

M^r Lewis
6 South Street



WORLD-RADIO

DOMINION & FOREIGN PROGRAMMES

The Official Foreign & Technical
Journal of the B.B.C.

Vol. XIV No. 359 Registered at the G.P.O.
as a Newspaper.

FRIDAY, JUNE 10, 1932

Three Pence

ROME'S NEW PALACE OF BROADCASTING

FROM THE SWISS ALPS

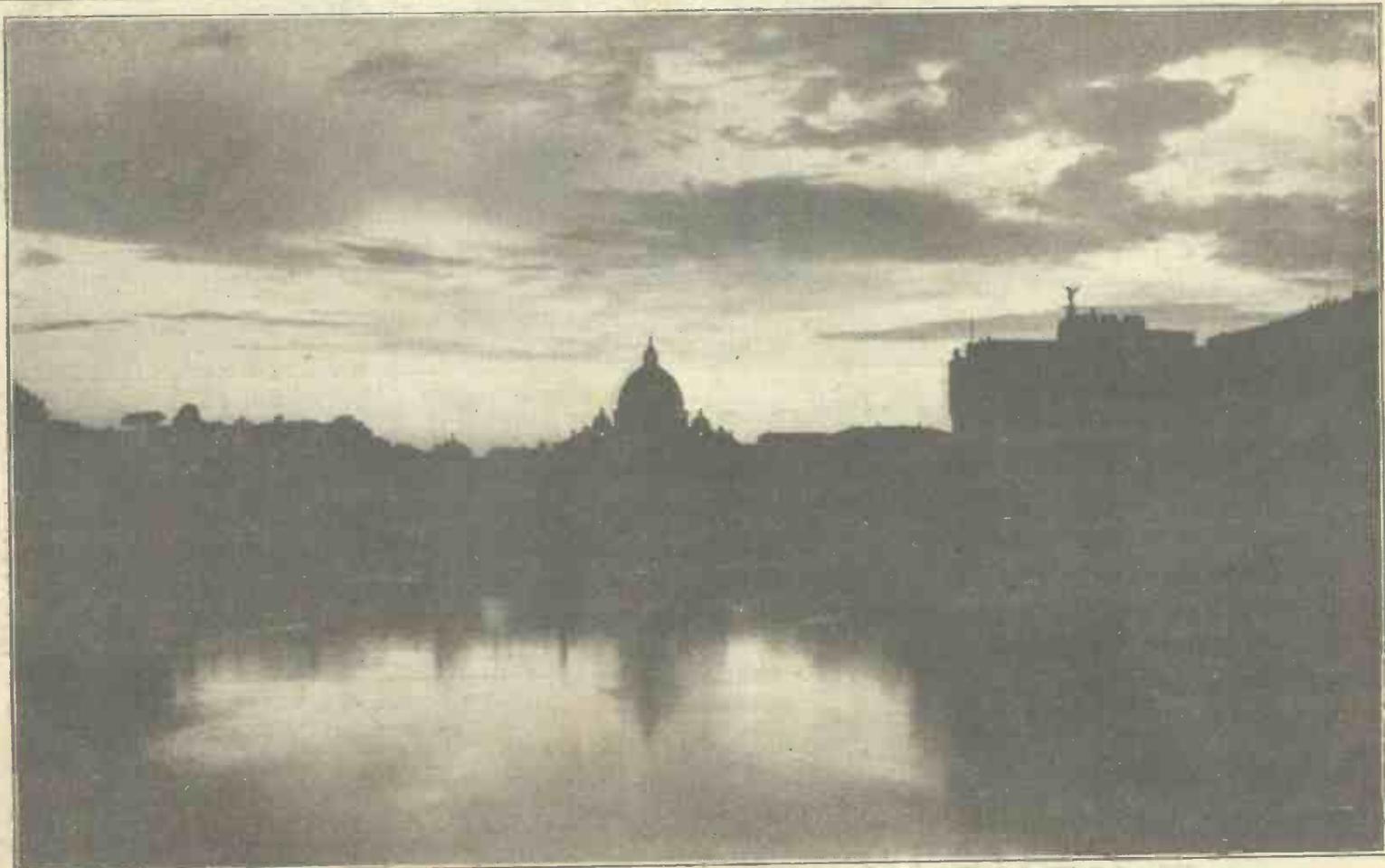
A CURIOUS SHORT-WAVE TROUBLE

RELIABILITY IN WIRELESS RECEPTION

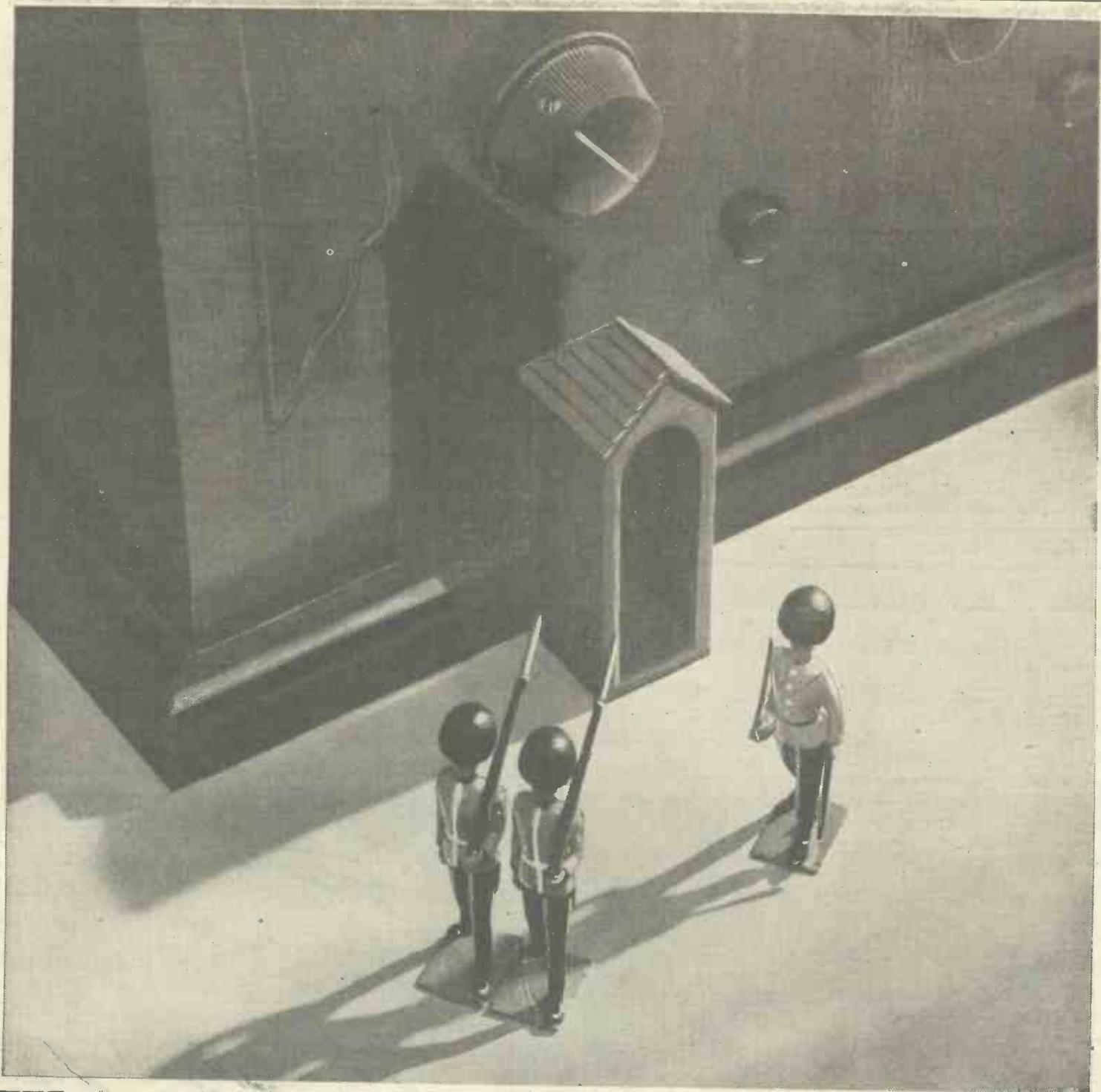
BROADCASTING HOUSE: PROGRAMME CONTROL

RADIATIONS AND REACTIONS

ELEMENTS OF WIRELESS—RESULTS OF COMPETITION No. 3



A sunset silhouette of Rome. An article on the new Rome Broadcasting Palace appears in this issue.



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THREE PENCE



Letters should be addressed to the Editor,
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W.1.

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Italy's Broadcasting

WE print in this issue a description of Rome's new Broadcasting Palace and also a brief review of Italy's broadcasting activities during 1931. Listeners, familiar as they must be with the good reception obtained during last winter from Rome, Turin, Trieste, and, more recently, Florence, must have been struck by the contrast between the excellence of these stations and the extremely small figures representing Italy's licensed listeners as shown in the broadcasting chart of the world's listeners published a few weeks ago in this journal. The contrast will seem all the stranger in the light of the facts which appear in the articles already mentioned.

The Italian system, it will be seen, is to consist of two main chains of stations, viz., that which may be roughly described as the Northern group—it is not exclusively of the North since it contains Florence—and the Central and Southern group. The former, consisting of stations at Milan, Turin, Genoa, Trieste, and Florence, is already complete; the latter will contain Rome, Naples, Bari, and Palermo. Rome and Naples already work in conjunction, and it is intended that Bari shall be relayed by Naples, and Naples by Palermo. Thus the Rome group of stations will be strengthened by the addition of two extra programmes which should add some agreeable and valuable local colour.

The account of the Rome broadcasting Palace will be read with interest. Although this building has been used for broadcasting since January, no official inauguration has yet taken place, and it does not appear that any definite date for this function has so far been assigned. Those who have visited the old broadcasting house in the Via Maria Cristina realise that the importance of the Rome station in the broadcasting world has long ago justified the change to more adequate and suitable quarters, and there is no doubt that the "palace" which has been constructed for the special purposes of broadcasting is in every way worthy of the reputation of the station.

It will be seen that the dual problems of insulating the studios from outside noise and, at the same time, of securing an adequate ventilation system have presented the usual difficulties to the engineers and have been overcome by methods different from those employed in Broadcasting House. The main feature of the construction consists of a triple shell, the two outermost walls being constructed

of solid masonry and the third of wood covered with insulating material, and, since the studios give on to the street, each entry has three doors and each window is in triplicate.

While we congratulate the E.I.A.R. on their new and beautiful broadcasting palace, we may be allowed to express a hope that the figures of the licensed listeners will show a very striking increase when the next returns are published. It cannot be that the Italian programmes appeal so little to Italy's artistic and musical population as the figures would appear to show; it can be only that the owners of unlicensed receiving sets are permitted far too great a latitude.

Via Ether

Some Notable Musical Broadcasts

FOR SUNDAY evening the Brussels stations have arranged a programme of Belgian music. The Directors of the three Belgian Conservatoires, Professors Jongen, Mortelmans, and François Rasse, are to conduct the augmented I.N.R. Orchestra in some of their own compositions. Another interesting concert is announced to take place at the same time. The broadcast comes from the Berlin studio, and is being relayed by Königs Wusterhausen, Heilsberg, and Langenberg. The principal artist is the well-known Italian singer Costa Milona. A number of outstanding orchestral broadcasts appear in MONDAY's programmes. First and foremost I must mention Ravag's transmission at 7.35 p.m.—to be relayed by Heilsberg. The Vienna Philharmonic Orchestra is then to be conducted by Koussevitzky and Tchaikovsky's Symphony No. 6 (*Pathétique*) constitutes the main item. The same symphony, by the way, is again to be heard later in the evening, at 9.25, from Breslau. The usual Monday concert, which is relayed by all Italian stations at 9 p.m., is on this occasion being rendered by the famous Roth Quartet, of Paris. Finally, I would mention the Wagner programme which Professor Neubeck, Leipzig's able Director of Music, is conducting at 9.10 p.m. at Frankfurt, and which is to be relayed by Stuttgart and Königs Wusterhausen. A feast of music for one evening! Two Vienna transmissions later in the week should also be mentioned: the relay of the tenth International Music Festival, which opens this year at Vienna on THURSDAY next, and "The Serenade" from the Josefsplatz on SATURDAY.

A Professorship of the Microphone

THAT the microphone demands a special technique on the part of performers has been recognised since the early days of broadcasting, and Britain was one of the first countries to institute courses of training for singers, players, and actors. Some two years ago, as we noted in our columns at that time, the State Academy of Music in Berlin added a special course for broadcasters to its curriculum, placing it under the charge of distinguished experts in drama and music. Now, in Paris, under the auspices of the Conservatoire and the Ministry of Instruction

and Fine Arts, M. Eric-André Sarnette has been appointed "Professor of the Microphone" at the École Supérieure de Musique. Young and full of enthusiasm, M. Sarnette takes a big view of his task. He thinks that the first thing to do is to teach composers to write for the microphone as they already do for the violin, pianoforte, and other instruments; after that he will tackle the performers! He intends to have his pupils' exercises played in front of the microphone, so that they may hear their effect by wireless, and carry out any changes which that experience suggests. M. Sarnette is sure that the composition of wireless orchestras must be altered, and in particular that the violins must be put in their place, which is, he is convinced, not the principal one. In his view, many of the winds transmit better than strings, and he is particularly enthusiastic on behalf of military bands and the instruments on which jazz music is played. He thinks that even in his own country not half enough consideration is shown to Sax and the families of instruments he gave the world—saxhorns, saxophones, and sax-trumpets.

Adapting the Microphone to Musical Needs

IT is no new idea that broadcasting needs special music and drama of its own; in more than one country, composers and authors have for years been adapting older methods to the shortcomings and weaknesses, as well as the advantages, of wireless transmission. In the light of the steady progress towards technical perfection which engineering research is making, that may well prove to be the wrong view of broadcasting's task; to evolve gear which will faithfully transmit every form of sound—and eventually sight—is surely a worthier aim than the adaptation of broadcast material to existing limits. None the less, it will be interesting to follow the course of M. Sarnette's teaching; he himself realises that he will have a good deal of opposition to overcome on the part of composers.

Filling in the Gaps

I AM told by a correspondent that skilful co-operation by the Columbia Broadcasting System from their New York studios ensured the success, from the listeners' point of view, of a recent broadcast from England. An orchestra was playing in London, and the opening of the first number was as strong as if a local combination had been performing! Slowly, however, the music faded until it became almost inaudible. In the Columbia studios Emery Deutsch's orchestra was waiting for just such an emergency. From the beginning of the broadcast it had been playing in time with its opposite number in London, although it was not "on the air." When the music from London faded out, the local orchestra was "faded in" to the programme. A few minutes later, when the English broadcast was picked up again, it was found that the two orchestras were still playing together in perfect time, and that from England then finished its trans-Atlantic broadcast without further help from the New York studios.

ETHERVIATOR

Rome's New Radio Palace

(From our Rome Correspondent)

TWO houses inside one—triple walls, triple doors, and triple windows—is the basic plan on which Rome's new broadcasting house has been built. Very worthily situated in the "Prati" quarter of Rome, are the studios, while the transmitting station is some eighteen miles away in the country at Santa Palomba. Privately owned telephone wires connect the studios and the transmitter.

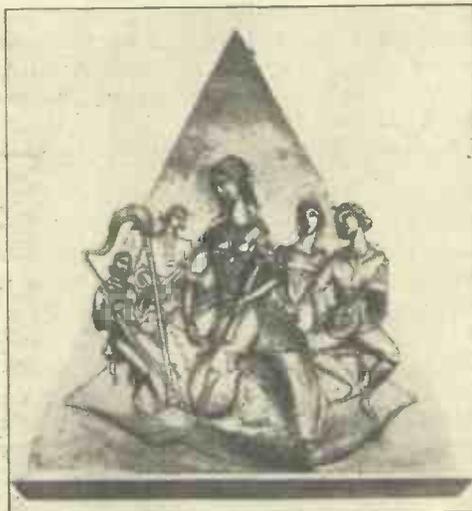
Modernity is the note which at once strikes a visitor to the new palace. Externally the building remains in keeping with the nondescript nineteenth-century structures surrounding it, but internally radio has asserted its right to the new, the luxurious, and the daring.

The first thing one notices on entering the building is the wealth of beautiful, rare marble used in the floors of the corridors and stairways. Clever lighting effects have also been carefully studied. Entering through the main doorway, one sees a handsome stairway in white marble, with the upright supports of the treads in rose-coloured marble. The pavement of the entrance floor is in black, white, and greenish marble. A group of diffused electric-light tubes in white porcelain, arranged like organ pipes, decorates the staircase at the first turn. On the ground floor, outside the entrance to the smaller studios, is a large fountain in handsome black "Belgian" marble, with purple, green, and red coloured lights cunningly placed under water.

The Rome Radio Palace has been functioning since the early part of January, but no official inauguration has yet taken place. The engineer of the company who showed me round the building said that the official inauguration would probably take place this summer, when some

favourable occasion presented itself. Signor Mussolini has not yet visited the palace, but it is understood that he may shortly desire to do so, in which case the inauguration would coincide with his visit.

About two years ago the directors of the E.I.A.R. (*Ente Italiano Audizioni Radiofoniche*),—or Italian Corporation for Radio Broadcasts—were faced with the problem of finding new and adequate accommodation. The old premises by the Tiber, in Via Maria Cristina, in three or



Decoration in small waiting-room

four converted (sculptors') studios were utterly unsuited. The E.I.A.R. engineers were continually facing hopeless problems of acoustical insulation. It was decided to tackle the matter squarely, and a small commission of two or three experts was sent abroad to find out what the

rest of Europe was doing in the matter of building broadcasting studios. As a result of these inquiries, a general plan was agreed on, and it was further settled that Italian designs, material, and labour should be used wherever possible. The construction of the frame-work of the new palace was entrusted to Engineer Marchesi-Coppai, who was assisted in his task by the wireless engineers attached to the E.I.A.R. and the commission of experts who had studied other broadcasting houses abroad.

The chief problem in the building of the studios was, of course, that of rendering the structure completely sound-proof and at the same time of providing a proper ventilation system. The former was accomplished by the creation of a building with a triple shell. The two outermost walls are in solid masonry, and the third in wood covered with various layers of insulating material, such as a preparation of compressed cane, cork, rubber, specially prepared wallpaper, etc.

Each room has three doors, which are air-proof and sound-proof, and such of the studios as have windows possess them in triplicate. The heavy plate glass in these windows is double, moreover. Looking down into the street a few yards below one of the studios, one saw a motor-cyclist obviously racing his machine, but not a single tremor of this particularly unpleasant noise reached those of us who were behind the triple windows.

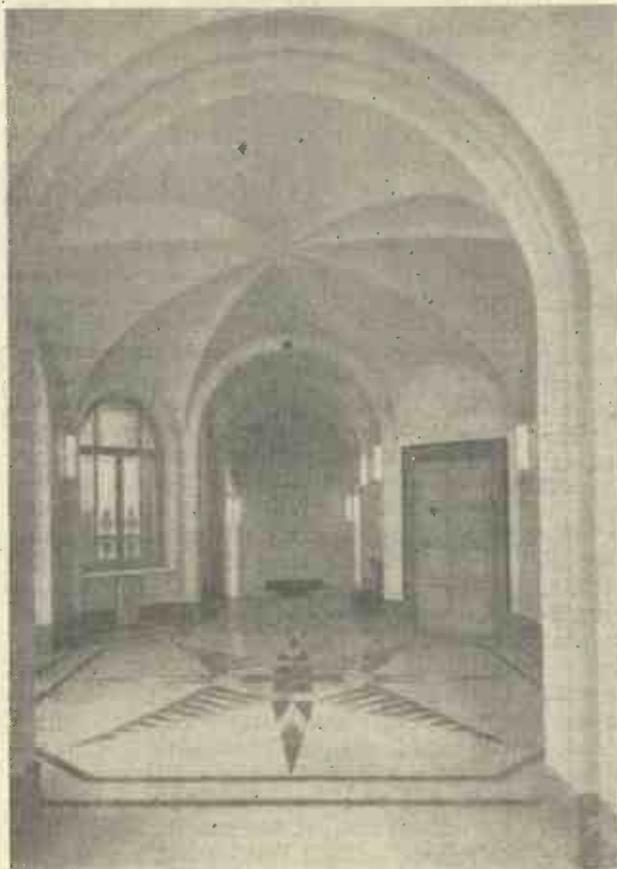
"The studios are, of course, proof against the direct entry of the outside air," said the accompanying engineer, "for where air can enter sound passes, too. A hole no bigger than is required to pass a thin telephone wire into a room will let in so much noise that you would think two of the three doors were open. We have found this by experience."

In designing the building everything had to be foreseen as far as possible, for with the complicated triple construction used, miscalculations involving pulling down sections already built would have proved most costly. When the plan was finished by the architects, the radio engineers went over it for sound difficulties, and the final plan was the result of their emendations.

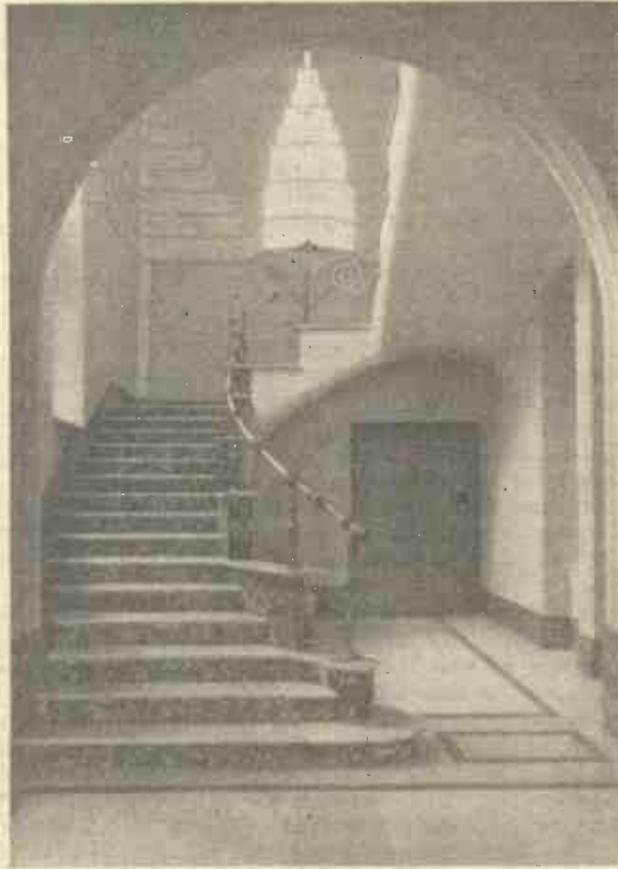
Having secured sound-proof rooms which were also incidentally practically air-proof, the next question was how to ventilate them effectively. This has been done with a central system of pumps and aspirators, which in winter-time drive in fresh, warmed air and extract the used air. In summer, cooled air, passed through a refrigerating plant in the basement, is driven into the studios and offices, and drawn out when used by the same aspirators. Thermostats automatically keep the temperature constant.

One of the most difficult problems was to contrive a way of preventing the noise coming from the pumps and aspirators of the ventilation plant from penetrating into the studios. Special silencers, something on the plan of an automobile radiator, through which the currents of warm or cool air are passed, were installed.

There are eight studios and, in addition, an experimental television salon and a couple of small news rooms.



Entrance hall



Marble staircase and pyramid of light

The ground floor is reserved for four studios, chiefly used for small concerts and the giving of operettas requiring only a few singers and a small orchestra. The Romè Radio Quintet generally plays here. On this floor there are also the offices of the Artistic Direction, the

specially constructed for radio broadcasting work.

Two of the smaller studios have windows opening on the street—triple windows, of course. The other salons are windowless. All studios are artificially ventilated by means of the system already described. These two salons were provided with windows in case a breakdown in the ventilating plant necessitated a delay in the programme. All the studios have attachments for plugging in the microphones. The acoustics of the salons have been studied, taking into consideration the characteristics of the microphone. The E.I.A.R. engineer accompanying your correspondent explained that there were at present roughly two ways of building transmission rooms for radio. With one method, the sounds are reflected on to the microphone from one or two specially-constructed areas, making everything else in the room absorbent. With the other system, it is possible, with formulæ indicated by Prof. Sabine, of Harvard University, and Prof. Jaeger, to calculate the number of "absorbing units, and therefore the quantity of material, which, placed in a given studio, allows one to establish the coefficient of reverberation considered to be that best suited for the room. This latter method has been followed in the case of the two large concert salons. In the smaller studios, where the number of the orchestra and choristers is more or less constant, an absorbing material is employed, and movable velvet

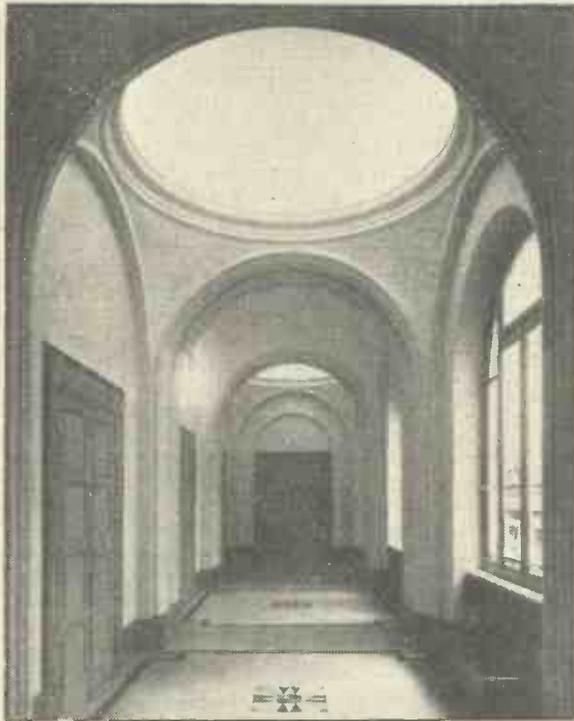
curtains are hung against the walls.

The following electrical signalling system has been installed in the building: (1) a telephone "central," divided into a house exchange, and an exchange for Rome city, the provinces and international calls; (2) a system of light signals connecting the various studios with the amplifying room and the offices of the Technical Management, and the control room; (3) a system for calling the artists from the various rooms; (4) a system of bell signals; (5) internal lines to listen to any transmission or rehearsal; (6) an electric time-piece service with single system of control; (7) lines connecting the microphones in the various studios, and lines carrying energy from the generator room and accumulators room to the panels of the amplifiers; (8) private telephones to the transmitting station at Santa Palomba.

There is also a dynamo room, with generators which furnish the electric current required for illuminating the building, also for aspirator plant, floor polishers, small ventilators, etc. The total power available is 180 kW.

Measures against the risk of fire have naturally been taken. Beside the usual mechanical hand extinguishers distributed all over the palace, three groups of carbonic anhydride extinguishers are installed, which work automatically when the temperature begins to rise above a certain degree.

A few figures may illustrate the requirements of the palace. For the acoustic insulation, 33,580 square yards of cardboard were used; 16,250 square yards of cellulose paper; 542 square yards of cork; 2,500 square yards of



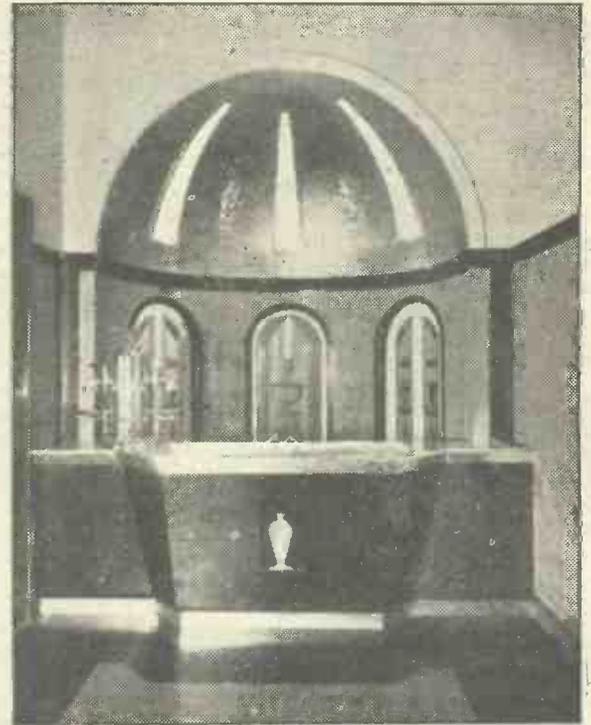
A corridor

amplifiers room, the musical archives and library, the waiting-room for the leading artists, and a small bar.

On the first floor the offices of the general management have been installed, the offices of Development and Propaganda, one large concert-hall for big orchestral concerts, operas, etc., and two small studios for the reading of news bulletins, weather reports, special information, etc. The large studio on this floor is provided with a triple glass screen, behind which invited members of the public can witness the concerts or operas and listen to them through a loud speaker instead of directly. The offices of the "Radio Giornale," or news service of the E.I.A.R., is also situated on this floor. A small staff of newspaper men prepare the official communiqués of the Italian (Stefani) news agency and other news reports and hand them to the announcers for transmission.

On the second floor, we find the offices of the technical department, the laboratories, the control room, with the various connexions to the transmitting station at Santa Palomba, the telephone central with leased wires running to the other Italian broadcasting stations of Turin, Milan, Naples, Florence, Genoa, and Trieste.

Bolzano and Palermo cannot relay through direct telephone land-lines like the other stations, as no cables have been leased for them, but they often pick up Rome programmes and then retransmit. On this floor there is the largest studio of all, measuring 97 ft. by 14 ft., with a height of 26 ft. This hall holds easily 120 persons as well as orchestra and choirs. It is meant for operas and big symphonic concerts. So far it has been used only once or twice. The studio on the floor below, which measures 80 by 45 by 23 feet, is at present generally used for the big concerts and operas. Both salons can be used contemporaneously without any inter-disturbance through sound. It is the intention of the E.I.A.R. shortly to instal a large organ in the biggest of the salons. This organ will be



Artists' Buffet

felt; besides a quantity of tar-paper, wood, and cotton.

In the basement there is a restaurant and bar for the artists and orchestra, with a small annexe containing tables, chairs, newspapers, and periodicals.

Convenience and comfort have been most carefully studied, and the impression a visitor gains is one of efficiency and smooth working.



Studio A. The biggest studio, for opera performances

Radiations and Reactions

WE have by now become accustomed to the term "television," which, it is to be hoped, does not mean that we have given it a permanent place in the English vocabulary. It is a bad word, one of the many unfortunate children of mixed marriages of Greek and Latin. Yet I do not recall seeing any protests when the word became current some six years or so ago. The *Libre Parole T.S.F.*, of Paris, says that the French Academy, when it shall next revise its dictionary, will be faced with a choice between three terms to describe the transmission from a distance of moving images—viz., "radiovision," "radio-telephony," and "television," the last of which it rightly describes as "un affreux mariage de racines."

Those who have had the misfortune to play against Don Bradman, when he is in one of his prolific scoring moods, have never seen anything particularly humorous about him. Rather, he seems a grim and remorseless young man, with no consideration for the feelings of fielders and no regard for the beautiful breaking balls of Britain's best bowlers. In truth, however, he is really a most amusing personality, as good at leg-pulling as pulling to leg, and he has been engaged by Station 2UE, Sydney, not to talk on cricket, but to provide entertainment generally.

A great—perhaps the greatest—feat of broadcasting compression was performed, appropriately enough, by the B.B.C. on the occasion of M. Paderewski's recital. That great artist insisted that there should be no preliminary announcement of any kind. His name was enough. Out of politeness the announcer said "Mr. Paderewski," a formula which contained twice the number of words the *maestro* desired. Although his enraptured listeners never imagined it, he was singularly nervous on the occasion of his broadcast performance, which may account for the fact that he has since steadfastly declined all invitations to play in the vicinity of a microphone.

Australia's decision to go in for a number of regional high-brow stations has produced the inevitable reaction of the militant low-brows. One of these ("James," of the *Sydney Wireless Weekly*) thus pleasantly expresses his views: "The conscientious high-brow is an insufferable bore because he has not mingled his little learning with the soil. For the sake of being thought a connoisseur he insists on having learned and tedious programmes to which he never listens." Then why "conscientious"?

There are many who, for some good reason, do not love the broadcast Stock Exchange reports, and to whom even fat stock prices are a weariness to the flesh. To such, a writer in an Australian radio journal brings words of comfort. He says: "We can never understand the attitude of listeners who dislike the broadcast market reports. To us the price of cabbages and turnips has always seemed an engrossing human document, and as we sit back in the cool of the evening and turn on the steady flow of garden names and prices, we seem to hear the still, sad voice of humanity's stomach; a poem in figures on the very old theme of supply and demand."

REAGENT.

From the Swiss Alps

A Review of the May European Programmes
By "YOPELLER"

IN the early part of May we had very cold weather in the Alps, snow, mists, and frequent rains; but to make up for these unpleasant things, we had, later, some glorious sunshine, a ten-day stretch of it, with no cloud to mar the blueness of the skyline. The glorious deep green which last month we observed down in the Rhone valley, has steadily crept upwards and has at last reached our little village—a treat for eyes surfeited with staring at a winter's whiteness.

Programmes have been of a very high standard during this month.

Sunday, May 1.—Started the month in England by tuning in the London Regional for the Sunday Orchestral Concert. The B.B.C. orchestra's rendering of Sibelius's tone poem *Die Okeaniden* I thought very fine, while the Holst Concerto for Two Violins as executed by Jelly d'Aranyi and Adila Fachiri was as good as it could possibly be.

Monday, 2nd.—Radio Suisse Romande gave us a symphony concert, the pick of which was Beethoven's 2nd Symphony.

Wednesday, 4th.—I have a sneaking regard for zither music, and on this occasion the German Swiss station at Beromünster captured my fancy with a zither music recital. Later, went over to Brussels, too late, unfortunately, for Schubert's "Unfinished," but just in time for a Brahms Concerto for Violin and Orchestra.

Thursday, 5th.—A Bach Cantata was being relayed by Sottens from the tiny cinema in my mountain village, a relay which I found interesting, because of its local association.

Saturday, 7th.—Had a great time at Budapest listening to an opera house relay of Lehár's operetta *The Land of Smiles*.

Monday, 9th.—Bucharest, one of my most reliable stations these days, gave me a broadcast from the Romanian Opera House of Puccini's *Tosca*.

Tuesday, 10th.—Found Königs Wusterhausen putting out a version of Wagner's five-act Opera *Rienzi*, and, this station once satisfactorily placed, I did not touch my dials the whole evening. This is listening as I like it.

Friday, 13th.—Spent the evening at Warsaw listening to a Beethoven Symphony Concert. The orchestra was the Warsaw Philharmonic—a very fine combination—under the baton of Paul Scheinpflug, and their rendering of the *Eroica*, and later, the composer's Violin Concerto—soloist, Diez Weismann—was as good as anything I have ever heard by wireless.

Saturday, 14th.—Took advantage of the unique opportunity offered by the fact that Jack Payne and his band were performing from Hilversum, and Henry Hall and his men from Daventry, at the same time, to compare the old and the new B.B.C. orchestra. Incidentally, I heard Jack Payne broadcasting in the "End of Savoy Hill" programme, and I imagine the difficulty of such a quick change from Hilversum to London was solved with the aid of our old friend Mr. Blattnerphone!

Sunday, 15th.—Munich, one of my favourite stations, gave of its best with a performance of Verdi's *Aida* by a cast whose names I missed, but who were, undoubtedly, front-rankers.

Monday, 16th.—From Rome, *viâ* Turin, came a studio symphony concert which included Schubert's "Unfinished" and Debussy's *L'Après-midi d'un faune*.

Friday, 20th.—Tried Warsaw for a Symphony concert by the Warsaw Philharmonic, and should have thoroughly enjoyed the Chopin Pianoforte Concerto in E Minor had it not been for a rather heavy crop of atmospheric and some slight heterodyne interference emanating from the Eiffel Tower.

Saturday, 21st.—As might be expected, passed the evening in England, where, by the kind offices of Daventry, I heard the Gracie Fields Music Hall Programme. This type of broadcast is as much, perhaps more, appreciated by the Englishman residing abroad as by those at home.

Tuesday, 24th.—Turin, because of its frequent fading, is by no means a reliable station with me, but on this occasion it behaved very well throughout an excellent version of Bellini's *I Puritani*, a work with which I am not too familiar, but which I hope to hear again soon.

Thursday, 26th.—Spent some time at the Albert Hall listening, through the National transmitter, to Florence Austral and Orchestra in the Aria from Weber's *Oberon*: "Ocean, Thou Mighty Monster," and the Burlesque for Pianoforte and Orchestra by Strauss which followed. Afterwards, turned over to Hilversum for a charming broadcast of Offenbach's *Tales of Hoffmann*.

Saturday, 28th.—After hearing from Vienna a concert which contained the Overture to Oscar Straus's *A Waltz Dream* and a tenor solo from Eysler's *Bruder Straubinger*, dropped down to Beromünster for Schubert-Bert's *Lilac Time*, a special broadcast given by the Berne Municipal Orchestra and Artists from the Biel-Solothurn theatre.

Sunday, 29th.—My last notes contain mention of a fine performance of Verdi's *Aida* from a station which I believe to have been Moravská-Ostrava, but am not quite certain, as at the time I was using a strange receiving apparatus, and one which I had not properly calibrated.

Summary.—These notes have been compiled in England following my arrival from Switzerland. It is delightful to be home again for a while, and my first duty on landing was, as may

(Continued on page 1161)

Letters to the Editor

"Die Lindenvirtin"

To the Editor of WORLD-RADIO

SIR,—Apropos of your note in last week's *World-Radio* on the "Lindenvirtin," I remember this as a well-established student song in North Germany nearly forty years ago. I happened to tune in during the recital and found that the singers were taking liberties with the text. They sang—"Brannte heiss ein anderer," instead of "Heiss ein anderer brannte," to rhyme with "Lass es mir zum Pfande."

Obviously, both rhyme and rhythm suffered. After so many decades elapsing since I heard it, I confirmed my memory by a reference to a contemporary *Kommersbuch*.

Yours faithfully,

A. JOHNSON.

102, Richmond Road, Cambridge.

Daylight Reception in East Anglia

To the Editor of WORLD-RADIO

SIR,—I read with interest "Nimrod's" report of daylight reception in East Anglia, and I should like to compare his list with mine. I notice that Cardiff, Cork, and Dublin are not well received by him in daylight, and I agree with him that this is so. Königs Wusterhausen and Warsaw, however, I receive quite well at almost any time.

My best daylight stations are: Huizen, Radio-Paris, Königs Wusterhausen, Daventry, Eiffel Tower, Warsaw, Motala, Kalundborg, and Oslo on the long waves, and on the medium waves Brussels No. 1 and No. 2, Hilversum, Langenberg, London Regional and National, Midland Regional, Northern National and Regional, Poste Parisien, Prague, Rennes, and Strasbourg. My set is a quite ordinary mass-produced two-valver.

Diss, Norfolk June 4, 1932.

Q.

Dominion and Foreign Broadcasting Intelligence

Italy's Broadcasting during 1931

(From our Turin Correspondent)

A BRIEF review of the Italian broadcasting activities in 1931 may not be uninteresting, the more so since the extension of the number of stations as well as the hours of transmission have added considerably to the appreciation of broadcasting and listeners have steadily increased in numbers. During the year the number of licensed listeners grew from 176,886 to 233,254 (according to the official U.I.R. figures). This number would be greater were it not for those listeners who for some reason or other were unable to renew their licence, and for the pirates, still very numerous, unfortunately.

Much has been done in the technical field during 1931. Three new stations were officially opened: Palermo on June 14, Trieste and Bolzano on October 28; in addition the power of Genoa's transmitter was increased. The official opening of the Florence station took place on April 21 this year, although in point of fact it had been operating in 1931. Work on the two new stations, Milan and Bari, is speedily progressing and it is hoped that they will begin to work in a few months from now. A chain of land-lines, connecting the various stations of the north and the centre, is nearly completed. In the course of next year Bari will be relayed by Naples and Naples by Palermo; so that on special occasions a certain programme may be transmitted throughout the peninsula.

During 1931 a small transmitter of 200 watts was installed at Asmara (Eritrea), and at the moment experiments are being made with a view to finding the most suitable wavelength for the tropical climate. Finally, a television transmitter is on the point of being installed at Rome.

The Rome Broadcasting House is a new building which was completed in 1931. It has been constructed in accordance with the most modern scientific developments, and those competent to judge have declared it to be a veritable jewel.

Much was done during 1931 with regard to programmes. An orchestra of 80 players was formed for the symphony concerts of the North Italian stations. For the first time in its existence, E.I.A.R. organised an opera season, in which many artists of great repute will participate, and that after having relayed a large number of performances from Italy's foremost opera houses (including La Scala). This special opera season is being repeated this year, as was recently stated in *World-Radio*. In order to establish a repertory for wireless plays a competition among Italy's best writers was organised.

In a brief review such as this only some of the activities of E.I.A.R. could be dealt with. But considering the number of licensed listeners, as compared with other countries, it will be admitted that E.I.A.R.'s endeavours have been considerable. Given greater support by its people and national institutions, Italian broadcasting will advance yet further.

CANADA

The Government Broadcasting Bill

(From our Montreal Correspondent)

The Government Bill in respect to broadcasting passed its third reading in the Canadian Senate on May 25. In answer to questions, the Rt. Hon. Arthur Meighen stated that one member of the Commission of three which will be in charge of the administration of the Act would be a French-Canadian

AUSTRIA

Vienna's Festival Fortnight Relays

(From our Vienna Correspondent)

Some relays of outstanding interest are announced for the second week of the Vienna Festival Fortnight (June 5-19). On Monday, the 13th, there is the Serenade from the courtyard of Kreuzenstein Castle, near Vienna, at 6 p.m. The Serenade will be conducted by Herr Hans Heinz Scholtys. On Friday, June 17, at 6.10 p.m., will be relayed the closing events of the Jubilee Rowing Regatta on the Old Danube Lake, which is four miles long. It is the fiftieth anniversary of the founding of the Regatta Association. On Sunday, June 19, there will be relays of Haydn Festivals at Eisenstadt, the capital of the Burgenland, near his birthplace, at 10.15 a.m. and 12.30 mid-day, and at 10 p.m. a Midsummer Night Festival will be relayed from Zell-am-See, taking place, mainly, on the lovely lake which has the Kaiser Mountains as its background.

FRANCE

Racing Commentaries

(From our Paris Correspondent)

The French Derby at Chantilly on June 12, the Grand Prix at Longchamp on June 19, the Grand Steeplechase at Auteuil on June 26, and the Grand Prix of Saint Cloud on July 4, will all be subjects of outside commentaries.

HOLLAND

A New Organ for Hilversum

(From our Correspondent at The Hague)

The N.C.R.V. (Protestant Radio Society) has given orders for the erection in its studio at Hilversum of a new organ worked entirely by electric power. Besides fifty organ stops, it will include church bells, carillon bells, harp, several orchestral instruments, etc. The console will be in semi-circular form, with the most modern arrangement of stop-keys and ten free combination registers. Many of the stops will be on a very high wind pressure, the whole ranging from 15 inches down to 6 inches. The wind will be supplied by a three horse-power motor, for which the current will be supplied by a specially constructed transformer.

ITALY

Vatican Station and the Dublin Congress

(From our Turin Correspondent.)

The activities of the Vatican radio station are continuously growing. The telegraph service is open for communication with Germany, France, Spain, and Poland. But of far more importance is its value to the Vatican's diplomatic service. This has been made possible by a direct connexion with the Papal Legations in all parts of the world which have all been supplied with specially manufactured sets. Similar receivers have also been supplied to all Cardinals abroad. In consequence of this development in wireless communication, and in view of the importance which His Holiness the Pope attaches to it, it may be that the International Eucharistic Congress, which will take place in Dublin this month, will be opened by the Pope with an inaugural address from Rome.

POLAND.

Mysterious Interruption of Broadcast Relay

(From our Warsaw Correspondent)

A sensational incident occurred during the relay of dance music from Warsaw "Café George," between 10.50 p.m. and 11.30 p.m. on Saturday, May 14, when a trespasser managed to make contact with the Warsaw plant. During an interval between the dance items, listeners were

most surprised to hear a man's voice read out rather quickly, but with unusual volume, a reminiscent note, marking the fact that the day was the sixth anniversary of a *coup d'état* of May, 1926. There was widespread consternation. It was at first thought that someone in the café had abused the opportunity to shout into the microphone, as occurred on a former occasion about a year ago. After about fifteen seconds, the Raszyn engineer realised that some trespasser must have interfered with the line. He immediately cut off the power and the programme was curtailed for that night. Without delay the whole line, from Raszyn suburbs to the studio in the city, was thoroughly inspected by the Polskie Radio "flying squad" and police agents. But it was not before dawn that the point where the line had been tapped was located in the woods of Senkocin, outside Warsaw, some fourteen miles from the studio and about a mile from Raszyn. This had evidently been done by someone with technical experience, for the connexion was perfect. The circuit line running to the Warsaw transmitter was cut and the intruders' apparatus, complete with amplifier, batteries, and microphone was connected and worked with exceptional strength owing to the relatively short distance from the transmitter. A man's glove, a coil, and a draft paper with the text read out by the mysterious interloper were found on the spot, and it is hoped that these will lead to the apprehension of the perpetrator

SPAIN

Eight Prospective Stations

(From our Madrid Correspondent)

The conditions imposed by the Government in connexion with the decision to accept offers from private sources for the establishment of a broadcasting system in Spain includes a list of the stations which will have to be opened. These are: In Madrid, a station of 120 kW with a wavelength of between 1,333.3 and 1,395.3 metres; one of 20 kW, wavelength 424 metres, and a short-wave station of 10 kW; in Barcelona, a station of 20 kW, wavelength 368 metres; in Valencia a station of 20 kW, wavelength 349 metres; in Seville, a station of 20 kW, wavelength 263 metres; in Corunna a station of 20 kW, wavelength 251 metres; and in Bilbao, a station of 10 kW, wavelength 229 metres.

U.S.A.

A Century of Progress Exhibition

(From our Chicago Correspondent)

In less than a year's time Chicago will become crowded with visitors from many lands as the Century of Progress Exposition opens. Ten programmes have been presented for the purpose of arousing interest and giving out information concerning the tremendous project.

Gramophone Records v. Electrical Transcriptions

(From our Washington Correspondent)

The Federal Radio Commission has again revised its ruling dealing with the announcing of gramophone record broadcasts and electrical transcriptions, with the object of impressing upon stations the difference between the two methods. The ruling was made necessary by reports of many fraudulent announcements of ordinary gramophone records, able to be purchased by anybody, as electrical transcriptions. The latter are made exclusively for broadcasting stations and are expensive to produce. The new order makes the descriptive language optional, but amplifies the order of February 11 in such a way as to leave no doubt of the difference between electrical transcriptions and ordinary gramophone records.

TECHNICAL SECTION

Broadcasting House

9.—Programme Control Equipment

(Continued from page 1105, June 3)

AS already indicated in previous articles, there are twenty-two studios in Broadcasting House, many of which have to be used simultaneously for the same programme, while a change from any one or group of these studios to another studio has to be effected many times in a day's programmes, and without delay.

Apart from the studios, Broadcasting House contains nine listening rooms, five echo rooms, two dramatic control rooms, checking circuits, rehearsal circuits, and the very large amount of additional equipment which past experience has shown to be necessary if programmes of a complicated type are to be undertaken, and to maintain a smooth continuity between any two sections of the same or different programmes. The feat of to-day is the routine practice of to-morrow, and what can be achieved as a special arrangement one week must be provided as necessary equipment with full flexibility a short time afterwards. During its nine years activity, the B.B.C. gradually added to its studio and amplifier equipment, which, although in many cases necessarily somewhat makeshift, gave a very accurate indication as to what was desirable and what was superfluous in the design of a large broadcasting headquarters.

The following article will describe the most important points in the design of the microphone circuits, amplifiers, and auxiliary speech input equipment which has been installed at Broadcasting House. As the network is necessarily somewhat complicated, and as it is desirable to make clear the fundamental principles of its design rather than the possible permutations and combinations of its use, secondary details have had to be left to the reader's imagination.

The description is based on the progress of

the speech currents from the microphones to the Post Office land lines linking Broadcasting House with the various transmitters which are taking that particular programme. In certain cases, it is convenient to delay, until later in the article, the explanation of certain terms and expressions which are used. Although it is impracticable to explain the extreme complications which occasionally occur in the use of the speech input equipment, it is hoped that the following description will suffice to give an accurate impression of the fundamental principles of the design and working of the equipment which is installed at Broadcasting House.

General

In general, each studio has associated with it either an Announcing or a Listening Room, and, in certain cases, both. The Announcing Room is a place where the announcer can take complete control of the programme; he can make announcements and can listen to the programme on a pair of headphones; he also has a telephone for communication with the engineers in the Control Room. Red, blue, and white signal lights are installed in each Announcing Room.

The Listening Room is a room designed primarily for use by producers and members of the musical staff,

studios. In the case of one Dramatic Control Room, arrangements have been made whereby the programme can be controlled—that is, kept within the limits of modulation for the transmitter—in the D.C. Room itself instead of in the Control Room or a Control Cubicle. The Echo Rooms are situated in the basement, and each is constructed to have a long reverberation period. For the convenience of engineers testing, there is a telephone for communication with the Control Room.

The Control Room is divided electrically, but not physically, into two: the Transmission Control Room and the Rehearsal Control Room. In the Transmission Control Room there are installed six racks of apparatus, six control positions, a supervisory position, a simultaneous broadcast position and a desk for use by the Senior Engineer on duty. In the Rehearsal Control Room there are four double control positions, a supervisory position, and the discharge power board. The floor of the Control Room itself is false so as to allow all cables between the Control Room and studios, Echo



Fig. 2—Transmission Control Positions and Amplifiers in Control Room

and by all members of the staff whose duty it is to attend to the balance of the programme. Each Listening Room is equipped with a loud-speaker, the input of which is connected to a circuit from the Control Room, a telephone to the Control Room, and, in certain cases, a "Mixer."

The Dramatic Control Rooms, contain one Dramatic Control Unit, a loud-speaker, headphones, telephone to the Control Room, red and blue signal lights, and an indicator, operated from certain

Rooms, D.C. Rooms, Listening Rooms, etc., and between the racks and positions and racks and Battery Room, to be accessible but out of sight; over the actual cable-runs the false floor has been made removable. The six racks of apparatus and the discharge power board are mounted on concrete plinths. Fig. 1 shows the general lay-out of the Control Room, and Fig. 2 is a general view of the room.

Studio Equipment

There are two types of microphone commonly used by the B.B.C. in studios: these are the carbon microphone and the condenser microphone. Owing to the difficulty of allocating a studio to particular types of programme and adhering to these decisions rigidly, it was considered advisable to design a microphone plug and socket which could be used for both types of microphone. An eight-point plug and socket is employed, and by using certain pins on the plug for certain microphones, either type of

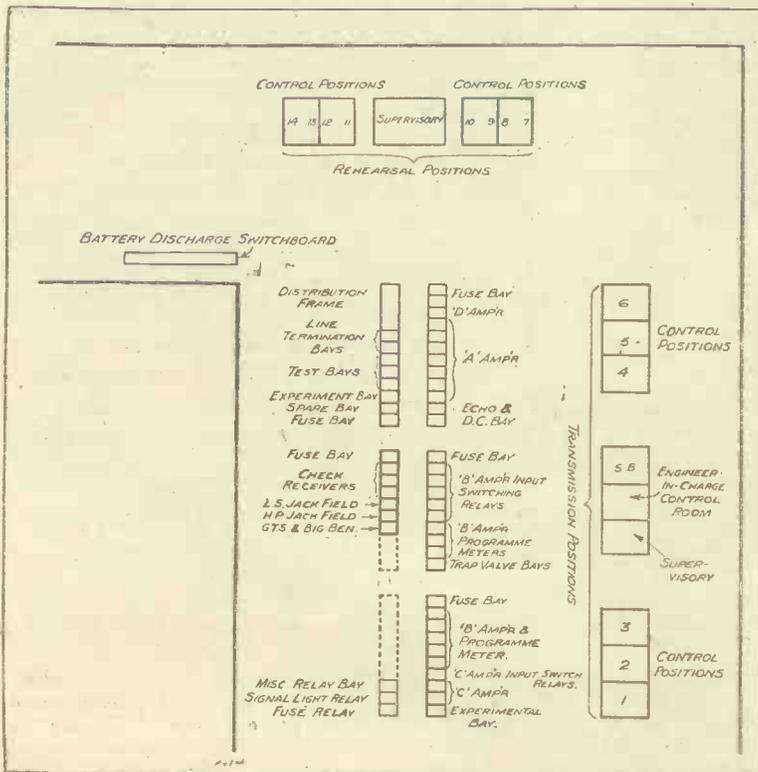


Fig. 1—Plan showing general lay-out of Control Room

microphone can be plugged into any microphone socket.

In some studios the microphone points are wired in parallel, and in others separately. In general terms this means that, in the former case, one microphone only can be used at a time, whereas, in the latter case, any number of microphones, up to the number of sockets available, can be used at once. In the former case, there is usually no Listening Room associated with the studio, whereas, in the latter case, without exception, there is an associated Listening Room. The wiring from the microphone

the mixer in the Listening Room listens to the programme on the loud-speaker fed from the Control Room, and is responsible for the "balance" of the programme. The output from the mixer is taken to the Control Room either direct or *via* a Silence Room. In the latter case, the output is connected to one input of an announcer's microphone unit.

Each announcer's microphone unit (shown on the Announcing Room desk in Fig. 3) has two inputs, the second being connected to a microphone for making announcements from the Announcing Room. This enables announcements to be made without the artists in the studio hearing them, or permits the conductor in the studios to issue orders without the studio being "faded out" by the Control Room. The unit itself contains the necessary decoupling arrangements for the announcer's microphone, and a change-over switch for connecting in circuit either the announcer's microphone or the studio microphones. The output from the Announcing Room is taken direct to the Control Room. The general arrangement of studio, Listening Room and Silence Room is shown diagrammatically in Fig. 4.

It should be stated here that, owing to the insensitivity and different impedance of the condenser microphone as compared

with the carbon type, it is imperative to install an amplifier immediately adjacent to each condenser microphone, this being done in such a manner that the microphone and amplifier are both contained in one unit measuring about six inches cube.

only, and are only used in conjunction with the dramatic control units, therefore facilities are provided for connecting only nineteen studio amplifier outputs to the inputs of the controlling amplifiers.

Earthing Arrangements

The earthing system for all apparatus in the broadcasting chain of equipment is completely separate from the earthing system used in connexion with the power, lighting, and heating installations, telephone exchanges, etc., and consists of two copper plates approximately 6 feet by 4 feet buried below the foundations in the north-east and north-west corners of the building. To each plate there are attached three No. 4 S.W.G. copper conductors which are brought through the foundations and sweated to a 3/4-inch by 1/2-inch copper strip running round each earth pit. From these earth pits is run a length of 19/083 V.I.R. cable, connecting to 3/4-inch by 1/2-inch copper strip running up each of four cable ducts to the Control Room, where they are bolted and soldered to a network of similar copper strips run in the Control Room.

Signal Lights

The system of signal lights employed is necessarily somewhat complicated, and a brief description of their uses may be considered of interest. Outside each studio there is a yellow light which is operated from the House Superintendent's office by the official responsible for the booking of all studios for rehearsals, transmissions, etc., and it is his responsibility to see that the yellow light is switched on during the period that the studio has been booked. Inside and outside the studios there are both red and blue lights; these are switched on by the engineers in the Control Room, the red lights being switched on from the transmission control positions, and are for use for transmissions only, and the blue lights from the rehearsal control positions for use for rehearsals when the microphone is required. In cases where a rehearsal takes place without the use of a microphone the yellow light only will be switched on.

Inside each studio there are also green and white lights; the green lights are for cues from the Dramatic Control Rooms, and are switched on and off by the producer to give



Fig. 3—An Announcing-room Desk

points in any one studio is run to the associated Listening Room, then to the Announcing Room, and finally to the Control Room. Should there be no Listening or Announcing Rooms associated with the studio, the wiring is run direct to the Control Room. Fig. 3 is a photograph of an Announcing Room desk.

In studios where the microphone points are wired separately, the wiring is brought to the inputs of either a three- or six-way mixer. In certain studios gramophone points have also been installed for "gramophone effects," and these are also wired separately to the inputs of mixers. The mixer is a piece of apparatus having three or six inputs and three or six fade potentiometers, and is used to mix the outputs of the microphones and gramophones in use. The microphone potentiometers have an attenuation of 44 decibels before the "faded out" position and the gramophone potentiometers 45 decibels.

The necessity of these fade units is obvious, as for certain types of programme, such as vaudeville, where an artist may be moving about the stage, it is necessary to "follow the artist," and in cases where singers are accompanied by a piano or orchestra, two microphones can be used, one for the singer and one for the piano or orchestra; it is then not necessary to move either of the microphones or the singer during a programme, each microphone having its own fade potentiometer, which is capable of varying the output of the microphone from zero to its maximum.

In the mixer unit is also installed the necessary microphone decoupling arrangements and the potentiometers for reducing the 300-volt high tension supply to values suitable for operating the condenser microphone amplifiers. The official responsible for the operation of

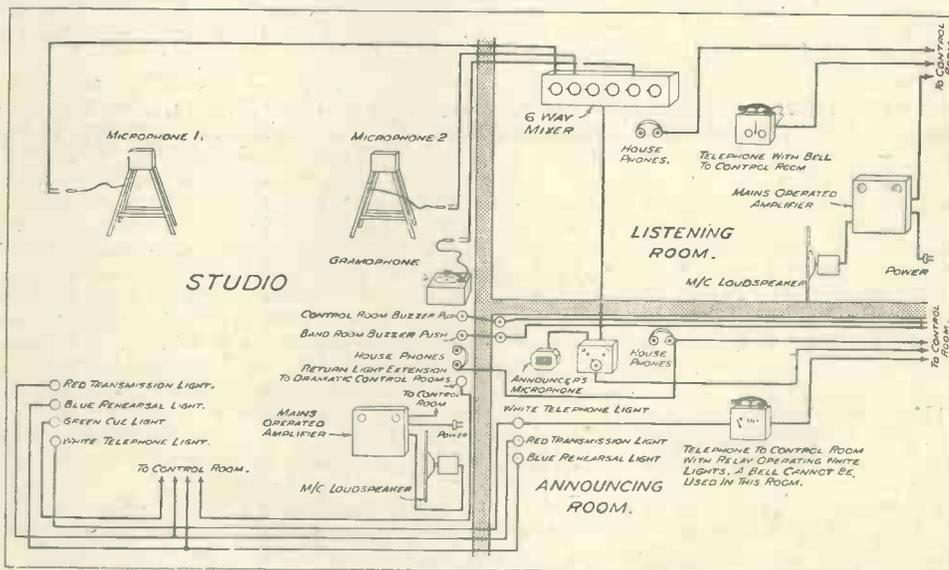


Fig. 4—General arrangement of Studio, Listening Room, and Announcing Room

To avoid confusion later, it should be borne in mind that, although there are actually twenty-two studios, two of them, Nos. 6A and 7A, are treated as one studio as far as the technical equipment is concerned; therefore only twenty-one studio amplifiers are required. Further, two of the studios are for use for gramophone effects

cues to artists in the studios. The white lights are used in conjunction with the Control Room telephone system. When a call is received from the Control Room, a relay is operated which lights the white light, the light remaining alight until the call has been answered.

(To be continued)

Reliability in Wireless Reception

The first of a series of articles designed to assist new listeners who may have difficulty in maintaining their equipment so as to obtain a consistently satisfactory service. The series will cover the maintenance of aerials, the adaptation of standard measuring instruments and testing apparatus to the requirements of a wireless receiver, the use of such instruments for tracing and preventing faults, and the location of faults generally.

MODERN broadcast receiving equipment, in many cases, consists of a well-polished cabinet receiver with three or possibly four control knobs, and the tendency is for such apparatus to become more simple both in appearance and operation. It is, therefore, not remarkable that the maintenance of the apparatus frequently takes the form of charging batteries once a week or month, the remainder of the installation being left to look after itself. With an "all-mains" receiver, even this amount of attention is unnecessary.

Up to a point this is ideal. Nevertheless, the full benefit to be derived from a wireless receiver is only obtainable if the complete equipment receives its fair share of attention from the maintenance point of view. Like any other apparatus, mechanical or electrical, certain parts wear out and need adjustment or replacement, and disappointment or annoyance can be avoided only by regular attention to the installation so as to forestall faults and irregularities which might otherwise develop.

The Aerial.

One of the most neglected portions of the equipment is the aerial system, and it is perhaps not generally recognised that this can be the seat of many exasperating interruptions and difficulties. It is sometimes the practice to erect the aerial, paying great attention to obtaining a good height, and then to leave it until a particularly heavy storm brings it to earth, after which possibly a temporary arrangement quickly extemporised becomes semi-permanent.

The average listener's aerial consists of one wooden mast supporting the free end of a horizontal wire, the other or lead-in end being supported at a convenient point of his house. The mast is usually stayed by galvanised iron wire ropes, the base sometimes being sunk into the earth.

It is very desirable that provision should be made for the periodical inspection of the mast and stays, once or possibly twice a year, and for this reason it is recommended that arrangements be made at the time of installation to enable the mast to be lowered when desired. The use of a "tabernacle" is therefore preferable to sinking the butt end of the mast in the earth.

In cases where the mast is already erected and sunk into a hole in the ground, it may be advisable to take it down and re-erect it in a more permanent manner as soon as there are signs of decay at the base of the mast or as soon as the stays show signs of deterioration. This deterioration is usually apparent at any point where there is a rubbing contact, as for instance at the anchorages. When the mast is down, the halyards used for hoisting the aerial wire to the top of the pole should be examined and replaced if faulty, and a similar examination might be made of any metal work on the mast, as for instance bolts which hold the pulley in position, etc. Lead paint should be applied to all such metal work, after the rust has been removed entirely.

The mast should, of course, receive one, or perhaps two, applications of paint when dry. It is also advisable to grease the bearings of the pulley at the top of the mast.

When the aerial is on the ground, the insulators should be cleaned and any cracked ones replaced. If there are any soldered joints in the aerial wire as, for instance, where the lead-in wire joins the horizontal portion, these should be examined for signs of defective contact, and made good, if necessary. If high conductivity copper wire is used for the aerial (and this is to be preferred), the wire should be good for many years of service without replacement.

A source of weakness in the aerial system is that frequently the aerial wire is used for supporting the mast, or taking the strain from one direction—i.e., the house direction, instead of the mast being entirely self-supporting, and holding the aerial wire aloft. When re-erecting therefore, it is a good plan to scheme out the supports for the mast carefully so that they really hold the mast under all weather conditions, and that the latter is quite independent of support from the aerial. For this purpose four or possibly five stays may be necessary. The stays may be split up with "egg-type"

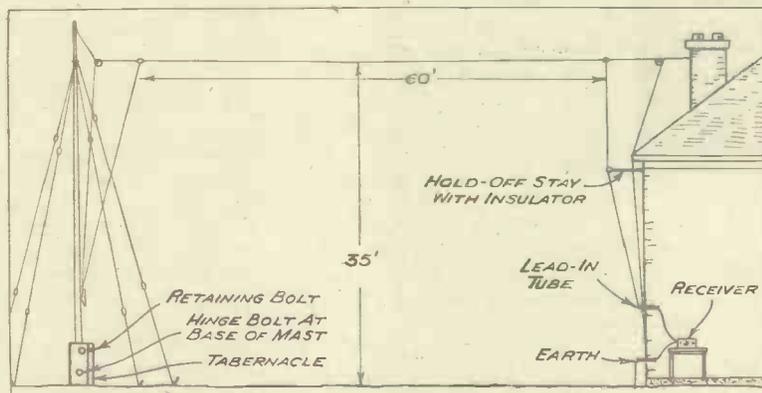


Fig. 1.—A serviceable arrangement of mast, aerial, and down-lead

insulators, one to every ten feet of wire, approximately. The sketch, Fig. 1, shows an aerial arranged to meet the requirements of most listeners, although variations may be necessary at the lead-in, or house end, according to the facilities available.

A source of trouble and leakage in the aerial system may be the method used for leading the aerial to the interior of the house. Many listeners merely bore a hole through a wooden window or door frame and lead the wire through this, whilst others use a lead-in tube of orthodox type, but seldom give it attention. The same remark applies to the method adopted to lead the wire from an external "earth."

Bare wires led through the window frame without insulation may become partially or wholly earthed at that point, especially when the atmosphere is damp through mist or heavy rainfall. It is, therefore, advisable that an insulated lead-in arrangement should be used. These accessories usually consist of a metal rod passing through an ebonite or porcelain tube, the two ends of the rod being threaded, and fitted with screwed washers and terminal heads. Unless well protected, the metal terminals become oxidised through the action of the atmosphere and cause poor or intermittent contact with the leads connected to them.

(Continued at foot of next column)

Correspondence

Demodulation by the Detector

To the Editor of WORLD-RADIO

SIR,—I was interested in the article by C. H. S. on "Demodulation by the Detector," published in your issue of June 3. It gave a very useful summary of the present knowledge of this important matter and attempted, in addition, to give an analytical explanation of the new fact which now appears to be emerging—namely, that the "demodulation" effect will only occur fully if the rectified current circuit of the detector is capable of reproducing or following the carrier beat frequency. It appears, for example, that if a grid circuit detector be used in which the time constant of the grid leak and condenser combination (as modified, of course, by the resistance of the grid-filament path) is high relative to the beat period, then the response to simultaneous excitation by two modulated waves tends to proportionality to the sum of the carrier amplitudes, and not to the square root of the sum of their squares. In such a case, the "demodulation" effect will not occur.

It is to be hoped that the present lack of published experimental data on this aspect of the matter will soon be made good, but there is also a need for a more exact analysis of the subject. That given by C. H. S. in Section 3 of his article is, if he will forgive my saying so, a happy inspired guess by one who knew the answer. I do not think he would be able to state very exactly his reasons for dropping the "cos ωt " term out of the previous expression for V_o , nor does his presentation make clear the precise part played by the time constant of the detector load. For a really complete analysis it will be necessary to start at the fundamental assumption that the response of the rectifier is proportional to the carrier amplitude, and show how the time constant of the load will affect this assumption when the amplitude varies at a high beat frequency.

Yours faithfully,

London, June 4.

F. M. COLEBROOK.

The Ear and the Microphone

To the Editor of WORLD-RADIO

SIR,—In your issue of April 22, under the heading "The Blessing of a Substitute," you quote a dictum of Sir Thomas Beecham to the effect that, *inter alia*, it is impossible for a loud-speaker to vibrate in an almost infinite number of ways, and you pass this part of his statement without comment. If I understand Sir Thomas's meaning correctly, he is under the impression that it is impossible for the diaphragm of one loud-speaker to respond to 100 instruments speaking together. If this is his meaning he is not so good a physicist as he is a musician. One might as well say that the drum of the human ear cannot respond to all the instruments: the principle is the same in both cases.

As you are aware, 100 different instruments do not cause 100 different sound waves to impinge on the ear; it is merely one composite wave. If a gramophone record were being made of the orchestra's playing, one would not have to provide 100 different grooves, one for each instrument. One groove is sufficient in which the composite wave is indented.

Although loud-speakers are not yet perfect, there is nothing intrinsically impossible in their ultimately responding to composite waves as efficiently as the human ear drum. As Sir Thomas's last remaining prejudices against radio are possibly based on misunderstandings of this nature, perhaps you will bring this matter to his notice.

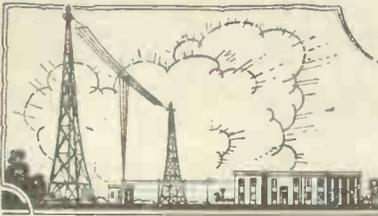
Yours faithfully,

V. P. WILLIAMS (M.A., Cantab.).

40, Hurst Park Avenue, Cambridge.

A regular system of inspection about once every three months, is, therefore, advisable, when the terminals should be cleaned thoroughly with a wire scratch brush or emery cloth at the point of contact. It might, perhaps, be of interest to observe that wires connected to such terminals are more satisfactory in service if they are fitted with the spade type of terminals, as this assists in maintaining good contact.

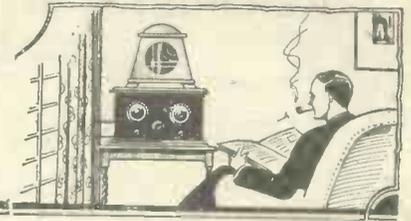
(To be continued)



The Elements of Wireless

(Part 18)

By RALPH STRANGER and E. REDPATH



WIRELESS WAVES

Wireless waves is the everyday name for electro-magnetic "waves." In visualising such a "wave" one should not think of a wave such as seen in water, but of two strains in the ether, or two fields in space, an electric and a magnetic field usually at right angles to each other.

In imagining such fields one should think of a horizontal magnetic field consisting of a number of lines of force spreading out horizontally and varying their extent as well as direction many times a second (in broadcast transmission this may happen a million times a second or more). Associated with this magnetic field, and at right angles to it, there is an electric field consisting of vertical lines of force which are also varying in number and direction as often as the magnetic lines of force.

These two fields do not really represent a wave, and possibly the reason why we talk of it as a wave is that if the variations of each field are plotted in the form of a curve the latter looks like a wave. We shall, therefore, consider an electro-magnetic wave as two simultaneously varying fields—the magnetic and the electric fields—travelling through space together and acting at right angles to each other. The speed or velocity of such a wave is, in round numbers, 186,000 miles, or 300,000,000 metres per second.

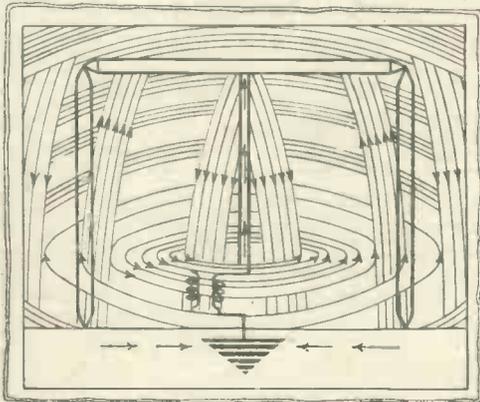


Fig. 52

Let us see how the two fields are produced. When a rapidly alternating or oscillating current is caused to flow in a transmitting aerial it will do two things; it will produce an alternating electric field between the aerial wire and the earth, and it will also produce an alternating magnetic field around the aerial conductor.

In the immediate neighbourhood of the aerial the electric field and the magnetic field are not in step; one is lagging behind the other by 90 degrees, or a quarter of a complete cycle. In this case, while the electric field grows the magnetic field collapses and vice versa. But this is only true within the inductive field of the aerial—say, within the first quarter of a mile around the transmitting aerial. Beyond this distance the two fields are, as it were, shaken off by the aerial, and when this occurs they fall into step and start to travel together, or to radiate, in all directions from the aerial.

The electro-magnetic wave, therefore, is caused by the electric current oscillating in the transmitting aerial, or, in other words, by the electrons rushing to and fro in the aerial wire. The movements of electrons in the aerial circuit are due to the transmitter controlled by the

microphone, which, in its turn, is actuated by the music and speech produced in front of it. Thus the manner in which the electrons will move in the aerial will depend on sound waves produced before the microphone.

For this reason the electric and magnetic fields which constitute the electro-magnetic wave will be directly influenced by the aerial current and indirectly influenced by the sounds emitted in front of the microphone. The wave so emitted bears the characteristics of sounds, —i.e., the two fields will vary in accordance with the variations of sound.

When such a "wave" reaches a receiving aerial it will affect the electrons in it, and will compel them to move in the same manner as the electrons in the transmitting aerial, always provided that both aeriels have the same electrical value or, as we say, are tuned to each other, or in resonance with each other.

The electrons thus disturbed will be dealt with by the receiver and will influence the loud-speaker which will emit sounds identical to those produced originally before the microphone.

Thus, the transmitting aerial is supplied with electrical energy so that it can communicate some of this energy to the ether. The disturbed ether communicates some small portion of the energy in question to each resonant receiving aerial within range, so setting electrons into motion—i.e., a relatively feeble electric current is induced in the receiving aerial.

(To be continued)

OSCILLATORY CIRCUITS

In preceding articles of this series, the functions and, to some extent, the constructional details of condensers and inductances have been dealt with. We now have to consider a type of electrical circuit consisting of a combination of these two components and known as an oscillatory circuit. This type of circuit may be said to form the basis of all wireless transmission and reception, and accordingly a clear understanding of the principles involved is essential to further study of the subject.

If an ordinary accumulator or dry-cell battery is connected to a circuit comprising an incandescent lamp, or a resistance, current flows steadily in one direction only until the battery is discharged.

A similar thing occurs in the case of a charged condenser connected to a circuit of high resistance. The surplus electrons upon one plate of the condenser flow through the circuit in one direction only until they reach the positively charged plate, and the condenser, like the battery, is discharged. Note particularly a circuit of high resistance is referred to.

On the other hand, if a charged condenser is connected to a circuit comprising inductance and having a low resistance, the discharge will no longer be uni-directional—the first rush of electrons through the circuit effects a reversal of the charge in the condenser (in other words, it over-discharges). The condenser then discharges again in a reverse direction, this action continuing, the current surging to and fro round the circuit until eventually the original charge is dissipated.

This type of discharge is known as an oscillatory discharge, and the circuit is called an oscillatory circuit. Oscillatory circuits may be of two types, known as closed and open oscillatory circuits. The first of these is

illustrated at (a) and (b) in Figure 53, in each of which L represents the inductance and C the capacity. As the inductance and capacity are concentrated at L and C respectively, the magnetic and electric fields created when an oscillatory current is flowing in the circuit are very restricted—the magnetic field to the immediate neighbourhood of the coil L and the electric field almost entirely to the dielectric of the condenser field. For this reason, this type of circuit is sometimes referred to as a non-radiating oscillatory circuit.

The eventual dissipation of the original charge in the condenser is due to the unavoidable resistance of the circuit—the coil L and the wires forming the connexions must offer a certain ohmic resistance to the current.

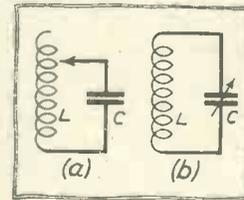


Fig. 53

Each complete oscillation, or cycle, follows what might be termed a definite "routine." This routine, which should be visualised as occurring in either of the circuits shown in Fig. 53, takes the following form.

1. Beginning with the condenser fully charged, there will be no current flowing and the energy will be entirely electric, being confined to the dielectric of the condenser.
 2. The condenser discharges and current flows round the circuit.
 3. With the condenser fully discharged, current in the coil will be at maximum value and the energy stored in the condenser has been transferred to the magnetic field surrounding the coil. Energy all magnetic.
 4. The magnetic field now collapses and current induced in the coil charges up the condenser in the reverse direction. Current flow ceases and again the energy is electric.
 5. The condenser discharges in opposite direction to the initial discharge and current flows in a corresponding direction.
 6. With the condenser fully discharged again, reversed current in the coil will be at maximum value, as will the magnetic field around the coil, and once again the energy is all magnetic.
 7. The magnetic field again collapses and the induced current in the coil charges up the condenser. Apart from losses in the circuit, conditions are now the same as at the beginning of the cycle, and each subsequent cycle is merely a repetition of the foregoing "routine."
- Note how the "energy condition" changes alternately from electric to magnetic before and after reversal, and compare this action to that of a pendulum, pulled to one side and then allowed to swing freely.

(To be continued)

PROGRESS COMPETITION—No. 3

The results of the third progress competition are as follows:—

1st Prize (Four Guineas) divided equally between Mr. E. FISHER, 33, Freeth Street, Oldbury, Nr. Birmingham, and Mr. W. BURTON, 62a, Carter Lane, Mansfield, Notts.

2nd Prize (Two Guineas) divided equally between Mr. A. E. HASSALL, 56, Southam Road, Hall Green, Birmingham, and Mr. H. H. LIGHTFOOT, 42, Frazer Street, Workington, Cumberland.

The correct answers to the questions will be published in our next issue.

