

# 2YA Afternoon Sessions Soon--What Causes Fading?

## Lectures on Imperial Affairs--1YA Featured

# THE RADIO RECORD

Published Weekly  
REGISTERED G.P.O., WELLINGTON, N.Z., AS A NEWSPAPER.

Price 3d.

VOL. 1, NO. 3.

WELLINGTON, N.Z., FRIDAY, AUGUST 5, 1927.

Per Annum, Post Free, 10/-; Booked 12/6.

### WORLD-WIDE BROADCASTS

### EXTRAORDINARY SHORT WAVES

### WHAT WILL BE THE OUTCOME?

Many New Zealanders have listened to programmes on ultra-short wavelengths broadcast by PCJJ, Holland and 2XAF, Schenectady, U.S.A., either by rebroadcasts or per medium of their special constructed short-wave receivers. The following article written by Martin P. Rice, manager of the broadcasting activities of the General Electric Company, shows how progress is being made in the linking up of the nations through ultra-short wavelength radio as the various States have been linked by land line chain broadcasting in the United States.

Inter-continental rebroadcasting of radio programmes is possible. Tests conducted by General Electric Company engineers at Schenectady (owners of the short-wave station 2XAF) have demonstrated that by the use of short waves, signals may be flashed across the Atlantic or the Pacific with sufficient volume and quality to permit rebroadcasting by distant receiving stations.

Vagaries of weather may interfere, and transmitting sets near the receiving point may smear the received signal; but under average conditions our engineers can predict results. On several occasions it has been possible to announce in advance a rebroadcast programme and carry through that programme successfully.

Just at present American listeners must be content with programmes originating for the most part in the 700 or more broadcasting stations in the United States, but it is quite reasonable to expect that when engineers in other countries have developed short wave transmitters on a par with the transmitters used at the General Electric developmental station, American stations will be able to pick up and rebroadcast programmes from other continents.

### CIRCLING THE GLOBE.

During the past two years Schenectady programmes have been rebroadcast by stations in Johannesburg and Durban, South Africa; Perth, Sydney and Melbourne, Australia; Keston, England; Paris, France; and Tinnucu, Cuba. In that period our radio engineers have been making thorough and comprehensive propagation tests, at all periods of the year, in darkness and light, with different power volumes, and on a variety of wavelengths. This work has recently been in charge of M. L. Prescott, and a great mass of data has been accumulated.

### SUCCESS IN BRITAIN.

Recently we received a letter from A. G. D. West, assistant chief engineer of the British Broadcasting Company, informing us that signals of 2XAF, our 32.77 metre transmitter, had been rebroadcast by all the stations of the British Broadcasting Company chain in the British Isles seven successive Tuesday evenings. These programmes have been included as a regular feature of the British Broadcasting Company programmes. They have not always been of high quality, but always of interest to the British listener. Reception is sometimes marred by fading, and at other times the chatter of ship transmitters, particularly those of the spark type, has prevented reception.

### PARIS RESULTS GOOD.

Of particular interest is Captain West's statement that while the British Broadcasting Company found 2XAF's signals fading somewhat during the transmission on March 8, the Le Petit Parisien station in Paris picked up 2XAF, and these broadcasting signals were clearly received in England.

P. Gendron, engineer in charge of the Le Petit Parisien station, has been co-operating with the engineers of WGY, Schenectady, and he is very anxious to begin broadcasting on short waves, in addition to his present wavelength of 340.9 metres, in the hope that the French signals will be heard and broadcast in the United States.

### 2XAF AND 2XAD.

Of the various transmitters used on short wavelengths by our engineers, the most reliable thus far have been the 32.77 and 22-metre stations, 2XAF and 2XAD, respectively. The latter station has been found most reliable by the British Broadcasting Company when the transmission from Schenectady has been during daylight. Our engineers are very proud of the reported results of their transmission.

The Washington birthday address by President Coolidge was sent out on both 32.77 and 22 metres, and the British Broadcasting Company successfully broadcast 20 minutes of the speech. A change of time, of which the English engineers were not informed, prevented broadcasting of the earlier parts of the address.

