

*W. Smith G. G.*



# WORLD-RADIO

## DOMINION & FOREIGN PROGRAMMES

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

Vol. XIV No. 351 Registered at the G.P.O.  
as a Newspaper

FRIDAY, APRIL 15, 1932

Three Pence

TOURING THE UNITED STATES WITH A PORTABLE

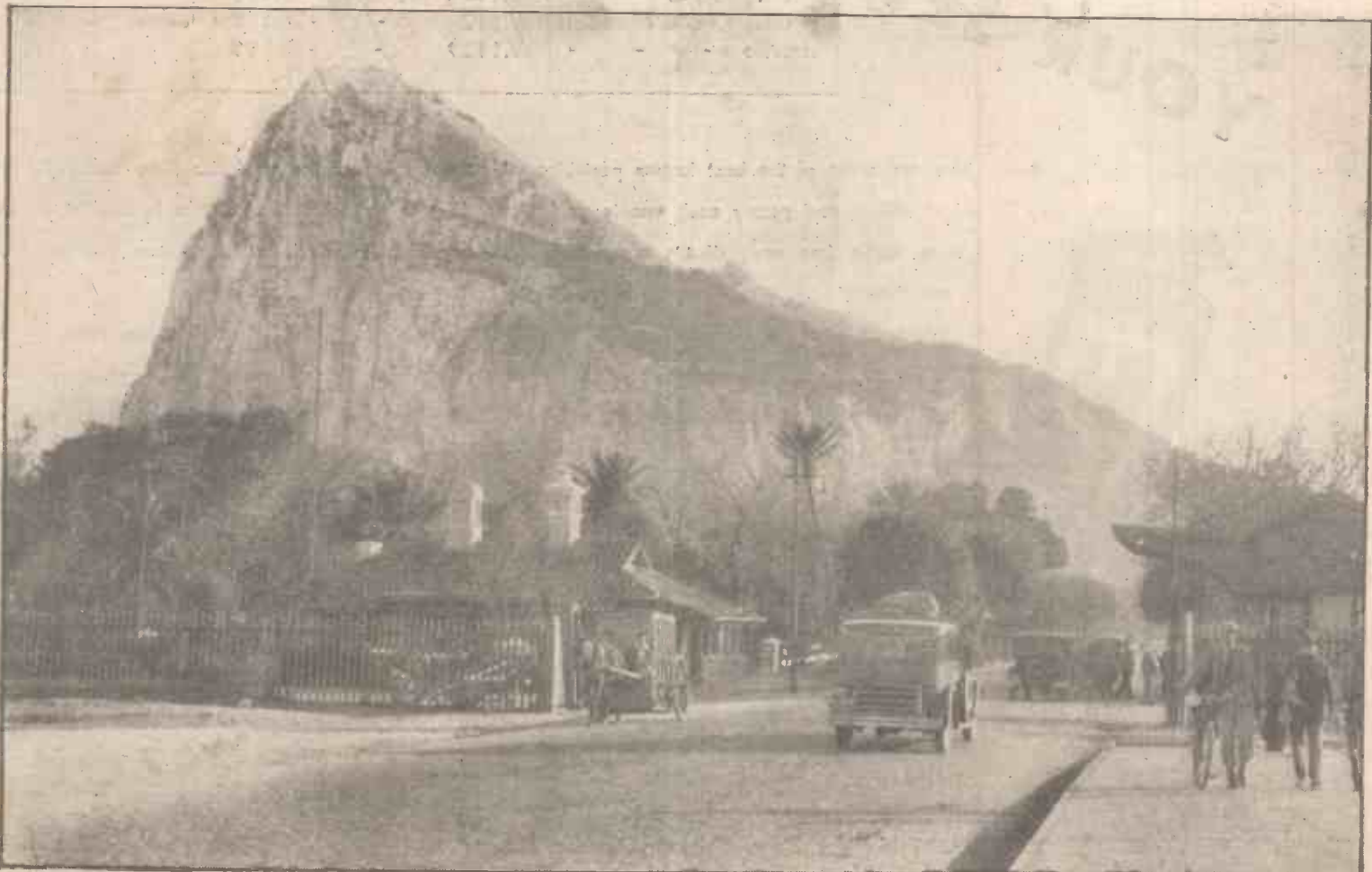
READERS' EXPERIENCES

THE INFLUENCE OF JAZZ

THE STORY OF BROADCASTING HOUSE

RECEPTION CONDITIONS IN GIBRALTAR

TECHNICAL TOPICS



Gibraltar: the northern end of the Rock, showing the frontier barrier. An article dealing with reception conditions in Gibraltar will be found in this issue.

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FRIDAY, APRIL 15, 1932

THREE PENCE



Letters should be addressed to The Editor,  
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## The Turn of the Year

WE have now arrived at the period of the year when the winter season is losing its hold and summer conditions are indisputably approaching. Even though the establishment of Summer Time is rather a legal process than a climatic phenomenon, the fact remains that the extra hour of daylight, while it conveniently brings us into line with the Middle European broadcasting countries, means temporary disappearance from our ken of some of the weaker stations which we may have been in the habit of hearing.

Each year the disappearance of the winter season leaves us with a greater prospect than we enjoyed the year before of stations to be relied on for reception during the summer months both by day and night. As far as trans-Atlantic reception is concerned the past season cannot claim great success, and although the season of 1930-31 provided some very good reception in this country of the United States stations, yet it cannot be said to have equalled that obtained some five or six years ago, when the general level of transmission power was considerably inferior to that obtaining now. What is the cause of this? What is the cause of the excellent reception in this country of 1 kW. stations in America when transmitters of fifty times that power cannot be heard? These points are by no means settled. What, however, is certain is the influence of the two Layers, the lower of which affects the medium waves and the upper the short waves. The result of experience seems to show that when reception of the medium waves is singularly good, as it has been recently, that of the short waves is correspondingly poor. In the present stage of knowledge, we can only observe these phenomena; we cannot explain them.

Let us take a brief glance at the list of European stations and note those which we can with confidence rely upon hearing during the coming months, whether by day or night. We may exclude the long-wave transmitters since they are as a rule daylight stations. On the medium waves we find Brussels No. 1 and 2, the new Florence station, Prague, Langenberg, the two Swiss stations, Rome, Moscow-Stalin, Katowice, Radio Toulouse, Stuttgart, Strasbourg, the new Poste Parisien station, Göteborg, Hörby, Hilversum, and doubtless others. These stations constitute a very fair list from which programmes may be

chosen. They will, undoubtedly, have their good days as well as their bad days, but as a whole one should be able to count on receiving the majority of them. And we have not included the short waves!

## Via Ether

### Football and Opera

LAST Sunday I listened to Radio-Paris, which was broadcasting the international football match, France *v.* Italy, and felt in the commentary of *Le Parleur Inconnu* the atmosphere of thrill inseparable from all international events. I hope to tune in Radio-Paris next SUNDAY afternoon, when the Corinthians are to play the French Club Sochaux, and *Le Parleur Inconnu* will again officiate as commentator. The programme of operas to be broadcast next week strikes me as particularly interesting. Thus Breslau is relaying a performance of *Der Freischütz* at 8.15 p.m. on SUNDAY, while Berlin and Königs Wusterhausen are relaying Oscar Straus's *The Last Waltz* from a Vienna theatre. MONDAY's choice of station is a difficult one. *Lohengrin*, relayed from the Opéra House, is to be heard from Stockholm. Paul Graener's new opera *Friedemann Bach*, which has been so enthusiastically received, is to be broadcast by the Munich group of stations, and a transmission of Moussorgsky's *Khovantchina* is announced from Copenhagen. Two Wagner performances at the Budapest Opera House, which are to be relayed by that station, merit special mention. *The Flying Dutchman* and *The Valkyrie* are the works to be given on TUESDAY and SATURDAY respectively.

### An Interesting First Performance

BOILDIEU'S *La Dame Blanche*, an opera that never fails in its appeal, appears in the Hamburg programme on WEDNESDAY, and Mozart's early operatic effort, *La finta giardiniera*, is to be heard from Prague later in the evening. The performance from the Königsberg Opera House, of Schubert's *Lilac Time*, which is to be relayed by Heilsberg at 8 p.m. on THURSDAY, will, I have no doubt, be an attraction for many listeners. FRIDAY, I observe, will bring us an operatic first performance from the Berlin common wave stations. Judging by its title—*Der neue lustige Kasperl*—this should be quite a jolly occasion. The week's programme of opera will be wound up on SATURDAY with the relay of a Gala Evening from the Royal Opera House, Antwerp.

### The Shakespeare Memorial Theatre

DOUBTLESS there will be listeners in all parts of the world to the opening ceremony of the new Shakespeare Memorial Theatre, at Stratford-on-Avon on April 23, the anniversary of the Poet's birthday. For this event the G5SW transmission will be specially extended, and the National Broadcasting Company of America will relay the broadcast proceedings; though the time of reception, in New York, of the official opening ceremony will be about

8 a.m. (B.S.T.). At 1 p.m. the speeches following the official luncheon will be relayed. His Worship the Mayor will preside, and will offer the official welcome to the Ambassadors, representatives of the Overseas Dominions, and other distinguished visitors. Sir Frank Benson will then propose the toast, "The Immortal Memory"; Mr. Stanley Baldwin will propose "Representatives of the Nations," and Monsieur de Fleuriau, the French Ambassador, will reply. At 2.20 p.m. will follow the opening speech by H.R.H. the Prince of Wales, and a descriptive commentary on the proceedings.

### A Summer School of the Air

CHICAGO, laggard though she may be in keeping up to date the salary payments of her school teachers, has certainly pioneered in the development of school broadcasting in the States. And the latest experiment announced to be undertaken by Station WMAQ (which has recently been sold to the National Broadcasting Company), under its enterprising Assistant Manager, Miss Judith C. Waller, sounds worth imitation elsewhere. A "Summer School of the Air" is to be held for children who are either unable to attend regular school for lack of funds or are away from home on their summer holiday, but could benefit from interesting educational work. Disclaiming any intention to provide a substitute for class instruction, the organisers of this summer school aim at reaching the children in groups, gathered either in private houses or in certain community centres. They require, to quote the words of the prospectus, "some mature person to direct the children in their application and activity during the period of the broadcast and during the period of study for carrying out suggestions and reference study between broadcasts." Parents, other qualified adults, and even elder brothers and sisters, are invited to volunteer to act as local leaders for the groups. The broadcast lessons will be given by expert teachers chosen from the Chicago public schools; the usual apparatus of school leaflets, progress reports, and achievement tests will be provided; and certificates of excellence will be issued at the end of the course. The project, as a whole, is being supervised by the Chicago Board of Education.

### The State and Bavarian Wireless

It has recently been announced that all private owners of transmitters in Bavaria have sold these to the Post Office and the Bavarian Ministry of Education, so that the State is now in possession of all the transmitters of the Bavarian Company. But, although this acquisition by the State is, of course, important, it will make but little difference to listeners, as there is no intention of altering the present programme arrangements. The State was already the owner of more than 50 per cent. of the transmitting stations and had thus a working majority, as is the case in all parts of Germany. The Post Office and the Bavarian Ministry of Education had, in any case, a right to buy these transmitters, and the arrangement is purely an internal one.

ETHERVIATOR

## Reception Conditions in Gibraltar

A SINGLE town in the vast expanse of the European continent, with but 18,000 inhabitants, and correspondingly small in area, at first sight hardly calls for an article on the possibility of receiving broadcast programmes. It is certain that few readers of *World-Radio* would be in the least degree interested in an article on reception conditions in Portsmouth, to cite a town of even larger size in England.

Gibraltar is a town built at the base of a great rock 1,200 feet in height, which stands as a massive monument to Nature's peculiarities, on a peninsula two and a half miles long by half a mile wide. Its population of 18,000 inhabitants is made up largely of Spaniards, with perhaps 3,000 English people, of which the majority are part of the naval and military garrisons stationed in the port.

But, for all this, Gibraltar does claim an article to itself in *World-Radio*, just as much as Canada or Ceylon, for each is a distinct unit of the British Empire. The town of Gibraltar has, since 1704, been one of England's colonies, lying friendless and alone at the southernmost point of Spain. To that colony many readers of *World-Radio* may at one time or another pay a visit, be they members of one of our fighting Services ordered there for two years, or be they but travellers on a short visit. And surely each of these potential visitors will wonder whether the transport of a receiving set abroad is worth while.

Reception conditions in Gibraltar cannot as a whole be considered as more than average. There are several Spanish stations, notably Seville and Barcelona, which are not far distant, but their programmes are of little interest to the English listener. It is necessary to have a fairly powerful receiver, the normal modern three-valve set (S.G., H.F. valve, detector, and pentode L.F. valve) in use on an outside aerial in order that reception of more distant stations may be satisfactorily obtained. On the long

waves, Daventry 5XX and Radio-Paris provide good signals, while on the medium wave-band the more powerful and better-known of the Continental stations are easy to receive, though, of course, those in Spain and Portugal (citing Lisbon and Madrid as typically good transmitters) and Southern France (notably Toulouse) are the most prominent on the dial. Rome and Algiers are, incidentally, good signals and can also be relied upon to provide programmes of interest to the English listener: but, strangely enough, of all the British stations on this wave-band, only Midland Regional can be described as being in the least bit reliable.

At first sight many listeners might be frightened of the possible shielding powers of the great mass of the Rock itself, but they need have no fear, since no noticeable effect of this type has been observed. Fading is sometimes very troublesome, but is no worse than in England when listening to stations at corresponding distances. Gibraltar has, however, one bugbear which is the curse of all listeners. On the isthmus connecting Gibraltar with the mainland is the powerful Naval transmitter which was the subject of an article in *World-Radio* dated November 13, 1931; and the signals from this station on 600 metres are so powerful that they can hardly be avoided even with the most selective receiver.

The fact that England is over 1,000 miles away means that great amplification must be used to ensure a strong signal from a British station; inevitably therefore, mush and atmospherics become a menace to one's enjoyment of the musical side of the programmes, and the proximity of the Sahara Desert does not mean good atmospheric conditions.

In the town it is difficult to obtain a receiver except by order, although a couple of shops may have a set or two in stock. Batteries and a few of the more common components can, however, be obtained fairly easily.

