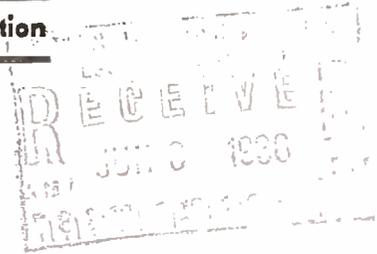


HEINL RADIO BUSINESS LETTER

2400 CALIFORNIA STREET

WASHINGTON, D. C.

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INDEX TO ISSUE OF JUNE 2, 1936

U. S. Public Radio Board Urged By Educators.....	2
Judge Sykes To Address NAB Convention.....	3
Zenith Shows \$1,212,752.07 Net For Past Year.....	4
Charges FCC With S-W Censorship.....	5
Senate Passes Bill Modernizing Law On Ship Radios.....	6
Better Facilities Urged For WIRE and WHB.....	8
Radio Zone Allocation System Ended By Congress.....	9
Radio Pioneer Dies In National Capital.....	10
Thad Brown Given Doctor Of Laws Degree.....	11
Convention Coverage Cited In Program Forecast.....	11
Industry Notes.....	12
KNX Libel Suit Reversed On Appeal.....	12

No. 933

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June 2, 1936.

U. S. PUBLIC RADIO BOARD URGED BY EDUCATORS

A new move to promote adoption of the American Public Radio Board plan has been launched as the result of an indorsement of the proposal in principal by the National Committee on Education by Radio.

Although the newer Radio Education Committee appointed by the Federal Communications Commission has yet to suggest a program, the Public Radio Board plan at present appears in the ascendancy among the varied proposals made for getting more educational programs on the air.

The National Committee on Education by Radio was organized in 1930 for the specific purpose of inducing the Federal Government to set aside 15 percent of all broadcasting channels for the exclusive use of education. The Committee, in endorsing the new idea, admits the impossibility of persuading the Government to adopt the other plan.

A bulletin issued by the Committee explains the new idea as follows:

"The details of the plan can be set forth concisely. It involves four major objectives:

"(1) The formation of boards, national, state and possibly regional, to direct programs in the public interest.

"(2) The securing of allocations of broadcast time to such boards by any and all stations.

"(3) The promotion of allocations of funds to such boards for program making purposes. These funds might come from philanthropy, from public and private institutions, from radio station budgets, or from contributions by civic bodies. The aim would be to establish the boards on a basis of assured self-support.

"(4) The experimental demonstration of socially profitable broadcasts in such fields as public affairs, adult education, school instruction, and the like.

"The procedure for creating a national board consists of having each State Board select from its own membership a single representative. Manifestly, a national control group so constituted ultimately might have forty-eight members. For administrative purposes this would require the appointment of a smaller directing committee empowered to employ an expert staff to handle specified national broadcasts. The character of the National Board would thus be determined by the various State Radio Boards.

"There are other ways of creating State Boards. Its members might be representatives of agencies selected because of their inherent interest in cultural and educational broadcasting. Whatever the method used, it should provide for safeguarding democracy by selecting only organizations, not handpicking individuals.

"Regional Boards, as found necessary, could be constituted on the same basis as the National Board, that is, of members selected by the State Boards.

"The plan for an American Public Radio Board is in harmony with the interests of that class of commercial broadcasters which is desirous of giving time on their stations to education, social welfare, and public affairs. In some cases, their experience has been disappointing, but this has been due largely to the fact that those to whom they have given time were inexperienced in the art of broadcasting and were unable to employ expert assistance. The system of radio boards should obviate this difficulty by retaining the service of experts to produce non-commercial programs of a quality comparable to that of advertising programs. Such a service would relieve commercial stations of many of the difficulties which now beset them with regard to both the choice of programs and the selection of groups or individuals who should put them on the air.

"The promotion of allocations of funds for use by such Boards, is not as difficult as it might at first appear. The Radio Board plan offers advantages which more than pay its way. To educational, cultural, and civic institutions or agencies it offers the opportunity to pool their radio interests in a single cooperating unit which could produce quality programs much more cheaply than could each constituent member operating independently. To station owners it offers the advantage of a better series of broadcasts than any of them could produce singly. It might take selected portions of programs from various stations and combine them with other superior programs for general use in filling surplus hours."

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JUDGE SYKES TO ADDRESS NAB CONVENTION

Judge Eugene O. Sykes, Chairman of the Broadcast Division of the Federal Communications Commission, will be the principal speaker at the annual convention of the National Association of Broadcasters in Chicago, July 5-8. His address, to deal with Federal regulation of broadcasting, will be made at the opening business session July 6th.

Copyright problems, including the plan to set up a Copyright Bureau within the NAB, and the proposal of the NAB Directors to increase membership dues 50 percent in order to meet a larger budget are expected to consume the major time of the convention.

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ZENITH SHOWS \$1,212,752.07 NET FOR PAST YEAR

Completing the most successful year in its history, the Zenith Radio Corporation, of Chicago, on April 30th had made a net profit after depreciation and taxes, of \$1,212,752.07 for the previous 12 months, E. F. McDonald, Jr., President, last week reported to Zenith shareholders. Income from sales, after deducting excise taxes, royalties, and cost of sales, was \$2,558,123.15.

Commander McDonald called attention to the receipt of more than \$4,000,000 in orders for 1937 receiving sets at the Chicago convention May 14-16. This compared with orders for \$2,200,000 at the Zenith meeting a year ago.

His report continued, in part:

"The products of your Company enjoyed the greatest increase in public acceptance this year of any manufacturer in the radio industry. This was due in a large measure to merit of product, which included many practical and outstanding features and was virtually service free, also to an effective half-million dollar advertising program carried out during the year.

"The introduction of an advanced and revolutionary type of economical farm radio receiving set gave your Company a dominant position of leadership in that field. The amount of business done on farm receiving sets contributed substantially to the total volume throughout the year and to the profits for the year.

"Conservative financial policies and production control were maintained throughout the year with the result that despite the large increase in business and the steady demand for the Company's products, we closed our fiscal year with no surplus merchandise or distress stocks. Our inventory consisted primarily of materials for the new line and some models of that line which had already been completed at inventory time.

"The principal business of the industry is now being done by relatively few manufacturers. By consistently producing a superior product and adhering to sound policies of merchandising that protect the customers' purchase, as well as the dealers' profits, your Company has done much to stabilize conditions within the industry. As a result it has created for itself good-will of an inestimable value and which may well be considered a guarantee of continued progress.

"The steadily increasing volume of business makes it necessary for the Company to secure larger and permanent quarters. Since such an arrangement could not have been made before the start of production on the new line, it became necessary for the Company to lease, on a temporary basis, an additional building in the vicinity of its main plants. We now have adequate facilities to take care of a much larger increase in volume this year and

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negotiations are being carried on for suitable permanent quarters which will be ready for occupancy when the present production season is finished.

"The Company now has over 13,000 dealers as against 3,500 a year ago and its objective is to materially increase this number."

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CHARGES FCC WITH S-W CENSORSHIP

Charging the Federal Communications Commission with an attempt to establish a censorship over broadcasting, the Short Wave Institute of Washington, last week filed a protest with the Commission against Rule 177 (d), effective July 1, providing:

"No licensee of any class of broadcast station shall rebroadcast the programs of any foreign radio station without written authority first having been obtained from the Commission."

In a letter to the Commission, Oswald F. Schuette, President of the Short Wave Institute, says this rule would create a censorship over the rebroadcast of foreign programs, in violation of the Communications Act, and would be a step toward the censorship of domestic programs.

"As a practical matter", says the protest, "this censorship would deprive 20,000,000 owners of standard broadcast sets of the right to hear the prohibited programs, while the owners of 6,000,000 short-wave sets would hear the same programs direct from the originating stations, unless it be the intent of the Commission to extend this prohibition to the receiving sets themselves and thus prevent the reception of the censored programs in the United States."

Up to this time about the only attempt to rebroadcast foreign programs into this country has been made by Germany. German programs, picked up by Col. Frank R. Curtis in Washington, have, through the cooperation of Kurt Sell, Washington representative of the German Broadcasting Company, been rebroadcast in the Capital by Station WOL.

Mr. Sell recently offered a special short-wave program direct from Germany to other stations throughout the country with which the assurance was given that the German station would play no music about which there could be copyright difficulties in America.

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SENATE PASSES BILL MODERNIZING LAW ON SHIP RADIOS

Seeking to insure greater safety at sea for passengers and crews and to avoid such disasters as those of the "Vestris" and "Morro Castle", the Senate on Monday, June 1st, passed the Copeland Bill amending the Communications Act relating to the use of radio equipment at sea.

Because of the lateness of the session, however, its passage by the House at this time is extremely doubtful.

The purpose of the measure is explained fully in a report submitted to the Senate by Senator Wallace H. White, Jr., (R.), of Maine, a veteran in radio legislation, for the Committee on Commerce.

"This bill's great purpose is to modernize our law with respect to radio installations and radio operations aboard ship to the end that safety at sea may be further assured", the report says. "America has fallen far behind the principal maritime nations of the world in this regard. We here seek to bring about that leadership to which we should aspire.

"In 1912 the loss of the 'Titanic' shocked the world. She was a monster ship of 46,000 tons, and she carried on this, her first and last voyage, 2,200 of passengers and crew, of whom only 711 were saved. In the year following this disaster a conference was held in London for the consideration of the general question of safety at sea, and in an endeavor to work out international agreements which would raise world standards, great progress was made. The United States, however, ratified that convention with such reservations as to defeat the effect and spirit of ratification.

"The World War taught many lessons with respect to the stability and floatability of ships, and great progress was made during that time and thereafter, both in radio equipment and in the navigational uses to which it was put. In 1927 there came renewed agitation for a world agreement on these subjects, and in 1929 the maritime nations again met at London to consider how the experience and enlightened desires of the world might make contribution to safety at sea. The United States participated in this conference. With a single exception its delegation represented the highest technical authority of our country. The conference labored with these problems through many weeks, and a treaty was signed at the conclusion of the efforts, a treaty now adhered to by 34 maritime nations. The United States has deferred ratification of this treaty and our country stands alone among the great nations as unwilling to make contribution or sacrifice through agreement with other nations to the humane ends sought in this convention.

"Disasters such as the sinking of the 'Vestris', the horror of the 'Morro Castle', and the loss of the 'Mohawk' have kept the subject before the American people and have emphasized the fact that the laws of the United States in these respects leave us far below the standards of the major powers and even those of many lesser consequence in world affairs.

"This legislation seeks to restore some of the lost prestige which has come through our failure to effectively cooperate with other nations, and through the inadequacy of our own statutory provisions.

"Today there are probably all of 1,200 ships of the United States of substantial tonnage carrying many persons as passengers and crews, which by our law are not required to carry radio. No more pointed illustration of the danger and of the tragedy of this inadequacy of law can be found than in the fact that there was an American ship not required to be equipped with radio within 30 miles of the 'Vestris' and which sailed away because it did not receive the SOS signals of that doomed vessel. We are told that that ship was so near to the 'Vestris' that it might have saved all.

"The 'Morro Castle' and the 'Mohawk' disasters moved the Senate of the United States to adopt a resolution requesting the Committee on Commerce of the Senate or a subcommittee thereof to conduct a study of the causes of these disasters, to make studies which might throw light on the question of safety of life at sea, and to make recommendations to the Congress for greater security of persons and property at sea. The Committee on Commerce authorized its Chairman to organize a Subcommittee on Department of Commerce and Merchant Marine, and this subcommittee authorized its Chairman, Senator Copeland, to solicit the aid of technical experts in the work directed by the Senate resolution. A technical committee of such experts was appointed. This general technical committee gave special consideration to the problem of radio, to the part radio plays in the navigation and operation of ships, and to its contribution to safety. As a result of this study of the problem the bill, which the Commerce Committee now report, was prepared and introduced by Senator Copeland.

"The bill has many technical aspects. Its major provisions which do not involve technical considerations may be summarized as follows:

"1. Under present United States law the requirement of radio equipment is based on the number of persons carried on board a vessel. The bill proposes that every ship of the United States and every foreign ship leaving a port of the United States other than a cargo ship of less than 1,600 gross tons shall be equipped with an efficient radio installation in operating condition in charge of and operated by a qualified operator or operators. It further requires that any passenger ship of the United States of 5,000 gross tons or over shall be equipped with an efficient radio direction-finder apparatus. These provisions and especially that relating to cargo ships will bring within the terms of the law a substantial number of ships not now compulsorily equipped with radio. There will be nearly 1,800 cargo ships not now required to carry radio which must be so equipped, and there will be in excess of 50 passenger ships which by statute will be required to install radio apparatus. This will make an addition of about 1,850 ships required to have such installations.

6/2/36

"2. The bill deals in detail with the technical requirements with respect to the radio installation on board the ship. These technical requirements conform generally to those found in the International Convention on Safety of Life at Sea and to those required by the International Telecommunication Convention to which the United States is a party. It gives to the Communications Commission authority of inspection and approval of the required apparatus.

"3. The bill amends the provisions of present law with respect to the suspension of operators' licenses. It seeks so far as statutes may encompass this end to assure the highest type of character and qualification in the operators on ships of the United States. It also deals with the number of operators required on ships. It requires every passenger ship to have at least two qualified operators.

"Another interesting and important requirement contained in the bill is that specifying that every motorized lifeboat which is required by treaty or statute shall be fitted with an efficient radio installation. The underlying thought of this requirement is that the motorized lifeboat with radio equipment can act as a mother ship for all other lifeboats and can in event of disaster requiring the abandonment of ship continue SOS calls, can give the position of the lifeboats and can by transmitting allow the rescuing vessels to take bearings by radio direction finders giving the position of the lifeboat.

"Other provisions of the bill are either redrafts of existing law or involve in the main controversial matters."

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BETTER FACILITIES URGED FOR WIRE AND WHB

Favorable reports were filed with the Federal Communications Commission this week by Examiners upon the applications of WIRE, Indianapolis, for permission to increase its nighttime power from 500 watts to 1 KW and the daytime power from 1 KW to 5 KW, and of WHB, Kansas City, Mo., for a shift from 850 to 1120 kc. with 500 watts at night and 1 KW daytime, unlimited hours.

Examiners recommended denial of applications of the Farmers & Bankers Life Insurance Co., Wichita, Kans., for a construction permit to operate on 1210 kc. with 100 watts, unlimited hours, and of KGDM, Stockton, Calif., to operate specified hours instead of daytime only.

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RADIO ZONE ALLOCATION SYSTEM ENDED BY CONGRESS

With the passage by the House on Monday, June 1st, of the bill to repeal the 8-year old Davis Equalization Amendment, the Federal Communications Commission will soon be in a position to allocate broadcasting facilities in accordance with modern engineering practices rather than a rigid zone system.

The measure, which now awaits the signature of President Roosevelt, will lead to a gradual reallocation of the limited broadcasting channels although no drastic shakeup is anticipated. The FCC has found the Davis Amendment, enacted in 1928 and subsequently made a part of the 1934 Communications Act, is unworkable and consequently has already made departures from its own quota tables for the 48 States and the five Zones into which the country was divided.

The new Act reads as follows:

"That section 302 of the Communications Act of 1934 is hereby repealed.

"Sec. 2. Subsection (b) of Section 307 of such Act is amended to read as follows:

"(b) In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same."

The House Committee on Interstate and Foreign Commerce in its report recommending passage of the bill, previously adopted by the Senate, stated:

"The legislation is recommended for practical reasons of administration by the Communications Commission, which has found that the drawing of artificial zone lines for guides in allocating radio facilities cannot satisfactorily be applied because of the physical laws governing radio transmission. As a consequence, the policy of Congress, to so distribute radio facilities that every section of the country will be adequately supplied, has been very difficult of effectuating."

The Chairman of the Communications Commission wrote the Chairman of the Senate Interstate Commerce Committee as follows:

"With further reference to S.2243, which was introduced by you March 13, 1935, I beg to advise that this Commission favors its adoption for the following reasons:

6/2/36

"The existing law, which S.2243 seeks to repeal, is contrary to natural laws and has resulted in the concentration of the use of frequencies in centers of population, and the restriction of facilities in sparsely populated States, even though interference consideration would permit the operation of one or more additional stations. Because of the size of the zones provided for by existing law, the distribution required by the Davis amendment has resulted in providing ample broadcast service in small zones and lack of service in large zones. The experience of the Federal Radio Commission and this Commission has proved that the Davis amendment is very difficult of administration and cannot result in an equality of radio broadcasting service."

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RADIO PIONEER DIES IN NATIONAL CAPITAL

William T. Pierson, pioneer in the radio field, music composer and publisher, died May 31st after a long illness at his home in Washington, D. C. He would have been 57 July 1.

Mr. Pierson, who had given many singers and musicians their start, as radio entertainers, was Program Director of old Station WCAP, the first large commercial radio station in the National Capital. It was owned and conducted by the Chesapeake & Potomac Telephone Co.

He remained with the station until 1926 when he became Program Director of Station WMAL, and continued there until 1933.

Mr. Pierson had given Kate Smith her first audition, and also Hazel Arth, who won the national Atwater Kent audition.

Before taking up song writing, he was first assistant to the engineer of the telephone company in the Washington and Baltimore area. With the establishment of WCAP, Mr. Pierson had charge of the broadcasts of many important national events - when radio was just coming into general use.

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A more powerful transmitting station is to be constructed this Summer by WLXAL, short-wave station at Boston. Regular programs will consequently be suspended during July.

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6/2/36

THAD BROWN GIVEN DOCTOR OF LAWS DEGREE

Decrying a philosophy of doom, despair, and lack of opportunity, and speaking great encouragement for the youth of today, Colonel Thad H. Brown, member of the Federal Communications Commission, on June 1st addressed 45 graduates of the Class of 1936 of Lincoln Memorial University at their annual commencement exercises at Harrogate, Tennessee.

Following his address, Lincoln Memorial University officials conferred upon Colonel Brown the honorary degree of Doctor of Laws and also made him a member of the Board of Directors of the University.

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CONVENTION COVERAGE CITED IN PROGRAM FORECAST

Attention is called to the important part to be played by radio in the forthcoming presidential campaign, in the June bulletin of Selected Radio Programs, issued by Philco's Radio Institute of the Audible Arts, two pages of which are devoted to a detailed account of broadcasting arrangements made for the Republican National Convention, which opens in Cleveland on June 9, and the Democratic National Convention to be held in Philadelphia, beginning June 23.

"This year, more than ever before, the entire picture of both conventions will be given to the public in greater detail by radio", the Institute states. "To a great extent, the convention programs have been arranged so as to permit the maximum utilization of radio in bringing the message of both parties to a great electorate that, through radio, is better informed on national problems than ever before."

The program bulletin, which is now in its second year of publication, lists as usual recommended programs in the fields of music, informative talks, variety, comedy, drama and news, to be broadcast regularly in June by the major networks. These are supplemented by broadcasts of noteworthy special events to be heard during the month.

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INDUSTRY NOTES

Ultra-short-wave radio communication equipment has just been installed by General Electric engineers in 13 police prowl cars and at police headquarters in Gary, Ind.

Alleging unfair competition in the sale of packaged mineral salts, the Federal Trade Commission has issued a complaint against Soal Lake Products Corporation, Seattle, Wash., distributor of "Mother Nature Soap Lake Salts", and other products obtained from Soal Lake, Wash., which advertises on the radio.

The Federal Communications Commission on Tuesday resumed the hearing of the American Telephone & Telegraph investigation.

Invitations have been sent by Louis G. Caldwell, prominent Washington radio attorney, and Mrs. Caldwell, for a reception to be held the evening before the informal Federal Communications Commission engineering conference which opens on Monday morning, June 15th.

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KNX LIBEL SUIT REVERSED ON APPEAL

Taking an opposite view from the trial court which ruled that a Los Angeles Times editorial was libelous per se, the California District Court of Appeals has reversed the judgment whereby the Western Broadcast Company, owner of radio station KNX, was awarded \$2500 actual and \$1 punitive damages by a jury. The suit was based on the Times editorial "A Plain Statement", published to explain the newspaper's stand in omitting KNX from the radio log when the station refused to come into the Press-Radio agreement.

"Since a corporation has no character to be affected by libel and no feelings to be injured, an article to be libelous of the corporation must have a tendency to directly affect the credit or property of the corporation or occasion it pecuniary injury", the appellate opinion states. "The mere fact that an article is unpleasant or hostile does not make it defamatory."

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INDEX TO ISSUE OF JUNE 5, 1936

Payne Is Reappointed For 7-Year Term On FCC.....	2	✓
Atwater Kent Dropping Radio Set Manufacturing.....	3	✓
Hearing Set On Zenith's Grigsby-Grunow Bid.....	4	—
Higher Power For Hearst's WISN Urged By Examiner.....	4	—
NBC Official Mentioned For New Canadian Radio Job.....	4	—
Mackay Denied Oslo Application; Appeal Is Expected.....	5	
Broadcast Advertising In April Still Above 1935.....	6	
First Women Television Announcers Hired; Men Sought.....	7	
Radio Waves Sometimes Slow, Scientist Finds.....	7	
WGBF Power Increase Urged; Radio-Phone Station Blocked.....	9	
Japan Reviews Progress Of Broadcasting.....	9	
NBC Raises Rates For Time On WEEI And WCKY.....	10	
FCC Approves New Antenna For WJZ.....	10	
"Queen Mary's" Arrival Sets RCA Record.....	11	
Many All-Wave Radio Sets At Paris Trade Fair.....	12	
NBC-Chicago Studios Get Master Control Desk.....	12	

No. 934

W. A. P. J.

PAYNE IS REAPPOINTED FOR 7-YEAR TERM ON FCC

Definitely ending all rumors to the contrary, President Roosevelt on Wednesday, June 3rd, sent to the Senate the renomination of George Henry Payne, of New York, as a member of the Federal Communications Commission for a seven-year term.

Although it was generally conceded that Mr. Payne would get the reappointment after Senator Borah, Idaho Republican gave him his endorsement, rumors continued to circulate occasionally that the New York liberal might be blocked by a combination of Democrats and Western Republicans who wanted a representative from their section of the country on the Commission.

Early confirmation of the appointment is expected in view of the move in Congress to adjourn before the Republican National Convention, if possible.

The reappointment places Commissioner Payne in a much stronger position on the FCC than ever before. From being the junior member, with only a 2-year term, he now becomes the member with the longest certain term. Only Chairman Anning S. Prall ranks second as he was renamed for a seven-year term last year.

Last Fall and Winter the New Yorker, a former friend of Theodore Roosevelt and long a Liberal Republican, made a series of addresses at universities in which he was tartly critical of the past policies of the Commission. So aroused did some of the more conservative colleagues become that Chairman Prall and he were not on speaking terms for some weeks. It was then that reports were circulated, and published, that a Western bloc of Senators was seeking to get a Westerner named for the position which Commissioner Payne was due to vacate July 1, 1936. This bubble soon faded, however, when several of the more prominent Western Republicans stated they favored Mr. Payne's reappointment, providing he wanted the job.

The relations thereafter between Messrs. Payne and Prall became obviously improved, but Mr. Payne ceased for the time his critical speech-making although he published in book form the addresses he had previously made.

Mr. Payne has had a varied and colorful career. Starting as a student of pharmacy, he has been editor, editorial writer, music and dramatic critic, political writer, lecturer, author, and politici.

He was one of the aides of Henry L. Stimson during the latter's campaign for New York Governor in 1910. Two years later he was one of the New York campaign managers for Theodore

6/5/36

Roosevelt. In 1920 he was a candidate for Republican Senator from New York, being defeated by James W. Wadsworth, now a member of the House of Representatives.

Following the confirmation of his nomination by the Senate observers expect to see him take a more pronounced lead in helping to direct the policies of the Federal Communications Commission in the future.

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ATWATER KENT DROPPING RADIO SET MANUFACTURING

The Atwater Kent Manufacturing Company, of Philadelphia, one of the pioneer organizations in the radio field, will no longer manufacture radio receiving sets or equipment, according to authoritative information received in Washington.

A brief statement was issued early this week in New York by the advertising firm of Barton, Durstine & Osborn. It said:

"The Atwater Kent Manufacturing Co. has decided less actively to promote its radio lines and has so informed its distributors. It is believed that less than 100 employees will be affected by this decision at this time. It is not in a position to state what new lines of activities it has planned for the future."

Sources close to A. Atwater Kent, founder and president of the concern, believe that he may be preparing to retire from business entirely as he already has accumulated a large fortune.

The Atwater Kent Manufacturing Company, which was a large producer of automotive ignition equipment for 20 years prior to the advent of radio, began making receiving sets in 1923 and for the first several years dominated the field. A trade report is that they have sold \$128,000,000 worth of radio merchandise during the last 13 years.

The Atwater Kent Sunday evening concerts and the annual Atwater Kent contests to select promising musical amateurs became traditions in the broadcasting industry.

A native of Vermont, with ancestry extending back to pre-Colonial days, Mr. Kent owns palatial homes in Ardmore, Philadelphia suburb, Bar Harbor, Me., and Palm Beach, Fla. He recently celebrated his sixty-second birthday.

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HEARING SET ON ZENITH'S GRIGSBY-GRUNOW BID

Because rapidly expanding business made the acquisition of additional equipment necessary, the Zenith Radio Corporation, of Chicago, has made a bid for all of the new plants of the defunct Grigsby-Grunow Company, west of Austin Avenue in Chicago.

Frank M. McKey, Trustee in Bankruptcy, of Grigsby-Grunow Company, on June 2nd filed the bid and asked that an order be entered requiring all creditors of Grigsby-Grunow to show cause why the bid should not be accepted. The Referee in Bankruptcy scheduled a hearing for June 17th at 11 A.M. The amount of the Zenith offer was not disclosed.

"Acquisition of this property was made necessary because of the greatly increased business of Zenith Radio Corporation", Hugh L. Robertson, Vice-President and Treasurer, said, "and will be occupied as soon as necessary alterations can be made. The property will hereafter be known as Zenith plants 5, 6 and 7."

Negotiations for the purchase were carried on by Irving Herriott, Zenith counsel.

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HIGHER POWER FOR HEARST'S WISN URGED BY EXAMINER

An increase in nighttime power from 250 watts to 1 kilowatt for WISN, Milwaukee, owned by Hearst Radio, Inc., was recommended to the Federal Communications Commission this week by Examiner Melvin H. Dalberg. WISN is the only CBS outlet in Wisconsin. The station also would be authorized to change the location of its transmitter.

An unfavorable report was filed by Examiner Ralph L. Walker on the application of the Union-Tribune Publishing Co., San Diego, Calif., for a construction permit to erect a station for operation on 1420 kc. with 100 watts night, 250 watts daytime, unlimited hours.

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NBC OFFICIAL MENTIONED FOR NEW CANADIAN RADIO JOB

Reginald Brophy, NBC Station Relations Manager, was mentioned as a possible General Manager of the Canadian radio system under the proposed new set-up recommended by the Special Parliamentary Committee, according to a Toronto correspondent of Variety. Brophy is a native of Montreal.

Another candidate mentioned for the post is Major Gladstone Murray, London Program Director for the British Broadcasting Corporation and formerly of Toronto.

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MACKAY DENIED OSLO APPLICATION; APPEAL IS EXPECTED

After almost three months' deliberation, the Federal Communications Commission on June 4th denied the application of the Mackay Radio and Telegraph Company to establish a commercial radio circuit between New York and Oslo, Norway, in competition with R.C.A. Communications, Inc. Mackay is expected to appeal the decision to the courts.

The FCC decision is of far greater significance than might be seen in the single application, as the Mackay Company planned to establish similar foreign circuits at strategic points over the world where RCA now exercises virtual control. The ruling is a distinct victory for RCA.

The Commission, in announcing its decision, expressed the belief that this country's measure of control of world radio communications would be jeopardized if permission were granted to two companies to establish competing circuits where financial returns do not appear to warrant such a step.

Five specific reasons were given for the ruling. The Commission declared:

"(1) That radio and cable facilities between the United States and Norway are adequate, competition is keen and there is no complaint of the service rendered;

"(2) That the proposed new circuit would not offer new or improved service, reduce rates or create traffic;

"(3) That the proposed new circuit, while increasing the revenues of the applicant, would decrease the revenues of all other established competing carriers, and would decrease the total revenues of the American-owned companies;

"(4) That the increase in applicant's revenue is not shown to be necessary for the continued operation of applicant or of its associated companies comprising the International System;

"(5) That the proposed circuit would result in the practical withdrawal of an associated cable company from competition."

The Commission further stated that:

"Inasmuch as the telegraph administration controls every word of outgoing radio-telegraph traffic, the competing American radio companies would be dependent upon it for their traffic from Norway. Each would be interested in increasing its share of the total traffic.

"To expect the telegraph administration to play the competing companies against each other is simply to expect that the administration will be headed by good business men, loyal to their national interests.

6/5/36

"The fact that telegraph services in Norway are operated as a monopoly by the government telegraph administration cannot be disregarded in connection with the situation presented by the other facts in the case. That administration controls the bulk of the outgoing international traffic.

"For the most part, it can route the traffic as it will. The telegraph administration receives a greater financial advantage from radio than from cable, and it sends the bulk of the traffic to the United States by radio.

"If the administration should have the choice of two competing direct radio circuits, it is only natural to expect that it would favor that circuit from which it would derive the greatest financial advantage.

