

1928



NATION SHALL SPEAK PEACE UNTO NATION

# WORLD-RADIO

## DOMINION & FOREIGN PROGRAMMES

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FRIDAY, JUNE 15, 1928.

Two Pence.

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(Revised.)

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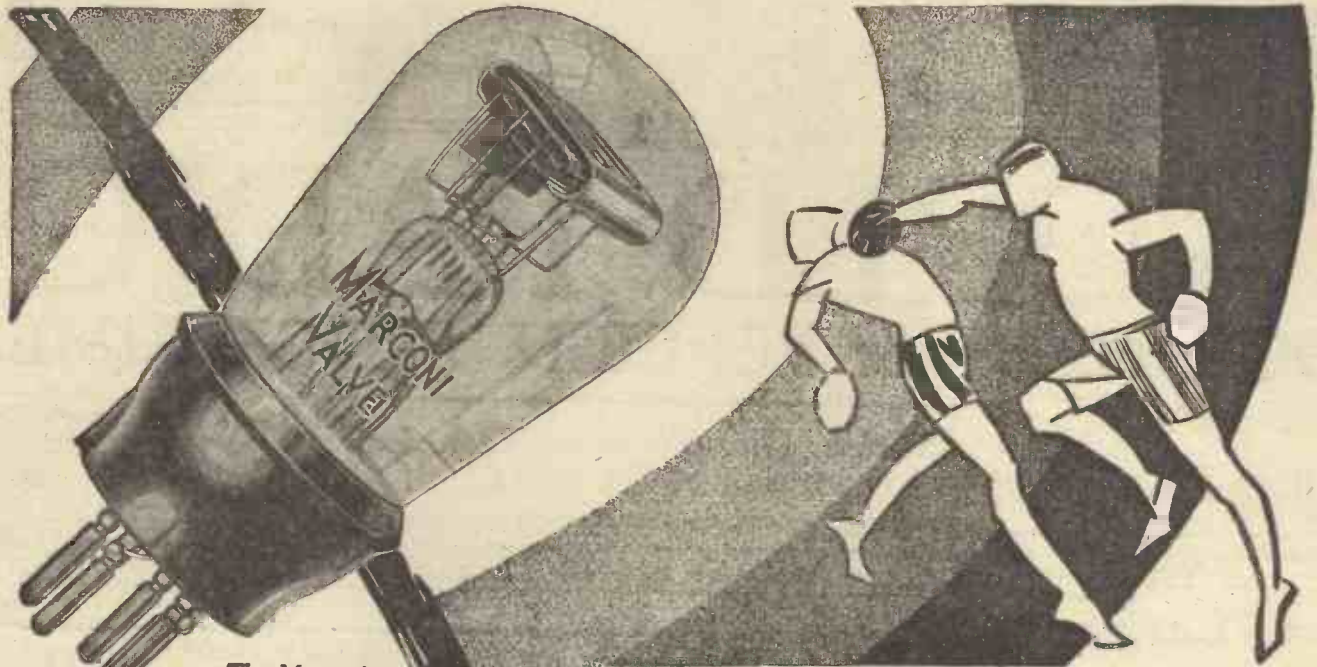
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# WORLD-RADIO

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## The Vienna Festival Fortnight

**T**HE Vienna and Lower Austria "Festival Fortnight," which was inaugurated in 1927 as an annual event, has a special interest this year, as part of the Schubert Centenary celebrations fall within this period (June 3—17). Vienna is, of course, thronged with visitors from all lands. There are open-air concerts in its public parks and squares, buildings and fountains are illuminated, the State Opera and all the theatres are giving of their very best. Many of the concerts are composed entirely of Schubert music, for parts of the celebrations connected with the centenary, next November, of this composer's death are being included in the Festival Fortnight. Horse races, regattas, the choosing of a Queen of Beauty in the Prater, have all been concentrated into these two weeks.

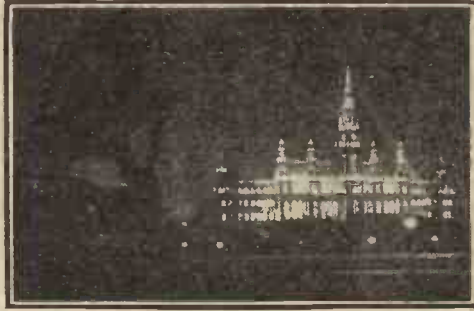
At the opening of the Festival loud speakers were prominent. They were fixed on the speakers' platform, among the orchestra, and on all the electric standards, ensuring that everyone in the immense crowd gathered in the square in front of the Town Hall should be able to follow the proceedings. Lines run from the square to Radio-Wien provided for the broadcasting of the concert, speeches, and demonstrations of the crowd to all parts of the country.

When the Austrian hymn had been played, just after 10.30 a.m. on June 3, the President of the Austrian Federation, Dr. Michael Hainisch, welcomed all visitors to the city. Then followed a fanfare from the Turmgalerie, specially composed for the occasion by Josef Marx. After speeches by Director-General Julius Müller, of the Tourist Traffic Commission, and the Mayor of Vienna, the Philharmonic Orchestra, conducted by Franz Schalks, played the Symphony in C sharp by Schubert. Dr. Hainisch, in declaring the Festival officially opened, spoke in glowing terms of the incomparable beauty of Austrian scenery.

Vienna, a city of nearly two million inhabitants, is also one of the nine Provinces composing the Austrian League Republic. It is surrounded by the province of Lower Austria, which has its administrative headquarters in Vienna, and these two provinces have combined in organising the Festival. Lower Austria includes the enchanting scenery of the Wachau,

that stretch of the Danube which can challenge comparison with the very best on the Rhine, the Schneeberg, and many other mountains well over 6,000 feet high, and extends to the frontier of Czecho-Slovakia over that wonderful area of forests and mediæval castles called the Waldviertel. This is one of the most romantic and beautiful districts in all Europe, and to explore it properly would require several weeks. Most of the castles are miles from the nearest branch-line railway station.

In Lower Austria are Baden, a spa which can hold its own in beauty of surroundings with



Vienna Town Hall illuminated

any other, the old palace of Laxenburg, the Emperor Francis Joseph's favourite summer home, Durnstein ruins, the castle where Richard of the Lion Heart was once imprisoned and beneath whose cell-window Blondel sang, and a bewildering choice of beauty spots and magnificent views. For Lower Austria is beautiful from end to end—mountain, valley, forest, waterfall and pastoral landscape—and in a day one may reach its remotest corners and return to Vienna, with all its comforts and gaieties. Even a visit to Vienna itself should not be hurried. Its supreme charm is the wealth of wild woodland that comes down to the suburbs, real forest that one enters a hundred yards from the tramcar terminus. Without making journeys by train or motor car one may walk straight from Vienna into limitless woods of the rarest beauty. No one ever leaves Vienna without the longing

to return. It is the most spacious of all great cities, with parks in profusion, miles of open-air swimming shores on the Danube, and inland lakes, and for wet days a choice of museums and art galleries which few cities can equal.

To know Vienna at its best, the Old Vienna that Beethoven and Napoleon knew, I think a summer Sunday afternoon is the ideal time to choose. That is when one should visit the quaint streets surrounding the former University, or the ancient church of St. Rupert, hidden away in the busiest quarter of the city, as old as the Cathedral itself. The streets are almost deserted then, and every detail of architecture may be studied, every illusion of antiquity enjoyed. The remnants of the old fortifications, Moelkerbastei and Dominikanerbastei, can be peopled with the promenading crowds in Biedermayer costume, in the age of peace and simplicity that followed Waterloo. And at night, if you want to be really Viennese, you go to the Urbani Cellar (where, in excavations far below the streets, you may fancy yourself back in the Middle Ages, surrounded by stone walls and oaken furniture), or seek some quiet winegarden on the slopes of the hills that climb two thousand feet above the city, yet are still within its boundaries, and watch the lights twinkling in the streets and habitations below, with the Danube stream gleaming to the moon, and the wide vague spaces beyond towards the battlefield of Wagram. The Romans chose the site of Vienna for their settlement of Vindobona because it lay where the Danube breaks forth from the hills into undulating lowlands, and the great metropolis that has grown up in the course of twenty centuries has a position that most cities of the world might envy.

Climb the tower of St. Stephen's Cathedral, more than 500 feet above the city, with a perpendicular ladder for the last stage, look round upon the wonderful panorama presented, and compare it with the best you have seen elsewhere. And then go into the catacombs below, where lie the bones of innumerable victims of the Plague. Or get some private owner to admit you to his second cellar, or even third, fifty feet below the street, and see how Vienna was built up from the river level to that of the cathedral floor and the streets around it.

But most of all it is the forest and the river that help to make the charm of Vienna for me, and these in combination are almost irresistible. I cannot leave them long.

J. B.



Wientalabschluss, Vienna



Schloss Schönbühel, Wachau

[Photos by courtesy of the Austrian Federal Railways.]



# Via Ether

I AM a conscientious objector to work and I have come down here for a rest. Of the first part both my family and your Editor are fully aware; of the second, I have not been able to convince my *entourage*. When I say "here" I refer to one of those not too overcrowded resorts on the South Coast which, when I am in London, head the previous day's weather report with a boast of some ten hours' sunshine, and indulge in a steady downpour so soon as my train reaches the local station. What is more, I left my wireless receivers at home in order to ensure that rest; I wished to be far from radio, but so great is that obsession, that, in the words of my doctor: "the silly chump borrowed a portable receiver from the local dealer some ten minutes after his arrival."

On Sunday last (June 10), did you hear, at 7.30 p.m., the relay carried out by Frankfurt-am-Main from its local Zoo on the occasion of the opening of the new Deep Sea Aquarium? From what I can make of it, an attempt was made to ascertain whether sea anemones and other marine plants talk to each other. Some of these experiments may have been inspired by a newspaper paragraph which appeared in a New York "daily," stating that submarine wireless tests which were being carried out off Hatteras in North Carolina had to be abandoned owing to the singing of oysters, a noise somewhat akin to a jazz composer humming a new melody!

Now, to business. A glimpse of the wireless programmes for the next ten days is likely to take me back to my wireless den in town, notwithstanding any local attractions, for it is seldom I have seen so many good entertainments packed in one single week. To-night (Friday, June 15) brings us at 7.55 p.m. from Kalundborg a relay of the *Dannebrog Festival*, which is taking place in Aarhus Cathedral in celebration of St. Waldemar's Day in Denmark. It commemorates, I believe, Waldemar the Great, the first of a series of Danish kings who reigned from 1157, and who, assisted by his Prime Minister Absalon, raised the country to a high degree of prosperity. At 7.30 p.m. Berlin offers us a great performance of Beethoven's opera *Fidelio*, from the New State Opera House in Unter den Linden, with that well-known singer Frida Leider in the part of Leonore. At Leipzig at 8.15 p.m. we find Verdi's four-act lyric opera *Ernani*, to which I had occasion to refer in these notes last week. To Naples at 8.50 p.m. we may turn for *Hoffmann*, a three-act opera by Laccetti, a work which does not appear to have been broadcast to date.

Folk songs and dances embodying the traditional melodies of individual lands aptly depict racial or national character; in many ways they help us to secure the true atmosphere of the foreign entertainments brought to our ears through the medium of radio. Many are the opportunities given to us this week by the Scandinavian transmitters of hearing the songs of their people. To-morrow night (June 16) Copenhagen will broadcast from 8.5 p.m. to 1.0 a.m. a radio ball, interspersed with old Danish folk dances from North Jutland. Stockholm, too, on Sunday (June

17) at 7.0 p.m., favours us with an open-air choral concert (some 2,300 singers) from the Stadium, on the occasion of the Swedish Congregational Church meeting in that city; it is followed by folk songs played by peasant fiddlers and pipers from Ostersund. On the following evening at 8.15 p.m. for a similar native entertainment we are taken to Sundsvall, on Tuesday to Boden and Umea, on Wednesday to Falun, and on Thursday and Friday to Hudiksvall. These local concerts will all be available to you *via* Motala, and should prove interesting.

But I have digressed; let us come back to to-morrow night (Saturday, June 16). Cologne and the Rhineland stations at 7.30 p.m. will switch over to the Exhibition Hall at Hanover for a performance of *La Damnation de Faust* (Berlioz), with well-known Berlin soloists, full choir and the Philharmonic Orchestra from the German capital. Excerpts from this work by Berlioz are also down for transmission by Brussels at 8.15 p.m. on Wednesday (June 20). Munich, at 8 p.m. on June 16, gives us a light musical comedy in three acts by Carl Millöcker, entitled *Three Pairs of Shoes*, and fifteen minutes later Frankfurt-am-Main will come "on the air" with a tuneful operetta by Leo Ascher, bearing the unusual title of *Der Soldat der Marie* (Mary's Soldier). It is the traditional story of the local innkeeper's pretty daughter who falls in love with a Prince disguised as a Tommy—that is, if Tommies, as such, already existed in the year 1830. Rome on this evening indulges in a more serious operatic work, for it advertises a broadcast of Gounod's *Faust* at 9 p.m.

Sunday (June 17) marks the opening of the Scheveningen Kurhaus season, and Hilversum takes advantage of the first opportunity to give us a relay of the excellent concert conducted by Professor Georg Schnéevoigt, hitherto Musical Director of the Finnish Opera House at Helsingfors; on this evening the soloist will be Marcelle Meyer, the celebrated pianist already heard in some of our home broadcasts. On Monday (June 18) and on Friday next we shall again be taken over to the Scheveningen Kurhaus for equally brilliant entertainments.

Cologne at 8 p.m. on Sunday revives Künneke's charming comic opera *Der Vetter aus Dingsda* (The Cousin from Nowhere), a work which, although popular in German-speaking countries, achieved but a *succès d'estime* when produced a few years ago in London. Munich, or Nürnberg as a relay, might be our objective at any time between 10.30 p.m. and 12.30 a.m., for it advertises a concert by the Mexican National Orchestra, playing at the Reichsadler Hotel in the Bavarian capital; I am informed that it is the Presidential Palace Band, and this constitutes its first trip to Europe. Finally, at 10 p.m., Madrid (EAJ7) commemorates, by a special gala entertainment, the third anniversary of Union Radio, of which the broadcast will be relayed by Bilbao, San Sebastian and Salamanca.

From time to time some of the Continental stations effect an interchange of programmes;

at 8.30 p.m. on Monday (June 18) you will be able to pick up the second of this International Series, in an entertainment from Vienna relayed to Berlin, Prague, Warsaw and Posen. On the same date both Oslo and the Swedish transmitters at 5.0 p.m. will favour us with talks by foreign authors assisting at the meeting of the "Pen Club" in the Norwegian capital; the programme is of an unconventional nature. Radio Belgique, which is extending its system of outside broadcasts, has added to its net the Metropole, Brussels, and at 5.30 p.m. on Mondays, Tuesdays and Thursdays will relay a concert by that very popular Hotel and Café orchestra.

As stated in these notes last week, the principals and chorus of the Scala Theatre, Milan, are presenting a series of performances at the Cologne Opera House this week; from Langenberg and all the Rhineland broadcasters we shall be given on Tuesday (June 19), at 7 p.m., a relay of Rossini's *opera-buffa* *The Barber of Seville*. It was produced at Rome in 1816. When it was staged at New York for the first time in 1825, it is stated that among those who praised this work were James Fenimore Cooper, and Joseph Bonaparte, ex-King of Spain, who was then living quietly in Bordentown (New Jersey). A further treat offered to us on Friday (June 22) will be Puccini's *La Bohème*, by the same Italian Company.

The first thoroughly National Polish opera, *Halka*, a work presented by Stanislaus Moniusko at Wilno in 1854, is down for transmission from the Grand Theatre, Posen, at 7.50 p.m. on Tuesday (June 19). It is a tragic peasant story of which the composer took full advantage in a brilliant score. At Radio Paris, at 8.45 p.m. on the same evening, the studio gives us a concert version of *Boris Godunov*, Petrovitch Moussorgsky's three-act opera which, owing to its intensely national spirit, was retained in the repertoire of the Imperial Theatre, St. Petersburg, from the night of its production in 1872. The title rôle has always appealed to Chaliapin, and in English-speaking countries to that B.B.C. favourite, Norman Allin. In the Paris broadcast it will be interpreted by singers from the Grand Opera House. At 7.55 p.m. we may find a good concert at Hilversum, which turns to Amsterdam for the celebration of the 75th anniversary of the Royal Dutch Male Voice Choir, "Apollo," to be assisted by the Amsterdam Concert Hall orchestra.

Another concert worthy of your attention should be that advertised by Stockholm for 8.45 p.m. on Wednesday (June 20), as in the list of artists I find the name of Madame Charles Cahier, of the Metropolitan Opera House, New York. Munich, on Thursday (June 21), for its main evening entertainment provides good fare with a studio performance of Puccini's *Madame Butterfly*. And, lastly, I can strongly recommend a visit on that day to Hilversum, when, at 8.55 p.m., it takes us over to the Scheveningen Kurhaus for a concert by the Budapest Philharmonic Orchestra, now on a European tour under the direction of Ernst von Dohnányi, who will also be featured as solo pianist.

JAY COOTE,



# Holidays Abroad: Ways and Means

## Holland

By JOYCE WEDGWOOD\*

**W**HAT does Holland suggest to you? Windmills, canals, a cannon ball cheese, or a young lady in a lace cap; voluminous petticoats and sabots? Well, on a holiday there, you will find all these—but much more.

Are you interested in the life of a busy port, where ships set sail for the Seven Seas? Go to Rotterdam or Amsterdam and study it at close quarters. Do you want a quiet place for the children? The long stretches of shore on



the seaward side of the Hook will provide it. Do you sketch? In Holland every street corner teems with subjects for pen or pencil. Are you fond of sailing? Try a yacht, or a "botter" on the Zuyder Zee. If you need a really lazy holiday, take a barge and wander through the canals, or a houseboat at some such place as Delft. If a fashionable resort is your aim try Scheveningen, the seaside suburb of the Hague.

It is quite easy to get there. If you are starting from London and are a good sailor, it is pleasant to go all the way by water. Leaving Victoria about six in the evening, you board the steamer at Gravesend, and arrive on the Boomje in Rotterdam about eight the next morning. From there any part of Holland can be reached in a few hours. The cost by this route is, first class £4 12s., second class £3 8s. for the return journey. From Harwich to the Hook is a slightly shorter sea passage. Here again the journey is by night, so that very little time is wasted in travelling. The cost is, first class £6 1s. 8d., second class £4 4s. 8d. This includes the railway fare between London and Harwich and from the Hook to Rotterdam. There is also a third route by Folkestone-Flushing, and if you are thinking of visiting Zeeland and the picturesque town of Middleburg, this is the best route to take.

Both the Hague and Amsterdam are excellent centres, and a week spent in each gives you a very good idea of Holland and the Dutch. First let us talk of the Hague. One of the charms of Holland is the quiet old-world atmosphere of many of the towns, and the Hague is one of these. Step only a very short distance from its busy modern thoroughfares, lined

with shops of curiously familiar names, and beneath its avenues of sweet-smelling limes the town slumbers peacefully. Along the canal banks life flows on smoothly, like the waters beneath the hump-backed bridges, except when the delegates to some Conference in the Peace Palace come to break the spell.

The Mauritzhuis, on the east side of the Vijver, has a wonderful collection of paintings by Rembrandt, Van Dyck, Jan Steen, Paul Potter, and many more. Here is Rembrandt's "Anatomical Lecture,"—not to be confused with his picture of the same title in the Riks Museum at Amsterdam—and Paul Potter's famous painting of "The Bull." Other places to visit are the Peace Palace and the House in the Wood.

A few miles away—within easy reach by canal, or tramcar—are Leyden, Delft, Gouda and many smaller towns and villages well worth seeing. It is difficult to realise, as we travel through the smiling country, with its busily turning windmills and cattle peacefully grazing, that the greater part of the pasturelands and even the towns themselves are below sea level, or how narrow is the margin between safety and disaster.

In Delft are two fine churches, the Old and the New, but even the new dates from the 14th century. Every town in Holland breathes not only antiquity but also that spirit of staunch determination and dogged endurance which is so much a part of the Dutch character. Here, in Delft, is the Prinzenhof where William, Prince of Orange, that William the Silent so beloved of his people, was brutally assassinated. He lies in the New Church. In the Old Church is the tomb of Admiral von Tromp, the legendary hero of the story of the Admiral's Broom. The potteries of Delft, famous for their ware, had languished, but have lately been revived. Another thing you should not miss is the quaint Oostpoort, or eastern gateway, with its twin spires and water gate.

Scheveningen, a few minutes run from the Hague, provides all the attractions of a modern



[By courtesy of the Batavier Line.]

A Typical Dutch Waterway

seaside resort and is purely cosmopolitan in its appeal. But in the old fishing town near the harbour you may sometimes, on Sundays and holidays, see the old national costume—so much advertised, but very rarely seen, except in the remoter parts of the country.

Amsterdam is the best centre for North Holland, but this year, I am afraid, accommodation will be scarce, owing to the Olympic Games which are to be held there in August, and will be correspondingly expensive. In the Riks Museum is Rembrandt's celebrated picture "The Night Watch." The whole of



## QUAINT HOLLAND

This week's travel article by Miss Wedgwood.

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Amsterdam is built on thousands of wooden piles, and the Royal Palace alone rests on over 13,000. It is curious to remember this as we walk through the streets, down the Kalverstraat with its delightful shops, through the Dam, the heart of the city, to the Damrak. It all appears so solid and substantial; it seems impossible it should be built upon mud and sand. But so it is.

Along the Damrak, swept on most days by ozone-laden breezes from the North, one sits in the early evenings sipping vintage port or Hollands gin and nibbling cheese straws.

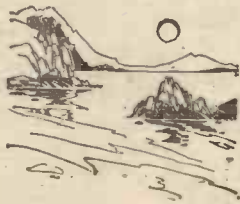
From Amsterdam many delightful excursions can be taken by steamer. These are comfortable and roomy, and are what is known as "all weather," i.e., the decks are protected by glass screens all round the bows so that one can sit in comfort even if a strong north-easter is blowing. They are also quite cheap and usually have a good restaurant on board. A trip to Zaandam need only occupy a morning. For an afternoon, there is the steamer through the North Sea canal to the locks where the big ocean-going liners enter from the Atlantic.

Alkmaar, the home of cheese, will take the whole day, and Friday is the day to choose, for then the cheese markets are held. An incredible amount of cheese passes through these markets in the year. The town lives, moves, and has its being by cheese. A model dairy is interesting to see. There is a particularly good one at Broek which one visits on the round trip to Marken. From Edam to Volendam one travels by a curious kind of houseboat drawn by an elderly man. He frequently pulls some twenty or thirty passengers for the couple or so miles, without any visible signs of fatigue. The canal is so narrow that you could almost jump across it, and is covered with floating duckweed. Here you can see one of the great dykes, built of rough stones with interwoven rushes. Don't miss lunch in the little hotel, where the walls are lined with paintings which artists of many

\* In a talk broadcast from London, through Daventry, on June 12.



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lands have left behind. The waitresses all wear native costume and cover their flaxen ringlets with beautiful lace caps.

A word about cost. Living in Holland is not cheap, as her currency has never fallen below par. The Dutch guilder is worth 1s. 8d., so that "three guilders equal 5s." gives a ready means of reckoning. In the larger hotels it will probably cost you about a pound a day for living expenses, but there are many small hotels



[By courtesy of the Batavier Line.  
 The Oostpoort, Delft

and pensions, especially in the country districts, where one can live very comfortably for from five guilders upwards. In the restaurants the prices are much the same as in London.

Travelling by steamer or tramcar is cheap; for instance, the whole day excursion to Volendam and Marken costs about 5s. or 7s. 6d., with lunch included. This year, of course, conditions are not normal on account of the Olympic Games, and therefore no very definite figures can be given, but for from £20 to £25 it should be possible in any ordinary year to spend a very pleasant fortnight, this including the fare from and back to London.

### Distant Control of Receiving Sets

(From Our Berlin Correspondent.)

For some time past the police authorities in Berlin have been in the habit of receiving certain necessary wireless transmissions by means of a receiving set placed in the outskirts of the city and joined to the Police Presidency by telephone. This course was adopted owing to the many electrical disturbances in the neighbourhood of the Presidency, which made reception of distant stations unreliable. It necessitated, however, constant attention to the set by special officials and involved a certain loss of time in the transmission of instructions. Police headquarters were therefore glad to make a trial of a less primitive system of distant-control, the invention of a German police officer. This new system has now been in use for several weeks and is said to give the greatest satisfaction. In the Police Presidency is installed a little apparatus hardly larger than a crystal set, manipulation of which controls the distant receiver, joins up aerial and batteries and tunes the condensers. The transmissions are then received, via a telephone line, on a loud speaker.

We have received from the Radio Society of Great Britain, 53, Victoria Street, S.W. 1, their 1928 *Annual and Log Book* (4s.), which is, as usual, an interesting publication. It contains some useful tables, lists of experimental stations, and a log for amateur transmissions.



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# Dominion and Foreign Broadcasting Intelligence

## CANADA

(From our Montreal Correspondent.)

### Wavelength Claims at Washington

MONTREAL, May 28.

Distribution of radio wavelengths over the North American continent will come up in Washington again next week. Lieut.-Commander C. P. Edwards, director of radio-telegraphy for Canada, will confer in Washington with officials of the State and Commerce Departments about short-wave trans-oceanic bands which are now being allocated by the American Federal Radio Commission to its own corporations. At the same time Commander Edwards will probably discuss with local officials Canada's claim to more exclusive broadcasting bands for use on this continent.

## SOUTH AFRICA

(From our Johannesburg Correspondent.)

### Miss Sybil Thorndike at JB

An interesting children's eisteddfod has just been concluded in connection with the Johannesburg station. Between two and three hundred little "Jay Bees" took part, and prizes were distributed by the distinguished actress, Miss Sybil Thorndike, who broadcast a short speech to the competitors and congratulated them upon living in such a lovely country and under such brilliant sunshine. It was the fourteenth birthday of Miss Thorndike's daughter, Miss Mary Casson, and she was presented with a bouquet, and her sister Ann with a book. Mr. Lewis Casson was also present.

## GERMANY

(From our Berlin Correspondent.)

### International Relays

A series of international relays was opened on June 11, when Vienna, Prague and Warsaw relayed from Berlin an orchestral concert by the Berlin Wireless Orchestra, the programme including selections from Weber, Mendelssohn and Wagner. The second of these international relays will take place on Monday next at 8.30 p.m. In this case Vienna will give the broadcast programme—a concert of Mozart and Schubert music—which will be relayed by Berlin, Prague, Warsaw and Posen. It has been arranged that French shall be used as a second language for announcements on these occasions. The procedure is that the station taking the relay makes a preliminary announce-

ment in its own tongue, and the station originating or giving the relay then makes all announcements in its own language and French. Thus, when Berlin is relaying to Warsaw, the latter station makes a prefatory announcement in Polish and the German station follows with an announcement in German and French. The procedure will, of course, be reversed when Warsaw relays to Berlin, the Polish station in that case making the bi-lingual announcements of individual items, after Berlin has made the preliminary announcement in German.

(From our Munich Correspondent.)

### Good Things to Come: Opera

From advance information published by the Deutsche Stunde in Bayern their summer programmes seem to be going to excel the winter ones. The opening performance of the Wagner Festivals in the Prince Regent Theatre in Munich, *Die Meistersinger*, and the complete *Ring* are to be broadcast during August. Further relays will be taken from the Residenztheater in Munich of the Mozart Festivals, also in August. It is interesting to note that Mozart himself wielded the *bâton* in the Residenztheater some 150 years ago.

### "Stunts"

Wireless "stunts," or perhaps they are becoming too numerous and too popular to call them "stunts" any longer, take quite an important place in the summer programme. The new Zeppelin LZ 127, built with funds gathered by public subscription in Germany, will "talk" with Munich, and the conversation will be relayed by the Bavarian stations while the airship is in range. As the LZ 127 is to be ready by July 1, the Deutschlandfahrt, during which these relays are to be given, will probably take place during that month. Munich has arranged an actual broadcast from one of the most important signal boxes at the entrance to Munich Central Station for June 21, from 9.30 to 10.30 p.m. At this time no less than six express trains from different parts of Germany are due. Listeners will be able to form an idea of the work performed for the safety of the trains.

### Popular Entertainments

Special evening entertainments will be relayed from popular summer resorts near Munich, the first, "An Evening in Tegernsee," will take place on June 24. The Bavarian stations will also relay a programme from a passenger steamer

on the Danube, which will include a concert on board and descriptions of the scenery passed in the trip up the river, as mentioned in *World Radio*, May 4.

## HUNGARY

(From a Correspondent.)

### Budapest's Range

The new Budapest station at Lakihegy has received the most gratifying reports from all quarters within a range of 1,200 miles, for its programme can be enjoyed at that distance at loud-speaker strength. In England, Norway, and Riga it is received on one-valve sets, and in Poland, Bavaria, Rome, and Sicily many listen to its programmes with crystal sets. The Postmaster-General sends a picture postcard to all radio amateurs in foreign countries who report their observations on reception from Lakihegy. Hungarians write from all over Europe, and even from America, expressing their joy at hearing gipsy music from Budapest itself. Numbers of gipsy fiddlers have been out of employment this winter in Hungary, having been ousted from many restaurants and cafés by jazz bands, but the characteristic gipsy music seems to be coming into its own again. The radio broadcasting administration intends to make this an even more prominent feature of the daily programmes in future.

## POLAND

(From our Warsaw Correspondent.)

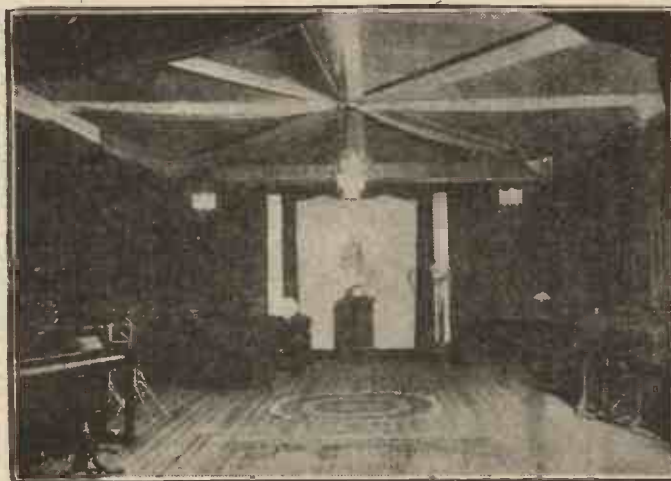
### Shakespeare Broadcast from a Warsaw Theatre

Seeking for something novel to enrich their programmes, the Warsaw station entered into the very attractive scheme—though one involving considerable responsibility—of broadcasting theatrical performances, under arrangement with some of the Warsaw theatres. *Julius Caesar* was relayed recently from the "Teatr Polski" in Warsaw. Encouraged by this experiment, the artistic Department of "Polskie Radio" relayed afterwards another English dramatic masterpiece, namely, Bernard Shaw's *Man and Superman*. It may also be mentioned that "Teatr Polski," which is maintaining high artistic level, has been for months producing mostly British authors. However, it has been found that the art of placing the microphone in the right position during the relay from the stage is the principal difficulty to be learned and overcome.

## Kovno's Birthday

ON June 12, Radio-Kaunas (Kovno) celebrated its second anniversary of successful broadcasting. The actual ceremonial programme has, however, been postponed until Sunday, June 17.

In spite of the difficulties against which Lithuania had to contend during the first stormy years after the gaining of its independence, the Government determined to build a powerful radio station as early as the year 1921. This station was intended primarily for wireless telegraphy, and its service was officially inaugurated in 1925. Shortly afterwards, however, wireless telephony having made remarkable progress throughout the civilised world, and its cultural influence becoming significant, Lithuania was not behindhand in joining the general movement, and on June 12,



Studio of Radio-Kaunas

1926, the wireless telephony broadcasting station of Radio-Kaunas came into being.

At first the new station transmitted regular reports of the Lithuanian Telegraphic Agency "Elta," later sending out concerts and readings. As soon as the projected activities of Radio-Kaunas became known, hundreds of licences were taken out, and when, in the autumn, the programmes were considerably enlarged, it was evident that broadcasting had found a firm footing in Lithuania. In the second year of its activities the programmes were further extended so as to cater for the taste of all classes. Some five hours a day are now devoted to a varied broadcast, which includes news, language lessons, readings, talks, instrumental, vocal and military band concerts, with frequent relays of operas from the National Opera House.



# Broadcasting and Languages

GERMAN

SELECTIONS FROM HEBEL

MERKWÜRDIGE GESPENSTERGESCHICHTE

(To be broadcast through Daventry from the London Station by Mr. F. Norman, on Monday, June 18, at 7.25 p.m.)

Ein vornehmer Herr reiste einmal in diplomatischem Dienst nach Dänemark. Eines Abends kam er spät in einem Ort an, in dessen Nähe ein Schloss stand. In dem Gasthaus, wo er übernachtet bleiben wollte, sagte ihm der Wirt, dass er keinen Platz mehr für ihn habe, denn drei Scharfrichter seien schon bei ihm. Er versprach, den folgenden Tag ein Zimmer für ihn einzurichten. Der Herr erwiderte: „Irgendwo muss ich übernachten, denn vor morgen nachmittag kann ich nicht weiterreisen. Ich will in das Schloss gehen. Der Baron wird mich gewiss hineinlassen und ein leeres Bett für mich haben.“ Der Wirt sah etwas verstört aus, indem er antwortete: „Manch schönes Bett mit seidnen Umhängen steht in den hohen Zimmern, und ich habe die Schlüssel in Verwahrung. Aber ich will es Ihnen nicht raten. Der gnädige Herr ist schon vor einem Vierteljahr mit seiner Frau auf eine lange Reise gegangen, und jetzt wüten die Gespenster im Schloss. Die Diener konnten nicht mehr bleiben, und wer einmal in das Schloss gegangen ist, der geht zum zweitenmal nie hinein.“ Darüber lächelte der fremde Herr, denn er war ein tapferer Mann, und hielt nichts auf die Gespenster. Der Wirt musste ihm den Schlüssel geben, und nachdem der Herr sich mit allem versehen hatte, was zu einem Gespensterbesuch nötig war, ging er mit seinem Bedienten in das Schloss.

Im Schloss angelangt, kleidete er sich nicht aus: er wollte auch nicht sofort schlafen, sondern abwarten, was geschehen sollte. Daher stellte er zwei brennende Kerzen auf den Tisch, legte ein Paar geladene Pistolen daneben und las in der Zeitung. Lange wollte sich nichts zeigen. Aber als die Glocke in dem Kirchturm zwölf schlug, eine Gewitterwolke über das Schloss zog und die grossen Regentropfen gegen die Fenster rasselten, klopfte es dreimal stark an die Tür, und eine fürchterliche Gestalt,

mit schwarzen, schielenden Augen, hervorstechenden Zähnen, einer langen Nase und einem Bocksbart, trat in das Zimmer und brummte mit fürchterlicher Stimme: „Ich bin der Grossherr Mephistopheles. Willkommen in meinem Palast! Und hast du auch Abschied genommen von Frau und Kind?“ Ein kalter Schauer durchfuhr den fremden Herrn von der grossen Zehe über den Nacken hinauf bis unter die Schlafmütze, und an den armen Bedienten darf man gar nicht denken. Als aber Mephistopheles mit fürchterlichen Grimassen auf ihn zukam, dachte der arme Herr: „Jetzt ist's nun einmal so,“ und stand herzhaft auf, hielt dem Ungetüm die Pistole entgegen und sagte: „Halt, oder ich schiesse!“ Mit so etwas lässt sich jedes Gespenst nicht schrecken, denn wenn man auch schiesst, fährt die Kugel glatt durch und trifft die Wand oder sogar zurück und trifft nicht den Geist sondern den Schützen. Aber Mephistopheles hob drohend den Zeigefinger in die Höhe, kehrte langsam um, und ging wieder fort, wie er gekommen war. Als aber der Herr sah, dass dieser Satan Achtung vor dem Pulver hatte, dachte er: „Jetzt ist keine Gefahr mehr,“ nahm in die andere Hand eine Kerze und folgte dem Gespenst, das langsam einen Gang hinabschritt. Der Bediente lief so schnell er konnte aus dem Schloss hinaus, denn er dachte, er wolle lieber bei den Scharfrichtern übernachten als bei den Geistern.

(To be continued.)

N.B.—Listeners are advised to provide themselves beforehand with paper and pencil, as a short dictation test in German will be given at the end of the talk.  
The text of the dictated matter will appear in the next issue of "World-Radio."

## FRENCH DICTATION

J'étais seul, j'étais à cheval, j'avais un bon manteau blanc, un habit rouge, un casque noir, des pistolets et un grand sabre. Il pleuvait à verse depuis quatre jours, et je me souviens que je chantais à pleine voix. J'étais si jeune! En 1814 les régiments avaient été remplis d'enfants et de vieillards; l'Empire avait tué les hommes.

Translation of the two test sentences:—

(a) We enjoyed ourselves all the more as the weather was so fine.

Nous nous sommes d'autant plus amusés qu'il a fait si beau.

(b) They all agreed in saying that you were wrong.

Ils s'accordaient tous à dire que vous aviez tort.

## SPANISH

Aids and Hints for Students—XVIII.

By W. F. BLETCHER

Amongst the many queries submitted to me recently by students of Spanish is the following:—

“How is ‘to take place’ best rendered in Spanish? Can it always be translated *tener lugar*, the equivalent of the French *avoir lieu*?”

My reply to this query will probably surprise most students and not a few teachers of the language. *Tener lugar* is not good Spanish for “to take place” though it is now very often used. It is a gallicism which is condemned and avoided by the best writers. Strictly speaking *tener lugar* does not mean “to take place” at all; its correct use is with a personal subject in the sense of *tener tiempo u ocasión* de hacer alguna cosa, thus:—

Aun no he tenido lugar de enterarme de lo sucedido.—(I have not yet had an opportunity to ascertain what has happened.)

Otro día tendremos lugar de hablar sobre ello.—(Some other day we shall have time to talk about it.)

How, then, is “to take place” expressed in Spanish? In my next article I will deal at some length with this interesting question.

Ahora, para variar (for a change) una breve conversación figurada (simulada, imaginaria) sobre un viaje por mar. Dos amigos, a quienes

llamaré A y B respectivamente, se dirigen apresuradamente (hurriedly) al muelle (dock) donde está atracado (drawn up alongside) el barco que les ha de llevar a ultramar (overseas).

A.—Tendremos que darnos prisa (to hurry); poco falta para las tres (it's nearly three o'clock) y debíamos estar a bordo ya.

B.—No se apure Vd. (don't worry), Don Juan; tenemos tiempo de sobra (nos sobra tiempo). Mire; allí está el vapor; en cinco minutos estaremos. Pero ¡Dios mío! ¡cuánta gente va! No suele haber (there are not usually) tantos pasajeros.

A.—Hicimos bien en tomar (sacar) los pasajes con quince días de anticipación (a fortnight beforehand). ¿En qué parte del vapor están los camarotes (cabins) nuestros?

B.—En la cubierta superior (upper deck) cerca del centro. No hay mejores en todo el barco.

A.—¡Cuánto me alegro! (I am glad) Yo no nací (I wasn't born) para marinero, y cuanto menos movimiento haya, mejor (the less movement there is, the better). Me mareo (I become seasick) tan facilmente. Subimos a bordo por este puente ¿no?

B.—Sí; y hay que enseñar los billetes. Iré yo primero.

A bordo del vapor.

A.—Todavía están embarcando los pasajeros. No; ahora retiran los puentes. ¡Uy! ¡Qué ruido! Esa sirena me va a dejar sordo (deaf). Ya sueltan las amarras (cables, moorings) ¡Nos vamos! ¡Adiós, tierra! Mire Vd., Don Pedro; allá en el muelle está. Ramirez. Nos ha visto y está haciéndonos señales con el pañuelo.

B.—Sí; ya le veo. Ahora el vapor está doblando (rounding) la extremidad del malecón (jetty) y acelerando su marcha (getting up speed). Ya pasamos el faro (lighthouse) y nos vamos mar adentro (out to sea).

A.—Hace un tiempo magnífico, el mar está tranquilo, y sin embargo empiezo a sentir el mareo. Debe de ser la vibración de la maquinaria.

B.—Sin duda; pero le aconsejo que se quede sobre cubierta (on deck) al aire libre y que se mantenga hacia el medio (middle) del vapor, porque aquí se nota menos el cabeceo (pitching) del barco, o sea, el movimiento de proa a popa, que es el que principalmente produce el mareo.

A.—Me dijeron en la oficina de vapores que este vapor hace escala en (calls at) dos puertos, para los cuales tiene alguna carga (cargo).

B.—Sí; pero sólo estaremos un par de horas, el tiempo preciso para efectuar la descarga. No creo que nos permitan desembarcar.

A.—Ya estamos en alta mar; no se ve más que agua por todos lados. Y ahora se nubla (is clouding over) el cielo y arrecia (is getting up) el viento. Poco ha durado la bonanza (fine weather). Me parece que va a estallar una tormenta (storm) ¡Qué horror!

B.—No, hombre, no será nada. Ya vuelve a salir el sol. Vamos a tener un buen pasaje.

## “A Radio Complexion”

So much has already been promised in the name of wireless that it is not perhaps surprising to learn that experiments are being made to transmit beauty treatment *via* ether. Writing for Belgian listeners, the *Soir* says:

“Do you wish, madame, to possess a complexion of lilies and of roses?”

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1878

1928

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## Practical Searching Hint

### KEEP CONDENSERS CLEAN

IT is not always realised how much trouble can be caused in the sensitive set such as is used for long-distance reception by dirty variable condensers. Since condensers are mounted, usually, either at the back of the panel or upon the baseboard, so that their vanes are vertical, dust is bound to make its way between them, for no cabinet is completely dust-proof, and the air of any living-room is always laden with small particles. This dust contains a large proportion of matter of a strongly hygroscopic nature, matter, that is, which absorbs moisture very readily. Having settled down between the condenser vanes, the deposit soon becomes slightly damp, and so is changed into, at any rate a partial, conductor of electricity. It is clearly of little use to employ condensers with one set of vanes most carefully insulated from the other and then to allow what may amount almost to a short-circuit, from a high-frequency point of view, to exist between them owing to the accumulation of dust. Careful measurements made on the same coil, tuned first by a clean condenser and then by one with dusty vanes, show a very considerable decrease in efficiency in the latter case, the tuning being much flatter and the circuit as a whole being far

### WAVELENGTH TABLE CHANGES.

M.	Kc.	
1765	170	.. Paris (Radio Paris).
357	840	.. Falun (Sweden).
355	845	.. Graz (Austria).
303.6	988	.. Königsberg (Germany).
297.9	1007	.. Hanover (Germany).
278	1077	.. Trollhättan (Sweden).
267	1122	.. Lille (P.T.T.).
		.. Gleiwitz (Germany), 10 kw.
<b>ADDITION.</b>		
291	1030	.. Liège (Belgium).

less sensitive. Nor must it be forgotten that dust between condenser vanes is a fruitful source of noisiness when the set is in a sensitive condition. Its effects are particularly marked in the short-wave receiver.

If variable condensers are attended to regularly there is no great difficulty about keeping them reasonably clean. Should the household possess a vacuum cleaner, the best of all methods of keeping the condensers in condition is available. In default of this, a bicycle pump used with care is satisfactory. A feather or a piece of thin silk may be worked between the vanes. A pipe cleaner is not a good thing to use for the job. If condensers have been neglected for a long time, the only way of getting them really clean again is often to take them to pieces and to polish each vane separately. The best means of keeping the condensers and other parts of the wireless set free from dust is to make a point of covering the set, after use, with a piece of American cloth or some other dust-proof material.

# The "Plan de Genève"

DURING the year 1925 it was realised that the rapid increase in the number of broadcasting stations in Europe would, if it continued unchecked and uncoordinated, lead to chaos and the impossibility of any one station being uninterfered with, even at close range. The broadcasting authorities of several countries met, therefore, in London, at the invitation of the B.B.C., and the Union Internationale de Radiophonie was formed to deal with this and other problems which were arising.

The Plan de Genève is a plan for the repartition of waves between 1,500 and 500 kilohertz\* (200 to 600 metres) amongst the European States for their broadcasting stations. This plan was drawn up by the Technical Committee of the Union Internationale de Radiophonie, and was based on certain fundamental facts and the results of a series of experiments which showed that, in general, in order to avoid mutual heterodyne interference between two stations, a minimum separation of 10 kilohertz between their fundamental carrier wave frequencies was essential. It will be seen that this allowed a maximum of 101 separate channels between 1,500 and 500 kilohertz. Actually, only 99 channels were available, due to the limit imposed by shipping and coast stations using 600 metres. As there was a considerably greater number of broadcasting stations than 99 to be accommodated, it was decided to allot 83 waves exclusively for the use of the most important 83 stations, while the remaining stations were distributed over the remaining 16 waves—designated "common waves." The allocation of the 83 exclusive waves to various countries was made from a formula taking into account their population, their surface area and an economic factor.

The resulting plan was put into operation on November 14, 1926, and with but a few minor alterations in detail, it is still in use, as shown in the chart on the next page of this issue of *World-Radio*. Changing conditions and technique, and the development of broadcasting in countries where previously it was almost unknown, have rendered some further changes desirable, but the basic principles of the plan remain sound. At its recent meetings at Lausanne, the U.I.R. decided to consider such detailed alterations at a subsequent meeting, but reaffirmed its adherence to the principles and base of the plan as the only means whereby mutual interference could be avoided among broadcasting stations in Europe.

The chart shows the frequency measurements of the majority of European broadcasting stations using the medium wave band of 1500/500 kilohertz (200/600 metres) for the month of May. This chart has been reproduced from the official chart of the Brussels Frequency Checking Station of the Union Internationale de Radiophonie, and it is hoped to give in *World-Radio*, in the third week of each month, a similar reproduction recording the measured frequencies for the previous month. This chart is complementary to the frequency list, and is of particular interest as a graphical record of the working of the Plan de Genève. The weekly frequency list is based on the latest information available at the moment of going to press, and the reliability of any one measurement given therein can now be judged by the reader from the frequency history of the station as shown in the chart. The factor which, in the end, determines the accuracy with which a station's frequency can be ascertained from the charts is limited by the accuracy to which the chart can be read. Unfortunately the limitations of space imposed in the reproduction of the charts in *World-Radio* reduce the overall accuracy very considerably to the order

of one part in a thousand, whereas the apparatus used permits of the actual measurement of frequencies to the order of one part in ten thousand.

Before examining the methods which are adopted to secure such an accuracy in the practical measurement at a distance of the fundamental carrier wave frequencies of broadcasting stations, a few notes on the chart itself will be of interest.

Firstly, the chart represents the "Plan de Genève," and shows the frequencies (wavelengths) in numerical order, together with the stations to which they have been allotted. The actual measured frequencies of stations are indicated by small circles, and if a station has remained exactly in the allotted place during the whole month, the line joining up these circles will, of course, coincide with the 10 kilohertz separation lines. Variations in frequency are immediately shown by deviations from these horizontal lines. The common wave stations cannot in all cases be measured, but where measurements have been possible they are shown, and the small circles are marked with a letter to indicate to which station they refer.

Secondly, the chart will show that the plan has been a success at least in about 80 per cent. of cases. The first necessity for complete success is for all broadcasting transmitters to attain a stability of carrier wave frequency. International agreement alone will not keep stations in their allotted places. Therefore, the Technical Committee issued a memorandum on technical conditions to be fulfilled by broadcasting transmitters. Secondly, it designed, manufactured, and supplied a special type of wavemeter—one to each broadcast transmitter—each wavemeter being adjusted for a narrow band of frequencies on either side of the exclusive or common frequency allocated to the station. Thirdly, it established a "Checking Post" at Brussels, equipped with receivers and measuring apparatus for determining accurately the frequencies on which stations actually work.

It is of interest to note the reasons for the failure of the remaining 20 per cent. of stations to keep to the Plan de Genève. Unfortunately, there are still some stations in Europe whose technical equipment leaves much to be desired, but it is hoped that it is only a matter of time before these technical defects will be remedied. Heterodyne interference is mutual, and as ideas of real programme service become more and more adopted, such heterodyning of the local station will not be tolerated by the listener. Some broadcasters in Europe have not joined the International Union and, therefore, do not conform to the Plan de Genève—while others who originally accepted the Plan have not found it possible to adhere to it. In one or two countries, broadcasting was either relatively undeveloped or practically non-existent at the time the Plan was made and, therefore, the exclusive frequencies allotted to such countries were those which are not so economical to use; for it will be appreciated that the attenuation of the direct wave (which is always used for local broadcasting where a service can be guaranteed) increases very rapidly with increase of frequency. Hence very much greater power is needed to obtain a given range using the higher frequencies. Such countries, therefore, have increased the wavelength instead of the power of their stations in order to get an increased range. The detailed amendments to the Plan mentioned above will, of course, take into account this factor, but it cannot be emphasised too strongly that for any plan to be a complete success, it is essential that all participants adhere rigidly to their allotted frequencies.

It is proposed to deal with the practical measurements of frequencies in a further article.

\* 1 kilohertz = 1 kilocycle per second.



