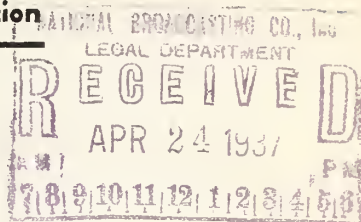


# HEINL RADIO BUSINESS LETTER

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No. 1022

## THE ARMY AMATEUR RADIO SYSTEM AS SEEN BY ARMY MAN

The Army amateur radio system pops up irregularly in the news along with national disasters, but it is seldom that the set-up is calmly surveyed as in the current issue of the Signal Corps Bulletin.

The following article was written by Lieut. Charles W. Roth, of the U. S. Signal Reserve:

"Briefly, the purposes of the Army amateur radio system are to furnish emergency communication, to offer additional facilities for the American Red Cross, and, most important from a military view, to train potential Army radio operators.

"Administration of the system is handled from the Office of the Chief Signal Officer, through corps area signal officers. Aides in this work are liaison officers, who are Regular Army personnel; and radio aides, who are either civilians, National Guard, or Reserve officers. These radio aides are normally radio amateurs capable of coordinating procedure in the Army and civilian attitudes and methods.

"The members of the A.A.R.S. are of all ages and occupations: Some are high-school students of tender age; others, successful business executives or professional men. They have, however, a common interest in a systematic organization such as this. While other radio amateurs may be interested in 'dx' (long-distance radio contacts), rag-chewing, experimenting, or traffic-handling, the men - and a few women, too - who make good members of the A.A.R.S. are those who want systematic activity. There is a thrill in being part of the machine-like function of our nets, or in contributing to this worth-while endeavor.

"While emergency operation is infrequent in this corps area, there have been several occasions which demonstrated the value of past training. Last Winter, sleet storms in Illinois and Michigan interrupted normal communication channels, and Army amateurs remained the only means of communication, carrying the traffic load for such periods as were necessary.

"The conditions under which Army amateurs operate, compared with those of a Regular Army net, will demonstrate some of our training difficulties.

"An Army net (brigade, for instance) operates on a cleared frequency. Stations in the net are brigade and its regiments. Aside from possible enemy 'jamming', no interference from other radio stations is anticipated. Where an HQ is required to operate in two nets (brigade and regiment), there are two sets of equipment and operators.

"The Army amateur net, on the other hand, usually operates on its assigned frequency, but this frequency is within an amateur band, and any one or more of some forty thousand other amateurs are free to operate on that same frequency. Usually, two to four such outsiders can be heard, slowing down net drill. Further, instead of being only short distances apart, net stations may be separated by as much as 250 miles. Due to vagaries attendant upon high frequency signals, it is frequently observed that net control stations may be lost, or blanketed by east-coast stations.

"Our Army amateurs ordinarily operate alone, having no relief operators for the period of drill, and so have to handle all records as well as transmission and reception. Finally, a station operating in two nets (State and district, for example), must operate on two separate frequencies. As only one transmitter at a station is the general rule, this necessitates shifting frequency to meet schedules, and thus a continuous chain of communication is delayed. For our work, the time loss is not enough to warrant two-transmitter stations.

"Army operators are trained in tactical net operation and use of procedure signals before they enter an actual radio net, while Army amateur operators receive all their training via radio communication. The latter, of course, involves the difficulties of lost signals, interference, and resultant corrections, rendering the process necessarily slow.

"Considering the methods of instruction, it is obvious that a good portion of our success is dependent upon the qualifications of the NCS. Too frequently, an inexperienced man must be made NCS (local net control station) for reasons of expediency rather than because of his ability. Then, too, we must not overlook the fact that the frequent turn-over in NCS's, with resultant shortage of time for proper organization and instruction accounts, in great measure, for failure to realize maximum proficiency in tactical net operation.

"What can be done to counteract this turn-over? At frequent intervals, there are general special activities such as ZAG contests, unknown station finding, unknown keyword cipher messages, goniometric problems, etc., planned and executed by the Chief Signal Officer. It is increasingly evident that this is not enough. It is too general. There must be more corps area activity, which has a more personal appeal.



"An attempt has been made during the past year or so, in response to growing demand, to have planned and organized activity which is confined to the limits of our corps area. As an experiment, special assignments were made, by radio, for selected members to monitor other nets, supply requested information, originate specific traffic, assume NCS position, etc. This preliminary work showed that the master traffic schedule for the corps area was not suited to the new plans, and that nets were not coordinating as they should.