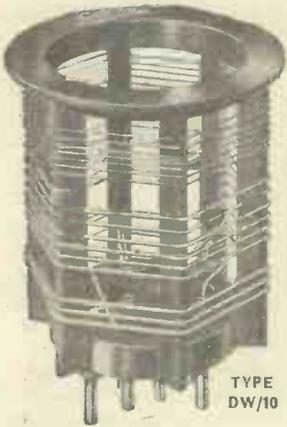
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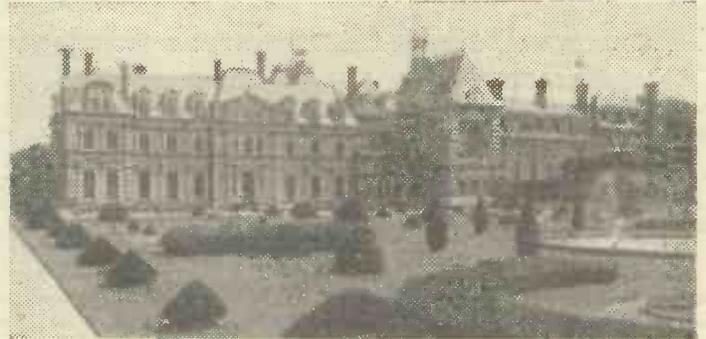
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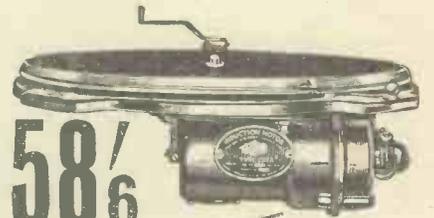
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SHORT-WAVE SECTION

A Curious Short-Wave Trouble

SOME time ago the writer encountered a rather unusual and somewhat baffling trouble in connexion with a short-wave receiver of the popular detector-and-L.F. type. A brief account of the trouble may be of interest, and possibly of use, to other short-wave enthusiasts.

The short-wave set was connected to an ordinary outdoor aerial and earth, and the whole installation (which was situated in the London district) functioned quite normally on the waveband below 100 metres in every respect except one, namely, that when the circuit was adjusted to that sensitive condition which occurs just before the point of oscillation is reached, the London Regional programme could be heard quite clearly as a pronounced background to the transmissions from whatever short-wave stations were being received. This interference persisted as long as the London Regional transmitter was working.

If reaction was increased so that the set passed into a state of actual oscillation, for the reception of continuous-wave morse signals, the strange background of interference from the London Regional programme was still more pronounced. So much so that, on certain portions of the waveband below 100 metres, the interference ceased to be a mere background and became a very definite foreground, that completely blotted out all but the strongest of the short-wave signals. In fact, it was possible so to adjust the set that the London Regional programme could be followed on the loud-speaker, with the circuit tuned to, say, 15, 20, or 30 metres!

The Unsuspected Cause

In endeavouring to trace the cause of this unusual interference, it was found that the simple expedient of disconnecting the earth lead from its terminal on the short-wave set effected a complete and immediate cure. This fact afforded a clue which led the writer to discover the cause of the whole trouble.

The owner of the short-wave receiver had also a small crystal-set, which he used as a "stand-by" for reception of the London Regional transmissions, and left permanently tuned to the 356-metre wavelength. The crystal-set worked off an independent indoor aerial (consisting of flex leads), but was joined up to the same earth connexion as the short-wave set.

It was found that the background of interference, in short-wave reception, which of course reappeared immediately on re-connecting the earth lead to the valve set, could be cut out completely once more by any method which put the crystal-set out of action on the London Regional transmissions. In other words the interference could be eliminated entirely by simply detuning the crystal-set, or by disconnecting the indoor aerial or earth.

Obviously, therefore, the whole trouble was due to some sort of interaction effect between the short-wave receiver and the harmless-looking crystal-set that shared its earth connexion. All that was necessary in order to effect a permanent cure was to shift the crystal-set (with its indoor aerial) to another part of the house, where it could be earthed independently to a main water-pipe. The short-wave receiver, of course, was left connected to the outdoor aerial and the original earth, which consisted of a metal plate buried in the ground beneath the aerial.

W. O.

Derby Day Traffic Control

THE Cierva Autogyro which was used by New Scotland Yard for traffic control on the roads leading to Epsom on Derby Day, was fitted with short-wave wireless equipment to enable the traffic expert in the air to maintain rapid and constant communication with those on the ground. The installation, which is illustrated in the accompanying photograph, consisted of a Marconi short-wave portable telephone transmitter, and aircraft receiver, and operated on a wavelength of about 100 metres.

Messages transmitted from the Autogyro were received at a ground station consisting of a motor van fitted with a short-wave aircraft



Fig. 40 by courtesy of Marconi's W. T. Co.
Wireless equipment in the cock-pit of the patrolling aeroplane

receiver of new design, incorporating tuned anode, tuned grid, and reaction circuits. A screened-grid valve is employed for high-frequency amplification, followed by a detector and a single-low-frequency magnifier, and the design embodies principles which ensure stability of working under all conditions. In addition, the ground station was provided with a short-wave telephone transmitter, so that two-way communication was possible with the patrolling aeroplane.

Berlin's 7-Metre Station

(From a Correspondent)

BERLIN'S ultra-short-wave station will be installed at the foot of the great aerial mast (Funkturn) in one of the exhibition halls. It will be situated on the first-floor gallery immediately opposite the present medium-wave Witzleben transmitter. A feeder line will go out through the roof of the hall straight up the Funkturn to the dipole aerial to be erected on the very top. Tests on the roof of the Europa-haus, recently described in *World-Radio*, proved that the greater height of the Funkturn would

(Continued at foot of next column)

Correspondence

Is S.W. Listening Worth While?

To the Editor of WORLD-RADIO

SIR,—As an amateur who appreciates the immense value of the short waves, I feel I must voice my protest against those who have recently stated that short-wave listening is not worth while. This certainly would apply to the ordinary listener, who is content to get a score of stations on the medium band which happen to be within a radius of 200 miles of his receiver, but to the long-distance enthusiast, or the exile 6,000 miles away, the short waves are not only of great value, but have a romance of their own. As an example, in March, 1931, I had the pleasure of hearing in my home in India at full loud-speaker strength, the voice of H.R.H. the Prince of Wales from Buenos Aires on 28 m. at the opening of the exhibition there. India and the Argentine are on opposite sides of the globe. Can there be any greater proof that short-wave listening is worth while?

Yours, etc.,

Cawnpore, India. W. A. D.

To the Editor of WORLD-RADIO

SIR,—Undeterred by the dismal lucubrations and warnings of certain doubting Thomases among your correspondents some weeks ago, I recently constructed my first short-wave adapter with simple home-made components. I have reaped my reward. Last Sunday night, when some wireless was asked for, I found the long and medium waves were troubled with atmospherics owing to thundery conditions, but turning to the short waves I was immediately able to switch on Zeesen and provide excellent music at full L.S. strength, *absolutely free from atmospherics*, Morse, or any other interference! Mark well the italics, O ye of little faith, and ponder thereon!

Yours faithfully,

St. Endellion, Cornwall. W. McD. A.

Televising the Derby

FOR the first time television of an event taking place fifteen miles distant was thrown on a screen and witnessed by the public when the Derby was seen at the Metropole Cinema, Victoria, by the Baird process. A few technical details concerning the experiment will, no doubt, be of interest. The transmitting apparatus, consisting of a large revolving mirror drum carrying thirty mirrors and reflecting a succession of images over three apertures admitting light to three separate photo-electric cells, was housed in a caravan opposite the Grand Stand at Epsom. Each photo-electric cell converted the images into electrical impulses, and transmitted one-third of the total picture. The electrical impulses then travelled *via* three pairs of Post Office lines to the Baird Company's offices in Long Acre, London, from which point they were relayed to the Cinema, and caused to operate light valves placed in front of three arc lamps. By the action of the light valves, the light emitted by the three arc lamps was varied in accordance with the image signals received and projected on to another revolving mirror drum, and thence to the screen.

amply make up for the distance from the centre of the town. The Europa-haus tests also showed that, for ultra-short waves, a horizontal dipole aerial will probably give better results than the vertical dipole hitherto employed.

The transmitter has been ready for some time. It will work with 4 kW. in the aerial on waves between six and eight metres. As the transmitter will be used primarily for television tests it will be connected with the Berlin Funkhaus, across the road from the Exhibition Hall, by an overhead line.

Short-Wave Reports

To the Editor of WORLD-RADIO

SIR,—As I have seen no reports from this district, I enclose my log for the last month:—

- April 23-20.35 Madrid EAQ (30.4 m.) Tel. R7/FR/N. Call.
23-16.15 Zeesen (31.38 m.) Tel. R6/FR/N. Call.
23-20.15 Vatican HVJ (50.26 m.) Tel. R8/FR/N. Call.
23-20.17 Moscow (50 m.) Tel. R7/FR/N. Call.
23-20.45 Rome (43 m.) Tel. R8/FR/N. Call.
23-21.30 W2XAF (31.48 m.) Tel. R3/FFR/X. Call.
24-21.10 Rabat (32.26) Tel. R7/FS/N.
May 1-22.50 W1XAZ (31.35) Tel. RS/FS/N. Relay of WGY.
3-16.45 PLE Java (31.86) Tel. R4/FFR/X. Call and Anthem.
4-19.30 7LO Nairobi (49.5 m.) Tel. R3/FRR/X. Gramophone and Call.
8-07.30 VK2ME, Sydney (31.28 m.) Tel. R3/FS/X. Kookaburra and Call.
19-22.45 CT1AA (31.25) Tel. R8/FR/X. Testing on new Wave.
19-03.50 W3XAL (49.18) Tel. R7/FS/X. Call.
22-05.30 W8XK (48.86) Tel. R3/FR/X. Call (relay KDKA).
26-03.30 W3XAL (49.18) Tel. R4/N/X. Call.
26-03.15 W8XK (48.86) Tel. R6/FS/X. Relaying KDKA.
26-03.45 VE9DR (49.96 m.) Tel. R4/N/X. Call and Organ.
26-04.00 W2XAF (31.48 m.) Tel. R3/FFS/XX. Call.

Receiver: 0-v-2, used with indoor aerial, length 47 feet. Rome, Vatican, Rabat, EAQ Madrid, Moscow and Zeesen can usually be received whenever they are transmitting. Wishing World-Radio every success.

Yours faithfully, L. G. Bushey, Hertts.

To the Editor of WORLD-RADIO

SIR,—I am a regular reader of World-Radio and as I have not seen any S.W. reports from Dorset published perhaps the following short extract from my log will prove of interest.

- May 6-23.00 CT1AA (42.9 m.) LS R6/FR/N.
6-23.00 W1XAZ (31.35 m.) Tel. R6/FFR/N.
8-01.00 W2XAF (31.48 m.) LS R6/FR/N.
8-01.00 W1XAZ (31.35 m.) LS R5/FR/N.
8-01.00 WEN (about 40.0 m.) LS R5/FR/N. Relaying W2XAL and testing.
8-01.00 W2XAL (49.18 m.) LS R7/FFS/X.
8-01.00 VE9DR (49.96 m.) Tel. R7/FR/X.
8-07.00 VK3ME (31.28 m.) Tel. R6/FFR/X.
10-14.50 Bandoeng (31.86 m.) LS R4/FR/N.
10-23.00 W2XAD (19.56 m.) Tel. R4/FFR/N.
11-23.15 Skamlebaek (31.51 m.) LS FFR/N.

VK2ME I have received (on 'phones) every Sunday for six weeks. Did anyone hear an American station on about 29 metres relaying a speech by Winston Churchill on Sun., May 8, at 22.30? I receive Zeesen, Moscow, Rome, both Vatican transmitters, and Rabat at LS strength regularly. Several amateurs, French and British, on about 40m. Receiver is a commercial 3-valve S.W. set used with 70ft. vertical aerial.

Dorset. L. H. H.

To the Editor of WORLD-RADIO

SIR,—Herewith short-wave report:—

- May 31-19.45 Zeesen (31.38 m.) Ro.
31-20.10 Skamlebaek, OXY (31.51 m.) R6/R8.
31-20.15 Vatican, HVJ (50.26 m.) R6/R8.
31-20.30 Rome, 2RO (25.4 m.) R7.
31-20.35 Coltano, IAC (23.5 m.) R8.
31-20.40 Moscow, TU (50.0 m.) RO/R7.
31-20.45 Moscow, REN (45.38 m.) R4.
31-21.00 Italian St. ? (about 42.0 m.) R8.
June 1-21.00 Rome, 2RO (25.4 m.) RO/R8.
1-21.25 Moscow, REN (45.38 m.) RO/R4.
1-22.00 Zeesen (31.38 m.) Ro.
1-22.05 Skamlebaek, OXY (31.51 m.) R3/R6.
1-22.10 Buenos Aires, LSX (28.98 m.) RO/R8.
1-22.20 Moscow, TU (50.0 m.) R8.
1-22.25 Casablanca, CN/8MC (48.0 m.) RO/R6.
2-21.45 Moscow, TU (50.0 m.) R8.
2-21.48 Moscow, REN (45.38 m.) R4/R7.
2-21.51 Zeesen (31.38 m.) Ro.
2-21.52 Skamlebaek, OXY (31.51 m.) R7.
2-21.54 Rome, 2RO (25.4 m.) RO/R8.
2-22.15 Paris, Colonial (25.2 m.) RO/R6.
2-22.25 Poznan, SR1 (31.35 m.) R7/R9.

Set: Straight short-wave 3-valve receiver, Reinartz circuit, with outside aerial. Local conditions: Very poor. I send you the above report in defence of "S.W. Listening." Notice, on June 2, five stations in less than ten minutes, three of which provided good music. Also very little static, which spoiled medium and long wave-bands.

Yours faithfully, L. J. F. W. Stretford, Manchester.

TO OUR READERS

When replying to Advertisements please mention WORLD-RADIO

Below 100 Metres

By "MICROM"

A VERY interesting signal this week was the 80-metre transmission by the Cierva autogyro on Derby Day, June 1. The transmissions from the aeroplane, GABUD to the ground station GTE, which replied on 120 metres, were very clearly heard in South-West London, where the writer is at present taking a brief holiday from the daily round.

It was quite fascinating to hear the traffic conditions on the roads leading to the famous Downs being described in a very "snappy" manner, and one felt that the whole thing would have made a good "broadcast." Excellent communication was at all times maintained between the ground station and the autogyro.

After listening to the autogyro, which returned to Croydon at about 6 p.m., Wednesday, June 1, Pontoise was heard at good loud-speaker strength on 25.2 metres giving an "eye-witness" account of the Derby in French, and one was struck by the very good conditions prevailing right down to 15 metres, although only morse transmissions could be tuned in.

Trans-Atlantic Reception

W2XAD on 19.56 metres has been heard weakly most evenings during the current week, though on some occasions, between 9 and 10 p.m., fair to good loud-speaker signals were obtained.

The best trans-Atlantic reception of the week, however, was obtained from WMA on 22.3 metres, at 10-10.40 p.m., on Friday, June 3. A programme of "Light Opera Gems" was relayed by this station from the Columbia System between 10 and 10.30 p.m., on this occasion followed by a further ten minutes of dance music until 10.40 p.m.

This appeared to be a test transmission prior to the relaying by the B.B.C. of the Columbia System's programme entitled "Broadway," at 11 p.m. Good loud-speaker results were obtained from this station and the quality was excellent; at these times W2XAD was a much weaker signal.

CT1AA, that very popular amateur station at Lisbon, was heard at excellent strength and quality on 31.25 metres at 10.30 p.m. on Thursday, and one cannot fail to note the tremendously improved signal which this station provides when transmitting on 31 metres. The power, as on 42.9 metres, was announced as 2 kilowatts,

Zeesen's New Schedule

Zeesen is now making regular transmissions on both 19 and 31 metres and overseas readers and others will probably be interested in the following schedule. All transmissions from 14.00 (or earlier) until 18.00 B.S.T. are made on the 19.73 metre wave (DJB) with a daily announcement concerning future programmes at 16.00, in German, and at 16.15 (approx.) in English. From 18.00 until 20.00 B.S.P. the station is closed while technical adjustments are taking place, and from 20.00 until close down the transmission takes place on 31.38 metres (DJA).

Both Paris (Poste Coloniale) and Zeesen (DJB) were excellent signals on their 19-metre waves at 4 p.m. on Friday, in South-West London, excellent reproduction on the loud-speaker being obtained with only a moderate amount of slow fading.

It seems rather fortunate that Paris (Poste Coloniale) just concludes his announcement of future programmes (on 19.68 metres) at 4 p.m. since at this time one can, with a fractional movement of the dial, pick up Zeesen (DJB) on 19.73 metres just commencing his announcements of future transmissions in German, and be nicely tuned in by the time they are repeated in English.

SHORT-WAVE STATIONS

The times quoted are reduced to B.S.T.

Table listing various short-wave stations with columns for frequency (M. Kc/s), call letters, power, and transmission times. Includes stations like Khabarovsk, London, Bandoeng, Prague, Brooklyn, etc.

For Long and Medium Wave Stations see page 1162.

FRENCH

(Supplementary Notes in connexion with the French Talk, Tuesday, June 7)

(A) *La négation ne employée seule* (Suite).

1. Par analogie avec les phrases ou *pas* et *point* se remplacent par *jamais*, *personne*, *rien*, *aucun* on supprime *pas* ou *point* dans certaines expressions telles que: *Elle ne dit mot; il ne souffla mot; il n'y avait âme qui vive; je n'ai trouvé qui que ce fût; je ne la reverrai de longtemps; etc.* . . .

Remarquons que *pas* ou *point* s'emploient aussi dans cette dernière phrase et les phrases du même genre: *je ne la reverrai pas de longtemps; il n'est pas sorti de trois jours; je n'ai pas fermé l'œil de la nuit; etc.* . . .

Il faut dire, sans employer *pas* ou *point* elle ne dit mot; il ne disait mot; nous ne dirons mot, etc. . . . Mais, dès que nous déterminons le substantif *mot*, *pas* devient nécessaire après dire: *elle ne dit pas un mot; il ne disait pas un mot, etc.* . . .

2. *Pas* se supprime dans *il n'est . . . que*, et *il n'est . . . qui* où *il n'est* est fréquemment suivi de *si*: Ex. *Il n'est pire sourd que celui qui ne veut pas entendre; il n'est si grand capitaine qui ne se trompe; il n'est si bonne compagnie qui ne se quitte; il n'y a pire eau que l'eau qui dort.* . . .

Examinons maintenant l'emploi de la négation *ne* dans les propositions subordonnées:

3. *Pas* se supprime dans les propositions relatives dont le verbe est au subjonctif, quand ces propositions relatives dépendent d'une proposition négative: Ex. *Il n'y a rien qu'il ne puisse faire; je ne connais personne qui ne le sache; il n'a pas de livres que je n'ai lus; nous n'avons pas d'amis qui ne soient venus à notre secours; etc.* . . .

Quand la proposition principale n'est pas négative (e.g. quand elle est affirmative, interrogative, ou interrogative et négative à la fois) *pas* est de rigueur: Ex. *Il me faut un cheval qui ne bronche pas; désirez-vous une cravate qui ne soit pas trop voyante? ne voulez-vous pas une bonne qui ne fasse pas trop de bruit?* . . .

4. On omet souvent *pas* après *si . . . ne*: Ex. *C'est elle, si je ne m'abuse; vous vous en repentirez, si je ne me trompe; si vous ne le dites; je ne dirai rien si vous ne m'en priez; si ce n'est toi c'est donc ton frère; si je ne savais qu'il est économe je ne lui prêterais pas d'argent; il n'est pas si fort qu'il ne soit bien fatigué de temps en temps; elle n'était pas si discrète qu'elle ne s'oublât parfois à dire un mot de trop.* . . .

5. *Pas* se supprime après *non que* et *ce n'est pas que*: Ex. *Non que je ne lui en parle de temps en temps; ce n'est pas qu'elle ne cherche à leur plaire; etc.* . . .

(B) . . . et *t'en aller tout de suite* à Eyguières (Lettres de mon Moulin, p. 29, l. 3.)

Le groupe *gu* devant une voyelle présente certaines difficultés au point de vue de la prononciation.

1. Devant un *e*, l'*u* ne se prononce à part en français, que dans le verbe *arguer* (*argu-er*), dans les substantifs *ciguë* et *besaiguë*, et devant l'*e* muet final des adjectifs féminins *aiguë*, *ambiguë*, *contiguë* et *exiguë*.

Il faut donc prononcer *argu-er*, *j'argu-e*, *nous argu-ons*, *il argu-ait*, et non pas *argher*, *j'arghe*, *nous arghons*, *il arghait*, comme on l'entend malheureusement trop souvent.

Partout ailleurs *gue* et *gué* se prononcent *ghe*, *ghé*: Ex. *guenon*, *guenille*, *guérir*, *narguer*, *Guérande*, *Guéméné*, *Guernesey*, etc. . . .

2. Devant un *i* l'*u* de *gu* se prononce à part dans *aiguille* (*aigu-ille*), *aiguillon* (*aigu-illon*), *ambiguïté*, *contiguïté*, *exiguïté* et tous les mots en *-uité*. L'*u* se maintient aussi dans certains mots savants: *consanguinité* (*consangu-inité*), *sanguification*, *linguiste*, *linguistique*, *inextinguible*, *inguinal*, *onguiclé*, etc. . . .

Quant au mot *aiguïser* il se prononce tantôt *aigu-iser* et tantôt *aigh-iser*. Cette dernière prononciation est très répandue, et semble en voie de devenir générale.

FOREIGN LANGUAGES SECTION

Partout ailleurs *gui*, *guy* se prononcent *ghi*: Ex. *anguille*, *guitare*, *guichet*, *aiguère*, *sanguinaire*, *Séguier*, *Tréguier*, *Guizot*, *Guise*, *Draguignan*, etc. . . . *guin* se prononce *ghin*: *sanguin*, *consanguin*, *Gauguin*, *Guingamp*, etc. . . .

3. Le groupe *gua* se prononce *goua* (*gwa*) sauf dans *aiguade* (*aighade*), *aiguayer* (*aighayer*) et dans les terminaisons des verbes en *-guer* (excepté *argu-er*): *il naviguait*, *elle le nargua*, etc. . . .

Nous disons donc *goua* dans: *jaguar*, *couguar*, *guano*, *iguane*, *alguazil*, *Guadeloupe*, *Guatemala*, *Nicaragua*, etc. . . .

(C) . . . un âne qui prenait le soleil (Lettres de mon Moulin, p. 30, l. 10).

Voici quelques emplois idiomatiques du verbe *prendre*:

1. *A tout prendre*=All things considered, on the whole.

2. *Ça ne prend pas*=It's no use, that's no go, it doesn't catch on.

3. *Bien (mal) lui en a pris de venir*=It was lucky (unlucky) for him that he came.

4. *Qu'est-ce qui vous prend?*=What's up now?

5. *Je vous y prends!*=I have caught you red-handed.

6. *Qu'on ne vous y prenne plus!*=Don't be caught at it again!

7. *C'est à prendre ou à laisser*=Take it or leave it.

8. *S'en prendre à quelqu'un*=To lay the blame on someone, to hold somebody responsible.

9. *Savoir s'y prendre*=To know how to set about something.

10. *Autant de pris sur l'ennemi*=So much to the good, so much saved out of the fire.

(D) . . . cette Parisienne de la rue Jean-Jacques (Lettres de mon Moulin, p. 28, l. 24).

Il s'agit ici de la rue Jean-Jacques Rousseau qui est située au centre de Paris, non loin des Halles. C'est dans la rue Jean-Jacques Rousseau que se trouve l'Hôtel des Postes (General Post-Office of Paris).

E. M. STÉPHAN.

GERMAN

A German Dialogue
Bad Nauheim

A. Potztausend, seht mal da, hier ist mein guter alter Freund Braun.—Es freut mich unendlich, Sie wiederzusehn.—Nun wie geht's denn noch?

B. Ich teile Ihre Freude. Mir geht's verhältnismässig noch ganz gut, und Ihnen?

A. Danke bestens, es geht so gut wie es kann in diesen unruhigen Zeiten und bei meinem problematischen Gesundheitszustand.

B. Na, Sie sehen aber gut aus und sind augenscheinlich immer noch heiter und guter Dinge. Wie geht es mit dem Herzen?

A. Nicht so schlecht, aber es ist ein unzuverlässiger Diener seines Herrn, man kann ihm nicht trauen.

B. Dann gehen Sie wohl im Sommer wieder nach Nauheim zur Kur.

A. Ja, vielleicht, obschon eine Wiederholung der Kur in diesem Jahre nicht unbedingt nötig ist.

B. Das ist ja alles Mögliche nach Ihrer langen schweren Krankheit vor 3 Jahren.

A. Gewiss, aber ich bin auch seitdem jedes Jahr in Nauheim zur Kur gewesen.

B. So, Sie schreiben den günstigen Verlauf der Kur in Nauheim zu?

A. Ja, zum grossen Teil, aber auch der Tatsache, dass ich in Nauheim gelernt habe, wie ein Herzkranker zu leben hat, wenn er auf den Beinen bleiben will.

B. Sehr interessant! Erzählen Sie mir doch etwas Näheres über Bad Nauheim, ich kenne es nur dem Namen nach. Darf ich Sie zu

einer Tasse Tee einladen? Da in dem Garten des Restaurants könnten wir im Schatten sitzen.

A. Sehr liebenswürdig; ich bin bereit und plaudere gern ein halbes Stündchen mit Ihnen, um Ihren Wissensdrang zu befriedigen.

B. Ganz recht, also bitte, gehen wir hinein.—Was sagen Sie zu dem Tisch da unter der grossen Linde.

A. Vorzüglich, da haben wir Schatten und Ruhe.

—[Der Kellner kommt] B. Herr Ober, bitte, bringen Sie uns zwei Portionen Tee mit Schlagsahne, Zwieback und Obsttorte.

—So, nun machm Sie sich's bequem und legen Sie los über Bad Nauheim.

A. Bad Nauheim liegt etwa 30km. nördlich von Frankfurt-am-Main, wie Sie wohl wissen. Vom Bahnhof führt eine Allee hinunter zu dem herrlichen Kurpark. In etwa 5 Minuten kommt man zum stattlichen Kurhaus mit seiner herrlichen Terrasse, indem man durch den weit ausgedehnten Kurpark mit prachtvollen Blumenbeeten, schönen hohen Bäumen und Alleen schreitet.

Halbwegs kommt man durch den Sprudelhof, wo das warme Wasser aus dem grossen Sprudel mächtig aufsteigt und in das Sammelbecken niederfällt. Drei Sprudel liefern täglich 2½ Millionen Liter Wasser, woraus 6-7,000 Bäder bereitet werden können.

Ausserdem gibt es noch Quellen, die den Trinkkuren dienen. Die Trinkkuranlage mit grossen gedeckten Wandelhallen liegt etwas abwärts nach links. Den Sprudelhof umgeben 8 grosse Badehäuser. Ausserdem gibt es noch allerhand Institute wie Inhalatorium, Radium Emanatorium, Zanderinstitut und Gott weiss was noch—alles, was man verlangen kann—denn Nauheim steht wissenschaftlich-praktisch auf der Höhe der medizinischen Leistungen. Das Kerckhoff Institut verdient besonderer Erwähnung. Es ist die Stiftung einer Amerikanerin aus Los Angeles, zur Erinnerung an ihren Mann, der viele Jahre lang nach Nauheim zur Kur kam—eine Stiftung von 4½ Millionen Mark zur Errichtung eines Forschungsinstituts und Gründung eines Stipendienfonds für Mediziner zur experimentellen Erforschung der Herzkrankheiten. Hinter dem Kurhaus erhebt sich der Johannisberg eine herrliche Höhe, die man von da in etwa 20 Minuten zu Fuss erreichen kann. Da sind schöne Waldungen mit sorgsam gepflegten Spaziergängen in allen Richtungen, und man hat von da eine schöne Aussicht auf die Umgegend.

B. Was Sie da beschrieben haben, gibt mir eine gute Idee von Bad Nauheim. Darf ich Sie nun bitten, mir noch etwas über die Wirkungsweise der Nauheimer Bäder zu sagen?

A. Ja gewiss, aber das ist nicht so einfach; darüber sind sich die Mediziner selber nicht ganz im klaren. The proof of the pudding is in the eating sagt man auf Englisch. Tausend und abertausend Herzranke wissen aus praktischer Erfahrung, dass ihnen die Nauheimer Kur gut tut. Ich habe in Nauheim Leute aus fast aller Herren Länder kennengelernt, die einstimmig erklärten, dass sie nirgendwo sonst dieselben Erfolge gehabt hätten.—Ja, Nauheim steht einzig da.

B. Das ist gewiss ein schönes praktisches Zeugnis, aber können Sie mir nicht einiges über die medizinische Erklärung dieser erstaunlichen Resultate sagen?

A. Leider nein; denn dazu bin ich nicht kompetent; aber ich will Ihnen ein paar Sätze darüber vorlesen aus dem Vortrag eines tüchtigen Arztes, das Ergebnis seiner eigenen objektiven Beobachtungen und Erfahrungen, von dem ich einen Abdruck bei mir habe.

B. Ja, bitte, tun Sie das. Es wird mich sehr interessieren.

A. In dem erwähnten Vortrag heisst es u.a.: —
"Die Bad Nauheimer Badequellen vereinigen in glücklicher Kombination alle die Eigenschaften, von denen jede für sich allein schon den Ruf eines Bades auszumachen imstande ist. Nauheim ist infolge der natürlichen Wärme seiner Quellen ein Thermalbad (wie Wiesbaden, Teplitz, Gastein); es ist ferner zugleich durch seinen Salzgehalt ein Solbad (wie Kreuznach und Reichenhall) und es ist endlich durch seinen Reichtum an Kohlensäure und Eisen ein Stahlbad (wie Franzensbad, Elster, Pyrmont und andere).

Ein Vorzug der Nauheimer Quellen ist es, dass sie durch eigenen Druck in die Wanne fliessen.

Die Möglichkeit, den Kohlensäure-Gehalt der Bäder abzustufen, ist für Nauheim als Herzheilbad von ganz besonderer Bedeutung. Zirka 70-74% aller nach Bad Nauheim kommenden Kranken suchen Nauheim wegen ihrer Kreislaufstörungen auf.

Beim Kreislaufkranken sehen wir eine Einwirkung des Bades auf den Blutdruck, den Puls und die Herztätigkeit in der Weise, dass im allgemeinen, vorausgesetzt dass das Bad richtig verordnet ist und eine Anpassung im Bade erfolgt, ein zu hoher Blutdruck niedriger, ein zu niedriger höher—ein zu schneller Puls langsamer und unter Umständen ein zu langsamer Puls schneller wird; ferner dass die Herztätigkeit, wenn sie unregelmässig ist, regelmässig wird.

Die übrigen 26-30% der Kranken, die Nauheim aufsuchen, verteilen sich auf rheumatische Erkrankungen der Muskeln und Gelenke, auf Nervenkrankheiten, auf Erkrankung des Stoffwechsels, insbesondere auf Gicht, Fettleibigkeit und Zuckerharnruhr,

sowie auf Blutarmut, Frauen und Kinderkrankheiten."

A. So das dürfte genügen, um Ihren Wissensdurst über Nauheim zu stillen.

B. Gewiss, ich bin Ihnen sehr dankbar für diese höchst interessanten Mitteilungen, und ich hoffe, dass Sie mir nach Ihrer nächsten Kur, wenn wir uns wiederschen, Ihre vollständige Wiederherstellung berichten können. G.S.

ITALIAN

(1) Unpo'di grammatica

POCHI giorni fa mi si fece (*was put to me*) la seguente domanda: "Perchè mai le due piccole frasi (*sentences*): "one has slept" "one has gone"—che sono apparentemente simili in inglese—si traducono (*are translated*) in modo differente in italiano: "si è dormito", "si è andati"? Perchè, mentre (*while*) nel primo caso si usa il participio passato in singolare (dormito), nel secondo, invece (*instead*), si usa in plurale (andati)?"

Tutt'e due (*both*) le frasi sono impersonali. Ora, con le locuzioni impersonali, si segue questa regola (*rule*):

(a) si usa il participio in singolare se si tratta d'un verbo che richiede l'ausiliare "avere". P. es.: "dormire"; "they have slept: hanno dormito." Il verbo "dormire" richiede "avere" come ausiliare. E perciò il participio passato resterà singolare anche nella costruzione impersonale: "si è dormito";

(b) ma se il verbo richiede l'ausiliare "essere" (com'è il caso di "andare"; "they have gone: sono andati") allora la costruzione impersonale (*one has gone*) vuole il participio passato plurale: "si è andati."

Vediamo ora degli altri esempi. Che ausiliare richiedono i verbi "viaggiare, passeggiare; dimorare, credere, cenare"? Richiedono "avere"; infatti si dice: hanno viaggiato (*they have travelled*), hanno cenato, ecc. Dunque

si dirà: "si è viaggiato" (*one has travelled*), "si è passeggiato", "dimorato, cenato" ecc.

Che ausiliare richiedono i verbi "essere, nascere, diventare, morire"? Richiedono l'ausiliare "essere"; "essi sono stati (*they have been*), sono nati, diventati", ecc. Dunque si dirà: "si è stati (*one has been*), si è nati, diventati, ecc."

(2) Qualche statistica della vita italiana.

Al principio del settecento (XVIII Cent.) l'Italia aveva tredici milioni d'abitanti; al principio dell'ottocento, ne aveva diciotto. Nel 1862 (mille ottocento sessantadue) la popolazione ammontava a venticinque milioni; due anni fa, a circa quarantuno milioni. Questo significa che in meno di due secoli e mezzo la popolazione è triplicata; e questo senza contare i nove milioni d'Italiani che si trovano sparsi per il mondo!

E quanti mutamenti ci sono stati nella vita sociale, in questi ultimi cinquant'anni! Nel campo della pubblica istruzione, per esempio. Nel 1871 su cento maschi, solamente 38 sapevano leggere; ma cinquanta anni dopo, nel 1921, erano saliti a settantasei; ed oggi, naturalmente, la percentuale sarà anche maggiore. Nel 1871, su cento donne, solamente 24 sapevano leggere; ma nel 1921, erano aumentate a settanta! Bel progresso, non è vero?

S. BREGLIA.

Esperanto Transmissions (June 12—18)

Sunday.—Hilversum, 8.10 a.m., Course.
Leningrad, 10.5 p.m., News.
Tuesday.—Brno, 6 p.m., Talk.
Wednesday.—Marseille-Provence, 7.15 p.m., Talk.
Thursday.—Paris PTT, 5.45 p.m., Course and Talk (Prof. Rousseau).
Valencia, 9 p.m., Talk.
Kaunas, 9 p.m., Talk.
Breslau-Gleiwitz, 10 p.m., 10 minutes for workers.
Friday.—Stuttgart, 7.30 p.m., Programme announcements.
Radio-Côte d'Azur, 8.10 p.m., Talk.
Lisbon (CTIAA—42.9 m.), 10.30 p.m., Talk.
Saturday.—Huizen, 4.55 p.m., News (P. Heiker).
Heilsberg, 6.10 p.m., Week's Programme (F. Jeno Wermke).
Lyon-la-Doua, 8.15 p.m., Talk: "Vojo de l'Feliĉo" (M. Borel).
NOTE.—These times may vary a little.

Last Week's Log

May 29—June 4

By "THE SEARCHER"

ATMOSPHERICS have been pretty bad throughout; in fact, there has not been one day or night entirely free from them. Naturally, there is little pleasure in listening to the long-wave stations, though most of these have been coming through very well indeed so far as signal strength is concerned, and good reception of them is a certainty as soon as we have a period of freedom from the atmospheric nuisance. Motala I still find a rather uncertain signal, though he is better than he was a while ago. Königs Wusterhausen, too, is not quite so constant as he was; he was distinctly weak on the Tuesday and the Saturday. Huizen, on the other hand, has completely returned to his best form and seems to be entirely reliable. For some reason Kalundborg showed weakness on the Wednesday—the only occasion for months on which I have recorded such a happening. The Vienna Experimental station was fairly well heard on the same night.

Budapest Still Elusive

Unlike "Northerner," I cannot make much just now of Budapest. He was fairly good on the Thursday, but on other nights of the week, if heard at all, he was a poorish signal. Vienna had an extraordinarily good night on the Wednesday, when he was received at full loud-speaker strength. His volume was only a little smaller on the Tuesday, but on other nights good loud-speaker reproduction was not possible.

Brussels No. 1, Florence, Prague, Langenberg, and Beromünster have all provided splendid reception, and I had unexpectedly good results from Lyons (la Doua) on the

Friday. On this evening I received the station at full loud-speaker volume for the first time for a very long while. Rome has been most reliable, though I have heard little or nothing of Stockholm. Berlin-Witzleben was badly heterodyned on the Monday and rather weak on other nights. Belgrade was in excellent form on the Monday and Saturday. Katowice was very good on the Monday, Tuesday, and Saturday, fair on the Wednesday, and poor on other nights. Radio Suisse Romande's best day was the Tuesday. Frankfurt was badly heterodyned on the Monday and was a really strong signal only on the Saturday. Toulouse has been good throughout the week. Lwów was heterodyned on the Monday, good on the Tuesday, and very good on the Friday. Strasbourg has provided wonderfully good reception and Brno shows a good record on the whole. Brussels No. 2 is now nearly, if not quite, as good as No. 1. Milan was at his best on the Thursday, though good reception was recorded on the Monday. The Poste Parisien was first-rate throughout the week. Breslau I heard well only on the Monday.

Some Excellent Stations

Marseilles is a queer station. Until this week I have only one record of him over a long period. On the Monday he returned faintly and on the Thursday loud-speaker reception was possible. Genoa has had a week of ups and downs. I did not try for him on the Sunday; on the Monday he scored a G; on the Tuesday he was heterodyned; on the Wednesday he was completely jammed; on the Thursday and Friday he was logged as V.G.; and on the Saturday he was down to G. Hilversum, Heilsberg, Turin, Gleiwitz, and Trieste have all been excellent. Bratislava was well heard on the Friday. Nürnberg was good on the Tuesday and very good on the Friday. Hörby and Leipzig were both particularly good on the Tuesday.

Interference between Stations

(May 29—June 4)

RADIO-LYON, which was mentioned last week on 1,042-1,043 kc/s, has kept that frequency during the above period, except on May 28 and 30. On the 30th he was using 1,036 kc/s at the beginning of the evening, and finally 1,044 kc/s, as usual. Radio-Lyon should work on 1,049 kc/s with Montpellier PTT, but in spite of many requests, he does not do so, and interferes not only with the British Common Wave, but also with Montpellier PTT.

Radio-Vitus, also mentioned last week as interfering with Cardiff, has passed from 961 kc/s, where he was last found, to 972 kc/s; this move is rather unsatisfactory for Cardiff, 927 kc/s being the frequency where Radio-Vitus has worked for months and where he has caused much interference to Cardiff. It is a long time ago that this station was asked to change its wavelength. This request seemed to have had a belated result in March, when Radio-Vitus used 1,013 kc/s, but he did so only for a few days and soon came back to his favourite place, 972 kc/s.

On the lower part of the medium-wave band (200-600 metres), the situation is still rather bad and is now as follows: on 523 kc/s, Ljubljana, a rather strong signal; on 527 kc/s, Freiburg, a weak German station; on 528 kc/s, Grenoble, a fairly strong signal; on 530 kc/s, Hanover, a weak German relay; on 531 Wilno, the 16 kW Polish station, whose signal is becoming weaker; on 536 kc/s, the synchronised German relays, Augsburg and Kaiserslautern, which is a fairly strong signal. All those stations, working in a frequency band of 13 kc/s, are interfering with each other seriously, the most powerful being Grenoble, Wilno and Augsburg-Kaiserslautern. L. B.

FROM THE SWISS ALPS

(Continued from page 1150.)

be imagined, to see about a receiving apparatus for myself. I have just obtained a portable of a well-known make, and hope, at another time, to be able to give my impressions of broadcasting in England and the changes which have taken place since last I set foot in "England's green and pleasant land." I hope, too, that now I am here, I shall hear rather more cheery weather reports from the gentleman at the B.B.C. microphone than I have heard of late from my Swiss listening point.

In the mountains atmospherics have been rather troublesome on several occasions, but, with the coming of summer conditions, I have noticed a marked falling-off in signal strength, a falling-off which I regard with a certain pleasure, for I find much less interference between stations than there was in mid-winter.

I have been listening occasionally to the French station which calls itself Poste Parisien and which, in Switzerland, comes in at terrific strength. The Spanish transmitters have been very poor of late and seem to suffer much from interference from other stations. Of the Italian transmitters, Florence is exceedingly powerful. Rome is, at times, stronger, but is most unreliable just at the moment. Graz is about twice as strong as its parent station, Vienna, but I have not yet logged Vienna on its experimental wave of 1237 metres.

With reference to my note concerning Jack Payne on May 14th, I have, just as I am about to send this article off, received a letter from one of my correspondents who informs me that Jack Payne was actually broadcasting from London on that occasion, but that his broadcast was taken by land-line to Hilversum and that the Dutch authorities sent over one of their announcers specially for this transmission.

Which Station Was That?

Replies to Queries

HYPOTHESIS (Northwood): We do not know a short-wave station relaying Poste Parisien, Paris; regret, cannot trace.
LIZZIE (Castleford): Langenberg, North Regional, Prague. We do not understand your reference to Königs Wusterhausen in this section of the waveband. **HETRAUNTY** (Belvedere): Apparently, harmonic of Radio Paris. **LONG WAVE** (Bowdon): Tallies in every detail with Motala relaying Service from Göteborg Cathedral, followed by news and weather. **QU'EST-CE-QUE C'EST** (Dartmouth): British amateur transmitter; inquiries concerning these should be sent to Radio Society of Great Britain, 53, Victoria Street, S.W.1. **NEDLAW** (Sittingbourne): Poste Parisien, Paris. **LOG** (Edmin): Moscow (Trades' Unions). **RAZOR KEEN** (Witham): SUV, Abu Zabal (Cairo). **C. G.** (Ulverston): WND, Ocean Township, N.J., 14.3 m., working with GZAA, London Terminal; Public radio telephony service. **ECK L. R.** (Belfast): (1) too vague; cannot trace; (2) Eindhoven, Holland, reported testing on 31.5 m. **LORNA DOONE** (Rutherglen): Possibly LQE, Buenos Aires, on 30.57 m. **NOVICE** (Middlesbrough): A test by Königs Wusterhausen. **SEZTHOU** (W.9): Please number your queries. **G51S** (Dulwich): G2XO, Maida Vale, W.9; if G5SN, Southend-on-Sea; if G5FN, Notting Hill. See reply to Qu'Est-Ce-Que C'est. **VERONA** (Southwick): PCP, Kootwijk, Holland, on 27.5 m. **DE MONTFORT** (Leicester): (1) possibly PCP, Kootwijk, 27.5 m., relaying Dutch programme to U.S.A.; (2) Rugby: possibly GBQ, 10,100 kc/s. **ARRAY** (Glasgow): British amateur transmitter. **GRAVEYARD WATCHER** (Leith): Cannot possibly identify transmitter without some indication of wavelength. **QU'EST-CE-QUE C'EST?** (Birmingham): WQV, Rocky Point (N.Y.) 20.26 m. **JOD** (Buxton): W1Y, Rocky Point on 18.9 m. **NIMROD** (Brentford): Abu Zabal, Cairo, working with GBC, Rugby. **F.S.W.** (Medomsley): Possibly harmonic of Davenport National. **WAGON** (Leyton): Cannot trace as call-sign appears to be mutilated; it should start with letter P, but Rio de Janeiro station working with LSX, Buenos Aires. **R.A.B.** (Jarrow): Leningrad; special concert for night workers. **C. & E.** (Sunderland): Relay of special broadcast from Geneva and Lausanne by Radio-Nations (Prangins) for retransmission to U.S.A. **GERCHAA** (Cambridge): Apparently altered programme; cannot trace, but possibly Turin. **UP ALL NIGHT** (Tooting): If foreign, —i.e., European—this may have been a test, which cannot be traced. **WIRELESS FIEND** (Benwell): Breslau; gramophone records. **EAST GROVE** (Exeter): Would tally with EAR58, Tenerife (41.0 m.). **YPA GOWOGA** (Eastbourne): (1) too vague to identify, but a two-way communication with French trans-Atlantic liner *L'Atlantique* (Bordeaux-Rio de Janeiro); (2) PPB, Rio de Janeiro (Brazil) on 19.28, 25.72, and 38.56 m. As you give no indication of WL we cannot tell you which transmission you heard. **MAYBE** (Fulham): W8XK, East Pittsburgh. **GT. OUSE** (St. Ives): Too vague; cannot trace. **WANT TO KNOW** (Hastings): Heston Aerodrome on 833 m.; Air Ministry weather reports and forecasts broadcast by Automobile Association. **ALI BABA'S CAMEL** (Londonderry): Supplementary to reply in last week's issue; MNG (North Ronaldshay) on 1,000 metres. **WANT 2 NO** (Moniton): Your details are too vague to permit identification of transmitter; cannot trace GBB. The call was possibly to GBC, Rugby.

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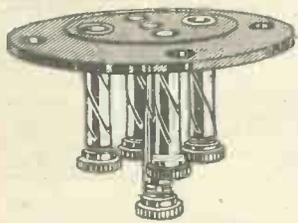
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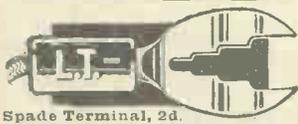
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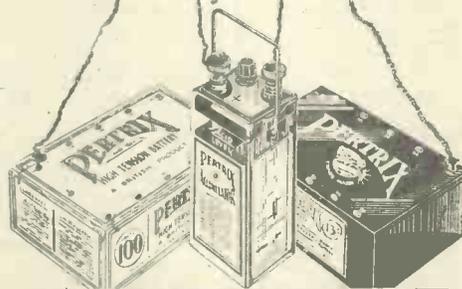
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RADIO CABINETS

Stations in Order of Frequencies and Wavelengths

Corrected in accordance with the latest official information available at the time of going to press

The figures in black type represent the power according to the Copenhagen Power-Rating, but carrier-wave power only is shown

Kc/s	M.	kW.	Station	Dial Readings	Kc/s	M.	kW.	Station	Dial Readings
155	1935	7	Kaunas (Lithuania)		689	436	0.25	Malmberget (relays Boden) (Sweden)	
160	1875	8.5	Huizen (Holland)		697	430.4	55	Stockholm (Sweden)	
167	1796	54	Lahti (Finland) (relays Helsinki)				2.5	Belgrade (Yugoslavia)	
174	1725	75	Radio-Paris (CFR)				2	Madrid (Union Radio)(EAJ7)(Spain)	
183.5	1635	60	Königs Wusterhausen (Zeeseen) (Germany) Relays Berlin					7—8.30 p.m. and (except Monday) 10 p.m. to 12 midnight	
193	1554.4	30	Daventry National (Great Britain)		707	424.3		Madrid (Radio España) (Spain) 5—7 p.m. (Mon. 5 p.m. to 12 midnight)	
195	1538	7	Ankara (Turkey)				100	Moscow-Stalin (Russia)	
202.6	1481	100	Moscow (Old Komintern) (RV1) (Russia)		715	419.5	1.5	Berlin (Witzleben)	
207.5	1445.7	13	Eiffel Tower (FLE) Paris (France)		721.1	416	6	Rabat (Morocco)	
212.5	1411	120	Warsaw No. 1 (Poland)		725	413	1.2	Dublin (Ireland)	
222.2	1350	0.5	Kasbah (Tunis)		734	408	16	Katowice (Poland)	
222.5	1348	30	Motala (Sweden) (relays Stockholm)		743	403	25	Radio Suisse Romande (Sottens) (Switzerland)	
230.1	1304	100	Moscow (Trades Union)				25	Midland Regional (Great Britain)	
238.1	1260	4	Novosibirsk (Russia)		752	398.9	25	Bucharest (Romania)	
242.5	1237		Vienna Experimental (Austria)		761	394	12	Archangel (Russia)	
244	1229.5	0.6	Boden (Sweden)		770	390	10	Frankfurt-a-M. (Germany)	
250	1200	5	Istanbul (Turkey)		779	385	1.5	Toulouse (Radio) (France)	
256	1171.5	21	Reykjavik (Iceland)		788	381	16	Lwów (Poland)	
260	1153	7.5	Tashkent (Russia)		792.5	378.6		Moscow (Russia)	
			Kalundborg (Denmark) (relays Copenhagen)		797	376.4	1	Glasgow (Great Britain)	
268.5	1116	40	Moscow, Popoff		806	372	50	Scottish Regional (Gt. Britain) (testing)	
277	1083	60	Oslo (Norway)		810	370.4	1.5	Hamburg (Germany)	
280	1071	10	Tiflis (Russia)				1.2	Radio LL, Paris (France)	
280	1071	10	Tiflis (Russia)				1	Bolzano (Italy) (IBZ)	
290	1034	36	Kiev (Russia)		815	368.1	13.2	Helsinki (Finland)	
300	1090	100	Leningrad (Russia)				1.5	Seville (Union Radio) (EAJ5) (Spain)	
320	937.5	20	Kharkov (Russia) RV20		816	367.6	0.7	Fredriksstad (Norway) (relays Oslo)	
353.5	848.7	4	Rostov-Don (Russia)		824	364	1	Bergen (Norway)	
385	778	2	Petrozavodsk (Russia)		825.3	363.3	13	Algiers (N. Africa)	
389	770	0.6	Östersund (Sweden) (relays Sundsvall)		832	360.5	60	Stuttgart (Mühlacker) (Germany)	
394	761.4	1.8	Nijni Novgorod (Russia)		842	356.3		Tiraspol (Russia)	
395	760	1.5	Geneva (Switzerland)		843	356	50	London Regional (Great Britain)	
416.7	720	20	Moscow (Experimental)		852	352.1	7	Graz (Austria) (usually relays Vienna)	
428.6	700	4	Minsk (Russia)		855.5	351	1.2	Leningrad (Russia)	
442	680	0.6	Lausanne AB2 (Switzerland)		860	349	8	Barcelona (Radio Barcelona) (EAJ1) (Spain)	
522	574.7	2.5	Ljubljana (Yugoslavia)				11.5	Strasbourg (Brumath) (France)	
527	570	0.25	Freiburg-im-Breisgau (Germany) (relays Stuttgart)		869	345	35	Brno (Czechoslovakia)	
			Grenoble (PTT) (France)		878	342	15	Brussels No. 2 (Belgium) (Flemish programme)	
530	566	0.25	Hanover (Germany)(relays Hamburg)		887	338.2		Cadiz (Spain)	
531	565	2	Smolensk (Russia)				5.5	Poznań (Poland)	
533	563	16	Wilno (Poland)		896	335	1.9	Milan (Italy)	
		0.25	Augsburg (Germany)(relays Munich)				7	Poste Parisien (Paris)	
536	560	1.5	Kaiserslautern (Germany) (relays Munich)		905	331.5	60	Breslau (Germany)	
		0.7	Hamar (Norway) (relays Oslo)		914	328.2	1.5	Göteborg (Sweden) (relays Stockholm)	
545	550	18.5	Budapest No. 1 (Hungary)		923	325	10	Dresden (Germany) (relays Leipzig)	
554	542	3	Palermo (Italy)		932	322	0.25	Naples (INA) (Italy)	
563	533	10	Sundsvall (Sweden)				1	Sofia (Rodno-Radio) (Bulgaria)	
572	525	1.5	Munich (Germany)		950	315	1.6	Marseilles (PTT) (France)	
581	517	15	Riga (Latvia)				1.5	Cracow (Poland)	
590	509	15	Vienna (Rosenhügel) (Austria)		959	312.8	10	Genoa (IGE) (Italy)	
599	500.8	20	Brussels No. 1 (Belgium)				1	Radio-Vitus, Paris (France)	
603.6	497	1.2	Florence (IFI) (Italy)		968	309.9	0.5	Cardiff (Great Britain)	
608	493.4	1.2	Nijni Novgorod (Russia)		977	307	0.75	Falun (Sweden)	
614	488.6	120	Moscow (Russia)				13	Zagreb (Yugoslavia)	
625	480	50	Trondheim (Norway)		986	304	50	Bordeaux-Lafayette (PTT) (France)	
			Prague (Czechoslovakia)		995	301.5		North National (Manchester) (Great Britain)	
630.2	476	1.2	North Regional (Manchester) (Great Britain)		1004	298.8	11	Tallinn (Estonia)	
635	473	60	Sebastopol (Russia)				20	Hilversum (Holland)	
		1.5	Langenberg (Germany)		1013	296.1	7*	Kosice (Czechoslovakia)	
644	465.8		Lyons (La Doua) (France) (relays PTT)				2.5	Limoges (PTT) (France)	
653	459	0.5	Tartu (Estonia)		1022	293	0.7	Pietarsaari (Jacobstad) (Finland) (relays Helsinki)	
		60	Schweizerischer Landessender (Bermünster)(Switzerland)				0.25	Tampere (Finland) (relays Helsinki)	
		0.5	Bödo (Norway)		1031	291	1	Viipuri (Viborg) (Finland) (relays Helsinki)	
		0.5	Danzig (Free City) (relays Königsberg)				13.2		
		0.5	Klagenfurt (Austria) (relays Vienna)					British Relay Stations	
662	453.2	0.7	Porsgrund (Norway) (relays Oslo)				1	Aberdeen	
		1	Salamanca (Spain) (EAJ22)				1	Bournemouth	
		0.6	San Sebastian EAJ8 (Spain) (Mon., Wed., Fri. 7.30—9 p.m., other days 10 p.m. to midnight)		1040	288.5	0.12	Dundee	
		0.1	Tromsø (Norway)				0.3	Edinburgh	
666	450.4	0.15	Uppsala (Sweden) (relays Stockholm)				1	Newcastle	
		4	Odessa (Russia)				0.12	Plymouth	
		0.35	Aalesund (Norway)		1043	287.6	0.12	Swansea	
		0.08	Notodden (Norway)		1049	286	0.7	Lyons (Radio) (France)	
671	447.1	0.7	Paris (PTT) (Ecole Supérieure) (France)				0.8	Montpellier (France)	
		0.15	Rjukan (relays Oslo) (Norway)				0.5	Berlin Relay (Germany)	
680	441	50	Rome (IRO) (Italy)		1058	283	0.5	Magdeburg (Germany)	
							0.5	Stettin (Germany) (relays Berlin)	
							0.5	Innsbruck (Austria) (relays Vienna)	

* Until 4.40 p.m.

STATIONS IN ORDER OF FREQUENCIES AND WAVELENGTHS (Continued)

Kc/s	M.	l.w.	Station	Dial Readings	Kc/s	M.	k.w.	Station	Dial Readings
1063	282.2	2	Lisbon (Portugal)		1283	235	2	Lodz (Poland) (Experimental)	
1067	281	0.75	Copenhagen (Denmark)		1292	232.2	0.25	Kiel (Germany) (relays Hamburg)	
1071	280		Radio Liège (Belgium)				0.25	Norrköping (Sweden)	
1076	279	14	Bratislava (Czechoslovakia)				0.2	Hälsingborg (Sweden)	
1085	276.5	60	Heilsberg (Germany) (rel. Königsberg)		1301	231	1.25	Malmö (Sweden) (relays Stockholm)	
1096	273.7	7	Turin (Italy)				0.2	Umea (Sweden)	
1103	272	1.3	Rennes (France)		1310	229	0.05	Uddevala (Sweden)	
1112	270	0.25	Bremen (Germany) (relays Hamburg)		1328	226	0.15	Hudiksvall (Sweden)	
		0.7	Oviedo (Spain)		1337	224.4	1	Cork (Ireland)	
		1.5	Radio Valencia (Spain)		1345	223	10	Fécamp (Radio Normandie) (France)	
1130	265.4	1.3	Lille (PTT) (France)				0.5	Flensburg (Germany) (relays Hamburg)	
1137	263.8	11	Moravská-Ostrava (Czechoslovakia)				0.7	Pori (Björneborg) (Finland) (relays Helsinki)	
1147	261.6	50	London National (Great Britain)		1373	218		Salzburg (relays Vienna)	
1157	259	2	Leipzig (Germany)				0.25	Karlstad (Sweden)	
1166	257	10	Hörby (Sweden) (relays Stockholm)		1382	217	0.5	Königsberg (Germany)	
1175	255	0.7	Toulouse (PTT) (France)				0.2	Halmstad (Sweden)	
1184	253	5	Gleiwitz (Germany) (relays Breslau)		1391	216	3	Radio Chatelineau (Belgium)	
		1	Almeria (Spain) (EAJ18)		1400	214.2	1.9	Warsaw, No.2 (Poland) (Experimental)	
1193	252	1	Barcelona (Association National) (EAJ15)		1428	210		Csepel (Hungary)	
		0.25	Trollhättan (Sweden)		1450	207	0.15	Borås (Sweden)	
1202	249.6	0.3	Varberg (Sweden)		1460	206	0.2	Ornsköldsvik (Sweden)	
1205	249	0.8	Juan-les-Pins (Nice) (France)		1470	204	0.2	Gävle (Sweden) (relays Stockholm)	
1211	247.7	0.2	Kalmar (relays Stockholm)		1480	203	0.25	Kristinehamn (Sweden)	
		10	Trieste (Italy)		1490	202	0.25	Jönköping (Sweden) (relays Stockholm)	
		0.5	Berne (Switzerland)		1530	196	0.2	Karlskrona (Sweden) (relays Stockholm)	
		0.4	Cartagena (Spain)		1714	175		St. Quentin (France)	
		0.25	Cassel (Germany) (relays Frankfurt)						
1220	246	0.2	Eskilstuna (Sweden) (relays Stockholm)						
		0.25	Kiruna (Sweden) (relays Boden)						
		0.5	Linz (Austria) (relays Vienna)						
		0.4	Säffle (Sweden) (relays Stockholm)						
		0.6	Turku (Abo) (Finland) (relays Helsinki)						
1229	244.1	0.5	Basle (Switzerland)						
1236	242.7		Liège Experimental (Belgium)						
1238	242	1	Belfast (Ireland)						
1247	240.6	0.5	Stavanger (Norway)						
1250	240	1.5	Radio Beziers (France)						
1256	239	2	Nürnberg (Germany) (relays Munich)						
		3	Bordeaux Sud-Ouest (France)						
1265	237.2	1	Radio-Nimes (France)						
		0.2	Örebro (Sweden) (relays Stockholm)						
1274	235.5	0.5	Christiansand (Norway)						

DEVIATIONS

The following are the actual deviations from the official frequencies, as noted during measurements made at the Tatsfield Checking Station. All differences at 1.9 kc/s and over are shown.

588.4	509.7	—	Brussels No. 1 (Belgium)
972	308.5	—	Radio Vitus (France)
1105	271.4	—	Rennes (France)
1177.2	254.7	—	Toulouse (PTT) (France)

(For List of Short-Wave Stations see page 1158)

Schedule of Advance Programmes

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For the benefit of traders who may wish to make arrangements for demonstrating, we are printing each week this schedule of the programmes to be transmitted by the National and Regional stations. It is felt that these programmes—which are roughly divided into one midday, three afternoon, and four evening items (on Sunday one evening item only)—will be of service to those of our readers able to use them in connexion with the reception of the Experimental Short Wave Station, G5SW, which relays either the National (5XX) or London Regional Programmes from 7 p.m.

News Bulletins are transmitted daily (except on Sunday) at 12.30 p.m. (Saturday, 12.45), 6.15 p.m., and midnight.

SUNDAY, JUNE 26

NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.	SCOTTISH REG.
Cello Recital	As National	As National	As National	As National
High Mass from Phoenix Park, Dublin	As National	As National	As National	As National
Light Music	As National	As National	As National	As National
Military Band	English Music	Male Voice Choir	As London Reg.	Studio Orchestra
Chamber Music	Orchestral Con.	Light. Orch. Con.	Military Band	As National

MONDAY, JUNE 27

NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.	SCOTTISH REG.
Studio Concert	As Midland Reg.	Cinema Orch.	As Midland Reg.	Cinema Organ
Cinema Orch.	As North Reg.	As North Reg.	Organ Recital	As National
Gram. Records	As Midland Reg.	Studio Orchestra	As Midland Reg.	As National
Hotel Orchestra	As National		As National	Studio Orchestra
Talks	Light Music	Band Concert	Dance Music	As National
Cinema Orch.	Vaudeville	As London Reg.	As London Reg.	As National
Play	Military Band	Studio Orchestra	Studio Orchestra	As National
Dance Music	As National	As London Reg.	As London Reg.	As National

TUESDAY, JUNE 28

NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.	SCOTTISH REG.
Cinema Organ	As North Reg.	As North Reg.	Buxton Orchestra	As National
Hotel Orchestra	As Midland Reg.	Ballad Concert	As Midland Reg.	As National
Gram. Records	As Midland Reg.	Studio Orchestra	As Midland Reg.	As National
Hotel Orchestra	As National		Evensong	Studio Orchestra
French Talk	Light Music	John Feulds' Music	Hotel Orchestra	As National
Light Orch. Con.	Gram. Records	String Orchestra	One-act Comedy	Scottish Vaudeville
Revue	Song Recital	As London Reg.	As London Reg.	As National
Dance Music	Dance Music	As London Reg.	As London Reg.	As National

WEDNESDAY, JUNE 29

NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.	SCOTTISH REG.
Cinema Organ	As Midland Reg.	Cheltenham Orch	As Midland Reg.	As National
Gram. Records	As Midland Reg.	Organ Recital	As Midland Reg.	Song Recital
Hotel Orchestra	As North Reg.	As North Reg.	Studio Orchestra	Gram. Records
Symphony Con.	As National		As National	Instrumental Con.
Talks	Light Music	Studio Orchestra	Studio Orchestra	As National
Jack Payne's Band	Play	As London Reg.	As London Reg.	As National
Mozart Programme	R.A.F. Band	Revue	Concert Party	As National
Dance Music	Dance Music	As London Reg.	As London Reg.	As National

THURSDAY, JUNE 30

NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.	SCOTTISH REG.
Cinema Organ	As North Reg.	As North Reg.	Whitby Orch.	As National
Cinema Orch.	As Midland Reg.	Cinema Organ	As Midland Reg.	As National
Abbey Evensong	As North Reg.	As North Reg.	Studio Orchestra	Cinema Organ
Dance Music	As National		As National	Dance Music
German Talk	As North Reg.	Light Music	Organ Recital	As National
As Scottish Reg.	As North Reg.	Military Band	Band Concert	Burlesque
Song and Violin Recital	Tango Orchestra	As London Reg.	As London Reg.	As National
Dance Music	Dance Music	As London Reg.	As London Reg.	As National

FRIDAY, JULY 1

NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.	SCOTTISH REG.
Cinema Orch.	As Midland Reg.	Cinema Organ	As Midland Reg.	Cinema Organ
Organ Recital	As North Reg.	As North Reg.	Cinema Orch.	Studio Orchestra
Gram. Records	As Midland Reg.	Studio Orchestra	As Midland Reg.	As National
As Scottish Reg.	As National		As National	Studio Orchestra
Talks	Light Music	Concert Party	Studio Orchestra	As National
Opera relay from Berlin	Revue	As London Reg.	As London Reg.	As National
Recital for two Pianofortes	As Midland Reg.	Studio Orchestra	Concert Relay	Concert Party
Dance Music	Dance Music	As London Reg.	As London Reg.	As National

SATURDAY, JULY 2

NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.	SCOTTISH REG.
As North Reg.	As National		Studio Orchestra	As National
Cinema Orch.	As National		As National	As National
Running Com. on Lawn Tennis Finals	Light Music	Dance Music	As National	As National
Pianoforte Recital	Cinema Organ	As London Reg.	Theatre Relay	As National
Vaudeville	Light Music	Organ and Violin	Buxton Orchestra	As National
Light Orch. Con.	As North Reg.	Studio Orchestra	Instrumental and Choral	Chamber Music
Dance Music	Chamber Music	As London Reg.	As London Reg.	As National

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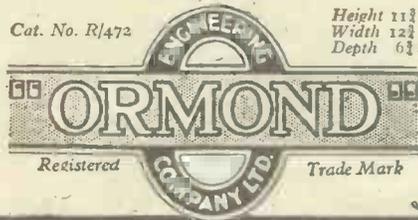


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PROGRAMMES FOR SUNDAY (June 12)

SERVICES AND SACRED MUSIC

- 9.55 a.m. Italian Stations (N.): Missa Cantata.
- 11.30 ,, Leipzig and most German stations: Bach Cantata.
- 12 noon Radio-Paris: Sermon by Père Lhande.
- 2.0 p.m. Copenhagen: Service from Cathedral.
- 2.10 ,, Huizen: "St. Anthony" (oratorio).

CONCERTS (Vocal and Instrumental)

- 6.15 a.m. Hamburg, etc.: Harbour Concert.
- 12.10 ,, Berlin, Breslau, Leipzig: Midday Concert.
- 2.50 ,, Vienna: Haydn Commemoration.
- 8.0 ,, Berlin, Heilsberg, Langenberg: Costa Milona (Tenor), and Orchestra.
- 8.0 ,, Brussels Nos. 1 and 2: Festival of Belgian Music.
- 8.15 ,, Munich, Frankfurt, Stuttgart: Station Orchestra.
- 9.45 ,, Schweizerischer Landessender: Late Concert.
- 10.10 ,, Breslau: Massed Military Bands.
- 10.10 ,, Copenhagen: Station Orchestra.

CHAMBER MUSIC

- 4.10 p.m. Vienna: Pianoforte Quartets.
- 8.0 ,, Schweizerischer Landessender: Trios.

RECITALS

- 8.0 p.m. Stockholm: Chopin Pianoforte music.
- 8.50 ,, Budapest: Lili Kelety (Soprano).

DANCE MUSIC

- 9.30 p.m. Budapest: Dance and Cigany Music;
- 10.2 Warsaw; 10.15 Berlin, etc.; 11.0 Copenhagen: Teddy Petersen's Band.

MISCELLANEOUS

- 3.0 p.m. Radio-Suisse Romande: Lawn Tennis Match, Italy v. Switzerland.
- 4.10 ,, Berlin stations: The German Derby.
- 6.0 ,, Frankfurt, Königs Wusterhausen: "With the Microphone in 'Old' Frankfurt."
- 8.0 ,, Oslo: National programme from Steiner.

Three Conservatoire Directors

Following their concerts on the occasion of the BRUSSELS Conservatoire Centenary, both stations there are broadcasting a concert to-day in which the Directors of the Brussels, Liège and Antwerp Conservatoires will co-operate. All three, MM. Jongen, Rasse and Mortelmans are well known as composers, not only to wireless listeners, and this evening's programme offers an interesting chance of appreciating the two schools of Belgian music of to-day. MM. Jongen and Rasse belong to the French school, and Françoise would be proud to claim their music among its own; M. Mortelmans is the leader of the Flemish group, carrying on the work set on foot by Benoit and Blockx.

The Dutch Milton

Joost van den Vondel, the greatest of the old Dutch



Photo: Oesterreichische Lichtbild-Anstalt, Vienna

The Abbey of Melk

poets, lived from 1587—1679. He did not escape the religious troubles of that age, and after belonging in turn to the Baptist and other Churches, he became a Roman Catholic and a warm advocate of the cause of Mary, Queen of Scots. His play, *Maria Stuart*, on her life and death, is one of his finest works. He anticipated Milton's *Paradise Lost* with a long drama, *Lucifer*, published in 1654, and many critics have it that Milton's work was strongly influenced by Vondel's. This evening, at HUIZEN station, M. Henri Eerens, a popular Dutch elocutionist, is to read part of a devotional work of Vondel's in prose, less well-known than his poetry. Its title is *The Mysteries of the Altar*.

Haydn from an Abbey

One of the most picturesque Haydn Commemoration festivals in Austria will take place at 3 p.m. in the great Benedictine Abbey of Melk, magnificently situated on a promontory above the Danube. The choir and orchestra of the Schubert Church in Vienna will be conducted by Dr. Heinrich Singer. Melk is the legendary "Medelicke of the Nibelungs," and hereabouts along the Danube the "Ring" legends took shape. The concert will be broadcast by VIENNA from what is called the Marble Hall, famous for its ceiling and wall paintings.

Old Frankfurt

At six this evening, the FRANKFURT microphone is to make a tour of the famous Altstadt under the guidance of Paul Laven. The old town remains, in part, very much as it was in the middle ages, and none of it is more recent than the 18th century. Looking back for the beginning of its history to the eighth century, Frankfurt was the headquarters of the German book-trade for centuries, and is now one of the most important centres of German commerce. This evening's broadcast will include something of the old vernacular, in market places, shops and beerhouses, elicited by masters in the art of making people speak naturally before the microphone.

NATIONAL

	kc/s	m.	kW.
London:	1,148	261.3	50
Daventry:	193	1,554.4	30
Northern:	995	301.5	50

- 10.30 a.m.—10.45—Time Signal (Greenwich); Shipping Forecast.
- 12.30 p.m.—A Recital by Sascha Lasserson (Violin).
- 1.0—The Commodore Grand Orchestra, directed by Joseph Muscant.
- 2.15—A Recital of Gramophone Records—Operatic Excerpts.
- 3.0—Time Signal (Greenwich).
- 3.0—The Leslie Bridgewater Quintet. John Turner (Tenor).
- 4.0—Bible Reading.
- 4.15—The Wireless Military Band. Conductor, B. Walton O'Donnell. Eveline Stevenson (Soprano).
- 5.30—A Pianoforte Recital by Reginald Stewart. Sonata, Op. 2, No. 3 (Beethoven). Jardins sous la plure (Gardens in the Rain) (Debussy). Toccata (York Bowen).
- 6.0—6.20—For the Children.
- 6.30—7.45—Welsh Service. Horeb Welsh Wesleyan Church, Colwyn Bay.
- 7.55—St. Martin-in-the-Fields.
- 8.45—The Week's Good Cause. Appeal on behalf of the Ex-Service Welfare Society by the Marchioness of Carisbrooke.
- 8.50—"The News." Weather Forecast, General News Bulletin; Shipping Forecast.
- 9.0—Time Signal (Greenwich).
- 9.5—String Orchestral Concert. Enid Cruickshank (Contralto). The B.C. Orchestra, conducted by Percy Pitt. Concerto Grosso, Op. 6, No. 8, in G Minor (Corelli). Enid Cruickshank and Orchestra. Recit and Aria, Che farò (Gluck). Orchestra: Ricercare (Bach, arr. Fischer). Aria for Violoncello and Strings (Porpora). Enid Cruickshank: Land of Promise (Bantock). Praise ye the Lord (Bantock). Orchestra: Serenade, No. 11, in F (Volkmann). Enid Cruickshank: How lovely is the Hand of God (Loughborough). Over the dark still Silence (Alba Rizzi). Orchestra: Concertino for Double String Orchestra (Goossens).
- 10.30—Epilogue.
- 10.43—11.0—The Silent Fellowship.

REGIONAL

	kc/s	m.	kW.
London:	842	356.3	50
Midland:	752	398.9	25
Northern:	626	479.2	50

- 12.30 p.m. (London and Northern)—Daventry National Programme.
- 4.0—A Recital by Isolde Menges (Violin) and Harold Williams (Baritone).
- 5.0—5.30—"China in the Melting Pot"—III. Professor P. M. Roxby.
- 7.55—St. Martin-in-the-Fields. The Bells.
- 8.45—The Week's Good Cause. Appeal on behalf of the Ex-Service Welfare Society by the Marchioness of Carisbrooke.
- 8.50—"The News."
- 9.5 (London)—Albert Sandler and the Park Lane Hotel Orchestra. Stuart Robertson (Bass-Baritone). Orchestra: Invitation to the Dance (Weber). Petite Suite d'Orchestre (Bizet). Stuart Robertson: O Mistress mine (Quilter). The Countryman (Peter Warlock). Orchestra: Selection on Songs (Dorothy Forster). Albert Sandler: La Fille aux Cheveux de lin (Debussy). Valse Bluette (Drigo, arr. Auer). La Capricieuse (Elgar). Stuart Robertson: Marishka (arr. Korbay). Shepherd, see thy Horse's foaming Mane (arr. Korbay). Orchestra: Fantasy, Cavalleria Rusticana (Mascagni).
- 9.5 (Midland)—The Studio Orchestra, Dorothy Showell (Soprano). Elsa Tookey (Violoncello). Orchestra: March, Pomp and Circumstance, No. 4, in G (Elgar). Suite, Joyous Youth (Eric Coates). Dorothy Showell: Songs. Orchestra: Minuet (Berenice) (Handel, arr. Best). Elsa Tookey: Solos. Orchestra: Serenade (Toselli). Echo des Bastions (Kling). Ronde joyeuse (Simonetti). Dorothy Showell: Songs. Elsa Tookey: Solos. Orchestra: Ballet Music, Rosamunde (Schubert).
- 9.5 (Northern)—A Choral and Instrumental Concert. The Deeside Male Voice Choir. Soloist, Ernest Williams (Tenor). Muriel Little (Harp). Joseph Lingard (Flute).
- 10.30—Epilogue.

The Frequencies and Wavelengths given in the following programmes are those published by the stations in question. For more accurate measurements, readers are referred to our Table of Frequencies and Wavelengths.

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

- BARCELONA (Spain)**
Radio-Barcelona (EAJR). 860 kc/s (349 m.); 8 kW.
Transmits at intervals from 8.10 a.m. 12 noon—Chimes and Weather Forecast. 12.15 p.m.—Photographic Weather Chart, followed by Concert by the Municipal Band, conducted by Lamote de Grignon, relayed from the Palacio de Bellas Artes. 2.0—Concert of Light Music on Gramophone Records. 2.30—Concert by the Station Sextet. Selections of Spanish Music. 3.0—Theatre Notes, Popular Music on Gramophone Records and Cinema Review.
3.20—Sextet Concert (contd.). Träume (Wagner). Selection from "The Czarevitch" (Lehar). Minuet (Boccherini). Folk Dance, Molly on the Shore (Grainger).
4.0—Programme for Hospitals and Benevolent Institutions with Gramophone Records. 5.0—6.30—Interval.
6.30—Popular Music on Gramophone Records.
7.0—Concert by the Station Orchestra. March (Ackermans). Selection from "Gipsy Love" (Lehar). Waltz (Waldfteufel). Carnaval japonais (de Basque). Causerie (Cui).
7.30—Xylophone Recital by Rafael Casanova. Dance, No. 5 (Granados). Minuet from "L'Arlesienne" (Bizet). Norwegian Dance No. 2 (Grieg). Sardana, Maig (Terré).
8.0—Talk in Catalan on Agricultural Problems.
8.10—Concert of Popular Music by the Orchestra. Soloists: Francesca Marlet (Soprano) and J. Torrents (Cello). Canzonetta in C (Salvat). Songs: (a) Der Nussbaum (Schumann), (b) Aria from "Hamlet" (Thomas). Cello Solo: Elegy (Faure). Song: Waltz, Will-o'-the-Wisp (Celli). Allegro di molto from the Symphony in G (Haydn).
9.0—Concert of Dance Music by the Melody Boys Orchestra, relayed from the Excelsior Restaurant.
10.0—Programme for Women. 10.30

- Request Gramophone Records. 11.45—Chess Lesson. 12 midnight (approx.)—Close Down.
- BELGRADE (Yugoslavia)**
607 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 8.25 a.m. 7.0 p.m.—Choral Concert of Yugoslavian Music. 8.10—Wireless Talk. 8.40—Cello and Pianoforte Recital. 9.30—News Bulletin and Sports Notes. 9.50—Russian Song Recital by Beba Kapamadzija. 10.10—Concert by the Station Orchestra. 11.0—Concert relayed from the "Ruski Car" Restaurant.
- BERLIN (Germany)**
Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.
Transmits at intervals from 6.0 a.m. (Witzleben Relay).
11.30 a.m.—See Leipzig. 12 noon—Reading of Verse by Wolfgang Rauch. 12.10—3.25 p.m.—See Berlin (Witzleben). 3.25—Reading (Max Dauthendey). 3.55—See Berlin (Witzleben). 4.10—Walter Bauer reads from his own Works. 4.30—Talk: German Landscapes. 4.55—6.0—See Berlin (Witzleben). 6.0—See Frankfurt. 6.50—The Younger Generation speaks—a Discussion on the Machine and Civilization. 7.20—Talk: The Idea of Progress. 7.45—Talk: Travel in Germany. 8.0 till Close Down—See Berlin (Witzleben). 12.30 a.m. (Monday)—Close Down.
- BERLIN (Germany)**
Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m. (Gymnastics and Hamburg Relay).
11.30 a.m.—See Leipzig. 12 noon—Hansjürgen Wille reads from his own Poems. 12.10 p.m.—Orchestral Concert, conducted by Georg Pilowsky. 2.0—Talk for Parents: Young People of the City on Holiday Rambles. 2.30—Concert by Blind Artists. 3.25—Berlin Anecdotes. 3.55—Talk: Five Years of Ocean Flights. 4.10—Radio Report on the German Trotting Derby, relayed from the Ruhleben Racecourse. 4.30—Concert from the Krollgarten. Military Band Music and Dance

- Music. 4.55—Topical Programme—Sport. 5.40—Concert from the Krollgarten (contd.). 6.0—Talk: Recreative Holidays for the Intellectual Worker. 6.15—Gramophone Concert of Light Music. In the interval: Radio Report on the International Aviation Exhibition, relayed from the Tempelhof Aerodrome. 7.20—Part Relay of the Celebrations of the Seventy Centenary of the Town of Küstrin. 7.50—Sports Notes. 8.0—Concert by the Berlin Wireless Orchestra, conducted by Bruno Seidler-Winkler. Soloist: Costa Milona (Tenor). La Burla—Orchestral Suite (Weingartner). Tenor Solos: (a) The Stars were shining, from "Tosca," (b) Aria from "Turandot" (Puccini). Intermezzi Goldoniani—for String Orchestra (Bossi). Ballet Music from "La Source" (Delibes). Prelude and Entr'actes from "Carmen" (Bizet). Aria from "Carmen" (Bizet). Symphonic Variations, Istar (d'Indy). Tenor Solos: (a) Aria from "Luiz Miller," (b) Aria from "Il Trovatore" (Verdi). Bulgarian Rhapsody, Vardar (Vladigero). 9.0 (in an interval)—News and Sports Notes. 10.0—Weather, News and Sports Notes, followed by Dance Music. 12.30 a.m. (Monday)—Close Down.
- BORDEAUX-LAFAYETTE (France)**
(PTT). (986 kc/s (304 m.); 13 kW.
12 noon—Concert relayed from Paris (Ecole Supérieure), 671 kc/s (447.1 m.). 2.0 p.m.—Relay from Paris or Relay of a Local Festival. 6.30—Radio Journal. 8.0—Review by M. Salomon. 8.10—Lottery Results. 8.30—Sponsored Concert on Gramophone Records. 9.0—Trades and Professions in Music—Gramophone Concert. After the Programme, Amusement Guide and Time Signal.
- BRATISLAVA (Czechoslovakia)**
1,076 kc/s (279 m.); 14 kW. Transmits at intervals from 7.0 a.m. 10.30 a.m.—Military Band Concert

relayed from a Park. 11.0—Band Concert from *Trencianske Koupele*. 12 noon—See Prague. 12.5 p.m.—Orchestral Concert from *Moravsko-Ostrava*. 1.30—See Prague. 2.0—Agricultural Talk. 4.0—Promenade Concert from *Trencianske Teplice*. 5.30—Reading. 5.50—Band Concert from the Museum Restaurant. 7.0—See Prague. 10.20—Programme Announcements and News. 10.25—See Prague.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by Gletwitz, 1,184 kc/s (253 m.).