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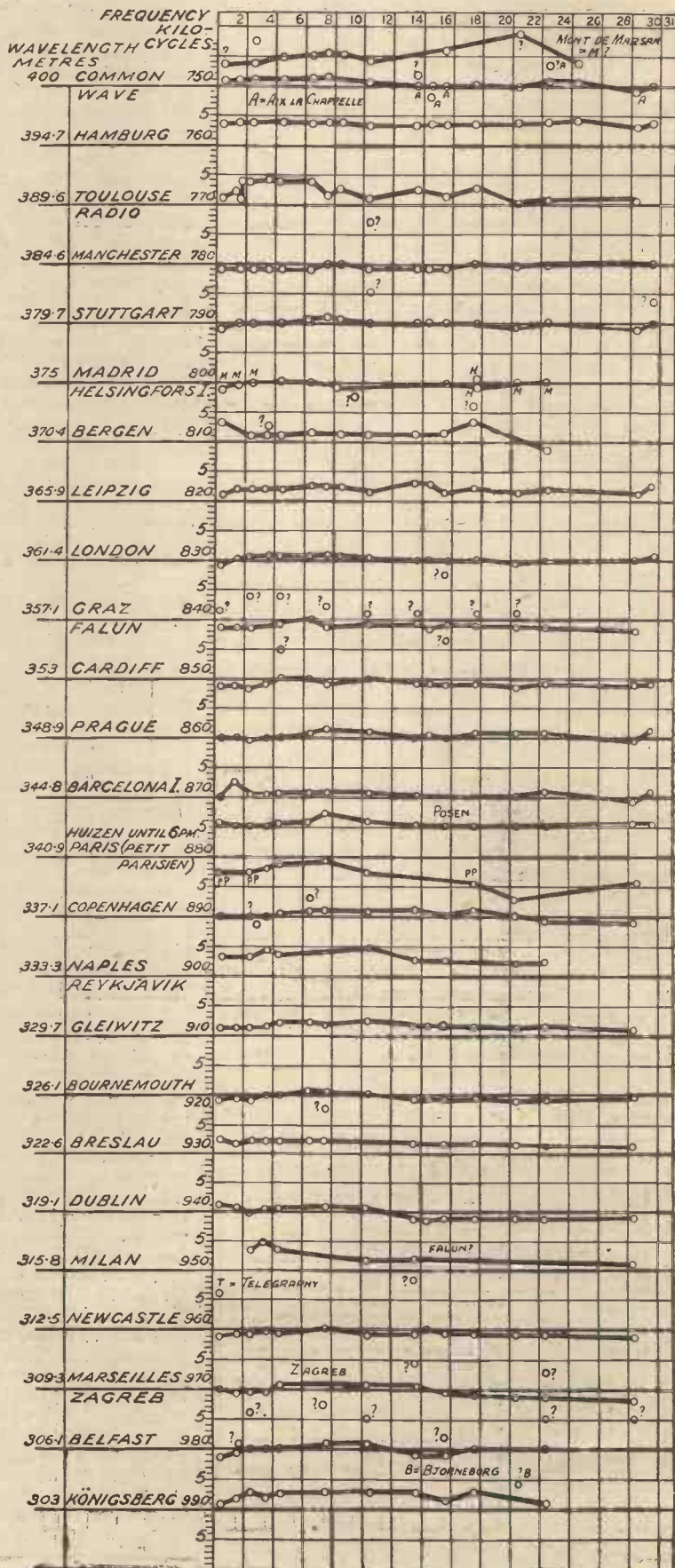
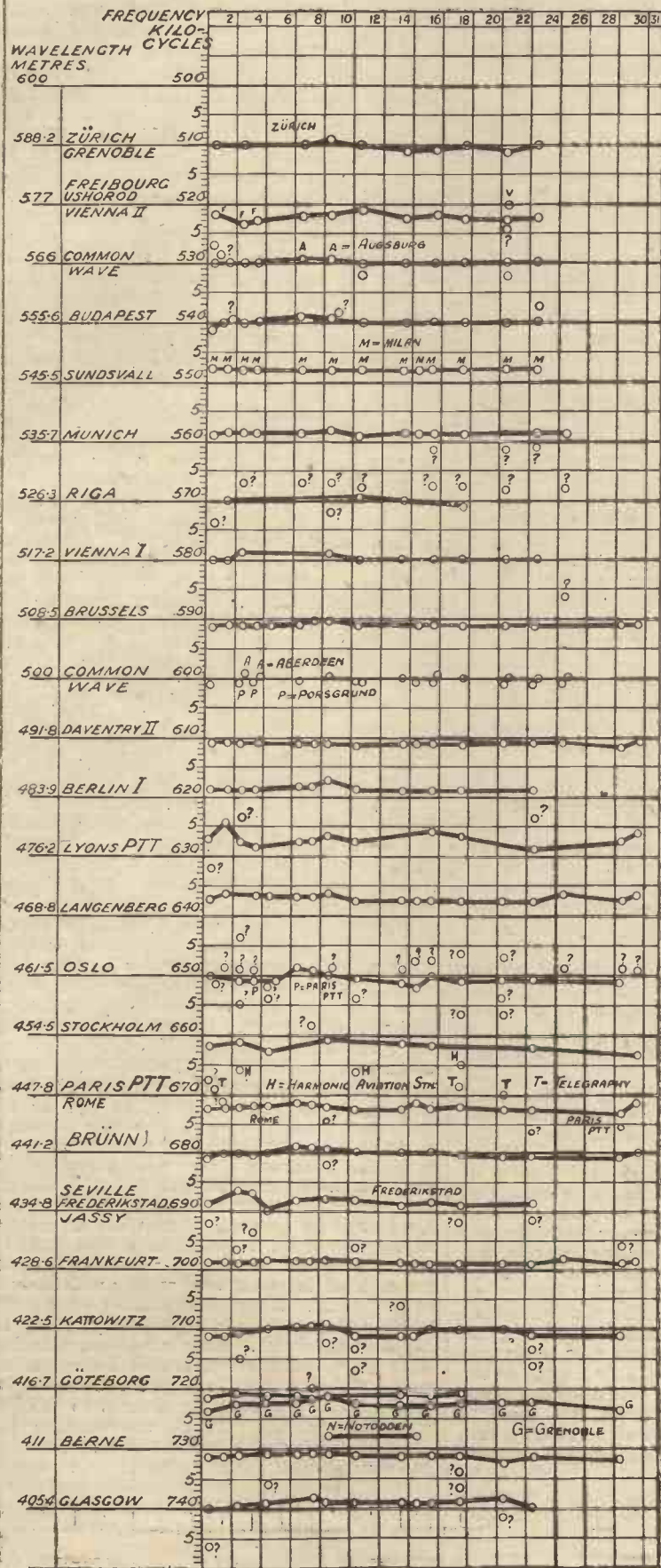
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# FREQUENCIES OF EUROPEAN MEASURED AT THE BRUSSELS TECHNICAL COMMITTEE OF THE UNION

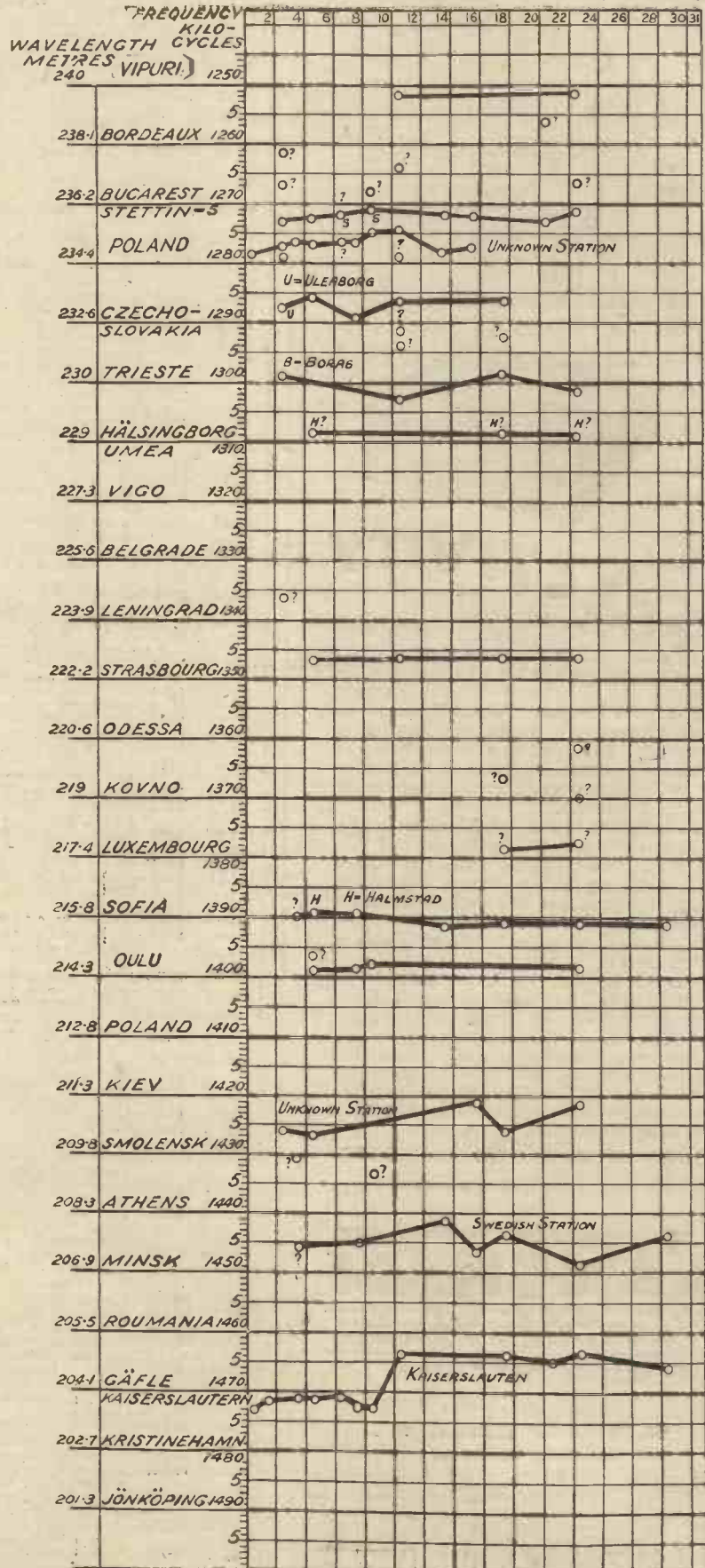
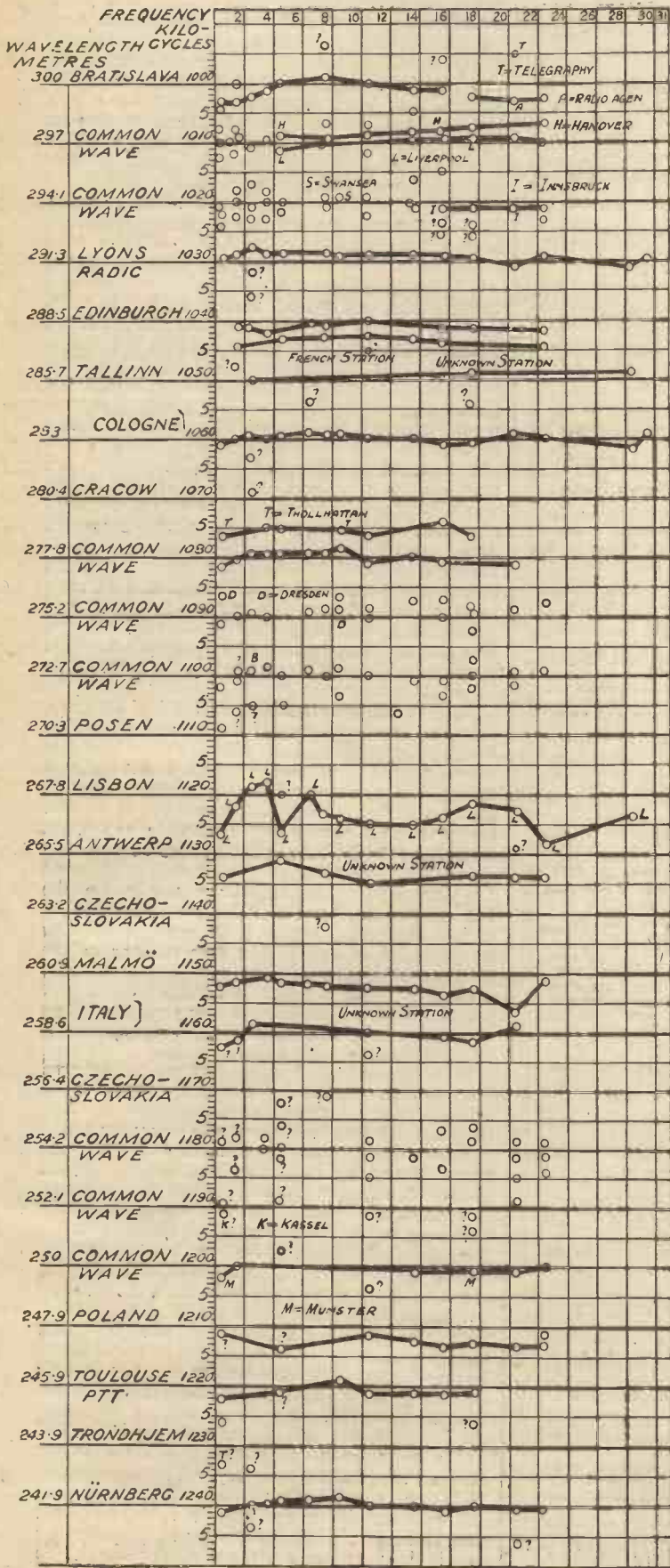




# BROADCASTING STATIONS

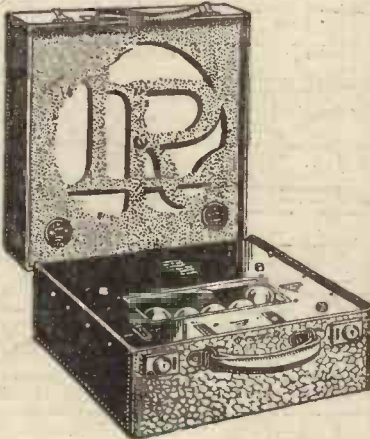
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**SHORT WAVE STATIONS**

NOTE: THE FOLLOWING TRANSMISSION HOURS ARE EXPRESSED IN BRITISH SUMMER TIME.

M.	Kc.	SUMMER TIME.
85	3529	Zürich (Radio Club) EH0XD
*84.25	3560	Copenhagen (7RL). MON., 11.30 p.m. - 1 a.m.
80	3750	Nogent-sur-Seine (F8AV). 0.4 kw.
70	4285	Springfield (Mass.) WBZ.
70	4285	Vienna (OHK2). (Transmits on SUN. for 15 minutes after each hour from 6 p.m. till 1 a.m.)
67.65	4434	Döberitz (AFK) 5 kw. MON., WED., and FRI., 11 a.m. to 12 noon and 7 to 8 p.m.
66.04	4542	Los Angeles (California) 6XAL from 12 midnight. 0.5 kw.
68.04	4542	Cleveland (Ohio) 8XF, 0.5 kw.
65.4	4587	Newark (N.J.) 2XAQ, 0.05 kw.
65.18	4602	Newark (New Jersey), 0.5 kw. 2XBA (S.W. of WAAM). Transmits between 12 midnight and 5 a.m. TUESDAYS, THURSDAYS and SATURDAYS.
65.18	4602	San Diego (KFBC).
64	4687	Richmond Hill (New York) WABC, 0.5 kw.
63	4762	Pittsburgh East (Westinghouse Electric) KDKA (U.S.A.).
61.06	4913	Council Bluffs (Iowa) 9XU. 0.5 kw.
61	4918	Paris (Radio LL) GC.
59.96	5003	Bound Brook (N.J.) 3XL, 30 kw.
58.5	5218	New York City (2XE). Relays WABC.
56.7	5291	Nauen (AG) occasionally after 7 p.m.
54.02	5553	Columbus (Ohio) XJ.
54.02	5553	Coney Island (N.Y.) 2XBH, 0.15 kw.
54	5555	Brooklyn (N.Y.) WCGV, from 11 p.m.
53.54	5600	Portland (Oregon) 7XAO, 0.1 kw.
52.05	5763	Harrison (Ohio) 8XAL, 0.5 kw.
52.02	5767	Cincinnati (Ohio) WLW. Relays medium wave transmissions from 11.50 p.m. Except SUN.
51	5882	Casablanca. AIN. Weather reports, 9.30 a.m. and 8.30 p.m.
50	6000	Karlsborg (Sweden).
50	6000	Russia, RFN. TUES., THURS. and SAT., 1 and 2 p.m.
45	6666	Rome (Italy) 1AX. Broadcasts occasionally.
44.4	6696	Vienna, 0.24 kw.
43	6976	Pittsburgh East (Westinghouse Electric) KDKA.
42.80	7009	Constantine (Tunis)—8 KR. SAT., 10 p.m. to midnight.
40.20	7463	Lyon (Rhône) YR. Daily except SUN, from 4.30 to 5.30 p.m.
38	7894	Agen.
37.65	7968	Döberitz (AFK)
37.5	8000	Ibarakiken (Japan) JHBB.
37.01	8105	New York (WJD).
37	8108	Radio Vitus. WED., FRI. and SUN., 9 p.m. to 10 p.m.
37	8108	Vienna (EATH). MON. and THURS., 10.30 p.m.-midnight.
33	9090	San Francisco (Cal.) 6XAR, from 12 midnight.
32.9	9118	Perth (W.A.) 6AG. 11.30 a.m. and 4 p.m.
32.5	9231	Sydney (2BL).
32.5	9231	Copenhagen 7MK. TUES. and THURS.
32.5	9231	Paris, Eiffel Tower. FL. Time Signal 2.58 a.m. and 8.58 p.m.
32	9375	Zürich (Radio Club) EH0XD.
32	9375	Melbourne (3LO). SUNDAYS, 7.30 p.m. to 9.30 p.m.
32	9375	Johannesburg (JB).
32	9375	Berne (Switzerland) EH9cC.
32	9375	Detroit (Mich.), 8XAO, 0.75 kw.
31.93	9395	Bandoeng, Java (Radio Service) ANE. TUES. and THURS., 5.40 p.m. to 7.40 p.m.
31.25	9600	Bergen.
31.5	9523	Helsingfors, 0.3 kw.
31.4	9554	Hilversum, Holland, PCJJ. TUES. and THURS., 5-9 p.m. FRI., 12 mdnt.-3 a.m. SAT., 4-7 p.m.
31.4	9554	Schenectady (General Electric Co.), N.Y., 2XAF, 10 kw. (Aer.). SUN., WED. and FRI., no transmission. MON., 11 p.m. to 4 a.m. TUES., 11 p.m. to 6 a.m. THURS., 11 p.m. to 5.30 a.m. SAT., 11.25 p.m. to 5 a.m. Relays WGY.
30.91	9706	New York (2XAL). TUES., 12 midnight to 5 a.m. WED., 12 midnight to 2 a.m. FRI., 12 midnight to 4 a.m. SAT., 12 midnight to 3 a.m., 0.5 kw.
30.7	9772	Madrid (EAM).
30	10,000	Bergen (Norway) LGN.
28.5	10,528	Sydney (2FC).
27	11,111	Pittsburgh (8XK). MON. and THURS., 7 p.m. to 9 p.m., 40 kw.
26.92	11,144	New York (2XAG).
24	12,500	New York (2XAB).
24	12,500	Chelmsford (5SW, 15 kw. Aer.). DAILY (except SAT. and SUN.) from 12.30-1.30 p.m. and from 7-11 p.m.
22.99	13,049	Houlton (Maine) 2XAA, after 11 p.m.
22.6	13,158	Fort Wayne (Indiana) WOWO, 1 kw. after 11 p.m.
22.2	13,392	Vienna, 0.24 kw.
22.1	13,574	Richmond Hill (N.Y.) 2XE (S.W. of WABC), after 11 p.m.
21.96	13,661	Schenectady (General Electric Co.), 2XAD. SUN., 11.30 p.m. to 4 a.m. MON., 7 p.m. to 9 p.m. WED., 11 p.m. to 4 a.m. THURS., 7 p.m. to 9 p.m. FRI., 11 p.m. to 4 a.m. Relays WGY WED. and FRI.
18	16,666	Kootwijk (Holland) PCLL. WED., 3 to 5 p.m. and occasionally on MON. & FRI.
17.2	17,441	Nauen (AGC).
17	17,647	Bandoeng, Java (Radio-Malabar) ANH, 30 kw. SAT., 1.40 to 3.40 p.m.
16.02	18,726	Rocky Point (Long Island) 2XG. MON. and FRI., after 5 p.m.
15.93	18,832	Bandoeng, Java (Radio Service) ANE. MON., 1.40 to 3.40 p.m.
15.5	19,354	Nancy (France).
*84.25	3560	Copenhagen (7RL), FRI., 11.0 p.m.-1.0 a.m. Picture Transmission.

**Last Week's Log**

By "THE SEARCHER"

THE tale that I have to tell is, I am afraid, not too cheerful, for the extraordinary demonstration of atmospheric interference that we have been subjected to this year still continues on almost all wavelengths. Hardly any evening has been entirely free from interference, though there have been patches, on certain nights, when reception has been comparatively good. At my station, work on the higher wavelengths, that is, above 1,000 metres, has been impossible unless one was prepared (as I am not) to withstand a constant bombardment of crackles and bangs. The medium band, if not very good, was, at any rate, a great deal better; at times, when atmospherics have permitted, several really first-rate transmissions have been received, both strength and quality being all that one could desire.

To my very great surprise, I found Berne, towards the end of the week, coming in with something very like his old power and purity. I had heard hardly anything of him for weeks past; in fact, so hopeless did reception of the Swiss station become that I gave up trying for him. One night, however, in passing upwards from Hamburg to Kattowitz I caught the voice of Berne's lady announcer and promptly made the necessary adjustments to tune in the transmission at its best. To my surprise, Berne was a strong telephone signal with three valves and very little reaction, and, when a second note-magnifier was thrown into circuit, he came through at good loud-speaker strength. Both speech and music had the clearness that we used to associate with them as transmitted from this station, and, except for fading—so slight that it was hardly noticeable—the programme was heard to perfection, for there was no heterodyne or other interference.

Fading, though, has been rather bad at times, affecting many stations in all parts of the wave-band. Langenberg has suffered rather badly at times, whilst Toulouse, though occasionally a strong and good signal, has generally faded so badly that his signals were roaring in at one moment and completely inaudible the next. Even late at night, fading has not been completely absent on certain transmissions. Between 11 p.m. and midnight, for example, on the Saturday night, Barcelona EAJI was affected by it to a surprising extent. Budapest must now be regarded as one of the star stations of the medium band, though I have seldom found him a good daylight signal. After dusk he is well worth trying for on almost any evening. Best of them all, at my station, is Cologne, who is most reliable, seeming never to vary.

The long-distance enthusiast would do well just now to confine himself during afternoons and early evenings to his short-wave set, using the medium and long-wave receiver after about 9 p.m. Or, if atmospherics are bad upon the upper bands, he may keep the short-wave set in use during the greater part of the evening. When static interference is troublesome on wavelengths of 200 metres upwards, it is generally to be found down to at least 50 metres. Below that, however, one may find a great improvement, and on wavelengths below 20 metres atmospherics are the exception rather than the rule. KDKA and the 67-metre transmission from Döberitz (AFK) have suffered badly—in fact, they have hardly ever been worth bothering about, though on one evening AFK was so powerful that he positively drowned the interference. PCJJ was pretty good at the end of the previous week, but, of late, fading has affected him rather seriously. The strength of 3LO on the Sunday was respectable, but atmospherics interfered greatly with reception. One can find 2XAD if one tries for him on any occasion when he is transmitting, though his strength is very poor just now for some reason.

(Continued on page 881, col. 2.)



# Technical Difficulties

By "SPARKS"

## High Frequency Amplification with Screened Grid Valve

"Would there be any advantage in substituting a screened grid valve for the H.F. amplifying valve in the B.B.C. Exhibition Set as described on page 621 of WORLD-RADIO, dated December 9, 1927? If so, how should this be done?"

THIS question has been received from several correspondents. Provided that the listener is situated in a position where he receives ample field strength from his local broadcasting station, there is no object in using a screened grid valve in place of the H.F. amplifier normally found in this set. On the other hand, in a few isolated parts of Great Britain where the strength of signals provided from the broadcasting station, owing to the limitations of the B.B.C.'s present scheme of distribution, cannot be of a high order, there may be a distinct advantage in making this alteration to the set. For instance, one correspondent writes from an address in Westmorland. Undoubtedly he would find it an advantage. Another listener at Southampton should not find it necessary for the reception of Bournemouth, but may find it so for the reception of 5GB, particularly if he is troubled by interference from ship stations. There need be no fear that in making this change there will be a loss of quality, and there will certainly be a considerable gain in selectivity and sensitivity. To give precise constructional details of the alterations necessary would be beyond the scope of these articles, as was pointed out at their beginning, but the following general hints may be useful. It will be advisable to dispense with the reaction coil shown in the diagram on page 621 of *World-Radio*, of December 9, 1927. The outer or screened grid should be given a potential of about 80 volts positive and should be connected through a condenser having a capacity of .2 mfd. to the screen, which must be constructed to surround the whole of the first stage. The screen must be earthed. It will probably be found necessary to replace the anode choke of the first valve by a fieldless coil having the same total inductance. The voltage applied to the anode of the screened valve must be in the region of 120 volts. The high potential side of the choke should be connected to the copper screen through a condenser of .2 mfd. It will probably be found necessary to insert a condenser of the same value across the L.T. supply. In laying out the apparatus for these alterations the greatest care should be taken to avoid the possibility of interaction between the aerial coil and the anode choke coil of the screened valve. Additional precautions which may be taken against unwanted oscillation are the insertion of stabilising resistance in the H.T. feed both to the screen grid and to the anode of the screened valve. The first may be of the order of 20,000 ohms and the other, 50,000.

One correspondent asks what is the ratio of H.F. amplification of selectivity with screened grid valves. This is rather an impossible question to answer because it entirely depends on the efficiency of the circuits, tuning coils, condensers, etc., which are used, also upon the steps which may have to be taken to avoid unwanted oscillation. Space forbids any further remarks on this matter, but an opportunity will be found to allude to it in the future. One may say, however, that the amplification which may be obtained from a screened valve is so high that it is seldom possible to use it to the full.

### Earth System.

"My earth from the set consists of six wires leading from one main lead covered cable to its different points buried 12 in. in the ground. Would I obtain better results by joining together all the points where the wires are earthed?"

No, not necessarily so. From the sketch which is attached to the correspondent's letter

it is evident that he is employing what is known as a buried counterpoise. It may or may not be an advantage to join all the points of earthing together, but it is not likely to be worth the expense and trouble involved. What, however, would be a very distinct improvement is that each of the six leads and the lead-covered cable to which they are joined should themselves be earthed and run underground from the nearest point possible to the set out to the various points to which they are now connected to earth. If it is possible to arrange this, it will probably be found to be an improvement. Buried counterpoise is one of the most efficient forms of earth, provided that proper contact with the earth itself is ensured throughout the whole length of the system. It is particularly effective because it gives a wide earth area under the aerial.

## Power Ratings of Stations

On the recommendation of its Technical Committee, the Conseil of the Union Internationale de Radiophonie has adopted as the standard of expressing the powers of transmitting stations that of the power to the aerial when the carrier wave is unmodulated—such power being expressed in kilowatts. Among the reasons given are that such a standard is officially and universally adopted for all types of wireless stations, and is used officially by Governments and by manufacturers of wireless apparatus. It also enables the power of a station to be indicated by a unit which is independent of the type of modulating system used by that station, and facilitates a comparison between the true ratings of several stations, which cannot be done when the station is rated according to the power applied to the anode of the oscillating valves.

(Continued from Page 880.)

or other: very probably experiments of some kind are in progress with the transmitting plant.

The Bandoeng station, ANH, did not appear to be at work on the Saturday at the end of the previous week, but he was picked up on the following Tuesday sending out a musical programme. Has he made a change in his days? A powerful signal on the Monday was the Italian IRG in the neighbourhood of 36 metres. This is the station of the *Radio-giornale* at Lake Como. The modulation, however, was not too good, there being an immensely strong carrier with telephony on the weak side when the signal had been tuned in properly with the set below the point of oscillation. ANH's modulation, too, has not been quite up to the mark.

(Continued from col. 3.)

Firefighter (St. Yarmouth): Cannot trace; not Nottingham, you must have mistaken call-sign.

One Valve (USSR) Вы слышали WJZ.

NOTE.—Those who wish to take advantage of our free service by means of these columns must give a NOM DE PLUME, in addition to their own name and address. PROPRIETARY TRADE NAMES MUST NOT BE USED AS NOMS DE PLUME.

## WORLD-RADIO (No. 151)

For replies to questions concerning the identity of stations heard, this coupon should be cut out and forwarded, together with particulars, written on a separate sheet of paper, to Editor, *World-Radio*, Savoy Hill, London, W.C.

Particulars should include: Date and time, approximate frequency (or wavelength), call (if heard), fading or not, signal strength, and details of programme. N.B.—Each inquiry must be accompanied by a separate coupon.

## The Alternative Postal Service.

Whilst retaining in *World-Radio* the usual free published service of "Which Station Was That?" we have instituted a paid postal service, which enables a reply to be posted within forty-eight hours of receipt of details and a stamped addressed envelope. Each enquiry must be accompanied by a coupon and 6d. in stamps or P.O.

# Which Station Was That?

## ANSWERS TO CORRESPONDENTS

Cranfield (Haslemere): Königswusterhausen has been testing recently on 1800 odd metres. Reward (N.W. 5): Regret, but we cannot trace this call sign in our list. The lowest WL. used by Doberitz is 37.65 m. Searcher (Beckenham): Yes, Hulzen (Holland); Epilogue. Triovalve (Acomb): You appear to have picked up a harmonic of Eiffel Tower, Paris. Dublety (Glasgow): Budapest. You heard the new automatic interval signal. Tyke (Skipton): (1) possibly (from details) Scheveningen-Haven (Holland) commercial report; (2 and 3) your condenser readings puzzle us; are these stations on wavelengths above or below 5XX? School Boy (Chester): Thank you very much for this information, and the cutting you have sent us. Skylark (Uppingham): Hulzen on 340.9 m. Gramophone records of the Wembley Tattoo. J. Campbell (Derry): 3LO (Melbourne) received direct. Ether Searcher 2: (1) See *World-Radio* issue June 1, page 808, (2) we regret, but it is impossible to trace this test; your details are much too vague. Tune and Anode (Plymouth): Hulzen (Holland). Station heard in the background was Radio Paris. H. F. Smith (Bristol): Surely this is Radio Paris. Log (Cambs.): Yes, this was Radio Barcelona; this station was advertised to close down at 11 p.m. approx. Short Wave Master (Lanark): Yes, 3LO (Melbourne) received direct. W. G. L. (Witham): Hulzen (Holland) on 340.9 m. at that time. Gramophone records of the Wembley Tattoo. Gandria (Manchester): Yes, your condenser readings would certainly point to Kalundborg, which was relaying a concert from Copenhagen, advertised to begin at 3 p.m., but quite possibly the time was altered. Vibrio Rugula (Stourport): Your estimates of WL. are wrong; (1) details tally with the Munich programme: news, weather, forthcoming programmes, etc., followed by relay of concert from the *Café Reichsadler*; (2) was undoubtedly from Cologne (chimes from the studio); we are sure that you heard (a) Nürnberg, relaying Munich, and (b) Münster relaying Cologne. Walbro (Barnsley): A test by Kalundborg (Denmark), possibly gramophone records. G. H. S. (Thorpe Bay): Radio Paris; news, followed by ten minutes of music. Boathouse (Cambridge): Hulzen (Holland) on 340.9 m., gramophone records of the Wembley Tattoo. Fife (Newcastle-on-Tyne): Stuttgart, relaying WGY (Schneectady). Branset (Manchester): (1) no, Hulzen (Holland); your estimate of WL. is apparently wrong; (2) surely this is Scheveningen-Haven (Stock Exchange quotations, market prices, etc.); (3) yes, Norddeich (weather report); (4) Moscow Comintern (RDW). Superbus (Clones): We cannot estimate WL. from your condenser readings, but details would tally with Kalundborg, which was relaying a church service from Copenhagen at that time. T. S. F. (Paignton): Budapest (the new automatic interval signal); announcements are made in Magyar, French and German. W. J. H. (Coventry): No, this was Hulzen (340.9 m.), gramophone records of the Wembley Tattoo. 3 VHV.: (45) Yes, fog beacons. GGG, Round Island Light-house Scilly Isles; GGM, Bar Lightship at entrance of Mersey; (46) IDO (not 1DO) San Paulo (Rome), on 33-37.5 m. Milan, 1MI (pronounced: Uno emmee). Interested (Kendal): We regret, but your details are too vague to trace; items of programmes broadcast at that late hour are seldom advertised in detail. A. S. H. (Chiswick): Yes, Budapest is the only station which might tally with your details on about that WL. A relay of Gipsy Music from the Hotel Britannia. Safety (Baxhill): Your details tally with the Kovno programme. Scheveningen-Haven (Holland) transmits commercial reports only. Roseville (Leeds): Hulzen, at that time on 340.9 m. Yes, gramophone records of the Wembley Tattoo. D. R. W. (Llaugadock): We regret, but it is impossible to trace without some estimate of WL. Cologne gives chimes from the studio (also relayed by Langenberg, Aachen and Münster), but we cannot say which, if any, of these stations you heard, for reason given above. W. L. A. C. (Isle of Wight): Frankfurt-on-Main; concert of the works of Ernst Arnold. E. C. C. (Putney): Kalundborg relaying Copenhagen; possibly a test. H. H. (Campden Hill): Radio Paris (now working on about 1,765 m.). News followed by ten minutes of music. S. G. D. (Hall Green): You give no estimate of WL. but if you were using the high wave coils, Moscow Comintern (RDW). W. Gotts (Hull): Hulzen (Holland) on 340.9 metres at that time. Gramophone records of the Wembley Tattoo. Oneash (Rochdale): Are you sure of the date? The song of the nightingale was broadcast from B.B.C. stations on May 12 and 29; regret, but cannot trace in any programme at that time. Joan (Coseley): (1) see reply to Fruh (Kettering), (2) AFK (Doberitz) on 67.65 and 37.65 m., (3) yes, an amateur transmitter at Copenhagen. GAF advertised as amateur at Eastbourne, (4) yes, 2XAF short wave transmitter of WGY (Schneectady), (5) 2XE (68.6 m.) relay of WABO (Richmond, U.S.A.), (6) an amateur transmitter at Brussels, but regret, cannot trace call sign, (7) regret, cannot trace as details are too vague. W. Crane (Sandiacre): Hulzen at that time on 340.9 m. gramophone records of the Wembley Tattoo. Mains (Gatley): (1) your details tally with Milan (Vigentino), (2) Vienna (see programme in *World-Radio*). G. Campbell (Inverness): Yes, this was Radio Paris (now working on about 1,765 m.); concert of piano, orchestral, and vocal music. Mikado (Birmingham): Your details are very vague, but possibly Norddeich (weather report). Fruh (Kettering): We have received reports of this transmission from several readers, and are keeping your query, with others, until we have fuller information of this broadcast. Your answer will be published in these columns in next week's issue of *World-Radio*. Knowall (Isleworth): (1) Berne (a lady announcer), orchestral concert from the Kursaal, (2) your estimate of WL. is much too vague; many of the German stations were relaying concerts from Restaurants or Cafes at that time, but the details are not published in the programmes. H. H. Le Couteur (County Galway): You give no estimate of WL., or say whether this was in the English or a foreign language, if the latter, possibly PCJJ (Hilversum). Enthusiastic (Eilstone): We regret, but we cannot trace morse transmissions. F. H. F. (Bucklands): Warsaw; a light orchestral concert under the direction of Z. Gorzyński. Apparently the time of the programme was slightly altered. Choke (Surrey): (1) regret, cannot trace, (2) Hannover, relaying cabaret from Hamburg. Low Wave (Totteridge): Kaiserslautern relaying Munich. Orchestral concert, followed by news, and a relay of a concert of gramophone records from Nürnberg; not an outside broadcast. L. O. B. (Southsea): Your details are too vague, regret, cannot trace. Could you send fuller details? Freystropian (South Wales): French station. See paragraph (under France) in *World-Radio*, page 808, issue June 1. Mabs (Gosport): Your details are too vague, regret we cannot trace.

(Continued at end of col. 2.)



# Continental Programme Events

**Sunday, June 17.**

- 5 p.m. Wilno.—“Festival of Song.”
- 7 „ Stockholm.—Open-air Concert.
- 7.25 „ Berlin, Hamburg, Stuttgart.—Beethoven's “Solemn Mass.”
- 7.30 „ Vienna.—Schubert songs, relayed from the composer's birth-place.
- 8 „ Breslau.—“Tales of Hoffmann.”
- 8.10 „ Langenberg.—“The Cousin from Nowhere.”
- 8.15 „ Stockholm.—Folk tunes.
- 9 „ Milan.—“La Sonnambula.”
- 9.30 „ Hamburg.—“Everyman.”
- 10.30 „ Munich.—Mexican National Orchestra.

- 7.50 p.m. Posen.—“Halka.”
- 8 „ Stuttgart.—“Demetrius” (Schiller).
- 8.15 „ Breslau.—“Where the Lark sings” (Lehár).
- 8.15 „ Stockholm.—Folk tunes.



[By Courtesy of the Austrian Federal Railways.]  
The Courtyard of Schubert's Birthplace.

**Monday, June 18.**

- 7.25 p.m. Breslau, Hamburg, Königsberg.—“Judas Maccabaeus.”
- 8.15 „ Stockholm.—Folk tunes.
- 8.30 „ Vienna.—International concert, relayed to Berlin, Posen, Prague and Warsaw.
- 8.50 „ Naples.—“Ernani.”
- 9.30 „ Copenhagen.—Orchestral concert.

- 8.45 p.m. Radio-Paris.—“Boris Godounov.”
- 9.15 „ Rome.—“Andrea Chenier.”
- 9.45 „ Copenhagen.—Danish Chamber Music.

**Wednesday, June 20.**

- 6.55 p.m. Prague.—“Marriage of Figaro.”
- 8.15 „ Brussels.—“The Damnation of Faust.”
- 8.15 „ Stockholm.—Folk tunes.
- 8.30 „ Berlin.—International songs.
- 8.30 „ Stamboul.—Concert.

**Tuesday, June 19.**

- 7.30 p.m. Langenberg.—“The Barber of Seville.”

- 8.30 p.m. Toulouse.—Selection from “Lakmé.”
- 9.30 „ Königsberg.—Finnish music.
- 10 „ Stuttgart.—German prose and poetry of the last hundred years.

**Thursday, June 21.**

- 7.30 p.m. Prague.—“Les Clochés de Cornetville.”
- 7.35 „ Munich.—“Madame Butterfly.”
- 8.15 „ Stockholm.—Folk tunes.
- 8.15 „ Stuttgart.—“Le Roi l'a dit.”
- 8.45 „ Milan.—“La Sonnambula.”
- 9.30 „ Copenhagen.—Handel concert.

**Friday, June 22.**

- 7 p.m. Brunn.—“I Pagliacci” and “Cavalleria Rusticana.”
- 8 „ Langenberg.—“La Bohème.”
- 8 „ Munich.—Symphony concert.
- 8.15 „ Stockholm.—Folk tunes.
- 8.50 „ Naples.—“Manon.”
- 10 „ Budapest.—Military concert.

**Saturday, June 23.**

- 8.50 p.m. Naples.—Orchestral selections.
- 9.15 „ Rome.—“Norma.”
- 10.5 „ Barcelona.—“La Verbena de San Juan” (Nifto).
- 10.15 „ Leipzig.—Military concert.

**Opening of Linz (Austria) Station**

The new station at Linz is to be ceremoniously opened on June 24, at 11 a.m., when the Governor of Upper Austria, the Burgomaster of Linz, and representatives of Ravag, Vienna, will speak before the microphone. At noon Radio Wien will relay the playing of the organ used by the Upper Austrian composer, Bruckner, in the Foundation Church of St. Florian, and in the afternoon relay the Linz Concert of the Philharmoniker, which will have a specially Austrian “note.”

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# DAVENTRY PROGRAMME

(June 17-23)  
(25 kw.)

(5 XX)  
(1604'3 metres : 187 kc.)

## SUNDAY

- 9.50 a.m.—York Minster Civic and Military Service, relayed from York Minster: The Massed Bands of the 14-20th Hussars, the 1st Battalion the Green Howards, and the 1st Battalion the Border Regiment will play: Slow Movement from "The New World" Symphony (Dvorak), Overture to "Rienzi" (Wagner).
- 10.15 a.m.—Service: Address by the Archbishop of York.
- 11.15 a.m.—Time Signal (Greenwich), Weather Forecast.
- 13.30 p.m.—A Military Band Concert: Alice Moxon (Soprano), Foster Richardson (Bass), the Wireless Military Band conducted by B. Walton O'Donnell.
- 5.0 p.m.—Service for Children. Relayed from St. John's Church, Westminster. Conducted by the Rev. Canon C. S. Woodward.
- 5.30 p.m.—Foundations of English Poetry—XII: "Byron."
- 5.45-6.10 p.m.—Bach Cantata: "Ah! God in mercy look from Heaven." Relayed from the Church of Messiah, Birmingham. Gladys Palmer (Contralto), Steuart Wilson (Tenor), Arthur Cranmer (Bass), G. D. Cunningham (Organ Continuo), and the Birmingham Studio Chorus and Orchestra conducted by Joseph Lewis.
- 8.0 p.m.—A Religious Service relayed from St. George's Chapel, Windsor. Address by the Very Rev. A. V. Baillie, Dean of Windsor. (Organist, Sir Walford Davies).
- 8.45 p.m.—The Week's Good Cause: Appeal on behalf of Dr. Barnardo's Homes by Mr. William McCall, Chairman of the Council.
- 8.50 p.m.—Weather Forecast, General News Bulletin, Local Announcements, Shipping Forecast.
- 9.5 p.m.—An Orchestral Concert: Keith Falkner (Baritone), the Wireless String Orchestra (Leader, S. Kneale Kelley), conducted by Julius Harrison. Orchestra: Suite for Strings (arr. Julius Harrison), Prelude, Sarabande, Caprice.
- 9.15 p.m.—Prelude—Music for Harp and Strings (Julius Harrison). (Soloist, Sidonie Goossens).
- 9.25 p.m.—Keith Falkner, and Orchestra: A Lament (Sir Thos. Wyatt), My Sweet Sweetening (Anon.), Merciless Beauty, The Escape from Love (Chaucer) (Julius Harrison).
- 9.40 p.m.—Orchestra: Tenth Concerto Grosso, in D minor (Handel), Pantomime from "Les Petits Riens" (Mozart), Mock Morris (Grainger).
- 10.5 p.m.—Keith Falkner: When the King went forth to War (Koenemann), Trottin' to the fair (Stanford), Hopeth Hornblower (Ireland).
- 10.12 p.m.—Orchestra: Introduction and Allegro (Elgar).
- 10.30 p.m.—Epilogue: "The Cradle of Truth."

## MONDAY

- 10.15 a.m.—A Short Religious Service.
- 10.30 a.m.—Time Signal (Greenwich), Weather Forecast.
- 11.0 a.m.—Gramophone Records.
- 12.0 noon.—A Ballard Concert: Sanders Warren (Baritone), Isabel Fullarton-James (Pianoforte).
- 2.30 p.m.—The B.B.C. Dance Orchestra: Personally conducted by Jack Payne.
- 2.0-2.0 p.m.—An Organ Recital, by Edgar T. Cook. Relayed from Southwark Cathedral. Guy Magrath (Violin).
- 7.0 p.m.—Miss Rhoda Power: "Boys and Girls of Other Days (Eighteenth and Nineteenth Centuries)—VII, Jack and the Smugglers."
- 7.0 p.m.—Musical Interludes.
- 7.3 p.m.—Great Stories from History and Mythology, told by Miss Rhoda Power: "Tales from the North—VII, The Death of Baldr."
- 7.20 p.m.—Musical Interlude.
- 7.30 p.m.—An Afternoon Concert: Lillian Cooper (Soprano), Issay Schlaen (Violin).
- 7.6 p.m.—Dance Music by the Savoy Orpheans.
- 7.8 p.m.—Household Talk: Mrs. Cranswick: "Fruit and Vegetable Bottling."
- 7.15 p.m.—The Children's Hour.
- 8.0 p.m.—Musical Interlude.
- 8.20 p.m.—Quarterly Bulletin by the Radio Society of Great Britain.
- 8.30 p.m.—Time Signal (Greenwich), Weather Forecast, First General News Bulletin.
- 8.45 p.m.—Musical Interlude.
- 9.0 p.m.—Mr. Desmond MacCarthy: Literary Criticism.
- 9.15 p.m.—The Foundations of Music;

- Rheinberger's Organ Sonatas. Played by Leonard Warner. From St. Botolph's, Bishopsgate. Sonata No. 2 in A flat, Op. 65.
- 7.25 p.m.—Mr. F. Norman: German Talk.
- 7.45 p.m.—The Three New Yorkers (in Harmony), Florence Oldham (Songs at the Piano).
- 8.0 p.m.—Chamber Music: George Parker (Baritone), Adila Fachiri (Violin), Frederick Wuhrer (Pianoforte).
- 9.0 p.m.—Weather Forecast, Second General News Bulletin.
- 9.15 p.m.—Sir Ronald Storrs: "Cyprus."
- 9.30 p.m.—Local Announcements, Shipping Forecast.
- 9.35 p.m.—A Recital of Owen Mase's Music, by Roger Clayton (Tenor). (The Composer at the Piano). Roger Clayton: A Welcome. There is no more to say, Blows the wind to-day, The Unchanging, Pretty Phyllis (Old French Song).
- 9.45 p.m.—Owen Mase: Prelude, Call to Prayer (from "Pagan" Suite).
- 9.50 p.m.—Roger Clayton: Scottish Songs, collected and arranged by Owen Mase: A Red, Red Rose, Ca' the Yowes, Rattlin', Roarin' Willie, Helen of Kirkcubell, The Ew-Bughts, Gently blow ye eastern breezes.
- 10.0 p.m.—"Up the River." An Aqueous Entertainment for Broadcasting, by "L. du G." Cast: Bruce Belfrage, Philip Wade, Frank Denton, Patrick Waddington, Joyce Bland, Phyllis Panting.
- 11.0 p.m.—12.0 midnight.—Dance Music.

## TUESDAY

- 10.15 a.m.—A Short Religious Service.
- 10.30 a.m.—Time Signal (Greenwich), Weather Forecast.
- 11.0 a.m.—Gramophone Records.
- 12.0 noon.—Concert. Doreen Bristol (Soprano), Eileen Wright (Violin), May Jardine (Pianoforte).
- 1.0-2.0 p.m.—Georges Boulanger and his Orchestra. From the Savoy Hotel.
- 2.30 p.m.—Sir Walford Davies: "Elementary Music—VII, The Dorian (RE) Mode."
- 3.15 p.m.—Musical Interlude.
- 3.20 p.m.—M. E. M. Stephan: Elementary French.
- 3.50 p.m.—Musical Interlude.
- 4.0 p.m.—William Hodgson's Marble Arch Pavilion Orchestra.
- 4.15 p.m.—Mr. Vernon Bartlett: "International Affairs in the Twentieth Century."
- 4.30 p.m.—Orchestra (continued).
- 5.0 p.m.—"Holidays Abroad"—Mrs. B. Tufnell: "Czecho-Slovakia."
- 5.15 p.m.—The Children's Hour.
- 6.0 p.m.—Gramophone Records.
- 6.30 p.m.—Time Signal (Greenwich), Weather Forecast, First General News Bulletin.
- 6.45 p.m.—Gramophone Records.
- 7.0 p.m.—Mr. Edward Shanks: "Contemporary Poetry."
- 7.15 p.m.—The Foundations of Music. Rheinberger's Organ Sonatas, played by Leonard Warner, from St. Botolph's, Bishopsgate. Sonata No. 2, Op. 65 (continued), Finale (Fugue), Sonata No. 3 in G, Op. 88, Pastoral.
- 7.25 p.m.—Prof. F. W. Burstall: "Engines for the Road and the Air—II, History of the Development of the Internal Combustion Engine."
- 7.45 p.m.—Julian Rose (Hebrew Comedian).
- 8.0 p.m.—Mr. J. C. Flugel: "The Psychology of Food and Dress—II, Food and the Mind."
- 8.30 p.m.—Musical Curiosities. Victor Hely-Hutchinson (Pianoforte), the Wireless Orchestra, conducted by John Ansell. Orchestra: March of the Kitchen Utensils (from "The Wasps") (Vaughan Williams).
- 8.33 p.m.—John Field (Oboe), Frederick Thurston (Clarinet), and Ernest Hinchcliffe (Bassoon). The Village Choir and The Hen, the Donkey and the Cuckoo (Charles-Huguenin).
- 8.38 p.m.—Orchestra: A Southern Wedding (Lotter).
- 8.47 p.m.—Victor Hely-Hutchinson and Orchestra: Kitten on the Keys (Confrey).
- 8.52 p.m.—Orchestra: The Two Cats (from "The Sleeping Beauty") (Tchaikovsky); Robots (V. Hely-Hutchinson), conducted by the Composer.
- 9.0 p.m.—Weather Forecast, Second General News Bulletin.

- 9.15 p.m.—Sir Walford Davies: "Music and the Ordinary Listener—Series VI, Music in Double Harness."
- 9.35 p.m.—Local Announcements, Shipping Forecast.
- 9.40 p.m.—A Ballard Concert. Olive Kavann (Contralto), Hubert Eisdell (Tenor), Mildred Dilling (Harp).
- 10.10 p.m.—Aldershot Command Searchlight Tattoo, in aid of Military Charitable Funds. Relayed from Rushmoor Arena, Aldershot. Massed Cavalry and Royal Artillery Mounted Bands. Part I.
- 10.35 p.m.—Ballad Concert (continued).
- 10.55 p.m.—Aldershot Tattoo. Pt. II.
- 11.15-11.45 p.m.—Finale. One verse of "Abide with Me" will be sung, and the bugles will play the Last Post, followed by God Save the King.

## WEDNESDAY

- 10.15 a.m.—A Short Religious Service.
- 10.30 a.m.—Time Signal (Greenwich), Weather Forecast.
- 11.0 p.m.—Gramophone Records.
- 12.0 noon.—A Ballard Concert: Phyllis Hudson (Contralto), Ernest White (Tenor).
- 12.30 p.m.—The B.B.C. Dance Orchestra, personally conducted by Jack Payne.
- 1.0-2.0 p.m.—Frascati's Orchestra, directed by Georges Haeck.
- 2.30 p.m.—Mr. A. Lloyd James: "Speech and Language."
- 2.50 p.m.—Musical Interlude.
- 3.0 p.m.—Mr. J. C. Stobart and Miss Mary Somerville: "The England that Shakespeare Knew—VII, Soldiers, Sailors and Explorers."
- 3.30 p.m.—Musical Interlude.
- 3.45 p.m.—Miss E. G. Clarke: "Food Values in Cooking—II, Proteins."
- 4.0 p.m.—Light Classical Concert: Howard Fry (Baritone). The Dorian Trio: Kathleen Washbourne (Violin), Pauline Taylor (Violoncello), Enid Lewis (Pianoforte).
- 5.15 p.m.—The Children's Hour.
- 6.0 p.m.—The B.B.C. Dance Orchestra, personally conducted by Jack Payne.
- 6.20 p.m.—The Week's Work in the Garden.
- 6.30 p.m.—Time Signal (Greenwich), Weather Forecast, First General News Bulletin.
- 6.45 p.m.—Orchestra (Continued).
- 7.0 p.m.—The Rt. Hon. Lord Desborough: "The World Dairy Congress."
- 7.15 p.m.—The Foundations of Music: Rheinberger's Organ Sonatas, played by Leonard Warner, from St. Botolph's, Bishopsgate. Sonata No. 3, Op. 88 (concluded); Intermezzo; Fugue.
- 7.25 p.m.—Mr. Clifford N. Collinson: "Foreign Travel."
- 7.45 p.m.—Variety: Angela Baddeley in a Sketch, Beatrice Eveline (Violoncello), the St. George's Singers, Cyril Lidington (Entertainer), Colleen Clifford (Songs at the Piano). A Sketch, "Early Birds." Cast: Auntie, Mabel Constanduros; Maud, Lillian Harrison; Sue, Florence Bayfield; Nell, Mary Allan; Milly, Melanice Castel; Programme Girl, Miriam Ferris.
- 9.0 p.m.—Weather Forecast, Second General News Bulletin.
- 9.30 p.m.—Local Announcements, Shipping Forecast.
- 9.35 p.m.—"Paolo and Francesca," by Stephen Phillips. Incidental Music by Percy Pitt, played by the Wireless Symphony Orchestra. Conducted by Percy Pitt. Characters: Giovanni Malatesta, "The Hunchback," (Tyrant of Rimini), Harcourt Williams; Paolo, "The Handsome" (Brother of Giovanni), Robert Donat; Valentino, Corrado, Luigi (Officers of Paolo's Company), Robert Speight, Bruce Belfrage, Patrick Waddington; Carlo (Servant to Giovanni), Herbert Lugg; Francesca da Rimini (Bride of Giovanni), and Daughter of Guido da Polenta, Tyrant of Ravenna, Gwen Frangcon Davies; Lucrezia Degli Onesti (Cousin to Giovanni), Dorothy Green; Nita (Maid to Francesca), Ivy Des Voeux; Angela (a Blind and Aged Servant of the Malatesta), Dorothy Holmes Gore; Guests, Couriers, Soldiers, Servants etc. Rimini—1285. Scene 1: The Hall in the Castle of the Malatesta. Scene 2: A Hall in the Palace. Scene 3: A Lane outside the Wall of the Castle Garden, near a postern door.
- 11 p.m.—12 midnight.—Dance Music.

## THURSDAY

- 10.15 a.m.—A Short Religious Service.
- 10.30 a.m.—Time Signal (Greenwich), Weather Forecast.
- 11.0 a.m.—Gramophone Records.
- 12.0 noon.—Light Music: The London Ensemble Quintet, Olive Rubens (Mezzo-Soprano).
- 1.0-2.0 p.m.—Gramophone Records.
- 2.30 p.m.—Mr. Eric Parker: "Out of Doors from Week to Week—VII, Midsummer Day."
- 3.0 p.m.—Evensong, from Westminster Abbey.
- 3.45 p.m.—Capt. B. MacCunn: "The Care of Cats."
- 4.0 p.m.—Organ Recital by Edward O'Henry. Relayed from Madame Tussaud's Cinema.
- 4.30 p.m.—The B.B.C. Dance Orchestra, personally conducted by Jack Payne.
- 5.15 p.m.—The Children's Hour.
- 6.0 p.m.—The B.B.C. Dance Orchestra, personally conducted by Jack Payne.
- 6.15 p.m.—Market Prices for Farmers.
- 6.20 p.m.—Musical Interlude.
- 6.30 p.m.—Time Signal (Greenwich), Weather Forecast, First General News Bulletin.
- 6.45 p.m.—Girl Guide Programme.
- 7.0 p.m.—Mr. Francis Toye: "Music in the Theatre."
- 7.15 p.m.—The Foundations of Music: Rheinberger's Organ Sonatas, played by Leonard Warner, from St. Botolph's, Bishopsgate. Sonata No. 6, in E Flat Minor, Op. 119, First Two Movements. Prelude: Intermezzo.
- 7.25 p.m.—Prof. W. M. Tattersall: "Nature's Reaction to Man—II, Man and the Balance of Nature."
- 7.45 p.m.—Norah Blaney.
- 8.0 p.m.—Mr. Vernon Bartlett: "The Way of the World."
- 8.15 p.m.—Cavalleria Rusticana. Relayed from the Royal Opera House, Covent Garden.
- 9.45 p.m.—Weather Forecast, Second General News Bulletin.
- 10.0 p.m.—Local Announcements, Shipping Forecast.
- 10.5 p.m.—Charlot's Hour: A Light Entertainment.
- 11.5 p.m.—12.0 midnight.—Dance Music.