"Changes in the division of tolls between American carriers and foreign administrations or companies which diminish the income of the American carriers as a whole without reducing rates or improving service, and especially without the additional patronage which can be expected from such a reduction in rates or improvement in service, must be weighed against applicant by a Commission charged with the duty both of the development of a nation-wide and world-wide wire and radio communication service and with the duty of seeing that the rates for that service are reasonable."

Commissioner Irvin Stewart made clear, however, that future cases would be decided on their individual merits.

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BROADCAST ADVERTISING IN APRIL STILL ABOVE 1935

While experiencing the usual seasonal decline, broadcast advertising in April continued to show a gain over the corresponding period for 1935, the National Association of Broadcasters reports.

The total volume of radio advertising in April was \$8,829,488. This was 5.4 percent below March's record but 9.5 percent above April, 1935. Local broadcast advertising, however, jumped 12.5 percent ahead of March, while the use of electrical transcriptions showed the greatest gain as compared with both March and April a year ago.

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FIRST WOMEN TELEVISION ANNOUNCERS HIRED; MEN SOUGHT

The British Broadcasting Corporation, which is preparing to launch a regular television transmission service shortly, has hired the world's first women television announcers, but is still looking for the proper type of male announcers.

Describing a recent meeting with the young women, a BBC commentator said:

"Miss Jasmine Blight and Miss Elizabeth Cowell have been appointed as the first women television announcers in the world. They will shortly take up their duties at the new BBC Television Station at the Alexandra Palace. Very charming we found them. Miss Bligh, who is twenty-two years of age, has already had three years' stage and film experience. She plays tennis, golf and squash rackets, and has traveled widely. Miss Cowell, one year her senior, has worked as a mannequin, and specialized in dress design and display. Miss Bligh and Miss Cowell were chosen from 1,122 applicants. They will spend some weeks in intensive training preparatory to the opening of the new television service. Television artists will require slight facial make-up in colors of yellow and blue.

"Meanwhile, the search still goes on for the ideal man announcer for television purposes. Chief qualification is a 'photogenic' face of masculine type."

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RADIO WAVES SOMETIMES SLOW, SCIENTIST FINDS

Radio waves are not always the speedy messengers of constant velocity that most scientists have believed them to be, but sometimes "doddle along in second gear" at about half their normal rate as they skip from place to place over the earth, according to Dr. Harlan T. Stetson of the Institute of Geographical Exploration, Harvard University.

At a joint meeting June 3rd of the Institute of Radio Engineers and the Radio Club of America, held at the American Museum of Natural History and the Hayden Planetarium, in New York City, Dr. Stetson told an audience of several hundred engineers and guests that radio waves recently had been found to travel as slowly as 90,000 miles a second.

Radio men have regarded the speed of radio in space as virtually constant. International observations, however, have recently shown otherwise, Dr. Stetson said.

6/5/36

The normal speed of radio energy through space, he said, is about 186,000 miles a second, or 300,000 kilometers, equal to the velocity of light waves. His deductions as to the diminished speed of radio waves on certain occasions, he said, are drawn from a long series of day-to-day comparisons of international time signals exchanged between the Naval Observatory, Washington, D. C., Royal Observatory, Greenwich, England, and the Paris Observatory in France. Dr. Stetson laid the discrepancy in the speed of travel of radio waves to "unknown cosmic phenomena."

"Some days the waves skip across the Atlantic Ocean on scheduled time, traveling apparently, with the velocity of light", said Dr. Stetson. "This would take the waves around the earth seven times in a second. Other days they 'doddle' along at a mere 90,000 miles per second, consuming twice as long as they should for a trans-Atlantic trip.

"Careful comparisons of the times consumed by the ethereal messengers appear to indicate the waves are seriously affected by the magnetic field of the earth, which varies in different regions of the globe.

"Near the magnetic equator the waves travel fastest. When they are sent over paths further north, or near a magnetic pole, they are much more reluctant about expediting their messages. Thus in the region near the equator, where the earth's horizontal intensity is greatest, they travel with a velocity apparently equal to that of light. This velocity diminishes over the more northern routes and in high latitudes. Where they must pass near the magnetic pole a velocity of only 200,000 kilometers is indicated. The pole, itself, is so disliked by the waves that sometimes they utterly refuse to pass it."

Dr. Stetson's topic was "Cosmic Cycles and Radio Transmission." Concerning pure cosmic and solar phenomena, he said, radio reception during the last sun-spot cycle indicated that the next few years might present new trouble for long-distance tuning in the broadcast band.

"Scientists are still searching for more accurate methods of predicting the sun's activity so those engaged in communication may anticipate conditions under which radio operators will have to work. The possibility that there may be other astronomical sources which change the electrical balance of the ionosphere offers further opportunity for speculation."

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WGBF POWER INCREASE URGED; RADIO-PHONE STATION BLOCKED

Increase of the daytime power of WGBF, Evansville, Ind., from 500 watts to 1 KW was recommended to the Federal Communications Commission this week by Examiner R. H. Hyde.

Denial of an application from Albert L. Brown for a construction permit to build a 100-watt radio-telephone station at Hallowell, Me., for operation on 9710 kc. was recommended by Examiner Ralph L. Walker. The station was to have been used to transmit stock quotations and bulletins direct to a brokerage house in Hamilton, Bermuda.

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JAPAN REVIEWS PROGRESS OF BROADCASTING

In a booklet published recently, the Broadcasting Corporation of Japan reviewed briefly the progress made by broadcasting in that country since a program service began, eleven years ago, and outlined its plans for the immediate future.

The first experimental transmitter, erected at Shibaura, in Tokyo, was JOAK, which started operating on March 22, 1925, with a power of 220 watts. In the following July this was replaced by 1 KW transmitter at Atagoyama, Tokyo; and the station building is still used for studio work - the nerve-centre of the Japanese network. In June of the same year JOBK, at Osaka, with 500 watts, and JOCK, at Nagoya, began broadcasting. These three stations were taken over, in August 1926, by the Nippon Horo Kyokai (Broadcasting Corporation of Japan), and that organization, under the Ministry of Communications, is the only body authorized to broadcast in that country. In May, 1928, the Corporation increased the power of the existing stations to 10 KW, and shortly afterwards five further transmitters were erected.

Today, 10 KW main stations are situated at Tokyo, Osaka, Nagoya, Hiroshima, Kumamoto, Sendai, and Sapporo, linked by twenty-two supplementary stations, with power ranging from 300 watts to 3 KW. During the current year five more stations are to be added; the power of Tokyo is to be increased to 150 KW, and that of other stations in Osaka and Kyushu to 100 KW.

The official list of subscribers shows a total of 2,385,000. The Corporation's revenue is obtained from the listeners license fee of 50 sen per month. Each listener pays, in addition, an initial fee of one yen to the Ministry of Communications. No broadcast advertising of any kind is permitted.

Under the head of television, it is stated that research work has been going on for some years, and the Corporation is giving consideration to the recommendation of the Television Society of Japan - formed in 1934 - that experimental television broadcasting should be started as soon as possible.

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NBC RAISES RATES FOR TIME ON WEEI AND WCKY

Increased network rates for two NBC stations - WEEI, Boston, and WCKY, Cincinnati - were announced this week by Roy C. Witmer, Vice-President in Charge of Sales for the National Broadcasting Company.

Effective July 1st, the rates will be:

WEEI - \$400 an hour, \$240 half-hour, and \$160 quarter-hour.
WCKY - \$320 an hour, \$192 half-hour, and \$128 quarter-hour.

These are the gross rates for periods between 6 and 11 P.M., Mr. Witmer said, and supersede the rates for these stations published in the NBC rate card No. 21, dated May 1, 1936. Rates are the other times of day increased in proportion.

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FCC APPROVES NEW ANTENNA FOR WJZ

The Federal Communications Commission this week approved plans for the erection of an ultra-modern 640-foot antenna for Station WJZ, the NBC-Blue network station at Bound Brook, N. J.

The Aviation Division of the Department of Commerce concurred in the permission for the new antenna, after engineers of the Department of Commerce, the National Broadcasting Company and the major airlines had collaborated in working out what is expected to be one of the most effective systems of night lighting ever provided for a radio tower.

An application to increase WJZ's power from 50,000 to 500,000 watts is now pending before the Commission.

The new antenna will bring to radio listeners a great improvement in tone and reliable reception, NBC engineers said. Bids for construction will be received at once, and the new antenna, it is hoped, will be in operation within from four to five months.

The new design for the tower is a steel structure 640 feet high, of constant cross-sections of approximately 8 feet in width, which in itself is the radiating element. No supplementary wires are used.

The single tower will be supported from the earth by two sets of steel guy stays. Directly in the earth beneath it will be a copper screen 150 feet in diameter, to minimize any losses in the earth which might occur at this point. Extending for more than 600 feet in every direction from the base of the tower will be more than 85,000 feet of heavy copper ribbon, placed radially from the tower, thus concentrating all radio transmission into the most powerful signal possible.

Power from the transmitting station will be transferred to the antenna through a 10-inch copper transmission line which will run to the base of the triangular tower. This line consists of two pipes, one within the other, the outer being grounded to the earth and the other insulated and carrying the power itself. The new antenna is designed to prevent fading in certain areas where unreliable reception has existed heretofore.

The new WJZ tower will be painted in alternate stripes of orange and white, making it clearly visible for miles. At night it will be silhouetted by lights placed at spaced intervals all the way to the top. On top of the antenna will be a flashing red aviation beacon.

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"QUEEN MARY'S" ARRIVAL SETS RCA RECORD

British interest in the arrival of the "SS. Queen Mary" in New York has resulted in a new record for news picture transmission by radio, according to William A. Winterbottom, Vice-President and General Manager of R.C.A. Communications, Inc.

"At no time before have we sent so many pictures overseas in a twenty-four hour period", he said, "and the file resulting from this single news event eclipses anything within our experience since the service was inaugurated in 1926."

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Use by Cushing Refining & Gasoline Co., Cushing, Okla., of false and misleading advertising to prejudice the public against "Ethyl" gasoline and to build up a preference for its own competitive product, is alleged in a complaint issued by the Federal Trade Commission against that company. The respondent corporation has branch offices in Minneapolis.

Advertising in newspapers and other publications, and in radio broadcasts, the respondent corporation is alleged to unfairly disparage and to discourage the use of "Ethyl" gasoline by making representations which cause purchasers to believe that gasoline treated with tetraethyl lead is dangerous, poisonous, injurious to the life or health of users, and that the respondent's product is safe and superior to gasoline chemically treated.

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Felix Green, special representative for the British Broadcasting Corporation in this country and Canada, was scheduled to sail for London on Friday to make a report on radio conditions as he found them on a recent motor tour.

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MANY ALL-WAVE RADIO SETS AT PARIS TRADE FAIR

Following is a report on the radio exhibition at the Paris International Trade Fair, which opened in mid-May, as carried in World-Radio, official organ of the British Broadcasting Corporation from a special correspondent:

"'All-wave' set was to be found on practically every stand, but, judging from remarks I heard from visitors, is likely to fall somewhat in popularity in the future, the sporting character of the reception from the short-waves not appealing to many listeners who only require entertainment. The range covered, with one or two rare exceptions, was from 19 meters either way according to the manufacturer's fancy. The price had decreased considerably, being in some cases as low as from Frs. 600-700. The better-known firms still maintain their prices between Frs. 1,500 and 2,000; but there are so many below Frs. 1,500 that we may expect to see these firms down about Frs. 500 by the Autumn because of the competition. There were perhaps a few more battery sets, and I saw only one make of crystal set (Frs. 50 to 150). Most of these sets were within the range of three valves to six valves, but there were a few of from seven to nine valves."

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NBC-CHICAGO STUDIOS GET MASTER CONTROL DESK

Without a hitch in normal operations, a new, giant master control desk and new studio control panels have been installed and placed in operation in the NBC Chicago studios, according to Howard C. Luttgens, NBC Central Division Engineer.

The new Master Control Desk, more than fifteen feet in length and six feet high, containing 575 lights and more than 500 keys and connected by more than 250,000 feet of wire with 650 relays in a nearby room, will enable the supervising engineer in the main control room to present the network channels in such a manner that the announcer may cut this studio in or out of a circuit merely by pressing a button.

Heretofore the intricate routing of a program into the proper channels for distribution to various legs of the NBC networks has been a responsibility resting primarily on the announcer in the studio in which the program originated. Last minute routing changes have required notification of numerous persons at switching points in the studios and control room, raising as many possibilities of error.

By means of the new control desk, a companion to the one in the NBC Radio City studios, circuits may be set up by an engineer while the preceding broadcast is on the air.

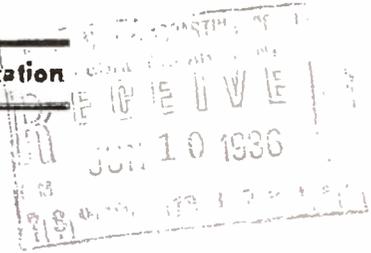
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HEINL RADIO BUSINESS LETTER

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INDEX TO ISSUE OF JUNE 9, 1936

FCC Issues Agenda For Engineering Conference.....	2
Publisher Sees Threat Of Foreign Propaganda By Radio.....	4
FCC Rules On Amateur License Modification.....	5
Growth Of Police Radio Systems Shown In New Lists.....	6
Three New California Stations Are Recommended.....	6
"Photo-Mike" Introduced By CBS At Republican Convention.....	7
New FCC Rules Discussed At Engineer Parley.....	7
Burkan, ASCAP Counsel, Dies In N. Y.....	8
710-Foot Antenna Planned For KDKA.....	9
FTC Clamps Down On Two Radio Advertisers.....	9
Report Split On Aeronautical Radio-A. T. & T. Case.....	10
Mrs. Belmont Joins NRC Advisory Council.....	10
CBS Fixes New Rates For Two Network Stations.....	10
New Radio Photo Transmission Used In France.....	11
Exhibit Of Educational Programs Planned.....	11
British Bring Interesting People To Mike For Schools.....	12
Movie Producers' Fears Of Television Allayed.....	12

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June 9, 1936

FCC ISSUES AGENDA FOR ENGINEERING CONFERENCE

Outstanding personalities in the technical and business aspects of broadcasting, communications, and scientific radio fields will participate in the far-reaching engineering hearing to open before the Federal Communications Commission on June 15th.

With radio "at the cross-roads", according to Commdr. T.A.M. Craven, FCC Chief Engineer, the hearing will constitute the most thorough investigation of the technical phases of radio transmission ever conducted in this country. Every service, which now has a specific band of channels allocated to it, will be called upon to justify its existence or, in some instances, its claim for more waves.

Anning S. Prall, Chairman of the FCC, will make the opening statement, outlining the scope and procedure of the hearing. Commander Craven will follow with a general review of the past developments, present practices, and future possibilities in radio.

Dr. J. H. Dellinger, Chief of the Radio Section of the Bureau of Standards, will be the first non-Commission witness. He will set forth the requirements of the several governmental services using the ether waves.

The second part of the hearing will be devoted to general testimony relating to broad questions of public interest and general allocation policies.

Broadcasters will get the first round among the specific services. Their testimony will cover television and facsimile broadcasting, international relay, high frequency, special, and experimental broadcasting as well as the ordinary long-wave transmission between 550 and 1500 kc.

Next in order will follow:

Fixed services; coastal, marine relay, and ship services; aviation; emergency; amateur, and miscellaneous services.

The list of witnesses in addition to Mr. Prall, Commdr. Craven, and Dr. Dellinger, follows:

GENERAL TESTIMONY: David Sarnoff, Radio Corporation of America; William S. Paley, Columbia Broadcasting System; William Green, American Federation of Labor; Edward N. Nockels, Chicago Federation of Labor; Frank Jewett, American Telephone & Telegraph Co.; T. J. White, Hearst Radio, Inc.; Dr. Chase,

National Advisory Council on Radio in Education; James W. Baldwin, National Association of Broadcasters; James M. Skinner, A. F. Murray and L. C. F. Horle, Radio Manufacturers' Association; International Scientific Radio Union (U.R.S.I.); Capt. D. S. Leonard, International Association of Chiefs of Police Associated Police Communication Officers; Rev. Edward Lodge Curran, International Catholic Truth Society; Major Edwin H. Armstrong; Mr. Samuel E. Darby, Jr., of Darby & Darby, representing radio set manufacturers; Don Lee Broadcasting System; Evening News Association, Inc.; Eugene Vidal, Bureau of Air Commerce, Dept. of Commerce; Paul Goldsborough, Aeronautical Radio, Inc.; James V. Piersol, Henry DuPont, Dean Farran, Itinerant Airmen; Dr. H. B. Williams (Columbia University), H. A. Carter, American Medical Association; and Oswald F. Schuette, Shortwave Institute of America.

SPECIFIC TESTIMONY (More than one service): E. K. Jett,

A. D. Ring, Dr. L. P. Wheeler, Federal Communications Commission; Dr. H. S. Osborne, L. Espenchied, E. L. Nelson, American Telephone & Telegraph Co.; F. J. H. Kracke, City of New York, Department of Plants & Structures; Jack Kaufman, Globe Wireless, Ltd.; Hearst Radio, Inc.; Ellery Stone, Haraden Pratt, Dr. F. A. Kolster, Mackay Radio and Telegraph Co.; L. G. Caldwell, Press Wireless, Inc.; Dr. C. B. Jolliffe, Radio Corporation of America; William E. Beakes, R. V. Howley, C. C. Harris, Tropical Radio Telegraph Co.; Western Radio Telegraph Co.; Brown Rayphones, Mr. Elmer L. Brown; W. G. H. Finch, Finch Telecommunications Laboratories; Walter S. Lemmon, International Business Machines Corp.; Dr. C. D. Haigis, Jesse G. Haycock, Jr., The Haigis Laboratories, Inc.; Westinghouse Electric and Mfg. Co.; Weston Electrical Instrument Corp.

BROADCAST SERVICE; Dr. Charles B. Aiken, National Association of Broadcasters; Elish Hanson, American Newspaper Publishers' Association; Brooklyn Technical High School; Buffalo Evening News by A. H. Kirchhofer; Maynard Marquardt, Chicago Federation of Labor; Columbia Broadcasting System; R. D. Lemert, DeForest Television Corp., Ltd.; Ben S. Fisher representing Stations KOMO, KJR, KPRC KGMB KGFJ WLBC WELI WTMJ WPHR WCOP KSL WNBC WBAP and WTBO; Philo T. Farnsworth, Donald K. Lippincott, Farnsworth Television, Inc.; William H. Priess, International Television Radio Corp.; L. J. Leishman, Los Angeles; R. V. Hamilton, St. Louis Star Times; Gerald N. Goldberger, Television Research Corp.; Stations WLW, WSAI & W8XAL (Crosley Radio Corp.); Worldwide Broadcasting Corp; and Paul de Mars, Yankee Network.

COASTAL SERVICE: J. D. Munton, Atlantic Communications Co.;

AVIATION SERVICE: Paul Goldsborough, Herbert Hucke, Aeronautical Radio, Inc.

EMERGENCY SERVICE; Lieut. George Kinsey, Lieut. E. C. Denstaedt, Capt. R. L. Batts, Lieut. L. L. Waitt, Lieut. C. J. Scavarda, Associated Police Communication Officers; Lieut. Sylvester D. Sullivan, Fred M. Link, Dept. of Public Safety, Jersey City Theodore G. Bremer, H. Allen Rutherford, Dept. of Police, Brookline, Mass.; John Desrocher, Police Dept., Grosse Pointe, Mich.;

Police Dept., New York, N. Y.; Lieut. Martin W. Joyce, Massachusetts State Police; Sen. Clarence C. Dill, State of Washington; Isaac Brimberg, Fire Dept., City of New York; Herbert W. Eales, Edison Electric Institute; Southern California Edison Co., Ltd.; E. J. Vanderwall, State of Wisconsin, Conservation Dept.

AMATEUR SERVICE:

Paul M. Segal, Maj. K. B. Warner, A. L. Budlong, Ross Hull.

MOTION PICTURE STATIONS: E. H. Hansen, Twentieth Century Fox Film Corp.; E. H. Hansen, Research Council of the Academy of Motion Picture Arts & Sciences.

MISCELLANEOUS: Sherman C. Amsden, Doctors Telephone Service, Inc.; Robert Robins, New York City; Edward J. Peoples, Institute of Radio Service Men.

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PUBLISHER SEES THREAT OF FOREIGN PROPAGANDA BY RADIO

Stressing the importance of the June 15 engineering hearing of the Federal Communications Commission, especially with regard to the allocation of television and facsimile channels, E. H. Harris, Chairman of the Publishers' National Radio Committee, believes this country is threatened with a flow of foreign propaganda via short-wave radio.

Addressing the Inland Daily Press Association in Chicago last week, he charged newspapers with the responsibility of preventing the foreign propaganda invasion.

He said, in part:

"The fact that radio waves recognize no frontiers, no national boundary lines, makes it an international problem, which is of great national significance to each country.

"This situation offers a most serious problem for the preservation of peace in Europe where many countries are close neighbors,

"Propaganda of one country may be broadcast to another. These countries have tried many ways to stop the transmission of propaganda across their boundaries, but so far have found no satisfactory solution. Some countries set up an interference signal on their boundaries to prevent the reception of anything from a foreign country which is detrimental to the interest of the country. Others have enacted laws imposing a jail sentence for listening to a foreign broadcast. In still other countries, radio sets which are built to receive foreign stations are prohibited.

"Many governments have found a way to control the dissemination of propaganđa through the newspapers under dictatorship but as yet no practical way has been found to stop propaganđa by means of radio transmission.

"The newspapers today are facing the most serious era of their 200 years in this country. They have the responsibility of seeing to it that the people of this country are not misled by false statements which come to them from foreign countries and foreign interests by means of radio.

"The Constitution, if interpreted loosely, offers to foreign nations an invitation to send their propaganđa into this country, and the radio provides them with the medium.

"If our form of government is to escape the fire of dictatorship which has burned through many of the countries of Europe, the newspapers of America must assume the burden of the battle because they are organized as free agencies to gather the news and to preserve democracy.

"The public still has confidence in the newspapers. Newspapers must hold that confidence against these foreign attacks and keep the public fully informed through interpretive news writing and telling and re-telling the merits and efficiency of the American press."

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FCC RULES ON AMATEUR LICENSE MODIFICATION

The Telegraph Division of the Federal Communications Commission has modified Rule 404, prescribing the scope of the examination for amateur operator license, as follows:

"a. Applicant's ability to send and receive in plain language messages in the International Morse Code (five characters to the word) at a minimum speed of 13 words per minute."

The former requirement was ten (10) words per minute.

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A favorable report on an application from Station WQDM, St. Albans, Vt., for a change in frequency from 1370 to 1390 kc. and for specified hours, was filed with the Federal Communications Commission this week by Examiner Melvin H. Dalberg.

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GROWTH OF POLICE RADIO SYSTEMS SHOWN IN NEW LISTS

The rapid expansion of police radio services in the past year is shown in two new lists issued this week by the Federal Communications Commission preparatory to the June 15th hearing at which time the police services, along with others, will be called upon to justify its use of limited ether waves.

As of June 1st, the list shows there were approximately 250 municipal police stations operating on emergency service, using frequencies from about 1600 to 2500 kc., and a similar number of police stations operating in general experimental service in the ultra-high frequencies.

Copies of the lists may be obtained from the offices of the Federal Communications Commission.

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THREE NEW CALIFORNIA STATIONS ARE RECOMMENDED

Examiners' reports recommending issuance of construction permits for the building of new broadcasting stations in Santa Cruz, Sacramento, and Fresno, California, were filed with the Federal Communications Commission.

Examiner Melvin H. Dalberg proposed, after hearing four applicants for new California facilities, that B. A. Thompson, of Santa Cruz, be granted a permit to build a station for operation on 1310 kc., with 250 watts power, daytime only, and that Howard N. Mitchell, of Sacramento, be authorized to build and operate a station on 1310 kc. with 100 watts power, unlimited hours.

Denial of applications by William B. Smullin, of Sacramento, and the Press Democrat Publishing Co., of Santa Rosa, California, was recommended in the same report.

Chief Examiner Davis G. Arnold recommended in another report that Julius Brunton & Sons Co., of Fresno, be granted a permit to erect a station for operation on 980 kc., with 250 watts power, daytime only. At the same time he urged denial of an application by Miles J. Hansen, of Fresno, for use of the 1420 kc. frequency.

A move by KFOX, Long Beach, Calif., to practically double its service area by extending into Los Angeles was balked in a report by Examiner Ralph L. Walker recommending denial of an application for increase in power from 1 KW to 5 KW daytime and 1 KW nighttime.

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"PHOTO-MIKE" INTRODUCED BY CBS AT REPUBLICAN CONVENTION

The photo-mike, latest development in portable radio transmitters, was to be introduced by the Columbia Broadcasting System during broadcasts of the Republican National Convention. Combining the properties of microphone and camera, the new device permits the taking of some thirteen candid camera pictures of the speaker whose words it is broadcasting. Unlike the lapel microphone first used by CBS on the floors of the 1932 convention, the new transmitter employs no wire lines. It will be used to carry the spoken word from impromptu interviews at convention gathering spots to Columbia's master booth in the hall. The photo-mike was conceived and developed by E. K. Cohan, CBS Director of Engineering.

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NEW FCC RULES DISCUSSED AT ENGINEER PARLEY

Radio engineers from all sections of the country gathered at offices of the Federal Communications Commission yesterday (Monday, June 8) to discuss the new rules promulgated for the various stations associated but not in the regular broadcast band.

All but one of the holders of television licenses agreed with the FCC Engineering Department that it would be better to abandon the band from 2,000 to 3,000 kc. for experimental visual broadcasting and to transfer operations above 30,000 kc. The only objector was Purdue University.

Various suggestions were made by representatives of the services affected by the new rules, and minor changes in the rules, which become effective July 1st, are expected to be announced by the FCC. The rules govern operations of facsimile, international, relay, high frequency, and television broadcasting.

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Denial of an application by Carl S. Taylor, of Dubois, Pa., for a construction permit to erect and operate a new broadcasting station on 780 kc. with 250 watts, daytime, was recommended to the Federal Communications Commission this week by Examiner R. H. Hyde.

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BURKAN, ASCAP COUNSEL, DIES IN N. Y.

Nathan Burkan, 57, a veteran copyright lawyer and one of the founders of the American Society of Composers, Authors and Publishers, died June 6th of acute indigestion at his estate in Great Neck, Long Island, N. Y.

Mr. Burkan, who was American attorney for Victor Herbert, the composer, and likewise numbered as clients and friends Charles Chaplin and other famous figures in the entertainment field, took up his fight to strengthen protection for the creators of music and literature in 1904. Five years later his efforts helped effect the copyright act of 1909.

At the time of his death, he was counsel for a number of the larger motion picture corporations.

He appeared before the Joint Committee on Patents of the Senate and House of Representatives and argued for the amelioration of the copyright laws on behalf of the Music Publishers' Association and the Authors and Composers Copyright League.

One of Tammany Hall's leaders, he refused public office on several occasions, although he did accept the chairmanship of the Triborough (New York) Bridge Authority.

Mr. Burkan is survived by his wife, two brothers, Joseph and David, and by a son, Nathan Burkan, Jr., 5.

The veteran lawyer represented Mrs. Gloria Vanderbilt in the recent fight over custody of her child. He once sued Mae West for alleged non-payment of fees.

At one time or another he had represented such well-known figures as Sir Thomas Lipton, former Mayor James J. Walker, Pearl White, Theda Bara, Eleanor Boardman and Florenz Ziegfeld.

Funeral services were held in New York today (June 9th).

A number of years ago Mr. Burkan and Victor Herbert, the famous composer, dropped into a Broadway restaurant one night. Everything was going full tilt. The orchestra was playing, the girls in the cabaret singing and dancing. Mr. Herbert turned to Mr. Burkan and said, "Everybody is getting paid for what they do here except me. We are paying for our food, the waiters are being paid, the orchestra is being paid, the singers are being paid - but I who write the music and the songs am not getting a damn cent."

Up to that time many successful composers had died in poverty and that evening's visit resulted in the organization of the ASCAP. First they exacted a tax on restaurant orchestras, then phonograph records, then the movies and then the radio. Mr. Burkan has always been chief counsel for the ASCAP.

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710-FOOT ANTENNA PLANNED FOR KDKA

Plans for a new antenna tower for KDKA, Pittsburgh outlet for the National Broadcasting Company's Blue network, were announced recently by the Westinghouse Electric and Manufacturing Company.

Construction of the new tower will start as soon as the necessary approval is obtained from the Federal Communications Commission and the Department of Commerce. Its site will be at KDKA's present transmitter location near Saxonburg, Pa.

This is believed to be the first tower of its kind to be erected for broadcasting service, and is expected to improve materially the reception of KDKA throughout the Pennsylvania, Ohio and West Virginia area. Although only five and one-half feet on a side, the new tower, a slender steel mast held erect by two sets of guys, is triangular in cross-section and will rise to a height of 710 feet, which is considerably higher than the University of Pittsburgh's Cathedral of Learning.

The structure will be one of the vertical radiator type, will be of uniform size throughout its entire length, and will in itself act as the antenna. Although similar antennas of smaller size have been used at the Westinghouse short-wave stations since 1923, this is believed to be the first time that one has been adapted for broadcasting purposes.