However, to anyone who queried whether it was worth while taking out a receiver I would say "Yes" every time, for just one thing, namely, the news, which is clearly receivable from England. If one knows that it takes four days for an English newspaper to reach Gibraltar, that the *Gibraltar Chronicle* only prints the briefest of cabled messages, then no wonder that in these times of trouble and strife throughout the world, when momentous news of interest to every listener may come at any time, that at six and nine o'clock every evening the owner of a radio receiver is very popular in Gibraltar. All the difficulties mentioned in this article have been garnered by one who has just paid a short visit to Gibraltar, and who is accustomed to the ideal reception conditions experienced by all who live in Great Britain. The real value of a receiver and its possibilities in this colony may best be judged from the fact that wireless sets are in common use, and that listening to the English stations is very popular, not only in Gibraltar among the English, but among the Spanish people themselves throughout the neighbouring provinces.

Finally, a brief word for the short-wave enthusiast may be added. Now that the station G5SW is in daily operation (except for Sundays), and the Empire Broadcasting Station is already under construction, there is no doubt that this would be the cheaper and simpler way of obtaining good reception in Gibraltar. A little more skill may be required to operate a short-wave receiver than one designed for the normal broadcasting wavelengths, but this skill should be soon acquired, and one will be well repaid for the trouble taken. In particular, it will be found that the Rock transmitter is no longer noticeable. To mention other short-wave stations which may be received here would be superfluous. *World-Radio* prints a long list every week, and a short-wave set owner will tell you: "With a short-wave receiver you will have the world, the broadcasting world, at your feet. Its possibilities are unlimited, no station is too far distant." G. M. B.

## Continental Announcers

7.—M. Douglas Pollock (Poste Parisien, Paris)  
(By our Paris Correspondent)

M DOUGLAS POLLOCK, the retiring announcer of the Poste Parisien, is not Scottish, as his name would imply. He is not even British, although he speaks English fluently and would pass for an Englishman anywhere. His ancestors came over to France five hundred years ago at the time of the Hundred Years' War, when the Scotch and French were allies, and helped the French against the English. This explains his Scottish name, and his education in England and the United States accounts for his fluent command of the language. He is also familiar with German, since a part of his education was obtained in Germany.

M. Pollock has been the announcer of Poste Parisien since the station opened on April 13, 1924, when the orchestra consisted of a piano and a cello only. Now, when he is about to pass his duties on to M. Marcel Laporte, the orchestra consists of thirty musicians. When the new Poste Parisien station is opened M. Pollock will take over the duties of Director of Programmes only, and M. Marcel Laporte ("Radiola"), will be the announcer of Poste Parisien.



## Letters to the Editor

Broadcasting "Good Nights"

To the Editor of WORLD-RADIO

SIR,—The delightful article in the current number of *World-Radio* does not include the varying forms of good nights and good-byes from the various Continental stations. Specially intimate is the German "Auf Wiederhören" (the counterpart of "Auf Wiedersehen") and the Berlin final reminder, so German in its orderliness, "Bitte, vergessen Sie nicht Ihre Antenne zu erden." An English announcer never thinks of saying "Don't forget to switch off your set." The Strasbourg double set of good nights, in French and German, includes Mesdemoiselles as well as Mesdames and Messieurs. When all is said and done, nothing is better than the English stations with the clear, friendly voice of the announcer saying so heartily "Good night," but it is pleasant to be wished a good night from far-off lands.

The Czechoslovak "Slow-Fox" when announcing dance tunes always amuses me.

Yours faithfully,

B. M. CAVE.

Parkstone, Dorset, April 3.

Broadcasting and World Unity.

To the Editor of WORLD-RADIO

SIR,—The last number of the *World-Radio* was of particular interest to me, as you gave details about music concerning my own country, also a picture of the "Fête des Vignerons" at Vevey—my native town. I have seen that fête only once as a spectator, having spent thirty-seven years of my life abroad.

Another article, the main points of which I have often discussed with friends—namely, "Broadcasting and World Unity"—was very interesting to me, especially this everlasting question of language. Why not adopt a language which the largest proportion of the population of the globe is already speaking, and which every well-educated business man, no matter where he lives, is supposed to know? You will guess that I am referring to the English language. I cannot think of any more convenient method. My friends often tell me that I get more pleasure out of wireless than they do (I am referring to my much-valued English friends), because I can enjoy a talk from Berlin, another from Paris, and so on. Very likely. Now supposing these talks were all in English, what would happen? How many would not understand? I think that it would be worth analysing. This brings me to the article entitled: "The Language of Radio." But why confined to radio? Every language has its own peculiar expressions, which cannot be translated literally, and I must confess that it is quite natural to me to hear: "Ici Radio Paris!" or "Südfunk-Südwestfunk!" or "Radio Roma-Napoli!" The same thing happens in other spheres and is not confined solely to radio. But it is quite possible that the explanations given are meant as a special guide for those not acquainted with the expressions referred to.

I always find *World-Radio* very interesting and educative.

Yours very truly,

J. C. BECK.

15, Doyle Gardens,  
Willesden, London, N.W. April 6.

# Touring the United States with a Portable

By RAYMOND M. BELL

THE writer spent last July and August on an 8,000-mile motor trip across the United States, touching twenty-three states and such cities as Chicago, Omaha, Salt Lake City, Los Angeles, and Nashville. He took on the trip a six-valve portable receiver, with which he kept in touch with the world. As the NBC and CBS each have eighty-five associated stations, the same programmes are heard in all parts of the country. Relays from other continents are now commonplace. These relays are generally broadcast from coast to coast. Good highways connect all parts of the United States, so that the 3,000-mile trip from the Atlantic seaboard to Los Angeles can be made with comparative ease. The tour brought within daylight range most of the stronger American stations, so that all parts of the country were heard.

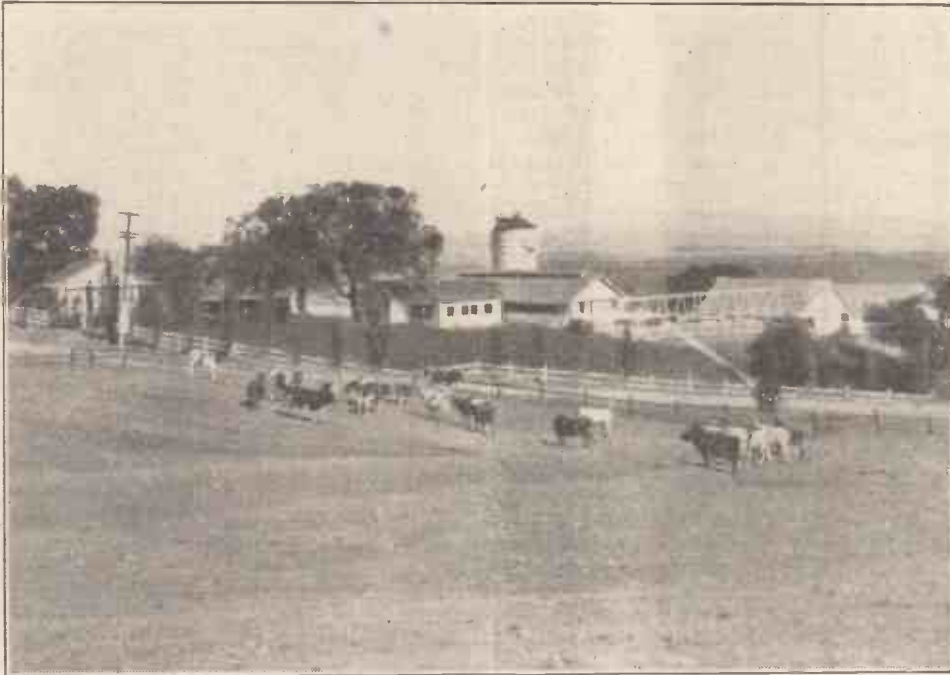
The start was made from Carlisle, Pennsylvania; a town laid out during the reign of King George II. It is in the eastern part of the state in Cumberland County, both town and county being named for the English counterpart. Reception here was mainly from New York, Washington, and Baltimore. Going westward through Pennsylvania the Allegheny mountains and plateaus were crossed—two to three thousand feet above sea level. In the oil-fields of north-western Pennsylvania KDKA gave the best reception. Crossing into Ohio, flat for the most part, WTAM Cleveland was a mainstay; while going still westward into the prairie country Chicago stations were picked up.

In Chicago the twenty-five local stations made it difficult to hear much else. Only New York with its forty-three locals has more transmitters. One of the interesting programmes heard along Lake Michigan, about thirty miles east of Chicago, was a relay from Poznań, which came through with tremendous volume *via* KYW. From a nearby sand dune the distant line of Chicago skyscrapers was clearly visible. In the city the two television stations were visited and transmissions observed to have excellent detail. These, with seven on the Atlantic coast, constitute the only American television stations on the air at present. Chicago uses forty-five lines per picture and fifteen pictures per second; New York sixty lines and twenty pictures.

Across the flat Illinois prairie farm country reception was mainly from Chicago. Crossing the Mississippi River into Iowa brought low hills and fine farming country. Stations in Kansas City, St. Louis, and all parts of Iowa were heard. In Omaha, Nebraska, several local stations provided ample entertainment. Nebraska is flat with a gradual approach in the west to the Rockies. For miles the highway follows the Union Pacific railroad and the transcontinental air line. In western Nebraska, at the edge of the cattle country, KOA Denver provided the best daylight reception; while WLW Cincinnati and KFI Los

Angeles were heard well at night. One morning at 9.30 a.m. M.S.T. (5.30 p.m. B.S.T.) a CBS relay from London was heard *via* KLZ Denver.

At Cheyenne, Wyoming, 6,000 feet above sea level, the Rocky Mountains were first encountered. There are wonderful colours in the rock strata. At Cheyenne Denver was heard best. Reception in the high western altitudes was always excellent, although the towns are few and the radio stations fewer. On one occasion in western Wyoming, while the sun was setting, the same NBC programme was heard from WFAA Dallas, KOA Denver, and KFI Los Angeles. Much barren desert country was encountered, except where irrigation had made beautiful green farms here and there. In Idaho KFI gave the best reception at night, although hundreds of miles away. In Utah, a beautiful state, Salt Lake City was the standby. Part



A typical dairy ranch on the Illinois prairie, where the reception of broadcasting is mainly from Chicago

of Nevada was crossed, a semi-arid state with an area greater than that of the United Kingdom, and with a population one-tenth that of Liverpool. Near Las Vegas KFI was heard well during the day.

### Seventeen Local Transmitters

The Rockies were left behind, and the California desert and mountains crossed into the beautiful Pacific coast city of Los Angeles, with a million and a half inhabitants. Ten days were hardly sufficient to see the many interesting sights. The many orange groves and palm trees provided unusual scenery. Hollywood, a section of Los Angeles, was visited, of course. The seventeen local broadcasters, several of which are on the air twenty-four hours daily, made reception of any other cities impossible and unnecessary. A number of international relays from abroad were heard from local stations. On one occasion, while in the Mexican and Japanese section of the city, the street resounded with a speech from Berlin. On another occasion at 1.30 p.m. P.S.T. (10.30 p.m. B.S.T.) Jack Payne and his B.B.C. Orchestra were heard through an NBC relay. The quality and volume could hardly have been better in London. The nine hours difference in time

made London seem a long distance from Los Angeles.

Driving east from Los Angeles reception of KFI was still dependable in the mountains of Arizona, even at the rim of the Grand Canyon, a gorge one mile deep cut in the earth by the Colorado River. Arizona has a clear atmosphere and lots of sunshine. New Mexico, with cliff dwellings, Indian villages, and Mexican towns, brought many novel sights. In Albuquerque KFI and the local KGGM were heard. The Spanish language was much in evidence, the local station announcing in English and Spanish. Even to-day Santa Fé is typically Spanish. Near the Texas border KOA Denver and WFAA Dallas and WOAI San Antonio were heard easily. In Texas the plains were reached once more, stretching flat as far as the eye could see. The State of Texas is considerably larger in area than the Republic of France. It has some fine broadcasters.

Oklahoma, with cotton fields and oil derricks, is a more recently developed state. Here Oklahoma City, Dallas, and Kansas City were heard. Crossing into the Missouri Ozarks country KMOX St. Louis and the Chicago

stations were mainstays. Ferrying the Mississippi River brought Kentucky, a part of the South. Here stations from New York to Texas were heard well. Within sound of the Ohio River steamboat whistles one of the programmes heard was dance music from Montreal *via* WENR Chicago. Driving into Nashville one sees many tobacco fields among the hills of Kentucky and Tennessee. About fifteen miles from Nashville an interesting test was made. KFI (50 kW) Los Angeles, 640 kc/s, 1,775 miles west, and WFAA (50 kW) New York, 660 kc/s, 775 miles east, were heard easily on the speaker of the portable with WSM (5 kW) Nashville, 650 kc/s, near by.

Crossing the mountains of eastern Tennessee into the valleys of Virginia, with many fine mansions, reception was mostly eastern stations with WLW loudest. Historic Virginia has many places of interest dating back as far as the days of King James I. Back in Pennsylvania KFI Los Angeles was still heard with good volume on the portable. On the same set a B.B.C. programme by the Wireless Military Band was heard over the NBC network at 2 p.m. E.S.T. Also one morning at 7 a.m. E.S.T. (9 p.m. in Japan) the networks relayed the toasts at a banquet given to Colonel Lindbergh in Tokyo.

### Three Star Stations

A summary of reception across the continent lists three stations as noteworthy performers: KFI Los Angeles, WFAA Dallas, and WLW Cincinnati. All were heard at fine volume in daylight at a distance of 300 miles and at night at a distance of over 1,000 miles. KCA Denver was another dependable station. KSL Salt Lake City and KTAR Phoenix were heard well in the Rocky Mountain district. There were generally one or more stations within daylight range and dozens at night. The best reception was from the following stations (all on 50 kW): KFI, WFAA, WLW, KDKA, KMOX, WOAI, WENR, WTAM—a clear case for high power for good reception.

## From the Swiss Alps

A Review of the March European Programmes  
By "YODELLER"

THE weather during March has been much the same in Switzerland as it has been—according to the Daventry weather reports—in England. We have had fine days, cold days, hot days, fogs, and two heavy falls of snow. Most of us will be glad when the next week or two have passed and the spring really comes to the mountain, changing the brown earth to a gorgeous green, and bringing with it the wonderful galaxy of wild flowers which grow so profusely in these altitudes. It is curious how closely the weather follows the reports from Daventry—in fact, the forecasts we get from England can nearly always be relied upon as an indication of what will happen out here some twenty-four hours later. The only difference is that the changes are not quite so severe.

Wireless programmes for the month have been excellent, and my bag of worth-while items has been well up to the best of the mid-winter standards.