Transmits at intervals from 6.15 a.m. 11.30 a.m.—See Leipzig. 12.20 p.m.—Concert from Berlin (*Witzleben*). 2.0—News Bulletin. 2.10—Agricultural Talk. 2.25—Talk for Unemployed Wireless Amateurs. 2.35—Talk; Peculiar Professions. 3.40—Talk on Opera. 4.0—Reading. 4.30—Concert of Light Music by the Warmbrunn Kurhaus Orchestra, relayed from Warmbrunn. Conductor: August Bösel. Soloist: Romuald Moch (Xylophone). 6.0—Running Commentary on the Second half of the Tennis Match, Beuthen 09 Club v. the Borussia Club, Berlin, relayed from the Stadium, Beuthen. 7.0—Harp Recital by Bruno Schaefer. Fantasia (Kovarovic). Nocturne (Kiclikia). Moldavia (Smetana). 7.30—Theodor Kramer reads from his own works. 8.5—Weather for Farmers and Sports Results. 8.10—Reading. 8.30—A June Picnic—Evening Programme in the Open Air by the Station Orchestra, conducted by Franz Marszalek, and Soloists. 10.0—News Bulletin. 10.10—Parade of Silesian Troops and Tattoo, by the Bands of the Silesian Infantry and Cavalry Regiments, relayed from the Freiherr vom Stein Stadium, Oppeln. Conductor: Hermann Kiefer. 11.0—Time Signal, Weather Forecast, Press Review, Sports Notes and Programme Announcements. 11.20—See Berlin (*Witzleben*). 12.30 a.m. (*Monday*) (approx.)—Close Down.

BRNO (Czechoslovakia)

878 kc/s (342 m.); 35 kW. Transmits at intervals from 7.0 a.m. 11.0 a.m.—Orchestral Concert relayed from *Luhacovice*. 12 noon—See Prague. 12.5 p.m.—Concert from *Moravsko-Ostrava*. 1.30—See Prague. 2.0—Reading. 4.0—Concert relayed from the Josefovsky Restaurant. 5.30—Pianoforte Recital by Anna Skaická. 6.0—German Transmission, Songs and Duets by Lehár. 6.45—Talk: The Popularisation of Ciné-photography for Amateurs. 7.0—Concert by the Drabek Trio. 7.45—See Prague. 10.20—News Bulletin. 10.25—See Prague.

BRUSSELS (Belgium) (No. 1)

I.N.R. 590 kc/s (509 m.); 15 kW. 5.0 a.m. and at hourly intervals throughout the day—Pigeon Flying Report. 12 noon—Concert by the Tea Room Orchestra. 12.40 p.m.—*Organ Recital* by M. Joos, relayed from the Carmelite Church. Prelude, Le Déluge (Saint-Saëns). 1.30—Pette Pastoral (Peeters). Litany (Schubert). Fugue on B-A-C-H (Schumann).

BRUSSELS (Belgium) (No. 2)

I.N.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—*Organ Recital* by M. Joos, relayed from the Carmelite Church.

1.0—Le Journal Parlé. 1.10—Gramophone Concert of Light Music. 5.0—Dance Music from the St. Sauveur Palais de Danse. 6.15—Programme for Children. The Clowns Bonzo and Sylvia. 6.30—Variety Music on Gramophone Records. 7.15—Religious: Address by the Reverend Father Hoornaert: A Prodigal Daughter. 7.30—Le Journal Parlé. 8.0—Festival of Belgian Music by the Wireless Orchestra, conducted by the Composers: Joseph Jongen, Director of the Brussels Conservatoire, L. Mortelmans, Director of the Antwerp Conservatoire and François Rasse, Director of the Liège Conservatoire. Soloist: Théo Delvenne (Violin). Passacaille and Gigue (Jongen). Poème héroïque for Violin and Orchestra (Jongen). 8.30—Talk by J. Horemans. 8.45—Humorous Dialogue (Donnay). 9.0—Concert (continued). Mythe du Printemps (Mortelmans). In Memoriam (Mortelmans). Symphonic Mosaic—For a Tragedy (1917-1929) (Rasse). In the interval at 9.15—Talk: On Tour with the Flemish Dramatic Society. 9.45—Orchestral Concert, conducted by Charles Walpot. 10.0—Le Journal Parlé. 10.10—Concert (continued). 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2)

I.N.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—*Organ Recital* by M. Joos, relayed from the Carmelite Church.

Prelude in G (Bach). Largo (Gaillard). Chant Sraphique (Guilmant). Piece héroïque (Frank)

12.30 p.m.—Weather Report. 12.40—Concert of Popular Music by the Tea Room Orchestra. 1.0—Popular Song Recital by Q. van Trigt. 1.20—Orchestral Concert (cont'd.). 5.0—Concert by the Station Orchestra, conducted by Charles Walpot. 6.0—Concert of Classical Music on Gramophone Records. 7.15—Religious Address. 7.30—Le Journal Parlé. 8.0—See Brussels No. 1. In the intervals Talks. 11.0 p.m. (approx.)—Close Down.

BUCHAREST (Romania)

Radio-Bucarest. 761 kc/s (394 m.); 12 kW.

9.15 a.m.—Programme for Children. 9.30—Religious Address. 9.45—Choral Selections of Religious Music. 10.0—Concert by the Jean Dumitresco Orchestra. 11.0—Light Music on Gramophone Records. 11.45—News Bulletin and Time Signal. 12 noon—Popular Music on Gramophone Records. 3.0 p.m.—Programme for Peasants. 4.0—Concert of Light Music and Romanian Music by the Marco Orchestra. 5.0—News Bulletin and Time Signal. 5.10—Orchestral Concert (cont'd.). 6.0—Educational Programme. 6.40—Light Music on Gramophone Records. 7.0—Relay of an Opera (to be announced). 8.45—Answers to Correspondents. 9.0—News Bulletin.

BUDAPEST (Hungary)

545 kc/s (550 m.); 18.5 kW.

Programme also relayed on 210 metres from 3.0—3.45 p.m. and 5.10 till Close Down. 9.0 a.m.—Press Review and Beauty Hints. 10.0—Catholic Service from the University Church. 11.15—Evangelical Service, followed by Time, Weather, Tide Report, and Concert by the Royal Hungarian Opera House Orchestra, conducted by Otto Berg. Overture, "Semiramis" (Rossini). Suite (Démótor). Hungarian Rhapsody (Szekely). Ballet Music from "Ascanio" (Saint-Saëns). Intermezzo (Arensky). Selection from "Tiefand" (D'Albert). Selection from "The Mute of Portici" (Auber).

2.0—Gramophone Concert of Variety Music. 3.0—Agricultural Talk. 3.45—Military Band Concert, conducted by Richard Fricssay. 4.50—Talk on Hungarian Culture. 5.10—Dance Music. 6.10—Hungarian Recitations. 7.0—"The Growth of the Operetta"—Concert by the Royal Hungarian Opera House Orchestra, conducted by Béla Nagypál. Soloists: Anna Bathy and Ladislav Szics. 8.30—Sports Notes and Racing Results. 8.50—Pianoforte Recital by Lili Kelety. Sonata in B Minor (Chopin). Reflets dans l'eau (Debussy). Etude (Dohnanyi). Echoes of Vienna (Sauer). 9.30—Concert from the Donaukorso Kaffeehaus.

COPENHAGEN (Denmark)

1,067 kc/s (281 m.); 0.75 kW. Relayed by *Kalundborg*, 260 kc/s (1,153 m.). Transmits at intervals from 8.30 a.m. (Gymnastics). 11.30 a.m.—Weather and News. 12 noon—Town Hall Chimes. 12.2 p.m.—Talk in English: Mr. MacDonald. 12.20—Talk in German. 12.40—Talk in French. 1.0—2.0—Relay from the West Park, Randers, of the Randers Listeners Society's Fourth Annual Meeting and Summer Festival. Programme of Music and Addresses. 2.0—Divine Service from the Cathedral. 3.20—4.0—Relay from the West Park, Randers (cont'd.). 4.0—Military Band Concert conducted by F. Hemme, relayed from the Faelledparken. 5.45—Talk for Children. 6.20—Talk: The Russian Author, Ilya Ehrenburg. 6.50—Weather and News. 7.15—Time and Sports Notes. 7.30—Talk: Women's Clubs in the U.S.A. 8.0—Town Hall Chimes. 8.2—"Landscapes in Music"—Concert by the Station Orchestra conducted by Launy Gröndahl. 8.50—"200,000"—A Radio Sketch (Soya). 9.10—Guitar Recital. 9.40—Recital of Songs by Ayeo Willumsen. 10.0—News Bulletin. 10.10—Orchestral Concert conducted by Launy Gröndahl. French March, Le régiment de Sambre-et-Meuse (Turlet). Waltz, Golden Rain (Waldteufel). Selection from "Rigoletto" (Verdi). Arabesque No. 1 in E (Debussy). Two Hungarian Dances (Brahms). Norwegian Folk Melody arranged for Strings (Johann Halvorsen). A Norwegian Artists' Carnival (Svendsen).

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SUNDAY
continued

11.0—Dance Music from the Wivex Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (*Monday*)—Close Down.

CRACOW (Poland)

959 kc/s (312.8 m.); 1.5 kW. Transmits at intervals from 10.0 a.m. 5.10 p.m.—See Warsaw. 7.55—Programme Announcements. 8.0—See Warsaw. 9.55—News Bulletin. 9.55—See Warsaw. 11.30 (approx.)—Close Down.

DUBLIN (Ireland)

(2RN). 725 kc/s (413 m.); 1.2 kW. Relayed by Cork, 1,337 kc/s (224.4 m.).

8.30 p.m.—Time Signal. 8.31—Orchestral and Vocal Concert. Soloists: May Busby (Soprano). E. Hargreaves (Tenor) and H. Dunkerley (Baritone). 10.0—The Adventures of Ellis Palmer, presented by I. P. Mitchell. 10.45—Orchestral Selections. 11.0—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France)

Radio Normandie. 1,345 kc/s (223 m.); 10 kW.

12 noon—Radio Normandie Gazette. 12.30 p.m.—News Bulletin. 12.45—Concert of Light Music. 1.15—Programme for Children. 6.0—Programme for Children. 6.30—Concert of Sacred Music by the Studio Choir. Soloist: Arthur Coleman (Organ). 7.30—Orchestral Concert of Pastoral Music. The I.B.C. Light Orchestra, conducted by John English. Soloists: Blodwen Rhys (Soprano) and Horace Fry (Tenor). 8.0—Variety Concert. 9.0—Concert by the Station Military Band, conducted by J. K. O'Regan. 10.0—Concert by the Chatsworth Octet. 11.0—Dance Music Programme. Through the Cotton Belt. 12.30 a.m. (*Monday*)—Programme by the Piano Synchronopators. 1.0—Vaudeville Programme. 2.0—Dance Music. 3.0 (approx.)—Close Down.

FLORENCE (Italy)

Ente Italiano Audizioni Radiofoniche. 599 kc/s (500.8 m.); 20 kW.

See Turin. 770 kc/s (390 m.); 1.5 kW. Relayed by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.15 a.m. (*Hamburg* Relay). 9.30 a.m.—Choral Concert. 11.0—With the Microphone through the New Goethe Museum. 11.30—See Leipzig. 12 noon—Wind Instrument and Pianoforte (Schulhoff). La Cinquantaine (Gabriel-Marie). Le Cygne (Saint-Saëns). Caprice (Gurlucht). 7.50—Sports Notes. 8.0 till Close Down—See Berlin (*Witzleben*). 12.30 a.m. (*Monday*)—Close Down.

FLORENCE (Italy)

Ente Italiano Audizioni Radiofoniche. 599 kc/s (500.8 m.); 20 kW. See Turin.

FRANKFURT-am-MAIN

(Germany)

770 kc/s (390 m.); 1.5 kW. Relayed by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.15 a.m. (*Hamburg* Relay). 9.30 a.m.—Choral Concert. 11.0—With the Microphone through the New Goethe Museum. 11.30—See Leipzig. 12 noon—Wind Instrument and Pianoforte (Schulhoff). La Cinquantaine (Gabriel-Marie). Le Cygne (Saint-Saëns). Caprice (Gurlucht). 7.50—Sports Notes. 8.0 till Close Down—See Berlin (*Witzleben*). 12.30 a.m. (*Monday*)—Close Down.

HAMBURG (Germany)

Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayed by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.) and Kiel, 1,292 kc/s (232.2 m.). Transmits at intervals from 6.15 a.m. (Bremen Harbour Concert). 10.25 a.m.—Divine Service relayed from Kiel. 11.0—Talk: Are Museums still necessary? 11.30—See Leipzig. 12.10 p.m.—Time Signal and Weather Forecast. 12.15 (from Hanover)—Open Air Concert from the Square in front of the Opera House. 1.0 (from Hanover)—Concert by the Station Orchestra conducted by Otto Ebel von Sosen. 2.0 (from Hanover)—Literary and Musical Programme. 2.45—Fantasia and Fugue on BACH for Organ (Reger) by Leopold Brodersen, relayed from St. John's Church, Altona. 3.15—New Fairy Tales by G. von Halle Alberti, with Music by the Small Station Orchestra, conducted by Gerhard Maasz. 4.0—Concert of Light Music by Members of the Lübeck Municipal Theatre, relayed from the Theatre. 5.50—Report on the Final of the German Football Championship, "Eintracht" Frankfurt v. "Bayern" Munich.

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6.30 (from Bremen)—Recital of Classical Sonatas by Hertha Kahn and Erik Schöense. Fantasia and Sonata in C Minor for Pianoforte (Mozart). Sonata for Violin and Pianoforte, Op. 47—the Kreutzer (Beethoven). 7.30—A Radio Report on Athletics. 7.40—Sports Notes. 7.55—Weather Forecast. 8.0—Concert conducted by Eibenschütz. Soloist: Herbert Ernst Groh (Soprano). Overture, "Alessandra Stradella" (Flotow). Forest Murmurs from "Siegfried" (Wagner). Symphonic Poem, Les Préludes (Liszt). Second Suite from "Carmen" (Bizet). Songs: (a) The Flower Song from "Carmen" (Bizet), (b) Song from "The Circus Princess" (Kálmán). Overture, "Lysistrata" (Lincke). Third Norwegian Rhapsody (Svendsen). Hungary from "Aus aller Herren Länder" (Moszkovsky). Waltz, Rheinsagen (Heinrich Reuter). Selection from "The Dollar Princess" (Fall). Waltz, Nordseebilder (Johann Strauss). 10.0—News Bulletin, Time Signal, Weather Report, Political and General Announcements, Sports Notes and Police News. 10.20—Topical Talk. 10.30—Dance Music relayed from the Boccaccio. 11.10 (from Bremen)—Dance Music relayed from the Hotel Atlantic.

HEILSBURG (Germany)

1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.15 a.m. (Concert from Danzig). 11.30 a.m.—See Leipzig. 12.15 p.m.—Concert by the Small Orag Orchestra, conducted by Eugen Wilcken. 2.15—Chess Talk. 2.45—Talk for Young People. 3.15—See Munich. 3.40—East Prussian Humour—Reading. 4.0—Radio Report from Kreuzburg on the Unveiling of the Boyen Memorial. Die ehre Gottes in der Natur—for Male Voice Choir and Orchestra (Beethoven). Address by the Mayor, Herr Dziorobek. Address by Major Lambeck, President of the Boyen Association. Male Voice Choir: Wo gen Himmel Eichen ragen (Hans Heinrich). 4.30—Concert by the Königsberg Opera House Orchestra, conducted by Georg Wöllner. 4.55—5.40—Topical Programme. 6.30—Part Relay of the Demonstration of the Catholic Workers' Societies of Ermeland, from *Bischofsburg*. 7.0—Talk: The Organisation of Civil Air Protection. 7.25—Saxophone Recital by Sigurd Rascher. Rhapsody (W. Donaldson). Second and Third Movements from the Sonata for Saxophone and Pianoforte (Schulhoff). La Cinquantaine (Gabriel-Marie). Le Cygne (Saint-Saëns). Caprice (Gurlucht). 7.50—Sports Notes. 8.0 till Close Down—See Berlin (*Witzleben*). 12.30 a.m. (*Monday*)—Close Down.

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HEILSBURG (Germany)

1,085 kc/s (276

SUNDAY continued

March, Durch Wald und Flur (Zeh). Waltz, Junge Mädchen tanzen gern (Eysler). Overture, "Poet and Peasant" (Suppé). Selections from the "Suite der Freude" (Scheinpflug): (a) Gavotte, (b) Fairy Land, (c) March Selections from "Der Waffen-schmied" (Lortzing). Polonaise in A (Chopin). Selections from "Der Tenor der Herzogin" (Künneke). The Butterfly's Waltz (Friml). Marionettenspiele (Plessow). Potpourri, Von Pontius zu Pilatus (Morena).

2.30—Chess Lesson. 2.50—Talk on Music. 3.20—Agricultural Talk. 3.45—The World on Gramophone Records—Macedonian Folk Songs. 4.5—Talk: Social Welfare. 4.30—Military Band Concert. 6.20—Educational Talk. 6.45—A Report (on Gramophone Records) on the International Swimming Contest, Germany v. France, relayed from Düsseldorf. 7.0—Variety Programme. 7.45—Sports Notes. 8.0—See Berlin (Witzleben). 10.0—News Bulletin. 10.30—Concert conducted by Wolf. 12 midnight—Close Down.

LEIPZIG (Germany)

1.157 kc/s (259 m.); 2 kW. Relay by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.0 a.m. 11.30 a.m.—"Jauchzet Gott in allen Landen"—Cantata (Bach) for the Third Sunday after Trinity, by the Municipal and Gewandhaus Orchestra, the Choir of St. Thomas' and Soloists. 12 noon—Hubert Mumeiler reads from his own Works. 12.30 p.m.—Concert from Berlin (Witzleben). 2.0—Weather and Time, followed by Notes on the Programme of the Week. 2.20—Agricultural Notes. 2.30—Talk: Dance Songs of our Youth, with Illustrations. 3.15—Max and Moritz. 4.0—5.45—Programme relayed from Munich. 6.0—Gramophone Records of Orchestral Music. 6.30—"Die Kreuzschreiber"—a Peasant Play (Ludwig Anzenberger). 7.45—"Die Weise von Liebe und Tod des Cornets Christoph Rilke" (Rainer Maria Rilke) Music by Casimir von Paszthory, with the Composer at the Pianoforte. 8.30—Concert of Operetta Music. The Leipzig Symphony Orchestra, conduct. by Otto Finsdeisen. Soloists: Gertude Roesner (Soprano), Eugen Hietel (Tenor), Alfred

Simon (Pianoforte). Overture "Paraph 3" (Suppé). Selection from "Der arme Jonathan" (Suppé). Two Soprano Solos from "Die Fledermaus" (Johann Strauss). Selection from "Der Göttergatte" (Lehár). Two Duets and Song from "The Count of Luxembourg" (Lehár). Martin Waltz from "Der Obersteiger" (Zeller). Selections from "A Waltz Dream" (Oscar Straus). Overture, "Frau Luna" (Lincke). Selections from "The Geisha" (Jones). Selection from "The Rose of Stamboul" (Fall).

10.30—News, followed by Dance Music from Berlin (Witzleben). 12 midnight (approx.)—Close Down.

LJUBLJANA (Yugoslavia)

522 kc/s (574.7 m.); 2.5 kW. Transmits at intervals from 9.30 a.m. 4.0 p.m.—Songs by a Vocal Quartet. 4.45—Humorous Programme. 5.0—Light Music. 8.0—Concert by a Balalaika Orchestra. 9.30—Quintet Concert. 10.0—Time, News and Light Music.

LWÓW (Poland)

788 kc/s (381 m.); 16 kW. Transmits at intervals from 10.30 a.m. 7.15 p.m.—Miscellaneous Items. 7.35—Answers to Technical Correspondence. 7.55—Racing News. 8.0—See Warsaw. 10.40—Sports Notes. 10.42—See Warsaw. 11.30 (approx.)—Close Down.

LYONS (France)

La Doua (PTT). 644 kc/s (465.8 m.); 1.5 kW. 8.0 a.m.—Review of the Paris Morning Press, relayed from Paris (Ecole Supérieure), 671 kc/s (447.1 m.). 10.30—Orchestral Concert. Talk in the interval. 12 noon—11.0 p.m.—Relay from Paris (Ecole Supérieure). 11.0 (approx.)—Close Down.

MADRID (Spain)

Union Radio (EAT). 707 kc/s (424.3 m.); 2 kW. 9.0—10.30 a.m.—Topical Review. 12.30 p.m.—Concert by the Municipal Band, relayed from the Retiro. 3.0—Chimes, Time, Theatre Notes and Concert. 4.30—8.0—Interval. 8.0—Chimes and Request Gramophone Records. 9.30—10.30—Interval. 10.30—Chimes, Time, Gipsy Programme, Song Recital by Pilar

MILAN (Italy)

Ente Italiano Audizioni Radiofoniche. 905 kc/s (331.5 m.); 7 kW. See Turin.

MORAVSKÁ-OSTRAVA (Czechoslovakia)

1,137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 7.0 a.m. 6.0 p.m.—See Prague. 6.45—Orchestral Concert, conducted by Plichta. 7.45—See Prague. 10.20—Programme Announcements and Theatre Guide. 10.25—See Prague.

MOSCOW (Russia)

Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in English and German: The Work of the Young People's Defence Brigade. 9.55—Time Signal. 10.0—Weather Forecast.

MUNICH (Germany)

563 kc/s (533 m.); 1.5 kW. Relay by Augsburg and Kaiserslautern, 536 kc/s (560 m.) and Nürnberg, 1,256 kc/s (239 m.). 10.0 a.m. (from Nürnberg)—Chamber Music. 10.45—Chimes from Our Lady's Church. 11.5—Reading of New South German Lyrics (Guido Zernatto, Julius Zerzer and Konrad Weiss). 11.30—See Leipzig. 12.10 p.m.—Concert from Frankfurt. 1.5—Time, Weather and Programme Announcements. 1.15 (from Nürnberg)—Agricultural Notes. 1.35—Concert of Light Music on Gramophone Records. 2.30—Chess Talk for Young People. 3.15—Songs for Children. 3.35—Recital of Songs and Duets (Richard Strauss and Brahms). 4.0—"The Cosy Corner." 5.45—Concert of Popular Music. 7.0—Weather and Sports Report. 7.20 (from Nürnberg)—Mandoline Recital. 7.55—Talk: A Literary Journey through Swabia. 8.15—Orchestral Concert, conducted

by Rudolf Hindemith. Soloist: Erich Kloss (Pianoforte). Prelude to "A Masked Ball" (Verdi). Concerto in F Minor for Pianoforte and Orchestra (Chopin). Symphony in D, Op. 60 (Dvorak). Overture, "The Thieving Magpie" (Rossini). March and Ballet Music from "The Queen of Sheba" (Goldmark). Waltz, Mon rêve (Waldteufel). March, Mit Standarten (Blon).

10.20—Time, Weather, News and Sports Notes. 10.45 (from Nürnberg)—Cabaret Programme. 12 midnight (approx.)—Close Down.

OSLO (Norway)

Kringkastingsselskapet, 277 kc/s (1,083 m.); 60 kW. Relay by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgründ, 662 kc/s (453.2 m.) and Rjukan, 671 kc/s (447.1 m.).

10.20 a.m.—Chimes. 10.30—Divine Service from the Fagerberg Church. 1.0 p.m.—Unveiling Ceremony of the Statue of Jens Tvedt. 4.30—Report on the Disarmament Conference relayed from Geneva. 5.0—Song Recital by Mimi Thorsen, with "Cello Obligato" by Leif Rustad. 5.30—"The Man of Destiny"—Play (Bernard Shaw). 7.0—Parliamentary Review. 7.15—Weather and News. 7.30—Talk: The Great Race under Sail from Australia to Europe. 8.0—Time Signal.

8.2 10.40—National Programme, relayed from Steinkjaer via Trondheim, 608 kc/s (493.4 m.). 8.2—Address, followed by Orchestral Selection, Nordic Suite (Torjusen). 8.45—Recitations. 9.10—Orchestral Selection: Overture, "Elverhoj" (Kuhlau). 9.20—Cantata (Holter) for Soloist, Choir and Orchestra. 9.40—Weather and News. 10.0—Topical Talk from Steinkjaer. 10.10—National Programme from Steinkjaer (continued). 10.15—Old Dances on the Hardanger Fiddle. 10.25—Martin Kvaenavika reads from his own Works. 10.40—Gramophone Dance Music. 12 midnight (approx.)—Close Down.

PALERMO (Italy)

Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. 10.40 a.m.—Concert of Sacred Music.

11.5—Agricultural Notes. 12.45 p.m.—Giornale Radio. 1.0—2.0—Dance Music. In the interval at 1.30—Time Signal, Announcements, and Weather Forecast. 5.30—6.30—Dance Music and Light Music. In the intervals, Sports Notes. 8.0—Announcements and Giornale Radio. 8.20—Sports Notes. 8.25—Light Music on Gramophone Records. 8.30—Time Signal and Announcements.

8.45—Orchestral Concert, conducted by Armando La Rosa Parodi. Concerto Grosso for Strings and Pianoforte (Bloch). Symphonic Suite, Antar (Rimsky-Korsakov). Talk on Art. Antiche danze ed arie—First Suite (Respighi). Sicilia canora (Mule). Overture, "Kamarinskaja" (Glinka). After the Concert, Theatre Notes and Programme of Songs. 10.55—News and Close Down.

PARIS (France)

Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW. Time Signals (on 2,650 metres) at 10.26 a.m. and 11.26 p.m. (preliminary and 6-dot Signals). 1.0 p.m.—News Bulletin. 1.10—Weather Report.

1.25—Orchestral Concert conducted by Edouard Flament. Soloists: M. Charon (Violin) and M. Krabanski (Cello). Selection from "The Tales of Hoffmann" (Offenbach). Waltz, Wiener Blut (Joh. Strauss-Winter). Babiole et Songe (Flament). Violin Solo from "Paganini" (Lehár-Salabert). Cello Solo: Overture, "Poet and Peasant" (Suppé-Godfrey). Danse mystique (Ganne). Violin Solo. Waltz, Moonlight on the Alster (Fetras-Bosc).

2.30—6.45—Interval. 6.45—Programme for Children. 7.15—Le Journal Parlé. 8.20—Weather Report. 8.30—Gramophone Concert. Part I. Russian Music. Part II. Light Music. 10.0 (approx.)—Close Down.

PARIS (France)

Poste Parisien. 914 kc/s (328.2 m.); 60 kW. 12 noon—Gramophone Records, News and Announcements. 12.15 p.m.—Popular Music on Gramophone Records. 1.45—News and Announcements. 2.0—7.0—Interval. 7.0—

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Popular Music on Gramophone Records, News and Announcements. 7.30—Sponsored Gramophone Concert. 8.0—Talk. 8.30—Gramophone Records, Talk and News. 8.45—Vocal and Orchestral Concert. Overture, "Le Roi d'Ys" (Lalo). Waltz from "The Damnation of Faust" (Berlioz). Lyric Suite (Richard Strauss). First Suite from "La Farandole" (Dubois). Hymn to the Sun from "Le Coq d'Or" (Rimsky-Korsakov). Entr'acte from "Die Königskinder" (Humperdinck). Ballet from "Bacchus" (Massenet). Schatzwäizer (Johann Strauß). Marche héroïque (Saint-Saëns). 10.45—News Bulletin. 10.50 (approx.)—Close Down.

PARIS (France)

Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW. 7.45 a.m.—Light Music on Gramophone Records. 8.0—News, Weather and Press Review. 8.30—Physical Culture. 10.20—Book-keeping Lesson. 10.40—Spanish Lesson. 12 noon—Religious Address by the Reverend Father Lhande. 12.20 p.m.—Toccata and Fugue in E Minor for Organ (Bach). 12.30—Bilboquet. 12.45—Press Review, News and Weather. 1.0—Gramophone Concert. Ballet Music from "Gretina Green" (Guiraud). Selection from "Le Cœur y est" (Pares-Van Parys); Selection from "Louis XIV" (Pares-Van Parys). Selection from "Déde" (Christiné). Selection from "Le bon roi Dagobert" (Rousseau). Sans tambour ni trompette (Casadesu). Aria from "Lakmé" (Delibes). Scènes pittoresques (Massenet). 2.0—Concert of Decet Records. 4.0—5.0—Non-stop Variety. 5.45—Gramophone Concert. Vieux airs limousins (Rochaud). The Ocean (Spencer). Extase (Ganne). Plaisir d'amour (Martini). Etude in G (Zoubalov). Spanish Dance (Granados). Tambourin chinois (Kreisler). Nuits algériennes (Grieg). Le pas d'armes du roi Jean (Saint-Saëns). The Little Goblins (Eilenberg). Melody for Cello (Rubinstein). In the Shadows (Finck). Selection from "Les Noces de Jeannette" (Massé). Overture, "Zampa" (Hérold). Magali. Aubade d'oiseaux (Peguri). Meditation from "Thais" (Massenet). New York (Padilla). 6.45—Concert by the Paris Alhambra Orchestra. 7.45—Radio-Paris Circus. 8.15—News, Sports Notes, Press Review and Weather. 8.30—Popular Concert on Gramophone Records. 9.15—Press Review and News. 9.30—Gramophone Dance Music.

PITTSBURGH (U.S.A.)

Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Relayed by W3XK on 48.86 m., and 25.25 m. (see Short-Wave List). Transmits at intervals from 3.55 p.m. 9.0 p.m.—Songs of Home, from New York. 9.30—Roaring Spring Boys' Glee Club. 10.0—Shadyside Presbyterian Church Services. 11.0—Green Bag Cement Time Signal. 11.1—Temperature Report, Electric League. 11.2—Weather Report. 11.5—Teaberry Sport Review. 11.10—Press News Reeler. 11.15—Westinghouse Concert. 11.45—Programme to be announced. 11.50—Time Signal. 12 midnight—KDKA Players. 12.30—3.45 a.m. (Monday)—New York Relay. 12.30—Three Bakers. 1.0—National Convention of Socialist Party. 2.0—Enna Jettick Melodies. 2.15—Bayuk Stag Party. 2.45—Making the Movies. 3.15—The Old Singing Master. 3.45—War Stories by Walter Myers. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report, Electric League. 4.12—Weather Report. 4.15—Press Last Minute News. 4.20—Alexander Roy, Tenor. 4.30—Piano Mooods from New York. 4.45—Frank Masters and his Orchestra, from New York. 5.0—Time and Good-night.

PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.5 a.m. 10.35 a.m.—Literary Programme. 11.0—See Brno. 12 noon—Chimes. 12.5 p.m.—Concert from Moravská-Ostava. 1.30—Gramophone Records of Variety Music. 2.0—Agricultural Report. 2.15—Talk. 4.0—See Brno. 6.0—German Transmission—Vocal and Orchestral Concert of Czech Music. 7.0—Dance Music. 7.45—Vocal Quartet Selections. 8.15—"The First Spring Trip"—Sketch (Zevloun). 9.0—Time Signal. 9.2—Orchestral Concert. 10.0—Time, News and Announcements. 10.25—Gramophone Records of Variety Music and Czech Jazz for Two Pianofortes.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)

743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.). 9.45 a.m. (from Lausanne)—Protestant Service. 11.0 (from Geneva)—Light Music on Gramophone Records. 12.30 p.m.—Weather Forecast and News Bulletin. 12.40—Orchestral Concert. 2.0—3.0—Interval. 3.0 (from Montreux)—Running Commentary on the Davis Cup Match, Italy v. Switzerland. 6.0 (from Geneva)—Light Music on Gramophone Records. 7.0 (from Geneva)—Catholic Address. 7.30—Gramophone Concert (contd.). 8.0 (from Geneva)—Motet Concert. Soloist: Annie Pautex (Harpischord). Harpsichord Solos: (a) Sonata in C Minor (Galuppi), (b) Les Cyclopes (Rameau). Adoramus (Anon). O vos Omnes (Da Vittoria). Jesus dultis (Da Vittoria). Breton Melody, The Rosary (arr. Charles Fallier). Harpsichord Solos: (a) Pavane and Rondo (Chaubonnières), (b) Le rossignol en amour, Tic-toc-choc, Musette and Taverny (Couperin), (c) Cuckoo (Pasquini), (d) Sonata (Scarlatti). Petite Camusette (Josquin des Prés). Madrigal (Monteverdi). Brangle de Bourgogne. Madrigal (Henri Gagnebin). Cornemuse (André Patry). Le Brick (Darius Milhaud). Deux rondels de Charles d'Orléans (Debussy): (a) Dieu qu'il fait bon regarder, (b) Yver. 9.0 (from Lausanne)—Literary and Musical Programme. The Station Orchestra, conducted by Fernand Closset, with Readings by Willy Gascard. 10.0—Weather Forecast and News Bulletin. 10.15 (approx.)—Close Down.

ROME (Italy)

Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayed by Naples, 941 kc/s (319 m.), and ZRO, 11,810 kc/s (25.4 m.). 9.40 a.m.—Giornale Radio. 9.45—Agricultural Talk. 10.0—Religious Programme. 10.15—Sacred Music. 10.45—11.0—Sports Notes and Amusement Guide. 12.30—2.0 p.m.—Concert of Light Vocal and Instrumental Music. In the interval at 1.30—Time and Announcements. 4.15 (Naples)—Programme for Children. Weather and Sports Notes. 4.45—Sports Notes. 5.0—6.30—Vocal and Instrumental Concert. 7.20 (Naples)—Shipping and Sports Notes. 7.30—Football Report, Announcements and News Bulletin. 8.0—Time and Announcements. 8.5—Gramophone Records of Variety Music. 8.30—Sports Notes. 8.45—"Countess Maritza"—Operetta in Three Acts (Kalmán). In the intervals: Reading and Topical Review. News after the Programme.

SCHENECTADY (U.S.A.)

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayed by W2XAF and W2XAD (See Short Wave List). Transmits at intervals from 1.0 p.m. 8.30 p.m.—5.30 a.m. (Monday)—New York Relay. 8.30—National Sunday Forum. 9.0—Jodent Programme with Jane Froman. 9.15—John Fogarty (Tenor). 9.30—Musical Programme. 9.45—Pastels. 10.0—Slow River. 10.30—Pop Concert. 11.0—Catholic Hour. 11.30—Our American Schools. 12 midnight—General Electric Circle. 12.30 a.m. (Monday)—Orchestral Gems. 1.0—Chase and Sanborn Programme. 2.0—Our Government by David Lawrence. 2.15—American Album of Familiar Music. 2.45—L'Heure Exquise. 3.15—Schaeffer Lifetime Revue. 3.30—Musings. 3.45—Sunday at Seth Parker's. 4.15—Russ Columbo (Baritone). 4.30—Jesse Crawford (Organist). 5.0—Larry Funk's Orchestra. 5.30—Lew Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)

653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.) and Berne, 1,220 kc/s (246 m.). 10.0 a.m. (from Berne)—Catholic Service. 10.45 (from Berne)—Concert by the Solothurn Municipal Orchestra conducted by Stephan Jaeggi. 11.30 (from Berne)—A Surprise Visit with the Microphone. 12 noon—Concert by the Station Orchestra. 12.30 p.m.—Time Signal, Weather Report and News. 12.40—Orchestral Concert (contd.). 1.35 (from Berne)—Concert of Popular Swiss Music by the "Echo von

SUNDAY continued

Thunersee" Orchestra and Trudi Eichenberger (Yodeler). 2.15—3.30—Interval. 3.30—Gramophone Concert of Schubert's Music. 4.0 (from Berne)—Mozart Programme.—The Vienna Sonatas for two Violins (arr. Kaempfert). In the intervals, Readings from Mozart's Letters. 5.0 (from Berne)—Reading. 5.30—Soldiers' and Folk Songs on Gramophone Records. 6.0 (from Berne)—Report of the International Chess Tournament, relayed from the Berne Chess Club. 6.30—Jack Hylton and his Dance Band on Gramophone Records. 7.0—Time Signal, Weather Forecast and Sports Results. 7.5 (from Berne)—Teddy Bear's English Half-hour. 7.30 (from Berne)—Talk: Richard Wagner and Mathilde Wesendonk. 8.0 (from Basle)—Dvorak and Tchaikovsky Concert by the Basle Trio. Eduard Henneberger (Pianoforte), Karl Schwallier (Violin) and Fritz Abel (Cello). Introductory Talk by Otto Maag. 9.15—Recitations by Fritz Liebrich. 9.30—Weather Forecast and News Bulletin. 9.45—Late Concert by the Station Orchestra. 10.15—Sports Report. 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden)

Radiojäst (SASA). 689 kc/s (436 m.); 55 kW. Relayed by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.), and Sundsvall, 554 kc/s (542 m.). 11.0 a.m.—Divine Service Relay. 12.45 p.m.—Weather Forecast. 1.0—Popular Music on Gramophone Records. 4.0—Programme for Children. 4.30—Concert by a Military Band. 5.30—Choral Concert. 6.0—Divine Service Relay. 7.15—Weather, News and Sports Review. 7.35—Talk. 8.0—Chopin Pianoforte Recital by Fritiof Kellberg, relayed from Malmö, 1,301 kc/s (231 m.). Ballad in G. Nocturne in D Sharp. Etude in C. Etude in E Flat Minor. Fantaisie impromptu. 8.25—A Comedy (Giovacchine Forzano). 9.45—Weather and News Bulletin. 10.0—Orchestral Concert of Light Music. 11.0 (approx.)—Close Down.

STRASBOURG (France)

Radio-Strasbourg (P.T.T.). 869 kc/s (345 m.); 11.5 kW. 10.45 a.m.—Protestant Service. 11.30—Catholic Service. 12 noon—Gramophone Concert of Classical Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert (continued). 2.0—Talk by M.P. Moffet: Excavations in Egypt—Taxis. 2.15—Dance Music on Gramophone Records. 3.15—3.45—Interval. 3.45—Dance Music on Gramophone Records. 4.15—Talk in German. 4.30—Relay of a Concert given by the Toulon Fleet in Marseilles Harbour. 6.0—Health Talk in French. 6.15—Sports Results. 6.20—Sports Talk in French. 6.30—Orchestral Concert, conducted by Maurice de Villers. Divertissement on Russian Songs (Rabaud). Selection and Waltz from "Gretina Green" (Guiraud). Overture, "La Princesse Jaune" (Saint-Saëns). Selection from "Werther" (Massenet). Rhapsody No. 2 (Liszt). Serenade and Caprice (Albeniz). Slavonic Dance No. 1 (Dvorak). 7.30—Time Signal. 7.32—News in French and German. 7.45—Dance Music. 8.30—Alsation Programme—Songs by a Double Quartet and Mandoline Quartet Selections. 10.30—Dance Music from the Casino, Niederbronn-les-Bains. 12 midnight (approx.)—Close Down.

STUTTGART (MÜHLACKER) (Germany)

Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayed by Freiburg, 527 kc/s (570 m.). Transmits at intervals from 6.15 a.m. (Hamburg Relay). 11.30 a.m.—See Leipzig. 12 noon—Pianoforte Recital by Otto Sonnen. 12.40 p.m.—Recital of Songs to Words by Hermann Löns, by Maria Waldner (Songs to the Lute). 1.10—Topical Talk. 1.25—Heinrich Rehkemper sings on Gramophone Records. 2.10 (from Karlsruhe)—Talk: Asparagus-Growing. 2.40—Choral Concert, relayed from Münster a. Neckar. 3.0—"How Stanley found

Livingstone"—a Radio Sequence for Children (arr. Will Tisot). 4.0—Concert by the Stuttgart Philharmonic Orchestra, conducted by Gustav Gölich. Soloist: Louis Schuyler (Cello). Part I: Classical Music. Overture, "Jean de Paris" (Boieldieu). Concerto for Cello and Orchestra, Op. 33 (Smetana). Part II: Marches and Waltzes. Peasants' March (Fall). Waltz, Golden Rain (Waldeufel). March, Treue Waffengefährten (Blankenburg). Waltz from "Der liebe Augustin" (Fall). March, Zum Städtehaus (Meissner). Waltz, Gold and Silver (Lehar). Dragoner-Marsch (Joh. Strauss). Waltz, Am Neckarstrand (Müllöcker). March from "Boccaccio" (Suppé). 6.0 (from Mamielin)—Authors' Programme—Emil Belzner. 6.30—Violin and Pianoforte Recital of Heinrich Meyer's Music. The Composer at the Pianoforte. Juliette Moegelin (Violin). Two Pianoforte Solos: (a) Totentanz, (b) Nebel im Wald. Prelude and Gavotte for Violin and Pianoforte. Three Pianoforte Solos: (a) Gang über die Tuileries, (b) Imitten des Waldes, (c) Blick von meinem Fenster auf Dächer. Romance for Violin and Pianoforte. 7.10—Sports Notes. 7.30—"Adventures with Foreign Languages" (arr. Martin Lang). 8.15—See Munich. 10.15—Time, Weather and News. 10.55—Dance Music from Berlin (Witzleben). 12 midnight (approx.)—Close Down.

TOULOUSE (France)

Radiophonie du Midi. 779 kc/s (385 m.); 8 kW. 12.30 p.m.—Catholic Service. 1.0—News Bulletin. 1.15—Sound Film Music. 1.30—Agricultural Report. 1.45—Protestant Service. 3.30—Transmission of Pictures. 5.0—Esperanto Lesson. 5.15—Military Music. 5.30—Symphony in C (Schubert). 6.15—Dance Music. 6.30—Horse Racing Results. 6.45—Cello Solos. 7.0—Orchestral Selections. 7.15—Light Music. 7.30—News Bulletin. 7.45—Military Music. Hungarian Rhapsody (Liszt). Overture, "Zampa" (Hérold). Wiegeliend (Brahms). 8.0—Accordion Solos. 8.15—Orchestral Selections. 8.30—Songs from (a) "Le Roi d'Ys" (Lalo) and (b) "Othello" (Verdi). 8.45—Orchestral Concert. 9.30—Songs from "Werther" (Massenet). 9.45—Orchestral Selections from (a) "Pelléas et Mélisande" (Debussy) and (b) "Iphigenia in Aulis" (Gluck). 10.0—Orchestral Music. 10.30—North African News. 10.45—English Music. 11.15—Light Music. 11.30—Songs from (a) "Pelléas et Mélisande" (Debussy) and (b) "Lakmé" (Delibes). 12 midnight—Weather, Announcements and Close Down.

TRIESTE (Italy)

Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 10 kW. 9.40 a.m.—12.20 p.m.—See Turin. 12.20—German Lesson on Gramophone Records. 12.30—7.5—See Turin. 7.5—Quintet Concert. Romantic Overture (Kéler-Béla). For Paris (Waldeufel). Ricordi (Allegro). Selection (Stolz). Selection from "Frederica" (Lehar). Maria (Mancini). Amore, amore (Moscini). 8.0 till Close Down—See Turin.

TURIN (Italy)

Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayed by Milan, 905 kc/s (331.5 m.), Genoa, 959 kc/s (312.8 m.), and Florence, 599 kc/s (500.8 m.). 9.40 a.m.—Giornale Radio. 9.55—Chimes and Missa Cantata from the Cathedral of San Giusto. 11.0—Religious Programme. 11.20—Agricultural Talk. 12.30 p.m.—Concert of Variety Music. 1.0—Time Signal and Announcements. 4.0—Dance Music, Sports Notes in the Interval. 6.15—Giornale Radio and Football Report. 6.25—Topical Review. 7.0—Announcements. 7.10—Variety Music. Overture, "Joan of Arc" (Verdi). Song, Scherzo (Boschi). Song. 7.30—Time Signal and Announcements, followed by Light Music on Gramophone Records. 8.0—Giornale Radio, Sports Notes and Popular Music on Gramophone Records. 8.30—An Opera (to be announced). In the intervals, Talk, Theatre Notes and Giornale Radio. After the Opera, News Bulletin.

VIENNA (Austria)

Radio-Wien. 581 kc/s (517 m.); 15 kW. Relayed by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,058 kc/s (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.) and Salzburg, 1,373 kc/s (218 m.). 10.0 a.m.—Choral Concert. 10.30—Talk: Plastic Art and Research. 11.0—Symphony Concert by the Vienna Symphony Orchestra, conducted by Dr. Felix Gatz. Soloist: Senta Benesch (Cello). Overture, "Romeo and Juliet" (Tchaikovsky). Rocco Variations (Tchaikovsky). The Fourth Symphony in B Flat (Beethoven). 12.20 p.m.—Water Ski Races for the National Cup. 12.35—Concert of Light Music. 1.50—Quartet Concert of Viennese Music. 2.40—Time and Programme Announcements. 2.50—Part Relay of the Haydn Festival' from Melk Abbey "Harmoniemesse"—by the Choir and Orchestra of the Schubertkirche. 3.45—Documents of the Age—Readings from the Works of Heinrich Hensler, Willy Seidl and Johannes Jensen. 4.10—Concert of Chamber Music by the Austrian Pianoforte Quartet. Adagio and Rondo for Pianoforte Quartet (Schubert). Pianoforte Quartet in C Minor, Op. 13 (Richard Strauss). 5.10—Advanced English Lesson. 5.30—Orchestral Concert, with Saxophone and Clarinet Solos. 6.40—Talk: Through the Balkans to Constantinople. 7.10—Fritz Müller-Partenkirchen reads from his own Works. Introductory Talk by Karl Jäger. 7.40—Recital on Two Pianofortes by Lily and Emmy Schwarz. 8.10—Time, Sports Notes and Programme Announcements. 8.20—"The Return of Hagen"—Play in Four Acts (W. Burggraf). 10.0—News Bulletin. 10.15—Dance Music with Vocal Refrains.

WARSAW (Poland)

Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW. 10.0 a.m.—Service relayed from Lwów. 11.58—Time Signal. 12.5 p.m.—Programme Announcements. 12.10—Weather Report. 12.15—Concert by the State Police Band, conducted by Al. Sielsky. Soloist: L. Witunska (Soprano). Polonaise (Oginsky). Kol Nidrei (arr. Risenfeld). Waltz from "Melusine" (Doppler). Songs: (a) Air from Act Four of "La Traviata" (Verdi), (b) Waltz from "Romeo and Juliet" (Gounod). Selection from "Madame Butterfly" (Puccini). Comic Overture (Eilenberg). Songs: (a) Selection (Proch), (b) Russian Nightingale Song (Alabiev). Selection from "The Circus Princess" (Kálmán). Mazurka (Osmansky). Pilsudsky's March (Lampe). In the interval at 12.55—Talk. 2.0—Talk. —Recital of Songs by the Young Blonie Choral Society. 2.30—Talk on Bee-keeping. 2.50—Song Recital (contd.). 3.5—Talk on Economics. 3.25—Song Recital (contd.). 3.40—Programme for Children. 4.5—Light Music on Gramophone Records. 4.26—Talk on the Polish Language. 4.35—Popular Music on Gramophone Records. 4.50—Useful Hints. 5.10—Choral Concert by the Dan Choir. In the interval, Report from the Race Course and Dance Music. 7.15—Miscellaneous Items. 7.35—Answers to Correspondents. 7.50—Interval. 7.55—Programme Announcements. 8.0—Concert by the Warsaw Philharmonic Orchestra, conducted by Josef Oziminsky. Soloist: Hans Franzos (Violin). March from "The Queen of Sheba" (Goldmark). Melody (Paderewsky). Selection (Katsky). Waltz, Künstlerleben (Johann Strauss). Violin Solos: (a) Air from the Concerto in A Minor (Goldmark), (b) Minuet (Mozart-Burmester), (c) Der Vogel als Prophet (Schumann-Franzos), (d) Schön Rosmarin (Kreisler). Ballet Music from "La Gioconda" (Ponchielli). Mazurka from "The Haunted Castle" (Moniuszko). Violin Solos: (a) Paraphrase on the Prize Song from "The Mastersingers" (Wagner-Wilhelmy), (b) Ballad and Polonaise (Vieuxtemps). Overture, "Mignon" (Thomas). Spinning Song from "The Flying Dutchman" (Wagner). Overture, "Tannhäuser" (Wagner). In the interval at 8.55—Reading. 9.55—Aviation Weather Report. 10.10—Sports Notes. 10.20—Dance Music. 10.40—Sports Notes. 10.50—Dance Music. 11.30 (approx.)—Close Down.

PRINCIPAL EVENTS

MONDAY (June 13)

SYMPHONY CONCERTS

- 7.35 p.m. Vienna, Heilsberg: The Philharmonic Orchestra (conductor, Koussevitzky).
- 9.0 " Italian Stations (all).
- 9.25 " Breslau: Symphony No. 6 (Pathétique) (Tchaikovsky).

CONCERTS (Vocal and Instrumental)

- 5.0 p.m. Daventry: The B.B.C. Orchestra (Conductor, Dr. Boult).
- 6.0 " Vienna: Serenade from Castle Kreuzenstein.
- 8.0 " Budapest: Organ and Choral music.
- 8.0 " Leipzig, Königs Wusterhausen: Georg Vollerthun programme.
- 8.30 " Copenhagen: Millöcker-Lecocq programme.
- 9.10 " Frankfurt, Königs Wusterhausen, Stuttgart: Wagner programme.
- 10.15 " Copenhagen: Spanish music.
- 10.45 (app.) Munich, Frankfurt, Stuttgart: Late Concert.

OPERAS AND OPERETTA

- 6.5 p.m. Munich: "Lohengrin" (Wagner), from the National Theatre.
- 8.0 " Radio-Paris: "Il Trovatore" (Verdi) (gramophone).
- 8.0 " Warsaw: "The Count of Luxembourg" (Lehar).

CHAMBER MUSIC

- 7.0 p.m. Bucharest: Theodoresco Quartet.
- 9.40 " Daventry: Catterall Quartet.

RECITALS

- 5.10 p.m. Berlin: Schubert Songs.
- 6.30 " Brussels No. 2: Sonatas.
- 7.30 " Frankfurt, Stuttgart: English Sea Shanties.
- 8.0 " London Regional: Dr. Schweitzer (organ).
- 9.0 " Brussels No. 1: Violin.

DANCE MUSIC

- 10.50 p.m. Warsaw.

Verdi's Troubadour
Il Trovatore, as most of the world knows it, *Le Trouvère*, as they call it in France, is being broadcast from gramophone records by RADIO-PARIS this evening, and at BUCHAREST on Friday. The popularity which it has always enjoyed depends almost wholly on the wonderful succession of melodies which make it up; as drama it is quite unsatisfactory. No hearer can follow the action without being informed that more than twenty years before the

curtain rises, Manrico, son of the Count of Luna, had been stolen by a gypsy woman, Azucena, in revenge for the burning of her mother as a witch, by the Count's orders. Manrico the Troubadour does not know the real story of his birth, and contends with the present Count Luna for the hand of the fair Leonora, without realising that his rival is his brother. The story ends in grim tragedy; Leonora poisons herself and dies in Manrico's arms. He is slain by the Count's order, and only then does Azucena, who is awaiting the same dreadful death as was meted out to her mother, tell the Count that he is his brother's murderer.



[Photo: Hermann Becker, Munich]

The National Theatre, Munich, from which *Lohengrin* is being relayed this evening.

NATIONAL		
	kc/s	m. kW.
London:	1,148	261.3 50
Daventry:	193	1,554.4 30
Northern:	995	301.5 50
10.15 a.m.—The Daily Service.		
10.30—Time Signal (Greenwich), Shipping Forecast.		
10.45—11.0—"Off the Shelf"—VII.		
12 noon—Nora Fletcher (Soprano). The Rowena Franklin String Quartet.		
12.45 p.m.—The Commodore Grand Orchestra.		
1.0—Time Signal (Greenwich).		
2.0—Gramophone Records.		
2.30—3.0—World History. Mr. J. A. White: "Empires, Movements, and Nations"—VIII, The League of Nations."		
3.25—French Dialogue. Mademoiselle Camille Viere and Monsieur E. M. Stéphan.		
3.45—A Pianoforte Recital by Auguste de Radwan.		
4.15—Mozchetto and his Orchestra.		
4.45—Time Signal (Greenwich).		
5.0 (Daventry)—The Children's Hour The B.B.C. Orchestra. Conducted by Adrian Boult.		
5.15 (London and Northern)—The B.B.C. Dance Orchestra.		
6.0—"The First News."		
6.30—Time Signal (Greenwich).		
6.30—The Foundations of Music. Bach's Choral Preludes. Played by D. W. G. Alcock.		
6.50—"New Books." Miss V. Sackville-West.		
7.10—7.25—Mr. Peter Fleming: "The Mystery of Colonel Fawcett."		
7.30—"Music, Old and New"—IX. Mr. Victor Hely-Hutchinson.		
8.0—Vaudeville. The Famous Roosters Concert Party. Percy Merri-man.		
9.0—Time Signal (Greenwich).		
9.0—"The Second News."		
9.15—Shipping Forecast; New York Stock Market Report.		
9.20—"The Rungs of the Ladder."		
9.40—Chamber Music. George Parker (Baritone). The Catterall String Quartet: Arthur Catterall (Violin); Laurance Turner (Violin); John Fry (Viola); Herbert Withers (Violoncello).		
11.0—12 midnight—Dance Music.		
11.30—Time Signal (Greenwich).		

REGIONAL		
	kc/s	m. kW.
London:	842	356.3 50
Midland:	752	398.9 25
Northern:	626	479.2 50
10.15 a.m. (London and Northern)—The Daily Service.		
10.30—11.0 (London and Northern)—Daventry National Programme.		
11.30—12 noon (London)—Experimental Television Transmission (Baird Process).		
12 noon—Ernest Parsons and his Orchestra.		
1.0 p.m.—Reginald Dixon. At The Organ.		
1.45—3.0—The Midland Studio Orchestra. Astley Fulford (Baritone).		
3.45 (London and Northern)—Daventry National Programme.		
5.15—"The Children's Hour."		
6.0—"The First News."		
6.30 (Northern and London)—The Nutgrove Prize Band. Conducted by J. Stevens. Hamilton Harris (Bass).		
6.30 (Midland)—A Gramophone Recital. Arranged and presented by Robert Tredinnick.		
7.15 (Midland)—The Studio Chorus. Under the direction of Edgar Morgan.		
7.45 (Midland)—"Summer Days." Reginald Morgan (Tenor); Vincent Curran (Readings). The Studio Orchestra.		
8.0 (London)—An Organ Recital by Albert Schweitzer, relayed from St. Margaret's, Westminster.		
8.0 (Northern)—Mr. Maurice A. R. Horspool: "Holidaying with our Ancestors."		
8.20 (Northern)—The Studio Orchestra. Tom Bridge (Pianoforte).		
8.30 (London)—The B.B.C. Theatre Orchestra. Conductor, Leslie Woodgate. Jamieson Dodds (Baritone).		
9.15 (Midland)—The Music of Glazounov. A Pianoforte Recital. By Cora Astle. Three Miniatures, Op. 42; Barcarolle, Op. 22, No. 7; Gavotte, Op. 40, No. 3; Nocturne, Op. 37; Waltz, Op. 41.		
9.45—A. J. Alan. "My Adventure at Chislehurst."		
10.15—"The Second News."		
10.35—11.0 (Midland)—As London.		
10.35—12 midnight (London and Northern)—Dance Music.		

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

BARCELONA (Spain)

Radio-Barcelona (EAJ1). 860 kc/s (349 m.); 8 kW. Transmits at intervals from 12 noon. 8.0 p.m.—Trio Concert. Serenade (Foselli). Minuet (Brémond). Selection from "Hélène" (Saint-Saëns). Hungarian Dance, No. 6 (Brahms). 8.30—Exchange Quotations, Request Gramophone Records, Sports Notes and News. 10.0—Chimes and Weather Forecast. 10.5—Concert of Sardanas. 10.45—Recital of Poems in Catalan by Gabriel Alomar, read by Adrian Gual. 11.0—Concert by the Station Orchestra. Selection from Suite exotique (Delmas). Andante con moto from the Italian Symphony (Mendelssohn). Serenade (Pacheco). 11.20—Concert by the Mataro Philharmonic Orchestra, conducted by Sanchez Gonzalez. Intermezzo, La Leyenda del Beso (Soutullo-Vert). Andalusian Dance No. 5 (Granados). Intermezzo, In the Oasis (Martí). Nocturne in E Flat (Chopin). Anitra's Dance from "Peer Gynt" (Grieg). Alborada (Caballero). Intermezzo from "El baile de Luis Alonso" (Jiménez). 11.30—Concert of Dance Music by the Melody Boys Orchestra, relayed from the Excelsior Dance Hall. 1.0 a.m. (Tuesday)(approx.)—Close Down.

BELGRADE (Yugoslavia)
 697 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 11.0 a.m. 5.0 p.m.—Concert of Light Music by the Station Orchestra. Pathetic Overture (Krstic). Selection (Gervais). Second Little Suite (Micheli). Waltz, Die Werber (Lanner). 6.55—Time Signal and Programme Announcements. 7.0—Talk. 7.35—See Vienna. 9.40 (approx.)—News Bulletin.

BERLIN (Germany)
 Königs Wusterhausen: 183.5 kc/s (1,635 m.); 60 kW. Transmits at intervals from 5.45 a.m. 12.5 p.m.—English Lesson for Schools; followed by Concert of Newly-released Gramophone Records, and Second Weather for Farmers.

12.55—Time Signal. 1.35—News Bulletin. 2.0—Gramophone Concert of Lortzing Music, relayed from Berlin (Witzleben). 3.0—Talk for Young People. 3.30—Weather and Exchange. 3.40—Talk for Young People. 4.0—Educational Talk. 4.30—5.30—See Berlin (Witzleben). 5.35—Talk: Tendencies in Modern Evangelical Theology—The Rediscovery of Luther. 6.0—Making Music with Invisible Partners. 6.30—Elementary Spanish Lesson. 6.55—Weather for Farmers. 7.0—Topical Talk. 7.20—Agricultural Talk. 7.35—Talk: Lenin and the Intellectual Bases of Bolshevism, followed by Weather for Farmers. 8.0—See Leipzig. 9.0—News from Berlin (Witzleben). 9.10—See Frankfurt. 10.15—Weather, News and Sports Notes, followed by Concert from Berlin (Witzleben).

BERLIN (Germany)
 Witzleben. 715 kc/s (419.5 m.); 1.5 kW. Transmits at intervals from 6.0 a.m. (Gymnastics and Concert Relay). 4.30 p.m.—Recital of Songs by Yella Hochreiter (Contralto). Six Songs (Julius Weismann): (a) Nachtlied eines Kindes, (b) Gleich und gleich, (c) Juli, (d) Spanisches Volkslied, (e) Beatrice spricht, (f) Sommer. Songs (Max Reger): (a) Und hab' so grosse Sehnsucht doch, (b) Des Kindes Gebet, (c) Volkslied, (d) Waldeinsamkeit, (e) Ich glaub' lieber Schatz, (f) Mei Bua. 4.50—Pianoforte Recital of Hungarian Music by Irene Marik (Pianoforte). Sonatina (Béla-Bartók). Pianoforte Pieces, Op. 11 (Zoltan Kodaly). Improvisations on Hungarian Folk Songs, Op. 20 (Béla-Bartók). 5.10—Schubert Song Recital by Paul Stieber-Walter (Tenor). Aus dem Schwanengesang: (a) Abschied, (b) Aufenthalt, (c) In der Ferne, (d) Ständchen, (e) Frühlingssehnsucht. 5.30—Tales by "Dr. Ueberall." 5.50—Economic Review. 6.15—Labour Market Report. 6.20—Part Relay of the Celebrations of the Seventh Centenary of the Town of Bernau. 6.55—"The Witzleben Station informs its Listeners." 7.0—Topical Talk. 7.10—Talk: From a Divorce Court. 7.35—Talk for the Seventieth Birthday of Johannes Cotta.

8.0—A Programme of Dance Music by the Ludwig Rüh Band, with Raimund Gessner (Tenor). 9.0 (in an interval)—News and Sports Notes. 10.0—Weather, News and Sports Notes. 10.15—See Frankfurt. After the Relay: Concert of Marches and Dances. Wedding March from "A Midsummer Night's Dream" (Mendelssohn). Waltz from "Sleeping Beauty" (Tchaikovsky). March from "Carmen" (Bizet). Waltz from "Der Rosenkavalier" (Richard Strauss). Triumphant March from "Aida" (Verdi). Waltz from "Hänsel and Gretel" (Humperdinck). March from "The Veil of Pierrette" (Dohnanyi). Waltz from "The Count of Luxembourg" (Lehár). Indigo-Marsch (Johann Strauss). Waltz, Dorfschwalben aus Oesterreich (Josef Strauss). March, The Star Spangled Banner (Sousa).

BORDEAUX-LAFAYETTE (France)
 (PTT). 986 kc/s (304 m.); 13 kW. Transmits at intervals from 12.45 p.m. 7.30 p.m.—Announcements, Exchange Quotations and Market Prices. 7.40—Sports Notes. 7.55—Lottery Results. 8.0—Talk on Children's Ailments. 8.15—Charades. 8.20—News Bulletin and Weather Forecast. 8.30—Concert. Soloists: Mme. Germaine Luquiaud (Vocalist), Pierre Samson (Recitations), M. Barouk (Cello), Mme. Hell (Pianoforte), M. R. Poustis (Violin), and M. Grange (Pianoforte). Sonata for Cello and Pianoforte (Pierne). Two Songs: (a) Se tu m'ami (Pergolesi), (b) Cleopatra's Song from "Julius Caesar" (Handel). First Movement from the Concerto for Pianoforte (Mendelssohn). Recitations. Three Movements from the Second Sonata for Pianoforte (Beethoven). Two Pieces for Cello (Saint-Saëns). Songs: (a) Song from "Proserpine" (Perisiello), (b) Agatha's Song from "Der Freischütz" (Weber). Violin Solos: (a) Liebesleid (Kreisler), (b) Rondo (Mozart). Recitations. Pianoforte Solos: (a) Serenade and (b) Mazurka (Borodin).

BRATISLAVA (Czechoslovakia)
 1,076 kc/s (279 m.); 14 kW.

MONDAY

continued

Transmits at intervals from 11.0 a.m. 6.0 p.m.—*Recital of Violin Sonatas*, by Prof. Actardjeff. Sonata in G (Mozart). Sonata in G Minor (Brahms). Sonata in G Minor (Scheidt-Trnavsky).
7.0—Brass Band Concert. 7.40—*Recital of Songs*. 8.0—See *Brno*.
9.0—See *Prague*. 9.30—Slovakian Music. 10.0—See *Prague*. 10.15—Programme. Announcements and News. 10.20—Concert from the Museum Café.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by *Gleitwitz*, 1,184 kc/s (253 m.).

Transmits at intervals from 6.0 a.m. 6.0 p.m.—See *Vienna*. 7.25—Weather for Farmers, followed by French Lesson. 7.40—Talk: "The Discovery of the Polar Regions." 8.5—Weather Report. 8.12—Talk: "The Climate and Weather Conditions in the Northern Polar Regions." 8.30—Concert by the *Silesian Philharmonic Orchestra*, conducted by Ernst Prade. Symphonietta in One Movement, Op. 2 (Jelinek). Eine Nachtmusik for Chamber Orchestra (Brand). 9.15—News Bulletin.
9.25—Symphony Concert by the Silesian Philharmonic Orchestra, conducted by Ernst Prade. Symphony in B minor, Op. 74, No. 6—the Pathetic (Tchaikovsky).
10.15—Time Signal, Weather Forecast, News Bulletin, Sports Notes and Programme Announcements. 10.35—Talk: Sports Movements for Workers in Different Countries. 10.50—Answers to Correspondents. 11.5 (approx.)—Close Down.

BRNO (Czechoslovakia)

878 kc/s (342 m.); 35 kW
Transmits at intervals from 11.0 a.m. 6.25 p.m.—German Transmission: Popular Songs by R. Frieb. Talk on Art by Fritz Jurditsch. 7.0—See *Bratislava*. 7.40—Talk: The Universe. 8.0—Concert of Czech Music. 9.0—See *Prague*. 9.30—Recital of Italian Songs and Airs by Julie Waldekova. 10.0—See *Prague*. 10.15—News Bulletin. 10.20—See *Prague*.

BRUSSELS (Belgium) (No. 1)

I.N.R. 590 kc/s (509 m.); 15 kW.
12 noon—Concert by Max Alexys and his Orchestra. 1.0 p.m.—*Le Journal Parlé*. 1.10—Concert (continued). 2.0—Educational Programme.
3.0—Orchestral Concert, conducted by Franz André. 6.0—Gramophone Records of Music by Chabrier. 6.15—Talk by Francis André: Peasant Literature. 6.30—Gramophone Concert of International Folk Music.
7.15—Talk: Strolls through Belgium—The Coast. 7.30—Theatre Notes. 8.0—Excerpts from "L'Amour din l'Farène"—Operetta in Three Acts (Vissou) by Artists of the Walloon Theatre, *Namur*. 8.45—Answers to Correspondents.
9.0—Violin Recital by Professor Edmond Harvant. Grave (Friedman-Bach-Kreisler). Tambourin (Leclair-Kreisler). Prelude and Allegro (Pugnani-Kreisler). Four Popular Spanish Songs (Falla). Rondo Capriccioso (Saint-Saëns). 9.30—Concert from the Memline Hall, *Antwerp*. 10.0—*Le Journal Parlé*. 10.10—Concert (continued). 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2)

I.N.R. 887 kc/s (338.2 m.); 15 kW.
Programme in Flemish.
12 noon—Concert by the Station Trio. 1.0 p.m.—Weather Report and Journal Parlé. 1.10—Concert of Popular Music on Gramophone Records. 2.0—Educational Programme, followed by Talk: The Reading of Weather Charts. 2.28—Light Music on Gramophone Records. 2.32—Lesson in Elocution. 5.0—Dance Music from the St. Sauveur Palais de Danse. 6.0—Popular Music on Gramophone Records. 6.15—Talk: Women and the Theatre.
6.30—Sonata Recital by M. Pitsch (Cello) and Charles Scharrés (Pianoforte). Suite (de Herveyloix). Sonata in G Minor, Op. 65 (Chopin).
7.0—Light Music on Gramophone Records. 7.15—Programme by Pirreke Pirrewit. 7.30—*Le Journal Parlé*.
8.0—Concert by the Concert Orchestra, conducted by Franz André. Soloists: M. Leener (Songs), M. Nelis (Trombone), M. Béthune (Violin). Perpetuum mobile (Johann Strauss). Rhythmic Paraphrase, "Tannhäuser" (Wagner-Lange). Selection of Scott's Songs (Salabert). Songs. Trombone Solo: "Sleepin' around (Mole). Violin Solo: Serenade (Rosetti).

Selection from "Show Boat" (Kern). Organ Solos. In the Mystic Land of Egypt (Kettelbey). 8.45—*Na de Wittebroodsloeken*—One Act Play, from the Hungarian. 9.0—*Orchestral Concert (continued)*.
Potpourri, Tempo-Tempo (Dostal). Clarinet Solo: North and South (Bergson). Violin Solo: Chanson à Lorette (Collin). Songs (Moretti-Salabert). Organ Solos. Musical Jest (Aston). Rumba, Käthe (Granicstaeden).
10.0—*Le Journal Parlé*.
10.10—Concert relayed from the Memline Hall, *Antwerp*. 11.0 (approx.)—Close Down.

BUCHAREST (Romania)

Radio-Bucarest. 761 kc/s (394 m.); 12 kW.
Transmits at intervals from 11.0 a.m. 4.0 p.m.—Concert by the Station Orchestra. 5.0—News Bulletin and Time Signal. 5.10—Orchestral Concert (continued). 6.0—Educational Programme. 6.40—Light Music on Gramophone Records.
7.0—Concert of Chamber Music by the Theodoresco Quartet. Quartet (Brodersen).
7.30—Dramatic Programme.
8.15—Chamber Music Concert (continued). Quartet in B Flat (Haydn). 8.45—News Bulletin.

BUDAPEST (Hungary)

545 kc/s (550 m.); 18.5 kW.
Transmits at intervals from 9.15 a.m. Programme also relayed on 210 m. from 6.15 p.m. till Close Down.
5.30 p.m.—Hungarian Folk Songs.
6.15—*Orchestral Concert*. Overture, "Die Fledermaus" (Joh. Strauss). España (Waldteufel). Overture, "Light Cavalry" (Suppé). Zigeunerfest (Lehár). Suite, Impressions exotiques (Mouton). The Butterfly (Bendix). S. Anagninis Wachtparade (Lincke). Ungarischer Magnaten-Marsch (Strickl).
7.30—Programme by Nikolaus Kállay.
8.0—Organ Recital from *Segešdin* with Choral Selections. Soloists (Bach): (a) Prelude and Fugue in E Minor, (b) Concerto in D Minor. Choral Selections (Palestrina): (a) Bonus est Dominus, (b) Vide Domine, (c) O vos omnes. Gagliarde (Schmid). Jesus, Du willst uns weisen (Scheidemann). Canzona (Erbach). Pastoral (Zipoli). Domine Deus Rex Coelestis (Couperin). Choral Fantasia in A Minor (Franck). Choral Selections: (a) Lied (Szögi), (b) Lied (Antos). Benedictus in B (Reger). Introduction and Fugue in D Minor (Reger), followed by Cigány Concert.
10.30—Concert. 11.0—Dance Music on Gramophone Records.

COPENHAGEN (Denmark)

1,067 kc/s (281 m.); 0.75 kW.
Relayed by *Kalundborg*, 260 kc/s (1,153 m.).
Transmits at intervals from 7.30 a.m. (Gymnastics).
11.0 a.m.—Weather Forecast. 11.10—Angling Notes. 12 noon—Town Hall Chimes. 12.2—2.0 p.m.—Concert from a Restaurant. 2.50—Gramophone Records of Variety Music. 3.20—Talk for the Housewife.
3.30—*Instrumental Concert*. Overture, "Isabella" (Suppé). Amelievals (Lumbye). Fantasia on Swedish Melodies (Meissner). Gavotte tendre (Ganne). Viennese Waltz (Benatzky). Ay-ay-ay (Perez-Freire). Mazurka for "His Life for the Czar" (Glinka). Reading (Ilja Ehrenburg). Waltz from "The Man with the Three Wives" (Lehár). Madrigale (Simonetti). La Toupie (Gillet). Selection (Heise). Selection from "Madame Butterfly" (Puccini). Moonlight Serenade (Cazancu). March, The Scrocher (Roscy).
5.40—Exchange Quotations and Fish Market Prices. 5.50—Talk: Danish Steel Workers. 6.20—*Elementary English Lesson*. 6.50—Weather and News. 7.15—Time Signal. 7.30—A Discussion: Socialism.
8.30—Carl Millocker—Charles Lecocq—Concert by the Radio Orchestra, conducted by Emil Reesen. Selections (Millocker): (a) March from "Der arme Jonathan", (b) Selection from "Gasparone". Selections (Lecocq): (a) Overture, "Le petit Duc", (b) Selection from "Giroflé-Girofla". Selections (Millocker): (a) Waltz, Tausend schön, (b) Selection from "Der Bettelstudent", Suite from "Les Fantoccini" (Lecocq).
9.30—Reading (Carl Gandrup). 10.0—News Bulletin.
10.15—Concert of Spanish Music by the Radio Symphony Orchestra, conducted by Emil Reesen. Sinfonietta in D (Halffter). Danzas fantásticas: (a) Exaltacion, (b) Ensueño, (c) Orgia (Turina). Danse

DUBLIN (Ireland)

(2RN). 725 kc/s (413 m.); 1.2 kW.
Relayed by *Cork*, 1,337 kc/s (224.4 m.).
1.30—2.0 p.m.—Time Signal, Stock Report, Weather Forecast and Light Music on Gramophone Records.
6.5—Popular Music on Gramophone Records. 6.15—Programme for Children. 7.0—Light Music on Gramophone Records. 7.20—News Bulletin. 7.30—Time Signal. 7.31—Gaedhlig. 7.45—Monologues by T. F. Rowley. 8.0—The Station Sextet. 8.30—Baritone Solos by Sam Joy. 8.45—Mezzo-Soprano Solos by Mary Sheridan. 9.0—Sketch by Sean O'Shea and Company. 9.30—Traditional Fiddle. 9.40—Tenor Solos by Gerard Crofts. 9.55—Pianoforte Solos by F. Stone. 10.15—The Station Sextet. 10.30—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France)

Radio Normandie. 1,345 kc/s (223 m.); 10 kW.
12 noon—Light Music on Gramophone Records. Selection from "Schön ist die Welt" (Lehár). Selection from "Poet and Peasant" (Suppé). Selection from "Benvenuto Cellini" (Diaz). Selection from "The Czardas Princess" (Kálmán). Selection from "Le Jongleur de Notre Dame" (Massenet).
12.30 p.m.—News Bulletin. 12.45—Variety Concert.
7.30—Radio Normandy Gazette. 8.0—News Bulletin. 8.30—Concert relayed from *Le Tréport*.
11.0—Concert. Violin Solo: Songs of Araby (Clay). Ombra mai fu (Handel). Duet: Indian Love Lyrics (Woodforde-Finden). Cornet Solos: (a) The Rosary (Marshall). Song, The Lost Chord (Sullivan). Violin Solo: A Perfect Day (Bond). 12 midnight—Dance Music by the Iboicians. 1.0 a.m. (Tuesday)—Close Down.

FLORENCE (Italy)

Ente Italiano Audizioni Radiofoniche. 599 kc/s (500.8 m.); 20 kW.
See *Turin*.