"Accordingly, the opening of the 1935-36 season found a suitable master schedule in effect, and plans ahead for activity. The schedule was such that normal drill could be called off, substituting for it a general problem. Such problems are simulated hurricanes, in which special nets must be set up by the (corps area net control station), requiring all stations to stand by to determine their assignments. Necessary emergency traffic is then handled, being concerned with relief measures, new items, etc. Possible variations are cyclones, floods, wars, sleet storms, and riots.

"Another general activity measure is in finding a station whose frequency is unknown, and following further orders contained in a general broadcast from such unknown station. This type of activity can include cipher messages in unknown key words, or division of the broadcast among several stations. A considerable number of variations is available so that there need be no fear of monotony.

"These planned activities, plus a general program emphasizing procedure rather than a high total of messages handled, have resulted so far in a marked improvement in technique. Without such planned and coordinated activity, the members do not realize that they are part of an extensive system of which they may be important links; without it they feel isolated, and distinct entities complete in themselves. It is most important that they have the broader conception, for then they work with more interest and concentration, resulting in quicker assimilation of the instruction offered. This benefit continues, for an interested member remains with the A.A.R.S. as long as he can, and if forced to leave, there is a trained man to replace him. Strict adherence to procedure and schedules must be maintained from corps area net down, if success is desired.

"This tendency toward directed activity within a corps area is not confined to the sixth, but is widely accepted. Not only the members, but the administrative staff as well, are gaining a working knowledge of the possibilities inherent in the A.A.R.S., and training is being called for and given, so that the system can operate at its best.



"Other suggested aids, outside of the purely operating work, are concerned with the maintenance of morale within the system. Ratings as sergeant, corporal, private first class, private, or specialist, first class (second, third, etc.), are employed in some corps areas, and consideration should be given to this. It is also possible that full courses of study might be offered by correspondence, leading to Reserve commissions. Membership in the Enlisted Reserve is another consideration. The feeling of A.A.R.S. members of this corps area is that they want to be associated with the Army, and anything done to enhance this feeling will help increase interest.

"This corps area needs a standardized routine of handling recruits. The application form, reading 'I do not want to take a physical examination', is undesirable. Consider the following procedure:

"A recruit, no matter what the course of his application, is assigned to a net and his DNCS (district net control station) notified. If recruited in the district net, no action is required of headquarters. The activity of the recruit is reported weekly by the DNCS, and only after an uninterrupted two months' constant drill attendance is he eligible for membership. The DNCS forwards the recruit's name and address to the SNCS at the close of the recruit's first drill. The SNCS, at the end of the probationary period, fills out an application blank to be sent to the recruit, who completes his portion of the application and forwards it to the DNCS. The DNCS adds his recommendation for membership, and appropriate remarks, forwarding the application to the liaison officer who immediately issues a membership certificate and any necessary supplies."

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#### EXAMINER URGES DENIAL OF EUGENE MEYER APPLICATION

The application of Eugene Meyer, wealthy publisher of the Washington Post and Republican leader, to build a radio station in Washington encountered its first obstacle this week when Examiner Ralph L. Walker recommended that it be denied.

In the name of the Mid-Atlantic Corporation, Mr. Meyer applied for a construction permit to use 1570 kc. with 1,000 watts and unlimited time.

Similar applications were filed by the Journal Company, of Milwaukee, and the Trenton Times, Trenton, N. J. Examiner Walker recommended that the frequency be allocated to the Trenton applicant, which asked only 250 watts power.

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## PAYNE-BOYLAN TAX MAY BE DELAYED BY PRESIDENT'S PLEDGE

The assertion of President Roosevelt in transmitting the relief budget that there would be no new taxes proposed so long as Congress does not increase the national expenses has given broadcasters reason to hope that the Payne-Boylan tax at least will be delayed until next session.

Chairman Doughton, of the House Ways and Means Committee, where all tax legislation originates, stated that he had not examined the tax bill, which would raise more than \$6,000,000 from broadcasters, but he intimated that disposition will depend upon word from the White House.

Broadcasters and their attorneys in Washington, while refraining from public statements, privately denounce the tax scale as "exorbitant". Even members of Congress who favor license fees for broadcasting believe that the matter should be studied thoroughly before legislation is adopted.