**Tuesday, March 1.**—Started the month well by listening to a popular concert given by the Frankfurt Orchestral Society. I liked the tenor, Franz Völker's rendering of selections from Massenet's *Manon*, also the suite from Tchaikovsky's *Sleeping Beauty* by the orchestra. I took this programme from Mühlacker.

**Thursday, 3rd.**—In the afternoon the Swiss stations were relaying speeches by the Chinese and Japanese delegates from the League of Nations building, Geneva. This proved to be a most interesting broadcast. Incidentally, had I not heard the announcement that it was Mr. Yen speaking, I should have been sure it was an Englishman at the microphone, so perfect was the Chinese Minister's English.

**Saturday, 5th.**—Picked up an excellent interpretation of Puccini's *Girl of the Golden West* from Rome, a work which I hear very frequently from the Italian stations.

**Monday, 7th.**—As is my general custom, switched on Frankfurt for its Monday evening concert, the eighth of the present series, from the local Saalbau. These concerts are, I think, among the best things the "ether" gives us, and on this occasion I listened enthralled to Mozart's Concerto for Violin and Orchestra, No. 80. Szigeti's playing was too wonderful for any words of mine to describe.

**Wednesday, 9th.**—Spent the evening at the Gewandhaus, Leipzig, listening to a special concert, conducted by Dr. Wilhelm Furtwängler. This was one of the best concerts I have heard, and included the Overture to Schubert's *Rosamunde*, the same composer's "Unfinished" Symphony and Beethoven's Seventh.

**Friday, 11th.**—Listened to the Ravel concert, conducted by the composer himself, from Warsaw. Marguerite Long played the pianoforte concerto in masterly fashion, but I was very disappointed at not hearing the famous "Bolero," as advertised.

**Saturday, 12th.**—Heard the funeral oration on Monsieur Briand, from Paris, and found this being relayed by a number of Continental transmitters.

**Monday 14th.**—Listened to a performance of Beethoven's *Missa Solennis*, from the High School of Music, Budapest. The combination of organ, choir, and orchestra was fine, and the "Sanctus" was particularly impressive.

**Wednesday, 16th.**—Began the evening at Stuttgart by listening to Haydn's Symphony No. 5 in C Minor, the London Symphony, after which I changed over to the London Regional for the second broadcast of "Bill's Grand National." I liked this latter very much, as did my wife, and we think it one of the best things the B.B.C. has ever put over. Two of my

English friends have since informed me that they listened to both performances of this playlet—from the London National, and afterwards from the London Regional. So it was obviously appreciated in Switzerland.

**Friday, 18th.**—Heard the Grand National twice; in the afternoon, then again in the evening News Bulletin, as recorded by the Blattnerphone process.

**Tuesday, 22nd.**—Spent an hour at Leipzig listening to a portion of Goethe's *Faust*, after which I turned to Vienna, hoping to hear the advertised broadcast of Beethoven's Seventh Symphony. Instead, I found the Austrian station putting out a transmission of the same composer's Eighth, rendered more brilliantly than I ever remember having heard it.

**Saturday, 26th.**—Dropped in on Brussels (No. 1) for the Beethoven Commemoration Concert, and thoroughly enjoyed the Belgian interpretation of the Fifth Concerto for Pianoforte and Orchestra, and the famous "Prometheus" Overture.

**Tuesday, 29th.**—For some reason, probably an unconscious prejudice, I have never listened to a Ridgeway Parade. But this evening I could see nothing in the Continental programmes which appealed to my taste, so tuned in London, and, I must freely admit, thoroughly enjoyed the "Parade" which followed. It is many a long day since I have heard some of the songs, and the old-fashioned melodies came through very charmingly, I thought. I don't know what studio was being used, but its acoustical properties were ideal for this type of performance.

**Wednesday, 30th.**—Switched on Bucharest for a pianoforte recital, by a pianist whose name I find it utterly impossible to reproduce in print (I refer to him mentally as Mr. Wheelbarrow), but whose workmanship was first class. Mr. Wheelbarrow's interpretation of Beethoven's Sonata No. 2, Opus 31, and Chopin's First Impromptu in A Flat Major, together with the same composer's Fifth Polonaise in F Sharp Minor, was deserving of the highest praise and comes as a fitting termination to these notes.

**Summary.**—Reception has been excellent throughout the month, although hardly as strong as that of the full winter season. Morse has been very troublesome on the wavelength utilised by Budapest, and once or twice it has been so powerful as to wipe out completely the programme of the Hungarian transmitter.

On Thursday, March 24, a curious coincidence happened. While listening to the London Regional relaying a selection from Weber's *Oberon*, played by the Metropolitan Works Band, I inadvertently moved my dials and, much to my surprise, heard the same piece coming from another station. At first I thought I had fluked the London National, but on consulting my programme, saw that this could not be so, as the National was broadcasting something quite different. I switched back to the Regional and, note by note, it seemed a continuance of the same music. Going back to the strange station, I at last discovered that it was the National's neighbour, Leipzig, which by chance happened to be doing the same *Oberon* selection. I wonder if any reader has ever heard two so widely separated stations broadcasting in perfect time the same item?

that, and more than one of his works embodies its rhythmic vigour. Kurt Weill and Hans Eisler in Germany, Constant Lambert and Victor Hely-Hutchinson in England, as well as many another earnest explorer of new paths in Music's domain, are all acknowledging that Jazz means something more to them than a mere jingle to set the feet of youth a-dancing: they find in it one of the truest expressions of the spirit of our time, seeking to embody in their own work all that is most truly alive in its vivid strength.

C. M. D.

## The Influence of Jazz

MUCH breath and much ink have been spent of late in warning Jazz to keep off Music's sacred precincts. And it has all been wasted; Jazz has never heeded the warnings, nor has it ever desired to trespass. The fences are too high, and the forbidden domain is not inviting: Music and Jazz have nothing in common save mutual contempt. But if there has been no trespass, there has been something very like poaching. One or two tunes have been caught as they soared over the boundary, and have been brutally ill-treated, battered almost beyond recognition. Music has complained bitterly, but the tunes themselves have been no whit the worse; it is a weakly tune that cannot hold its head serene above the worst that Jazz could do to it.

Now, within the last decade or so, Music has begun to retaliate. Its devotees have grown tired of the well-trod paths their fathers knew and tended; they have gone off on all the side-tracks they could find, proclaiming themselves pioneers who could lead their fellows to parts of the domain more beautiful than any they had known.

One day, not so very long ago, one of these came unexpectedly on a piece of firm and kindly turf, with a sense of being braced by something tonic. What it was he did not guess at once: gradually, and at first a little grudgingly, did he realise that it was a piece of Jazz which had flown over the boundary hedge.

He and his fellow-composers set themselves to look up the antecedents of this Jazz, and found that, like Saint Patrick, it came of decent people—American negro missions and American military bands, with a trace of comic opera in its make-up. The excesses into which it had been led, they saw, were no fault of its own, nor were its dreadful manners any index of its real heart and character. Springing as it did from American rag-time, it is pre-War in its origin, many decades older than that. But it was a war-weary world which welcomed it, turning to its vivid stimulus as a sick man welcomes tonic strength. And to compound the tonic, it seized for its ingredients on the strongest tone-qualities at hand—trumpet, trombone, and saxophone. That the prescription was made up so strongly as to be intoxicating rather than wholesomely vigorous was almost inevitable. In the very same way, the rhythms which it chose were boldly elemental to the verge of crudeness. And in the dancing-halls of America and Europe the blatancy and crudeness grew more blatant and more crude, until the one resemblance with music which remained was rhythm—stark, brutal rhythm.

Still, it had a vivid sense of brightness, of optimism, and that is what the serious musician of to-day is hailing as the one element left in our music which is born of impulse rather than of thought, which is in accord with mankind's pulsing heart rather than his learned study of ways and means and tendencies. Louis Gruenberg, of New York, was among the first to recognise the domination which rhythm was assuming over music, and the way in which that sway might be exercised for good. How much in earnest he was, his *Daniel Jazz* made clear to the rest of the world when it was heard at Venice in 1925; it was chosen by the Jury of the International Society for Contemporary Music as a representative example of what youth was doing, and it made an impression which almost no other work at that festival availed to do. It is no mere adoption of Jazz peculiarities: it is a serious work by one who has made himself at home in the best features of the idiom, until he expresses himself fluently and easily in it. Darius Milhaud, one of the most vital composers who are influencing the course of music in France, had confessed his interest in Jazz some years before

(Continued at the foot of column 2)

# Dominion and Foreign Broadcasting Intelligence

## Special Easter Programmes in U.S.A.

(From our Washington Correspondent)

Easter in America was celebrated by many broadcasts of religious services and sacred music. Its universal aspect was emphasised by special programmes from Vatican City, one of which was spoiled by a confusion of switches in Rome. Listeners who expected to hear a short-wave re-broadcast of sacred music from the North American College in Rome were mystified when the unmistakable rhythm of a jazz orchestra was heard.

Cardinal William O'Connell, Archbishop of Boston, introduced the broadcast. An announcer then said that station HVJ, Vatican City, would be heard. Instead, a programme of syncopated dance music followed. This lasted nearly ten minutes, when announcement was made from the National Broadcasting Company studios in New York that "owing to circumstances over which we have no control" the attempt to broadcast the Italian choir would have to be abandoned. Later it was stated that the confusion resulted from failure of the Italian radio engineers to switch from their local to the international programme at the right time. The director of the E.I.A.R. cabled his regrets to the NBC.

But apart from this disappointment, the American listener had ample Easter fare. It is a beautiful custom in America to hold sunrise services on Easter Sunday, usually in the open, facing East. Two of these services were nationally broadcast, one from the Arlington National Cemetery outside Washington, where the Unknown Soldier is buried, and the other from the Hollywood Bowl, in California. The latter service is an impressive spectacle with usually more than 100,000 people assembled, and a huge choir led by the Hollywood Symphony Orchestra. The service begins as the first bars of sunlight come up out of the East.

Easter programmes were also received from Buenos Aires and from the Wiener Sängerknaben, a famous Viennese choir founded by the Emperor Max of Austria in 1498 for the celebration of Masses in the Hofburg Chapel.

## AUSTRALIA

Control of Broadcasting

(From our Australian Correspondent)

The Commonwealth Government has completed its consideration of the Bill to provide for the control of broadcasting and it is expected that the measure will be presented to Parliament within a week from the time of sending this note. From information available the Bill will not differ greatly from the Bill prepared by the Scullin (Labour) Government which did not reach the House.

## FRANCE

(From our Paris Correspondent)

Election Broadcasts

Although it is announced that there will be no election broadcasts, on Wednesday, March 30, M. Tardieu delivered an important speech at the political banquet held at the Salle Bullier which was broadcast by Paris PTT and the State stations. M. Herriot, ex-Premier of France and Mayor of Lyons, replied to this speech on Tuesday, April 5, and M. Tardieu had given permission for this reply to be broadcast. All propaganda of a political character is entirely forbidden to wireless stations as from April 8 to May 8.

Poste Parisien

The new Poste Parisien station, which, it is anticipated, will be opened on April 25, promises to be one of the best French stations. The tests that are taking place at the present moment

(generally in the daytime between noon and 2 p.m.—11 a.m. to 1 p.m. G.M.T.) are heard very satisfactorily in the Paris district, clear of interference. The new station announces "Ici Nouveau Poste Parisien."

### Quotas

The quotas established for the three months April to June, 1932, in continuance of the policy of restricting imports into France are as follows for wireless goods:—

Valves	
Holland	99 Quintals per month
Great Britain	98 " " "
United States	18 " " "
Receivers and Components	
Holland	2,154 Quintals per month
Germany	1,021 " " "
United States	200 " " "
Great Britain	148 " " "
Other Countries	134 " " "

(A quintal is nearly two cwts.)

The quota for January to March was given in *World-Radio* on the 29th January last.

### International Forum of Broadcasting

Mr. Ira Nelson Morris, formerly United States Minister to Sweden, described a plan for an international forum of broadcasting at a luncheon of the Anglo-American Press Association of Paris held in Paris last week. International talks will be exchanged at very frequent intervals, those from France to America being in English and those from America to France in French, while a similar plan will be adopted for other countries. Political talks will be eschewed. Committees will be formed, and among the names of prominent persons who will act on these committees are to be found those of Dr. Nicholas Murray Butler, Miss Jane Addams, Marshal Lyautey, Admiral Lacaze, the Duc de Broglie, M. Paul Painlevé (former Prime Minister of France), M. J. J. Jusserand (former French Ambassador to the United States), M. Moreau (former Governor of the Bank of France), and others.

## GERMANY

A New Broadcasting House for East Prussia

It is now announced that the Director of Ostmarken Rundfunk, A.G. (Orag), has succeeded (after exceptionally long and difficult negotiations) in arranging for the building of a new Königsberg Broadcasting House. It is hoped to set the work on foot so soon that by the late autumn of this year the house will be ready for occupation. The plans will, in all probability, be entrusted to a Königsberg architect of the most modern tendencies, one to whom the town already owes some of its most important buildings. For some time there has been no doubt of the need for such a new building. Till now, many of the plays have had to take place in the hall of a neighbouring Meeting House, where the players had to speak between plush curtains to achieve a moderately-satisfactory acoustic transmission. All the contracts are to be placed in the Province, and the site is to be put at the disposal of the broadcasting authorities by the town on a rental basis, so that there is no question of a capital outlay.

Further Privileges for Unemployed Listeners

(From a Correspondent)

The German Reichspost have again simplified the special terms for unemployed listeners. Formerly unemployed persons were granted licences after having been paying listeners for at least six consecutive months before asking for exemption. As from April 1 onwards, the Reichspost have allowed the necessity for the sequence to fall, so that every unemployed listener who has owned a licence for a total of six months

since January 1, 1931, will be exempt from paying licence fees. The Reichspost have even gone the length of counting licences owned by members of the same family living together. So that if an unemployed person's brother owned a set and paid a licence for two months, his sister for another two months, and himself for a further two months, at any time between January 1, 1931 and April 1, 1932, the required total of six months is considered as attained. It will be remembered that the total number of German listeners passed the four million mark on March 1, but of these non-paying listeners amounted to 330,000, which number will now probably increase very greatly.

### German Broadcasts for Schools

The number of German schools equipped for receiving special school broadcasts increased from 13,000 in 1930 to 20,000 in 1931, so that well over a third of the total 55,000 German schools can listen to broadcast programmes. Two thousand special programmes were broadcast, as follows:—

Musical programmes, 24 per cent; German folklore, 22 per cent; geography, 10 per cent; historical and economic broadcasts, 15 per cent; botany, science, etc., 12 per cent; foreign languages, 17 per cent.

