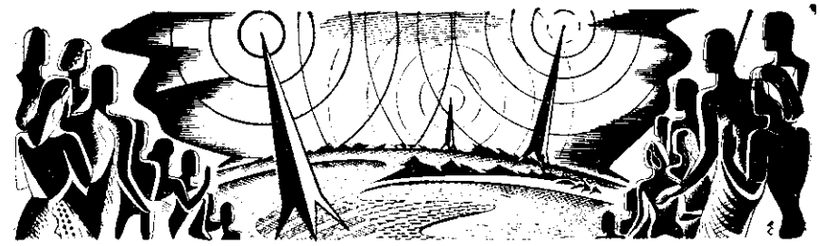

CLEARING THE AIR

International Convention on Wavelengths

By Airmail — Special to "The Listener" from London

SOMETHING a little different in international conferences has just closed after three months of continuous negotiation in Denmark. Twenty-five countries have signed a new convention laying down the wavelengths that may be used for broadcasting by each country, and the power of the transmitters that may work on those points on the dial. The conference was distinguished by the fact that the U.S.S.R. has signed up (although there were frequent threats to success because of east-west differences particularly between the occupying powers over the radio coverage of Germany), and it is curious to read that the dissenting powers were the small voices of Austria, Egypt, Iceland, Luxembourg, Sweden, Syria, and Turkey. But the overcrowding of the usable waveband for broadcasting is not a thing that can be settled by bearish non-co-operation because the interferer is himself interfered with to his own extent. Hence presumably this exemplary agreement. The Post Office describes it as a "considerable achievement in international co-operation." That may be flattering it; it was a case of co-operate, or else—however, that is as may be.

Perhaps radio owners who are accustomed to the free and easy ether over the Pacific and the Tasman Sea will hardly appreciate the necessity for this kind of thing until they have some idea of what happens when you twist a dial on your radio in England. For one thing, the neat and spacious placing of stations on round figures—540 kilocycles, 650, 720, 800 and so on, is not possible here. Between 4YZ and the projected Rotorua station, for instance, a New Zealander waking to find himself in Europe would discover something like this on his radio:

722 kc. Hilversum (Holland), Leipzig, Lisbon.
731 kc. Monte Carlo, Seville, Tallinn (Estonia).
740 kc. Munich.
749 kc. Marseilles, Leningrad.
758 kc. Warsaw, Istanbul, Madrid.
767 kc. Scottish Regional, Paris, Stalino (U.S.S.R.).
785 kc. Leipzig.
795 kc. Barcelona, Jerusalem.
804 kc. Welsh Regional, Salonika.

Now it's plain that where stations double up on one frequency, they have been far apart; but the frequencies themselves are close, and many of the transmitters are very powerful. In the south-east corner of England you are as close to Paris, Brussels, and Amsterdam as Christchurch is to Wellington—and the transmitters there are all fairly powerful. So you get them well in the daytime.

But daylight goes, and a natural phenomenon occurs—a thing known as the Heaviside layer comes down in altitude, making radio waves bounce better and go further, and the nightly lowering of this curtain reproduces a microcosm of world affairs. A waveband that was spacious and clear by day—when the BBC, Holland, Belgium, Paris, and Hamburg, are all wide apart and clear as 2YA — becomes, as you twiddle over it, a howling dissension of tongues.

In the brief list given above, Hilversum, Munich, and both of the Leipzig stations are at present recorded as using over 100 kilowatts (2YA uses 60). The Paris station which shares Scotland's wavelength is lower in power, but obviously no amount of planning can get round the nightly problem, "international co-operation" or not.

The last effective allocation plan was made at Lucerne in 1933, and some nations were then technically behindhand. Now they have caught up, and every nation's actual needs exceed what can be granted without chaos. "Consequently," says *The Times*, "agreement has been made possible only by nations from all parts of Europe accepting less than their full requirements."

The new agreement does not take effect until March, 1950, which will, presumably, give everyone time to make technical adjustments—if technical adjustments are the only ones the nations of Europe are making in 1950.

The U.K. at present has 11 wavelengths including one on the "long" band that New Zealand does not even need to use—from 540 kilocycles down to 150. English radio sets are equipped to receive on this band, and the Light programme, for instance, is on it. One characteristic is that a station on it spreads out wide, over almost a whole twist of the knob, on some sets. The new agreement will give the U.K. 14 wavelengths (still including one long). But the BBC has already had to "take into temporary use" (in the words of *The Times*—the Russians would have another word for it) two wavelengths that were allotted to other countries in 1933. So the nett gain will be one wavelength. In some cases increased power may be used. The chief effect, it is hoped, will be that the Third Programme will become audible in all parts of the country. The Copenhagen conference was not concerned with shortwaves, or ultra-shortwaves (television and FM radio). These are to be discussed at Mexico City next month.