Stations Available to New Zealand Listeners

Special Schedule of Local and Overseas Stations and Operating Times

NEW ZEALAND as a whole is well served by broadcasting, not only by the Dominion's own excellent stations, but also by stations beyond our island shores. The very fact that New Zealand is an insular country and not very remotely removed from much larger and more densely populated countries with numerous broadcast stations favours our listeners to the extent of offering supplementary broadcast services and programmes of sometimes a higher standard of merit than is possible with New Zealand's relatively small population and a necessarily restricted amount of talent to choose from.

However, there is a spirit of camaraderie engendered by broadcasting, which, by the way, augurs well for its influence as a factor towards international peace and friendship, and the proprietors of broadcast stations in all parts of the world are most anxious to know when their transmissions afford pleasure to listeners in foreign or oversea lands. Our brothers in Australia, particularly, value New Zealand listeners as an important section of their vast audiences. The Broadcast Company of New Zealand also reciprocates the friendly and appreciative attitude of the Australians, and the many letters which are received from Commonwealth listeners who pick up the New Zealand stations are cordially welcomed

Many New Zealand listeners who are resident in a highly favourable locality and have first-class equipment regularly pick up a dozen or more broadcast stations located across the seas, and there are several who have "logged" fifty and even more stations outside New Zealand. "D.X." (long-distance) reception offers a particularly fascinating field for exploration and enjoyment quite distinct from ordinary reception of the stations within the confines of New Zealand. The supercritical may cavil at the musical quality of long-distance reception which is more or less affected by static, fading, and concomitant periods of distortion, due to natural phenomena over which human ingenuity has as yet contrived no means of control. Yet there are many occasions when stations even thousands of miles distant can be received with such defects scarcely intrusive enough to spoil the real pleasure of the average listener. And there is a large body of listeners who are sufficiently intrigued by long-distance reception to make full allowances for the brief periods of fading and distortion and a certain amount of static.

This well-fixed desire for long-distance reception is exemplified by the general demand by prospective buyers for high-class receiving sets that will "reach-out" beyond New Zealand. There are inevitably many disappointments in this respect. High-class, efficiently-designed receiving sets are merely a factor towards successful oversea reception, and the other factors have proved to be equally important. A favourable locality for the installation of the receiving set makes all the difference between success and failure. There are certain localities which favour reception from one or two points of the compass, others which are unfavourable only when reception is from one particular direction. The reason for these vagaries are sometimes obscure and, on the other hand, are frequently quite obvious. Sometimes the aerial is at fault, being strongly directional, and at other times there are screening effects due to the proximity of hills, trees, or mineral deposits between the transmitting station and the receiving set. Radio engineers now lay it down that aerials which are over 35 feet in height above all objects (bushes, fences, houses, etc.) are not directional; that is to say they receive from all points of the compass with equal strength. An aerial lower than 35 feet in height is apt to receive with greater strength all stations in the direction of the lead-in end of the aerial, providing it is of the most approved broadcast receiving type, namely—a single wire inverted L.

The earthing system is of equal importance with that of the aerial. The thicker and shorter the earth wire is the better it is. The "earth" itself should by preference be a water-pipe, and it is best to solder the earth wire to it, although a patent clamp if efficiently fitted will serve admirably also. Out-of-town residents who have no water-pipes will find kerosene tins filled with wet charcoal and buried three feet below the surface a capital "earth" to which the earth wire can be soldered. If a listener has a high-class receiving set and a poor aerial and earth installation he can only blame himself if he is not receiving the long-distance stations that the quality of his set warrants. Unavoidable difficulties, such as an unfavourable locality, must be endured, but the listener should first put his house in order by having the whole of his equipment thoroughly efficient.

The long-distance station seeker has a wide scope, but he must also acquire some skill in detecting and bringing reception up to its maximum It is a home truth that some listeners possess distinct natural ability for finding the distant stations, others acquire it, and there are some who are destitute of sufficient patience to overcome the little difficulties that beset "DX" work.