### Famous Orchestras Combine

The two big orchestras in Berlin, the Berliner Symphonie Orchester and the Philharmonisches Orchester, have amalgamated under the latter title, the town of Berlin being unable to continue to pay the subsidy of 200,000 marks. The Broadcasting Company have undertaken to pay a fee of 70,000 marks per annum to the orchestra with the right (but not the obligation) to relay any concert by the orchestra.

### Programme News

Hagenbeck's famous Zoo will be twenty-five years old this year, and the Norag transmitters have arranged outside broadcasts and talks on the subject of "Twenty-five Years at Stellingen" (Stellingen is the small place outside Hamburg where the Zoo is situated), to take place regularly every two weeks during the summer. The first broadcast will be on Sunday, April 17.

## ITALY

The Opening of Florence Station

(From our Turin Correspondent)

After the reconstruction of its aerial masts, broken during a heavy gale, the Florence station began about a month ago the last stage of its experimental transmissions, which have been found to give good results. During these transmissions the station has joined the Northern group of Italian transmitters and has broadcast the programme of that group. The official inauguration is due to take place on Thursday next, April 21, the anniversary of the foundation of the City of Rome. The wavelength of Florence is 500.8 metres (599 kc/s), which was that formerly used by Milan. A short technical description of the station will be found in our Technical Section.

## YUGOSLAVIA

Competition for National Composers

(From a Correspondent)

The Zagreb radio station authorities announce a competition for Yugoslav composers. They wish to obtain really good Yugoslav composition for pianoforte, as very few exist. One piece is to be for piano and violin and is to last not less than fifteen minutes, the second composition is to be for solo pianoforte, minimum ten minutes. The first prize is 2,000 dinars, and the prize for the best pianoforte solo 1,000 dinars.

# TECHNICAL SECTION

## Broadcasting House

*The second of a series of authoritative articles describing the building, studios and technical equipment of the new B.B.C. Headquarters*

### 2.—Air Conditioning and Heating Plants

IT has already been explained that the construction and acoustic treatment renders the studios well insulated against heat. Hence, if a large amount of heat from occupants and illumination is liberated in a studio, its temperature will rise rapidly unless some precautions are taken to prevent its doing so. Furthermore, since the occupants continually give off moisture, the humidity of the air will also rise. The only way to maintain comfortable and healthy atmospheric conditions in the broadcast studio (despite its construction, considerable number of occupants and powerful illumination) is by means of an artificial supply of air, the temperature, humidity and purity of which are controlled. The problem not only involves adequate means for controlling the temperature, humidity and purity of the air supply, but also its introduction into, and extraction from, the studios without noise.

The air conditioning apparatus inevitably comprises fans for supplying and extracting the air and other moving machinery, which, no matter what precautions are taken, generate some noise. Also, all the studios to be ventilated must be connected to such apparatus by means of ducts, and, since it is impracticable to have individual air conditioning plants for each studio, it is unavoidable that the ducting system should effect sound communication between studios. One has, therefore, not only to contend with noise generated by the air conditioning apparatus itself, but also with the question of mutual interference, between studios.

The degree of silence necessary for good broadcasting is seven decibels above the threshold of hearing. It is difficult to appreciate how quiet such a "sound level" is without having practical experience in the measurement of sound intensity. However, the non-expert can perhaps get some idea of this degree of silence, referred to as 7 db., by imagining

the sound created by the rustling of leaves set up by a gentle breeze in; say, a perfectly quiet spot on a summer's night.

It will be understood that the problem of duct design and sound elimination are most complicated when it is remembered, as has already been stated, that for practical reasons several studios have to be served by one air conditioning plant, and therefore are interconnected with ducts, and that in one of these studios a brass band is playing, while from another a violin solo or a play is being broadcast.

At Broadcasting House there are four air conditioning plants, serving twenty-two studios, and in addition a large number of smaller rooms, such as listening and announcing rooms.

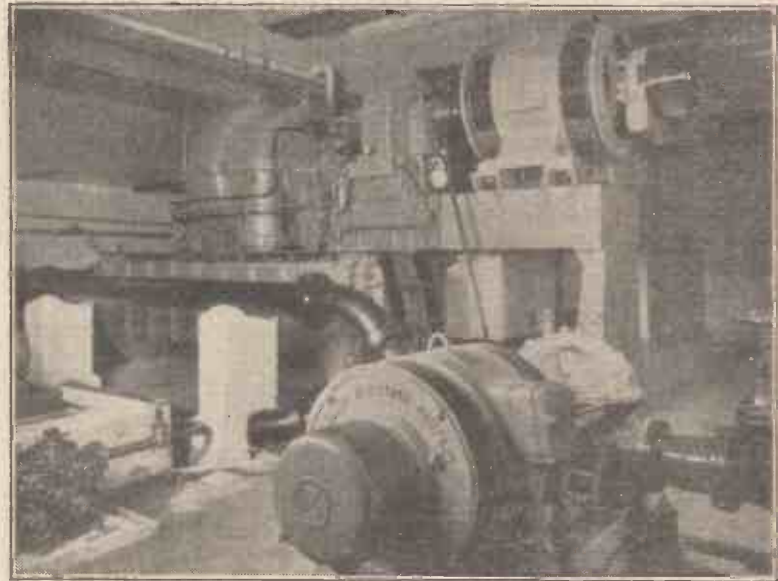
Owing to their heavy construction, the heating and cooling of the studios is not determined by the weather, but entirely by the number of occupants and illuminations. As soon as the temperature has been raised to a comfortable degree, the presence of the artists and the illumination necessitate continuous cooling. However, since all the studios served by one particular plant may not be occupied at the same time, or at least only partly occupied, it will be obvious that individual control of the air supply to each studio is essential. In practice the temperature in each studio is automatically controlled by means of a thermostat, which regulates both the quantity of air supplied and its temperature, in accordance with the occupancy and illumination of the studio.

The function of the air conditioning apparatus is to take the required amount of fresh air from outside and heat it, cool it, reduce or increase its moisture content, as may be necessary to bring it within the range of standard conditions of temperature and humidity necessary for the satisfactory air conditioning of the studios.

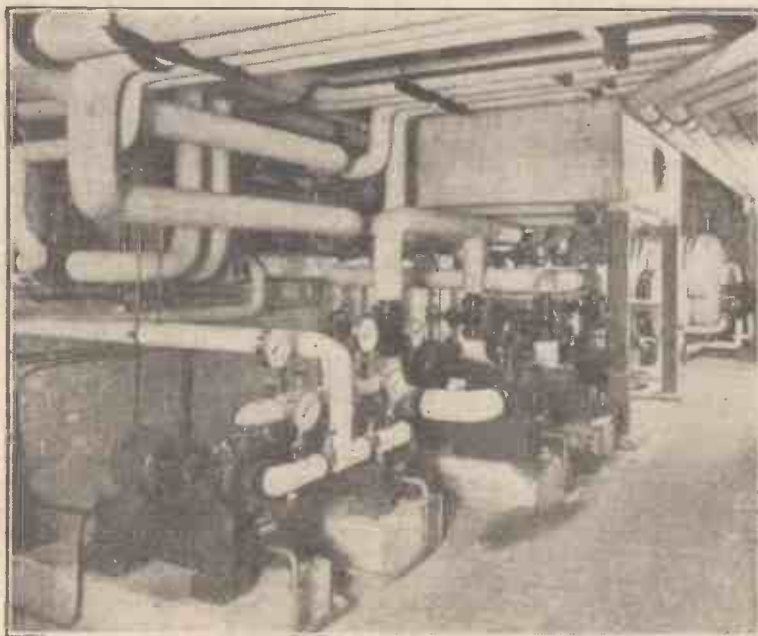
In winter generally it is necessary to increase both the temperature

and the humidity of the fresh air, while in summer generally both require to be reduced.

Since it is intended to maintain in the studios on the hottest summer's day a temperature of 72° F., when the temperature outside may rise to 90° F., it will be obvious that some means of cooling the fresh air drawn into the air conditioning apparatus is necessary. This cooling is effected by using refrigeration, which is distributed to the various plants in the form of cold water. Briefly, this cold water is brought, by spraying, into intimate contact with the air, with the result that the air temperature is reduced. Subsequent treatment of this cold, saturated air results in it being delivered to the studios at pre-determined temperature and humidity, the latter of which will generally be below that of the outside air in summer time. The refrigerated water, having per-



Refrigerating equipment for Studio Air Conditioning Plant



A corner of the Boiler House—three floors below street level

formed its function in the air conditioning plant, is returned to the central refrigerating plant, where it is re-cooled and again circulated.

The apparatus comprising each air conditioning plant includes a supply and extract fan, a dehumidifier (and humidifier), steam heaters and automatically controlled dampers.

In the dehumidifier air is cooled and its moisture content reduced by precipitation in summer, while in winter this apparatus can be converted into a humidifier. At all times of the year the dehumidifier acts as a washer and filter, removing practically the whole of the dust and dirt in the atmospheric air.

The heater batteries warm the air in winter, while the automatically controlled dampers regulate the volume, according to the requirements of the various studios.

In every instance the fresh air supply is taken from shafts running up through the building to points well above street level, so arranged that the minimum amount of chimney smoke from the surrounding property is drawn in. Thus, the cleanest air naturally available is utilised in order that the cleansing and the purifying load on the air conditioning plants may be as small as possible.

In order to reduce the noise generated by the air conditioning plants to a minimum, all moving parts, such as fans, motors and pumps, are specially designed to run silently and are furthermore supported on special anti-vibration foundations. In this way not



only is the noise communicated to the ducting reduced to a minimum, but any vibrations set up by the moving parts are prevented from distributing themselves via the building structure.

As will be described later, the studios are all built within a central tower which extends from sub-basement level to the roof. The various air conditioning plants, refrigerating machinery and boiler house are arranged at sub-basement level outside the central tower. This necessary arrangement of the apparatus causes the various components of each plant to be somewhat scattered, and, therefore, to facilitate the starting up and shutting down of the various plants, a remote control panel with push button and indicating lamps is installed, whereby the engineer-in-charge can

space in the sub-basement around the central tower which has no direct communication with the outside atmosphere. These rooms and spaces are ventilated and warmed in winter and ventilated and cooled in summer by means of two evaporative cooling plants installed in the sub-basement.

These plants are somewhat simpler than the dehumidifying plants used in connexion with the studios, since they are not designed to make use of refrigeration. They are somewhat limited in their capacity to cool and dehumidify during the summer, although in the winter they give results equal to those produced by the studio plants. Mechanically they comprise supply fans, humidifiers, pumps, heater batteries, and automatic control dampers, the extract fans being, in this case, arranged at roof level and not in the sub-basement.

The plants are automatically controlled, and between them serve all rooms and spaces which are either below street level or within the central tower, but not served from any of the four studio plants, individual rooms having automatic temperature control as in the case of the studios.

The ducting systems, however, are of a simpler nature, since the question of noise is relatively unimportant: that is to say, good commercial silence is the criterion and not the super silence necessary in the studios.

In the central tower and below street level there are many lavatories and cloakrooms which have no direct communication

with the outside atmosphere. Air is extracted from all these rooms to vertical shafts running through the building which connect ultimately to extract fans on the roof. There are, in addition, extract fans associated with reverberation rooms and other spaces in the building, the total number amounting to eleven in all.

These extract fans, and also those associated with the evaporative water coolers, are very specially designed, and rest on special foundations in order that no vibration may be communicated to the roof and hence to the upper studios.

To facilitate control, all these fans can be started and stopped either locally on the roof or from the remote control panel already mentioned, installed in the sub-basement. Thus the engineer-in-charge can start or stop the water cooler fans or any extract fan at roof level from the central position, where he also has control of all the other plants.

On all floors above the ground floor the central tower is sur-

rounded with offices, all of which have ample windows giving light and air. These offices, stairways and corridors throughout the building are warmed in winter by means of radiators.

The radiator heating is on the accelerated hot-water system, in connexion with which two steam calorifiers are installed in the boiler house in the sub-basement.

In addition to the radiator heating, an up-to-date system of hot-water service to all lavatories throughout the building has been installed.

For supplying steam to the air conditioning plants the hot-water heating calorifiers, the hot-water service calorifiers and the restaurant kitchen two oil-fired boilers are used. Associated with the boilers there is the most up-to-date equipment of auxiliaries, the whole forming one of the most modern and efficient steam-raising and heat-distributing installations in any public building in London.

The capacity and extent of this remarkable air conditioning and ventilating installation, with its auxiliaries, can be gauged from the following figures:

The refrigerating machine used for cooling the studios in summer has a capacity equivalent to the freezing of 200 tons of water per day.

The total power consumption, when the whole installation is working at full capacity, exceeds 450 horse-power.

The total quantity of air handled by all the fans amounts to 260 tons per hour.

The various air conditioning, ventilating and extract plants serve 180 individual rooms.

There are more than 100 tons of steel ducting distributed throughout the building, and many miles of piping conveying hot and cold water, and steam.

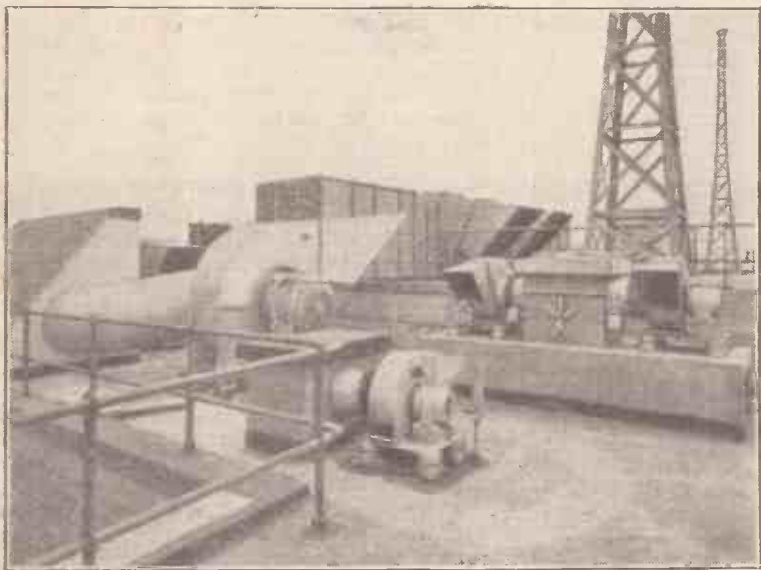
The steam-raising equipment is capable of raising 14,000 lb. of steam per hour.

There are 840 radiators distributed throughout the building.