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THE FTC CLAMPS DOWN ON TWO RADIO ADVERTISERS

The Federal Trade Commission has just released information concerning the following two cases:

False and exaggerated claims on the part of Buno Co., Inc. 507 Green Street, Philadelphia, Pa., as to the remedial or curative qualities of "Buno", advertised over radio and by other media, and sold as a competent treatment for skin and scalp ailments, are alleged in a complaint issued by the Federal Trade Commission against that company. Friday, July 10, is the final date on which the respondent may show cause why an order to cease and desist from the practices complained of should not be issued.

An order to discontinue false representations in connection with the sale of cosmetic preparations has been entered by the FTC against Reta Terrell Sloan, trading as Reta Terrell, with her principal place of business at 513 Oakdale Ave., Chicago, and a branch at 50 East 10th St., New York City. The respondent is a radio advertiser.

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REPORT SPLIT ON AERONAUTICAL RADIO-A.T.& T. CASE

Making a lengthy report, Examiner P. W. Seward this week recommended to the Federal Communications Commission that the American Telephone and Telegraph Company be compelled to furnish private line teletypewriter service to Aeronautical Radio, Inc., but he suggested denial of the latter's demand for a special rate comparable to that given Federal agencies.

Aeronautical Radio last November filed a complaint against the A. T. & T., alleging unjust and unreasonable discriminations against it.

Following a lengthy inquiry, Examiner Seward found that the refusal of the telephone company to furnish the teletypewriter service at regular commercial rates is a violation of the Communications Act of 1934. He did not sustain, however, the contention of the complainant that a special classification known as "airways communications" be set up to provide lower rates for private airways communications services.

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MRS. BELMONT JOINS NBC ADVISORY COUNCIL

Mrs. August Belmont, noted New York social leader prominent in civic affairs, has accepted an invitation to become a member of the Advisory Council of the National Broadcasting Company. Mrs. Belmont's name was proposed at the recent tenth annual meeting of the Council, held in NBC headquarters in New York (Radio City). The invitation was extended by Owen D. Young, as Chairman of the Council.

The New York civic and social leader will take the place of the late Mrs. John D. Sherman, formerly national President of the General Federation of Women's Clubs. Mrs. Belmont will become Chairman of the Women's Affairs Committee of the Council.

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CBS FIXES NEW RATES FOR TWO NETWORK STATIONS

New rates for Stations WNAC, Boston, and KLZ, Denver, are announced by the Columbia Broadcasting System to become effective July 8th. They are:

	<u>1 Hour</u>	<u>½ Hour</u>	<u>¼ Hour</u>
Boston (WNAC)	\$400	\$240	\$160
Denver (KLZ)	\$200	\$120	\$ 80

No change is made in the rate of Station WAAB in Boston.

These rates supersede those shown on Rate Card #21, and apply to night-time broadcasts. Day rates and transition rates are to be increased in proportion.

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NEW RADIO PHOTO TRANSMISSION USED IN FRANCE

A new method of photo-transmission by radio has been developed by the Belin Company, of Paris, France, according to an article in a recent issue of Photography, published in London.

"The problem of radio transmission of pictures has now been solved by the Beling Company, which has devised an apparatus by means of which fading, principal difficulty of the past, is done away with, and which enables pictures to be wirelessly with as much sharpness as they can be cabled", the magazine states.

"The new system of transmission is the result of considerable experiment, which for the last six months has taken the form of test emissions between Paris and Algiers. The first regular installation for commercial purposes is to be installed in Djibouti, very shortly, for communication of pictures from Abyssinia to Paris."

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EXHIBIT OF EDUCATIONAL PROGRAMS PLANNED

The Eighth Annual Institute for Education by Radio, to be held in May 1937, will sponsor the first American exhibition of recordings of educational radio programs. The purpose of the exhibition is to further the broadcasting of valuable educational programs by calling attention to the more meritorious ones of each type. The exhibitors are to be classified into two groups: educational institutions and organizations, and commercial stations broadcasting educational programs. Awards will be made for the best of each of four different program types: (1) lecture, talk, speech; (2) demonstrations of musical selections, poetry readings, or classroom activities with explanations; (3) dialog, roundtable conversation, interview, debate, question and answer; (4) all forms of dramatization, including dialog where speakers take assumed parts.

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Reuter reports from Munich that, according to the South German Press, there are now 35,700 transmitting stations in the world, about 7,700 (or roughly 22 percent) of them broadcasting entertainment programs. The remaining 28,000 stations are concerned with radio services for ships, aeroplanes and other interests. Continental Europe alone has 2,000 stations which serve aeroplane traffic. Roughly 4 percent of the world's transmitting stations (numbering 1,448) are equipped for radio telephone services.

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BRITISH BRING INTERESTING PEOPLE TO MIKE FOR SCHOOLS

The reason for the success of educational broadcasting in the British Isles may be found in the following comment in a bulletin issued by the British Broadcasting Corporation:

"We often wish we had more time during the day to listen to the BBC broadcasts to schools. Looking over a list of people who had recently broadcast in the schools transmissions, we discovered a former air pilot, an ambulance man, a fireman, a train driver, the coxswain of the Dungeness life-boat, and even a deep-sea diver. It is part of the regular policy of the schools broadcasting authorities to bring interesting people to the microphone to talk about the day's work. One of the most interesting talks we actually heard was by a famous newspaperman, L. Marsland Gander, who described how a great newspaper was produced, how the news was obtained, and how hundreds of thousands of copies were distributed all over the country. Marsland Gander has not only had a long experience of work in Fleet Street, but of newspaper work in both India and Africa."

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MOVIE PRODUCERS' FEARS OF TELEVISION ALLAYED

Motion picture producers were told recently not to worry over the prospect that television would shortly put them out of business.

The Scientific Committee for the Research Council, Academy of Motion Picture Arts and Sciences, reported that Hollywood's "psychological preparedness" for television was in contrast to the costly "skepticism" with which many greeted the change from silent to sound pictures.

"The cost of development up to this point may be measured in millions of dollars", stated the Committee. "Before there is any possibility of nation-wide exploitation hundreds of millions of dollars must be expended for numerous transmitting stations of limited range, connecting cables of new design, and receivers. None of these things can be obtained overnight.

"There is a possibility of such a development starting in 1937 or more probably in 1938. It should be noted that its scope, as far as we can prevision it, is limited to home entertainment purposes in urban areas."

The Committee is composed of outstanding film technicians, with Carl Dreher as Chairman. It said that the film industry had "technically trained personnel, capable of following the progress of television and giving notice of impending developments."

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HEINL RADIO BUSINESS LETTER

2400 CALIFORNIA STREET

WASHINGTON, D. C.

CONFIDENTIAL — Not for Publication

INDEX TO ISSUE OF JUNE 12, 1936

Census Bureau Reports On Radio In Mountain States.....	2
Canada To Spend \$500,000 Extending Radio System.....	3
Gene Buck Delivers Eulogy At Burkan Funeral.....	4
Radio Allocation Changes Due As Quota Law Dies.....	5
Carnegie Institution Gets Experimental License.....	5
Greece Again Seeks Bids For Radio Stations.....	6
Payne Congratulated Upon Confirmation By Senate.....	6
ASCAP Wins Ruling In Washington State.....	7
BBC Raps U.S. Networks After "Queen Mary" Broadcasts.....	7
Effective Date Of FCC Rules Postponed Month.....	8
Radio Audience Of 1936 Analyzed In CBS Report.....	8
Hearings Scheduled On Request Of Amateurs.....	9
U.S.-Controlled World Communications Plan Drawn.....	9
RCA Handwriting Transmitter Is Demonstrated.....	10
Two New Vice-Presidents Elected By CBS.....	11
Australian Import Quota Date Changed.....	12
150 Stations Use Talks To Boost Radio Sales.....	12

No. 936

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CENSUS BUREAU REPORTS ON RADIO IN MOUNTAIN STATES

Total receipts of the 42 broadcast stations in the Mountain States, from sale of radio time during the year 1935, amounted to \$1,760,684, it was reported June 12th by Director William L. Austin, Bureau of the Census, Department of Commerce, in the fourth report of the new Census of Business series on the broadcasting business.

The report includes all broadcast stations in the eight Mountain States which sold time during 1935. There were 12 such stations in Colorado, 7 in Arizona, 6 each in Idaho and Montana, 5 in New Mexico, 3 in Utah, 2 in Wyoming, and 1 in Nevada.

About three-fifths (61.1 percent) of the time sales of stations in the eight States was derived from local advertisers. The remainder was received from national and regional advertisers who purchased time directly from the stations, and from national and regional networks as payment for network commercial programs carried by the stations.

More than three-fifths (62.1 percent) of the total time sales of stations in the Mountain States was received by Colorado and Utah stations. Colorado led the other States with total time sales of \$593,226, of which \$364,441 (61.4 percent) was local advertising. Utah was second with \$500,268 revenue from the sale of time, of which \$218,593 (43.7 percent) was local advertising.

Revenue as reported by the stations is the net billings for advertising time on the air, including the stations' proportion of network billings. It is computed after deducting quantity and time discounts.

The 42 Mountain Stations employed a total of 436 persons (monthly average) with an annual pay roll in 1935 of \$634,160. More than 91 percent of this pay roll was paid to full-time employees.

There was no seasonal fluctuation apparent in station employment in 1935. The number of persons employed ranged from a low of 408 in January to a high of 479 in December. The number of employees was smaller for the first few months of 1935 partly because of the opening of a new station later in the year. Monthly employment figures for those stations in operation continuously throughout 1935 indicate a gradual increase in numbers rather than a seasonal fluctuation.

Station talent, consisting of artists and announcers, totaled 149, or about one-third (31.6 percent) of total station employees. Of these, however, 72 (or 48.3 percent) were employed

on a part-time basis, and they accounted for 59 percent of all part-time employees. Artists alone accounted for 42.6 percent of all part-time employees. Station talent, including both artists and announcers, received 21.9 percent of the total pay roll for the week.

Technicians engaged in the operation and maintenance of broadcast stations made up the second largest functional group in numbers, but received a greater portion of the total weekly pay roll. They accounted for 25.3 percent of all employees and received 27.6 percent of the total payroll for the week.

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CANADA TO SPEND \$500,000 EXTENDING RADIO SYSTEM

Expenditure of \$500,000 to extend the national network of broadcasting stations in the Dominion of Canada was recommended in the report of the Special Committee to the House of Commons, proposing a set-up similar to the British system of radio control, according to a report to the Commerce Department from Ottawa.

The Committee recommended that the proposed corporation in control of radio broadcasting should immediately consider ways and means of extending national coverage either by connecting additional private stations to its network or by the creation of new outlets, the report stated, and recommended that the corporation be authorized to borrow up to \$500,000 from the Federal Government to extend coverage.

The Radio Committee's report, Assistant Trade Commissioner A. F. Peterson pointed out, does not indicate any fundamental change in policy regarding broadcasting in Canada. The principle of complete nationalization of radio broadcasting was reaffirmed but pending the realization of this objective it was recognized that private stations will necessarily continue to provide a large portion of programs for listeners and it was recommended that complete cooperation should be maintained between the proposed government radio corporation and private stations.

The Committee indicated that in case the corporation should take over any private outlets no value should attach to the license and no person should be deemed to have any proprietary right in any radio channel, the Trade Commissioner reported.

The proposed unit would replace the three-man Radio Commission now supervising radio activities in the Dominion. It would be headed by a Board of nine honorary Governors which would determine broadcasting policy, the functions being carried out by a General Manager.

Technical features of radio control should be under the direction of the Minister of Marine through the Radio Branch of that Department, in the opinion of the Committee. At present this is the licensing authority in Canada and questions of wave length, power of stations, collection of license fees and other operating matters should be directed from this Department, according to the Committee. Additional power to control outside sources of local interference was recommended.

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GENE BUCK DELIVERS EULOGY AT BURKAN FUNERAL

A eulogy on the service of Nathan Burkan, late counsel of the American Society of Authors, Composers, and Publishers, to protect copyrights, was delivered by Gene Buck, President of ASCAP, at the Burkan funeral June 9th in New York City.

"Nathan Burkan was the greatest copyright protector this nation has ever known", said Mr. Buck.

The funeral drew many well known figures in political and theatrical life, including Mayor LaGuardia and former Mayor James J. Walker.

Meanwhile there was speculation in broadcasting and music circles regarding the effect of Mr. Burkan's death on ASCAP and the whole copyright controversy.

Variety, in commenting on the matter, said:

"Uneasiness among broadcasters, particularly in NBC and CBS quarters, derives from the fact that they had looked to Burkan to conduct the defense of the infringements proceedings brought against them by Warner Bros., following the latter's walk from the Society. The networks and associated station defendants had, in turning over their cases to Burkan, felt secure about the outcome, since there was no one who knew better than Burkan the circumstances that led to Warner Bros. breakaway, the legal implications that allegedly bound WB to the five-year license which ASCAP has issued to radio stations, and the argument to be used in upholding the ASCAP writers' rights to the catalogs withdrawn by Warner Bros. Another factor made them confident was Burkan's No. 1 rating as a trial lawyer on issues of musical copyright.

"Indications are that the ASCAP board will, at its next meeting, vote that the attorneys associated with Burkan in his law firm continue to represent the Society. Two members of the firm who had been closely allied with Burkan in handling the Society's affairs are Loid D. Frohlich and Charles Schwartz, while another, Arthur Schwartz, of the same firm but no relation to Charles Schwartz, played a major part in the preparation of ASCAP's defense against the U.S. government's anti-trust suit. The Society may later change this legal representation and assign its business to two or three firms which would cooperate on major issues."

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6/12/36

RADIO ALLOCATION CHANGES DUE AS QUOTA LAW DIES

The way was opened for the expansion of broadcast facilities in some of the more sparsely settled sections of the country this week when the Wheeler Bill repealing the quota system or Davis Amendment became a law with the signature of President Roosevelt.

While the broadcast band is already crowded, leaving little room for new stations, the removal of the requirement that broadcasting facilities be allocated in general according to population will permit the Federal Communications Commission to improve the service in the South and the West.

This improvement may be effected by adding to the time of existing stations or increasing their power as well as authorizing the erection of additional small stations.

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CARNEGIE INSTITUTION GETS EXPERIMENTAL LICENSE

The Carnegie Institution, of Washington, this week was granted a license by the Federal Communications Commission, Telephone Division, to go ahead with its proposed experiments in the outler limits of the stratosphere - trouble zone of short-wave radio transmission.

The license, covering a construction permit for a station already built at Kensington, Md., just outside of Washington, will permit the making of continuous automatic recordings of the virtual heights of the ionized layers of the upper atmosphere and the variation of their critical frequencies throughout the seasons and the years.

Frequencies to be used are from 516 to 16000 kc. with a peak power of 800 watts.

While the experiments will be highly technical for the present, results may be obtained that will diminish, if not eliminate, some of the troubles that beset short-wave radio communication when changes occur in the ionosphere.

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GREECE AGAIN SEEKS BIDS FOR RADIO STATIONS

The establishment of a radio broadcasting system in Greece is again being considered by the Government of that country according to a report to the Commerce Department from Commercial Attache K. L. Rankin, of Athens.

In 1929, the report states, following an international competition, the concession for erecting and operating a station in Athens was awarded to the Marconi Company of London. Instead of developing the project, however, the Marconi Company assigned it to American interests and withdrew. The new concessionaires formed a local company but could not obtain the necessary capital to carry on the work. In November, 1935, the Greek Government cancelled the concession and international bids for the erection and operation of a radio broadcasting system were requested.

According to the terms of the international competition, the concession will be granted for a period of 27 years but the Government will have the right to purchase the entire system on twelve months' notice after it has been in operation and for five years, the report states.

The concession provides for the installation of three medium-wave and one short-wave stations, and for the construction of three fully equipped studios and office buildings. The stations are to be located at Athens, Salonika, and Corfu. The Athens station must be completed within eighteen months from the signing of the contract, while the remaining two stations must be ready for operation within two years. The Government will provide free land for the erection of the stations and the necessary office and studio buildings, the Commercial Attache reported.

The equipment and supplies required for the installation, operation and maintenance of the entire broadcasting system will be exempt from import duties and all other taxes, the report states.

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PAYNE CONGRATULATED UPON CONFIRMATION BY SENATE

George Henry Payne, of New York, was receiving congratulations this week from his colleagues and friends following the Senate's confirmation of his renomination for a 7-year term on the Federal Communications Commission.

As was expected, the confirmation came without any opposition in the last-minute rush before the Senate recessed over the Republican convention.

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ASCAP WINS RULING IN WASHINGTON STATE THIS WEEK

Judge Wright of the Thurston County Superior Court, Seattle, Washington, this week dismissed the State's case against the American Society of Composers, Authors and Publishers upon ASCAP's agreement to submit to the State's jurisdiction on matters of unfair trade practices. The decree vacates the receivership which was appointed a year ago over ASCAP's affairs in the State of Washington.

Judge Wright's finding which followed trial of the State's monopoly action, holds ASCAP to be an entirely useful agency and of service to music users, that its practices are not violative of the State's laws and that it may continue to do business in Washington. Judge Wright got the case after ASCAP had sought to have the issues involved transferred to the jurisdiction of the Federal Court. The court rejected the appeal, holding that it was up to a higher State court to determine whether the rights of those that ASCAP represented had been placed in jeopardy.

Several hours after the decision was announced ASCAP started making plans to reopen its Washington office.

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BBC RAPS U.S. NETWORKS AFTER "QUEEN MARY" BROADCASTS

The elaborate program of broadcasting the maiden voyage of "Queen Mary" led to strained relations between the British Broadcasting Corporation and the two American networks - NBC and CBS - and between BBC and the Publicity Department of the Cunard Line, according to Variety.

BBC officials complained that the Cunard line discriminated in favor of the United States radio chains and that keen competition between NBC and CBS proved troublesome to all concerned.

The amusement organ quoted an unnamed BBC executive's memorandum as follows, in part:

"The rivalry which exists between the American organizations, NBC and CBS, has reached a pitch which not only may result in bad programs but also has become farcical. Arrangements were made for various programs at least a week before the ship sailed. Already three alterations have been made in four programs. This is not good enough and is not fair to the executive staff of the BBC.

"It is no concern of ours if NBC and CBS chose to enter into what might be described as a stupid form of competition, but when it is likely to cut across or damage programs by the BBC, it then becomes a matter of direct interference by us."

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6/12/36

EFFECTIVE DATE OF FCC RULES POSTPONED MONTH

Because many broadcasters affected by the new rules (970 and to 1075) recently announced by the Federal Communications Commission did not receive copies in time to discuss them at an informal conference held on June 8th, the Broadcast Division on June 12th postponed the effective date of the regulations from July 1st to August 1st.

Services affected by the new rules are in the relay, international, visual, high frequency, and experimental bands and not in the regular long-wave broadcasting division.

A statement by the FCC explained that, while only one objection to the regulations was raised at the engineering parley, many persons complained that they had not had sufficient time to study the proposed changes.

The Commission also stated that briefs setting forth any constructive criticism or suggestions regarding the new rules will be received up until July 20th.

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RADIO AUDIENCE OF 1936 ANALYZED IN CBS REPORT

Almost everything about the radio audience of 1936 except the color of a listener's hair is set forth in an analysis of the radio audience of 1936 just issued by the Columbia Broadcasting System.

The report shows the distribution of radio sets by income levels, size of cities, and time zones. It tells how many listeners have autos, telephones, radios in their cars. The analysis even estimates how many sets are in daily use, how many hours, and by income levels, city-size, and time zones.

A breakdown of 22,869,000 radio homes in the United States among the States, counties and sections of the country will be issued shortly by CBS.

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6/12/36

HEARING SCHEDULED ON REQUEST OF AMATEURS

The Federal Communications Commission, Telegraph Division, this week scheduled a public hearing on the request of the American Radio Relay League, organization of radio amateurs, for expansion of the band assigned for amateur radiotelephony operation from 3900-4000 kc. to 3850-4000 kc.

Many licensed amateur operators are opposed to any expansion of the existing radiotelephony bands, the FCC stated, in scheduling the hearing for October 20, 1936.

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U.S.-CONTROLLED WORLD COMMUNICATIONS PLAN DRAWN

A plan designed to insure an American-controlled system of world communications is being developed by officials of the Federal Communications Commission, and is scheduled to be submitted soon to the State, War and Navy Departments for approval.

The program would provide for, and require, development on an economic basis of telephone, cable and radio-telegraph circuits direct from the United States to various points in Europe, Africa and the rest of the world.

One of the principal immediate objectives is to eliminate, as far as possible, the present system of routing many communications through London, thus giving to the British a measure of control over telephone and cable circuits, an official explained.

As the first step in developing direct radio-telephone service with transatlantic points other than London, a direct New York-Paris circuit will be tested beginning July 15 by an American company with the approval of the FCC. Telephone calls to and from Paris are now transmitted via London.

It was asserted that FCC officials believed that, in the future, negotiations between American communication companies and foreign governments should be carried out through the State Department, rather than direct, in order to assure a uniform system in keeping with our defense and other national needs.

It is held, further, by these officials that a long-range policy under Federal supervision has become essential if the country's interests are to be properly guarded.

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RCA HANDWRITING TRANSMITTER IS DEMONSTRATED

A new radio communication service by which entire letters may be transmitted in the exact handwriting of the senders was launched June 11th with the first demonstration of RCA's new ultra-short wave radio circuit connecting New York and Philadelphia. The circuit is unique in that it employs ultra-short radio waves with automatic relay stations and enables the transmission of drawings, type matter, handwriting and other visual material in facsimile, along with the simultaneous operation of automatic typewriter and telegraph channels. It is a completely secret system.

Chancellor Harry Woodburn Chase of New York University and Vice-President W. Chittin Wetherill of The Franklin Institute, Philadelphia, exchanged pictures and greetings by radio facsimile. Models of the first Morse apparatus were connected to the circuit and operated simultaneously with the newest facsimile equipment.

In a statement to guests present at the New York end of the radio circuit, David Sarnoff, President of the Radio Corporation of America, said: "Radio communication is today placing in useful public service, a region of the radio spectrum which only yesterday was virtually unexplored and scientifically unconquered territory. Having developed a technique of operation for the three meter band of radio wave lengths, we find in that region, a medium of transmission unlike anything that we have ever known.

"The most significant feature of the new communications development is that it marks the attainment of a radio circuit so efficient that we are challenged to take full advantage of it. We cannot only send messages in facsimile as fast as present equipment will allow, but we can send two pictures simultaneously, and on the same radio wave we can also add two automatic typewriter channels and a telegraph channel. Of course, this means that we do all those things in both directions at the same time."

The automatic repeater stations, which catch the micro waves flying in both directions and fling them on to their destinations at New York and Philadelphia, are located at New Brunswick, New Jersey, and Arney's Mount, near Trenton, New Jersey.

Each of the repeater stations employs two different transmitting wavelengths, or one for each direction. The two terminal stations each use one sending wave, making a total of six wavelengths, or frequencies, for the complete circuit. It was explained that, if it should be desired to extend the circuit beyond either terminal point, those six micro waves could be used over and over again in the same sequence. Thus, two waves of the same length would be generated at points about one hundred miles apart, and would not interfere with each other, because of the line-of-sight limitation to their range.

6/12/36

William A. Winterbottom, Vice-President and General Manager of R.C.A. Communications, Inc., was at the New York ceremony with Mr Sarnoff. At Philadelphia were Charles H. Taylor, Vice-President in Charge of Engineering, and H. H. Beverage, Chief Research Engineer of R.C.A. Communications, Inc., under whose direction the new system was developed.

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TWO NEW VICE-PRESIDENTS ELECTED BY CBS

Election of two new Vice-Presidents was announced June 11th by the Columbia Broadcasting System with the appointment of D. W. Thornburgh as Vice-President to take command of Columbia's increasing activities on the Pacific Coast and of H. V. Akerberg as Vice-President in Charge of Station Relations. Both appointments are effective immediately.

Mr. Thornburgh, formerly Assistant Manager of Columbia's Chicago office, will leave for the Coast early next month on a preliminary trip of inspection; will later establish a residence and Columbia's executive offices in Los Angeles. Mr. Akerberg formally takes over the duties of Sam Pickard, relieved of active duty at his request some weeks ago. Mr. Pickard, however, remains as a Columbia Vice-President. Although without specific assignment, he is still available to the network in an advisory capacity.

Joining the Chicago sales force of CBS in June, 1931, Mr. Thornburgh has served as an Executive Assistant to H. L. Atlass, CBS Vice-President in Chicago, since March 1935. His new appointment is further indication of Columbia's recently increased activities on the West Coast, where four major CBS shows are now, or will shortly be, produced (Camel, Lux, Campbell's Soups and Tomato Juice) and where the network has leased another theatre, the Music Box, in Hollywood.

Before joining CBS as Assistant Chief Engineer in October, 1929, Mr. Akerberg was associated with the Bell Laboratories, Inc., working closely with Columbia on technical problems concerning installation of facilities and new network organization. A year later he was made Chief Engineer. In this capacity, he devoted much of his time to research, a detailed study on synchronization attracting particular attention. He has assisted Mr. Pickard, in station relations, for the past two years.

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6/12/36

AUSTRALIAN IMPORT QUOTA DATE CHANGED

The effective date of the Australian import quota on radio and other commodities has been adjusted as follows, according to Andrew W. Cruse, Chief of the Electrical Division, Bureau of Foreign and Domestic Commerce.

Instead of stopping shipments not on the water by May 23rd, goods ordered on or before May 21st will be admitted extra-quota on the water on or before June 30th. Many classes of small electrical goods are included, which may be found in the June 7 issue of "Commerce Reports."

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150 STATIONS USE TALKS TO BOOST RADIO SALES

Approximately a hundred and fifty radio stations throughout the country are using a weekly series of fifteen minute talks entitled "You and Your Radio", prepared by The Radio Institute of the Audible Arts, of which Pitts Sanborn, prominent music critic, is Director, and furnished free of charge by the Institute.

The purpose of these broadcasts is to aid stations by increasing public interest in radio in general, and in the worth-while offerings of the particular stations; and to aid listeners by acquainting them with ways and means of utilizing this entertainment and education.

Since the Institute was founded a year and a half ago by Philco Radio & Television Corporation, it has released sixty of these talks. Some of the more recent subjects include "Vacationing with Radio", "Radio and Sports", "Music in the Making" and "Civic Education by Radio". Forthcoming talks will continue the Institute's policy of tying up current events with subjects of interest to both stations and listeners.

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The Federal Communications Commission on Wednesday last again recessed indefinitely the hearings in the investigation of the American Telephone & Telegraph Company's setup after a brief session. It is not expected that the inquiry will be resumed before Fall.

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June 16, 1936

PRALL OPENS LARGEST RADIO PARLEY; CITES ITS PURPOSE

Opening the largest radio engineering conference ever held in this country, Anning S. Prall, Chairman of the Federal Communications Commission, on Monday, June 15, outlined the objectives of the parley as follows:

- "(1) To determine the present and future needs of the various classes of service for frequencies above 30,000 kc., with a view toward ultimately allocating such frequencies to services;
- "(2) To secure for the public and the Commission a keener insight into the conflicting problems which confront the industry and the regulatory body in the application of the new frequencies to the service of the public;
- "(3) To guide experimentation along more definite lines as may be justified from the evidence presented at the hearing;
- "(4) To review present frequency allocations to services in the radio spectrum below 30,000 kc., and
- "(5) To assist the government in its preparation for the International Telecommunications Conference at Cairo in 1938.

"Neither individual applications nor individual assignments within service bands are relevant at this hearing" he added. "Such matters may more properly be taken up at hearings which the Commission proposes to hold at a later date, on more detailed subjects such as frequency assignments to stations within the broadcast band, details with respect to television, etc.

"This hearing should deal with development trends, general procedure and general frequency allocations to services. At this hearing the Commission is interested in such subjects as the relationship between frequency allocation, and the design, manufacture and sale of radio equipment.

"We are, and we believe everyone else is, tremendously interested in intelligent estimates of the future trends of radio. For example, will the trend of practical application of radio to the service of the public be toward the greater and more effective use of ultra high frequencies by existing services; or will the use of such frequencies be confined naturally to new services such as television, facsimile broadcasting, two-way police communication, aids for blind landing of aircraft, etc. In estimating trends, it seems that we should also take into consideration the possible effect a new service may have upon an established service.

"For instance, assuming that television ultimately will be practical, what indirect effect would it have upon existing broadcasting, and would this effect be such as to result in the use by regular broadcast stations of the ultra high frequencies for urban service rather than the existing medium frequency broadcasting band. In this connection, it must be remembered that we must safeguard the public's investment in receivers, and give consideration to the investment of the industry in existing facilities for the production and transmission of programs. Hence, we are particularly interested in information relative to this phase of the problem.

"Some feel that ultimately, through the progressive development of facsimile transmitters and receivers, it will be entirely practicable from a technical standpoint to print a newspaper in the home. I do not think it entirely unfeasible to anticipate such an application of radio to the service of the public in the future, because news service is dependent primarily upon speedy communications for the collection and dissemination of news to the public. In other words, time-saving is an absolute necessity and news loses its value as a marketable product immediately after it has become known to the public. Therefore, if there should be developed a practical facsimile receiver for home use at a reasonable cost, newspapers might desire to make use of this system to distribute news to the public, and if such news distribution system proved to be practical from both technical and economic standpoints, and provided such a service proved to be of sufficient importance, demands might be made upon the Commission to endeavor to provide space in the ether for this service to the public. On the other hand, if today it is the consensus of opinion that such a development is unlikely to occur, there would be no great need for extra space.