## FRIDAY

- 10.15 a.m.—A Short Religious Service.
- 10.30 a.m.—Time Signal (Greenwich), Weather Forecast.
- 11.0 a.m.—Gramophone Records.
- 12.0 noon.—A Sonata Recital. Orrea Pernel (Violin), Hetty Bolton (Pianoforte).
- 12.30 p.m.—An Organ Recital from St. Botolph's, Bishopsgate.
- 1.0-2.0 p.m.—Lunch-time Music. The Hotel Metropole Orchestra (Leader, A. Mantovani), from the Hotel Metropole.
- 3.0 p.m.—Mr. J. C. Stobart and Mr. Ernest Young: "Empire History and Geography. History: Other Empires. Geography: Routes to the East."
- 3.25 p.m.—Musical Interlude.
- 3.30 p.m.—Concert to Schools. The Sybil Eaton Quartet: Sybil Eaton (1st Violin), Mavis Bacca (2nd Violin), Raymond Jeremy (Viola), Allen Ford (Violoncello), Frank Hastwell (Baritone).
- 4.30 p.m.—Musical Interlude.
- 4.45 p.m.—A Song Recital by Daphne Bettger (Soprano).
- 5.0 p.m.—Miss Muriel Currey: "Dalmatia and Albania."
- 5.15 p.m.—The Children's Hour.
- 6.0 p.m.—Frank Westfield's Orchestra.
- 6.30 p.m.—Time Signal (Greenwich), Weather Forecast, First General News Bulletin.
- 6.45 p.m.—Orchestra (continued).
- 7.0 p.m.—Mr. Percy Scholes; The P.B.C. Music Critic.
- 7.15 p.m.—The Foundations of Music: Rheinberger's Organ Sonatas, played by Leonard Warner. Sonata No. 6 (concluded); Religious March; Fugue.
- 7.25 p.m.—Prof. J. Dover Wilson: "Six Tragedies of Shakespeare (An Introduction for the Plain Man)—II, Macbeth."
- 7.45 p.m.—Vaudeville: George Graves, Teddy Brown (Xylophone), John Kirby (Entertainer), Julian Rose and Nick Adams (Potash and Perlmutter), Cecily James (Soubrette), The B.B.C. Dance Orchestra personally conducted by Jack Payne.
- 9.0 p.m.—Weather Forecast, Second General News Bulletin, Road Report.

- 0.15 p.m.—Topical Talk.
- 9.30 p.m.—Local Announcements; Shipping Forecast.
- 9.35 p.m.—A London Ronald Concert: Doris Vane (Soprano), Harold Williams, The Wireless Orchestra (Leader, S. Kneale Kelley) conducted by the Composer. The Orchestra: A Birthday Overture. Doris Vane and Orchestra: Dramatic Scene for Soprano—"Adonais" (words arranged from Shelley's poem by Vernon Blackburn). Orchestra: Suite from "The Garden of Allah"—(1) Prelude, (2) In an Eastern Garden (Violin Solo, S. Kneale Kelley), (3) Kyrie Eleison, (4) Dance of the Ouled-Nail. Doris Vane; The Lamb, and Spring (from "Four Songs of Innocence"), Away on the Hill and A Little Winding Road (from "Four Songs of the Hill"), accompanied by the Composer. Harold Williams and Orchestra: Dramatic Scene—"The Lament of Shah Jehan" (Poem by Sir Ian Malcolm). Orchestra: Three Dances for Orchestra—(1) Valse Caprice, (2) Dance des Morts (Dance of the Dead), (3) Danse Bacchanale (from Suite de Ballet).
- 11.0 p.m.—12.0 midnight.—Dance Music.

## SATURDAY

- 10.15 a.m.—A Short Religious Service.
- 10.30 a.m.—Time Signal (Greenwich), Weather Forecast.
- 1.0-2.0 p.m.—The Carlton Hotel Octet, directed by René Tapponnier.
- 3.30 p.m.—An Afternoon Concert. The Concord Singers, The Sydel Octet.
- 4.45 p.m.—Vaudeville. Barney O'Reilly (Entertainer), Yvette Darnac (French and English Songs), John Kirby (Entertainer).
- 5.15 p.m.—The Children's Hour.
- 6.0 p.m.—Organ Recital by Reginald Foot.
- 6.30 p.m.—Time Signal (Greenwich), Weather Forecast, First General News Bulletin.
- 6.45 p.m.—Nora Delaney.
- 7.0 p.m.—Mr. Basil Maine: "Next Week's Broadcast Music."
- 7.15 p.m.—The Foundations of Music. Rheinberger's Organ Sonatas, played by Leonard Warner. Passacaglia from Sonata No. 8, in E minor, Op. 132.
- 7.25 p.m.—Col. Philip Trevor: Eye-Witness Account of the England v. West Indies Match.
- 7.45 p.m.—A Military Band Concert. Betsy de la Porte (Contralto), William Boland (Tenor), The Wireless Military Band, conducted by John Ansell.
- 9.0 p.m.—Weather Forecast, Second General News Bulletin.
- 9.15 p.m.—Mr. G. Watson Parker: "More Motoring Matters."
- 9.30 p.m.—Local Announcements, Shipping Forecast.
- 9.35 p.m.—"Fancy Meeting You!" A Revue for Broadcasting in Ten Original un-Scenes. Book and Lyrics by Clifford Seyler. Music by Billy Milton and Harry S. Pepper. Cast: Patricia Rossborough, Philip Wade, Norman Griffin, Frank Denton. 1. Prologue. 2. The Stage of the Frivolity Theatre. 3. Victoria Station at Midnight. 4. Interior of 1st Class Pullman Car. 5. Brighton Front. 6. A Castle Hall. 7. In an Aeroplane. 8. The Open Sea. 9. Grouching-up Baby's Bed-time Story. 10. Somewhere in Spain. Including the Revue Chorus.
- 10.15 p.m.—12.0 midnight.—Dance Music.

CONTINUED FROM PAGE 885.

- 6.45 p.m.—Light Music: The Birmingham Studio Orchestra, conducted by Frank Cantell. Michael Mullinar (Pianoforte).
- 8.0 p.m.—The B.B.C. Dance Orchestra, personally conducted by Jack Payne.
- 8.30 p.m.—A Symphony Concert: Isabel Gray (Pianoforte). The Wireless Symphony Orchestra, leader, S. Kneale Kelly, conducted by Maurice Besly.
- 10.0 p.m.—Weather Forecast; Second General News Bulletin.
- 10.15 p.m.—Sports Bulletin.
- 10.20-11.15 p.m.—A Ballard Concert. Booth Hitchen (Baritone). Walter Glynnie (Tenor). Juliette Alvin (Cello).



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# DAVENTRY (EXPERIMENTAL) PROGRAMME

(5 GB) (491.8 metres : 610 kc.) (25 kw.) (June 17—June 23)

## SUNDAY

- 3.30 p.m.—Chamber Music: Valentina Aksarova (Soprano), John Wills (Pianoforte), Victor Watson (Double Bass), The Catterall String Quartet: Arthur Catterall (1st Violin); John F. Bridge (2nd Violin); Frank S. Park (Viola); Johan C. Hock (Violoncello).
- 5.0 p.m.—Children's Service. (See 5.XX).
- 5.30—5.45 p.m.—Foundations of English Poetry (see 5.XX).
- 7.50 p.m.—Birmingham Cathedral. The Bells. Followed by
- 8.0 p.m.—A Religious Service. Relayed from the Cathedral; Birmingham.
- 8.45 p.m.—The Week's Good Cause (see 5.XX).
- 8.50 p.m.—Weather Forecast, General News Bulletin.
- 9.0 p.m.—A Band Concert (from Birmingham), Callender's Band. Conducted by Tom Morgan; Herbert Simmonds (Baritone); Dorothy Wilson (Pianoforte).
- 10.30 p.m.—Epilogue.

## MONDAY

- 3.0 p.m.—The B.B.C. Dance Orchestra. Personally conducted by Jack Payne. Reg Palmer (Entertainer).
- 4.0 p.m.—Lozells Picture House Organ. Frank Newman (Organ). Lewis Knight (Bass).
- 5.0 p.m.—A Ballad Concert. Duets by Constance Hope and Joyce Newton, Anthony Pini (Violoncello).
- 5.45 p.m.—The Children's Hour.
- 6.30 p.m.—Time Signal (Greenwich). Weather Forecast, First General News Bulletin.
- 6.45 p.m.—Light Music: Clifford Millar (Tenor). Albert Voorsanger (Violin). The Cresswell Colliery Band.
- 8.0 p.m.—Vaudeville: The Mirimba Trio. Janet Joye (in Types and Notions). Robert Pitt and Langton Marks (Calling the British Smiles). Ted and Valerie (Comedy

- Duo). Philip Brown's Dominoes Dance Band.
- 9.0 p.m.—"The Marchioness." A Comedy Operetta—being a chapter from Charles Dickens, arranged and amplified by B. W. Findon. Music by Edward Jones. Dick Swiveller. (Robert Chignell). The Marchioness (Vivienne Chatterton). Scene: The office of Sampson Brass at Bevis Marks.
- 9.25 p.m.—Favourite items from the popular Comic Opera "Les Cloches de Corneville." By Robert Planquette. Including: Overture. Chorus, "All who for servants are enquiring." Soprano Song, "I may be a Princess." Finale to Act I. Soli and Chorus, "Let our Torches." Baritone Song and Chorus, "Silent Heroes." Soprano Song and Chorus, "The Cider Song." Finale to Act III. Vivienne Chatterton. Robert Chignell. The Birmingham Studio Chorus and Orchestra. Conducted by Joseph Lewis.
- 10.0 p.m.—Weather Forecast, Second General News Bulletin.
- 10.15—11.15 p.m.—Dance Music.

## TUESDAY

- 3.0 p.m.—Paul Moulder's Rivoli Theatre Orchestra.
- 4.0 p.m.—A Military Band Concert. The Band of H.M. 7th Queen's Own Hussars. Conducted by Bandmaster F. Spencer. Relayed from the Pump Room Gardens, Leamington. Herbert Stephen (Violoncello). Claire Harris will entertain.
- 5.45 p.m.—The Children's Hour.
- 6.30 p.m.—Time Signal (Greenwich). Weather Forecast, First General News Bulletin.
- 6.45 p.m.—The B.B.C. Dance Orchestra. Personally conducted by Jack Payne. Florence Oldham (Songs at the Piano). Harry Hensley (Child Impersonations).
- 8.0 p.m.—Variety: The Birmingham Studio Chorus. Conducted by Joseph Lewis. Ida M. Gilbert

- (Recital). Frank Cantell and Harry Freeman (Duets for two Violins). Sidonie Goossens (Harp).
- 9.0 p.m.—A Recital: Isolde Menges (Violin). Harold Samuel (Pianoforte). Second Sonata, in A (Brahms).
- 9.25 p.m.—"Madam Butterfly" Act II. Relayed from the Royal Opera House, Covent Garden.
- 10.15 p.m.—Weather Forecast, Second General News Bulletin.
- 10.30—11.15 p.m.—Mr. C. Leonard Woolley: "Ur of the Chaldees."

## WEDNESDAY

- 3.0 p.m.—Chamber Music. The Spa Pianoforte Trio, directed by Edna Willoughby. Relayed from the Pump Rooms, Leamington. Edna Willoughby (Pianoforte).
- 4.0 p.m.—The B.B.C. Dance Orchestra. Personally conducted by Jack Payne; Florence Oldham (Songs at the Piano). Rex Palmer (Entertainer).
- 5.45 p.m.—The Children's Hour.
- 6.30 p.m.—Time Signal (Greenwich). Weather Forecast, First General News Bulletin.
- 6.45 p.m.—Light Music. The Birmingham Studio Orchestra, conducted by Frank Cantell. Frances Morris (Soprano).
- 8.0 p.m.—The Barbirolli String Orchestra. Leader, Boris Pecker. Conducted by John Barbirolli. Concerto Grosso in C minor, Op. 6, No. 3 (Corelli, arr. R. Eribach). (First Performance). Peat Reek, March of the Little Folk (McEwen); By the Tam (Goossens); Handel in the Strand (Grainger); Suite for Strings (Mozart, arr. Barbirolli); Le Baiser d'Eunice (Eunice's Kiss) (Vouge); (Solo Violoncello, Douglas Cameron); Waltz "Freut euch des Lebens" (Johann Strauss).
- 9.0 p.m.—A Military Band Concert. Rex Palmer (Baritone). The Wireless Military Band, conducted by B. Walton O'Donnell.
- 10.0 p.m.—Weather Forecast, Second General News Bulletin.
- 10.15—11.15 p.m.—Dance Music.

## THURSDAY

- 3.0 p.m.—A Symphony Concert. Relayed from the Winter Gardens, Bournemouth. The Bournemouth Municipal Augmented Orchestra. Deputy Conductor, Montague Birch. Diana Trevanion (The Cornish Contralto), Dorothy Folkard (Pianoforte).
- 4.30 p.m.—Lozells Picture House Orchestra. Conducted by Paul Rimmer. Elsa Durelle (Contralto), Frank Newman (Organ).
- 5.45 p.m.—The Children's Hour.
- 6.30 p.m.—Time Signal (Greenwich). Weather Forecast, First General News Bulletin.
- 6.45 p.m.—The B.B.C. Dance Orchestra. Personally conducted by Jack Payne. Mabel Constanduros, Bernard Ansell (Entertainer).
- 8.0 p.m.—The Gershwin Parkington Quintet: Leon Goossens (Oboe).
- 9.0 p.m.—"She was No Lady." A Play by St. John G. Ervine. Presented by Stuart Vinden. Sir Alfred Pickles, K.B.E., M.P. (Wortley Allen). Henry Leamouth (a Private Inquiry Agent) (William Hughes); Lady Pickles (Mabel France); Mrs. Graveney (a Caretaker) (F. A. Chamberlain).
- 9.30 p.m.—A Pianoforte Recital by Katharine Goodson.
- 10.0 p.m.—Weather Forecast, Second General News Bulletin.
- 10.15 p.m.—An Orchestral Concert. The Birmingham Studio Augmented Orchestra (Leader, Frank Cantell). Conducted by Joseph Lewis. Overture to "A Midsummer Night's Dream" (Mendelssohn). Helen Henschel (Mezzo-Soprano) and Orchestra: It was a lover and his lass, Take, O take those lips away, Blow, blow, thou winter wind (from "Shakespearean Songs") (Quiter).
- 10.32 p.m.—Edward Isaacs (Pianoforte) and Orchestra: Concerto No. 1, in C, Op. 15 (Beethoven), Allegro con brio; Largo; Rondo-allegro scherzando.
- 11.0—11.15 p.m.—Helen Henschel and Orchestra: Seguidilla (from "Car-

men") (Bizet). Orchestra: Finale from Symphony No. 31, in D, K.297, The "Parisian" (Mozart).

## FRIDAY

- 3.0 p.m.—An Organ Recital by Bertram J. Orsman (Organist and Director of the Choir, Holy Trinity, Upper Tooting), relayed from St. Mary-le-Bow. Mary Hamlin (Soprano).
- 4.0 p.m.—The B.B.C. Dance Orchestra, personally conducted by Jack Payne: Florence Oldham (Songs at the Piano), Rex Palmer (Entertainer).
- 5.45 p.m.—The Children's Hour.
- 6.30 p.m.—Time Signal (Greenwich). Weather Forecast; First General News Bulletin.
- 6.45 p.m.—Light Music: Paulino Maunder (Soprano), Norman Venner (Baritone). The Richard Brinkman Sextet.
- 8.0 p.m.—"The Mirage of Cowardice" by Ralph de Rohan, read by himself
- 8.25 p.m.—A Light Orchestral Concert: Constance Willis (Contralto), David McCallum (Violin). The Birmingham Studio Orchestra, conducted by Joseph Lewis.
- 10.0 p.m.—Weather Forecast, Second General News Bulletin; Road Report.
- 10.15 p.m.—11.15 p.m.—Dance Music.

## SATURDAY

- 3.30 p.m.—Variety: Gordon Bryan (Pianoforte) in a "Maritime" Recital, Constance Wentworth (Soprano) and Frederic Lake (Tenor) (in Folk Songs and Duets), Edith Penville (Flute), Helena Millais (the Actress-Entertainer).
- 4.30 p.m.—The Piccadilly Dance Band, directed by Charles Watson, from the Piccadilly Hotel.
- 5.45 p.m.—The Children's Hour.
- 6.30 p.m.—Time Signal (Greenwich). Weather Forecast, First General News Bulletin.

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# PROGRAMMES FOR SUNDAY

(June 17)

NOTE: THE HOURS OF TRANSMISSION ARE REDUCED TO BRITISH SUMMER TIME

### BARCELONA (Spain)

- Radio Barcelona (EA1). WL 344.8 m. (870 kc); 1.5 kw.
- 12.0 noon.—Chimes and Weather.
- 1.30 p.m.—Concert of Trio Music.
- 6.0 p.m.—Orchestral Selections. 1. Morena y sevillana—Pasodoble (Fuste). 2. Pierrrot's Waltz (Worsley). 3. Maruchita Tango milonga (Vila).
- 6.30 p.m.—Recital of Songs. 1. Chanson hindoue (Rimsky-Korsakoff). 2. L'amour des roses (Franck). 3. Liebslied (Brahms). 4. Ich grille nicht (Schumann).
- 7.0 p.m.—Talk. "Potato Growing."
- 7.20 p.m.—Orchestral Selections. 1. "The Magic Flute"—Overture (Mozart). 2. Selection from "Madame Butterfly" (Puccini). 3. Menuet rose (Ganne). 4. Les Cigarettes (Filipucci).
- 7.50 p.m.—Recital of Songs. 1. Mare vols dir-me? (Wekerlin). 2. Romance from "Tosca" (Puccini). 3. Cancó de Maria (de Grigon). 4. Serenade (Strauss).
- 8.20 p.m.—Orchestral Selections. 1. Andante from the Fifth Symphony (Beethoven). 2. Margita Czardas (Michiels). 3. The Cadets March (Souza).
- 8.40 p.m.—Sports Notes.
- 9.0 p.m. (approx.)—Close Down.

### BERGEN (Norway)

- Kringkastingselskap. WL 369.9 m (811 kc); 1.5 kw.
- 10.30 a.m.—Religious Service.
- 5.0 p.m.—Programme relayed from the National Exhibition.
- 8.0 p.m.—Concert: 1. March (Souza). 2. Potpourri from "The Czardas Princess" (Kálmán). 3. Romance (Bernheimer).
- 8.30 p.m.—Organ Recital: 1. Selection (Forwald). 2. Fugue in G Minor (Bach). 3. Selection (Forwald). 4. Fantasia in G Major (Bach).
- 9.0 p.m.—Talk: "The Death Bed of Wergeland," by F. G. Lynner.
- 9.30 p.m.—American Songs; 1.

- Massa's in de cold ground (Foster). 2. Dearest Mae (Gorsby). 3. Old black Joe (Foster). 4. De Camp town races (Foster). 5. Carry me back to old Virginny (Bland). 6. Nelly Bly (Foster).
- 10.0 p.m.—Weather, Time and News.
- 10.15 p.m.—Dance Music from Hotel Norge.
- 12 midnight (approx.)—Close Down.

### BERLIN (Germany)

- Königs-wusterhausen. WL 1,250 m. (240 kc); 35 kw.
- 6.30 a.m.—6.30 p.m.—Programme relayed from Voxhaus.
- 6.30 p.m.—Talk by Schirokauer.
- 7.25 p.m.—Programme from Hamburg, followed by Programme from Frankfurt.
- 10.15 p.m. (approx.)—Programme relayed from Voxhaus.

### BERLIN (Germany)

- Voxhaus. WL 484.6 m. (619 kc); 4 kw.
- 6.30 a.m.—Early Morning Concert.
- 9.0 a.m.—Sacred Morning Recital.
- 11.30 a.m.—Concert: 1. Mandoline Selections: (a) "Klänge vom Erie-See"—Overture (Wormsbacher); (b) Herzen und Blumen (Czibulka). 2. Soprano Solos: (a) Frühlingssonne (Trunk); (b) Wiegenlied; (c) Tage der letzten Erfüllung (Liebau). 3. Verschmähte Liebe—Waltz (Lincke). 4. Soprano Solos: (a) Dort in den Weiden; (b) Die Sonne scheint nicht mehr (Brahms). 5. Selection from "Die Fledermaus" (Joh. Strauss). 6. Soprano Solos: (a) Liebe (Weidemann); (b) Nacht (Weidemann); (c) Schließliedchen (Scharke); (d) Des Kindes Gebet (Reger). 7. (a) Minuet Bocchefini; (b) Die Wachtparade (Blankenburg).
- 1.5 p.m.—Shorthand Lesson.
- 1.30 p.m.—Agricultural Programme.
- 3.50 p.m.—Commentary on The Berlin Regatta relayed from Grunau.
- 5.0 p.m.—Orchestral Concert: 1. Die Sportmädels—March (Einödshofer). 2. "The Bohemian Girl"—Overture (Balfé). 3. Frühlingstimmen—Waltz (Joh. Strauss). 4. Selection from "Cavalleria Rusti-

- cana" (Mastagni). 5. Der Fliegerzieger (Einödshofer). 6. "Im Reich des Indra"—Overture (Lincke). 7. Am Meeresgrund—Waltz (Einödshofer). 8. Hungarian Comedy Overture (Kéler-Bela). 9. Hans in allen Ecken (Unbehau).
- 6.50 p.m.—Talk for Journalists.
- 7.25 p.m.—"Missa Solemnis" (Beethoven) relayed from the Stadt-halle, Hanover, followed by News, Weather, Time and Sports Notes.
- 10.30 p.m.—Dance Music Programme.
- 12.30 a.m. (Mon. approx.)—Close Down.

### BERNE (Switzerland)

- Radio-Berne. WL 411 m. (730 kc); 1.5 kw.
- 10.0 a.m.—Protestant Address.
- 10.45 a.m.—Morning Concert.
- 1.0 p.m.—Time and Weather.
- 1.5 p.m. (approx.)—Country Dances.
- 2.30 p.m.—Talk. "Fruit and Fruit-wine in Switzerland."
- 3.30 p.m.—The Kursaal Orchestra.
- 8.0 p.m.—Time and Weather.
- 8.5 p.m.—Vocal and Instrumental Concert, arranged by the Spiez Institution for the Blind.
- 8.30 p.m.—Talk, "How the Blind are Taught," by the Rev. Egger.
- 8.45 p.m.—Mixed Choir Concert.
- 9.0 p.m.—The Kursaal Orchestra.
- 9.10 p.m.—Choral and Solo Recital by Members of the Spiez Institution for the Blind.
- 9.45 p.m.—Sports, News, Weather.
- 10.0 p.m.—The Kursaal Orchestra.
- 10.35 p.m. (approx.)—Close Down.

### BRESLAU (Germany)

- Schlesische Funkstunde. WL 322.9 m. (929 kc); 4 kw. Relayed by Gleiwitz on 329.7 m. (910 kc).
- 8.45 a.m.—Christ Church Carillon.
- 11.0 a.m.—Sacred Morning Recital.
- 12.0 noon.—Concert: 1. Schalks-Marsch (Koczys). 2. "Des Teufels Anteil"—Overture (Auber). 3. Waltz from "The Bird Fancier" (Zeller). 4. Selection from "Le Postillon de Lonjumeau" (Adam). 5. Slavonic Dance (Dvorák). 6. Torch Dance from "The Mastersingers of Nuremberg" (Wagner). 7. The Little Recruit—Character

- Sketch (Jessel). 8. From East to West—March (Hirschberg).
- 2.10 p.m.—Agricultural Talk.
- 2.35 p.m.—Talk on Chess Problems.
- 3.0 p.m.—Programme for Children.
- 3.30 p.m.—Advanced English Reading from "The Aran Islands" (Synge).
- 4.30 p.m.—Orchestral and Instrumental Concert.
- 6.25 p.m.—Weather and Talk.
- 6.50 p.m.—Dialogue, "A Trip from the Oder to the Rhine."
- 7.15 p.m.—Talk, "The Breslau Drama of the Past," by A. Kranold.
- 7.55 p.m.—Introductory Talk to the following transmission.
- 8.0 p.m.—"The Tales of Hoffmann" Opera (Ofenbach).
- 10.0 p.m.—News and Announcements.
- 10.30 p.m.—Programme from Berlin.
- 12.0 midnight (approx.)—Close Down.

### BRÜNN (Czecho-Slovakia)

- Komarov. WL 441.2 m. (680 kc); 2.4 kw.
- Transmits at intervals from 9.0 a.m.
- 6.0 p.m.—German Transmission.
- 7.0 p.m.—Programme of Recitations.
- 7.30 p.m.—Slovakian Suite.
- 8.0 p.m.—Violin and Pianoforte Sonata (Cesar Franck).
- 8.30 p.m.—Popular Musical Selections.
- 9.0 p.m.—Exhibition Programme.
- 10.0 p.m.—Programme from Prague.
- 10.20 p.m.—Exhibition Programme.

### BRUSSELS (Belgium)

- Radio Belgique. WL 508.5 m. (590 kc); 1.5 kw.
- 5.0 p.m.—Orchestral Dance Music from the St. Sauveur Palais de Danse.
- 6.0 p.m.—Programme for Children.
- 6.30 p.m.—Trio Music and Songs: 1. La Lépröse (Lazzari). 2. (a) Selection from "William Tell" (Rossini); (b) Chanson d'amour (Grieg). 3. En mer (Holmes). 4. Danse du papillon (Laurens). 5. Pianoforte Solos, Mimmet and Sailors' Song (Grieg). 6. Adagio of the 3rd Chorale (Franck). 7. (a) Princesse d'auberge (Blockx); (b) L'alouette (Granier). 8. Suite Orientale (Bonis).
- 7.30 p.m.—Le Radio-Chronique.
- 8.15 p.m.—Concert: 1. Overture in The Italian style (Schubert). 2.

- Selection from "L'Africaine" (Meyerbeer). 3. Wind Instrument Selection—Pastorale variée (Pieroni).
- 4. String Quartet—Canzo, Scherzino and Tarantelle (Raff). 5. L'attaque du moulin (Bruneau).
- 6. "Karadeo"—Prelude, Song and Breton Wedding (d'Indy). 7. Duet from "Le Roi d'Ys" (Lalo). 8. Fragments poétiques (Godart). 9. Cavatine from "Faust" (Gounod). 10. Selection from "La Tosca" (Puccini).
- 11. Duet from "Rigoletto" (Verdi).
- 12. (a) Divertissement and Musette (Zamazeuil); (b) Danse des Bouffons (Rimsky-Korsakoff). 13. Song—Trio from "Jerusalem" (Verdi).
- 14. Dances symphoniques (Grieg).
- 10.15 p.m.—News and Close Down.

### BUDAPEST (Hungary)

- Magyar Telephon Hirmonde es Radio R.T. WL 557.1 m. (538 kc); 2.5 kw.
- 9.0 a.m.—Morning Carnival Recital.
- 11.45 a.m.—Divine Service.
- 12.30 p.m.—Time, Weather and Orchestral Concert. 1. "The Barber of Seville"—Overture (Rossini). 2. Symphony in B Minor (Schubert). 3. Violin Concerto (Mendelssohn). 4. "La Traviata"—Selection (Verdi).
- 4.0 p.m.—Hungarian Fairy Stories.
- 5.0 p.m.—Orchestral Concert: 1. Overture (Nagypál). 2. "The Bird Fancier"—Selection (Zeller). 3. "Die Geschiedene Frau"—Selection (Fall). 4. Oriental Suite (Popy).
- 7.0 p.m.—"Székitt katona"—Play with Music (Szigligeti Ede). In the Interval, Racing News.
- 9.45 p.m.—Time, and Sports Notes, followed by Tzigane Music.
- 12 midnight (approx.)—Close Down.

### COLOGNE (Germany)

- Westdeutscher Rundfunk. WL 283 m. (1,060 kc); 4 kw.
- 9.0 a.m.—See Langenberg Station.
- 11.35 a.m.—Reading for Children.
- 12.15 p.m.—See Langenberg Station.
- 1.0 p.m.—Concert: 1. Geldenischer Schützenmarsch (Denzer). 2. Frühlingssinder—Waltz (Waldteufel). 3. "Heideschacht"—Overture (Holstein). 4. Selections from the Works of Lalo (arr.



Programmes for Sunday.—(Cont.)

Artok. 5. Largo (Handel). 6. Soprano Solos. 7. Selections from Liszt (Urbach). 8. Die Spieluhr (Blaauw). 2.30 p.m.—Wireless Literature. 2.50 p.m.—See Langenberg Station. 4.5 p.m.—Talk, "The Central-European Drama of To-Day," by G. Weisenboon. 4.30 p.m.—See Langenberg Station. 6.5 p.m.—Talk on "Rudolf Leonhard."

6.25 p.m.—Talk, "From Drama to Stage," by Dr. Bernhard Diebold. 7.0 p.m.—See Langenberg Station. 7.25 p.m.—Dr. Hans Flesch—Reading from His Own Works. 7.55 p.m.—Sports Notes. 8.10 p.m.—"The Cousin from Nowhere"—Operetta (Kunneke), followed by Sports Notes, Musical Selections and Dance Music. 12 midnight (approx.)—Close Down.

COPENHAGEN (Denmark)

Copenhagen Radio. WL. 337.4 m. (889 kc); 1 kw. Relayed by Kalundborg on 1,153.8 m. (260 kc). 10.0 a.m.—Divine Service. 2.0 p.m.—Divine Service. 3.30 p.m.—Afternoon Concert. 6.50 p.m.—Weather and News. 7.15 p.m.—Time and Talk. 8.0 p.m.—Town Hall Chimes. 8.5 p.m. (approx.)—Choral and Soloist Concert. 1. Song for the Danes (Weyse). 2. Sakuntala (Rosenfeldt). 3. Amor (Kuhlau). 4. Song of the FATHERLAND (Horneman). 5. Pianoforte Solos: (a) Seguidillas (Albeniz), (b) Polish Dance, No. 2, in F sharp minor (Scharwenka). 6. Choral Selections: (a) Sweden (Stenhammer), (b) Two Russian Folk Melodies (arr. by Goldmark), (c) Dalkarla Song (Lindblad). 7. Pianoforte Solos (Peterson-Berger): (a) Minuet, (b) Waltz. 8. Choral Selections: (a) The Sea Round Denmark (Nielsen), (b) My Home (Hellmuth), (c) A Peaceful Heart (Agerby), (d) Song of Youth (Hagen). Followed by News and Reading. 9.45 p.m.—Orchestral Concert. 1. "Ilka"—Overture (Doppler). 2. Suite No. 1 (Massenet): (a) March, (b) Nocturne, (c) Pastorale and Variations. 3. Zorahayda—Legend (Svendsen). 4. Cello Solo—Taranette (Popper). 5. Selection from "A Masked Ball" (Verdi). 6. Nocturne, Op. 40 (Dvorak). 7. Spanish Caprice (Rimsky-Korsakoff). 10.45 p.m.—Dance Music Programme Relayed from Nimb's Restaurant. In the Interval at 12.0 midnight: Town Hall Chimes. 12.30 a.m. (Mon., approx.)—Close Down.

CORK (Ireland)

Cork Broadcasting Station (6CK). WL. 400 m. (750 kc); 1.5 kw. 8.30 p.m.—Concert by the Augmented Orchestra, Elliot Dobie (Baritone), Frau T. Fleischmann (Pianist), Eibhlin Ni Driscoll (in Traditional Irish Songs), and Chevalier W. H. Grattan Flood, Mus.D.K.S.G. 11.0 p.m.—National Anthem and Close Down.

CRACOW (Poland)

Polskie-Radio. WL. 567 m. (529 kc); 1.5 kw. 10.15 a.m.—Divine Service. Relayed from Posen Cathedral. 12 noon.—Fanfare, Time and Weather. 4.0 p.m.—Agricultural Talks. 5.0 p.m.—Programme from Warsaw. 6.30 p.m.—Variety Selections. 6.50 p.m.—Cracovian Poets' Meeting. 7.35 p.m.—Talk, "Lives of Celebrities of Contemporary French Literature," by Madame Krzetuska. 8.0 p.m.—Fanfare and Sports Notes. 8.30 p.m.—Concert: 1. Vocal Quartet (a) Deux sorts (Lachman), (b) La nuit silencieuse (Stoiber), (c) Quoi que ce soit la vie (Dobrzynsky), (d) Conseil (Moniuszko). 2. Pianoforte Selections, (a) Nocturne, No. 3 (Liszt), (b) Valse (Chopin), (c) Impromptu (Chopin). 3. Vocal Quartet: (a) Les petits poissons (St. Lipsky), (b) Desesp'oir (Gall), (c) Berceuses (Swierzyznsky), (d) Chanson de soldat (Moniuszko). 4. Pianoforte Solos: (a) Dr. Gradus ad Parnassum (Debussy), (b) Preludes Nos. 2 and 3 (Scriabin), (c) Prelude in G sharp minor (Rachmaninoff). 5. Quartet: (a) Regrets (Stoh), (b) Monts de Norvege (Kjerulf), (c) Sur un pipeau (Lipsky), (d) Le Cracoviak (Grossmann). 6. Pianoforte Solos: (a) Berceuse (Chopin), (b) Waltz in E flat major (Chopin), (c) Prelude in B minor (Mendelssohn). 7. Quartet: (a) Nuit de Mai (Kotar-

binsky), (b) J'ai au moins une saison d'argile (Gall), (c) Sauve-moi, mon Dieu! (Gall), (d) Cracoviak (Swierzyznsky). 10.0 p.m.—Programme from Warsaw. 10.30 p.m.—Restaurant Concert. 11.30 p.m. (approx.)—Close Down.

DUBLIN (Ireland)

Dublin Broadcasting Station (2RN). WL. 319.1 m. (940 kc); 1.5 kw. 8.30—11.0 p.m.—Programme of Music relayed from Cork.

FRANKFURT-am-MAIN (Germany)

Südwestdeutscher Rundfunk. WL. 429 m. (699 kc); 4 kw. Relayed by Cassel, on 252.1 m. (1,190 kc). 8.0 a.m.—Morning Recital. 10.30 a.m.—Talk for Parents. 11.0 a.m.—Balloon Flight—description of start and speech by the aeronaut. Open-air Concert. 2.0 p.m.—Relay from the Zoological Gardens of the opening of the Congress of the Co-operative Society of German Railways. 3.0 p.m.—Football Match (Munich). 5.0 p.m.—Children's Programme. 6.0 p.m.—Educational Transmission. 7.0 p.m.—Sports Notes, followed by Missa Solemnis (Beethoven) from Hanover, Concert and Programme from Voxhaus.

FREE STATE OF DANZIG

WL. 272.7 m. (1,100 kc); 0.75 kw. 9.0—11.0 a.m.—Programme relayed from Königsberg. 11.0 a.m.—Weather Forecast. 11.15 a.m.—4.0 p.m.—Programme relayed from Königsberg. 4.0 p.m.—Talk on "Nietzsche as a Philosopher," by Dr. Werner. 4.30 p.m.—Programme from Königsberg. 5.0 p.m.—Concert, relayed from the Kurgarten Zoppt. 1. "Si j'étais Roi"—Overture (Adam). 2. Nocturne from "A Midsummer Night's Dream" (Mendelssohn). 3. Selection from "Samson and Delilah" (Saint-Saëns). 4. Mazurka from "Halka" (Moniuszko). 5. "Dance of the Hours," from "La Gioconda" (Ponchielli). 6. "La Dame Blanche"—Overture (Boieldieu). 7. Slavonic Dance (Dvorak). 8. "The Blue Danube" (Strauss). 9. Selection from "La Traviata" (Verdi). 7.15—12.0 midnight.—Programme relayed from Königsberg.

HAMBURG (Germany)

Norag (ha, in Morse). WL. 396 m. (757 kc); 4 kw. Relayed by Bremen on 272.7 m. (1,100 kc); Hanover, 297.9 m. (1,007 kc); and Kiel, 255 m. (1,176 kc). Transmits at intervals from 6.30 a.m. 11.0 a.m.—Talk (Hamburg, Hanover and Bremen).—"Behind the Scenes of a Theatre in the Ante Christian Era." 11.30 a.m. (Hamburg, Hanover and Bremen).—"The Origin and Importance of Warehouses." 12.55 p.m.—Nauen Time Signal. 3.0 p.m.—Orchestral Concert. 4.30 p.m.—Talk from Kiel—"Travelling in the High-Mountains of the Argentine." 5.0 p.m.—Café Wallhof Concert. 6.20 p.m.—Talk, "In a Motor Car through the Holy Land." 6.50 p.m.—Talk, "German Gymnastics," by W. Braungardt, from Bremen. 7.19 p.m.—Sports and Weather. 7.30 p.m.—"Missa solemnis" (Beethoven), relayed from the Stadthalle, Hanover. 9.30 p.m.—"Everyman"—Play (Hugo von Hofmannsthal), followed by News, Weather, Ice Report, Topical Talk and Concert from the Café Wallhof.

HILVERSUM (Holland)

Algemeene Vereniging Radio-Omroep. WL. 1,069 m. (280 kc); 5 kw. 9.10 a.m.—Programme arranged by the Workers' Radio Society. 12.10 p.m.—Concert of Trio Music. 2.40 p.m.—First Concert relayed from the "Kurhaus," Scheveningen. 1. Festival Polonaise (Svendsen). 2. Ein Steppenskizze aus Mittelasien (Borodine). 3. Rondo capriccioso (Saint-Saëns). 4. Overture, Entr'acte and Ballet Music from "Rosamunde" (Schubert). 5. Prelude to the Third Act of "Lohengrin" (Wagner). 4.10 p.m.—Gounod Concert. 1. March from "The Queen of Sheba." 2. Ballet Music from "Romeo and Juliet." 3. Aria from "Faust." 4. Vision. 5. Selection from "Miracle." 6. Soprano Solo

from "Romeo and Juliet." 7. Entr'acte from "La Colombe." 8. Serenade. 9. Selection from "Faust." 6.10 p.m.—Divine Service. 7.40 p.m.—Time, Weather and News. 7.50 p.m.—Concert. Relayed from the "Kurhaus," Scheveningen. 1. "Fidelio" Overture (Beethoven). 2. Concerto for Pianoforte in A minor (Schumann). 3. Vltava Symphonic Poem (Smetana). 4. Selections for String Orchestra (Grieg): (a) Herzwunde, (b) Peasant Dance. 5. Piet Hein—Rhapsody (Van Anrooij).

HUIZEN (Holland)

WL. 1,870 m. (160 kc); 4 kw. 11.0 a.m.—Religious Service from Amsterdam. 1.10 p.m.—Instrumental Trio Concert relayed from Amsterdam. 2.10 p.m.—Talk, followed by Concert by Orchestra, Quartet, and Soloists. 4.40 p.m.—Programme for Hospitals. 6.0 p.m.—Divine Service from the Nieuwe Westerkerk Church, Rotterdam. 8.10 p.m.—Talk by M. v. Kessel. 11.25 p.m.—Epilogue and Close Down.

JUAN-LES-PINS (France)

Radio LL. WL. 230 m. (1,304 kc); 0.25 kw. 1.0 p.m.—Orchestral Concert. 1. Per Aspera ad Astra (Urbach). 2. Children's Ten Minutes. 3. Rêve de violette (Savata). 4. Le Nil (Leroux). 5. Selection from "Coriolan" (Beethoven). 6. Sogno (Bonincontro). 7. Pavane pour une infante défunte (Ravel). 8. Douce caresse (Gillet). 9. Selection from "Tannhäuser" (Wagner). 10.0 p.m.—Casino Dance Bands. 10.30 p.m. (approx.)—Close Down.

KÖNIGSBERG (Germany)

Ostmarken Rundfunk. WL. 303.6 m. (988 kc); 4 kw. 9.0 a.m.—Sacred Morning Recital. 10.15 a.m.—Relay of the General Meeting of the Association of Electro-Installation Firms, from Elbing. 1. Prelude to "The Mastersingers" (Wagner). 2. Songs: (a) Brüder, reicht die Hand zum Bunde (Mozart), (b) Am Siegfriedbrunnen (Kobach), (c) Address. 11.0 a.m.—Weather Forecast. 11.15 p.m.—Orchestral Concert. 1. "The Thieving Magpie"—Overture (Rossini). 2. Selection from "La Sonnambula" (Bellini). 3. Rameu—Gavotte (Burmester). 4. An den Frühling (Grieg). 5. Aus Mozarts Reich (Urbach). 6. La Serenata (Braga). 7. Rakoczy Czardas (Michiels). 8. Die guten alten Zeiten—Waltz (Strauss). 9. San Lorenzo—March (Silva). 12.55 p.m.—Time and Weather. 2.30 p.m.—Chess Problems Talk. 3.0 p.m.—Programme on the Occasion of the Seventh Anniversary of the Reichverbandes der Rheinländer. Addresses. 4.0 p.m.—Talk, "Introduction to Musical Improvisation." 4.30 p.m.—Talk for Children. 5.0 p.m.—Programme from Danzig. 7.15 p.m.—Variety Concert. 8.10 p.m.—News and Sports Notes. 10.15 p.m.—Dance Music Programme and Concert of Light Music. 12.0 midnight (approx.)—Close Down.

KOVNO (Lithuania)

Radio-Kaunas. WL. 2,000 m. (150 kc); 15 kw. Second Anniversary of the Kovno Broadcasting Station. 9.0 a.m.—Morning Recital: Quintet Selections: 1. Love me and the world is mine (Ball). 2. Andante religioso (Dregshok). 3. Pastorale (Bizet). 4. Ave Maria—Soprano Solo (Luzzi). 5. Paris Angelicus (Frank). 6. Sventa Marija (Nanjalis). 7. Songs (Eulenberg). 12 noon.—Time and Weather. Chimes from the War Museum. 12.10 p.m.—Organ Recital. 12.30 p.m.—Programme for Children. 3.0 p.m.—Talk, "Children in Summer." 3.30 p.m.—Talk by Petras Babickas, Director of Programmes, Kovno. 4.0 p.m.—Orchestral Concert: 1. In dulce júbilo (Knumann). 2. "Das Nachtlager in Granada" (Kreutzer). 3. Dreams of the Ocean—Waltz (Gungl). 4. Gondoliera (Meyer-Helmund). 5. Souvenir de Capri (Becc). 6. Lithuanian Songs (Simkus). 7. The Gladiator. 4.30 p.m.—Address by Ing. A. Juriskis, Station Director. 4.45 p.m.—Address by S. Klimas, Member of the Radio Commission. 5.0 p.m.—Talk, "Economics." 6.9 p.m.—Programme for Children.

6.30 p.m.—Talk for the Housewife. 7.30 p.m.—Talk on Health. 8.0 p.m.—Lowering of the Colours from the War Museum. 8.15 p.m.—Quartet Concert: 1. Radio Welle (Kacanaukas). 2. Sommernachte (Neujalis). 3. Abschied mit dem Wald (Simkus). 4. Grüne Rante habe gesatt (Niemantas). 5. Drei Tage, drei nächte (Tallat). 8.30 p.m.—Time and Weather. 8.40 p.m.—Talk, "How I became a radio Enthusiast." 9.0 p.m.—"Radio-Antiphon"—A Carnival Play. 10.0 p.m.—Concert: 1. Lietuvias esame mes gimc (Simkus). 2. Siesta Berceuse (Waldteufel). 3. Aria from "Faust" (Gounod). 4. Selection from "Die Fledermaus" (Strauss). 5. Schön Rosmarin (Kreissler). 6. Coronation March from "The Prophet" (Meyerbeer). 7. Intermezzo (Petit). 11.15 p.m.—"On the Third Year."

LAHTI (Finland)

WL. 1,522.8 m. (197 kc); 25 kw. Programme also for Helsingfors, 275.9 m. (798 kc); 1.2 kw. 9.0 a.m.—Service (in Finnish). 10.50 a.m.—Musical Programme. 11.50 a.m.—Weather and Time. 12.0 noon.—Divine Service in Swedish from St. John's Church. 5.57 p.m.—Time and Weather. 6.10 p.m.—News and Announcements. 6.15 p.m.—Concert. 1. Melodies from "Faust" (Gounod). 2. Valse (Waldteufel). 3. Melodies from "Countess Mariza" (Kalman). 4. Songs. 5. "The Caliph of Baghdad"—Overture (Boieldieu). 6. Valse Berceuse (Micheli). 7. Czardas (Michiels). 8. Songs. 9. Finnish Melodies (Jäger). 10. Minuet (Sundblad). 11. Song (Ekman). 8.45 p.m.—News given in Finnish and Swedish, followed by Close Down.

LANGENBERG (Germany)

Westdeutscher Rundfunk. WL. 470.9 m. (637 kc); 25 kw. Programme also for Aix-la-Chapelle, 401 m. (748 kc); Cologne, 283 m. (1,060 kc); and Münster, 250 m. (1,200 kc). 9.0 a.m.—Sacred Morning Recital: Relayed from Düsseldorf. 11.0 a.m.—Talk on "Albrecht Dürer." Relayed from Düsseldorf. 11.35 a.m.—Programme from Cologne. 12.15 p.m.—Pianoforte Selections from Bach's "Wohltunepiertes Klavier." Relayed from Düsseldorf. 1.0 p.m.—Programme from Cologne. 2.50 p.m.—Chess Talk from Düsseldorf. 3.20 p.m.—Reading from Düsseldorf—"From the Rocket-Propelled Car and Airship to the Flight into Space," from "Der Schuss ins All" (Gail). 4.5 p.m.—Programme from Cologne. 4.30 p.m.—Concert from Dortmund: 1. Coronation March from "The Prophet" (Meyerbeer). 2. "The Nuremberg Doll"—Overture (Adam). 3. Contralto Solos: (a) Aria from "Samson and Delilah" (Saint-Saëns), (b) Selection from "Der Evangelimann" (Kienzl). 4. Waltz from "Der Rosenkavalier" (Strauss). 5. Frühlings-Suite (Nevin). 6. Contralto Solos: (a) Verborgenheit (Wolf), (b) Gesang Weylas (Wolf). 7. Czardas (Michiels). 8. San Lorenzo March (Silva). 6.5 p.m.—Programme from Cologne. 7.0 p.m.—Talk for Workers. Relayed from Düsseldorf. 7.25 p.m.—12 midnight.—Programme from Cologne. 12 midnight (approx.)—Close Down.

LEIPZIG (Germany)

Mitteldeutscher Rundfunk. WL. 366 m. (818 kc); 4 kw. Relayed by Dresden on 275.2 m. (1,090 kc). 3.0 p.m.—Orchestral Concert from the Jahrhenschau, Dresden. 4.0 p.m.—"Das magnetische Feld"—Comedy in One Act (Gandrup). 5.0 p.m.—Vocal and Instrumental Concert. (Musical Guessing Competition.) 6.30 p.m.—See Königswusterhausen. 7.30 p.m.—Popular Concert. 10.30 p.m.—Programme from Voxhaus 12.30 a.m. (Mon. approx.)—Close Down.

MADRID (Spain)

Union Radio (EAJ7). WL. 374 m. (802 kc); 1.5 kw. 11.30 a.m.—Selections by the Municipal Band. Relayed from the Parque del Retiro, Madrid. 11.45 a.m.—Orchestral Selections. 3.0 p.m.—Orchestral Concert from the Hotel Nacional. 7.0 p.m.—Programme for Children.

8.0 p.m.—Dance Music Programme. Programme relayed by San Sebastian EAJ8, 335 m. (895 kc). 10.0 p.m.—Chimes and Programme in Commemoration of the Third Anniversary of Union Radio. 12.30 a.m. (Mon. approx.)—Close Down.

MILAN (Italy)

Unione Radiofonica Italiana. WL. 549.3 m. (546 kc); 7 kw. 10.30 a.m.—Concert of Sacred Music. 12.30 p.m.—Quartet Concert. 3.30 p.m.—Concert. 1. Giralda (Cagnoni). 2. Soprano Solos. 3. Pianoforte Solos: (a) Barcarolle (Rachmaninoff), (b) Poème d'amore (Da Venezia). 4. Recital of Poems in Venetian Dialect. 5. Tenor Solo from "La Gioconda" (Ponchielli). 6. Selection from "Othello" (Verdi). 7. Cordova—Pianoforte Solo (Albeniz). 8. Tenor Solo from "Werther" (Massenet). 9. (a) Confidenza amorse (Capitani), (b) Hungarian Dance (Brahms). 4.45 p.m.—Programme for Children. 5.15 p.m.—Dance Music Programme, from the Cova Restaurant, Milan. 8.35 p.m.—Time. Talk on "The Battle of Pieve," by Col. Ambrogetti. 9.0 p.m.—"La Sonnambula"—Opera (Bellini). In the Interval: News and Sports Notes. 11.45 p.m. (approx.)—Close Down.

MUNICH (Germany)

Deutsche Stunde in Bayern. WL. 536 m. (550 kc); 4 kw. Relayed by Augsburg on 566 m. (530 kc); Kaiserslautern, 204.1 m. (1,480 kc); and Nürnberg, 241.9 m. (1,240 kc). 4.0 p.m.—"From Grandmother's Time." Songs and Music. 5.30 p.m.—Talk, "At the Source of Symphony," by Dr. Grunsky. 6.0 p.m.—Baritone and Flute Solos. 7.0 p.m.—Talk on "Michael Angelo." 7.50 p.m.—Local Sports News. 10.5 p.m.—Announcements and News. 10.30 p.m.—Mexican Concert from the Hotel Reichsadler, Munich. 12.30 a.m. (Mon. approx.)—Close Down.

NAPLES (Italy)

Unione Radiofonica Italiana (INA). WL. 313.3 m. (900 kc); 1.5 kw. 10.0 a.m.—Concert of Sacred Music. 4.45 p.m.—Weather Forecast. 4.55 p.m.—Variety Concert. 8.45 p.m.—Wireless Lesson. 8.50 p.m.—Concert. 1. "Il finto Stanislao" (Verdi). 2. Bass Solo from "Macbeth" (Verdi). 3. Soprano Solo from "I Lituani" (Ponchielli). 4. Baritone Solo from "Carmen" (Bizet). 5. Prelude to Act 1 of "The Huguenots" (Meyerbeer). 6. Duet for Soprano and Bass from "I Masnadieri" (Verdi). 7. Resurrection (Alfano). 8. Duet for Baritone and Bass, from "Ruy Blas" (Marchetti). 9. Aria from "The Force of Destiny" (Verdi). 10. Bass Solo from "Ernani" (Verdi). 11. Baritone Solo, from "Zaza" (Leoncavallo). 12. Prelude to the Fourth Act of "La Wally" (Catalani). 13. Duet for Soprano and Baritone, from "La Gioconda" (Ponchielli). 14. Selection from "Don Carlos" (Verdi). Sports Notes in Interval. 10.55 p.m.—Calendar, Programme Announcements, and Close Down.

PARIS (France)

Eiffel Tower (FL). WL. 2,650 m. (113 kc); 5 kw. 8.56 a.m.—Time Signal on 32.5 m. (9,231 kc). 10.26 a.m.—Time Signal on 2,650 m. 6.45 p.m.—"Le Journal Parlé": Talks on "Police Memoirs," "Health," and "Sports Events," etc. 8.10 p.m.—Weather Forecast. 8.20 p.m.—Concert by Mario Cazes and his Orchestra. 8.56 p.m.—Time Signal on 32.5 m. 11.26 p.m.—Time Signal on 2,650 m.