In connexion with the hot-water service system there is a storage capacity of 1,000 gallons available to meet the sudden demands which occur at lunch time and when the office is closed for the day.

The fuel oil storage tanks have a capacity of 70 tons, sufficient to keep the boiler plant going for several weeks under winter conditions.

The third article of this series will deal with the **ELECTRICAL PLANT AND POWER SUPPLY.**



General Extract Fans and Water Coolers on the roof of Broadcasting House

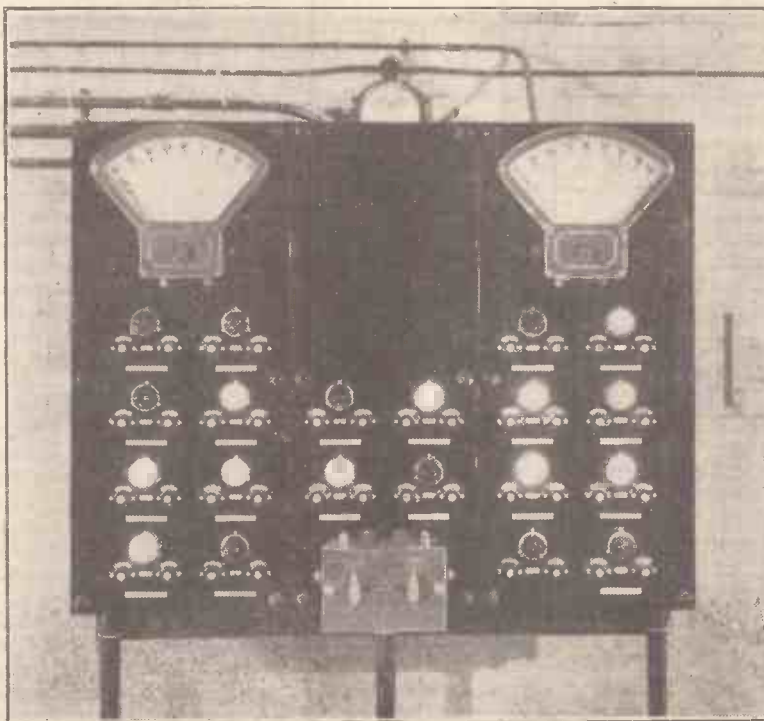
shut down or start up any air conditioning plant from this central point. On the remote control panel large dial-indicating thermometers are arranged to indicate the outside temperature and humidity.

When a refrigerating machine having a considerable capacity is installed in a public building in a city, the first problem that arises is that of providing sufficient circulating water for the condenser. It is usually impossible to take water from the mains on account of its high cost and very often the difficulty of disposing of a large quantity to the sewer. Cooling towers are nearly always impracticable owing to the large roof area they occupy, their enormous weight, the wind load they add to the structure, and their unsightliness.

At Broadcasting House, the difficulty has been got over by the installation of evaporative water coolers, which are extremely compact, forced circulation type coolers requiring but a fraction of the space and adding a negligible weight and windage compared with the ordinary cooling tower.

These water coolers have a further advantage, in so far as they are perfectly independent of the wind, and the temperature of the water obtainable under any given weather conditions can be accurately foretold.

The apparatus described in the foregoing is concerned exclusively with the air conditioning and ventilating of the studios and rooms immediately associated with broadcasting, such as listening and silence rooms, etc. There are many other rooms only indirectly concerned with broadcasting or connected with the administration which are below street-level or actually within the central tower, so that they have no means of natural ventilation. There is also the whole of the machinery



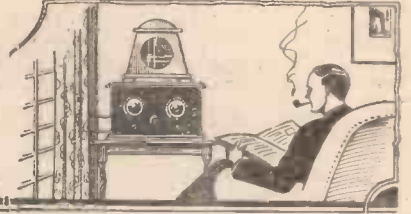
From this control panel any Air Conditioning Plant can be started or stopped



# The Elements of Wireless

(PART 10)

By RALPH STRANGER and E. REDPATH



## ELECTRIC FIELDS

In studying electricity and magnetism it is necessary to take into consideration not only the material in which a certain phenomenon takes place, but also the space in close proximity to the material. It has been established that the ether surrounding a magnet is strained, and this strain is called the magnetic field. On investigation it has been found that there are lines of strain, some of which are straight and some curved, which are called the "lines of force" of the magnetic field. The intensity of the magnetic field is assessed by the number of lines of force existing per square centimetre or per square inch. The more lines of force, the more intense is the field.

There is also another kind of strain in the ether surrounding a charged conductor. This strain is called the *electric field*, and it also consists of a number of lines of force. Just as it is possible to produce a visible picture of the magnetic field with the help of iron filings, so it is possible to discover the direction of the lines of force of an electric field with the help of small pieces of straw pivoted at the centre. A number of such pivoted straws placed near a charged conductor will have electronic tides induced in them, and will place themselves so as to coincide with the direction of the lines of force of the electric field.

The electric field surrounding a charged conductor is due to the electric fields around each electron and proton and is the sum total of them all. Imagine an electron and a proton isolated in space, far away from any other electrons and protons. In this case the ether surrounding each particle is strained in the manner shown in Fig. 28. If the two particles are near to each other, lines of force start from the proton, extend and terminate on the electron (see Fig. 29). This is a balanced field, there are no loose ends of lines of force, and if an atom is in its neutral state—i.e., having as many electrons as protons—no electric field will exist outside the atom. In an electrified atom which has, say, two electrons in deficit, lines of force from two unbalanced protons will extend into space, beyond the atom, and will appear as an external electric field.

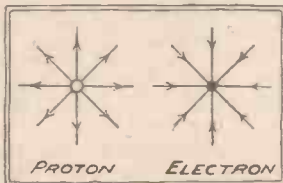


Fig. 28

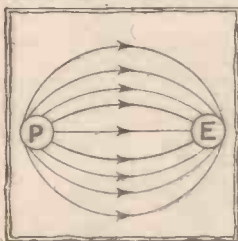


Fig. 29

When a charged body has a surplus of electrons or a preponderance of protons (a deficit of electrons) it will have a well-pronounced electric field around it. There is a close connexion between a magnetic and an electric field and this will become apparent when the nature of an electro-magnetic wave is explained later. In the meantime, it is important to study the electric field between two charged conductors such as the plates of a condenser. An electrical condenser in its simplest form consists of two metal plates separated by some insulating substance which is called the *dielectric*. Since dry air is an insulating substance, it is possible to have a very simple form of a condenser consisting of two metal plates

placed close together (but not touching) the space between being occupied by air.

Suppose two such plates are joined to the terminals of a battery, one plate being connected to the negative terminal and the other plate to the positive terminal. Each plate will share the potential of the terminal of the battery to which it is joined. If the cell is now removed, one plate of the condenser will remain rich in electrons and the other plate poor in electrons, the cell having robbed one plate of some of its electrons and transferred them to the other plate. Thus, what one plate is lacking in electrons the other has in excess. In other words, the two plates are charged electrically and accordingly there will exist an electric field, the lines of force of which will stretch between the two plates as shown in Fig. 30.

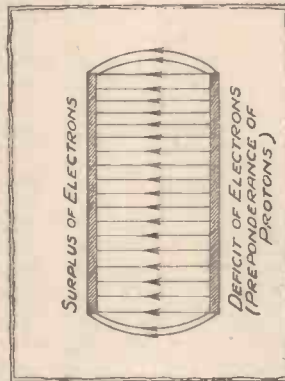


Fig. 30

## CONDENSERS

The capacity of a condenser consisting of only two plates is the ability of one plate to lose or gain a certain number of electrons to the advantage or at the expense of the other. It is clear, therefore, that the capacity of a condenser depends, in the first instance, on the number of surface atoms of one plate, or, in other words, on the area of that plate. The larger the area of the condenser plate the more surface atoms come into play, and the more electrons the plate as a whole can lose or gain.

But the surface area of a condenser plate is not the only factor that determines its capacity. There are two other factors which contribute to a certain extent towards the final capacity of the condenser. Electric induction or "electronic tide" increases as the distance between the influencing charged body and the neutral body is reduced. It also depends on the medium occupying the space between the two bodies (the dielectric).

It has been established that a positively-charged body will attract the electrons of a neutral body to the nearer end, leaving the other end poor in electrons. If this other end is now connected to earth, electrons will flow from earth to the body, compensating the deficit. The electrons which have been attracted towards the positively-charged body are bound to stay at that end as long as the attracting body is there. Having evacuated the opposite end they have increased its ability to acquire more electrons, so that a *bound charge* increases the capacity of the body on which it is found.

When there is a difference of potential between the two plates of a condenser, there is a force of attraction, amounting to an "electronic tide," between the electrons on one plate and the unbalanced or partly-balanced protons on the other plate, so that as the two plates are brought closer and closer together, the bound charges on each increase, clearing space for the arrival or removal of more electrons. For this reason *the capacity of a condenser increases as the distance between the two plates decreases.*

Since the dielectric between the two plates also takes a part in the electronic tide, either facilitating or impeding the attraction between electrons and protons, the capacity of a condenser will vary with the nature of the dielectric. Just as every metal has its own specific resistance, so every dielectric has its *specific inductive capacity*—i.e., the ability with which it facilitates the attraction existing between electrons on the one side and protons on the other, as compared to the similar ability of air.

To sum up: *the capacity of a condenser in acquiring a certain charge, increases with the increase in the plate area, and the decrease of the distance between the plates, and also depends on the nature of the dielectric.*

### Practical Considerations

The basic principles of the condenser being understood from the foregoing, the rules which govern the actual design and construction and their relationship to the final capacity may now be enumerated and explained.

(1) *The capacity of a condenser varies directly and in proportion with the total effective area of the plates.*

The "effective area" of one pair of plates is the area of overlap, or, in other words, it is the area of "dielectric under strain." Hence, the total effective area of a multi-plate condenser is the "overlap area" of one plate, multiplied by the number of plates *less one*, and doubling this area doubles the resultant capacity—all other conditions being unchanged.

(2) *The capacity of a condenser varies in inverse proportion to the thickness of dielectric.* Whether the dielectric is air, ebonite, or mica, if its thickness is *halved* throughout, the capacity of the condenser will be *doubled*—all other conditions remaining unchanged.

Condenser capacities are almost universally expressed in *microfarads* (abbreviated to mfd.). A microfarad is one-millionth (0.000001) of a Farad which, although actually the unit of capacity, is much too large to be of practical use. Very small capacities are sometimes expressed as micro-microfarads, or alternatively, as picafarads, both meaning one-millionth of one-millionth of a farad. Capacity can also be expressed in terms of centimetres—which greatly facilitates calculation and design—and the relationship of these terms is as follows:—

$$1 \text{ microfarad} = 0.000001 \text{ farad} = 900,000 \text{ cms.}$$

$$1 \text{ picafarad} = 0.000001 \text{ microfarad} = 0.9 \text{ cm.}$$

The capacity of any "plate" type of condenser can be calculated by means of the following formula:—

$$\text{Capacity (C)} = \frac{A K}{4 \pi d}$$

where C = capacity in centimetres.

A = total effective area of plates in cms.

$\pi = 3.14159$  ( $4\pi = 12.57$  approx.).

d = thickness of dielectric, in centimetres.

K = dielectric constant, or specific inductive capacity of the material forming the dielectric.

### SPECIFIC INDUCTIVE CAPACITY OF VARIOUS MATERIALS.

Air . . . . .	1.00	Ebonite . . . . .	2.5 to 3.5
Paraffin Wax . . . . .	2.0	Shellac . . . . .	3.0 to 4.0
Petroleum . . . . .	2.13	Fibre . . . . .	5.0 to 7.0
India-rubber . . . . .	3.5	Mica . . . . .	4.0 to 8.0
Castor Oil . . . . .	4.5	Glass . . . . .	6.0 to 9.0

Condensers in Parallel

Whatever the type of condenser, fixed or variable, two or more may be connected together so as to obtain a resultant capacity which may be greater or less than that of any individual condenser, according to the method of connexion adopted. It is important that the student should have a complete understanding of the effects produced by connecting condensers in parallel and in series respectively.

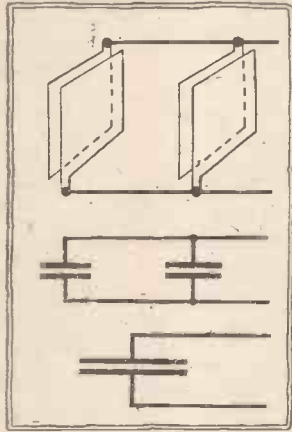


Fig. 31

The total capacity of any number of condensers connected in parallel is the sum of their individual capacities.

Thus, C (total) = C<sub>1</sub> + C<sub>2</sub> + C<sub>3</sub>, etc.

Fig. 31 shows two similar condensers—each consisting of two square metal plates placed close together and separated by air—connected “in parallel.”

It has already been explained that doubling the plate area (A) doubles the capacity, and reference to the two theoretical diagrams of Fig. 31 will show that, in effect, the plate area is doubled. The two similar condensers in parallel are exactly equivalent to one condenser having twice the plate area. For the purpose of this example two similar condensers are taken, but the principle and the rule quoted are equally applicable to any condensers.

Condensers in Series

The rule which applies to condensers connected “in series” will be recognised as being similar to that for “resistances in parallel.” In this matter of series and parallel connexions, condensers and resistances are exact opposites.

The effective capacity of any number of condensers connected in series is the reciprocal of the sum of the reciprocals of their individual capacities.

$$\text{Thus } C_{(\text{EFFECTIVE})} = \frac{1}{\frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3}, \text{ etc.}}$$

Fig. 32 shows two condensers, of the same type as those illustrated in Fig. 31, supposedly identical, and connected “in series.”

Inspection of the two theoretical diagrams in this case (Fig. 32) will, no doubt, make it clear that the effect of connecting the two equal condensers in series is to double the thickness of the dielectric which, as explained, halves the capacity.

