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# THE AMERICAN RADIO RELAY LEAGUE

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KENNETH B. WARNER, EDITOR.

August 14, 1934

Mr. John D. Kraus  
Arlington Blvd.  
Ann Arbor, Mich.

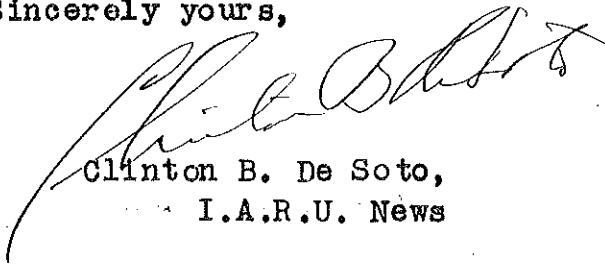
Dear Mr. Kraus:

I am terribly sorry that the conjunction of several annual vacations in this department has delayed reply to your letter of July 31st.

Following your visit, Mr. Lamb discussed with me the possibility of your preparing such an article as you mentioned. I should be very glad indeed to have this article for use in the I.A.R.U. News of QST, and I think that the length you mention - about 1500 words - will be approximately right. If you will send it along, I will be highly appreciative.

Thanks, and cordial 73.

Sincerely yours,



Clinton B. De Soto,  
I.A.R.U. News

CBD:JHK

August 18, 1934

Mr. Clinton B. DeSoto  
I.A.R.U. News  
West Hartford, Conn.

Dear Mr. DeSoto:

I am in receipt of your letter of August 14th in which you mention that it is possible to use an article I have prepared on "Amateur Radio in the Soviet Union" in QST. I am enclosing the article and accompany it with a photograph and a suitable legend which I hope you may also be able to use. Although the article may be included in the I.A.R.U. News of QST, I had thought that its character might make it suitable for use among the general articles in QST. I would be pleased to hear from you whether or not you can use the photograph and also about when the article may be expected to appear in QST.

As I explained in my last letter, I left a copy of the Russian radio journal "Radiofront" at the A.R.R.L. offices during my recent visit. It was to be turned over to you and subsequently returned to me. Since its absence causes a break in my file of Radiofront, I would very much appreciate receiving it.

About a month ago I wrote Mr. Lamb, at the headquarters office, concerning a technical article which I submitted last year and which has been pending publication ever since. I have not had a reply and wonder if Mr. Lamb is on a vacation at the present. If so please advise me to whom I should write.

Very sincerely and with 73,

John D. Kraus, W8JK  
Arlington Blvd.  
Ann Arbor, Michigan

## AMATEUR RADIO IN THE SOVIET UNION

At the present time there are about 500 amateurs in the entire Union licensed to use transmitters and, in addition, about 2000 registered short-wave receiving stations. The Soviet Union occupies <sup>more than seventh</sup> almost one sixth of the land area of the earth and many of the amateurs are widely separated from each other, but one finds also that much of the activity is centered around such cities as Moscow and Leningrad.

The amateurs are a self-governing group; the "Central Bureau of the Short-Wave Section" (abbreviated C.B.S.K.W.) is at the head of their affairs and has its headquarters in Moscow. One finds in nearly every city or district of any size a "Society of the Friends of Radio" (abbreviated O.D.R.). The members include broadcast listeners and experimenters but the Societies have in most cases also a "Short-Wave Section (S.K.W.) and it is in this Section that the transmitting amateurs are active. Directly subordinated to the C.B.S.K.W. is a board made up of 5 amateurs which is known as the "Committee on Qualification". Among its duties are the working out of regulations and standards for the amateurs, the classifications of the amateurs into groups depending on their qualifications, the giving of license examinations, <sup>and</sup> the solution of technical discussions and questions arising between individual short-wave sections, ~~and so forth~~. Many of the regional districts also have <sup>such</sup> committees based on this model.

To secure a transmitting permit one first obtains from the local Short-Wave Section (S.K.W.) of the Society of Friends of Radio (O.D.R.) a petition, <sup>it</sup> which is then submitted to the regional organization of the S.K.W.

