Listeners Corner Continued

Do Listeners Get Too Much?

"Listener" (Christchurch): I should like to make a few remarks on the broadcasting service in New Zealand. First of all, let me congratulate you on the production of your splendid paper the "Radio Record," which I read with very much interest every week. I do not know how you can turn out such a paper, containing so much interesting and useful matter, at the price. I should like also to congratulate the Broadcasting Company on the service they have built up and the fare they are giving us. I may say that I have recently come out from England, where, of course, broadcasting is a very great institution, and while New Zealand cannot expect to compare with England in this respect, I think what we are getting is splendid under the circumstances, and great credit is due to the promoters. While saying this, however, it is just here that I want to find some fault. I have read a number of letters in your paper, and especially in the morning newspapers, and the one idea of the writers seems to be that they want more. They are regular Oliver Twists; they "want more," and still more. One of these writers wants a concert on Sunday afternoon, and he also wants the interval from 7.45 to 8 p.m. "filled up with something." As one of your more reasonable correspondents remarks, it is astonishing what some people do want for their money. I sincerely hope, sir, that the company will not accede to any such request. Sunday afternoon is a time either for rest and quiet or for out-door recreation, and a wireless programme would, in my opinion, be quite out of place, and, in fact, objectionable.

Now, my complaint is not that we get too little, but that we get too much, and to make my meaning clear I will take an instance. On a recent Sunday evening I listened with a party of friends to four hours' continuous performance, without a single break, from 3YA. First there was a children's service starting at 5.45 and lasting right on to 6.30, at which time the regular church service begins. At the end of this, at 8 o'clock, the announcer gives us an educational talk for 15 minutes, and at 8.15 a secular concert is begun lasting till about 9.45. The whole Sunday evening, four hours, without a minute's interval.

Now, although I think wireless is a good thing, I think this is altogether "too much of a good thing," and simply has the effect of tiring people. For my part, I should like to see Sunday evening given up to the church service alone, especially where we have a children's service in addition. We have a secular concert every other evening, and I think this could very well be dispensed with on Sunday. I recognise, however, that this would not suit many, and if the concert must be given I would like to suggest that the evening be divided into three distinct sessions in something like the following manner:—The children's service, start at 5.45, finish at 6.20 prompt; 10 minutes interval. The regular service start at 6.30, finish at 8. The talk, or reading, should be left out (not that it is uninteresting, for, indeed, I should like to hear a deal more of that sort of thing, but simply because there is no time for it). A quarter of an hour's interval should be given, and then the concert session could start and go on till the finish.

I feel certain that to the great majority of listeners this would be a much better arrangement, and I should think it would be better for the operators, too, for it would give them a spell. I should also like to have a ten minutes' interval in the middle or the evening concert. We used to get this, but I notice now the interval is generally left out, which I think is a mistake. There are other things I should like to mention, but I am afraid of making this letter too long. For instance, we have in Christchurch four children's sessions per week of about an hour each. This is too much, and the former arrangement of two sessions per week was much better. In one of the early numbers of the "Radio Record" there was an article in which it was stated that the sessions in America were much shorter than in New Zealand, and that is just the point that I am driving at. You can guess that the Americans know a thing or two, and what they want, and what we want, too, is quality rather than quantity. The thing to be aimed at, I suggest, is short, bright sessions on different topics of about an hour each, as many as you like, but divided from each other by not less than a quarter of an hour's interval.

In writing this, I may say that I am expressing not only my own views but those of many others, for I have often heard similar views expressed, and my only desire is for the improvement of the broadcasting business in New Zealand.

The Empire Broadcast.