Although the matter may go over until next session, however, it is believed that Commissioner Payne has opened the way for an inquiry that will lead ultimately to a license fee system or some form of taxation on broadcasting stations.

It is certain that when Congress begins looking around for new sources of revenue to balance the budget that it will examine the broadcasting field.

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## RECORD SUMMER RADIO AUDIENCE FORECAST IN CBS SURVEY

Bringing up to date statistics prepared by Dr. Daniel Starch, the Columbia Broadcasting System this week issued a booklet forecasting that the approaching Summer will produce the largest regular radio audience this country has known.

Highlights of the report are that:

There will be 2,000,000 more radio families in the United States this Summer than last.

Radio receivers will total 34,000,000.

Radio-equipped homes will number 25,000,000.

Each Summer day will produce 77,000,000 family hours of listening.

There will be 4,000,000 "extra" radio receivers in the 25,000,000 homes.

Five million automobiles will be equipped with radio sets.



Asking the question of "how often and how much" will the 34,000,000 radio receivers in the country be in use in the Summer of 1937, CBS says:

"To Dr. Daniel Starch these are recurrent questions about the radio audience; question to which he and a nation-wide staff have devoted at least four months each year for the last three years.

"The recent compilation of personal interview No. 182,404 with the American public on its radio habits (by far the largest study of this type ever undertaken) gives Dr. Starch and his staff a three-year record of the listening habits of the American people, and the listening habits for three Summer seasons.

"Specifically, Dr. Starch found that on the average week-day in July, 1936, 70% of all home radios were in use sometime daily.

"16,100,000 families listen daily an average of 4 hours and 24 minutes, or 70,840,000 family-hours of home-listening each Summer day in '36. This does not include families listening in automobiles.

"This Summer the astronomical but actual sum of 77,000,000 family-hours of home-listening each day looms as a new 1937 summer radio record."

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#### MIAMI BEACH GETS NEW STATION; OTHERS RECOMMENDED

The Federal Communications Commission this week granted a construction permit to A. Frank Katzentine to erect and operate a new broadcasting station in Miami Beach, Fla., on 1500 kc. with 100 watts power, unlimited time.

Examiners' reports recommended other new stations for Portland, Me., Barnstable, Mass., Cheyenne, Wyo., and Johnson City, Tenn.

Favorable reports also were submitted on application of WMEX, Boston, to transfer from 1500 to 1470 kc., and to increase its power to 5,000 watts; and KARK, Little Rock, Ark., to increase its power to 1,000 watts.

Among the applicants whose requests were disapproved by Examiners was Richard M. Casto, of Johnson City, Tenn., whose counsel, George H. Smith, of Washington, was rebuked by the FCC for allegedly inserting documents in the file in violation of Commission regulations. The Examiner, George H. Hill, described the incident in detail although he made no mention of the FCC's subsequent action and the pending inquiry being conducted by a Special Committee headed by Commissioner George Henry Payne.

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## NBC EXPANDS FACILITIES IN SIX KEY CITIES

An extensive building program involving expansion and improvement of six National Broadcasting Company plants in key cities of the Red and Blue Networks, was announced this week by Lenox R. Lohr, President of NBC.

The project includes immediate construction of new studios at Philadelphia and Schenectady, the completion of a building already under way in Washington, and the subsequent provision of new facilities at Hollywood, San Francisco and Cleveland.

Radio's rapid development, the increase in NBC business and the growth of the company's public service activities make such expansion immediately necessary, Mr. Lohr stated, in order that available facilities keep pace with current needs.

Changes and new developments in the six cities will be made with a view to placing all NBC broadcasting plants on the same technical basis as the Radio City and Chicago studios. Plans also include complete air-conditioning, sound-proofing and acoustical treatment, and lighting devices designed to reduce heat radiation to a minimum. They also provide space for future development of television activities.

Ground will be broken at Philadelphia within a week for the construction of a six-story building at 1619 Walnut Street which will house NBC studios and offices and Station KYW, the Westinghouse Electric and Manufacturing Company's outlet of the NBC-Red Network. The studios equipped will cost about \$600,000 and will be ready for occupancy November 1st.