PARIS (France)

Petit Parisien. WL. 340.9 m. (880 kc); 0.5 kw. 8.45 p.m.—Gramophone Selections, Talk, Announcements and News. 9.0 p.m.—Concert. 1. "La Faute de l'Abbé Mouret"—Overture (Bruneau). 2. First Suite of the Ballet "Ascanio" (Saint-Saëns). 3. Symphony Orchestra: (a) First Part of the Unfinished Symphony (Schubert), (b) Concerto in D for Two Violins, Viola, Cello and Double Bass (Bach). 4. (a) Valse de l'Enfant, (b) Les Sortilèges (Debussy). 5. La Grande Duchesse de Gérolstein (Offenbach). 6. Marche américaine (Widor). News in Intervals.

PARIS (France)

Radio-Paris (CFR). WL. 1,765 m. (170 kc); 3 kw. 8.0 a.m.—News and Press Review,



**Programmes for Sunday.—(Cont.)**

12.0 noon.—Religious Address, Sacred Concert and News.  
 12.45 p.m.—Concert: Bilboquet Programme. Orchestral Programme: 1. Guitare (Lalo). 2. Selection from "Le Roi d'Ys" (Lalo). 3. Valse poudrée (Popy). 4. Sérénade enfantine (Volpatti). 5. A Sunday Promenade (Sadum). 6. En carriole (Porret).  
 4.30 p.m.—Dance Music, News.  
 8.0 p.m.—Agricultural Report, News.  
 8.15 p.m.—Radio-Paris Circus.  
 8.45 p.m.—Concert: 1. "Beatrice"—Overture (Berlioz). 2. Un dimanche basque (Laparra-Grécourt). 3. Chansons anciennes (Mascagni). 4. L'ami Fritz (Mascagni). 5. Recitations. 6. La princesse d'Elide (Bigot). 7. Selection from "The Tales of Hoffmann" (Offenbach). News in the Intervals.

**PITTSBURGH (U.S.A.)**  
 Westinghouse Electric (KDKA). WL 315.6 m. (950 kc); 50 kw. Relayed at intervals on 63 m. (4,762 kc) and 27 m. (11,111 kc). Transmits at intervals from 3.45 p.m.  
 11.15 p.m.—Baseball Announcements.  
 11.15 p.m.—Orchestral Concert from the William Penn Hotel.  
 12.0 midnight.—Time and Concert.  
 1.45 a.m. (Monday).—"Whittall Anglo-Persians" from WJZ, New York.  
 2.15 a.m.—Goldman Band Concert from WJZ, New York. Time Signal  
 3.15 a.m.—Baseball Scores and Time.  
 3.30 a.m. (approx.).—Close Down.

**PRAGUE (Czecho-Slovakia)**  
 Stranice. WL 348.9 m. (860 kc); 5 kw.  
 Transmits at intervals from 9.0 a.m.  
 6.0 p.m.—German Transmission.  
 7.15 p.m.—Agricultural Report and Popular Evening Programme.  
 9.0 p.m.—Exhibition Programme. Relayed from Brünn.  
 10.0 p.m.—Time and News.  
 10.20 p.m.—Orchestral Selections from the Exhibition at Brünn.

**ROME (Italy)**  
 Unione Radiofonica Italiana (IRO). WL 450 m. (666 kc); 3 kw.  
 6.0 p.m.—Dance Music Programme from the Casinetta, Rome.

9.10 p.m.—Instrumental Concert: 1. Andante for Harp and Organ (Nardini). 2. Symphony in G major, No. 13 (Haydn). 3. Talk, "The Theatre from an Armchair." 4. "Carnaval" (Glazounov). 5. Selections from "Hansel and Gretel" (Humperdinck). 6. Fashion Talk. 7. "Liszt"—Study in E major for Pianoforte (Paganini). 8. Toccata for Pianoforte (Sgambati). 9. March from "Lohengrin" (Wagner). 10. Le maschere—Pavane (Mascagni). 11. Hungarian Dance (Brahms).  
 11.20 p.m.—News and Close Down.

**SCHENECTADY (U.S.A.)**  
 General Electric Company (WGY). WL 379.5 m. (790 kc); 50 kw. Relayed by 2XAD on 21.96 m. (13,661 kc) from 11.0 p.m. Transmits at intervals from 4.0 p.m.  
 11.0 p.m.—"Stetson Parade"—American Legion Band, Boston.  
 12.0 midnight.—Hans Barth—Concert Pianist. Programme from New York.  
 12.25 a.m. (Mon.).—Baseball Scores.  
 12.30 a.m.—Capitol Theatre Programme relayed from New York.  
 2.0 a.m.—Talk, "Our Government," by David Lawrence, Washington.  
 2.15 a.m.—"Atwater Kent"—Programme relayed from New York.  
 2.45 a.m.—Time and "Biblical Drama." Relayed from New York.  
 3.15 a.m. (approx.).—Close Down.

**STAMBOUL (Turkey)**  
 Radio-Stamboul. Société Anonyme Turque de Téléphonie sans fil. WL 1,180 m. (254 kc); 5 kw.  
 4.30 p.m.—Orchestral Programme.  
 5.20 p.m.—Market Price Quotations.  
 6.15 p.m.—Concert of Turkish Music.  
 8.20 p.m.—Weather and Time.  
 8.30 p.m.—Concert. 1. Sonata for Violin and Pianoforte (Bach). 2. Trio (Franck).  
 10.0 p.m.—News and Close Down.

**STOCKHOLM (Sweden)**  
 Radiotjänst (SASA). WL 453.8 m. (661 kc); 1.5 kw. Relayed by Motala, on 1,380 m. (217 kc); Göteborg, 416 m. (721 kc); Malmö, 260.9 m. (1,150 kc); and Sundsvall, 545.8 m. (550 kc).

11.0 a.m.—Divine Service.  
 1.0 p.m.—Choral Concert from Karlstad: 1. Spring Song (Prince Gustaf). 2. Sing, Sing (Söderman). 3. Folksong (Alfven). 4. Bridal crossing on the Hardanger (Kjerulf). 5. When the fjord darkens (Poulsen). 6. Summer peace (Wieden). 7. Sleep, sleep sweetly (Wojlfart). 8. Sweden (Stenhammer). 9. Morning (Eklöf). 10. Air (Olson). 11. Jubilate (Kjerulf). 12. The Swedish Flag (Alfven).  
 2.30 p.m.—Running commentary on motor-boat races.  
 5.0 p.m.—Children's Programme.  
 6.0 p.m.—Divine Service.  
 7.0 p.m.—Open-air Choral Concert at the Swedish Congregational Church Meeting: 1. Unison Song. 2. Words of Greeting. 3. The Heavens (Peterson-Berger). 6. "The World is wonderful (arr. Lindberg). 8. Sweden (Stenhammer). 8. Short Address. 9. Open Wide the Gates (Lützel). 10. Great and Wonderful are Thy Works (Erikson). 11. Psalms No. 1 (Mendelssohn). 12. Selection (Grieg). 13. Conclusion of Meeting. 14. I Cannot Reach them All (Lindström). 15. The Sign of the Cross (Södersten). 16. Community Singing.  
 8.15 p.m.—Folk Music by Peasant Fiddlers and Pipers.  
 8.45 p.m.—Chamber Music.  
 9.40 p.m.—"The Clouds"—Comedy (Artistophanes).  
 10.40 p.m. (approx.).—Close Down.

**STUTTGART (Germany)**  
 Süddeutscher Rundfunk. WL 379.7 m. (790 kc); 4 kw.  
 11.15 a.m.—Morning Recital, followed by Promenade Concert and Gramophone Selections.  
 2.0 p.m.—Children's Programme.  
 3.0 p.m.—Football Match (Munich).  
 3.30 p.m.—Concert. 1. "Oberon" Overture (Weber). 2. A Godard Cycle (Urbach). 3. "Der Freischütz"—Overture (Weber). 4. Duet Annchen-Agatha from "Der Freischütz" (Weber). 5. Schubert Songs, (a) Wohin, (b) Des Baches Wiegenslied, (c) Heidenröslein, (d) Erlkönig. 6. Air from "Der Freischütz" (Weber). 7. Trio, Agatha-Annchen-Max from "Der Freischütz" (Weber). 8. Schumann Songs, (a) An den Sonnen-schein, (b) Volksliedchen, (c)

Marienwürmchen. 9. Fackeltanz (Meyerbeer). 10. Invitation to the Dance (Weber). 11. Prayer and Temple Dance from "Olaf Trygvason" (Grieg). 12. (a) Zum Schlafen, (b) Wenn die Linde blüht (Reger). 13. Air from "Turandot" (Puccini). 14. Air from "Die weisse Dame" (Boieldieu). 15. Duet from "La Traviata" (Verdi). 16. Selection from "Othello" (Verdi). 17. Psyche's Song from "Die toten Augen" (d'Albert). 18. Mimi's Song from "La Bohème" (Puccini). 19. (a) The Gardener, (b) Homesick (Wolff). 20. (a) A Sonntagmorgen, (b) Feldeinsamkeit, (c) Von ewiger Liebe (Brahms). 21. Selection from "Manon Lescaut" (Puccini).  
 6.0 p.m.—Time and Sports Notes.  
 6.15 p.m.—Recitations relayed from Freiburg.  
 6.45 p.m.—Contralto and Pianoforte Music from the Works of Arnold Mendelssohn.  
 7.25 p.m.—Missa Solemnis (Beethoven) from Hanover, followed by News and Sports Notes and Dance Music from Café-Restaurant, Wilhelmshaus. 1. Henriette—Foxtrot. 2. Thermen—Waltz. 3. Do the Black Bottom with me. 4. Mocoso—Tango. 5. If tears could bring you back. 6. Reaching for the moon—Foxtrot. 7. Good Night. 8. Together—Waltz. 9. We live, we love. 10. Du, nur du—Blues. 11. Without you sweetheart. 12. Children's Songs (Robrecht).

**TOULOUSE (France)**  
 Radiophonie du Midi. WL 389.6 m. (770 kc); 3 kw.  
 8.30 p.m.—Concert. 1. "Poet and Peasant"—Overture (Suppé). 2. "Mignon" (Thomas). 3. "Raymond." 4. "Semiramus" (Rossini). 5. "The Barber of Seville" (Rossini). 6. "Carmen" (Bizet). 7. "Manon" (Massenet). 8. "Le Roi d'Ys" (Lalo). 9. "Egmont" (Beethoven). 10. "Fra Diavolo" (Aubert). 11. "Les Saltimbanques" (Gannes). 12. "Lakmé" (Delibes). 13. "L'Arlesienne" (Bizet). 14. "Anacreon" (Cherubini). 15. "The Marriage of Figaro" (Mozart).  
 9.30 p.m.—Concert of Dance Music. 1. Murmure des fleurs—Waltz (de Blon). 2. Rose mouse—Valse Intermezzo (Bosc). 3. Réve de

fleurs—Valse Intermezzo (Trans-lateur). 4. Narcisse—Valse Intermezzo (Nevin). 5. Gold and Silver (Lehar). 6. Golden Rain (Wald-teufel).  
 10.15 p.m.—"North African" Journal.

**VIENNA (Austria)**  
 Radio-Wien. WL 577 and 517.2 m. (520 and 580 kc); 0.75 and 5 kw. Relayed by Innsbruck on 294.1 m. (1,020 kc) and Klagenfurt, on 272.7 m. (1,100 kc).  
 10.15 a.m.—Choral Concert.  
 11.0 a.m.—Concert. 1. Academic Carnival Overture (Brahms). 2. Melodies (Lafite): (a) Canzone, (b) Ständchen, (c) Schlusslied. 3. Concerto for Violin. 4. Melodips (Axt): (a) Die Frau vor dem Spiegel, (b) Und gegen Abend, (c) Es ist alles wie ein wunderbarer Garten. 5. Rossiniana (Respighi).  
 4.0 p.m.—Orchestral Concert.  
 5.45 p.m.—Travel Talk, "Tunis."  
 6.30 p.m.—Austrian Literature of the Present Day—Ballads.  
 7.30 p.m.—Relay from Schubert's Birthplace. 1. Songs. 2. Pianoforte Trio in B flat major. Op. 99.  
 8.30 p.m.—"Frasquita"—Operetta in Three Acts (Lehar).

**WARSAW (Poland)**  
 Polskie-Radio. WL 1,111.1 m. (270 kc); 10 kw.  
 10.15 a.m.—Divine Service. Relayed from Posen Cathedral.  
 1.0 p.m.—Time, Fanfare from Notre Dame at Cracow, Aviation Notes and Weather.  
 4.0 p.m.—Agricultural Talks.  
 5.0 p.m.—Orchestral Concert.  
 6.30 p.m.—Variety Selections.  
 7.10 p.m.—Talk, "In Scotland."  
 7.35 p.m.—Polish History Talk.  
 8.15 p.m.—Orchestral Concert.  
 10.0 p.m.—Time, Aviation Notes, Weather, News and Sports Notes  
 10.30 p.m.—Dance Music Programme from the Oaza Restaurant.  
 11.30 p.m. (approx.).—Close Down.

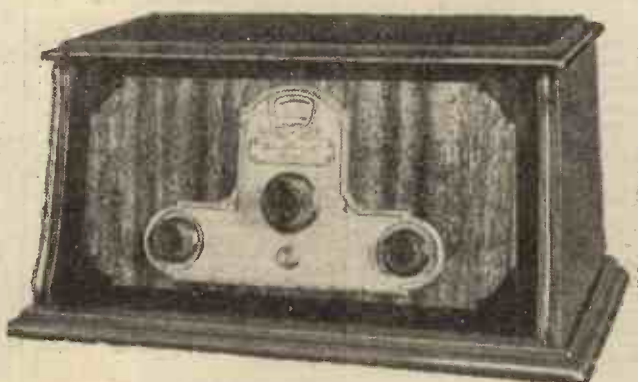
**ZURICH (Switzerland)**  
 Radio-Genossenschaft. WL 588.2 m. (510 kc); 1 kw.  
 7.30 p.m.—Catholic Address.  
 8.0 p.m.—Dance Music and Variety followed by Request Concert.  
 10.0 p.m.—News and Close Down.

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# PROGRAMMES FOR MONDAY

(June 18)

NOTE: THE HOURS OF TRANSMISSION ARE REDUCED TO BRITISH SUMMER TIME

**BARCELONA (Spain)**  
Radio-Barcelona (EAJ). WL. 344.8 m. (870 kc); 1.5 kw.  
Transmits at intervals from 11.0 a.m. to 10.15 p.m. (approx.).  
6.0 p.m.—Exchange Quotations.  
6.10 p.m.—Sextet Selections.  
8.30 p.m.—Talk, "Curious Customs of the People in Murcia."  
8.45 p.m.—Talk in Esperanto.  
9.0 p.m.—Exchange and News.  
9.5 p.m.—Humorous Review of the Week's Events in Verse.  
9.15 p.m.—Orchestral Selections by the "Cobla Barcelona."  
10.0 p.m.—Chimes and Weather.  
10.5 p.m.—Song Recital. 1. Song (Beethoven). 2. Lachen und wienen (Schubert). 3. Song (Moussorgsky). 4. El mestre (Barberá).  
10.30 p.m.—Orchestral Selections. Ivanka Czardas (Michiels). 2. Selections from "Boris Godounov" (Moussorgsky). 3. Movements from the Symphony in G major (Haydn).  
11.0 p.m. (approx.)—Close Down.

**BERGEN (Norway)**  
Kringkastingskap. WL. 369.9 m. (811 kc); 1.5 kw.  
Transmits at intervals from 11.15 a.m. to 10.15 p.m. (approx.).  
8.0 p.m.—Concert. 1. (a) Prelude, (b) Scandinavian Impressions (Söderman). 2. Congratulations (Peterson-Berger). 3. Swedish Folk Melodies and Dances (Eysden). 4. The flowers' song (Lange). 5. Dance of the insects (Svendsen). 6. In lonely hours (Bull). 7. Crescendo (Larsson).  
9.0 p.m.—Talk by Miss T. Freding.  
9.30 p.m.—Exhibition Orchestra.  
10.0 p.m.—Weather, News and Time.  
10.15 p.m. (approx.)—Close Down.

**BERLIN (Germany)**  
Königswusterhausen. WL. 1,250 m. (240 kc); 35 kw.  
Transmits at intervals from 12 noon to 10.15 p.m. (approx.).  
5.0 p.m.—Programme from Voxhaus.  
6.0 p.m.—Talk, "Midsummer Day Magic in Literature."  
6.30 p.m.—Elementary English Lesson.  
6.55 p.m.—Talk on "Forestry in the Coal District of the Ruhr."  
7.20 p.m.—Talk on "Water as the Friend and Enemy of Mankind."  
7.45 p.m.—Talk for Doctors.  
8.30 p.m.—Programme from Vienna.

**BERLIN (Germany)**  
Voxhaus. WL. 484.6 m. (619 kc); 4 kw.  
Transmits at intervals from 9.15 a.m. to 10.15 p.m. (approx.).  
5.0 p.m.—Concert. 1. Chamber Trio No. 3 for Oboe, Violin and Piano-forte (Handel). 2. Sonata for Viola, Op. 13, No. 2 (Böhmke). 3. Sonata for Piano-forte, in B flat major (Mozart). 4. Soprano Solo from "Il re Pastore" (Mozart). 5. Sonata in B flat major for Piano-forte and Violin (Mozart). 6. Trio for Two Oboes and Horn on the theme of Mozart's "Reich mir die Hand, mein Leben" (Beethoven). 7. Soprano Solos: (a) Der Jüngling an der Quelle, (b) Das Rosenband, (c) Seligkeit, (d) Rastlose Liebe (Schubert). 8. Fantasia for Piano-forte on "Carmen" (Busoni).  
6.10 p.m.—Four Piano-forte Pieces Op. 97 (Karl-Eller).  
6.45 p.m.—Talk, "Three Personalities of the German Stage."  
7.10 p.m.—Talk, "Work and Culture."  
7.35 p.m.—Talk, "The Art Exhibition."  
8.0 p.m.—Talk, "The Modern Racial Problem in Europe."  
8.30 p.m.—Programme from Vienna, followed by News, Weather, Time, Sports Notes and Close Down.

**BERNE (Switzerland)**  
Radio-Berne. WL. 411 m. (730 kc); 1.5 kw.  
Transmits at intervals from 1.0 p.m. to 10.15 p.m. (approx.).  
8.5 p.m.—Programme from Zurich.  
9.45 p.m.—News and Weather.  
10.0 p.m.—The Kursaal Orchestra.  
10.35 p.m. (approx.)—Close Down.

**BRESLAU (Germany)**  
Schlesische Funkstunde. WL. 322.9 m. (929 kc); 4 kw.  
Relayed by Gleiwitz on 329.7 m. (910 kc).  
Transmits at intervals from 11.15 a.m. to 10.15 p.m. (approx.).  
6.0 p.m.—Talk with Musical Illustrations "Choral and Madrigal Music at its Zenith."  
6.20 p.m.—Talk on Legal Affairs.

6.40 p.m.—Topical Events Review.  
7.35 p.m.—"Judas Maccabaeus"—Oratorio (Handel), relayed from Hanover.  
10.0 p.m.—News and Announcements.

**BRÜNN (Czecho-Slovakia)**  
Komarov. WL. 441.2 m. (680 kc); 2.4 kw.  
Transmits at intervals from 11.0 a.m. to 10.15 p.m. (approx.).  
6.25 p.m.—Agricultural Report.  
6.40 p.m.—Talk on History.  
7.0 p.m.—Cabaret Show Selections.  
8.30 p.m.—Programme from Vienna.  
10.15 p.m.—Exhibition Programme.

**BRUSSELS (Belgium)**  
Radio-Belgique. WL. 508.5 m. (590 kc); 1.5 kw.  
5.0 p.m.—Gramophone Selections.  
5.30 p.m.—Café Metropole Concert.  
6.0 p.m.—Talk, "History of Music."  
6.15 p.m.—Talk, "A few words à propos of elegance and breeding."  
6.30 p.m.—Trio Concert. 1. Viennese March (Popy). 2. Nocturne (Widor). 3. Me too (Harry Woods). 4. Pianoforte Solo—Tocattelle (Dupont). 5. Déjanice (Saint-Saëns). 6. Violin Solo—Schön Romarin (Kreisler). 7. (a) Attendez (d'Hardelet), (b) Brown Sugar (Barris), (c) Amabilis (Scasola). 8. "Cello-Solo—Canzonetta (Caludi). 9. Selection from "Les Cloches de Corneville" (Planquette).  
7.30 p.m.—Le Radio-Chronique.  
8.15 p.m.—Special Concert.  
9.0 p.m.—Talk on Topicalities.  
10.15 p.m.—News and Close Down.

**BUDAPEST (Hungary)**  
Magyar Telephon Hírmondo es Radio R.T. WL. 557.1 m. (538 kc); 25 kw.  
Transmits at intervals from 9.30 a.m. to 10.15 p.m. (approx.).  
7.0 p.m.—Wireless Correspondence.  
8.0 p.m.—German Language Lesson.  
8.40 p.m.—Orchestral and Instrumental Concert.  
10.0 p.m.—Time and News, followed by Programme of Gramophone Records.  
12.0 midnight (approx.)—Close Down.

**COLOGNE (Germany)**  
Westdeutscher Rundfunk. WL. 283 m. (1,060 kc); 4 kw.  
Transmits at intervals from 10.15 a.m. to 10.15 p.m. (approx.).  
1.5 p.m.—Orchestral Concert. 1. "Halka"—Overture (Moniuszko). 2. Suite from the Ballet "The Sleeping Beauty" (Tchaikovsky). 3. Soprano Solos: (a) Aria from "The Merry Wives of Windsor" (Nicolaï), (b) Jewel Song from "Faust" (Gounod). 4. Pastorale Suite (Schäfer).  
4.5 p.m.—Motherhood Talk for Women.  
4.25 p.m.—Series of Talks.  
5.15 p.m.—See Langenberg Stations.  
6.0 p.m.—Concert. 1. "Fingal" Cave"—Overture (Mendelssohn). 2. Floradora—Waltz (Stuart). 3. Pierrot's Birthday (Monti). 4. Abendruhe (Frederiksen). 5. Concerto for Clarinet (Spohr). 6. Slavonic Dances (Ferber). 7. Little Viennese March (Kreisler).  
7.20 p.m.—Spanish Language Lesson.  
7.45 p.m.—Talk for Parents, "Our Children's Craving for Pleasure."  
8.5 p.m.—Report on the Olympic Football Match at Amsterdam.  
8.15 p.m.—"The Judge of Zalamea"—Play (Calderon-Knier). After the Play, Report on the Olympic Football Match at Amsterdam, News, Sports Notes, Musical Selections and Dance Music Programme.  
12.0 midnight (approx.)—Close Down.

**COPENHAGEN (Denmark)**  
Copenhagen Radio. WL. 337.4 m. (889 kc); 1 kw.  
Relayed by Kalundborg on 1,153.8 m. (260 kc).  
Transmits at intervals from 7.30 a.m. to 10.15 p.m. (approx.).  
6.20 p.m.—English Language Lesson.  
6.50 p.m.—Weather, News, Exchange.  
7.15 p.m.—Time and Talk.  
8.0 p.m.—Town Hall Chimes.  
8.5 p.m. (approx.)—Orchestral and Soloist Concert, followed by News.  
9.30 p.m.—Orchestral Concert.  
10.45 p.m. (approx.)—Close Down.

**CORK (Ireland)**  
Cork Broadcasting Station (6CK). WL. 400 m. (750 kc); 1.5 kw.  
2.30 p.m.—Weather, Stock Market Report, and Gramophone Records.  
6.15 p.m.—Programme from Dublin.

**CRACOW (Poland)**  
Polskie-Radio. WL. 567 m. (529 kc); 1.5 kw.  
Transmits at intervals from 12.0 noon to 10.15 p.m. (approx.).  
7.15 p.m.—Agricultural Report.  
7.30 p.m.—Variety Selections.  
7.30 p.m.—French Language Lesson.  
8.0 p.m.—Fanfare and Sports Notes.  
8.30 p.m.—Programme from Vienna.  
10.0 p.m.—Programme from Warsaw.  
10.30 p.m. (approx.)—Close Down.

**DUBLIN (Ireland)**  
Dublin Broadcasting Station (2RN). WL. 319.1 m. (940 kc); 1.5 kw.  
Transmits at intervals from 1.30 p.m. to 10.15 p.m. (approx.).  
6.15 p.m.—Programme for Children.  
7.0 p.m.—Gramophone Records.  
7.20 p.m.—News, and Irish Lesson.  
7.45 p.m.—Health Talk, by Mrs. Russell.  
8.0 p.m.—"Round the Map," by Orchestra.  
8.15 p.m.—"Tramping"—Duet and Solos by Eileen Knowles (Contralto) and Ina Flynn (Soprano).  
8.30 p.m.—Quintet Chamber Music.  
9.0 p.m.—Agnes O'Kelly (Contralto).  
9.15 p.m.—The Station Orchestra.  
9.30 p.m.—Fay Sargent and Jimmy O'Dea (Entertainers) in Variety.  
10.0 p.m.—The Traditional Trio.  
10.30 p.m.—News and Close Down.

**FRANKFURT-am-MAIN (Germany)**  
Südwestdeutscher Rundfunk. WL. 420 m. (699 kc); 4 kw. Relayed by Cassel on 252.1 m. (1,190 kc).  
Transmits at intervals from 4.30 p.m. to 10.15 p.m. (approx.).  
6.15 p.m.—Wireless Notes and News.  
6.30 p.m.—Illustrated Chess Talk.  
7.0 p.m.—Talk, "Problems of Child Welfare," by Rev. Erich Mayer.  
7.30 p.m.—Selected English Literature.  
7.45 p.m.—English Language Lesson.  
8.15 p.m.—Programme from Stuttgart followed by Beethoven Concert.

**GRAZ (Austria)**  
Oest. Radio-Verkehr. WL. 355 m. (845 kc); 0.5 kw.  
4.05 p.m.—Orchestral Concert.  
6.0 p.m.—Talk, "Chess Problems."  
6.30 p.m.—Shorthand Lesson.  
7.0 p.m.—Serbisch-Croatian Lesson.  
7.30 p.m.—Programme from Vienna.

**HAMBURG (Germany)**  
Norag (ha, in Morse). WL. 396 m. (757 kc); 4 kw. Relayed by Bremen on 272.7 m. (1,100 kc); and Kiel, 297.9 m. (1,007 kc); and Hanover, 255 m. (1,170 kc).  
Transmits at intervals from 5.45 a.m. to 10.15 p.m. (approx.).  
6.30 p.m.—See Königswusterhausen.  
7.0 p.m.—Talk by Dr. Th. Cassan.  
7.20 p.m.—Weather Report.  
7.30 p.m.—"Judas Maccabaeus"—Oratorio (Handel) relayed from the Stadthalle, Hanover, followed by News, Sports Notes, Ice Report and Silent Night.

**HILVERSUM (Holland)**  
Algemeene Vereeniging Radio-Ompreep. WL. 1,069 m. (280 kc); 5 kw.  
11.40 a.m.—Police Information.  
12.10 p.m.—Lunchtime Concert.  
4.20 p.m.—Programme for Children.  
5.40 p.m.—Orchestral Concert. 1. "Eleonora"—Overture (Donizetti). 2. Ein Fest in Gnomemreich—Ballet (Witteborn). 3. Madrigale (Drdla). 4. Czardas No. 1 (Michiels). 5. Selection from "Day and Night" (Lecocq). 6. Pearls of Love—Waltz (Jos. Strauss). 7. The Lotus Flower—Interlude (Lincke). 8. La Toupie (Gillet). 9. Columbia March (Rust).  
6.55 p.m.—French Olympic Lesson.  
7.25 p.m.—Police News and Time.  
7.55 p.m.—Concert. Relayed from the Kurhaus, Scheveningen. 1. "The Marriage of Figaro" (Mozart). 2. Soprano Solo from "Der Freischütz" (Weber). 3. Danse macabre (Saint-Saëns). 4. (a) Chanson triste, (b) Invitation au voyage (Duparc). 5. Selections from "The Damnation of Faust" (Berlioz).

**HUIZEN (Holland)**  
WL. 341 m. (879 kc); 4 kw. (until 6.40 p.m.). Transmits from 6.40 p.m. on 1,870 m. (160 kc).  
12.40 p.m.—Concert by M. J. Vincent, Carillonleur of the Royal Palace, Amsterdam.  
4.0 p.m.—Programme for Hospitals.  
6.55 p.m.—Talk on Photography.  
8.16 p.m.—Singing Lesson.  
8.40 p.m.—Concert by mixed choir children's choir and soloists, followed by Talks.

**JUAN-LES-PINS (France)**  
Radio LL. WL. 230 m. (1,304 kc); 0.25 kw.  
1.0 p.m.—Orchestral Concert.  
9.0 p.m.—News, followed by Programme of Talks.  
10.0 p.m.—Casino Dance Bands.

**KATTOWITZ (Poland)**  
Polskie Radio. WL. 422 m. (710 kc); 12 kw.  
Transmits at intervals from 5.0 p.m. to 10.15 p.m. (approx.).  
6.15 p.m.—Dance Music Programme.  
6.55 p.m.—Reading in French.  
7.15 p.m.—Announcements and Talk.  
8.0 p.m.—Polish Language Lesson.  
8.30 p.m.—Concert Relay from Vienna.  
10.0 p.m.—Time, News and Close Down.

**KÖNIGSBERG (Germany)**  
Ostmarken Rundfunk. WL. 303.6 m. (988 kc); 4 kw. Relayed by Danzig on 272.7 m. (1,100 kc).  
Transmits at intervals from 6.15 a.m. to 10.15 p.m. (approx.).  
6.20 p.m.—Reading of Sketches and Narratives from his own Works, by Eugen Kalkschmidt.  
7.25 p.m.—"Judas Maccabaeus"—Oratorio (Handel), from Hanover, followed by Weather, News and Sports Notes.  
10.0 p.m.—Orchestral Concert. 1. La belle meuniere (Michiels). 2. Waldfantasie (Thiele). 3. Tchaikovsky Fantasia (Becce). 4. Andalusian Serenades (Jessel). 5. Vision (Mascagni). 6. Viennese Dance (Bach). 7. Ein Ballnachtstraum (Stransky). 8. Mondnacht am Rheinsberger See (Blon).  
11.30 p.m. (approx.)—Close Down.

**KOVNO (Lithuania)**  
Radio-Kaunas. WL. 2,000 m. (150 kc); 15 kw.  
Transmits at intervals from 12 noon to 10.15 p.m. (approx.).  
9.0 p.m.—Trio Concert. 1. Quintessenzen—Potpourri (Morena). 2. Barcarolle—Waltz (Waldteufel). 3. Dodelinette (Godard). 4. Weine nicht, Mütterlein (Neujalis). 5. Schelm-Amour. 9.—Intermezzo (Rhadol). 6. Andante Cantabile (Tchaikovsky). 7. Intermezzo from "Salome" (Laraine).

**LANGENBERG (Germany)**  
Westdeutscher Rundfunk. WL. 470.9 m. (637 kc); 25 kw. Programme also for Aix-la-Chapelle, 401 m. (748 kc); Cologne, 283 m. (1,060 kc); and Münster, 250 m. (1,200 kc).  
Transmits at intervals from 10.15 a.m. to 10.15 p.m. (approx.).  
5.15 p.m.—Educational Talk, from the Educational Academy, Bonn.  
6.0 p.m.—12.0 midnight—Programme relayed from Cologne.

**LAHTI (Finland)**  
WL. 1,522.8 m. (197 kc); 25 kw. Programme also for Helsingfors, 275.9 m. (798 kc); 1.2 kw.  
11.0 a.m.—Exchange and Music.  
11.30 a.m.—Exchange and News.  
11.59 a.m.—Time and Weather.  
5.57 p.m.—Time, Weather and News.  
6.15 p.m.—Concert. 1. "Jean de Paris"—Overture (Boieldieu). 2. Valse (Waldteufel). 3. Selection from "Madame Butterfly" (Puccini). 4. Variety Music and Songs. 5. March (Fucik). 6. Wine, Women and Song (Strauss). 7. Waltz from "Eve" (Lehár). 8. Hungarian Dances (Brahms). 9. Valse (Gungl). 10. Serenata amorosa (Becce). 11. Selection from "The Little Dutch Girl" (Kálmán). 12. March (Raéeck).  
8.30 p.m.—Agricultural Report.  
8.45 p.m.—News Bulletin given in Finnish and Swedish.  
9.15 p.m.—Relay from a Restaurant.  
10.0 p.m. (approx.)—Close Down.

**LAUSANNE (Switzerland)**  
Société Romande de Radiophonie. WL. 680 m. (441 kc); 1.5 kw.  
Transmits at intervals from 6.45 a.m. to 10.15 p.m. (approx.).  
8.0 p.m.—Weather, followed by Recital of French Songs.  
8.30 p.m.—Orchestral Concert. 1. Marche printanière (Mouton). 2. "The Merry Wives of Windsor" Selection (Nicolaï). 3. Célèbre canzonetta (Mendelssohn). 4. Véronique (Messenger). 5. Ave Maria (Gounod). 6. "Kunstlerleben (Strauss). 7. Selection (Gillet). 8. Suite gaie (Gabriel-Marie).

**LEIPZIG (Germany)**  
Mitteldeutscher Rundfunk. WL. 366 m. (818 kc); 4 kw. Relayed by Dresden, on 275.2 m. (1,090 kc).

Transmits at intervals from 10.0 a.m. to 10.15 p.m. (approx.).  
4.30 p.m.—Orchestral Concert.  
6.30 p.m.—See Königswusterhausen.  
7.0 p.m.—Talk, "The Naumberg Cathedral."  
7.30 p.m.—Horticultural Talk.  
8.0 p.m.—Weather and Time.  
8.15 p.m.—Concert. 1. Violin Solos: (a) German Dance (Mozart), (b) Viennese Folk Song (Kreisler), (c) Burla (Reger). 2. Songs to the Lute: (a) Das wackere Jüngferlein, (b) Mein Schatz, wenn du zum Tanze gehst. 3. Songs: (a) Der Tambour, (b) Storchenvotschaft, (c) Abschied. 4. Violin Solos: (a) Promenade from "Erinnerungen am Bosphorus" (Cen-tola), (b) Gipsy Dance (Jeral). 5. Two North German Dances: (a) Schottisch in de Köck, (b) Die drei Mamsellen. 6. Songs: (a) Der fröhliche Musikus (Mattieson), (b) Das Huhn und der Kampfen (Mattieson), (c) Kirmestanz (Volkmann). 7. Songs to the Lute: (a) Das Harfenjucheln, (b) Der Schneider von Kötzschenbroda.  
9.30 p.m.—Literary Programme. Petronius—his Life and Works.  
10.30 p.m.—News and Sports Notes.  
10.45 p.m.—Dance Music Programme and Concert of Light Music.  
12.0 midnight (approx.)—Close Down.

**LILLE (France)**  
PTT. WL. 267 m. (1,122 kc) 0.5 kw.  
Transmits at intervals from 12.30 p.m. to 10.15 p.m. (approx.).  
7.0 p.m.—Talk in Esperanto.  
7.30 p.m.—Prices of Market Goods.  
7.40 p.m.—Concert of Choral Music: 1. Le Tyrol (Thomas). 2. (a) Chanson Hindoue (Rimsky-Korsakoff); (b) Caprice Viennois (Kreisler). 3. Pays Natal (Nadaud). 4. La Patrie aux soldats morts (Verhaeren). 5. "Samson and Delilah"—Aria (Saint-Saëns). 6. Talk on "The Nadaud Choral Society." 7. "Au Tombeau des Janissaires"—Choral scene (Lim-nander). 8. Flute and Piano-forte Solos: (a) Pensée grise (Gallois); (b) Gavotte (Lorillet). 9. "Lohengrin"—Tenor Solo (Wagner). 10. Vienne histoire (Nadaud). 11. Plaisir d'amour (Martini). 12. Re-traité, followed by News Bulletin.

**MADRID (Spain)**  
Union Radio (EAJ7). WL. 374 m. (802 kc); 1.5 kw.  
Transmits at intervals from 11.45 a.m. to 10.15 p.m. (approx.).  
7.0 p.m.—Concert. 1. El amor en solfa (Serrano and Chapi). 2. La montaña negra (Holmes). 3. Reading of Poems. 4. Selection from "The Geisha" (Jones).  
8.0 p.m.—Dance Music Programme.  
8.30 p.m. (approx.)—Close Down.

**MILAN (Italy)**  
Unione Radiofonica Italiana. WL. 549.3 m. (546 kc); 7 kw.  
Transmits at intervals from 12.15 p.m. to 10.15 p.m. (approx.).  
7.47 p.m.—English Language Lesson.  
8.35 p.m.—Time followed by Lesson in Technical, Wireless.  
8.45 p.m.—Relay of an Opera. In the interval—Talk.  
10.55 p.m.—News, followed by Dance Music relayed from the Riaschetta Toscana, Milan.  
11.30 p.m. (approx.)—Close Down.

**MUNICH (Germany)**  
Deutsche Stunde in Bayern. WL. 536 m. (550 kc); 4 kw. Relayed by Augsburg, on 566 m. (530 kc); Kaiserlautern, 204.1 m. (1,480 kc); and Nurnberg, 241.9 m. (1,240 kc).  
Transmits at intervals from 12.55 p.m. to 10.15 p.m. (approx.).  
6.15 p.m.—Agricultural Report.  
6.30 p.m.—Agricultural Talk.  
7.0 p.m.—Talk, "Judas Maccabaeus."  
7.25 p.m.—"Judas Maccabaeus"—Oratorio (Handel), relayed from the Stadthalle, Hanover.  
10.5 p.m.—Announcements and News.  
10.20 p.m.—Gramophone Selections.  
10.30 p.m. (approx.)—Close Down.

**NAPLES (Italy)**  
Unione Radiofonica Italiana (INA). WL. 333.3 m. (900 kc); 1.5 kw.  
Transmits at intervals from 2.0 p.m. to 10.15 p.m. (approx.).  
8.40 p.m.—Time and News, followed by Harbour Notes.  
8.50 p.m.—"Ernani"—Opera (Verdi).  
10.55 p.m.—Calendar and Announcements.  
11.0 p.m. (approx.)—Close Down.

**PARIS (France)**  
Eiffel Tower (FL). WL. 2,650 m. (113 kc); 5 kw.  
8.56 a.m.—Time Signal on 2,650 m. (113 kc).  
10.26 a.m.—Time Signal on 2,650 m.



### Programmes for Monday.—(Cont.)

6.45 p.m.—"Le Journal Parlé." Talks on "Art," "The Theatre" and "New Things in Wireless."  
 8.10 p.m.—Weather Forecast.  
 8.30 p.m.—"Le dernier Valois"—Comedy (Dupeyrat). Music by Gaston Selz. At 8.56 p.m. Time Signal on 32.5 m. (9.231 kc).  
 9.30 p.m.—Educational Programme Talks on "Imaginary Invalides," "Electricity," etc.  
 11.26 p.m.—Time Signal on 2,650 m.

#### PARIS (France)

Radio-Paris (CFR). WL 1,765 m. (170 kc); 3 kw.  
 Transmits at intervals from 7.30 a.m. 12.30 p.m.—Concert. 1. Illys (Ganne). 2. Waltz from "Der Rosenkavalier" (R. Strauss). 3. Orchestral Suite (Lazzari). 4. Danse macabre (Saint-Saëns). 5. Bouton d'or (Pierne). 6. Au village (Mouquet). 7. Selection from "The Merry Widow" (Lehár), News in the interval.  
 1.30 p.m.—Market Prices, Bourse.  
 3.30 p.m.—Exchange Quotations.  
 3.45 p.m.—Concert. 1. "Der Freischütz"—Overture (Weber). 2. Violin Sonata (Saint-Saëns). 3. Aragonaise (de Falla). 4. Pianoforte Solos: (a) Paysage (Wurmser), (b) Valse poétique (Galeotti). 5. Feuillet d'Album (Chabrier). 6. "Cello Solos—Deux Pièces (Jullien). 7. Selection from "The Tales of Hoffmann" (Offenbach).  
 4.45 p.m.—Exchange and News.  
 8.0 p.m.—Agricultural Report.  
 8.15 p.m.—Exchange and News.  
 8.30 p.m.—Talk on Gardening.  
 8.45 p.m.—Concert. 1. "Les Gaités de l'Escadron"—Comic Scenes (Courteline). 2. Duet from "Beatrice and Benedict" (Berlioz). 3. Duet (Rubinstein). 4. Chamber Music. News in the Intervals.

#### PITTSBURGH (U.S.A.)

Westinghouse Electric (KDKA). WL 315.6 m. (950 kc); 50 kw. Relayed at intervals on 63 m. (4,762 kc) and 27 m. (11,111 kc).  
 Transmits at intervals from 3.0 p.m. 11.0 p.m.—Time and Baseball Scores.  
 11.10 p.m.—Theatrical Calendar.  
 11.15 p.m.—Orchestral Concert from the William Penn Hotel.

11.55 p.m.—Baseball Announcements.  
 12 midnight—(In the interval) Time.  
 12.30 a.m. (Tuesday).—4.0 a.m.—Programme from WJZ, New York.  
 12.30 a.m.—"Roxy's Gang" Programme.  
 2.0 a.m.—"Riverside Hour" Programme.  
 2.30 a.m.—"Marimba Melodies."  
 3.0 a.m.—Time and Programme from the Works of Great Composers.  
 4.0 a.m.—Time, Weather, Baseball Scores and Close Down.

#### POSEN (Poland)

Polskie-Radio. WL 343 m. (874 kc); 1.5 kw.  
 Transmits at intervals from 1.0 p.m. 6.55 p.m.—Talk, "Silva Rerum."  
 7.15 p.m.—French Language Lesson.  
 7.35 p.m.—Talk on "Andalusia."  
 8.0 p.m.—Finance Report.  
 8.30 p.m.—Programme from Vienna.  
 10.0 p.m.—Time, News, Weather, Announcements and Variety Selections.  
 10.50 p.m. (approx.)—Close Down.

#### PRAGUE (Czecho-Slovakia)

Strasnice. WL 348.9 m. (860 kc) 5 kw.  
 Transmits at intervals from 11.0 a.m. 5.50 p.m.—German Transmission.  
 6.15 p.m.—Agricultural Report.  
 6.25 p.m.—Talk for Workers.  
 6.35 p.m.—French Language Lesson.  
 7.15 p.m.—Dance Music Programme.  
 8.0 p.m.—Dramatic Selections.  
 8.30 p.m.—Programme from Vienna.  
 10.0 p.m.—Time, News, Orchestra.

#### ROME (Italy)

Unione Radiofonica Italiana (IRO). WL 450 m. (666 kc); 3 kw.  
 Transmits at intervals from 12.30 p.m. 8.30 p.m.—French Language Lesson.  
 8.58 p.m.—Time, News and Weather.  
 9.15 p.m.—Concert. 1. Suite from " Sylvia " (Delibes). 2. Soprano Solos: (a) Raggi d'oro, (b) Abbiamo scherzato (Anzelmo). 3. Guitar Solos: (a) Prelude (Ponce). (b) Festa in giardino (Chavarrri). 4. Monelli in testa (Criscuolo). 5. Solitudine—Tenor Solo (Silvestri). 6. Duet for Soprano and Tenor from "La Piccola Cioccolataia" (Schinelli). 7. "La Catena d'Oro"

—Comedy (Zambaldi). 8. Guitar Solos: (a) Preqhiera (Mertz), (b) Gitana (Chavarrri). 9. Selections from "Boccaccio" (Suppé). 10. Italia Imperiale—March (Consorti).  
 11.20 p.m.—News and Close Down.

#### SCHENECTADY (U.S.A.)

General Electric Company (WGY). WL 379.5 m. (790 kc); 50 kw. Relayed by 2XAF on 31.4 m. (9,554 kc) from 11.0 p.m. Transmits at intervals from 11.45 a.m. 11.0 p.m.—Stock Reports and News.  
 11.25 p.m.—Baseball Announcements.  
 11.30 p.m.—Dinner Music Programme. Relayed from the Hotel van Cuvler.  
 12.25 a.m. (Tuesday). — Baseball Scores.  
 12.30 a.m.—General Electric—Edison Electric Appliance Programme.  
 1.30 a.m.—4.0 a.m. (approx.)—Programme relayed from New York.  
 1.30 a.m.—"The A. and P. Gipsies."  
 2.30 a.m.—General Motors' Family Party, followed by Concert.  
 3.30 a.m.—Fisk "Time to Retire, Boys," Variety Programme.  
 4.0 a.m.—Time and "Max Smith and His Cavaliers," from Rochester.  
 4.30 a.m. (approx.)—Close Down.

#### STAMBOUL (Turkey)

Radio-Stamboul. Société Anonyme Turque de Téléphonie sans fil. WL 1,280 m. (254 kc.); 5 kw.  
 Transmits at intervals from 4.30 p.m. 6.15 p.m.—Concert of Turkish Music.  
 8.20 p.m.—Weather and Time.  
 8.30 p.m.—Concert: 1. Selection from "Madame Butterfly" (Puccini). 2. Melody (Gluck). 3. "Cello Solo: Chant d'amour (Cassella). 4. Minuet (Beethoven). 5. March from "Aida" (Verdi).  
 10.0 p.m.—News and Close Down.

#### STOCKHOLM (Sweden)

Radiojäst (SASA). WL 453.8 m. (661 kc); 1.5 kw. Relayed by Motala on 1,380 m. (217 kc); Göteborg, 416 m. (721 kc); Malmö, 260.9 m. (1,150 kc); and Sundsvall, 545.8 m. (550 kc).  
 Transmits at intervals from 12.35 p.m. 6.0 p.m.—Children's Programme.  
 6.30 p.m.—Concert of Finnish Music.  
 1. Swedish Song (Hagfors). 2. Summer March (arr. Anderson). 3. Min brutna ros (arr. Andersson).

4. Thou art so lovely in my eyes (arr. Ekman). 5. My Beloved (Merikanto). 6. Folksong (Hannikainen). 7. Sunshine (Jarnefelt). 8. Kuoleman puutarka, Op. 41 (Mado-toja). 9. Lastuja No. 1 (Melaryin). 10. It was a lovely summer eve (arr. Ekman). 11. The peasant drives to the firwood (Ekman). 12. The shepherd and the shepherdess (Anderssen). 13. Our Land (Pacius).  
 7.25 p.m.—Talk, "Foreign Affairs."  
 7.45 p.m.—Concert of Light Music.  
 8.15 p.m.—Folk Music from Sundsvall.  
 8.45 p.m.—Talk, "Viktor Rydberg's Birth Place," by Herr Dalbäck.  
 9.40 p.m.—German Talk, "The Country Between Two Powers—Austria," by Dr. Hermann Herz.  
 10.0 p.m. (approx.)—Close Down.

#### STUTT GART (Germany)

Süddeutscher Rundfunk. WL 379.7 m. (790 kc); 4 kw.  
 Transmits at intervals from 12.30 p.m. 6.0 p.m.—Time and Weather.  
 6.15 p.m.—Economics, Finance and Exchange Notes.  
 6.45 p.m.—Wireless Talk.  
 7.15 p.m.—Talk on the operas, "The Protagonist" and "Der Zar lässt sich photographieren."  
 7.45 p.m.—Time and Weather.  
 8.0 p.m.—Concert. 1. Quartet for pianoforte, clarinet, viola and cello (Kaminski). 2. Frauentanz for soprano, flute, clarinet, bassoon, horn and viola (Weill). 3. Duet for violin and cello (Kodalky).  
 15 p.m.—"Swabian Peasant Wedding"—Play (Georg Ott). News.

#### TOULOUSE (France)

Radiophonie du Midi. WL 389.6 m. (770 kc); 3 kw.  
 8.30 p.m.—Concert. 1. "Pelleas and Melisande"—Part 1 (Debussy). 2. Dance Music: (a) Girl of my Dreams—Waltz, (b) Original Dixieland—One-step, (c) My gal Sal—Foxtrot, (d) The hours I spent with you—Waltz, (e) Marianetta—Waltz; (f) I fell head over heels in love, (g) Who knows. 3. Accordion Selections: (a) Reine de musette, (b) Les triolets, (c) L'entrainante, (d) Martalette, (e) La bourrasque, (f) Plaisance.  
 10.15 p.m.—"North African" Journal.

#### VIENNA (Austria)

Radio-Wien. WL 577 and 517.4 m. (520 and 580 kc); 0.75 and 3 kw. Relayed by Innsbruck on 294.1 m. (1,020 kc); and Klagenfurt on 272.7 m. (1,100 kc).  
 S.B. Berlin, Warsaw, Posen, Prague. 8.30 p.m.—International Concert. 1. "Te Deum for Four Soloists, two Violins, Bass and Organ (Mozart). 2. The Twenty-third Psalm. 3. Laudate pueri. 4. Mass in A flat major for Four Soloists, Orchestra and Organ (Schubert).

#### WARSAW (Poland)

Polskie-Radio. WL 1,111.1 m. (270 kc); 10 kw.  
 Transmits at intervals from 12.0 noon 6.18 p.m.—Dance Music Programme.  
 7.5 p.m.—Agricultural Report.  
 7.15 p.m.—Variety Selections.  
 7.35 p.m.—Elementary French Lesson.  
 8.0 p.m.—Talk, "In the Land of a Thousand Lakes," by Mr. Gorzuchowski.  
 8.30 p.m.—Programme from Vienna. News in French in the interval.  
 10.0 p.m.—Time, Aviation Notes, Weather, News and Sports Notes.  
 10.30 p.m. (approx.)—Close Down.

#### WILNO (Poland)

Polskie Radio. WL 435 m. (689 kc); 0.5 kw.  
 Transmits at intervals from 12.0 noon 5.0 p.m.—Gramophone Records.  
 5.15 p.m.—News in Lithuanian.  
 5.45 p.m.—Talk, "Witch Trials."  
 6.10 p.m.—Concert of Light Music from the Jardin B. Sztral.  
 7.5 p.m.—Programme for Children.  
 7.30 p.m.—Talk, "The Jews in Wilno During the Last Eighty Years."  
 7.55 p.m.—News and Announcements.  
 8.15 p.m.—Programme from Warsaw.

#### ZURICH (Switzerland)

Radio Genossenschaft. WL 588.2 m. (510 kc); 1 kw.  
 Transmits at intervals from 12.30 p.m. 7.45 p.m.—Time and Weather.  
 7.47 p.m.—Talk, "From Arnold Ott to Jakob Bühner," by Dr. Lang.  
 8.15 p.m.—Musical Selections from the Works of Old Masters.  
 9.0 p.m. (approx.)—Reading.  
 9.10 p.m. (approx.)—Orchestra.  
 10.0 p.m.—Weather, News, Close Down.

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# PROGRAMMES FOR TUESDAY (June 19)

**NOTE: THE HOURS OF TRANSMISSION ARE REDUCED TO BRITISH SUMMER TIME**

**BARCELONA (Spain)**  
Radio-Barcelona (EAJI). WL. 344.8 m. (870 kc); 1.5 kw.  
Transmits at intervals from 11.0 a.m.  
6.0 p.m.—Exchange Quotations.  
6.10 p.m.—Review of Fashion.  
6.30 p.m.—Sextet Selections.  
8.40 p.m.—English Language Lesson.  
9.0 p.m.—Exchange and News.  
9.5 p.m.—Orchestral Selections. 1. The Liberator's—March (Ancliffe). 2. Valse romantique (Raurich). 3. Selection from "The Shadow of Damascus" (Luna).  
9.30 p.m.—Humorous Recitations.  
9.50 p.m.—Orchestral Selections. 1. Prelude to the Suite "España" (Albéniz). 2. "Queen of Autumn"—Overture (Biggè).  
10.0 p.m.—Chimes and Weather.  
10.5 p.m.—Choral Selections.  
11.0 p.m. (approx.)—Close Down.