After <sup>has been</sup> ~~they have~~ given the amateur a written examination and a code test <sup>by</sup> these regional organizations, <sup>they</sup> may issue a recommendation for a license. The recommendation is forwarded to the People's Commissariat of Communication <sup>which</sup> ~~who~~ then issues the license. For 5 and 10 meter transmission the recommendations may be given out directly by the local organizations. Only amateurs who have reached the age of 18 years and are actively engaged in the S.K.W. are qualified to receive a license. By special permission of the C.B.S.K.W., however, persons under 18 may be recommended.

The Soviet amateurs are licensed in three groups or categories. The amateurs in the third or beginning category must have a code speed of 10 words per minute, <sup>(3 characters per word)</sup> a knowledge of ~~the~~ radio abbreviations and procedure, and a general practical understanding of radio technique. For workers in productive industry and members of the Communist party the code speed requirement is reduced to 6 words per minute. Privileges include 20 watts in the antenna and operation on 5, 10, 40, and 80 meters wavelength. On 40 meters the time of operation is limited to between midnight and 8 A.M. Moscow time with a tone not less than 4. The other wavelengths have no such limitations. Only 6 percent of the amateurs are classified in this category.

The second or middle category amateur is required to show in the examination a more thorough understanding of radio technique and a knowledge of the fundamental units used in electrical work. Code speed must be 16 words per minute but this is reduced to 10 in the case of workers in productive industry and party members. Operation may be on 5, 10, 40, 80, and 160 meter wavelengths with 40 watts in the antenna. By special permission of the C.B.S.K.W. 20 meters may also be used. There are no time or power-supply limitations. This

category contains about four-fifths of the amateurs of the Soviet Union.

The examination for the first or highest category requires, in addition to the material demanded for the second category, a more fundamental knowledge of tube operation, tube characteristics and parameters, use and operation of quartz crystals, ~~and so forth~~. Included are also questions on electric motors, dynamo machinery, and even on the internal combustion engine. <sup>An</sup> Amateurs applying for a telephone license ~~have~~ <sup>has</sup> additional questions on modulation and microphones. A note in the examination program requests that the examiners refrain from giving catch questions. ~~Not~~ <sup>not</sup> a bad idea on any exam. The first category, which takes in about 14 percent of the amateurs, carries privileges of operation on 5, 10, 20, 40, 80, and 160 meters wavelength and the use of up to 100 watts in the antenna. Time of work is unlimited. Further these amateurs acquire the right to take part in polar and other scientific expeditions of All-Union importance and the right of teaching in all courses organized by the Society of Friends of Radio. These societies hold regular meetings during the winter months and although technical discussions are the rule, courses of instruction are given if there is sufficient demand.

(no. caps.) Many Short-Wave Sections publish "ham sheets" with reports of tests and activities. The one which I saw from the Leningrad district was a mimeographed publication, <sup>of</sup> about two dozen pages and done in approved ham fashion. Q signals and familiar amateur abbreviations appeared often <sup>along with</sup> ~~and~~ the Russian. The most popular radio journal is ~~called~~ "Radiofront" and enjoys a very large circulation. It is issued twice a month and a portion of each copy is devoted to a <sup>section called "Short Waves"</sup> ~~Short Wave Section~~ which carries material of <sup>particular</sup> interest to the amateur. Technical articles, amateur news,

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and station write-ups are included.

Collective or club stations in which the apparatus is pooled by the members are quite popular. Equipment cost is not so high, however, but that a person of moderate means can afford his own station. The Soviet workers are paid in the so-called "paper rubles" which through governmental control have no foreign exchange value. One is accordingly forced to buy only domestically available equipment which is all of Soviet manufacture. Parts, especially indicating meters, are apt to be quite liberally proportioned. As is always true among hams a good portion of the gear is home-made. There are many radio shops where complete broadcast receivers, individual parts, and accessories can be purchased. Some equipment is very modern; some quite old, -- much reminds one of 1922-radio in America. As is generally true in Europe, broadcast receivers with regenerative detector are common. Quality reproduction does not as yet appear to have received much consideration. In radio shops -- as in every shop or store -- there is an abacus, a calculating device usually about a foot square having a set of parallel wires on which to shove wooden beads back and forth. Judging from their frequent use, it would seem that a Russian storekeeper without his abacus is almost as bad off as an American engineer without a slide-rule.