NBC's new Washington studios, now nearly completed, will be in operation July 1st, and will double the capacity of the present Washington studios. The NBC quarters will occupy the greater portion of the newly constructed building of the Trans-Lux Washington Corporation.

Because of the great number of talks on national affairs originating in Washington, the new studios will include two of the speaker type. Three others will be used for entertainment broadcasts. The NBC quarters, housing stations WRC and WMAL, will have an almost continuous frontage of windows on three sides. The cost of the plant, including the new transmitter contemplated in Prince George's County, Maryland, for Station WRC, will be about \$350,000.

Negotiations have been completed, Mr. Lohr said, for construction of a new NBC building at Schenectady to house Station WGY of the General Electric Company. Work will begin shortly on the studios, which will occupy a space of 20,000 square feet, and it is expected that the plant will be ready for use September 1st. Cost of building and equipment is estimated at \$300,000.

Plans for improved facilities at Hollywood, Cleveland and San Francisco are still in a formative stage. It is planned, however, to double the capacity of the present Hollywood studios and to expand those at San Francisco and Cleveland.



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## CORONATION PROCESSION TO BE TELEVISED BY BBC

The still new television broadcasting facilities of the British Broadcasting Corporation will be put to a severe test on May 12th during the coronation of George VI and Queen Elizabeth. The famed coronation procession is to be televised.

Anticipating the significance of the achievement,  
World-Radio comments:

"Outside broadcasts by television begin with a literal flourish of trumpets, for the inaugural event will be the televising of the Coronation procession from a specially chosen site at Apsley Gate, Hyde Park Corner. As Coronation processions occur once or twice in a lifetime, no television enthusiast could have hoped for a more auspicious start. Indeed, the difficulty may be to avoid anti-climax in the weeks that follow.

"Although only one camera position is permitted, a splendid view of the procession should be obtained as it approaches down the East Carriage-road, passing within a few feet of the camera, crossing Hyde Park Corner on its way to Constitution Hill, and there should be wide scope for panoramic effects. Telephoto lenses, which have given excellent results in Alexandra Park, should also yield good close-ups, though much will depend on the weather conditions.

"Owners of television sets as well as visitors to the hundreds of viewingrooms all over London will undoubtedly see the procession under more comfortable conditions than many people who have paid for sets on the route; and they will also have the benefit of a running commentary.

"Among the features of Coronation Week in television will be a specially adapted version of 'Hamlet' and a Coronation edition of 'Picture Page' - to be televised on Tuesday instead of the usual Wednesday - in which interesting people associated with the preparations for the national festivities will be interviewed in the studio. Replicas of the Crown Jewels will also be shown.

"Another outstanding item will be a 'tour' of the London Television Station. The cameras will be taken through the transmitter halls, into the make-up and dressing rooms, and through the main corridor to the studio itself, where a typical production will be seen 'on the set.' Viewers will see how the cameras and microphones are handled and will have glimpses of the control-room and of the producer and his assistants at the control desk overlooking the studio."

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## PUBLISHER-BROADCASTERS HOLD INFORMAL MEETING

An informal meeting of newspaper publishers who own radio stations was held Tuesday afternoon at the Hotel Waldorf-Astoria, N. Y. About 75 attended.

"While lethargic in note, the sense of the meeting, according to Variety, seemed to be:

"(a) Newspaper-owned stations should not ask either the A.N.P.A. nor the N.A.B. to consider the peculiar position of the press-controlled broadcasters as they would be a minority without the sympathy of their contemporaries in both cases.

"(b) Newspaper stations should not set up a Washington lobby, but should work through their regular counsel and keep in touch with one another.

"Ex-Senator Dill was a speaker, as were Louis G. Caldwell and Gardner Cowles. Latter stressed the idea of not lobbying or otherwise inciting artillery fire. Dill mentioned the six months' license as a perennial source of weakness in radio.

"Discussion from the floor was without benefit of introduction or any record. A suggestion that combination rates be dropped and that a broad-minded attitude be taken on listing competitor radio logs did not arouse much enthusiasm.

"Shotgun divorce of press-radio has pubs' worried somewhat, but there is no united sentiment apparently on what measures to take to combat the move. Several speakers pessimistically referred to the different political color of themselves and the administration in Washington."