"As is well known, there is a physical limitation on the number of frequencies in any one band which are available for assignment at a given time for use in one area, depending on the existing state of the art.

"In addition to this physical limitation, this Commission has placed upon it administrative limitations in making allocations of frequencies to commercial and private agencies. For example, the Interdepartment Radio Advisory Committee must determine the needs of the various government departments for portions of the radio spectrum, and in this connection we hope that the evidence presented here by commercial enterprise will be of assistance to the Interdepartment Radio Advisory Committee in arriving at a just balance between government and commercial uses of the radio spectrum, and that as a result thereof the I.R.A.C. will present a constructive recommendation to the President of the United States with respect to allocation of frequencies to the various government services.

"Likewise, insofar as international communications and interference are concerned, we are bound by Article 7 of the Regulations of the Telecommunications Convention of 1932, held at Madrid, Spain. The Regulations will be in effect until superseded by international agreement to be reached at the coming conference at Cairo in 1938.

"However, in the consideration of its proposals to other governments with respect to any changes in the existing Regulations of the Madrid Convention, the United States Government has an opportunity to utilize the evidence presented at this hearing. The Commission has not the only voice in the preparation of these proposals, but I am certain that the various government departments and the Commission will cooperate in formulating the proposals for the Cairo Conference. The success of the United States delegation to the Cairo Conference will materially affect the ultimate frequency allocations to commercial services which the Commission will make in the future.

"In addition to securing agreement among the nations of the world with respect to allocation of frequencies to the various services and with respect to the uses of frequencies, as well as the prevention of interference, it is necessary for the United States to come to amicable arrangements with other nations in the North American region, particularly with respect to the use of individual frequencies within various bands, and with respect to more detailed matters than would be covered by a general international agreement with all the nations of the world. This has been done in the past; for example, the broadcasting arrangement with Canada, and the high frequency agreement with Canada, Newfoundland and Cuba in 1929, although since that date Cuba has denounced the arrangement. Such regional arrangements as can be made in the future will naturally have a specific bearing on the ultimate allocation of frequencies to stations and services which will be made in the United States, and, of course, may affect to some extent the engineering problems involved.

"We have represented here today practically every phase of the industry, including scientists, manufacturers, operators of stations, communication companies, executives, administrators and representatives from all government departments, as well as the entire Federal Communications Commission. We consider that the government and the industry have a most excellent opportunity to accomplish constructive and intelligent planning for the future development and application of radio to the service of the nation. This is an opportunity which hitherto has not existed very often, and I know it is the hope of everyone that we can make the best of the opportunity thus made available. I am certain that everyone here who testifies will do so from a constructive standpoint and with the aim of rendering service to the public."

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PUBLIC TELEVISION STARTED BY DON LEE SYSTEM

Getting the jump on the Radio Corporation of America, the Don Lee Broadcasting System early this month inaugurated the first public television setup in this country.

The transmitter and receiver were developed secretly during the last year and a half by Harry L. Lubcke, television director, and were demonstrated June 4th and thereafter placed on a regular daily schedule. Cathode ray television, framing 300-line images 24 times a second, is employed.

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RADIO AT CRUCIAL PERIOD OF DEVELOPMENT, SAYS CRAVEN

Radio is not only at the cross-roads in its comparatively brief development in the past twenty years, Commdr. T.A.M. Craven, Chief Engineer of the Federal Communications Commission, declared Monday outlining the technical aspects of the engineering hearing, but it appears to be "at the threshold of creating a new and important branch of the radio industry", as well.

"In my 23 years of active association with almost every phase of communications, I have never witnessed so vivid a cross-roads, nor have I known of such an opportunity for cooperative, constructive and intelligent planning as is before us at this hearing today, where the government and the radio industry are meeting to consider the radio problems of the immediate future", he said.

After sketching the history of radio from 1914, he continued:

"From 1927 to 1936, we not only witnessed a consolidation of the frequency allocations of 1927, but also a gradual growth in the demands of each service at a rate greater than the development in technical engineering refinements could accommodate within the allocation limits. So that now, in 1936, we discover that the developed portion of the radio highway is badly congested from 10 to 20,000 kc and rapidly becoming so between 20,000 and 30,000 kc., as well as in each portion allocated to individual classes of service. We also find that there are demands for new services such as television and facsimile for both ordinary communications and broadcasting. We find also that aviation is requiring more frequencies to afford better navigation in the air, and hence greater safety of life in the aeronautical industry.

"With the increasing use of modern developments by criminals of today, we find police departments all over the country feel that they need radio in order to facilitate the detection and prevention of crime. Demands are increasing for public radio telephone service both in marine and overseas circuits. We also know that the government must keep abreast of progress in its direct use of radio by the various departments and bureaus.

"Fortunately the scientists at this time have shown us that the useful portion of the radio frequency spectrum can be widened, so that we may soon have available frequencies from 10 to about 100,000 kc. The band from 100,000 kc. to 200,000 kc., while still in the laboratory, shows signs of soon being valuable for practical application, and in the band from 200,000 to 500,000 kc., we can see probabilities of future practical application to the service of the public. The spectrum from 500,000 to 10,000,000 kc. lies before us in the dim future, and I am unable to say anything about it, except to express faith that science can conquer it ultimately.

"The vacuum tube is useful today on frequencies up to about 100,000 kc., although improvements must be made in the efficiency of its operation thereon. Vacuum tubes for use on higher frequencies are in the process of development, and while there are extreme difficulties which may make permanent accomplishment a matter of slow progress, I see no reason why the engineering

talent of this country, as well as of the world, cannot also solve that problem ultimately.

"Among the important obstacles to be overcome is that of man-made interference, such as created by automobile ignition systems, X-ray machines, diathermy apparatus, and other industrial electrical apparatus. These can be overcome by effective cooperation between engineering scientists, all industry, and the government, and if the public demand for satisfactory radio is sufficiently great, I have no doubt of the successful solution of this phase of the future radio problems.

"So this brings us to today, when there are about to take place three important events which might affect the radio industry as a whole. The first is the fact that certain government departments feel that they have sufficient information with respect to the efficacy of the new portion of the spectrum to invest large sums of money in equipment to be used therein, and are desirous of obtaining allocation of certain frequencies for their exclusive use. It has been suggested that the Interdepartment Radio Advisory Committee, which is a committee consisting of representatives from various government departments and is charged with making recommendations on frequency allocations to the President, be called together this Summer for the purpose of ascertaining what allocations of frequencies in the new portions of the spectrum should be made to the government services. Their conclusions will form a recommendation to the President of the United States, who may, under authority of Section 305 of the Communications Act of 1934, approve the recommendation if he deems it proper to do so.

"The next important event is our preparation for the International Telecommunications Conference to be held in Cairo in 1938, at which various nations of the world may attempt to come to a new agreement with respect to allocation of frequencies to services. The proposals of the United States with respect to this subject are required to be submitted to other governments not later than November of this year. Interrelated with the General International Conference is, of course, the ever-present necessity and desirability of maintaining cooperative arrangements with the nations on the North American Continent. Such regional arrangements as may be made between these nations will affect the ultimate allocation of frequencies to services as well as the engineering methods to be utilized in the prevention of interference between stations within services. When the time is opportunity we may expect the possibility of such arrangements where necessary and in our planning for the future we should give consideration to the fact that other nations on the North American Continent also use radio.

"The third event is that recent scientific developments have indicated new uses for radio in new portions of the radio spectrum, and thus it would appear that we might be at the threshold of creating a new and important branch of the radio industry.

"Some fear we do not know enough to proceed with allocations of frequencies to services. To some extent this may be true. On the other hand, some feel that we have sufficient knowledge to proceed along definite practical lines, and they intend to do so. In my opinion, if one service should proceed without consideration of others, the danger that it may handicap those services which are not now ready, outweighs by far the danger that we may lack knowledge of details.

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"Another reason for proceeding with a frequency allocation to services at the earliest time information becomes available relative to the practical usefulness of frequencies in various portions of the radio spectrum, is the relation between frequency allocation and equipment design. Early information with respect to the space in the spectrum that will be assigned to a particular service will enable crystallization of the specific problems confronting the design engineer and should also be of vast assistance to the manufacturer in planning his future manufacturing processes.

"Your Engineering Department realizes the dangers of proceeding too hastily, but, on the other hand, we believe that if there is technical knowledge of a general character, we should not delay too long a decision which affects so vitally every phase of the industry. In my experience, progress in crossing relatively uncharted seas was never made by hesitating to proceed cautiously as slow speed."

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GOVERNMENT DEMANDS CREATE STIR AT HEARING

Dr. J. H. Dellinger, of the National Bureau of Standards, threw a bombshell into the opening session of the FCC Engineering Conference on Monday with an outline of the demands for governmental allocations of radio bands. He represented the Interdepartment Radio Advisory Committee.

Of the 1907 frequencies available in the assignable waves between 30 and 200 megacycles, Dr. Dellinger requested that 1012 be set aside for government use and 895 for non-government services.

"The government utilizes frequencies throughout the whole radio spectrum", he said. "In agreement with the practice of the Commission, definitive assignments have hitherto been made to stations at frequencies below 30,000 kilocycles and only experimental assignments at frequencies above 30,000 kilocycles. The assignments are in accordance with the Madrid Convention and General Radio Regulations. The government agencies unanimously feel that the Madrid band allocation has worked out very well. It is considered to be in general satisfactory. It is the present thought that only minor changes will be needed at the Cairo Conference, and none are definitely recommended at this time. It is suggested, in fact, that any proposals for changes in the Madrid band allocations be studied with great care.

"Complete data on the frequencies used by the government up to 30,000 kilocycles have been furnished to the Federal Communications Commission. It is understood that these data are included in the comprehensive tabulation of frequency assignments which the Commission has prepared for this occasion. It is therefore not considered necessary to present in this statement any additional information in regard to the frequencies below 30,000 kilocycles.

"We shall treat specifically herein the government's needs for frequencies above 30,000 kilocycles. The present status of development and availability of equipment for practical service suggests that definitive assignments of frequencies might well be made at this time up to approximately 200,000 kilocycles (200 megacycles). We are therefore proposing an allocation of frequencies for government use in the range 30 to 200 megacycles. It is thought that frequencies above 200 megacycles might well be retained in a purely experimental status for a considerable further period.

"It will perhaps conduce to clarity of consideration of this frequency range to mention that frequencies above 30 megacycles are in general suitable only for short-distance service, i.e., for dependable communication over varying distances up to about 40 miles with sporadic transmission to greater distances. It is important to note, however, that 30 megacycles is not a clear-cut limit of the frequencies suitable for regular long-distance transmission; there are times when frequencies up to some 50 or 60 megacycles are capable of transmission over very great distances. For example, transmission over several thousand miles was possible up to 40 megacycles practically every afternoon during the past winter. Researches on the ionosphere have shown that this occurs in general when the number of sunspots is large. As sunspots will reach their maximum in an eleven-year cycle about 1939, this condition can be expected to be pronounced during the next few years, and to become less thereafter. In allocating frequencies from about 25 to 60 megacycles it is necessary to take account of this fact that the frequencies will at times be long-distance frequencies and at other times short-distance frequencies, the times varying from year to year, season to season, day to day, and day to night.

"The most efficient use can be made of the available frequencies only when due regard is paid to a minimum frequency spacing. Except for television, this spacing, at frequencies above 30 megacycles, is determined not at all by the communication band width but by such considerations as the selectivity of receivers and the stability of transmitters and receivers. The frequency separation in particular cases, furthermore, must be determined by consideration also of the relative power of the transmitters, their geographical separation, antenna directivity, special circumstances necessitating guard bands, etc.

"Despite the differences in the requirements of individual cases, the orderly assigning of frequencies and the minimizing of interference will be promoted by establishing a definite basic system or list of assignable frequencies. The wisdom of such a course is amply demonstrated by experience in the assigning of frequencies below 30 megacycles. It is tentatively suggested, subject to possible amendment after study of all data available, that such basic system provide frequencies separated 0.1%. It is recognized that there will be few installations in the near future so highly developed that adjacent frequencies in this system could be assigned. In fact, some portable services require frequency separations of 1% or more at 30 megacycles. The 0.1% system, however, would allow for future progress, and meanwhile there would be no difficulty in restricting frequency assignments to such separations as experience indicated to be practicable.

"The minimum frequency separation determines the number of assignable frequencies in a given frequency range. They are inversely proportional. On the 0.1% basis there are 1907 assignable frequencies between 30 and 200 megacycles. It is pertinent to note that of these there are 1210 between 30 and 100 megacycles and 697 between 100 and 200 megacycles.

"The government employs practically every application of radio in its numerous services. In the past few years these various services have had an active part in the development and the utilization of frequencies above 30 megacycles. These frequencies have been found valuable for many government purposes. To mention merely a few examples these have included such purposes as law enforcement, aids to air and water navigation, military applications, forest fire protection, weather predicting, and various short-distance communication services."

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RESERVATION OF FREQUENCIES URGED BY SARNOFF

Advance reservation of frequencies to meet the needs of future services, such as television, facsimile, and high-frequency broadcasting, was suggested by David Sarnoff, President of the Radio Corporation of America, in a paper on "The Future of Radio" at the FCC Engineering Conference.

His summarized proposals follow:

"1. Because of the rapid strides of the radio art, advance reservations of frequencies should be made by the Federal Communications Commission to meet the needs of future services, such as television, facsimile and high-frequency broadcasting. This will enable these achievements of radio to give their greatest possible public service as soon as developed, instead of compelling them to contest with older services for adequate space in the spectrum.

"2. Except for experimental purposes, no allocations to individual applicants should be made in these reserved frequencies until actual public service is possible. No one should be permitted to reserve frequency space for future use and then let it remain idle while others carry the burden of development.

"3. In allotting frequencies the greatest economy and usefulness of the available channels should be promoted by requiring, so far as feasible, the multiple use of frequencies.

"4. In determining precedence in the allocation of frequencies, consideration should be given to services on the basis of their comparative importance to the public, the urgency of the tasks to be performed, and the requirements of the public to be served. Radio has made possible outstanding progress in mass communication. Ample allocation should be made for the greatest use of this public service for the broadcasting of sight as well as of sound, nationally and internationally.

"5. In time of war, or other emergency, all the equipment and resources of the radio industry, are by law placed at the disposal of the nation. The government departments interested in our national defense should, therefore, cooperate in making possible the greatest peacetime development of radio by limiting the number of frequencies requested for exclusive government use.

"6. A fundamental and comprehensive communications policy should be formulated, not only for the guidance of the Commission, but of all government departments, to safeguard the independence of America's communication system in international relations. This is especially important because American communication services are at a disadvantage in dealing with monopolistic state-owned foreign communication systems.

"7. In helping to determine the attitude of the United States in the International Communications Conference to be held in Cairo in 1938, the Federal Communications Commission should recommend a policy which will promote the greatest possible international use of radio communications. That Conference will be called upon to apportion the hitherto unallocated frequencies in the upper portions of the radio spectrum. In the international field as well as in domestic use these allocations should be safeguarded against any possibility of freezing radio development."

"We of the RCA are especially conscious of the complexity of the problems your Commission must solve in the public interest. That complexity results from a number of circumstances unique to the radio industry.

"First: It is the youngest of our country's great industries. Because of the aggressive and dynamic development of the radio art, it has reached its present proportions and its vast social significance in less than fifteen years. It has few precedents and no rules of thumb to formulate its policies. At every stage of its progress it must break new ground. It must always be a daring pioneer.

"Second: It is an industry that functions in the present, although it lives also for a greater future. Important new radio services are ready today for practical demonstration. Tomorrow they will be ready to serve the public. Others are still in the laboratory stage of development. But beyond are widening perspectives of usefulness; the promises of further radio possibilities which may well outweigh all the achievements of the past. These developments must be safeguarded against unnecessary restrictions. Radio progress must not be "frozen" at any point.

"Third: We deal in radio with a public treasure that - for the moment - is limited in its extent. The frequencies which make up the radio spectrum constitute one of the nation's most valuable natural resources. Each of them must be made to yield its maximum of service under the stimulation of every new discovery.

"These are the realities of today. But tomorrow, the pioneers in the radio laboratories may open up unlimited reservoirs of new frequencies and then your Commission must be ready to remold its rules to take advantage of the new opportunities, so that the public may benefit at once from these achievements.

"We have no definite yardstick with which to measure radio as a civilizing influence, in the education, entertainment and progress of mankind. But we do know that life itself has been revolutionized by the speed and completeness with which radio has drawn the most distant places, the most forgotten lives, into the orbit of civilization."

"Of the future industries now visible on the horizon, television has gripped the public imagination most firmly. Technically, television is an accomplished fact, although it is not yet ready commercially. In this field American research holds the lead and America's supremacy, as in other fields of radio, is universally recognized.

"To bring television to the perfection needed for public service our work proceeds under high pressure at great cost and with encouraging technical results. Other nations are accepting the standards and methods of RCA engineers and are applying them to the solution of their own television problems. Most of these foreign nations have been working with public funds. No such government subsidies of course have been available in the United States. None has been asked. But for more than a decade in years of plenty and in years of depression, a corps of RCA research engineers has been working unremittingly to give the art of television to the public. We are now entering advanced stages of that effort and will open an experimental television transmitting station in New York within two weeks. We believe that we have demonstrated again that private initiative can accomplish more in America than government subsidy has been able to accomplish elsewhere.

"The television which is assuming shape in our laboratories will not, as many persons assume without warrant, replace sound broadcasting or make sound receiving sets obsolete. The present sound broadcasting services will proceed without interruption. Television must find new functions, new entertainment and new programs.

"As soon as television has been brought to a point of practical service, it will be made available to the American people. But to protect the public interest, television should not be launched until proper standards have been fixed. Television reception as we now know it differs from sound reception in at least one decisive technical aspect. In sound broadcasting every receiver is built to pick up any transmission within its range of reception. On the other hand, television represents an integrated system in which sending and receiving equipment must be fitted one to the other, as lock and key. We must avoid the danger of costly obsolescence which hasty commercialization might inflict upon the public."

"It is the mastery of the ultra-high frequencies which is bringing television and facsimile within the area of practical use. We are steadily pushing farther into the higher regions of the spectrum which only yesterday constituted a 'radio desert', now being made fruitful."

"This expansion of the useful radio spectrum has only begun. Beyond the ultra-high frequencies lie the 'micro-waves' -- frequencies that oscillate at the rate of a billion cycles a second, wavelengths measured in centimeters instead of meters.

"Future developments in micro-waves may well prove revolutionary. In the past, radio operations have been confined to a limited part of the radio spectrum. Once we have conquered these micro-waves we shall have opened a radio spectrum of almost infinite extent. Instead of numbering the useable channels in a few scant thousands, the radio art will put millions of frequencies at the command of communication services of every kind. When that day comes - and I have no doubt that it will - there will be frequencies enough to make possible the establishment not only of an unlimited array of mass communication services, but of an unlimited number of individual communication connections. In that day each one of our millions of citizens may have his own assigned frequency to use wherever he may be."

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5-POINT TELEVISION PROGRAM RECOMMENDED BY RMA

A basic 5-point program to plan for the successful development of television in the public interest was recommended to the Federal Communications Commission by James M. Skinner, Chairman of the Radio Manufacturers' Association Special Committee on Television at the Engineering Conference on Tuesday, June 16th.

"Television will not be ready for the public for several years to come, but provision must be made now for its growth", said Mr. Skinner, who is also President of the Philadelphia Storage Battery Company, manufacturer of Philco radios. "Sound radio and television will not be competitors. Sound radio is used not only as a primary source of entertainment and education, but also as a background while reading, resting, working or playing bridge. Looking at television requires concentration. However, the addition of daily television programs at certain hours should be a very important addition to the home life of the American people."

The United States is not lagging behind in the perfection of television, Mr. Skinner explained, but owing to the larger area of the country and the lower density of the population the problems of providing a service are greater here than in Europe. He urged the Commission to adopt the following television policies:

1. Establishment of a single set of television standards for the United States so that all receivers shall be capable of receiving the signals of all transmitters.
2. Development of pictures free from distortion and blur, approaching ultimately the distinctness and clarity obtainable in home movies.
3. Provision for services giving as near nationwide coverage as possible, so that the benefits of television may be available to all sections of the country.

4. Provision for a choice of programs, that is simultaneous broadcasting of more than one television program in as many localities as possible, to avoid monopoly and to provide variety of educational and entertainment features.

5. Lowest possible receiver cost and easiest possible tuning, to stimulate domestic installations of television receivers, both of which are best achieved by allocating for television as nearly a continuous band in the air waves as possible.

While it is not possible at present to determine precisely what the selling price of a television receiver will be, it will most likely cost less than the average motor car, Mr. Skinner said. The fact that the American public has found ways and means of financing the purchase of more than 20,000,000 motor cars, indicates that there is a wide market for television.

"The present job of the Commission is to stake out for the public in the radio spectrum enough television space to preserve the possibility of a nation-wide television service", Mr. Skinner declared. "The Radio Manufacturers' Association feels that the Federal Communications Commission will supply the flexibility necessary to allow the art of television broadcasting to grow."

Television will further expand the service of radio to the American people as a source of education and entertainment, Mr. Skinner said. But unlike radio, television cannot "feel its way" through the early stages of its commercial growth, he added, pointing out:

"Unless tentative standards are now set, and later confirmed by extensive field tests under all sorts of conditions, receivers might be built and sold to the public which would be completely obsoleted within a year or two. Commercial television must be born full grown."

Experimental work in television has reached a "promising stage", Mr. Skinner stated, citing the experimental high definition television broadcasts which have been on the air for some time from the Philco Radio & Television Laboratories in Philadelphia and from RCA Victor at Camden.

With further development, television will provide a stimulus to increased employment and national prosperity, according to Mr. Skinner.

"The Radio Manufacturers' Association views television ultimately as a big business", he stated, "a business which will employ many thousands of people in the production and operation of broadcasting equipment, in the production of receiving sets, in the production of daily programs, and in the fields of distribution and service. Television, we believe, is one of the new businesses the country needs to create new jobs."

Engineers of the radio industry have already held many meetings under the auspices of the Radio Manufacturers' Association and have arrived at practically complete agreement on basic television standards, it was pointed out. Nine basic items have been covered, laying the groundwork for future television developments, all pointing to the same goal - a single television system for the United States, with every receiver capable of receiving every broadcast reaching its locality.

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SUPER-POWER HEARINGS POSTPONED UNTIL SEPTEMBER

Occupied as it is with a general study of the whole radio structure, the Federal Communications Commission has postponed until September 24th hearings on the requests of five stations for permits to step up their power to 500,000 watts or that of the nation's most powerful outlet, WLW, Cincinnati.

The five applications, filed by KNX, Los Angeles; WHAS, Louisville; WNG, Chicago; WHO, Des Moines; and WJZ, New York, were consolidated for the purpose of the public hearing. Other requests for super-power licenses, however, are expected to be filed and made a part of the hearing before Fall.

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NAB OUTLINES PROPOSALS ON RADIO BANDS

James W. Baldwin, Managing Director of the National Association of Broadcasters, outlined technical proposals for providing additional facilities for broadcasting stations while at the same time taking care of other services, at the FCC hearing June 16th.

"In our proposals we have named certain frequencies below 550 kc for broadcasting", he said. "Such use is in agreement with the policy of other nations of the world. The propagation characteristics of these long waves are such as would enable broadcasters to greatly improve the service in rural areas. This will be discussed in detail when we present our technical testimony. Also, in our proposals we have endeavored to provide for sound broadcasting on certain of the high frequencies. We need to know more about them before reaching final conclusions on all their characteristics. Based on the information we have, it is believed they may be utilized for local broadcasting. The specific frequencies requested have been named with the view of making maximum use of receiving sets that may be manufactured for high frequency reception, with a minimum of interference with other services and consistently with your expressed ideas of 'experimentation and evolution'.

"There is one difference between the proposals of the Radio Manufacturers' Association and our own in this regard. We proposed that the frequencies in the bands 36 to 38 mc and 62 to 64 mc be allocated for aural and facsimile broadcasting. Agreeably with the change which has been made in the RMA proposals, as first submitted, we will discuss when we offer our technical testimony, the feasibility of modifying our proposals so as to ask for 40 to 42 mc instead of 36 to 38 mc. The RMA propose that the frequencies 37 to 42 mc be allocated for aural broadcasting and they have objected to our proposal in respect to 62 to 64 mc because it would interrupt a continuous band for television.

"Our purpose in asking for the two bands are twofold: First, we do not know where long distance interference ends. We do know, however, that the probability of troublesome long distance interference, now or in the future, is very much less on 60 mc than on 40 mc. Adequate opportunity should be given to obtain reliable data concerning operation on the various high frequencies. Secondly, we do not consider it should be objectionable to anyone to provide for sound broadcasting in the television band. We know of no reason why the purchaser of a television set should be limited to the sound broadcasting service receivable on the television channels. Moreover, we know from experience that in the manufacture of receiving sets, quality of reception is often sacrificed at either end of the receiver band. It is, therefore, highly desirable that provision be made near the middle of the television band for aural broadcasting.

"A word about international broadcasting. We have proposed a widening of the international bands with but one view in mind. The existing conditions are chaotic. It would seem that this country either should make provision for an international broadcasting service of the highest quality and free from interference or give it up as a bad job. A sufficient number of frequencies, the maintenance of better standards, and more effective international regulations with regard to hours of operation, we believe, can be employed to improve our commerce with the other nations of the world.

"Our proposals also provide for the allocation of frequencies for aural, facsimile and frequency modulation, auxiliary broadcast service such as point-to-point relay for broadcasting, synchronization, mobile voice and facsimile pickup. These will be discussed in detail by another witness.

"Facsimile broadcasting is an impending new service. It is a method of record broadcasting. It is a service that can be supplied through the utilization of existing broadcast frequencies and broadcast transmitters. It is our contention that all frequencies allocated for aural broadcasting should be available for facsimile broadcasting as well. There is every reason to believe that facsimile broadcasting can supplement sound broadcasting. It is an economic waste to deny the broadcasters the opportunity to develop this new service through the use of existing broadcasting facilities. Moreover, the utilization of existing broadcast facilities will permit of the kind of competition that has made American broadcasting the greatest in the world. Prevent the development of facsimile on the frequencies that are used today and tomorrow for sound broadcasting and you may guide this new service into monopolistic hands.

"Now as to television. I appreciate we are concerned here with the technical problem of finding a place in the radio spectrum for its introduction. And we have endeavored to cooperate with other interested parties to suggest bands of frequencies which might be used for television broadcasting. The requirements for a television channel are very great. As far as we know now, one television channel will require a path almost six times as wide as that now devoted to all sound broadcasting in the United States. We have been able to suggest a plan of allocation which would provide eight television channels below 100 mc. This is not enough. A

great many technical considerations are involved and a discussion of these will be left to another witness.

"There are, however, more than technical considerations involved here. The American Broadcasting System is a competitive system. It is a great system because it has been competitive. It has meant a freedom of the air unmatched anywhere in the world. And our plea today is that you allow television to develop on the same basis. Better we delay the introduction of television than, in enthusiastic haste, inaugurate it and find that through the control of patents, so powerful an instrument is in the hands of too few people. Indeed this expression is but declaratory of the spirit of the Communications Act.

"Again, if television is ready to be inaugurated and if you can allocate sufficient frequencies to permit it to grow on the basis of a national competitive service then it seems to me you have a very great responsibility in determining in advance, whether for all practical purposes, the ownership of basic patents, and agreements, if any, between patentees, will permit competition in the construction of television transmitters and receiving sets. We should also know in advance what relationship, if any, may be established between the sending and receiving apparatus. Will there be freedom in the selection of receiving sets or will the use of terminal facilities be controlled in a manner comparable with the telephone? Surely everyone will agree that those who own television patents are entitled to a rich reward for their creative work, but because of the public service inherent in television, patentees should be denied the right to control its use. Keep it free from the hands of monopoly and allow it to develop only on a national competitive basis."

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HORLE SUGGESTS BROADCASTING ABOVE 30 MEG.

Proposing allocation of a portion of the radio spectrum above 30 megacycles for additional broadcasting assignments, Lawrence C. F. Horle, of New York, on June 16th appeared at the Federal Communications Commission hearing for the Radio Manufacturers' Association.

"While the Association cannot estimate what requests have been or will be made of the Commission for additional assignments to broadcasting", he said, "it believes that these additional allocations to broadcasting cannot possibly be adequate for providing additional facilities for purely local coverage, for such transfer of facilities to other bands as may be desirable or necessary in the interest of making possible more clear channel coverage of rural areas and for the encouragement of greater cooperation with the regulating authorities of our neighbor nations. The Association assumes that to meet these needs at least as many additional channels must be assigned to broadcasting as are already in use; and, additionally, that if such new allocations as are made are to provide for any considerable period in the future, several times that number of assignments must be contemplated.

"The Association thus concludes that the only solution to the allocation problem here presented lies in the allocation of a portion of the radio spectrum above 30 M.C. to additional broadcasting assignments of such a frequency range as will provide for all assignments in immediate prospect without duplication of frequency assignments and will thus provide for additional assignments as trial and experience point the way to rational frequency duplications.

"The Association is convinced that no allocation reasonably satisfactory from the stand-point of the American public is possible unless that allocation, like the band now devoted to American broadcasting is a continuous one, free of other services and well protected from interference by other services by the careful geographical distribution of assignments to other services in adjacent bands.