FRANKFURT-am-MAIN (Germany)

770 kc/s (390 m.); 1.5 kW.
Relayed by *Cassel*, 1,220 kc/s (246 m.).
Transmits at intervals from 6.0 a.m. 4.2 noon—See *Stuttgart*. 12.50 p.m.—News and Weather.
1.0—Gramophone Concert. Two Historical Folk Songs: (a) Der Lindenschmid (1490), (b) Die Schlacht bei Murten (1476). Sixteenth Century Folk Song: Ein Blümlein auslesen (arr. G. Schumann). Song: Feinsliebchen, du sollst mir nicht barfuß geh'n (arr. Brahms). Choral Selection: Die drei Röslein (arr. Schumann). Selection for Madrigal Choir: Der furchtsame Jäger. Folk Song, Scheiden und meiden. Duet: Schätzle ruck, ruck, ruck. Choral Selection: Ein wandernder Geselle. Songs by Richard Tauber: (a) In einem kühlen Grunde, (b) Steh' ich in first'r Mitternacht. Choral Selection: Trennung (arr. Marschner). Duet: Ein Schäfermädchen weidete. Choral Selection: Die Gedanken sind frei. Two Choral Selections: (a) Ich hatt' einen Kameraden, (b) Nun ade du mein lieb Heimatland. Folk Song: Sandmännchen (Brahms).
2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Economic Notes and Time Signal. 4.55—Economic Notes. 5.0—See *Langenberg*. 6.25—A Dialogue with Olympic Games Competitors. 6.50—Talk: Is there an Animal Instinct? 7.15—Time, Programme Announcements, Weather and Economic Notes.
7.35—Recital of English Sea Shanties by Victor Orsin (Tenor). 8.15—Walter Bauer Lyrics. 8.30—The Beech Festival in Dörrenbach, near St. Wendel (on Gramophone Records).
8.45—Reading: "Abschied vom Lederstrumpf" (Paul Laven).
9.10—Wagner Concert by the Station Orchestra, conducted by Dr. Neubeck. Soloist: Elly Doerfer (Vocalist). Overture, "The Flying Dutchman". Senta's Ballad from "The Flying Dutchman". Prelude to the Third Act of "Tannhäuser". Aria from "Tannhäuser". Prelude and the

Death of Isolde from "Tristan und Isolde". Prelude to "The Mastersingers".
10.15—Topical Report: South Africa's Struggle to maintain the Gold Standard. 10.55—Time, Weather, News and Sports Notes.
11.10—Concert from Munich. 12 midnight (approx.)—Close Down.

HAMBURG (Germany)

Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayed by *Bremen*, 1,112 kc/s (270 m.); *Flensburg*, 1,373 kc/s (218 m.); *Hanover*, 530 kc/s (566 m.), and *Kiel*, 1,292 kc/s (232.2 m.).
Transmits at intervals from 5.45 a.m. 6.35 p.m.—Dialogue for Workers. 6.55—Exchange Quotations. 7.0—Topical Talk. 7.15—Weather Forecast.
7.20—Heinrich Dieckelmann Programme. Readings and Pianoforte Solos by Heinrich Dieckelmann, with Songs by Bernhard Jakschatt and Introductory Talk by Max Kuckei. Three Songs: (a) Du un ik, (b) In der Fremde, (c) Jan Peter (Music by Walther Bullerdieck). Reading from the Book "Grootstadt", by the Author. Two Folk Dances for Pianoforte (Dieckelmann), played by the Composer: (a) Springquadrille, (b) Der Wiborg.
8.0—Concert by the Small Station Orchestra, conducted by Fritz Gartz, and the Hamburg Choral Society, conducted by Gustave Kolbe. Two Movements from the Suite "Kinderlieder" (Blech). Two Folk Songs (arr. Lendvai): (a) Der Winter ist vergangen, (b) Sage mir mein Herzliebchen. Three Movements from the Suite, "Kinderlieder" (Blech). Choral Selections (Erdlen): (a) Das schönste Jagd. Two Movements from the Wateau Suite (Zimmer). Choral Selections (Weigmann): (a) Lateerleed, (b) Achtern Hollerbusch, (c) Stratenmusik. Two Movements from the Wateau Suite (Zimmer).
9.0—"The Great Robbers"—A Radio Sequence with Music (Elwenspöck). 10.0—News Bulletin. 10.20—Concert relayed from the Café Wallhof.

HEILSBURG (Germany)

1,085 kc/s (276.5 m.); 60 kW.
Relayed by *Danzig*, 662 kc/s (453.2 m.).
Transmits at intervals from 6.0 a.m. (Weather, Gymnastics and Concert from *Breslau*).
1.5—2.30 p.m.—*Orchestral Concert*, conducted by Eugen Wilcken. Overture, "Vier Menschenalter" (Lachner). Torch Dance of the Brides from "Feramors" (Rubinstein). Irrlichter-Walzer (Hampf). Suite, Ein Fest im Gnomereich (Witteborn). An Eastern Romance (Haynes). Selection from "La Favorita" (Donizetti). Spring's Awakening (E. Bach). The Inquisitive: Flapper (Armandola). Waltz, The Wedding of the Winds (Hall). Selection from "The Czarevitch" (Lehár). 4.0—Programme for Children.
4.30—Concert by the *Königsberg Opera House Orchestra*, conducted by Karl Hrubetz. Oriental March, Suleika (Heinecke). Overture; "Ilka" (Doppler). Selection from "The Goldsmith of Toledo" (Offenbach). Six Caucasian Melodies (Leiserovitz). Waltz, Golden Rain (Waldteufel). Selection from "Die Puppenfee" (Bayer).
5.45—Review of Books. 6.15—Agricultural Prices. 6.25 (from *Danzig*)—Talk: Danzig and Oliva. 6.50—Talk: Memorable Days of the Week. 7.0—Talk: Handicrafts and Advertising. 7.35—Weather Forecast.
7.35—See *Vienna*. 9.45—Reading from the Works of Stefan George. 10.10 (approx.)—Weather, News and Sports Notes.

HILVERSUM (Holland)

1,013 kc/s (296.1 m.); 20 kW. (7 kW. up till 4.40 p.m.).
6.25—6.40 a.m. and 7.10—7.25—Physical Culture Course. 7.40—Light Music on Gramophone Records. 8.40—Concert by the Amsterdam Quintet.
9.40—Religious Programme by the Liberal Protestant Radio Society (V.P.R.O.). 9.55—Recitations by Minny Erfmann. 10.10—Quintet Concert (contd.). 10.40—Popular Music on Gramophone Records. 10.55—Quintet Concert (contd.). 11.25—Recitations by Minny Erfmann.
11.40—Concert by the V.A.R.A. Septet. Fliegermarsch (Urbach). Waltz, Moonlight on the Alster (Fetras). Aufzug der Liliputaner-Garde (Staub). Gramophone

Records of Popular Music, Potpourri, Hallo, hallo, hier Wien! (Morena). Wonderful World of Romance (Wood). Gramophone Records. Overture, "Berlin, wie es weint und lacht" (Conradi). Waltz, To you (Elliott). Musica proibita (Gastaldon). Gramophone Records. Selection from "Tosca" (Puccini). Patrouille enfantine (Gillet). Gramophone Records. Waltz, Les Sirènes (Waldteufel). Paso Doble, Flame of Desire (Dazar).
1.25 p.m.—Interval. 1.55—Literary Reading.
2.40—Organ Recital by Johan Jong. Four Indian Love Lyrics (Woodford-Finden). Ballet Music from "Rosamunde" (Schubert). Blume von Hawaii (Dostal).
3.10—Concert of Spanish Music on Gramophone Records. 4.10—Programme for Children.
4.40—Concert by the V.A.R.A. Orchestra conducted by Hugo de Groot. Overture, "Maritana" (Wallace) Suite, The Language of Flowers (Cowen). Salut d'amour (Elgar). Suite, Summer Days (Coates). Gramophone Records. Potpourri for Soloists: Ons Orkest (de Groot). Selection (Koenneman).
6.40—Educational Programme: Dialogue, with Gramophone Records and Talk.
8.0—Acts I and II of "The Czarevitch"—Operetta in Three Acts (Lehár). 10.10—News Bulletin.
10.25—Concert by the V.A.R.A. Septet. Overture, "Der Schauspielerdirektor" (Mozart). Waltz, Tales from the Vienna Woods (Johann Strauss). Potpourri, From A to Z (Geiger). Gramophone Records. Selection from "The Maid of the Black Forest" (Jessel). The Capricious Musical Box (Fresco). Parade des Poupées (Noiret). Serenata amorosa (Becca). Chinese Jugger (Roscy). 11.40 (approx.)—Close Down.

HUIZEN (Holland)

160 kc/s (1,875 m.); 8.5 kW.
Programme of the Christian Radio Society (N.C.R.V.).
7.40 a.m.—Bible Reading. 7.55—9.10—Variety Music on Gramophone Records. 10.10—Programme for Invalids. 10.40—Religious Reading. 11.10—Popular Gramophone Music. 11.40—Police Notes. 1.55—Variety Music on Gramophone Records.
12.10 p.m.—Organ Recital by Jan Zwart. Prelude and Fugue in F Minor (Bach). Trio Sonata, No. 6 (Bach). Prelude and Fugue in C Minor (Bach). Pastoral (Bach). Pièce héroïque (Franck). Cantabile (Franck). Pastoral (Franck). Choral No. 3 (Franck).
1.40—Variety Music on Gramophone Records. 2.15—Gardening Talk. 2.55—Dressmaking Lesson. 3.25—3.40—Interval. 3.40—Programme for Invalids.
4.40—Quintet Concert. Hungarian Comedy Overture (Kéler-Béla). Czardas from "Der Geist des Wojewoden" (Grossmann). Two Hungarian Dances (Brahms). Fantasia, from the Old and the New World (Dvorák). Overture, "The Barber of Seville" (Rossini). Selection from "The Pearl Fishers" (Bizet). Ballet Music from "Isoline" (Messenger). Pizzicato from "Sylvia" (Delibes).
6.10—Answers to Correspondence. 7.10—Police Notes.
7.40—Orchestral Concert, conducted by F. Schuurman. Overture, "Die Zauberharfe" (Schubert). Six German Dances (Mozart). Four Slavonic Melodies (Dvorák). Entr'acte from "Kamarinskaja" (Glinka). Andante from the Fifth Symphony (Tchaikovsky). Hoort gy die stemme (Fleming). Selection (Mendelssohn). Selection (Silcher). 8.40—Talk. 9.10—Concert (continued). Overture, "La Princesse jaune" (Saint-Saëns). Suite (d'Indy). Selection from "Louise" (Chaprentier). In the interval at 9.40—News Bulletin. 10.10—Variety Music on Gramophone Records. 11.10 (approx.)—Close Down.

KALUNDBORG (Denmark)

Kalundborg Radio. 260 kc/s (1,153 m.); 7.5 kW.
See *Copenhagen*.

LANGENBERG (Germany)

Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW.
Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time and Concert Relay).
11.20 a.m.—Gramophone Concert of Popular Music. 12 noon—Concert from *Stuttgart*. 12.50 p.m.—Weather Announcements and Time. 1.0—Concert, conducted by Wolf

MONDAY continued

Teutonic Marsch (Hofmann). Waltz, Diesen Kuss der ganzen Welt (Ziehrer). Overture, "Sakuntala" (Goldmark). Prelude (Rachmaninov). Ein Pfäuderstündchen mit Delibes (Urbach). Hungarian Rhapsody No. 6 (Liszt). Stolzenfels am Rhein (Meissler). Humorous Variations on the Song "Was kommt dort von der Höh" (Suppé). 2.30—Meat Market Prices. 3.30—Economic Notes and Time Signal. 3.50—Programme for Children. 5.0—Concert of Opera Music, conducted by Wolf. Overture ("Thoma), Intermezzo from "Tiefland" (D'Albert). Tanzlied des Pierrot from "Die tote Stadt" (Korngold). Selections from "Hérodiade" (Massenet). Pilgrims' Chorus and Song: O Star of Ewel from "Tannhäuser" (Wagner). Selections from "Tosca" (Puccini). Two Selections from "Feramors" (Rubinstein). Waltz from "Der Rosenkavalier" (R. Strauss). 6.15—Talk for Women. 6.40—Technical Talk. 7.0—Weather, Time, Economic Notes and Sports Results. 7.15—Topical Talk. 7.30—Talk: The State and the Universities. 7.55—News Bulletin. 8.0—Jazz on Two Pianos by Paul Schramm and Diny Soetermeer. Küsse vergisst man (Schwarz-Richards). Purzels Rendezvous (Schramm). Künstlerleben (Joh. Strauss). Eskimo Shivers (Billy Mayerl). Sunshine and you (Edwards). Polly (Zamecnik). Deutschmeister Regimentsmarsch (Jurek). 8.30—Choral Concert. Soloists: Hoersch (Tenor), Remagen (Bartone), Schneider (Bass) and Grape (Pianoforte). Folk Song, Der Tod als Schnitter (arr. Röntgen). Innsbruck, ich muss dich lassen (Isaak). Du sollst an mich gedenken (Lochheim Song Book). Der Mond ist aufgegangen (Schulz-Schwarzwenka). Three Pianoforte Pieces (Schubert): (a) in E Flat Minor, (b) in E Flat, (c) in C. Baritone Solos: (a) Geheimnis (Schubert), (b) Ich grolle nicht and (c) Wohlauf, noch getrunken (Schumann). Songs (Silcher): (a) Mein eigen soll sie sein, (b) Was hab' ch denn meinem Feinsliebchen getin, (c) Die drei Röslein. Tenor Solos: (a) Komm wir wandeln (Cornelius), (b) Dort

and (c) In der Kirschenblüt (Ramarath), (d) Sechse, sieben oder acht (Brüll). Baritone and Bass Duets (Vignau): (a) In der Irre, (b) Das ferne Grab, (c) Jungbrunnen, (d) Scherz. Two Folk Songs: (a) Abschiedslied (Scholz), (b) Das Ringlein (Reger). Baritone Solos (Vignau): (a) Mariele im Garten, (b) Verschneiter Weg, (c) Zwei Wasser. Two Folk Songs: (a) Der Jäger und das Mädchen (Scholz), (b) Der Jäger aus Kurpfalz (Othegraven). 10.5—News Bulletin. 10.30—Concert from a Café. 12 midnight (approx.)—Close Down. LEIPZIG (Germany) 1,157 kc/s (250 m.); 2 kW. Relayed by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.0 a.m. 6.0 p.m.—Review of New Books. 6.30—World Literature—Felix Timmermans (Gustav Hermann). 7.0—Talk for Housewives: Retail Trade. 7.30—Music of the Mountains—Gramophone Concert. 8.0—Georg Vollerthun Concert by the Leipzig Symphony Orchestra, conducted by the Composer. Prelude to the Third Act of "Island-Saga." Mazurka, March and Waltz Entr'acte from "Der Freikorporal." 8.0—Hunters and the Hunted—A Radio Sequence (Jochen Günther). 10.5—News Bulletin. 10.15 (approx.)—Concert by the Emdé Orchestra. March, Im Zigeunerlager (Max Oscheit). Overture, "Orpheus in the Underworld" (Offenbach). Caprice, Op. 75, No. 1 (Moszkovsky). Song, Ein rheinisches Mädchen bei rheinischem Wein (Paul Hoppe). Reminiscences of Grieg (Urbach). Waltz, Nordseestürme (Döring). Stephanie-Gavotte (Czibulka). Song Ich küsse deine Lippen (Moritz Rudolphe). Potpourri, Ernst und Scherz fürs Wiener Herz (Komzak). March: Frischer Mut, leichtes Blut (Blon). 12 midnight (approx.)—Close Down. LYONS (France) La Doua (PTT). 644 kc/s (465.8 m.); 1.5 kW. Transmits at intervals from 8.0 a.m. 7.0 p.m.—Light Music on Gramophone Records. 7.30—Radio Gazette

for Lyons and the South East. 8.30—Concert of Instrumental Music, conducted by Charles Strony. MADRID (Spain) Union Radio (EAF7). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 11.45 a.m. 8.0 p.m.—Chimes, Exchange, Market Prices and Request Gramophone Records. 9.15—News Bulletin. 9.30 (approx.)—Close Down. MILAN (Italy) Ente Italiano Audizioni Radiofoniche. 905 kc/s (331.5 m.); 7 kW. See Turin. MORAVSKÁ-OSTRAVA (Czechoslovakia) 1,137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 11.0 a.m. 6.25 p.m.—German Transmission. Talk: The Summer Holidays. 6.40—Talk: The Glow Worm. 7.0—See Bratislava. 7.40—Light Music on Gramophone Records. 8.0—See Brno. 9.0—See Prague. 9.30—Orchestral Concert conducted by Tvrdy. 10.0—See Prague. 10.15—Programme Announcements and Theatre Guide. 10.20—See Prague. MOSCOW (Russia) Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in German and English: The Moscow Park of Culture and Rest. 9.55—Time Signal. 10.0—Weather Forecast. 11.0 (approx.)—Close Down. MUNICH (Germany) 563 kc/s (533 m.); 1.5 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.) and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 4.50 p.m.—Concert, conducted by Erich Kloss. Overture, The Betrothal by Lanternlight (Offenbach). Cradle Song (Kricka). Liebkosung (Wladigeroff). Oriental Suite, On the Banks of the Nile (Horst von Platen). Waltz, For you

(Elliott). Potpourri, The World in Song (Intrator). Jazz-Intermezzo (Richartz). 5.50—Talk on the following transmission. 6.5—"Lohengrin"—Opera in Three Acts (Wagner), relayed from the National Theatre. In the first interval at 7.5—Time, Weather and Agricultural Notes, and in the Second Interval at 8.50—Wireless Notes. 10.20—Time, Weather, News and Sports Notes. 10.45—Concert conducted by Erich Kloss. 12 midnight (approx.)—Close Down. OSLO (Norway) Kringkastingsselskapet, 277 kc/s (1,083 m.); 60 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.); and Rjukan, 671 kc/s (447.1 m.). Transmits at intervals from 11.5 a.m. 5.0 p.m.—Variety Music on Gramophone Records. 5.45—Talk. 6.15—Chamber Music by the Norwegian String Quartet. String Quartet in G Minor (Grieg). 7.0—Announcements, Weather and News. 7.30—Agricultural Talk. 8.0—Time Signal. 8.2—Orchestral Concert conducted by Hugo Kramm. Overture, "Preciosa" (Weber). Grieg Potpourri (Urbach). Selection (Peterson-Berger). Aragonese (Falla). Schmetterlingspiele (Leopold). Pizzicato Serenade (Beccce). Selection from "La Belle Hélène" (Offenbach-Fetras). Kadettenstreich (Jessel). 9.10—Political Review. 9.40—Weather and News. 10.0—Topical Talk. 10.15—Choral Concert, conducted by Alfred Russ. Soloist: Leif Baltzersen. 10.45 (approx.)—Close Down. PALERMO (Italy) Ente Italiano Audizioni Radiofoniche, 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 5.30—6.30 p.m.—Popular Music on Gramophone Records. 8.0—Announcements, Giornale dell'Enit, Agricultural Notes, Report of the Royal Geographical Society and Giornale Radio. 8.20—Gramophone Records of Variety Music. 8.30 (in an interval)—Time and Announcements.

8.45—"Fedora"—Opera (Giordano), on Gramophone Records. In the intervals: Book Review and Talk on Art. 10.55—News and Close Down. PARIS (France) Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW. Time Signals (on 2,650 metres) at 10.26 a.m. and 11.26 p.m. (preliminary and 6-dot Signals). Transmits at intervals from 1.0 p.m. 6.45 p.m.—Film Review. 7.0—Le Journal Parlé. 8.20—Weather Report. 8.30—Variety Programme, arranged by Henri Beaulieu, with the Collaboration of Henry Laverne in his Repertoire, Viette Tussy, Mlle. Nivette and Henri Beaulieu (Duets) and Raymond Girard (Recitations). Interlude "La Belle Eveillée"—a Fantasy (Franc-Nohain). 9.35—Concert. Soloists: Marie Antoinette Pradier (Pianoforte), Léon Zighéra (Violin), Jules Lemaire (Cello), and Jenny Tourrel (Songs). Commentary by André Delacour. Trio in E Flat (Beethoven). Songs (Brahms): (a) Nie mehr zu dir zu gehen, (b) Mainacht, (c) Sonntag, Trio (Turina). Songs: (a) Alma Sintamos (Nin), (b) Cantares populares (Obradors), (c) Seguedilla Murciana (Falla). 10.35 (approx.)—Close Down. PARIS (France) Poste Parisien. 914 kc/s (328.2 m.); 60 kW. Transmits at intervals from 12.0 noon. 7.0 p.m.—Light Music on Gramophone Records, News and Announcements. 7.30—Talk: The Thought of the Week. 8.30—Gramophone Records, News and Announcements. 8.45—Cabaret Programme. "Tant pis et tant mieux"—Revue. Two Sketches (Balder): (a) "The Sleepwalker" (b) "The Cabdriver". In the interval, the Weekly Competition. 9.45—Dance Music. 10.45—News Bulletin. 10.50 (approx.)—Close Down. PARIS (France) Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW. 6.45 a.m.—Physical Culture. 7.30—Weather and Physical Culture (continued). 7.45—Gramophone Records. Pacific

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MONDAY continued

No. 231 (Honegger). Suite, No. 2 for Small Orchestra (Stravinsky). 8.0—News, Weather and Press Review. 12.30 p.m.—Symphony Concert on Gramophone Records. Choral Prelude (Bach). Le Chasseur maudit (Franck). Ecco mormorar l'onde (Monteverdi). Con mio mentire vi miro (Monteverdi). Bergers et mages (Rousseau). Pastorale d'été (Honegger). Plaisirs champêtres (Montcalegre-Casadesu). Die Loreley (Liszt). Polonaise (Chopin). L'air (Hahn). Le Printemps (Hahn). Menuet antique (Ravel). Capriccio (Stravinsky). In the intervals at 1.0—Exchange, News and Weather and at 1.30— and 2.0—Exchange.

3.45—Exchange and Market Prices. 6.30—Market Prices, Weather, Agricultural Report, Talk and Racing Results. 7.0—Film Review. 7.10—Review of New Books. 7.30—Elementary English Lesson. 7.45—Commercial Prices and News. 8.0—"Il Trovatore" (The Troubadour) Opera (Verdi) on Gramophone Records by the Cast of the Scala, Milan. Conductor: Carlo Sabajno. In the intervals at 8.30—News, Sports Notes, Weather and Review by Paul Reboux and at 9.15—Press Review and News.

PITTSBURGH (U.S.A.)

Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Relayed by W8XK on 48.86 m. and 25.25 m. (See Short Wave List). Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Business News. 9.15—Programme to be announced. 9.30—Pebecco Weather Report. 9.32—Market Report. 9.45—Programme to be announced. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Bulletin. 10.12—Programme Announcements. 10.15—KDKA Kiddies' Klub. 10.30—The Singing Lady from New York. 10.45—Little Orphan Annie.

11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News Today. 11.7—Teaberry Sport Review. 11.12—Press News Reeler. 11.15—Westinghouse Parade. 11.45—Literary Digest Topics in Brief, by Lowell Thomas, from New York. 11.59—Time Signal. 12 midnight—3.15 a.m. (Tuesday)—New York Relay. 12 midnight—Pepsodent Amos 'n' Andy. 12.15 a.m.—Tastyeast Jesters. 12.30—Stebbins Boys. 12.45—Billy Jones and Ernie Hare. 1.0—Carnation contented Programme. 1.30—Death Valley Days. 2.0—Sinclair Minstrels. 2.30—George Olsen's Orchestra. 3.0—Bob Nolan's San Felicians. 3.15—Programme to be announced. 3.30—Love Songs and Waltzes, from New York. 3.45—Contract Bridge Lesson. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News Flashes. 4.20—Lew Conrad and his Orchestra. 5.0—Grand Terrace Orchestra, from New York. 5.30—Time and Goodnight.

PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.15 a.m. 5.50 p.m.—Talk. 6.0—Cookery Notes. 6.10—Agricultural Report. 6.15—Gramophone Records of Light Music. 6.25—German Transmission—News and Talk. The Principles of Art. 7.0—See Bratislava. 7.40—Recital of Czech Songs. 8.0—See Brno. 9.0—Time and News. 9.10 (approx.)—Quartet (Haydn). 9.30—Pianoforte Recital. 10.0—Time, News and Announcements. 10.20—Gramophone Records of Light Music.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)

743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.32—Weather and News. 12.40 (from Geneva)—Gramophone Concert of Light Music. 1.0—Exchange Quotations. 1.5—Gramophone Concert (contd.). 1.45—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1 (from Lausanne)—Programme for Children. 5.30—Orchestral Concert, conducted by Robert Echenard. 7.0—Weather Forecast. 7.1 (from Geneva)—Popular Music on Gramophone Records. 7.40 (from Geneva)—Recitations by Eugène Fabre. 7.55—Announcements. 8.0—Concert by the Station Orchestra, conducted by Fernand Closset. 8.45 (from Lausanne)—Concert of Music by A. A. Tichy. The Conservatoire Quartet and the Notre-

Dame du Valentin Choral Societys. Soloists: Fiore Gabella (Vocalist). Mlle. Casiraghi (Violin). Mlle. Margot (Pianoforte), M. Georges, Desarzens (Violin) and M. Victor Desarzens (Violin). Choral Selections: (a) Kyrie from the "Messe à St.-Louis," (b) O quam suavis est, (c) Orayson à Notre-Dame. Pianoforte Solos: (a) A la mauresque, (b) Minuet, (c) A la Courrate. Sonata in A for Pianoforte and Violin. Choral Selections, (a) Berceuse, (b) La Vie est Belle. Sonata for Two Violins. Soprano Solo: Jeannette. Quartet in B Flat. 10.15—Weather Forecast and Announcements. 10.30 (approx.)—Close Down.

ROME (Italy)

Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayed by Naples, 941 kc/s (319 m.) and 2RO, 11,810 kc/s (25.4 m.). 8.15—8.30 a.m.—Giornale Radio and Announcements. 12 noon—2.0 p.m.—Gramophone Concert of Variety Music. In the intervals: Weather, Giornale Radio, Exchange, Time and Announcements. 5.0—Exchange, Children's Radio Review, Giornale Radio and Announcements. 5.30—Vocal and Instrumental Concert. Soloists: P. Ulisse (Soprano) and Renzi Bertucci (Violin). Sonata in E for Violin. Songs: (a) Aria from "Mephistopheles" (Boito), (b) Aria from "Loreley" (Catalani), (c) Aria from "The Force of Destiny" (Verdi). Ballad and Polonaise for Violin (Vieuxtemps). 6.15—Giornale dell'Enit. 6.55 (Naples)—Shipping and Sports Notes. 7.0—Agricultural Notes, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Gramophone Records of Variety Music. 8.45—Sports Notes, followed by Talk: Books and Authors. 9.0—See Turin. 10.0—Fashion Review.

10.10—Concert of Light Music. 1400 HP (Nani). Soprano Solo: Canta, mio cuore (Mariotti). Tenor Solo: Core ingrato (Cardillo). Soprano Solo: Santa Lucia (Anon.). Selection for Orchestra (Ansaldo). Soprano Solo: Non vi specciate, signora (Mascheroni). Popular Duet for Soprano and Tenor: Dal petto il cor m'hai tolto—Palмира (Simons). Tenor Solo: Napule canta (Tagliaferri). Sicilian Songs for Soprano (Favara): (a) A la rimiddota, (b) Chiovu abballati. Soprano Solo: Eva diceva (Lao Schorr). Tenor Solo: Santa Lucia luntana (Mario). Mamma cara (Wellisch). 10.55—News Bulletin.

SCHENECTADY (U.S.A.)

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayed at intervals by W2XAF and W2XAD. (See Short Wave List).

Transmits at intervals from 11.45 a.m. 9.0 p.m.—Book Chat. 9.15—William Steven (Baritone). 9.30—Bridge Lesson from New York. 9.45—Studio Ensemble. 9.50—News Items. 10.0—Stock Reports and Police Notices. 10.15—Skippy from New York. 10.30—Swanee Serenaders from New York. 10.45—Chandu the Magician. 11.0—DeWitt Clinton Orchestra. 11.30—The Magic Weavers. 11.55—Baseball Scores. 12 midnight (WGY only)—Under the Big Top. 12 midnight (W2XAF only)—Stock Reports and News Items. 12.30 a.m. (Tuesday)—Weather Report. 12.31—New Kenmore Orchestra. 12.45—4.0—New York Relay. 12.45—The Goldbergs. 1.0—Societyland Sketch. 1.30—Voice of the Firestone. 2.0—A and P Gipsies. 2.30—Parade of the States. 3.0—National Radio Forum. 3.30—Do you remember? 4.0—Arm Chair Chats. 4.15—Johnny Albright (Crooner). 4.30—DeWitt Clinton Orchestra. 5.0—Rex Koury (Organist). 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)

653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory, Weather Forecast and News Bulletin. 12.40—Round the World on Gramophone Records. 1.35—Weather Report and Exchange Quotations. 1.45—3.30—Interval. 3.30—Light Music on Gramophone Records. 4.30—Concert by the Station Orchestra. 5.0—Weather Forecast. 5.5—6.30—Interval. 6.30 (from Zurich)—Programme for Children. 7.0—Time Signal and Weather Report. 7.5 (from Zurich)—Regina

Ullmann reads from her own Works. 7.30 (from Zurich)—Talk: The Path to Happiness. 8.0 (from Zurich)—Concert of Light Music and Dance Music by the Station Orchestra, conducted by Erwin Gilbert. Soloists: Albert Kühle (Humorous Talks and Songs) and Albert Assmann (Xylophone Solos). 9.30—Weather Report and News. 9.45—Late Concert by the Station Orchestra. 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden)

Radiojäntar (SASA). 689 kc/s (436 m.); 55 kW. Relayed by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.); and Sundsvall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. 5.0 p.m.—Geological Talk. 5.30—Light Music on Gramophone Records. 6.30 (from Sundsvall)—Country Programme. 7.15—Weather and News Bulletin. 7.30—Political Report. 8.0—Song Recital by Sven d'Ailly and Reading by Margit Andelius. 8.30—Talk on the Elections for the Riksdag. 9.0—Vocal and Pianoforte Recital, relayed from Malmö, 1,301 kc/s (231 m.). 9.45—Weather and News Bulletin. 10.0—Talk on Sports. 10.20—Orchestral Concert. Selection (Cadman). Waltz from "Ceuntess Maritza" (Kaltman). Längtan (Schmalstich). In a Persian Market (Keteleby). Argentine Tango, Florida (Storac). Musical Box (Liadov). Berceuse (T. v. Post). Potpourri (Lofgren). 11.0 (approx.)—Close Down.

STRASBOURG (France)

Radio-Strasbourg (PIT). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert of Opera and Light Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Concert from Bordeaux-Lafayette. 1.50—Gramophone Records of Light Music. 2.0—4.45—Interval. 4.45—Scientific Talk in French. 5.0—Orchestral Concert, conducted by Roskam. March, Kansas City (Benoit). Waltz, Die Romantiker (Lanner). Intermezzo, The Beautiful Japanese Girl (Siede). Overture, "La Dame blanche" (Boieldieu). Selection from "Le petit Duc" (Lecocq). Serenade (Toselli). Ballet Suite (Popy). Minuet (Scassola). March, Abd-el-Kader (Evrard). 6.0—Literary Talk in French: Jules Valles. 6.15—Talk in French: The Strasbourg Painter, Paul Iske. 6.30—Orchestral Concert, conducted by Maurice de Villers. Overture, Calm Sea and Prosperous Voyage (Mendelssohn). Selection from "Die Walküre" (Wagner). Suite from "Izely" (Piéridé). Pianoforte Solo. Canonette (Godard). Waltz and Polonaise from "Eugen Onegin" (Tchaikovsky). 7.30—Time Signal. 7.32—News in French and German. 7.45—Gramophone Concert. Old Swiss Marches. Prelude in A Flat, Op. 45 (Chopin). Overture, "The Barber of Seville" (Rossini). Ma poupée chérie. Chanson pour le petit cheval (de Séverac). My Ideal (Whiting). Dans le cœur du vieux Paris. El Engañado (García). Águilas Mexicanas (Escobar). Le Vagabond d'amour (Valée). One Sweet Kiss. My Song of Love. Selection (Stolz). 8.30—Programme from Paris (Eiffel Tower). 9.30—"Fleur de Thé"—Opéra-bouffe in Three Acts (Lecocq). 10.30 (approx.)—Close Down.

STUTTGART (MÜHLACKER) (Germany)

Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayed by Freiburg. 527 kc/s (570 m.). Transmits at intervals from 6.0 a.m. (Time, Weather and Gymnastics). 10.0 a.m.—Cinema Organ Recital of Keteleby's Music, relayed from the Ufa-Palast. In a Monastery Garden. In the Mystic Land of Egypt. In a Chinese Temple Garden. In a Persian Market. 10.20—Symphony in E Flat (Mozart) on Gramophone Records. 11.0—Time, Weather and News. 11.15—11.30—Sponsored Musical Programme. 12 noon—Concert by the Philharmonic Orchestra, conducted by Gustav

Görlisch. War March of the Priests, from "Athalie" (Mendelssohn). Overture, "Athalie" (Mendelssohn). Serenade for Strings (Fuchs). Minuet from the Divertimento in D (Mozart). Prelude to "Hansel and Gretel" (Humperdinck).

12.50 p.m.—Time, Weather, News and Programme Announcements.

1.0—International Dance Orchestras on Gramophone Records. Henry Hall: (a) Waltz, The Blue of the Night, (b) Foxtrot, Songs that are old lives for ever. Hal Kemp: (a) Fox-trot, Would you like to take a walk? (b) Foxtrot. Savoy Orpheans: (a) Slow Foxtrot, By the Fireside, (b) All of me. Cab Calloway: Two Foxtrots, Billy Cotton: (a) Foxtrot, Smile, darn ya, smile, (b) Foxtrot, Fries. Vincent Lopez: Haiti-Rumba. Abe Lyman: Foxtrot, You try somebody else. Jack Payne: Radio Nights. Dabroy Somers: Foxtrot, The Queen was in the Parlour. Ted Lewis: (a) Dallas Blues, (b) Royal Garden Blues.

1.55—News Bulletin. 2.0—2.15—Sponsored Musical Programme. 2.30—Elementary Spanish Lesson. 3.0—Elementary English Lesson. 4.0—Talk: Dietary Cooking—a Paying Proposition. 4.30—Talk: Music outside the Concert Hall. 5.0—See Langenberg. 6.15—Time and Weather. 6.30—Part Relay of a Concert from Vienna. 7.30—Time, Weather and Agricultural Notes. 7.35—10.55—See Frankfurt. 10.55—Time, Weather, News and Programme Announcements. 11.10—Talk on Chess. 11.35—Late Concert from Munich. 12 midnight (approx.)—Close Down.

TOULOUSE (France)

Radiophobie du Midi. 779 kc/s (385 m.); 8 kW. Transmits at intervals from 12.30 p.m. 5.0 p.m.—Transmission of Pictures. 5.15—Exchange Quotations. 5.30—Orchestral Selections. 5.45—Orchestral Selections from "The Mastersingers" (Wagner). 6.0—Sound Film Music. 6.15—Third Symphony for Orchestra (Saint-Saëns). 6.30—Exchange, Announcements and Horse Racing Results. 6.45—Orchestral Selections from (a) "Die geschiedene Frau" (Fall) and (b) "The Daughter of the Regiment" (Donizetti). 7.0—Light Music. 7.30—News Bulletin. 7.45—Accordion Solos. 8.0—Military Music. Overture, "William Tell" (Rossini). March (Voigt). Parade of the Hussars (Voigt). 8.15—Songs from (a) "Rigoletto" (Verdi) and (b) "I Pagliacci" (Leoncavallo). 8.30—English Lesson. 8.35—Orchestral Concert. La Hussarde (Ganne). Le dernier sommeil de la Vierge (Massenet). Selection from "The Land of Smiles" (Lehar). Waltz, Banana Skin Stomp (Markuch). The Song is ended (I. Berlin). Pierrot galant (Chilemann). Au moulin (Gillet). 9.0—Argentine Selections and Chansonnets. 9.30—Overtures to (a) "Banditenstreich" (Suppé) and (b) "La Belle Hélène" (Offenbach). 9.45—Accordion Solos. 10.0—Songs from "Désahabillez-vous" (Mercier). 10.15—Dance Music. 10.30—North African News. 10.45—Orchestral Selections.

11.0—Concert. Chez le tailleur. Une soirée au bord du lac. Selections from (a) "Si j'étais Roi" (Adam) and (b) "Les Dragons de Villars" (Maillart). Serenade (Toselli). The Stars were shining from "Tosca" (Puccini). C'est une chanson d'amour (Offenbach). Il est doux, il est bon (Massenet). Selection from "Rose Marie" (Friml). Le roi des commissaires (Bach-Laverne). Selection from "Lakmé" (Delibes). Rupture (Léjocq). 12 midnight—Weather and Announcements. 12.5 a.m. (Tuesday)—English Music. 12.30 a.m. (approx.)—Close Down.

TRIESTE (Italy)

Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 10 kW. Transmits at intervals from 8.15 a.m. 7.10 p.m.—Quintet Concert. 8.0 till Close Down—See Turin.

TURIN (Italy)

Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayed by Milan, 905 kc/s (331.5 m.), Genoa, 959 kc/s (312.8 m.) and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural Notes and

Report of the Royal Geographical Society. 7.5—Announcements. 7.10—Light Music on Gramophone Records. In the interval at 7.30—Time Signal and Announcements. 8.0—Giornale Radio and Weather Report. 8.20—Concert of "Variety Music," Introduction to "Giroffé-Giroffa" (Lecocq). Russian Song (Smith). Ballet égyptien (Luigini). The Bird of Love (Grieg). Wedding Dance (Burgmeier). 8.50—Talk on Books and Authors.

9.0—Sponsored Concert. 10.0—Comedy in One Act (to be announced), followed by Popular Music on Gramophone Records. 11.0—Giornale Radio.

VATICAN CITY (Rome)

15,123 kc/s (19.84 m.) (Morning) and 5,969 kc/s (50.26 m.) (Evening); 10 kW. 11.0—11.15 a.m.—Religious Information in Italian. 8.0—8.15 p.m.—Religious Information in Italian.

VIENNA (Austria)

Radio-Wien. 581 kc/s (517 m.); 15 kW. Relayed by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,058 kc/s (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.); and Salzburg, 1,373 kc/s (218 m.).

Transmits at intervals from 9.20 a.m. 6.0 p.m.—Concert of Historical Music, relayed from Burg Kreuzenstein. Conductor: Dr. Werner Riemerschmid. Introductory Talk by Dr. Nowak. Intrade for Trumpets (Heinrich Isaac). Christ ist erstanden—Motet for Five Part Choir and Orchestra (Heinrich Finck). Organ Solo: Recordare (Paul Hoffhaier). Second Part of the Motet: Virgo prudentissima—for Six Part Choir, Orchestra and Organ (Heinrich Isaac). Las rauschen (Jobst von Brant). Meins travrens ist—for a Capella Choir (Paul Hoffhaier). Gar hoch auf jenem Berge (Wolf Heinz). Es ging ein wolgezogener Knecht—Dance Song for Choir and Wood Wind Instrument (Stephan Mahu). Gleichwie sich fein ein vöglein—for Choir (Michael Altenberg). Bataglia (Heinrich Isaac). Innsbruck ich muss dich lassen, for a Capella Choir (Heinrich Isaac). Choral, Allein Gott in der Höh' sei Ehr (Michael Praetorius). Wie der Türk Wien belagert und mit schaden abgezogen—for Choir and Wind Instruments (Arnold von Bruck). March, Graf Salm.

7.25—Time, Weather and Programme Announcements. 7.35—Concert by the Vienna Philharmonic Orchestra, relayed from the Musikvereinsaal. Conductor: Dr. Serge Koussevitzky. Concerto for Orchestra (P. E. Bach-Steinberg). Two Nocturnes (Debussy): (a) Nuages, (b) Fêtes. Second Suite from "Daphnis et Chloé" (Ravel). The Sixth Symphony in B Minor, Op. 74—The "Pathétique" (Tchaikovsky). 9.40—News and Weather. 9.55—Orchestral Concert.

WARSAW (Poland)

Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW. 11.58 a.m.—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Polish Press Review. 12.40—Weather Report. 12.45—Light Music on Gramophone Records. 3.0—Economic Report. 3.10—Popular Music on Gramophone Records. 3.30—Traffic Report. 3.40—Light Music on Gramophone Records. 4.35—Hydrographic Report. 4.40—Talk in French. 5.0—Concert of French Music, by the Station Orchestra, conducted by Josef Oziminsky. March of the Marionettes (Gounod). Berceuse from "Jocelyn" (Godard). Entr'acte Music from "Carmen" (Bizet). Selection from "Faust" (Gounod). Rhapsody, España (Chabrier). Chaconne (Durand). French Military March (Saint-Saëns). 6.0—"Arabian Phantasmagorias"—Programme by B. Richter. 6.20—Dance Music, relayed from the Café Gastronomica. 7.15—Miscellaneous Items. 7.35—Radio Journal. 7.45—Agricultural Correspondence. 7.55—Programme Announcements. 8.0—"The Count of Luxembourg"—Opera in Three Acts (Lehar) Radio Journal in the interval. 10.0—Dialogue: A Visit to Raszyn. 10.15—Weather Report. 10.20—Interval. 10.25—Talk in French. 10.40—Sports Notes. 10.50—Dance Music.

PRINCIPAL EVENTS

TUESDAY (June 14)

SYMPHONY CONCERTS

- 8.35 p.m. Radio-Suisse Romande: Mendelssohn's Italian Symphony, etc.
- 8.45 " Berlin (Witzleben): Prof. Havemann (Violin).

CONCERTS (Vocal and Instrumental)

- 5.0 p.m. Warsaw: Concert to Schools.
- 8.0 " Brussels No. 1: Station Orchestra.
- 8.0 " Brussels No. 2: Jewish Hour.
- 8.0 " Copenhagen: String Orchestra.
- 8.0 " Schweizerischer Landessender: Schubert-Brahms programme.
- 9.40 " Hamburg: Ernst Krenek programme.
- 10.30 " Hamburg: Male Voice Choir.

OPERAS

- 7.25 p.m. Vienna: "Faust" (Gounod) from the State Opera House.
- 8.35 " Frankfurt, Stuttgart: "Oberon" (Weber).

CHAMBER MUSIC

- 8.35 p.m. Heilsberg: Trios.
- 8.45 " Radio-Paris: Cello and Pianoforte (gram.).
- 9.25 " Munich.
- 10.0 " Stockholm: French Composers.

RECITALS

- 7.45 p.m. Bucharest: Mme. Nanesco-Comsa (Soprano).
- 10.0 " Budapest: Dohnányi and Stefájai (Two Pianofortes).

PLAY AND TALK

- 8.0 p.m. Radio-Paris: "Letters from a fair Unknown" (Stefan Zweig).
- 8.35 " Langenberg, Königs Wusterhausen: "Genoveva" (F. Hebbel).

DANCE MUSIC

- 10.50 p.m. Copenhagen.

MISCELLANEOUS

- 7.35 p.m. Heilsberg and all German stations: "East Prussia."

Goethe Music by Krenek

For some years a pupil of Franz Schreker, Krenek has lived in Berlin and Zürich, and has worked at the Kassel and Wiesbaden operas, but during the last few years he has travelled much farther afield. When he was only twenty-one he stepped into an important place in modern music with a string quartet performed at the Nürnberg Festival. Chamber music and orchestral works followed in rapid succession, and in 1923 his comic opera, with a text by himself, *Der Sprung über den Schatten*, made a big impression; in recent years his jazz opera *Jonny spielt auf* has done even more to spread his fame.



[By Courtesy of Funk Stude.]

Ernst Krenek

HAMBURG station is this evening broadcasting two of his recent works, a suite made from the incidental music he wrote to Goethe's *Triumph der Empfindsamkeit*, and the monologue of *Stella*, from the play of that name. On Thursday evening at 10, a new suite of his for wind instruments, called *Kleine Blasmusik*, is to be broadcast from FRANKFURT.

A Twenty-four-Stringed Lute

MUNICH station this evening is broadcasting a piece of Haydn's which is practically unknown, for lute, violin, and cello. The lute part is being played on an old instrument with twenty-four strings. Known since the days of Orpheus, the lute flourished throughout the ages, and was for long an instrument in the orchestra; the last known use of it in that way is in a Handel opera, and Bach introduced it in one of the *Passions*. From old reference to it, it is clear that it was a difficult instrument to keep in order. In one frequently-quoted work, every lute player is recommended to keep his lute in a bed which is regularly slept in. Even then, the writer adds, it would be necessary for him about once a year to have it taken to pieces and put together again to remedy warping from the tension of the strings. Another writer tells us that any lute player who reached the age of eighty years would have spent sixty of them in tuning his instrument.

Mendelssohn's Italian Symphony

The Symphony which is being broadcast in the programme of RADIO SUISSE ROMANDE this evening, was actually begun in Italy, where Mendelssohn went after his first visit to England and Scotland, enjoying everything he saw and heard with the whole-hearted zest which was his. His letters home are full of vivid descriptions of people and places—full, too, of illuminating comments, and sometimes of the rather scathing criticisms of intolerant youth. But amid constant distractions he found time to produce a good deal of music, and the *Scots Symphony*, as well as this one, was partly composed during that busy time. The *Italian Symphony* was dedicated to the Royal Philharmonic Society of London, and it was they who gave it its first performance in May, 1833, when Mendelssohn came over to conduct it.

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

BARCELONA (Spain)

Radio-Barcelona (EAJI). 860 kc/s (349 m.); 8 kW. Transmits at intervals from 8.10 a.m. 8.0 p.m.—Trio Concert. Serenade (Chaminade). Intermezzo from "Cavalleria Rusticana" (Mascagni). Berceuse from "Jocelyn" (Godard). Selection from "Lakmé" (Delibes). 8.30—Exchange Quotations, Request Gramophone Records and Press Notes. 10.0—Chimes and Weather Forecast, Market Prices, Exchange Quotations and Relay of Foreign Stations. 10.15—Light Music by the Station Orchestra. March, Freiheit (Laukier). Legend of Dance Music by the Demons Jazz Band. 11.0—Selection from a Musical Comedy. 1.0 a.m. (Wednesday)—Close Down.

BELGRADE (Yugoslavia)

697 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 11.0 a.m. 5.0 p.m.—Concert of Light Music by the Station Orchestra. 6.45—Time Signal and Programme Announcements. 6.50—Czech Lesson. 7.20—Beauty Hints. 7.50—Song Recital by Mme. Bozana Adamovic. Three Songs (Brahms): (a) Wiegenlied, (b) Feldeinsamkeit, (c) Meine Liebe ist grün. Es muss ein Wunderbares sein (Liszt). Marietta's Aria from "Die tote Stadt" (Korngold). Cécilie (Richard Strauss). Two Songs (Brahms): (a) Von ewiger Liebe, (b) Vergebliches Ständchen. 8.30—Viola da gamba Recital, relayed from Zagreb, 977 kc/s (307 m.). 10.30—News Bulletin and Sports Notes. 10.50—Concert relayed from the Hotel Imperial.

BERLIN (Germany)

Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW. Transmits at intervals from 5.45 a.m. 12.55 p.m.—Nauen Time Signal. 1.35—News Bulletin. 2.0—The Don Cossacks and Feodor Chaliapin Gramophone Concert from Berlin (Witzleben). 3.0—Music Lesson for Children. 3.30—Weather and Ex-

change. 3.45—Talk for Women: Modern Beach Wear. 4.30—See Leipzig. 5.30—Talk: Eros in Contemporary Literature. 6.0—Talk: The Theme in Instrumental Music. 6.30—Advanced English Lesson. 6.55—Weather for Farmers. 7.0—Topical Talk. 7.35—See Heilsberg. 8.35—See Langenberg. 10.30—Weather, News and Sports Notes. 11.0 (approx.)—Concert from Hamburg. 12 midnight (approx.)—Close Down.

BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW. Transmits at intervals from 6.0 a.m. (Gymnastics and Concert Relay). 6.10 p.m.—Concert of Light Music. Overture, "The Barber of Bagdad" (Cornelius). Ballet Music from "Undine" (Lortzing). Scenes napolitaines (Massenet). Hungarian March (Berlioz). 6.55—"The Witzleben Station informs its Listeners..." 7.0—Topical Talk. 7.10—Concert (contd.). Selection from "Madame Butterfly" (Puccini). Overture, "Euryanthe" (Weber). 7.35—See Heilsberg. 8.35—News and Sports Notes.

8.45—Symphony Concert by the Berlin Wireless Orchestra, conducted by Bruno Seidler-Winkler. Soloist: Professor Gustav Havemann (Violin). Concertante Symphony for Solo Violin and Orchestra (Herrmann Hans Wetzler), conducted by the Composer. Divertissement for Small Orchestra, Op. 67 (Graener). Symphony in C—The Linz Symphony (Mozart). 10.0—Weather, News and Sports Notes.

BORDEAUX-LAFAYETTE (France)

(PTT). 986 kc/s (304 m.); 13 kW. Transmits at intervals from 12 noon. 7.30 p.m.—Announcements and Exchange Quotations. 7.40—Programme arranged by the Guilds and Corporations of Bordeaux. 7.55—Lottery Results. 8.0—Scientific Talk. 8.15—News Bulletin and Weather Forecast. 8.30—Literary Programme.

BRATISLAVA (Czechoslovakia)

1,076 kc/s (279 m.); 14 kW. Transmits at intervals from 11.0 a.m. 6.0 p.m.—Chess Lesson. 6.30—

Gramophone Records of Variety Music. 6.40—Talk: Nervous Diseases.

7.0—Orchestral Concert, conducted by Lud Raiter. Overture, "The Marriage of Figaro" (Mozart). Symphony in E Flat (Mozart). Caprice (Wittgenstein). Suite, mignonne (Nedbal). Overture (Weinberger). 7.45—See Prague. 8.0—Choral Concert of Hebrew Melodies. 9.0—See Prague. 10.15—Programme Announcements and News. 10.20—Cigány Band Concert from the Elizabeth Café.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by Gleiwitz, 1,184 kc/s (253 m.). Transmits at intervals from 6.0 a.m. 4.10 p.m.—Recital of Weber's Songs to Guitar Accompaniment by Claire Frühling (Soprano), Paul Richter (Baritone), and Friedrich Wirth (Guitar), with introductory Talk by Friedrich Wirth. Soprano Songs: (a) Die Schäferstunde, (b) Heimlicher Liebe Pein. Baritone Songs: (a) Es sitzt die Zeit, (b) Lass mich schlummern. Soprano Song: Ueber die Berge. Baritone Songs: (a) Gelahrtheit, (b) Alte Weiber, (c) Bettleid. Soprano Songs: (a) Die fromme Magd, (b) Wiegenlied.

4.40—Concert of Light Music by the MacCarlsen Orchestra, relayed from the Café Vaterland. 5.10—Weather for Farmers and Book Review. 5.30—Technical Talk. 5.55—Programme for Women. 6.20—Talk: The Flora and Fauna of the Arctic Regions. 6.50—Agricultural Weather Report. 6.52—Silesian Border Towns—Kreuzberg: A Radio Sequence. 7.35—See Heilsberg. 8.35—"Liebling, adieu!"—Musical Comedy (Max Bertuch and Lothar Sachedy). Music by Willy Rosen. 10.0—Time Signal, Weather Report, Press Review, Sports Notes and Programme Announcements. 10.25—Dialogue: Actors as Footballers, by Otto Dewald and Richard Dittscheid. 10.45—Concert of Light Music and Dance Music by the Fred Humpert Band, relayed from the Haus Metropole, Hindenburg, Silesia. 12 midnight (approx.)—Close Down.

BRNO (Czechoslovakia)

878 kc/s (342 m.); 35 kW. Transmits at intervals from 10 a.m.

NATIONAL

	kc/s	m.	kW.
London:	1,148	261.3	50
Daventry:	193	1,554.4	30
Northern:	995	301.5	50
10.15 a.m.—The Daily Service.			
10.30—Time Signal (Greenwich); Shipping Forecast.			
10.45—"Saying Time in the Kitchen"—I.			
11.0—11.5—Housewives' News.			
12 noon—Reginald Foort, at the Organ.			
1.0 p.m.—Time Signal (Greenwich).			
1.0—Leonardo Kemp and his Piccadilly Hotel Orchestra.			
1.55—Experimental Transmission by the Fultograph Process.			
2.5—Nature Study. Mr. Eric Parker.			
2.30—Music. Sir Malcolm Davies: Final Concert Lesson.			
3.35—Interval.			
3.35—French. Monsieur E. M. Stéphan with Mademoiselle Coustenoble: "Early Stages in French"—Interval.			
4.0—"The Claims of Science"—V. Mr. Gerald Heard: "Man and his Mind"—II.			
4.25—Interval.			
4.30—The Grosvenor House Orchestra.			
4.45—Time Signal (Greenwich).			
5.15 (Daventry)—The Children's Hour.			
5.15 (London and Northern)—The B.B.C. Dance Orchestra.			
6.0—"The First News."			
6.30—Time Signal (Greenwich).			
6.30—The Foundations of Music. Bach's Choral Preludes. Played by Dr. W. G. Alcock.			
6.50—French Talk. Monsieur E. M. Stéphan.			
7.20—The Wireless Military Band. Conductor, B. Walton O'Donnell. Leonard Gowings (Tenor).			
8.30—"Life among Native Tribes"—IV. Dr. Agnes Frascr: "A Warrior Tribe."			
9.0—Time Signal (Greenwich).			
9.0—"The Second News."			
9.15—Shipping Forecast: New York Stock Market Report.			
9.20—"Going South." New York to New Orleans.			
10.5—A Pianoforte Recital, by Severin Eisenberger.			
10.35—12 midnight—Dance Music.			
11.30—Time Signal (Greenwich).			

REGIONAL

	kc/s	m.	kW.
London:	842	356.3	50
Midland:	752	398.9	25
Northern:	626	479.2	50
10.15 a.m. (London and Northern)—The Daily Service.			
10.30—11.5 (London and Northern)—Daventry National Programme.			
11.30—12.0 (London)—Experimental Television Transmission (Baird Process).			
12 noon—Municipal Orchestra, Buxton. Conductor Horace Fellowes.			
1.0 p.m.—A Ballad Concert. Mabel Whiteley (Contralto), Sydney Graham (Pianoforte), Roy Warburton (Tenor).			
2.0—3.0—The Midland Studio Orchestra.			
4.0 (Northern)—Evensong. Relayed from York Minster, York.			
4.30 (London)—Daventry National Programme.			
4.45 (Northern)—Daventry National Programme.			
5.15—"The Children's Hour.			
6.0—"The First News."			
6.35 (London)—Reginald King's Orchestra. Isabella Vass (Soprano).			
6.35 (Midland)—Light Music. Pattison's Salon Orchestra.			
6.35 (Northern)—The Studio Orchestra. Norah Winstanley (Violin).			
7.30 (Midland)—A String Orchestral Concert. Rowland Sirrell (Violin), Elsa Tookey (Violoncello). The Birmingham Philharmonic String Orchestra.			
7.45 (London)—A Violoncello Recital. By Sheridan Russell.			
8.0 (Northern)—Scarborough Spa Orchestra. Conducted by Alick Maclean. Tom Case (Baritone).			
8.15 (London)—Cantatas. Relayed from the Bach Cantata Club Performance. At St. Margaret's, Westminster.			
8.45 (Midland)—The Birmingham Military Band. Miranda Sugden (Pianoforte).			
9.15 (London)—The B.B.C. Orchestra (Section G). Conducted by Victor Hely-Hutchinson. Harold Fairhurst (Violin).			
10.15—"The Second News."			
10.35—11.0 (Midland)—As London.			
10.35—12 midnight (London and Northern)—Dance Music.			

TUESDAY continued

6.0 p.m.—Talk in Esperanto: Sport in Czechoslovakia. 6.15—See Prague. 6.25—German Transmission. News and Two Talks. 7.0—Mr. Matej Kropal's Two Wagers—Comedy in Three Acts (Nikola). 7.45—See Prague. 8.0—Leo Janacek Concert. Ukvaldian Melodies Nos. 2 and 11. Talk on Janacek. Romance for Violin and Piano No. 4. Ploughing. Variations for Pianoforte. Folk Nocturnes Nos. 1 and 5. Selection from the Suite for Strings. Moravian Songs. 10.15—News Bulletin. 10.20—See Prague.

BRUSSELS (Belgium) (No. 1) I.N.R. 500 kc/s (509 m.); 15 kW. 12 noon—Gramophone Concert of Pre-War Music, arranged by the Belgian Catholic Radio Society. Spanish March, Granada (Garcia). La Paimpolaise (Botrel-Feautrier). Waltz, Over the Waves (Rosas). Mazurka, La Czarina (Ganne). Dors mon gas (Botrel). Waltz, Sous les Ponts de Paris (Scottot). Rocco Intermezzo, Rendez-vous (Aletter). The Lancers (Metra). Waltz, Amoureuse (Berger). Song of the Golden Corn (Doria). Lake Como (Galos). Envoi de Fleurs (Delmet). Selection from "Lysistrata" (Lincke). L'Angelus de la mer (Goublier). Waltz, Très gentiment (Waldteufel). 1.0 p.m.—Le Journal Parlé. 1.10 Concert (cont'd.). Waltz, Estudiantina (Waldteufel). Les Rameaux (Fauré). La Lettre de Manon (Gillet). Vous êtes si jolie (Delmet). Selection (Krier). Si vous l'aviez compris (Denza). In the Shadows (Finck). Le Temps des cerises (Renard). Moss Rose (Bosc). By the Swanee River (Myddleton). Idylle passionnelle (Razigade). Les Millions d'Arlequin (Rigo). Down South (Myddleton). Marche Lorraine (Ganne). 5.0—Orchestral Concert, conducted by Charles Walpot. March, Ce que c'est qu'un drapeau (Diodes). Waltz Suite, Roses of the South (Johann Strauss). Songs (Dalcroze): (a) La Chère Maison, (b) Le Cœur de ma Mie. Belgian Military Waltz (Frémaux). Ballet Music from "Sylvia" (Delibes). 5.45—Programme for Children. 6.20—Literary Review. 6.30—Gramophone Concert of Light Music. 7.15—Catholic Report. 7.30—Programme for Women.

8.0—Orchestral Concert, conducted by Arthur Meulemans. March from "Aida" (Verdi). Les Comères du Village (Grieg). Simple aveu (Thomé). Re traite espagnole (Desormes). Croquis Chinois (Leemans). Japanese Dance (Yoshitomo). Aubade (Gillet). Waltz, from François les Bas Bleus (Messager-Waldteufel). 8.45—Talk by Marcel Ancaux. 9.0—Concert (continued). Selection from "The Girl of the Golden West" (Puccini). Callirhoë (Chaminade). Gramophone Records (Bontemps): (a) Billoquet's Circus, (b) Rieur. Suite pour mes petits amis (Pierne). Marche Nuptiale d'une Poupée (Lecocq). La Sultane (Bucalossi). 10.0—Le Journal Parlé. 10.10—Gramophone Concert of Sound Film Music. 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—Gramophone Concert of Classical and Light Music. 1.0—Weather Report. 1.10—Gramophone Concert (continued). 5.0—Orchestral Concert, conducted by A. Meulemans. Slavonic March (Tchaikovsky). Jubel Ouverture (Christian Bach). Rapsodie Dahoméenne (de Boeck). Rustle of Spring (Sinding). Scènes napolitaines (Massenet). 5.45—Programme for Children. 6.30—Concert of Light Music on Gramophone Records. Selection from "The Merry Wives of Windsor" (Nicolai). Légende d'Amour (Bece). Serenade (Gade). Evening Bells (Blauw). March Grottesque (Sinding). 7.15—Talk: Safety on the Road. 7.30—Le Journal Parlé. 8.0—Concert of Jewish Music by Mile. Julia Brin (Soprano), Helena Spira (Pianoforte), Charles Engelhart (Recitation) and Leon Kubovitzky. Pianoforte Solos: (a) Jewish Melodies (Stutschewsky), (b) Air from "The Dybuk" (Engel). Recitation by Charles Engelhart. Songs: (a) Pragim (Achron), (b) Two Popular Jewish Airs. Talk by Leon Kubovitzky: The Path of the Jewish Socialist. 9.0—Concert by the Station Orchestra, conducted by Charles Walpot. Soloists: Henry March and (Recita-

tions) and Eddy Romyn (Accordion). March, Entry of the Gladiators (Fucik). Waltz, Frühlingstimmen (Joh. Strauss). Accordion Solo: Selection from "La Traviata" (Verdi). Selections in Flemish by Henry Marchand. 10.0—Le Journal Parlé. 10.10—Concert (continued). Ballet Suite (Popy). Potpourri for Accordion (Romyn). Selections by Henry Marchand. Potpourri of Stolz Airs (Dostal). Foxtrot (Heymann). 11.0 (approx.)—Close Down.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Concert of Light Music and Romanian Music by the Motzoi Orchestra. 5.0—News Bulletin and Time Signal. 5.10—Orchestral Concert (cont'd.). 6.0—Educational Programme. 6.40—Light Music on Gramophone Records. 7.0—Concert by the Station Orchestra. Ouverture, "Phèdre" (Massenet). Potpourri of Romanian Airs (Elinesco). 7.30—Talk (to be announced). 7.45—Song Recital by Tana Nanesco-Comsa. 8.10—Orchestral Concert (cont'd.). Valse triste (Sibelius). Selection from "The Girl of the Golden West" (Puccini). 8.45—News Bulletin.

BUDAPEST (Hungary) 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Programme also relayed on 210 metres from 3.30—4.30 p.m. and 8.0 till Close Down. 5.0 p.m.—Concert by a Balalajka Orchestra. Soloist: Andreef. Russian Music and Folk Songs. 6.0—Topical Talk. 6.30—Concert by a Cigány Band. 7.30—Programme by A. Pünköski. 8.0—Variety Programme. 9.0—Racing Results. 9.45—Time, Weather and News. 10.0—Recital on Two Pianofortes by Ernst Dohnanyi and Emerich Stefajai. Organ Concerto (Vivaldi-Bach). Introduction, Passacaglia and Fugue (Reger). 10.45—Concert by a Cigány Band from the Café Ostende.

COPENHAGEN (Denmark) 1,067 kc/s (281 m.); 0.75 kW. Relayed by Kahndberg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. (Gymnastics). 11.0 a.m.—Weather Forecast. 11.10—Angling Notes. 12 noon—Town Hall Chimes. 12.2—2.0 p.m.—Concert from a Restaurant. 3.0—Orchestral Concert, conducted by Emil Reseen. Soloist: Harriet Vendelhaven (Vocalist). Ouverture, "Raymond" (Thomas). Waltz from "Polenblut" (Nedbal). Selection from "Faust" (Gounod). Humoresque (Dvorak). Spring Song (Mendelssohn). A Norwegian Bridal Procession (Grieg). Danish Songs. Japanese Parade (Vollstedt). Hungarian Dances, Nos. 5 and 6 (Brahms). Gavotte (Martini). Waltz, Dreams on the Ocean (Gung'l). Selection from "The Barber of Seville" (Rossini). Trepak (Rubinstein). 5.0—Programme for Children. 5.40—Exchange and Fish Market Prices. 5.50 (from the Aarhus Studio)—Gardening Talk. 6.20—Elementary German Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Talk: Modern Hebrew Literature. 8.0—Town Hall Chimes. 8.2—Concert of Classical Music for Strings. The Radio String Orchestra, conducted by Launy Grøndahl. Concerto grosso in C Minor for two Violins, Cello, Strings and Pianoforte (Locatelli). Symphony for Strings and Pianoforte (Matthias Georg Monn). 8.35—"Euthyphro"—Dialogue by Plato (arranged for Radio). 8.55—Sonatina for Pianoforte Duet (Kuhlau). Sonatina in C, Op. 44, No. 2. Sonatina in F, Op. 44, No. 3. 9.15—Reading (Alfred Kjerulf). 9.40—News Bulletin. 9.55—Popular Concert by the Radio Orchestra, conducted by Launy Grøndahl. Florentine March (Fucik). Punctinella (Herbert). West Finnish March (Palmgren). Two Selections (Gabriel-Marie): (a) La Cinquantaine, (b) Minuet—Royal plaisir. Serenade for Strings (Chaminade). Solveig's Song and Anitra's Dance from the Music to "Peer Gynt" (Grieg). Waltz Fantasia (Glinka). Trot de Cavalerie (Rubinstein). 10.50—Dance Music from the Nimb Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (Wednesday)—Close Down.

CRACOW (Poland) 959 kc/s (312.8 m.); 1.5 kW. Transmits at intervals from 11.58 a.m. 7.0 p.m.—See Vienna. 8.30—See Warsaw. 9.55—News Bulletin. 10.0—See Warsaw. 11.30 (approx.)—Close Down. DUBLIN (Ireland) (2RN). 725 kc/s (413 m.); 1.2 kW. Relayed by Cork, 1,337 kc/s (224.4 m.). 1.30—2.0 p.m.—Time Signal, Weather Forecast, Stock Report and Light Music on Gramophone Records. 6.0—Popular Music on Gramophone Records. 6.15—Programme for Children. 7.0—Light Music on Gramophone Records. 7.15—News Bulletin and British Market Report. 7.30—Time Signal. 7.31—Leighacht Gaedhlig. 7.45—Talk by John Brennan. 8.0—Concert by the Quiristers Male Voice Quartet. 8.30—Recital of Minuets and Scherzos by the Station String Quartet. 8.50—Recital by a Ladies' Vocal Quartet. 9.10—Orchestral Concert. 9.30—Baritone Solos by Marcus Ruddle. 9.45—Two Short Plays with Orchestral Interlude and Finale. 10.30—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France) Radio Normandie. 1,345 kc/s (223 m.); 10 kW. 12 noon—Popular Music on Gramophone Records. 12.30 p.m.—News Bulletin. 12.45—Light Concert. 7.30—Radio Gazette for Normandy. 8.0—News Bulletin. 8.30—Le Havre Chronicle, followed by Concert relayed from Le Havre. 11.0—Concert by the I.B.C. Light Orchestra (Section B), conducted by Herbert Foster. Soloist: Harry Corder (Baritone). Baritone Solos: (a) We must all pull together (Lee), (b) Airman, Airman, and (c) I took Jane for a walk in the rain (Damerell). Dance while the music is ringing (Fryer). Songs: (a) Put your Worries through the mangle (Wallace), (b) Singing in the bath-tub (Cleary), (c) You're gonna be young (Nicholls). When it's night time in Nevada (Gilbert). 12 midnight—Dance Music by the Iheolians. 1.0 a.m. (Wednesday)—Close Down.

FLORENCE (Italy) Ente Italiano Audizioni Radiofoniche. 599 kc/s (500.8 m.); 20 kW. See Turin. FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relayed by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 12 noon—Gramophone Concert. Ouverture, "The Land of Smiles" (Lehár). Mikado-Walzer (Kornzalk). Ballet Suite (Popy). Persian March (Johann Strauss). Polka, Tritsch-Tratsch (Johann Strauss). Aquarellen-Walzer (Johann Strauss). Mazurka-Potpourri. Alte Zeit im neuen Kleid (Wismar-Ailbott). Ouverture, "Nakiris Hochzeit" (Lincke). O Frühling, wie bist du so schön (Lincke). Moselmarsch (Rösler). 12.50 p.m.—News and Weather. 1.0—See Stuttgart. 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Time and Economic Notes. 3.20—Programme for the Housewife. 4.55—Economic Notes. 5.0—See Stuttgart. 6.15—Economic Notes. 6.25—Legal Talk. 6.50—See Stuttgart. 7.15—Time, Programme Announcements. Weather and Economic Notes. 7.35—See Heilsberg. 8.35—"Oberon"—Opera (Weber). 10.30—Time, Weather, News and Sports Notes. 10.45—See Stuttgart. 12 midnight (approx.)—Close Down.

HAMBURG (Germany) Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayed by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.), and Kiel, 1,292 kc/s (232.2 m.). Transmits at intervals from 5.45 a.m. 5.55 p.m.—Variety Programme. 6.30 (from Bremen)—Talk: Trade and Commerce in Siam. 6.55—Exchange Quotations and Market Prices. 7.0—Topical Talk. 7.15—Weather Forecast. 7.20—Gramophone Concert: Arturo Toscanini as a Conductor. Introduction to the First Act of "La Traviata" (Verdi). L'Apprenti Sorcier (Dukas). 7.35—See Heilsberg. 8.35—Heinrich Sobnrey reads from his own Works,

with Introductory Talk by Diedrich Steilen. 9.10—Recital of Original Viennese Songs by Maria Hussa. Das hat kein Goethe geschrieben (Sioly). Plüt di Gott, du alte Zeit (Lorens). Die Luft vom Wiener Wald (Folk Song). Pianoforte Solo: Wiener Tanz (Friedmann). Songs: (a) s' Mailüfterl (Kreitl), (b) Die wahre Liebe ist das nicht (Folk Song), (c) Du guater Himmelsvater (Krakauer), (d) Die Stadt der Lieder (Hofmann). 9.40—Krenek Programme, by the Station Orchestra, conducted by Gerhard Maasz. Soloist: Maria Hussa (Songs). Suite, Triumph der Empfindsamkeit. Song: Monologue of Stella (Goethe). 10.10—News Bulletin. 10.30—Reception of the St. Franzisko Choirs—Concert by the "Unitas" Male Voice Choir, the Alstertal Glee Society, and the St. Franzisko Male Voice Choirs, relayed from the Winterhuder Fährhaus. Introductory Talk by Käthe Alving. Song by the "Unitas" and "Alstertal" Choirs: Eintracht (Mozart). Address by Richard Oelcker. Address by the President of the St. Franzisko Choir. Sängerguss der Deutschen Sängerbundes (Methfessel), by the Unitas and Alstertal Choirs. Song by the St. Franzisko Choirs.

11.0—Late Concert by the Small Station Orchestra, conducted by Horst Platen. Ouverture, "Diamant" (Bizet). Selection from "Meistofele" (Boito). Suite from "Much Ado about Nothing" (Komgold). Little Dance Suite (Mraczek). Selection from the Ballet "Ritter Pasman" (Johann Strauss). Ouverture, "Der Bettelstudent" (Müllacker). HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. (Weather, Gymnastics and Concert from Hamburg). 11.30 a.m.—Concert by the Königsberg Opera House Orchestra conducted by Werner Richter-Reichhelm. Ouverture, "Preciosa" (Weber). Variations on a Dutch Song (van Gilse). Scènes bohémiennes (Bizet). Ouverture, "The Caliph of Baghdad" (Boieldieu). Ballet Suite (Gluck-Mottl). Ouverture, The Hebrides (Mendelssohn). 1.5 p.m.—Gramophone Concert. Selection from "Cavalleria rusticana" (Mascagni). Soprano Solos: (a) Shadow Song from "Dinorah" (Meyerbeer), (b) Aria from "Lakmé" (Delibes). Tenor Solos: (a) Morgen (Richard Strauss), (b) Liebesfeier (Weingartner). Ouverture, "Die Fledermaus" (Johann Strauss). Choral Selections: (a) Aus der Jugendzeit (Radecke), (b) Beim Holderstrauch (Kirschner). Selection from "Lilac Time" (Schubert-Berté). Tally-Ho!—Potpourri of Hunting Songs (Kohlmann). A Musical Box (Nikolajevsky). Reminiscences of Munich. Flower Waltz (Waldteufel). Selection from "Les Cloches de Corneville" (Planquette). Admiral-Stosch-Marsch (Latam). Barataria-Marsch (Komzak). 2.30—Sponsored Programme, with Gramophone Records. 3.30—Musical Programme for Children. 4.0—Orchestral Concert conducted by Eugen Wilcken. Ouverture, "Giovinezza ardente" (Cortopassi). Falling Leaves (Carena). Occhi di Zingara (Filippini). Suite giolardica (Amadei). Fantasia on "Santa Poesia" (Cortopassi). Io t'amo (Amadei). Rusticarella (Cortopassi). Suite, Reminiscences of Cairo (Armandola). Waltz, Secrets of the Adige (Carena). Suite, In Campagna (Micheli). 5.35—Review of Periodicals. 5.55—Review of Books. 6.15—Agricultural Prices. 6.30—Talk: The Battle of Friedland, 125 Years Ago. 6.50—Talk for Workers. 7.25—Weather Forecast. 7.35—"East Prussia"—Provincial Programme by the Little Orag Orchestra, the Wireless Chorus conducted by Hugo Hartung and Soloists. 8.35—(from Danzig)—Trio in C Minor Op. 1 No. 3 (Beethoven) by the Danzig Trio. 9.5—Announcements: 9.15—Historical Silhouettes—III. "Yorck" a Radio Sequence (Sigfried Nikolajsky). 10.15 (approx.)—Weather, News and Sports Notes. HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up to 4.40 p.m.). Programme of the Algemeene Vereniging Radio Omroep (A.V.R.O.). 7.40 a.m.—Time Signal. 7.41—Variety Music on Gramophone Records,

8.40—Concert by the Wireless Chamber Orchestra, conducted by Lou's Schmidt. Ouverture, "Mitridate" (Mozart). German Dances (Schubert). Elegy (Tchaikovsky). Selection from "Le Tribut de Zamora" (Gounod). Russian Mazurka (Glinka). Waltz, Die Schönbrunner (Lanner). Marechiaré (Tosti). Russian March, (Ohlsen). 9.40—Time Signal. 9.41—Divine Service. 9.55—Variety Music on Gramophone Records. 10.10—Organ Recital by Piet van Egmond, Jr., with Songs by Ré Koster. 10.40—Talk. 11.10—Organ Recital (continued). 11.40—Time Signal. 11.41—Orchestral Concert, conducted by Nico Treep. Ouverture, "Albin" (Pletow). Three Woodland Dances (Haines). Souvenir (Drdla). Variety Music on Gramophone Records. Selection from "The Pearl Fishers" (Bizet). Capricieuse (Gillet). Torna a Sorrento (de Curtis). Waltz, Acceleratiagen (Johann Strauss). Popular Music on Gramophone Records. Lehariana (Geiger). Poussade (Fresco). Japanese Dance (Yoshitomo). Massinan—Marsch (Carl). 1.55—2.10—Interval. 2.10—Pianoforte and Cello Recital by Theja Schwartz and Willem Aerts. 2.40—Dressmaking Lesson. 3.40—Pianoforte and Cello Recital (continued). 4.10—Programme for Children. 5.10—Light Concert by Kovacs Lajos and his Orchestra. In the interval at 6.10—Talk. 7.10—Talk. 7.40—Time Signal. 7.41—Organ Recital by Pierre Palla, with Songs by Albert de Booy, relayed from the Kurhaus, Scheveningen.

8.40—Concert by the Police Choir "Entre Nous" conducted by Anten Smit. Populus Sion (Olmán). Salve Regina (Schubert). Prayer (Roeske). 9.0—Orchestral Concert, conducted by Nico Treep. March, Heil Europa (v. Blon). Waltz (Johann Strauss). Love Dream (Bece). Popular Music on Gramophone Records. Viennese Musical Comedy Revue (Fetras). March, Zwanzinette (Lehár). 9.45—Weather and News. 9.55—Concert (continued). Ouverture, "Mignon" (Thomas). Selection from "Tosca" (Puccini). Idylle passionnelle (Razigade). Was Blumen träumen (v. Blon). Variety Music on Gramophone Records. Vom Rhein zur Donau (Rhode). Texas Girls (Siede). Selection from "The Gondoliers" (Sullivan). March, Hoch Heidecksburg (Herzer). 11.10—Variety Music on Gramophone Records. 11.40 (approx.)—Close Down.

HUIZEN (Holland) 160 kc/s (1,875 m.); 8.5 kW. Programme of the Catholic Radio Society (K.R.O.). 7.40—8.55 a.m.—Gramophone Records of Variety Music. 9.40—Gramophone Concert of Light Music. 11.10—Religious Address. 11.40—Police Notes. 11.55—Trio Concert. 1.25—1.40 p.m.—Interval. 1.40—Programme for Women. 2.40—Dressmaking and Millinery Lessons. 3.40—Gramophone Records of Variety Music. 4.10—Orchestral Concert, conducted by Johan Gerritsen. Folies bergères (Lincke). Jubel Ouverture (Weber). Waltz from "The Rose of Stamboul" (Fall). Selection from "Das Nachtlager in Granada" (Kreutzer). Toréador et Andalous (Rubinstein). Old Folks at Home (Busch). 4.55—Gramophone Records of Variety Music. 5.25—Concert (cont'd.). Polish Dance (Scharwenka). Selection from "Die Faschingsfee" (Kálmán). Albumblatt (Wagner). Potpourri, Wiener Operetten-Revue (Kobrecht). Ich liebe dich (Grieg). 6.10—Gramophone Records of Variety Music. 6.25—Concert (cont'd.). Suite, At the Circus (Armandola). American Patrol (Meacham). Potpourri of Marches (Morchan). 6.50—Jewish Address. 7.10—Police Notes. 7.25—Talk. 7.40—Orchestral Concert. March, The Gladiators' Farewell (Blankenburg). Ouverture, "Le Cheval de Bronze" (Auber). Waltz, Die Hydropathen (Gung'l). Selection from "Feramors" (Rubinstein). Fantasia on "Coppélia" (Delibes). Klänge aus Arkadien (Thomara). Ouverture, "Mignon" (Thomas). Hofballtänze (Lanner). Potpourri, The Sunny South (Bodewalt-Lampe). American Patrol (Meacham). Selection from "Rose Marie" (Friml). Selection from "Faust" (Gounod). 10.40—Gramophone Concert of Variety Music. 11.40 (approx.)—Close Down.

KALUNDBORG (Denmark)
Kalundborg Radio. 260 kc/s (1,153 m.); 7.5 kW. See Copenhagen.