**BERGEN (Norway)**  
Kringkastingsselskap. WL. 369.9 m. (811 kc); 1.5 kw.  
Transmits at intervals from 11.15 a.m.  
8.0 p.m.—Concert. 1. Wedding Waltz (Dohnanyi). 2. Selection from "La Tosca" (Puccini). 3. Melodies (Rachmaninoff). 4. (a) Romantic Ode, (b) The Witches' Sabbath (Lülin). 5. Indian Summer—Intermezzo (Moret). 6. Indian War Dance (Lumbye).  
9.0 p.m.—American Songs. 1. Ave Maria (Rosergiv). 2. West of the Great Divide (Ball). 3. Let the End of the World Come Tomorrow (Ball). 4. Invictus (Huhn). 5. Adelaï (Calleja). 6. Moonlight and Roses (Lemare).  
9.30 p.m.—Talk, "The Indians of North America," by L. Lea.  
10.0 p.m.—Weather, News and Time.  
10.15 p.m. (approx.)—Close Down.

**BERLIN (Germany)**  
Königswusterhausen. WL. 1,250 m. (240 kc); 35 kw.  
Transmits at intervals from 12.0 noon.  
5.0 p.m.—Programme from Leipzig.  
6.0 p.m.—Talk, "Dramatic Art Throughout the Ages." Scene from "Cantus."  
6.30 p.m.—Elementary French Lesson.  
6.55 p.m.—Talk, "Introduction to the Study of Plastic Art."  
8.10 p.m.—Programme from Voxhaus.

**BERLIN (Germany)**  
Voxhaus. WL. 484.6 m. (619 kc); 4 kw.  
Transmits at intervals from 10.10 a.m.  
5.0 p.m.—Orchestral Concert from the Ostseebad Heringsdorf.  
6.45 p.m.—Talk on "Health Insurance."  
7.10 p.m.—Talk, "Unknown Health Resorts in Germany," by W. Norbert.  
7.40 p.m.—Talk, "The World Powers in their Political and Economic Importance—Russia."  
8.10 p.m.—"Eva"—Operetta (Lehár) followed by News, Weather, Sports Notes, Time, and Close Down.

**BERNE (Switzerland)**  
Radio-Berne. WL. 411 m. (730 kc); 1.5 kw.  
Transmits at intervals from 1.0 p.m.  
8.0 p.m.—Time and Weather.  
8.5 p.m.—Talk, "History of Wireless."  
8.30 p.m.—The Kursaal Orchestra.  
8.45 p.m.—Yodel Scene (Grunder).  
9.45 p.m.—News and Weather.  
10.0 p.m.—The Kursaal Orchestra.  
10.35 p.m. (approx.)—Close Down.

**BRESLAU (Germany)**  
Schlesische Funkstunde. WL. 322.9 m. (929 kc); 4 kw. Relayed by Gleiwitz on 329.7 m. (910 kc).  
Transmits at intervals from 11.15 a.m.  
6.0 p.m.—Two Talks: (a) "Journeys in olden times; (b) Mariners of old."  
6.30 p.m.—See Königswusterhausen.  
7.25 p.m.—Talk, "Caesar's Crossing of the Rhine," by G. Lichey.  
7.50 p.m.—Art and Literary Review.  
8.15 p.m.—"Where the Lark sings"—Three-Act Operetta (Lehár).  
10.0 p.m.—News and Wireless Notes, followed by Close Down.

**BRÜNN (Czecho-Slovakia)**  
Komarov. WL. 441.2 m. (680 kc); 2.4 kw.  
Transmits at intervals from 11.0 a.m.  
5.0 p.m.—Exhibition Programme.  
6.0 p.m.—German Transmission.  
6.25 p.m.—Agricultural Report, followed by Talk.  
7.0 p.m.—Weekly Wireless Review.  
7.40 p.m.—Talk in English.

8.0 p.m.—Popular Songs (Malat).  
8.30 p.m.—"The Old Story"—Drama (Frank Wollman).  
9.0 p.m.—Exhibition Programme.  
10.0 p.m.—Programme from Prague.  
10.20 p.m.—Exhibition Programme.

**BRUSSELS (Belgium)**  
Radio-Belgique. WL. 508.5 m. (590 kc); 1.5 kw.  
5.0 p.m.—Organ Recital.  
5.30 p.m.—Café Metropole Concert.  
6.0 p.m.—French Language Lesson.  
6.30 p.m.—Trio Concert: 1. Selection from "Le Roi d'Ys" (Lalo). 2. Pianoforte Solo—Wedding March (Greig). 3. Monde d'amour (Wood). 4. Maniana (Pier). 5. Little Grey Home (Lohr). 6. Cello Solo—Simple chanson (Kruener). 7. Zemor (Holiday). 8. Ballade printanière (Siède). 9. Allegrias (Canonge). 10. Violin Serenade (Pierne). 11. Mascarade (Lacome).  
7.15 p.m.—Le Radio-Chronique.  
8.0 p.m.—Royal Zoological Society Concert, from Antwerp: 1. March (Schubert, Orchestration Liszt). 2. "Waverley"—Overture (Berlioz). 3. Asgaardreien (Norwegian Walkyries) (Ole Olsen). 4. "The Warrior's Song"—Dramatic Scenes. 5. "Artegilde"—Overture (Guiraud). 6. Slavonic Dances, Nos. 1, 2, 3, and 4 (Dvorák). 7. Piet Hein—Netherland Rhapsody (Van Anrooy). Topical Talk in the Interval. News at end.

**BUDAPEST (Hungary)**  
Magyar Telephon Hirmondo es Radio R.T. WL. 557.1 m. (538 kc); 25 kw.  
Transmits at intervals from 9.30 a.m.  
6.50 p.m.—Wireless Correspondence.  
7.50 p.m.—Recital of Hungarian Songs.  
9.10 p.m.—Hungarian Concert by the "Budapest Choral Society."  
10.15 p.m.—Dance Music relayed from the Hotel Ritz, Budapest.  
12.0 midnight (approx.)—Close Down

**COLOGNE (Germany)**  
Westdeutscher Rundfunk. WL. 283 m. (1,060 kc); 4 kw.  
Transmits at intervals from 10.15 a.m.  
1.5 p.m.—See Langenberg Station.  
3.50 p.m.—Programme for Children.  
4.15 p.m.—See Langenberg Station.  
5.30 p.m.—Talk: "The Latest German Drama," by Sergius Sax.  
6.0 p.m.—Chamber Music: 1. Pianoforte Solo—Sonata in G Major (Huber). 2. Soprano Solos (Friedland): (a) Trübe Zeit, (b) Warnung, (c) Lisbias Liebling, (d) Voglein Tod, (e) Sommergang, (f) Hart an der Ecke. 3. Pianoforte Selections: (a) Waltz from the Second Suite (Rachmaninoff), (b) Rondo in C Major (Chopin). 4. Soprano Solos: (a) Cradle Song, (b) Weeping Willow (Scott), (c) Ithy blue eye, (d) Maiden's Song, (e) On the Sea (Brahms).  
7.10 p.m.—Talk, "The Barber of Seville" (Rossini), by Prof. Hermann, followed by Announcement of the Opera.  
7.30 p.m. (approx.)—"The Barber of Seville"—Opera (Rossini), by the Artists of the Scala, Milan, After the Opera, Report on the Olympic Football Match at Amsterdam, News, Announcements, Sports Notes, followed by Silent Night.

**COPENHAGEN (Denmark)**  
Copenhagen Radio. WL. 337.4 m. (889 kc); 1 kw. Relayed by Kalundborg on 1,153.8 m. (260 kc).  
Transmits at intervals from 7.30 a.m.  
6.20 p.m.—Talk: "The Cultivation of Strawberries."  
7.0 p.m.—News, Exchange and Time.  
7.30 p.m.—Talk: "What every Railway Traveller should know."  
8.0 p.m.—Town Hall Chimes.  
8.5 p.m. (approx.)—"Af Ashen og Ilden"—Vaudeville (Bøgh), followed by News.  
9.15 p.m.—Reading by G. Nissen.  
9.45 p.m.—Concert of Danish Chamber Music: 1. Trio for Violin, Cello and Pianoforte in F Major, Op. 42 (Gade). 2. Trio for Pianoforte, Violin and Cello in F Minor, Op. 53 (Lange-Müller).  
10.45 p.m. (approx.)—Close Down.

**CORK (Ireland)**  
Cork Broadcasting Station (6CK). WL. 400 m. (750 kc); 1.5 kw.  
2.30 p.m.—Weather, Stock Market Report, and Gramophone Records.  
6.15 p.m.—Programme from Dublin.

**CRACOW (Poland)**  
Polskie-Radio. WL. 567 m. (529 kc); 1.5 kw.  
Transmits at intervals from 12 noon.  
5.45 p.m.—Programme from Warsaw.  
7.5 p.m.—Agricultural Report.  
7.15 p.m.—Variety and News.  
7.50 p.m.—Opera Relay from Posen.  
10.0 p.m.—Programme from Warsaw.  
10.30 p.m.—Restaurant Concert.  
11.30 p.m. (approx.)—Close Down.

**DUBLIN (Ireland)**  
Dublin Broadcasting Station (2RN). WL. 319.1 m. (940 kc); 1.5 kw.  
Transmits at intervals from 1.30 p.m.  
6.15 p.m.—Programme for Children.  
7.0 p.m.—Gramophone Records.  
7.20 p.m.—News and Fainne Talk.  
7.45 p.m.—Spanish Language Lesson.  
8.0 p.m.—Pipe Solos by A. Meikle.  
8.10 p.m.—The Augmented Orchestra.  
8.30 p.m.—Gladys MacNevin (Soprano).  
8.40 p.m.—Selections by T. McCurtin (Cornet) and Orchestra.  
8.50 p.m.—The Station Orchestra.  
9.0 p.m.—Music Talk by H. R. White.  
9.15 p.m.—The Celeste Orchestra.  
9.30 p.m.—"The Late Comer" by Dorothy Day and Company.  
10.5 p.m.—The Augmented Orchestra.  
10.30 p.m.—News and Close Down.

**FRANKFURT-am-MAIN (Germany)**  
Südwestdeutscher Rundfunk. WL. 429 m. (699 kc); 4 kw. Relayed by Cassel on 252.1 m. (1,190 kc).  
Transmits at intervals from 4.30 p.m.  
6.15 p.m.—Wireless Notes and News.  
6.30 p.m.—Talk for Women, and Talk on "The Importance of Teaching Children to Swim," from Cassel.  
7.15 p.m.—Talk on "The Teeth."  
7.45 p.m.—Talk, "Mannheim as Art Centre in the 18th Century," from Mannheim.  
8.15 p.m.—Violin da Gamba Recital. 1. Sonata in A minor (d'Hervelois). 2. Fantasia (Schenk). 3. Sonata in C major (Handel).  
9.15 p.m.—"Die Wächter"—Play (Paul Haag, arr. Marlo), from Cassel.  
10.30 p.m. (approx.)—Close Down.

**HAMBURG (Germany)**  
Norag (ha, in Morse). WL. 396 m. (757 kc); 4 kw. Relayed by Bremen, on 272.7 m. (1,100 kc); Hanover, 297.9 m. (1,007 kc); and Kiel, 255 m. (1,176 kc).  
Transmits at intervals from 5.45 a.m.  
5.0 p.m.—Talk, "Sketches of Theatre History—Modern Problems."  
5.25 p.m.—(For Hamburg, Hanover, and Bremen). Talk, "A Sports Journey to the Lower Elbe in Small Ships."  
6.45 p.m.—Talk for Housewife.  
7.0 p.m.—Talk for Mothers.  
7.25 p.m.—Talk on "The Prevention of Fire," by Dr. Riebesell.  
7.55 p.m.—Weather Forecast.  
8.0 p.m.—Reading, followed by "Wann hat sie gelogen"—Play in One Act (Knobloch), Topical Talk, News, Sports Notes, Ice Report, and Cabaret Concert.

**HELSINGFORS (Finland)**  
WL. 375.9 m. (798 kc); 1.2 kw.  
6.15 p.m.—Agricultural Report.  
6.30 p.m.—Talk in Swedish.  
6.50 p.m.—Programme from Lahti.

**HILVERSUM (Holland)**  
Algemene Vereeniging Radio-Omroep. WL. 1,069 m. (280 kc); 5 kw.  
11.40 a.m.—Police Information.  
12.10 p.m.—Concert of Trio Music.  
5.10 p.m.—Concert. 1. "Ali Baba" Overture (Cherubini). 2. Canzonetta from the Concerto for Violin (Boccherini). 3. Selection from "Norma" (Bellini). 4. Soprano Solos: (a) Prayer from "Tosca" (Puccini), (b) Ridonami la calma (Tosti). 5. Rustic Dance (Godard). 6. (a) Minuet (d'Albert), (b) Gavotte (d'Albert). 7. Vier Lieder aus der Wanderzeit (Schillings). 8. Wotan's Farewell and Fire Magic from "The Valkyrie" (Wagner). 9. Birthday Serenade (Lincke). 10. Selection from "Countess Mariza" (Kalmán). 11. Cadets March (Souza).  
6.55 p.m.—German Language Lesson.  
7.25 p.m.—Police News and Time.  
7.40 p.m.—Talk on the Concert.  
7.55 p.m.—Concert. Relayed from the Amsterdam Concert Hall. 1. The Unfinished Symphony (Schubert). 2. Die Allmacht—for Choir, Orchestra and Tenor (Schubert). 3.

At Midnight—for Choir and Tenor (Bruckner). 4. Rhapsody—for Contralto and Orchestra (Brahms). 5. Sailor's Song from "The Flying Dutchman" (Hol) for Choir and Orchestra. 6. Selection for Choir and Orchestra (Zweers). In the interval: Weather and News.

**HUIZEN (Holland)**  
WL. 341 m. (879 kc); 4 kw. (Until 6.40 p.m.). Transmits from 6.40 p.m. on 1,870 m. (160 kc).  
1.10 p.m.—Concert by the "Winkel" Instrumental Trio, Amsterdam.  
6.40 p.m.—Gramophone Selections.  
8.10 p.m.—Church Latin Lesson.  
8.40 p.m.—Choral, Solo and Organ Concert, and Talk from Den Heider.

**JUAN-LES-PINS (France)**  
Radio LL. WL. 230 m. (1,304 kc); 0.25 kw.  
1.0 p.m.—Orchestral Concert.  
9.0 p.m.—News, Medical Talk and Orchestral Music.  
10.0 p.m.—Casino Dance Bands.

**KATTOWITZ (Poland)**  
Polskie Radio. WL. 422 m. (710 kc); 12 kw.  
Transmits at intervals from 5.0 p.m.  
5.45 p.m.—Programme from Warsaw.  
6.55 p.m.—News and Announcements.  
7.50 p.m.—Programme from the Posen Opera House.  
10.0 p.m.—Time and News Bulletin.  
10.30 p.m.—Dance Music Programme.

**KÖNIGSBERG (Germany)**  
Ostmarken Rundfunk. WL. 303.6 m. (988 kc); 4 kw. Relayed by Danzig on 272.7 m. (1,100 kc).  
Transmits at intervals from 6.15 a.m.  
6.15 p.m.—Talk, "The World Upheaval, and Present-day Crises."  
7.0 p.m.—Spanish Language Lesson.  
8.10 p.m.—Advanced English Lesson.  
8.30 p.m.—Vocal and Orchestral Concert. 1. Orchestra—Berlin, dir bleib ich treu—March (Kollo). 2. Baritone Solos. 3. Orchestra—Der kleine Reiter—Character Sketch (Lincke). 4. Baritone Solos. 5. Orchestra—Das ist Berlin auf der Taubentzien (Rosen). 6. Baritone Solos. 7. Orchestra—Bei uns um die Gedächtniskirche rum (Holländer). 8. Recitations. 9. Orchestra—Wenn der Vater mit dem Sohne—March (Gilbert).  
10.15 p.m. (approx.)—Weather, News and Sports Notes.  
10.30 p.m.—Orchestral Selections.  
11.30 p.m. (approx.)—Close Down.

**KOVNO (Lithuania)**  
Radio-Kaunas. WL. 2,000 m. (150 kc); 15 kw.  
Transmits at intervals from 12.0 noon.  
9.0 p.m.—Orchestral Concert: 1. Swedish Honour (Heinecke). 2. Der Liebe Freud und Leid (Lindsay). 3. "Orpheus in the Underworld"—Overture (Offenbach). 4. Serenade (Widow). 5. Melodies from "Paganini" (Lehár). 6. Scherzo (Lauritschkus). 7. "Pique Dame"—Overture (Suppé). 8. Réve d'amour (Beccè). 9. Selection from "Der Obersteiger" (Zeller). 10. Rumanian Night of Love (Köping). 11. Jimska Feuer (Gabriel).

**LAHTI (Finland)**  
WL. 1522.8 m. (197 kc); 25 kw.  
11.0 a.m.—Exchange and Music.  
11.30 a.m.—Exchange and News.  
11.59 a.m.—Time and Weather.  
5.57 p.m.—Time, Weather and News.  
6.15 p.m.—Talk in Finnish.  
6.30 p.m.—Concert. 1. March (Blankenburg). 2. Quintessenzen—Spanish Waltz (Morena). 3. Finnish Dances (de Merkantio). 4. Songs. 5. To Spring (Grieg). 6. Pastorale (Bizet). 7. Spanish Serenade (Micheli). 8. Shadow Dance (Yoshitomo). 9. Tango (Sylviano). 10. En sourdine (Tellam). 11. March.  
8.45 p.m.—News Bulletin given in Finnish and Swedish.  
9.15 p.m.—Relay from a Restaurant.  
10.0 p.m. (approx.)—Close Down.

**LANGENBERG (Germany)**  
Westdeutscher Rundfunk. WL. 479.9 m. (637 kc); 25 kw. Programme also for Aix-la-Chapelle, 401 m. (748 kc); Cologne, 283 m. (1,060 kc); and Münster, 250 m. (1,200 kc).  
Transmits at intervals from 10.15 a.m.  
1.5 p.m.—Concert of Russian Folk-music relayed from Düsseldorf.  
3.50 p.m.—Programme from Cologne.  
4.15 p.m.—Children's Concert relayed from Düsseldorf.

4.45 p.m.—Educational Talk from Krefeld.  
5.30 p.m.—Programme relayed from Cologne.

**LEIPZIG (Germany)**  
Mitteldeutscher Rundfunk. WL. 366 m. (818 kc); 4 kw. Relayed by Dresden on 275.2 m. (1,090 kc).  
Transmits at intervals from 10.0 a.m.  
4.30 p.m.—Concert. 1. Selections from "A Midsummer Night's Dream" (Mendelssohn). 2. Selections from "The Sleeping Beauty" (Humperdinck). 3. "Cinderella" (d'Albert).  
6.5 p.m.—Programme for Women.  
6.30 p.m.—See Königswusterhausen.  
7.0 p.m.—Talk, "Drawbacks in the Development of a Newspaper."  
7.30 p.m.—Reading in English.  
7.30 p.m.—Weather and Time.  
8.15 p.m.—Moritz Hauptmann Recital.  
9.15 p.m.—Variety Concert.  
10.15 p.m.—News and Sports Notes.  
12.0 midnight (approx.)—Close Down.

**LILLE (France)**  
PTT. WL. 267 m. (1,122 kc); 0.5 kw.  
Transmits at intervals from 12.30 p.m.  
7.30 p.m.—Prices of Market Goods.  
7.40 p.m.—Agricultural and Horticultural Notes.  
8.0 p.m.—Concert arranged by "Le Journal and Radio Roubaix." Followed by News.

**MADRID (Spain)**  
Union Radio (EAJ7). WL. 374 m. (802 kc); 1.5 kw.  
Transmits at intervals from 11.45 a.m.  
7.0 p.m.—Concert: 1. Las mocitas del barrio (Chueca). 2. Selection from "Le Caid" (Thomas). 3. Talk on "The Interpretation of Nature in the Poems of Gabriel and Galan." 4. Música, Luz y alegría (Alonso).  
8.0 p.m.—Dance Music Programme. Programme relayed by San Sebastian EAJ7, 335 m. (895 kc).  
10.0 p.m.—Chimes and Exchange.  
10.5 p.m.—"Benamor"—Operetta Selection (Luna). News.  
12.30 a.m. (Wed. approx.)—Close Down.

**MILAN (Italy)**  
Unione Radiofonica Italiana. WL. 549.3 m. (546 kc); 7 kw.  
Transmits at intervals from 12.15 p.m.  
8.35 p.m.—Time and Art Talk.  
8.45 p.m.—Concert. 1. (a) "The Italian in Algiers"—Symphony (Rossini), (b) Schéhérazade (Rimsky-Korsakoff). 2. "L' Africaine"—Baritone Solo (Meyerbeer).  
3. Pianoforte Solos (Brahms): (a) Intermezzo, (b) Rhapsody. 4. "Saffo"—Soprano Solo (Pacini). 5. (a) Berceuse, (b) Caprice—Waltz (Wieniawsky). 6. "North South"—Talk. 7. (a) "Zingari"—Song (Leoncavallo), (b) "Don Carlos"—Baritone Solo (Verdi). 8. Pianoforte Solos (Saint-Saëns): (a) Gavotte, (b) Toccata. 9. Soprano Solo (Paisiello). 10. "Saul"—Overture (Bazzini).  
10.55 p.m.—News, followed by Dance Music. Relayed from the Fiascheretta Toscana, Milan.  
11.30 p.m. (approx.)—Close Down.

**MUNICH (Germany)**  
Deutsche Stunde in Bayern. WL. 536 m. (550 kc); 4 kw. Relayed by Augsburg on 266 m. (530 kc); Kaiserlautern, 204.1 m. (1,480 kc); and Nürnberg on 241.9 m. (1,240 kc).  
Transmits at intervals from 11.20 a.m.  
6.20 p.m.—Harmonium Recital.  
7.0 p.m.—Talk, "Spiritual Life."  
7.30 p.m.—Song Recital: 1. (a) Aus dem Nachtlid Zarathustras; (b) Aus dem hohen Lied (Mendelssohn). 2. Heimweh (Wolf). 3. (a) Träume (Wagner); (b) Wieder möcht ich Dir begegnen (Liszt); (c) Cäcilie (Strauss).  
8.0 p.m.—Three One Act Plays—"Die letzten Masken" (Schnitzler), "Der abgeleitete Don Juan" and "Die telepathische Hausmeisterin" (Ollop).  
10.5 p.m.—Announcements and News.  
10.25 p.m.—Chess Lesson.

**NAPLES (Italy)**  
Unione Radiofonica Italiana (INA). WL. 333.3 m. (900 kc); 1.5 kw.  
Transmits at intervals from 2.0 p.m.  
8.40 p.m.—Time and News, followed by Harbour Notes.  
8.50 p.m.—Orchestral Selections. 1. Neapolitan Suite (De Christoforo). 2. "Sylvia"—Intermezzo (Siède).







## PROGRAMMES FOR WEDNESDAY

(June 20)

NOTE: THE HOURS OF TRANSMISSION ARE REDUCED TO BRITISH SUMMER TIME

## BARCELONA (Spain)

Radio-Barcelona (E.A.J.). WL. 344.8 m. (870 kc); 1.5 kw. Transmits at intervals from 11.0 a.m. 6.0 p.m.—Exchange Quotations. 6.10 p.m.—Sextet Selections. 8.30 p.m.—Castilian Grammar Lesson. 9.0 p.m.—Exchange and News. 9.5 p.m.—Orchestral Selections. 9.15 p.m.—Recital of Aragonese Jotas. 9.50 p.m.—Orchestral Selections. 10.0 p.m.—Chimes and Weather. 10.5 p.m.—Programme in Commemoration of the Death of the Great Author Leandro Fernandez de Moratin. Talk on his life and Works and Selections from his two Comedies, "El si de las niñas" and "El Café." 10.30 p.m.—Soprano and Tenor Duets: 1. Duet from "Rigoletto" (Verdi). 2. Duet from the First Act of "La Bohème" (Puccini). 3. Duet from Act 2 of "Boris Godounov" (Moussorgsky). 11.0 p.m. (approx.)—Close Down.

## BERGEN (Norway)

Kringkastingselskap. WL. 369.9 m. (811 kc); 1.5 kw. Transmits at intervals from 11.15 a.m. 8.0 p.m.—Concert. 1. Tiber—Dramatic Overture (Popy). 2. Andante Cantabile from Symphony in C major (Beethoven). 3. Waltz from "Pan Twardowski" (Roz-ycki). 4. Summer Song (Berger). 5. Rustle of Spring (Sinding). 8.30 p.m.—Talk, "Sunshine, Summer and Health," by Mr. Holst. 9.0 p.m.—Gramophone Selections. 9.30 p.m.—Solo Song Recital. 10.0 p.m.—Weather, News and Time. 10.15 p.m.—The Exhibition Orchestra.

## BERLIN (Germany)

Königswusterhausen. WL. 1.250 m. (240 kc); 35 kw. Transmits at intervals from 12.0 noon. 5.0 p.m.—Programme from Hamburg. 6.0 p.m.—Talk, "Tariff Policy of the German National Post." 6.30 p.m.—Advanced French Lesson. 6.55 p.m.—Technical Talk for Experts. 7.20 p.m.—Talk, "Introduction to the study of Music." 8.30 p.m.—Programme from Voxhaus.

## BERLIN (Germany)

Voxhaus. WL. 484.6 m. (619 kc); 4 kw. Transmits at intervals from 10.10 a.m. 5.0 p.m.—Programme for Children. 6.45 p.m.—Talk on Gardening. 7.10 p.m.—Talk on "The Stage." 7.35 p.m.—Talk by W. Essner. 8.0 p.m.—Talk: "Berlin Football." 8.30 p.m.—International Songs. 9.10 p.m.—Chamber music: 1. String Quartet in F major (Dittersdorf). 2. String Quartet in E major, Op. 125, No. 2 (Schubert). 3. String Quartet in C minor, Op. 18, No. 4 (Beethoven). Followed by News, Time, Weather and Sports Notes. 10.30 p.m.—Concert of Sea Melodies: 1. (a) "Die Matrosen"—Overture (Flotow), (b) Strandbilder—Waltz (Waldteufel). 2. Soprano Solos: (a) "Helgoland," from "Europa spricht davon" (Steffan), (b) Wir wandeln durchs Märchenland (Moon). 3. (a) Durch das blaue Meer (Nelson), (b) Die Schöne vom Strande (Holländer). 4. Ihr ruht ihr blauen Wogen (Glinka). 5. Strandbilder Suite (Blon). 6. Soprano Solos: (a) "Strandlied," from "König Anna" (Ehrke), (b) Deutschland Ade (Stransky). 7. (a) Matrosen Polka (Ziehrer), (b) In Swinemunde träumt man im Sand (Stolz), (c) Matrosengezang (Dazar).

## BERNE (Switzerland)

Radio-Berne. WL. 411 m. (730 kc); 1.5 kw. Transmits at intervals from 1.0 p.m. 8.0 p.m.—Time and Weather. 8.5 p.m.—Mandoline Orchestra. Animal Anecdotes in the Intervals. 9.35 p.m.—The Kursaal Orchestra. News and Weather in the Interval. 10.35 p.m. (approx.)—Close Down.

## BRESLAU (Germany)

Schlesische Funkstunde. WL. 122.0 m. (820 kc); 4 kw. Relayed by Gleiwitz, 320.7 m. (910 kc). Transmits at intervals from 1.15 a.m. 6.0 p.m.—Talk, "Book Aesthetics." 6.30 p.m.—See Königswusterhausen. 7.25 p.m.—Talk on "Modern Law." 7.50 p.m.—Pictures of Upper Silesia, from Gleiwitz.

8.15 p.m.—Concert, "The Last Journey," in Music. 9.20 p.m.—Pianoforte Recital. 1. Caprice (Bach). 2. Two Piano Pieces, Op. 2 (Kornauth). 3. (a) Nocturne in G Minor, (b) Two Mazurkas, (c) Polonais in A Flat Major (Chopin).

## BRÜNN (Czecho-Slovakia)

Komarov. WL. 441.2 m. (680 kc); 2.4 kw. Transmits at intervals from 11.0 a.m. 6.0 p.m.—German Transmission. 6.25 p.m.—Agricultural Report, followed by Talk. 6.55 p.m.—Opera Relay from Prague. 10.20 p.m.—Exhibition Programme.

## BRUSSELS (Belgium)

Radio-Belgique. WL. 508.5 m. (590 kc); 1.5 kw. 5.0 p.m.—Dance Music from the St. Sauveur Palais de Danse. 6.0 p.m.—Talk, "Belgium's History." 6.15 p.m.—Talk, "Le Musée Plantin Moretus." 6.30 p.m.—Chamber Music Concert. 1. Sonata for Violin (Haydn). 2. Sonata for Pianoforte (Mozart). 3. Sonata for Violin (Beethoven). 7.30 p.m.—Le Radio-Chronique. 8.15 p.m.—"The Damnation of Faust"—Opera Selection (Berlioz). In the Interval: Talk, "Belgian Art Propaganda Abroad." 10.15 p.m.—News and Close Down.

## BUDAPEST (Hungary)

Magyar Telefon Hírmondó es Radio R.T. WL. 557.1 m. (538 kc); 25 kw. Transmits at intervals from 9.30 a.m. 6.50 p.m.—Talk on Technical Subject. 7.30 p.m.—"Mah Jong"—Comedy in Three Acts (Boross). In the Interval—Racing Results. 9.50 p.m.—Time, and News, followed by Tzigane Music Selections. 12 midnight (approx.)—Close Down.

## COLOGNE (Germany)

Westdeutscher Rundfunk. WL. 283 m. (1,060 kc); 4 kw. Transmits at intervals from 10.15 a.m. 1.5 p.m.—Orchestral Concert. 3.45 p.m.—Motherhood Talk for Women. 4.15 p.m.—Review of Books. 4.45 p.m.—Educational Talk, "Narratives as Incentives to Work." Relayed from "Das Haus in der Sonne," in Isert, Westerwald. 5.35 p.m.—See Langenberg Station. 6.0 p.m.—Evening Concert. 7.20 p.m.—Reading for Workers. 7.45 p.m.—Talk, "The Function of the Organs," by Dr. Haberland. 8.5 p.m.—Report on the Olympic Football Match at Amsterdam. 8.15 p.m.—Orchestral Concert: 1. Overture to a Robber-Baron Comedy (Ranrath). 2. Serenade (Braunfels). 3. Suite from the Music to Shakespeare's "As You Like It" (Wetzlar). 4. Serenade for String Orchestra (Trunk). 5. Selections from "Deutschen Märchen" (Ehrenberg). In the interval "Der Fliegende Geheimgat"—Farce (Kurt Goetz). After the Concert, Report on the Olympic Football Match at Amsterdam, News, Announcements, Sports Notes and Musical Selections with Dance Music. 12 midnight (approx.)—Close Down.

## COPENHAGEN (Denmark)

Copenhagen Radio. WL. 337.4 m. (880 kc); 1 kw. Relayed by Kalundborg on 1,153.8 m. (260 kc). Transmits at intervals from 7.30 a.m. 6.20 p.m.—Wireless Announcements. 7.0 p.m.—News, Exchange and Time. 7.30 p.m.—Talk, "Wanderings in North Jutland," by Carl Behrens. 8.0 p.m.—Town Hall Chimes. 8.5 p.m. (approx.)—Anniversary Programme, followed by News. 9.45 p.m.—Orchestral Concert. 1. Swedish Rhapsody, Op. 19 (Aifven). 2. "Morning," from the Pastoral (Palmgreen). 3. "Svoty Vaclava"—Meditation on an old Bohemian Choral for String Instruments (Suk). 4. Prelude and Serenade from the Pantomime "The Snowman" (Krongold). 10.45 p.m.—Dance Music Programme. 12.0 midnight.—Town Hall Chimes. 12.30 a.m. (Thurs., approx.)—Close Down.

## CORK (Ireland)

Cork Broadcasting Station (6CK). WL. 400 m. (750 kc); 1.5 kw. 2.30 p.m.—Weather, Stock Market Report and Gramophone Records. 6.15 p.m.—Programme from Dublin.

## CRACOW (Poland)

Polskie-Radio. WL. 567 m. (520 kc); 1.5 kw. Transmits at intervals from 12 noon. 5.45 p.m.—Programme for Children. "The Jungle Book" (Kipling). 6.15 p.m.—Programme from Warsaw. 7.5 p.m.—Agricultural Report. 7.15 p.m.—News and Announcements. 7.35 p.m.—Talk, "Philosophical Ideas in the Hymns of Rig-Veda." 8.0 p.m.—Fanfare and Talk. 8.30 p.m.—Programme from Warsaw.

## DUBLIN (Ireland)

Dublin Broadcasting Station (2RN). WL. 319.1 m. (940 kc); 1.5 kw. Transmits at intervals from 1.30 p.m. 6.15 p.m.—Programme for Children. 7.0 p.m.—Programme for Women. 7.20 p.m.—News, and Irish Lesson. 7.45 p.m.—German Language Lesson. 8.0 p.m.—Band Music Concert. 9.0 p.m.—Talk on "James Clarence Mangan," by D. J. Clarke. 9.15 p.m.—Gaelic and Anglo-Irish Songs by May Mortell. 9.30 p.m.—"From Eastern Lands," by the Station Orchestra. 9.45 p.m.—"The Old Timers." 10.30 p.m.—News and Close Down.

## FRANKFURT-am-MAIN (Germany)

Südwestdeutscher Rundfunk. WL. 429 m. (699 kc); 4 kw. Relayed by Cassel, on 252.1 m. (1,190 kc). Transmits at intervals from 12.15 p.m. 4.30 p.m.—Ketelbey Concert by the Station Orchestra. 5.45 p.m.—Review of New Books. 6.15 p.m.—Wireless Notes and News. 6.30 p.m.—Talk, "Nocturnal Animal Life in the Tropics." 6.45 p.m.—French Language Lesson. 7.30 p.m.—"Il Trovatore"—Opera (Verdi) from the Opera-House.

## GRAZ (Austria)

Oest. Radio-Verkehrs. WL. 355 m. (845 kc); 0.5 kw. 8.5 p.m.—Variety Concert: 1. Talk: E. L. Wolzogen. 2. The Sisters (O. Strauss). 3. Die Musik kommt (O. Strauss). 4. Humorous Recitations. 5. The dancing girl (Ruch). 6. The three wanderers (Hermann). 7. The Charity Concert (Wandland). 8. Landsknecht und Comet (Wolzogen). 9. Madame Dubarry (Wolzogen). 10. Seelenbündnis (Willomitzer). 11. Hinkende Jamben (Löwe). 12. Wer sich in Wien verliebt (Deimel). 13. Das Lichtblau-Vogerl—Parody (Wolzogen). 9.0 p.m.—"On the Day of Judgment."—Play (Peter Rosegger). News.

## HAMBURG (Germany)

Norag (ha, in Morse). WL. 306 m. (757 kc); 4 kw. Relayed by Bremen on 272.7 m. (1,100 kc); Hanover, 297.9 m. (1,007 kc); and Kiel, 255 m. (1,176 kc). Transmits at intervals from 5.45 a.m. 5.0 p.m.—Concert of Skipper and Fisher Songs and Melodies. 6.45 p.m.—Talk on "Chess Problems." 7.0 p.m.—Talk from Hanover—"The History of Lower Saxony." 7.25 p.m.—Talk, "Brazilian Travels." 7.55 p.m.—Weather Report. 8.0 p.m.—Concert of Revue Melodies, followed by News, Weather, Ice Report and Café Wallhof Concert.

## HILVERSUM (Holland)

Algemeene Vereeniging Radio-Omroep. WL. 1,069 m. (280 kc); 5 kw. 11.40 a.m.—Police Information. 12.10 p.m.—Concert of Trio Music. 2.40 p.m.—Programme for Women. 2.40 p.m.—Concert of Trio Music. 6.55 p.m.—Talk and Police News. 7.40 p.m.—Time, Weather and News. 7.45 p.m.—Selections from Operettas: 1. "Surcouf" (Planquette). 2. "La Fille de Madame Angot" (Lecocq). 3. "Erminie" (Jackobowski). 4. "The Geisha" (Jones). Weather and News in the interval. 10.40 p.m. (approx.)—Close Down.

## HUIZEN (Holland)

WL. 341 m. (879 kc); 4 kw. (Until 6.40 p.m.). Transmits from 6.40 p.m. on 1,870 m. (160 kc). 1.10 p.m.—Instrumental Trio Concert. 5.40 p.m.—Children's Programme. 7.10 p.m.—English Divine Service. 8.10 p.m.—Literary Talk. 8.30 p.m.—Cello Recital and Talk.

## JUAN-LES-PINS (France)

Radio L.L. WL. 230 m. (1,304 kc); 0.25 kw. 1.0 p.m.—Orchestral Concert. 9.0 p.m.—Symphony Concert. News. 10.0 p.m.—Casino Dance Bands. 10.30 p.m. (approx.)—Close Down.

## KATTOWITZ (Poland)

Polskie Radio. WL. 422 m. (710 kc); 12 kw. Transmits at intervals, from 5.0 p.m. 6.15 p.m.—Afternoon Concert. 6.55 p.m.—Talk, "The Silesian Household." 7.25 p.m.—Announcements and Talk. 8.30 p.m.—Concert from Warsaw. 10.0 p.m.—Time, News, and Close Down.

## KÖNIGSBERG (Germany)

Ostmarken Rundfunk. WL. 303.6 m. (988 kc); 4 kw. Relayed by Danzig on 272.7 m. (1,100 kc). Transmits at intervals from 6.15 a.m. 6.15 p.m. (Königsberg only)—Talk for Parents, "Essays without Red Ink." 6.15 p.m. (Danzig only)—Talk, "Nietzsche as Philosopher." 6.50 p.m.—Scenes from "Germinal" (Emile Zola). 7.30 p.m.—Elementary English Lesson. 8.10 p.m.—Ettina's Bethrothal, Comedy in Three Acts (Lenz). 9.30 p.m.—Vocal and Instrumental Concert of Finnish Music: 1. Pianoforte Solos—Four Pieces (Palmgren). 2. Soprano Solos: (a) An das Lied; (b) Am Abend; (c) Ein kleines Lenzlied; (d) Die Ruhe des Todes (Kilpinen). 3. Violin and Pianoforte Selections: (a) Romance; (b) Waltz (Sibelius). 4. Soprano Solos: (a) Die Hirtenknaben (Toivo Kuula), (b) Parahu (Sulho-Ranta). 5. Violin and Pianoforte: (a) Trambüld, (b) Dance (Leevi Madetoja), followed by Weather, News and Sports Notes. 10.30 p.m.—Orchestral Concert: 1. Ilka—Overture (Doppler). 2. Grieg—Erinnerungen (Urbach). 3. Dorschwaben aus Ostpreussen (Walz). 4. Rhapsody, No. 2 (Liszt). 5. Romance from "Nachtlager von Granada" (Kreutzer). 6. Rustle of Spring (Sinding). 11.30 p.m. (approx.)—Close Down.

## KOVNO (Lithuania)

Radio-Kaunas. WL. 2,000 m. (150 kc); 15 kw. 12.0 (noon)—Chimes. 9.0 p.m.—An Operetta (Offenbach).

## LAHTI (Finland)

WL. 1,522.8 m. (197 kc); 25 kw. Programme also for Helsingfors, 275.9 m. (798 kc); 1.2 kw. 11.0 a.m.—Exchange and Music. 11.30 a.m.—Exchange and News. 11.59 a.m.—Time and Weather. 5.57 p.m.—Time, Weather and News. 6.15 p.m.—Concert. 1. March (Oscheit). 2. Romance (Renee). 3. Valse (Michiels). 4. Penso (Tosti). 5. Finnish Songs (arr. Kauppi). 6. Violin Solos. 7. Draussen in Schönbrunn (Benatzky). 8. Swedish Melodies (Sandell). 9. "A Midsummer Night's Dream" (Mendelssohn). 10. Minuet (Stenberg). 11. Romance (Rubinstein). 12. Sérénade d'amour (Waldau). 13. Sotilaspoika (Pacius). 8.45 p.m.—News Bulletin given in Finnish and Swedish. 9.15 p.m.—Relay from a Restaurant.

## LANGENBERG (Germany)

Westdeutscher Rundfunk. WL. 470.9 m. (637 kc); 25 kw. Programme also for Aix-la-Chapelle, 401 m. (748 kc); Cologne, 283 m. (1,060 kc); and Münster, 250 m. (1,200 kc). Transmits at intervals from 10.15 a.m. 1.5 p.m.—5.35 p.m.—Programme relayed from Cologne. 5.35 p.m.—Talk, "Art in Paris." Relayed from Elberfeld. 6.0 p.m.—12 midnight.—Programme relayed from Cologne.

## LEIPZIG (Germany)

Mitteldeutscher Rundfunk. WL. 366 m. (818 kc); 4 kw. Relayed by Dresden on 275.2 m. (1,090 kc). Transmits at intervals from 10.0 a.m. 4.30 p.m.—Programme for Children. 6.30 p.m.—See Königswusterhausen. 7.0 p.m.—Talk, "The Philosophical Importance of Biology." 7.30 p.m.—Sports Talk by Dr. Zeitler. 8.0 p.m.—Weather and Time. 8.15 p.m.—Walter Bloem Recital. 8.45 p.m.—Soloist Concert: 1. Sonata for Pianoforte, Op. 173 (Schubert).

2. Concerto—Polonaise, Op. 4 for Violin (Wieniawsky). 3. Songs. 4. Impromptu in F major for Piano forte (Chopin). 5. Violin Solos: (a) Spanish Dance (Sarasate); (b) Hejre Kati (Hubay). 6. Selections for Pianoforte and Violin from "Il Re Pastore" (Mozart). 7. Selection from "Troubadour" (Lizst). 8.—Songs.

10.0 p.m.—News and Sports Notes. 10.15 p.m.—Orchestral Concert. 12.0 midnight (approx.)—Close Down.

## LILLE (France)

PTT. WL. 267 m. (1,122 kc); 0.5 kw. Transmits at intervals from 12.30 p.m. 7.30 p.m.—Prices of Market Goods. 7.40 p.m.—Concert arranged by "Le Reveil." 9.0 p.m.—Programme relayed from "Ecole Supérieure, PTT." News.

## MADRID (Spain)

Union Radio (E.A.J.). WL. 374 m. (802 kc); 1.5 kw. Transmits at intervals from 11.45 a.m. 7.0 p.m.—Concert. 1. La guardia amarilla (Jiménez). 2. Selection from "The Flying Dutchman" (Wagner). 3. Interlude by Luis Medina. 4. La casita del guarda (Soutullo and Vert). 8.0 p.m.—Dance Music Programme. 9.45 p.m.—Talk, "Principal Pests in Spanish Agriculture." 10.0 p.m.—Chimes and Weather. 10.5 p.m.—Concert. 1. "Preciosa"—Overture (Weber). 2. Soprano Arias from "Der Freischütz" (Weber). 3. Humorous Talk. 4. Selection from "Doña Francisquita" (Vives). 5. Soprano solos: (a) De la alegría (Stürmer), (b) Tanore a las rosas (Stürmer), (c) The Page's Aria from "The Marriage of Figaro" (Mozart), (d) Adelaide (Beethoven). 6. Dances from "Prince Igor" (Borodine). 11.50 p.m. (approx.)—News. 12.0 (midnight)—Dance Music. 12.30 a.m. (Thurs. approx.)—Close Down.

## MILAN (Italy)

Unione Radiofonica Italiana. WL. 549.3 m. (546 kc); 7 kw. Transmits at intervals from 12.15 p.m. 7.47 p.m.—French Language Lesson. 8.35 p.m.—Time, followed by Talk on "The Planets" by F. Barbacini. 8.45 p.m.—Concert of Light Music and Variety. 1. Quintet Selections: (a) "Raymond"—Overture (Thomas), (b) Humoresque (Dvorák). 2. A Comedy. 3. Talk. 4. String Orchestra Selections. 10.30 p.m.—Dance Music relayed from the Restaurant Cova, Milan. 12.0 midnight (approx.)—Close Down.

## MUNICH (Germany)

Deutsche Stunde in Bayern. WL. 536 m. (550 kc); 4 kw. Relayed by Augsburg on 566 m. (530 kc); Kaiserslautern 204.1 m. (1,480 kc); and Nürnberg on 241.9 m. (1,240 kc). Transmits at intervals from 12.55 p.m. 7.0 p.m.—Talk on "Heat." 7.30 p.m.—Talk, "The Destiny of East Swabia," by K. von Möller. 8.5 p.m.—Orchestral Concert arranged by the State Railway. Followed by Concert.

## NAPLES (Italy)

Unione Radiofonica Italiana (I.N.A.). WL. 333.3 m. (900 kc); 1.5 kw. Transmits at intervals from 2.0 p.m. 5.0 p.m.—Orchestral and Vocal Concert. 8.40 p.m.—Time, and News, followed by Harbour Notes. 8.50 p.m.—Concert. 1. "Martha"—Symphony (Flotow). 2. "I Pagliacci"—Chorale (Leoncavallo). 3. "Othello"—Ave Maria for Soprano (Verdi). 4. "Il Trovatore"—Bass Solo (Verdi). 5. "I Pagliacci"—Intermezzo (Leoncavallo). 6. "Lorelei"—Soprano Solo (Catalani). 7. "Le Roi de Lahore"—Selection (Massenet). 8. "La Favorita"—Bass Solo with Choral and Orchestral Accompaniment (Donizetti). 9. "Suor Angelica"—Soprano Solo (Puccini). 10. "I Lombardi"—Selection for Choir and Orchestra (Verdi). 11. "La Gioconda"—Bass Solo (Ponchielli). 12. "Cleopatra"—Andante and Barcarolle (Mancinelli). 13. "Norma"—Soprano Solo (Bellini). 14. "I Promessi Sposi"—Symphony (Ponchielli). 10.55 p.m.—Calendar and Announcements. 11.0 p.m. (approx.)—Close Down.



Programmes for Wednesday.—(Cont.)

PARIS (France) Eiffel Tower (FL). WL. 2,650 m. (113 kc); 5 kw. 8.56 a.m.—Time Signal on 32.5 m. (9,231 kc). 10.26 a.m.—Time Signal on 2,650 m. 6.45 p.m.—"Le Journal Parle." Talks on "Modern Science" and "Fashions," etc. 8.10 p.m.—Weather Forecast. 8.30 p.m.—Concert. 1. Quintet, "Chansons de Bilitis" (Debussy). 2. Six Melodies (Grieg). (a) Autumn (b) Spring, (c) The Waterlily, (d) The Swan, (e) I love you, (f) Good Morning. 3. "Le Pas des armes" from "Le Roi Jean" (Hugo-Saint-Saëns). 4. La chanson des rames—Flute Solo (Sels). 5. Erlkönig—Song (Schubert). At 8.56 p.m., Time Signal on 32.5 m. (9,231 kc). 9.30 p.m.—Educational Programme. Talks on "Agriculture," "Physical Culture," etc. 11.26 p.m.—Time Signal on 2,650 m.

PARIS (France) Radio-Paris (CFR). WL. 1,765 m. (170 kc); 3 kw. Transmits at intervals from 7.30 a.m. 12.30 p.m.—Classical Quartet Concert. News in the interval. 1.50 p.m.—Market Prices, Bourse. 3.30 p.m.—Exchange Quotations. 3.45 p.m.—Concert. 1. "La Dame Blanche"—Overture (Boieldieu). 2. Violin Solos by Albert Locatelli, (a) Aubade provençale (Kreisler), (b) La Précieuse (Couperin), (c) Le Rouet (d'Ambrosio). 3. Berceuse (Brun). 4. Pianoforte Solos, by Maurice Camot, (a) Jeux d'eau à la villa d'este (Liszt), (b) Première arabesque (Debussy). 5. Arabesque (Debussy). 6. Cello Solos by Lucienne Radisse, (a) Grave (Eccles), (b) Tarantelle (Popper). 7. Divertissement (Lalo). 4.45 p.m.—Exchange and News. 6.0 p.m.—Agricultural Report. 8.15 p.m.—Exchange and News. 8.30 p.m.—Concert. News.

PITTSBURGH (U.S.A.) Westinghouse Electric (KDKA). WL. 315.6 m. (950 kc); 50 kw. Relayed at intervals on 63 m. (4,762 kc) and 27 m. (11,111 kc).

Transmits at intervals from 2.45 p.m. 11.0 p.m.—Time and Baseball Scores. 11.10 p.m.—Theatrical Calendar. 11.15 p.m.—Orchestral Concert from the William Penn Hotel. 11.55 p.m.—Baseball Announcements. 12.0 midnight.—In the Interval: Time. 12.45 a.m. (Thursday)—"Political Situation in Washington Tonight," by F. Wile, from WJZ, New York. 1.0 a.m.—3.0 a.m.—Programme relayed from WJZ, New York. 1.0 a.m.—"May Singhi Breen and Peter de Rose," and the Saxophone Quartet, followed by the "Sylvia Foresters." 2.0 a.m.—"Philco" Programme. 3.0 a.m.—"Happiness Programme" by the Merry Maytag Ramblers. 3.30 a.m.—"Power Period." 4.0 a.m.—Time, Weather, Baseball Scores and Close Down.

POSEN (Poland) Polskie-Radio. WL. 343 m. (874 kc); 1.5 kw. Transmits at intervals from 1.0 p.m. 7.35 p.m.—Talk and Finance Report. 8.30 p.m.—Vocal and Instrumental Concert. Violin Solos. 10.0 p.m.—Time, News, Weather Announcements and Variety Items. 10.40 p.m.—Wireless Technique. 11.0 p.m.—Dance Music Programme, from the Café Esplanade, Posen. 12.0 midnight (approx.)—Close Down.

PRAGUE (Czechoslovakia) Stranice. WL. 348.9 m. (860 kc); 5 kw. Transmits at intervals from 11.0 a.m. 5.10 p.m.—Czech-German Conversation. 5.20 p.m.—Programme for Children. 5.30 p.m.—Agricultural Report. 5.40 p.m.—Masaryk Institute Talk. 6.15 p.m.—Agricultural Report, followed by Talk for Workers. 6.55 p.m.—"The Marriage of Figaro"—Opera (Mozart). 10.20 p.m.—Exhibition Programme, relayed from Brunn.

ROME (Italy) Unione Radiofonica Italiana (IRO). WL. 450 m. (666 kc); 3 kw. Transmits at intervals from 1.30 p.m.

8.30 p.m.—German Language Lesson. 8.58 p.m.—Time, News and Weather. 9.10 p.m.—Debussy Concert on the occasion of the Tenth Anniversary of his death: 1. Petite Suite (Debussy). 2. Talk on "The Life and Works of Debussy." 3. Ariettes oubliées, for Soprano: (a) C'est l'extase langoureuse, (b) Il pleut doucement sur la ville, (c) Chevaux de bois. 4. Two Nocturnes. 5. Pianoforte Solos: (a) Le colline di Anacapri, (b) General Lavine. 6. Réverie for Violin. 7. Children's Corner. 8. Selections from "L'Enfant Prodigue." 9. March on a Popular Scottish Theme. 11.20 p.m.—News and Close Down.

SCHENECTADY (U.S.A.) General Electric Company (WGY). WL. 379.5 m. (790 kc); 50 kw. Relayed by 2XAD on 21.96 m. (13,661 kc) from 11.0 p.m. Transmits at intervals from 11.45 a.m. 11.0 p.m.—Stock Reports and News. 11.25 p.m.—Baseball Announcements. 11.30 p.m.—Dinner Music Programme. 12.25 a.m. (Thurs.)—Baseball Scores. 12.30 a.m.—Remington Rand Band. 1.0 a.m.—3.30 a.m. (approx.)—Programme from New York. 1.0 a.m.—Musical Programme. 2.0 a.m.—Ipana Troubadours—Variety. 2.30 a.m.—Goodrich Silvertown Quartet and Orchestral Selections. 3.30 a.m.—Time and Madrigal Mixed Quartet Selections. 4.0 a.m. (approx.)—Close Down.

STAMBOUL (Turkey) Radio-Stamboul. Société Anonyme Turque de Téléphonie sans fil. WL. 1,180 m. (254 kc); 5 kw. Transmits at intervals from 4.30 p.m. 6.15 p.m.—Concert of Turkish Music. 8.20 p.m.—Weather and Time. 8.30 p.m.—Concert: 1. "Phédre"—Overture (Massenet). 2. Selection from "Samson and Delilah" (Saint-Saëns). 3. Delilah's Air from "Samson and Delilah" (Saint-Saëns). 10.0 p.m.—News and Close Down.