N. R. Cunningham (amateur station 2BD, Masterton) writes:—I was rather surprised to note in the issue of the "Radio Record" just to hand that only poor reception was had from English 2NM last Sunday evening. Although in a very bad position in the middle of the town here, I received the Empire broadcast quite well. Certainly swinging was pronounced at times, but on the whole the reception was quite good. As I did not take notes at the time, it is rather difficult for me to remember now just what did happen. I first picked up the station shortly after 5.30. From then on till 6 p.m. were various speeches and orchestral items, these latter seeming like phonograph records. The only piece which I knew was the old favourite "Always," which came through very well indeed, being at times unpleasantly loud in the headphones. When this piece ended at 5.58, the announcer said (from memory) "[illegible] how did you get that. I hope it was very good. Just stand by." I then waited for a few minutes, but there was nothing further. I had to leave the set then, and did not get back to it till 6.40. Just as I was tuning in, I heard a speaker, but he stopped almost immediately, and I heard nothing further. I did not bother to take notes of the announcements, etc., as I expected that if I was receiving it in my poor location, others would be receiving it much better. However, in any further Empire broadcasts I will take notes and give you further particulars.

BIG FIGURES

144 STATIONS RECEIVED

AN IMPRESSIVE LIST.

The number of creditable "logs" of distant stations continues to grow. Here is an interesting letter from Taranaki.

Mr. T. W. Ward, of Inglewood, writes:—"I have been interested in your search for the greatest number of broadcasting stations received by any listener in New Zealand. I do not see that this points to any great ability by the owner of such a record, but it certainly shows that amateur is keen and persevering, and that is what we want amongst out amateurs to-day. If a bigger percentage of New Zealand listeners-in would spend more time searching for new stations, instead of growling at our own stations and the Broadcasting Co., they would very soon learn to appreciate our own transmissions.

I enclose a complete list of all stations on telephony received by myself. The list comprises 50 New Zealand, 34 Aussie, 52 American, 3 Japan, 1 Philippine Islands, 2 India, 1 Russia, and 1 Holland, making a total of 144. These have all been received on two to seven valve receivers, but the seven valves were seldom used, except for very weak reception from America, in fact, I can assure you that even these were first picked up on five valves, but to overcome fading I often used the other two, which were H.F. Practically all the long distance stations have been officially checked and the replies are in my possession. As regards loudspeaker reception, first I want to know what constitutes loudspeaker reception on DX work.

I may also mention that Mr. B. Dwen, Waitoriki, Inglewood, also has a log comprising a total of 127 stations, and all these were received on home made receivers. This gentleman will be only too pleased to supply a complete log if desired. In fact, I know of other amateurs in New Zealand whose logs are well over 100 stations, if they would care to total them up.

Talking of D.X. reception, I have just had an experience that is real D.X. work. I built a crystal receiver, and the results were startling indeed. The receiver was only made from cast out material in my shack, but the following stations were received:—1YA, 2YA, 3YA, and from Aussie, 2BL, 2FC, 3LO, and 4QG. Not only received on one night, but on several nights.

Stations Received on Telephones.

New Zealand stations.—1VB, 1AO, 1AB, 1YA (old station), 1AM, 1AX, 1AA, 1 YA (new station), 1ZB, 1AR, 1ZO, 1AZ, 2AB, 2AA, 2AC, 2YM, 2AH, 2AB, 2AF, 2AM, 2AP, 2BZ, 2AQ, 2AJ, 2AK, 2YB, 2YK, 2YA (old station), 2YA (new station), 2ZF, 3AA, 3AC, 3BQ, 3AF, 3AQ, 3YA, 3AU, 3YA (new station), 4AA, 4YA, 4YO, 4AG, 4AD, 4AC, 4AB, 4AP, 4BM, 4AK, 4ZB, VLDN.

Australia.—2CM, 2GR, 2JM, 2ZG, 2FB, 2FC, 2BO, 2BL, 2RJ, 2BF, 2KY, 2RA, 2EM, 2UW, 2MA, 2DN, 2RA, 2BE, 2GB, 2UX, 2UE, 3AR, 3LO, 3DB, 3UZ, 3MA, 3LO (short wave), 4QG, 5DN, 5CL, 5DN (short wave), 6WF, 6WF (short wave), 7ZL.