### RELAYED AT DURBAN.

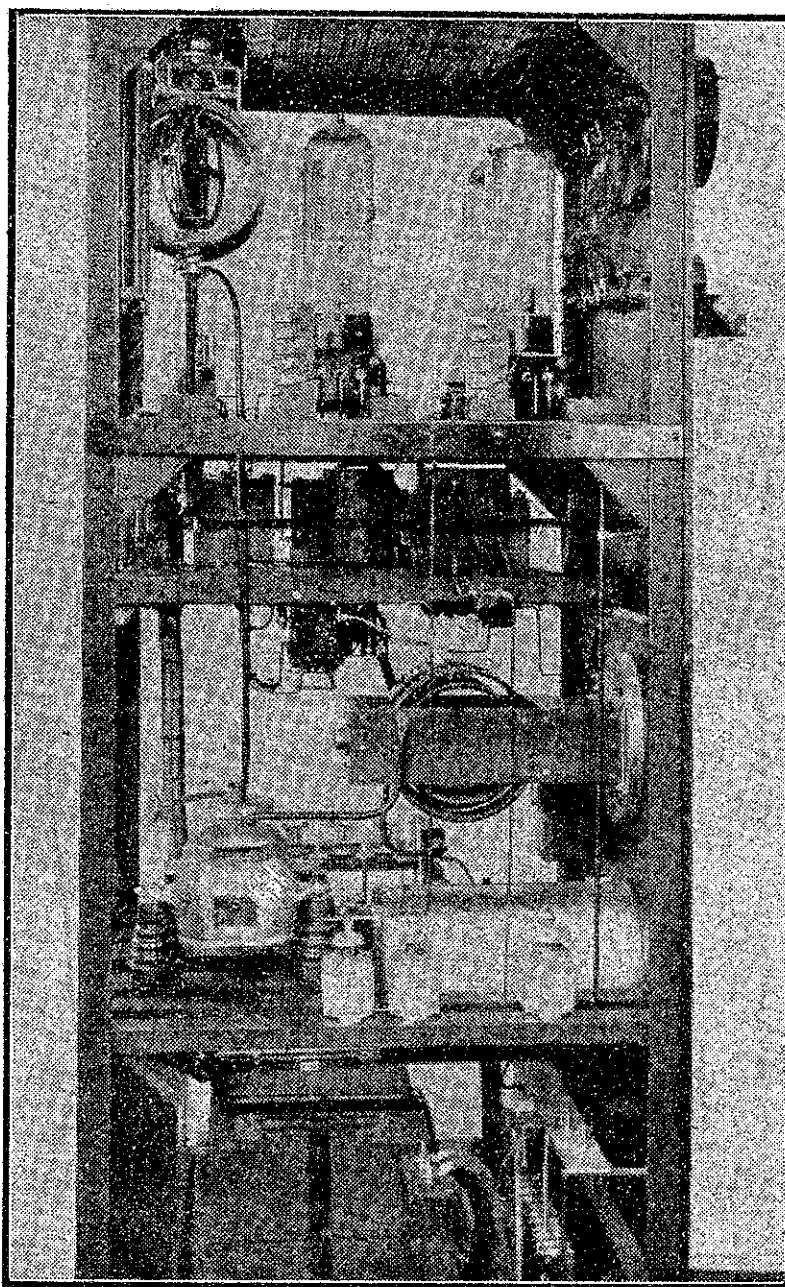
A few weeks ago a station at Durban, South Africa, broadcast 2XAF signals, and Americans on a world cruise heard greetings from home as they sat in the ship's lounge, in the harbour of Durban. On November 27, an address by Hiram Percy Maxim, of the Amateur Radio Relay League, delivered to the league members in South Africa, was relayed by Station JB.

Beginning September 13, station GWT, Perth, Australia, 11,300 miles from Schenectady, rebroadcast the first of six programmes from 2XAF. So successful was this station in getting the 32.77 metre signals that advance announcement of rebroadcasting was published.

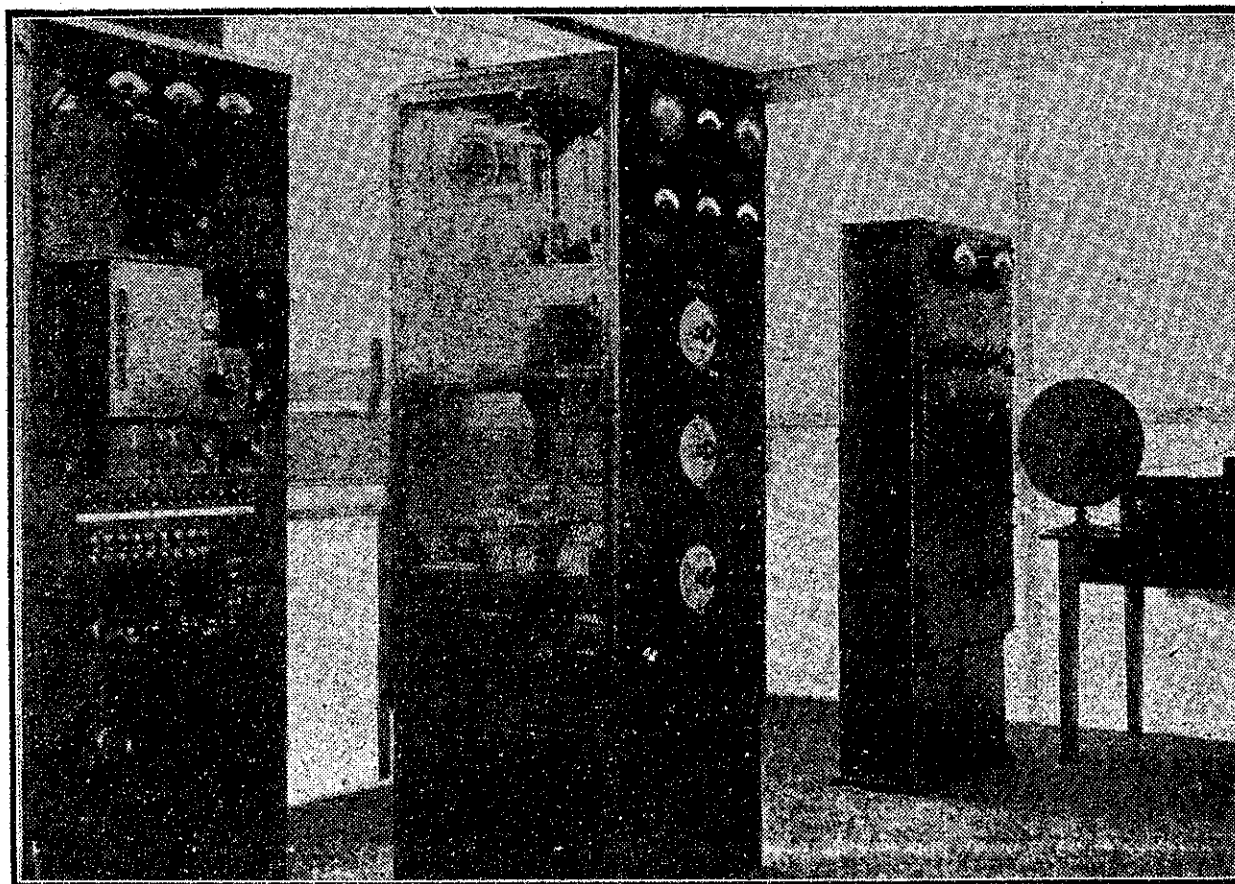
### TRANSMITTER SMALL.