STOCKHOLM (Sweden) Radiotjänst (SASA). WL. 453.8 m. (661 kc); 1.5 kw. Relayed by Motala on 1,380 m. (217 kc); Göteborg, 416 m. (721 kc); Malmö,

260.9 m. (1,150 kc); and Sundsvall, 545.8 m. (550 kc). Transmits at intervals from 12.35 p.m. 11.0 a.m.—Opening Celebration of the Exhibition in Jönköping. Introductory words by Carl Malroth, after which the King opens the Exhibition. Programme of Military Music and Songs. 6.30 p.m.—Children's Programme. 6.45 p.m.—Talk, "Modern Handicraft." 7.15 p.m.—Light Music from Malmö. 7.45 p.m.—Topical Talk from Malmö. 8.15 p.m.—Folk Music from Falun. 8.45 p.m.—Symphony Concert. Mme. Charles Cahier of the Metropolitan Opera, New York (Soloist). 10.30 p.m. (approx.)—Close Down.

STUTTGART (Germany) Süddeutscher Rundfunk. WL. 379.7 m. (790 kc); 4 kw. Transmits at intervals from 12.30 p.m. 6.0 p.m.—Time, Weather and Agricultural Report. 6.15 p.m.—Talk, "Liability in Daily Life," by H. Spiro. 6.45 p.m.—Talk, "The Study of Agriculture and its Possibilities." 7.15 p.m.—Spanish Language Lesson. 7.45 p.m.—Time and Weather. 8.0 p.m.—Concert. 1. "The Barber of Bagdad" (Cornelius). 2. Suite from "Der Rosenkavalier" (R. Strauss). 3. Ballet Music from "The Nutcracker Suite" (Tchaikovsky). 9.0 p.m.—The Hunt for Happiness—A Journey Round the World in 12 Transmissions—Paris. 10.2 p.m.—Programme of German Prose and Poetry of the Past Hundred Years. News.

TOULOUSE (France) Radiophonie du Midi. WL. 389.6 m. (770 kc); 3 kw. 8.30 p.m.—Orchestral Selection from "Lakme" (Delibes). 9.10 p.m.—Concert of Military Music: 1. Salut des aigles (Gourdin). 2. Charge de la Grande Epopée. 3. Batterie d'Austerlitz. 4. Farandole impériale. 5. Marche des écoliers. 6. Reveil au bivouac. 7. Le champ d'honneur. 8. Marche impériale. 9. La Grenadière. 10. Retraite française. 11. Reveil de la Garde. 12. Pas cadencé des sauculottes. 13. Debout les morts.

14. Marche indienne. 15. Le Bombardier. 16. Selection from "La Dolores" (Breton). 17. Selection from "Light Cavalry" (Suppé). 18. La Marseillaise. 10.15 p.m.—"North African" Journal.

VIENNA (Austria) Radio-Wien. WL. 577 and 517.2 m. (520 and 580 kc); 1.5 and 5 kw. Relayed by Innsbruck, on 294.1 m. (1,020 kc); and Klagenfurt, on 272.7 m. (1,100 kc). 6.0 p.m.—Talk, "Through Austria." 6.30 p.m.—Agricultural Talk. 7.0 p.m.—Italian Language Lesson. 7.30 p.m.—Talk, "Milk Hygiene." 8.0 p.m.—Programme Announcements. 8.5 p.m.—English Language Lesson. 8.30 p.m.—Chamber Music Concert, followed by Orchestral Concert.

WARSAW (Poland) Polskie-Radio. WL. 1,111.1 m. (270 kc); 10 kw. Transmits at intervals from 1.0 p.m. 6.15 p.m.—Orchestral Concert. 1. International Suite (Tchaikovsky): (a) Polish Dance, (b) French Romance, (c) Czech Dance, (d) Italian Song, (e) Russian Musicians' Song, (f) Tyrolean Dance, (g) Hungarian March, (h) Song to a Neapolitan Dance. 2. Serenade (Cui). 3. Valse Caprice (Rubinstein). 4. Nocturne from the Second Concerto for String Instruments (Borodin). 5. Ballet Suite (Drigo): (a) Nocturne, (b) Valse, (c) Gavotte (d) Finale. 7.5 p.m.—Agricultural Report. 7.15 p.m.—Variety Selections. 7.35 p.m.—Talk, "Hints for Tourists." 8.30 p.m.—Chamber Music from the Works of Paderewski. 1. Sonata in A minor for Pianoforte and Violin. 2. (a) Capriccio alla Scarlatti, (b) Legend in A flat minor. 3. Songs: (a) Si je changeais, (b) Mes larmes ont coulées, (c) The Bagpiper's Song. 4. Variations for the Pianoforte in A major. 5. Songs: (a) J'ai tant souffert, (b) Aria from "Manru." News in French in the Interval. 10.0 p.m.—Time, Aviation Notes, Weather, News and Sports Notes. 10.30 p.m. (approx.)—Close Down.

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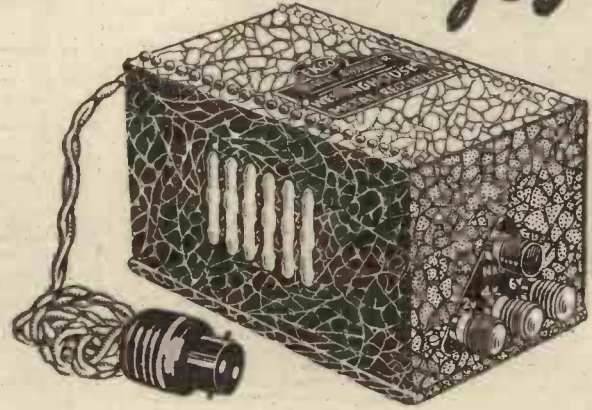
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# PROGRAMMES FOR THURSDAY (June 21)

**NOTE: THE HOURS OF TRANSMISSION ARE REDUCED TO BRITISH SUMMER TIME**

## BARCELONA (Spain)

Radio-Barcelona (EAJ1). WL. 344.8 m. (870 kc); 1.5 kw.  
Transmits at intervals from 11.0 a.m.  
6.30 p.m.—Programme for Children.  
6.40 p.m.—Reading from the Novel "The Baron of Munchhausen."  
6.50 p.m.—Reading from "The Streets of Barcelona."  
8.40 p.m.—English Language Lesson.  
9.0 p.m.—Exchange and News.  
9.5 p.m.—Orchestral Selections.  
9.50 p.m.—Recital of Songs.  
9.50 p.m.—Orchestral Selections: 1. Nocturne (Ganne). 2. Berceuse (Cup).  
10.0 p.m.—Chimes and Weather.  
10.5 p.m.—Programme of Dances.  
10.15 p.m. (approx.)—Close Down.

## BERGEN (Norway)

Kringkastingselskap. WL. 369.9 m. (811 kc); 1.5 kw.  
Transmits at intervals from 11.15 a.m.  
8.0 p.m.—Concert: 1. Second Suite (Mitchell). 2. Selection from "The Pearl Fishers" (Bizet). 3. Raket March (Vollstedt).  
9.0 p.m.—Talk, "Across the North Atlantic in an Open Boat," by Captain Folgers.  
9.30 p.m.—Pianoforte Recital: 1. Rondo a Capriccio (Beethoven). 2. Dance Arias (Respighi). 3. Paraphrase on "Rigoletto" (Liszt).  
10.0 p.m.—Weather, News and Time.  
10.15 p.m. (approx.)—Close Down.

## BERLIN (Germany)

Königswusterhausen. WL. 1,250 m. (240 kc); 35 kw.  
Transmits at intervals from 12 noon.  
5.0 p.m.—Programme from Voxhaus.  
6.0 p.m.—Talk, "The Importance of Ecclesiastical Work for the Germans Abroad."  
6.30 p.m.—Advanced Spanish Lesson.  
6.55 p.m.—Talk for Farmers.  
7.20 p.m.—Talk, "The Commercial Life of the Merchant," by Dr. Wieg.  
8.30 p.m.—Programme from Voxhaus.

## BERLIN (Germany)

Voxhaus. WL. 484.6 m. (619 kc); 4 kw.  
Transmits at intervals from 10.10 a.m.  
5.0 p.m.—Concert: 1. (a) Variations on a Polish Theme (Ljadow), (b) Prelude in A minor, (c) Am Springbunnen (Arensky), (d) Novelle in C minor, Op. 17 (Medtner), (e) Étude in C minor (Tschérpnin), 2. Baritone Solos: (a) Lyric Prologue (Vesper), (b) Wärdt du von Stein (Michelangelo), (c) Abendröte der Liebe (D'Amico), (d) Schöne Nacht (Busse), (e) Unsersätlich (Huch). 3. Ballade No. 2 (Heintze). 4. Baritone Solos: (a) Salomo (Heine), (b) Alte Landsknechte (Münchhausen), (c) Robespierre (Uthmann), (d) Drei Wanderer (Busse). 5. (a) Two Viennese Dances in G flat and G major (Gärtner), (b) Polka in D flat (Mervollf), (c) Naila—Waltz (Delibes).  
6.45 p.m.—French Talk on "The International Quinzaine Sociale in Paris," by O. Colson.  
7.10 p.m.—Talk: "Modern Spraying Methods applied to mass production."  
7.35 p.m.—Talk: "Literature and the Present Day—Thomas Mann."  
8.0 p.m.—Talk: "The Economic and Social Position of Berlin Employees," by Adolf Kahlen.  
8.30 p.m.—German Apprentice Songs and Recitations.  
9.30 p.m.—"Weekly Wireless," followed by News, Time, and Weather.  
10.30 p.m.—Dance Music Programme.  
12.30 a.m. (Fri., approx.)—Close Down.

## BERNE (Switzerland)

Radio-Berne. WL. 411 m. (730 kc); 1.5 kw.  
Transmits at intervals from 1.0 p.m.  
8.0 p.m.—Time, Weather, and Talk.  
8.30 p.m.—The Kursaal Orchestra. Vocal Concert, News and Weather during the Interval.  
10.35 p.m. (approx.)—Close Down.

## BRESLAU (Germany)

Schlesische Funkstunde. WL. 322.9 m. (920 kc); 4 kw. Relayed by Gleiwitz, 329.7 m. (910 kc).  
Transmits at intervals from 11.0 a.m.  
6.0 p.m.—Talk, "Present Day Laws of Protection in Germany," relayed from Gleiwitz.  
6.25 p.m.—Economic Questions.  
7.25 p.m.—English Reading (O. Wilde).

7.50 p.m.—Talk, "From Solomon to the League of Nations."  
8.30 p.m.—Military Concert. Relayed from the "Schieswerder." 1. Ocean Flights—March (Mannecke). 2. "Norma"—Overture (Bellini). 3. Selection from "Die Freischütz" (Weber). 3. Waltz from "Farinelli" (Zumpe). 4. Themes from "Lohengrin" (Wagner). 5. "Der Wildschütz"—Overture (Lortzing). 6. Serenade Rocco (Meyer-Helmund). 7. Hungarian Dances Nos. 5 and 6 (Brahms). 8. Auf der Wanderschaft—Potpourri (Hanneman). 9. Der Badonviller March (Fürst).  
10.0 p.m.—News and Wireless Notes.  
10.15 p.m.—Midsummer Day's Feast Gala Programme.

## BRÜNN (Czecho-Slovakia)

Komarov. WL. 441.2 m. (680 kc); 2.4 kw.  
Transmits at intervals from 11.0 a.m.  
6.0 p.m.—German Transmission.  
7.0 p.m.—"The Silver Wedding"—Comedy (Cisler).  
7.45 p.m.—Chamber Music Selection.  
8.0 p.m.—Popular Songs.  
9.0 p.m.—Exhibition Programme.  
10.0 p.m.—Programme from Prague.  
10.30 p.m.—Exhibition Programme.

## BRUSSELS (Belgium)

Radio-Belgique. WL. 503.5 m. (590 kc); 1.5 kw.  
5.0 p.m.—Gramophone Records.  
5.30 p.m.—Orchestral Concert from the Hotel Métropole.  
6.0 p.m.—Flemish Language Lesson.  
6.30 p.m.—Trio Concert: 1. Marche chamberdement (Hallet). 2. Ave Maria (Schubert). 3. Humoresque (Widor). 4. Prelude et matin d'été—Pianoforte (Meulemans). 5. Miss Helyett (Audran). 6. Lied—Violin Solo (Block). 7. Roses of Picardy (Wood). 8. Cela dépend de vous (de Sylva). 9. Valse parisienne (Ganne). 10. Chant russe—Cello Solo (Lalo). 11. Lakhmé (Delibes).  
7.30 p.m.—Le Radio-Chronique.  
8.15 p.m.—Gramophone Record Selections with commentary.  
8.30 p.m.—Concert relayed from the Casino de Spa. Topical Talk given in the Interval.  
10.15 p.m. (approx.)—News.  
10.30 p.m. (approx.)—Close Down.

## BUDAPEST (Hungary)

Magyar Telephon Himnond es Radio R.T. WL. 557.1 m. (538 kc); 25 kw.  
Transmits at intervals from 9.30 a.m.  
6.15 p.m.—Talk, "Finland's Commemoration of Freedom."  
7.0 p.m.—Talk arranged by "Magyar Radio Ujsag."  
7.45 p.m.—English Language Lesson.  
8.30 p.m.—Concert of Opera Music. 1. "The Magic Flute"—Aria (Mozart). 2. "Cavalleria Rusticana"—Aria (Mascagni). 3. Scene from "Cavalleria Rusticana." 4. "I Pagliacci"—Selections (Leoncavallo).  
10.5 p.m.—Time and News.  
10.30 p.m.—Concert, including Chamber Music, Light Selections and Dance Music Programme.  
12 midnight (approx.)—Close Down.

## COLOGNE (Germany)

Westdeutscher Rundfunk. WL. 283 m. (1,060 kc); 4 kw.  
Transmits at intervals from 10.15 a.m.  
1.5 p.m.—Orchestral Concert: 1. "Manfred"—Overture (Schumann). 2. Die Chorsänger (Pheps). 3. Mozartiana (Kreisler). 4. Was Blumen träumen (Translateur). 5. Sonata in E Minor (Grieg). 6. Selection from "A Masked Ball" (Verdi). 7. Am Amazonenstrom—Intermezzo (Bode). Das hör' ich so gern—Potpourri (Spoliarsky).  
4.30 p.m.—See Langenberg Station.  
4.55 p.m.—Talk: "Street Humour."  
5.15 p.m.—Talk: "First Aid to the Injured—Cases of Burns and Injuries caused by Electricity."  
5.40 p.m.—See Langenberg Station.  
6.0 p.m.—Vocal and Orchestral Concert: 1. "The Hebrides"—Overture (Mendelssohn). 2. Soprano Solos: (a) Aria from "Acis and Galathea" (Handel), (b) Recitative and Air, "Non temer amato bene," with Violin Obligato (Handel). 3. Valse triste (Sibelius). 4. Selection from "Il Tabarro" (Puccini). 5. The Last Waltz (Strauss).  
7.20 p.m.—See Langenberg Station.  
7.45 p.m.—Talk on Natural Science.  
8.5 p.m.—Report on the Olympic Football Match at Amsterdam.  
8.15 p.m.—Programme from Düsseldorf (see Langenberg), followed by Report on the Olympic Hockey

Match at Amsterdam, News, Sports Notes, and Musical Selections.  
12 midnight (approx.)—Close Down.

## COPENHAGEN (Denmark)

Copenhagen Radio. WL. 337.4 m. (880 kc); 1 kw. Relayed by Kalundborg on 1,153.8 m. (260 kc).  
Transmits at intervals from 7.30 a.m.  
6.20 p.m.—Talk in English, "The North Western Frontier Province of India," by Mr. C. Campbell-MacCallum.  
7.0 p.m.—News, Exchange and Time.  
7.30 p.m.—Talk, "God in Nature."  
8.0 p.m.—Town Hall Chimes.  
8.5 p.m. (approx.)—Programme of Danish Poetry, followed by News.  
9.30 p.m.—Händel Concert: 1. "Anthem"—Over ure. 2. Two Selections from "Radamisto" and Selection from "Semele" (arr. Laub). 3. Four Selections from "Water Music": (a) Bourée, (b) Alla Hornpipe, (c) Loure, (d) Minuet. 4. Partita for Pianoforte. 5. Concerto No. 19 in C Minor.  
10.45 p.m. (approx.)—Close Down.

## CORK (Ireland)

Cork Broadcasting Station (6CK). WL. 400 m. (750 kc); 1.5 kw.  
2.30 p.m.—Weather, Stock Market Report and Gramophone Records.  
6.15 p.m.—Programme from Dublin.

## CRACOW (Poland)

Polskie-Radio. WL. 567 m. (529 kc); 1.5 kw.  
Transmits at intervals from 12.0 noon.  
7.5 p.m.—Agricultural Report.  
7.30 p.m.—English Language Lesson.  
8.0 p.m.—Fanfare and News.  
8.30 p.m.—Concert. 1. Songs: (a) Le soleil à de clairs rayons (Gall), (b) Ninon (Tosti), (c) Amor to vieta (Giordano). 2. Songs: (a) Ne pleure pas pour moi (Karlo-wicz), (b) Calme comme la nuit (Bohm), (c) La fleur fanée (Rotoli). 3. Violin Concerto—First Part (Tchaikovsky). 4. Songs: (a) Elegy (Massenet), (b) Aria from "May Night" (Rimsky-Korsakoff). 5. Songs: (a) Aria from "Pique Dame" (Tchaikovsky), (b) Aria from "Mignon" (Thomas). 6. Canzonetta and Finale from the Violin Concerto (Tchaikovsky). 7. Aria from "Elixir of Love" (Donizetti). 8. Songs: (a) Cavatines from "The Huzenots" (Meyerbeer), (b) Aria from "Samson and Delilah" (Saint-Saëns).  
10.0 p.m.—Programme from Warsaw.  
10.30 p.m.—Pavilion Restaurant Concert.  
11.30 p.m. (approx.)—Close Down.

## DUBLIN (Ireland)

Dublin Broadcasting Station (2RN). WL. 319.1 m. (940 kc); 1.5 kw.  
Transmits at intervals from 1.30 p.m.  
6.15 p.m.—Programme for Children.  
7.0 p.m.—Gramophone Records.  
7.15 p.m.—News, and French Lesson.  
7.35 p.m.—Talk on History.  
8.0 p.m.—"The Post Bag," by Kathleen Roddy and Company.  
8.40 p.m.—Chris Bruton (Entertainer).  
8.50 p.m.—Irish Dance Music by Michael Grogan's Trio.  
9.0 p.m.—Fred M. Doogan (Bass).  
9.10 p.m.—Dance Music Programme.  
10.30 p.m.—News and Close Down.

## FRANKFURT-am-MAIN (Germany)

Südwestdeutscher Rundfunk. WL. 429 m. (699 kc); 4 kw. Relayed by Cassel on 252.1 m. (1,190 kc).  
Transmits at intervals from 1.30 p.m.  
6.15 p.m.—Wireless Notes and News.  
6.30 p.m.—Talk, "Garden Birds," by Karl Hinze, from Cassel.  
6.45 p.m.—Talk, "Health Insurance and the Public," by an official.  
7.15 p.m.—Catholic Transmission.  
7.45 p.m.—Programme arranged by the Frankfurter Zeitung.  
8.15 p.m.—Programme from Stuttgart, followed by Gramophone Selections.

## HAMBURG (Germany)

Norag (ha, in Morse). WL. 396 m. (757 kc); 4 kw. Relayed by Bremen or 272.7 m. (1,100 kc); Hanover, 297.9 m. (1,007 kc); and Kiel, 255 m. (1,176 kc).  
Transmits at intervals from 5.45 a.m.  
5.0 p.m.—Café Walfhof Concert.  
6.45 p.m.—Talk for the Housewife.  
7.0 p.m.—Talk, "Youth's Right to Self-Government," by Pastor Egelke.  
7.25 p.m.—Talk on "The Care of Milk in the Summer Months."

8.0 p.m.—Talk on Economics.  
8.15 p.m.—Concert of Italian Opera Music of the Nineteenth Century, followed by News, Sports Notes, Ice Report and Concert from the Ostermann Restaurant.

## HILVERSUM (Holland)

Algemeene Vereeniging Radio Omroep. WL. 1,069 m. (280 kc); 5 kw.  
11.40 a.m.—Police Information.  
12.10 p.m.—Lunchtime-Trio Music.  
2.40 p.m.—Programme for Hospitals.  
5.40 p.m.—Concert: 1. "Tancred"—Overture (Rossini). 2. In Sunny Spain—Suite (Percy Elliot). 3. Albumblatt (Gade). 4. Sonata in G minor (Locatelli). 5. Selection from the Works of Liszt. 6. Legend (Massenet). 7. Violin Solos: (a) Melody (Tchaikovsky); (b) Song of Louis the Thirteenth and Pavane (Cooperin-Kreisler). 8. "Summernight's Dream"—Waltz (Gungl). 9. Selection from "A Waltz Dream" (Osc. Strauss). 10. Finale.  
6.55 p.m.—English Language Lesson.  
7.25 p.m.—Police Information.  
7.40 p.m.—Haarlem Orchestral Society Concert: 1. Second Suite from "L'Arlésienne" (Bizet). 2. Concerto for Pianoforte and Orchestra No. 2, Op. 18 (Rachmaninoff).  
8.50 p.m.—Orchestral Concert from the Kurhaus, Scheveningen, followed by Weather, News and Sports

## HUIZEN (Holland)

WL. 341 m. (879 kc); 4 kw. (Until 6.40 p.m.) Transmits from 6.40 p.m. on 1,870 m. (160 kc).  
1.10 p.m.—Contraalto Song Recital.  
6.10 p.m.—Instrumental Concert.  
8.10 p.m.—Talk by Mr. Gorter.  
8.40 p.m.—Soprano Solos and Talk.

## JUAN-LES-PINS (France)

Radio LL. WL. 230 m. (1,304 kc); 0.25 kw.  
1.0 p.m.—Orchestral Concert.  
9.0 p.m.—News, Musical Selections and Programme of Talks.  
10.0 p.m.—Casino Dance Bands.  
10.30 p.m. (approx.)—Close Down.

## KATTOWITZ (Poland)

Polskie Radio. WL. 422 m. (710 kc); 12 kw.  
Transmits at intervals from 5.0 p.m.  
6.55 p.m.—Reading in English.  
7.15 p.m.—Announcements and Talk.  
8.15 p.m.—A Three Act Comedy.  
8.10 p.m.—Time and News, followed by Dance Music Programme.

## KÖNIGSBERG (Germany)

Ostmarken Rundfunk. WL. 303.6 m. (988 kc); 4 kw. Relayed by Danzig, on 272.7 m. (1,100 kc).  
Transmits at intervals from 6.15 a.m.  
6.20 p.m.—Talk, "Wanderings in Lapland," by Dr. Strauss.  
7.0 p.m.—Talk, "New York Life."  
7.30 p.m.—Talk, "The Economic Policy in England and the British Empire," by Dr. Schmalz.  
8.10 p.m.—Vocal and Instrumental Concert, followed by Weather, News, Sports Notes, and Silent Night.

## KOVNO (Lithuania)

Radio-Kaunas. WL. 2,000 m. (150 kc); 15 kw.  
Transmits at intervals from 12 noon.  
9.0 p.m.—Finnish Concert: 1. (a) An das lied, (b) Du gingst mein Lieb, (c) Die Ruhe des Todes (Kilpinen). 2. Hirtenknaben (Kuula). 3. Rarahu (Ranta). 4. Isoäidille (Ikonen). 5. Ave Maria (Hannikainen).  
LAHTI (Finland)  
WL. 1,522.8 m. (197 kc); 25 kw.  
Programme also for Helsingfors, 275.9 m. (798 kc); 1.2 kw.  
11.0 a.m.—Exchange and Music.  
11.30 a.m.—Exchange and News.  
11.50 a.m.—Time and Weather.  
5.57 p.m.—Time, Weather and News.  
6.15 p.m.—Children's Programme.  
7.0 p.m.—Concert, followed by News in Finnish and Swedish.  
9.15 p.m.—Relay from a Restaurant.  
10.0 p.m. (approx.)—Close Down.

## LANGENBERG (Germany)

Westdeutscher Rundfunk. WL. 470.9 m. (637 kc); 25 kw. Programme also for Aiv-la-Chapelle, 401 m. (748 kc); Cologne, 283 m. (1,060 kc); and Münster, 250 m. (1,200 kc).  
Transmits at intervals from 10.15 a.m.  
1.5 p.m.—Programme from Cologne.  
4.30 p.m.—Reading from Düsseldorf.  
4.55 p.m.—Programme from Cologne.

5.40 p.m.—Talk from Düsseldorf, "Present-day Industrial Problems in the Rhenish-Westphalian District."

6.0 p.m.—Programme from Cologne.  
7.20 p.m.—Elementary Spanish Lesson.  
7.45 p.m.—Programme from Cologne.  
8.15 p.m.—Schumann Concert, from Düsseldorf: 1. Introductory Talk—"The Düsseldorf of Schumann's Time." 2. Fairy Tales for Pianoforte, Viola and Clarinet, 3. Sonnet to Clara Schumann (Grillparzer). 4. Pianoforte Solos: Three Selections, Op. 3. 5. Songs. 6. Reminiscences of Clara Schumann. 7. Pianoforte Solos: (a) Selection from the Sonata in F Sharp Minor, Op. 2 (Joh. Brahms), (b) Song O versenk—Piece dedicated to Clara Schumann (Joh. Brahms). 8. Recitation—Ballad from Heideknaben (Hebbel), Op. 122, No. 1 (R. Schumann). 9. Duets—Tone Poems from Op. 139 (Ball Scene) and Op. 130 (Children's Ball) (Schumann). Followed by Report on the Olympic Football Match at Amsterdam, News, Announcements, Sports Notes, Musical Selections with Dance Music.  
12 midnight (approx.)—Close Down.

## LEIPZIG (Germany)

Mitteldeutscher Rundfunk. WL. 366 m. (818 kc); 4 kw. Relayed by Dresden on 275.2 m. (1,090 kc).  
Transmits at intervals from 10.0 a.m.  
4.30 p.m.—Orchestral Concert.  
6.50 p.m.—Talk on Legal Matters.  
6.20 p.m.—Talk on "Health Insurance."  
6.30 p.m.—See Königswusterhausen.  
7.0 p.m.—Talk on "The Biology of Animals," by Dr. Hempelmann.  
7.30 p.m.—Talk, "Technical Physics."  
8.0 p.m.—Weather and Time.

8.15 p.m.—Symphony Concert. 1. Three Selections for String Orchestra (Purcell): (a) Allemande, (b) Sarabande, (c) Gellib. 2. Suite for Orchestra in G major (Fasch). 3. Allegro and Adagio (Frederick the Great). 4. "Ricerare" from "Musikalisches Opfer" for Strings (Bach). 5. Orchestral Music (Telemann). 6. Rondo in B flat major for Pianoforte and Orchestra (Prince Louis Ferdinand). 7. Symphony in E flat major (Beck).  
10.5 p.m.—News and Sports Notes.  
10.30 p.m.—Silent Night.

## LILLE (France)

PTT. WL. 267 m. (1,122 kc); 0.5 kw.  
Transmits at intervals from 12.30 p.m.  
7.30 p.m.—Market Prices.  
7.40 p.m.—Concert arranged by the Wireless Association of N. France.  
8.45 p.m.—Concert arranged by "Union Musicale du Nord," followed by News.

## MADRID (Spain)

Union Radio (EAJ7). WL. 374 m. (802 kc); 1.5 kw.  
Transmits at intervals from 11.45 a.m.  
7.0 p.m.—Concert: 1. Maria de los Angeles (Chapi). 2. Selection from "La Navarraise" (Massenet). 3. Interlude by Luis Medina. 4. Selection from "Pelleas and Melisande" (Debussy).  
8.0 p.m.—Dance Music Programme. Programme relayed by San Sebastian, EA78, on 335 m. (895 kc).  
10.0 p.m.—Chimes, Exchange, News.  
10.5 p.m.—"Surprise Programme."  
12 midnight.—Dance Music relayed from the Alcazar.  
12.30 a.m. (Fri., approx.)—Close Down.

## MILAN (Italy)

Unione Radiofonica Italiana. WL. 549.3 m. (546 kc); 7 kw.  
Transmits at intervals from 12.15 p.m.  
7.47 p.m.—English Language Lesson.  
8.35 p.m.—Time, followed by Talk on a Scientific Subject.  
8.45 p.m.—"La Sonnambula"—Opera (Bellini). Sports Notes in the Interval at 9.30 p.m. (approx.).  
10.55 p.m.—News and Close Down.

## MÜNICH (Germany)

Deutsche Stunde in Bayern. WL. 566 m. (550 kc); 4 kw. Relayed by Augsburg, on 204.1 m. (1,470 kc); Kaiserlautern, 204.1 m. (1,480 kc); and Nürnberg, 241.9 m. (1,240 kc).  
Transmits at intervals from 12.55 p.m.  
6.15 p.m.—Agricultural Talk.  
6.50 p.m.—Talk, "The German Forest in World Economics," by L. Wappes.  
7.20 p.m.—Talk, "Madame Butterfly."



Programmes for Thursday.—(Cont.)

7.35 p.m.—"Madame Butterfly"—Opera (Puccini), relayed from the National Theatre, Munich. 10.5 p.m.—News and Announcements. 10.25 p.m.—Gramophone Concert.

NAPLES (Italy)

Unione Radiofonica Italiana (r. NA). WL. 333.3 m. (900 kc); 1.5 kw. Transmits at intervals from 2.0 p.m. 8.40 a.m.—Time and News, followed by Harbour Notes. 8.50 p.m.—Concert of Light Music. 1. "Morning, Noon and Night"—Overture (Suppé). 2. "The Marriage of Figaro"—Bass Solo (Mozart). 3. "Le educande di Sorrento"—Tenor Solo (Usiglio). 4. "Fra Diavolo"—Tarentelle (Auber). 5. "The Elixir of Love"—Soprano and Tenor Duet (Donizetti). 6. "Falstaff"—Selection (Verdi). 7. "Don Juan"—Soprano and Bass Duet (Mozart). 8. "Don Pasquale"—Tenor Solo (Donizetti). 9. "The Barber of Seville"—Soprano Solo (Rossini). 10. "Columella"—Bass Solo (Fioravanti). 11. "Don Juan"—Minuet (Mozart). 12. "The Daughter of the Regiment"—Selection (Donizetti). 13. "The Italian in Algiers"—Symphony (Rossini). 10.55 p.m.—Calendar and Announcements. 11.0 p.m. (approx.)—Close Down.

PARIS (France)

Eiffel Tower (FL). WL. 2,650 m. (113 kc); 5 kw. 8.56 a.m.—Time Signal on 32.5 m. (9,231 kc). 10.26 a.m.—Time Signal on 2,650 m. 6.45 p.m.—"Le Journal Parlé." Talks: "Books to Read," "New Things in Wireless," "The Cinema." 8.10 p.m.—Weather Forecast. 8.30 p.m.—Concert. 1. Trio-Serenade (Beethoven). 2. Trio No. 1 (Schumann). 3. Songs (Gauthiez). At 8.56 p.m.—Time Signal on 32.5 m. (9,231 kc). 9.30 p.m.—Educational Programme. Talks on "Singing," "The Lute Maker." 11.26 p.m.—Time Signal on 2,650 m.

PARIS (France)

Petit Parisien. WL. 340.9 m. (880 kc); 0.5 kw. 8.45 p.m.—Gramophone Selections, Talk, Announcements and News. 9.0 p.m.—Concert: 1. "Pique Dame"—Overture (Suppé). 2. Selection from "Antar" (Rimsky-Korsakoff). 3. Symphony Orchestra: (a) Concerto in A major for Clarinet and Orchestra (Mozart). 4. Entr'acte from "La galant aventure" (Guiraud). 5. Danse (Debussy). 6. Athenian March from "Phédre" (Massenet). News during the intervals.

PARIS (France)

Radio-Paris (CFR). WL. 1,765 m. (170 kc); 3 kw. Transmits at intervals from 7.30 a.m. 12.30 p.m.—Orchestral Concert. 1. (a) Scènes alsaciennes, (b) La Navarraise, (c) Ballet Music from "Le Roi de Lahore" (Massenet). 2. (a) Le Chemin de l'Alhambra, (b) Sur la Giralda, (c) Sous les orangers, (d) Le jeudi saint à minuit, (e) Jeux (Turina). News. 1.50 p.m.—Market Prices; Bourse. 3.30 p.m.—Exchange Quotations. 3.45 p.m.—Programme for Children. 4.45 p.m.—Exchange and News. 8.0 p.m.—Agricultural Report. 8.15 p.m.—Exchange and News. 8.20 p.m. (approx.)—Esperanto Notes. 8.30 p.m.—Concert. 1. "Eux" (Donnay) by Mlle. Hélène Manson and M. René Moutis. 2. Trio Classique. 3. Melodies by M. Vigneau. 4. Poems by Mlle. Risner. 5. Harp Solos by Mlle. Lautemann: (a) Légende (Deffosse), (b) La Source (Tournier), (c) Tabatière à Musique (Liadour). 6. Trio Classique. News.

PITTSBURGH (U.S.A.)

Westinghouse Electric (KDKA). WL. 315.6 m. (950 kc); 50 kw. Relayed at intervals on 63 m. (4,762 kc) and 27 m. (11,111 kc). Transmits at intervals from 2.45 p.m. 11.0 p.m.—Time and Baseball Notes. 11.10 p.m.—Theatrical Calendar. 11.16 p.m.—Orchestral Concert from the William Penn Hotel. 11.55 p.m.—Baseball Announcements. 12.0 midnight—In the Interval. Time.

1.0—4.0 a.m. (Friday)—Programme relayed from WJZ, New York. 1.0 a.m.—"Retold Tales." 1.30 a.m.—Jack Albin's Orchestra. 2.0 a.m.—"Maxwell" Programme. 3.0 a.m.—Time, and Michelin Tire Company Programme. 3.30 a.m.—"Flit Soldiers Show." 4.0 a.m.—Baseball Scores, Weather, Time, and Close Down.

POSEN (Poland)

Polskie-Radio. WL. 343 m. (874 kc); 1.5 kw. Transmits at intervals from 7.0 a.m. 7.10 p.m.—English Language Lesson. 7.35 p.m.—Agricultural Talk. 8.0 p.m.—Finance Report. 8.30 p.m.—Concert of Polish Music. 10.0 p.m.—Time, News, Weather, Announcements and Variety Selections. 10.50 p.m. (approx.)—Close Down.

PRAGUE (Czechoslovakia)

Strasnice. WL. 348.9 m. (860 kc); 5 kw. Transmits at intervals from 11.0 a.m. 5.40 p.m.—Masaryk Institute Talk. 5.50 p.m.—German Transmission. 6.15 p.m.—Agricultural Report. 6.25 p.m.—Talk for Workers. 6.35 p.m.—French Language Lesson. 7.30 p.m.—"Les Cloches de Corneville"—Operetta (Planquette). 10.0 p.m.—Time and News, followed by Propaganda Programme.

ROME (Italy)

Unione Radiofonica Italiana (IRO). WL. 450 m. (666 kc); 3 kw. Transmits at intervals from 1.30 p.m. 8.30 p.m.—French Language Lesson. 8.58 p.m.—Time, News and Weather. 9.15 p.m.—"The Dollar Princess"—Operetta (Fall). Talk in the Interval on "Sea Art and Literature." 11.20 p.m.—News and Close Down.

SCHENECTADY (U.S.A.)

General Electric Company (WGY). WL. 379.5 m. (790 kc); 50 kw. Relayed by 2XAF on 31.4 m. (9,554 kc); from 11.0 p.m. Transmits at intervals from 11.45 a.m. 11.0 p.m.—Stock Reports and News.

11.25 p.m.—Baseball Announcements. 11.30 p.m.—Dinner Music from the Hotel de Witt Clinton, Albany. 12.25 a.m. (Friday)—Baseball Scores. 12.30 a.m.—Talk, "Bass Fishing." 12.45 a.m.—Music from the Studio. 1.0 a.m.—Musical Programme, followed by "Hoover Sentinels"—Programme relayed from New York. 2.0 a.m.—Musical Programme. 2.30 a.m.—Beechnut Historic Mohawk Valley Travelogue—Talk on "Rome and Oriskany." 3.0 a.m.—Halsey Stuart Presentation Programme from New York. 3.30 a.m.—Time, followed by Shea's Buffalo Studio Programme. 4.0 a.m.—Dance Music, New York. 4.30 a.m.—Organ Recital by Floyd Walter—Strand Theatre, Albany. 5.30 a.m. (approx.)—Close Down.

STAMBOUL (Turkey)

Radio-Stamboul. Société Anonyme Turque de Telephonie sans fil. WL. 1,180 m. (254 kc); 5 kw. Transmits at intervals from 4.30 p.m. 6.15 p.m.—Concert of Turkish Music. 7.20 p.m.—Weather and Time. 8.30 p.m.—Concert from Works of Offenbach. 1. Selection from "La belle Hélène." 2. "La Perichole"—Selection. 3. Selection from "The Tales of Hoffmann." 10.0 p.m.—News and Close Down.

STOCKHOLM (Sweden)

Radiojansat (SASA). WL. 453.8 m. (661 kc); 1.5 kw. Relayed by Motala, on 1,380 m. (217 kc); Göteborg, 416 m. (721 kc); Malmo, 260.9 m. (1,150 kc); and Sundsvall, 545.8 m. (550 kc). Transmits at intervals from 12.35 p.m. 6.30 p.m.—Service from Boden. 7.0 p.m.—Talk on "Teetotalism and Social Life," by Mr. Jacob Pettersson, Home Secretary. 7.55 p.m.—Technical Talk. 8.15 p.m.—Folk Melodies, relayed from Hudiksvall, 272.7 m. (1,100 kc). 8.45 p.m.—Concert: 1. Baritone Solos (Wiren): (a) En vinter-visa, (b) Floderna, (c) Ormvisa. 2. Sonata in A major for Pianoforte (Sjögren). 3. Baritone Solos (Sjögren): (a) Serenade, (b) Song from "Kärlens komedi." 9.15 p.m.—News and Weather.

9.40 p.m.—Illustrated Talk on "Fritz Reuter—the North German Dialect Humorist." 10.10 p.m. (approx.)—Close Down.

STUTTGART (Germany)

Süddeutscher Rundfunk. WL. 379.7 m. (790 kc); 4 kw. Transmits at intervals from 12.30 p.m. 6.0 p.m.—Time and Weather. 6.15 p.m.—Talk on "The World Voyage of the Cruiser Emden." 6.45 p.m.—Talk for Doctors. 7.15 p.m.—Hints and Suggestions for Excursions. 7.30 p.m.—Programme dedicated to Hermann Essig: 1. Introduction—His Life and Works. 2. At the grave side of Hermann Essig. 3. Träumerei (Schumann). 4. Poems: 5. Minuet (Boccherini). 6. Reading of a Story. 7. Serenade (Haydn). 8. The Black Cat—Story (Essig). 9. Poems (Essig). 8.15 p.m.—"Le Roi l'a dit"—Opera (Delibes). Followed by News and Silent Night.

TOULOUSE (France)

Radiophonie du Midi. WL. 389.6 m. (770 kc); 3 kw. 8.30 p.m.—Concert of Dance Music: 1. Valenciana. 2. Jota aragonesa. 3. La Corrida. 4. Danza. 5. Malaguena. 6. Lagararana. 7. Cordoba. 8. Tango andalou. 9.0 p.m.—Grand Concert organised by French Wireless Firms: 1. Military March (Schubert). 2. Canzonetta (Filippucci). 3. Mascarade (Lacome). 4. Dolores—Waltz (Waldteufel). 5. Selection from "The Barber of Seville" (Rossini). 6. Maritana—Overture (Wallace). 7. Babillage (Kunc). 8. Amoureuse serenade (Filippucci). 9. Selection from "Carmen" (Bizet). 10. Au bal des trompettes (Jessel). 11.0 p.m.—"North African" Journal

WARSAW (Poland)

Polskie-Radio. WL. 1,111.1 m. (270 kc); 10 kw. Transmits at intervals from 12.35 p.m. 7.5 p.m.—Agricultural Report. 7.15 p.m.—Variety Selections. 7.35 p.m.—Agricultural Talk. 8.15 p.m.—Orchestral Concert. News in French during the interval. 10.0 p.m.—Time, Aviation Notes, Weather, News and Sports Notes. 10.30 p.m.—Dance Music Programme. 11.30 p.m. (approx.)—Close Down.

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PROGRAMMES FOR FRIDAY (June 22)

NOTE: THE HOURS OF TRANSMISSION ARE REDUCED TO BRITISH SUMMER TIME

BARCELONA (Spain)

Radio-Barcelona (EAJ). WL. 344.8 m. (870 kc); 1.5 kw. Transmits at intervals from 11.0 a.m. 6.0 p.m.—Exchange Quotations. 6.10 p.m.—Fashion Talk. 6.30 p.m.—Sextet Selections. 8.30 p.m.—Music Lesson. 9.0 p.m.—Exchange and News. 9.5 p.m.—Orchestral Selections. 1. The Invincible Eagle—March (Souza). 2. Thinking of you (Worsley). 3. Nocturne: Tango (Jordá). 4. Magyar Czardas (Michiels). 9.30 p.m.—Reading of Spanish Poems. 9.45 p.m.—Selection from "The Little Dutch Girl" (Kalmán). 10.0 p.m.—Chimes and Weather. 10.5 p.m.—Guitar Recital. 1. Prelude (Nogúés). 2. Minuet (Beethoven). 3. Boceto (Romea). 4. Prelude (Tárrega). 5. Andante (Beethoven). 10.30 p.m.—The Royal Concerto (Couperin). 11.0 p.m. (approx.)—Close Down.

BERGEN (Norway)

Kringkastingselskap. WL. 369.0 m. (811 kc); 1.5 kw. Transmits at intervals from 11.15 a.m. 8.0 p.m.—The Wireless Orchestra. 1. "Hamlet"—Overture (Bach). 2. Selection from "Pique Dame" (Tchaikovsky). 8.30 p.m.—Talk, "The Indians of North America," by L. Lea. 9.0 p.m.—The Exhibition Orchestra. 9.30 p.m.—English Song Recital. 1. Drink to me only. 2. Rose of my heart (Lohr). 3. A Lane in Spain. 4. Your eyes have told me so (O'Hara). 5. Night and Day (Lloyd). 6. By the light of the Jungle Moon (Atkinson). 10.0 p.m.—Weather, News and Time. 10.15 p.m. (approx.)—Close Down.

BERLIN (Germany)

Königswusterhausen. WL. 1,250 m. (240 kc); 35 kw. Transmits at intervals from 12 noon. 5.0 p.m.—Programme from Leipzig. 6.0 p.m.—Talk, "Agricultural Dependence on Industry." 6.30 p.m.—Advanced English Lesson. 6.55 p.m.—Talk, "Power Supplies in Central Europe." 7.20 p.m.—Talk for Veterinary Surgeons. 8.0 p.m.—Talk, "Wireless Short-hand." 8.30 p.m.—Talk, "The Future of Trans-Oceanic Air Traffic." 9.0 p.m.—Talk, "The Infancy of the Labour Movement in Europe." 9.30 p.m.—Talk, "The Wonders of the Underworld"—Coal in Central Germany," by A. L. Müller. 10.15 p.m. (approx.)—News from Voxhaus. 10.30 p.m.—Programme from Königsberg.

BERLIN (Germany)

Voxhaus. WL. 484.6 m. (619 kc); 4 kw. Transmits at intervals from 10.10 a.m. 5.30 p.m.—Orchestral Concert. 6.40 p.m.—Talk by President Nitz. 7.0 p.m.—Italian Language Lesson. 7.30 p.m.—Talk, "Problems of the New Berlin" by Dr. Zielenziger. 8.0 p.m.—Talk, "A Week End in Neumark." 8.30 p.m.—Wireless Talk. 9.0 p.m.—"In the Mountains"—Concert: 1. "Edelweiss"—Overture (Komzák). 2. (a) Serenade for Chorus and Pianoforte (Meyer-Helmund); (b) Das schlaue Mädchen. 3. Ein Sonntag auf der Alm—Waltz Idylle (Koschat). 4. Choral Selections: (a) Juhe, Tyrolian Song (Kremsler); (b) Kilbertal, du bist mein Freud" (Kühel). 5. Selection from "Abschied" (Koschat). 6. Choral Selections: (a) Verlasser—Folk Song; (b) Am Wörther See—Waltz (Koschat). 7. (a) Auf den Bergen wohnt—Waltz (Komzák); (b) Gäiteler Jägermarsch (Koschat), followed by News, Time and Weather.

BERNE (Switzerland)

Radio-Berne. WL. 411 m. (730 kc); 1.5 kw. Transmits at intervals from 1.0 p.m. 8.0 p.m.—Time and Weather. 8.5 p.m.—Talk on Mountaineering. 9.30 p.m.—The Kursaal Orchestra: Baritone Solos, News and Weather during the intervals. 10.35 p.m. (approx.)—Close Down.

BRESLAU (Germany)

Schlesische Funkstunde. WL. 322.9 m. (929 kc); 4 kw. Relayed by Gleiwitz 329.7 m. (910 kc). Transmits at intervals from 11.15 a.m. 6.0 p.m.—Talk, "Week Ends in Greiffenberg, Flinsberg and Schwarzbach." 7.25 p.m.—Talk, "The Evolution of the Modern Theatre," by P. Rilla. 7.50 p.m.—Talk, "The History of Culture—Germany and her people." 8.30 p.m.—Symphony Concert from the Works of Schubert. 1. Overture in E minor. 2. The Second Symphony, in B flat major. 3. Rondo in A major for Violin and String Orchestra. 4. Music for Wind Instruments. 5. Minuet and Finale for Wind Instrument Octet. 6. "Rosamunde" Overture.

BRUNN (Czecho-Slovakia)

Komarov. WL. 441.2 m. (680 kc); 2.4 kw. Transmits at intervals from 11.0 a.m. 6.0 p.m.—German Transmission. 6.25 p.m.—Agricultural Reports, followed by Talk. 7.0 p.m.—"I Pagliacci"—Opera (Leoncavallo) and "Cavalleria Rusticana" (Mascagni), relayed from the National Theatre, Brünn. 10.0 p.m.—Programme from Prague. 10.25 p.m.—Exhibition Programme.

BRUSSELS (Belgium)

Radio-Belgique. WL. 508.5 m. (590 kc); 1.5 kw. 5.8 p.m.—Dance Music from the St. Saviour Palais de Danse. 6.0 p.m.—"The History of Music." 6.15 p.m.—Flemish Literary Talk. 6.30 p.m.—Chamber Music Concert. 1. Concerts royaux (Couperin). 2. Rondo for Pianoforte (Beethoven). 3. Fantasia (Schumann). 7.30 p.m.—Le Radio-Chronique. 8.15 p.m.—Concert. 1. Petite Suite for Clarinet, Flute and String Quartet (Clausman). 2. Talk on "Le Poète Stuart Merrill à Forest." 3. Serenade for Flute, Violin and Cello (Reyer). 4. Topical Talk. 5. Trio for Clarinet, Cello and Pianoforte (d'Indy). 6. Talk in Flemish on "The Composer Jan Blokkx." 7. Quintet for Violin, Clarinet, Viola, Cello and Pianoforte (Dubois). 10.15 p.m.—News and Close Down.

BUDAPEST (Hungary)

Magyar Telephon Hírműve és Radio R.T. WL. 557.1 m. (538 kc); 25 kw. Transmits at intervals from 9.30 a.m. 7.15 p.m.—Cabaret Concert. 1. Selection (Nagi). 2. Songs. 3. Talk. 4. Songs with Guitar accompaniment. 5. Selection (Lorizc). 6. A Play (Lorizc). 10.0 p.m.—Concert of Military Music. 1. Parade March (Hoved). 2. Waltz (Strauss). 3. "Ilka"—Overture (Doppler). 4. "Thais"—Selection (Massenet). 5. Meditation and Ave Maria (Gounod-Bach). 12.0 midnight (approx.)—Close Down.

COLOGNE (Germany)

Westdeutscher Rundfunk. WL. 283 m. (1,060 kc); 4 kw. Transmits at intervals from 10.15 a.m. 1.5 p.m.—Orchestral Concert from the Works of Weber. 1. "Turandot"—Overture. 2. Concerto for Bassoon and Orchestra. 3. Soprano Solos—Selections from "Der Freischütz." 4. Entr'acte from "Die drei Pintos." 5. Concerto for Clarinet with Orchestra—Second and Third Movements. 6. Baritone Solos—Selections from "Euryanthe." 7. "Euryanthe"—Overture. 4.0 p.m.—See Langenberg station. 4.30 p.m.—Programme for Children. 5.15 p.m.—Review of Books. 5.40 p.m.—See Langenberg station. 6.0 p.m.—Orchestral Concert. 1. "Le Pensionnaire" (Suppé). 2. Alt-Wien—Waltz (Kremsler). 3. "Nabucco"—Overture (Verdi). 4. Offerande (Poisson). 5. Buresque (Södermann). 6. Selection from "Lucrecia Borgia" (Donizetti). 7. Eviana—Waltz (Huppermann). 7.10 p.m.—English Language Lesson. 7.35 p.m.—Talk on "La Bohème." 8.0 p.m.—"La Bohème"—Opera (Puccini), by the Artistes of the Scala, Milan. After the Opera, Report on the Olympic Football Match at Amsterdam, News, Announcements, Sports Notes, Musical Selections, and Dance Music. 12 midnight (approx.)—Close Down.

COPENHAGEN (Denmark)

Copenhagen Radio. WL. 337.4 m. (889 kc); 1 kw. Relayed by Kalundborg on 1,153.8 m. (260 kc). Transmits at intervals from 7.30 a.m. 6.20 p.m.—Talk for Housewives. 7.0 p.m.—News, Exchange, and Time. 7.30 p.m.—Talk, "The Descent of Man." 8.0 p.m.—Town Hall Chimes. 8.5 p.m. (approx.)—Bournonville Evening. 1. (a) Walhalla March (Hartmann), (b) Selection from "Thrymskviden" (Hartmann). 2. (a) Country Dance (Gade), (b) March and Bridal Waltz from "Et Folkesagn" (Gade). 3. Polonaise from "Far from Denmark" (Glaeser). 4. Selection from "Valdemar" (Fröhlich). 5. Tarantelle from "Napoli" (Pauli). 6. Finale—Galop from "Livjaegerne paa Amager" (Lumbyé). Followed by News. 9.30 p.m.—"The Old Bachelor"—Play (Gustav Esmann). 10.0 p.m.—Popular Danish Songs. 10.30 p.m. (approx.)—Close Down.

CORK (Ireland)

Cork Broadcasting Station (6CK). WL. 400 m. (750 kc); 1.5 kw. 2.30 p.m.—Weather, Stock Market Report and Gramophone Records. 6.15 p.m.—Programme from Dublin.

CRACOW (Poland)

Polskie-Radio. WL. 567 m. (529 kc); 1.5 kw. Transmits at intervals from 12 noon. 5.45 p.m.—Programme from Warsaw. 7.5 p.m.—Agricultural Report. 7.15 p.m.—Variety Selections. 7.35 p.m.—Wireless Review. 8.0 p.m.—Faire and News. 8.15 p.m.—Programme from Warsaw.

DUBLIN (Ireland)

Dublin Broadcasting Station (2RN). WL. 319.1 m. (940 kc); 1.5 kw. Transmits at intervals from 1.30 p.m. 6.15 p.m.—Programme for Children. 7.0 p.m.—Gramophone Records. 7.20 p.m.—News and Gardening Talk by G. O. Sherrard. 7.45 p.m.—Italian Language Lesson. 8.0 p.m.—Orchestral Selections from "A Midsummer Night's Dream." 8.20 p.m.—Selections from "A Midsummer Night's Dream," by Elizabeth Young and Company. 8.50 p.m.—Donnchadh MacCoiiligh (Baritone). 9.5 p.m.—Sydney Green (Pianist). 9.15 p.m.—Patricia Cahill (Contralto). 9.25 p.m.—Sydney Green (Pianist). 9.30 p.m.—"Whimsicalities," by J. O'Sheehan. 9.45 p.m.—"Musical Composers"—"Dr. Starkie"—2RN Series. 10.10 p.m.—Operatic Music by the Station Orchestra. 10.30 p.m.—News and Close Down.