America.—KFI, KHJ, KDYX, KGO, 6XB, WDAP, WGAY, KPO, WMB, KGU, KGW, KNX, WQJ, WGN, 6XD, WEBH, 8XAA, WREO, WFAA, KOA, CFCN, WDAF, KFRU, 9XG, WCBD, KDYL, KHQ, KDKA, KFWB, KFON, CNRV, KFRU, WBBM, WLW, 2XAF, WSAI, 2XAG, WHB, KFVD, WLIB, KFSG, KOWW, KFSD, WENR, KMOX, KFWI, KTAB, KFPR, KFWB, 2XG, 2XAD, NRRL.

Japan.—JOAK, JOBK, JOCK.

Philippine Islands.—KRMZ.

India.—7BY, 7CA.

Russia.—RFN.

South Africa and England.—Telephony heard from both places, but never received the call letters to definitely prove the reception.

Canadian stations (2), and Hawaiian Islands stations (2).—The call letters are included in the American list above (CNRV, CFCN, and KDYX, KGU).

Holland.—PCJJ.

RADIO BURGLAR-CAMERA

Radio control of an invisible camera which operates in daylight or darkness so that a thief merely by his presence in a room sets the camera in action was demonstrated at Rochester, New York, recently, by John E. Seebold, president of the Seebold Invisible Camera Corporation of that city.

Co-operating with Mr. Seebold, engineers of the General Electric Company developed the radio-control device in the Schenectady laboratories.

With a light-detecting device at one side of the room and a small electric light at the other, the camera begins operating when a person or object passes between the two. Tampering in action. The camera will take one picture or any number in succession up to 160. The equipment can be completely hidden.

A control device so that it operates in daylight as well as in darkness is the work of the General Electric engineers.

U.S. STATIONS

NEW WAVE-LENGTHS

LIST FOR NEW ZEALAND LISTENERS.

A large number of New Zealand listeners, particularly those located outside the cities, where electrical leakages interfere with long-distance reception, tune in American stations during the early portion of the evening. The newly-appointed United States Radio Commission, for the purpose of mitigating the evil occasioned by some 600 broadcast stations in that country interfering with each other, has reallotted the wavelengths of various stations, and in some cases has ordered a reduction of power. The commission has issued temporary licenses up till about the middle of this month, when possibly some minor alterations were to be made in wavelengths and power.

The following list of United States broadcast stations, with their new wavelengths and power, comprises the leading stations, and those most likely to be heard in New Zealand:—

STATIONS, WITH WAVELENGTHS AND POWER.