KATOWICE (Poland)
734 kc/s (408 m.); 16 kW. Transmits at intervals from 11.58 a.m. 5.0 p.m.—Orchestral Concert of Popular Music. 6.0—Talk. 7.25—See Vienna. 9.15—Concert of Light Music. 10.30—Dance Music on Gramophone Records.

LANGENBERG (Germany)
Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time and Concert Relay).

11.20 a.m.—Sponsored Gramophone Concert. 11.50—12 noon—Interval. 12 noon—Concert from Stuttgart. 12.50 p.m.—Weather, News and Time. 1.0—Orchestral Concert conducted by Erich Walter. Soloists: Wolfgang Stavenhagen (Violin), March, An die Gewehre (Lehnhard), Overture, "Anacreon" (Cherubini), Waltz, Samt und Seide (Ziehrer), Procession to the Minster from "Lohengrin" (Wagner), Violin Solo: Madrigal (Simonetti), Selection from "La Traviata" (Verdi), Loin du bal (Gillet), Ballet Suite (Rubinstein), Tango, Irma (Walter), Selections from "The Bird Fancier" (Zeller), Overture, "Die Fledermaus" (Johann Strauss).

3.30—Economic Notes and Time. 3.50—Talk for Children: The Sun, Moon and Stars. 4.20—Notes on the Broadcasts for Schools. 4.30—Educational Talk. 5.0—Concert from Stuttgart. 6.15—Talk: Modern University Administration. 6.35—French Conversation. 6.50—Nikolas August Otto Programme for the Centenary of his Birth, relayed from the Haus der Technik, Cologne. 7.35—See Heilsberg. 8.35—"Genoveva"—Drama (Friedrich Heibel). Music by Hans Ebert. 10.30 (approx.)—News, Sports Notes, Miscellaneous Announcements, and Silent Night.

LEIPZIG (Germany)
1,157 kc/s (259 m.); 2 kW. Relay by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.0 a.m. 4.30 p.m.—Concert by the Leipzig Symphony Orchestra conducted by

Willy Steffen. Overture, "The Thieving Magpie" (Rossini). Wedding Scenes (Smetana) Intermezzo, Das getanzte Festmahl (Alexander Schettler), Potpourri, Ein Opernalbum (Adolf Schreiner), Waltz, Die Romantiker (Lanner), Rundfunk-Marsch (Max Pischek).

5.30—Weather and Time. 5.50—Economic Notes. 6.30—French Lesson. 6.50—Programme to be announced. 7.0—Talk: The Theatre and the Cinema. 7.35—See Heilsberg. 8.40—Concert by the Dresden Soloist Ensemble. Overture, "Die schöne Müllerin" (Gustave Michiels), A Norwegian Bridal Procession (Grieg), Ballet Music from "Der Fremde" (Hugo Kaun), Viennese Caprice (Kreisler), Two Viennese Dances (Robert Fuchs), Selection from "Das süsse Mädel" (Reinhardt), Pizzicato-Serenade, Pierrette (Fritz Brase), Waltz from "Der Opernball" (Heuberger).

9.40—Reading of two Tales in North German Dialect (Rudolf Kinau). 10.10—News Bulletin. 10.20—(approx.)—Concert of Contemporary Music by the Dresden String Quartet. Quartet in E Minor Op. 8 (Erwin Lendvai), String Quartet in F Minor for Two Violins, Viola, 'Cello and Double Bass Op. 37 (von Meelendorff). 11.30 (approx.)—Close Down.

LYONS (France)
La Doua (PTT). 644 kc/s (465.8 m.); 1.5 kW. Transmits at intervals from 8.0 a.m. 7.0 p.m.—Light Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South-East. 8.30—Two Comedies.

MADRID (Spain)
Union Radio (EAT). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 9.0 a.m. 8.0 p.m.—Chimes, Exchange, Market Prices and Request Gramophone Records. In the interval at 8.30—Talk by Joaquín España Cantos. 9.15—News and Political Review. 9.30—10.0—Interval. 10.0—French Lesson on Gramophone Records. 10.30—Chimes, Time and Political Review. 10.45 (approx.)—Selections from "La Bohème"—Opera (Puccini) on Gramophone Records. 12.45 a.m. (Wednes-

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continued

day)—News Bulletin. 1.0—Chimes and Close Down.

MILAN (Italy)
Ente Italiano Audizioni Radiofoniche. 905 kc/s (331.5 m.); 7 kW. See Turin.

MORAVSKÁ-OSTRAVA (Czechoslovakia)
1,137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 10.0 a.m. 6.25 p.m.—See Brno. 7.45—See Prague. 8.0—See Brno. 9.0—See Prague. 10.15—Programme Announcements and Theatre Guide. 10.20—See Prague.

MOSCOW (Russia)
Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in Dutch and French: Resorts and Convalescent Homes in Soviet Russia. 9.55—Time Signal. 10.0—Weather Forecast.

MUNICH (Germany)
563 kc/s (533 m.); 1.5 kW. Relay by Augsburg and Kaiserslautern, 536 kc/s (560 m.) and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 6.15 p.m.—Time, Weather and Agricultural Notes. 6.25—Talk: The Postage Stamp in Politics. 6.45—Talk: The First Postage Stamps. 7.10—Talk: German Contemporary History. 7.35—See Heilsberg. 8.35—Orchestral Concert conducted by Karl List. Overture, "Orpheus in the Underworld" (Offenbach), Waltz, Es muss doch Frühling werden (Müller), Selection from "Mignon" (Thomas), Das Märchen vom tapferen Schneiderlein (Zimmer), Dollar Waltz (Fall), Waldesflüster (Czibulka), Overture, "Lysistrata" (Lincke).

9.25—Concert of Chamber Music by the Anton-Huber Quartet. Soloists: Henry Wolff (Soprano) and Hans Nemann (Twenty-Four-Stringed Lute), Concerto in F for Lute, Two Violins and 'Cello (Kohaut), Concerto for Soprano

with Instrumental accompaniment, Ich werde nicht sterben (Schütz), Psalm No. 100 for Soprano, with Instrumental accompaniment. (Bruhn), Cassation in C for Lute, Violin and 'Cello (Haydn). 10.20—Time, Weather, News and Sports Notes.

OSLO (Norway)
Kringkastingselskapet, 277 kc/s (1,083 m.); 60 kW. Relay by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.) and Rjukan, 671 kc/s (447.1 m.). Transmits at intervals from 11.5 a.m. 5.0 p.m.—Concert of Chamber Music by the Station Ensemble. 6.0—Talk for Women: Care of Young Children. 6.45—Recital of Dance Music on Two Pianofortes. 7.0—Announcements, Weather and News Bulletin. 7.30—Talk: Hygiene in Viking Ships. 8.0—Time Signal.

8.1—Programme to celebrate the 75th Birthday of Jens Tvedt. Choral Selections and Talk. 8.45—Pianoforte Recital of his own Music by Halfdan Cleve. 9.15—Recitations. 9.30—Talk: Agriculture Abroad. 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Concert of Popular Music by the Station Cornet Octet. 10.45 (approx.)—Close Down.

PALERMO (Italy)
Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 5.30 p.m.—Programme for Women. 5.40—6.30—Concert of Variety Music. 8.0—Announcements, Giornale dell'Enit, Agricultural Notes and Giornale Radio. 8.20—Popular Music on Gramophone Records. 8.30 (in an interval)—Time and Announcements.

8.45—Concert of Chamber Music. Soloists: Gagliano ('Cello), R. Padova (Soprano), Mannino (Pianoforte), and Manno (Violin). 'Cello Solos: (a) Pavane (Ravel), (b) Intermezzo (Lalo). Two Soprano Solos (Monleone). 'Cello Solos: Nocturne and Tarantella (Casella). Sonata for Violin and Pianoforte (Franck). 9.30—"The Cardinal's Supper"—a Comedy in One Act (Dantes),

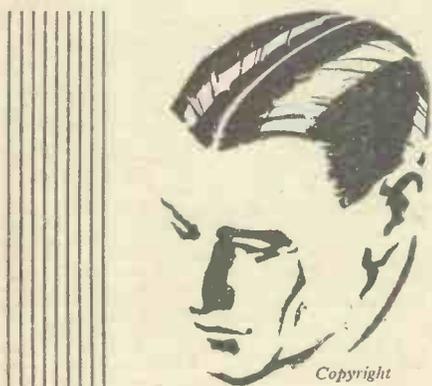
followed by Chamber Music (contd.). Two Soprano Solos. Violin Solos: (a) Minuet (Mozart), (b) Spanish Serenade (Chaminade). Pianoforte Solos: Three Movements from "Petroushka" (Stravinsky). 10.55—News and Close Down.

PARIS (France)
Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW. Time Signals (on 2,650 metres) at 10.26 a.m. and 11.26 p.m. (preliminary and 6-dot Signals). Transmits at intervals from 1.0 p.m. 6.45 p.m.—Dramatic Programme. 7.0—Le Journal Parlé. 8.20—Weather Report.

8.30—Concert arranged by the Composers' Society. Soloists: Janine Cools (Pianoforte), Paul Rémond (Flute), Cécile Rémond (Pianoforte), Beatrice Bluhm ('Cello), Lola Bluhm (Pianoforte), Marcelle Faye (Songs), Germaine Gavianier (Songs), Elen Foster and Jan Merry (Flute). Pieces intimes for Pianoforte (E. Cools). Introduction, Theme and Fantasia for Flute and Pianoforte (Imbert). Three Pieces for 'Cello (Imbert). French Songs (Tailleferre): (a) Non la fidélité, (b) Souvent un air de vérité, (c) Mon mari m'a diffamé, (d) Vrai Dieu qui m'y confortera, (e) Un dit mal de mon ami, (f) Les trois présents. Two Songs on Poems by Derème (Migot). Two Monodies on Poems by Klingsor (Migot). Two Pieces from the "Ad Usum Delphini" (Migot). Two Pieces from "Le petit fablier" (Migot). Two Pieces from "Le Zodiaque" (Migot). Three Pieces for Flute (Merry): (a) Prelude, (b) Pastorale, (c) Etude. 10.0 (approx.)—Close Down.

PARIS (France)
Poste Parisien. 914 kc/s (328.2 m.); 60 kW. Transmits at intervals from 12.0 noon. 7.0 p.m.—Light Music on Gramophone Records, News and Announcements. 7.30—Sponsored Gramophone Concert. 8.30—Popular Music on Gramophone Records, Talk and News. 8.45—Vocal and Orchestral Concert. Overture, "Une éducation manquée" (Chabrier). Serenade for

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TUESDAY continued

Flute, Oboe, Horn and Strings (Lacombé). Selection from "Johnny spielt auf" (Krenek). Orchestral Suite, La Ferie (Lacombé). Ballet from "Isoline" (Messager). Meditation (Glazounov). Second Orchestral Suite, La fête chez Thérèse (Hahn). Two Characteristic Dances (Granados). March of the Highlanders from Scottish Scenes (Godard).

10.45—News Bulletin. 10.50 (approx.)—Close Down.

PARIS (France)

Radio-Paris (CFR). 174 kc/s (1.725 m.); 75 kW. 6.45 a.m.—Physical Culture. 7.30—Weather and Physical Culture, (continued). 7.45—Gramophone Records. Clair matin (Jeanjean). Aubade d'amour (Monti). Andante pastoral (Taffanel). Serenata (Malats). 8.0—News, Weather and Press Review. 12 noon—Gramophone Records. Overture to and Song from "The Daughter of the Regiment" (Donizetti). Two Songs from "L'Africaine" (Meyerbeer). Selection from "Martha" (Flotow). Overture to and Selections from "Les Dragons de Villars" (Maillart). Selections from "Fortunio" (Messager). Two Arias from "Prince Igor" (Borodin). Song: Die Forelle (Schubert). Serenade (Schubert). Concerto for Violin and Orchestra (Beethoven). In the intervals at 1.0—Exchange, News and Weather, at 1.30—Exchange and at 2.0—Exchange and Announcements.

3.45—Exchange and Market Prices. 6.30—Market Prices, Weather, Agricultural Report, Talk and Racing Results. 7.0—Theatre Notes. 7.15—Talk on Art. 7.30—Advanced English Lesson. 7.45—Review of the British Press, Commercial Prices and News. 8.0—"Letter from a fair Unknown" (Stefan Zweig), arranged for Radio, with the collaboration of Eve Francis. 8.30—News and Weather. 8.40—Review by Miguel Zamacois. 8.45—Chamber Music on Gramophone Records. Cello Solos: (a) Plainte (Caix d'Hervelois-Béon), (b) Prelude to "La Napolitaine" (Caix d'Hervelois-Béon). Sonata appassionata (Beethoven).

PITTSBURGH (U.S.A.)

Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Relayed by WBXX on 48.86 m. and 25.25 m. (See Short-Wave List). Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Business News. 9.15—Programme to be announced. 9.30—Pebeco Weather Report. 9.32—Market Reports. 9.45—Programme to be announced. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Booking Service. 10.12—Programme Announcements. 10.15—KDKA Kiddies' Klub. 10.30—The Singing Lady from New York. 10.45—Little Orphan Annie. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News Today. 11.7—Teaberry Sport Review. 11.12—Press News-Reeler. 11.15—KDKA Orchestra. 11.30—Programme to be announced. 11.45—Literary Digest Topics in Brief by Lowell Thomas, from New York. 11.59—Time Signal. 12 midnight—1.30 a.m. (Wednesday)—New York Relay. 12 midnight—Pepsodent Amos 'n Andy. 12.15 a.m. (Wednesday)—Just Willie. 12.30—The Stebbins Boys. 12.45—Billy Jones and Ernie Hare. 1.0—You and your Government. 1.30—Programme to be announced. 1.45—Sisters of the Skillet, from New York. 2.0—Household Finance Programme, from New York. 2.30—Great Personalities, from New York. 3.0—Quaker State Carefree Programme. 3.15—Westinghouse Pioneers. 3.30—Paris Night Life, from New York. 3.45—Chats between the Acts, Florence Fisher Parry. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News Flashes. 4.20—Lew Conrad and his Orchestra. 5.0—Dancing in Milwaukee, from New York. 5.30—Time and Good-night.

PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.15 a.m. 5.45 p.m.—Reading. 5.55—Programme for Sokols. 6.25—German Transmission. 6.15—Topical Talk. 6.25—German Transmission—Song Recital. Songs (Reger): (a) The

King of the East, (b) To Sleep, (c) When the Lime-Tree is in Blossom, (d) My Darling. Four Songs (Kaufmann). 7.0—See Brno. 7.45—Talk on Hygiene. 8.0—See Brno. 9.0—Time and News. 9.10 (approx.)—Orchestral Concert. Scherzo (Weinberger). Scherzo from the Violin Concerto in A Minor (Glazounov). Suite (Kozina). 10.0—Time Signal. 10.2—News and Announcements. 10.20—Gramophone Records of Light Music.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)

743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.) and Geneva, 395 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and Announcements. 12.40 (from Geneva)—Light Music on Gramophone Records. 1.0—Exchange Quotations. 1.5—Gramophone Concert (contd.). 1.45—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1 (from Lausanne)—Programme for Women. 5.30 (from Geneva)—Light Music on Gramophone Records. 6.40 (from Geneva)—Talk: The International Organisation of Labour and Extra-European Countries. 7.0—Weather Forecast. 7.1 (from Geneva)—Concert of New Gramophone Records. 7.30 (from Geneva)—Talk: The Work of the Disarmament Conference. 7.55—Announcements. 8.0 (from Geneva)—"Message" by Mme. Boas de Jouvencelle, Noël Baker and Sister Henderson. 8.20 (from Geneva)—Talk by Fernand Gigon. 8.35 (from Lausanne)—Concert by the De Ribaupierre Orchestra, conducted by Emile de Ribaupierre. Soloists: Madeleine Gonser (Violin) and M. Vuillemin (Pianoforte). Italian Symphony (Mendelssohn). Concerto for Pianoforte in C Minor (Mozart). Concerto for Violin (Mendelssohn). Overture, "The Barber of Seville" (Rossini). In an interval at 9.30 (approx.)—Weather Forecast and Announcements. 10.30 (approx.)—Close Down.

ROME (Italy)

Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayed by Naples, 941 kc/s (319 m.) and R20, 11,810 kc/s (25.4 m.). 8.15—8.30 a.m.—Giornale Radio and Announcements. 12 noon—Gramophone Records of Variety Music. 12.35 p.m.—Weather Forecast. 12.45—2.0—Instrumental Concert. March from "The Bartered Bride" (Smetana). Two Spanish Dances (Moszkovsky). Canzonetta nostalgica (de Micheli). Violin Solos: (a) Ballet Music from "Rosamunde" (Schubert), (b) Polichinelle (Kreisler), (c) The Dancing Doll (Poldini). Selection from "The Bayadere" (Kálmán). Selection (Heymann). In the intervals: Giornale Radio, Time and Announcements. 5.0—Exchange, Children's Radio Review, Giornale Radio and Announcements. 5.30—Songs, by Maria Baratta (Soprano). Der Engel (Wagner). Cor di fiamma (Sgambati). Lithuanian Song (Chopin). L'eco (Tomacecci). 5.45—Instrumental Concert. Viva Rosita (Stafelli). Love Roundelay (Van Westerhout). Wonderful World (Calotta). Anima d'Oriente (Guarino). Anima catalana (Corcopassi). 6.25—Talk: Planets. 6.55 (Naples)—Shipping and Sports Notes. 7.0—Atmospheric Signals, Lesson in Morse, Agricultural Notes, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Gramophone Records of Variety Music. 8.30—Sports Notes and Announcements. 8.45—Concert Soloists: Ugo Ajello (Cello), Franca Sorvillo (Pianoforte), Vincenzo Tanlongo (Tenor), and the Station Choir. Suite, Op. 44 for Cello and Pianoforte (Alessandro Longo). Three Songs for Tenor (Mario Costa): (a) In montagna, from "Canti calabresi", (b) Sul fiume, and (c) Sei morta nella vita mia. 9.30—"Per vanita"—Short Sketch (Giannino Antona Traversi). 10.0—Concert (contd.). Selections for "Cello and Pianoforte": (a) Largo (Mullé), (b) Al castello (Pjorino), (c) Romance (Napoli), (d) Scherzo (van Goens). Serenata agli sposi and Resta tragica from "Scene abruzzesi" (de Mardis). Choral Selection: Canto di Natale (Albanese). "Terra d'oro"—Scene for Soloists, Choir and Orchestra (Albanese). L'ultima

canzone, for Soloists, Choir and Orchestra (Albanese). Popular Abruzzian Dance (Melchiorre). Abruzzian Songs for Choir and Voices (Albanese): (a) Vola, vola, vola, (b) Paisanelle, (c) Fiurette d'amore, (d) La piante de la foije, (e) Campana all'egreze. 10.55—News Bulletin.

SCHENECTADY (U.S.A.)

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayed at intervals by W2XAF and W2XAD (See Short Wave List). Transmits at intervals from 11.45 a.m. 9.0 p.m.—Bridge Lesson. 9.30—Studio Ensemble. 9.35—News Items. 9.45—Stock Reports and Sports Notices. 10.0—Sonata Programme from New York. 10.15—The Success Doctor. 10.45—Chandu, the Magician. 11.0—Joe and Eddie. 11.15—New Kenmore Orchestra. 11.24—Baseball Scores. 11.20—Weather Report. 11.30—With Gray McClinton in the Canadian Northwest. 11.45—Sonata Programme. 12 midnight—(WGY only) General Electric Programme. 12 midnight (W2XAF only)—Stock Reports and News Items. 12.15 a.m. (Wednesday)—New Kenmore Orchestra. 12.30—4.0—New York Relay. 12.30—Barbasol Programme. 12.45—The Goldbergs. 1.0—Blackstone Plantation. 1.30—True Story Hour. 2.0—Gay Vienna. 2.30—Ed Wynn and the Fire Chief Band. 3.0—Lucky Strike Dance Hour. 4.0—Freddy Engel's Orchestra. 4.30—DeWitt Clinton Orchestra. 5.0—Ralph Kirbyer, the Dream Singer from New York. 5.5—Hotel New Yorker Orchestra from New York. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)

653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory, Weather Forecast, and News Bulletin. 12.40 p.m.—Concert by the Station Orchestra. 1.35—Weather Report and Exchange Quotations. 1.45—3.30—Interval. 3.30—Concert by the Station Orchestra. 4.0—Light Music on Gramophone Records. 5.0—Weather Report. 5.5—6.30—Interval. 6.30 (from Basle)—Talk: The Origin of the Swiss Cantons. 7.0—Time Signal, Weather Forecast and Foreign Traffic Report. 7.5 (from Basle)—Talk: The Attractions of Basle for Foreigners. 7.30 (from Basle)—Programme for Women. 8.0 (from Berne)—Schubert and Brahms Concert, by the Station Orchestra. Soloists: Clara Keller (Soprano), Lydia Wagner (Contralto), Erwin Tüller (Tenor), Ernst Schläfli (Baritone), Wilma Lüllman (Pianoforte), Willy Girsberger (Pianoforte). 9.30—Weather Forecast and News Bulletin. 9.45—Concert of Marches and Waltzes by the Station Orchestra. 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden)

Radiotjänst. (SASA). 680 kc/s (436 m.); 55 kW. Relayed by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.); and Sindsval, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. 5.0 p.m.—Programme for Children. 5.40—Reading. 6.0—Popular Music on Gramophone Records. 7.0—Useful Hints. 7.15—Weather and News Bulletin. 7.30—Talk. 8.0—Concert by the Station Orchestra. Ballet Suite from "The Sleeping Beauty" (Tchaikovsky). Overture, "The Bartered Bride" (Smetana). The Swan (Saint-Saëns). Waltz, Wo die Citronen blühen (Johann Strauss). Minuet (Paderewsky). Mississippi Suite (Grofé). Selection from "Sunny" (Kern). 9.15—Literary Review. 9.45—Weather and News Bulletin. 10.0—Quartet Concert of Chamber Music. Julius Ruthström (Violin), Sven Kjellström (Viola), Gunnar Norby (Cello) and Ingrid Kjellström-Stenbäck (Pianoforte). Piano-forte Quartet in A Minor, Op. 7 (d'Indy). Pianoforte Quartet in C Minor, Op. 15 (Faure). 11.0 (approx.)—Close Down.

STRASBOURG (France)

Radio-Strasbourg. (PIT). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert of Classical and Light Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert (contd.). 2.0—4.45—Interval. 4.45—Talk in French: The Work of France in Laos. 5.0—Concert relayed from Montpellier, 1,049 kc/s (286 m.). 6.0—Literary Talk in French: Edouard Schuré. 6.15—Topical Talk in French. 6.30—Orchestral Concert, conducted by Maurice de Villers. Symphony in E Flat (Mozart). Prelude to "Kunihild" (Kistler). Suite from "Le Roi s'amuse" (Delibes). 7.30—Time Signal. 7.32—News in French and German. 7.45—Orchestral Concert, conducted by Roskam. Overture, "Orpheus in the Underworld" (Offenbach). Waltz, The Wedding of the Winds (Hall). Selection from "Der Frauenfresser" (Eyler). Serenade from "Les Millions d'Arlequin" (Drigo). La lettre de Manon (Gillet). Selection from "L'Amour masqué" (Messager). March, The Juggler (Roscy). 8.30—Programme (not yet announced) relayed from Paris. 10.30 (approx.)—Close Down.

STUTTGART (MÜHLACKER) (Germany)

Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayed by Freiburg, 527 kc/s (570 m.). Transmits at intervals from 6.0 a.m. (Time, Weather and Gymnastics). 10.0 a.m.—Russian Music for Violin. Kurt Krause (Violin) and Traute Zarges (Pianoforte). Regrets, Op. 9 (Gretchaninov). Deux moureaux (Akimov). Mazurka (Wieniawsky). Scherzo and Melody (Tchaikovsky). Sonata (Kryjanov). 11.0—Time, Weather and News. 11.15—11.30—Sponsored Musical Programme. 11.45—Sponsored Music. 12 noon—Scenes from "Aida" (Verdi) on Gramophone Records. 12.50 p.m.—Time, Weather, News and Programme Announcements. 1.0—Concert of Scandinavian Music by the Philharmonic Orchestra conducted by Emil Kahn. Overture, "Nordische Sennfahrt" (Gade). Suites 1 and 2 from "Peer Gynt" (Grieg). Swedish Rhapsody (Lindberg). Sehnsucht der Sennerin (Svensden). Midsommarvaka (Alfen). 1.55—News Bulletin. 2.0—2.15—Sponsored Music. 2.30—Advanced English Lesson. 4.0—Talk: Flowers. 4.30—Talk for Women. 5.0—Orchestral Concert, conducted by Gustav Görlich. Soloist: Ellen Beck (Soprano) and Hans Hofels (Baritone). March from "The Bartered Bride" (Smetana). Selection from "Madame Butterfly" (Puccini). Spring Suite (Nevin). Four Duets for Soprano and Baritone (Dvorak). Styrian Dances from "Das Testament" (Kienzl). Martin-Walzer (Zeller). Baritone Solo: Rheinlied (König). Soprano Solo: Spring Song from "The Queen's Kerchief" (Joh. Strauss). March, Schneidig vor! (Fucik). 6.15—Time and Weather. 6.25—Talk: Breeding and Education. 6.50 (from Freiburg)—Talk: The Value of Polar Exploration. 7.15—Time, Weather and Agricultural Notes. 7.35—See Heilsberg. 8.35—See Frankfurt. 10.30—Time, Weather, News and Programme Announcements. 10.45—Concert by the Philharmonic Orchestra with Vocal Refrains by Hede Schack. 12 midnight (approx.)—Close Down.

TOULOUSE (France)

Radiophonie du Midi. 779 kc/s (385 m.); 8 kW. Transmits at intervals from 12.30 p.m. 5.0 p.m.—Transmission of Pictures. 5.15—Exchange Quotations. 5.30—Orchestral Selections. 5.45—Symphony No. 39 for Orchestra (Mozart). 6.0—Songs from "Romco and Juliet" (Gounod). 6.15—Accordion Solos. 6.30—Exchange Quotations and Horse Racing Results. 6.45—Orchestral Concert. Selections from "Scheherazade" (Rimsky-Korsakov). Serenade (Pierne). Le Cygne (Saint-Saëns). Trio in B Flat (Schubert). Mon bébé frisé (Clupsan). 7.15—Sound Film Music. 7.30—News Bulletin. 7.45—Orchestral Selections. 8.15—Songs from (a) "Cavalleria Rusticana" (Mascagni) and (b) "Thais" (Massenet). 8.30—German Lesson. 8.35—Military Music. 8.45—Accordion Solos. 9.0—Light Music. 9.15—Dance Music. 9.30—Concert relayed from the Café Albrighti. 10.30—North African News. 10.45—Orchestral Selections

from (a) "The Tales of Hoffmann" (Offenbach) and (b) "Rigoletto" (Verdi). 11.0—Chansonnettes. 11.15—Dance Music. 11.30—Symphony No. 6 for Orchestra (Beethoven). 12 midnight—Weather and Announcements. 12.5 a.m. (Wednesday)—English Music. 12.30 a.m. (approx.)—Close Down.

TRIESTE (Italy)

Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 10 kW. Transmits at intervals from 8.15 a.m. 7.5 p.m.—Quintet Concert. Serenata a bolero (Di Lazzaro). Fiori del bosco viennese (Trauner). Coraggio tartaro (Scassola). Nostalgia messicana (Franco). Roulette (Silvert). Amore tra i pampini (De Micheli). Amor di gauchio (Carabella). Selection (Dauber). In the interval at 7.25—English Lesson on Gramophone Records. 8.0 till Close Down—See Turin.

TURIN (Italy)

Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayed by Milan, 905 kc/s (331.5 m.); Genoa, 959 kc/s (312.8 m.); and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 5.50 p.m.—Giornale Radio and Announcements. 6.45—Agricultural Talk. 7.0—Announcements. 7.5—Concert of Variety Music. 7.30—Time Signal and Announcements, followed by Light Music on Gramophone Records. 8.0—Giornale Radio, Weather Report and Popular Music on Gramophone Records. 8.15—Talk by Salvatore Gotta. 8.30—An Operetta in Three Acts (to be announced). In the intervals—Talks on Music and Art. After the operetta—Giornale Radio.

VATICAN CITY (Rome)

15,123 kc/s (19.84 m.) (Morning), and 5,969 kc/s (50.26 m.) (Evening); 10 kW. 11.0—11.15 a.m.—Religious Information in English. 8.0—8.15 p.m.—Religious Information in Italian.

VIENNA (Austria)

Radio-Wien. 581 kc/s (517 m.); 15 kW. Relayed by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,058 kc/s (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.) and Salzburg, 1,373 kc/s (218 m.). Transmits at intervals from 9.20 a.m. 6.20 p.m.—Agricultural Talk. 6.45—Weekly Microphone Feuilleton. 7.15—Time, Weather and Programme Announcements. 7.25—"Faust"—Opera in Four Acts (Gounod), relayed from the Opera House. 9.20 (in an interval)—News and Weather. 10.50—Concert by Bela Zec Cigany Band from Pataky's "Wundergarten".

WARSAW (Poland)

Polskie Radio, 212.5 kc/s (1,411 m.); 20 kW. 11.58 a.m.—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5—Programme Announcements. 12.10—Polish Press Review. 12.20—Interval. 12.40—Weather Report. 12.45—Light Music on Gramophone Records. 2.0—Interval. 3.0—Economic Report. 3.10—Light Music on Gramophone Records. 3.30—Aviation Report. 3.35—Sports Notes. 3.40—Popular Music on Gramophone Records. 4.35—Hydrographic Report. 4.40—Talk: Beauty in Everyday Life. 5.0—Concert of Popular Classical Music by the Warsaw Philharmonic Orchestra conducted by Wilkomirsky. Ballet Suite, Minuet, Musette and Tambourin (Rameau-Mottl). Bacchanale from "Samson and Delilah" (Saint-Saëns). Concert Waltz (Glazounov). Two Slavonic Dances, (a) in A Flat, (b) in G (Dvorak). Symphonic Poem, Vltava (Smetana). 6.0—Talk (to be announced). 6.20—Miscellaneous Items. 6.40—Programme Announcements. 6.45—Radio Journal. 6.55—Interval. 7.0—Programme to be announced. 8.30—Literary Feuilleton. 8.45—Concert of Light Music by the Warsaw Philharmonic Orchestra conducted by B. Szulc. March of the Hussars (Szulc). Overture, Morning, Noon and Night (Suppé). Waltz, Frühlingstimmen (Johann Strauss). Serenade (Drigo). Parade of the Tin Soldiers (Jessel). Selection from "Paganini" (Lehar). Overture, "Orpheus in the Underworld" (Offenbach). Perpetuum mobile (Johann Strauss). Humoresque (Dvorak). Oberek (Szulc). 9.50—Radio Journal. 9.55—Aviation Weather Report. 10.0—Dance Music. 10.40—Sports Notes. 10.50—Dance Music.

WEDNESDAY (June 15)

PRINCIPAL EVENTS

CONCERTS (Vocal and Instrumental)

- 12.30 p.m. Radio-Paris: Grieg anniversary programme (gramophone).
- 7.30 " Stuttgart, Frankfurt: Bach programme.
- 7.40 " Huizen: Light orchestral programme.
- 8.0 " Vienna, Königs Wusterhausen, Leipzig: "Wien bleibt Wien."
- 8.5 " Heilsberg: The Königsberg Opera Orchestra.
- 8.30 " British Regional Stations: Canterbury Festival.
- 8.45 " Radio-Paris: Operetta from 1870 to 1900.
- 8.45 " Strasbourg: Overture, "Gwendoline," (Chabrier), etc.
- 9.0 " Brussels No. 2: Liszt programme.
- 9.0 " Hamburg: Raff programme.
- 9.15 " Stockholm: Choral music.
- 9.45 " Schweizerischer Landessender: Günther Raphael's music.
- 10.0 " Copenhagen: Older Danish Music.
- 10.15 " Oslo: Choral Concert relayed from Stavanger.
- 10.15 " Leipzig: The Symphony Orchestra.

OPERA AND OPERETTA

- 7.50 p.m. Munich: "Nanon" (Genée).
- 8.45 " Rome: "Tannhäuser" (Wagner).

CHAMBER MUSIC

- 8.0 p.m. Brussels No. 2: Mozart and Brahms.

RECITALS

- 6.45 p.m. Heilsberg: Pianoforte Sonatas (Haydn).
- 7.0 " Bucharest: 'Cello, pianoforte, violin.
- 8.0 " Warsaw: Vocal Quartet.

MISCELLANEOUS

- 8.0 p.m. Copenhagen: King Valdemar's Day Festival, relayed from Aarhus Cathedral.

DANCE MUSIC

- 10.15 p.m. Berlin, (10.40) Breslau.
- 10.30 " Strasbourg.

Gwendoline

Gwendoline is the golden-haired daughter of Arnel the Saxon, conquered by the Danish seaking Harald, who has never seen a woman before. Arnel gives her as bride to Harald, but contrives that his followers shall murder the Danes when they have laid aside their arms at the wedding feast. He stabs the king himself, and Gwendoline, who loves her savage husband, takes her own life, dying on his body amid the glare of the Danes' burning ships. The most successful of Chabrier's operas, it was produced in Brussels in 1886; its music is of the vivid and melodious order we expect from the composer of that universal favourite, the *Rhapsody Espana*. The overture alone—STRASBOURG



Castello



Anny Helm

By courtesy of Radio Corriere



Melandri

The Wolfram, Elisabeth, and Tannhäuser in to-night's broadcast from ROME

The Polite Winds

This evening STUTTGART station is celebrating the 75th anniversary of the Orchestral Society there with a Bach programme. It includes an aria from one of his cantatas, written for the name-day of a friend who was a university professor. It was designed for autumn, and begins by recounting how the winds are released from their summer bondage to work their own wild will. The Goddess of Harvests begs them to respect her vineyards, but the winds laugh her to scorn. When they are asked, however, to respect the festival for which the cantata was composed, they immediately comply. Their wild manners are vividly set forth in Bach's music, but the aria in this programme, sung by Zephyr, is a quiet contrast with the other, boisterous, numbers.

NATIONAL

	kc/s.	m.	kW.
London:	1,148	261.3	50
Daventry:	193	1,554.4	30
Northern:	995	301.5	50

- 10.15 a.m.—The Daily Service.
- 10.30—Time Signal (Greenwich), Shipping Forecast.
- 10.45—"New Pennies, Old Purses"—VII. Dr. P. Sargent Florence: "Cuts and Rises"—I.
- 11.0—The Heckmondwike Lecture, relayed from Heckmondwike.
- 12.15 p.m.—Quentin Maclean at the Organ.
- 12.45—Gramophone Records.
- 1.30—Jack Martin and his Hotel Majestic Orchestra.
- 2.30—Biology and Hygiene. Professor Winifred Cullis, C.B.E.: "Your Body every Day"—VII.
- 3.0—English Literature. Miss N. Niemeyer: "Delight in Poetry."
- 3.30—The Bournemouth Municipal Orchestra, conducted by Montague Birch. John Hunt (Pianoforte).
- 4.45—Time Signal (Greenwich).
- 4.45—Reginald New at the Organ.
- 5.15 (Daventry)—The Children's Hour.
- 5.15 (London and Northern)—Dance Music.
- 6.0—"The First News."
- 6.30—Time Signal (Greenwich).
- 6.30—The Foundations of Music. Bach's Choral Preludes. Played by Dr. W. G. Alcock.
- 6.50—"This Surprising World." Mr. Gerald Heard.
- 7.10—7.25—"Idle Thoughts of a Busy Farmer"—III. Mr. A. G. Street.
- 7.30—"Speech in the Modern World"—IV. Mr. A. Lloyd-James.
- 8.0—"The Pink Pink Vase," by Marjorie J. Redman, the Music composed and conducted by Leslie Woodgate.
- 9.0—Time Signal (Greenwich).
- 9.0—"The Second News."
- 9.15—Shipping Forecast; New York Stock Market Report.
- 9.20—"Musings without Method." The Rt. Hon. Lord Ponsonby.
- 9.35—The B.B.C. Orchestra (Section G), conducted by Joseph Lewis. John Morel (Baritone).
- 11.0—12 midnight—Dance Music.
- 11.30—Time Signal (Greenwich).

REGIONAL

	kc/s.	m.	kW.
London:	842	356.3	50
Midland:	752	398.9	25
Northern:	626	479.2	50

- 10.15 a.m. (London and Northern)—Daventry National Programme.
- 12.15 p.m.—Midland Studio Orchestra. Dorothy Wells.
- 1.15—Organ Recital by G. D. Cunningham.
- 2.0—3.0—The Northern Studio Orchestra. Rachel Bastable (Soprano).
- 3.30 (London and Northern)—Daventry National Programme.
- 5.15—"The Children's Hour."
- 6.0—"The First News."
- 6.30 (London and Northern)—The London Zigeuner Orchestra. Hardy Williamson (Tenor).
- 6.30 (Midland)—Light Music. Ernest Parsons and his Orchestra.
- 7.30 (Midland)—"The Pageant of Leicester" from A.D. 50 to 1882 by W. E. H. Allen.
- 7.45 (London)—The Leslie Bridge-water Quintet. Nora Desmond (Soprano).
- 7.45 (Northern)—Frank A. Terry presents the famous "Super-Optimists" in their Summer-time Revue, "Pleasure on Parade."
- 8.30—Conterbury Festival of Music and Drama. Serenade. Relayed from the Cloisters, Canterbury Cathedral. The B.B.C. Orchestra. Conductor, Adrian Boult. Symphony No. 93 in D (Haydn): 1. Adagio, Allegro assai; 2. Largo Cantabile; 3. Menuetto, Allegretto; 4. Presto. Three Movements, Serenade No. 11 in E Flat for Wind Instruments (K. 375) (Mozart). Entr'acte No. II and Ballet Music No. II (Rosamunde) (Schubert). Siegfried Idyll (Wagner).
- 9.45 (London and Midland)—A Recital of Gramophone Records by Christopher Stone.
- 9.45 (Northern)—The Studio Orchestra.
- 10.15—"The Second News."
- 10.35 (Midland)—Experimental Transmission by the Fultograph Process.
- 10.40—11.0 (Midland)—As London.
- 10.35—12 midnight (London and Northern)—Dance Music.

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

BARCELONA (Spain)

Radio-Barcelona (E.A.J.I.). 860 kc/s (349 m.); 8 kW. Transmits at intervals from 8.10 a.m. 8.0 p.m.—Trio Concert. The Kiss Gavotte (Popy). Selection from "Rigoletto" (Verdi). Violin Solo: Aubade (Caludi). Ballet (Almayrac). 8.30—Exchange Quotations. 8.35—Lesson in Catalan Grammar. 9.0—Talk on Luminous Signs, Request Gramophone Records and Press Notes. 10.0—Chimes and Weather Forecast, Exchange Quotations and Market Prices. 10.5—Programme by the Station Orchestra. Pasodoble (Ibarra). Selection from "A Waltz Dream" (Oscar Straus). Romance (Rubinstein). 10.30—Baritone Song Recital by Miguel Jané. 11.0—Vicente Diez de Tejada reads from his own Works. 11.15—Concert by the Toldra Sextet from the Granja Royal. 4.0 a.m. (Thursday) (approx.)—Close Down.

BELGRADE (Yugoslavia)

697 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 9.55 a.m. 5.0 p.m.—Yugoslavian Song Recital by Dino Ijubisic. 5.30—Light Music on Gramophone Records. 7.30—6.55—Time Signal and Programme Announcements. 7.0—Popular Music on Gramophone Records. 7.30—Talk. 8.0—A Comedy. 8.45—Sonata in A (Franck) by Milan Dimitrijevic (Violin). 9.15—Light Music on Gramophone Records. 9.35—News Bulletin and Sports Notes. 9.55—Grieg Concert by the Station Orchestra. Homage March. Suite from "Peer Gynt." 10.40—Concert relayed from the "Rudnicanin" Restaurant.

BERLIN (Germany)

Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW. Transmits at intervals from 5.45 a.m. 12 noon—Weather for Farmers, followed by Gramophone Concert of Schubert Music, and Second Weather for Farmers. 12.55 p.m.—Nauen Time Signal. 1.35—News Bulletin. 2.0—Operatic Concert on Gramophone Records, relayed from Berlin (Witzleben). 3.0—Talk: Cruelty to Animals. 3.30—Weather and Exchange. 3.45—Talk for Women: German Week, 1932. 4.0—Educational Talk: The Young Teacher. 4.30—See Hamburg. 5.30—Talk: Little-known Parts of France. 6.0—Talk: The Lochheim Song Book, the Oldest Example of the German Song. 6.30—See Berlin (Witzleben). 6.55—Weather for Farmers. 7.0—Talk on Economics: The Eve of the Lausanne Conference. 7.40—See Berlin (Witzleben). 8.0—See Vienna. 10.0 till Close Down—See Berlin (Witzleben). 12.30 a.m. (Thursday)—Close Down.

phone Records, relayed from Berlin (Witzleben). 3.0—Talk: Cruelty to Animals. 3.30—Weather and Exchange. 3.45—Talk for Women: German Week, 1932. 4.0—Educational Talk: The Young Teacher. 4.30—See Hamburg. 5.30—Talk: Little-known Parts of France. 6.0—Talk: The Lochheim Song Book, the Oldest Example of the German Song. 6.30—See Berlin (Witzleben). 6.55—Weather for Farmers. 7.0—Talk on Economics: The Eve of the Lausanne Conference. 7.40—See Berlin (Witzleben). 8.0—See Vienna. 10.0 till Close Down—See Berlin (Witzleben). 12.30 a.m. (Thursday)—Close Down.

BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW. Transmits at intervals from 6.0 a.m. (Gymnastics and Concert Relay). 6.5 p.m.—Talk: "A Day in a Sanatorium." 6.30—Legal Talk. 6.55—"The Witzleben Station informs its Listeners..." 7.0—Topical Talk. 7.10—Concert of Light Music from the "Traube Weinrestaurant." 7.40—Frontier Reports. 8.0—See Vienna. 10.0—Weather, News, Sports Notes and Dance Music from the Europa-Garten. 12.30 a.m. (Thursday)—Close Down.

BORDEAUX-LAFAYETTE (France)

(P.T.T.). 986 kc/s (304 m.); 13 kW. Transmits at intervals from 12.45 p.m. 7.30 p.m.—Announcements and Market Prices. 7.40—Dramatic Criticism. 7.55—Lottery Results. 8.0—Agricultural Talk. 8.15—News Bulletin and Weather Forecast. 8.30—Concert of Adam's Music by the Arca Symphony Orchestra. Introductory Talk by Pierre Caujolle. Soloists: Mlle. Saint Val (Vocalist) and M. Lafont (Tenor).

BRATISLAVA (Czechoslovakia)

1,076 kc/s (279 m.); 14 kW. Transmits at intervals from 11.0 a.m. 6.0 p.m.—Hungarian Review, followed by Concert. Suite bergamasque (Debussy). French Songs from the Thirteenth to the Eighteenth Century. 7.0—See Brno. 8.0—See Prague. 10.20—Programme Announcements and News.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by Gleiwitz, 1,184 kc/s (253 m.). Transmits at intervals from 6.0 a.m. 5.25 p.m.—Humorous Songs for Bass Voice—Recital by Hermann Frischler. Catalogue Song from "Don Giovanni" (Mozart). Song from "The Three Pintos" (Weber). Kezal's Song from "The Bartered Bride" (Smetana). The Song of Porter from "Martha" (Flotow). Song from "The Gipsy Baron" (Johann Strauss). 5.50—Talk: The Development of Industry in Upper Silesia since the New Frontiers were arranged. 6.10—Historical Talk. 6.30—Weather for Farmers. 6.32—Wind Instrument Concert by the Trumpet Corps of the Seventh Prussian Cavalry Regiment, conducted by Hermann Ullrich, March, Flott voran! (Ullrich). Overture, Friedensfeier (Nehl). March, The King's Grenadiers (Teichert). March, Deutschland hoch in Ehren (Hackenberger). Potpourri of Verdi's Music (arr. Bohne). March, No. 194 (Lautenbach). Heroic March (Frederick the Great). Overture, "Il Guarany" (Gomez). Russian Descriptive Piece, Stenka Rasin (Kubát). Potpourri, North and South in Dance and Song (Rath). Zeppelin March (Schneider).

8.0—Weather Forecast. 8.2—"The Drama of the Arctic." 8.30—See Langenberg. 10.15—Time Signal; Weather Forecast, News Bulletin, Sports Notes and Programme Announcements. 10.40—Light Music from the Stadtpark Café, Gleiwitz. 12 midnight (approx.)—Close Down.

BRNO (Czechoslovakia) 878 kc/s (342 m.); 35 kW. Transmits at intervals from 11.0 a.m. 6.25 p.m.—German Transmission. News and Talk for Workers: Rationalisation and its importance. 7.0—Talk: Sailing. 7.15—Some English Authors: Dickens, Chesterton, Shaw, and Jerome K. Jerome. 8.0—See Prague. 10.20—News Bulletin.

BRUSSELS (Belgium) (No. 1)

I.N.R. 590 kc/s (509 m.); 15 kW. 12 noon—Concert by Max Alexys and his Orchestra. 1.0 (in the interval)—Le Journal Parlé. 5.0—Dance

WEDNESDAY continued

Music from the St. Sauveur Palais de Danse. 6.15—Talk by Louis Delmeé. 6.30—Gramophone Concert. Fuite et Mort de Néron (Lavaigne). Legend of the Sage Bush from "Our Lady's Juggler" (Massenet). Andante pastoral (Taffanel). Fête polonaise from "Le Roi malgré lui" (Chabrier). Aria from "Hérodiade" (Massenet). Ballet Music from "Isoline" (Messager). 7.15—Talk: "Psychic Rays and Radiation." 7.30—Medical Talk. 8.00—Popular Programme. Monologues, Songs and Sketches. 9.00—Concert relayed from the Memline Hall, Antwerp. 10.0—Le Journal Parlé. 10.10—Concert (continued). 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (237.2 m.); 15 kW. Programme in Flemish. 12 noon—Concert by the Max Alexys Orchestra. 1.0—Le Journal Parlé. 1.10—Concert (continued). 5.0—Twenty-ninth Recital of Modern Belgian Sonatas, by Henry Wagemans (Violin) and Charles Scharrer's (Pianoforte). Sonata in D for Violin and Pianoforte (Martin Lussens). 5.30—Concert of Light Music on Gramophone Records. March (Yatove). Selection from "The Desert Song" (Romberg). Selection from "Die Fledermaus" (Johann Strauss). Little Serenade (Mozart). Overture, "Norma" (Bellini). Selection from "The Gipsy Baron" (Johann Strauss). Fantasia capriccio (Vinas). Marche des Vallées (van Hoorebeke). 6.15—Review of the Historical Events of the Month. 6.30—Trio Concert. Puerta de la Carne (Lucchesi). Waltz, Dolores (Waldeufel). Pensée d'Automne (Massenet). Selection from "Hamlet" (Thomas). Violin Solo: Arab Song (Rimsky-Korsakov). Gavotte for Cello (Popper). To Spring (Grieg). Selection from "Paganini" (Lehár). 7.15—Economic Review: The Lausanne Conference. 7.30—Le Journal Parlé. 8.0—Chamber Music by M. and Mme. Lykoudi-Passet. Sonata No. 1 for Violin and Pianoforte (Mozart). Sonata in G, Op. 78 (Brahms). 8.30—En Bateau from the "Petite Suite" (Debussy), on Gramophone Records. 8.45—Reading (Dostoevsky) 9.0—Liszt Concert by the Symphony Orchestra, conducted by Arthur Meulemans. Rakoczy March. Les Préludes. Rhapsody for Orchestra. Liebestraum. The Legend of St. Elisabeth. Hungarian March. 10.0—Le Journal Parlé. 10.10—See Brussels (No. 1). 11.0 (approx.)—Close Down.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Concert of Variety Music and Romanian Music by the Station Orchestra. 5.0—Time Signal and News Bulletin. 5.10—Orchestral Concert (continued). 6.0—Educational Programme. 6.40—Song Recital by M. Shilton (Baritone). 7.0—Cello Recital by Georges Gocca. Sonata in E Minor (Vivaldi). Pavane pour une Infante défunte (Ravel). Pièce en forme de Habanera (Ravel). 7.30—Talk to be announced. 7.45—Pianoforte Recital by Cella Delavrancea Labovary. 8.15—Violin Recital by A. Sarvas. Spanish Suite (Falla-Kochansky). Clair de Lune (Debussy). Ballet Music from "Rosamunde" (Schubert-Kreisler). 8.45—News Bulletin.

BUDAPEST (Hungary) 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Programme also relayed on 210 metres from 6.30 p.m. till Close Down. 5.25 p.m.—Gramophone Concert of Popular Music. 6.30—Hungarian Folk Songs. 7.15—Programme by Ludwig Zilahy. 7.40—Orchestral Concert. Edera (Carosio). Loin du bal (Gillet). Melody (Jarai). Selection from "The Merry Widow" (Lehar). Waltz Song (Saphit). Selection from "Si j'étais Roi" (Adam). Waltz Song (Banyai). Tango Song (Kuthy). 8.45 Psalm LV (Kodaly), by the Royal Hungarian Opera House Orchestra and Choir and Franz Szekelyhidy (Tenor) with Introductory Talk. 9.30—Talk on Politics. 10.0—Concert from the Markus Restaurant. 10.10 (in the interval)—Weather Report. 11.0—Dance Music from the Tarján Restaurant.

COPENHAGEN (Denmark) 1,067 kc/s (281 m.); 0.75 kW. Relayed by Kalundborg, 260 kc/s (1,153 m.).

Transmits at intervals from 7.30 a.m. (Gymnastics). 11.0 a.m.—Weather Forecast. 11.10—Angling Notes. 12 noon—Town Hall Chimes. 12.2—2.0 p.m.—Concert from a Restaurant. 3.0—Orchestral Concert conducted by Launy Gröndahl. Overture, "Les deux Savoyards" (Offenbach). Waltz from "Vera Violetta" (Eysler). Rubans et Tambourins and Valse Serpentine from the "Cotillon Suite" (Lacôme). March, The Boys of Tipperary (Amers). Talk for Women. March, San Sebastian (Dufort). Waltz, Solvmyrter (Lumbye). Song from "Maskarade" (Carl Nielsen). Ecossaise for Wind Instruments (Schubert). Peasant Dances, Oberfäzler (Venzl). The Call of Spring (A. Williams). Festival March from "Romeo and Juliet" (Gounod). 5.0—Gramophone Records of Variety Music. 5.40—Exchange Quotations and Fish Market Prices. 5.50—Talk: Long Distance Rowing. 6.20—French Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30 (from the Esbjerg Studio)—Talk: Hay and Hay-making. 8.0—Town Hall Chimes. 8.2—Relay from Aarhus Cathedral of the "Danekrog" Festival for Waldemar's Day. Chimes. Organ Prelude. Community Song: Lad vaje højt vort Kongeflag. Collect and Lesson. Selections by a Children's Choir. Speech by M. Fuglsang-Damgaard. Song by O. Hjelms. Choral Selection: Lovsinger Herren. Blessing. Community Song: Kongerens Konge. Organ Epilogue. 9.15 (from the Aabenraa Studio)—Talk: The Unity of the Church. 9.45—News Bulletin. 10.0 Concert of Old Danish Music by the Radio Orchestra conducted by Emil Reesen. Overture, "Elverhøj" (Kuhlau). Introduction and Dance from "Valdemar" (J. Fröhlich). Dance, Polonaise and Waltz from "Et Folkesagn" (Niels Gade). Prelude, Dance and Overture from "The Raven" (J. P. E. Hartmann). 10.45 (approx.)—Close Down.

CRACOW (Poland) 959 kc/s (312.8 m.); 1.5 kW. Transmits at intervals from 11.58 a.m. 7.35 p.m.—Radio Journal. 7.45—Answers to Correspondents. 8.0—See Warsaw. 9.55—News Bulletin. 10.0—Dance Music and Humorous Talk. 10.40—See Warsaw. 11.30 (approx.)—Close Down.

DUBLIN (Ireland) (2RN). 725 kc/s (413 m.); 1.2 kW. Relayed by Cork, 1,337 kc/s (224.4 m.). 1.30—2.0 p.m.—Time Signal, Weather Forecast, Stock Report and Light Music on Gramophone Records. 6.0—Popular Music on Gramophone Records. 6.15—Programme for Children. 7.0—Light Music on Gramophone Records. 7.20—News Bulletin. 7.30—Time Signal. 7.31—Gaedhilg. 7.45—German-Lesson. 8.0—Mass in G Minor (Vaughan Williams), by the Culwick Choral Society, conducted by Turner Huggard. 8.30—Vaughan Williams Recital by the Station Sextet. 9.0—Tenor Solos by Peter Dunn. 9.15—Banjo and Steel Guitar Solos by Jack MacGarvey. 9.30—Soprano Solos by Edie O'Dwyer. 9.45—The Numbers. 10.15—The Station Sextet. 10.30—Time Signal, News, Weather Forecast and Close Down.

FÉCAMP (France) Radio Normand. 1,345 kc/s (223 m.); 10 kW. 12 noon—Light Music on Gramophone Records. 12.30 p.m.—News Bulletin. 12.45—Concert. Melodious Memories (Finck). Selection from "Le Roi malgré lui" (Chabrier). Selection from "Marietta" (O. Straus). Selection from "Madame Butterfly" (Puccini). Selection from "Werther" (Massenet). Selection from "Le Jongleur de Notre Dame" (Massenet). Reflections (Guitry). Selection from "Tosca" (Puccini). Selection from "Cavalleria rusticana" (Mascagni). 7.30—Radio Gazette for Normandy. 8.0—News Bulletin. 8.30—Concert relayed from Trouville. 11.0—Dance Music by Pay Casey and his Rialto Boys. 12 midnight—Dance Music by the Café Anglais Band. 1.0 a.m. (Thursday)—Close Down.

FLORENCE (Italy) Ente Italiano Audizioni Radiofoniche. 599 kc/s (500.8 m.); 20 kW. See Turin.

FRANKFURT-am-MAIN (Germany)

770 kc/s (390 m.); 1.5 kW. Relayed by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 12 noon—Concert from Munich. 12.50 p.m.—News and Weather. 1.0—Gramophone Concert. Mephisto-Walzer (Liszt). Pianoforte Concerto in E Minor, Op. 11 (Chopin). 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Time and Economic Notes. 3.15—Programme for Young People. 4.55—Economic Notes. 5.0—Orchestral Concert, conducted by Reinhold Merten. Soloist: Karl Erich Jaroschek (Tenor); Part I. Chaconne from "Orpheus" (Cluck). Selection and Aria from "Enea nel Lazio" (Righini). Symphony in C No. 30 (Haydn). Part II. Programme of Old Dance Music. 6.15—Economic Notes. 6.25—Dialogue with a Bookseller. 6.35—See Stuttgart. 6.50—English Language Lesson. 7.15—Time, Programme Announcements, Weather, and Economic Notes. 7.30—9.0—See Stuttgart. 9.0—Orchestral Concert, conducted by Hans Rosbaud. Soloist: Ary Schuyter (Cello). Romantic Serenade for Small Orchestra, Op. 9 (Rüdiger). Variations for Cello and Orchestra (Boellmann). Suite from the Music to Shakespeare's "The Tempest" (Humperdinck). Selections for Cello and Orchestra (Schuyter): (a) Improvisation, (b) Serenade. Overture, "Der Improvisator" (d'Albert). 10.0—Talk on the Author Arno Nadel, with Readings from his Works. 10.30—Time, Weather, News and Sports Notes. 10.45—Dance Music from London.

HAMBURG (Germany) Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayed by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.); and Kiel, 1,292 kc/s (232.2 m.). Transmits at intervals from 5.45 a.m. 4.30 p.m. (from Hanover)—Wagner Concert, by the Dresden Philharmonic Orchestra relayed from Bad Pymont. Overture, "Rienzi." Procession to the Minister from "Lohengrin." Overture, "Tannhäuser." Violin Solo: Walter's Prize. Song from "The Mastersingers." Prelude to the Third Act. Dance of the Apprentices, and Entry of the Guilds from "The Mastersingers." 5.30 (from Kiel)—Talk: Animals in North German Folklore. 5.55 (from Kiel)—Song Recital by Else Veith (Soprano). Songs (Schubert): (a) An eine Quelle, (b) Lachen und Weinen. Songs (Schumann): (a) Nussbaum, (b) Aufträge. Songs (Grieg): (a) Mit einer Wasserlilie, (b) Lauf der Welt, (c) Solveig's Song. Songs (Jensen): (a) O lass dich halten, gold'ne Stunde, (b) Sie sassen zum Abmarsch, (c) Am Ufer des Flusses, des Manzanars. 6.30—Talk: Judges and Courts of Justice Abroad—II. The United States of America. 6.55—Frankfurt Exchange. 7.0—Topical Talk. 7.15—Weather Report. 7.20—Military Band Concert. March, St. Hubertus (Prager). Overture, "Der Wildschütz" (Lortzing). Selections from "Der Freischütz" (Weber). Selections (Reckling): (a) Gefällt dir meine grüne Tracht, (b) Weidmannsheil, Jagdfantasie (Prager). March, Der Jäger aus Kurpfalz (Rode). March, Treu deutsch (Thiele). March, Unter dem Gardestern (Möller). Overture, Heeresmusikinspizient (Schmidt). Husarenrit (Spindler). Potpourri, Mecklenburgischer Melodienkranz (Kruze). March, Achtung! Fertig! Los! (Prager). March, Donner und Doria? (Prager).

6.30—Joachim Raff Programme, for the Fiftieth Anniversary of his Death. The Norag Orchestra, conducted by José Eibenschütz. Overture on "Ein feste Burg." Symphony No. 3, Im Walde. 10.0—Time and News. 10.20—Dance Music from the "Haus Sieglar."

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.).

Transmits at intervals from 6.0 a.m. 1.5—2.30 p.m.—Gramophone Concert. Leonora Overture No. 3 (Beethoven). Symphony in E flat (Mozart). Monologue from "The Mastersingers" (Wagner). Two Arias for Soprano from "Der Freischütz" (Weber). Contralto Solos: (a) Aria from "Samson and Delilah" (Saint-Saëns), (b) Aria from "Carmen" (Bizet). Duet for Tenor and Soprano from "Aida" (Verdi). Two Selections for Chorus and Orchestra from "Fra Diavolo" (Auber). 3.30—Talk for the Housewife. 3.40—"Kinderland"—Poem (Peter Josef Schneider) with Children's Songs. 4.15—Radio Report on the Second Half of the International Handball Match, Germany v. Switzerland. 4.30 (approx.)—See Hamburg. 5.30—Talk for Parents. 5.55—Review of Books. 6.15—Agricultural Prices. 6.25—Talk by Dr. Straube on the Exhibition of the German Artists' Society in the Wrangelturn, Königsherg. 6.45—Haydn's Pianoforte Sonatas, played by Rudolf Winkler. [Sonata in F. Sonata in D. Sonata in E. Sonata in E Flat. 7.20 (from Prisching)—Radio Report: An Alarm at the Voluntary Fire Station. 8.0—Weather Forecast. 8.5—Concert by the Königsberg Opera House Orchestra, conducted by Werner Richter-Reichheld. Overture, "The Merry Wives of Windsor" (Nicolaï). Norwegian Artists' Carnival (Svendsen). Intermezzo from "The Tales of Hoffmann" (Offenbach). Tovelille (Aager Hammerick). Eine kleine Nachtmusik (Mozart). Tales from the Vienna Woods (Johann Strauss). Suite, Aus aller Herren Länder (Moszkowsky). Overture, "Rienzi" (Wagner). 9.0 (in an interval)—Announcements. 10.5 (approx.)—Weather, News and Sports Notes, and Dance Music from Berlin (Witzleben). 12.30 a.m. (Thursday)—Close Down.

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW up to 4.40 p.m.). 6.25—9.40 a.m.—Programme of the Workers' Radio Society (VARA). 6.25—6.40 and 7.10—7.25 a.m.—Physical Culture. 7.40—Variety Music on Gramophone Records. 8.40—Concert by the Willem Drukker Trio. 9.40—Religious Programme by the Liberal Protestant Radio Society (VPRO). 9.55 (till Close Down). VARA Programme. 9.55—Concert by the Willem Drukker Trio. Recitations by Janny van Oogen. Dramatic Selection by the "Groot Volkstoneel" and Variety Music on Gramophone Records. 11.40—Septet Concert, with Variety Music on Gramophone Records. 1.25 p.m.—1.55—Interval. 1.55—Cookery Hints. 2.40—Programme for Children. 5.10—Septet Concert. 5.40—Educational Talk. 6.10—Concert (continued). 6.4c—Talk: Imperialism and the League of Nations—Great Britain, Japan and China. 7.0—Concert (continued). 7.40—"Princes and Nations"—Historical Radio Play (Dekker), with the collaboration of a Speaking Choir. 8.25—Orchestral Concert, conducted by Hugo de Groot. Soloist: Harry Wiegelaar (Violin). Overture, "Marinarella" (Fucik). Waltz, Moonlight on the Alster (Fetras). The Musical Box (Manfred). Tango (Filippucci). Violin Solo: Serenade (Drda). Selection from "La Bohème" (Puccini). 9.10—"The Adventures of Messrs. Wakker and Tropenduit"—Sketch. 9.25—Concert (continued). March, Heil Europa (v. Blon). Selection from "The Dollar Princess" (Fall). Gavotte, Rendez-vous (Aletter). Polopiele (Fetras). Waldteufel Potpourri (Mousseux). March, Uncle Sammy (Holzmann). 10.10—News Bulletin. 10.25—Concert (continued). Overture, "Flotte Bursche" (Suppé). Hiawatha (Moret). The Forge in the Forest (Michaelis). Legend of Love (Becco). Austrian Peasant Dances (Pachermezz). 10.55—Popular Music on Gramophone Records. 11.40 (approx.)—Close Down.

HILVERSUM (Holland) 160 kc/s (1,875 m.); 8.5 kW. Programme of the Christian Radio Society (N.C.R.V.). 7.40 a.m.—Bible Reading. 7.55—Gramophone Records of Light Music. 9.10—9.40—Interval. 9.40—Choral Concert. 10.10—Programme for Invalids. 10.40—Soprano and Harmonium Recital. 11.40—Police Report.

KALUNDBORG (Denmark) Kalundborg Radio. 260 kc/s (1,153 m.); 7.5 kW. See Copenhagen.

KATOWICE (Poland) 734 kc/s (408 m.); 16 kW. Transmits at intervals from 11.58 a.m. 6.0 p.m.—Talk. 6.20—Dance Music. 9.10—Song Recital by Serge Gagarin. 10.0—Popular Music on Gramophone Records. 11.0—Answers to Correspondents in French.

LAHTI (Finland) 167 kc/s (1,796 m.); 54 kW. Relayed by Helsinki, 815 kc/s (368.1 m.). Transmits at intervals from 7.10 a.m. 6.15 p.m.—Programme for Children. 7.0—Variety Music. 7.20—Talk on Sport. 7.45—Dance Music by the Amarillo Orchestra. 8.5—Recital of Popular Songs by Iivari Kainulainen. 8.20—Dance Music. 8.45—News in Finnish. 9.0—News in Swedish. 9.15—Light Music relayed from the Kappeli Restaurant. 10.0 (approx.)—Close Down.

LANGENBERG (Germany) Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time, and Concert Relay). 12 noon—Concert from Munich. 12.50 p.m.—Weather, News and Time Signal. 1.0—Orchestral Concert, conducted by Wolf. Gammel-Jäger-Marsch (Morena). Overture, "Nekiris Hochzeit" (Lincke). Waltz, Die Hydropathen (Gung'l). Watcau-Suite (Zimmer). Venezianisches Gondellied (Mendelssohn). Causerie (Gillet). Ländler (Pachermezz). Potpourri, So schön wie's einmal war (Dauber). 2.30—Sponsored Gramophone Concert. 3.50—Programme for Children. 4.20—Reading of Poems. 4.35—Educational Talk. 5.0—Concert. Soloists: Evelyn Wendorf-Fecht (Contralto), Anno-Schellenberg (Baritone) and Egbert Grape (Pianoforte). Sonata in E Flat for Pianoforte (Bach). Contralto Solo: I mio bel foco (Marcello). Four Ballads for Pianoforte (Brahms): (a) in D Minor, (b) in B Major, (c) in B Minor, (d) in B Major. Baritone Solos: Gesänge an Gott (Haas). Four Waltzes for Pianoforte, Op. 39 (Brahms). Songs for Contralto (Brahms): (a) An die Nachtigall, (b) Mädchenlied. (c) Der Tod, das ist die kühle Nacht. Two Songs for Baritone (Paulig): (a) Ein junger Dichter denkt an die Geliebte (from the Chinese), (b) Morgen. 6.15—Talk: German Destiny as mirrored in German Towns—Bremen. 6.40—Talk: The Proletariat and Unemployment. Insurance. 7.0—Weather, Time, Economic Report and Sports Notes. 7.15—Talk:

LANGENBERG (Germany) 12 noon—Concert from Munich. 12.50 p.m.—Weather, News and Time Signal. 1.0—Orchestral Concert, conducted by Wolf. Gammel-Jäger-Marsch (Morena). Overture, "Nekiris Hochzeit" (Lincke). Waltz, Die Hydropathen (Gung'l). Watcau-Suite (Zimmer). Venezianisches Gondellied (Mendelssohn). Causerie (Gillet). Ländler (Pachermezz). Potpourri, So schön wie's einmal war (Dauber). 2.30—Sponsored Gramophone Concert. 3.50—Programme for Children. 4.20—Reading of Poems. 4.35—Educational Talk. 5.0—Concert. Soloists: Evelyn Wendorf-Fecht (Contralto), Anno-Schellenberg (Baritone) and Egbert Grape (Pianoforte). Sonata in E Flat for Pianoforte (Bach). Contralto Solo: I mio bel foco (Marcello). Four Ballads for Pianoforte (Brahms): (a) in D Minor, (b) in B Major, (c) in B Minor, (d) in B Major. Baritone Solos: Gesänge an Gott (Haas). Four Waltzes for Pianoforte, Op. 39 (Brahms). Songs for Contralto (Brahms): (a) An die Nachtigall, (b) Mädchenlied. (c) Der Tod, das ist die kühle Nacht. Two Songs for Baritone (Paulig): (a) Ein junger Dichter denkt an die Geliebte (from the Chinese), (b) Morgen. 6.15—Talk: German Destiny as mirrored in German Towns—Bremen. 6.40—Talk: The Proletariat and Unemployment. Insurance. 7.0—Weather, Time, Economic Report and Sports Notes. 7.15—Talk:

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Health before Everything: Recreative Holidays for the Intellectual Worker. 7.30—Talk: 'The Work of the German University Student.' 7.55—First General News. 8.0—'The People make Music'—Concert. Mouth Organ Selections, Songs by War-Disabled Men, and Tambour Selections.

8.30—Dancing in the Open Air—Concert by the Station Orchestra, conducted by Kühn. March, Unter dem Grillenbanner (Lindemann). Waltz, A toi (Waldteufel). Die schöne Polin, Mazurka from 'Der Bettelstudent' (Millöcker). Der Bouquet (Johann Strauss). Jockey-Polka (Josef Strauss). Quadrille à la cour (Faust). Waltz, Juristenballtänze (Joh. Strauss). French Polka, Piffig (Ziehrer). Waltz, Ganz allerliebste (Waldteufel). Quick Polka, Ohne Bremse (Eduard Strauss). Selections from 'Gitta entdeckt ihr Herz' (Brodszky). Viennese Waltz (Benatzky). Fox-trot from 'Die blonde Liselott' (Künneke). Selections from 'Die spanische Fliege' (Gilbert). March Fox-trot from 'Der Sieger' (Heymann). Rumba from 'Schön ist die Welt' (Lehár).

10.15—News, Announcements, Sports Notes, and Programme to be announced. 12 midnight (approx.)—Close Down.

LEIPZIG (Germany)

1.157 kc/s (259 m.); 2 kW. Relayed by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6 a.m. to 10 p.m.—Educational Talk. 6.35—Italian Lesson. 6.55—Programme to be announced. 7.5—Talk: Petrol and its Importance in Industry. 7.30—Max Barthel reads from his novel, 'Der grosse Fischzug.' 8.0—See Vienna. 10.5—News Bulletin.

10.15 (approx.)—Concert by the Leipzig Symphony Orchestra, conducted by Paul Scheinpfug. Soloist: Gisela Springer (Pianoforte). Overture, 'Kätzchen von Heilbronn' (Hans Pfitzner). Concert Piece for Pianofort and Orchestra (Wilhelm Berger). A Symphonic Poem, Abschiedsszene (Ferdinand Braunroth). Suite for Small Orchestra, Le Bourgeois Gentilhomme (Richard Strauss). 11.30 (approx.)—Close Down.

LJUBLJANA (Yugoslavia)
522 kc/s (574.7 m.); 2.5 kW. Transmits at intervals from 12.15 p.m. 9.0 p.m.—Quintet Concert. 7.0—Russian Lesson. 7.30—Literary Programme. 8.0—Music Lesson. 8.30—Song Recital. 9.0—Quintet Concert. 10.0—Time, News and Light Music.

LWÓW (Poland)
788 kc/s (381 m.); 16 kW. Transmits at intervals from 11.58 a.m. 7.15 p.m.—Miscellaneous Items. 7.35—See Warsaw. 7.45—Literary Programme. 8.0—See Warsaw. 10.25—Talk: The Danube. 10.40—See Warsaw. 11.30 (approx.)—Close Down.

LYONS (France)
La Doua (PTT). 644 kc/s (465.8 m.); 1.5 kW. Transmits at intervals from 8.0 a.m. 7.0 p.m.—Selections from Operas on Gramophone Records. 7.30—Radio Gazette for Lyons and the South East. 8.45—Sponsored Concert.

MADRID (Spain)
Union Radio (EAJ7). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 9.0 a.m. 8.0 p.m.—Chimes, Exchange, Market Prices and Request Gramophone Records. 9.15—News and Political Review. 9.30—10.30—Interval. 10.30—Chimes, Time, Political Review. 10.45 (approx.)—'Le Bourgeois Gentilhomme'—Play (Molière), adapted by Agustín Martín Becerra. 12.45 a.m. (Thursday)—News Bulletin. 1.0 a.m.—Chimes and Close Down.

MILAN (Italy)
Ente Italiano Audizioni Radiofoniche. 995 kc/s (331.5 m.); 7 kW. See Turin.

MORAVSKÁ-OSTRAVA (Czechoslovakia)
1.137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 11.0 a.m. 6.25 p.m.—Recital by a Vocal Quartet. 7.0—See Brno. 8.0—See Prague. 10.20—Programme Announcements.

MOSCOW (Russia)
Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Three Talks: (a)

WEDNESDAY
continued

in Czech; Soviet Foreign Politics, (b) in Swedish: The Young People's Defence Brigade and its Work, (c) in French: Review of the Week's Events and Answers to Correspondents. In the interval at 9.55 Time Signal. 11.0 (approx.)—Close Down.

MUNICH (Germany)
563 kc/s (533 m.); 1.5 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.); and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 6.15 p.m.—Time Signal, Weather Report and Agricultural Notes. 6.25—Health Talk. 6.45—English Lesson. 7.5 (from Nürnberg)—Choral Concert by the Gleisshammer Singers, conducted by Karl Ott. Vale carissima (Kaun). Little Quartet (Kaun). Ein Lied Chastelards (Knab). Die Stille Stadt (Knab). Nun tu mir auf, meine Taube (Rein). O Bauernknecht, lass die Röslein stahn (Rein). 7.30—Talk: An Author travels through Swabia. 7.50—'Nanon'—Comic Opera in Three Acts (Richard Genée). 10.0—Topical Talk. 10.20—Time Signal, News Bulletin, Weather Report, and Sports Notes. 10.45—Concert Relay. 12 midnight (approx.)—Close Down.

OSLO (Norway)
Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrunn, 662 kc/s (453.2 m.) and Risør, 671 kc/s (447.1 m.). Transmits at intervals from 11.5 a.m. 5.30 p.m.—Popular Music on Gramophone Records. 6.30—Programme for Boys. 7.0—Announcements, Weather and News. 7.30—Talk: How we know what Plants live on. 8.0—Time Signal. 8.1—Variety Concert. Mgvar Wang (Saxophone), Normann Olsen (Banjo) and the Hans Erichsen Trio. Selection (Nicolette). Recitation (Wiedt). Patrol (Kozzak). Waltzes and Rheinland (Hans Erichsen). 9.30—Agricultural Report, Weather and News. 10.0—Topical Talk. 10.15—Choral Concert by the

Comrades Sandnes Choir, relayed from Stavanger, 1,247 kc/s (240.6 m.). 10.45 (approx.)—Close Down.

PALERMO (Italy)
Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 5.30—6.30 p.m.—Popular Music on Gramophone Records. 8.0—Announcements. Giornale dell'Erta, Agricultural Notes and Giornale Radio. 8.20—Light Music on Gramophone Records. 8.30 (in an interval)—Time Signal and Announcements. 8.45—Concert of Light Music and Selections from Operetta, conducted by F. Militello. In the interval, Talk. After the Programme, Literary Notes. 10.55—News Bulletin and Close Down.

PARIS (France)
Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW. Time Signals (on 2,650 metres) at 10.26 a.m. and 11.26 p.m. (preliminary and 6-dot Signals). Transmits at intervals from 1.0 p.m. 6.45 p.m.—Music Review by Victor Larbey, with the Collaboration of M. Braminov of the Opéra in Selections from the Works of Mme. Nageotte Wilbouchewitch. 7.0—Le Journal Parlé. 8.20—Weather Report. 8.30—Pianoforte Recital, by Georges Gabor. Eight Hungarian Folk Songs. Rhapsody (Dohnanyi). Two Etudes (Chopin). Liebestraum (Liszt). Dance (Debussy). 9.0—Symphony Concert, conducted by Edouard Flament. Soloists: M. Marchesini ('Cello), M. Flament (Pianoforte), and M. Cantrelle (Violin). Part I. Grieg Programme on the Eighty-Ninth Anniversary of his Birth. Sonata, Op. 36 for 'Cello and Pianoforte. Allegretto espressivo alla romanza from the Sonata Op. 45, for Violin and Pianoforte. Part II. Prelude in G Minor (de Massi-Hardman). Selection from 'Madame Chrysantheme' (Messager - Delsaux). 10.10 (approx.)—Close Down.

PARIS (France)
Poste Parisien. 914 kc/s (328.2 m.); 60 kW. Transmits at intervals from 12 noon. 7.0 p.m.—Light Music on Gramophone Records, News and Announcements.

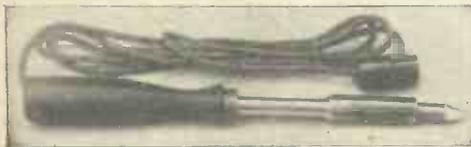
7.30—Dramatic Programme by the 'Amis de Guignol à Paris': (a) 'Guignol avocal,' (b) 'Le marchand de Picarrais.' 8.15—Talk (to be announced). 8.30—Gramophone Records, Talk and Announcements. 8.45—Sponsored Gramophone Concert. 9.45—Dance Music. 10.45—News Bulletin. 10.50 (approx.)—Close Down.

PARIS (France)
Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW. 6.45 a.m.—Physical Culture. 7.30—Weather and Physical Culture (continued). 7.46—Light Music on Gramophone Records. 8.0—News, Weather and Press Review. 12 noon—Talk: New Schools in France and Abroad. 12.30 p.m.—Grieg Concert on Gramophone Records for the Eighty-ninth Anniversary of his Birth. Sonata in C Minor for Violin and Pianoforte. Songs: (a) Ich liebe dich, (b) A Dream. Norwegian Dances. Suite from 'Peer Gynt.' Third Movement from the Concerto in A Minor. Triumphant March from 'Sigurd Jorsalfar.' In the intervals, at 1.0—Exchange, News and Weather, and at 1.30 and 2.0—Exchange. 3.45—Exchange and Market Prices. 6.30—Market Prices, Weather, Agricultural Report, Talk and Racing Results. 7.0—Talk on German Literature: A Phase of the Contemporary Theatre—Expressionism. 7.30—Medical Talk. 7.45—Commercial Prices and News. 8.0—Literary Readings: Tales by Alphonse Allais. 8.30—News and Weather Forecast. 8.40—Fashion Review by Mlle. José. 8.45—Concert of Operetta Music from 1870 to 1900. Selections from the Operettas of Serpette, Vasseur and Clérico. Soloists and Orchestra conducted by Raoul Labis. In the interval at 9.15—Press Review and News.