FRANKFURT-am-MAIN (Germany)

Südwestdeutscher Rundfunk. WL. 429 m. (699 kc); 4 kw. Relayed by Cassel on 252.1 m. (1,190 kc). Transmits at intervals from 1.0 p.m. 6.15 p.m.—Wireless Notes and News. 6.45 p.m.—Transmission of the Southwest German Radio Club. 7.15 p.m.—Talk, "The Jury." 7.45 p.m.—Science and Technology. 8.5 p.m.—Weekly Film Review. 8.15 p.m.—Talks by Josef Penten and Adolf von Hatzfeld. 9.15 p.m.—Variety Programme followed by Late Concert from Cassel.

HAMBURG (Germany)

Norag (ha, in Morse). WL. 396 m. (757 kc); 4 kw. Relayed by Bremen on 272.7 m. (1,100 kc); Hanover, 297.9 m. (1,007 kc); and Kiel, 255 m. (1,176 kc). Transmits at intervals from 5.45 a.m. 5.0 p.m.—Concert of Songs and Arias by H. Sperber (Tenor). 6.30 p.m.—See Königswusterhausen. 7.25 p.m. (Hamburg only)—Talk by Carl Ritters. 7.55 p.m.—Weather Report. 8.0 p.m. (Hamburg and Kiel)—Three Plays in Low German, Dialect (Hamburg and Kiel only), (a) "Versteekenspeelen," Comedy (Behnken), (b) "De Straf" (Rogge), (c) "Packetsel" Comedy (Behnken), followed by Topical Talk, News, Sports Notes, Ice Report and Cabaret Concert.

HILVERSUM (Holland)

Algemeene Vereeniging Radio Omroep. WL. 1,069 m. (280 kc); 5 kw. 11.40 a.m.—Police Information. 12.10 p.m.—Lunchtime Trio Music.

HUIZEN (Holland)

WL. 341 m. (879 kc); 4 kw. (Until 6.40 p.m.). Transmits from 6.40 p.m. on 1,870 m. (160 kc). 1.10 p.m.—Concert of Trio Music. 4.40 p.m.—Gramophone Selections. 5.40 p.m.—Contraalto Song Recital. 7.40 p.m.—Gregorian Lesson. 8.10 p.m. (approx.)—Close Down.

JUAN-LES-PINS (France)

Radio LL. WL. 230 m. (1,304 kc); 0.25 kw. 1.0 p.m.—Orchestral Concert. 9.0 p.m.—News and Talks. 10.0 p.m.—Casino Dance Bands. 10.30 p.m. (approx.)—Close Down.

KATTOWITZ (Poland)

Polskie Radio. WL. 422 m. (710 kc); 12 kw. Transmits at intervals from 5.0 p.m. 7.35 p.m.—Talks in English and Italian, on "The Genius of Paderewski," by Prof. Jachimecki. 8.15 p.m.—Programme from Warsaw. 10.0 p.m.—Time and News. 10.30 p.m.—Answers to Correspondents in French, for the benefit of foreign listeners, by M. Tymieniecki, Programme Director.

KÖNIGSBERG (Germany)

Ostmarken Rundfunk. WL. 304.6 m. (988 kc); 4 kw. Relayed by Danzig, on 272.7 m. (1,100 kc). Transmits at intervals from 6.15 a.m. 6.25 p.m.—Agricultural Talk. 7.0 p.m.—Spanish Language Lesson. 7.30 p.m.—Lesson in Esperanto. 8.5 p.m.—Wagner Concert, relayed from Danzig, followed by Weather, News and Sports Notes. 10.15 p.m.—Dance Music Programme, relayed from Danzig.

KOVNO (Lithuania)

Radio-Kaunas. WL. 2,000 m. (150 kc); 15 kw. Transmits at intervals from 12.0 noon. 9.0 p.m.—Trio Concert. 1. "The Mastersingers of Berlin" (Lincke). 2. Erinnerung—Waltz (Waldteufel). 3. Salut d'amour (Elgar). 4. Lithuanian Folk-Songs. 5. Intermezzo (Traditeur). 6. Siamese Watch Parade (Lincke). 7. Idylle (Alleter).

LAHTI (Finland)

WL. 1,522.8 m. (197 kc); 25 kw. Programme also for Helsingfors, 275.9 m. (998 kc); 1.2 kw. 11.0 a.m.—Exchange and Music. 11.30 a.m.—Exchange and News. 11.59 a.m.—Time and Weather. 5.57 p.m.—Time and News. 6.15 p.m.—Children's Programme. 7.0 p.m.—Concert. 1. Polonaise (Sibelius). 2. Berceuse (Sibelius). 3. Autrefois (Sibelius). 4. Finnish Songs (arr. Kauppi). 5. Song. 6. Estudantino (Waldteufel). 7. Chansons viennoises (Siczynski). 8. Selection from "The Gipsy Baron" (J. Strauss). 9. Still wie die Nacht (Bohm). 10. "Pique Dame"—Overture (Suppé). 8.45 p.m.—News Bulletin given in Finnish and Swedish. 9.15 p.m.—Relay from a Restaurant.

LANGENBERG (Germany)

Westdeutscher Rundfunk. WL. 470.9 m. (637 kc); 25 kw. Programme also for Aix-la-Chapelle, 401 m. (748 kc); Cologne, 283 m. (1,060 kc); and Münster, 250 m. (1,200 kc). Transmits at intervals from 10.15 a.m. 1.5 p.m.—Programme from Cologne.

LEIPZIG (Germany)

Mitteldeutscher Rundfunk. WL. 366 m. (818 kc); 4 kw. Relayed by Dresden, on 275.2 (1,090 kc). Transmits at intervals from 10.0 a.m. 4.30 p.m.—Concert of Modern Operetta Music. 1. Pevanche (Jaschka). 2. Die Bacchusnacht (Granichstaedten). 3. Die goldne Meisterin (Eysler). 4. Paganini (Lehar). 5. Die Dumme August (Gfallner). 6. The Circus Princess (Kalmán). 6.30 p.m.—See Königswusterhausen. 7.0 p.m.—Talk, "The Olympic Gods." 7.30 p.m.—Talk, "Through New York." 8.0 p.m.—Weather and Time. 8.15 p.m.—"Street Humour"—Variety. 9.15 p.m.—Concert, followed by News and Sports Notes. 10.20 p.m.—Dance Music Programme and Selections of Light Music. 12.0 midnight (approx.)—Close Down.

LILLE (France)

P.T.T. WL. 267 m. (1,122 kc); 0.5 kw. Transmits at intervals from 12.30 p.m. 7.30 p.m.—Prices of Market Goods. 7.40 p.m.—English Language Lesson. 8.15 p.m.—Agricultural or Horticultural Talk. 8.30 p.m.—Concert, arranged by "Tourcoing Radio Amateurs," followed by News Bulletin.

MADRID (Spain)

Union Radio (EAJ7). WL. 374 m. (802 kc); 1.5 kw. Transmits at intervals from 11.45 a.m. 1.0 p.m.—Chamber Music Concert. 1. Quartet in A major, No. 16 K.464 (Mozart). 2. Soprano Solos: (a) Ah, mio cor (Handel), (b) Chi vuol comprar la bella calendrina (Durante), (c) Cascatiemo morire (Monteverdi). 3. Trio in C minor (Mendelssohn). 4. Soprano Solos: (a) Ich liebe dich (Grieg), (b) Träume (Weber), (c) Berceuse (Wagner). 10.0 p.m.—Chimes and Exchange. 10.5 p.m.—Orchestral Concert. Relayed from the Hotel Nacional. 11.50 p.m. (approx.)—News. 12.0 midnight.—Dance Music Programme from the Alcazar, Madrid. 12.30 a.m. (Sat., approx.)—Close Down.

MILAN (Italy)

Unione Radiofonica Italiana. WL. 549.3 m. (546 kc); 7 kw. Transmits at intervals from 12.15 p.m. 7.47 p.m.—German Language Lesson. 8.35 p.m.—Time and Medical Talk. 8.45 p.m.—Symphony Concert. 1. "Titus"—Overture (Mozart). 2. "Fifth Symphony"—(Beethoven). 3. Literary Talk. 4. Three Preludes from "Oedipus Rex" (Pizzetti). 5. "Moths Goose"—Selections (Ravel). 6. "I Lituani"—Symphony (Ponchielli). 10.55 p.m.—News and Close Down.

MUNICH (Germany)

Deutsche Stunde in Bayern. WL. 566 m. (550 kc); 4 kw. Relayed by Augsburg on 204.1 m. (1,470 kc); Kaiserlautern on 241.9 m. (1,480 kc); and Nürnberg on 241.9 m. (1,240 kc). Transmits at intervals from 11.20 a.m. 6.15 p.m.—Love Song Recital. 7.30 p.m.—Talk, "The Modern Woman." 8.0 p.m.—Symphony Concert. 1. Serenade No. 2, Op. 16 (Brahms). 2. Concerto for Pianoforte and Orchestra, No. 2 in B flat major, Op. 83 (Brahms). 9.20 p.m.—Reading, followed by Wireless Notes and News. 10.39 p.m.—The Week's Sports.

NAPLES (Italy)

Unione Radiofonica Italiana (INA). WL. 333.3 m. (900 kc); 1.5 kw. Transmits at intervals from 2.0 p.m. 8.40 p.m.—Time and News, followed by Harbour Notes. 8.50 p.m.—"Manon"—Opera (Massenet). 10.55 p.m.—Calendar and Announcements. 11.0 p.m. (approx.)—Close Down.



Programmes for Friday.—(Cont.)

PARIS (France) Eiffel Tower (FL). WL. 2,650 m. (113 kc); 5 kw. 8.56 a.m.—Time Signal on 32.5 m. (9,231 kc). 10.26 a.m.—Time Signal on 2,650 m. (113 kc); 5 kw. 6.45 p.m.—"Le Journal Parlé." Talks on "Modern Music" and "The Palace of Justice," etc. 8.10 p.m.—Weather Forecast. 8.30 p.m.—Concert. 1. Songs: (a) Odile au Couvent, (b) Ronde des jeunes filles d'Obernal. 2. Songs: (a) La confession, (b) Le vieillard. 3. Sonata for Violin. 4. Songs: (a) La Chanson de la Joncque, (b) Serenade. 5. Le sommeil d'Endymion—Lyric from the Poem by L. Paté. At 8.56 p.m.—Time Signal on 32.5 m. (9,231 kc). 9.30 p.m.—Educational Programme. Talks on "Great Modern Writers at Home" and "Peter Benoit," etc. 11.26 p.m.—Time Signal on 2,650 m.

PARIS (France) Petit Parisien. WL. 340.9 m. (880 kc); 0.5 kw. 8.0 p.m.—Dance Music Programme. 9.0 p.m. (approx.)—Close Down.

PARIS (France) Radio-Paris (CFR). WL. 1,765 m. (170 kc); 3 kw. Transmits at intervals from 7.30 a.m. 2.30 p.m.—Orchestral Concert. 1. Blue Baby (Klages). 2. Tanti Serenade (Lears). 3. "Le Roi d'Ys"—Overture (Lalo). 4. Berceuse (Meurice). 5. Songs by Mlle. S. Gouts. (a) Air de Zerline (Mozart). (b) Lilac Time (Chausson). 6. Violin Solos by Mlle. Maria Meurice. (a) The Bee (Schubert); (b) Humoresque (Dvorak). 7. Bella-Kallina (Deleau). 8. Suite funambulesque (Busser). 9. Petite Aubade (Wurmser). 10. The Minstrel's Song—Cello Solo by Mlle. Renée Alexandre (Glazounov). 11. Suite caucasienne (Ippolitov-Ivanov). 12. Pierrot Joyeux (Lévy). News in the interval. 1.50 p.m.—Market Prices, Bourse. 3.30 p.m.—Exchange Quotations. 3.45 p.m.—Concert. 1. "Masques et bergamasques"—Overture (Faure). 2. Sonata for Cello by Mlle.

Lucienne Radisse (Boellmann). 3. La Chanson des Abeilles (Filippucci). 4. Piano-forte Solos by Marcel Briquet, (a) Humoresque (Falkenberg), (b) Seguidilla (Albeniz). 5. Rhapsodie mauresque (Saint-Saens). 6. Violin Solos by Albert Locatelli, (a) Minuet (Porphora), (b) Scherzo (Dittersdorf), (c) Rosamunde (Schubert). 7. Ballet Music from "Antar" (Dupont). 4.45 p.m.—Exchange and News. 8.0 p.m.—Agricultural Report. 8.15 p.m.—Exchange and News. 8.30 p.m.—Concert. 1. Concerto for Cello and Orchestra by M. André Levy. 2. Baritone Solos by Armand Crabbe. 3. Selections by Mlle. Perelli (Vocalist). 4. Daphnis and Chloe (Ravel). News.

PITTSBURGH (U.S.A.) Westinghouse Electric (KDKA). WL. 315.6 m. (950 kc); 50 kw. Relayed at intervals on 63 m. (4,762 kc) and 27 m. (11,111 kc). Transmits at intervals from 2.45 p.m. 11.0 p.m.—Time and Baseball Notes. 11.10 p.m.—Theatrical Calendar. 11.15 p.m.—Orchestral Programme from the William Penn Hotel. 11.30 p.m.—Children's Programme—the Gold Spots Pals, from WJZ. 12 (midnight)—Time, Baseball Scores, and Orchestral Programme. 12.20 a.m. (Sat.)—Week-end Tours. 12.30 a.m.—3.0 a.m.—Programme relayed from WJZ, New York. 12.30 a.m.—Dixie Circus Programme. 2.0 a.m.—Godfrey Ludlow (Violinist). 3.0 a.m.—"Automatic Agitators." 4.0 a.m.—Time, Weather, Baseball Scores, and Close Down.

PRAGUE (Czechoslovakia) Stranice. WL. 348.9 m. (860 kc); 5 kw. Transmits at intervals from 11.0 a.m. 5.50 p.m.—German Transmission. 6.15 p.m.—Agricultural Report. 6.25 p.m.—Talk for Workers. 6.35 p.m.—Czech-German Conversation. 7.15 p.m.—Orchestral Concert. 8.0 p.m.—Weather and News. 8.10 p.m.—Popular Evening Programme. 9.0 p.m.—Evening Concert.

10.0 p.m.—Time, News, Orchestra. 10.25 p.m.—Exhibition Programme relayed from Brinn.

ROME (Italy) Unione Radiofonica Italiana (IRO). WL. 450 m. (666 kc); 3 kw. Transmits at intervals from 1.30 p.m. 8.30 p.m.—English Language Lesson. 8.58 p.m.—Time, News and Weather. 9.15 p.m.—Concert. 1. Quartet in G Major (Haydn). 2. Soprano Solos: (a) Madonna Renzuola (Donaudy), (b) Fedeltà (Brahms), (c) Canzone del viandante (Mascenet). 3. Two Quartet Selections (Raff). 4. Talk. 5. "Coriolan"—Overture (Beethoven). 6. Le Educande di Sorrento—Humorous Duet (Petrella). 7. Violin Solos: (a) Zampagnara (Principe), (b) Gavotta variata (Pugnani). 8. (a) Serenata (Granados), (b) Espana—Rhapsody (Chabrier). 9. Pipelet—Aria and Duet (Ferrari). 10. Violin Solos: (a) Canti russi (Lalo), (b) Mazurka (Wieniawsky). 11. Spanish Caprice (Rimsky-Korsakoff). 11.20 p.m.—News and Close Down.

SCHENECTADY (U.S.A.) General Electric Company (WGY). WL. 379.5 m. (790 kc); 50 kw. Relayed by 2XAD on 21.96 m. (13,661 kc) from 11.0 a.m. Transmits at intervals from 11.45 a.m. 11.0 p.m.—"Mutual Savings Hour." Programme from New York. 12 (midnight)—Exchange and News. 12.20 a.m. (Sat.)—Baseball Scores. 12.25 a.m.—Talk on Health, followed by the WGY Players' Programme. 1.0 a.m.—"Ero-Joy" Programme—Matilda Biglow Russ (Soprano). 2.0 a.m.—"An Evening in Paris." Programme relayed from New York. 2.30 a.m.—"Cathedral Echoes." 3.0 a.m.—"Palmolive Hour." Programme relayed from New York. 4.0 a.m.—Time, and Close Down.

STAMBOUL (Turkey) Radio-Stamboul. Société Anonyme Turque de Téléphonie sans fil. WL. 1,180 m. (254 kc); 5 kw. Transmits at intervals from 4.30 p.m. 6.15 p.m.—Concert of Turkish Music. 8.30 p.m.—Concert. 1. "Morning, Noon and Night"—Overture (Suppé). 2. Selection from "A Masked Ball" (Verdi). 3. Trio (Mozart).

STOCKHOLM (Sweden) Radiotjänst (SASA). WL. 453.8 m. (661 kc); 1.5 kw. Relayed by Motala on 1,380 m. (217 kc); Göteborg, 416 m. (721 kc); Malmö, 260.9 m. (1,150 kc); and Sundsvall, 545.8 m. (550 kc). Transmits at intervals from 12.35 p.m. 6.30 p.m.—Talk for Boy Scouts. 7.0 p.m.—Concert. 1. March potpourri (Winter). 2. Selection from "No No Nanette" (Youmans). 3. Modern German Popular Songs. 4. Blues from "Johnny spielt auf" (Krenek). 5. Foxtrot from "Madame Revue" (Nelson). 6. Selection from "Sunny" (Kern). 7. Modern German Popular Songs. 8. "Très jolie (Waldteufel). 8.15 p.m.—Folk Melodies, played by Peasant Fiddlers and Pipers. Relayed from Hudiksvall, 272.7 m. (1,100 kc). 8.45 p.m.—Cabaret Show Selections. 9.0 p.m.—Agricultural Talk. 9.40 p.m.—Talk, "Salmon Fishing in Northern Sweden." 10.10 p.m. (approx.)—Close Down.

STUTTART (Germany) Süddeutscher Rundfunk. WL. 379.7 m. (790 kc); 4 kw. Transmits at intervals from 12.15 p.m. 6.0 p.m.—Time, Weather and Agricultural Report. 6.15 p.m.—Medical Talk from Freiburg, 574.7 m. (522 kc). 6.45 p.m.—Talk, "Social Life of To-day and Yesterday." 7.15 p.m.—English Language Lesson. 7.45 p.m.—Announcements in Esperanto on programme of the coming week; Time and Weather. 8.15 p.m.—Symphony Concert. 1. Symphony (Haydn). 2. Spanish Symphony (Lalo). 3. Potpourri Op. 54 (Krenek). Followed by Variety Programme. 4. Gramophone Selections. 5. Sketch (Baring). 6. Gramophone Selections. 7. "How I got Married" (Tchekov). 8. Gramophone Selections. 9. "Neumann spielt Kömödie" (Reimann). 10. Gramophone Selections. 11. "Der Windstoss" (Jerusalem). 12. Gramophone Selections. 13. "Der gemütliche Kommissär."—Grottesque (Courtelaine). 14. Gramophone. News.

TOULOUSE (France) Radiophonie du Midi. WL. 389.6 m. (770 kc); 3 kw. 8.30 p.m.—Concert. 1. Selection from "Prince Igor" (Borodine). 2. Two Duets from "Faust" (Gounod). 3. Duet from "Louise" (Charpentier). 4. Two Duets from "Mireille" (Gounod). 5. "Anges pur" from "Faust" (Gounod). 6. Duet from "Don Quichotte" (Puccini). 7. Mimi's Farewell from "La Bohème" (Puccini). 8. Swallow's Duet from "Mignon" (Thomas). 9. "C'est l'amour endormi" from "Lakmé" (Delibes). 10. Duet from "Fortunio" (Messager). 11. Aria from "La Bohème" (Puccini). 12. Aria from "La Bohème." 10.0 p.m.—Tango Selections. 10.15 p.m.—"North African" Journal.

VIENNA (Austria) Radio Wien. WL. 577 and 517.2 m. (520 and 580 kc); 1.5 and 5 kw. Relayed by Innsbruck, on 294.1 m. (1,020 kc); and Klagenfurt, on 272.7 m. (1,100 kc). Transmits at intervals from 11.0 a.m. 6.0 p.m.—Talk, "The Mountain Observatories of Austria." 6.30 p.m.—Talk for Workers. 7.0 p.m.—Italian Language Lesson. 7.30 p.m.—Public Health Talk. 8.0 p.m.—English Literature Lesson. 8.30 p.m.—Reading and "Sonnenwende"—Play (L. von Strauss and Tormay).

WARSAW (Poland) Polskie-Radio. WL. 1,111.1 m. (270 kc); 10 kw. Transmits at intervals from 1.0 p.m. 7.5 p.m.—Agricultural Report, followed by Market Prices from Cracow. 7.15 p.m.—Variety Selections. 7.30 p.m.—Talk, "Why Polish Sportsmen will go to Amsterdam." 7.55 p.m.—Talk on "Music." 8.30 p.m.—Symphony Concert from the Works of Mendelssohn. 1. Scottish Symphony. 2. The Hebrides Overture. 3. Violin Concerto. 4. Selections from "A Midsummer Night's Dream." (a) Overture, (b) Scherzo, (c) Nocturne, (d) Intermezzo, (e) Rustics' Dance, (f) Wedding March. News in French during the interval. 10.0 p.m.—Time, Aviation Notes, Weather, News, and Sports Notes. 10.30 p.m. (approx.)—Close Down.

Programmes for Saturday.—(Cont.)

10.55 p.m.—News, followed by Dance Music from the Cova Restaurant. 11.45 p.m. (approx.)—Close Down. MUNICH (Germany) Deutsche Stunde in Bayern. WL. 536 m. (559 kc); 4 kw. Relayed by Augsburg, on 566 m. (530 kc); Kayserslautern, 204.1 m. (1,470 kc); and Nürnberg, 241.9 m. (1,240 kc). Transmits at intervals from 11.45 a.m. 4.0 p.m.—Orchestral Concert. 5.30 p.m.—Talk on Map-reading. 6.20 p.m.—Concert of Trio Music. 7.0 p.m.—Talk on Wireless. 8.0 p.m.—Variety Concert. 10.5 p.m.—News and Announcements 10.25 p.m.—Band Dance Music.

NAPLES (Italy) Unione Radiofonica Italiana (INA). WL. 333.3 m. (900 kc); 1.5 kw. Transmits at intervals from 2.0 p.m. 8.40 p.m.—Time and News, followed by Harbour Notes. 8.50 p.m.—Orchestral Selections: 1. "La Couronne des Indes" (Elgar). 2. Selections (Longo): (a) Berceuse, (b) La campana di San Petronio. 3. Ballet fantastique (Raff). 9.30 p.m.—Relay from a Theatre. 10.55 p.m.—Calendar and Announcements. 11.0 p.m. (approx.)—Close Down.

PARIS (France) Eiffel Tower (FL). WL. 2,650 m. (113 kc); 5 kw. 8.56 a.m.—Time Signal on 32.5 m. (9,231 kc). 10.26 a.m.—Time Signal on 2,650 m. 6.45 p.m.—"Le Journal Parlé." 8.10 p.m.—Weather Forecast. 8.30 p.m.—Concert: 1. Three "Romances sans paroles" (Mendelssohn): (a) Le naufrage, (b) La flûse, (c) Spring Song. 2. Songs of Auvergne (Canteloube). 3. Thème varié (Hue). 4. Sonata for Flute (Granon). 5. Adoration (Filippucci). 6. Le chant du souvenir (Filippucci). At 8.56 p.m., Time Signal on 32.5 m. (9,231 kc). 9.30 p.m.—Educational Programme: Talks on "Co-operation in Agriculture," "The Origin of Religions," and "Economics," etc. 11.26 p.m.—Time Signal on 2,650 m.

PARIS (France) Petit Parisien. WL. 340.9 m. (880 kc); 0.5 kw. 8.45 p.m.—Gramophone Selections. Talk, Announcements and News. 9.0 p.m.—Concert. 1. Lyrical Overture (Kéler Béla). 2. Selections from "La Korrigane" (Widor). 3. Symphony Orchestra: (a) First Part of the Italian Symphony (Mendelssohn), (b) Berceuse for Horn and Quintet (Schubert). 4. Selection from "The Fair Maid of Perth" (Bizet). 5. Selection from "La Feria" (Lacome). 6. Persian Dance (Guiraud). News in interval.

PARIS (France) Radio-Paris (CFR). WL. 1,775 m. (170 kc); 3 kw. Transmits at intervals from 7.30 a.m. 12.30 p.m.—"Columbia" Record Concert: 1. The Norwegian Rhapsody (Lalo). 2. "Leonora"—Overture (Beethoven) by Sir Henry Wood's Orchestra. 3. Act 2, Scene 2, from "Pelleas and Mélisande." 3. Mai-Song (Hahn). 5. Sonatina in D major, for Violin and Piano-forte (Schubert). 6. C'est vous—Sung by Layton and Johnstone. 7. Just like a Butterfly. 8. Cheer up, keep smiling—Foxtrot. News in the interval. 1.50 p.m.—Religious Notes, Bourse. 3.45 p.m.—Dance Music. News. 7.30 p.m.—Piano-forte Recital. 8.0 p.m.—Agricultural Report. 8.15 p.m.—Talk and News. 8.30 p.m.—Children's Programme, followed by Concert: 1. Melodies by M. Félix Galipaux. 2. Melodies by Mlle. de Bonnero. 3. Melodies by Mme. Steffany. 4. Dance Music by Billy Arnold's Jazz. News.

PITTSBURGH (U.S.A.) Westinghouse Electric (KDKA). WL. 315.6 m. (950 kc); 50 kw. Relayed at intervals on 63 m. (4,762 kc) and 27 m. (11,111 kc). Transmits at intervals from 2.45 p.m. 11.0 p.m.—Time and Baseball Notes. 11.10 p.m.—Theatrical Calendar. 11.15 p.m.—Orchestral Concert from the William Penn Hotel. 11.55 p.m.—Baseball Announcements. 12.0 (midnight)—(In Interval) Time.

12.30 a.m. (Sunday)—Weekly Meeting of the Home Radio Club. 12.45 a.m.—"Gems of American Literature" Programme. 1.0 a.m.—4.0 a.m.—Programme relayed from WJZ, New York. 1.0 a.m.—United States Navy Band. 1.45 a.m.—Talk by Dr. Julius Klein. 2.0 a.m.—Mediterranean Dance Band. 4.0 a.m.—Weather, Time, Baseball Scores and Close Down.

POSEN (Poland) Polskie-Radio. WL. 343 m. (874 kc); 1.5 kw. Transmits at intervals from 7.0 a.m. 5.45 p.m.—Programme for Children. 7.15 p.m.—Elementary French Lesson. 7.35 p.m.—Talk and Finance Report. 8.15 p.m.—Programme from Warsaw. 10.0 p.m.—Time, News, Announcements, Weather and Variety Selections. 10.50 p.m.—Dance Music Programme, from the Carlton Restaurant. 12.0 midnight.—Orchestral Concert. 2.0 a.m. (Sun., approx.)—Close Down.

PRAGUE (Czechoslovakia) Stranice. WL. 348.9 m. (860 kc); 5 kw. Transmits at intervals from 11.0 a.m. 5.0 p.m.—Radio Cabaret Programme. 6.0 p.m.—German Transmission. 6.25 p.m.—Agricultural Report. 6.35 p.m.—Talk for Workers. 7.15 p.m.—Popular Musical Selection. 8.0 p.m.—Weather and News. 8.10 p.m.—Popular Evening Programme. 9.40 p.m.—Comedy, followed by Time, News and Sramota Café Programme.

ROME (Italy) Unione Radiofonica Italiana (IRO). WL. 450 m. (666 kc); 3 kw. Transmits at intervals from 1.30 p.m. 8.30 p.m.—German Language Lesson. 8.58 p.m.—Time, News and Weather. 9.15 p.m.—"Norma"—First and Third Acts (Bellini). Talk on Art and Literature in the interval. 11.20 p.m.—News and Close Down.

SCHENECTADY (U.S.A.) General Electric Company (WGY). WL. 379.5 m. (790 kc); 50 kw. Relayed by 2XAF on 31.4 m. (9,554 kc); from 11.25 p.m.

Transmits at intervals from 11.45 a.m. 11.25 p.m.—Baseball Announcements. 11.30 p.m.—Dinner Music Programmes. 12.25 a.m. (Sun.)—Baseball Scores. 12.30 a.m.—"Statler's Pennsylvanians," relayed from New York. 1.0 a.m.—"Bonnie Laddies," followed by "Cabin Door," Programme relayed from New York. 2.0 a.m.—Time and National Symphony Orchestra from New York. 3.0 a.m.—Musical Programme (Syracuse). 3.30 a.m.—Organ Recital (Rochester). 4.0 a.m.—Dance Music (Buffalo). 5.0 a.m. (approx.)—Close Down.

STAMBOUL (Turkey) Radio-Stamboul. Société Anonyme Turque de Téléphonie sans fil. WL. 1,180 m. (254 kc); 5 kw. Transmits at intervals from 4.30 p.m. 6.15 p.m.—Concert of Turkish Music. 8.20 p.m.—Weather and Time. 8.30 p.m.—Concert of Opera Music. 10.0 p.m.—News and Close Down.

STOCKHOLM (Sweden) Radiotjänst (SASA). WL. 453.8 m. (661 kc); 1.5 kw. Relayed by Motala on 1,380 m. (217 kc); Göteborg, 416 m. (721 kc); Malmö, 260.9 m. (1,150 kc); and Sundsvall, 545.8 m. (550 kc). Transmits at intervals from 12.35 p.m. 5.30 p.m.—Concert of Light Music. 6.30 p.m.—Programme for Children. 7.0 p.m.—Recital of Poetry. 7.15 p.m.—Cabaret Programme. 8.30 p.m.—A Midsummer Night in Dalecarlia. 9.15 p.m.—News and Weather. 9.45 p.m.—Dance Music Programme. 1.0 a.m. (Sun. approx.)—Close Down.

STUTTART (Germany) Süddeutscher Rundfunk. WL. 379.7 m. (790 kc); 4 kw. Transmits at intervals from 12.30 p.m. 6.0 p.m.—Time and Weather. 6.15 p.m.—Talk from Freiburg, 574.7 m. (522 kc). 6.45 p.m.—Talk by Dr. Kümmerlen. 7.15 p.m.—Legal Talk. 7.45 p.m.—Talk of South-west German Labour Exchange. 8.0 p.m. (approx.)—Time, Weather Report and Sports Notes. 8.15 p.m.—Cabaret Concert. 1. Seminola—Foxtrot. 2. Du, nur

du—Boston. 3. Die kleine Mühle—Foxtrot. 4. "Two bunches of heys"—Farce (Bahr). 5. Lene Lehmann—Foxtrot. 6. Ja, ja, der Mann ist meine schwache Seite. 7. Roses of love. 8. The Marzipan Soldier. 9. At 12 in the middle of the night. 10. Pierrettschen. 11. Humorous selection. 12. American Negro Songs. 13. Siada—Tango. 14. Why? 15. Ich hab' halt kein Vertrauen. 16. Dear God, that was sweet of you. 17. The Nigger girl. 18. American Negro songs. 19. As once in May. 20. "Ein Stündchen im Münchner Am Platzel"—Sketch. Followed by News and Dance Music from Café-Restaurant Wilhelmsbau.

TOULOUSE (France) Radiophonie du Midi. WL. 389.6 m. (770 kc); 3 kw. 8.30 p.m.—Orchestral Selection from "L'Arlésienne" (Bizet). 9.0 p.m.—Concert. 9.30 p.m.—Accordion Recital. 10.15 p.m.—"North African" Journal.

VIENNA (Austria) Radio Wien. WL. 577 and 517.2 m. (520 and 580 kc); 1.5 and 5 kw. Relayed by Innsbruck, on 294.1 m. (1,020 kc); and Klagenfurt, on 272.7 m. (1,100 kc). Transmits at intervals from 11.0 a.m. 6.20 p.m.—Children's Programme. 6.45 p.m.—Talk, "The 10th Anniversary of the Death of Rosegger," by Dr. R. Plattensteiner. 7.15 p.m.—Talk, "From Town and Suburb—Roduam and Perchtoldsdorf." 8.15 p.m.—Concert of Vocal and Instrumental Music.

WARSAW (Poland) Polskie-Radio. WL. 1,111.1 m. (270 kc); 10 kw. Transmits at intervals from 12 noon. 7.5 p.m.—Agricultural Report. 7.15 p.m.—Variety Selections. 7.35 p.m.—"Radiochronique," followed by Report of the Polish Horse-breeders' Association. 8.15 p.m.—Orchestral Concert. News in French during the interval. 10.0 p.m.—Time, Aviation Notes, Weather, News and Sports Notes. 10.30 p.m.—Dance Music Programme from the Restaurant Oza. 11.30 p.m. (approx.)—Close Down.



# PROGRAMMES FOR SATURDAY

(June 23)

**NOTE: THE HOURS OF TRANSMISSION ARE REDUCED TO BRITISH SUMMER TIME**

## BARCELONA (Spain)

Radio-Barcelona (EAJT). WL. 344.8 m. (870 kc); 1.5 kw. Transmits at intervals from 11.0 a.m. 6.0 p.m.—Exchange Quotations. 6.10 p.m.—Marche printannière (Mouton). 6.15 p.m.—Service relayed from the Basilica de la Merced. 6.25 p.m.—Sextet Selections. 8.30 p.m.—French Language Lesson. 9.0 p.m.—Exchange and News. 9.5 p.m.—Orchestral Selections. 1. The Spirit of Liberty—March (Souza). 2. La musa—American Dance (Coté). 3. El Collar de Afrodita (Guerrero). 4. Aclamations—Waltz (Waldeufel). 5. Adagio from the Quartet in D minor (Mozart). 6. Rondo from the Quartet in D major (Mozart). 10.0 p.m.—Chimes and Weather. 10.5 p.m.—"La Verbena de San Juan"—Wireless France (Nifto). 11.30 p.m. (approx.)—Close Down.

## BERGEN (Norway)

Kringkastingselskap. WL. 369.9 m. (811 kc); 1.5 kw. Transmits at intervals from 11.15 a.m. 8.0 p.m.—The Wireless Orchestra: 1. Nachklänge von Ossiand—Overture (Gade). 2. Humoresque (Aulin). 3. Evening Landscape (Halvorsen). 4. Country Dance (Wesslander). 5. Wedding March (Söderman). 6. Serenade (Backer-Grøndahl). 7. Norwegian Rhapsody (Svendsen). 9.0 p.m.—Programme from Oslo. 9.30 p.m.—Concertina Recital. 10.0 p.m.—Weather, News and Time. 10.15 p.m.—Hardanger Fiddle Music. 10.30 p.m.—Programme from Oslo. 11.0 p.m.—The Exhibition Orchestra. 12 midnight (approx.)—Close Down.

## BERLIN (Germany)

Königswusterhausen. WL. 1,250 m. (240 kc); 35 kw. Transmits at intervals from 12 noon. 6.0 p.m.—Talk, "Communal Welfare in Vienna," by Stadtrat Tandler. 6.30 p.m.—Spanish Language Lesson. 6.55 p.m.—Talk on Choral Music. 7.20 p.m.—Talk, "Weingärtner's South Tyrolean Silhouettes." 8.30 p.m.—Programme from Voxhaus.

## BERLIN (Germany)

Voxhaus. WL. 484.6 m. (619 kc); 4 kw. Transmits at intervals from 10.10 a.m. 5.0 p.m.—Dance Music Programme from the Hotel Esplanade. 6.45 p.m.—Talk, "The Lives and Works of the Great German Philosophers of the Nineteenth Century"—Georg W. F. Hegel. 7.35 p.m.—Talk by Dr. Bock. 8.30 p.m.—"Der Clowin wider Willen"—Wireless Comedy in Three Acts (Maril), with Introductory Talk, followed by Time, News and Weather.

## BERLIN (Germany)

Magyar Telephone Himnude es Radio R.T. WL. 557.1 m. (538 kc); 25 kw. Transmits at intervals from 9.30 a.m. 6.50 p.m.—Literary Programme. 7.30 p.m.—Recital of Hungarian Songs. 8.50 p.m.—Time and News Bulletin. 9.15 p.m.—Two One Act Plays (Bibó). 10.15 p.m.—Tzigane Music Selections. Relayed from the Café Emcke. 12 midnight (approx.)—Close Down.

## BERNE (Switzerland)

Radio-Berne. WL. 411 m. (730 kc); 1.5 kw. Transmits at intervals from 1.0 p.m. 8.0 p.m.—Time and Weather. 8.5 p.m.—Talk, "The Old Wells of Berne," by Walter Schweizer. 8.30 p.m.—Programme from Basle.

## BRESLAU (Germany)

Schlesische Funkstunde. WL. 322.9 m. (929 kc); 4 kw. Relayd by Gleiwitz 329.7 m. (910 kc). Transmits at intervals from 10.30 a.m. 6.0 p.m.—Talk on "Travelling." 6.15 p.m.—Esperanto Talk. 6.30 p.m.—See Königswusterhausen. 7.25 p.m.—English Language Lesson. 7.50 p.m.—Talk, "The Works of the Painter-Poet Hanns Fechner." 8.30 p.m.—"Sommernuende uffm Zuta-barge"—Play (Hans Christoph Kaergel). 10.0 p.m.—Announcements and News. 10.15 p.m.—"Midsummer Day's Magic" Festival Programme.

## BRÜNN (Czecho-Slovakia)

Komarov. WL. 441.2 m. (680 kc); 2.4 kw. Transmits at intervals from 11.0 a.m. 6.0 p.m.—German Transmission. 6.25 p.m.—Programme of Talks. 7.0 p.m.—Concert: 1. Finlandia, Op. 26 (Sibelius). 2. Norwegian Carneval (Svendsen). 3. Songs (Grieg). 4. Lullaby (Järnefelt). 5. The Evening, Op. 110 No. 6. (Sinding). 6. Songs. 7. Suite (Fredericksen). 8.0 p.m.—Talk on Music. 8.30 p.m.—Modern Ronances. 9.0 p.m.—Exhibition Programme. 10.0 p.m.—Programme from Prague. 10.20 p.m.—Exhibition Programme.

## BRUSSELS (Belgium)

Radio-Belgique. WL. 508.5 m. (590 kc); 1.5 kw. 5.0 p.m.—Dance Music from the St. Sauveur Palais de Danse. 6.0 p.m.—English Language Lessons. 6.45 p.m.—Trio Concert. 1. March (Thun). 2. Fleurette (Haydn). 3. Vers le Passé (Learsi). 4. Petite Suite for Pianoforte (Daneau). 5. Hamlet (Thomas). 6. Romance bohémienne for Violin (Bolidi). 7. François les Bas Bleus (Messenger). 7.30 p.m.—Le Radio-Chronique. 8.15 p.m.—Concert. 1. Fanfare militaire (Uscher). 2. Selection from "Die Fledermaus" (J. Strauss). 3. Romance for Flute (Saint-Saëns). 4. Ballet de cour (Pierné). 5. Songs, (a) Coeur fidèle (Brahms), (b) Clair de lune (Fauré). 6. Bleuets et coquelicots (Waldeufel). 7. Topical Talk. 8. Tur stel (Siede). 9. Gwen (Seville). 10. Poor old blum (Pacquay). 11. Mariage paysan (Jessel). 12. Malika (Reel). 13. Selection (Hamy). 14. Literary Selection. 15. Callirhoe (Cham-inade). 16. Songs, (a) Le ciel est par-dessus les toits (de Sévérac), (b) Two Greek Melodies (Ravel). 17. Un diner chez Suppé (Morena). 10.15 p.m.—News and Close Down.

## BUDAPEST (Hungary)

Magyar Telephone Himnude es Radio R.T. WL. 557.1 m. (538 kc); 25 kw. Transmits at intervals from 9.30 a.m. 6.50 p.m.—Literary Programme. 7.30 p.m.—Recital of Hungarian Songs. 8.50 p.m.—Time and News Bulletin. 9.15 p.m.—Two One Act Plays (Bibó). 10.15 p.m.—Tzigane Music Selections. Relayed from the Café Emcke. 12 midnight (approx.)—Close Down.

## COLOGNE (Germany)

Westdeutscher Rundfunk. WL. 283 m. (1,060 kc); 4 kw. Transmits at intervals from 10.15 a.m. 1.5 p.m.—Orchestral Concert. 3.40 p.m.—See Langenberg station. 4.0 p.m.—Talk, "Fairy Tales for Grown-ups," by A. Wedekind. 4.30 p.m.—See Königswusterhausen. 5.0 p.m.—Motherhood Talk for Women. 5.30 p.m.—See Langenberg station. 6.0 p.m.—Concert. 1. "Egmont" Overture (Beethoven). 2. Cantata for Soprano—Eulatiere jubilate (Mozart). 3. "King Oedipus"—Prologue (Schillings). 4. Two Orchestral Songs, (a) Hymne, (b) Geständnis (Weigl). 7.20 p.m.—Talk for Workers. 7.45 p.m.—See Langenberg station. 8.5 p.m.—Report on the Olympic Football Match at Amsterdam. 8.15 p.m.—Programme from Dortmund (see Langenberg), followed by Report on the Olympic Football Match at Amsterdam, News, Sports Notes, Musical Selections, and Dance Music. 1.0 a.m. (Sun., approx.)—Close Down.

## COPENHAGEN (Denmark)

Copenhagen Radio. WL. 337.4 m. (889 kc); 1 kw. Relayd by Kalundborg on 1,153.8 m. (260 kc). Transmits at intervals from 7.30 a.m. 7.0 p.m.—News, Exchange and Time. 7.20 p.m.—Programme Announcements. Followed by Talk. 8.0 p.m.—Town Hall Chimes. 8.5 p.m. (approx.)—Midsummer's Eve Concert, followed by News. 9.15 p.m.—Radio-Cabaret. 10.45 p.m.—Dance Music Programme. 12.0 midnight (in the Interval)—Chimes. 12.15 a.m. (Sun., approx.)—Close Down.

## CORK (Ireland)

Cork Broadcasting Station (6CK). WL. 400 m. (750 kc); 1.5 kw. 2.30 p.m.—Weather, Stock Market Report, and Gramophone Records. 7.20 p.m.—Programme from Dublin.

## CRACOW (Poland)

Polskie-Radio. WL. 567 m. (529 kc); 1.5 kw. Transmits at intervals from 12 noon. 5.45 p.m.—Programme from Warsaw. 7.5 p.m.—Programme from Warsaw. 7.35 p.m.—Review of the Foreign Politics of the Past Week. 8.0 p.m.—Fanfare and News. 8.30 p.m.—Programme from Warsaw.

## DUBLIN (Ireland)

Dublin Broadcasting Station (2RN). WL. 319.1 m. (940 kc); 1.5 kw. Transmits at intervals from 1.30 p.m. 7.20 p.m.—News, and Talk on "Rose Cavanagh—An Irish Poetess," by Chrissie Doyle. 8.0 p.m.—The Augmented Orchestra. 8.20 p.m.—"Amhrain Gaedhlice," by Maighread Ni Annagáin. 8.35 p.m.—The Augmented Orchestra. 8.50 p.m.—H. A. McVaghey (Bari-tone). 9.0 p.m.—Violet McKinnon (Pianist). 9.10 p.m.—Mercy Gibbons (Soprano). 9.25 p.m.—A Revue, by H. O'Donovan and Company. 10.10 p.m.—Augmented Orchestra. 10.30 p.m.—News and Close Down.

## FRANKFURT-am-MAIN (Germany)

Südwestdeutscher Rundfunk. WL. 429 m. (699 kc); 4 kw. Relayd by Cassel, on 252.1 m. (1,190 kc). Transmits at intervals from 12.15 p.m. 5.45 p.m.—Reading from a Novel. 6.15 p.m.—Wireless Notes and News. 6.30 p.m.—Answers to Correspondents. 6.45 p.m.—Talk on "Literature." 7.15 p.m.—Talk, "Bernard Shaw as Critic of Society," by Prof. Hillmann. 7.45 p.m.—Talk, "The Chimpanzees and the Orang-utans in the Frankfurt Zoological Gardens." 8.15 p.m.—"Endlich allein"—Three-Act Operetta (Lehar). 10.35 p.m.—Dance Music Programme. 12 midnight (approx.)—Close Down.

## HAMBURG (Germany)

Norag (ha, in Morse). WL. 306 m. (757 kc); 4 kw. Relayd by Bremen on 272.7 m. (1,100 kc); Hanover, 207.9 m. (1,007 kc); and Kiel, 255 m. (1,176 kc). Transmits at intervals from 5.45 a.m. 5.0 p.m.—Concert. Relayd from the "Völkerschau," Hagenbecks Tierpark. 6.0 p.m.—Talk on Wireless Technics. 6.55 p.m.—Talk, "Modern Treasure Diggers." 7.20 p.m.—(Hamburg, Hanover, and Bremen). Topical Events Talk. 7.35 p.m.—Talk on Legal Matters. 7.55 p.m.—Weather Report. 8.0 p.m.—"Ueberr grossen Teich" (Philipp), followed by News, Sports Notes, Ice Report, and Concert from the Winterhuder Fährhaus (Hamburg, Bremen, and Hanover).

## HILVERSUM (Holland)

Algemeene Vereeniging Radio Omroep. WL. 1,069 m. (280 kc); 5 kw. 11.40 a.m.—Police Information. 12.10 p.m.—Lunchtime Trio Music. 1.40—4.10 p.m.—Programme from the Tuschinsky Theatre at Amsterdam. Dance and Solo Music. 5.40 p.m.—Concert: 1. "The Grand Duchess of Gérolstein"—Overture (Offenbach). 2. A Summer Night Festival Suite (Siede). 3. Canzonetta (Framl). 4. Die Mühle im Schwarzwald (Eilenberg). 5. Selection from "Robert le Diable"

Meyerbeer. 6. Wienerkinder—Waltz (Jos. Strauss). 7. Gipsy Romance (Bakaleinikow). 8. Von Bühne zu Bühne—A Medley (Fétras). 9. Selection from "The Desert Song" (Romberg). 10. Signorita tanzt (Klose). 11. Selection from "Alt-Heidelberg" (Carl May). 12. Finale. 7.25 p.m.—Police Information. 7.40 p.m.—Concert and Talk arr. by the Workers' Radio Society. 10.10 p.m.—Concert relayed from the Royal Cinema at Amsterdam. 11.15 p.m. (approx.)—Close Down.

## HUIZEN (Holland)

WL. 341 m. (870 kc); 4 kw. (Until 6.40 p.m.). Transmits from 6.40 p.m. on 1,870 m. (160 kc). 1.10 p.m.—Concert of Trio Concert. 6.10 p.m.—Gramophone Selections. 7.40 p.m.—Dutch Language Lesson. 8.10 p.m.—Talk by Prof. Huybers. 8.40 p.m.—Orchestral Concert, followed by Talk by Mr. Knippenberg.

## JUAN-LES-PINS (France)

Radio LL. WL. 230 m. (1,304 kc); 0.25 kw. 1.0 p.m.—Orchestral Concert. 9.0 p.m.—Symphony Concert, News. 10.0 p.m.—Casino Dance Bands. 10.30 p.m. (approx.)—Close Down.

## KATTOWITZ (Poland)

Polskie Radio. WL. 422 m. (710 kc); 12 kw. Transmits at intervals from 5.0 p.m. 6.55 p.m.—Children's Letter Box. 7.15 p.m.—Announcements and Talk. 8.15 p.m.—Popular Concert. 10.0 p.m.—Time and News, followed by Dance Music Programme.

## KÖNIGSBERG (Germany)

Ostmarken Rundfunk. WL. 303.6 m. (988 kc); 4 kw. Relayd by Danzig, on 272.7 m. (1,100 kc). Transmits at intervals from 6.15 a.m. 7.30 p.m.—Elementary English Lesson. 8.20 p.m.—Concert. 1. Orchestra, "Indra"—Overture (Plotow). 2. Songs: (a) Ein altes Lied (Kreisl-ler), (b) Phyllis an Damon (Kowal-sky), (c) Auf der Bank im Walde (Kahn), (d) The Sleeping Beauty (Frommer). 3. Zither and Violin Duets: (a) Weltvergessen (Teich-mann), (b) Wiener Herz—Waltz-Rondo (Enselin). 4. Vocal Quartet: (a) Der Rolandsbogen (Mania), (b) Stilleben (Kirsch). 5. Wiener Leben (Komzak). 6. (a) Süßes Baby (Rotter-Eggen), (b) Das Frauenhaar (Kollo), (c) Sag nicht du zu mir (Egen-Doelle). 7. Zither and Violin Duets: (a) Du alter Stefansturm—Viennese Folk-song (Brandt), (b) Auf zum Tanz. 8. (a) Walzerengel (Grünbaum-Nelson), (b) Immer mit'n Wupp-dich (Kollo). 9. Orchestra. Nachtsch-wärmer—Waltz. (Ziehler) 10. Vocal Quartet: (a) Am Stammtisch (Walter), (b) Jettchen Polka (Rei-mann). 11. Xylophon Solo—Eich-kätzchen (Bode). 12. Orchestra—Die blonde Puppe—Intermezzo (Leopold). 13. Tenor Solos: (a) Ja, die Frauen sind meine schwache Seite (Schwabach-Egen), (b) Schöne Frau, komm heut nacht im Traum-bild zu mir (Rotter-Eggen), (c) Die schönsten Augen hat meine Frau (Rotter-Erwin). 14. Über dem Ozean—March (Schmidt-Hagen), followed by Weather, News, Sports Notes and Dance Music. 12.0 midnight (approx.)—Close Down.

## KOVNO (Lithuania)

Radio-Kaunas. WL. 2,000 m. (150 kc); 15 kw. Transmits at intervals from 12 noon. 9.0 p.m.—Ukrainian Concert. 1. Trio Selection. 2. Forestenko (Kasat-gehok). 3. Die Frau eines Popen—Song. 4. Skinu kuzel. 5. Gretschaniki. 6. One chodi. Griciu. 7. Balanuty. 8. Dozdiki.

## LAHTI (Finland)

WL. 1,522.8 m. (197 kc); 25 kw. Programme also for Helsingfors, 275.9 m. (798 kc); 1.2 kw. 11.0 a.m.—Exchange and Music. 11.30 a.m.—Exchange and News. 11.59 a.m.—Time and Weather. 5.57 p.m.—Time and News. 6.15 p.m.—Concert. 1. Wasa March (Collan). 2. Valse des papillons (Melarini). 3. Valse lente (Melarini). 4. Finnish Songs (Tiger). 5. Song. 6. "Light Cavalry"—Overture (Suppé). 7. Extase (Bizet). 8. An Dich (Waldeufel). 9. Ritorno (Carsoio). 10. Selection

from "Aida" (Verdi). 11. Valse (Lehar). 12. Hallo! America! (Lubbe). 8.45 p.m.—News Bulletin given in Finnish and Swedish. 9.15 p.m.—Relay from a Restaurant. 10.0 p.m. (approx.)—Close Down.

## LANGENBERG (Germany)

Westdeutscher Rundfunk. WL. 470.9 m. (637 kc); 25 kw. Programme also for Aix-la-Chapelle, 401 m. (748 kc); Cologne, 283 m. (1,060 kc); and Münster, 250 m. (1,200 kc). Transmits at intervals from 10.15 a.m. 1.5 p.m.—Programme from Cologne. 3.40 p.m.—Talk on "Wireless Technic." Relayd from Elberfeld. 4.0 p.m.—Programme from Cologne. 4.30 p.m.—See Königswusterhausen. 5.0 p.m.—Programme from Cologne. 5.30 p.m.—Elementary English Lesson. Relayd from Münster. 6.0 p.m.—Programme from Cologne. 7.45 p.m.—Talk from Münster. 8.5 p.m.—Programme from Cologne. 8.15 p.m.—Variety Programme from Dortmund, followed by Programme from Cologne. 1.0 a.m. (Sun., approx.)—Close Down.

