

IN RADIO—The Signal Must Be Good

MUCH pioneer work in the propagation of directional radio waves and in the transmission of programmes in foreign languages has been done by the General Electric Company of New York. The following article, which is the second instalment of the text of a talk given by Boyd W. Bullock, Assistant Manager of Broadcasting, gives some indication of the work that has been done by this company in an endeavour to further the science of radio for peaceful purposes.

AFTER a careful study of the situation and of the frequencies still available, General Electric applied to the F.C.C. for certain new authorisations.

One of these was a power increase to 100 kilowatts for both W2XAF and W2XAD. Another was for the use by W2XAD of two additional frequencies, 9550 k.c. and 21,500 k.c. Still a third was for permission to build an international broadcast station (the present proper designation for a shortwave broadcast station) at Belmont, California. The latter station to use 20 kilowatts and operate on W2XAF's or W2XAD's frequencies of 9530 and 15,330 k.c., while they were not on the air at Schenectady.

The object of all these provisions was to enable General Electric not only to improve reception in Latin-America, but also to make such reception as consistent as possible throughout a 24-hour day; and also to provide a practical and consistent service to the regions comprising the Far East. All these new facilities have been granted by the F.C.C., and at present the two new frequencies have been in use by W2XAD for approximately eight months. Reports from Latin-America are very gratifying.

Beam Antennae

WHILE directive antennae, of the Alexanderson panel type, have been used for many years by W2XAF and W2XAD—particularly by the latter—the new play contemplates the regular use of such antennae for all transmissions to particular countries or areas.

For instance, on the evening schedule to South America, a 30-degree beam from W2XAD on 9550 k.c. is centred on Rio de Janeiro, while W2XAF sends out a second such beam, on 9530 k.c., and adjacent to the 9550 beam on the west. W2XAD thus specialises to the predominantly Portuguese eastern half of South America, while W2XAF uses Spanish announcements, etc., to the western half. Both beams carry programmes carefully adapted to the desires of their respective predominant audiences. This is the technical and programme arrangement which has already elicited pleased comment.

The effect of the directive antenna is such that the beam signal strength—or field intensity as it is called—at a given point is several times what it would be with the same power in an ordinary antenna.

All this work costs money, and the question may well be asked: "Why does the General Electric Company do it—especially since international broadcasting cannot be commercial—sponsors cannot buy advertising time?" The answer is simple.

First, because General Electric is interested in the technical and social advance of all phases of electrical enterprise.

Second, because General Electric believes that such broadcasting is a vital factor in the promotion of international goodwill—not by the propaganda method, but by making all peoples better acquainted with each other, for, knowing a person—in most cases—is to like him. It is a long-range and far-sighted viewpoint—but General Electric knows that

toms as well as the languages which they speak are different from each other. Some might say that the solution is simple, that music is an international language, but what kind of music is international—symphonic, grand opera, folksongs, jazz or dance music? The answer is that there is no one type of music that everyone, every place wants to hear, at least wants to hear all of the time. Someone else may say that radio should edu-

cate people, and the natural question then is "What is education?" Education to some who do not have the information, of course, would be boring to others who do. Another suggestion is that programmes should be cultural. What that means to one who actually tries to devise a programme is almost anyone's guess.

N.Z. DX Club Meetings

HAWKE'S BAY.
In the Club Room, above Wood's Tearooms, Waipukurau, at 7.45 p.m. on Wednesday, January 11.
V. L. KING (119H.B.),
Branch Secretary.

NORTHLAND.
At 21 Anzac Road, Whangarei, at 7.30 p.m. on Monday, January 16.
R. A. ROYCROFT (2H.Q.),
Branch Secretary.

AUCKLAND.
In the Society of Arts Hall, Kitchener Street, at 8 p.m., on Wednesday, January 11.
F. NEWING (316A.),
Branch Secretary.

WELLINGTON.
In the Club Rooms of the 1st Wellington City Rover Crew, 3rd floor "Times" Building, Kelburn Avenue, at 8 p.m. on Monday, January 9.
M. WICKENS (503W.),
Branch Secretary.

WAIKATO.
In Hamilton on Saturday, January 14, 1939.
W. NORRIS (620A.),
Branch Secretary.

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Those are just some of the problems confronting the short-

From the Mailbag

AN interesting method of attack against the annoyance of electrical interference has been adopted by a large organisation of 38,000 listeners in Finland. They pointed out to the power authorities that their annual consumption of electricity amounted to approximately 2,000,000 k.w.h., which means a yearly income of more than £17,000 for the company. If interference from electrical appliances could be eliminated, or at least reduced power suppliers would benefit from the many hundreds of listeners who would promptly change their present battery sets (which are not so prone to mains-borne interference) for new all-mains receivers.

The power authorities were impressed by the argument, and immediately responded by making a thorough investigation. It was found that about 50 per cent. of electrical interference in Helsingfors originated from lifts, and as a result of this discovery an order

has been issued to the effect that all lifts are to be equipped with interference suppressors before March 1, 1939. The necessary installations, which will apply to some 2000 lifts, are to be paid for by the landlords.

A CONCESSION has been granted to an English advertising company to operate a sponsored broadcasting station in the State of Liechtenstein. Vaduz, the capital of Liechtenstein, which is situated between the German and Swiss frontiers, is about 550 miles from London.

TWO pilots of the Western Air Express flying over Salt Lake City were in imminent danger of making a crash landing when their machine's landing gear jammed. Wireless instructions from Lockheed factory engineers enabled them to effect repairs in the air, and the plane landed without mishap.

THE rapid development of listening discussion groups in Britain has resulted in spreading an entertainment-with-instruction form of leisure activity throughout the country, and the total number of groups in the spring of the present year comes to 756, as against 407 for the corresponding period in 1937.

HIGH-FREQUENCY oscillations are used for treating acute inflammatory eye conditions in the Royal Westminster Ophthalmic Hospital, London.

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