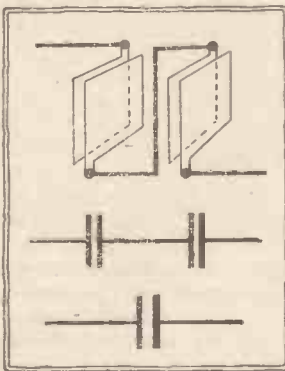


Fig. 32

This, of course, is true only with two condensers of equal capacity. A numerical example will show the actual proceeding in the case of, say, three unequal condensers. Suppose that the three condensers have capacity values of 0.01; 0.02 and 0.04 mfd. respectively.

$$C_{(\text{EFFECTIVE})} = \frac{1}{\frac{1}{0.01} + \frac{1}{0.02} + \frac{1}{0.04}} = \frac{1}{\frac{4}{0.04} + \frac{2}{0.04} + \frac{1}{0.04}} = \frac{1}{\frac{7}{0.04}} = \frac{0.04}{7} = 0.0057 \text{ mfd.}$$

It should be noted that the effective capacity of any number of condensers in series will always be less than that of the smallest condenser. (To be continued)

WORLD-RADIO “ELEMENTS OF WIRELESS”

Progress Competition, No. 2

We give below the second test-paper in connexion with the monthly Progress Competitions for registered readers of *World-Radio*. Two cash prizes (FOUR GUINEAS AND TWO GUINEAS) are offered for the best and second-best completed test-papers respectively. No competitor will be awarded more than one of the monthly prizes, but all the test-papers of prize winners will rank for a special final award.

To those who are not yet registered, or who wish to recommend the scheme to a friend, we would point out that each month's competition is distinct and separate, and that anyone can register now by completing the accompanying form, handing the lower portion to the local newsagent, and forwarding the upper portion—in an unsealed envelope with halfpenny stamp—direct to the Editor of *World-Radio*.

Registration entitles the reader to enter for each of the monthly Progress Competitions and the final award, and at the same time ensures the uninterrupted supply of *World-Radio*.

Every reader, when registering, must sign the brief declaration to the effect that he (or she) is a genuine student—i.e., not engaged professionally in any branch of wireless, nor holding any qualification which would confer an unfair advantage in the Progress Competition; and that in the event of any dispute, the Editor's decision will be accepted as final.

Rules Regarding Test-Papers

Competition test-papers must be written in ink on ruled foolscap (or preferably typed) using one side of the paper only, and must be enclosed in an envelope, addressed to the Editor, *World-Radio*, Broadcasting House, Portland Place, London, W.1., bearing the words “Progress Competition” and the competitor's registered number.

Each sheet of paper must be numbered, and must have the competitor's registered number in the top right-hand corner. The questions must be answered in the same order in which they appear below, the question number only being quoted and a one-inch margin must be left clear down both sides of each sheet.

Complete test-papers must be posted so as to reach this office not later than first post on Monday, April 25. While competitors will assist greatly by sending in their papers as early as possible, any papers received later than the date stated cannot be examined at all. (Special arrangements will be made in the case of readers residing overseas.) The result of this competition will be announced in *World-Radio* on May 6, together with the correct answers to the questions.

Owing to the great demand for corrected papers to be returned, we regret it is impossible to continue the arrangement made in Competition No. 1. In the case of the present and future competitions of this series, therefore, no papers can be corrected or returned.

Registration Form

SEND THIS COUPON TO THE EDITOR

Please register me as a regular reader of *World-Radio* for the next six months and enrol my name for the “Elements of Wireless” Competitions.

NAME .....  
 ADDRESS .....  
 DATE .....  
 My newsagent, with whom I have now registered, is  
 NAME .....  
 ADDRESS .....

I undertake to abide by the Rules and Conditions, as published, and declare that I am a genuine student, as defined in the conditions.

(Signature) .....

CUT HERE.

HAND THIS COUPON TO YOUR NEWSAGENT

Please supply me for the next six months with ..... copies (copy) weekly of *World-Radio*, starting with the issue dated .....  
 NAME .....  
 ADDRESS .....  
 DATE .....

TEST-PAPER No. 2.

Completed Test-Papers must reach this office not later than first post on Monday, April 25.

1. Work out the following examples of the application of Ohm's law:

- (a) Given a circuit comprising a 12-volt battery and a variable resistance ranging from 1,000 to 10,000 ohms, state the values of current flowing as the resistance is varied in equal steps of 1,000 ohms.
- (b) Given a 60-volt battery and closed circuit, determine the resistance of the circuit in each case when

$$I = \frac{15}{17} \text{ ampere.}$$

$$I = \frac{1}{135} \text{ ampere.}$$

$$I = \frac{3}{194} \text{ ampere.}$$

Give the answers correct to three decimal places.

- (c) State the EMF applied to a circuit when

$$R = \frac{5}{127} \text{ ohm and } I = 0.03 \text{ ampere.}$$

$$R = \frac{121}{375} \text{ ohm and } I = 6.73 \text{ amperes.}$$

$$R = 0.00375 \text{ ohm and } I = \frac{1}{13} \text{ ampere}$$

- 2. Given twelve 2-volt 20 ampere-hour accumulators (discharge rate 2 amps.) show, by means of three theoretical diagrams, how you would arrange them to yield—

- (a) Maximum E.M.F.
- (b) Maximum current at 6 volts.
- (c) Current for three separate circuits requiring 5 amps. at 6 volts; 0.75 amp. at 10 volts; and 0.2 amp. at 12 volts, to be supplied simultaneously.

- 3. (a) Make a drawing, or, better still, produce photographs from iron filings fixed in paraffin waxed paper of the magnetic fields of two bar magnets having

- (i) two like poles facing each other;
  - (ii) two unlike poles facing each other.
- Explain briefly the difference between the two results.

- 4. Refer to the diagram (Fig. 1) and, neglecting the resistance of connecting wires and batteries, state the values of currents flowing at the points marked A, B, C and D. The number against each resistance indicates its value in ohms.

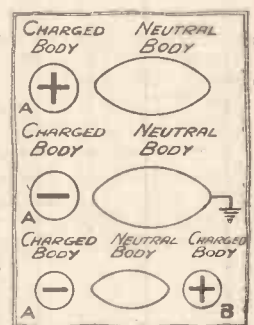


Fig. 1. Question 4

- 5. What is the difference between magnetic and electric induction? Refer to the accompanying diagrams (Fig. 2) and explain what happens to the neutral body in each case. (NOTE: A and B are spheres of the same material and the same dimensions-bearing equal charges.)

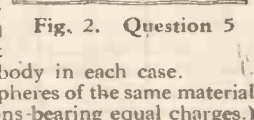


Fig. 2. Question 5

- 6. Calculate the respective capacities of the following two fixed condensers. State the values in microfarads to six decimal places.

- (a) 11 plates, each 2.5 cms. by 2 cms., spaced 0.5 millimetre apart in air. ( $4\pi = 12.57$ .)
- (b) 3 plates, each 2 cms. by 1 cm. with mica dielectric 0.2 millimetre thick. (Take the K value of mica as 5).
- (c) State the effective capacity of these two condensers when connected in series.

CORRECTED TEST-PAPERS—Competition No. 1.

There are still a number of papers to be returned, and they are being dealt with, in rotation, as quickly as possible.

## Technical Topics

By "DECIBEL"

YOU are all perfectly familiar with the fact that the sounds you hear from the loud-speaker of one receiver may be appreciably different from those being emitted by the loud-speaker of another receiver, even though they are both receiving the same programme. Neither loud-speaker is reproducing the sounds being transmitted exactly as they appeared in their original form, and we say that the original sounds have been "distorted" by the time they reach the ear of the listener. The word "distortion" conveys the necessary meaning, but have you really grasped the full meaning of distortion, and of what it consists? Merely to say that the reproduced sounds are not the same as the original sounds, and therefore distortion has occurred, does not indicate definitely what the difference is.

Let us consider how the reproduced sounds may differ from the original sounds. The latter normally consist of a complex combination composed of a very large number of sounds of different frequencies and different strengths or amplitudes. For correct reproduction all these component sounds must be reproduced exactly in the correct proportions, and no additional sounds must be introduced. In actual practice it is impossible to ensure that both these requirements are fulfilled entirely, but it is possible to fulfil them sufficiently for a listener with a very keen ear to be satisfied that the result is sufficiently like the original to give a pleasing effect without appreciable "distortion."

### Distortion caused by Harmonics

The most unpleasant form of distortion to most people consists of the presence of sounds which were not present in the original sound. These additional sounds are usually harmonics of the components of the original sound, that is to say, their frequencies are multiples of those of the original components. Any amplifying device which is "non-linear" will produce these harmonics, and any device which converts energy from one form to another, such as a microphone or a loud-speaker, may have the same effect.

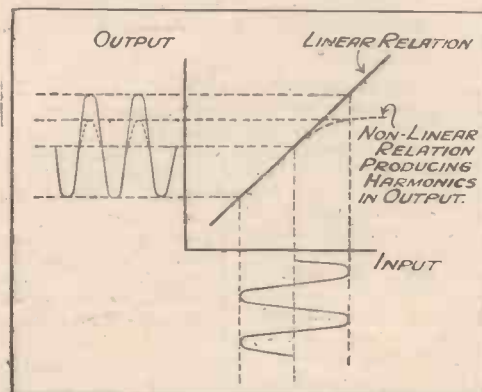


Fig. 1.—Illustrating the production of harmonics by non-linear amplifier

Fig. 1 illustrates how this form of distortion may occur. For the sake of simplicity, consider a simple sound of a single frequency, or an alternating voltage corresponding to this simple sound, applied to a piece of apparatus forming a stage in the chain from microphone to loud-speaker. If the output from this stage is to be exactly proportional to the input to it, in order to avoid any distortion being introduced, the relation between input and output must be represented by a straight line. If there is any departure from a straight line over the range covered by the applied input, the waveform of the output will not be the same as that of the input, and will not be a simple sine wave like the waveform of the input.

This distorted waveform of the output can be shown to be composed of several simple oscillations having frequencies which are multiples of the frequency of the input, together with a component the frequency of which is the same as that of the input or so-called fundamental. The number and strength of the harmonics will depend on how far the relation between input and output departs from a straight line.

In order to avoid this form of distortion it is important to ensure that all devices of this kind are operated under conditions such that the relation between input and output departs as little as possible from a straight line. The range over which this relation holds is usually very limited, and the input must therefore be restricted to fall within this range.

### Unequal Response

The other common form of distortion is due to the failure of the various links in the chain to respond equally to sounds, or their corresponding electrical oscillations, of different frequencies.

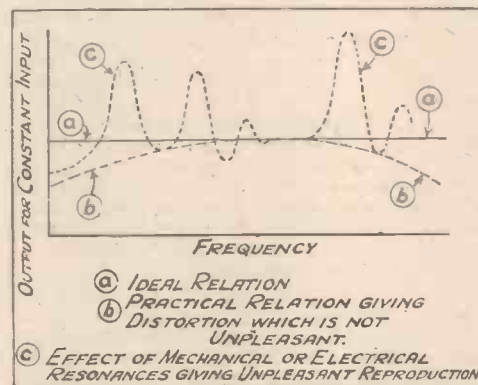


Fig. 2.—The relation between output and constant input at various frequencies

The electrical circuits used in receivers, and of course, at the transmitting end also, have to be very carefully designed and constructed if they are to have the same effect over the whole of the frequency range necessary to deal faithfully with all the components of the original sound. Similarly, microphones and loud-speakers must be carefully designed and constructed if they are not to introduce distortion of this form.

The ideal response curve showing the relation between output and frequency, for constant input at the various frequencies to be handled by the links in the chain, should therefore be a horizontal straight line, as shown in Fig. 2 (a). In practice there is a tendency for the lower and higher frequencies to have less output than the middle frequencies, Fig. 2 (b) but distortion of this form is not so unpleasant as a rule as that which introduces harmonics.

If, however, the frequency response curve, instead of showing a gradual falling off at the low and high frequencies, has sudden peaks in it as shown in Fig 2(c), the reproduction may sound very unpleasant indeed. These peaks may be due to electrical or mechanical resonance at the particular frequencies concerned, and they occur to some extent in all loud-speakers as well as in other parts of the chain. It is important, therefore, that these resonances should be as little pronounced as possible if distortion of this type is to be negligible.

It is too long a story to tell you now what precautions should be taken to avoid distortion, but perhaps you will be able to profit more by any articles on the subject which you may read in the future now that I have explained what forms distortion may take. I haven't

(Continued at foot of next column)

## The New Florence Transmitter

FOLLOWING the success of the Trieste station, the opening of the Florence broadcasting station, which is due to take place on April 21, marks a further important advance in the re-organisation of the Italian broadcasting system undertaken by the E.I.A.R.—the Italian Broadcasting Company.

The transmitter for Florence, like those for Trieste and the projected station at Bari, was manufactured by the Marconi Company at Chelmsford. The power of the transmitter is 20 kilowatts, reckoned in accordance with the new method of rating decided upon at last year's Copenhagen meeting of the International Technical Consultative Committee for Radio-Electric Communications. This method of rating supersedes The Hague rating scheme and came into force on January 1 this year. Modulation can be effected up to 100 per-cent., and although the Florence station is scheduled to operate on the wavelength of 500.8 metres (599 kilocycles), the wavelength of the transmitters can be varied between 250 and 550 metres if required.

### Maintaining Constant Frequency

The present crowded state of the ether, particularly on the medium broadcast waveband, has necessitated the development of a special technique to keep transmitting stations accurately to their allotted frequencies. In modern stations quartz crystals, valve drives, or tuning forks are employed for this important function, and in the Florence transmitter an oscillating quartz crystal has been chosen to stabilise the transmission. The crystal is fitted in a heat-insulated box with thermostatic control, preventing any variation in the rate at which the crystal oscillates, and thus keeping the transmission accurately to the allotted frequency. Very stringent specifications for the constancy of carrier waves of broadcasting stations were laid down by the International Conferences at The Hague in 1929 and at Copenhagen in 1931, and the Florence station conforms completely with the exacting limits of these specifications.

### Aerial and Feeder System

Radio Florence is at present transmitting on a temporary aerial; the final aerial is to be of the quarter-wave "T" type, suspended from two self-supporting steel towers, each 310 feet high. In accordance with modern practice, the transmitter is connected to the aerial through a twin-wire feeder, which conveys the energy to a feeder house located at the lower end of the aerial down-lead. Here the energy is transferred from the feeder to the aerial by means of coupling circuits. Owing to its temporary aerial, the Florence broadcasting station is not at present transmitting on full power. When radiating on the final aerial it probably will rank among the most popular transmitters in Europe for strength and quality.

space to tell you in detail exactly-how and where this distortion may occur, but if you have grasped the main idea you will be able to ascertain this for yourselves.

For example, you have probably noticed that a loud-speaker does not sound the same in all parts of the room. This means that sounds of different frequencies do not reach the ear in the same proportions at every point in the room, and directional effects of loud-speakers, and reflection from the walls of the room have to be taken into account. In other words, the relation between the output of the loud-speaker, as measured by the ear, at various frequencies is not the same in all parts of the room, and does not agree with Fig. 2(a), hence distortion occurs. Other examples I will leave to you.