Station layouts vary considerably but the QSL-card acts in its capacity of wallpaper almost everywhere. Receivers are of rather simple design using 2 or 3 tubes. A detector and audio is common with two tubes; but a third tube as tuned RF makes a popular arrangement. Although the simpler types of transmitter are still common many hams have crystal controlled or CO-FD-PA rigs. The rack and panel arrangement is much used. Transmitting tubes rated at from 20 to <sup>150</sup> ~~20~~ watts are available. The single wire-

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fed antenna is known as the "American type" and enjoys much popularity. On June 1st the Soviet amateur districts were renumbered and ~~all~~ the amateur call letters reassigned. (~~according to the Madrid Conference~~).

For the operation of an amateur station a small fee is charged. This includes the privilege of a broadcast receiver which ordinarily requires a fee of its own. The handling of messages <sup>kkxx</sup> is prohibited with the exception that the local sections and the central bureau offices of the S.K.W. may make use of the amateur relay services. In foreign QSOs the international ham lingo is ~~of course~~ used but in contacts within the Union the amateur can <sup>also</sup> transmit <sup>in Russian</sup> by means of the same code symbols, ~~in Russian using the Russian alphabet~~. Certain letters or their equivalents are common to both the Latin and Russian alphabets. For example, the Russian "Ф" is equivalent to the "F" of the Latin alphabet and is designated by "dit dit dah dit." All of the 26 code symbols for the English alphabet are used, as well as a number of the symbols for foreign letters (French é, German ð, etc.) to make up the 33 letters of the Russian alphabet. Thus, with one set of code characters the Russian amateur has at his disposal a choice of two alphabets.

In my visit in the Soviet Union I did not meet any amateur who spoke more English or German than I did Russian, which was about nil. The international amateur lingo and abbreviations were, of course, in common but the pronunciation often was not. Accordingly, it was the rule to speak through an interpreter if one wished to do much extended conversing. But it was frequently possible to work directly by whistling the code. This was great sport and always ~~was~~ a source of amusement to the interpreter that we had a language in common he couldn't "savvy." Nearly all of the abbreviations are interpreted <sup>in</sup> the same <sup>way</sup> as we do. Some have

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assumed a bit of variation, however. Thus, "TFC" does not signify messages but merely a QSO.<sup>(6)</sup>

Having visited a number of amateur stations I expressed a desire to see a broadcasting station and a visit was promptly arranged. The one visited is situated somewhat north of Moscow and required an auto trip of about 35 kilometers to reach it. The road ~~was~~<sup>to the station</sup> was a real workout for any car and reminded me in places of a complex wave shape. The station house was found to contain a 100 kilowatt job using sixteen 50 kilowatt water-cooled tubes as a final envelope amplifier. It so happened that I had arrived at a time when the transmitter was not scheduled to be on the air. After inspecting the workings and being shown around in great style, the engineer turned on the station for a few minutes --100 kilowatts and all--<sup>an essentially class-B</sup> to demonstrate its operation a bit more vividly. The rustling sound of ~~the~~ water swirling thru the tubes at full pressure and neon bulbs glowing at many points thruout the transmitter helped a lot to complete the picture. A 20 kilowatt short-wave broadcasting station was also situated in the same building.

During my trip of over 3000 miles in the Soviet Union the fact that I was a ham proved many times of great value. It opened the way for many contacts which helped make the trip more enjoyable. During a stay of three months in Germany the same was also true. One soon discovers that amateurs everywhere are the same fine group<sup>of fellows</sup>, --always willing to go out of their way to be cordial and obliging. It is a real privilege to belong to such an international organization as is that of the "radio hams!"