Radio Call Letter.	BROADCAST STA. Location	Wave (Metres).	Power (Watts)
KDKA, East Pittsburg, Pa...		316	30000
(Also *63.6 metres and other short-wave transmissions on varying power.)			
KELW, Burbank, Calif.		229	250
KEX, Portland, Ore.		240	2500
KFAB, Lincoln, Neb.		309	*2000
KFAD, Phoenix, Ariz.		273	500
KFAU, Boise, Idaho		285	*2000
KFBU, Laramie, Wyo.		428	500
KFDM, Beaumont, Texas		375	500
KFDX, Shreveport, La.		236	250
KFDY, Brookings, S.D.		395	500
KFEL, Denver, Colo.		248	250
KFEQ, St. Joseph, Mo.		231	1000
KFH, Wichita, Kas.		246	500
KFI, Los Angeles, Calif.		468	5000
KFJF, Oklahoma City, Okla.		273	*750
KFKB, Milford, Kansas		242	*1500
KFKU, Lawrence, Kansas		254	500
KFNF, Shenandoah, Iowa		270	1000
KFOA, Seattle, Wash.		447	1000
KFON, Long Beach, Calif.		242	500
KFPR, Los Angeles, Calif.		282	250
KFPY, Spokane, Wash.		246	250
KFQB, Port Worth, Texas		261	1000
KFRC, San Francisco, Calif.		454	500
KFRU, Columbia, Missouri		250	500
KFSD, San Diego, Calif.		441	1000
KFSG, Los Angeles, Calif.		275	500
KFUL, Galveston, Texas		258	500
KFUO, St. Louis, Mo.		545	500
KFVD, Venice, Calif.		208	250
KFVE, St. Louis, Mo.		234	*1000
KFWB, Los Angeles, Calif.		361	500
KFWF, St. Louis, Mo.		244	250
KFWI, San Francisco, Calif.		268	500
KFWM, Oakland, Calif.		236	*500
KFWO, Avalon, Calif.		219	250
KFXB, Los Angeles, Calif.		252	500
KFXF, Denver, Colo.		283	500
KFYR, Bismarck, No. Dak.		240	250
KGA, Spokane, Wash.		261	2000
KGBU, Ketchikan, Alaska		229	500
KGCH, Wayne, Nebraska		294	250
KGEF, Los Angeles, Calif.		263	500
KGFH, La Crescenta, Calif.		224	250
KGO, Oakland, Calif.		384	5000
KGU, Honolulu, Hawaii		270	600
KGW, Portland, Oregon		492	1000
KHJ, Los Angeles, Calif.		405	500
KHQ, Spokane, Wash.		370	1000
KJR, Seattle, Wash.		349	2500
KLDS, Independence, Ma.		238	1500
KLS, Oakland, Calif.		246	250
KLX, Oakland, Calif.		508	500
KLZ, Denver, Colo.		268	250
KMA, Shenandoah, Iowa		270	500
KMIC, Inglewood, Calif.		224	250
KMMJ, Clay Centre, Neb.		229	500
KMO, Tacoma, Wash.		254	250
KMOX, 1St. Louis, Mo.		300	5000
KMTR, Los Angeles, Calif.		526	500
KNRC, Santa Monica, Calif.		375	500
KNX, Los Angeles, Calif.		337	500
KOA, Denver, Colo.		326	*5000
KOAC, Corvalis, Oregon		273	500
KOB, State College, New Mex.		395	5000
KOCH, Omaha, Neb.		258	250
KOIL, Council Bluffs, Iowa		278	*2000
KOIN, †Portland, Oregon		319	1000
KOMO, Seattle, Wash.		306	1000
KOW, Denver, Colo.		476	250
KOWW, Walla Walla, Wash.		300	500
KPO, San Francisco, Calif.		422	1000
KPRC, Houston, Texas		294	500
KPSN, Pasadena, Calif.		316	1000
KOV, Pittsburgh, Pa.		270	500
KQW, San Jose, Calif.		297	500
KRLD, Dallas, Texas		461	500
KRLO, Los Angeles, Calif.		216	250
KSAC, Manhattan, Kansas		333	500
KSBA, †Shreveport, La.		268	1000
KSCJ, Sioux City, Iowa		244	500
KSD, St. Louis, Mo.		545	500
KSEI, Pocatello, Idaho		333	250
KSL, Salt Lake City, Utah		303	1000
KSO, Clarinda, Iowa		227	500
KSOO, Sioux Falls, So. Dak.		210	250
KTAB, Oakland, Calif.		280	500
KTBI, Los Angeles, Calif.		288	500
KTCL, Seattle, Wash.		278	500