"With these, and other factors in mind, the Association wishes to recommend the allocation of the band between 37 and 42 M.C. to additional broadcasting assignments, both for aural broadcasting and for facsimile broadcasting as will be referred to later; and additionally recommends that whatever assignments in the region of 26 M.C. may have been contemplated, be not assigned to aural broadcasting.

"It believes that these additional assignments to aural broadcasting in the 37 to 42 M.C. band should allow not only of transmission of an audio band of 15 K.C. - a communication band of 30 K.C. - but that they should, in addition, provide a guard band of 10 kilocycles in contemplation of provision for emphasis of the high frequency portion of the audio frequency range in whatever form of predictortion may ultimately be found desirable in the interest of making possible complete fidelity of transmission. This, then, requires frequency separation of assignments of 40 K.C. and the Association so recommends.

"Additionally, the Association recommends that, at least, in early assignments to aural broadcasting in this high frequency band, assignments in the same geographical area be made with frequency separations of 200 K.C.

"Such recommendations as the Association wishes to make with respect to facsimile broadcasting are largely concerned with the aspect of its further development. It believes that provision for its early broadcast use can best be made by making eligible for facsimile broadcasting as an adjunct, i.e., midnight to morning service, all assignments to aural broadcasting in the interest of permitting the use of already operating aural broadcasting equipment in the practical development of this service. Further, the Association believes that in establishing the basis for allocations to the broadcast services during the next few years, assignments to facsimile broadcasting as a primary, i.e., twenty-four hour service, should be contemplated. It may ultimately develop that for this purpose an allocation somewhere between 1600 and 3000 K.C., or perhaps, even in the region of 26 M.C. will be found suitable.

"The Association recommends, in addition to providing for facsimile broadcasting as an adjunct service on all assignments to aural broadcasting, that additional assignments to facsimile broadcasting as a primary service be made in the 37 to 42 M.C. band referred to in the Association's recommendations with respect to

aural broadcasting. It is essential, of course, that in this band there be no interleaving of assignments to these two broadcast services for reasons that have already been given and it is, therefore, recommended that the assignments to facsimile broadcasting be limited to the lower end of this band, possibly between 37 and 38 M.C. and that the remainder of the band be exclusively devoted to aural broadcasting.

"It should perhaps be pointed out in closing, that the recommendations here made contemplate assignments which permit of commercial as well as technical development. If, however, allocations are to be made on a purely experimental, non-commercial basis, the membership of the Association will doubtless, in the future, as in the past, provide such receiving equipment as the public will find acceptable and of use in the development of the assignments made on the basis of these allocations."

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INDEPENDENT RADIO MANUFACTURERS SEE MONOPOLY

To prevent unjust levies of tribute on the public in the television field, Samuel E. Darby, Jr., of Darby & Darby, counsel in patent anti-trust courses, raised the issue of monopoly today at a hearing before the Federal Communications Commission. Mr. Darby appeared on behalf of eleven independent radio manufacturers who have produced about three-quarters of the radio sets in the United States; about eighteen million to twenty-five million.

Mr. Darby warned that the Radio Corporation of America R.C.A. is endeavoring to extend its radio patent pool monopoly to the television field. He warned the Commission against accepting the monopoly principle in television which costs the American people \$5,000,000 yearly and has cost them in tribute to R.C.A. about \$50,000,000 in the last nine years.

The same patents which have throttled the public in radio manufacture are in process of being used all over again in television.

The independent radio manufacturers, who include the makers of Philco, American Bosch, Zenith, Crosley, Sears Roebuck, Montgomery Ward, Emerson, Stromberg-Carlson, Motorola, Stewart Warner and Sparton, are working jointly in the public interest and their own interest to prevent their and the public's exploitation by R.C.A. in the new television field.

Mr. Darby urged the Commission to consider the record of those who apply for television licenses. He urged that television be not allowed to fall into the same state as radio manufacture had fallen into - in which the public pays tribute to the patent pool monopoly of R.C.A.

"Anti-monopoly today is a public interest issue, an issue taken out of partisanship by the recent strong anti-monopoly plank in the Republican platform and the equally strong anti-monopoly stand of the Democratic party which backed the Clayton Act and which will undoubtedly have a strong anti-monopoly plank in the forthcoming platform. In the public interest, this great new industry must be conserved by preventing monopoly from securing a stranglehold on it at its birth."

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PALEY SAYS NEW VENTURES MUST PAY THEIR WAY

"If broadcasting, aural, visual, or both, is to continue to advance, it must be economically sound", William S. Paley, President of the Columbia Broadcasting System, declared June 16th at the FCC engineering hearing. "It must be kept on a firm business footing. I do not think many of us will disagree on this point. It is part of the basic American viewpoint that a service which is to be a constructive force must be self-supporting. It must be alive enough to pay its own way. This makes it, among other things, responsive to the public will. For it must quickly adjust itself to the public demand, or lose revenue and be wiped out.

"It is worth noting, I think, that economic self-sufficiency has made American radio one of the finest broadcasting services in the world. It has certainly made it the most unshackled broadcasting service in the world. Its independence of political control is one of the surest guarantees that it will help perpetuate our representative political system.

"If private capital is going to continue doing the sort of broadcasting job it has started out to do in this country, its past investment must not be ignored. I say this because there must be constant encouragement to capital flow if the people of America are to have the benefit of every technical discovery, every creative advance.

"For this reason, sudden, revolutionary twists and turns in our planning for the future must be avoided. Capital can adjust itself to orderly progress, it always does. But it retreats in the face of chaos.

"We are on the threshold of a period of transition for the next couple of years. We should do everything in this period to advance experimentation. But we should do nothing to weaken the structure of aural broadcasting in the present band until experimentation in other bands has yielded us new certainties.

"The really immediate question in this connection is whether we should do anything at all to present commercial broadcasting facilities until we know where broadcasting is ultimately going. There already appear to be enough economic uncertainties for us to consider, without our voluntarily assuming still more at this time. The same consideration would apply to any sudden large addition to present aural broadcasting frequencies. Reckless expansion might so scatter the audience that it would be impossible for many small stations to survive economically.

"The same economic forethought should be applied to the proposed use of super-power for stations in the present broadcast band. Since the Commission is soon to give this subject full consideration, I need do no more now than emphasize the importance of balancing carefully the possibilities of increased service against staggering increases in costs of construction and operation.

"Probably the most important economic problem we must face - certainly the one uppermost in everybody's mind - lies in the approach of television. Perhaps not all of us realize just how important, or how great, this problem will be.

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"We may already have accustomed ourselves to think of higher program costs and rapid obsolescence. But I wonder if it would interest anyone at this meeting to learn that a competent preliminary estimate of the cost of a single television station - engineered only according to standards of present day experiment - was in excess of five hundred thousand dollars. And this cost, incidentally, was only for a station for experimental transmission.

"Next in importance, after the principle of economic soundness, is the principle of competition. Adherence to this second principle, also, is essential if the public is to be assured good service - constantly improving service. This is as true in broadcasting as in any other economic undertaking. Our sureness on this point arises from our own experience. The eagerness of broadcasters to compete for the goodwill and interest of the American audience has greatly advanced broadcasting.

"The third principle I want to stress has already been developed by the Commission's engineering staff. Your own engineers recommend that the Commission hold fast to a policy of experimentation and evolution, I emphatically agree.

"The final principle I want to mention is this: In assigning channels to individuals or to organizations, their demonstrated responsibility should be a fundamental consideration. In some instances this should be a responsibility to the whole American people; in others it should be a responsibility in and to the community the applicant proposes to serve. In aural broadcasting I think the need for such responsibility has been established beyond argument.

"The importance of the principle of responsibility, when we think of television, is limited only by our imagination as to the social and cultural force in the nation that television may eventually be.

"If television is to flourish, it must be made a nationwide service - a vital part of the life of the American people. Whatever the present technical difficulties, the day can hardly be distant when the public and our national interest will demand network television. It will be tremendously costly - that goes without saying. Even the preliminary foundation work cost millions. This can only be justified if adequate allocations are assured. A sufficient number, and, at least in the beginning, only a sufficient number, of responsible organizations signifying a desire to work toward a nationwide, coordinated service should be given some certainty that - if they meet definite requirements in performance - they will receive the necessary encouragement and allocations to go ahead.

"While we recognize the needs of governmental services, we believe their requirements should be very carefully studied, to determine, first, whether definite need actually exists, and second, the extent to which their needs could be taken care of by existing services, including other means of communication."

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INDEX TO ISSUE OF JUNE 19, 1936

FCC Swamped With Advice On Ultra-High Frequencies.....	2
Coast Guard Tests New Amplifier Device.....	3
Frequency Modulation Exhibit Sensation at Hearing.....	4
McCosker Urges Latitude For Television.....	5
Television Standards Recommended By RMA Witness.....	6
Police Chief Raps Commercial Grab At Ultra-High Frequencies....	8
List Of Representatives At FCC Hearing.....	9
Government Telegraph Rates Continued Another Year.....	12
Hearst Spokesman Suggests Broader Broadcast Band.....	13
Zenith Gets Grunow Plant, Plans Expansion.....	13
U. S. Lead In Radio Communication Cited By Jolliffe.....	14
Jett Explains Status Of Present Radio Spectrum.....	15
Briefs.....	18

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FCC SWAMPED WITH ADVICE ON ULTRA-HIGH FREQUENCIES

The Federal Communications Commission was so snowed under with gratuitous advice this week on what to do with the ultra-high frequencies that indications were it will take months for it to reach any conclusions. And the expert recommendations of technicians were just beginning.

So many witnesses appeared with carefully prepared papers that Chairman Anning S. Prall about the middle of the week suggested that most of them merely file their reports without reading them.

Television, and its possible effects on aural broadcasting and other radio services, was far and away the favorite topic. All speakers agreed that visual broadcasting, on a broad scale at least, is still several years ahead despite the approaching inauguration of ambitious experiments by the Radio Corporation of America, the Columbia Broadcasting System, the Don Lee Broadcasting System (already begun), and others.

The principal obstacle to more immediate public acceptance of the new art, it was brought out, is that receivers will be very expensive at the outset. James M. Skinner, President of the company that makes Philco radios, suggested that they may cost as much as a small automobile and that they will never come down to the level of radio receivers.

Caution in assigning channels in the ultra-high frequency bands was urged upon the Commission on all sides while at the same time government services, educators, organized police, and commercial interests clamored for substantial blocs of the unproved waves.

The FCC, it appeared, will need many more channels than those available above 30,000 kilocycles to meet the demands of all groups that have appeared at the hearing.

Even the commercial interests were fighting among themselves as well as collectively against the government services and the educational organizations represented by the U. S. Office of Education and the National Advisory Council on Radio in Education.

Warnings against monopoly in television and other new radio fields, such as facsimile broadcasting, came from the organized broadcasters, through James W. Baldwin, Managing Director of the National Association of Broadcasters, and from Samuel E. Darby, Jr., a spokesman for 11 so-called independent radio set manufacturers.

David Sarnoff, President of the RCA, which is leading the field in television and facsimile experimentation, was more aggressive than most of the witnesses in suggesting that advance reservations of frequencies be made for future services, such as television, facsimile, and high-frequency broadcasting. He stated, however, that individual allocations, save for experiments, should be reserved until public service is possible.

Dr. Frank Jewett, of American Telephone & Telegraph Company, protested, with others, loudly against the demand of Dr. J. H. Dellinger, speaking for the government services, for about 60 per cent of the frequencies between 30,000 and 200,000 kc.

Both Dr. Jewett and Mr. Sarnoff urged the Commission to give the industry ample latitude for experimentation, unrestricted by bureaucratic regulations.

William S. Paley, Columbia Broadcasting System President, who is watching RCA's experiments closely, warned the Commission against leaping into the dark "just for the sake of leaping" and advised against too hasty removal of the experimental ban on television.

Labor organizations, through Edward N. Nockels, of Chicago, warned against allowing "powerful corporations" or "selfish interests" to "hog the air".

"Whoever controls the allocation of radio channels in the future", he said, "will control the destiny of the land for good or evil."

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COAST GUARD TESTS NEW EMPLIFIER DEVICE

A newly-constructed public address equipment light enough to be installed in airplanes, yet sufficiently powerful to shout hurricane warnings over a radius of one mile, was demonstrated this week by the U. S. Coast Guard at Fort Hunt, Va.

The new equipment is to be installed in several selected Coast Guard airplanes and cutters in the principal hurricane areas to facilitate the spread of warnings to fishermen of the sudden approach of a storm. The loud speakers also will be used in flood-stricken areas and to direct rescues at sea.

Weighing only 115 pounds, the equipment, consisting of an amplifier, microphone, loud speaker and mountings powered by a single 15 volt battery, giving off 55 watts of current, is sufficiently powerful to be heard for a mile around an altitude of 3,500 feet.

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FREQUENCY MODULATION EXHIBIT SENSATION AT HEARING

A demonstration of a frequency modulation device by Maj. Edwin H. Armstrong, Professor of Electrical Engineering at Columbia University, and noted radio inventor, proved a sensation at the FCC engineering hearing this week.

Commissioners and FCC engineers showed an intense interest in the exhibit as Major Armstrong ran off disk recordings of both amateur and long wave broadcasts to show the superiority of frequency modulation to the amplitude modulation now in use by long wave stations.

Commdr. T.A.M. Craven, FCC engineer, was quick to point out, however, that the development could not be adapted to the regular broadcast band at this stage in radio transition as it would mean the scrapping of millions of dollars worth of transmitting and receiving equipment.

Major Armstrong ran off records of broadcasts from a Yonkers (N.Y.) ham station and a network long-wave station. The frequency modulation produced programs free from all static or noise, while the same records played with amplitude modulation were full of static, whistles, and other noises.

The recordings of the network programs were made, he said, during a severe thunderstorm in New York, yet they were reproduced with the clarity of a ringing bell.

Major Armstrong admitted that the frequency modulation, developed during the past two years, is impractical for adaptation to regular broadcast stations at this stage. He said it would require extremely wide band, so wide, in fact, that hardly more than one station could be established on the present regular broadcast band. He visualized the time, however, when the ultra-high frequencies will play a leading role in the field of aural broadcasting and when his invention will greatly improve the technical quality of radio transmission.

An amateur in radio in 1906, Major Armstrong is the inventor of the super-heterodyne and super-regenerated circuit and other radio developments. He has made a fortune in the radio industry but still is vitally interested in its technical progress at Columbia University, where he has been on the faculty for 20 years.

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Station WTIC (The Travelers Broadcasting Service Corp.,) Hartford, Conn., has filed an application with the Federal Communications Commission for an extension of special experimental authorization to change frequency from 1060 kilocycles to 1040 kilocycles, hours of operation from sharing with WBAL, to simultaneous with KRLD (unlimited) for period from 8/1/36 to 2/1/37.

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McCOSKER URGES LATITUDE FOR TELEVISION

An appeal for "logical latitude" in the control of television experimentation was made by Alfred J. McCosker, Chairman of the Board of the Mutual Broadcasting System and President of the Bamberger Broadcasting Service (WOR, Newark, N. J.) before the Federal Communications Commission hearing this week.

"The radio industry has reached the ripe old age of fifteen years and many of us who are before you today are the pioneers of yesterday", he said. "Therefore, our observations are taken from the pages of fact and not from the text of fiction.

"In the early twenties, transmitting equipment was very expensive and approximately one person in each 1000 population had a radio receiving set. At that time, radio had no immediate or definite prospective commercial value. Scores of stations similar to WOR undertook enormous expenditures in the spirit of adventure typical of our forebears in a field which gave promise of contribution to the public weal.

"For the first five years it was a continued expenditure with not one penny of revenue. During that period WOR spent a million dollars. What we did was duplicated by KDKA, WGY, the Chicago Tribune station WGN, the Detroit News, the Atlanta Journal and scores of others.

"In recent years, revenue has been obtainable but concurrently has come the need for improved equipment, enlarged operating personnel, extensive non-revenue public service programs and an army of costly talent.

"However, the real dividend, which we, the broadcasters, have received, exists in the fact that the U. S. admittedly has led the world in this new art. Other countries have adopted systems unlike ours; systems ranging from government ownership to government control and subsidizing stations to a listeners' tax. Whatever criticism may be directed at our system has its complete answer, not only in the comparison or progress, but greater still in the comparison of the availability of radio to education and every political and religious creed. The valued freedom of the press has, I contend, been personified in the American system of radio.

"Mindful of what I have said as to the early days of radio, may I point out that we are again facing a long series of pioneering in television, facsimile and kindred activities? Not one of these has commercial possibilities for many years to come. There are today fewer receiver sets capable of receiving the high frequencies than there were receiver sets capable of receiving the broadcast band in the early twenties.

"Unless the experiments we are now conducting and are about to conduct reveal something which has a tangible public value and public appeal, our efforts will have failed. If this experimentation be successful, it will require several years to build and distribute the receiving sets. Without the audience, the commercial possibilities are nil.

"How these new public services shall be controlled, it is not my purpose here to discuss. The serious problem of how

facsimile and television will be launched and controlled will be vibrant in giving concern to thoughtful minds.

"The important 'New York Times' in its Sunday editorial - yesterday (June 14) discusses the subject in a most capable fashion commenting on a study of television and the movies conducted by the Scientific Committee of the Research Council of the Academy of Motion Picture Arts and Sciences. 'The Times' propounds the question 'But who will guide the destiny of television when it does come? Will the radio companies assume control as their affiliation with sound pictures seems to indicate? Or will the Motion Picture industry simply evolve into a television organization which will concern itself with the transmission of images and leave the making and selling of receivers to the radio companies? Even now, the strategists must be laying their plans to wage a struggle that will decide which of the two conflicting groups is to entertain the continent.'

"It is obviously prudent to cross each bridge as we reach it. The bridge immediately ahead is that of experimentation. If the critics and debasers had prevailed, we would have had no Columbus, Pasteur, Bell, Edison, Byrd or Marconi.

"We, therefore, earnestly bespeak of this Commission to give the greatest logical latitude towards the interested and courageous individuals and corporations who now propose to hazard additional money to make available to the public the new wonders of facsimile and television."

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TELEVISION STANDARDS RECOMMENDED BY RMA WITNESS

Declaring that the time has arrived for the radio industry to recommend tentative television standards and to suggest frequency assignments to the Federal Communications Commission, Albert F. Murray, one of the Radio Manufacturers' Association's expert witnesses at the engineering hearing this week said the RMA considers the following to be important basic television requirements:

- "1. A single set of television standards for the U.S.A.
- "2. Frequency channels of adequate width, 6 Mc., necessary for the transmission of high-definition pictures - pictures which experience has shown possess sufficient detail to afford sustaining interest - pictures which will approach the quality of home movies.
- "3. Television, with its accompanying sound, should be in that portion of the ultra-high frequency spectrum best suited to this service (the 42-90 Mc. region). This band must be wide enough for a sufficient number of channels to permit the simultaneous broadcasting of a reasonable number of programs in a given territory.

- "4. The television frequency band, or bands, should be as continuous as possible because of the convenience this affords in tuning, and because this permits the design of simpler, cheaper home television receivers.
- "5. A space in that experimental region above 120 Mc. for television relaying, pick-up work and expansion. This space is to be shared with other services until that time arrives when, in the opinion of the Commission, definite assignments should be made. Then there will be required the allocation of a continuous band wide enough for a sufficient number of channels for future television service."

Turning from purely technical consideration to the economic and social side of television, he said:

"In order that television may avoid the difficulties now being experienced in aural broadcasting, let us plan at the outset channels of sufficient width and proper arrangement. This means that plans for high-fidelity television, based on the standards suggested by the radio industry, must be laid now. Any other course will later lead to the obsolescence of television receivers.

"How will this new art affect our national life? Television, supplementary to, but not taking the place of sound broadcasting, will some day win for itself a place of importance in our national life approaching that of present-day aural broadcasting. We say this because we engineers have observed with keen interest the reaction of individuals to whom we have shown television. The groups have been small but sufficiently varied to present a cross-section of public opinion. With one accord they have expressed deep interest.

"We believe television, when it reaches the commercial stage, will form the basis of a new industry, an industry producing television equipment in our factories and producing programs in the studios. Thousands of workers will be required to manufacture, distribute and maintain television service in the U.S.A.

"Naturally television will some day become the useful and valued servant of a large portion of the American people. The number of our people to be served will be limited by (a) the range of television transmission on ultra-high frequencies, averaging about 25 miles, (b) the initial cost of transmitters, receivers and programs, and (c) the yet unsolved problems of utilizing for transmission the higher end of the ultra-high frequency band.

"In asking for the frequency band beginning at 42 Mc. we point out that this part of the spectrum is now, and for years has been allocated by the Commission to experimental visual broadcasting. It has been found that in this band the peculiar requirements for television (that is, wide channels and metropolitan coverage) can be met, at least at the lower frequency end. It is logical, therefore, to ask for the continued use of these frequencies. The wisdom of the Commission in designating, five years ago, this particular band for this particular service is shown by the radio industry's recommendations today contained in the formal report from the Radio Manufacturers' Association."

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POLICE CHIEF RAPS COMMERCIAL GRAB AT ULTRA-HIGH FREQUENCIES

Declaring that the ultra-high frequencies are in danger of being "gobbled up" by commercial interests, Capt. D. S. Leonard, of the International Association of Chiefs of Police, told the Federal Communications Commission at the engineering hearing that it was the duty of the organized police to seek a just share of the new wave bands.

The amateurs are entitled to the "lion's share of credit", he said, for developing communication in the ultra-high frequencies.

"I wouldn't have the fortitude even though representing the important service I do", he added, "to stand before you in an attempt to confiscate this important band between 30 and 42 megacycles to the exclusion of commercial and other interests who have just needs for such channels in promoting good and welfare.

"And if any service, governmental or otherwise, thinks they are going to get away with that without hearing from the service which protects the lives and property of citizens in times of peace as well as war, they are mistaken.

"We would betray a sacred trust if we didn't seek our just share of frequencies."

Dividing police needs into four classes, Chief Leonard said that the State Police system, which now has 12 frequencies, seven of which are shared with Canada and two with municipal stations, should have at least 16 additional channels.

"Municipal police have 22 frequencies of which 10 are shared with Canada in 2310-2490 kc.", he continued. "There are now 230 municipal stations. The present conditions are far from satisfactory and with a 2-way development a 300 per cent increase in messages has resulted.

"We admit we must make our frequency tolerance more rigid and that selective receivers will have to be manufactured and used by police."

In the ultra-high frequencies, the Police Chief added, a city operating 250 cars needs five fixed and ten mobile stations. For the intercity policy radio system, eight fixed stations, ten mobile, four fixed mobile, and one special mobile stations are required.

Television and facsimile, he said, will aid in the transmission of photographs of criminals and finger-prints from one city to another.

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LIST OF REPRESENTATIVES AT FCC HEARING

Partial list of those attending the informal engineering hearing before the Federal Communications Commission:

John Aitkenhead, Jr., Akron, Ohio, Station WADC; Fred W. Albertson, Radio Lawyer, Washington, D. C.; R. D. Armiger, Short Wave Institute of America, Washington, D. C.; Edwin H. Armstrong, Columbia University, New York City; Isaac Z. Bachwalter, Mason-Dixon Radio Group, Inc., Lancaster, Pa.; J. Wm. Bain, Canadian Government, Ottawa, Canada; I. R. Baker, RCA, Camden, N. J.; James W. Baldwin, Managing Director, National Association of Broadcasters, Washington, D. C.; Thomas Baker, Press Wireless, Inc., Hicksville, New York City.; John H. Barron, Consulting Radio Engineer, Washington, D. C.; W. E. Beakes, Tropical Radio Co., Boston, Mass.; Carroll O. Bickelhaupt, American Telephone & Telegraph Co., New York City; Harold R. Blomquist, United Electric Railways Co., Providence, R. I.; H. L. Blatterman, Chief Engineer, Station KFI, Los Angeles, Cal.; L. F. Bockerem, Western Electric Company, New York City; Ralph Bown, Bell Telephone Laboratories, Maplewood, N. J.; John B. Brady, Lawyer, Washington, D. C.; Wm. M. Brandon, Central Broadcasting Co., Davenport, Ia.; B. F. Brooke, Penna. R.R. Co. (Retired), Philadelphia, Pa.; Elmer L. Brown, Chief Engineer, Brown Rayphones, San Francisco, Cal.; J. Stanley Brown, President, Washington Radio Club; Observer PEPCO, Washington, D. C.; Carl H. Butman, Radio Consultant, Washington, D. C.

Martin Campbell, Gen. Mgr., WFAA, Dallas, Texas; E. K. Cargill, Pres., WMAZ, Macon, Ga.; H. K. Carpenter, V.P., Gen-Mgr., Radio Air Service Crp., Cleveland, Ohio; Howard A. Carter, Sec. of Council on Physical Therapy, Chicago, Ill.; Lloyd N. Chatterton, Cleveland Police Dept., Cleveland, Ohio; Ralph Clark, V. Pres., Television Corp. of America, New York City; Robert L. Coe, Station KSD, St. Louis, Mo.; E. K. Cohen, Columbia Brdcstg. System, New York City; J. O'R. Coleman, Edison Elect. Inst., New York City; F. B. Coles, Canadian Pacific RR., Montreal, Canada; Ray Collins, Station WFAA, Dallas, Tex.; A. L. Colston, N. Y. C. Board of EA, New York City; H. L. Cornell, Amer. SS Owners Assn., New York City; H. P. Corwith, Western Union Telg. Co., Watermill, L. I., N.Y.; A. J. Costigan, Radiomarine Corp. of America, New York City; Homer B. Courchene, Downers Grove, Ill., Station WLS; Andrew W. Cruse, Dept. of Commerce, Washington, D. C.; L. G. Cumming, Engr. Metropolitan Dist. Com., Boston, Mass.

Raymond Dalton, Station WDNC, Durham, N. C.; C. F. Daugherty, Station WSB, Atlanta, Ga.; Jas. F. Davenport, Supt. of Hydro Generation, Los Angeles, Cal.; C. E. Davies, Western Union; Dr. J. H. Dellinger, Bureau of Standards, Washington, D. C.; Paul A. deMars, Yankee Network, Boston, Mass.; G. J. Dempsey, Engineer, FCC, Washington, D. C.; Edw. C. Denstaedt, Detroit Police Dept., Detroit, Mich.; Jno. D. DesRocher, Supervisor of Police Station, WRDR, Grosse Pointe, Mich.; Hon. C. C. Dill, radio Lawyer, Washington, D. C.; F. M. Doolittle, Manager, WDRC, Hartford, Conn.; Jas. G. Drysdale, Chief of Police, Grosse Pointe Park, Mich.; J. D. Durkee, Western Union Co., Chief Engr., Bartlesville, Okla.; H. W. Eales, Rep. Edison Elect. Inst., Chicago, Ill.; E. W. Engstrom, RCA Mfg. Co.; Walter Evans, Westinghouse E & M., Springfield, Mass.

F. B. Falkner, Col. Brdcstg. Syst., Chicago, Ill.; Philo T. Farnsworth, Farnsworth Television, Inc., Philadelphia, Pa.; Capt. Chas. D. Farmer, Capt., State Highway Patrol, Raleigh, N. C.; John E. Fetzer, Pres., WKZO, Inc., Kalamazoo, Mich.; W.G.H. Finch, Finch Telecommunications Labs., New York City; Ben S. Fisher, Radio Lawyer, Washington, D. C.; Donald Flamm, Pres., Station WMCA, New York City; Wm. L. Foss, Cons. Engineer, Washington, D. C.; Lt. F.R. Furth, U.S. Navy, Washington, D. C.

D. W. Gellerup, Milwaukee Journal Co., Milwaukee, Wis.; Glenn D. Gillett, Cons. Radio Engr., Washington D. C.; Theo R. Gilliland, Amer. Section Inter. Natl. Scientific Radio Union, Washington, D. C.; Earle D. Glatzel, Edison Elec. Inst., Detroit, Mich.; Paul F. Godley, Cons. Engineer, Montclair, N. J.; G. N. Goldberger, Chf. Engr. Television Research Corp., Brooklyn, N. Y.; Paul Goldsborough, Aero. Radio, Inc., Washington D. C.; Dr. P. C. Goldmark, CBS, Brooklyn, N. Y.; Paul J. Gollhofer; Emil J. Gott, Hearst Radio, Inc., and E. J. Gough, same, New York City; V. Ford Greaves, Chief Insp., FCC, San Francisco, Cal.; William Green, Amer. Fed. of Labor, Washington, D. C.; S. D. Gregory, Westinghouse E. & M., Springfield, Mass.; Gerald C. Gross, Engineer, FCC, Washington, D. C.; James W. Gum, Radio Lawyer, Washington, D. C.

C. D. Haigis, Haigis Labs. & Dept. of Con. & Dev. Forest Fire Service, of N.J., Maple Shade, N. J.; Hugh A. L. Half, WOAI, San Antonio, Tex.; J. T. Hallman, Plant Engr., WOAI; R. V. Hamilton, St. Louis Star Times, Station W9XOK, St. Louis, Mo.; James H. Hanley, Radio Lawyer, Washington, D. C.; E. H. Hansen, 20th Century Fox Film Corp., Hollywood, Cal.; Harry Harvay, Chf. Engr., KFAB-KOIL, KFOR, Lincoln, Neb.; Herman Haverkamp, N.Y.C. Bd. of EA, New York City; Volney D. Hurd, Christian Science Monitor Boston, Mass.; J. G. Haycock, Haigis Labs., Inc., Maple Shade, N.J.; Alan Hazeltine, Hazeltine Corp., Hoboken, N.J.; Ralph Heintz, Globe Wireless, Ltd., San Francisco, Cal., Palo Alto, Cal.; P. J. Hennessey, Jr., NBC, Washington, D. C.; Jas. M. Herring, Univ. of Penna., Lansdowne, Pa.; Walter R. Hoffman, Detroit News Station WWJ, Detroit, Mich.; Hamilton Hoge, Television Corp. of America, New York City; Paul W. Hord, Lt., U.S. Navy, Washington, D. C.; C. W. Horn, Engineer NBC, New York City; L.C.F. Horle, Cons. Engineer, New York City; Harvey Hoshour, A. T. & T., New York City; G. Porter Houston, Baltimore, Brdcstg. Corp. WCBM, Baltimore, Md.