PITTSBURGH (U.S.A.)
Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Relayed by W8XK on 48.86 m. and 25.25 m. (See Short Wave List.) Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Business News. 9.15—Programme to be announced. 9.30—

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WEDNESDAY continued

Pebecco Weather Report. 9.32—Market Reports. 9.45—Songs in French Manner by Diane Laval. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Bulletin. 10.12—Programme Announcements. 10.15—KDKA Kiddies' Klub. 10.30—The Singing Lady. 10.45—Little Orphan Annie. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sport Review. 11.12—Press News-Reeler. 11.15—Westinghouse Watchmen.

11.30—Programme to be announced. 11.45—Literary Digest Topics in Brief, by Lowell Thomas, from New York. 11.59—Time Signal. 12 mid-night—1.15 a.m. (Thursday)—New York Relay. 12 midnight—Amos 'n Andy. 12.15 a.m.—Standard Brands. 12.30—The Stebbins Boys. 12.45—Billy Jones and Ernie Hare. 1.0—American Tax Payers' League. 1.15—Programme to be announced. 1.30—Jack Frost Melodies. 2.0—O'Henry Stories, from New York. 2.30—Canada Dry, George Olsen's Orchestra with Jack Benny, from New York. 3.0—Bob Nolan's San Felixians, from New York. 3.15—Ellsworth Giles' Home Singers. 3.30—Waves of Melody, from New York. 3.45—Around the Cracker Barrel. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News Flashes. 4.20—Lew Conrad and his Orchestra. 5.0—Orchestra, from New York. 5.30—Time and Good Night.

POZNAŃ (Poland) 896 kc/s (335 m.); 1.9 kW. Transmits at intervals from 10.10 a.m. 7.15 p.m.—Miscellaneous Items and Announcements. 7.35—See Warsaw. 7.45—Light Music on Gramophone Records. 7.58—Time Signal. 8.0—9.55—See Warsaw. 9.55—Time Signal—Sports Notes and Police Report. 10.10—Dance-Music, relayed from the Esplanade Cafe. 12 midnight (approx.)—Close Down.

PRAGUE (Czechoslovakia) 614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.15 a.m. 5.30 p.m.—Choral Selections. 6.0—Talk: Children's Habits. 6.10—Gramophone Records. 6.15—Popular Music. 6.25—German Transmission: Announcements and Talk for Workers. 7.0—Concert from Strelecky Ostrav. March (Zita). Dance from "Stradella" (Flotow). Tango, Jozi (Oberthor). Intermezzo (Bayer). Selection from "Il Trovatore" (Verdi). Five Minutes' Interval. Selections from "Rose Marie" (Friml). Torch Dance, No. 1 (Meyerbeer). March (Svarec). 8.0—Introductory Talk to the following Transmission. 8.5—Concert by the Czech Philharmonic Orchestra, conducted by Jiri Schaidler, relayed from the Town Hall. In the interval at 9.0—Time, News and Sports Notes. 10.15—Announcements.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland) 743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather and Announcements. 12.40—Orchestral Concert. 1.0—Exchange Quotations. 1.5—Concert (cont'd.). 1.45—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1—Concert by the Station Orchestra, conducted by Robert Echenard. 6.0 (from Geneva)—Programme for Children. 7.0—Weather Forecast. 7.1 (from Lausanne)—Review of New Books. 7.30 (from Lausanne)—Talk: The Economic Future of the Swiss Forests. 7.55—Announcements. 8.0 (from Geneva)—Cello Recital by Hans Andrae. 8.30 (from Geneva)—Talk with Illustrations, by Jacques Dalcroze: Rhythm and the Popular Song. 9.0—Concert of Variety Music by the Station Orchestra. 10.0—Weather Forecast and News Bulletin. 10.10 (from Geneva)—Announcements. 10.30 (from Geneva)—Dance Music relayed from the "Moulin Rouge." 11.0 (approx.)—Close Down.

ROME (Italy) Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (431 m.); 50 kW. Relayd by Naples, 941 kc/s (319 m.); and 2RO, 11,810 kc/s (25.4 m.). 8.15—8.30 a.m.—Giornale Radio and News. 12 noon—Variety Music on Gramophone Records. 12.35 p.m.—Weather Report. 12.45—Concert by the Radio Sextet.

Soloist: Antonio Saldarelli ('Cello). March, Il piccolo trombettiere (Carlini). Piedmontese Dance (Sinigaglia). L'ape (Filippucci). 'Cello Solos: (a) Canzonetta sul liuto (Forino), (b) Andalusia (Grandos), (c) Srenade (Godard). Selection from "Madame Butterfly" (Puccini-Tavan). Rustle of Spring (Sinding). Mimosa (Magliene). In the interval at 1.15—Giornale Radio, Exchange, Time and Announcements.

2.0—5.0—Interval. 5.0—Exchange, Report of the Royal Geographical Society, Children's Radio Review, Giornale Radio and Announcements. 5.30—Duets by Virginia Brunetti (Soprano) and Maria Soccorsi (Soprano). Vo' cercando fra le ombre (d'Astorga). Selection from "L'olimpiade" (Pergolesi). Se vuoi vedere il servo tuo morire (Gordigiani).

5.45—Concert of Light Music. 6.15—Giornale dell'Enit. 6.25—Medical Talk. 6.55 (from Naples)—Shipping Report and Sports Notes. 7.0—Agricultural Report, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Gramophone Records of Popular Music. 8.15—Medical Talk. 8.30—Sports Notes and Miscellaneous Announcements. 8.45—"Tannhäuser"—Opera in Three Acts (Wagner). The Orchestra conducted by Riccardo Santarelli. Choir Master: E. Casolari. In the interval, Talk on Literature and Art and Review of Reviews. 10.55—News Bulletin.

SCHENECTADY (U.S.A.) General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayd at intervals by W2XAF and W2XAD (See Short Wave List). Transmits at intervals from 11.45 a.m. 9.0 p.m.—The Pilgrims from New York. 9.30—Bridge Lesson from New York. 9.45—Studio Ensemble. 9.50—News—Items. 10.0—Stock Reports and Police-Notices. 10.15—Skippy from New York. 10.30—Musical Programme from New York. 10.45—Chandu, the Magician. 11.0—When Day is done. 11.25—Health Talk. 11.30—Weather Report. 11.31—Song and Story Man. 11.45—New Kenmore Orchestra. 11.55—Baseball Scores.

12 midnight (WGY only)—New York State Educational Series. (W2XAF only)—Stock Reports and News Items. 12.15 a.m. (Thursday)—New Kenmore Orchestra. 12.45—4.15—New York Relay. 12.45—"The Goldbergs." 1.0—Big Time. 1.30—Halsey Stuart Programme. 2.0—Goodyear Programme. 2.30—Mobil Oil Concert. 3.0—Coca Cola Programme. 3.30—N.B.C. Artists Service Musicale. 4.0—Nellie Revell. 4.15—Songs my Mother taught me. 4.30—DeWitt Clinton Orchestra. 5.0—Ralph Kirby, the Dream Singer from New York. 5.5—Buddy Rogers and his California Cavaliers from New York. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland) 653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory, Weather Report and News Bulletin. 12.40—Selection from "The Barber of Seville" on Gramophone Records. 1.35—Weather Report and Exchange Quotations. 1.45—3.30—Interval. 3.30—Folk Songs and Songs to the Lute on Gramophone Records. 4.0—Children's Songs on Gramophone Records. 4.30 (from Basle)—Programme for Children. 5.0—Weather Forecast. 5.5—6.30—Interval. 6.30 (from Berne)—Topical Talk. 7.0—Time Signal, Weather Report and Market Prices. 7.10 (approx.)—Gramophone Concert of Hungarian Dances. 7.30 (from Basle)—Review of the Latest Books on Music. 8.0 (from Zürich)—Mandoline Concert by the Amando Band, conducted by Oskar Werenbold. 8.35—Author's Programme: Mary von Gavel reads from her latest novel, "Dina and her Friends," with Musical Setting by the Station Orchestra, conducted by Hermann Hofmann. 9.30—Weather Report and News Bulletin. 9.45—Concert of Music by Günther Raphael, by the Station Orchestra, with the Composer as Conductor and Soloist (Pianoforte). 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden) Radiotjänst (SASA). 689 kc/s (436 m.); 55 kW. Relayd by

Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.); and Sundsvall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. 5.0 p.m.—Concert of Light Music by a Mandoline Orchestra. 5.30—Reading from the "Jungle Book" (Kipling). 6.0—Popular Music on Gramophone Records. 6.55—Talk on Agriculture. 7.15—Weather and News Bulletin. 7.30—Talk. 8.0—Accordion Recital. 8.45—Talk. 9.15—Concert by the Swedish Choral Society, conducted by V. E. Lundquist. 9.45—Weather and News Bulletin. 10.0—Dance Music by the Georg Enders Orchestra. 11.0 (approx.)—Close Down.

STRASBOURG (France) Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert of Operetta and Light Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Instrumental Concert, relayed from Bordeaux-Lafayette. 1.50—Gramophone Records of Light Music. 2.0—4.45—Interval. 4.45—Talk in French on Electricity. 5.0—Orchestral Concert, conducted by Roskam. March, Hollywood (Leopold). Waltz, Myosotis (Waldteufel). La Sérénata (Braga). Overture, "Frau Luna" (Lincke). Idylle passionnelle (Razigade). Selection from "A Waltz Dream" (O. Straus). Suite variée (Pierné). Aubade printanière (Lacombe). Selection from "François les bas-bleus" (Messager). 6.0—Talk in French: The Italian Poet, Leopardi. 6.15—Medical Talk in German. 6.30—Orchestral Concert, conducted by Maurice de Villers. Overture, "Euryantia" (Weber). Fantasia, Wagneriana (Fourdrain). Romance (Tchajkovsky). Ballet Music from "Lakmé" (Delibes). Selection from "Etienne Marcel" (Saint-Saëns). March from "Athalie" (Mendelssohn). 7.30—Time-Signal. 7.32—News in French and German. 7.45—Programme to be announced. 8.15—Gramophone Concert. Preludes Nos. 4, 6, and 20 (Chopin). Selections from (a) "The Queen of Spades" (Tchajkovsky), (b) "Ernani" (Verdi), and (c) "L'Arlésienne" (Bizet). Overture, "Die Fledermaus" (Joh. Strauss). Selections from (a) "The Fair Maid of Perth" (Bizet) and (b) "The Barber of Seville" (Rossini). Canzonetta (Tchajkovsky). La Campanella (Paganini). Canzonetta (d'Ambrósio). Orientale (Cui). 8.45—Symphony Concert by the Municipal Orchestra, relayed from the Restaurant de l'Orangerie. Soloist: P. Krauss (Flute). Overture, "Gwendoline" (Chabrier). Andantino and Scherzando for Flute, Harp, Kettle-drums and Strings (Monfeullard). Symphonic Poem, Les Eolides (C. Franck). Symphony (Adam).

10.30—Dance Music from the Savoy. 12 midnight (approx.)—Close Down. STUTTGART (MÜHLACKER) (Germany) Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayd by Freiburg, 527 kc/s (570 m.). Transmits at intervals from 6.0 a.m. (Time, Weather and Gymnastics). 10.0 a.m.—Schubert Song Recital by Karl Hauser. Artur Haagen at the Pianoforte. Three Selections from "Die schöne Müllerin": (a) Der Neugierige, (b) Des Müllers Blumen, (c) Mit dem grünen Lautenbande. Three Selections from "Schwanengesang": (a) Aufenthalt, (b) Ihr Bild, (c) Ganyem. Der Wanderer. Schubert Pianoforte Pieces in the intervals. 10.30—The London Symphony Orchestra on Gramophone Records. Le Fontane di Roma (Respighi). Till Eulenspiegel's Merry Pranks, Op. 28 (Richard Strauss). 11.0—Time, Weather and News. 11.15—11.30 and 11.45—12 noon—Sponsored Music. 12 noon (from Nürnberg)—Concert by the Frankish Chamber Orchestra, conducted by Markus Rümmelein. Overture, "Bastien und Bastienne" (Mozart). Allegro from the Symphony in A (Mozart). Selection from "Dalibor" (Smetana). Impromptu, Op. 90, No. 4 (Schubert). Der Jäger aus Kurpfalz (Hindemith).

12.50—Time, Weather, News and Programme Announcements. 1.0—Richard Tauber Song Recital on Gramophone Records. Löns Poems set to Music by Gabriel Herzblatt am Lindenbaum. Verlören. Rose im Schnee. Scherfiedel. Verschütt! Der ferne Stern. Ja, grün ist die Heide (Blumle). In the intervals, Folk Songs and Potpourri. 1.55—News Bulletin. 2.0—2.15—Sponsored Music. 3.0 (from Freiburg)—Talk in connection with the Agricultural Show at Mannheim. 3.15 (from Karlsruhe)—Programme for Children. 4.30—Talk arranged by the Post Office. 5.0—See Frankfurt. 6.15—Time and Weather. 6.25 (from Mannheim)—Talk: Humorous Aids to Ready Reckoning. 6.50—See Frankfurt. 7.15—Time, Weather, and Agricultural Notes. 7.30—Bach Concert for the Seventy-fifth Anniversary of the Stuttgart Orchestral Society, relayed from the Liederhalle. Conductor and Pianist: Walter Rehberg. Soloists: Prof. Walter (Tenor), Albert Bertschmann (Viola d'amore) and Siegfried Rehberg (Viola da Gamba). Overture in C for Two Oboes, Bassoon and String Orchestra. Aria with Original Cembalo, Viola d'amore and Viola da Gamba. Frische Schatten, meine Freude. Concerto in D Minor for Pianoforte and Orchestra—Conductor: Hugo Rückbeil. 8.30—"Hard Luck with Gramophone Records"—a Humorous Sketch (Heinut Kassing). 9.0—See Frankfurt. 10.0—"The Hand"—a Story (Mauissant). 10.20—Time, Weather, News, Programme Announcements and Silent Night for Distant Reception.

TOULOUSE (France) Radiophonie du Midi. 779 kc/s (385 m.); 8 kW. Transmits at intervals from 12.30 p.m. 5.0 p.m.—Transmission of Pictures. 5.15—Exchange Quotations. 5.30—Chansonnettes. 5.45—Overtures to (a) "Benvenuto Cellini" (Berlioz) and (b) "Oberon" (Weber). 6.0—Orchestral Selections—Hungarian Dance, No. 6 (Brahms). Hungarian Fantasia (Liszt). Avalanche (Messie). Folle panique (Messie). 6.15—Songs from (a) "Lohengrin" (Wagner), (b) "The Magic Flute" (Mozart) and (c) "The Damnation of Faust" (Berlioz). 6.30—Exchange Quotations and Horse Racing Results. 6.45—Light Music. 7.0 (in the interval)—Talk. 7.15—Accordion Solos. 7.30—News Bulletin. 7.45—Dance Music. 8.0—Orchestral Selections. 8.30—Sound Film Music. 8.45—Orchestral Selections. Symphonic Dances, Nos. 3 and 4 (Grieg). La voix des cloches (Lugini). 9.0—Concert relayed from the Ecole Philharmonique. Old Comrades (Leike). Overture, "Stradella" (Flotow). Waltz, Morning Dew (Fahrbach). Selection from "Patrie" (Padilidhe). Meditation (Laffon). Polka, Sugar and Coffee (Millocker). In the interval, Light Music. 10.30—North African News. 10.45—Orchestral Selections from "Les Erynnies" (Massenet). 11.0—Concert. 12 midnight. Weather and Announcements. 12.5 a.m. (Thursday)—English Music. 12.30 (approx.)—Close Down.

TRIESTE (Italy) Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 10 kW. Transmits at intervals from 8.15 a.m. 7.5 p.m.—Quintet Concert. La spagnola innamorata (Bordetas). Racconto d'amore (Camusso). Serenata ideale (Apollonio). Selection (Engelhart). Ah, nel Far West! (Serra). Potpourri, Hullo 1930! (Borchert). Moonlight on the Alster (Fetras). Cesarini (Sanson). 6.0 till Close Down—See Turin.

TURIN (Italy) Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayd by Milan, 905 kc/s (331.5 m.), Genova, 959 kc/s (312.8 m.) and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural Notes. 7.0—Announcements. 7.5—Variety Music. 7.30—Time Signal and Announcements. 7.31—Light Music on Gramophone Records. 8.0—Giornale Radio and Weather Report. 8.15—Medical Talk.

8.30—A Three-Act Comedy (to be announced), followed by Popular Music on Gramophone Records. 11.0—Giornale Radio.

VATICAN CITY (Rome) 15,123 kc/s (19.84 m.) (Morning) and 5,969 kc/s (50.26 m.) (Evening); 10 kW. 11.0—11.15 a.m.—Religious Information in Spanish. 8.0—8.15 p.m.—Religious Information in Italian.

VIENNA (Austria) Radio-Wien. 581 kc/s (517 m.); 15 kW. Relayd by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,058 kc/s (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.) and Salzburg, 1,373 kc/s (218 m.). Transmits at intervals from 9.20 a.m. 5.0 p.m.—Vocal and Instrumental Concert. Sonata in A Minor for Pianoforte (Schubert). Six Songs, Op. 40 (Hans Pfitzner): (a) Leuchtende Tage, (b) Wenn sich was Liebes von dir lösen will, (c) Sehnsucht, (d) Herbstgefühl, (e) Wandersner Nachtlied, (f) Der Weckruf. 5.40—Recital on two Pianofortes, by Grete Hinterhofer and Karl Frotzler. Sonata in D (Mozart). Prelude and Fugue (Gustav Donath). 6.15—Medical Talk. 6.40—Talk: Vocational Questions for the Girl-Student. 7.5—French Lesson. 7.25—Time, Weather and Programme Announcements. 7.35—Talk: The Secret of Will. 8.0—"Wien bleibt Wien"—A Radio Potpourri (Dr. Lother Riedinger). The Pepi Wicht Quartet, the Josef Holzer Orchestra, the Stern Dance Band, the Vienna Male Voice Choir and a Ladies' Choir. Soloists: Maria Gerhart (Soprano), Grete Holm (Soprano), Georg Maikl (Tenor), Ernst Arnold (Tenor), Dario Medina (Tenor), Fanny Slezak (Zither) and Friedrich Klapper (Pianoforte). 10.0—News and Weather. 10.15—Dance Music from Hübners Park-hotel.

WARSAW (Poland) Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW. 11.58 a.m.—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Polish Press Review. 12.20—Interval. 12.40—Weather Report. 12.45—Light Music on Gramophone Records. 2.0—Interval. 3.0—Economic Report. 3.10—Popular Music on Gramophone Records. 3.30—Boy Scouts Report. 3.35—Maritime Report. 3.40—Programme for Children. 4.5—Light Music on Gramophone Records. 4.35—Hydrographical Report. 4.46—Answers to Correspondents. 5.0—Concert of Polish Music by the Station Orchestra, conducted by Josef Oziminsky. Overture (Nowowiejski). Polonaise and Cracowienne (Noskowsky-Kondracky). Song (Paderewsky). Minuet (Paderewsky). Entr'acte Music to an Opera (Zelensky). Barcarolle (Macura). Berceuse (Michalowski-Lefeld). Mazurka in D, Op. 33 (Chopin). Waltz from the Ballet, "Pan Twardowski" (Rozycky). Air (Wronsky). Oberek (Wiche). 6.0—Talk relayed from Wilno. 6.20—Concert by the Wilkosz Orchestra relayed from Hotel Europe. 7.15—Miscellaneous Items. 7.35—Radio Journal. 7.45—Agricultural Notes. 7.55—Programme Announcements. 8.0—Vocal Quartet Concert and Guitar Solos by W. Zywolevsky. 8.55—Literary Programme. 9.10—Song Recital by Serge Gagarin (Baritone). 9.50—Radio Journal. 9.55—Aviation Weather Report. 10.0—Dance Music. 10.25—Talk in French: The Ukrainian Problem in Poland. 10.40—Sports Notes. 10.50—Dance Music.

WILNO (Poland) 533 kc/s (563 m.); 16 kW. Transmits at intervals from 11.58 a.m. 7.30 p.m.—Light Music on Gramophone Records. 7.35—See Warsaw. 7.45—Topical Talk. 7.55—Programme Announcements. 8.0—See Warsaw. 10.25—Talk 10.40 (approx.)—Close Down.

ZAGREB (Yugoslavia) 977 kc/s (307 m.); 0.75 kW. Transmits at intervals from 12.20 p.m. 7.45 p.m.—Reports. 8.0—Concert of Light Music by the Station Orchestra. 10.30—News and Weather Forecast. 10.40—Part Relay of a Sound Film. 11.30 (approx.)—Close Down.

THURSDAY (June 16)

PRINCIPAL EVENTS

SYMPHONY CONCERTS

7.55 p.m. Hilversum: The Concert-Gebouw Orchestra (Conductor, Mengelberg).
8.30 " Oslo: Symphony No. 5 (Dvorak).

CONCERTS (Vocal and Instrumental)

5.0 p.m. Warsaw: Blind Musicians' Orchestra.
8.0 " Brussels No. 2: Russian music.
8.0 " Copenhagen: Russian music.
8.0 " Daventry: Canterbury Festival.
8.0 " Schweizerischer Landessender: Hungarian Music.
9.0 " Vienna: International Music Festival—First Concert.
9.45 " Schweizerischer Landessender: Choir.
10.0 " Frankfurt, Stuttgart: Ernst Krenek.
10.15 " Stockholm: Military Band.
10.50 " Stuttgart, Frankfurt, Königs Wusterhausen: Late Concert.
10.55 " Hamburg: German dances.

OPERA AND OPERETTA

8.15 p.m. Leipzig: "Der schlaue Amor" (Beilschmidt).
8.30 " Italian Stations (N.): "The Cricket on the Hearth" (Zandonai).

CHAMBER MUSIC

10.30 p.m. Copenhagen: Mendelssohn's Octet.

RECITALS

8.0 p.m. Berlin, Königs Wusterhausen, Hamburg: Brahms Songs.

PLAYS

8.0 p.m. Budapest: "The Tragedy of Man" (I. Madách).
8.50 " Munich: "Immortal Austria."
9.0 " Berlin, Breslau, Heilsberg: "The Alchemists" (Grote).

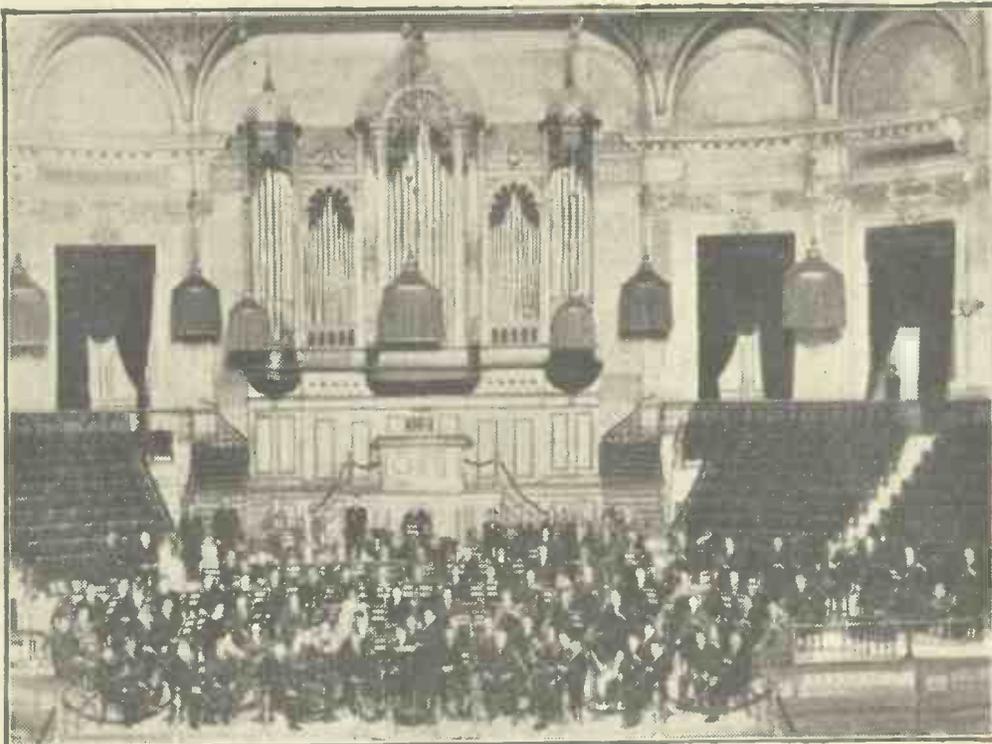
DANCE MUSIC

11.5 p.m. Copenhagen: Otto Lington's Band.

The Tenth International Festival

In the summer of 1922 a festival of modern music was organised by a number of young Viennese composers at Salzburg. It was so successful that a society was formed immediately afterwards, in

order that a similar festival might be given once a year for the encouragement of young composers, and the spreading of an interest in the newest music. Year by year an international jury is appointed, whose task it is to select the music for performance at the Annual Festival, and many different parts of the world are always represented in the programme. This year's festival, the tenth, is being held in VIENNA.



The Concert-Gebouw Orchestra, with Mengelberg conducting. (Hilversum, 7.55)

[Photo: Vereenigde Foto Bureau, Amsterdam.]

NATIONAL

	kc/s	m.	kW.
London:	1,148	261.3	50
Daventry:	193	1,554.4	30
Northern:	995	301.5	50

10.15 a.m.—The Daily Service.
10.30—Time Signal (Greenwich); Shipping Forecast.
10.45—11.0—Mrs. Ivo Geikie Cobb: "Children, Yesterday and To-day"—I.
12 noon—The Scottish Studio Orchestra, directed by Guy Daines.
1.0—2.0—The Shepherd's Bush Abbey Orchestra.
2.5—For the Schools: "Tracing History Backwards"—VIII.
2.30—Speech Training. Mr. A. Lloyd-James.
3.0—Evensong from Westminster Abbey.
3.50—For the Schools. German Dialogue. Dr. Ernst Deissmann and Fräulein Cläre von Both.
4.5—The B.B.C. Dance Orchestra.
4.30—Midland Studio Orchestra.
4.45—Time Signal (Greenwich).
5.15 (Daventry)—The Children's Hour.
5.15 (London and Northern)—The B.B.C. Dance Orchestra.
6.0—"The First News."
6.30—Time Signal (Greenwich).
6.30—The Foundations of Music. Bach's Choral Preludes.
6.50—German Talk—Mr. Otto Sippmann.
7.20—Weekly Special Notices.
7.30—"The Disintegration of the Modern World Order"—IV.
8.0—Canterbury Festival of Music and Drama. Orchestral Concert. The B.B.C. Orchestra (Section B). (Leader, Arthur Catterall.) Conductor, Adrian Boult. "Transformation Music and Closing Scene, Act I, Parsifal (Wagner), Symphony No. 1, in C Minor (Brahms).
9.25—"The Second News."
9.40—Shipping Forecast; New York Stock Market Report.
9.45—"The Way of the World"—Mr. Vernon Bartlett.
10.0—A. J. Alan: "My Adventure at Chislehurst."
10.30—A Short Service, relayed from St. Michael's, Chester Square.
10.45—12 midnight—Dance Music.
11.30—Time Signal (Greenwich).

REGIONAL

	kc/s	m.	kW.
London:	842	356.3	50
Midland:	752	398.9	25
Northern:	626	479.2	50

10.15 a.m. (London and Northern)—The Daily Service.
10.30—11.0 (London and Northern)—Daventry National Programme.
11.30—12 noon (London)—Experimental Television Transmission.
12 noon—Edward O'Henry at the Organ.
1.0 p.m.—Northern Studio Orchestra. Emilie Hargreaves (Soprano).
2.0—3.0—The Whitby Municipal Orchestra, conducted by Frank Gomez.
3.0 (Northern)—Studio Orchestra.
3.30—3.45 (Northern)—Miss Sybil Clarke: "Short Stories by Northern Authors."
4.5 (London and Northern)—Daventry National Programme.
5.15—The Children's Hour.
6.0—"The First News."
6.35 (London)—Music of Percy Fletcher. The Wireless Ladies' Chorus. The B.B.C. Theatre Orchestra.
6.35 (Midland)—From the Musical Comedies. The Midland Studio Orchestra.
6.45 (Northern)—Dance Music.
7.0 (Midland)—Speeches at the Inaugural Banquet of the Pageant of Leicester.
7.30 (Northern)—A Recital by The Hull Æolian Ladies' Choir.
7.45 (London and Midland)—Pianoforte Recital by Howard-Jones.
8.0 (Northern)—Mr. E. J. Sampson: An Eye-witness Account of the Northern Eliminating Trials for Wimbledon at Manchester.
8.15—Going South. New York to New Orleans. Dialogue—Arrangement—Presentation. By Derek McCulloch.
9.0 (London)—The Wireless Military Band. May Blyth (Soprano).
9.0 (Midland)—Charles H. Chandler: "Midland Rambles—V."
9.0 (Northern)—Mr. W. E. Shewell Cooper: "The Northern Garden."
9.20 (Northern)—Studio Orchestra.
9.30 (Midland)—Dance Music.
10.15—"The Second News."
10.35—12 midnight (London and Northern)—Dance Music.

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

BARCELONA (Spain)

Radio-Barcelona (EAJ1). 860 kc/s (349 m.); 8 kW.
Transmits at intervals from 8.10 a.m.
8.0 p.m.—Trio Concert. Granada (Albéniz). Selection from "Ruy Blas" (Acevedo). The Captive (Padilla). Serenade (Ross).
8.30—Exchange Quotations, Talk in Catalan, Request Gramophone Concert and Press Notes. 10.0—Chimes. Weather Forecast, Market Prices and Exchange Quotations.
10.5—Concert by the Station Orchestra. Pasodoble (Ibarra). Selection from "The Huguenots" (Meyerbeer). Waltz "Intermezzo (d'Ambrosio). Canto nocturno (Rabey). Night in the Bay of Palma (Turina). Sanctuary of the Heart (Ketelbey).
11.0—"The Mayor of Zalamea"—Play in Three Acts (Calderon). 1.0 a.m. (Friday) (approx.)—Close Down.

BELGRADE (Yugoslavia)

697 kc/s (430.4 m.) 2.5 kW.
Transmits at intervals from 10.35 a.m.
5.0 p.m.—Concert by the Station Orchestra. March (Joksimovic). Potpourri of Serbian Songs (Rendala). Overture, "Russlan and Ludmilla" (Glinka). Selection from "Russlan and Ludmilla" (Glinka). Ballet Music from "Czar and Carpenter" (Lortzing). Waltz, Die Romantiker (Lanner).
6.45—Time Signal and Programme Announcements. 6.50—Talk. 7.20—Medical Talk. 7.50—Introductory Talk to the following Transmission.
8.0—"Rousalka"—Opera (Dvorak), relayed from the National Theatre, Ljubljana. In an interval at 9.30 (approx.)—News Bulletin and Sports Notes. After the Opera, Dance Music on Gramophone Records.

BERLIN (Germany)

Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.
Transmits at intervals from 5.45 a.m.
12 noon—Weather for Farmers.
12.2 p.m.—Gramophone Concert of Choral Selections, followed by Weather for Farmers. 12.55—Time Signal.
1.35—News Bulletin. 2.0—Gramophone Concert of Popular Music,

relayed from Berlin (Witzleben).
3.0—Talk: Different Kinds of Drama on the Wireless. 3.30—Weather and Exchange Quotations. 3.45—Talk for Women. 4.0—Educational Talk.
4.30—Concert from Berlin (Witzleben).
5.30—Talk: The Salzburg Protestants in East Prussia. 6.0—Two Sonatas for Saxophone and Pianoforte (Jacobi-Breme) by Sigurd Rascher and Marie Zweig. 6.30—Advanced Spanish Lesson. 6.55—Weather for Farmers.
7.0—Talk: How can the Population protect itself from an Air Attack? 7.20—Agricultural Talk. 7.35—Talk: Will the Russian Five Year Plan attain its Object? followed by Weather for Farmers.
8.0—See Berlin (Witzleben). 9.0—See Hamburg. 10.20—Programme from Berlin (Witzleben), followed by Concert from Stuttgart. 12 midnight (approx.)—Close Down.

BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m. (Gymnastics and Concert Relay).
4.30 p.m.—Orchestral Concert, conducted by Edward Fendler. Soloist: Walter Drwensky (Cembalo). Suite of Overtures in C for Strings and Cembalo (Heinrich-Erlebach). Concerto in B Minor for Viola and Orchestra (Handel-Casadesus). Symphony in C Minor (Kraus).
5.30—Talk for Young People. 5.50—Talk: Women's Dress. 6.15—Concert from the Central Hotel. 6.55—"The Witzleben Station informs its Listeners." 7.0—Topical Talk.
7.10—Dialogue: Berlin and the Provinces. 7.35—Readings from the Works of Max Mohr.
8.0—Brahms Song Recital by Mia Peltenburg (Soprano), Hertha Glückmann (Contralto), Heinz Marten (Tenor) and Fred Drissen (Baritone). Zigeunerlieder, Op. 52. 8.50—News and Sports Notes.
9.0—"The Alchemists"—Radio Play (Hans Henning). 10.20—Political Press Review. 10.35—Weather, News and Sports Notes.
10.45 (approx.)—Orchestral Concert, conducted by Eugen Sonntag. Overture, "Der Improvisator" (D'Albert). Suite No. 2 from "L'Arlesienne" (Bizet). Two Selections from the Oriental Symphony (Godard). Suite, Deutsches Barock (Fachernegg). Selections

from the Ballet Suite, "Psyche" (Juon). Valse caprice (Rubinstein). Waltz and Polonaise from "Eugen Onegin" (Tchaikovsky).

BORDEAUX-LAFAYETTE (France)

(PTT). 986 kc/s (304 m.); 13 kW.
Transmits at intervals from 12.45 p.m.
7.30 p.m.—Announcements and Exchange. 7.40—Talk arranged by the International Labour Bureau. 7.55—Lottery and Charades Results. 8.0—Talk on Wine. 8.15—News Bulletin and Weather Forecast. 8.30—Popular Music on Gramophone Records.
9.0—"The Lawyer"—Comedy in Three Acts (Brioux).

BRATISLAVA (Czechoslovakia)

1,076 kc/s (279 m.); 14 kW.
Transmits at intervals from 11.0 a.m.
6.20 p.m.—Gramophone Records of Variety Music. 6.45—Reading of Poems. 7.0—"The Silent Comedy"—a Radio Comedy (Victor Horak).
7.20—Concert by a Mandoline Orchestra, conducted by J. Macenka. 7.45—See Brno. 8.0—See Prague. 10.15—Programme Announcements and News. 10.20—See Prague.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by Gleiwitz, 1,184 kc/s (253 m.).
Transmits at intervals from 6.0 a.m.
5.50 p.m.—This will interest you! Surprise Programme. 6.15—Radio Educational Programme. 6.40—Talk on Music: Some Strange Premieres—Successful Operas which started its Failures. 7.5—Talk: The Arctic as a Future Industrial Region and Traffic Route. 7.30—Weather for Farmers.
7.32—Concert of Popular Music by the Station Orchestra, conducted by Franz Marszalek. Soloists: Rost Albach (Soprano), and Hellmuth Hallendorf (Tenor).
8.30—Topical Talk. 9.0—See Berlin (Witzleben). 10.20—Time Signal, Weather Forecast, News Bulletin, Sports Notes and Programme Announcements. 10.55—Talk in Esperanto. 11.5—Talk: The Art of Self-Defence. 11.25 (approx.)—Close Down.

BRNO (Czechoslovakia) 878 kc/s (342 m.); 35 kW. Transmits at intervals from 10.0 a.m. 6.25 p.m.—German Transmission. News and Talks. 7.0—See Moravská-Ostrava. 7.45—Gramophone Records. 8.0—See Prague. 10.15—News Bulletin. 10.20—See Prague.

BRUSSELS (Belgium) (No. 1) I.N.R. 590 kc/s (509 m.); 15 kW. 12 noon—Gramophone Concert of Light Music. In the interval at 1.0 p.m.—Le Journal Parlé. 5.0—Orchestral Concert, conducted by Jean Kumps. Symphony in G (Haydn). Le Tombeau de Couperin (Ravel). Overture, "Der Freischütz" (Weber). 5.45—Programme for Children. Stories of Great Musicians—Chopin. 6.15—Talk on Cookery. 6.30—Gramophone Records: Symphony No. 4 (Beethoven). 7.10—Reading for Children. 7.20—Gramophone Records. Tango d'un jour (Gavel). Zazoulia (arranged Scriabine). Foxtrot (Stolz). Les Ziganes (arranged Scriabine). 7.30—Wireless Notes. 8.0—Orchestral Concert, conducted by Franz André. Soloist: M. Misson. Overture, "Nouveau Seigneur" (Boieldieu). Three Humorous Pieces for Violin (Léonard): (a) L'Ané et l'Anier, (b) Chatte et souris, (c) Le Lapin belliqueux. Characteristic Dance (Tchaikovsky). Poem for Seven Voices (Dongrie). Waltz from The Sleeping Beauty (Tchaikovsky). 8.45—Talk: The Nationalisation of the Mines. 9.0—Orchestral Concert, conducted by Franz André. Paso Doble, Falsetas (de Rodriguez). Foxtrot, My Gal (Reel). Potpourri, Achtung! Achtung! Chips for Pianoforte and Orchestra (Uden). Dixie Melody (Packay). Selection from "The Grand Duchess of Gérolstein" (Offenbach). Foxtrot, Mama Inez (Grenet). Foxtrot, It must be true. I surrender (Barros). Interlude. Minuet (Valencin). By the Swanee River (Myddleton). Selection from "Victoria and her Hussar" (Abraham). 10.0—Le Journal Parlé. 10.10—Gramophone Dance Music. 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2) I.N.R. 887 kc/s (333.2 m.); 15 kW. Programme in Flemish. 12 noon—Gramophone Records. 12.30 p.m.—Weather Report. 12.40—Sacred Music on Gramophone Records. 1.30—Song Recital by Albert Joris. 5.0—Ketybelby Concert, conducted by Charles Walpot. Overture, Chal Romano. In a Chinese Temple Garden. The Sacred Hour. Bells across the Meadows. Sanctuary of the Heart. 5.45—Programme for Children. 6.30—Gramophone Records of Famous Singers—each singing in their own language. 7.15—Talk: Education of Girls in Flanders. 7.30—Programme for Women. 8.0—Russian Concert conducted by Jean Kumps. 1812 Overture (Tchaikovsky). In the Steppes of Central Asia (Borodin). Orientale (Cui). Recitation. Polovtsian Dance from "Prince Igor" (Borodin). 8.40—Talk: The Future of the Christian Workers' Movement. 8.55—Concert (continued). Kamarinskaja (Glinka). Selection from "His Life for the Tsar" (Glinka). Three Russian Songs (Bortniansky), on Gramophone Records. The Flight of the Bumble Bee (Rimsky-Korsakov). Waltz from The Sleeping Beauty (Tchaikovsky). 9.55—Evening Prayer. 10.0—Le Journal Parlé. 10.10—Gramophone Records. Suite from "L'Arlesienne" (Bizet). Ballet Music from "Faust" (Gounod). 11.0 (approx.)—Close Down.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Concert of Light Music and Romanian Music by the Dinico Orchestra. 5.0—News Bulletin and Time Signal. 5.10—Orchestral Concert (continued). 6.0—Educational Programme. 6.40—Light Music on Gramophone Records. 7.0—Song Recital by E. Stratty (Bass). 7.20—Orchestral Concert conducted by Carolo Brunetti. Soloist: M. Lipatti (Pianoforte). Old Italian Airs (Respighi). Concerto for Pianoforte and Orchestra (Chopin). 8.0—Talk. 8.15—Concert (continued). Chamber Symphony (Andrico). Overture,

"A Midsummer Night's Dream" (Mendelssohn). 8.45—News Bulletin.

BUDAPEST (Hungary) 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Programme also relayed on 210 metres from 6.45 p.m. till Close Down. 5.0 p.m.—Orchestral Concert from the Markus Restaurant on the Margaretinsel. Feierliche Ouvertüre (Unger). Waltz Song, Roses of the South (Johann Strauss). Selection from "The Bartered Bride" (Smetana). Fantasia (Liszt-Urbach). Rurialia Hungarica (Dohnanyi). Selection from "Faust" (Gounod). Overture, "Tannhäuser" (Wagner). 6.15—Talk: The Town of Eger. 6.45—Concert. Soloists: Alice Balint (Pianoforte), Elizabeth Gervay (Vocalist) and Eugen Vermes (Vocalist). Six Variations Op. 34 (Beethoven). Selection from "Der Freischütz" (Weber). Two Selections (Hammerschlag): (a) Piece for Pianoforte, (b) Etude. Songs: (a) Ewige Liebe (Brahms), (b) Liebesbotschaft (Schumann), (c) Song (Mendelssohn), (d) Tears (Rubinstein). Aria from "Don Carlos" (Verdi). The King's Hunting Jigg (Bull). Romanian Dance (Béla-Bartok). Hungarian Songs. Rigoletto Fantasia (Liszt). 8.0—"The Tragedy of Mankind"—Play (Imre Madach), followed by Cigány Concert from the "Parliament" Grill Room.

COPENHAGEN (Denmark) 1,067 kc/s (281 m.); 0.75 kW. Relayed by Kalundborg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. (Gymnastics). 11.0 a.m.—Weather Forecast. 11.10—Angling Notes. 12 noon—Town Hall Chimes. 12.2—2.0 p.m.—Concert from a Restaurant. 3.0—Orchestral Concert conducted by Launy Grøndahl. King Christian X March (Andersen). Overture, "La Sirène" (Auber). Spring Song (Glass). Selection from "Les Cent Vierges" (Lecocq). The Heavens Declare the Glory of God, from "The Creation" (Haydn). Scherzo (Schubert). Reading (René Bazin). March, Sons of the Brave (Bidgood). Fantasia on Old Danish Sailors' Songs. Berceuse (Danning). Colonial Song (Percy Grainger). Waltz from "Die Fledermaus" (Johann Strauss). Overture, "La rencontre imprévue" (Gluck). Gallop, En Sommernat paa Møens Klint (Lumbye). 5.0—Programme for Boys. 5.40—Exchange Quotations and Fish Market Prices. 5.50—Talk by Elise Wesenberg-Lund. 6.20—Elementary English Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Review of Politics for the Past Month. 8.0—Town Hall Chimes. 8.2—Concert of Russian Music. The Radio Orchestra conducted by Emil Reesen. Soloist: Lisa Rantza-Meyer (Vocalist). Overture, "Romeo and Juliet" (Tchaikovsky). Songs: (a) Unendliche Liebe, and (b) Warum? (Tchaikovsky), (c) Cradle Song (Gretchaninov), (d) Aimant la rose (Rimsky-Korsakov), (e) Lilac and (f) The Little Island (Rachmaninoff). Selections from "Le Pavillon d'Armide" (Tcherepnin). 9.0—Talk on Caroline Graves, with Reading from her Works. 9.30—Concert of Modern Operetta Music by the Radio Orchestra conducted by Emil Reesen. March (Kollo). Selection from "Oh Kay" (Gershwin). Chinese One-step and Waltz from "The Yellow Jacket" (Lehár). Selection from "Zigeunerprimas" (Kálmán). Foxtrot from "Mádi" (Stolz). 10.15—News Bulletin. 10.30—Concert of Chamber Music. Octet, Op. 20 (Mendelssohn). 11.5—Dance Music from the Ritz Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (Friday)—Close Down.

DUBLIN (Ireland) (2RN). 725 kc/s (413 m.); 1.2 kW. Relayed by Cork, 1,337 kc/s (224.4 m.). 1.30—2.0 p.m.—Time Signal, Weather Report, Stock Report and Light Music on Gramophone Records. 6.0—Popular Music on Gramophone Records. 6.15—Programme for Children. 7.0—Light Music on Gramophone Records. 7.10—News and Dublin Cattle Market Report. 7.30—Time Signal. 7.31—French Dialogues. 7.45—The Station Sextet. 8.15—Amhrain. 8.30—Programme

by the Emer Comedy Company. 9.0—Talk: Traffic Developments during Congress Week. 9.15—The Station Sextet. 9.30—Sponsored Programme. 10.30—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France) Radio Normandie. 1,345 kc/s (223 m.); 10 kW. 12 noon—Gramophone Records of Variety Music. 12.30 p.m.—News Bulletin. 12.45—Light Concert. 7.30—Radio Gazette for Normandy. 8.0—News Bulletin. 8.15—Talk: The Harbour of Fécamp. 8.30—Concert relayed from the Town Hall, Rouen. 11.0—Concert by the I.B.C. Novelty Orchestra. Soloist: C. Craven (Xylophone). The Clock is playing (Blaauw). Xylophone Solos: (a) Overture, "Light Cavalry" (Suppé), (b) Venetian Carnival (Briccialdi). At the Temple Gates (Johnston). Xylophone Solos: (a) Irish Waltz (Durant), (b) Tarantella (Byng). Bells across the Meadows (Ketelby). 12 midnight—Dance Music by the Icolians. 1.0 c.m. (Friday)—Close Down.

FLORENCE (Italy) Ente Italiano Audizioni Radiofoniche. 599 kc/s (500.8 m.); 20 kW. See Turin.

FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relayed by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 12 noon—Concert from Munich. 12.50 p.m.—News and Weather. 1.0—Concert from Langenberg. 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Time and Economic Notes. 3.15—See Stuttgart. 4.0—4.55—Interval. 4.55—Economic Notes. 5.0—Concert from Langenberg. 6.15—Economic Notes. 6.25—Book Review. 6.50—Talk: The Economic Situation in South America. 7.15—Time and Announcements. 7.30—Orchestral Concert, conducted by Reinhold Merten. Overture, "Franz Schubert" (Suppé). Waltz, Jungherrn Tanze (Gungl). Einquartierung—March from "Kadettenstreiche" (Hollander). Children's Suite (J. Ansell). Military Polka (Behr). Hungarian Dances (Kéler-Béla): (a) Erinnerung an Bartfeld, (b) Czardas, Komet. Carnival Waltz from "Pierrot and Pierrette" (Lehar). Ozeanmarsch (Fucik). 8.30—A Microphone Report—"Life in the Hedges". 9.0—"Michael Reinhold Lenz"—Radio Play (Fritz Buch). 10.0—Kleine Blasmusik, Op. 70a (Ernst Krenek), by the Station Orchestra, conducted by Hans Rosbald. 10.30—Time and News. 10.45—Concert from Stuttgart. 12 midnight (approx.)—Close Down.

HAMBURG (Germany) Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayed by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.); and Kiel, 1,292 kc/s (232.2 m.). Transmits at intervals from 5.45 a.m. 4.30 p.m.—Concert from Heilsberg. 5.30—Sociological Review. 5.55—Variety Programme. 6.30—Health Talk. 6.55—Frankfurt Exchange. 7.0—Topical Talk. 7.15—Weather Report. 7.20 (from Hanover)—"North Saxon Miniatures"—Ludwig Hölty. Programme by Carola Wagner and Harry Moss (Recitations), Gertrude Schmidt-Gerlach (Vocalist) and Otto Ebel v. Sosen (Pianoforte). Talk on Ludwig Hölty. Recitations by Carola Wagner: (a) An die Fantasia, (b) Narziss and Echo. Songs (Schubert): (a) An den Mond, (b) An den Frühling, (c) Seligkeit. Recitation by Harry Moss: Trinklied im Mai. Recitations by Carola Wagner: (a) Die Liebe, (b) Die Mainacht, (c) Das Landleben. Songs (Brahms): (a) An ein Veilchen, (b) Minnelied. Recitation by Carola Wagner: Lebenspflichten. Recitations by Harry Moss: (a) Der alte Landmann an seinen Sohn, (b) Vermächtnis. Intermezzo, Op. 119, No. 1, for Pianoforte (Brahms). 8.0—See Berlin (Witzleben). 8.50—News Bulletin. 9.0 (from Bremen)—With a Microphone through the Streets of Bremen—the Böttcherstrasse. 10.45—Time and News. 10.55—German

Dance Music by Erna Kroll-Lange, Herbert Ernst Groh and the Norag Orchestra, conducted by Adolf Secker.

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. 11.30 a.m.—Concert by the Königsberg Opera House Orchestra, conducted by Werner Richter-Reichhelm. Overture, "Egmont" (Beethoven). Serenade in C Minor, No. 12, for Wind Instruments (Mozart). Selections from "Orpheus" (Gluck): (a) Reigen seliger Geister, (b) Furiantanz. Overture and Scherzo from "A Midsummer Night's Dream" (Mendelssohn). Overture, "Raymond" (Thomas). Toréador et Andalouse (Rubinstein). Spanish Dances (Moszkovsky). 1.20 p.m.—News Bulletin. 1.30—Gramophone Concert of Light Music. 2.30—3.30—Interval. 3.30—Programme for Children. 4.30—Concert by the Little Orag Orchestra, conducted by Eugen Wilcken. Waltz, Die Pesther (Lanner). Neu Wien (Joh. Strauss). Traume auf dem Ozean (Gungl). Mein Lebenslauf ist Lieb und Lust (Jos. Strauss). Lotosenblumen (Ohlsen). Im Reiche der Venus (Groschl). Mon réve (Waldteufel). 6.15—Agricultural Market Prices. 6.30—Agricultural Talk. 7.0—See Berlin (Witzleben). 7.30—Weather Report. 7.35—Tenor Solos by Johannes Maximilian. 8.5—Viola and Pianoforte Recital by Hildegard Heinitz and Grete Sultan. Arpeggio Sonata (Schubert). Sonatine (Dessau). Elegia e Tempo di danza (Desderi). 8.50—News Bulletin. 9.0—See Berlin (Witzleben).

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up to 4.40 p.m.). Programme of the Algemeene Vereeniging Radio Omroep (AVRO). 7.40 a.m.—Time Signal. 7.41—Variety Music on Gramophone Records. 9.41—Divine Service. 9.55—Variety Music on Gramophone Records. 10.10—Pianoforte and Soprano Song Recital by J. C. van Reimsdijk and Martha Rolloos. Ballad for Pianoforte (Debussy). Three Songs (Wagner): (a) Stehe Still, (b) Schmerzen, (c) Träume. Songs: (a) O heller Tag (Tchaikovsky), (b) Alle Dinge haben Sprache (G. J. Wolff). Pianoforte Solo: Fantasia in F Minor (Chopin). 10.40—Dressmaking Lesson. 11.10—Recital (continued). Spanish Dance No. 3 (Fock). Two Impromptus (Fauré). Concert Etude (MacDowell). Zonnedag (Fock). Two Spring Songs (v.d. Stucken). Treue (Nicolai v. Wilm). Er ist gekommen (Franz). Aufschwung (Schumann). Warum? (Schumann). 11.40—Time Signal. 11.41—Concert by the Wireless Orchestra conducted by Nico Treep. Overture, "Frau Luna" (Lincke). Selection from "The Tales of Hoffmann" (Offenbach). Selection from "The Queen of Spades" (Tchaikovsky). Album Leaf (Gade). Morena v. Seviliana (Maduro). Songs by P. C. Brederode. Waltz, A toi (Waldteufel). Von Wien durch die Welt (Hruby). Czardas (Michiels). Karawanenzug (Rey). Spring in Japan (Jessel). Songs. Selection from "Eva" (Lehár). The Clock is playing (Blaauw). March, Raastlos voorwärts (Blankenburg). 1.55—2.10—Interval. 2.10—Talk. 2.40—Vocal and Instrumental Concert. Lena Kruithof van Diggelen (Songs), L. Goossens (Cello) and Rosine de Cocq (Pianoforte). 3.40—Programme for Hospitals. 4.40—Concert by the Wireless Chamber Orchestra conducted by Louis Schmidt. Selection from "Flotte Bursche" (Suppé). Waltz, Am schönen Rhein gedenk ich dein (Kéler-Béla). Aubade à Musette (Poppy). Selection from "Les Cloches de Corneville" (Planquette). Variety Music on Gramophone Records. Dance of the Wooden Shoes (Fetras). Nocturne (Ganne). Styrian Dances (Lanner). Popular Music on Gramophone Records. Selection from "Die Faschingsfee" (Kálmán). 6.10—Talk on Sports. 6.40—Concert (continued). March from "Eva" (Lehár). Cara dura (Ghurlanda). Paginas muertas (de Caro). Waltz from "Polenblut" (Nedbal). Polka Diplomaten (Johann Strauss). Gallop, Ninetta (Johann Strauss). March (Morena). 7.10—Talk. 7.41—Concert by the Concertgebouw Orchestra conducted by William Mengelberg relayed from the Con-

certgebouw, Amsterdam. First, Second, and Fifth Symphonies (Beethoven). 9.55—Weather and News. 10.10—Variety Music on Gramophone Records. 10.40—Dance Music. 11.40 (approx.)—Close Down.

HUIZEN (Holland) 160 kc/s (1,875 m.); 8.5 kW. 7.40—8.55 a.m.—Variety Music on Gramophone Records by the Catholic Radio Society (K.R.O.). 9.40—10.40—Programme of the Christian Radio Society (N.C.R.V.). 9.40—Popular Gramophone Music. 9.55—Programme for Invalids. 10.25—Popular Gramophone Music. 10.40—1.40 p.m.—K.R.O. Programme. 10.40—Variety Music on Gramophone Records. 11.10—Religious Address. 11.40—Police Notes. 11.55—Orchestral Concert, conducted by Johan Gerritsen. Russian March (Ganne). Overture, "Fra Diavolo" (Auber). Waltz, Seid umschlungen, Millionen (Joh. Strauss). Selection from "The Daughter of the Regiment" (Donizetti). Ave Maria (Bach-Gounod). Two Spanish Dances (Moszkovsky). Selection from "The Merry Peasant" (Fall). Frühlingsglaube (Schubert). Serenade (Schubert). Serenade (Moszkovsky). Popular Viennese Melodies (Drescher). 1.40 till Close Down—N.C.R.V. Programme. 1.40—Spare-time Hobbies. 2.40—Programme for Women. 3.10—3.40—Interval. 3.40—Programme for Invalids. 4.40—Handicrafts for Children. 5.25—Harmonium Recital by E. Vos. Musette and Air from the Pastoral Suite (Bach). Prelude, Schmücke dich, o liebe Seele (Bach). Three Pieces (Jongen). Allegro assai from Sonata No. 4 (Guilmant). Two Pieces (Frank): (a) Offertoire in E Minor, (b) Sortie in G. Two Pieces (Vierne): (a) Berceuse, (b) Choral. Invocation (Lemmens). Idylle (Bley). Improvisation, Houd gij mijn handen beide (Vos). 6.25—Dressmaking Lesson. 6.40—Talk. 7.10—Police Notes. 7.25—Religious News. 7.40—Concert by the "Jubal" Drum and Fife Band conducted by Schotel. Relayed from Dordrecht. 8.40—Talk. 9.10—Chamber Music. J. Stotijn (Oboe), J. Blazer (Cello), and Mmc. C. Severens (Pianoforte). Concerto in C Minor for Oboe and Pianoforte (Marcello). Suite (d'Herveylois). Concerto in C Minor No. 1 (Rameau). Sonata for Cello and Pianoforte (Debussy). Sonata for Oboe (Sigtenhorst Meijer). Selection for Oboe, Cello and Pianoforte. Nymph's Complaint for the Death of her Faun (White). 10.10—News Bulletin. 10.20—Variety Music on Gramophone Records. 11.10 (approx.)—Close Down.

KALUNDBORG (Denmark) Kalundborg Radio. 260 kc/s (1,153 m.); 7.5 kW. See Copenhagen.

LANGENBERG (Germany) Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time and Concert Relay). 12 noon—Concert of Light Music, conducted by Erich Kloss. Soloist: Hugo Recker (Violin). Overture, "Die Felsenmühle" (Reissiger). Heroic March (Schubert-Kusche). The Nutcracker Suite (Tchaikovsky). Spanish Dance (Saratsate). Potpourri, Waldteufeleien (Kling). 12.50 p.m.—Weather Report, Announcements and Time Signal. 1.0—Concert, conducted by Wolf. Soloist: Karl Rost (Baritone). March, Unter Brief und Siegel (Becker). Waltz, Dorfschwalben aus Oesterreich (Josef Strauss). Festival Overture (Lassen). Selection from "The Sunken Bell" (Respighi). Songs (Schubert): (a) Im Abendrot, (b) Frühlingsglaube, (c) Der König in Thule. Song: Von der Jugend (Mahler). Rheinlegendchen (Mahler). Wedding Scenes (Smetana). Two Russian Dances, Nos. 1 and 8 (Bullerian). Potpourri, Hallo, hallo, hier Wien (Morena). 2.30—Sponsored Gramophone Concert. 3.30—Economic Notes and Time Signal. 3.50—Programme for Children. 4.10—Notes on the Broadcasts for Schools. 4.20—Educational Programme. 5.0—Concert of Operetta Music, conducted by Wolf. Overture, "Venus auf Erden" (Lincke). Selection from "Die blonde Liselott" (Künneke). Selections from "Frasquita" (Lehar). Waltz from "Der süsse Kavalier" (Fall). Overture,

THURSDAY continued

"Die Irrfahrt ums Glück" (Suppé). Selections from "A Waltz Dream" (Oscar Straus). Waltz from "The Bird Fancier" (Zeller). 6.15—Review of New Books on German History. 6.40—Italian Lesson. 7.0—Weather Report, Time Signal, Economic Report and Sports Notes. 7.15—Review of the Day's Events. 7.30—Talk: The Intellectual Problems of the German University Professor. 7.55—News Bulletin. 8.0—"Europe sings"—Programme to be announced. 9.0—See Frankfurt. 10.10—News Bulletin and Sports Notes. 10.35—Symphony Concert by the Station Orchestra, conducted by Buschhütter. Soloist: Hilde Sander (Pianoforte). Symphonic Poem, Till Eulenspiegel's Merry Pranks (Richard Strauss). Pianoforte Solo, Indian Fantasia (Busoni). Symphony No. 4 in D Minor (Schumann). 12 midnight (approx.)—Close Down.

LEIPZIG (Germany) 1,157 kc/s (250 m.); 2 kW. Relayed by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6 a.m. 6.0 p.m.—Talk on Hygiene. 6.15—Notes on Taxation. 6.30—Spanish Lesson. 6.50—Programme to be announced. 7.0—Talk: Austria—a Social and Economic Problem. 7.30—Concert by the Leipzig Symphony Orchestra, conducted by Hilmar Weber. Suite from the "Music to 'Così fan tutte'" (Mozart, arr. Carl Stueber). Suite from the "Music to 'Il Seraglio'" (Mozart, arr. Carl Stueber). 8.15—"Der schlaue Amor"—Opera in One Act (Curt Beilschmidt). 9.0—Topical Report. 9.10—"Wunder aus Dir"—a Radio Play (Henrik Herse). 10.5—News Bulletin, followed by Silent Night.

LYONS (France) La Doua (PIT). 644 kc/s (465.8 m.); 1.5 kW. Transmits at intervals from 8.0 a.m. 7.0 p.m.—Concert of Light Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South East. 8.30—Literary and Musical Programme.

MADRID (Spain) Union Radio (EAJ7). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 9.0 a.m. 8.0 p.m.—Chimes, Exchange, Market Prices, and Request Gramophone Records. 9.15—News and Political Review. 9.30—10.30—Interval. 10.30—Chimes, Time, Political Review. 10.45 (approx.)—Mozart Song Recital. Arias from Don Giovanni, "The Marriage of Figaro" and "The Magic Flute," followed by a Concert by the National Guitar Orchestra, relayed from the Hotel Nacional. 12.45 a.m. (Friday)—News Bulletin. 1.0—Chimes and Close Down.

MILAN (Italy) Ente Italiano Audizioni Radiofoniche. 905 kc/s (331.5 m.); 7 kW. See Turin.

MORAVSKÁ-OSTRAVA (Czechoslovakia) 1,137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 10.0 a.m. 6.25 p.m.—German Transmission: Talk: The Importance of Broadcasting. 6.40—Talk. 7.0—Orchestral Concert, conducted by J. Plichta. 7.45—Talk: Prof. Masaryk's Visit to Russia. 8.0—Concert by the Petrvald Brass Band. 9.0—See Prague. 10.15—Programme Announcements and Theatre Guide. 10.20—See Prague.

MOSCOW (Russia) Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Review of the Week's Events and Answers to Correspondents in German and English. 9.55—Time Signal. 10.0—Weather Forecast. 11.0 (approx.)—Close Down.

MUNICH (Germany) 563 kc/s (533 m.); 1.5 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.) and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 5.0 p.m.—Concert from Langenberg. 6.15—Time Signal, Weather Forecast and Agricultural Notes. 6.25—Talk on Economics: Theory and Practice. 6.45—Agricultural Talk. 7.5—Talk in commemoration of two Great Men—Karl von Linde and Philipp Lenard. 7.25—Programme of Mental Exercises. 7.45—Concert of Light Music by the Little Station Orchestra,

conducted by Erich Kloss. In an interval: "How to treat a Wife"—Practical Advice (Jo Hans Rösler). 8.50—"Immortal Austria"—A Radio Sequence (Alfons von Czibulka). Conductor: Wilfrid Feldhütter. 10.20—Time Signal, Weather Report, News Bulletin and Sports Notes.

OSLO (Norway) Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Norderund, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.); and Rjukan, 671 kc/s (447.1 m.). Transmits at intervals from 11.5 a.m. 5.0 p.m.—Balalaika and Donra Recital by Boris Borisoff. 5.45—Theatre Guide. 6.15—Light Music on Gramophone Records. 6.30—Divine Service. 7.0—Announcements, Weather and News Bulletin. 7.30—Song Recital by Gunnar Graarud (Baritone). Five Songs (Schubert): (a) Der Zwerg, (b) Der Wanderer an den Mond, (c) Memnon, (d) Der Musensohn, (e) An die Musik. Five Songs (Grieg): Symra (Sinding). 8.1—Talk on Agriculture. 8.30—Concert by the Station Orchestra, conducted by Hugo Kramm. Overture, "Semiramis" (Rossini). Fifth Symphony in E Minor (Dvorak). Rhapsody (Alfven). 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Talk: Modern Greece. 10.45 (approx.)—Close Down.

PALERMO (Italy) Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 5.30 p.m.—Light Music on Gramophone Records. 6.0—6.30—Programme for Children. 8.0—Announcements, Agricultural Notes and Giornale Radio. 8.20—Light Music on Gramophone Records. 8.30 (in an interval)—Time Signal and Announcements. 8.45—"Don Pasquale"—Opera in Three Acts (Donizetti). In the intervals, Film Review and News Bulletin.

PARIS (France) Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW. Time Signals (on 2,650 metres) at 10.26 a.m. and 11.26 p.m. (preliminary and 6-dot Signals). Transmits at intervals from 1.0 p.m. 6.40 p.m.—Talk on Dramatic Art. 7.0—Le Journal Parlé. 8.20—Weather Forecast. 8.30—Gramophone Concert. Selections from "Le Roi malgré lui" (Chabrier): (a) Bourrée fantasque, (b) Marche joyeuse, (c) Fête polonoise. Pavane pour une Infante défunte (Ravel). L'apprenti sorcier (Dukas). España (Chabrier). Selections from: (a) "Banditenstreich" (Suppé), (b) "Marietta" (O. Straus), and (c) "Véronique" (Messager). Selections (Yoshitomo): (a) Japanese Lantern Dance, (b) Cherry Blossom Festival. Selection from "The Land of Smiles" (Lehar). Selections (Buxeuil): (a) Ma Petite Patrie, (b) La Valse Viennoise. Waltz, Frimas (Fucik). Selections (Ivory): (a) The Gingerbread House, (b) Neptune's March. Selections (Reichart): (a) Qui connaît les femmes, (b) Rose rouge. Selection from "Le Chemin du Paradis" (Heymann). Hawaka (Moret). March, Drin Drin. 10.0 (approx.)—Close Down.

PARIS (France) Poste Parisien. 914 kc/s (328.2 m.); 60 kW. Transmits at intervals from 12 noon. 7.0 p.m.—Light Music on Gramophone Records, Talk and News. 7.30—Sponsored Gramophone Records. 8.0—Dramatic Programme. 8.30—Popular Music on Gramophone Records, Talk and News. 8.45—Vocal and Orchestral Concert. Overture, Fingal's Cave (Mendelssohn). Symphonic Poem, Les Préludes (Liszt). Brandenburg Concerto No. 4 (Bach). Sérénade, Theme Varié, Parades and Fête foraine from "Namuona" (Lalo). Spanish Caprice (Rimsky-Korsakov). Invitation to the Dance (Weber). Third Torch Dance (Meyerbeer). 10.45—News Bulletin. 10.50 (approx.)—Close Down.

PARIS (France) Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW. 6.45—Physical Culture. 7.30—Weather and Physical Culture (continued). 7.45—Gramophone Records. Hymn to the Sun (Rimsky-Korsakov). Pep

(de Pietro and Pepper). Mazurka (Neruda). A Wedding Day on Troidhaugen (Grieg). 8.0—News, Weather and Press Review. 12 noon—Protestant Address. 12.30 p.m.—Gramophone Concert. Sous les Ponts de Paris (Scotto). Bécausse dit des Bêtises (Dandelin-Bol). Bolero from "The Magic Lantern" (Godard). Le Chat et le vieux rat (La Fontaine). La Toupie (Gillet). Waltz in A (Brahms). Blonde Amie (Carcel). Selection from "Paganini" (Lehár). The Nursery (Inghelbrecht). Reading: La Tristesse d'Olympio (Hugo). Valse des fleurs (Tchajkovsky). In the Streets of Toulon (Izôird-Raiter). Italian Serenade (Wolf). Song of the Flea (Mousorgsky). The Toy Symphony (Romyberg). Les réponses de Grand-mère (Dalcroze). Nocturne from "La Navarraise" (Massenet). Reading from "Cyrano de Bergerac" (Rostand). Mother Goose Parade (Sturmet-Bibo). Selection (Herb-Brown). The Whistler and his Dog (Pryor). Selection (Robrecht). Vagabond Song (Richmann-Messenheim). In the intervals, at 1.0—Exchange, News and Weather, and 1.30 and 2.0—Exchange. 3.45—Exchange and Market Prices. 6.30—Market Prices, Weather, Agricultural Report, Talk and Racing Results. 7.0—Dialogue by Frédéric Lefèvre and Paul Valéry. 7.30—German Lesson. 7.45—German Press Review, Commercial Prices and News.

8.0—A Play by the Comédie Française Company under the direction of M. Valmy-Baysse. In the intervals, at 8.30—News, Sports Notes, Weather and Review by Dominique Bonnaud, and at 9.15—Press Review and News. PITTSBURGH (U.S.A.) Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Relayed by W8XK on 48.86 m. and 25.25 m. (See Short Wave List). Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Business News. 9.10—David Lawrence Dispatch. 9.15—Programme to be announced. 9.30—Pebeco Weather Report. 9.31—Market Reports. 9.45—KDKA Kiddies' Klub. 10.0—Coffee Matinee from New York. 10.30—Singing Lady, from New York. 10.45—Little Orphan Annie, from New York. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sport Review. 11.12 Press News Reeler. 11.15—Westinghouse Musical Maids. 11.45—Literary Digest Topics, in Brief, by Lowell Thomas, from New York. 11.59—Time Signal. 12 midnight—Pepodent Amos 'n Andy, from New York. 12.15 a.m. (Friday) Standard Brands. 12.30—The Stebbins Boys, from New York. 12.45—Billy Jones and Ernie Hare, from New York. 1.0—The Edgeworth Programme, with Dr. Traprock. 1.15—Rin Tin Tin Thrillers. 1.30—Ivory Programme, from New York. 1.45—Sisters of the Skillet. 2.0—Blackstone Plantation, from New York. 2.30—Thompkins Corners. 3.0—A and P. Gipsies, from New York. 3.30—Paris Night Life, from New York. 3.45—Contract Bridge Lesson. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News Flashes. 4.20—Margaret Russell (Contralto). 4.30—Lew Conrad and his Orchestra, from New York. 5.0—Programme to be announced. 5.15—Time and Good Night.

POZNAŃ (Poland) 806 kc/s (335 m.); 1.9 kW. Transmits at intervals from 10.10 a.m. 7.0 p.m.—Agricultural Report. 7.15—Miscellaneous Items. 7.35—See Warsaw. 7.45—Light Music on Gramophone Records. 7.58—Time Signal. 8.0—Soloist Concert. In the intervals, Theatre Guide. 9.20—9.55—See Warsaw. 9.55—Time Signal, Sports Notes and Police Report. 10.10 (approx.)—Close Down.

PRAGUE (Czechoslovakia) 614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.15 a.m. 5.55 p.m.—Talk: Snakes in Czechoslovakia. 6.5—Agricultural Talk. 6.15—Talk for Workers. 6.25—German Transmission: Announcements and Two Talks: (a) New Books, (b) Poisonous Plants. 7.0—See Moravská-Ostava. 7.45—See Brno. 8.0—"The Man who Blushes"—Drama (Masek). 9.0—Time and

News. 9.10 (approx.)—See Vienna. 10.0—Time, News and Sports Notes. 10.15—Announcements. 10.20—Organ Recital from the Beranek Cinema. Overture, "In the Well" (Blódek). Garden Festival (Fibich). Slavonic Dance in E Minor (Dvorák). Dreaming (Dvorák). Humoresque in E Flat (Dvorák). The Hen (Smetana). The Gallop (Smetana).

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland) 743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and News Bulletin. 12.40 (from Geneva)—Light Music on Gramophone Records. 1.0—Exchange Quotations. 1.5—Gramophone Records (continued). In the interval, Sketch. 1.45—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1—Orchestral Concert, conducted by R. Echenard. 5.50 (from Geneva)—Literary Programme. 6.10—Concert (continued). 6.45 (from Geneva)—Programme for Young People. 7.0—Weather Forecast. 7.1 (from Geneva)—Cinema Review. 7.20 (from Lausanne)—Report of the Swiss Peasants' Union. 7.30 (from Lausanne)—Talk: Parents and Children. 7.55—Announcements. 8.0—Concert by the Station Orchestra. 8.50 (from Lausanne)—Cabaret Concert. 10.0—Weather Forecast and Announcements. 10.15 (approx.)—Close Down.

RIGA (Latvia) 572 kc/s (525 m.); 15 kW. Transmits at intervals from 6.0 a.m. 6.0 p.m.—Radio Notes. 6.30—English Lesson. 7.5—Concert of Music by Thomas, by the Radio Orchestra, conducted by Janis Medins. Overture, "Mignon." Ballet Music from "Hamlet." Overture, "Raymond." 8.0—News Bulletin. 8.20—Recital of Operatic Arias by Wagner. Elizabeth's Prayer from "Tannhäuser." Airs from "Lohengrin." 8.40—Orchestral Concert. Prelude and Cradle Song (Järnefeldt). Bassoon Solos. Suite Juel-Frederiksen. 9.0 (in an interval)—News. 9.35—Gramophone Records of Variety Music. 10.30 (approx.)—Close Down.

ROME (Italy) Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayed by Naples, 941 kc/s (319 m.); and 2RO, 11,810 kc/s (25.4 m.). 8.15—8.30 a.m.—Giornale Radio and Announcements. 12 noon—Variety Music on Gramophone Records. In the intervals at 1.15 p.m.—Giornale Radio and Exchange, and at 1.30—5.0—Interval. 5.0—Exchange Quotations. 5.5—News for Children. 5.25—Giornale Radio and Announcements. 5.30—Songs by Ofelia Parisini (Soprano) and Vittorio Sensi (Baritone). Duet from "Aida" (Verdi). Duet from "André Chenier" (Giordano). 5.45—Concert. Selection from "Masaniello" (Auber). Soleina (Chesi). Sincopomania (Montagnini). Intermezzo from "L'Amico Fritz" (Mascagni). Sui prati (Gragnani). Selection (Jurman). 6.15—Giornale dell'Enit. 6.55 (from Naples)—Shipping and Sports Notes. 7.0—Agricultural Report, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Popular Music on Gramophone Records. 8.30—Talk for Housewives, Sports Notes and Announcements. 8.45—Concert. The Orchestra, conducted by Riccardo Santarelli, and The Madami Zither Quartet. Soloists: Gualda Caputo (Soprano), M. Ceccarelli (Pianoforte), Vera Nadia Poggioli (Soprano), Bianca Bianchi (Soprano), Vincenzo Tanlongo (Tenor) and Antonio Prodi (Bass). Part I. Zither Selections (Scarlati): (a) Toccata, (b) Minuetto, (c) Allegro con spirito. Three Old French Songs for Soprano (arranged Weckerlin): (a) Maman dites-moi, (b) Bergère, (c) Fleur des alpes. Zither Selections: (a) Gavotte and Tempo di Bolero (Lassen), (b) Intermezzo, Goyescas (Granados). Talk by Mario Corsi. Pianoforte Solos: (a) Toccata (Clementi), (b) Impromptu (Chopin), (c) La campanella (Liszt). Part II. Vocal and Orchestral Selections from "William Ratcliff" (Mascagni). Prelude to Act 4 of "Carmen" (Bizet). 10.55—News Bulletin.

SCHENECTADY (U.S.A.) General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayed at intervals by W2XAF and W2XAD (see Short-Wave List). Transmits at intervals from 11.45 a.m. 9.0 p.m.—Musical Comedy Hits from New York. 9.30—Adult Education Series. 9.45—Musical Ad Men. 9.50—News Items. 10.0—Stock Reports and Police Notices. 10.15—Sippy from New York. 10.30—Bosco Children's Programme. 10.45—Chandu, the Magician. 11.0—Joe and Eddie. 11.15—Annette McCullough (Crooner). 11.30—Musical Comedy Hits. 11.55—Baseball Scores. 12 midnight (WGY only)—De Witt Clinton Orchestra. 12 (W2XAF only)—Stock Reports and News Items. 12.30 a.m. (Friday)—4.0—New York Relay. 12.30—Barbasol Programme. 12.45—The Goldbergs. 1.0—Fleischmann Hour. 2.0—Big Six of the Air. 2.30—Adventures of Sherlock Holmes. 3.0—Lucky Strike Dance Hour. 4.0—Carmelo Cascio (Pianoforte). 4.15—Floyd Walter (Organist). 4.45—Cotton Club Orchestra from New York. 5.0—De Witt Clinton Orchestra. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland) 653 kc/s (459 m.); 60 kW. Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory, Weather Forecast and News Bulletin. 12.40—What Piece was that? Musical Guessing Competition. 1.35—Weather Forecast and Exchange Quotations. 1.45—3.30—Interval. 3.30 (from Berne)—Programme for Women. 4.0—Gramophone Concert of Operetta Music. 5.0—Weather Report. 5.5—6.30—Interval. 6.30 (from Basle)—Talk on Foreign Countries and their Inhabitants: The Congo. 7.0—Time Signal, Weather Forecast, Traffic Report and Light Music on Gramophone Records. 7.30 (from Basle)—Italian Lesson. 8.0 (from Basle)—Hungarian Music by the Station Quartet. 9.0 (from Basle)—Humorous Reading. 9.30—Weather Forecast and News Bulletin. 9.45 (from Basle)—Concert by the Basle Tramwaymen's Choir. 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden) Radiotjänst (SASA). 689 kc/s (436 m.); 55 kW. Relayed by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hålvik, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.); and Sundsvall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. 5.0 p.m.—Divine Service. 5.30 (from Göteborg)—Song and Violin Solos, followed by Reading. 6.15—Popular Music on Gramophone Records. 7.15—Weather and News Bulletin. 7.30—Talk: Travelling in a Motor Boat. 8.0—Orchestral Concert.—Soloist: Simon Edvarssen (Vocalist). Festival March (Henneberg). Intermezzo (Söderman). Waltz, Bøljeby (Petersen-Berger). Two Songs: (a) Dream (Waldimir-Engeström), (b) O, milda Sång (Trönqvist). Caucasian Suite (Ippolito-Ivanov). Dances from "Prince Igor" (Borodin). Four Songs: (a) Song from "Alexandra" (Szirmai), (b) Song from "Countess Maritza" (Kálmán), (c) Song from "Paganini" (Lehár), (d) Song from "The Land of Smiles" (Lehár). Selection from "Eva" (Lehár). 9.25—Talk. 9.45—Weather and News. 10.0—Song Recital by Eric Kjällqvist, relayed from Göteborg.