KTHS, Hot Springs, Ark.		384	1000
KFNT, Muscatine, Iowa		256	*3500
KTSA, San Antonio, Texas		265	2000
KTW, Seattle, Wash.		395	1000
KUOA, Fayetteville, Ark.		297	500
KUOM, Missoula, Mont.		375	500
KUSD, Vermillion, St. Dak.		484	250
KUT, Austin, Texas		232	500
KVOO, Bristow, Okla.		349	1000
KWKH, Shreveport, La.		395	1000
KWSC, Pullman, Wash.		395	500
KWUC, LeMars, Iowa (dayt'e)		244	1500
KWWG, Brownsville, Texas		278	500
KYA, San Francisco, Calif.		309	500
KYW, Chicago, Ill.		526	2500
NAA, Arlington, Virginia		**434	1000
WAAF, Chicago, Ill.		389	500
WAAM, Newark, N.J.		349	500
WAAT, Jersey City, N.J.		246	500
WAAW, Omaha, Neb. (dayt'e)		375	300
WABC, Richmond Hill, N.Y.		326	2500
(Also 64.0 metres, 500 watts)			
WABF, Pringleboro, Pa.		265	250
WABO, Philadelphia, Pa.		261	500
WADC, Akron, Ohio		240	1000
WAIU, †Columbus, Ohio		283	5000
WAMD, Minneapolis, Minn.		225	500
WAPI, Auburn, Ala. (daytime)		326	1000
WBAA, West Lafayette, Ind.		**273	500
WBAP, Fort Worth, Texas		500	1500
WBBM, Chicago, Ill.		389	1000
WBBR, Rossville, New York		256	1000
WBNY, New York, N.Y.		236	500
WBOQ, Richmond Hill, N.Y.		326	500
WBT, Charlotte, No. Car.		258	*500
WBZ, †Springfield, Mass.		*333	15000
WCAJ, Lincoln, Neb.		349	500
WCBD, Zion, Ill.		345	5000
WCCO, †Minneapolis, Minn.		405	*5000
WCFL, Chicago, Ill.		484	1500
WCX, †Pontiac, Mich.		441	5000
WDAF, Kansas City, Mo.		370	1000
WEAF, New York, N.Y.		**492	5000
WEAR, Cleveland, Ohio		400	1000
WEBH, Chicago, Ill.		366	2000
WEMC, Berrien Springs, Mich.		238	1000
WEW, St. Louis, Mo.		353	1000
WFAA, Dallas, Texas		500	500
WFLA, Boca Raton, Fla.		213	1000
WGHP, Mt. Clemens, Mich		244	1500
WGN, Chicago, Ill.		306	15000
WGY, Schenectady, N.Y.		**380	30000
(Also on 32.77 metres and 22.02 metres)			
WHAP, New York, N.Y.		236	1000
WHO, Des Moines, Iowa		535	5000
WHT, †Chicago, Ill.		416	5000
WIOD, Miami Beach, Fla.		248	1000
WJAD, Waco, Tex.		447	500
WJAG, Norfolk, Nebr.		285	*250
WJAX, Jacksonville, Fla.		337	1000
WJAZ, †Mt. Prospect, Ill.		263	5000
WJJD, Mooseheart, Ill.		366	1000
WJR, †Pontiac, Mich.		441	5000
WJZ, †New York, N.Y.		**454	30000
WLBL, †Stevens Point, Wisc.		319	1000
WLS, †Chicago, Ill.		**345	5000
WLW, †Cincinnati, Ohio		428	5000
(Also 53.02 metres, 250 watts)			
WLWL, New York, N.Y.		370	1000
WMAQ, Chicago, Ill.		**447	1000
WNOX, Knoxville, Tenn.		265	1000
WOAI, San Antonio, Tex.		303	5000
WOC, Davenport, Iowa		352	5000
WODA, Paterson, N.J.		294	1000
WOI, Ames, Iowa		265	*2500
WOK, †Chicago, Ill.		252	5000
WOR, Newark, N.J.		422	5000
WORD, †Batavia, Ill.		275	5000
WOW, Obama, Nebr.		508	1000
WOWO, Fort Wayne, Ind.		229	1000
WRC, Washington, D.C.		**468	500
WREN, Lawrence, Kan.		254	750
WRHM, Minneapolis, Minn.		261	1000
WRR, Dallas, Tex.		353	500
WRVA, Richmond, Va.		254	1000
WSAI, †Cincinnati, Ohio		361	5000
WSB, Atlanta, Ga.		476	1000
WSM, Nashville, Tenn.		341	2000
WTAM, Cleveland, Ohio		400	3500
WTAS, †Batavia, Ill.		275	3500
WTAW, College Station, Tex.		509	500
WWJ, Detroit, Mich.		375	1000
WWNC, Asheville, N.C.		297	1000