E. C. Immel, Engr. in Charge, Mich. State Police, E. Lansing, Mich.; Geor K. Jacobsen, Ch. Engr. Stations WDGY WIXAT KIRI, Minneapolis, Minn.; J. F. Jarman, Jr., WDNC, Durham, N.C.; Dr. Frank Jewett, A. T. & T., New York City; Edw. R. Johnston, WIP, Philadelphia, Pa.; W. R. Johnston; Dr. C. B. Jolliffe, RCA of America, New York City; Ralph D. Jones, Engineer FCC, Washington, D. C.; Alexander Kahn, WEVD, New York City; Lambdin Kay, Atlanta Journal, Atlanta, Ga.; Wm. D. Kelly, WFBR, Baltimore, Md.; Bruno W. Kern, Asso. Engrs., Newark, N. J.; Kern Emil A., same; Ralph H. Kimball, Western Union, New York City; S. M. Kintner, Westinghouse E. & M., Pittsburgh, Pa.; Glenn Koehler, Asst. Prof. of Elec. Engr., U. of Wis., Madison, Wis.; Chas. C. Kolster, Inspector in Charge, FCC, Boston, Mass.; F. A. Kolster, International Tel. & Tel., New York City.

Glen G. Langdon, American Gas & Elec. Co., Danville, N. J.; Leroy G. Leighton, Aviation Division, State Road Dept., Jacksonville, Fla.; Leroy J. Leishman, Independent Research, Los Angeles, Cal.; John C. Leitch, WCAU Brdcstg. Co., Philadelphia, Pa.; R. D. LeMert, V. P., DeForest Television Corp., Hollywood, Cal.; Walter S. Lemmon, International Business Mach. Corp., New York City; Capt. D. S. Leonard, International Asso. Chief of Police Detroit, Mich.; G. F. Leydore, WLW, Mason, Ohio; Fred M. Link, Radio Consultants, New York City; Donald K. Lippincott, Farnsworth Television, Inc., San Francisco, Cal.; W. B. Lodge, Columbia Brdcstg. System, New York City; Philip G. Loucks, Radio Lawyer, Washington, D. C.; P. A. Loyet, Tech. Director WHO, Des Moines, Ia.; Harry R. Lubcke, Director of Television, Don Lee Brdcstg System, Los Angeles, Cal.; Leon Levy, WCAU, Philadelphia, Pa.; G. F. Luydorf;

Mark L. MacAdam, Technician, Construction & Maintenance, Brockton, Mass.; J. O. Maland, V.P. WHO, Des Moines, Ia.; T. P. Mathenson, Amateur radio, Richmond, Va.; Tech. Dir. Mason-Dixon Radio Group, Inc., T. E. Mathief, Lancaster, Pa.; Maynard Marquardt, WCFL W9XAA W9XI, Chicago, Ill.; John Marshall, Rockefeller Foundation, New York City; Frank Marx, Station WMCA, New York City; Clair R. McCollough, Gen. Mgr., Mason-Dixon Radio Group, Inc.; Alfred J. McCosker, WOR, Newark, N. J.; Jas. C. McNary, Radio Engineer, Washington, D. C.; G. O. Milne, Eastern Division Eng., NBC, New York City; J. M. Moroney, WFAA, A. H. Bele Corp., Dallas, Tex.; Laurence F. Mott, Wisc. Conservation Dept., Tomahawk, Wis.; Frank E. Mullen, RCA, New York City; J. D. Munton, Atlancit Communications Corp., Upper Darby, Pa.; Adrian Murphy, CBS, New York City; Albert F. Murray, Philco Radio & Television Corp., Philadelphia, Pa.

W. D. Neil, Canadian Pacific Ry. Co., Montreal, Canada; Eliot Neww, Director of Public Safety, Cleveland, Ohio; John L. Niesse, Detroit, Mich.; E. N. Nockels, WCFL, W9XAA W9XI, Glencoe, Ill.; G. S. O'Connor, Md. State Dept. of Forestry, Baltimore, Md.; Harold L. Olesen, Western Elect. Instr. Corp., W. Orange, N. J.; H. S. Osborne, A. T. & T., New York City.

William Pabst, Brooklyn Technical High School, Garden City, L. I.; E. C. Page, Cons. Engr., Evanston, Ill.; William S. Paley, Pres., CBS, New York City; Herbert M. Peck, WKY Oklahoma City, KLZ, Denver, Oklahoma City, Okla.; Harold G. Peery, Don Lee Brdcstg. Syst., Los Angeles, Cal.; Armstrong Perry, Washington, D. C.; R. M. Pierce, WJR WGAR, Cleveland, Ohio; James V. Piersol, Detroit News, Detroit, Mich.; J. R. Poppele, WOR, Newark, N. J.; Haradon Pratt, Mackay Radio & Telg. Co., New York City; M. L. Prescott, General Elec. Co., Schenectady, N. Y.; Arthur G. Previn, Elect. & Exporter, Washington, D. C.; Walter J. Quick, Jr., Md. State Dept. of Forestry, Baltimore, Md., Catonsville, Md.; E. J. Quinn.

Wm. Q. Ranft, Chf. Engr. WFBR, Baltimore, Md.; Geo. P. Rankin, Jr., WMAZ, Macon, Ga.; Robt. Robins, New York City; R. J. Rochwell, Crosley Radio Corp., Cincinnati, Ohio; Reed T. Rollo, Attorney, Washington, D. C.; Paul Rosekrans, Communications Engr., State of N. C., Raleigh, N. C.; Harold Rothrock, Attorney, Washington, D. C.; Comdr. W. J. Ruble, Bureau of Engr., Washington, D. C.

Edw. R. Sanders, Development Engr., WTIC, Hartford, Conn.; David Sarnoff, Pres. Radio Corp. of America, New York City; Lt. C. J. Scavarda, Mich. State Police, E. Lansing, Mich.; Arthur Scharfeld, Attorney, Washington, D. C.; Wm. J. Scripps, Station WJW & W8XWJ, Detroit, Mich.; G. Richard Shafto, WIS, Columbia, S. C.; H. G. Shrode, Coast Guard Hdqrs., Washington, D. C.; A. G. Simson, U. S. Forest Service, Portland, Ore.; Lloyd H. Simson, Bureau of Air Commerce, Washington, D. C.; Hector R. Skifter, Natl. Battery Brdcstg. Co., St. Paul, Minn.; G. W. Spaulding, Penna. Water & Power Co., Baltimore, Md.; John W. Starke, Washington, D. C.; L. W. Stinson, KVOO, Tulsa, Okla.; A. A. Stuart, Aviation Div. State Road Dept., Jacksonville, Fla.; Jno. W. Studebaker, U. S. Commissioner of Education, Washington, D. C.

T. DeWitt Talmadge, Tenn. Valley Authority, Chattanooga, Tenn.; G. L. Taylor, W9XBY, Kansas City, Mo.; Wm. Edw. Taylor, Lt. Balto Police Dept., Baltimore, Md.; Kern Tips, Manager KPRC, Houston, Tex.; F. E. Travis, Ch. Engr. W4XAU, Nashville, Tenn.; Seymour Turner, Farnsworth Television, Inc., Philadelphia, Pa.; G. H. Underhill, Edison Elect. Inst., Poughkeepsie, N. Y.; J. H. Uhalt, Pres. Station WDSU, New Orleans, La.; Harold C. Vance, RCA, Chicago, Ill.; E. J. Vandewall; Irving Vermilya, Gen. Mgr. WNBK, Owner Police Radio WPFN, New Bedford, Mass.; S. M. Viele, Penna. RR Co., Swarthmore, Pa.

H. J. Walls, Immigration & Nat. Service, Washington, D. C.; K. B. Warner, American Radio Relay League, Inc., W. Hartford, Conn.; Sydney E. Warner, Ch. Engr. Station W1XBS, Waterbury, Conn.; Chas. V. Wayland, Radio Lawyer, Washington, D. C.; Fred Weber, Mutual Broadcasting System, New York City; C. H. Wesser, Chief 8BXWJ, Detroit, Mich.; Wm. H. West, Station WTMV, St. Louis, Mo.; John H. Wharton, Atty. for Mackay Radio & Telg. Co., New York City; Lynde P. Wheeler, Consulting Physicist, Washington, D. C.; J. E. Whitehouse, Chf. Trans. Eng. WLW, Crosley Radio Corp., Mason, Ohio; L. E. Whittemore, A. T. & T., New York City; Horatio B. Williams, Columbia Univ. (Amer. Medical Assn.), New York City; Ralph O. Williams, Engr. Radio Project Dept. of Conserv. Mich., E. Lansing, Mich.; John E. Wing, Chicago, Ill.; Dr. Frank Wolff, Telephone Engr., Bureau of Standards, Washington, D. C.; F. W. Wozencraft, RCA, New York City; Grant Wrathell, Ass. McNary & Chambers, Washington, D. C.; Comdr. F. A. Zeusler, U. S. Coast Guard, Washington, D. C.

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GOVERNMENT TELEGRAPH RATES CONTINUED ANOTHER YEAR

The Telegraph Division of the Federal Communications Commission this week issued an order continuing the government telegraph rates of up to 40 per cent of commercial charges from July 1, 1936, to June 30, 1937.

Copies of the order may be obtained from the FCC offices in Washington.

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HEARST SPOKESMAN SUGGESTS BROADER BROADCAST BAND

Expansion at both ends of the broadcast band was proposed at the Federal Communications Commission hearing this week by J. C. McNary, consulting engineer, on behalf of Hearst Radio, Inc., which is rapidly becoming an important factor in the broadcasting field.

The broadcast band, now 550 to 1500 kc., might be lowered to include 520, 530, and 540 kc., channels, Mr. McNary said, and be raised to include up to 1600 kc., now used for experimental broadcasting only.

The expansion, he insisted, would alleviate the present congestion of broadcasting stations and at the same time provide facilities for new stations, chiefly 100-watters, although possibly a high-power clear channel outlet.

Objection to the lowering of the band was raised immediately, however, by Haraden Pratt, of the Mackay Radio and Telegraph Company. He pointed out that it would endanger the efficiency of SOS signals on 500 kc.

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ZENITH GETS GRUNOW PLANT, PLANS EXPANSION

The \$410,000 bid of the Zenith Radio Corporation for certain properties of the Grigsby-Grunow Company in Chicago was accepted this week by a referee in bankruptcy upon recommendation of creditors and bondholders.

Plans for an expansion of the Zenith Corporation were immediately announced by Hugh Robertson, Vice-President and Treasurer. Increased production and a concentration of facilities are contemplated.

The Grigsby property consists of four factory buildings and office and a warehouse. Mr. Robertson said present Zenith plans contemplate establishment of emergency manufacturing lines in the new space. The company now has three plants in Chicago which, he said, eventually would be transferred to the new location so that Zenith's manufacturing operations would be centralized.

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U. S. LEAD IN RADIO COMMUNICATION CITED BY JOLLIFFE

The United States, linked as it is by radiotelegraph with most of the nations of the world, large and small, is leading the world in developing this modern type of communication, Dr. C. B. Jolliffe, former FCC Chief Engineer, and now with R.C.A. Communications, Inc., told the Federal Communications Commission this week.

In discussing the activities and research of the corporation he represents, Dr. Jolliffe laid stress on the contributions made by RCA engineers and their constant efforts to improve the art of radio communication.

"The importance to the United States of radiotelegraph for international communication has been demonstrated so conclusively in the sixteen years since RCA entered the field that it would be superfluous to restate here the facts so well known to this Commission. It is sufficient to say that radio provides the United States with direct communication with all the major nations and most of the smaller nations of the world. This service is, of course, completely dependent on the assignment of radio frequencies.

"RCAC provides direct radio contact between the United States and 47 nations and between eleven cities within the United States. This service is open to the general public and therefore available to everybody in the United States.

"Frequencies which are useful for international communications are by their very nature capable of producing international interference. Consequently, in considering the allocation of frequencies to international services the interests of the entire world must be given consideration.

"High frequency waves are useful for long distance radio communication solely because ionized layers of extremely rarified gases exist many miles above the earth's surface. The layers, known as the 'Heaviside Layer', or more recently as the 'Ionosphere' are able to bend back radio waves which encounter them. When the waves which have been bent back by the ionosphere reach the earth's surface, they are again reflected upward toward the ionosphere and this process continues indefinitely until the energy of the waves has been dissipated. This ability of the ionosphere to bend radio waves depends upon the degree of ionization, upon the frequency of the radio waves, and upon the angle at which the waves enter the ionosphere.

"The intensity of ionization and the effective height of the ionosphere depends on the degree of exposure in the sun. Maximum intensity and minimum effective height occurs around midday in midsummer and minimum intensity and maximum effective height occur early in the morning just before sunrise in midwinter. Consequently we have a continuing diurnal change of highest possible and lowest usable frequencies for any circuit, relatively high frequencies being required for daylight service and relatively low frequencies for night service.

"The conditions in the ionosphere also change with the seasons as the proportion of daylight to darkness varies. Consequently we have an annual range of frequencies for use at any particular time of day. In addition to this there is superimposed a change brought about by change in the sun spot activity in an eleven year cycle. This means that the best frequency for a given distance varies daily, with the seasons and with the position in the eleven year sun spot cycle, and that for continuous service over a long period between any two distant points not one but several frequencies must be available to provide even a single channel of communication between such points.

"The frequencies assigned to RCAC are distributed throughout the usable portion of the radio spectrum. The number of frequencies assigned cannot be considered as the number of channels available since the condition of the ionosphere dictates the proper frequency to be used at a given time. RCAC circuits cover varying distances and have different conditions of daylight and darkness so that if a frequency is not useful for one circuit it may be useful for another. Full use is made of this possibility and the frequencies assigned are used as fully as the conditions of the ionosphere and the circuits permit."

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JETT EXPLAINS STATUS OF PRESENT RADIO SPECTRUM

As groundwork for the Federal Communications Commission, as well as commercial radio engineers, to work on in considering an allocation of new frequencies and a possible shakeup of bands now utilized, Lieut. E. K. Jeff, FCC Assistant Engineer, this week explained the present general status of the radio spectrum.

"Throughout the development of radio a fundamental problem has been the increasing demand for frequencies to care for the growth of individual services", he said. "To show the tremendously rapid growth in the use of radio frequencies during the last few years, a comparison with the original International Frequency List established by the Berne Bureau in December 1928 is illuminating. In the original list of December 1928, a total of approximately 1700 stations were listed. Five years later the number of stations were approximately 17,000, or a ten-fold increase. A rough check of the latest list dated March 1936 shows a total of 25,000 stations. These figures are for stations at fixed locations and do not include ship, aircraft, amateur and portable stations.

"Prior to the adoption of the International Radiotelegraph Convention of Washington in 1927 there was a general policy of freedom of operation throughout the radio spectrum. Today, however, as a result of extensive development and international agreement, we have a well-organized system of channeling of the ether which permits the allocation of radio channels in much the same manner as telephone and telegraph wires are assigned for private use.

"The Washington Convention was superseded in 1932 by the International Telecommunication Convention of Madrid. Article 7 of the General Radio Regulations annexed to this Convention provides for the use of frequencies from 10 to 60,000 kilocycles (wave lengths from 30,000 to 5 meters). All frequencies throughout this range, except between 30,000 and 56,000 kilocycles are reserved for specific classes of services.

"The radio spectrum is now generally believed to extend in frequency from 10 to several million kilocycles; however, since most of the activity to date has been reported on frequencies below 200,000 kilocycles (wave lengths above 1.5 meters), I will confine this discussion to these frequencies only.

"It is convenient to divide the radio spectrum into five major bands which are:

- (a) Low-frequencies; 10 to 100 kc.
- (b) Medium-frequencies; 100 to 550 kc.
- (c) Broadcasting; 550 to 1600 kc.
- (d) Medium-high frequencies; 1600 to 6000 kc.
- (e) High-frequencies; 6000 to 30,000 kc.
- (f) Very-high frequencies; 300,000 to 200,000 kc. and above.

"Low-frequency Band (10 to 100 kc). The low-frequency band is divided into 207 standard telegraph bands or channels

"The low-frequency band is best adapted for high-power long-distance communication necessitating extensive transmitting and receiving sites. The band, therefore, must be considered as being international in its service range and is used for fixed service. This band is occupied by 47 United States stations and 348 foreign stations, or a total of 395 stations in the world.

"Medium-frequency Band - (100 to 550 kc). These frequencies were the first to be made available for practical use. The band is now used throughout North America by government stations, stations engaged in fixed service communication; ship and coastal stations; aircraft, aeronautical and airport stations; and radiobeacon and direction-finding stations. The frequencies 530 and 540 kilocycles are also used for regional broadcast service in Canada, subject to no interference resulting to the mobile services.

"There are 369 standard-telegraph channels in the medium frequency range. There are about 6800 United States stations in this band. Reliable information is lacking as to the approximate number of foreign mobile stations operating on frequencies throughout the spectrum; however, according to the Berne frequency list there appear to be about 2750 foreign fixed and land stations operating on the medium frequencies; therefore excluding the thousands of foreign mobile stations there are roughly 9500 stations in the band.

"Broadcast Band - (500 - 1600 kc). The regular broadcast band extends in frequency from 500 to 1500 kilocycles. The band, however, was recently extended by the Commission to 1600 kilocycles in order to permit experimental operation on certain frequencies.

"Medium-high Frequency Band - (1600-6000 kc). This band is usually referred to as the continental band because the frequencies therein are considered as being regional in their

service range. Except for night operation on frequencies between 4000 and 6000 kilocycles, it is practicable to simultaneously use the medium-high frequencies on the various continents of the world without the possibility of serious interference resulting between continents.

"The band is used by maritime and aviation stations, police, amateur, point-to-point, government stations, and special stations including geophysical and motion picture stations. Until recently experimental television stations were assigned two channels, each 100 kilocycles wide, in the band between 2000 and 3000 kilocycles. However, unless protests are filed requesting a hearing the action of the Commission in shifting these stations to the very-high frequency band will become effective on July 1, 1936.

"High-frequency Band (6000-30,000 kc). The 1376 standard channels between 6000 and 28,000 kilocycles are world-wide in their service range, the higher frequencies, above approximately 16,000 kilocycles being useful only over a daylight transmission path.

"It is recognized in the Madrid Regulations that frequencies between 6000 and 30,000 kilocycles are very efficient for long-distance communications. The administrations are required to make the greatest possible effort to reserve these frequencies for this purpose except when their use for short or medium-distance communication is not likely to interfere with long-distance communication.

"The skip-distance characteristics of frequencies vary from a few miles to more than a thousand miles, depending upon the frequency of operation, time of day, season, etc. Transmission is affected at times by magnetic storms, fading, and round-the-world echoes.

"Very-high Frequency Band (30,000 to 200,000 kc. and above). Except for the commercial use of frequencies above 30,000 kilocycles for inter-island public telephone service in Hawaii, which has been in successful operation since September 1931, all frequencies above 30,000 kilocycles have been licensed for experimental use only.

"Although the frequency characteristics of this band, for which commercial apparatus has been designed, are sufficiently well known at this time to leave no doubt as to their usefulness in many of the established services, the Commission has not received enough data to date to enable it to determine which particular frequencies within the entire range are most suitable for specific services. This hearing should be of assistance to us in this matter. These frequencies, however, are known to be best suited for short-distance communication, the exact distance being dependent upon the height of the receiving and transmitting antenna. Reports have been received indicating reliable reception during favorable daylight hours over long-distances such as across the ocean when using frequencies below 60 megacycles. Interference from electrical machinery and ignition systems of aircraft and automobiles is a serious factor to contend with in communication on these channels in congested areas, but appears to decrease in intensity as the frequency increases. Some reports indicate that this type of interference becomes almost negligible at approximately 200,000 kilocycles.

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"There is no reliable information available as to the amount of activity on frequencies above 110,000 kilocycles. In order to encourage the development of these frequencies the Commission on June 22, 1934, adopted Rules 309-a and 374-a, which permit the regular licensees of all classes of stations in the experimental service, including amateurs, to operate on any frequency above 110,000 kilocycles without separate authority therefor, provided such stations are operated only in the particular class of service for which the licensee holds a license for operation on the lower frequencies, and provided further that such operation is restricted to matters pertaining to fundamental research or amateur service as the case may be."

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BRIEFS

Trade representations unfair to competitors are alleged by the Federal Trade Commission in a complaint issued against Federal Enameling & Stamping Co., of McKees Rocks, Pa., and Pittsburgh, manufacturer of porcelain enamel kitchen utensils sold under the trade name "Federalware". The respondent advertises by radio and other media.

Station WFIL, of Philadelphia, Pa., has been granted a construction permit to install new equipment, move transmitter locally, install new vertical radiator, increase power to 1 KW, unlimited time.

J. R. Poppele, Chief Engineer of WOR, Newark, has been elected to the Board of Directors of the station and appointed Secretary of the Bamberger Broadcasting Service. Mr. Poppele has been with WOR since February 18, 1922, four days before it went on the air.

Nathan Burkan, ASCAP counsel, who died on June 6th, left his estate in trust to his widow and son, it was disclosed Monday in New York City when his will was filed for probate in Surrogate's Court. It was reported that the estate would exceed \$1,000,000.

Radio market reports were issued this week by the Bureau of Foreign and Domestic Commerce for the following countries: Argentina, Yugoslavia, Brazil (new regulations), Newfoundland, and Germany. Copies may be obtained at 25 cents.

The Zenith Radio Corporation, of Chicago has applied of the Federal Communications Commission for a construction permit for a new general experimental station to be operated on 31600, 35600, 38600, 41000, 86000-400000, 401000 kilocycles, 100 watts, portable-Mobile.

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HEINL RADIO BUSINESS LETTER

2400 CALIFORNIA STREET

WASHINGTON, D. C.

CONFIDENTIAL — Not for Publication

INDEX TO ISSUE OF JUNE 23, 1936

Commerce Expert Prods Manufacturers On Export Laxity.....	2
Zenith Zooms Following New Plant Purchase.....	3
Greater Educational Use Of Radio Is Forecast.....	4
Industry Notes.....	6
N.Y. Radio Show Set For September.....	7
Short-Wave Interrupted By Sun Spots.....	7
CBS May Billings 35.9% Above Last Year.....	7
Farnsworth Sees Television Receiver For \$250.....	8
Press First Interest To Use Radio Communication.....	10
Food-Drugs Bill, Copyright Measure Die With Adjournment.....	11
FCC Approves Lease Of WEEI To CBS Network.....	12
Hanson Urges Set Periods For Newscasts.....	12

No. 939

Handwritten notes:
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June 23, 1936.

COMMERCE EXPERT PRODS MANUFACTURERS ON EXPORT LAXITY

Those attending the main session of the 12th Annual Convention of the Radio Manufacturers' Association received a friendly raking over the coals by Andrew W. Cruse, Chief of the Electrical Division of the Bureau of Foreign and Domestic Commerce, for great opportunities which he said they were overlooking in the export field.

"It is a happy hunting ground and you are not doing anything about it", Mr. Cruse declared. "We are out trying to bird-dog the market for you and you are not sufficiently interested to ask us for more information. There has never been an export manager of any radio company in my office."

Mr. Cruse told of the new consolidated program of the American short-wave stations compiled by the RMA and beginning June 1st which is now being sent each week by the Bureau of Foreign and Domestic Commerce to the Commercial Attaches.

"This was the idea of Commander E. F. McDonald, Jr., and I am kicking myself ever since because I didn't think of it sooner", the government expert said.

In referring to the trade treaties, Mr. Cruse paid tribute to Bond Geddes, Vice-President of RMA, for his work in Washington. "If everyone was as fair and square as Mr. Geddes, my job would be a lot easier", he added. "A lot of people are afraid of the Phillips competition abroad. I am not. You should not be. If you played ball better with the foreign importers, you would get farther."

O. H. Caldwell predicted that sales this year would go to 7,000,000 sets, two million more than the best previous ones.

A warning that business, including the radio industry, will be throttled anew by the Walsh-Healy (new NRA) bill, which at the time he spoke awaited only President Roosevelt's signature to become a law, was given by Attorney John W. Van Allen, of Buffalo, N. Y., general counsel of the Association, who urged that business seek a government of definite laws rather than uncertain decrees of government officials - government by laws, rather than by men.

"When the bill becomes a law", Attorney Van Allen asserted, "the chances of favoritism in the awarding of government contracts will be greatly multiplied. Any one to become a bidder

must have subjected his business to complete federal regulation. Otherwise he becomes disqualified for securing any government business.

"Any business that does not so subject itself must, however, continue to pay taxes and to pay the prices set by companies that have submitted to these regulations. It will be again a denial of the equal opportunities which have made this country great."

The Radio Manufacturers' Association is concerned because its members sell considerable equipment to the aviation, army and naval services of the country.

Leslie F. Muter, President of the Muter Company, Chicago, was reelected President of the Association.

New members of the Board of Directors were Eugene F. McDonald, Jr., of Zenith Radio Corporation; James Knowlson, of Stewart-Warner Corporation, and Peter Jensen, of the Jensen Radio Manufacturing Company, all of Chicago.

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ZENITH ZOOMS FOLLOWING NEW PLANT PURCHASE

Zenith radio stock took the spotlight in trading on the Chicago Stock Exchange following the purchase last Wednesday of the newer buildings of the old Grigsby-Grunow Company, for \$410,000. Zenith stock last Friday reached the highest level on the Chicago Exchange since 1929, and contributed more than any other issue to the day's volume of 35,000 shares. The stock ranged between $23\frac{1}{2}$ and $24\text{-}7/8$, closing at $24\frac{1}{2}$, up $3/8$ point, in a turnover of 5,850 shares.

The Triangle Electric Company, of Chicago, last week bought the good will, trade-marks, and patent rights of Grigsby-Grunow Company for an undisclosed sum from Walter E. Schott and the Harris, Karp, Goldsmith Company, of Cincinnati, Ohio.

The Cincinnati group purchased the physical equipment of the once prominent radio company last April for \$350,000, which included the above items, and has been disposing of this machinery and equipment through auction sales at former Grigsby-Grunow plant.

Purchase of the trade name "Majestic" will make the reappearance on the market of this brand of items in the radio, refrigerator, and household utilities lines, which were prominent in their respective field when Grigsby-Grunow was at its height.

Triangle Electric Company has been engaged in manufacturing and distributing radio sets and electrical appliances for more than twenty years. The company is controlled by Davega Stores Corporation.

"We are going to manufacture and distribute nationally a complete line of Majestic radio sets, refrigerators, and household utilities, and will in the very near future announce a schedule of franchised 'exclusive dealers'", said Nathan L. Cohn, President of Triangle Electric and Chairman of Davega Stores, in a statement issued after the deal was closed.

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GREATER EDUCATIONAL USE OF RADIO IS FORECAST

More extensive use of radio for education as new services develop, was forecast by John W. Studebaker, United States Commissioner of Education, in making a plea for a bloc of the ultra-high frequencies at the engineering hearing before the Federal Communications Commission.

Speaking for the organized educators, Dr. Studebaker, who is Chairman of the Radio-Education Committee, named by the FCC last Winter, said:

"In confining my presentation to the problem of reserving certain frequencies for oral and facsimile broadcasting, I realize that television has infinite educational possibilities. I hope that in giving jurisdiction to licensees in television, the Federal Communications Commission will see to it that, as a matter of public interest, education is properly served.

"In presenting this request for reservations of ultra-high frequencies for organized educational agencies, I am looking toward the future. The present uses of educational programs in the regular broadcasting band have indicated that the potentialities of radio for educational purposes are tremendous. While I believe that the present use of educational programs in the regular broadcasting band should be continued and extended to commercial stations in the ultra-high frequency band, I believe also that ultra-high frequencies when granted to organized education should not be allowed in any way to jeopardize the position of education in the regular broadcasting band.

"The results of research and experimentation which have come to the attention of the Office of Education convince me beyond doubt that frequencies in the ultra-high wave bands will be required by organized education to afford services over and above and in addition to services rendered by commercial stations. I would not minimize the importance of the educational service which is now being rendered by broadcasting systems and radio

stations. I appreciate the significance of the fact that our billion dollar organization for broadcasting has been developed by American industry without a direct cost to the listener in contrast with policies of governmental subsidy and direct tax on radio sets in many other countries. Quite unsparingly expenditures have been made and genius exercised in interesting and entertaining American listeners. It would seem that the influence of radio on the national mind is very great.

"I understand from radio engineers that allocation of megacycles adjoining the commercial broadcasting frequency band might be made for local school systems and other local educational agencies. These frequency bands would be used for facsimile, radio teletype, and voice broadcasting. Because of the probable convenience to users of receiving sets, I recommend that the frequencies represented by at least three and preferably four megacycles next below those assigned to commercial broadcasting be allotted for the exclusive use of agencies organized for educational purposes.