STRASBOURG (France) Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert of Opera and Classical Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert (continued). 2.0—Programme for Children. 3.0—4.15—Interval. 4.15—Elocution Lesson in French. 4.30—Relay of a Concert from Ships in Marseilles Harbour. 6.0—Talk in French: French Museums. 6.15—Talk in French: The Fishing Industry. 6.30—Orchestral Concert, conducted by Maurice de Villers. Overture, "Fierrabras" (Schubert). Waltz (Chabrier). Selection from "Faust"

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayed at intervals by W2XAF and W2XAD (see Short-Wave List). Transmits at intervals from 11.45 a.m. 9.0 p.m.—Musical Comedy Hits from New York. 9.30—Adult Education Series. 9.45—Musical Ad Men. 9.50—News Items. 10.0—Stock Reports and Police Notices. 10.15—Sippy from New York. 10.30—Bosco Children's Programme. 10.45—Chandu, the Magician. 11.0—Joe and Eddie. 11.15—Annette McCullough (Crooner). 11.30—Musical Comedy Hits. 11.55—Baseball Scores. 12 midnight (WGY only)—De Witt Clinton Orchestra. 12 (W2XAF only)—Stock Reports and News Items. 12.30 a.m. (Friday)—4.0—New York Relay. 12.30—Barbasol Programme. 12.45—The Goldbergs. 1.0—Fleischmann Hour. 2.0—Big Six of the Air. 2.30—Adventures of Sherlock Holmes. 3.0—Lucky Strike Dance Hour. 4.0—Carmelo Cascio (Pianoforte). 4.15—Floyd Walter (Organist). 4.45—Cotton Club Orchestra from New York. 5.0—De Witt Clinton Orchestra. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

THURSDAY continued

(Gounod). Gitaneries (Razigade). Symphonic Poem, Helvetia (Scasola).
7.30—Time Signal. 7.32—News in French and German. 7.45—Dance Music.
8.45—Orchestral Concert, relayed from the Restaurant de l'Orangerie. Rhapsody for Orchestra (Lalo). Prelude to "Die Loreley" (Bruch). Overture, "Sakuntala" (Goldmark). Slavonic March, Op. 31 (Tchaikovsky). Waltz, Op. 66, No. 6 from "The Sleeping Beauty" (Tchaikovsky). Italian Caprice, Op. 45 (Tchaikovsky). 10.30 (approx.)—Close Down.

STUTTGART (MÜHL-ACKER) (Germany)

Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayed by Freiburg, 527 kc/s (570 m.).
Transmits at intervals from 6.0 a.m. (Time, Weather and Gymnastics).
10.0 a.m. (from Freiburg)—Piano-forte Trios by Heinz Munkel, (Pianoforte), Willy Kiskalt (Flute) and Theo Kellner (Cello). Trio in G (Beethoven). Trio, Op. 63 (Weber).
11.0—Time, Weather and News.
11.15—11.30—Sponsored Music. 12 noon—Concert from Munich. 12.50—Time, Weather, News and Programme Announcements. 1.0—See Langenberg. 1.55—News Bulletin. 2.0—2.15—Sponsored Music. 2.30—Elementary Spanish Lesson. 3.0—Elementary English Lesson. 3.30—Programme for Children.
5.0—See Langenberg. 6.15—Time and Weather. 6.25—Talk: Must the Sun eventually lose its Heat? 6.50—See Frankfurt. 7.15—Time, Weather and Agricultural Notes.
7.30—10.30—See Frankfurt. 10.30—Time, Weather, News and Programme Announcements.
10.45—Concert by the Philharmonic Orchestra, conducted by Emil Kahn. Soloist: Hubert Buchta (Tenor). Eine kleine Nachtmusik (Mozart). Aria from "Il Seraglio" (Mozart). Overture, "Das Nachtlager in Granada" (Kreutzer). Selection from "Undine" (Lortzing). Military March, No. 2 (Schubert): Selection from "Lilac Time" (Schubert). Overture, "Frühlingsluft" (Jos. Strauss-Reiterer). Song from "Der liebe Augustin" (Fall). Emperor

Waltz (Joh. Strauss). 12 midnight (approx.)—Close Down.

TOULOUSE (France)

Radiophonie du Midi. 779 kc/s (385 m.); 8 kW.
Transmits at intervals from 12.30 p.m. 5.0 p.m.—Transmission of Pictures. 5.15—Exchange Quotations. 5.30—Overture to (a) "Orpheus in the Underworld" (Offenbach) and (b) "Euryanthe" (Weber). 5.45—Orchestral Selections. 6.0—Light Music. 6.15—Orchestral Selections. 6.30—Exchange Quotations and Horse-Racing Results. 6.45—Songs from (a) "Lakmé" (Delibes), (b) "The Bayadere" (Kálmán) and (c) "Carmen" (Bizet). 7.0—Talk for Tourists. 7.15—Accordion Solos. 7.30—News Bulletin. 7.45—Light Music. 8.15—Orchestral Concert. Selections from (a) "Le Pré aux Clercs" (Hérold), (b) "La Mascotte" (Audran) and (c) "La Source" (Delibes). Follow a Star: Fantasia on Sophie Tucker's Song. 8.45—Sound Film Music. 9.0—Orchestral Selections. 9.30—Songs from (a) "Hamlet" (Thomas) and (b) "L'Africaine" (Meyerbeer). 9.45—Accordion Solos. 10.0—Military Music. 10.15—Orchestral Selections. 10.30—North African News. 10.45—Orchestral Selections from "Die Walküre" (Wagner). 11.0—Concert. 12 midnight—Weather and Announcements. 12.5 a.m. (Friday)—English Music. 12.30 (approx.)—Close Down.

TRIESTE (Italy)

Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 10 kW.
Transmits at intervals from 8.15 a.m. 7.5 p.m.—Quintet Concert. Susy (Manoni). Finestra a Siviglia (Dax). Serenata ambulante (De Micheli). Summer Night by the Sea (Handers). Cuba (Mascheroni). Selection from "Gipsy Love" (Lehár). Fiorita (Storaci). Canzone del perché (Mariotti). 8.0 (till Close Down)—See Turin.

TURIN (Italy)

Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayed by Milan, 905 kc/s (331.5 m.); Genoa, 959 kc/s (312.8 m.) and Florence, 599 kc/s (500.8 m.).
Transmits at intervals from 8.15 a.m.

6.45 p.m.—Agricultural Talk. 7.0—Announcements.
7.5—Concert of Light Music. Selection from "Le Donne Curiose" (Usiglio). Summer Sun (Lincke). Scherzo (Schubert). Jongleur (Gagliardi).

7.30—Time Signal and Announcements.
7.31—Variety Concert. Selection from "Le Villi" (Puccini). Romance (d'Ambrosio). Selection from "Riguetto" (O. Straus). Marcia esotica (Malvezzi).
8.0—Giornale Radio, Weather Report and Light Music on Gramophone Records. 8.25—Talk for Housewives.

8.30—"The Cricket on the Hearth"—Opera in three Acts (Zandonai), conducted by the Composer. In the intervals, Talk, Literary Notes and Giornale Radio. After the Opera, News Bulletin.

VATICAN CITY (Rome)

15,123 kc/s (19.84 m.) (Morning) and 5,969 kc/s (50.26 m.) (Evening); 10 kW.
11.0—11.15 a.m.—Religious Information in French. 8.0—8.15 p.m.—Religious Information in Italian.

VIENNA (Austria)

Radio-Wien. 581 kc/s (517 m.); 15 kW. Relayed by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,058 kc/s (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.) and Salzburg, 1,373 kc/s (218 m.).
Transmits at intervals from 9.0 a.m. 12 noon—The Opening of the Tenth International Festival of Music, relayed from the Rathausplatz. Bläserfanfare (Richard Strauss). Addresses by Wilhelm Miklas and Karl Seitz, Bürgermeister of Vienna. Military March in D Minor (Schubert). 12.30 p.m.—Quartet Concert. 1.0—Time, Weather, News and Programme Announcements. 1.10—2.0—Quartet Concert (contd.). 3.0—Time, Weather and Market Reports. 3.20—Talk: The Second International Exhibition of Austrian Amateur Photographers. 3.30—"Summer in Song"—Recital by Edith van Aust (Mezzo-Soprano) and Johann v. Szantha (Bass).

3.55—Talk: The Protection of Animals and Public Opinion. 4.15—Talk: Austrian Sayings and Maxims. 4.45—Esperanto Report. 5.0—A Radio Report of the International Singing and Violin Playing Competition, relayed from the Musikvereinssaal. 5.30—Gramophone Concert of Orchestral Arrangements of well-known Pianoforte and Organ Music. 6.25—Talk for Women: Name Fashions. 6.45—Talk on Industry. 7.10—Talk: The International Exhibition of Artisan Dwellings, Vienna, 1932. 7.35—Time, Weather and Programme Announcements.

7.45—Rudolf Kronegger Concert. Soloists: Franz Hoffmann (Tenor), and Alfred Hoffmann (Baritone). Tenor Solos: (a) Der erste Ball im Himmel droh'n, (b) Wien ist ein Stern der am Himmel. Duets: (a) Die Stadt uns'rer Sehnsucht, (b) So a Weana Tanzl. Baritone Solos: (a) Die Weanastadt, die schlaf't ja nur, (b) Lagunenzauber. Tenor Solos: (a) Wollt's wiss'n, wer i bin, (b) Roter Stadl, waldumrauscht, (c) Wann's Herz a Fensterl hatt'.

8.20—Readings: Children and Grown-ups. 8.50—"There are no more Children"—Sketch in One Act (Arkady Avertchenko).

9.0—The Tenth International Festival of Music—Concert by the Vienna Symphony Orchestra, relayed from the Konzerthausaal. Part I. Czechoslovak Music, conducted by Otakar Jeremias. Soloist: Stanislav Novak. Violin Concerto, Op. 6 (Karel Hába). Part II. Spanish Music, conducted by Dr. Anton Webern. Soloist: Conxita Badia d'Agusti. Six Catalonian Songs (Robert Gerhard). (a) La Calandria, (b) El petit vailet, (c) El cotillo, (d) La mort i la Donzella, (e) Enemic de les doues, (f) Els baillares dins un sac. Part III. French Music, conducted by Roger Desormière. Bal Vénitien—Dance Suite for Orchestra (Claude Delvincourt).

10.0—News and Weather.
10.15—Orchestral Concert. March, Austria (Silvester Schieder). Overture, "Raymond" (Thomas). Waltz, Wiener Fresken (Josef Strauss). Song, Erste Liebe (Lehár). Selection from "The Czarevitch" (Lehár). Intermezzo,

Beisoldaten (Otto Kochert), Tango. Ist dein kleines Herzchen mir treu (Karl Eisele). Waltz from "The Gipsy Princess" (Kálmán) Potpourri, Für lustige Leut' (Kornzak). Gallop, Tik-Tak (Johann Strauss).

WARSAW (Poland)

Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW.
11.58 a.m.—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Polish Press Review. 12.20—Interval. 12.40—Weather Report. 12.45—Light Music on Gramophone Records. 2.0—Interval. 3.0—Economic Report. 3.10—Popular Music on Gramophone Records. 3.30—Announcements. 3.35—Variety Music on Gramophone Records. 4.35—Hydrographic Report. 4.40—Book Review.

5.0—Concert by Blind Musicians. Pupils of the State Institution for Deaf-Mutes and the Blind. Soloists: Aksamirsky (Pianoforte) and Ed. Morga (Pianoforte). Introductory Talk by S. Lopatto. Chanson sans paroles (Tchaikovsky). Melody (Tchaikovsky). Pianoforte Solos: (a) Intermezzo (Schumann), (b) Prelude (Bilinsky), (c) Etude fantastique (Bilinsky), (d) Nocturne in F Sharp Minor (Chopin), (e) Fantasia Impromptu (Chopin). Pianoforte Duet: Danse macabre (Saint-Saëns).

6.0—Talk: Stanislas Wyspiansky. 6.20—Concert of Chamber Music from the Café Adria. 7.15—Miscellaneous Items. 7.35—Radio Journal. 7.45—Agricultural News. 7.55—Programme Announcements.

8.0—Concert of Light Music by the Warsaw Philharmonic Orchestra, conducted by St. Navrot. Polonaise (Konopasek). The Wedding (Powiadowsky). Tennis (Lincke). Waltz, Flott durch's Leben (Translatour). Gypsy Overture, Chal Romano (Ketelbey). Couaienne (Lodwigowsky). Cockney Suite (Ketelbey). Waltz, Donauperlen (Volstaedt). Gallop (Frischer). Mazurka (Levandovsky). 9.20—Reading. 9.50—Radio Journal. 9.55—Aviation Weather Report and News Bulletin. 10.0—Dance Music. 10.40—Sports Notes. 10.50—Dance Music.

PRINCIPAL EVENTS

SYMPHONY CONCERTS

- 3.0 p.m. Budapest: The Opera House Orchestra (Conductor, Dohnanyi).
8.0 " Warsaw: The Philharmonic Orchestra (Conductor, Mlynarski)

CONCERTS (Vocal and Instrumental)

- 12.30 p.m. Radio-Paris: Gounod anniversary programme (gramophone).
8.0 " Brussels No. 2: The Station Orchestra.
8.0 " Heilsberg: The Königsberg Opera Orchestra.
8.0 " Oslq: The Station Orchestra.
9.0 " Brussels No. 1: Popular programme.
9.0 " Radio-Paris and other French Stations: Debussy Festival.
9.45 " Schweizerischer Landessender: The Station Orchestra.
10.15 " Leipzig: Stravinsky programme.

OPERAS AND OPERETTAS

- 6.40 p.m. Bucharest: "Il Trovatore" (Verdi) (Gramophone).
8.0 " Berlin and most German Stations: "Semiramis" (Rossini).
8.15 " Copenhagen: "Spring in Vienna" (Johann Strauss, father and son).

RECITALS

- 7.0 p.m. Heilsberg: Organ.
7.35 " Vienna: Contemporary Swiss pianoforte music.
8.0 " Stockholm: Organ.
8.10 " Radio-Suisse Romande: Harriet Cohen (pianoforte).
8.30 " Leipzig: Songs (Brahms).
10.45 " Stuttgart, Frankfurt, Königs Wusterhausen: Violin and pianoforte.

DANCE MUSIC

- 11.10 p.m. Copenhagen.

FRIDAY (June 17)

A Reformed Semiramis

To see Rossini's *Semiramis* described as a merry opera—as BERLIN is doing on the occasion of its first broadcast performance in Germany this evening—gives the old opera enthusiast a severe shock. In its original form, it is as far from merry as any tragic story of the old lyric stage; Rossini's libretto sticks pretty closely to the accepted legends about



[Photo: Emil Müller, Stuttgart.]

JOHANN STRAUSS

(See Copenhagen programme, 8.15)

the Queen of Babylon, making much of the splendour with which she surrounded herself, and ending with her death by the hand of her own son. For this broadcast, however, the whole story has been re-written, with a new set of characters, and with the action taking a wholly different course; its only relation to the old work is that the scene is in Babylon, and that Semiramis herself plays the principal part. In its re-cast form the story goes forward happily, and the opera ends as all comic-operas should, with the betrothal of the two principal young people. The new libretto is by Hans Bodenstedt, and two musicians have had a hand in rearranging the music, Adolf Secker and Adolf Petersen. The broadcast begins at eight, and will be relayed by a number of other stations.

Stravinsky's Pulcinella

The revival of interest in the classics which influenced even such ultra-modern composers as Stravinsky, made itself strongly felt all over the world during the war. The fact that audiences consisted necessarily of old people must have had something to do with that. It certainly sent Diaghilev, of the Russian Ballet, to look for subjects among the older stories, and it was in some MSS. at Naples that he unearthed a story of four marionettes in which he at once saw possibilities for an intriguing ballet. Picasso devised the stage setting for it, carried out in blue, black and grey, capturing the spirit of the piece with all his uncanny skill. What it was that made Diaghilev look to old Pergolesi for his music no one quite knows, but its suitability has always been hailed as a stroke of genius on his part. In the library at Milan he found some complete pieces, and a good many jottings and sketches, many of them mere themes which had never been worked out. He took these scraps of music to Stravinsky and asked him to arrange and orchestrate them as a complete ballet, and the result was not only one of the most successful pieces in his repertoire, but one of the most interesting of Stravinsky's works. The music is being played at LEIPZIG this evening in a programme in honour of Stravinsky's fiftieth birthday. He was born on June 5 (June 18 by our calendar).

NATIONAL

London: 1,148 261.3 50
Daverntry: 193 1,554.4 30
Northern: 995 301.5 50

10.15 a.m.—The Daily Service.
10.30—Time Signal (Greenwich);
Shipping Forecast.

10.45—11.0—"The Weck in West-
minster." Mr. W. S. Morrison,
M.C., M.P.

12 noon—Emanuel Starkey and his
Orchestra.

12.45 p.m.—Organ Recital by Eric
Brough.

1.0—Time Signal (Greenwich).

1.30—New Gramophone Records.

2.30—"The School Garden."—IV.

3.0—"Life and Work in the British
Isles."—VIII.

3.35—Concert for Schools.

4.15—The Scottish Studio Orchestra.

4.45—Time Signal (Greenwich).

5.15 (Daverntry)—The Children's
Hour.

5.15 (London and Northern)—The
B.B.C. Dance Orchestra.

6.0—"The First News."

6.30—Time Signal (Greenwich).

6.30—The Foundations of Music.

Bach's Choral Preludes.

6.50—"Your Week-end in the Gar-
den." Mr. W. Brett.

7.10—7.25—The B.B.C. Music Critic,
Mr. Ernest Newman.

7.30—"Biology in the Service of
Man."—IV. Sir J. Arthur Thom-
son, LL.D.

8.0—9.0—Four Quarters, Engel
Lund, in Traditional and Folk
Songs from many European coun-
tries, sung in the original language.

"Mr. Sheridan Pays Up," a Farce
in one act by John C. Woodiwiss.

The first broadcast of Van Straten
and his Orchestra. Claude Hulbert,
Emid Trevor, Paul England, Pat
Paterson. Two Pianos, Jean
Melville and Billy Thorburn.

9.0—Time Signal (Greenwich).

9.0—"The Second News."

9.15—Shipping Forecast; New York
Stock Market Report.

9.20—"Here and Now." Mr. Gerald
Barry.

9.35—The B.B.C. Orchestra (Section
F), conducted by Stanford Robin-
son. Astra Desmond (Soprano).

11.0—12 midnight—Dance Music.

11.30—Time Signal (Greenwich).

REGIONAL

London: 842 356.3 50
Midland: 752 398.9 25
Northern: 626 479.2 50

10.15 a.m. (London and Northern)
—The Daily Service.

10.30—11.0 (London and Northern)
—Daverntry National Programme.

11.30—12 noon (London)—Experi-
mental Television Transmission.

12 noon—Frank Newman at the
Organ.

1.0 p.m.—The New Victoria Cinema
Orchestra, conducted by Haydn
Heard.

2.0—3.0—The Northern Studio Orche-
stra.

4.15 (London and Northern)—
Daverntry National Programme.

5.15—The Children's Hour.

6.0—"The First News."

6.30 (London)—An Orchestral Con-
cert. Charles Mayhew (Baritone).
The B.B.C. Orchestra (Section G),
conducted by B. Walton O'Donnell.

6.30 (Midland)—Murray Ashford's
Entertainers, from The Pavilion,
Jephson Gardens, Leamington Spa.

6.30 (Northern)—Reginald Dixon
at the Organ.

7.15 (Northern)—A Relay from The
Hippodrome, Manchester.

7.30 (Midland)—The Songs of Gran-
ville Bantock. A Recital by Muriel
Sotham (Contralto).

8.0 (London)—Chamber Music. Wini-
fred Radford (Soprano). The
Stratton String Quartet.

8.0 (Midland)—The Leicester Impe-
rial Band, conducted by S. S.
Hilffe. Gilbert Astin (Baritone).

8.0 (Northern)—Manx Folk-song.
A Talk by Mr. Ramsey B. Moore
(Archdeacon-General of the Isle of
Man). Illustrated by Nora Gell
(Soprano), Margaret Christian
(Contralto), John Christian (Tenor),
Alan Quirk (Bass).

8.30 (Northern)—The Studio Orche-
stra.

9.15—"The Pink Pink Vase." By
Marjorie J. Redman. The Music
composed and conducted by Leslie
Woodgate. Produced by Howard
Rose.

10.15—"The Second News."

10.35—11.0 (Midland)—As London.

10.35—12 midnight (London and
Northern)—Dance Music.

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

BARCELONA (Spain)

Radio-Barcelona (EAJI). 860 kc/s.
(349 m.); 8 kW.
Transmits at intervals from 8.10 a.m.
8.0 p.m.—Concert by the Station Trio.
Nolette, No. 1 (d'Ambrosio).
En badinant (d'Ambrosio).
Berceuse (Rimsky-Korsakov).
Selection from "The Twilight of the
Gods" (Wagner).

8.30—Exchange Quotations, Request
Gramophone Records and Press
Notes. 10.0—Chimes, Weather Fore-
cast, Exchange Quotations and Relay
of Foreign Stations. 10.15—Light
Music by the Station Orchestra. 10.30
—Dance Music by the Excelsior Jazz
Band. 11.0—Catalan Poetry (Santos
Oliver), by Rosa Cód.

11.20—Concert by the Vilalta Or-
chestra relayed from the Café Español.
1.0 a.m. (Saturday)—Close Down.]

BELGRADE (Yugoslavia)

697 kc/s (430.4 m.); 2.5 kW.
Transmits at intervals from 11.0 a.m.
5.0 p.m.—Cello Recital by Fjodor
Koch. Sonata in G Minor (Eccles).
Romance (Goltermann). Lamento
(Fauré). Scherzo (van Goens).

5.30—Light Music on Gramophone
Records. 6.55—Time Signal and
Programme Announcements. 7.0—
Czech Lesson. 7.30—Recital of
Yugoslavian Songs. 8.0—Talk for
Sokols.

8.30—Yugoslavian Composers—Con-
cert. Trio, Op. 15, for Piano,
Violin and Cello. Quartet in A
Minor, Op. 13.

9.30—Yugoslavian Song Recital.

10.0—Orchestral Concert of French
Music. Overture, "Raymond"
(Thomas). Suite, Scenes alsaciennes
(Massenet).

10.30—News Bulletin and Sports
Notes. 10.50—Concert of Ciginy
Music, relayed from the "Potrosacka
Zadruga" Restaurant.

BERLIN (Germany)

Königs Wusterhausen. 183.5 kc/s
(1,635 m.); 60 kW.
Transmits at intervals from 5.45 a.m.
12 noon—Weather for Farmers. 12.2
p.m.—Gramophone Concert of Regimen-
tal Marches, followed by Weather
for Farmers. 12.55—Time Signal.

1.35—News of Classical Music
relayed from Berlin (Witzleben).

3.0—Talk for Girls. 3.30—Weather
and Exchange Quotations. 3.40—
Talk for Young People. Hans
Richter. 4.0—Talk on Educational
Books.

4.30—Concert from Leipzig. 5.30—
Talk: Stalin Pasha, on the occasion
of his 75th Birthday. 6.0—Illustrated
Talk: Forgotten German Music from
the Time of Bach—Trio Sonatas.

6.30—Talk: The Reparations Prob-
lem from the point of view of the
International Labour Movement. 6.55
—Weather for Farmers. 7.0—Topical
Talk. 7.15—Talk for Doctors.

7.35—Talk for Workers, followed by
Weather for Farmers.

8.0—See Berlin (Witzleben). 10.15
—Weather, News and Sports Notes.
10.45—See Stuttgart. 12 midnight
(approx.)—Close Down.

BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.);
1.5 kW.
Transmits at intervals from 6.0 a.m.
(Gymnastics and Gramophone Con-
cert)

4.30 p.m.—Pianoforte Recital, by
Herbert Donath-Oswald. Phan-
tasmagorie (Kurt Schubert). Im-
promptu (Durra). Air and Fan-
tastic Scherzo from the Suite
in D Minor (Ertel).

4.45—Song Recital by Agnes Schulz-
Lichterfeld (Mezzo-Soprano).
Abrede (arr. Hirschberg). Maria
und der Schiffer (Knab). Wie
schön blüht uns der Maien (Casper).
Erinnerung (v. Bethmann-Hollweg).
Vollständigen (Blech). Tanzlied
(Ramrath). Mädchenlied (Bortz).
Hans in allen Gassen from "Des
Knaben Wunderhorn" (Bortz).

5.0—Talk for Young People: Swabia.
5.20—Talk: The Student on the
Films and in Reality. 5.50—Review
of New Books. 6.0—Concert from
the Hotel Kaiserhof. 6.55—"The
Witzleben Station informs its
Listeners." 7.0—Topical Talk.

7.10—Choral Concert. Folk Song.
Sie glich wohl einem Rosenstock
(arr. Röntgen). Seventeenth Century
Song, Flieg' her, flieg' hin, Wald-
vögelein (arr. Kahn). Folk Melody
of 1800, Klinge lieblich und sacht
(arr. Kapriel). Marienwunderchen
(Zuccalmaglio, arr. Othegraven).
Schifferlied (arr. Ochs). Schneiders
Hollenfahrt (arr. Schmid).

FRIDAY continued

7.30—Talk: A Hundred Years of
Serial Stories. 7.55—Hints for the
Weekend.

8.0—"Semiramis"—Opera in Three
Acts (Rossini) newly arranged by
Adolf Secker and Otto Petersen.
10.15—Weather, News and Sports
Notes. 10.30—Dance Music. 12.30
a.m. (Saturday)—Close Down.

BORDEAUX-LAFAYETTE (France)

(PTT). 986 kc/s (304 m.); 13 kW.
Transmits at intervals from 12 noon.
7.30—Announcements. 7.40—Edu-
cational Talk. 7.55—Lottery Results.

8.0—Advanced Spanish Lesson. 8.15
—News Bulletin and Weather Fore-
cast. 8.30—Relay from Paris (Ecole
Supérieure), 671 kc/s; (447.1 m.).

BRATISLAVA (Czechoslovakia)

1,076 kc/s (279 m.); 14 kW.
Transmits at intervals from 10.30 a.m.
6.20 p.m.—Gramophone Records of
Variety Music. 6.40—Sports Re-
view. 7.0—Recital of Russian and
Latvian Songs. 7.45—See Prague.

8.0—Brass Band Concert. 8.35—See
Prague. 10.15—Programme, An-
nouncements and News. 10.20—
Cigány Band Concert from the
Elizabeth Café.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Re-
layed by Gleiwitz, 1,184 kc/s
(253 m.).
Transmits at intervals from 6.0 a.m.
5.50 p.m.—This will interest you—
Surprise Programme. 6.10—Talk
by Gustav Willibald Freytag; Remin-
iscences of my Father. 7.0—Weather
for Farmers.

7.2—Weber Concert by the Station
Orchestra, conducted by Franz
Marszalek. Soloists: Kurt Hatt-
wig (Pianoforte), Franz Marszalek
(Pianoforte), Richard Schicke
(Flute), and Curt Becker (Cello).

Overture, "Oberon." Two Piano-
forte Duets. Trio for Flutes,
"Cello and Pianoforte. Selection
from "Der Freischütz." Overture,
"Preciosa."

7.55—Weather Forecast. 8.0—See
Berlin (Witzleben). 10.15—Time
Signal, Weather Forecast, News Bul-
letin, Sports Notes and Programme
Announcements. 10.45—Talk: Some
New Ideas for Holidays in a Canoe.

11.0—Dance Music by the Station
Orchestra, conducted by Franz Mar-
szalek. In the interval, at 11.25—Weekly
Sound News, relayed from the Gloria
Palace. 12.30 a.m. (Saturday)
—Close Down.

BRNO (Czechoslovakia)

878 kc/s (342 m.); 15 kW.
Transmits at intervals from 10.30 a.m.
6.25 p.m.—German Transmission:
News and Talks: (a) Wallenstein
and Moravia, (b) Economic Problems.
7.0—Brass Band Concert. 7.45—
See Prague. 8.0—Talk: Scouting.
8.35—See Prague. 10.15—News Bul-
letin. 10.25—See Prague.

BRUSSELS (Belgium) (No. 1)

I.N.R. 500 kc/s (599 m.); 15 kW.
12 noon—Trio Concert. The Phan-
tom Brigade (Myddelton). Prelude
(Beaume). Minuet (Boccherini).
Selection from "Le Cid" (Mas-
senet). Canzonetta for Violin
(d'Ambrosio). Golliwog's Cake
(Walk (Debussy)). Waltz, The
Skaters (Waldruffel). Ich grolle
nicht (Schumann). Serenade from
"Milénka" (Block). Hungarian
Dances (Brahms). 1.0 Weather
Report. 1.10—Gramophone Con-
cert of Light Music.

5.0—Orchestral Concert, conducted
by Franz André. March, The
Marine-Guards (Heymann). Selection
from "The Daughter of the
Regiment" (Donizetti). Japanese
Dance (Yoshitomo). Tango, La
seule au monde (Ritter-Grothe).
Waltz, Clair de Lune (Collin).
Tango, "Rita Argentine" (Milli-
Jacobs). Selection from "Le
Chemine du Paradis" (Haymann).
Three Masked Dances (Wood).
Burlesque (Poot). Indian Dance
(Siedel). Paso doble (Calvette).

6.0—Gramophone Records. Waltz
from "The Count of Luxem-
bourg" (Lehár). Ideale (Tosti).
Toredador et andalouse (Rubin-
stein). Santa Lucia Luntana
(Mario).

6.15—Talk: Belgian Museums—
Gaesbeck Castle.
6.30—Gramophone Records. Selec-
tions from "L'Heure espagnole"
(Ravel).

7.15—Talk: Dolf Ledel—a Belgian
Sculptor. 7.30—Music Review by
Marcel Poot.

8.0—Concert by the Tea Room Or-
chestra. Castilian Nights (Duromo-
Nussbaum). Waltz, Tales from
the Vienna Woods (Johann Strauss-
Michaelov). Spanish Dance, Zam-
bra (Granada). Selection from
"The Barber of Seville" (Rossini).
Foxtrot, Don't do that (Sarony-
Eyton). Chopinata (Doucet).

8.30—"The Life Annuity"—One-
Act Comedy (d'Hervilliez).

9.0—Insects and Animals in Music
Orchestral Concert, conducted by
Franz André. Soloists: M.
Fischer (Cello), and Mlle. Saucin
(Songs). March of the Lion (Saint-
Saëns). Cello Solo: The Fly.
(Mastruci). The Donkeys (Ibert).
Waltz, The Cuckoo (Jonasson).
The Butterfly Chase (Kéler-Béla).
The Elephant (Saint-Saëns). Le
Cygne (Saint-Saëns). The Cock-
chaffer's Tea Party (Noack). Selection
from "Le Carnaval des
animaux" (Saint-Saëns). Songs
from Operettas.

10.0—Le Journal Parlé.

10.10—Concert. Romanian Dances
(Barch). Hungarian Rhapsody
(Liszt). Waltz, The Blue
Danube (Johann Strauss). Songs.
Spanish Dances (Granados). Scot-
tish Dances (German). Foxtrot,
Home (Van Steeden). Valse
musette, Ca tourne (Gailhard).
Selection (Campbell). Bubbling
over with love (Russell). 11.0
(approx.)—Close Down.

BRUSSELS (Belgium) (No. 2)

N.I.R. 887 kc/s (338.2 m.);
15 kW. Programme in Flemish.
12 noon—Light Music on Gramo-
phone Records. 1.0 p.m.—Weather
Report. 1.10—Concert (continued).

5.0—Orchestral Concert, conducted
by Arthur Meulemans. Jubel
Ouverture (Weber). Commemora-
tion March (Gilson). Prelude to
"Hansel und Gretel" (Hump-
fired). Prelude (Rachmaninov).
Waltz, Wiener Bonbons (Johann
Strauss). Inaugural March (Grieg).
Selection from "Sylvia" (Delibes).

5.45—Pallierer Programme.

6.30—Gramophone Records.

7.15—Talk for Women. 7.30—
Talk on Botany.

8.0—Orchestral Concert, conducted
by Arthur Meulemans. Soloist:
Mme. Francine Bruylants (So-
prano). Symphony in G Minor
(Mozart). Songs: (a) Aria from
"The Marriage of Figaro"
(Mozart), (b) Aria from "Der
Freischütz" (Weber). Overture,
"Così fan tutte" (Mozart).

8.45—Talk: Ten Years of the
Pacifist Movement in Flanders.

9.0—Concert (continued). Prelude to
"Libus" (Smetana). Selections
from "The Snow Maiden" (Rim-
sky-Korsakov). Songs. Waltz,
Donauweller (Ivanovici). Liebes-
baum (Liszt). Danses villageoises
(Grétry). Spanish Dance (Falla).
Overture, "Charlotte Corday"
(Benoit).

10.0—Le Journal Parlé. 10.10—
Gramophone Records. 11.0 (approx.)
—Close Down.

BUCHAREST (Romania)

Radio-Bucarest. 761 kc/s (394 m.);
12 kW.
Transmits at intervals from 11.0 a.m.
4.0 p.m.—Concert by the Station
Orchestra. 5.0—News Bulletin and
Time Signal. 5.10—Orchestral
Concert (continued). 6.0—Educa-
tional Programme.

6.40—"Il Trovatore"—Opera in
Four Acts (Verdi) on Gramophone
Records. News in the intervals.

BUDAPEST (Hungary)

545 kc/s (550 m.); 18.5 kW.
Transmits at intervals from 9.15 a.m.
Programme also relayed on 210 metres
from 6.55 p.m. till Close Down.

5.30 p.m.—Recital of Hungarian Folk
Songs with Cigány Band accompani-
ment.

6.30—Talk.

6.55—Concert by the Budapest Con-
cert Orchestra. Selection from
"Raymond" (Thomas). Secrets
of the Adige (Carena). Interme-
zzo, Pepito (Weninger). Foxtrot
Potpourri from "The Czardas
Princess" (Kalman). Selection
from "Goldblume" (Huszka). Tan-
go Song (Markus). Foxtrot (Wil-
czynsky). Der kleine Reiter (Lin-
cke).

8.0—Wind Instrument Concert, fol-
lowed by Concert by the Royal Hun-
garian Opera House Orchestra con-
ducted by Ernst Dohnanyi. Over-
ture, "Rübezahl, Beherrscher der
Geister" (Weber). Horn Quartet with
Orchestral accompaniment (Hübel).
The Fifth Symphony (Tchaikovsky).

9.45—News Bulletin, followed by
Cigány Concert from the Kovacevics
Restaurant. 11.0—Talk in German:
Hungary—the Country and the
People.

COPENHAGEN (Denmark)

1,067 kc/s (281 m.); 0.75 kW.
Relayed by Kalundborg, 260 kc/s
(1,153 m.).
Transmits at intervals from 7.30 a.m.
(Gymnastics).

11.0 a.m.—Weather Forecast. 11.10—
Fish Market Prices. 12 noon—Town
Hall Chimes. 12.2—2.0 p.m.—Con-
cert from a Restaurant.

3.10—Pianoforte Recital by Holger
Lund-Christiansen. Selections
(Schumann): (a) Der Vogel als
Propheet, (b) Nos. 2 and 3 from the
"Fantasiestücke" Op. 111. Theme
with Variations in B Flat (Schu-
bert). Soirées de Vienne (Liszt-
Schubert).

3.30—Concert from the Wivex Res-
taurant. 5.0—Programme for Child-
ren. 5.40—Exchange Quotations
and Fish Market Prices. 5.50—Talk:
Great Works in Danish Literature—
"Den patriotiske Tilskner" (Hans
Werner). 6.20—Elementary German
Lesson. 6.50—Weather and News.

7.15—Time Signal. 7.20—Talk:
The Development of Fishing during
the last Twenty Years. 7.50—Item
by Per Knutzon. 8.0—Town Hall
Chimes. 8.2—Talk on the following
Transmission.

8.15—"Spring in Vienna"—Musical
Play in Three Acts (Music by
Johann Strauss, Father and Son),
arranged by Julius Bittner. 10.55
(approx.)—News Bulletin. 11.10—
Dance Music. 12 midnight (in an
interval)—Town Hall Chimes. 12.30
a.m. (Saturday)—Close Down.

DUBLIN (Ireland)

(2RN). 725 kc/s (413 m.); 1.2 kW.
Relayed by Cork, 1,337 kc/s
(224.4 m.).

1.30—2.0 p.m.—Time Signal, Weather
Report, Stock Report and Light
Music on Gramophone Records.

6.0—Popular Music on Gramophone
Records. 6.15—Programme for
Children. 7.0—Light Music on
Gramophone Records. 7.20—News
Bulletin. 7.30—Time Signal. 7.31—
Talk on Gardening. 7.45—Talk on
Fishing. 8.0—Berlioz and Bizet
Concert by the Station Sextet.

8.30—Baritone Solos by T. W. Hall.
8.45—Violin and Song Recital by
May Fogarty and Marion Joyce.

9.15—Duets by Eira Haise and
Eileen Driscoll. 9.30—Variety Pro-
gramme. 10.10—The Station Sextet.

10.30—Time Signal, News, Weather
Report and Close Down.

FÈCAMP (France)

Radio Normandie. 1,345 kc/s
(223 m.); 10 kW.
12 noon—Gramophone Concert. Se-
lections from "Tannhäuser" (Wag-
ner), "Il Seraglio" (Mozart),
"La Traviata" (Verdi), and
"The Marriage of Figaro"
(Mozart). 12.30 p.m.—News
Bulletin.

12.45—Recital of Songs. Chérie,
je n'ai pas peur (Valaire). C'est
pour Raymond (Puig). Le Biniou
(Durand). It is a Love Song
(Klennér). Un Million (Moretti).
My Tonia (de Sylva). With you
(Berlin). La Tournaite (Nelly).
La Dérobée de Guingamp. Pacific
(Wallace). T'as bonne mine
(Moretti). Dans un bouquet tout
simplement (Mabel Wayne).

7.30—Normandy Radio Gazette. 8.0
—News Bulletin. 8.15—Agricultural
Report. 8.30 (from Le Havre)—
Request Programme.

11.0—Concert. Trio Selection:
Friend of Mine (Sanderson).
Songs: (a) The Volunteer Organist
(Lamb). (b) The Miner's Dream of
Home (Dryden). Trio Selections:
(a) Un peu d'amour (Silésu), (b)
Love's old Sweet Song (Molloy).
Songs: (a) I wasn't ashamed of
you, Mother (Hammond), (b)
Will they love me up in Heaven
(Prince). Trio Selection: Even-
song (Martin). 12 midnight—
Dance Music by the Icolians.

FLORENCE (Italy)

Ente Italiano Audizioni Radio-
foniche. 599 kc/s (500.8 m.);
20 kW.
See Turin.

FRANKFURT-am-MAIN (Germany)

770 kc/s (390 m.); 1.5 kW. Re-
layed by Cassel, 1,220 kc/s (246 m.).
Transmits at intervals from 6.0 a.m.
12 noon—Orchestral Concert, con-
ducted by Reinhold Merten. Nach-
tmusik, Op. 7 (Heuberger). Nacht-
sliches Bilderbuch, Op. 11 (Volk-
mann). Two Icelandic Melodies
(arr. Svendsen). Molly on the Shore
(arr. Svendsen). Molly on the Shore
(P. A. Grainger). Serenade in
G, Op. 50 (Schwalm). 12.50 p.m.—
News and Weather.

1.0—Gramophone Concert. Impromptu
in B Flat for Pianoforte (Schubert).
Andante grazioso from the Piano
forte Trio No. 3 in C Minor.

(Brahms). Polonaise in A Flat for Pianoforte (Chopin). Quintet in A. Op. 114. The Trout Quintet (Schubert).
 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Time and Economic Notes. 3.30—Talk: The Care of Sickness among the Unemployed. 4.0—4.55—Interval. 4.55—Economic Notes.
 5.0—Concert from Langenberg. 6.15—Economic Notes. 6.25—Talk arranged by the Frankfurter Zeitung. 6.50—Talk from Stuttgart. 7.15—Time and Announcements. 7.30—10.20—See Stuttgart. 10.20—Time and News. 10.45—Late Concert, by Fritz Neuhäusel (Violin) and Richard Bornschlein (Pianoforte). Sonata in C Minor. Op. 30 No. 2 (Beethoven). Sonata in F Sharp Minor Op. 84 (Reger). 12 midnight (approx.)—Close Down.

HAMBURG (Germany)

Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayed by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.); and Kiel, 1,292 kc/s (232.2 m.).
 Transmits at intervals from 5.45 a.m. 4.30 p.m.—Concert from Leipzig. 5.30—Talk on Fishing. 5.55—Variety Programme. 6.35—Talk: Social Insurance and the Protection of the Worker. 6.55—Frankfurt Exchange and Hamburg Market Prices. 7.0—Topical Talk. 7.15—Weather Report.

7.20 (from Bremen)—Pianoforte Recital by May Heineken. Selections (Schubert): (a) Impromptu in A Flat, (b) Impromptu in E Flat, (c) Impromptu in G. Selections (Brahms): (a) Intermezzo in A, (b) Intermezzo in E Flat, (c) Andante in F Minor.

3.0—See Berlin (Witzleben) 10.0—Time and News.

10.20—Concert of Intermezzi and Entr'actes by the Norag Orchestra, conducted by Horst Platen. Overture, "Die Abreise" (d'Albert). Pictures from the South (Nicoce). Intermezzo from "William Ratcliff" (Mascagni). Prelude to the Third Act of "Carmen" (Bizet). España (Chabrier). Intermezzo from "I Pagliacci" (Leoncavallo). Italian Caprice (Tchaikovsky).

HEILSBURG (Germany)

1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.).

Transmits at intervals from 5.15 a.m. 11.30 a.m.—Concert from Breslau. 1.5 p.m.—Concert by the Little Orag Orchestra, conducted by Eugen Wilcken. Overture, "Turandot" (Lachner). Waltz, Krolls Balklänge (Lumbye). Selection from "Mignon" (Thomas). Potpourri, Eisblumen (Leuschner). Overture, "Ten Maids and no Man" (Suppé). Waltz, Dolores (Waldteufel). Ritorna (Caroso). Extase (Ganne). Selection from "Frasquita" (Lehar). March, Semper vivum (Larcher). 2.30—Advertising Notes with Gramophone Records. 3.30—Talk for Women.

4.0 (from Danzig)—Choral Concert, conducted by Erich Goebel. Wehlied (Striegler). Im Feld des Morgens früh (Burkhardt). Die grünen Jäger (Kirchner). Der Studenten Nachtgesang (Fischer). Das Dörchen (Schubert). Jägers Lust (Astholz).
 4.30—Concert by the Little Orag Orchestra, conducted by Eugen Wilcken. Overture, "Alfonso and Estrella" (Schubert). Nocturne No. 3 (Liszt). Waltz, Bei uns zu Haus (Joh. Strauss). Fantasia on the Works of Godard (Rhode). "Fanz-Szenen" (Richter). Victoria March (von Bion).

5.45—Dialogue on Swimming—Life Saving Instruction. 6.15—Agricultural Market Prices. 6.25—Readings. 6.50—Organ Recital, by Hugo Hartung, from the Neurosgärtner Church, Königsberg. Prelude and Fugue on the Name B.A.C.H. (Bach). Fugue, Op. 60, No. 2 (Schumann). Prelude and Fugue, "Bach" (Liszt). Fantasia and Fugue, Op. 46 (Reger).
 7.30—Arthur Silbergleit reads from his own Works. 7.55—Weather Report.

8.0—Concert by the Königsberg Opera House Orchestra, conducted by Werner Richter-Reichhelm. Soloist: Dr. Erwin Ross (Vocalist). Overture, "Agrippina" (Handel). Songs (Handel): (a) Aria from "Ottone", (b) Song from "Admeto." Feuerwerksmusik (Handel). Recitative and Aria, Così dunque tradisci (Mozart). Serenata notturna No. 4 (Mozart). Selections (Beethoven): (a) Prüfung des Küssens, (b) Mit Mädchen sich vertragen. Overture, "Corio-

lanus" (Beethoven). 9.30—News Bulletin. 9.35—Dialogue: Danzig and Königsberg in 1700. 10.5 (approx.)—Weather, News and Sports Notes.

HILVERSUM (Holland)

1,013 kc/s (296.1 m.); 20 kW. (7 kW. up till 4.40 p.m.).
 6.25—9.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 6.25—6.40 and 7.10—7.25—Gymnastics. 7.40—Gramophone Records of Variety Music. 8.40—Septet Concert.

9.40—Religious Programme by the Liberal Protestant Radio Society (V.P.R.O.).

9.55—11.40—V.A.R.A. Programme. 9.55—Recitations. 10.10—Septet Concert (contd.). 10.55—Recitations. 11.10—Concert (contd.).
 11.40—3.40 p.m.—Programme of the Algemeene Vereniging Radio Omroep (A.V.R.O.). 11.40—Time Signal.

11.41—Concert by the Wireless Orchestra, conducted by Nico Treep. Overture, "The Mikado" (Sullivan). Selection from "Maskerade" (Nielsen). Selection from "William Tell" (Rossini). Gramophone Records of Variety Music. Marching Song from "Das moderne Mädel" (Jessel). Two Selections (Micheli): (a) Serenata spagnuola, (b) La mia cara danza. Waltz, Wo die Zitronen blühen (Johann Strauss). Cupid's Garden (Eugene). Selection from "Prince Methusalem" (Johann Strauss). Gramophone Records of Variety Music. Schön sind lachende Frauen (Lehar). Rheinländer (Kernbach). Motor March (Rosey).

1.40 p.m.—Talk for Schools. 2.10—Concert of Light Music by Kovacs Lajos and his Orchestra with Songs by Bob Scholte. In the interval: Gramophone Records of Variety Music.

3.40—7.40—V.A.R.A. Programme. 3.40—Pianoforte Recital by Johan Jong. The "Pathetic" Sonata (Beethoven). Prelude and Mazurka (Chopin). 4.10—Programme for Children.

4.40—Orchestral Concert, conducted by Hugo de Groot. Overture, "Fra Diavolo" (Auber). Styrian Dances (Lanner). Serenade (Msczkovsky). Toréador et Andalousse (Rubinstein). Selection from "I Pagliacci" (Leoncavallo). Suite, Four Ways (Eric Coates). 5.40—Gramophone Records of Variety Music. 5.55—Concert (contd.). Marche des petits Pierrots (Bosc). Valse brune (Krier). Indian Intermezzo, Aisha (Lindsay). Mimi d'amour (Vercolli). L'amour qui rit (Christiné). Waltz, Daisy. On the Riviera (Danieroff). Are you from Dixie? (Yellam-Cobb). 6.25—Talk: Imperialism and the League of Nations. 6.45—Concert (contd.). Oriental Suite (Popy).

7.0—Organ Recital. Torna a Sorrento (de Curtis). Serenade (Schmalstich). Le Pas des Fleurs, from "Nata" (Delibes). Just one more chance (Coslow-Johnson).

7.20—Orchestral Concert (contd.). Jugger's March (Rosey). Waltz from "A Waltz Dream" (Oscar Strauss). Per aspera ad astra (Urbach).

7.40—10.40—V.P.R.O. Programme. 7.40—Talk: Modern Youth. 8.10—Recital by Willy Kleyweg (Cello) and Theo van der Pas (Pianoforte). 8.40—Religious Address. 9.10—Cello and Pianoforte Recital (contd.). 9.40—Religious Notes. 9.45—News Bulletin. 9.55—Recitations. 10.25—Gramophone Records of Variety Music.

10.40—11.40—V.A.R.A. Programme. Gramophone Records of Light Music. 11.40 (approx.)—Close Down.

HUIZEN (Holland)

160 kc/s (1,875 m.); 8.5 kW. Programme of the Catholic Radio Society (K.R.O.).

7.40—8.55 a.m.—Gramophone Records of Light Music. 9.40—Gramophone Records of Popular Music. 11.10—Programme for Invalids. 11.40—Police Notes. 11.55—Quintet Concert of Light Music. 1.25—1.40 p.m.—Interval. 1.40—Organ Recital with Songs by Boris Pelsky (Baritone).

3.10—Trio Concert. Grand Duet in D Minor for Cello and Pianoforte (Goltermann). Pianoforte Solos: (a) Symphonic Etude, Op. 13 (Schumann), (b) Etude, Op. 25, No. 11 (Chopin). Sonata in A for Violin and Pianoforte (C. Franck). Trio in D Minor, Op. 63, No. 1 (Schumann). 4.40—Esperanto Lesson. 5.0—Gramophone Records of Light Music.

5.10—Concert. Tarantella (Meyer-Helmund). Gavotte, Stephanie

FRIDAY continued

(Czibulka). Potpourri, Im Zeichen Suppés (Urbach). Spanish Dances (Granados). Selection (Aston-Ketelbey). Aufschwung (Schumann).
 6.0—Talk.
 6.20—Concert (continued). Prelude (Järnefelt). Berceuse (Järnefelt). Overture, "Czar and Carpenter" (Lortzing). Dutch Fishermen (Lander). Finale.

6.40—Talk. 7.10—Police Notes. 7.25—Talk.
 7.40—Orchestral Concert. Abactis March (Woud). Overture, "Yelva" (Reissiger). Spanish Waltz, Die Schönen von Valencia (Morena). Parade of the Dolls (Grit). Selection from "Napoli" (Gade). Gavotte (Monti). Waltz, Wild Roses (Ganglberger). Potpourri, Berlin bei Nacht (Lincke). Intermezzo, Am Lagerfeuer (Siede).

8.40—News Bulletin. 8.55—"On Easy Terms"—Comedy in One Act (Oidik).

9.40—Orchestral Concert. Die Post im Walde (Schäffer). Selection from "Le Petit Duc" (Lecocq). Siamesische Wachtparade (Lincke). Parade des Embonpoints (Auber). Potpourri, Melodienraum (Urbach). Waltz, Golden Rain (Waldteufel). Valse orientale (François). Banderilleros (Billi).
 10.40—Gramophone Records of Variety Music. 11.40 (approx.)—Close Down.

KALUNDBORG (Denmark)

Kalundborg Radio. 260 kc/s (1,153 m.); 7.5 kW. See Copenhagen.

LANGENBERG (Germany)

Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW.

Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time and Concert Relay).

12.0 noon—Concert from Frankfurt. 12.50 p.m.—Weather Report, Announcements and Time Signal.

1.0—Concert. 2.30—Sponsored Gramophone Concert. 3.30—Economic Notes and Time Signal.

3.50—Handwork Lesson. 4.20—Programme for Children.

5.0—Concert of Popular Music, conducted by Wolf. March, Heil Europa (Blon). Waltz from "The Little Dutch Girl" (Kalmann). Overture, "Aufbruch in Delden" (Stierlin). Träumerei (Burmester). Canzonetta (Friml). Selections from "La Juive" (Halévy). Two Selections (Dvorak): (a) By the Black Sea, (b) A Dance. Selections from "Die geschiedene Frau" (Fall). Potpourri of Marches, Alte deutsche Treue (Frantzen).

6.15—The World on Gramophone Records: The Island of La Camargue. 6.40—English Conversation. 7.0—Weather Report, Time Signal, Economic Notes and Sports Forecast.

7.15—Review of the Day's Events. 7.30—Talk: Universities in the Rhineland and Westphalia. 7.55—News Bulletin. 8.0—See Berlin (Witzleben). 10.5—News Bulletin, and Sports Notes. 10.30—See Berlin (Witzleben). 12.0 midnight (approx.)—Close Down.

LEIPZIG (Germany)

1,157 kc/s (259 m.); 2 kW. Relayed by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.0 a.m. 4.30 p.m.—Concert by the Dresden Philharmonic Orchestra, conducted by Erich Schneider. Five Contradances (Mozart). Serenade (Draesecke). Scherzo, Die Jagd nach dem Glück (Nicoce). Waltz, Pikantierien (Lehar). Polka from "Der Obersteiger" (Zeller). Trommler Marsch (Mello). 5.30—Review of Books on Science. 5.50—Economic Notes, Weather and Time. 6.0—Talk: Typhoons off Luzon. 6.25—English Lesson. 6.50—Talk (to be announced). 7.0—Talk on the Fiftieth Birthday of Igor Stravinsky. 7.30—Gramophone Concert of Light Music.

8.30—Brahms' Song Recital. Rede Mädchen, allzuliebes. Am Gesteine rauscht die Flut. O die Frauen! Wie des Abends schöne Rote. Die grüne Hopfenranke. Ein kleiner hübscher Vogel. Wenn so lind dein Auge. Am Donaustrande. O wie sanft die Quelle. Nein, es ist nicht auszukommen. Schlosser auf und mache Schlosser Vögelchen durchrauscht die Luft. Sieh, wie ist die Welle klar. Nachtigall sie singt so schön. Ein dunkler Schacht ist Liebe. Es bebte das Gesträuch. Verzicht, o Herz auf Rettung. Finstere

Schatten der Nacht. Vom Gebirge Well' auf Well'. Weiche Gräser im Revier. Schwarzer Wald, dein Schatten. Nein, Geliebter. Flammenauge, dunkles Haar. Nun, ihr Musen genug. 9.10—Talk on Economics. 9.20—"Feldherin schreiben Geschichte"—Radio Sequence (Arno Schirokauer). 10.10—News Bulletin. 10.15 (approx.)—Igor Stravinsky Programme on his Fiftieth Birthday. The Leipzig Symphony Orchestra, conducted by Arthur Rother. Soloist: Ernst Latzko (Pianoforte). Suite from "Pulcinella." Caprice for Pianoforte and Orchestra. Scherzo fantastique, Op. 3. 11.30 (approx.)—Close Down.

LYONS (France)

La Doua (PTT). 644 kc/s (465.8 m.); 1.5 kW.

Transmits at intervals from 8.0 a.m. 7.0 p.m.—Concert of Popular Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South East. 8.30—Dramatic Programme.

MADRID (Spain)

Union Radio (EAJ7). 707 kc/s (424.3 m.); 2 kW.

Transmits at intervals from 9.0 a.m. 8.0 p.m.—Chimes, Exchange Quotations, Market Prices and Request Gramophone Records. In the interval at 8.30—Educational Talk. 9.15—News and Political Review. 9.30—10.30—Interval. 10.30—Chimes, Time and Political Review.

10.45 (approx.)—Symphony Concert on Gramophone Records. Overture No. 3, "Leonora" (Beethoven). Selection from "Pelleas et Melisande" (Fauré). Triana (Albéniz). Symphony in E Flat, No. 39 (Mozart). The Rite of Spring (Stravinsky). 12.45 a.m. (Saturday)—News Bulletin. 1.0 a.m.—Chimes and Close Down.

MILAN (Italy)

Ente Italiano Audizioni Radiofoniche. 995 kc/s (331.5 m.); 7 kW.

See Turin.

MORAVSKÁ-OSTRAVA (Czechoslovakia)

1,137 kc/s (263.8 m.); 11 kW.

Transmits at intervals from 10.30 a.m. 7.0—See Prague. 7.25—Accordion Recital. 7.45—See Prague. 8.0—See Brno. 8.35—See Prague. 10.15—Programme Announcements. 10.25—See Prague.

MOSCOW (Russia)

Trades Union. 230.1 kc/s (1,304 m.); 100 kW.

Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in German and Swedish: Resorts and Convalescent Homes in Soviet Russia, followed by Talk in French: The Work of a Builder. In the interval at 9.55—Time Signal. 11.0 (approx.)—Close Down.

MUNICH (Germany)

563 kc/s (533 m.); 1.5 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.); and Nürnberg, 1,256 kc/s (239 m.).

Transmits at intervals from 6.45 a.m. 5.0 p.m.—Orchestral Concert, conducted by Erich Kloss. Overture, "Preciosa" (Weber). Albumblatt in C (Humperdinck). Selection from "Tannhäuser" (Wagner). Wiegeliend (Richard Strauss). Selection from "Little Ida's Flowers" (Klenau). Rondino (Beethoven-Kreisler).
 6.15—Time Signal, Weather Report and Agricultural Notes. 6.25—Talk: The Holland Tunnel in New York. 6.45—Talk: Curiosities of America. 7.5—Zither Duet Recital. 7.30—Talk: Foreign Affairs. 7.50—"Cain"—A Radio Play (Bauer).
 9.20—Symphony Concert by the Station Orchestra, conducted by Hans Winter. Soloist: Edith, von Voigtlander (Violin). Symphony No. 12 in B Flat (Haydn). Concerto in D for Violin and Orchestra (Brahms).

10.20—Time Signal, Weather Forecast, News Bulletin, Sports Notes and Traffic Report.

OSLO (Norway)

Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); and Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.); and Rjukan, 671 kc/s (447.1 m.).

Transmits at intervals from 11.5 a.m. 5.0 p.m.—Popular Music on Gramophone Records. 5.45—Press Review. 6.0—Talk. 6.30—Song Recital by Mme. Petra Lie-Zeppel. 7.0—Announcements, Weather and News

Bulletin. 7.30—Recitations. 8.0—Time Signal.

8.1—Concert by the Station Orchestra conducted by Hugo Kramm. March from "Aida" (Verdi). Fantasia, Cinderella (Coates). Selection from the Kjerulf Suite (Birknes). Scherzo (Eilling). Serenade (Toselli). Selection from "The Violin-Maker of Cremona" (Hubay). Meditation (Keteley). Twelfth Hungarian Rhapsody (Liszt). Valse des Fleurs (Waldteufel). Fantasia, In Norway (Itzel). Selection (Sandell). Mazurka (Godard). Viennese Music (Oscar Straus).

9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Talk in Swedish: The Lyrics of Jarl Hemmers, relayed from Trondheim, 608 kc/s (493.4 m.). 10.45 (approx.)—Close Down.

PALERMO (Italy)

Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW.

Transmits at intervals from 8.15 a.m. 5.30—6.30 p.m.—Light Music on Gramophone Records. 8.0—Announcements, Giornale dell'Ente, Agricultural Notes, Report of the Royal Geographical Society and Giornale Radio. 8.20—Light Music on Gramophone Records. 8.30 (in an interval)—Time Signal and Announcements.

8.45—Concert. Soloists: Toni Giacchino (Cello), Livia Giacchino (Pianoforte) and E. Malato (Soprano). Cello Solos: (a) Andante espressivo (Barbieri), (b) Gavotte (Hillemecker). Pianoforte Solos: (a) Gondoliera (Liszt), (b) Romance (Martucci), (c) Bolero (Chopin). Soprano Solos: (a) Se tu m'ami (Pergolesi), (b) Vatinicio (Tirindelli). Talk by De Maria. Cello Solos: Canzone and Arab Dance (Mulé). Two Soprano Solos: (a) Song from "Il piccolo Marat" (Mascagni), (b) Song from "Turandot" (Puccini). Scatena in D for Cello and Pianoforte (Cilea).

10.0—Variety Programme. 10.55—News and Close Down.

PARIS (France)

Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW.

Time Signals (on 2,650 m.) at 10.26 a.m. and 11.26 p.m. (preliminary and 6-dot Signals).

Transmits at intervals from 1.0 p.m. 6.45 p.m.—Talk: New Papers. 7.0—Lc Journal Parlé. 8.20—Weather Forecast. 8.30—Scenes from "Les Mathews de Sophie"—Comedy (Paul de Pitray) (adapted from the Novel by the Comtesse de Ségur).

9.0—Orchestral Concert, conducted by M. Flament. Programme of Children's Music. Soloists: M. Bas (Violin) and Edouard Flament (Pianoforte). Pastels d'enfants (G. Brun). Two Pieces from "Children's Corner" (Debussy-Mouton): (a) Serenade for the Doll, (b) The Little Shepherd. Deux enfants jouent dans le jardin (Dupont-Mouton). Violin Solo: La Poupée (Bizet). Dance of the Dolls (Turina-Chapelier). Ma Poupée chérie (de Sévécac-Chapelier). Chanson pour bercer (Rousseau-Chapelier). L'Enfant au pays des songes (Dessart). Pianoforte Solo: Réve d'enfant (E. Flament), played by the Composer. To the Memory of a Baby (Turina-Chapelier). 10.0 (approx.)—Close Down.

PARIS (France)

Poste Parisien. 914 kc/s (328.2 m.); 60 kW.

Transmits at intervals from 12 noon. 6.30 p.m.—Sponsored Gramophone Concert. 7.30—Light Music on Gramophone Records, News and Announcements. 8.0—Talk (to be announced). 8.30—Gramophone Records, Talk and News. 8.45—Concert of French Songs by Music Hall Artists. 10.45—News Bulletin. 10.50 (approx.)—Close Down.

PARIS (France)

Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW.

6.45 a.m.—Physical Culture Course. 7.30—Weather Forecast and Physical Culture (continued). 7.45—Popular Music on Gramophone Records. 8.0—News, Weather Forecast and Press Review. 12 noon—Jewish Address.

12.30 p.m.—Gounod Concert on Gramophone Records. Overture and Four Selections from "Mirella." Selections from "Philonon et Baucis." Selections from "The Queen of Sheba." Selections from "Romeo and Juliet." Song from "Le Médecin malgré lui." Felix Culpa from "Mors et vita." Jerusalem. Soldiers' Chorus from "Faust." In the intervals, at 1.0—Exchange Quotations, News and Weather Forecast, at 1.30—

FRIDAY, continued

Exchange, and at 2.0—Exchange and Announcements. 3.45—Exchange and Market Prices. 6.10—Book Review. 6.30—Market Prices, Weather Forecast, Agricultural Report, Talk, Exchange Quotations and Racing Results. 7.0—Talk: Annamese and Cambodian Jewels. 7.45—Commercial Prices and News. 8.0—Gramophone Concert. Quartet in D (Mozart). Le Bonheur est chose légère (Saint-Saëns). Les Étoiles (Hahn). Cello Solos: (a) Spanish Dance (Granados), (b) Vito (Popper). 1.30—News and Weather Forecast. 8.40—Gastronomic Review. 8.45—Gramophone Concert (continued). Bourrée fantasque for Pianoforte (Chabrier). Habanera for Violin (Sarasate). 9.0—Debussy Festival relayed from the Théâtre des Champs Élysées. First Scene from "Le martyr de Saint Sébastien" by the Mixed Choir of the Paris Choral Association, the Amicitia Choir, and Orchestra, conducted by Philippe Gaubert. Nocturnes: (a) Nuages, (b) Fêtes, (c) Sirènes, by the Amicitia Choir conducted by Gabriel Pierné. Prélude à l'après-midi d'un Faune, by the Orchestra of the Allgemeine Musikgesellschaft of Basle, conducted by Felix Weingartner. La Mer—Three Symphonic Sketches for Orchestra, conducted by Arturo Toscanini. Act IV of "Pelléas et Mélisande" for Orchestra conducted by Inghelbrecht. In the interval at 10.30—Press Review and News.

PITTSBURGH (U.S.A.)
Westinghouse Electric (KDKA) 980 kc/s (306 m.); 25 kW. Relayed by W8XK on 48.86 m. and 25.25 m. (See short wave list). Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Sport Review. 9.5—Business News. 9.15—Rita Cavalieri (Soprano). 9.30—Pebco Weather Report. 9.33—Market Reports. 9.45—Programme to be announced. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Bulletin. 10.12—Programme Announcements. 10.15—KDKA Kiddies' Klub. 10.30—The Singing Lady, from New York. 10.45—Little Orphan Annie, from New York. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News Today. 11.7—Teaberry Sport Review. 11.12—Press News Reeler. 11.15—KDKA Orchestra. 11.30—Programme to be announced. 11.45—Literary Digest Topics in Brief by Lowell Thomas, from New York. 11.50—Time Signal. 12 midnight—3.45 a.m. (Saturday)—New York Relay. 12 midnight—Pepodent Amos in Andy. 12.15 a.m.—Standard Brands. 12.30—The Stebbins Boys. 12.45—Billy Jones and Ernie Hare. 1.0—Nestlé's Programme. 1.30—Ivory Programme. 1.45—Sisters of the Skillet. 2.0—Friendship Town. 2.30—Armour Programme. 3.0—Whiteman's Pontiac Chieftains. 3.30—Love Songs and Waltzes. 3.45—Programme to be announced. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News Flashes. 4.20—Lew Conrad and his Orchestra. 5.0—Cotton Club Orchestra, from New York. 5.15—Time and Good Night.

PRAGUE (Czechoslovakia)
614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.15 a.m. 8.45 p.m.—Reading. 5.55—Talk: Between the Hawaiian Islands and Japan. 6.5—Agricultural Report and Market Prices. 6.15—Gramophone Records of Light Music. 6.25—German Transmission. 6.30—Two Talks. 7.0—Slava Grossmann Programme. 7.25—Popular Songs. 7.45—Reading. 8.0—See Brno. 8.35—Introductory Talk to the following transmission. 8.45—Orchestral Concert, conducted by Jaroslav Ridky. Overture, "The Blue Bird" (Kricka). Concerto, Op. 14, for Cello and Orchestra (Ridky). Elegy (Jarek). 9.0 (in the interval)—Time Signal. 10.0—Time, News and Announcements. 10.25—Gramophone Records of Variety Music.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)
743 kc/s (403 m.); 25 kW.; and Lausanne, 442 kc/s (680 m.); and Geneva, 305 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and Announcements. 12.40 (from Geneva)—Light Music on Gramophone Records. 1.0—Exchange Quotations. 1.5—Concert (cont.). 1.45—5.0—Interval.

5.0—Time Signal from Neuchâtel Observatory. 5.1 (from Geneva)—Programme for Women. 5.45—Orchestral concert, conducted by Robert Echenard. 7.0—Weather Forecast. 7.1 (from Lausanne)—Sports Talk. 7.20 (from Lausanne)—Report of the Swiss Automobile Club. 7.30 (from Geneva)—Talk: The Work of the Disarmament Conference. 7.55—Announcements. 8.0 (from Geneva)—Review of the Week. 8.10 (from Geneva)—Pianoforte Recital by Miss Harriet Cohen. 8.45 (from Geneva)—Anecdotes. 9.0 (from Geneva)—Mandoline concert. 9.20 (from Geneva)—Reading from the Works of Courteline. 9.35 (from Geneva)—Concert (cont.). 10.0—Weather Forecast and Announcements. 10.15 (approx.)—Close Down.

ROME (Italy)
Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayed by Naples, 941 kc/s (319 m.), and 2RO, 11,810 kc/s (25.4 m.). 8.15—8.30 a.m.—Giornale Radio and Announcements. 12 noon—Light Music on Gramophone Records. 12.35 p.m.—Weather Forecast. 12.45—Sextet Concert. Suite, Sylvia (Delibes). Air de Ballet (Massenet-Förster). Intermezzo, Il giocoliere (Garofalo). Selection from "Madama di Tebe" (Lombardo). (Carrel). Triana (Pizzardi). Good Friends (Heymann). 1.15—Giornale Radio and Announcements. 1.30—Time Signal and Programme Announcements. 4.45 (from Naples)—Talk for Women. 5.0—Exchange, Children's Journal, Radio Journal and Announcements. 5.30—Songs by Ornella Panella (Soprano). Donne vaghe (Paisiello). Song from "William Tell" (Rossini). Song from "Hero and Leander" (Bottesini). 5.45—Concert of Popular Italian Music. 6.15—Giornale dell'Enit. 6.55 (from Naples)—Shipping Report and Sports Notes. 7.0—Agricultural Notes, Announcements, Giornale Radio and Press Review. 7.50—Light Music on Gramophone Records. 8.0—Time Signal, Programme Announcements and Agricultural Notes in Italian, French, English, German and Spanish. 8.30—Sports Notes and News. 8.45—Soloist Concert, by Maria Flori (Violin) and Angelo Parigi (Tenor). Violin Solos: (a) Suite in E (Corelli), (b) Poem (Chausson). Tenor Solos: (a) Una rota si fa in cielo (Persico), (b) San Basilio (Pizzetti), (c) Mandoline (Debussy), (d) Italian Song (Ravel). 9.30—The Telephone—One Act Comedy (Stefani). 10.0—Soloist Concert (contd.). Violin Solos: (a) Prelude to "Le Dileuge" (Saint-Saëns), (b) Czardas (Hubay). Tenor Solos: Selection of Italian Songs. After the Concert News and Popular Music on Gramophone Records. 10.55—News Bulletin.

STOCKHOLM (Sweden)
Radiotjänst (SASA). 680 kc/s (436 m.); 55 kW. Relayed by Ådalen, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 380 kc/s (770 m.) and Sundsvall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. 5.0 p.m.—Programme for Children. 5.20—Reading. 5.45—Light Music on Gramophone Records. 6.45—Talk on Sociology. 7.15—Weather Forecast and News Bulletin. 7.30—Talk. 8.0—Organ Recital by Otto Olsson, with Songs by Harry Sagner. Fantasia and Fugue in A Minor (Bach). Adagio (Haydn). Air, for Voice and Organ from St. Paul (Mendelssohn). Pastoral (Salomé) Andante con moto (Höbly). Larghetto (Haas) Selection (J. W. Franck). Die Himmelfahrt (Widor). 9.0—A Play (Laurence Housman). 9.45—Weather and News Bulletin. 10.0—Concert of Light Music. Overture, "The Merry Wives of Windsor" (Nicolai). Serenade (Brunner). Waltz, Très Jolie (Waldeuteufel). Selection from "Lilac Time" (Schubert-Berté). Tango (Freeman). Two Viennese Waltzes (Fuchs). Selection from "The Czardas Princess" (Kálmán) 11.0 (approx.)—Close Down.

STRASBOURG (France)
Radio-Strasbourg (PTT). 860 kc/s (345 m.); 11.5 kW. Transmits at intervals from 11.30 a.m. 11.30 a.m.—Gramophone Concert of Popular Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert of Light Music. 2.0—4.45—Interval. 4.45—Literary Talk in French: Leconte de Lisle. 5.0—Orchestral Concert, conducted by M. Roskam. March from "Gasparone" (Millückler). Frühlingstimmen (Johann Strauss). Suite, "Fête Nippone" (Mouton). Selection from "Martha" (Flotow). We Two—Serenade for Pianoforte, Violin and Cello (Franzetti). Selection from "Prince Methusalem" (Johann Strauss). Bohemian March (Pillipucci). 6.0—Talk in German: Topical Problems. 6.15—Legal Talk in German. 6.30—Gramophone Concert of Variety Music. 7.30—Time Signal, and News in French and German. 7.45—Gramophone Concert. Selection from "The Rhinegold" (Wagner). Selection from "Boris Godounov" (Moussorgsky). Selection from "Manon" (Massenet). Selection from "Philemon et Baucis" (Gounod). Selection from "Lohengrin" (Wagner). Selection from "Rigoletto" (Verdi). Selection from "L'attaque du moulin" (Bruneau). Selection from "Cavalleria rusticana" (Mascagni). Selection from "Faust" (Gounod). Mélancoie (Février). Song of the Troubadour (Cheslin). Popular Venetian Air (Ruggero). Etude (Chopin). Les Lilas (Doelle). Selection (Johann Strauss). 8.30—Debussy Concert, relayed from Paris. 10.30 (approx.)—Close Down.

SCHENECTADY (U.S.A.)
General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayed at intervals by W2XAF and W2XAD (See Short wave List). Transmits at intervals from 11.45 a.m. 9.0 p.m.—Decorating Notes from New York. 9.15—Ollie Yettru (Pianoforte). 9.30—Studio Ensemble. 9.50—News Items. 10.0—Stock Reports and Police Notices. 10.15—Skippy from New York. 10.30—The Success Doctor. 10.45—Chandu, the Magician. 11.0—Musical Programme. 11.24—Baseball Scores. 11.30—With Gray McClintock in the Canadian Northwest. 11.45—Musical Programme. 12 midnight (WGY only)—General Electric Programme. 12 (W2XAF only)—Stock Reports and News Items. 12.15 a.m. (Saturday)—Weather Report. 12.16—New Kenmore Orchestra. 12.45—Trials of the Goldbergs from New York. 1.0 (WGY only)—Cities Service Concert, from New York. 1.0 (W2XAF only)—International General Electric Programme. 1.30—WGY Farm Forum. 2.0—Clicquot Club Eskimos, from New York. 2.30—Pond's Programme from New York. 3.0—National Oratorio Society Programme, from New York. 4.0—DeWitt Clinton Orchestra. 4.30—Ralph Kirby (The Dream Singer) from New York. 5.5—Hotel New Yorker Orchestra, from New York. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)
653 kc/s (459 m.); 60 kW.;

Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory, Weather Forecast and News Bulletin. 12.40—Concert by the Station Orchestra. 1.35—Weather Report and Exchange Quotations. 1.45—3.30—Interval. 3.30—Concert by the Station Orchestra. 4.30 (from Zürich). Programme for Children. 5.0—Weather Report. 5.5—6.30—Interval. 6.30 (from Zürich)—Talk: Modern Astronomers. 7.0—Time Signal, Weather Forecast, Market Prices, Tourist Bulletin and Sports Results. 7.30—Popular Music on Gramophone Records. 8.0—Dialect Comedy (Stauffer). 9.30—Weather Forecast and News Bulletin. 9.45—Late Concert by the Station Orchestra. 10.30—Weather Forecast and Close Down.

STUTTGART (MÜHLACKER) (Germany)
Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayed by Freiburg, 527 kc/s (570 m.). Transmits at intervals from 6.0 a.m. (Time, Weather and Gymnastics). 10.0 a.m. (from Mannheim)—Violin Duets by Hans Bender and A. Schuhmacher. Duet in E Minor, Op. 131 b, No. 1 (Max Regner). Sonata for Two Violins (Arthur

Honegger). Duet, Op. 3, No. 1 (Spohr). 10.30 (from Freiburg)—Broadcast for Schools. 11.0—Time, Weather and News. 11.15—11.30 and 11.45—12 noon—Sponsored Music. 12 noon—Concert from Frankfurt. 12.50 p.m.—Time, Weather, News and Programme Announcements. 1.0—Famous Wagnerian Singers on Gramophone Records. Emmy Bettendorff and Lauritz Melchior: Love Duet from "Lohengrin." Marcella Roesler: (a) Elizabeth's Greeting from "Tannhäuser," (b) Death of Isolde from "Tristan und Isolde." Friedrich Schorr: (a) Oh, Star of Eve, from "Tannhäuser," (b) Aria from "The Flying Dutchman." Margarete Bäumer and Gotthelf Pistor: Two Selections from "Die Walküre." Margarete Bäumer and Reimer, Minten: Two Selections from "Siegfried." Emanuel List: Song from "The Twilight of the Gods." Sigismund Pilinsky: Aria from "Rienzi." 2.0—2.15—1.55—News Bulletin. 2.30—Advanced English Lesson. 4.0—Concert by the Albrecht Krämer Orchestra, relayed from Freudenstadt. Overture, "Morning, Noon and Night" (Suppe). Waltz from "Gipsy Love" (Lehar). Potpourri of Strauss Operetta Music (Schlögel). Salut d'amour (Elgar). Minuet (Paderewsky). Andalusian Romance (Sarasate). 5.0—Concert from Langenberg. 6.15—Time, Weather and Agricultural Notes. 6.25—Talk: The History of the Bassermann Family. 6.50—Medical Talk: Hay Fever. 7.15—Time, Weather and Programme Announcements in Esperanto. 7.30 (from Mannheim)—A Tour round a Mill. 8.0—See Berlin (Witzleben). 10.0—"Authors whom we ought to know"—A Series of Dialogues: 1. Karl Schloss. 10.20—Time, Weather, News and Announcements. 10.45—Chamber Music, relayed from Saarbrücken. Fritz Neuhesl (Violin) and Richard Borsnein (Pianoforte). Sonata in C minor for Violin and Pianoforte, Op. 30, No. 2 (Beethoven). Sonata in F sharp Minor for Violin and Pianoforte, Op. 84 (Max Regner). 12 midnight (approx.)—Close Down.

TOULOUSE (France)
Radiophonie du Midi. 779 kc/s (385 m.); 8 kW. Transmits at intervals from 12.30 p.m. 5.0 p.m.—Television Transmission. 5.15—Exchange Quotations. 5.30—Symphony No. 1 (Beethoven) by the Classical Symphony Orchestra. 5.45—Light Music. 6.0—Songs from Operettas. Air from "Les Saltimbanques" (Ganne). Hallelujah from "Hit the Deck" (Youmans). Two Songs from "The Grand Mogul" (Audran). 6.15—Dance Music. 6.30—Exchange Quotations and Racing Results. 6.45—Cello Solos. Nocturne in E Flat (Chopin). Zigeunerweisen (Sarasate). Selection from "Fortunio" (Messager). Intermezzo from "L'Arlesienne" (Bizet). 7.0—Orchestral Selections. Suite, No. 2 (Stravinsky). Largo (Handel). Elegy (Massenet). 7.15—Songs. 7.20—News Bulletin. 7.45—Accordion Solo. 8.0—Military Music. 8.15—Orchestral Music. Selection from "I Pagliacci" (Leoncavallo). Overture, "Mignon" (Thomas). 8.30—Songs from Operas by Mozart. Two Songs from "The Marriage of Figaro." 8.45—Selections by an Argentine Orchestra. 9.0—Concert by the Navarra Orchestra, relayed from the Grand Café des Américains. 10.30—North African Songs. 10.45—Dance Music. 11.15—Songs. 11.30—Trio in E Flat (Schubert). 12 midnight—Weather and Announcements. 12.5 a.m. (Saturday)—Concert of English Music. 12.30 (approx.)—Close Down.