# Readers' Experiences

## A Four-valve Super-het Short-wave Receiver

THE writer has been experimenting recently with different circuits in an endeavour to evolve a really satisfactory short-wave "super" using four valves only, and the receiver now to be described is the outcome of these experiments. The H.T. consumption is well within the capacity of a "super-power" battery, and the general performance of the set as regards sensitivity, stability, and volume is quite equal to many six, and even seven-valve super-heterodynes.

Reference to the accompanying theoretical diagram will show that a double-grid valve has been employed as a combined first detector and oscillator, and this allows the use of separate aerial and oscillator controls, and so assures maximum efficiency. The short-wave H.F.

valve and first intermediate-frequency transformer; while in the final compartment are fitted the second IFT, the second detector valve with its associated components, and the differential reaction condenser, the latter being mounted on the front of the screening box in line with the two tuning controls. The low-frequency stage, comprising the L.F. transformer, multi-grid valve and choke output filter, is fastened on the 4in. strip of baseboard at the rear of the metal box.

The first intermediate-frequency transformer consists of 120 turns of No. 36 S.W.G. d.c.c. copper wire wound on a 1½in. diameter former. This comprises the secondary winding, and over it is wound 60 turns of the same wire to act as primary. The second transformer

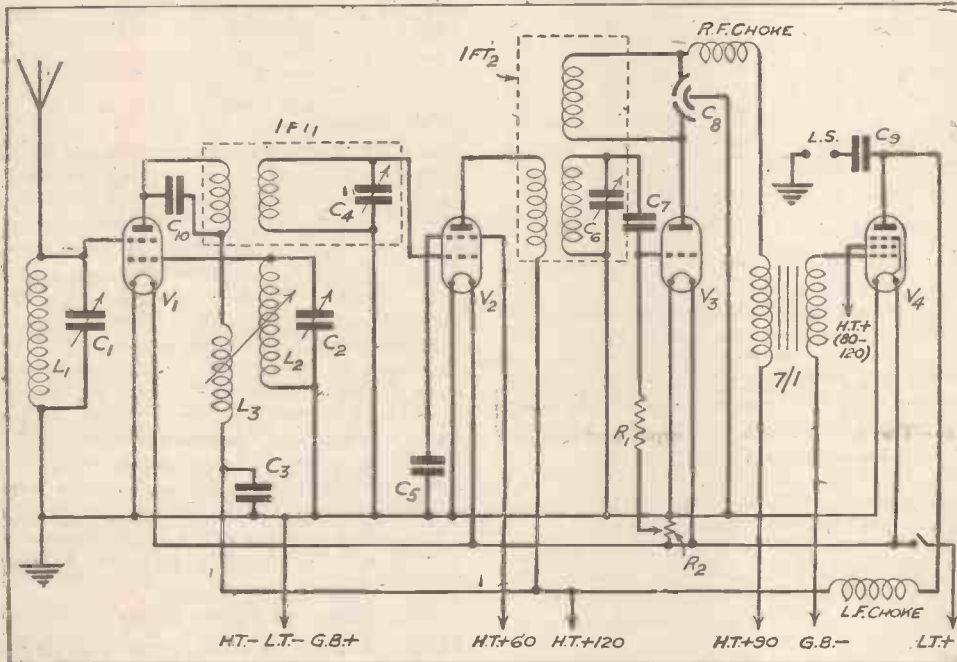
mediate-frequency transformers at about a quarter from their minimum positions, and rotate the aerial and oscillator dials slowly in step, with the second detector valve just oscillating gently (there is little fear of radiation with this circuit). When a strong telephony carrier has been picked up, adjust the tuning controls until the whistle reaches its lowest pitch, and then reduce reaction by adjusting condenser C<sub>8</sub>.

The station should now be heard distinctly, but one more adjustment remains to be effected. With a long screwdriver carefully turn the knob of the trimmer condenser of IFT<sub>1</sub> until maximum signal strength is obtained. These two "trimmers" will not need further attention, all tuning being carried out with C<sub>1</sub> and C<sub>2</sub>, while C<sub>8</sub> affords a means of increasing sensitivity, and serves also as a volume control.

During the period the receiver has been in use (three months) over 70 transmissions have been received and identified, the majority at fair or good loud-speaker strength; and VK<sub>2</sub>ME, Sydney, has also been heard on three occasions at about R8 on the 'phones.

A final word may be added concerning the intermediate frequency. This was chosen round about 300 metres, so that really effective amplification is obtained using only one screened-grid intermediate stage, and at the same time the two alternative tuning points of the oscillator dial are far enough apart to avoid confusion when tuning. Whoever cares to make up this "super" will find it both efficient and economical.

H. F. P. (Hereford).



Complete circuit diagram of the receiver

L<sub>1</sub>, L<sub>2</sub> and L<sub>3</sub>—Plug-in S.W. coils. C<sub>1</sub> and C<sub>2</sub>—0.00015 mfd. C<sub>3</sub>—0.1. C<sub>4</sub>, C<sub>6</sub> and C<sub>10</sub>—0.0001. C<sub>5</sub>—1 mfd. C<sub>7</sub>—0.0003. C<sub>8</sub>—0.0001 (diff.). C<sub>9</sub>—2 mfd. R<sub>1</sub>—2 megohms. R<sub>2</sub>—400 ohms.

impulses from the aerial are received on the first tuned grid, and mixed with the oscillations which are imposed, *via* the coil L<sub>3</sub>, on the second tuned grid. The resultant lower "beat" frequency is transferred to the first intermediate-frequency transformer (IFT<sub>1</sub>), and then amplified in the usual manner.

The condenser C<sub>10</sub> provides an alternative path for the very high-frequency currents, and so assists in stabilising the locally-generated oscillations. V<sub>2</sub> is an intermediate S.-G. amplifier, V<sub>3</sub> a leaky-grid second detector, and V<sub>4</sub> a special multi-grid low-consumption power-output valve.

Further details of the receiver are as follows: A metal screening box, measuring 20ins. long, 8ins. deep, and 8ins. high, is bolted to a baseboard 20ins. by 12ins., and the box is divided into three sections. The first section measures 10ins. by 8ins., and the remaining two compartments measure 8ins. by 5ins. each. The largest box contains the aerial and oscillator condensers (actuated by slow-motion dials mounted on the front); the S.W. plug-in aerial-grid coil; the S.W. plug-in oscillator-grid and reaction coils; and the bi-grid valve. The aerial coil is placed as far as possible from the other two inductances, and is also mounted at right angles to them.

(IFT<sub>2</sub>) has the same primary and secondary windings as IFT<sub>1</sub>, with the addition of 60 turns of similar wire, spaced ½in. from the "earthed" end of the secondary, to provide the feedback from the anode of the second detector valve. All these coils are wound in the same direction. Each IFT is placed exactly in the centre of its respective screening box, so as to avoid any losses due to eddy currents, etc. The secondary windings of these two transformers are accurately balanced by means of the baseboard "pre-set" condensers, C<sub>4</sub> and C<sub>6</sub>.

The method of operation is simple. Insert a bi-grid valve in valve-holder V<sub>1</sub>, a screened-grid valve in V<sub>2</sub>, one of the H.L. type in V<sub>3</sub>, and a pentode in V<sub>4</sub>. If desired, an ordinary power valve can be used in the last stage, particularly if it is proposed to use headphones only.

For the 18-28 metre band, suitable coils are: L<sub>1</sub>=3 turns, L<sub>2</sub>=3 turns, and L<sub>3</sub>=4 turns; and for the waveband between 25 and 50 metres L<sub>1</sub>=6, L<sub>2</sub>=6, and L<sub>3</sub>=7 turns. The reaction coil L<sub>3</sub> should be coupled to L<sub>2</sub> just sufficiently to produce steady oscillation, which is evidenced by a wet finger touches and leaves the aerial terminal. Set the trimmer condensers of the two inter-

### Special Relays from G5SW

ON Saturday, April 23, the transmission from short-wave station G5SW (25.53 metres) will be extended to include the opening ceremony of the Shakespeare Memorial Theatre and the Association Cup Final commentary. The station will not close down until 4.45 p.m.

### Short-Wave Reception Reports

Quite a number of interesting reports cannot be published because, either our rules are not complied with, or the reports are not concise and would take up a great deal too much space. Will correspondents kindly note that all letters and reports must give the writer's full name and address—not necessarily for publication—and should be written on one side of the paper only.

In order to permit the publication of as many reports as possible, Short-wave Reception Reports should be made in the following form:—

Jan. 20. 22.05 W8XK (48.86) Tel. R5/FFS/X Str. call.  
Jan. 30. 21.45 Rome (80) LS R7/N/XX Opera.  
Receiver used 0-v-2, and usual outdoor aerial.

which indicates that W8XK (48.86 metres) was heard, on telephones (Tel.) at strength R5, with fairly deep fading of the "slow" type (FFS) and slight static (X), his actual station call being heard, while Rome (80 metres) was received, on the loud speaker (LS) at strength R7, without fading but with rather bad atmospheric, the item heard being part of an opera performance. The type of receiver and aerial, also any general remarks, should appear at the foot of the report.

#### TABLE OF SIGNAL STRENGTHS

- R<sub>1</sub>—Just audible.
- R<sub>2</sub>—Audible, but unintelligible.
- R<sub>3</sub>—Audible, partly intelligible.
- R<sub>4</sub>—Just intelligible.
- R<sub>5</sub>—Quiet, but intelligible.
- R<sub>6</sub>—Moderately loud.
- R<sub>7</sub>—Normal, good clear reception.
- R<sub>8</sub>—Strong reception.
- R<sub>9</sub>—Wipe-out signals.

#### FADING AND ATMOSPHERICS

F=slight fading; FF=fairly deep fading, but no programme lost; FFF=complete fade-out, programme lost. (N=no fading.)  
SS=very slow fading (minutes); S=slow (one minute or so). R=fairly rapid (several seconds); RR=very rapid (one second or less).  
X=slight static; XX=rather bad; XXX=very strong atmospheric. (N=no atmospheric.)

Short-Wave Reports

Below 100 Metres

To the Editor of WORLD-RADIO

SIR,—I should like to report the following:—

- Feb. 18 and each Tuesday and Thursday since—17.00 G.M.T. UOR2 (49.4 m.) LS R8/F/X.
28—15.45—16.30 VK2ME (31.29) Tel. R5/FF/N. Call.
Mar. 6—14.00 Rabat (23.8 m.) Tel. R6/FS/N. Call and Orch.
6—20.20 Rabat (32.26 m.) LS R6/N/N. Call and Orch.
18—19.30 Rome (25.4 m.) LS R5/F/N. Call. Announcements.
18—22.00 CT1AA (49.2 m.) LS R6/F/X. Records.
19—15.05 Saigon (49.05 m.) Tel. R5/F/X. Call.
19—10.00 EAG Spain (30 m. approx.) LS R6/F/N. Records.
19—20.00 Moscow (50 m.) LS R8/FS/X. Talk in English.
26—20.15 W8XK (25 m.) Tel. R8/F/N. Call. N.B.C. programme.
26—21.00 W1XAZ (31.53 m.) Tel. R6/Fr./N. Call.
26—21.30 W2XAF (31.48 m.) Tel. R7-8/F/N. Call.
26—23.00 W3XAL (49.18 m.) LS R6/F/X. Call.
26—23.15 W8XK (48.86 m.) LS R7/FS/X. Call.
26—23.35 W2XE (49.02 m.) LS R5/FS/X. Call.
27—00.10 W9XF (49.83) Tel. R7/FF/X. Call.
27—00.30 VE9DR (49.96) LSR 6/FS/X. Call.
27—00.45 W8XAL (49.5 m.) Tel. R6/FF/X. Call.
29—14.20—15.55 Bandoeng PLE (31.80 m.) LS R6-7/Fr/N. Call and Orch.

Yours faithfully,

Ruskington, Lincs. R. P. A.

To the Editor of WORLD-RADIO

SIR,—Here is my log for one week, which may be of interest to your readers:

- Mar. 22—14.00 PLE (31.86) LS R6/FS/N.
23—22.30 W3XAL (49.18) LS R4/FS.
24—22.45 W1XAZ (49.18 m.) LS R4/FS/X.
24—22.30 W3XAU (31.3) LS R3/FR.
25—18.00 Eindhoven (50.1) LS R6/FS/N.
25—19.15 Vatican (50.26) LS R7/N/N.
(This came in between Moscow (50 m.) and Eindhoven (50.10) and later in the evening returned to its proper wavelength.)
25—22.30 W2XAF (31.48) LS R5/F.
27—15.30 VK2ME (31.28) Tel. R4/FSS.
27—21.00 Moscow (50.00) LS R6/FR/X.
27—21.30 Radio LL (31.00) LS R5/N.
29—13.00 G5SW (25.53) LS R4/FR/X.
29—13.30 Zeesen (31.38) LS R8/FFS/N.
29—16.45 2RO (25.4) LS R9/N.
29—17.00 Radio Colonial (25.2) LS R5/N.
29—17.30 Vienna (Exp.) (49.4) LS R5/N.

My receiver is a 0-v-2 with home-made coils.
Wishing your enlarged World-Radio every success.

Yours faithfully,

Luton, Beds. K. W. F.

To the Editor of WORLD-RADIO

SIR,—The following report may be of interest to readers. Receiver used is a "plug-in" adaptor plus 2 L.F. valves.

- Mar. 6—20.00 Rabat (32.26 m.) LS R8.
6—20.45 Zeesen (31.38 m.) LS R6/F/N.
12—17.00 Zeesen (31.38 m.) LS R9/F/N.
12—17.00 Rome (25.4 m.) LS R9/F.
20—16.00 Rome (25.4 m.) LS R8-9/FF/SS.
20—15.00 Bandoeng (31.86 m.) LS R5-6/N. Relaying the broadcast of the football match Belgium v. Holland.
23—20.00 Moscow (50 m.) Tele. R8/N.
24—20.00 Moscow (50 m.) LS R5/N. Talks in English.
24—20.30 Vienna UOR2 (49.4 m.) Tele. R4/FFF. Announcements in three languages and request for reports.
24—21.30 Chelmsford (25.53 m.) Tel. R5/N.
27—23.15 W3XAL (49.18 m.) Tel. R4/F.
29—15.30 Bandoeng (31.86 m.) LS R6/F/N.
29—17.15 Rome (25.4 m.) LS R8/N.
29—19.00 Station Du Vatican (50.26 m.) Tel. R7.
London, N.W.1. F. W. E.