"The extent of the need for an adequate number of channels for local educational broadcasting is indicated by the fact that there are 239,000 schools in the United States, employing a million teachers to instruct 28,700,000 elementary and secondary school pupils, not to mention two other great groups: (1) Persons involved in higher education, and (2) the general adult population. The school property of the country is valued at more than ten billion dollars. Approximately three billion dollars are expended annually for education below the college level.

"There has been a remarkable growth in broadcasting by school systems within the past few years. Data collected in the Office of Education indicates that more than 200 school systems in the United States are broadcasting or recently have broadcast regular series of radio programs. In most instances these programs were carried by commercial stations. In addition several hundred schools and school systems broadcast radio programs from time to time as the occasion arises. In consideration of the rate at which improved techniques of educational broadcasting are being discovered and developed, it may be expected that without relief from new allocations made exclusively for local educational organizations, the pressure of organized education for time over commercial broadcasting systems and through stations will bring undesirable and probably unfortunate collisions of vested interests.

"I can visualize a great variety of ways in which school systems will make regular full-time use of broadcasting in the future, not alone for carefully planned parts of a closely integrated educational program for learners, but also in connection with the routine and administration of schools. In both of these fields, that is, in the enrichment and improvement of the instructional program and in management, the possibilities of radio are innumerable and extremely important."

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 ::::: INDUSTRY NOTES :::::
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J. L. Van Volkenburg, formerly manager of Station KMOX, St. Louis, has been named Executive Assistant to H. Leslie Atlass, Columbia Broadcasting System Vice-President in Chicago. He succeeds D. W. Thornburgh, who was recently elected Vice-President in charge of West Coast activities. Previous to Mr. Van Volkenburg's association with KMOX, he was affiliated with the Chicago office of Batten, Barton, Durstine & Osborn, Inc.

 Misrepresentation of the therapeutic value of "NoDoz Awakeners", a pharmaceutical preparation said to be compounded of caffeine citrate and sugar of milk, is charged in a Federal Trade Commission complaint issued against NoDoz Laboratories, Inc., Sacramento, Calif., manufacturer and seller of this product, and a radio advertiser.

 John L. Clark has resigned as General Manager of WLW, Cincinnati, to head a new enterprise which will devote itself to the buying, leasing and managing of stations, the sale of time on either a group or single station basis, and the manufacturing of transcriptions. Holding company for these various activities will be the Trans-American Broadcasting and Television Corp.

 Governor Horner opened Illinois' \$350,000 police radio chain last week over the local station WQPS, first of seven units to be completed. The Governor predicted that the system would "pay for itself many times over." "The whole State will be covered with instant communication between directing officers and State highway and county police agencies", he said.

 A "walking transmitter", permitting an announcer absolute freedom in moving about the floor, will be introduced by the Columbia Broadcasting System at the Democratic National Convention which started today. Designed and constructed under the direction of A. B. Chamberlain, Chief Engineer, the "walking transmitter" is actually an ultra-high frequency radio station to be concealed on the person of an announcer. A walking-stick contains the antenna and the radio frequency oscillator. The power supply is carried in a belt similar to a money belt. Flexible leads pass up under the coat and down through the coat sleeve to the cane, and also from the belt power-supply and from the crystal type lapel microphone worn on the wrist. The audio amplifier and modulator are carried in a compact binocular case slung under the armpit.

 Receipt of orders for about 6,000 radio sets, one of the largest amounts in recent years, was announced last week by the Stromberg-Carlson Telephone Manufacturing Company of Rochester, N.Y. To fill them, the company said, it had stepped production schedules to 50 per cent ahead of a year ago.

George A. Scoville, Vice-President and General Manager, said the company's production already was running at least thirty days ahead of any previous season to keep up with increasing business.

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N. Y. RADIO SHOW SET FOR SEPTEMBER

The Fourth Annual New York Convention and 1936 Radio Trade Show has been scheduled for September 18 to 20 and will be held at the Hotel Pennsylvania.

Arrangements had been made previously to hold the 1936 Fall meeting late in October but in view of the enormous increase in the demand for exhibition space, and the accompanying increase in the attendance at the Convention and Trade Show held at the Hotel Sherman last March, the management of the Institute has become fearful lest the facilities reserved at the close of the 1935 meeting would prove inadequate.

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SHORT-WAVE INTERRUPTED BY SUN SPOTS

Telegraphic transmission and short-wave radio telephone circuits were interrupted, and in some cases put out of commission temporarily, early last Friday morning by earth currents and electrical disturbances variously attributed to the eclipse of the sun, to sun spots and to the "northern lights", or aurora borealis. The disturbances, occurring at various times between midnight and 7 A.M. were more severe than other recent interruptions of a similar nature.

The American Telephone and Telegraph Company reported interference with the short-wave radio telephone, but said the long-wave radio phone and the long-distance wires were unaffected. The disturbances had cleared up by 10 A.M. The difficulty was attributed to sunspots.

Radio companies reported no interference. The disturbances occurred at a time when radio stations were for the most part silent.

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CBS MAY BILLINGS 35.9% ABOVE LAST YEAR

Time sales on the Columbia network for May totaled \$1,749,517, an increase of 35.9% over the same month's billings in 1935. This marks the fifth successive month that CBS revenue has increased the gap between this and last year's figures. These increases have been as follows: January over January, 7.5%; February over February, 15.4%; March over March, 18.7%; April over April, 20.8%. The five-month total to date - largest in the history of any single network - represents an 18.7% increase over the corresponding period of 1935. It is \$9,683,007.

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FARNSWORTH SEES TELEVISION RECEIVER FOR \$250

Taking issue with previous witnesses who estimated that a television receiver would cost as much as a small automobile, Philo T. Farnsworth, Philadelphia television inventor known as "the boy wonder", told the Federal Communications Commission this week that receivers should be manufactured to sell for as little as \$250. He also expressed confidence that the ultra high frequencies between 100 and 1,000 megacycles will be commercially useable within a very short time.

"We have under development in our laboratory tubes that may be used as oscillators and amplifiers without loss of frequency up to 500 megacycles or higher", he said. "These tubes are of the cold cathode multipactor variety. We hope to make tubes of this type available to our licensees for experimental purposes within the next few months. At the present time we are attempting to develop a tube which will deliver an output of 500 watts up to 500 megacycles. When we have succeeded in this, it will be possible to build economical one kilowatt transmitters for the band between 100 and 500 megacycles. This illustrates how the by-products of an important development such as television may open up new frontiers of scientific achievement.

"It is thought by many that the receiver developed for television at present is too complicated for use by the public. There are only three essential controls on our television receiver. One of these controls tunes the ultra short wave receiver. Another control adjusts the intensity of the visual image. The third control adjusts the intensity of the visual image. The third control is for focusing of the cathode ray spot. We are confident that with a very small amount of further development, we can eliminate the focusing control, leaving only two controls for the complete visual part of a television receiver. In adopting a fixed spacing between sound and vision carriers, it is contemplated that the tuning of sound and vision ultra short wave receivers will be accomplished with one control. We therefore have only one additional control, namely, that for regulating the intensity of the picture in what is for all practical purposes the present television receiver. We do not feel that even at the present time the cost of television receivers would be prohibitive. Our receiver at present consists of three units:

- "1. A combined sound and vision ultra short wave receiver.
- "2. A television scanning chassis.
- "3. A regulated power supply

"The total number of tubes required in these three units at the present time is nineteen. We hope in the very near future to reduce this number to fifteen. We believe, therefore, that the costs estimated for television receivers are entirely too high. We do not feel that it is at all unreasonable to expect that the cost to the public can almost at once be less than \$250 each. It is perfectly true that since a television receiver must always include both sound and vision receivers, the combination will always cost more than a simple sound receiver but it will not necessarily cost more than a sound receiver does today.

"As to the cost of television transmitters, we have had manufactured for us by one of our licensees a complete television transmitting station and the cost is but a small fraction of any of the figures which have been so widely publicized. Television studios, as is the case with sound studios, may be elaborated to any desired degree. It would hardly be fair to take as the cost of a sound transmitting station the cost of the plant at Radio City.

"We believe that amateurs can and should be permitted to share in the development of television by building their own television receivers. It is our belief that television presents no more difficulty to amateur receiving set builders than did radio in 1921 and 1922. Of course, there will be no crystal set days but there will be manufacturers of cathode ray tubes, there will be manufacturers of component scanning units, there will be published circuit diagrams of useable short wave receivers and I should not be surprised to find amateurs building television receivers, competing favorably with those developed in the large laboratories.

"We take issue with the testimony which has been given by other television workers in their belief that television must be born a finished service. We do not want to misinterpret their statements as meaning that television will not make further progress after it has become a commercial service. It seems to be the general belief, however, that the baby must be born with a beard.

"While we recognize fully the force of what has been said as to the necessity for caution leading to the inauguration of television, we question whether it is within our ability to control its progress. We submit that with the public desire for television what it is, once experimental stations are operating on regular schedules, uncontrolled manufacturers will produce television sets for public consumption even though of an inferior quality. Does anyone suppose that the Courtland Street gentry will not find a way to offer cheap television receivers of the bootleg variety just as soon as experimental broadcasting is regularly on the air? It may well be, therefore, that receiver manufacturers and broadcasters may be forced to start television sooner than they expect.

"Of course, transmitters could be so limited in hours as to make it not worth while for the amateur to look in but this would not allow satisfactory experimental progress to be made.

"During the past ten years since the public first began to hear about television and to envisage it as a home entertainment service, it has been steadily becoming an explosive entity. The flame of public interest has been fanned by publicity until it is about ready to burst into a conflagration. Whether it will do so as a result of the added impetus that is now given to television experimentation, is a matter of conjecture, but it is our opinion that after the public learns that a few hundred television receivers are operating even though under experimental field conditions, it will be difficult for any group to delay its commercial exploitation."

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PRESS FIRST INTEREST TO USE RADIO COMMUNICATION

The press was the first interest in the United States to set up and employ radio communications, Joseph Pierson, President and General Manager, Press Wireless, Inc., told the Federal Communications Commission this week. This was The New York Herald. The first radio message across the ocean was the property of the New York Times.

"The American press organized and set up its own radio communications in Canada in 1922", he continued. "That trans-atlantic service still is in operation. In 1928 forty frequencies were allocated to the press by the Federal Radio Commission for the handling of press communications. At that time some 12 or 15 separate news agencies had applications pending before the Commission, each for its own radio system. Thereafter the Commission adopted a policy that one public utility should serve the press in the point-to-point service, and in July, 1929, Press Wireless, Inc., was organized.

"Since the adoption of this policy with respect to the American press by the Federal Radio Commission, one exception has been made, which exception, without umbrage, I call to your attention; namely, several point-to-point frequencies have been assigned to a single press interest. This is the only exception made. Press Wireless, Inc., handles service for all press agencies.

"The stock of this Corporation is restricted to newspapers and news agencies. The present stockholders of the Company are The New York Times, New York Herald Tribune, Christian Science Monitor, Chicago Tribune, Chicago Daily News, Los Angeles Times and San Francisco Chronicle.

"In 1935 we delivered more than 20 million paid words. For the first quarter of 1936, the figure is 7 million words. The American press seems now to be the major user of radio communications in North America. One of the news agencies puts us on notice that there is not a city, village or hamlet in the United States or Canada which does not receive a substantial part of its news from the principal press radio telegraphic licensee of this Commission, Press Wireless, Inc.

"Although some of these frequencies have been restricted to territorial use, the press has been handling an average of 500,000 paid words per year per frequency.

"We came down here rather inclined to be apologetic about our traffic. But I learned yesterday that that might be embarrassing to our commercial friends. I am told they would have great difficulty in showing 100,000 words per frequency per year. I am afraid they just want to make us the shining example in the radio traffic world. However, probably all of us in commercial and press communications agree that the ratio of what the professional theorists say to what actually can be done is surely no more than 500,000/17,520,000ths. We offer it humbly but freely to the Commission for what it may be worth in considering ultra-high frequencies.

"The American press still has a lot to do. It will take a few more years. We may ask for a few more frequencies in our present traffic spectrum, probably in the 2,700 kc. band

and between 8,000 and 14,000 kilocycles, and a few in the ultra-high frequency sector.

"From time to time we may ask for some minor administrative changes. We do want our newscast, or multi-address, services licensed as a primary, instead of as a secondary, use. This seems to us in accord with the importance of the public service rendered. With that service we deliver news to every ocean and continent in large volume and instantaneously. We are advised that with a delay of at most only a few minutes this service reaches every county in the United States.

"Newscast seems to be the use for which radio is most naturally suited.

"We believe a news message should enjoy priority over the bulk of private messages because the information contained therein is addressed to a large number. The right to priority is so much the greater when the message goes widespread to the public of vast areas through many different addresses.

"Press Wireless estimates its need of ultra-high frequency channels to be used for telegraph, telephone and facsimile at 11, each 100 kilocycles wide distributed between 42 and 110 megacycles. We also are studying the applications of the bands below 1 meter to the operation of directional and semi-directional television. It is our view that these frequencies will do some of the work of television in the course of the next few years.

"Something has been said here about the interests who will control the development of the ultra-high frequency spectrum and its service to the public. We do not have much apprehension about that. No trust or potentate can long fool the American people. There is no bankruptcy like that which arises from the abuse of public confidence. Just a little competition and the stables will be kept clean automatically."

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FOOD-DRUGS BILL, COPYRIGHT MEASURE DIE WITH ADJOURNMENT

Two major legislative measures in which the radio industry was keenly interested die with the adjournment of the 74th Congress, although they are certain to be revived in the next Congress.

The Copeland Pure Food and Drug Bill, after being bandied about for two years was on the verge of being enacted into law after it was adopted with amendments by the House. But conferees failed to reach an agreement in the adjournment rush. The measure passed the Senate on May 28, 1935, and the House on June 19, this year, under suspension of rules. The principal difference between the two measures was that the Senate bill authorized the Secretary of Agriculture to protect consumers against false advertising, while the House bill accorded the power to the Federal Trade Commission.

The copyright bills, upon which prolonged hearings were held before the House Patents Committee, failed to emerge from the sub-committee to which they were referred.

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The only major radio legislation enacted at the second session of the 74th Congress was the repeal of the Davis Equalization Amendment, which forced the Federal Communications Commission, to follow a quota system based on population in allocation broadcasting facilities.

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FCC APPROVES LEASE OF WEEI TO CBS NETWORK

The Federal Communications Commission this week announced it had approved the assignment of the license of WEEI, Boston, from the Edison Electric Illuminating Company, of Boston, to the WEEI Broadcasting Corporation, a wholly owned subsidiary of the Columbia Broadcasting System.

The transfer was pursuant to an agreement between the Edison Company and CBS, effected last April, providing for the leasing of WEEI until April 1, 1943, at a rental of \$18,250 a month. The lease also grants CBS the right to purchase the station.

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HANSON URGES SET PERIODS FOR NEWSCASTS

A recommendation that definite periods of the day be set aside for the radio broadcasting of news was made to the Federal Communications Commission this week by Elisha Hanson, General Counsel of the American Newspaper Publishers' Association.

Mr. Hanson asserted that the manner in which broadcast stations today handle news "leaves much to be desired" and added that newspapers were prepared to meet any free competition in the facsimile broadcasting or television fields.

"The association which I represent is not opposed to the development of facsimile or television, because either or both might compete with newspapers", Mr. Hanson said. "The newspapers are perfectly capable of meeting any competition which arises on a fair basis. They are concerned, however, with the basis of competition."

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HEINL RADIO BUSINESS LETTER

2400 CALIFORNIA STREET

WASHINGTON, D. C.

CONFIDENTIAL — Not for Publication

INDEX TO ISSUE OF JUNE 26, 1936.

First U. S. Public Television Director Talks.....	2
Three Commissioners (One A Republican) At Philadelphia.....	4
New Law Firm Formed By Associates Of Burkan.....	4
WJR Joins Applicants For Super-Power Permits.....	4
Move Made To Put RCA-Independent Fight Into Politics.....	5
Movie Man Suggests Fees On Television Receivers.....	5
NAB Names Fitzgerald Director Of Copyright Bureau.....	6
Radio Lawyers Form Bar Association.....	6
New Deal Pledges Freedom Of Radio.....	6
Editor Urges Higher Broadcast Power At Hearing.....	7
Census Bureau Reports On Middle Atlantic Stations.....	8
NAB Convention Program Is Announced.....	9
FCC Calls Parley On Telegraph Topics.....	9
New French Station Nears Completion.....	10
Englishman Admits U. S. Commercial System O.K.....	10
Three Hurt In RCA Camden Plant Strike.....	11
Philco Claims Improved Short-Wave Reception.....	12
Zenith Shows Profits Every Month For Year.....	12
G. E. Announces New "Focused Tone" Radio Sets.....	12

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FIRST U. S. PUBLIC TELEVISION DIRECTOR TALKS

The man who on June 4th inaugurated the first public demonstration in America of cathode ray television was a witness this week at the Federal Communications Commission engineering hearing.

Harry R. Lubcke, Director of Television of the Don Lee Broadcasting System, Los Angeles, who had charge of the demonstration was the witness.

"The ultimate social and economic importance of a television service is certainly appreciated and understood", he said. "That the service will be established, and that the public will support it will also be appreciated and understood. On the fourth of this month high-definition television broadcasting was inaugurated by our organization in Los Angeles, California. Daily four-hour demonstrations were made available to the public. The public and the press have evidenced a deep interest in, and a favorable reaction to, the images that have been displayed to them.

"We believe that, in so far as possible, television should be made available to the public on an extended comparative scale, with wide frequency bands and with provision for television service to every city of appreciable size in our country.

"Our experience has shown that the ultra-short wave, and perhaps later, the microwave regions of the radio spectrum are the only suitable regions for television broadcasting. The wide possible channel width, the absence of fading, of multiple and variable transmission paths, and of static, makes this so. These conclusions are based upon simultaneous operation on both the ultra-short waves and on the former long waves, over a period of several years. The same images were broadcast over the same area by two transmitters; the present W6XAO, and the former W6XS.

"In the matter of channel widths, we recommend six channels, each six megacycles wide, extending from 42 to 84 megacycles. This includes the Commission designated groups A and B. In group C, three groups of channels of greater width are suggested; group C1, comprising six channels, 8 megacycles wide, extending from 130 to 178 megacycles; group C2, comprising five channels, 10 megacycles wide, extending from 300 to 350 megacycles; and group C3, comprising five channels, 100 megacycles wide, extending from 3000 to 3500 megacycles. These channel widths are somewhat in excess of the capabilities of the present art, but should be reserved to accommodate future expansion.

"It is evident that television channels should be arranged in groups, and that each group should contain five or more channels in order that the design of receivers may be simple and economical. Television channels should not be shared with other services. The aural channel for each visual channel should properly be adjacent thereto, although existing broadcast band transmitters and receivers constitute an already established channel for this purpose, which use should be allowed.

"Some time will undoubtedly pass before the value of the C3 group of frequencies for television is established or disproved. This is because of the microwave nature of the waves, which are less than 10 centimeters in length. It is the purpose of our organization, however, to explore this untried band for television use, and to compare its capabilities with our regular operations in the group A band.

"Five years of continuous television broadcasting points to the use of the cathode ray, or other type of, as yet, undeveloped electronic method of television. This is particularly true at the receiver, where a reasonable variation in standards of operation can be accommodated almost automatically.

"A high frequency scanning characteristic of 300 lines per frame was selected (at Los Angeles) as the result of considerations taken from the motion picture industry.

"It is obvious that any object, so small as to be wholly included within one scanning line may lose much of its identity. An image containing a number of scanning lines proportional to the precision previously stated would therefore be of the same clarity as the motion picture.

"One scanning line should thus be one-third of one per cent of the picture height. This is to say that the image should contain three hundred lines (the reciprocal of one-third of one per cent).

"This represents a precision that is within the grasp of the television art. The television presentations of the present day are, of course, defective in other respects, but the standard of 300 lines need not be exceeded, if all other parts of the television system are brought, as they will be, to ultimate perfection."

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Station WEEI, The Edison Electric Illuminating Co., of Boston, Boston, Mass., has filed an application for a construction permit to install a new transmitter and directional antenna for day and night, increase power from 1 kilowatt to 1 kilowatt night, 5 kilowatts day, move transmitter from Bridge Street, Weymouth, Mass. to Mystic Valley Parkway, Medford, Mass.

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THREE COMMISSIONERS (ONE A REPUBLICAN) AT PHILADELPHIA

Three members of the Federal Communications Commission, one of them a Republican, deserted Washington and an engineering hearing at which the FCC was sitting en banc, to attend the Democratic National Convention in Philadelphia this week.

Anning S. Prall, Chairman of the Commission, was an alternate delegate from a Tammany district in New York City. He spoke over the Mutual Broadcasting System on Tuesday after being introduced by Alfred J. McCosker, President of WOR and Chairman of the Board of Mutual.

The other two FCC attendants at Philadelphia were George Henry Payne, Progressive New York Republican, just re-appointed for seven years, and Frank Walker, Chairman of the Telephone Division.

At Commissioner Payne's office, it was said that he was the guest of Ralph Beaver Strassburger, owner of the Norristown (Pa.) Times-Herald, and a wealthy horse breeder at Normandy Farm, Gwynedd Valley, just outside of Philadelphia.

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NEW LAW FIRM FORMED BY ASSOCIATES OF BURKAN

Former associates of the late Nathan Burkan, general counsel of the American Society of Composers, have formed the firm of Schwartz & Frohlich to continue the practice previously conducted under the name of Nathan Burkan. It is presumed that they will handle the business of ASCAP.

Max D. Steuer will be special counsel of the firm. The offices will remain at 1450 Broadway, New York. Members of the firm are: Charles Schwartz, Louis D. Frohlich, Herman Finkelstein, Arthur H. Schwartz, and David Fogelson.

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WJR JOINS APPLICANTS FOR SUPER-POWER PERMITS

WJR, Detroit, this week joined the applicants for construction permits to operate with the super-power of 500,000 watts, now used by only one broadcasting station in the United States, WLW, Cincinnati. WJR now operates with 50,000 watts.

The other applicants, for whom a general hearing has been scheduled September 24, are: KNX, Los Angeles; WHAS, Louisville; WGN, Chicago; WHO, Des Moines; and WJZ, New York.

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MOVE MADE TO PUT RCA-INDEPENDENT FIGHT INTO POLITICS

A move was launched this week at the Democratic National Convention to inject the old battle between the Radio Corporation of America and independent radio manufacturers over patent control into the 1936 political campaign.

Shortly after Boake Carter, news commentator for the Philco Radio & Television Corporation, had made reference to the radio industry fight in speaking of the anti-monopoly plank in the G.O.P. platform, Samuel E. Darby, Jr., counsel for the independents, sent a telegram to James A. Farley, in Philadelphia, urging Democratic adoption of a similar plank. Darby appeared before the Federal Communications Commission last week and attacked RCA as a "monopoly".

Darby's telegram to Farley follows:

"I am instructed on behalf of a number of manufacturers of radio broadcast receivers employing many thousands employees and who combined have made and sold approximately three-quarters of all of the radio broadcast receivers in use in the United States today and who are and have for a number of years been subjected to the onus of an outstanding example of monopoly which has thus far resulted in the exaction of a tribute of approximately fifty million dollars from the American public and unless relieved promises to continue to exact a tribute of many millions of dollars annually, not only for radio broadcast receivers but also in the forthcoming television field as well, to earnestly urge your adoption of an anti-monopoly plank as strong as that adopted at the Republican convention to ensure that the subject of improper monopolies will be non-partisan and that free speech on the radio, as well as freedom of television in its development and presentation to the public, will be safeguarded from continued or expanded monopoly effected by a pooling of patent rights such as is today held and enforced by Radio Corporation of America."

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MOVIE MAN SUGGESTS FEES ON TELEVISION RECEIVERS

Fearing that too prompt development of television may impair the investments in the motion picture industry, Robert Robins, of New York City, told the Federal Communications Commission this week that television program service should be placed on a non-commercial fee basis as radio programs are abroad.

"The combined introduction of combined visual and aural programs into the home", he said, "places the entire investments in the talking motion picture industry in a very precarious position."

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NAB NAMES FITZGERALD DIRECTOR OF COPYRIGHT BUREAU

Edward J. Fitzgerald, of Long Island City, N. Y., and recently General Musical Director of WLW and WSAI, Cincinnati, this week was appointed Director of the NAB Copyright Bureau by James W. Baldwin, Managing Director.

The new Director will immediately undertake the task of (1) making available to broadcasters a complete and accurate catalogue of active musical compositions and (2) creating a standard library of musical compositions taken, for the most part, from the public domain of music.

Meanwhile conferences were occurring in New York, it was reported, that may lead to new alignments in the copyright battle and may prevent a rupture among the broadcasters at the National Association of Broadcasters' convention.

Negotiations were under way between Warner Brothers and the networks which may lead to the return of WB to the ranks of the American Society of Composers, Authors and Publishers. The terms of the discussions have not been revealed but are understood to involve a readjustment of the copyright fees paid by the two major radio chains.

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RADIO LAWYERS FORM BAR ASSOCIATION

Radio attorneys practicing before the Federal Communications Commission have formed the FCC Bar Association. Louis G. Caldwell, former General Counsel of the old Federal Radio Commission, is President. Other officers are:

Ralph H. Gimball, Vice-President, George O. Sutton, Secretary-Treasurer. They will act as ex-officio members of an Executive Committee comprising the following: Duke M. Patrick and Frank D. Scott, both of Washington, for three years; Frank Quigley, New York City and Paul D. P. Spearman, Washington, for two years; and Ben S. Fisher and Philip J. Hennessey, Jr., of Washington, for one year.

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NEW DEAL PLEDGES FREEDOM OF RADIO

Continued freedom of radio was pledged in the platform adopted by the Democratic National Convention June 25th. It was the only plank which referred specifically to radio. It read:

"We shall continue to guard the freedom of speech, press, radio, religion and assembly which our Constitution guarantees; with equal rights to all and special privileges to none."

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EDITOR URGES HIGHER BROADCAST POWER AT HEARING

Increased power for broadcasting stations, providing strict technical regulations are enforced, was urged upon the Federal Communications Commission this week by A. H. Kirchofer, Vice-President of WBEN, Inc., Buffalo, and Managing Editor of the Buffalo Evening News, at the engineering hearing.

"A broad policy, it would seem to be in the public interest not only to insist upon the highest possible technical installation upon the part of radio stations but to accompany it, wherever it can be done without interfering with the service others receive, with permission to increase the amount of power allowed for broadcasting", he said.

"This is stated as a general conclusion, without regard to any individual situation. It follows, of course, that if the premise is sound, it will apply to all alike.

"Besides that point, I wish to make two others based upon our observations, experiments and studies. They are:

"1. There seems to be a definite field of usefulness of a distinctly local character in high frequency broadcasting; either to supplement the present broadcast service, or to allow smaller communities now without their own service to enjoy local radio facilities. Due to the comparatively low cost of installation and operation, such high frequency broadcasting might be allowed as an addition to community facilities and would seem almost as necessary as a local newspaper or similar community services.

"2. Furthermore, there is a very definite field of usefulness, probably in the high frequency range, for facsimile reproduction facilities. The possibilities of this service cannot be realized unless facsimile is viewed as a full-time service. Its usefulness will be hampered, if not destroyed, by any theory of auxiliary operation. Auxiliary operation may serve for some uses, but generally there must be full time provision for facsimile broadcasting and reception. That is not to say, in any sense, that facsimile broadcasting will be carried on, without interruption, for ten or sixteen hours a day. It does mean, however, that the opportunity to give service must be flexible enough to allow the operator to transmit signals either on a continuous program or on a fixed schedule that will not interfere with aural broadcasting."

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CENSUS BUREAU REPORTS ON MIDDLE ATLANTIC STATIONS

Total receipts of 82 broadcast stations in the Middle Atlantic States, from sale of radio time during the year 1935, amounted to \$11,422,747, it was revealed June 24th by Director William L. Austin, Bureau of the Census, Department of Commerce, in the fifth report of the new Census of Business series on the broadcasting business.

The report includes all broadcast stations in the three Middle Atlantic States which sold time and were in operation December 31, 1935. There were 10 such stations in New Jersey, 39 in New York, and 33 in Pennsylvania.

Slightly less than one-half (46 per cent) of the time sales of stations in the 3 States was derived from local advertisers, and the remainder from national and regional advertisers as payment for commercial programs carried by the stations.

Almost one-half (48.5 percent) of the total time sales of stations in the 3 Middle Atlantic States was accounted for by the New York stations. Total time sales of these 39 stations amounted to \$5,546,064 of which \$2,625,439 (47.3 percent) was local advertising. Pennsylvania stations were second with \$3,484,647 revenue from the sale of time, and New Jersey last with time sales of \$2,392,036.

Revenue as reported by the stations is the net billings for advertising time on the air, including the stations' proportion of network billings. It is computed after deducting quantity and time discounts.

The 82 Middle Atlantic stations employed a total of 2,415 persons (monthly average) with an annual pay roll in 1935 of \$4,554,179. More than 92 percent of this payroll was paid to full-time employees.

Stations talent, consisting of artists and announcers, totaled 989, or about two-fifths (39 percent) of total station employees. Of these, however, 374 (or 37.8 percent) were employed on a part-time basis, and they accounted for 74 percent of all part-time employees. Artists alone accounted for 68.1 percent of all part-time employees. Station talent, including both full-time and part-time artists and announcers, received 31.5 percent of the total payroll for the week.