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## RADIO BOON TO RURAL AREA, SAYS LOHR

"Radio has become one of the most powerful means of communication in breaking down the physical and cultural isolation to which rural people in remote areas were subjected only a comparatively few years ago", said Lenox R. Lohr, President of the National Broadcasting Company, in an address on the General Electric Farm Forum from WGY in Schenectady, on April 16.

"During the economic emergencies of the past few years, agriculture has had a period of readjustment. Information on conservation, drought, crop control and insect pest control has been broadcast daily to keep the farmer informed on all of the late developments in connection with his government. Today, instead of waiting for a local county or state leader to explain what is going on in these fields, the farmer is able to get his information direct from some of the chief policy-making officers by radio.



"It is my opinion that no class of people has received the benefits from radio as much as has the farmer", said Mr. Lohr. "The radio has brought him entertainment, music, news of general interest and also market and business news, which has been of direct financial value. The lives of rural people have been broadened because radio has brought into the farm home these national and world-wide affairs and events", said Mr. Lohr.

"Weather, the governing element in raising crops, is relayed to the farmer several times daily by radio. It has been said that the radio is the farmer's substitute for the ticker, the telegraph, the printing press and the luncheon club. I believe that there is a lot of truth in that statement, because radio has done a great deal to place the farmer on a par with his city brother. The most isolated farmer, who never had been able to leave his county or state, can now attend by radio the finest opera presentations in New York, the inauguration in Washington, the coronation in London and the most stimulating musical programs from all parts of the globe. This has brought the farmer and his family into a direct relationship with the city and impressed on him the city way of thinking", said Mr. Lohr.

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#### GIULIO MARCONI JOINS NBC TO STUDY

Giulio Marconi, only son of Marchese Guglielmo Marconi, will join the National Broadcasting Company next Monday to complete an already extensive apprenticeship in the science with which his family name is so intimately associated.

The long strides made by radio in the United States so deeply impressed the father of wireless communication that, on his suggestion, his son - an alert, handsome young man of 26 - has come to this country for several years of study and training in the most advanced radio techniques of the National Broadcasting Company and the Radio Corporation of America. Young Marconi, who arrived in New York from Naples last Sunday, has already had three years of similar study in England and in his native Italy.

It was while Mr. Marconi was pursuing his radio studies with the Italian Marconi Company in Rome that the plan to come to America was formulated. The friendship between his father and David Sarnoff, President of RCA, made it possible, Mr. Marconi explained.

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 ::: TRADE NOTES :::  
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W. Wright Gedge, of Detroit, a Direction of the National Association of Broadcasters and associated with WMBC, Detroit, died this week. He had been elected a NAB Director for a three year term in 1935.

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Glenn I. Tucker, formerly with the Radio Corporation of America, is Vice-President of a new advertising agency in New York, Thornley and Jones, Inc., formed by the association of George H. Thornley and John Price Jones.

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Ground-breaking ceremonies for the construction of the new CBS studios and offices in Hollywood will be held Tuesday, April 27, in a special broadcast over the entire WABC-Columbia network, from 4:45 to 5:15 P.M., EDST.

The new CBS radio center in Hollywood will include auditoriums, studios and offices of Columbia's newly acquired 50,000-watt radio station KNX, as well as other facilities for servicing the network. The structure will front on Sunset Boulevard, occupying the block between Gower and El Centro Streets, and the entire project will cost approximately \$1,000,000.

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NBC's station total, already at an all-time high, will rise to 125 on May 1 when WSAN, the only station in Allentown, Pa., becomes an optional outlet available on either the Basic Blue or Basic Red NBC networks. WSAN operates on 1440 kilocycles with power of 500 watts. The network rate will be \$120 per evening hour.

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William S. Paley, President of the Columbia Broadcasting System, has commissioned Alexander Calder, internationally known sculptor, to design the Annual Amateur Radio Award, which will be presented to the individual who through amateur radio has contributed most usefully to the American people either in research, technical development or operating achievement.

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George Henry Payne, Federal Communications Commissioner; Governor Elmer A. Benson, of Minnesota, and John P. Devaney, president-elect of the National Lawyers' Guild were to speak over WOR tonight (Friday) while at a dinner of the Guild being tendered to Mr. Devaney, who was former Chief Justice of the Minnesota Court of Appeals. The National Lawyers' Guild has been an active force in endorsing President Roosevelt's Supreme Court proposal and the guest speakers at the dinner were to express their approval of the Guild's stand.

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