Compared with the average broadcast transmitter, 2XAF is small and unimpressive. Much of the success of rebroadcasting has been due to the absolute fidelity with which the radiations of the stations are kept to their stated frequency. This has been made possible by the use of a quartz crystal oscillator which holds the oscillations to an undeviating frequency.

While the average broadcast aerial requires long strands of wire suspended aerial of 2XAF is 40 feet of wire sus-



A near view of the big valves in the equipment used at 1YA, Auckland. —Shaw, photo.



Transmitting room of 1YA, Auckland. This was the first of the new stations built by the Broadcasting Company, and has given good service. It has been effectively heard all over Oceania. The voice of 2YA will, however, now penetrate even further.

ended vertically from a 50-foot wooden mast.

### SHORT WAVE FREAKS.

Of particular interest is the fact that the received signal is of less strength 15 miles from the transmitter than that heard in South Africa, while 50 miles from the station no signal can be heard.

Six years ago the listener was thrilled if he heard an occasional word and a few musical notes through the static-riddled atmosphere. Later it was no unusual experience to hear stations in distant States, and then came the thrill of hearing South American, Canadian, and even occasionally an English or other European station. Now we are on the threshold of intercontinental rebroadcasting, a possibility which six years ago even the most unfettered imagination might have failed to encompass.

### STRIDES IN EUROPE.

What the results of inter-continental rebroadcasting will be, none can say, but few would have the courage to scout the wildest prediction. In continental Europe to-day the listener in one country can hear the programmes of a half-dozen or more countries. A turn of the dials carries him from Norway to Spain, from Italy to England, and from each he hears a different language.

### SPREAD OF LANGUAGE.

As a result, the radio stations of Italy, for example, are offering language lessons in English. A station in Norway broadcasts lessons in elementary French. Radio magazines in England, in addition to advertisements for radio sets and parts, now carry several advertisements by language experts. Will radio lead everyone to learn several languages, or will it evolve a world tongue? One tendency already noted is the elimination of dialects, thus resulting in a standardisation of the same tongue.

The development of communication has brought about greater understanding between different races widely separated by distance. In broadcasting, that great annihilator of distance, we have an instrument capable of helping to erase racial prejudice and of creating that unity of thought and purpose which leads to international friendship.

### PIANO LESSONS BY RADIO

Piano lessons by radio. That is being tried over the Evening Express Station, KNX, Los Angeles, California (a station often heard in New Zealand), and, according to reports coming in, it is proving to be successful. A lady is conducting the class. All that is necessary, as the teacher points out, is a radio, a piano and the desire to learn—plus the chart that is issued for the students. This chart is free and is mailed out upon request. Several hundred have already been mailed. The instructor is on the air between 4.30 and 5 o'clock every Wednesday afternoon. Parents are using the class to test out their children's natural ability along the musical line.

### SUMMER RADIO POPULAR

Officials of station KFI, in Los Angeles (California), recently made a thorough survey of the radio situation, with particular regard to the receptionists' viewpoint. The results obtained disclosed the fact that, contrary to popular opinion, the summer months do not lessen the radio audience. It was found that a large majority of vacationists take their receiving sets with them on their trips to the mountains or seashore, and further, that those whose sets were not portable, prefer to stay at hotels along the way which supply this accommodation for their guests.

Convicts in Austria are to be allowed radio sets, it is announced, with the distinction that those whose conduct merits it will be allowed the additional liberty of valve sets instead of crystal receivers.