Technicians engaged in the operation and maintenance of broadcast stations made up the second largest functional group both in numbers and payroll. They accounted for 20.4 percent of all employees and received 21.8 percent of the total payroll for the week. Other functional groups reported by the stations include office and clerical workers, supervisors, and executives. Salesmen, continuity writers, and persons performing a variety of functions, have been grouped together as "other" employees.

6/26/36

All employment data herein apply strictly to persons employed and paid by the stations. In addition there are artists and others employed by advertisers and radio networks who contribute to radio programs, but are not a part of station personnel. No figures are available on the former, but the latter will be included in the final summary of the broadcasting business in the United States.

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NAB CONVENTION PROGRAM IS ANNOUNCED

The complete program of the Fourteenth Annual Convention of the National Association of Broadcasters, to be held July 5, 6, 7 and 8 at the Stevens Hotel, Chicago, was released this week by James W. Baldwin, Managing Director.

Mayor Edward J. Kelly will deliver the address of welcome on Monday, July 6th. Addresses by Leo J. Fitzpatrick, President of NAB; Federal Communications Commissioner Eugene O. Sykes; and Isaac D. Levy, Treasurer, and a report by Mr. Baldwin will follow the same day.

On Tuesday morning papers will be read by the following: Arthur B. Church, KMBC, Kansas City, Mo., on "Cooperative Bureau of Radio Research"; C. H. Sandage, Bureau of Census, on "What the Radio Business Census Means to the Radio Broadcasting Industry"; and H. K. Carpenter, WHK, Cleveland, on "Organizing a Station for Selling Radio Advertising."

The annual banquet will be held Tuesday night and the election of officers Wednesday morning.

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FCC CALLS PARLEY ON TELEGRAPH TOPICS

A meeting will be held in the offices of the Federal Communications Commission at 10 A.M., on Wednesday, July 8th, in Room 1413, New Post Office Building, for the purpose of considering preparatory work for the conference of the International Consulting Committee on Telegraph to be held in Warsaw, October 19, 1936, Commissioner Irvin Stewart announced this week.

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NEW FRENCH STATION NEARS COMPLETION

Installation of the new French radio broadcasting station at Muret is nearing completion, according to a report to the Commerce Department from its Paris office. This station, it is pointed out, will be one of the most important in France as it will reach a power of 120 kilowatts. It is expected that broadcasting from Muret will begin during the current month.

With the Muret station in operation, the report states, the general plan of broadcasting in France will be practically completed. For the last few months, the stations at Lille, Strasbourg, Lyons, Marseilles, Nice and the Paris station PTT have been broadcasting on a power of 60 to 120 kilowatts and the stations under construction in the region of Moulins of Radib-Paris and the Centre d'Emissbus Coloniales will be among the most powerful in Europe. Plans are also being made for the installation of stations in the region of Limoges and Grenoble.

With the full realization of this plan, France hopes to be able to successfully compete with other European countries in the broadcasting field, according to the report.

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ENGLISHMAN ADMITS U. S. COMMERCIAL SYSTEM O.K.

Colorless as much of Britain's broadcasting fare is reported under the government controlled BBC, one seldom encounters an Englishman who is willing to admit that radio under the highly competitive American commercial system has any points in its favor. An exception, however, is John Macdonell, a former production man at BBC, according to Larry Wolters, Radio Editor of the Chicago Tribune.

"Though commercial broadcasting is prohibited by BBC, the country is nevertheless getting used to sponsored programs which are brought in from the continent in English, Mr. Macdonell said. An American advertising agency blankets England from Luxembourg and Normandy with programs by advertisers who have Bing Crosby, CBS Radio theater and several other shows on the air in America.

These programs are spotted at the Sunday dinner hour (before British stations come on the air) and at 10:30 at night (after they go off). The Sunday radio fare is duller than during the week. Hence sprightly musical programs from Luxembourg are welcomed.

Mr. Macdonell further revealed that many of America's big sponsored programs are widely followed now in England by way of short wave receivers. Thus, if the products advertised are merchandised in England they get free plugging from across the seas. The British amusement world has developed quite a habit of tuning in our programs - Jack Benny, Fred Allen, Major Bowes, Rudy Vallee, and Bing Crosby.

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THREE HURT IN RCA CAMDEN PLANT STRIKE

Three men were hurt and thirty-two persons arrested in clashes between pickets and strike-breakers at the Victor division factory of the RCA Manufacturing Company in Camden, N.J. June 24th, during the first full day of the organizational strike of Local 103, United Electrical and Radio Workers of America.

Statements as to the number of workers on strike varied widely, E. T. Hamilton, Vice-President of the company, said 7,000 of the 12,000 employees remained at work. A. C. Levay, Chairman of the Strikers' Legal Committee, declared 8,250 employees had gone on strike, and that 5,400 had participated in the mass picketing.

The strike was called after a week's negotiations between union leaders and company executives. The workers demand a closed shop, recognition of their Union, abolition of the company union, arbitration of grievances, a 20 per cent wage increase for day workers and a 30 per cent rise for night workers.

John L. Lewis, President of the United Mine Workers and leader of the movement for industrial unionism, went to New York to confer with officers of the Radio Corporation of America, including General Hugh S. Johnson, Special Labor Adviser of the Company, on the Camden strike situation.

James B. Carey, President of the United Electrical and Radio Workers, an industrial union, said that 9,000 workers had joined the walkout. He said that the Union was eager to continue negotiations with the management, with a view to early termination of the strike.

Elmer T. Cunningham, President of the Company, in a statement addressed to "the people of Camden and Philadelphia and all our employees" said that "during the week ending June 13, the Victor Division of the RCA Manufacturing Company provided employment for 12,244 men and women in the Camden-Philadelphia area and that the wage rates of this company in each classification are equal to, if not greater than, the wage rates prevailing in this area."

Mr. Cunningham said the Union made its demands to him "under threat" on June 15th.

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Microphone-hardened delegates at the Democratic National Convention in Philadelphia were treated to a new experience in broadcasting when NBC's new micro-wave transmitter was carried about the floor of the big auditorium to pick up on-the-spot reports direct from the various State delegations. For the first time, the delegates did not have to be escorted to a microphone; the microphone came to them.

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PHILCO CLAIMS IMPROVED SHORT-WAVE RECEPTION

Short-wave reception of powerful foreign radio stations has now become as reliable as the tuning-in of nearby American stations, through several important scientific inventions which have been incorporated in the new foreign tuning system of the 1937 Philco line, according to a statement by the Philco Radio & Television Corporation, Philadelphia.

Some of the outward features are the Colored Spread-Band Dial, the Glowing Beam Tuning Range Indicator, and the 2-speed Vernier Tuning Knob.

An important internal feature is "Magnetic Tuning", whereby the set automatically pulls powerful foreign or domestic stations into perfect tune, and holds them there, once the listener has turned the dial to the approximate setting.

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ZENITH SHOWS PROFITS EVERY MONTH FOR YEAR

The Zenith Radio Corporation has shown a profit in each of the last 12 months, stockholders were told by E. F. McDonald, Jr., President, at the annual meeting in Chicago June 24th.

Mr. McDonald said that was unprecedented in the corporation's history. It was due, he said, not only to results of an advertising campaign, but also to the shift in automobile production, which has tended to eliminate the dull season in radio. He said that by transferring manufacturing operations to the recently acquired Grisby-Grunow plant, consolidating work done in three separate units, a saving of ten cents a set would be effected. The company proposes to spend between \$150,000 and \$200,000 for alterations on the Grigsby property, acquired in bankruptcy proceedings for \$410,000.

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G. E. ANNOUNCES NEW "FOCUSED TONE" RADIO SETS

General Electric has just announced its new radio line, embracing 18 "Focused Tone", metal-tube receivers and featuring a new simplified color tuning control, an automatic frequency control, and a silent tuning control, together with other advances contributing to fidelity of reproduction and peak performances.

The line includes 8 table models, 8 consoles and 2 radio-phonographs, built around five basic chassis using 6, 7, 8, 12, and 15 tubes. All of the sets are equipped for both standard broadcast and short-wave reception and several have extended tuning ranges for ultra-short waves. One, the 15-tube de luxe model, offers complete service from 150 to 70,000 kilocycles, providing the most extensive coverage of any home receiver available today.

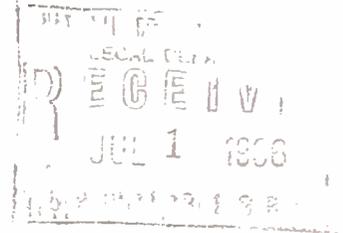
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HEINL RADIO BUSINESS LETTER

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INDEX TO ISSUE OF JUNE 30, 1936

Doctors Ask Radio Channel For Emergency Calls.....	2
Earl Says KNX Will Earn \$200,000 This Year.....	4
Mutual Becomes A National Network.....	4
Story Of McDonald's Rise In Radio Told In <u>Time</u>	5
Scripps-Howard Chain Blocked In Radio Moves.....	6
FCC Hearing Ends; Amateurs Ask For More Channels.....	6
Secrecy Makrs Debut Of RCA Television Tests.....	7
Army Air Stations Spend Million On Radio.....	8
British Ban Radio Advertising For Ten Years.....	9
New Type Of Party Convention Required For Radio.....	9
Radio Spurs "Truth In Advertising", Says Sarnoff.....	10
KDKA Files Request For 500 KW. Permit.....	11
Radio Problems Discussed At AFA Convention.....	12
Industry Notes.....	12

No. 941

of P... F... M...

June 30, 1936

DOCTORS ASK RADIO CHANNEL FOR EMERGENCY CALLS

It's a far cry from the telephoneless days of the old country doctor on horseback to the radio paging service for physicians planned by a New York organization.

Appearing as an applicant before the Federal Communications Commission for a single frequency anywhere in the ultra-high band from 30 to 50 megacycles, the radio paging division of the Doctors' Telephone Service, Inc., explained their proposal to set up an emergency call service that may be placed on a nation-wide scale.

Taking a cue from the police radio services, this doctors' organization proposes to send out signals for physicians so that they may be reached even while en route to or from another call. The doctor would then go to a telephone and get the complete message at once.

"Almost all doctors travel by private automobile and we frequently receive a call for a doctor five minutes after he has left his office and is perhaps travelling home to the suburbs 40 - 60 miles away", a spokesman for Doctors' Telephone Service said. "It may take him 2 hours to get home and 2 hours to come back and that 4 hours gained might frequently be the means of saving a patient's life. Contact by radio when the doctor is travelling to his home or from hospital to hospital or house call to house call is the only means by which we can bridge the gap and correct the short comings of the present system by which patients can reach their own doctor when it is most vital.

"The radio installed in police cars in large cities has been of inestimable value in combating crime. It was only the other evening that a liquor store in the neighborhood in which I live in New York was held up and robbed of \$75. In exactly one minute and a half eight radio police cars had arrived at that store and about two minutes after, the hold-up men had been captured and arrested. Important as this is, surely the response of a doctor to a human being's life which is in the balance and who might be our mother, our wife or our child, is vastly more important than the apprehending of a thief who stole \$75 in currency. The money can be replaced but the life - never.

"The Doctors' Telephone Service is the logical agency to seek a frequency and construction permit as we have had 14 years' experience in tracing doctors for their patients in the Telephone Service which we now render. Every day we have difficulty in tracing hundreds of doctors and in some cases we are unable to locate them.

"The Radio Paging Service will be a public service available to every resident of New York City and to every doctor who is interested in equipping his car with a receiving set.

"As the radius of operation will be limited to 50 or 65 miles, the same frequency used in New York City can be used in other cities throughout the United States. There are 100 cities of over 100,000 population now operating Doctors Telephone Services, however only the large cities in this group have expressed the desire of carrying on a similar plan for their particular city.

"The Radio Paging Service of the Doctors' Telephone Service will be only a method of signalling those who are wanted. No message or word of instruction is communicated to a doctor while enroute. Upon receiving a pre set signal, it is required of the doctor to leave his automobile, step to the nearest telephone and ask Radio Paging Service for his message.

"The receiving device to be carried by the doctor can be likened to the combination on a safe. Each receiving set has its own combination of numbers and when this code or series of dots, dashes is sent out over the air only the set of the doctor wanted responds by setting off a buzzer and lighting a pilot lamp.

"As the pilot lamp and buzzer remain in operation until released by the doctor it means that it is unnecessary for him to concentrate any attention on his receiver. He may be half an hour making a house call and upon returning to his automobile find his signal in operation.

"One receiving set has been built in the laboratory and successfully tried under actual operating conditions in New York City.

"The receiving set and device is in need of refinement, but inasmuch as there would be no need for it without the allocation of a frequency for this class of emergency service, its development has simply been held in abeyance.

"It is the plan of the Doctors' Telephone Service to turn the building of these receivers over to some well known radio manufacturers who are interested in placing them with doctors on a rental and service basis.

"It is therefore recommended that a single frequency anywhere in the 30 to 50 megacycle band be set aside for this Doctors' Paging Service throughout the country. The band width need be no more than 6 kc since the coding requirements are for one or more modulating tones each less than 3 kc and operating at comparatively slow speed.

"With adjacent communities having different code combinations, there is no doubt that this single channel can be duplicated every 100 miles without interference."

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EARL SAYS KNX WILL EARN \$200,000 THIS YEAR

Speaking as principal witness in a hearing before the Broadcast Division on the application of the Western Broadcast Company to sell KNX, Los Angeles, to the Columbia Broadcasting System, Guy C. Earl, Jr., President, on June 29th predicted that the station will earn a net profit of \$200,000 in 1936. The station's net income from October 1, 1935, to March 1, 1936, he said, was \$73,000.

The Broadcast Division took under advisement the application for a transfer, which involves the largest purchase price ever paid for a broadcasting station, reputedly \$1,250,000.

Because it is still smarting under Congressional criticism for alleged failures to investigate radio station deals thoroughly, the Commission may wait a few weeks before announcing its decision.

Representative Connery (D.), of Massachusetts, Chairman of the House Labor Committee, took a parting shot at Chairman Anning S. Prall and the Federal Communications Commission in the June 24th issue of the Congressional Record for permitting unrestrained "traffic in radio licenses".

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MUTUAL BECOMES A NATIONAL NETWORK

Completion of negotiations by which the Don Lee Network in California will become a member of the Mutual System was announced June 27th by W. E. Macfarlane, President of the Mutual Network.

Adding as a Rocky Mountain region outlet stations KFEL-KVOD, operating on a single channel in Denver, Mutual will begin trans-continental operations sometime not later than December 29 - perhaps earlier. Negotiations are also in progress to bring several other stations in major population centers into the Mutual chain.

Thus the Mutual System, started less than two years ago through the exchange of several programs between three powerful stations stretching from New York to Chicago, will soon become the third national network. Mutual has had by far the swiftest rise to transcontinental stature of any network in the history of radio. The present expansion project was handled by Fred Weber, General Manager of Mutual.

The Don Lee Network is the oldest and only permanent network of the Golden State. It consists of KHJ, Los Angeles, which operates at 5,000 watts daytime and 1,000 at night on the 900 kc. band - KFRC, San Francisco, same power on 610 kc. -

6/30/36

KGB, San Diego, 1000 watts, 1330 kc. and KDB, Santa Barbara on 1500 kc. The Denver stations are on the 920 kc. channel. Thus these stations have several choice spots on the dial.

The Don Lee Network was the first on the Pacific slope to conduct daily television demonstrations and it owns several patents said to be of considerable importance to the development of visual radio.

The growing association of the movie industry and broadcasting is bringing more and more of radio's major programs to the Hollywood regions. On the older networks approximately half of the major evening programs are to be originated in the movie capital. Through its expansion westward, Mutual will be in a position to originate programs featuring some of the glamorous figures of the movie, music and theatrical worlds that are concentrated in Hollywood.

Member stations of Mutual are WGN, the Chicago Tribune station; WLW, Cincinnati; WOR, New York and Newark; and CKLW, Detroit-Windsor. In addition, Mutual programs are released through stations in Boston, Philadelphia, Baltimore, Cleveland, Pittsburgh and Buffalo, and additional stations may be added to meet program and client needs.

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STORY OF McDONALD'S RISE IN RADIO TOLD IN TIME

A graphic account of the entrance and rise of Commander Eugene F. McDonald, Jr., President of the Zenith Radio Corporation, in the radio industry is told in the June 29th issue of Time.

Commander McDonald got his start with two young men who had a passion for building radio receivers in 1920. Now the Zenith Radio Corporation is one of the leaders in the industry. Three moves are credited by the Time correspondent for Commander McDonald's rapid rise: (1) concentration on short-wave sending and receiving sets, together with the taking of a short-wave set to the Arctic on the McMillan expedition in 1923; (2) the enlistment of the Goodrich tire dealers in a novel sales campaign; and (3) the solution of the power problem for farmers by developing the "Winchargers."

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SCRIPPS-HOWARD CHAIN BLOCKED IN RADIO MOVES

The move of the Scripps-Howard newspaper chain to set up an auxiliary link of broadcasting stations, as is being done by William Randolph Hearst, encountered a stumbling block this week when Examiners reported adversely to the Federal Communications Commission on two applications.

Through its radio subsidiary, the Continental Radio Company, the Scripps-Howard newspapers had asked for construction permits to erect and operate new stations in Columbus and Toledo, Ohio, where it publishes newspapers. Examiners found in both cases that additional service is not needed.

Continental Radio Company now owns and operates WNOX, at Knoxville, and WCPO, at Cincinnati.

"It is the desire of the applicant to acquire or establish broadcast stations in communities in which this organization owns newspapers", the Examiner's report stated, "and where adequate service is not being rendered, or in communities where a station may be acquired by the applicant and improved and developed as a broadcast station; the newspaper and the broadcast station being operated independently of each other."

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FCC HEARING ENDS; AMATEURS ASK FOR MORE CHANNELS

Culminating two weeks of testimony-taking, the Federal Communications Commission's engineering hearing ended last week with a plea from organized radio amateurs for more channels in the ultra-high frequencies.

Because of the mass of testimony submitted, the FCC will need weeks, if not months, to digest it and to reach any general conclusions.

Chief demands of representatives of the American Radio Relay League, speaking for 40,000 amateurs, were for additional channels in the radio right-of-ways.

F. E. Handy, Communications Manager, before the session said that although "92 per cent of the stations in the United States" were operated by amateurs, only "7 per cent of the frequencies" now assigned have been given them. In the present channels "used internationally, there are over 400 stations jammed in every channel", he added.

Supporting their plea, the amateurs noted that President Roosevelt had lauded their emergency service in protecting lives and property during the recent floods.

"Countless lives and property of untold value have been saved by amateur radio", said K. B. Warner, Secretary of the organization.

He declared that radio amateurs had been the "backbone" of the Signal Corps during the World War.

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SECRECY MARKS DEBUT OF RCA TELEVISION TESTS

Cloaked in secrecy, pending definite reports on its effectiveness, the Radio Corporation of America on June 29th inaugurated its \$1,000,000 field tests of a 10 KW television transmitter mounted atop the Empire State Building, New York City.

Instead of the customary fanfare of publicity that accompanies innovations in the radio field, the experiments in the visual broadcasting field kept newspapermen and the general public guessing. Engineers said it may be weeks or months before they will be ready to report on the results of the tests upon which the practicability of television for public entertainment may depend.

Public interest in the tests was widespread, but inquirers got no information to satisfy their curiosity.

Amateur experimenters eavesdropped on the six-meter wave band to "hear" what television sounded like while those with all-wave receivers which can tune down to six meters reported the signal strong in the metropolitan area, but they had only sound receivers and could not "see".

No report was available as to how far the images traveled, but the perfect June day was considered to be a clue that the broadcast covered a wide radius.

Official observers equipped with receiving sets installed in about 100 homes and offices watched the performance and will report on the reception. At the same time mobile receivers endeavored to pluck the motion pictures from space in various parts of the metropolitan area. Much will depend upon how images behave amid the skyscrapers when it comes to deciding whether or not television is to reach the mass production scale within a year or five years, according to the experts who for years have been developing the apparatus in the laboratories.

The transmitter high up in the skyscraper is one of the most modern and powerful of its type in the world. It is based to a great extent upon the inventions of Dr. Vladimir K. Zworykin, noted for his research achievements in electrical scanning.

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ARMY AIR STATIONS SPEND MILLION ON RADIO

A \$1,000,000 radio improvement program for Army air stations throughout the country, Panama and Hawaii is to be put into effect under the direction of the United States Signal Corps in the next fiscal year. The program, which will link the Army's 31 air fields not only into a more intimate network of military communication, but with the commercial airway system as well, will fall into three parts.

1. Setting up of simultaneous radio beacons and weather broadcasting systems at 18 fields.
2. Installation of traffic control transmitters at 20 of the busiest Army airports.
3. Replacement of existing low-frequency radio equipment at each of the Army's 31 fields with high-frequency equipment.

Buildings to house the new simultaneous radio beacon-weather broadcasting equipment have already been erected at Langley Field, Va.; Maxwell Field, Ala., and Patterson Field, Ohio. Bids for the equipment for all 18 stations, which is expected to cost about \$400,000 are to be advertised in the next few weeks.

Successfully tested by the Bureau of Air Commerce at Pittsburgh, the simultaneous radio beacon and weather broadcasting systems permit the sending out of the weather broadcasts without interfering with the constancy of the radio beam. With the prevailing equipment, to flash weather news the station operator must break the beam, which often proves confusing to fliers near the field.

In shifting radio equipment at all of the Army's airfields from low to high frequency, the Signal Corps plans to replace equipment in many cases 14 years old, with more modern radio devices and to increase the tuning-in and broadcast range of these fields. Where with low frequency radio facilities the maximum range is from 50 to 150 miles, depending on the power used and weather conditions, with high frequency equipment the range is virtually unlimited. The total cost for the new radio equipment is estimated at around \$500,000.

The installation of the simultaneous radio beacon and weather broadcasters is to be undertaken first, with the shift from low to high frequency radio equipment expected some time next Spring.

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The Chicago Federation of Labor has requested the Federal Communications Commission for authority to install new equipment at WCFL, Chicago, and increase its power from 5 to 50 KW.

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BRITISH BAN RADIO ADVERTISING FOR TEN YEARS

Direct advertising and sponsored programs in British radio broadcasting will be strictly forbidden for at least ten years more, the government announced June 29th, according to a dispatch from London in the New York Times.

"The complete exclusion of advertisements from British Broadcasting Corporation programs is widely approved", declared Postmaster General G. C. Tryon in an official memorandum accepting most of the recent recommendations by Viscount Ullswater's committee of inquiry. The Committee had suggested that sponsored programs might pay for experimental television programs, but even this was ruled out by the government with the statement that "there is no good ground for making any exception." The government, moreover, agreed "to take all steps within its power" to prevent the broadcasting by foreign stations of advertising programs intended for British listeners.

Broadcasting in Britain is made possible by a license costing 10 shillings paid annually by every owner of a radio receiving set. The revenue from this modest tax is so great that the government will receive and keep £1,050,000 from the British Broadcasting Corporation during 1936 exclusive of the hundreds of thousands of pounds paid in income taxes.

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NEW TYPE OF PARTY CONVENTION REQUIRED FOR RADIO

Misgivings were freely expressed by the political impressarios at the Democratic Convention in Philadelphia, as to the net effect of holding a party conclave exclusively for the radio audience instead of for the delegates who have to organize and carry on the campaign, Anne O'Hare McCormick wrote in the New York Times.

"Emil Hurja, for instance, scientific surveyor and chief political weather prophet for the administration, is of the opinion that the old type of convention cannot survive if given on the air", she said.

"A broadcast convention, he thinks after this experience, must be specifically prepared, abridged and dramatized for broadcasting. A new technique has to be developed. The issues shall be debated to interest the listening public, and to achieve this objective Mr. Hurja suggests the possibility of bringing to the floor, and hence to the microphone, condensed summaries of the discussions that take place in the Resolutions Committee."

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6/30/36

RADIO SPURS "TRUTH IN ADVERTISING", SAYS SARNOFF

Asserting that the very nature of radio advertising requires a sincerity of approach, David Sarnoff, President of the Radio Corporation of America, on June 29th told the 32nd Annual Convention of the Advertising Federation of America that broadcasting spurs "truth in advertising".

Radio owes a debt of gratitude to older advertising media for setting up established standards and ethics, he said, adding:

"Radio inherited ethical standards which had been established after a long period of discussion, experimentation and purposeful self-regulation by the advertising fraternity. It had no legacy of bad habits from an unregulated past, and was, therefore, able more easily to maintain the principles of 'Truth in Advertising'.

"It is because radio provides such an intimate and personal contact with the individual man, woman and child that it is so sensitive to truth, fairness and honest dealing. Every advertiser knows from his own experience that exaggeration is easier in impersonal, flamboyant type than in the spoken man-to-man message over the radio.

"I do not mean to imply that radio advertising is beyond criticism or improvement. But I feel justified in saying that it has been a wholesome force in maintaining that 'Truth in Advertising' to which this gathering is pledged.

"Probably more than in any other medium, the success of radio advertising depends on its command of the subtle but decisive elements of public confidence and good-will, and the direct moral responsibility of the advertiser for his claims.

"Already modern advertising has felt the impact of this radio technique. Broadcasting has encouraged a type of advertising which not only permits but requires a mass appeal, couched in the most individual terms. It speaks to members of a crowd not as a crowd on the street, but as to a friend in the seclusion of his home. The most convincing proof that industry and business have found these factors useful is provided by the extraordinary growth of radio advertising. In fifteen years it has reached an annual expenditure for broadcasting time of eighty-seven million dollars.

"Another proof may be found in the fact that the largest majority of radio advertisers tend to become permanent users of this medium. Last year, for instance, less than 15% of radio's commercial sponsors were new to the networks. More than 85% had been on the air in 1934 and the vast majority of them had used radio in the preceding years as well.

"Let me now say a word concerning the future of radio in its relation to your advertising problems. Some day we shall also have a facsimile broadcasting service to the home. The technical barriers to such a service have been overcome. Just as in the early days of sound broadcasting, it remains now to create the practical service which facsimile can render to the home. The practical genius of American business, and particularly American advertising, will know how to use this new medium to its own profit and to the nation's benefit.

"There is another subject which I am sure is in your minds and that is the part which television will play in advertising. As a commercial operation, television has not yet arrived, but we have advanced sufficiently far to say that the technical obstacles are not insuperable.

"The benefits which have resulted from the industrial sponsorship of sound broadcasting indicate that our major television programs will come from the same source. It requires little imagination to see the advertising opportunities of television. Broadcasting an actual likeness of a product, the visual demonstration of its uses, the added effectiveness of sight to sound in carrying messages to the human mind - these are only a few of the obvious applications of television to merchandising. Commercial announcement can be expanded through television to include demonstration and informational services that will be of value to the public as well as to the advertiser.

"But let no one fool himself into believing that television over a wide area or to a considerable audience is around the corner, or even around the block. Endless details of transmission, reception and program problems are still to be worked out."

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KDKA FILES REQUEST FOR 500 KW. PERMIT

Application for an increase in power from 50,000 to 500,000 watts for KDKA, NBC-Blue network outlet in Pittsburgh, was announced June 29th by the Westinghouse Electric and Manufacturing Co., owner of the station. The application was filed in Washington before the Federal Communications Commission.

If the power application is granted, a greatly improved signal will be heard from KDKA. Radio engineers say that the increased power, in conjunction with the new 700-foot vertical radiator just approved by the FCC, and now in process of construction, will provide a broadcast service of the highest quality. The new transmitting equipment, now being designed by Westinghouse engineers, will embody all the latest technical advances. The present transmitter building, at Saxonburg, Pa., 21 miles north-east of Pittsburgh, will be completely modernized to house the new equipment.

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RADIO PROBLEMS DISCUSSED AT AFA CONVENTION

The role of radio in modern advertising was being discussed by speakers before the 32nd Annual Convention of the Advertising Federation of America in Boston this week.

Besides David Sarnoff, President of the Radio Corporation of America, whose address precedes this story, the speakers and topics scheduled were:

Herman Bettinger, Assistant Professor of Marketing, Wharton School of Finance and Commerce, University of Pennsylvania, on "Effective Retail Radio Advertising" at luncheon of Sales Promotion Division of National Retail Dry Goods Association, Tuesday, June 30th.

Symposium, "What of Radio for Public Utilities", led by Will C. Grant, Advertising Director, Lone Star Gas Co., Dallas, Texas, at luncheon of Public Utilities Advertising Association today.

R. L. Harlow, Assistant to the President, Yankee Network, on "Merchandising the Radio: National and Spot", National Advertisers Conference this morning.

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INDUSTRY NOTES

The Telegraph Division of the Federal Communications Commission has issued an order (No. 23) requiring every common carrier subject to the Communications Act to file with the Commission not later than September 1st in triplicate on prescribed forms a statement showing various information relative to rates charged.

The National Broadcasting Company is advertising the results of the Radio Guide's "star of stars" poll which places NBC programs and stars first in all classifications. Some 1,250,000 votes were cast. First place winners were:

Star of stars, Jack Benny; Musical program, Maxwell House Show Boat; dance orchestra, Wayne King (also on CBS); dramatic program, One Man's Family; Children's program, the Singing Lady; male singer of popular songs, Bing Crosby; singer of operatic or classical songs, Nelson Eddy; comedian or comedy act, Jack Benny; news commentator, Lowell Thomas.

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