In submitting a list of long-distance stations most frequently heard in New Zealand, one is confronted with the task of eliminating those which in some isolated localities are heard more often than in others. A number of the most successful listeners in various parts of the Dominion have been consulted, and their reports have been compared. The suggestion has been made by various correspondents that some of the minor New Zealand broadcast stations should be sandwiched in the list, and this has been followed. The various wavelengths are mainly those given in the official lists, but it is known that there have been slight variations to avoid heterodyning with other stations. The list compiled is the first of its kind published specially for New Zeland listeners, and if there are errors due to alterations in broadcasting schedules and wave-lengths, the kind indulgence of our readers is solicited; any suggested revisions will be welcomed by the editor of "The Radio Record." While the Australian schedules are shown to commence at 10.30 p.m., it is not intended to convey that the Australian schedules are meant only for the evening programmes. The Australian stations, of course, transmit day-time and early evening programmes, and it was not deemed necessary to remind listeners of this circumstance. The times given are New Zealand "daylight saving." The stations, for convenience in tuning, are listed according to their respective wave-lengths.

LONG-DISTANCE STATIONS MOST FREQUENTLY HEARD IN NEW ZEALAND, AND MINOR N.Z. STATIONS.

Call.	Place.	Wave.	Power.	Schedule.
KEX	Portland, Ore., U.S.A.	240	2500	Till 8.30 p.m.
KFON	Longbeach, Cal., U.S.A.	242	500	Till 8.30 p.m. daily.
3BY	Melbourne, Australia	250	50	1 a.m. till 4.15 a.m., Sun. and Mon.
			600	11 p.m. till 1 a.m., Mon., Wed., Fri., Sat., and Sun.
5KA	Adelaide, Australia	250		
3DB	Melbourne, Australia	255	500	10.30 p.m. till 1.30 a.m.
2UW	Sydney, Australia	267	500	From 10.30 p.m.
1ZB	Auckland, N.Z.	275	250	Sunday afternoon, Monday nights.
2ZF	Palmerston N., N.Z.	278	50	From 7.30 p.m., Mon., Wed., Fri., Sat. Sun.
2KY	Sydney, Australia	280	1500	From 10.30 p.m. daily.
2UE	Sydney, Australia	293	250	From 11.30 p.m. Tues., and Thurs., and from 10.30 p.m. Sundays.
4ZF	Dunedin, N.Z.	300	50	Irregular.
CNRV	Vancouver, Canada	291	500	Till 7.30 p.m. daily.
WOAI	Texas, San Antonio, U.S.	303	5000	Till 8 p.m. daily.
2GB	Sydney, Australia	310	3000	From 10.30 p.m. daily, excepting ——?
5DN	Adelaide, Australia	313	500	From 11 p.m. daily.
3UZ	Melbourne, Australia	319	100	From 10.30 p.m. Mon. and Wed.
KNX	Hollywood, Cal., U.S.A.	339	1000	Till 8.30 p.m. daily, but occasionally till 10.30 p.m.
KJR	Seattle, Wash., U.S.A.	349	2500	Till 8.30 p.m. daily.
2BL	Sydney, Australia	353	5000	From 10.30 p.m. daily.
7BY	Bombay, India	357	3000	From 4 a.m. daily.
JOCK	Nagoya, Japan	360	1500	From 10 p.m. daily.
KFWB	Los Angeles, Cal., U.S.A.	361	500	Till 7.30 p.m.
3LO	Melbourne, Australia	371	5000	From 10.30 p.m.
7CA	Calcutta, India	370	3000	From 3.30 a.m. daily.
JOAK	Takio, Japan	375	1500	From 10 p.m. daily.
KGO	Oakland, Cal., U.S.A.	384	5000	Till 8.30 p.m. Sundays, and 7.30 p.m. Thurs., Fri., Sat.
JOBK	Osaka, Japan	385	1000	From 10 p.m. daily.
WBBM	Chicago, Ill., U.S.A.	389	5000	Till 8.30 p.m.
4QG	Brisbane, Australia	385	5000	From 10.30 p.m. daily.
5CL	Adelaide, Australia	391	5000	From 11 p.m. daily.
KZRM	Manila, Philippines	406	1000	From midnight.
KPO	San Francisco, U.S.A.	422	5000	Till 8.30 p.m. daily.
2FC	Sydney, Australia	442	5000	From 10.30 p.m. daily.
KFI	Los Angeles, Cal., U.S.A.	468	5000	Till 8.30 p.m. daily.
3AR	Melbourne, Australia	484	1600	From 10.30 p.m.
7ZL	Hobart, Australia	535	3000	From 10.30 p.m. daily.

Notes for Beginners: *By M. I. R E,*

In this article reference is made to misleading advertising in connection with radio. From a careful study, beginners will be able to avoid some of the pitfalls of the unwary amateur. The value of a good speaker is specially stressed.