*Allowed higher daylight power.

**Standard or constant frequency transmission.

†Remote control.

LIST OF CANADIAN BROADCAST STATIONS.

CFAC, Calgary, Alta.	434.5	500
CFCA, Toronto, Ont.	356.9	500
CFCF, Montreal, Que.	410.7	1650
CFCH, Iroquois Falls, Ont.	499.7	250
CFCN, Calgary, Alta.	434.5	1800
CFCT, Victoria, B.C.	329.5	500
CFQC, Saskatoon, Sask.	329.5	500
CFRB, Toronto, Ont.	291.1	
CFRC, Kingston, Ont.	267.7	500
CFYC, Burnaby, B.C.	410.7	500
CHCY, Edmonton, Alta.	516.9	250
CHIC, Toronto, Ont.	356.9	500
CHNC, Toronto, Ont.	356.9	500
CHUC, Saskatoon, Sask.	329.5	500
CHWC, Regina, Sask.	312.3	250
CHXC, Ottawa, Ont.	434.5	250
CHYC, Montreal, Que.	410.7	750
CJBC, Toronto, Ont.	291.1-356.9	500
CJCA, Edmonton, Alta.	516.9	500
CJCI, Toronto, Ont.	291.1	
CJCQ, York, Ont.	291.1	1000
CJGC, London, Ont.	329.5	500
CJSC, Toronto, Ont.	356.9	500
CJTC, Calgary, Alta.	434.5	250
CJWC, Saskatoon, Sask.	329.5	250
CJYC, Scarboro, Ont.	291.1	500
CKAC, Montreal, Que.	410.7	1200
CKCD, Vancouver, B.C.	410.7	1000
CKCK, Regina, Sask.	312.3	500
CKCL, Toronto, Ont.	356.9	500
CKCO, Ottawa, Ont.	434.5	100
CKCW, Barketon Junc. Ont.	329.5	5000
CKCX, Toronto, Ont.	291.1	500
CKNC, Toronto, Ont.	356.9	500
CKY, Winnepeg, Man.	384.4	500
CNRA, Moncton, N.B.	322.4	500
CNRC, Calgary, Alta.	434.5	500
CNRE, Edmonton, Alta.	516.9	500
CNRM, Montreal, Que.	410.7	1650
CNRO, Ottawa, Ont.	434.5	500
CNRQ, Quebec, Que.	340.7	500
CNRR, Regina, Sask.	312.3	500
CNRS, Saskatoon, Sask.	329.5	500
CNRT, Toronto, Ont.	356.9	500
CNRV, Vancouver, B.C.	291.1	500
CNRW, Winnipeg, Man.	384.4	500

THE VARIABLE GRID LEAK

In receiving distant stations, the grid leak can also be used in tuning, but in order to explain this we must first understand its function. It will not be difficult to do this if we can visualise the grid as it is being charged with these positive and negative charges 1,220,000 times a second when receiving a signal from a broadcasting station operating at a frequency of 610 kilocycles. It is very easy to comprehend that if nothing is done to relieve the grid of these charges it will become choked. This is the purpose of the grid leak, which allows the charges to leak from the grid directly or indirectly to the filament.

We can reason from this that the stronger the signal the greater the leakage we must allow. By the same token it is advisable to have as little leakage as possible when receiving a very weak signal. Inasmuch as a grid leak is nothing more than a high resistance and that the greater the resistance the less the leakage it is evident that a variable resistance in the grid circuit is quite essential. If you have a variable grid leak, increase the resistance when you wish to receive distant stations and decrease it when you wish to receive local stations.

ESPERANTO

On the occasion of the transmission of the studio explanation of Lesson 6, an unavoidable alteration in the time of the broadcast was experienced, and, as a result, only half of the lesson was transmitted. The instructor gives his assurance to students that every possible endeavour is made to adhere to the announcements published with the printed lessons. In the event of any rearrangement in connection with a broadcast lesson from 2YA being necessary, efforts will always be made to acquaint students with the alteration per medium of the ether; and students should, therefore, be on the alert to receive any special notification.