## LEIPZIG (Germany)

Mitteldeutscher Rundfunk. WL. 366 m. (818 kc); 4 kw. Relayd by Dresden, on 265.2 m. (1,090 kc). Transmits at intervals from 10.0 a.m. 4.30 p.m.—Concert. 1. "Tancred"—Overture (Rossini). 2. Allegretto gracioso, from the Second Sym-phony (Brahms). 3. Melodies from "Kuhreigen" (Kienzl). 4. Serenade for String Orchestra (Hofmann). 5. Ballet Music, from "Rienzi" (Wagner). 6. Liebeswalzer (Moskowsky). 6.0 p.m.—See Königswusterhausen. 6.45 p.m.—Talk for Workers. 7.0 p.m.—Talk, "The Problems of Travelling through Space." 7.30 p.m.—Talk, "Animal Life in our Seas," by Dr. Wolterreck. 8.0 p.m.—Weather and Time. 8.15 p.m.—Cabaret Concert. 10.0 p.m.—News and Sports Notes. 10.15 p.m.—Military Band Concert.

## LILLE (France)

PTT. WL. 267 m. (1,122 kc); 0.5 kw. Transmits at intervals from 12.30 p.m. 7.0 p.m.—Prices of Market Goods. 7.10 p.m.—Concert arranged by "L'Echo du Nord" and Coupleux Bros. 8.20 p.m.—Variety Item Programme. 8.45 p.m.—Concert arranged by the Wireless Association of Northern France, followed by News.

## MADRID (Spain)

Unione Radio (EAJ7). WL. 374 m. (802 kc); 1.5 kw. Transmits at intervals from 11.45 a.m. 7.0 p.m.—Organ Recital. 1. Appassionato (d'Aubel). 2. Réverie (Mailley). 3. Interlude by Luis Medina. 4. Canto de amor (Almagro). 5. Montañesa (Almagro). 6. Andantino (Almagro). 7. Rondo (Almagro). 8. Selection from "The Blue Domino" (Arrieta). 8.0 p.m.—Dance Music Programme. 9.45 p.m.—The Week's Market Prices. Programme relayed by San Sebastian EAJ8, 335 m. (895 kc). 10.0 p.m.—Chimes and Exchange. 10.5 p.m.—"La Dame aux Camélias" Wireless Adaptation of A. Dumas Novel by Ruy de las Arcas. News. Followed by Concert relayed from the Alcazar. 12.30 a.m. (Sun. approx.)—Close Down.

## MILAN (Italy)

Unione Radiofonica Italiana. WL. 549.3 m. (546 kc); 7 kw. Transmits at intervals from 12.15 p.m. 7.47 p.m.—French Language Lesson. 8.35 p.m.—Time, followed by Talk on "Verdi" with Pianoforte Music. 8.45 p.m.—Variety Concert: 1. (a) Der Freischütz—Overture (Weber), (b) La Cabrera—Selection (Dupont). 2. Tenor Solos. 3. (a) Dolcissimo sospire (Caccini), (b) Nei meriggi (Clausetti), (c) Good-bye (Parelli). 4. Chramtic Fantasy and Fugue in D Minor (Bach). 5. Reading. 6. (a) Duet (Rubinstein), (b) Commiato (Lacertti), (c) Carovana—Soprano Solo (Mario). 7. Tenor Solos. 8. (a) Olaf's Dance (Mangialilli), (b) "An Evening in Granada" (Debussy)—Pianoforte Solos. 9. Symphony in C (Forini),



# Stations in Alphabetical Order

(Above 100 metres)

## EUROPEAN

	Met.	Kc.
Aalesund (Norway)	512	585
Aberdeen (2BD), 1.5 kw.	500	600
Agen (France), 0.25 kw.	297	1010
Aix-la-Chapelle (Germany), 0.75 kw.	401	748
Almeria (Spain) EAJ18, 1 kw.	327	916
Angora (Turkey), 6 kw.	1800	167
Augsburg (Germany), 1.5 kw.	566	530
Barcelona (Spain) (Radio Barcelona) EAJ1, 1.5 kw.	344.8	870
Barcelona (Spain) (Radio Catalana) EAJ13, 1 kw.	462	649
Basle (Switzerland), 0.25 kw.	1000	300
Belfast (2BE), 1.5 kw.	306.1	980
Belgrade (Serbia), 2 kw.	460	652
Bergen (Norway), 1.5 kw.	369.9	811
Berlin (Königswusterhausen) AFP, 8 kw. 2900 (4000) 103 (75)	1250	240
Berlin (Königswusterhausen) AFT, 35 kw.	484.6	619
Berlin (Witzleben), 4 kw.	2525	119
Berlin (Wolf's Bureau)	411	730
Berne (Switzerland), 1.5 kw.	158	1899
Beziers, 0.5 kw.	304	986
Bjorneborg (Finland)	566	530
Bloemendaal (Holland), 0.05 kw.	198	1515
Biarritz (Côte d'Argent, France), 0.25 kw.	1190	252
Boden (Sweden) 2 kw.	230.2	1303
Boras (Sweden), 1 kw.	272.4	1101
Bordeaux (Lafayette) PTT	237	1265
Bordeaux, 1.5 kw.	326.1	920
Bournemouth (8BM), 1.5 kw.	252.1	1190
Bradford (2LS) (Transmits Leeds programmes)	300	1000
Bratislava (Czecho-Slovakia), 0.5 kw.	272.7	1100
Bremen (Germany), 0.75 kw.	322.9	929
Breslau (Germany), 4 kw.	441.2	680
Brunn (Czechoslovakia), 2.4 kw.	508.5	590
Brussels, 1.5 kw.	557.1	540
Budapest (Hungary), 25 kw.	400	750
Cadiz (Spain) EAJ3, 0.5 kw.	353	850
Cardiff (5WA), 1.5 kw.	335	895
Cartagena (Spain), EAJ16, 1 kw.	252.1	1190
Cassel (Germany), 0.7 kw. (Relays Frankfurt)	283	1060
Cologne (Germany), 4 kw.	337.4	889
Copenhagen, 1 kw.	400	750
Cork (1F8), 1.5 kw., 6CK	567	529
Cracow (Poland), 1.5 kw.	272.7	1100
Danzig (Germany), 0.75 kw.	1604.8	187
Davenport (5XX), 25 kw.	491.8	610
Davenport (Experimental) 5GB, 25 kw.	1100	273
De Bilt (Holland)	275.2	1090
Dresden (Germany), 0.7 kw. (Relays Leipzig)	319.1	940
Dublin (2RN), 1.5 kw.	294.1	1020
Dundee (2DE), 0.2 kw.	288.5	1040
Edinburgh (2EH), 0.2 kw.	250	1200
Eskilstuna (Sweden), 0.25 kw. (Relays Stockholm)	357	840
Falun (Sweden), 2 kw.	200	1500
Fecamp Radio (France)	429	689
Frankfurt-on-Main (Germany), 4 kw.	435	689
Fredrikstad (Norway), 0.7 kw. (Relays Oslo)	574.7	522
Freiburg (Germany)	204.1	1470
Gavle (Sweden) 0.25 kw. (Relays Stockholm)	760	395
Geneva (Radio Geneve), 0.5 kw.	275	1090
Ghent (Belgium)	405.4	740
Glasgow (5SC), 1.5 kw.	329.7	910
Gleiwitz (Germany), 10 kw. (Relays Breslau)	416	721
Goteborg (Sweden), 1 kw.	355	845
Graz (Austria), 0.5 kw. (Relays Vienna)	415	722
Grenoble, 1 kw.	215.8	1390
Halmstad (Sweden), 0.25 kw.	555.8	540
Hamar (Norway), 0.7 kw.	396	757
Hamburg (ha, in Morse), 4 kw.	297.9	1007
Hanover (Germany), 0.7 kw. (Relays Hamburg)	229.3	1308
Helsingborg (Relays Stockholm)	375.9	798
Helsingfors (Finland), 1.2 kw.	1069	280
Hilversum (Holland) ANRO, 5 kw.	272.7	1100
Hudiksvall (Sweden), 0.25 kw.	341	879
Mulken (Holland), 4 kw. (till 5.40 p.m.)	1870	160
Hull (6KH), 0.2 kw. After 5.40 p.m.	294.1	1020
Innsbruck (Austria), 0.5 kw. (Relays Vienna)	275.2	1090
Jakobstad (Finland)	201.3	1490
Jonkopings (Sweden), 0.5 kw. (Relays Stockholm)	297	1010
Jyväskylä (Finland), 0.2 kw. (Relays Helsingfors)	204.1	1470
Kaiserlautern (Bavaria), 2 kw.	254.2	1180
Kalmar (Sweden) 0.25 kw. (Relays Stockholm)	1153.8	260
Kalundborg (Denmark), 7.5 kw.	196	1530
Karlskrona (Sweden) 0.25 kw. (Relays Stockholm)	220.0	1360
Karlstad (Sweden), 0.25 kw. (Relays Stockholm)	422	710
Kattowitz (Poland), 12 kw.	1680	178
Kharkov (Russia), 1.5 kw.	487	616
Kharkov (Russia), 4 kw.	255	1176
Kiel (Germany), 0.7 kw. (Relays Hamburg)	820	366
Kiev (Russia), 1 kw.	238.1	1260
Kiruna (Sweden), 0.25 kw.	272.7	1100
Klagenfurt (Austria)	303.8	988
Konigsberg (Germany), 1 kw.	1870	160
Kosice (Czecho-Slovakia), 2.5 kw.	2000	150
Kovno (Lithuania), 15 kw.	202.7	1480
Kristinehamn (Sweden) 0.1 kw. (Relays Stockholm)		

	Met.	Kc.
Lahti (Finland)	1522.8	197
Langenberg (Germany), 25 kw.	470.9	637
Lausanne (Switzerland) HB2, 1.5 kw.	680	441
Leeds (2LS), 0.2 kw.	277.8	1080
Leipzig (Germany), 4 kw.	366	818
Leningrad (Russia), 10 kw.	995	301
Liege (Belgium), 25 kw. (201m; 1030 kcs.)	267	1122
Lille (PTT), 0.5 kw.	273	1098
Limoges (France), 0.5 kw.	500	600
Linköping (Sweden), 0.25 kw. (Relays Stockholm)	297	1010
Liverpool (6LV), 0.2 kw.	361.4	830
Londen (2LO), 3 kw.	217.4	1380
Luxembourg, 0.25 kw.	477.7	628
Lyons (France) (La Doua), 1 kw. P.T.T.	291.3	1030
Lyons (Radio Lyons), 1.5 kw.	400	750
Madrid (Radio España) EAJ2, 0.5 kw.	374	802
Madrid (Union Radio) EAJ7, 1.5 kw.	446	672
Malmö (Sweden)	260.9	1150
Manchester (2ZY), 1.5 kw.	384.6	780
Marseilles (PTT), 0.5 kw.	315.7	947
Milan, 7 kw.	549.3	546
Mont de Marsan (France), 4 kw.	400	750
Montpellier (France), 0.25 kw.	252.1	1190
Moscow (Old Komintern) RAI, 20 kw.	1450	207
Moscow (Popoff)	675	444
Moscow (Trades Union) RA2, 4 kw.	450	663
Motala, 20 kw.	1380	217
Munster (Germany), m.s. in Morse, 1.5 kw.	250	1200
Munich (Germany), 4 kw.	536	559
Naples (1NA), 1.5 kw.	333.3	900
Newcastle (5NO), 1.5 kw.	312.5	960
Nice-Juan-les-Pins, 0.25 kw.	230	1304
Nijni Novgorod (Russia), 1.2 kw.	860	349
Nîmes (France)	240	1250
Norddeich (Germany)	829	164
Norrköping (Sweden) SMVV, 0.25 kw.	275.2	1090
Notodden (Norway)	412	728
Nottingham (England), 5NG, 0.2 kw.	275.2	1090
Novosibirsk (Russia) RA33, 4 kw.	1117	289
Nurnberg (Germany), 4 kw. (Relays Munich)	241.9	1240
Orebro (Relays Stockholm)	236.2	1270
Ornskoldsvik, 0.25 kw.	187.5	1600
Oslo (Norway), 1.5 kw.	461.5	650
Ostersund (Sweden), 2 kw. (Relays Stockholm)	720	416
Oviedo (Spain), 0.1 kw.	309	970
Paris (Ecole Supérieure) FPPT, 0.5 kw.	447	671
Paris (Eiffel Tower) FL, 5 kw.	2650	113
Paris (Petit Parisien), 0.5 kw.	340.9	880
Paris (Radio LL), 0.5 kw.	370	811
Paris (Radio-Paris) CFR, 3 kw.	1765	170
Paris (Radio Vitus), 1 kw.	302	993
Plymouth (5PY), 0.2 kw.	400	750
Porsgrund (Norway), 1 kw.	500	600
Posen (Poland), 1.5 kw.	343	874
Prague (Czecho-Slovakia), 5 kw.	348.9	860
Radio Schaarbeek	230	1304
Rennes (France), 0.5 kw.	295	1018
Reykjavik (Iceland), 1 kw.	333.3	900
Riga (Latvia), 2 kw.	526.5	570
Rjukan (Norway), 0.1 kw.	448	670
Rome (IRO), 3 kw.	450	666
Rostov/Don (Russia), 4 kw.	850	353
Ryvang (Denmark), 1 kw.	1150	261
Safla (Sweden) 0.5 kw. (Relays Stockholm)	252.1	1190
Salamanca (Spain) EAJ22, 1 kw.	405	741
San Sebastian (Spain) EAJ8, 0.5 kw.	335	895
Scheveningen Haven (Holland), 2.5 kw.	1950	154
Saville (Spain), EAJ5, 2 kw.	434.8	680
Sheffield (6FL), 0.2 kw.	272.7	1100
St. Michel	566	530
Stamboul (Turkey), 5 kw.	1180	254
Stettin (Germany), 0.75 kw. (Relays Berlin)	236.7	1267
Stockholm 1.5 kw.	453.8	681
Stoke (England) 6ST, 0.2 kw.	294.1	1020
Strasbourg, 0.1 kw.	268	1119
Stuttgart (Germany), 4 kw.	379.7	790
Sundsvall (Sweden) SASD, 1 kw.	545.6	550
Swansea (5SX), 0.2 kw.	294.1	1020
Tallin (Reval) (Esthonia), 2.2 kw.	408	735
Tammerfors (Finland). (Relays Helsingfors)	390	769
Tiflis (Russia), 4 kw.	870	345
Toulouse (France) PTT, 0.5 kw.	259	1160
Toulouse (France) (Rad. du Midi), 3 kw.	389.6	770
Trollhattan (Sweden), 1 kw.	278	1077
Tromsø (Norway)	504	595
Trondhjem (Norway), 1 kw.	243.9	1230
Uddevalla (Sweden) (Relays Stockholm)	294.1	1020
Uleaborg (Finland), 0.2 kw. (Relays Helsingfors)	250	1200
Umea (Relays Stockholm)	229	1310
Uppsala (Sweden), 0.25 kw. (Relays Stockholm)	500	600
Varborg (Relays Stockholm)	297	1010
Viborg (Finland)	240	1250
Vienna (Rosenhügel)	517.2	580
Vienna (Stubenring)	577	520
Warsaw (Poland), 10 kw.	1111.1	270
Wilno (Poland), 0.5 kw.	435	689
Zagreb (Jugoslavia), 0.35 kw.	309	970
Zurich (Switzerland), 1 kw.	588.2	510

## EXTRA-EUROPEAN

	Met.	Kc.
Adelaide (Australia), 5CL, 5 kw.	395	789
Algiers	310	967
Atlantic City, N.J. (U.S.A.) WPG, 5 kw.	272.6	1100
Auckland (New Zealand), 1YA, 0.5 kw.	333	900
Baltimore, N.D. (WBAL), 5 kw.	285.5	1050
Bombay (India) (7BY), 3 kw.	357.1	840
Bound Brook (National Broadcasting Co.) (U.S.A.) WJZ, 30 kw.	454.3	660
Brisbane (Australia), 4QG, 5 kw.	385	779
Calcutta (India) (7CA), 3 kw.	370.4	810
Calgary (Canada) CNRC, 1.8 kw.	434.3	690
Cape Town, 1.5 kw.	368	815
Carthage (Radio Tunis) TNU, 5 kw.	1850	162
Casablanca (Morocco), 2.5 kw.	305	984
Chicago (U.S.A.) KYW, 2.5 kw.	526	670
Chicago (U.S.A.) WBBM, 5 kw.	389.4	770
Chicago (U.S.A.) WLS, 5 kw.	344.6	870
Christchurch (New Zealand) 3AY, 0.5 kw.	306	980
Cincinnati (U.S.A.) WLW, 5 kw.	428.3	700
Cleveland (U.S.A.) WTAM, 3.5 kw.	399.8	750
Colombo (Ceylon), 1.75 kw.	800	375
Columbus (O.) WAIU, 5 kw.	282.8	1060
Council Bluffs (Iowa) KOHL, 5 kw.	319	940
Davenport (U.S.A.) WOC, 5 kw.	374.8	800
Denver (KOA)	325.9	920
Des Moines (U.S.A.) WHO, 5 kw.	535.4	560
Detroit (U.S.A.) WJR, 5 kw.	440.9	680
Dunedin (New Zealand) 4YA, 0.25 kw.	463	647
Durban (South Africa), 1.5 kw.	406.5	735
Edmonton (Canada) CNRE, 0.5 kw.	516	580
Fort Worth (Texas) WBAP, 5 kw.	499.7	600
Johannesburg (JB), 0.5 kw.	443.5	676
Kyoto (Japan) TOOK, 4 kw.	367	817
Lima (Peru) OAX, 6 kw.	380	789
Los Angeles (U.S.A.) KFL, 5 kw.	468.5	640
Melbourne (Australia) (3AR), 3 kw.	481	620
Melbourne (Australia) 3LO, 5 kw.	371	808
Miami Beach (Florida) WIOD, 1 kw.	247.8	1210
Minneapolis (U.S.A.) WCCO, 5 kw.	405.2	740
Monkton, N.B. (Canada) CNRA, 0.5 kw.	322.4	930
Montreal (Canada) CKAC, 1.2 kw.	411	730
Montreal (Canada) CNRM, 1 kw.	411	730
Mt. Prospect (Ill.) WJAZ, 5 kw.	263	1140
Nagoya (Japan) JOCK, 4 kw.	360	833
Nashville (Tenn.) WSM, 5 kw.	336.9	890
Newark (N.J.) WOR, 3.5 kw.	422.7	710
New York (National Broadcasting Co.) WEAF, 50 kw.	491.5	610
Oaklands (U.S.A.) KGO, 5 kw.	384.4	780
Osaka (Japan) JOBK, 4 kw.	385	779
Ottawa (Canada) CNRO, 0.5 kw.	434.4	690
Perth (Australia), 6WF, 5 kw.	1250	240
Pittsburgh East (U.S.A.) (Westinghouse Electric) KDKA, 5 kw.	315.6	950
Portland (U.S.A.) KGW	491.5	610
Rabat (Morocco)	416	721
Rangoon (Burma) 2HZ, 0.35 kw.	350	857
Regina (Canada) CNRR, 0.5 kw.	312.3	960
Rio de Janeiro S2AA, 2 kw.	400	750
Rochester (N.Y.) WHAM, 5 kw.	280.2	1070
San Antonio (Texas) WOAI, 5 kw.	499.7	600
Saskatoon (Canada) CNRS, 0.5 kw.	329.5	911
Schenectady (General Electric Co.) (U.S.A.) WGY, 50 kw.	379.5	790
Springfield (U.S.A.) WBZ, 15 kw.	333.1	900
Sydney (Australia) 2FC, 5 kw.	442	678
Sydney (2BL), 5 kw.	358	850
St. Col (N.M.) KOB, 5 kw.	394.5	780
St. Louis (Mo.) KMOX, 5 kw.	299.8	1000
Tokyo (Japan) JOAK, 4 kw.	375	800
Toronto (Canada) CFEA, 0.5 kw.	357	840
Toronto (Canada) CKCL, 0.5 kw.	356.9	841
Toronto (Canada) CNRT, 0.5 kw.	356.9	841
Toronto (Canada) CKGW, 5 kw.	312.3	960
Vancouver (Canada) CNRV, 0.5 kw.	291	1030
Wellington (2YA), 5 kw.	420	714
Winnipeg (Canada) CKY, 0.5 kw.	384.4	781
Winnipeg (Canada) CNRV, 0.5 kw.	384.4	781
Zion Ill. (U.S.A.) WCBD, 5 kw.	344.6	870



# STATIONS IN ORDER OF WAVELENGTHS AND FREQUENCIES.

A LIST OF SHORT WAVE STATIONS WILL BE FOUND ON ANOTHER PAGE.

## EUROPEAN

- M. Kc. 4000 751 Berlin (Königswusterhausen) AFP, 8 kw.
- 2900 103 Paris (Eiffel Tower), FL, 5 kw.
- 2650 113 Berlin (Wolff's Bureau). Intermittent News during the day.
- 2525 119 Berlin (Wolff's Bureau). Intermittent News during the day.
- 2000 150 Kovno (Lithuania), 15 kw.
- 1950 154 Scheveningen Haven (Holland), 2.5 kw.
- 1870 160 Huizen (from 5.40 p.m. till closing down).
- 1870 160 Kosice (Czechoslovakia) 2.5 kw. DAILY—7.30—10.0 p.m.
- 1829 164 Norddeich (Germany). WEEKDAYS—11.0 p.m. Weather Report.
- 1800 167 Angora (Turkey), 6 kw.
- 1765 170 Paris (Radio-Paris) CFR, 3 kw. (Aer.)
- 1680 178 Kharkov Narkomptschitel (Russia), 1.5 kw.
- 1604.8 187 Daventry (5XX), 25 kw. (Aer)
- 1522.8 197 Lahti (Finland), 25 kw.
- 1450 207 Moscow (Old Komintern), RAI, 20 kw. DAILY—3.0 p.m.
- 1380 217 Motala (Sweden), 20 kw. (Aer.) Relays Stockholm.
- 1250 240 Königswusterhausen (Zeens), 35 kw. in Aerial
- 1190 252 Boden (Sweden), 2 kw.
- 1180 254 Stamboul (Turkey), 5 kw.
- 1153.8 260 Kalundborg (Denmark), 7.5 kw. (Aer.)
- 1150 261 Ryvang (Denmark), 1 kw.
- 1117 269 Novosibirsk (Russia), RA 33, 4 kw. 8.0 p.m.
- 1111.1 270 Warsaw (Poland), 25 kw. (Aer.)
- 1100 273 De Bilt (Holland). WEEKDAYS—9.15 p.m. Weather.
- 1039 280 Hilversum (Holland) ANRO, 5 kw. (Aer.)
- 1000 300 Basle (Switzerland), 0.25 kw. SUNDAYS—7.30 p.m.; WEEKDAYS, 8 p.m.
- 995.5 301 Leningrad (Russia), 10 kw. WEEKDAYS—6.0 p.m., Lecture: 7.0 p.m., News, 7.30 p.m., Concert or Opera. SUNDAY—6.0 p.m., Lecture, 7.0 p.m., News, 7.30 p.m., Concert.
- 870 345 Tiflis (Russia), 4 kw.
- 860 349 Nijni Novgorod (Russia), 1.2 kw
- 850 353 Rostov/Don (Russia), 4 kw. 4.10 p.m.
- 820 366 Kiev (Russia), 1 kw.
- 760 395 Geneva (Radio-Geneve), 0.5 kw. WEEKDAYS—8.40 p.m., Concert and News.
- 720 416 Östersund (Sweden), 2 kw. Relays Sundsvall.
- 680 441 Lausanne (Switzerland), HB2, 1.5 kw. DAILY—9.0 p.m., Concert. Talk.
- 675 444 Moscow (Popoff).
- 588.2 510 Zürich (Switzerland), 1 kw.
- 577 520 Vienna (Stubenberg) (Austria), 0.75 kw.
- 574.7 522 Freiburg (Germany), 0.75 kw.
- 567 529 Cracow (Poland), 1.5 kw.
- 568 530 Augsburg (Germany), 1.5 kw. Relays Munich.
- 568 530 Bloemendaal (Holland), 0.05 kw. SUNDAYS—10.40 a.m. and 5.40 p.m., Church Service.
- 568 530 St. Michel (Finland).
- 557.1 538 Budapest (Hungary), 25 kw.
- 555.8 540 Hamar (Norway), 0.7 kw. Relays Oslo.
- 549.3 546 Milan, 7 kw.
- 548.8 550 Sundsvall (Sweden), 1 kw.
- 538 559 Munich (Germany), 4 kw.
- 526 570 Riga (Latvia), 2 kw. DAILY—11.35 a.m.—12.0 noon and 8.0—9.30 p.m., Concert, News, Weather.
- 517.2 580 Vienna, 5 kw.
- 512 585 Aalesund (Norway).
- 508.5 590 Brussels, 1.5 kw.
- 504 595 Tromsø (Norway).
- 500 600 Aberdeen (2BD), 1.5 kw.
- 500 600 Uppsala (Sweden), 0.25 kw. Relays Stockholm.
- 500 600 Linköping (Sweden), 0.25 kw. Relays Stockholm.
- 500 600 Porsgrund (Norway), 1 kw. Relays Oslo.
- 491.8 610 Daventry Experimental (5GB), 25 kw. in Aerial.
- 487 616 Kharkov (Russia), 4 kw.
- 484.8 618 Berlin (Witzleben), 4 kw.
- 477.7 628 Lyons (France) (La Doua), PTT, 1 kw. MON., WED., & FRI.—9.45 p.m., Concert. SUN., TUES., THURS., & SAT.—Relays Ecole Supérieure.
- 470.9 637 Langenberg (Germany), 25 kw.
- 462 649 Barcelona (Spain) (Radio Catalana), EAJ13, 1 kw.
- 461.5 650 Oslo (Norway), 1.5 kw.
- 460 652 Belgrade (Yugo-Slavia), 2 kw. (Testing each SUNDAY at 1.0 p.m.)
- 453.8 661 Stockholm (Sweden), 1.5 kw.
- 450 666 Rome (IRO) (Italy), 3 kw.
- 450 668 Moscow (Trades Union), RA2, 4 kw. 4.0 a.m.—9.0 p.m.
- 448 670 Rjukan (Norway), 0.1 kw. Relays Oslo.
- 447 671 Paris (Ecole Supérieure), FPTT, 0.5 kw.
- 446 672 Malmberget. Relays Boden.
- 441.2 680 Brünn (Czechoslovakia), 2.4 kw. DAILY—7.0 p.m., Concert and News. TUES. & THURS.—3 p.m. Talk for Women. SUN. 9 a.m. Religious Music.—11.0 a.m., Concert.
- 435 689 Wilno (Poland), 0.5 kw.
- 435 689 Fredrikstad (Norway), 0.7 kw. Relays Oslo.
- 434.8 690 Seville (Spain) (Union Radio), EAJ5, 2 kw.
- 429 699 Frankfurt-on-Main (Germany), 4 kw.
- 422 710 Katowitz (Poland), 12 kw.
- 416 721 Göteborg (Sweden), 1 kw.
- 415 722 Grenoble (France), 1 kw. WED. and SAT. only.
- 412 728 Notodden (Norway), 0.7 kw. Relays Oslo.
- 411 730 Berne (Switzerland), 1.5 kw.
- 408 735 Tallinn (Reval), Estonia, 2.2 kw.
- 405.4 740 Glasgow (5SC), 1.5 kw.
- 405 741 Salamanca (Spain), EAJ22, 1 kw. DAILY—10.30 p.m., Concert. 11.30 p.m., Dance Music.
- 401 748 Aix-la-Chapelle (Germany), 0.75 kw.
- 400 750 Cadiz (Spain), EAJ3, 0.5 kw.
- 400 750 Mont de Marsan (France), 4 kw.
- 400 750 Madrid (Radio España) (EAJ2), 0.5 kw.
- 400 750 Cork (Irish Free State), 6CK, 1.5 kw.
- 400 750 Plymouth (5PY), 0.2 kw.
- 398 757 Hamburg (Germany), 4 kw.
- 390 768 Tammerfors (Finland). Relays Helsingfors, 1.5 kw.
- 389.6 770 Toulouse (France) (Rad. du Midi), 3 kw. DAILY—1.40 p.m., Concert. 9.50 p.m., Concert.
- 384.6 780 Manchester (2ZY), 1.5 kw.
- 373.7 790 Stuttgart (Germany), 4 kw.
- 375.9 798 Helsingfors (Finland), 1.2 kw. 9.0 a.m., Exchange Quotations. DAILY—5.0—8.0 p.m., Concert.
- 374 802 Madrid (Union Radic), EAJ7, 1.5 kw.

- M. Kc. 370 811 Paris (Radio LL), 0.5 kw. MONDAY, WEDNESDAY and FRIDAY—10.0 p.m., Concert.
- 369.9 811 Bergen (Norway), 1.5 kw.
- 366 818 Leipzig (Germany), 4 kw.
- 361.4 830 London (2LO), 3 kw.
- 357 840 Falun (Sweden), 2 kw.
- 355 845 Graz (Austria), 0.5 kw. Usually relays Vienna.
- 353 850 Cardiff (5WA), 1.5 kw.
- 348.9 860 Prague (Czechoslovakia), 5 kw. DAILY—8.0 p.m., Concert.
- 344.8 870 Barcelona (Spain) Radio Barcelona, EAJ1, 1.5 kw.
- 343 874 Posen (Poland), 1.5 kw.
- 341 879 Huizen (Holland), 4 kw. (till 5.40 p.m.)
- 340.9 880 Paris (Petit Parisien), 0.5 kw.
- 337.4 889 Copenhagen, 1 kw.
- 335 895 San Sebastian (Spain), EAJ8, 0.5 kw.
- 335 895 Cartagena EAJ16 (Spain), 1 kw.
- 333.3 900 Reykjavik (Iceland), 1 kw.
- 333.3 900 Naples (INA), 1.5 kw.
- 329.7 910 Gleiwitz (Germany), 10 kw. Relays Breslau.
- 327 916 Almeria (Spain) EAJ18, 1 kw.
- 326.1 920 Bournemouth (6BM), 1.5 kw.
- 322.9 929 Breslau (Germany), 4 kw.
- 319.4 940 Dublin (2RN), 1.5 kw.
- 315.7 947 Marseilles (PTT), 0.5 kw. WEEKDAYS—9.0 p.m., Concert.
- 212.5 960 Newcastle (5NO), 1.5 kw.
- 309 970 Zagreb (Yugoslavia), 0.35 kw. DAILY—7.0 p.m.
- 309 970 Oviedo (Spain), 0.1 kw.
- 308.1 980 Belfast (2 BE), 1.5 kw.
- 304 986 Björneborg (Finland). Relays Helsingfors.
- 303.6 988 Königsberg (Germany), 4 kw. DAILY—8.10 p.m., Concert.
- 302 993 Paris (Radio Vitus), 1 kw. WEDNESDAYS, FRIDAYS, and SUNDAYS. From 9.0 p.m.—10.45 a.m., Concert.
- 300 1000 Bratislava (Czechoslovakia), 0.5 kw.
- 297.9 1007 Hanover (Germany), 0.7 kw. Relays Hamburg.
- 297 1010 Agen (France), 0.25 kw. TUES. and FRI.—10.30 p.m., Concert.
- 297 1010 Liverpool (6 LV), 0.2 kw.
- 297 1010 Varberg, 0.2 kw. Relays Göteborg.
- 297 1010 Jyväskylä (Finland), 0.2 kw. Relays Helsingfors.
- 295 1016 Rennes (France), 0.5 kw.
- 294.1 1020 Hüll (6KH), 0.2 kw.
- 294.1 1020 Dundee (2DE), 0.2 kw.
- 294.1 1020 Stoke (6ST), 0.2 kw.
- 294.1 1020 Swansea (5SX), 0.2 kw.
- 294.1 1020 Uddevalla (Sweden), 0.25 kw. Relays Göteborg.
- 294.1 1020 Innsbruck (Austria), 0.5 kw. Relays Vienna.
- 291 1030 Lyons (Radio-Lyon), 1.5 kw. WEEKDAYS—7.15 p.m., News. WEEKDAYS (except MON.) 7.45 p.m., Concert.
- 291 1030 Liège (Belgium), 25 kw.
- 288.5 1040 Edinburgh (2EH), 0.2 kw.
- 283 1060 Cologne (Germany), 4 kw.
- 283 1077 Trollhattan (Sweden), 1 kw. Relays Göteborg.
- 277.8 1080 Leeds (2LS), 0.2 kw.
- 275.2 1090 Dresden (Germany), 0.7 kw. Relays Leipzig.
- 275.2 1090 Jacobstad (Finland).
- 275.2 1090 Nottingham (England), 5NG, 0.2 kw.
- 275.2 1090 Norrköping (Sweden), 0.25 kw. Relays Stockholm.
- 275 1090 Ghent (Belgium). SUN.—11.30 a.m.—12.30 p.m. THUR.—6.7.30 p.m. SAT.—6.7.30 p.m.
- 273 1098 Limoges (France), 0.5 kw.
- 272.7 1100 Sheffield (6FL), 0.2 kw.
- 272.7 1100 Bremen (Germany), 0.75 kw. Relays Hamburg.
- 272.7 1100 Danzig, 0.75 kw. DAILY—11.0 a.m., Weather. 11.30 a.m., Concert. 2.15 p.m., Exchange Quotations. 4.0 p.m., Relays Königsberg.
- 272.7 1100 Hudiksvall, 0.25 kw. Relays Stockholm.
- 272.7 1100 Klagenfurt (Austria), 1.5 kw. Relays Vienna.
- 272.4 1101 Bordeaux (Lafayette), PTT, 1 kw.
- 268 1119 Strasbourg (France), 0.1 kw. TUESDAY and THURSDAY—10.0 p.m., Concert, Talk and News.
- 267 1122 Lille (PTT), 0.5 kw.
- 260.9 1150 Malmö (Sweden), 1 kw.
- 259 1160 Toulouse (France), PTT, 0.5 kw.
- 255 1176 Kiel (Germany), 0.7 kw. Relays Hamburg.
- 254.2 1180 Kalmar (Sweden), 0.25 kw. Relays Stockholm.
- 252.1 1190 Cassel (Germany), 0.7 kw. Relays Frankfurt.
- 252.1 1190 Bradford (2LS), 0.2 kw. Transmits Leeds programmes.
- 252.1 1190 Montpellier (France), 0.25 kw. WEEKDAYS—8.45 p.m., News. 9.0 p.m., Concert or Talk.
- 252.1 1190 Säfte (Sweden), 0.5 kw. Relays Stockholm.
- 250 1200 Eskilstuna (Sweden), 0.25 kw. Relays Stockholm.
- 250 1200 Münster (Germany) m.s. in Morse, 1.5 kw.
- 250 1200 Ulcborg (Finland). Relays Helsingfors, 0.2 kw.
- 243.9 1230 Trondhjem (Norway).
- 241.9 1240 Nürnberg (Germany), 4 kw. Relays Munich.
- 240 1250 Viborg (Finland), 0.7 kw.
- 240 1250 Nimes (France). DAILY from 8.45 p.m.
- 238.1 1260 Kiruna (Sweden), 0.25 kw. Relays Boden.
- 237 1265 Bordeaux (France), 1.5 kw.
- 236.7 1267 Stettin (Germany). Relays Berlin, 0.75 kw.
- 236.2 1270 Örebro, 0.25 kw. Relays Stockholm.
- 230.2 1303 Boras (Sweden), 1 kw. Relays Göteborg.
- 230 1304 Nice Juan les Pins (France), 0.25 kw.
- 230 1304 Radio Schaerbeck, from 8.30 p.m.
- 229.3 1308 Hälsingborg (Sweden), 0.25 kw. Relays Malmö.
- 229 1310 Umea, 0.25 kw. Relays Stockholm.
- 220.6 1360 Karlstad (Sweden), 0.25 kw. Relays Stockholm.
- 217.4 1380 Luxembourg, 0.25 kw.
- 215.8 1390 Halmstad (Sweden), 0.25 kw. Relays Malmö.
- 204.1 1470 Gävle (Sweden), 0.25 kw. Relays Stockholm.
- 204.1 1470 Kaiserslautern (Bavaria), 0.2 kw.
- 202.7 1480 Kristinehamn (Sweden), 0.1 kw. Relays Stockholm.
- 201.3 1490 Jönköping (Sweden), 0.5 kw. Relays Stockholm.
- 200 1500 Fécamp (Radio) — Thursday 10.30 p.m. to midnight.
- 198 1515 Biarritz (Côte d'Argent, France), 0.25 kw.
- 196 1630 Karlskrona (Sweden), 0.25 kw. Relays Stockholm.
- 187.5 1600 Örnsköldsvik, 0.25 kw. Relays Sundsvall.
- 158 1899 Beziers (France), 0.5 kw.

- M. Kc. 508.2 590 Omaha, Neb. (WOW), 1 kw.
- 499.7 600 San Antonio, Tex. (WOAI), 5 kw.
- 499.7 600 Fort Worth, Tex. (WBAP), 5 kw.
- 491.5 610 New York; (WEAF), 50 kw.
- 491.5 610 Portland; Ore. (KGW), 1 kw.
- 466.5 640 Los Angeles, Cal. (KFI), 5 kw.
- 461.3 650 Shenandoah, Ia. (KFNF), 2 kw.
- 454.3 660 Bound Brook, N.J. (WJZ), 30 kw.
- 440.9 680 Detroit, Mich. (WJR), 5 kw.
- 428.3 700 Cincinnati, O. (WLW), 5 kw.
- 422.7 710 Newark N.J. (WOR), 3.5 kw.
- 416.4 720 Chicago, Ill. (WGN), 15 kw.
- 405.2 740 Minneapolis, Min. (WCCO), 5 kw.
- 399.8 750 Cleveland, O. (WTAM), 3.5 kw.
- 394.5 760 St. Col., N.M. (KOB), 5 kw.
- 389.4 770 Chicago, Ill. (WBBM), 5 kw.
- 384.4 780 Oakland, Cal. (KGO), 5 kw.
- 379.5 790 Schenectady, N.Y. (WGY), 50 kw.
- 374.8 800 Davenport, Ia. (WOC), 5 kw.
- 370.2 810 New York (WLW), 5 kw.
- 361.2 830 Cincinnati, O. (WSAI), 5 kw.
- 348.6 860 Seattle, Wash. (KJR), 2.5 kw.
- 344.6 870 Chicago, Ill. (WLS), 5 kw.
- 344.6 870 Zion, Ill. (WCBD), 5 kw.
- 336.9 890 Nashville, Tenn. (WSM), 5 kw.
- 333.1 900 Springfield, Mass. (WBZ), 15 kw.
- 328.9 920 Denver, Colo. (KOA), 2.5 kw.
- 319 940 Council Bluffs, Ia. (KOIL), 5 kw.
- 319 940 Lincoln, Neb. (KFAB), 5 kw.
- 315.6 950 Pittsburgh, Pa. (KDKA), 50 kw.
- 305.9 980 Chicago, Ill. (WHT), 5 kw.
- 299.8 1000 St. Louis, Mo. (KMOX), 5 kw.
- 285.5 1050 Baltimore, Md. (WBAL), 5 kw.
- 282.8 1060 Columbus, O. (WAIU), 5 kw.
- 280.2 1070 Rochester, N.Y. (WHAM), 5 kw.
- 275.1 1090 Chicago, Ill. (WTAS), 3.5 kw.
- 272.6 1100 Atlantic City, N.J. (WFG), 5 kw.
- 265.3 1130 San Antonio, Tex. (KTSA), 2 kw.
- 263 1140 Mt. Prospect, Ill. (WJAZ), 5 kw.
- 260.7 1150 Spokane, Wash. (KGA), 2 kw.
- 256.3 1170 Muscatine, Ia. (KTNT), 2 kw.
- 252 1190 Batavia, Ill. (WORD), 5 kw.
- 252 1190 Chicago, Ill. (WOK), 5 kw.
- 252 1190 Homewood, Ill. (WMBB), 5 kw.
- 247.8 1210 Miami Beach, Fla. (WIOD), 1 kw.
- 239.9 1250 Portland, Ore. (KEX), 2.5 kw.
- 228.9 1310 Fort Wayne, Ind. (WOWO), 2 kw.
- 220.4 1360 St. Paul, Minneapolis (WAMD), 10 kw.
- 202.6 1480 Mt. Vn. Hills, Wa. (WTF), 10 kw.

## CANADA

- 516.9 580 Toronto (CKSM), 1 kw.
- 516.9 580 Toronto (CFRB), 1 kw.
- 516.9 580 Toronto (CJYC), 0.5 kw.
- 516.9 580 Edmonton (CNRE), 0.5 kw.
- 434.5 690 Ottawa (CNRO), 0.5 kw.
- 434.5 690 Calgary (CFCN), 1.8 kw.
- 434.3 690 Calgary (CNRC), 0.5 kw.
- 411 730 Montreal (CKAC), 1.2 kw.
- 411 730 Montreal (CNRM), 1 kw.
- 410.7 730 Montreal (CFCF), 1.6 kw.
- 410.7 730 Vancouver (CHPC), 1 kw.
- 410.7 730 Vancouver (CKCD), 1 kw.
- 384.4 781 Winnipeg (CNRW), 0.5 kw.
- 384.4 781 Winnipeg (CKY), 0.5 kw.
- 357 840 Toronto (CFCA), 0.5 kw.
- 358.9 841 Red Deer (CKLC), 1 kw.
- 358.9 841 Toronto (CKLK), 0.5 kw.
- 358.9 841 Toronto (CNRT), 0.5 kw.
- 340.7 880 Quebec (CNRO), 0.1 kw.
- 329.5 911 Saskatoon (CNRS), 0.5 kw.
- 322.4 930 Moncton, N.B. (CNRA), 0.5 kw.
- 312.3 960 Regina (CNRR), 0.5 kw.
- 312.3 960 Toronto (CKGW), 5 kw.
- 296.9 1010 Moose Jaw (CJRM).
- 291 1030 Vancouver (CNRV), 0.5 kw.

## NORTH AFRICA

- 1850 162 Radio Carthage (Tunis) TNV, 5 kw. News. 4.0—5.20 p.m.; Concert, 6.0—9.0 p.m.
- 416 721 Rabat (Morocco).
- 310 967 Algiers (PST), 2 kw.—Concert, 6.10 p.m.
- 305 964 Radio Casablanca (Morocco), 2.5 kw.—SUNDAY, 7.0—11.0 a.m.; 1.0—3.0 p.m. Dance Music, 7.0—11.0 p.m. WEEKDAYS, 6.0—9.0 p.m.

## AUSTRALIA

- 1250 240 Perth (6WF), 5 kw.
- 481 620 Melbourne (3AR), 3 kw.
- 442 678 Sydney (2FC), 5 kw.
- 395 759 Adelaide (5CL), 5 kw.
- 385 779 Brisbane (4QG), 5 kw.
- 371 808 Melbourne (3 LO), 5 kw.
- 358 850 Sydney (2BL), 5 kw.

## NEW ZEALAND

- 463 647 Dunedin (4YA), 0.25 kw.
- 420 714 Wellington (2YA), 5 kw.
- 333 900 Auckland (1YA), 0.5 kw.
- 308 960 Christchurch (3YA), 0.5 kw.

## INDIA

- 370.4 810 Calcutta (7CA), 3 kw.
- 357.1 840 Bombay (7BY), 3 kw.
- 350 857 Rangoon, Burma (2HZ), 0.35 kw.

## SOUTH AMERICA

- 400 750 Rio de Janeiro (SOAA), 2 kw
- 380 789 Lima, Peru (OAX), 6 kw.

## JAPAN

- 385 779 Osaka (JOBK), 4 kw.
- 375 800 Tokyo (JOAK), 4 kw.
- 367 817 Kyoto (JOKK), 4 kw.
- 360 833 Nagoya (JOCK), 4 kw.

## CEYLON

- 600 375 Colombo (Ceylon), 1.75 kw.

## SOUTH AFRICA

- 443.5 676 Johannesburg (JB), 0.5 kw.
- 406.5 738 Durban, 1.5 kw.
- 368 815 Cape Town, 1.5 kw.

## U.S.A.

- 635.4 560 Des Moines, Ia. (WHO), 5 kw.
- 626 570 Chicago, Ill. (KYW), 2.5 kw.



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*-but*

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60 " Super Power ...	...	...	13/6
9 " Grid Bias ....	...	...	1/6
4½ " Pocket Battery ...	...	...	each 5d. 4/6 a doz.

**LISSEN LTD., Friars Lane, Richmond, Surrey.**

*Managing Director: Thomas N. Cole.*

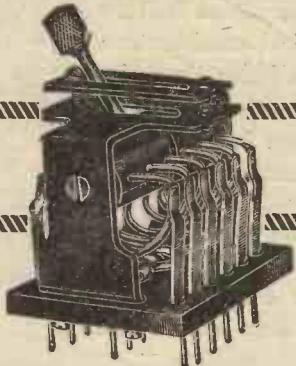




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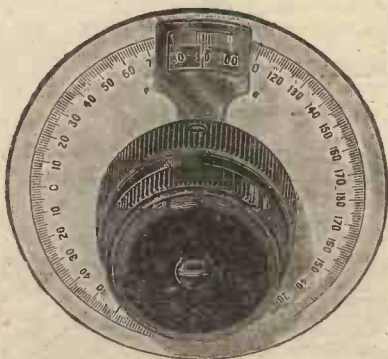
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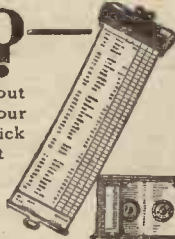
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**D.C.**  
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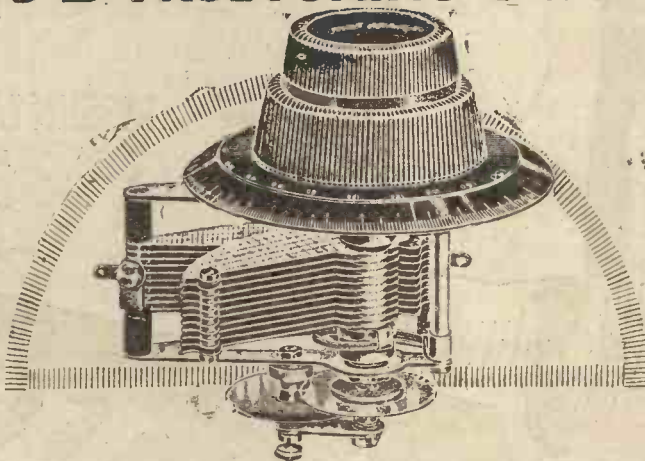
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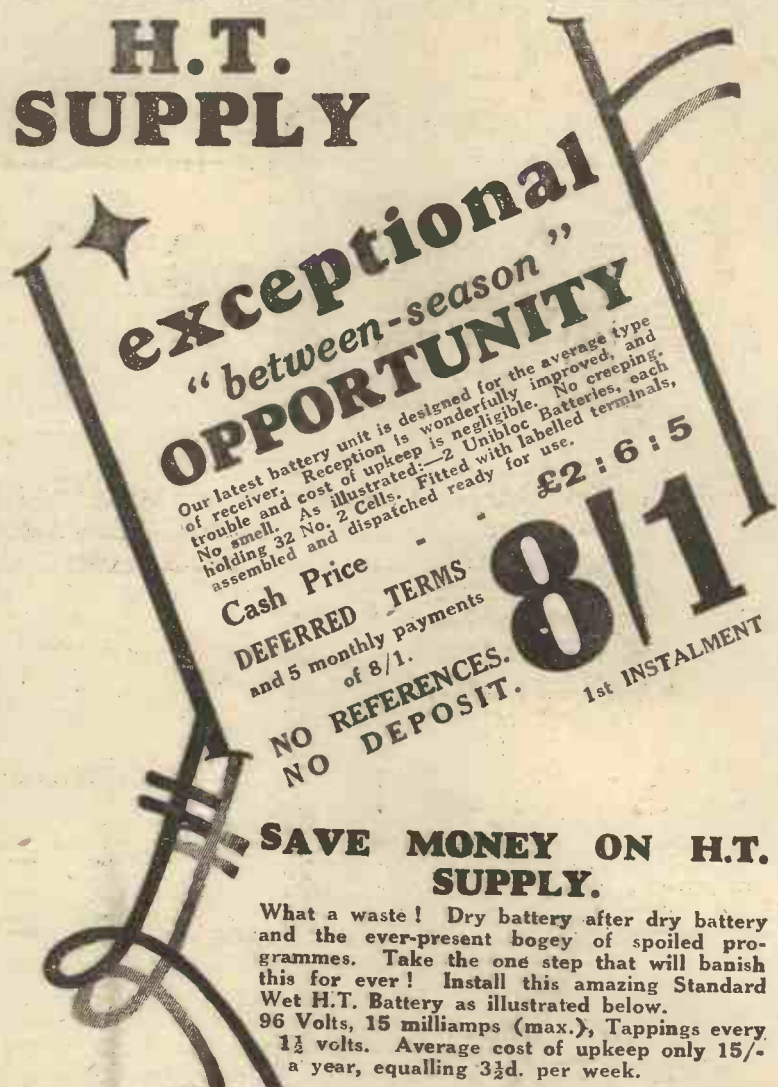
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Our latest battery unit is designed for the average type of receiver. Reception is wonderfully improved, and trouble and cost of upkeep is negligible. No creeping, No smell. As illustrated:—2 Unibloc Batteries, each holding 32 No. 2 Cells. Fitted with labelled terminals, assembled and dispatched ready for use.

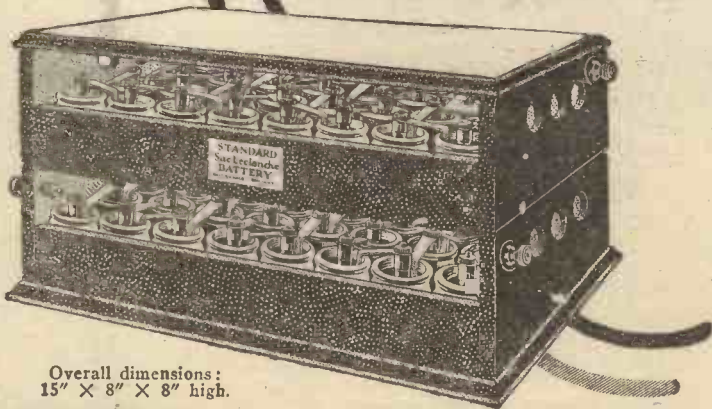
**Cash Price**  
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and 5 monthly payments of 8/1.

**NO REFERENCES.**  
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1st INSTALMENT

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What a waste! Dry battery after dry battery and the ever-present bogey of spoiled programmes. Take the one step that will banish this for ever! Install this amazing Standard Wet H.T. Battery as illustrated below. 96 Volts, 15 milliamps (max.), Tappings every 1½ volts. Average cost of upkeep only 15/- a year, equalling 3½d. per week.



Overall dimensions:  
15" X 8" X 8" high.

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All types of "STANDARD" Batteries are obtainable from Wireless Dealers and Halford's Cycle Stores. Woolworth's stock No. 2 Cell completely assembled at 6d. each. Also electrolyte chemical in 6d. bottles.

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**THE WET H.T. BATTERY CO.,**  
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**A WATCH MINUS HANDS!**

YOU might as well have a watch without any hands on it as run a radio set without using recording instruments. Hundreds have fitted Bulgin Milliammeters to their Cossor Melody Makers and other sets with most gratifying results to detect distortion due to wrong H.T. or G.B., etc. Drop us a p.c. to-night for a leaflet showing how this can be done, and for our catalogue showing a full range of miniature panel mounting volt meters and ammeters, as well as 250 other useful gadgets. Please mention "World-Radio."  
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1½ inch panel hole 7 scale ranges between 0.15 and 0.200 milliamps.  
**10/6 each.**

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THE B.B.C. has prepared a free pamphlet to help listeners to get the best possible results from their sets. It can be obtained on application to the B.B.C. Bookshop, Savoy Hill, London, or to any provincial stations. This pamphlet is published in conjunction with the Radio Manufacturers' and the British Radio Valve Manufacturers' Associations.





# Mullard



## **THE · MASTER · VALVE**

ADVT. THE MULLARD WIRELESS SERVICE CO., MULLARD HOUSE, DENMARK STREET, LONDON, W.C.1.

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