IN the course of previous remarks in this column many considerations have been dealt with in an endeavour to give prospective purchasers of radio equipment a persective which would assist not only in the choice of the right class of apparatus, but would also lead to an idea of the correct expectations of performance of the apparatus. However, these considerations have been necessarily in the form of generalities, and in order to develop the perspective on the foundations already laid, more detailed information should be forthcoming. Previous discussions have been focused on the receiving set itself, naturally, as this is the main performer, but it is also necessary to consider the speaker or reproducer in particular, along with the other (so called) accessories that go with the receiver.

In looking over prices of receiving sets, do not be misled by a price quoted without accessories. In the first place a claim for wonderful reception, especially in terms of distance, where the price asked is palpably low for such results, should cause the prospective purchaser to think twice before entering into negotiations with the firm responsible. If claims of performance are made alongside a price which merely represents the bare receiving set, it is a distinctly misleading and unfair method of doing business, unless the price complete with all accessories is quoted as well, and providing it is given reasonable prominence.

Misleading Methods.

It is extraordinary how certain methods of doing business, if carried out by one class of traders, would be considered almost dishonest, yet the same methods may be practised with impunity by another class of traders. For instance, vendors of motor-cars would get themselves disliked if they advertised their makes of cars at a certain figure, and when the prospective purchaser went along, explained that the advertised figure only represented the chassis, and that before the car could be put into commission a body would have to be fitted at the purchaser's expense! This is exactly parallel to what is being put up to the public in radio to-day. The radio dealer who practises such methods may say that he doesn't know what sort of batteries, speaker, valves, etc., the buyer will choose, but this is just as logical an excuse for the motor-car vendor because the latter doesn't known whether the next buyer who comes into his showroom will require a limousine, whereas the last chose a tourer. The engine and chassis may be identical in both cases, but his case for advertising a price for the chassis and leading the public to believe that it is a car in complete going order is, to say the least, a poor one.

Therefore, a consideration of price should call for an examination of the items covered. A set quoted bare should have the cost of accessories added, and a set quoted complete should include all the units to set it into operation, and the units quoted should be of an order of quality line with, or of a superior quality than, the receiver they are accompanying. Obviously a receiver of good quality and price calls for a more dignified layout generally than that expected to be found with a cheaper variety. It is safe to say that a six-valve set valued at, say, £40 or £50 here would be very out of balance if connected to a loudspeaker valued at £2 or £3, for instance. There is certainly no standard design of speaker lower in price than £5 or £6 which would satisfy the user of the equipment, and probably at least £10 would be necessary to purchase a speaker which would give that ultimate satisfaction which should be forthcoming to owners of sets after they have had them installed for a sufficient period of time for the novelty to have worn off.

The Loudspeaker.

With the cheaper brands of multi-valve sets the accompanying accessories will equal the value of the receiver, and may, in many cases, exceed it. Of course, as the value of the receiver increases, although the accompanying parts should increase somewhat also, the proportion is less, and, in the case of the six-valve set mentioned before, which was valued at £40 or £50 here, the accessories would be as low as 50 per cent. of this figure.

It is to be specially noted that as much attention should be paid to the purchase of a loudspeaker as to the receiver itself.

A receiving system consists, briefly, of an aerial or loop to pick up the signals, a receiver to tune the aerial or loop and convert into electric currents capable of producing sound waves of an audible nature when passed through a reproducer or loudspeaker. Where, therefore, is the logic when a cheap reproducer is connected to a receiver which is of such a quality as to be capable of carrying out its duties with absolute fidelity? Such a procedure can only be likened to substituting a tin horn in place of the beautifully designed sound box of a gramophone of costly manufacture. The record and pick-up arrangements, as well as the appearance of the machine, may be all that can be desired, but, seeing that everything has to pass through the tin horn, everything becomes modulated thereby, and results may be termed "tinny" in every sense of the word.

Care in Selection.

The above statement should not be taken as in any way affecting many types of loudspeakers on the market to-day which are fitted with "tin" horns, not unlike the original form of phonographs. A gramophone or phonograph reproducer is sufficiently far removed in design from a radio reproducer as to necessitate separate consideration altogether. As a matter of fact, although it is most usual to find horn types of radio speakers having wooden, or partly metal and partly wooden, horns there are many makes of all-metal horns which give a fidelity of reproduction equal to anything on the market for speakers of medium value.

