



THIS map has been specially prepared to enable radio readers of 'IDEAS' to familiarise themselves with coming reception changes. It shows the principal broadcasting stations of Europe, and in tabulated form are given the wavelengths now used and those allotted to the transmitters from January 15, 1934, under a scheme to cut down interference evolved by radio

experts at a conference at Lucerne, Switzerland earlier this year.

Under the scheme the nearest stations to each other are separated by the greatest differences in wavelengths. The plan covers 232 broadcasting stations, but as there are only 130 channels between 200 and 2,000 metres, certain wavelengths are to be shared by stations in countries distant from each other. As an example, North Regional is sharing a wavelength with Jerusalem. Further, under this scheme stations using wavelengths between 200 and 240 metres must

not exceed 30 kilowatts in power. Between 240 and 272 metres the limit is 60 kilowatts, jumping to 100 kilowatts for stations working between 272 and 545 metres.

Many countries, notably Germany and France, are preparing to transmit on these higher powers. Above 1,000 metres all stations may use up to 150 kilowatts, but Moscow, having a 500 kilowatt station in operation, was allowed to keep that power.

The stations shown on the map, and those named at the sides, represent about one quarter of the

total number of broadcasting stations operating daily in Europe. Many of the others are small powered transmitters giving the same programmes as the parent station.

All the stations shown are regularly heard in this country, but the best received will vary according to the locality of the listener, and the nature of the surrounding country.

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LONG WAVE STATIONS

Present Wavelength 1,875 metres **HUIZEN** and HILVERSUM 301 metres RADIO PARIS BERLIN (Deutschlandsender) 1,570 metres EIFFEL TOWER (Paris) WARSAW (Poland) 1.304 metres First European station to use over 100 k.w. Fiss high-class concerts and frequent transmissions of Chopin pianoforte music. It is announced as "Varshau." MOTALA (Sweden) 1,388 metres RADIO LUXEMBOURG KALUNDBORG (Denmark) 1,261 metres Recently raised from 7 kilowatts, and is now a favourite day and night station in this country. Relays Copenhagen. MONTE CENERI (Switzerland) A new Swiss station designed to serve the Italian-speaking population of the country. Announces frequently in Italian, and relays Italian opera. OSLO (Norway) 1,185 metre 60 k.w. 716 miles. ral concert every night, and also features instrumental music 1,185 metres

MEDIUM WAVE STATIONS

BUDAPEST (Hungary) 549.4 metres Is just within tuning range of majority of receivers. Announces "Hallo, Hier Radio Budapest!" requently, and is easily recognised by

MUNICH (Germany) VIENNA, BISAMBERG (Austria) 506.7 metres

BRUSSELS No. 1 (Belgium) 483.9 metres

PRAGUE (Czecho-Slovakia) 470.2 metres

LYONS (LA DOUA) France 463 metres Though of very small power is often well received in this country. Plans to go up to 60 k.w. in near future.

LANGENBERG (Germany) 455.9 metres Will shortly raise its power to 100 k.w. Will be less than 7 metres from North Regional in January, but fortunately has an exclusive wavelength. "On the air " at 5-50 a.m. daily with music for gymnastic exercises. Relays the best of the Berne, Basle, and Zurich programmes.

ROME (Italy) 420.8 metres 50 k.w. 890 miles, estral broadcasts, which are relayed by the 25.4 Famous for opera and orchestral broadcasts, was metres transmitter and Milan and Naples, 55 k.w. 886 miles.

STOCKHOLM (Sweden) 426.1 metres

often broadcasts old English dance music, and gives prominence to popular orchestral, string, and instrumental music.

424 metres

MADRID (Spain)

2 k.w. 786 miles.

Often transmits until well into the morning hours and, in spite of its low rating and great distance, comes over at good volume when other stations have closed down.

FUNKSTUNDE (Berlin) German National station, replacing Witzleben. Will transmit on 60 k.w. when changing wavelength.



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MEDIUM WAVE STATIONS

ATHLONE (Irish Free State) 413 metres KATOWICE (Poland) SOTTENS (Switzerland) LEIPZIG (Germany) TOULOUSE (France) Popular station with British listeners on account of its short and bright programmes, many of which only last fifteen minutes, and rarely exceeding half and hour. Will shortly raise its power to 60 k.w. HAMBURG (Germany) One of the lowest-powerd German stations regularly received in this country. Will shortly increase its power to 100 k.w. under the German 360 metres STUTTGART (Muhlacker, Germany) 522.6 metres Another station which will shortly increase its power to 100 k.w. On its new wavelength it should be one of the best German stations received in this country. BARCELONA, EAJ1 (Spain) 349 metres STRASBOURG (France) 345 metres

MILAN (Italy) 50 k.w. 598 miles. A powerful Italian relay station taking the majority of its programmes from Turin. Relayed also by Genoa, Trieste, and Florence. POSTE-PARISIEN

BRUSSELS No. 2 (Belgium)

an, French, and English.

342 metres

BRESLAU (Germany) GENOA (Italy

BORDEAUX-LAFAYETTE (France) 278.6 metres HILVERSUM and 1,345 metres HIJIZEN (Holland) 1.875 metres

LISBON (Portugal) 282 metres 20 k.w. 980 miles. A new station just beginning its tests. Can be easily located between Heilsberg and Hilversum. Call sign, Radio Lisboa. HEILSBERG (Germany 60 k.w. 881 miles. missions from 5-15 a pt 2nd features concerts by the Konisberg

Transmissions from 5-15 a.m., and features concerts by the Konisberg Opera House and Dresden Symphony Orchestras. 274 metres TURIN (Italy) 263.2 metres $7 \, \mathrm{k.w.}$ $575 \, \mathrm{miles}$. Small power but important Italian station. Gives relays of opera, which are taken by Milan, Genoa Trieste, and Florence.

MORAVSKA-OSTRAVA (Czecho-Slovakia)
11 k.w. 813 miles.
Comes on the air at 5-15 a.m. Gives its own afternoon concerts, afterwards

FRANKFURT (Germany) 17 k.w. 396 miles.
Supplies many concerts and programme items to the more powerful German stations. The Frankfurt Symphony Orchestra is one of the best in Europe TRIESTE (Italy) 245.5 metres

223 metres

FECAMP (France) 206 or 215.4 metres A French station with a great following in this country. Special daily transmissions from 11 p.m. to 3 a.m. with announcements in English and