TRIESTE (Italy)
Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 10 kW. Transmits at intervals from 8.15 a.m. 7.10 p.m.—Quintet Concert. Overture, "Orpheus in the Underworld" (Offenbach). Piccola edelweiss (Sasselli). Il mullone sentimentale (Brancucci). Serenata triste (Bonelli). Selection from "Carmen" (Bizet). Ricordi d'Ukraina (Ferraris). Principe bruno (Serra). Selection (Steiz). 8.0 (till Close Down)—See Turin.

TURIN (Italy)
Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayed by Milano, 925 kc/s (331.5 m.); Genoa, 959 kc/s

(312.8 m.) and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural Notes and Report of the Royal Geographical Society. 7.5—Announcements. 7.10—Variety Music. 7.30—Time Signal and Announcements, followed by Light Music on Gramophone Records. 8.0—Giornale Radio, Weather Report and Popular Music on Gramophone Records. 8.40—Talk on Wire-less. 8.45—Variety Programme. In the intervals, Talks. 11.0—Giornale Radio.

VATICAN CITY (Rome)
15,123 kc/s (10.84 m.) (Morning) and 5,969 kc/s (50.26 m.) (Evening); 10 kW. 11.0—11.5 a.m.—Religious Information in German. 8.0—8.15 p.m.—Religious Information in Italian.

VIENNA (Austria)
Radio-Wien. 581 kc/s (517 m.); 15 kW. Relayed by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,058 (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.); and Salzburg, 1,373 kc/s (218 m.). Transmits at intervals from 9.20 a.m. 5.0 p.m.—Orchestral Concert. Overture, "The Thieving Magpie" (Rossini). Selection from "Manon" (Massenet). Novelty Foxtrot, Karo Bube (Steeler). Intermezzo, Asta (Leopold). Papa das Mädi, ist so mud' from "Revanche" (Jascha). Foxtrot, Hongkong from "Jolly Joker" (Neumann). Potpourri, Rund um die Wiener Operette (Priessnitz). Potpourri of Popular Songs (Geiger). 6.15—Talk for Tourists. 6.30—Talk: Fifty Years of Rowing Regattas in Vienna. 6.45—Sports Report. 7.0—Talk: The Philosopher, Emanuel Kant. 7.25—Time and Announcements. 7.35—Recital of Modern Swiss Pianoforte Music by Walter Frey. Invention (Müller). Consolation (Schoeck). Intermezzo and Prelude (Schaeuble). Three Pianoforte Pieces, Op. 12 (Schulthess): (a) Prelude, (b) Aria, (c) Alla Tarantella. Four Pieces (Conrad Beck): (a) Allegro, (b) Lento, (c) Allegro giocoso, (d) Presto. Seven Short Pieces (Honegger): (a) Soupplement, (b) Vif, (c) Très lent, (d) Légèrement, (e) Lent, (f) Rythmique, (g) Violent.

8.15—"His Majesty the Fool"—Play (Streicher, Music by Richard Mayer-Bojana). 10.30—News Bulletin. 10.45—Gramophone Concert of Dance Music.

WARSAW (Poland)
Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW. 11.20 a.m.—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Polish Press Review. 12.20—Interval. 12.40—Weather Report. 12.45—Light Music on Gramophone Records. 2.0—Interval. 3.0—Economic Report. 3.10—Variety Music on Gramophone Records. 3.30—Report of a Polish Musical Society. 3.35—Popular Music on Gramophone Records. 4.35—Hydrographic Report. 4.40—Talk (to be announced). 5.0—Light Music by the Printers' Association Band conducted by S. Snieckovsky. March (Snieckovsky). Canzonetta (Rybicky). In a Chinese Temple Garden (Keteibey). Two Preludes (Chopin), (a) in A, (b) in B Flat Minor. Oberek (Sonnenfeld). Love Serenade (Sulima). March of the Gnomes (Blon). Selections (Kozak). Berceuse (Jarnfeldt). Mazurka (Namyoslovsky). 6.0—Talk: The Baltic Sea, relayed from Cracow. 6.20—Dance Music relayed from the Café Georges. 7.15—Miscellaneous Items. 7.35—Radio Journal. 7.45—Agricultural Notes from Wilno, 533 kc/s (563 m.). 7.55—Programme Announcements. 8.0—Symphony Concert by the Warsaw Philharmonic Orchestra conducted by Mlynarsky. Soloist: Eust. Horodysky (Pianoforte). Overture, "Rosamund" (Schubert). Symphony No. 8 in B Minor—The Unfinished (Schubert). Pianoforte Concerto in E Flat (Liszt). Introduction and Entr'acte from "Lohengrin" (Wagner). Overture, "The Flying Dutchman" (Wagner). Hungarian Dances (Brahms). In the Interval at 8.55—Musical Feuilletton. 9.50—Radio Journal. 9.55—Weather and Police Notes. 10.0—Dance Music. 10.40—Sports Notes. 10.50—Dance Music.

PRINCIPAL EVENTS

SATURDAY (June 18)

CONCERTS (Vocal and Instrumental)

- 5.0 p.m. Warsaw: Russian music.
- 7.0 " Bucharest: The Station Chorus.
- 7.5 " Munich: Franconian Folk-Music.
- 8.0 " Brussels No. 1: The Station Orchestra.
- 8.0 " Copenhagen: Old-time Dance Music.
- 8.0 " Schweizerischer Landessender: From opera and operetta.
- 8.0 " Stockholm: Old-time dances.
- 8.30 " Strasbourg: The Station Orchestra.
- 9.0 " Vienna, Breslau, Budapest, Stuttgart: Serenade from the Josefsplatz.
- 10.45 " Munich: Late concert.

OPERA

- 8.45 p.m. Rome: "Dejanice" (Catalani)

RECITAL

- 10.5 p.m. Warsaw: Chopin.

CHAMBER MUSIC

- 7.10 p.m. Berlin, Königs Wusterhausen: String Quartet, (Reznicek), (first performance).

TALK

- 8.0 p.m. Radio-Paris: Literary talk.

MISCELLANEOUS

- 8.0 p.m. Hamburg: Cabaret.
- 8.0 " Langenberg, Berlin, Königs Wusterhausen: Variety programme.
- 8.45 " Radio-Paris: "La vie drôle."
- 8.50 " Copenhagen: "Landscapes, Western Finen" (Talk and Songs).

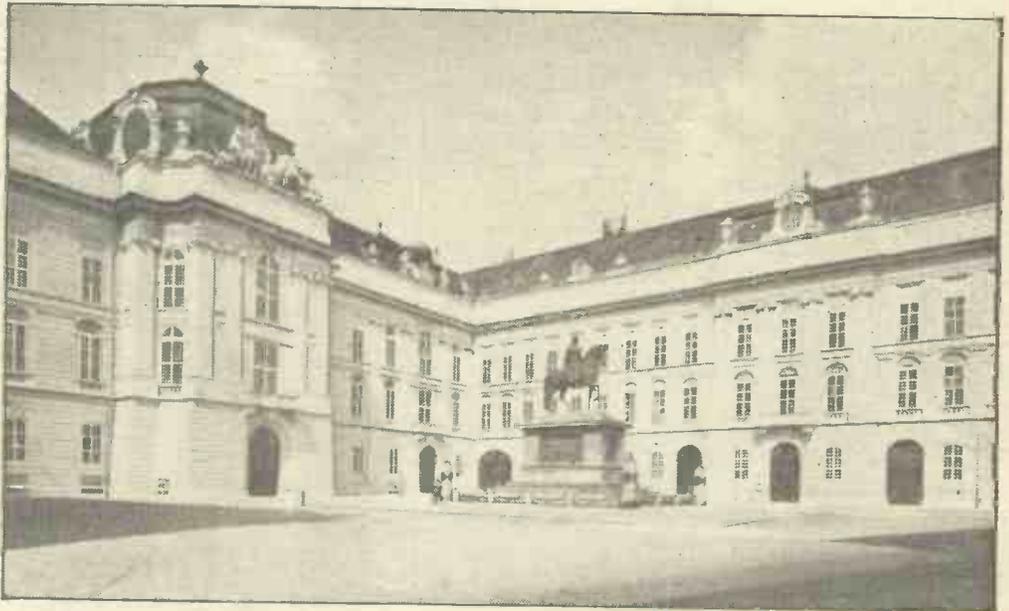
DANCE MUSIC

- 9.45 p.m. Schweizerischer Landessender.
- 10.0 " Stockholm.
- 10.10 " Radio-Suisse Romande.
- 10.15 " Berlin and other German Stations.
- 10.30 " Strasbourg.
- 10.45 " Oslo.
- 10.50 " Copenhagen.

The "Well Enough Known" Mozart

One specially interesting thing about the Mozart sonatas for violin and pianoforte is that he could play either of the instruments himself. His father was particularly anxious that he should shine as a fiddler, and kept him to his practice with scoldings and encouragements. On at least one occasion he assured his son that if he could only play with more confidence he might be as great a violinist as he was a pianist. Mozart neglected the instrument latterly, but his knowledge of it was

always turned to good account in his chamber and orchestral music; in the affectionate slang of performers, his violin parts "always play themselves well." The Sonata which is to be broadcast from COPENHAGEN this evening belongs to a set of six which appeared in 1781, with the title "Sonatas for the pianoforte, with accompaniment of a violin, by the well enough known and famous Wolfgang Amadeus Mozart." Soon after their appearance they were warmly praised in a contemporary musical paper, as "unique in their own class, rich in new thoughts, and betraying everywhere traces of the great genius of their composer."



The Josefsplatz, Vienna, from which this evening's Serenade will be broadcast

(Photo: Oesterreichische, Lichtbildstelle, Vienna.)

NATIONAL

- | | | | |
|-----------|-------|---------|-----|
| | kc/s | m. | kW. |
| London: | 1,148 | 261.3 | 50 |
| Daventry: | 193 | 1,554.4 | 30 |
| Northern: | 995 | 301.5 | 50 |

- 10.15 a.m.—The Daily Service.
- 10.30—Time Signal (Greenwich), Shipping Forecast.
- 10.45—11.0—Domestic Economies—V. Mrs. Arthur Webb.
- 12 noon—The Northern Studio Orchestra.
- 12.45 p.m.—Reginald New at the Organ.
- 1.0—Time Signal (Greenwich).
- 1.30—North v. South. An Eye-Witness Account of the Test Trial, by Mr. Howard Marshall, from Old Trafford Cricket Ground.
- 1.35—2.30—The Commodore Grand Orchestra, directed by Joseph Muscant.
- 3.30—The Cedric Sharpe Sextet. Arthur Duxbury (Tenor). Howard Clarke (Pianoforte).
- 4.45—Time Signal (Greenwich).
- 4.45—Reginald Foort at the Organ.
- 5.15 (Daventry)—The Children's Hour.
- 5.15 (London and Northern)—The B.B.C. Dance Orchestra, directed by Henry Hall.
- 6.0—"The First News."
- 6.25—Interval.
- 6.30—Time Signal (Greenwich).
- 6.30—North v. South. An Eye-Witness Account of the Test Trial, by Mr. Howard Marshall, from Old Trafford Cricket Ground.
- 6.45—A Recital by Ethel Barker (Contralto).
- 7.5—7.25—Topical Talk.
- 7.30—The B.B.C. Dance Orchestra, directed by Henry Hall.
- 8.0—"Waterloo." In Memory of June 19, 1815. The Cast will include: H. G. Stoker, Frank Hundley, Hermione Gingold, etc.
- 9.0—Time Signal (Greenwich).
- 9.0—"The Second News."
- 9.15—Shipping Forecast; New York Stock Market Report.
- 9.20—"Hazard"—V. Sailing a Storm with Mr. Weston Martyr.
- 9.50—Light French Music. The B.B.C. Orchestra (Section G), conducted by Victor Hely-Hutchinson.
- 10.35—12 midnight—Dance Music.
- 11.30—Time Signal (Greenwich).

REGIONAL

- | | | | |
|-----------|------|-------|-----|
| | kc/s | m. | kW. |
| London: | 842 | 356.3 | 50 |
| Midland: | 752 | 398.9 | 25 |
| Northern: | 626 | 479.2 | 50 |

- 10.15 a.m. (London and Northern)—The Daily Service.
- 10.30—11.0 (London and Northern)—Daventry National Programme.
- 12 noon (Northern and London)—The Northern Studio Orchestra.
- 12.45 p.m. (London and Northern)—Daventry National Programme.
- 1.35—2.30 (London and Northern)—The Commodore Grand Orchestra.
- 3.30 (London and Northern)—Daventry National Programme.
- 3.30 (Midland)—Dance Music. Billy Merrin and his Commanders.
- 4.45 (Midland)—London Regional Programme.
- 5.15—The Children's Hour.
- 6.0—"The First News."
- 6.25 (London and Northern)—Interval.
- 6.25 (Midland)—The Studio Chorus.
- 6.30 (London)—The Gershom Parkington Quintet.
- 6.30 (Northern)—The Studio Orchestra. Raymond Watson (Entertainer).
- 7.0 (Midland)—A Military Band Concert. The City of Birmingham Police Band, conducted by Richard Wassell.
- 7.30 (London)—Operatic Programme. Alessandro Valente (Tenor). The B.B.C. Orchestra (Section F), conducted by Joseph Lewis.
- 7.30 (Northern)—"The Junior Partner"—a Play in One Act by Vivian Tidmarsh.
- 8.0 (Midland)—The Studio Orchestra.
- 8.0 (Northern)—The Studio Orchestra.
- 8.45—Vaudeville.
- 9.45—Speeches at the Annual Dinner of The International Lawn Tennis Club of Great Britain. Viscount Jellicoe, G.C.B., O.M., G.C.V.O. The Secretary of State for India, the Right Hon. Sir Samuel Hoare, G.B.E., C.M.G. M. Jean Borotra.
- 10.15—"The Second News."
- 10.35 (Midland)—Experimental Transmission by the Fultograph Process.
- 10.40—11.0 (Midland)—As London.
- 10.35—12 midnight (London and Northern)—Dance Music.

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

- BARCELONA (Spain)**
Radio-Barcelona (EAJI). 860 kc/s (349 m.); 8 kW.
Transmits at intervals from 8.10 a.m. to 10.0 p.m.—Programme for Children and Exchange Quotations. 9.0—Request Gramophone Records and Press Notes. 10.0—Chimes, Weather Forecast and Exchange Quotations.
- 10.5—Concert by the Station Orchestra. March (Canals). Selection from "Les Saltimbanques" (Ganne). Intermezzo (d'Ambrosio). Mazurka Brillante (Liszt). 11.0—See Madrid.
- BELGRADE (Yugoslavia)**
697 kc/s (430.4 m.); 2.5 kW.
Transmits at intervals from 11.0 a.m. to 10.0 p.m.—Concert by the Station Orchestra. March (Binicki). Yugoslavian Air (Cizek). Overture, "The Hermit's Bell" (Maillart). Suite, Scènes napolitaines (Masset). The Lagoon Waltz (Johann Strauss).
- 6.55—Time Signal and Programme Announcements. 7.0—Talk. 7.30—Recital of Operatic Airs by Sofija Davidova. 8.0—Comedy. 8.55—Popular Band Concert. In the interval at 10.0 (approx.)—News Bulletin and Notes on Art and Science. After the Concert, Programme of Light Music, relayed from the "Gradjevska KASINA" Restaurant.
- BERLIN (Germany)**
Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.
Transmits at intervals from 5.45 a.m. to 12 noon.—Weather for Farmers. 12.2 p.m.—Gramophone Concert of Chamber Music, followed by Weather for Farmers. 12.55—Time Signal. 1.35—News Bulletin. 2.0—Gramophone Concert of Marches, relayed from Berlin (Witzleben). 3.0—Talk: The Clown on the Stage. 3.30—Weather and Exchange Quotations. 3.45—Talk for Women. 4.0—Talk: The Post Office Sports Clubs. 4.30—See Hamburg. 5.30—Health Talk. 5.50—Talk: Mecklenburg and the Baltic Coast. 6.5—Talk: Pirates of Yesterday and To-day. 6.30—Talk: Ludwig Richter. 6.55—Weather for Farmers. 7.0—Elementary English Lesson. 7.30—Talk:

- The Church and Civilisation, followed by Weather for Farmers. 8.0—See Langenberg. 10.0—See Berlin (Witzleben). 12.30 a.m.—(Sunday)—Close Down.
- BERLIN (Germany)**
Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m. (Gymnastics and Concert Relay). 4.5 p.m.—Orchestral Concert, conducted by Dr. Frieder Weissmann, Concert Suite from "Idomeneo" (Mozart-Busoni). Weinlesetänze (Sieg). Four Selections from "Faust II" (Unger). Flemish Rhapsody (Brusselmanns). Overture, "The Daughter of the Regiment" (Donizetti). Suppé Potpourri (Michaelov). Waltz, Schallwellen (Joh. Strauss). Overture and Flower Waltz from the Nutcracker Suite (Tchaikovsky). 6.0—The Narrative of the Week. 6.25—Ivor Stravinsky Programme on Gramophone Records. 6.55—"The Witzleben Station informs its Listeners. . . ." 7.0—Topical Talk. 7.10—String Quartet in B Flat (Reznicek), by Georg Kniestädt (First Violin), Willy Kirch (Second Violin), Johannes Steinweg (Viola), and Richard Klemm (Cello). 7.45—Labour Market Report. 7.50—Sports Notes. 8.0—See Langenberg. 10.0—Weather, News and Sports Notes. 10.15 (approx.)—Dance Music from the Hotel Excelsior. 12.30 a.m. (Sunday)—Close Down.
- BORDEAUX-LAFAYETTE (France)**
(PTT). 986 kc/s (304 m.); 13 kW.
Transmits at intervals from 12.45 p.m. to 7.30 p.m.—Radio Journal. 7.40—Announcements, Exchange and Lottery Results. 7.45—Sports Notes. 7.50—Advanced English Lesson. 8.5—News Bulletin and Weather Forecast. 8.15—Relay from Paris (Ecole Supérieure), 671 kc/s; (447.1 m.). 8.30—Popular Music on Gramophone Records. 9.0—Two One-Act Comedies: (a) "Rodogune"—Comedy (Gossard-Richard), (b) "L'Accident"—Comedy (Duvernis).
- BRATISLAVA (Czechoslovakia)**
1,076 kc/s (279 m.); 14 kW.
Transmits at intervals from 11.0 a.m. to 6.0 p.m.—A Puppet Play. 7.0—An

- Interview with Prof. Skultety. 7.15—An interview with the Author, Soficsova. 7.30—Folklore. 8.0—A One Act Play. 8.30—Talk. 9.0—See Prague. 10.15—Programme Announcements and News. 10.20—Cigány Band Concert.
- BRESLAU (Germany)**
923 kc/s (325 m.); 1.5 kW. Relayed by Glewitz, 1,184 kc/s (253 m.).
Transmits at intervals from 6.0 a.m. to 6.45 p.m.—Weather for Farmers. 6.47—Concert by the Station Orchestra, conducted by Franz Marszalek. Soloist: Erich Gregor (Vibraphone). March, Wiener Heurigen (Römisch). Pizzicato Waltz, Pavlova. Fantastic Intermezzo, Gang durch den Märchenwald (Meyer-Helmund). Selection from "Eine Ballnacht" (Oscar Straus). Mexican Serenade, Lissonja (Armandola). Symphonic Episode; The Heart of a Pierrot (Clemus). Vibraphone Solo: Romance (Löhr). Potpourri of Song and Dance Hits (Grey). 7.40—Weather Forecast and Surprise Programme: This will interest you! 8.0—See Hamburg. 9.0—See Vienna. In an interval at 10.0—Time Signal, Weather Forecast, News Bulletin, Sports Notes and Programme Announcements. 11.0—News Bulletin. 11.15—See Berlin (Witzleben). 12.30 a.m. (approx.) (Sunday)—Close Down.
- BRNO (Czechoslovakia)**
878 kc/s (342 m.); 35 kW.
Transmits at intervals from 10.0 a.m. to 6.25 p.m.—German Transmission. News and Talk with Gramophone Illustrations: Eastern Music. 7.0—See Bratislava. 9.0—See Prague. 10.15—News Bulletin. 10.20—See Bratislava.
- BRUSSELS (Belgium) (No. 1)**
I.N.R. 590 kc/s (509 m.); 15 kW. 5.0 a.m. and at hourly intervals throughout the day—Pigeon Flying Report. 12 noon—Trio Concert. Punch and Judy (Black). Waltz, Die Kosen-den (Lanner). Ukrainian Pieces (Akimenko). Two Songs from La Chanson de Paris (Whiting). Arab Patrol (Manfred). Selection from "The Pearl Fishers" (Bizet). Ser-

SATURDAY continued

nade for Violin (Drdla). Waltz, Diane (Rapée-Pollack). Fascinat' Vamp (Nussbaum). 1.0 p.m.—Le Journal Parlé. 1.10—Light Gramophone Music. 5.0—Orchestral Concert, conducted by Franz André. Fox-trot, 'The King's Horses (Gay). Overture, 'The Gipsy Baron' (Johann Strauss). Romanian Dances (Barch). Tango, Lagrimas (Aberro). Selection from 'Le Hiniou' (Durand). Waltz, España (Waldteufel). Selection from 'Véronique' (Lehár). Two Songs (Tosti). Rhythmic Paraphrase on 'Il Trovatore' (Verdi-Lange). Fox-trot, Roll on, Mississippi, Roll on (West and Copprey). Rumba, Flor de Cuba (Bee). 6.0—Gramophone Concert. Six Dance Songs (Bruneau). Overture, 'Raymond' (Thomas). Overture, Egmont (Beethoven). Concerto in A for Pianoforte (Liszt). Les Cigales (Chabrier). Overture, 'The Magic Flute' (Mozart). In the interval at 6.15—Talk: Strolls through Belgium—The Ardennes. 7.15—Talk: Why did Napoleon lose the Battle of Waterloo? 7.30—Le Journal Parlé. 8.0—Concert, conducted by Jean Kumps. Overture, 'Jean de Paris' (Boieldieu). Selection from 'Rienzi' (Wagner). Minuet from the Sonatine (Ravel). Selection from Piccolino (Gütraud). Bourrée in A Minor (Bach). Conte pastoral (Godard). Fresques (Gaubert). Valse caprice (Rubinstein). Symphonic Dances (Grieg). Croquis chinois (Lecmans). Petite Polonaise (de Joncker). Caucasian Suite (Ivanov). In the interval, Address by Paul Hymans, Minister for Foreign Affairs, on the occasion of the Liberal Congress, relayed from the Hotel Metropole (Translation into Flemish). 10.0—Le Journal Parlé. 10.10—Concert by Max Alexys and his Orchestra, relayed from L'Antienne Belgique. 11.0 (approx.)—Close Down. BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—Concert by Max Alexys and his Orchestra. 1.0 p.m.—Le Journal Parlé. 1.10—Concert (continued). 5.0—Dance Music from the St. Saviour Palais de Danse.

6.0—Gramophone Records. Two Selections from 'Mephistopheles' (Boito). Potpourri, Metropolitaniana (Brinkman). 6.15—Talk: Childish Ailments. 6.30—Gramophone Records. Symphony, The Bells (Haydn). Danse des petits nègres (Caplet). Norwegian Dances, Nos. 2 and 3 (Grieg). 7.15—Sketch. 7.30—Agricultural Report. 8.0—Orchestral Concert, conducted by Charles Walpot. March of the French Guards (Wettge). Strauss Fantasia (Aubrey-Winter). Serenata (Toselli). Fantasia on a Popular German Theme (Ochs). 8.45—Programme by Louis Contran—Dutch Humorist, followed by Address by Léon Dens, Minister for Defence on the occasion of the Liberal Congress, relayed from the Hotel Metropole. After the Address, Concert (continued). Waltz, España (Waldteufel). Selection from Wonder Bar (Katscher). Nxylophone Solo. Violin Solo. Saxophone Solo. Selection from 'Le Chemin du Paradis' (Heymann-Salabert). Fox-trot, Sing, you Sinners (Coslow-Harling). Waltz (Erwin). Onestep, The Marine Guards (Heymann). 10.10—Le Journal Parlé. 10.10—Concert relayed from L'Antienne Belgique. 11.0 (approx.)—Close Down. BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Concert of Light Music and Romanian Music by the Sibiceano Orchestra. 5.0—News Bulletin and Time Signal. 5.10—Orchestral Concert (continued). 6.0—Educational Programme. 6.40—Light Music on Gramophone Records. 7.0—Choral Concert conducted by G. Niculesco. Responses (Wachmann). Praise be the Lord (Niculesco). Hymne à la Nuit (Rameau). Air (Abt). Night (Slicher). Hymn to the Forest (Mendelssohn). 7.30—Talk. 7.45—Choral Concert (continued). Selection of Popular Romanian Airs. 8.0—Concert of Romanian Music by the Luca Orchestra. 9.0—News Bulletin.

BUDAPEST (Hungary) 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Programme also relayed on 210 metres from 7.45 p.m. till Close Down. 5.0 p.m.—Concert of Light Music. 6.45—Gramophone Records of Variety Music. 7.45—Answers to Correspondents. 8.20—Song Recital by Irene Zoltan. Rosen Lieder (Philip Eulenberg). La Capinera (Benedict). Aria from 'La Traviata' (Verdi). Aria from 'Madame Butterfly' (Puccini). 9.0—See Vienna. 10.0—News, followed by Gigány Concert from the Café Baross. COPENHAGEN (Denmark) 1,067 kc/s (281 m.); 0.75 kW. Relayd by Kalundborg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. 11.0 a.m.—Weather Forecast. 11.10—Angling Notes. 12 noon—Town Hall Chimes. 12.2—2.0 p.m.—Concert from a Restaurant. 2.30—Gramophone Records of Variety Music. 3.0—Programme for Children. 3.30—Orchestral Concert conducted by Emil Reesen. Soloist: Kay Abrahamson (Vocalist). Concert Overture, Michel Angelo (Niels Gade). Waltz, Strandbilder (Waldteufel). Selection from 'Eva' (Lehár). Three Selections from the Suite for Strings (Ole Olsen). Wellington-March (Zehle). Two Songs from 'The White Horse Inn' (Benatzky). Song from 'Mona Lisa' (Stolz). Two Songs from 'Skal vi vaelde en Million?' (Kai Norman Andersen). Radio-March 'Peeking'. Prague—Fantasia on Bohemian Folk Songs. Nocturne for Strings (Dvorak). Minuet (Bolzoni). Waltz from 'Die drei Wünsche' (Ziehrer). Swedish Folk Melody (Peterson-Berger). Rheinländer from 'The Chocolate Soldier' (Oscar Straus). Comedy Gallop (Fahrbach). 5.40—Exchange Quotations and Fish Market Prices. 5.50—Talk. 6.20—French Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Talk: The Activity of the Armaments Industries throughout the

World. 8.0—Town Hall Chimes. 8.2—Concert of Old Dance Music by the Radio Orchestra conducted by Launy Gröndahl. Mac Mah on-March (Lumbye). Caecilie-Vals (Lumbye). Camilla-Polka (Lumbye). Waltz, Dorfschwalben aus Oesterreich (Josef Strauss). Polka (Suppe). Selection. Sextet. The Lancers (Mikel). Waltz, Accelerationen (Joh. Strauss). Helga Mazurka (Lumbye). Gallop, Elektriske Guster (Lumbye). 8.50—Recital of Songs from the Island of Fünen, with Introductory Talk. 9.50—Sonata for Violin and Pianoforte in F (Mozart). 10.10—News Bulletin. 10.25—Concert of Light Orchestral Music conducted by Launy Gröndahl. Overture, 'Prince Kholm-sky' (Glinka). Arabesque No. 1 in E (Debussy). Two Slavonic Dances (Dvorak). Selection for Strings: An den Frühling (Grieg). A Norwegian Artists' Carnival (Svendsen). 10.50—Dance Music from the Lodberg Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.15 a.m. (Sunday)—Close Down.

DUBLIN (Ireland) (2RN). 725 kc/s (413 m.); 1.2 kW. Relayd by Cork, 1,337 kc/s (224.4 m.). 1.30—2.0 p.m.—Time Signal, Weather Forecast, Stock Report and Light Music on Gramophone Records. 7.20—News Bulletin. 7.30—Time Signal. 7.31—Talk. 7.45—Gaedhlig. 8.0—Violin Duets by Edith Kelly Lange and Mrs. Larchet. 8.30—Contralto Solos by Florence Howley. 8.45—The Augmented Station Orchestra. 9.15—Variety Programme. 9.45—The Augmented Station Orchestra. 10.0—Baritone Solos by M. O.C. Maguire. 10.15—Variety Programme. 10.30—Time Signal, News and Weather Forecast. 10.40—Weekly Sports Review and Close Down.

FÉCAMP (France) Radio Normandie. 1,345 kc/s (223 m.); 10 kW. 12 noon—Gramophone Records of Variety Music. 12.30 p.m.—News Bulletin. 12.45—Concert. Redis-moi (Zoka

On ne peut pas être fidèle à Paris (Hyde). Ernestine (Campbell). En parlant un peu de Paris (Moretti). Selection (Woods). L'amour est rêve à deux (Hély). I've dreamed of love (Campbell). Bonsoir chérie (Campbell). Vos mollets Mesdames (Monaco). Histoire de voir (Moretti). Un mot suffit (Campbell). Selection (Grothe). 7.30—Normandy Radio Gazette. 8.0—Sponsored Programme. 8.45—Concert. Les Allobroges (Porot). Selection from 'Les Noces de Jeannette' (Massé). Selection from 'Kadubec' (Yvain). Tu l'as connu (Bousquet). 9.0—Orchestral Concert, conducted by M. Lahaye. Soloist: Mmc. Delacour (Pianoforte). 11.0—Concert by the Four Hawaiians. Manila (Easton). Palikiko Blues. Hawaiian Love (Gaston). Kilima. Somehow (Hackforth). With my guitar and you (Heymann). Go home and tell your Mother (Fields). Hawaiian Hotel. 12 midnight—Humorous Programme on Gramophone Records. 1.0 a.m. (Sunday)—Vaudeville. 2.0—Dance Music by Ray Connell and his Rialto Boys and the Shaftesbury Dance Orchestra.

FLORENCE (Italy) Ente Italiano Audizioni Radiofoniche. 599 kc/s (500.8 m.); 20 kW. See Turin.

FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relayd by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 12 noon—Concert from Munich. 12.50 p.m.—News and Weather. 1.0—Gramophone Concert. Pot-pourri, Morgen gehts uns gut (Benatzky). Du bist mein Traum from 'Das Lied der Liebe' (Joh. Strauss—Korngold). Pot-pourri of Hungarian Folk Songs. Waltz Song from 'Die Flucht in die Ehe' (Brodzsky). Ich spiel den ganzen Tag auf meiner Ziehharmonika (Reisfeld). Musical Joke, Perpetuum mobile (Strauss). Wiener Fiaakerlied (Pick). Ich hatte einst auch eine liebe Mutter.

CATARRH & HEAD NOISES ENDED FOR EVER



YES, they can be banished—quickly—and permanently. I know, for besides succeeding in my own case, I have succeeded in thousands of others since making my great discovery. Just imagine! The joy of being completely well again! No more choking, snuffing, sniffing, sneezing and nose-blowing. No more dizziness, sickness or headaches. No more buzzing, ringing ear noises or hardness of hearing. No more continuous coughs and colds. If you will only follow my simple directions you will clear Catarrh right out of your system—head, digestive and respiratory tracts, and intestines. No breeding-place for catarrh germs will be left to start the infection all over again. That is the basis of my method, for

Sneezing and nose-blowing make you objectionable to everyone near you. I will tell you how to stop both.

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CATARRH RUNS THROUGH SYSTEM —ELIMINATE IT COMPLETELY

Do not think "it can't be true." It is true, and I want to prove it to you without a penny outlay. No matter what sprays, gargles, atomisers, snuffs, medicines, etc., you have tried. Local treatment often relieves, but the trouble soon returns—by spreading upwards from below. My method is entirely different. It not only banishes catarrh from the head, throat, air and digestive passages, but from the colon as well—where catarrhal infection originates.

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LET ME PROVE IT —FREE

No longer need you keep paying out for temporary relief. No longer need you suffer from headaches, indigestion, insomnia, mouth-breathing, snoring and bad dreams. No longer need you dread asthma, bronchitis, and the weakness that follows oxygen-shortage through stuffed-up air-tubes. Catarrh is disgusting, dangerous, debilitating. It has ruined thousands of lives. Do not let it ruin yours. You can be free and keep free if you take my advice, which is yours for the asking. Fill in and post the coupon at foot, and you will soon be looking back upon your present sufferings as a nightmare. Write now—there is nothing to pay—nothing to promise. You need not even enclose 1d. *allan Cooper* 33, Strand, London, W.C.2. stamp for reply unless you wish to do so.

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Mr. ALLAN COOPER, 33, Strand, London, W.C.2. Without obligation, kindly tell me how I can permanently rid myself of Catarrh. NAME..... ADDRESS..... (Please print in block letters.) W.R. (10/6/32.)

SATURDAY continued

Verliebt ist die Sonne in den Mond. Marching Song, Es gibt nur ein Berlin (Kollo). Berliner Bilderbogen (Gray). Die Musik kommt (O. Straus). Potpourri of Marches by Lincke. In the interval at 2.0—News. 2.40—Sponsored Gramophone Concert. 3.20—Weather Report. 3.25 Time and Economic Notes. 3.30—6.15—See Stuttgart. 6.15—Economic Notes. 6.25—Talk: The New Formation of Industrial Areas. 6.50—Dialogue: Payment in Gold or Goods. 7.15—Time and Announcements. 7.25—10.20—See Stuttgart. 10.20—Time and News. 10.45—Dance Music from Berlin (Witzleben). 12 midnight (approx.)—Close Down.

HAMBURG (Germany) Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayed by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.) and Kiel, 1,292 kc/s (232.2 m.). Transmits at intervals from 5.45 a.m. 4.30 p.m. (from Hanover)—Concert from Bad Nenndorf. Overture, "Susanna's Secret" (Wolf-Ferrari). Selections from "A Masked Ball" (Verdi). Slavonic Dance No. 1 (Dvorak). Overture, "The Golden Cross" (Brüll). Selections from "The Little Dutch Girl" (Kálmán). Waltz from "Die geschiedene Frau" (Fall). Florentine March (Fucik).

6.0—Talk for Country Women. 6.5 (from Kiel)—Talk: Beauty Spots in Germany—the Holstein Switzerland. 6.30—Talk: The Economic and Political Importance of the Events in East Asia. 7.0—Topical Talk. 7.15—Weather Report. 7.20—Mandoline Concert. Festhymne (Schaub). Overture, Mignonette (Baumann). Waltz, Münchner Kindl (Koszar). Fantasia, The First Roses (Sartori). March, Durch Nacht zum Licht (Lauke). 8.0—The "Fox Horn"—A New Cabaret with Willy Hagen. 10.0—Time and News. 10.20—Dance Music from the "Haus Sieglar."

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. 11.30 a.m.—Concert by the Königsberg Opera House Orchestra, conducted by Werner Richter-Reichhelm. Overture, "Donna Diana" (Reznick). Bilder aus Osten (Volkmann). Homeward Bound (Sibelius). Overture, "The Magic Flute" (Mozart). Selection from "Der Evangelist" (Kienzl). Jubelwalzer (Joh. Strauss). 1.5 p.m.—Gramophone Concert of Popular Music. 2.30—3.30—Interval. 3.30 (from Danzig)—Handwork for Children. 4.0—Concert by the Little Orag Orchestra, conducted by Eugen Wilken. March, Fanfarenklänge (Fucik). Overture, "Der Lebe-mann" (Grünfeld). Waltz (Ketel-bey). Magyar dalek (Lehár). Selection from "The Maid of the Black Forest" (Jessel). Czardas No. 8 (Michiels). Waltz, Wild Roses (Ganglbauer). 4.50 (from Danzig)—Film Notes. 5.0—Festival Programme on the Bi-Centenary of the Immigration of the Salzburg Evangelists to East Prussia, relayed from Gumbinnen. Talks and Musical Selections. 6.0—Programme Announcements. 6.10—Programme Announcements in Esperanto. 6.15—Agricultural Market Prices. 6.20—World Market Report. 6.35—Talk: The East-Prussian Lithuanian Question. 7.0—Talk: The Berlin-New York and Berlin-Shanghai Wireless Communications. 7.25—Weather Report. 7.30—Variety Programme. 8.0—News Bulletin. 9.0—See Vienna, followed by Weather, News and Sports Notes and Dance Music from Berlin (Witzleben). 12.30 a.m. (Sunday)—Close Down.

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up till 4.30 p.m.). 6.25—9.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 6.25—6.40 and 7.10—7.25 (7 kW. up to 4.40 p.m.)—Physical Culture Course. 7.40—Light Music on Gramophone Records. 9.40—Religious Programme by the Liberal Protestant Radio Society (V.P.R.O.). 9.55 till Close Down—V.A.R.A. Programme. 10.55—Variety Programme. Selections by a Mandoline Ensemble, Dramatic Items, Organ Solos and Variety Items on Gramophone Records. 11.40—Concert by the V.A.R.A. Septet. March, San Lorenzo (Silva). Waltz, Traumdeale (Fucik). Gramophone Records.

Potpourri. From the Rhine to the Danube (Rhode). La Paloma (Yradier). Gramophone Records. Waltz, Du, du, du (Stolz). Wenn die kleinen Veilchen blüh'n (Stolz). Play me a Song from my own Country (Hajos). Foxtrot, Guilty (Kahn). Gramophone Records. Potpourri, Lass Schlager sprechen (Dostal). Foxtrot, When I take my Sugar to tea (Fain). Gramophone Records. Potpourri, Ein Melodientraum (Urbach). March, La Madelon de la Victoire (Borel-Clerc). 1.25—Interval. 1.40—Talk for Workers. 1.55—Spanish Music on Gramophone Records. 2.25—Sports Talk. 2.40—Light Music on Gramophone Records. 3.0—Talk on Darwin. 3.20—Popular Songs by the "De Wielewaal" Choir, conducted by Piet Tiggers. 3.35—Talk on the Young Socialist Movement. 3.40—Choral Concert (contd.). 3.55—Topical Talk. 4.10—Recital of Pianoforte Duets. Selection from "The Magic Flute" (Mozart). Romance (Reinecke). Music by Schubert, Mozart and Debussy. 4.40—Programme for Children. 5.40—Concert by the V.A.R.A. Septet. Overture, "The Nuremberg Doll" (Adam). Waltz, Dorfschwalben aus Oesterreich (Josef Strauss). Potpourri, Von Wien durch die Welt (Hruby). Foxtrot, Kind, du brauchst nicht weinen (May). 6.10—Frisian Programme—Talk and Recitations. 6.55—Septet Concert (contd.). Potpourri of Frisian Songs (de Groot). Waltz, Im Himmel gibt es kein Pilsner Bier (Schwarz). Selection from "The Rose of Stamboul" (Fall). March, Echtes Wienerblut (Komzak). 7.25—Address by Mr. de Vries, President of the V.A.R.A. 7.40—Concert by the V.A.R.A. Orchestra, conducted by de Groot, with the V.A.R.A. Dramatic Ensemble. Teun de Klepperman (Topical Talk) and Johan Jong (Organ). Overture, "Poet and Peasant" (Suppé). Symphonic Intermezzo from "Cavalleria Rusticana" (Mascagni). Ballet Egyptian (Luigini). Talk by Teun de Klepperman. Organ Solo: Selection from "Les Cloches de Corneville" (Planquette). March, Alte Kameraden (Teike). Waltz, Gold and Silver (Lehár). Foxtrot Troubadour (Lange). Foxtrot, Faust (Lange). Potpourri of Marches (Krome). Dramatic Item. Organ Solo: Potpourri, Memories of Other Days (de Groot). 9.40—News Bulletin and Football Notes. 9.55—Concert by the V.A.R.A. Orchestra. 10.40—Light Music on Gramophone Records. 11.40 (approx.)—Close Down.

LANGENBERG (Germany) Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 6.45 a.m. 12 noon—Concert from Munich. 12.50 p.m.—Weather Report, Announcements and Time Signal. 1.0—Concert. 2.35—The Weekend Concert on Gramophone Records. 3.30—Economic Notes and Time Signal. 3.50—Programme for Children. 4.20—Talk on Touring in the Rhineland and Westphalia: The Aesterberg Region. 4.40—English Lesson. 5.0—Choral and Pianoforte Recital by the Sterkrade and Mülheim-Dümpen Mixed Choir, conducted by Hermann Pieper. Soloist: Astrid Neuhaus (Pianoforte). Pianoforte Solos: Nocturne in E, Op. 62, No. 2 (Chopin). Scherzo in E, Op. 54 (Chopin). Items by the Mixed Choir: (a) Item to be announced, (b) Four Songs (Silcher): Das Klosterfräulein, Die Trauernde, In der Ferne und Lebewohl. Pianoforte Solos: (a) Capriccio in C Sharp Minor, Op. 76, No. 5 (Brahms); (b) Capriccio in D Minor, Op. 116, No. 7 (Brahms); (c) Gnomenreigen (Liszt); (d) Waldesrauschen (Liszt). Items for Mixed Choir: (a) Wohin mit der Freud' (Silcher), (b) 's Herzele (Silcher), (c) Selection (Gastoldi), (d) Frühlingssbotschaft (Uthmann). Pianoforte Solo: Etude in F Sharp, Op. 7, No. 4 (Stravinsky). 6.15—Programme for Women. 6.40—Talk on World Economics: Germany and Chilean Saltpetre. 7.0—Weather Forecast, Time Signal, Economic Notes and Sports Forecast. 7.15—Wireless Technical Notes. 7.30—Educational Talk. 7.55—News Bulletin. 8.0—Variety Programme by the Station Orchestra, conducted by Spreer. 10.5—News Bulletin and Sports Notes. 10.20—See Berlin (Witzleben). 12 midnight—Gramophone Concert of Famous Jazz Bands. 1.0 a.m. (Sunday) (approx.)—Close Down.

LEIPZIG (Germany) 1,157 kc/s (259 m.); 2 kW. Relayed by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.0 a.m. 5.0 p.m.—Concert by the Leipzig Symphony Orchestra, conducted by Leopold Prinz. Overture, "Raymond" (Thomas). Selections from "The Prophet" (Meyerbeer). Folk Dances (Hensel). Old Norwegian Romance (Grieg). Selections (van Blon): (a) Intermezzo, Triumph der Schönheit, (b) Sizzilietta, Norwegian Rhapsody No. 2 (Svendsen). Selections from "Blue Beard" (Offenbach). Waltz, Verschmähte Liebe (Lincke). March, Wiener Hallo (Reckenwald). 6.30—German Lesson. 6.50—Topical Talk. 7.0—Talk: The Earth as a Heavenly Body. 7.30—Variety Programme. Part One—Dance Music. Part Two—"Der Wunderhund"—Farce (Manfred Sturmarm). Part Three—Dance Music with Songs. 9.0—See Vienna. 10.5—News Bulletin. 10.15 (approx.)—Concert by the Emdé Orchestra. Popular Songs. Slow Foxtrot, Ariane (Weiss-Schwarz). Two Tango Songs: (a) Ach Annemarie (Maan), (b) Susie (Mann-Weiss). Tango, Einmal möcht' ich noch Primane sein (Reisfeld-Marbotts). English Waltz, Little Yvonne (Sachs). Foxtrot, Du bist so schön Marie (Kück-Schwabach). Two Tangos: (a) Tamara, du Rose vom Wolgastrand (Eberler), (b) O Sonja du (Mann-Rosen). Foxtrot, Dreimal sechs ist achtzehn (Weiss). Slow Foxtrot, Madame, Sie sind mir nicht einerlei (Goldwyn-Intrador-Freudental). Pasodoble, Sag' mir nicht Liebling (Weiss). 12 midnight—Close Down.

LYONS (France) La Doua (P.T.T.). 644 kc/s (465.8 m.); 1.5 kW. Transmits at intervals from 8.0 a.m. 7.0 p.m.—Popular Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South-East. 8.30—Light Music on Gramophone Records.

10.40—Gramophone Concert of Variety Music. 11.40 (approx.)—Close Down.

KALUNDBORG (Denmark) Kalundborg Radio. 260 kc/s (1,153 m.); 7.5 kW. See Copenhagen.

MADRID (Spain) Union Radio. (EAJ7). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 9.0 a.m. 8.0 p.m.—Chimes, Market Prices, Talk and Request Gramophone Records. 9.15—News Bulletin. 9.30—10.30—Interval. 10.30—Chimes, Time and Selections from Musical Comedies: (a) "Bohemios" (Vives), (b) "Los Claveles" (Serrano). 12.45 a.m. (Sunday)—News Bulletin. 1.0 a.m.—Chimes and Close Down.

MILAN (Italy) Ente Italiano Audizioni Radiofoniche. 905 kc/s (331.5 m.); 7 kW. See Turin.

MORAVSKÁ-OSTRAVA (Czechoslovakia) 1,137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 10.0 a.m. 6.25 p.m.—Concert by the Sochof Choir. 7.0—See Bratislava. 9.0—See Prague. 10.15—Programme Announcements and Theatre Guide. 10.20—See Bratislava.

MOSCOW (Russia) Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in German: Interview with the Soviet Minister of Finance. 9.55—Time Signal. 10.0—Weather Forecast.

MUNICH (Germany) 563 kc/s (533 m.); 1.5 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.) and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 5.30 p.m.—Concert by the "Pander" Women's Quartet. 6.5—Programme for Children. 6.50—Technical Notes. 7.5 (from Nürnberg) Concert of Franconian Folk Music. Conductor: Max Bohm. 8.0—Concert of Light Music by the Station Orchestra, conducted by Karl List. 9.0—"Murder in the Morning"—Comedy (Lutz). 9.40—Cabaret Concert on Gramophone Records. 10.20—Time Signal, Weather Report, News Bulletin and Sports Notes. 10.45—Concert by the Ludwig Wörthmüller Orchestra. 12 midnight (approx.)—Close Down.

OSLO (Norway) Kringkastingsselskapet. 277 kc/s (1,083 m.); 60 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrunn, 662 kc/s (453.2 m.); and Rjukan, 671 kc/s (447.1 m.). Transmits at intervals from 11.5 a.m. 4.15 p.m.—Concert by the Station Orchestra, conducted by Hugo Kramm. Carmen March (Fétras). Overture, "Light Cavalry" (Suppé). Selection from "Martha" (Flotow). Sun on the Sea (Curtis). Gjaetergut og Ganger (Grieg). Erlkönig (Schubert). Selection from "The Mikado" (Sullivan). 5.15—Programme for Children. 6.15—Recital of Norwegian Music on the Hardanger Fiddle. 6.45—Talk on Old Norwegian Songs with Vocal Illustrations. 7.0—Announcements, Weather and News Bulletin. 7.30—Talk: The Olympic Games in Olden Times. 8.0—Time Signal. 8.1—Concert of Light Music by the Frølich Banjo Quintet. 8.30—Review of the Week and Song Recital by Lyktemann. 9.0—Recitations. 9.25—Talk on Economics. 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Concert by the Bondeunddomslaget Choral Society. 10.45—Dance Music. 12 midnight (approx.)—Close Down.

PALERMO (Italy) Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 5.30 p.m.—Light Music on Gramophone Records. 6.0—6.30—Programme for Children. 8.0—Announcements, Giornale dell'Enit, Agricultural Notes and Giornale Radio. 8.20—Popular Music on Gramophone Records. 8.25 (in an interval)—Sports Notes, Time and Announcements. 8.45—"The Count of Luxembourg"—Opetetta in Three Acts (Lehár). In the intervals, Book Review and

8.45—Wagner Festival, relayed from the Bellecour Park. Tannhäuser March. Selection from "The Valkyries." Good Friday Magic from "Parsifal." Selection from "Lohengrin." Overture, "Rienzi." March from "The Twilight of the Gods."

8.45—Wagner Festival, relayed from the Bellecour Park. Tannhäuser March. Selection from "The Valkyries." Good Friday Magic from "Parsifal." Selection from "Lohengrin." Overture, "Rienzi." March from "The Twilight of the Gods."

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Miscellaneous Announcements. After the Programme, News Bulletin and Close Down.

PARIS (France) Eiffel Tower (FLE). 287.5 kc/s (1,145.7 m.); 13 kW. Time Signals (on 2,650 metres) at 10.26 a.m. and 11.26 p.m. (preliminary and 6-dot Signals). Transmits at intervals from 1.0 p.m. 6.45—Talk: Music and Musicians, with Illustrations. 7.0—Le Journal Parlé. 8.20—Weather Forecast. 8.30—Dramatic Programme: (a) "On dine à sept heures"—Comedy in One Act Maurice Moreaux; (b) "Le Truc de M. Trac"—Comedy in One Act (Guillot de Saix); (c) "Baptiste n'est pas Baptiste"—Comedy in One Act (Olivier and Foucher). Wireless Notes in the interval. 10.0 (approx.)—Close Down.

PARIS (France) Poste Parisien. 914 kc/s (328.2 m.); 60 kW. Transmits at intervals from 12 noon. 7.0 p.m.—Light Music on Gramophone Records, News and Announcements. 7.30—Sponsored Gramophone Concert. 8.30—Gramophone Records, Talk and Announcements. 8.45—Vocal and Orchestral Concert. Overture, "Madame Favart" (Offenbach). Selection from "Die Teresina" (Oscar Straus). Suite, Summer Days (Coates). Prélude, Marine et Chanson (Ropartz). Selection from "Les Cloches de Corneville" (Planquette). First Orchestral Suite, The Nursery (Inghelbrecht). Melody for Bassoon and Quartet (Vidal). Selection from "L'Amour masqué" (Messager). Selection from "Galathée" (Masse). Waltz, A toi (Waldteufel). Russian March (Luigini). 10.45—News Bulletin.

PARIS (France) Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW. 6.45 a.m.—Physical Culture Course. 7.30—Weather Forecast and Physical Culture Course (continued). 7.45—Dance Music on Gramophone Records. 8.0—News Bulletin, Weather Forecast and Press Review. 12 noon—Concert of Light Music on Gramophone Records. Le Cheval de la Garde (Paradis). Elegy (Vidal). Parade of the Tin Soldiers (Jessel). Jeune fille au Jardin (Mompou). Pas des Echarpes (Chaminade). Viens près de moi (Danieroff). Glow-Worm Gavotte (Lincke). Berceuse (Aubert). Gouttes d'Eau (Petit). Prenez mes Roses (Fugazo). Selection from "The Dollar Princess" (Fall). Reviens (Fragson-Christiné). La Salade (Ponchon). Stephanie Gavotte (Czibulka). Bimba (Silvestri). Je n'en demande pas plus. Songs from the Film "Un Coup de Téléphone" (Borchard-Spaak). Estrellita (Ponce). Moineau (Beydits). Sur la Rance (Avignon). C'est toi, chérie mon seul amour (Hermitte). Ranavolo (Romberg). Mascaratade (Lacomé). In the intervals, News and Weather. 3.0—Programme for Children. 3.45—Market Prices. 6.30—Wheat Prices, Weather Forecast, Agricultural Notes and Talk, Exchange Quotations and Racing Results. 7.0—Talk on Vacations: Be a Mason. 7.10—Technical Talk. 7.30—Book-keeping Lesson. 7.45—Review of the Latin Press, Commercial Prices and News. 8.0—Literary Readings: Mimes of Antiquity—The Syracusans of Theocritus and The Shoemaker of Herondas. 8.30—News, Sports Notes and Weather Forecast. 8.40—Review by René Dorin. 8.45—Humorous Programme. In the interval at 9.15—News Bulletin and Press Review.

PITTSBURGH (U.S.A.) Westinghouse Electric. (KDKA). 980 kc/s (306 m.); 25 kW. Relayed by W8XK on 48.86 m. and 25.25 m. (See Short Wave List). Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Pebecco Weather Report. 9.7—Rhythmic Serenade, from New York. 9.30—Tales of the Pennsylvania State Police: "Behind the Law." 9.45—Programme to be announced. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Bulletin. 10.12—Programme for the Evening. 10.15—Roseyhits, A. K. Rowswell. 10.30—Stories for Children by Louise Guiraud. 10.45—Little Orphan Annie from New York. 10.50—Temperature Report. 10.51—Weather Report. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sport Review. 11.12—Press News Reeler.

SATURDAY continued

11.15—Programme to be announced. 11.30—Lew Conrad and his Orchestra. 11.59—Time Signal. 12 midnight—Pepodent Amos n Andy, from New York. 12.15 a.m. (Sunday)—Dance Masters, from New York. 12.30—Sacred Songs. 1.0—Danger Fighters, from New York. 1.30—Dance with Countess d'Orsay, from New York. 2.0—Jingle Joe, from New York. 2.15—Programme to be announced. 2.30—The First Nighter, from New York. 3.0—Homey and Old-fashioned. 3.30—Twenty Fingers of Harmony, from New York. 3.45—McCraw Brothers, from New York. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News. 4.20—Messages to Explorers and Missionaries.

PRAGUE (Czechoslovakia) 614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.15 a.m. 5.50 p.m.—Talk on Nursing. 6.0—Reading. 6.10—Agricultural Talk. 6.25—German Transmission—Announcements and Musical Programme. 7.0—Sec Bratislava. 8.0—Cabaret Programme. 9.0—Brass Band Concert. 10.0—Time, News and Announcements. 10.20—See Bratislava.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland) 743 kc/s (403 m.); 25 kW; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and Announcements. 12.40—Orchestral Concert. 1.0—Exchange Quotations. 1.5—Concert (contd.). 2.0—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1—Concert by the Station Orchestra, conducted by Robert Echenard. 6.30 (from Geneva)—Dance Music on Gramophone Records. 7.0—Weather Forecast. 7.1—(from Geneva)—Chimes from St. Peter's Cathedral. 7.10—Dance Music (continued). 7.30 (from Lausanne)—Review of the Week's Foreign Politics. 7.55—Announcements. 8.0 (from Geneva)—Variety Programme with Jean-Marc Pasche and his Orchestra. 9.0—Concert of Popular Music by the Station Orchestra. 10.0—Weather Forecast and Announcements. 10.10 (from Montreux)—Dance Music relayed from the "Perroquet." 11.30 (approx.)—Close Down.

ROME (Italy) Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayed by Naples, 941 kc/s (319 m.) and 2RO, 11,810 kc/s (25.4 m.). 8.15 a.m.—Giornale Radio and Announcements. 8.30—12.0 noon—Interval. 12 noon—Light Music on Gramophone Records. 12.35—Weather Forecast. 12.45—2.0—Sextet Concert. Soloist: Umberto Spionello (Violin). Suite, Idyll (Montanaro). Gavotte (Spambati-Artok). Crescendo (Lassen-Haensch). Violin Solos: (a) Sérénade mélancolique (Tchaikovsky), (b) Spanish Romance (Sarasate), (c) Scherzo (Ferrata). Selection from "Lilac Time" (Schubert). Sevilliana (Sals). Gipsy Song (Cersel). In the intervals, Giornale Radio and Exchange Quotations, Time Signal and Programme Announcements. 5.0—Exchange, Report of the Royal Geographical Society, Giornale Radio and Announcements. 5.15—Reading. 5.30—Song Recital by Maria Senes (Soprano). Voglio un amore doloroso (Caggiano). Maria Wiegand (Regen). Song (Moussorgsky). Russian Nightingale's Song (Alabiev). 5.45—Concert. Selection from "The Caliph of Bagdad" (Boieldieu). Sérénade, To Dulcinea (Carlyus). Waltz (Saletti). Second and Third Movements from the Suite "Slavia" (Guarino). March (Witte). 6.15—Giornale dell'Ente. 6.25—Talk: Siena. 6.55 (from Naples)—Shipping Report and Sports Notes. 7.0—Atmospheric Signals, Lesson in Morse, Agricultural Notes, Giornale Radio and Press Review. 8.0 p.m.—Time Signal, Programme Announcements and Light Music on Gramophone Records. 8.30—Sports and News. 8.45—"Dejanice"—Opera in Four Acts (Catalani). In the intervals, Book Review and Talk. After the Programme, News Bulletin.

SCHENECTADY (U.S.A.) General Electric Company (WGY). 700 kc/s (379.5 m.); 50 kW. Relayed at intervals by W2XAF and by W2XAD (see Short Wave List). Transmits at intervals from 11.45 a.m. 9.15 p.m.—Alex Drassin's Orchestra from New York. 9.45—Studio Ensemble. 10.15—Skippy, from New York. 10.30—Soloist, from New York. 10.45—Landy Trio, from New York. 11.0—Joe and Eddie. 11.15—Waldorf Astoria Orchestra, relayed from New York. 11.30—American Trio. 11.45—DeWitt Clinton Orchestra. 11.55—Baseball Scores. 12 midnight (W2XAF only)—Stock Reports and News Items. 12 midnight (WGY only)—DeWitt Clinton Orchestra. 12.15 a.m. (Sunday)—Melody Trail, from New York. 12.45—The Goldbergs, from New York. 1.0—The Bridge Lesson, from New York. 1.15—Bernard Silberg (Cellist). 1.30—4.0—New York Relay. 1.30—National Advisory Council in Radio on Education. 2.0—Drama K-7. 2.30—Club Valspar. 4.0—3.0—Lucky Strike Dance Hour. 4.0—DeWitt Clinton Orchestra. 4.30—Hotel New Yorker Orchestra, from New York. 5.0—Ralph Kirbery, the Dream Singer, from New York. 5.5—Buddy Rogers and his California Cavaliers, from New York. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESSENDER (BEROMÜNSTER) (Switzerland) 653 kc/s (459 m.); 60 kW; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. Weather Forecast and News Bulletin. 12.40—Variety Music on Gramophone Records. In an interval at 1.15 (approx.)—Topical Talk. 1.50—Weather Report and Exchange Quotations. 2.0—3.30—Interval. 3.30—Light Music on Gramophone Records. 4.30 (from Berne)—Interview with Workers. 5.0 (from Berne)—Concert by the Frohinn Accordion Society. 5.30 (from Berne)—Talk: Accidents in the Mountains. 5.50—Songs from the Alps on Gramophone Records. 6.15 (from Berne)—Listeners' Quarter of an Hour. 6.30 (from Zürich)—Talk: The Swiss Passion Play. 7.0 (from Zürich)—Chimes. 7.15—Time Signal, Weather Forecast and Market Prices. 7.30 (from Zürich)—Wind Instrument Concert. 8.0 (from Basle)—Concert by the Basle Orchestral Society, conducted by Gottfried Becker. Programme of Opera and Operetta Music. 9.30—Weather Forecast and News Bulletin. 9.45 (from Basle)—Dance Music. In an interval—"Roast Goose"—Sketch (Rosler). 11.0 (approx.)—Close Down.

STOCKHOLM (Sweden) Radiotjänst (SASA). 680 kc/s (436 m.); 55 kW. Relayed by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.); and Sundsvall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. 4.0 p.m.—Concert of Popular Music, relayed from Göteborg. 5.0 (from Sundsvall)—Talk. 5.30—Popular Music on Gramophone Records. 6.30—Variety Programme by the Russel Jones Trio, Greta Söderberg (Songs), and G. Kraft (Dramatic Items). 7.15—Weather Forecast and News Bulletin. 7.30—Talk. 8.0—Old Time Dance Music Relay. 8.45—Programme relayed from the Tivoli, Copenhagen. 9.45—Weather Forecast and News Bulletin. 10.0—Dance Music. 11.0 (approx.)—Close Down.

STRASBOURG (France) Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert of Popular Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Instrumental Concert from Bordeaux-Lafayette. 1.50—Gramophone Records of Light Music. 2.0—Talk in French. 2.15—Gramophone Concert of Light Music. 3.15—3.45—Interval. 3.45—Illustrated Music Talk: Bach. 4.0—Gramophone Dance Music. 4.45—Legal Talk in French: Responsibility for Motor Accidents. 5.0—Dance Music Programme. 6.0—French Talk on Touring. 6.15—Horticultural Talk in German. 6.30—Gramophone Concert. Potpourri of Marches (Charlie). Variations on Carinthian Songs (Strohl). Aventures de marins. On a Local Railway (Rathke). The Girl on the Moon (Berdtsson). Minjas Polka (Lissa). Dans tes mains blanches. Two in a Carriage (Granchstacten). Potpourri of

Dances (Dostal). I Love your Smile. Reproche (Peguri). Selection (Rosen). Selection (Stolz). Mets ta main dans la mienne (Doelle). I've kissed you one little time (Hayes). 7.30—Time Signal and News in French and German. 7.45—Gramophone Concert. Liebes-Hed (Schubert). Dream of Love after the Ball (Czibulka). Coquelicots (Moret). Lagunenwalzer (Strauss). Selection from "Gipsy Love" (Lehár). My golden Baby (Abraham). Tango, Wenn der Maximilian (Cotter). I've kissed you one little time (Hayes). Mara (Petersburgsky). Spanish Tango (Rotter). Otra Vez (Fozelmann). Gitania (del Plata). 8.30—Orchestral Concert conducted by Maurice de Villers. Soloist: Mme. de Terras (Vocalist). Symphonie légendaire (Godard). Aria from "Othello" (Verdi). Sonata for "Cello (Bocherini). Song: Absence (Berlioz). Suite from "Marouf" (Rabaud). Song, Le Bois dormant (Bachelet). Ballet Music from "Le Roi de Lahore" (Massenet). 10.30—Dance Music relayed from the Savoy. 12 midnight (approx.)—Close Down.

STUTTGART (MÜHLACKER) (Germany) Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayed by Freiburg. 527 kc/s (570 m.). Transmits at intervals from 6.0 a.m. (Time, Weather and Gymnastics). 10.0 a.m. (from Karlsruhe)—Concert of Chamber Music by the Karlsruhe Wind Instrument Society. Two Divertissements for Flute, Clarinet and Bassoon, Op. 24 and 29 (de Lorenzo). Sérénade and Theme—Variations for Flute, Oboe, Clarinet, Horn and Bassoon, Op. 34 (Theodor Blumer). 10.30 (from Freiburg)—Talk for Schools. 11.0—Time and News. 11.15—11.30 and 11.45—12 noon—Sponsored Musical Programme. 12 noon—Weather Report. 12.5 p.m.—Sponsored Music. 12.20—Concert from Munich. 12.50—Time, Weather, News and Programme Announcements. 1.0—Gramophone Concert. Hungarian Comedy Overture (Kéler-Béla). Two Songs from "Carmen" (Bizet). Melody and Torch Dance of the Brides of Kashmir (Rubinstein). Romance (Tchajkovsky). Sérénade (Tarenghi). Concert Waltz (Boulangier). The Clock and the Dresden Figures (Ketelby). Koboldspiele in der Johannisnacht (Hohmann-Webau). Dream Pictures (Lumbye). Selection from "Der lustige Krieg" (Johann Strauss). Two Selections (Myddelton): (a) The Nigger's Dream, (b) Way down South. Saxophone Solos: (a) Blinde Augen (Derbil), (b) Einmal am Rhein (Ostermann). Maskenball im Gänsstall (May-Schwabach). Potpourri, Walzer-Trümpele (Robrecht). March-Foxrot, Wenn die Garde aufmarschiert (Kalman-Welisch). 2.30—Reading of Ballads by Theodor Fontane. 3.0 (from Karlsruhe)—Zither Concert. March, Unter Kameraden (Schrüder). Idyll, Aus'm Herzwinkel (Weber). Erinnerung aus Burg Hohenaschau (Hauser). March, Heiter durch's Leben (Voigt). 3.30—Dialogues: What Young People expect from the Radio. 4.0—Programme for Young People. 4.30 (from Freiburg)—Choral Concert. Male Voice Choir: (a) Es haben zwei Blümlein geblüht (Heinrich Schrader), (b) Rose Marie (Mühlberg). Boys' Choir: (a) Morgen muss ich fort von hier (Folk Song), (b) Schweselhölzle (Folk Song). Danish Folk Melody for Male Voice Choir. Boys' Choir: (a) Wenn die Nachtigallen schlagen (Folk Song), (b) Rätsel aufgeben (Folk Song). Folk Song for Male Voice Choir: Am Schwanenfluss. Boys' Choir: (a) Hansel, dein Gretlein (Folk Song), (b) Reinsestock, Holderblüt (Folk Song). 5.0—Concert, conducted by Hermann Escherich, relayed from Wildbad. Overture, "Stradella" (Flotow). Waltz, Wiener Fresken (Josef Strauss). Potpourri, Haydn-Himmelsgrüsse (Haydn-Urbach). Two Slavonic Dances (Dvorak). Prelude and Allegro for Violin (Pugnani). March, Hurra Germania! (Katzel). 6.15—Time, Weather, and Sports Notes. 6.25 (from Karlsruhe)—Talk: Modern Street Planning. 6.50—Talk: arranged by the Vocational

Bureau of Tübingen University: Study and Practice. 7.15—Time and Weather. 7.25 (from Mannheim)—"A Thousand Words in the Palatinat Dialect..." 8.0—See Langenberg. 9.0—See Vienna. 10.20—Time, Weather, News and Programme Announcements. 10.45—Dance Music from Berlin (Witzleben). 12.30 a.m. (Sunday)—Close Down.

TOULOUSE (France) Radiophonie du Midi. 779 kc/s (385 m.); 8 kW. Transmits at intervals from 12.30 p.m. 5.0 p.m.—Television Transmission. 5.15—Operatic Music for Orchestra. Overture, "Coriolanus" (Beethoven). March from "Tannhäuser" (Wagner). Good Friday Magic from "Parsifal" (Wagner). 5.30—Dance Music. 5.45—Operatic Songs. Selections from: (a) "Cosi fan tutte" (Mozart), (b) "Sigurd" (Reyer), (c) "The Tales of Hoffmann" (Offenbach), (d) "Aida" (Verdi), (e) "Tannhäuser" (Wagner), (f) "Norma" (Bellini) and (g) "Mefistofele" (Boito). 6.15—Selections by an Argentine Orchestra. 6.30—Racing Results. 6.45—Orchestral Selections. Jubilee Overture (Weber). Torch March (Meyerbeer). 7.30—News Bulletin. 8.0—Orchestral Selections of Operatic Music. 8.15—Military Music. 8.30—Accordion Solos. 8.45—Songs from Operettas. Air from "La Fille de Madame Angot" (Lecocq). Song from "Véronique" (Messager). Selection from "Le Postillon de Longjumeau" (Adam). 9.0—Selections from "Romeo and Juliet" (Gounod). 10.0—Songs from Operettas: Selection from "Die Fledermaus" (Johann Strauss). Selection from "The Czardas Princess" (Kálmán). Prelude and Dance from "L'Enfant Prodigue" (Debussy). Entr'acte from "Carmen" (Bizet). 10.30—North African News. 10.45—Balalaika Selections. 11.0—Request Concert. 12 midnight—Weather and Announcements. 12.5 a.m. (Sunday)—English Music. 12.30 (approx.)—Close Down.

TRIESTE (Italy) Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 10 kW. Transmits at intervals from 8.15 a.m. 7.5 p.m.—Quintet Concert. Zingaresca (Pennati-Malvezzi). Miss d'oltremare (Bossola). Fosto Rose (Sagarra). Manolo (Waldteufel). Amore canta (Tagliarini). Suite, Echoes of Russia (Leopold). Vecchia canzone del ghetto (Rens). Rubacuori (Montagnini). In the interval at 7.25—French Lesson on Gramophone Records. 8.0 till Close Down—See Turin.

TURIN (Italy) Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayed by Milan, 905 kc/s (331.5 m.), Genoa, 959 kc/s (312.8 m.) and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural News. 7.0—Announcements. 7.5—Variety Music. Overture, "Les Cloches de Corneville" (Planquette). Selection (Uhl). Waltz, Wienerblut (Johann Strauss). In a Chinese Theatre (Dreyer). 7.30—Time Signal and Announcements. 8.0—Giornale Radio and Weather Report. 8.15—Concert of Popular Music. Overture, "The Crown Diamonds" (Auber). Gaby (Zecchi). The Dancing Marionettes (Fotras). Danse macabre (Saint-Saëns). Serbian March (Volpatti). 8.45—Topical Talk and Book Review. 11.0—Giornale Radio, followed by Dance Music from the Fiaschetta Toscana, Milan. 11.55—News Bulletin.

VATICAN CITY (Rome) 15,123 kc/s (19.84 m.) (Morning), and 5,969 kc/s (50.26 m.) (Evening); 10 kW. 11.0—11.15 a.m.—Religious Announcements in Different Languages. 8.0—8.15 p.m.—Religious Information in Italian.

VIENNA (Austria) Radio-Wien. 581 kc/s (517 m.); 15 kW. Relayed by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,058 kc/s (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.); and Salzburg, 1,373 kc/s (218 m.). Transmits at intervals from 9.20 a.m. 5.0 p.m.—Dance Music from "Hübners Kursalon". 6.20—Talk: A Month of World Events. 6.50—Re-

port on the Reparations' Conference relayed from Lausanne. 7.20—Time and Announcements. 7.30—Orchestral Concert, conducted by Josef Holzer. Soloists: Berta Kiurina (Vocalist), and the Melody Ladies. Fliegermarsch (Dostal). Waltz, Am Elbestade (Ertl). Songs: (a) Song from "Gipsy Love"; (Lehar), (b) Song from "The Geisha" (Jones). Overture, "Clo-Clo" (Lehar). The Melody Ladies: (a) Divanpüppchen, (b) Song from "Véronique" (Messager), (c) La canzone del' amore (Bixio), (d) J'ai deux amours (Whitcomb), (e) Bianca (Samuels-Scott), (f) My Little Boy (Abraham), (g) Potpourri, A-B-C (Komzak). Songs from (a) "Das Veilchen von Montmartre" (Kálmán), (b) "The Chocolate Soldier" (O. Straus). Carambolina-Caramboletta (Kálmán). The Melody Ladies: (a) Potpourri (Stutzer), (b) Tales from the Vienna Woods (Joh. Strauss). Egerländer-Marsch (Kopetzky). 9.0—Serenade. Programme by the Vienna Philharmonic Orchestra and the State Opera House Choir, conducted by Robert Heger, relayed from the Josefplatz. Overture, "Oberon" (Weber). Symphony in G, No. 100 (the Military) (Haydn). Abendseg'n (Dvorak). Nachtlied (Schumann). Serenade from "The Damnation of Faust" (Berlioz). Two Selections from "Orpheus and Eurydice" (Glück). Selections (Mozart): (a) Aria from "König Thamos"; (b) Die Battaille. Romance from "The Magic Harp" (Schubert). Perpetuum mobile (Joh. Strauss). In the interval at 10.0 (approx.)—News Bulletin.

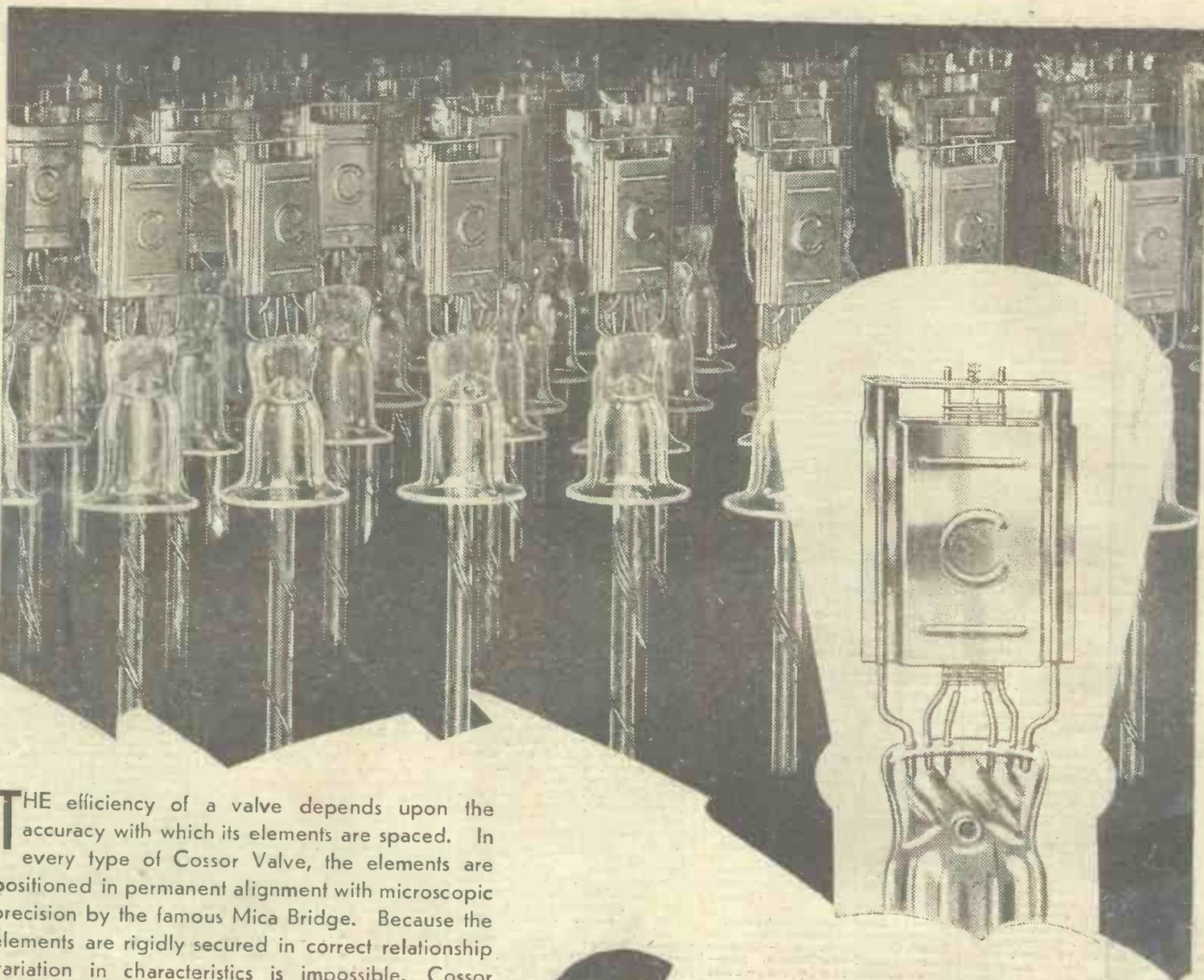
11.0—Concert from the Hotel Krantz Ambassador.

WARSAW (Poland) Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW. 11.58 a.m.—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Polish Press Review. 12.20—Interval. 12.40—Weather Report. 12.45—Educational Programme from Lwów. 1.20—Light Music on Gramophone Records. 2.0—Interval. 3.0—Economic Report. 3.10—Songs for Children. 3.30—Answers to Correspondents on Military Questions. 4.5—Light Music on Gramophone Records. 4.35—Hydrographic Report. 4.40—Review of Periodicals. 5.0—Concert of Russian Music. March from "Boris Godounov" (Moussorgsky). Berceuse (Artok-Iljinsky). Mazurka (Artok-Scrubin). Barcarolle (Artok-Arensky). Selection (Tchaikovsky). Overture, Night in Madrid (Glinka). Musical Box (Liadov). Danse from "Feraoms" (Rubinstein). Persian Dances (Rubinstein). Waltz from "Eugen Onegin" (Tchaikovsky). 6.0—Talk: The Future of Polish Culture. 6.20—Concert of Light Music and Dance Music relayed from the Cristal Restaurant. 7.15—Miscellaneous Items. 7.35—Radio Journal. 7.45—Agricultural Notes. 7.55—Programme Announcements. 8.0—Concert of Light Music by the Warsaw Philharmonic Orchestra, conducted by S. Nawrot. Soloist: T. Laskovsky (Tenor). March, The Star Spangled Banner (Souza). Comedy Overture (Kéler-Béla). Suite, At the Circus (Armandola). Songs: (a) Air from "The Yellow Jacket" (Lehar), (b) Air from "The Czarevitch" (Lehar), (c) Air from "Eine Nacht in Venedig" (Johann Strauss). Potpourri, Lehariana (Geiger). Fox-trot, "The Circus Princess" (Kálmán). Songs, Gavotte, Eugénie (Makomasky). Polka from "Gasparone" (Müllöcker). Waltz, Golden Rain (Waldteufel). Mazurka (Namy-slovsky). 8.55—On the Horizon. 9.10—Report of a Local Event. 9.50—Radio Journal. 9.55—Aviation Weather Report. 10.0—Interval. 10.5—Chopin Pianoforte Recital [by Henry Szotminka. Nocturne in C Minor. Mazurka in C Sharp Minor. Waltz in E Flat, Op. 18. Polonaise in E Flat Minor. Ballade in A Flat. 10.40—Sports Notes. 10.50—Dance Music.

ZAGREB (Yugoslavia) 977 kc/s (307 m.); 0.75 kW. Transmits at intervals from 12.20 p.m. 7.45 p.m.—Reports. 8.0—Light Music on Gramophone Records. 8.20—Introductory Talk to the following Transmission. 8.30—A Relay (to be announced). 10.30—News and Weather Forecast. 10.40—Concert of Light Music by the Station Orchestra. 11.30 (approx.)—Close Down.

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