To give an idea of the importance which faithful reproduction is receiving at the hands of manufacturers, there are now available on the New Zealand market two types of apparatus which sell for approximately £70 for the reproducer alone! This seems incredible at first sight, but in view of the fact that they are selling rapidly, it is unnecessary to state that their performance is in line with their price. At least two, to the knowledge of the writer, are being used to reproduce signals from a crystal set This gives some idea of the importance paid by seekers after the very best, to the question of reproduction. Of course, the range of such a combination is limited to the local station, but, as has been pointed out before, the true results are always forthcoming from the local station and static and fading are factors unknown to those content to devote their attention to entertainment provided nearer home. However, to elaborate the point, were the writer purchasing equipment to listen to the local station, he would certainly use a crystal set with a single valve amplifier and then a speaker, which approximates £12 in price and happens to be a particular fancy. Notice the apparent out-of-balance of prices. The speaker is more expensive than the receiver and batteries, etc., added together, but the results more than warrant the expenditure.

Far too often is reception ruined by a purchaser buying a set, then valves and batteries, etc., as a matter of course, and then proceeding to choose a speaker because it happens to be of such a shape that it will stand on the mantle-piece in place of that family clock that has never been purchased, or else it happens to be the right colour to match the drawing-room carpet!

It is most important also to understand that the speaker must suit the last valve in the radio set in order to give the desired results. For instance, the reproducer previously described as worth £70, contains a valve as well as the reproducer and these two are matched in design, thus giving the desired results. The manufacturers refuse to sell the reproducer without the valve because it would be used incorrectly in many cases. There are many speakers in use to-day capable of giving wonderfully fine results, but which are giving very inferior service because the dealer who sold the equipment, or the purchaser who bought the units at different shops and then connected them together, failed to realise the importance of this matching process.

There is nothing mysterious about matching the valve and the speaker, because the dealer who sells the speaker will be able to give advice regarding the type of valve recommended by the makers of the speaker. If the speaker is a general purpose one it will work well when driven by a general purpose valve, but will give superior results in 99 cases out of 100 when the valve is of a "power" type. The very best results are forthcoming from types of speakers whose electrical characteristics demand power valves with high voltages on the valve connected to them, and by high voltages is meant between 150 and 200 volts.

The prospective purchaser is therefore exhorted to be guided mainly by his own ears in choosing his speaker and to judge the speakers when connected to his own type of receiver operated under conditions as nearly identical as possible to those under which the equipment will operate when in his own possession. The choice of speakers is largely a matter of individual opinion, but a word of warning is necessary, and that is that it is quite impossible to listen to a speaker working in one shop or showroom and then to compare it mentally with another speaker in another showroom unless, of course, the performance of the one to the other shows a very decided difference. Just as it was shown to be a mental and physical impossibility to compare receivers unless they were operating on the same aerial and valve and battery power, so it is with speakers. Naturally, it is not possible to always get speakers together for comparison purposes, so that a mental comparison is the only way to decide, but here again, as with receivers, it is necessary to confine attention to those dealers and distributors who handle lines which can be reckoned as standard and who are prepared to stand behind their products with spare parts in stock and who will guarantee service and satisfaction.

SPARK TO VALVE

WAHINE AND MAORI.

The Union Steam Ship Company's Wellington-Lyttelton "ferry" steamers Wahine and Maori are now no longer a cause of interference with broadcast listening, having been equipped with valve morse-transmitters which are being used in place of the crashing, interfering spark transmitters. The new transmitters are proving a complete success from an operator's point of view as well as affording relief to broadcast listeners. These vessels use a considerable amount of morse for passengers' messages while on their 175-mile run between Wellington and Lyttelton, and in the past have spoilt many a broadcast item for listeners in their homes ashore. This is now a thing of the past so far as these two steamers are concerned.

IN THE UNITED STATES.

The work of equipping and re-equipping American vessels in the change from spark to valve transmitters has been going on steadily during the past two years. Already several hundred ships are equipped with valve transmitting apparatus, or will be very shortly. Spark signals are becoming a rarity, except for the occasional small foreign ship which comes into an American port and proceeds to squat on the 450-metre or 600-metre channels in unloading its traffic amid a world of broadcast entertainment, and also a few coastal stations still operating with spark transmitters.

The difference between spark and valve transmission is that the former spreads over a wide band of wavelengths interfering with all broadcasting more or less, according to the proximity of the spark transmitter, while the valve transmitter can be tuned as sharply as a broadcasting station, thus eliminating interference.

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