As in the past, inquiries relative to Esperanto and the course may be forwarded to "The Esperanto Instructor," N.Z. Broadcasting Co., Wellington, or care of "Radio Record." To ensure a reply, enclose a stamped addressed envelope.

LESSON IX.

(To be broadcast from 2YA on September 29, from 7.39 to 7.54 p.m.).

Bonan vesperon, studantoj.

THE VERB (concluded): Although this part of speech was dealt with piecemeal in the last three lessons, it has been decided to give further space for examples of the use of active and passive participles. Examine the following:—**ACTIVE: La frato estas studanta morson,** the brother is studying morse; **studanto viro,** a studying man; **studanto,** a student; **studante, oni lernas,** by studying one learns; **la policano estas parolinta,** the policeman **has spoken; parolinto,** a speaker (after he has spoken); **parolinte, li sidig'is,** having spoken, he sat down; **la sendilo estas funkcionta,** the transmitter is about to work (function); **la kantonto,** the singer (one about to sing). PASSIVE: **La kondensatoro estas konstruata,** the condenser is being constructed; **la batato,** the person being beaten; **batate, li ekkriis,** being beaten, he cried out; **amplifite, la signaloj estis tre fortaj,** having been amplified, the signals were very strong; **la ricevilo estas agordata, agordita, agordota,** the receiver is being tuned, has been tuned, is about to be tuned; **reakcio estos provizata de bobeno kuplita al la antena induktanco,** reaction will be provided by a coil coupled to the aerial inductance.

Note: Every verbal ending is applicable to every verb in the language, without exception.

Bonan nokton al c'iuj!

LOUD-SPEAKERS ON CRYSTALS

Probably there are but few listeners who realise that a crystal receiver is capable of working a small loudspeaker at sufficient strength to entertain a room full of people. That this means greater enjoyment than the usual "taking turns with the 'phones" goes without question.

This applies to practically all crystal receivers within two miles or so of the Auckland and Christchurch stations, and within five to ten miles of the new 2YA Wellington station.

The most important part of any crystal set is the aerial. It must be as long and as high as possible. Listeners should always remember that signal strength is directly proportional to the height of their aerials.

Also the heavier the wire (in gauge) the better. The Post Office makes no restrictions whatever on height or length of aerials. One hundred feet should be used at the least. Two hundred feet or even more would be ideal, especially if stranded copper wire is used.

Next in importance is the earth connection. It is essential that this be the best possible. It is not sufficient to merely twist the wire a few times round the water pipe or the tap. If the water pipe is used, the earth wire (preferably thick insulated wire) should be tightly soldered to it. Care must be taken to see that the water pipe actually goes into the ground within a short distance of where the earth wire is connected to it. Otherwise it would be better to solder a wire to a pipe three or four feet long and then drive it into the ground just outside. In this case keep the ground always damp by tipping water over it occasionally.

Where possible take your lead-in off the highest end of your aerial and always have everything well insulated.

Any well made home constructed set or any standard crystal receiver should be capable of working the loudspeaker. Of course a big loudspeaker suitable for a multi-valve set must not be expected to give satisfactory results at any distance from the broadcasting station. There are plenty of small loudspeakers suitable for the purpose which can be obtained for a very slight outlay.

In the writer's opinion the ideal receiver is one which has a fixed crystal contact (commonly called a permanent detector) with a potentiometer and a small 1½ volt battery to bring the crystal up to its most sensitive condition.

Carborundum for preference as this is generally recognised as one of the most stable detectors known.

Another point—when buying crystals, the dealer will probably offer specimens at graded prices. Some crystals give as much volume as some valves, the dealer has tested them, and the price is an indication of their quality. Take the best! However, your own crystal set should do the work. Give it a trial.—O.P.

Every seat in the new parlour cars of the Canadian National Railways is equipped with radio headphones, plugged into outlets in the walls, while the car has a cone speaker. This was a special part of the structural designs each car has its own built-in receiver and special aerials are provided.