To the Editor of WORLD-RADIO

SIR,—The following is a report of short-wave reception which may be of interest to other readers:

- Mar. 20—17.15 Rome (25.4 m.) Tel. R4/F/N. Dance Music.
20—19.55 Rabat (32.26 m.) LS R4/F/N. Dance Music.
22—15.30 Bandoeng (31.86 m.) Tel. R6/FR/N. Call-sign and music.
28—20.50 Moscow (50 m.) LS R4/FR/N. German Talk.
29—16.10 Bandoeng (31.86 m.) Tel. R8/FR/N. Orchestral music.
30—10.15 Vatican (19.84 m.) Tel. R5/FF/N. Call sign.
April 1—19.05 Vatican (50.26 m.) LS R3/F/N. Call-sign.
1—22.35 CT1AA (42.9 m.) Tel. R5/F/X. Call-sign and talk.
1—23.10 G5SW (25.53 m.) Tel. R5/F/N. Dance Music.
3—13.15 Moscow (25.16 m.) Tel. R3/N/N. Talk.
3—13.20 Rabat (23.8 m.) Tel. R5/F/N. Music.
3—16.20 Zeesen (31.38 m.) Tel. R7/N/N. Light Music.
3—20.30 Radio-Coloniale (25.63 m.) Tel. R4/F/N. Call-sign.
3—20.50 Moscow (50 m.) Tel. R6/FFS/X. English talk.

My receiver is a 0-v-2 set with outdoor aerial.
Thanking you for the enlarged World-Radio.

Yours faithfully,

Redhill, Surrey. F. D. T.

By "VERNIER"

RECEPTION conditions during the past week have been variable, and static on the higher wave-bands has been rather bad.

I have now heard from Schenectady that station W2XAF officially uses a directional aerial on South America as I suggested a few weeks ago. The Schenectady authorities state that owing to the difference of time the largest proportion of their evening audience is in the South American continent. W2XAF now broadcasts with a power of 40kW. in the aerial. The power amplifier takes the modulated power at a 5kW. level and amplifies it by means of six powerful "short-wave" valves to a power level of 40kW. carrier for the aerial. This unit is capable of supplying 135kW. continuously for telegraph work. The output may be switched to either a simple aerial, which is now rarely used, or to the special directional aeriels which have recently been erected for transmissions to South America and Australia.

It is stated, however, that W2XAD still operates on 19.56 metres with an aerial directional on Europe. This is contrary to recent information which I received. The schedules of both transmitters, W2XAD and W2XAF, will be altered considerably with the introduction of daylight-saving time in U.S.A.

I have this week received a most interesting letter from a friend in the Seychelles Islands, to whom I recently sent a 4-valve all-wave receiver. The Seychelles are in the middle of the Indian Ocean, and some twelve hundred miles from Mombasa. He states that reception is very variable in the islands, being exceptionally good on some days and almost impossible on others. G5SW, he says, is usually inaudible, but Kootwyk on 16.88 metres always comes in well. Pittsburg on the 25-metre band is also very good at times, and Pontoise can be heard, but not at very good strength. Rome, however, provides a reliable signal. On the medium wave-band he picks up Heilsberg every night, which is perfectly audible above the very bad atmospherics. London National and Regional are never loud enough, however, to be intelligible.

Lisbon on 42.9 metres came in very well on Friday evening. The quality of this transmitter has improved enormously during the last few months. The announcer is certainly an accomplished linguist, for he speaks English, German, Spanish, French and, of course, Portuguese all fluently. Rabat on 23.8 metres was very good on Sunday morning, April 10, and his transmission on 32.26 metres provided excellent volume on a moving-coil loud-speaker using only a 3-valve receiver. The transmissions from this station, however, are always of somewhat poor quality, and usually accompanied by a loud carrier hum.

Both the Moscow transmitters on 50 metres and 45.38 metres were broadcasting on Sunday night an English version of the trial of Judah Stern and Vasiliev who were executed recently, for the attempted murder of a Counsellor at the German Embassy in Moscow. Murder trials are often broadcast in U.S.A., but this is the first time I have listened to one in this country. Reception from the 50-metre transmitter was of much better quality than from that on 45.38 metres.

I have still not identified the Russian commercial telephony transmitters, which broadcast on approximately 19.5 and 21 metres every morning. The fact that they communicate on these wavelengths indicates that they must be situated very far apart. It is probable that one is in Siberia and the other in Moscow.

SHORT-WAVE STATIONS

Table listing various short-wave stations with columns for M. (Meters), Kc/s (Kilohertz), and station details including name, location, power, and broadcast times. Includes stations like Rome (Italy), Khabarovsk, Long Island, Prague, Brooklyn, Chapatitepec, Station du Vatican, Barcelona Radio Club, Bucharest, Moscow, Drummondville, Tegucigalpa, Chicago, Halifax, Cincinnati, Nairobi, Philadelphia, Vancouver, Johannesburg, UOR2, Chicago, Bowmanville, Saigon, Richmond Hill, Pittsburgh, Winnipeg, Mexico City, Bogota, Barranquilla, Casablanca, Bound Brook, Moscow, Constantine, Madrid, Lisbon, Singapore, Tenerife, Bangkok, Bogota, Nuevo Laredo, Long Island, Radio LL, Paris, Rabat, Bandoeng, Rio de Janeiro, Melbourne, Skamlebek, Schenectady, Zeesen, Poznan, Springfield, Philadelphia, Melbourne, Sydney, Eindhoven, Belgrade, Heredia, Buenos Aires, Chelmsford, Chapatitepec, Saigon, Bowmanville, Rome, Chicago, Pittsburg, Radio-Colonial, Funchal, Rabat, Bucharest, Chapatitepec, Station du Vatican, Pittsburg, Radio-Colonial, Schenectady, Chicago, Bandoeng.

## FRENCH

(Supplementary Notes in connexion with the French Talk, Tuesday, April 12)

(A) *Remarques sur certains adverbies français* (Suite).

(1) *Beaucoup* a pour comparatif *plus*. On entend assez fréquemment des gens dire *d'avantage de*: Ex. *nous avons davantage de patience que vous*.

Cette façon de dire n'est guère correcte, car *d'avantage* s'emploie absolument: Ex. *Vous travaillez beaucoup, mais votre frère travaille davantage; elle gagne moins que moi et dépense davantage*.

Quand le complément est représenté par *en* on emploie *d'avantage* s'il n'y a pas d'autre mot à côté: Ex. *Elle en a vu davantage; nous en savons davantage; il en a mangé davantage; etc.*

S'il y a un autre mot entre le verbe et le comparatif on emploie *plus* ou *d'avantage*: Ex. *J'en veux encore plus ou j'en veux encore davantage; nous en avons vu bien plus ou nous en avons vu bien davantage; etc.*

S'il y a un terme de comparaison contenant que il faut employer *plus* et non *d'avantage*, car aujourd'hui *d'avantage* que n'est guère plus correct que *d'avantage de*: Ex. *Vous en avez vendu plus que lui; elle en a acheté bien plus que vous, etc.*

Au fond, dans toutes ces questions nous sommes guidés par l'oreille. *D'avantage*, à cause de sa longueur, se met presque toujours à la fin de la phrase, tandis que *plus*, qui est un monosyllabe, s'accompagne généralement d'autres mots.

(2) L'adverbe *trop* est précédé de la préposition *de* quand il est complément partitif: Ex. *Je n'ai rien de trop; ceci est de trop; voici quelque chose de trop; débarrassons-nous de ce que nous avons de trop; vous n'êtes pas de trop; vous en avez deux de trop; elle a un livre de trop; etc.*

*Beaucoup* disent *en-trop*; mais *de trop* est préférable.

Mais quand *trop* est complément d'un verbe il ne faut pas le faire précéder de la préposition *de*: Ex. *Vous en avez trop; elle mange trop; il s'amuse trop; etc.*, et non pas, comme on l'entend souvent, *vous en avez de trop; elle mange de trop, etc.*

En parlant à plusieurs personnes on distingue *vous n'êtes pas trop* c'est-à-dire *vous n'êtes pas trop nombreux* et *vous n'êtes pas de trop* c'est-à-dire *vous pouvez rester*.

*Remarques* aussi la locution adverbiale *par trop* qui signifie *beaucoup trop, vraiment trop*: Ex. *Vous êtes par trop impertinent; c'est par trop fort; je suis par trop fatigué pour sortir, etc.*

(3) La locution *rien moins que* est ambiguë puisqu'elle peut s'employer dans un sens négatif et dans un sens positif. Mieux vaut donc l'éviter. Toutefois, si on s'en sert, il est préférable de lui réserver son sens négatif: Ex. *Vous n'êtes rien moins que poli, c'est-à-dire vous n'êtes pas poli du tout; elle n'est rien moins que belle c'est-à-dire elle n'est pas belle du tout.*

Pour le sens affirmatif servons-nous de *rien de moins*: Ex. *Elle n'est rien de moins qu'une coquine, c'est-à-dire elle est tout à fait une coquine.*

(B) . . . *les gens des mas nous apportaient leur blé à moudre.* (Lettres de mon Moulin, p. 5, l. 16.)

Dans le mot provençal *mas* l's finale se prononce.

En principe, à la fin des mots, l's ne se prononce pas dans les mots proprement français.

Après un *a* il y a très peu d'exceptions: *as, hélas, las* (signifiant hélas), *atlas*.

Les autres exceptions sont des mots d'origine étrangère: *gratias, habes corpus, pancréas, lias, trias, madras, upas, alcarazas, vasistas, mas, etc.*

(2) . . . *et continuait de vivre couragement*

## FOREIGN LANGUAGES SECTION

(p. 6, l. 25). Il y a la même différence entre *continuer à* et *continuer de* qu'entre *commencer à* et *commencer de*.

On commence à faire une action ou une série d'actions qui n'a pas de terme, qui se continuera indéfiniment; et on continue à faire ce qu'on a commencé à faire; *continuer à* marque donc surtout une action habituelle: Ex. *Il continue à jouer, c'est-à-dire il n'a pas quitté l'habitude du jeu; elle continue à se plaindre, vous continuez à vous moquer des gens, etc.* . . .

On commence de faire une action unique, qui s'achève en plus ou moins de temps, qui a un commencement, un milieu et une fin, et on continue de faire ce qu'on a commencé de faire. On continue donc de faire ce qu'on fait actuellement: Ex. *Il continue de jouer, c'est-à-dire il continue la partie commencée; elle continue d'écrire; elle continue de se plaindre.*

Dans la phrase qui nous occupe on aurait pu dire également *continuait à vivre*.

(C) [Translation of Exercise 132, in Intermediate Exercises in French Grammar and Composition (Harrap and Co.)]

Un Arabe et sa tribu avaient attaqué la caravane de Damas dans le désert. La victoire était complète, et les Arabes étaient en train de recueillir leur butin quand les cavaliers du Pacha d'Acre, qui étaient venus à la rencontre de la caravane, fondirent soudain sur les Arabes victorieux, en tuèrent un grand nombre, firent les autres prisonniers (capturèrent les autres), et après les avoir liés (ligottés) avec des cordes les emmenèrent à Acre. Notre Arabe avait reçu une balle au bras. Comme la blessure n'était pas mortelle, les Turcs, l'attachèrent sur un chameau, et s'étant emparés de son cheval, ils emmenèrent la monture et le cavalier.

A la fin (sur le soir) du jour où ils devaient entrer à Acre, ils étaient campés dans les montagnes avec leurs prisonniers. L'Arabe blessé avait les jambes liées par une lanière de cuir et était couché près de la tente où dormaient les Turcs.

## GERMAN

## Compound Verbs—(XVII)

1. The determinative word (Bestimmungswort) is a substantive.

(a) Substantives are not extensively and only in comparatively recent stages of the language used as the first component of compound verbs. Even when this is so, they are not genuine compounds (inseparable verbs) and the connexion is rather loose though they are written in one word, e.g.:

*achtgeben* (to pay attention): Er gibt nicht acht (He does not pay heed, attention).

*Bitte, geben Sie acht auf die Kinder* (Please, mind the children).

*achthaben* (to heed, mind): Haben Sie acht, es droht Gefahr.—Haben (=geben) Sie acht auf das Feuer. The two verbs are used alike, but *achtgeben* is more common.

*atemholen* (to draw breath): Er hat zum letztenmal atemgeholt (or Atem geholt).—Das Atemholen wird ihm schwer. Holen Sie tief Atem!

*danksagen* (to return thanks): Es ist meine Pflicht (duty) dankzusagen (or Dank zu sagen). Always, of course, *Ich sage vielen Dank. Ich schulde ihnen Dank dafür.*

*gewährleisten* (to grant, guarantee): Man hat ihm freies Geleite gewährleistet.—But *Ich leiste dafür Gewähr.*

*glückwünschen* (to congratulate): usually *Glück wünschen*: *Ich wünsche Ihnen Glück zu Ihrem Geburtstag.* But *beglückwünschen* + Acc. is inseparable, of course.

*haushalten* (to keep house, manage): *Sie hält ihm haus.*—Mit vielem kommt man aus, mit wenig hält man haus. (Man's wants are many, but his needs are few.)

*hohnsprechen* (to be a mockery, to mock): *Das*

*spricht aller Sitte* (good manners) *hohn.*—*Er sprach allem hohn, was ich sagte. Ich sage das, ohne ihm hohnzusprechen.*

*notleiden* (to be in distress): *Viele Arbeitslose leiden not mit andern notleidenden Familien in Deutschland.*

*preisgeben* (to deliver up, abandon): *Sie haben das Schiff den Wellen preisgegeben.*—*Er gab Haus und Hof preis und entflo.*—Preis in this combination has nothing to do with Preis (Wert, Lohn) but with French *la prise* (prize, booty).

*stattfinden* (to take stead, place): *Die Sitzung findet morgen statt.*—*Das Konzert hat gestern stattgefunden.* Similarly, but less common, *statthaben*. Different from this "statt" is *Das wird ihm zustatten kommen* (That will serve him well).—*Die Arbeit geht gut vorstatten* (progressing well).

*standhalten* (to stand firm, hold, last): *Die Truppen hielten nicht stand.*—*Solche Gebäude halten nicht stand.*

*teilhaben* (to play a part): *Er hat nicht teilgehabt an dem Betrug, aber sein Teilhaber (partner).*

*teilnehmen* (to take part, share): *Ich habe daran teilgenommen.*—*Sie nimmt teil an meinem Schmerz.*

*überhandnehmen* (to spread, get the upper hand): *Die Epidemie nimmt überhand.*—*Das Wasser nimmt überhand.* (Überhand is an old noun.)

*wahrnehmen* (to notice, observe): *Sie nahmen nicht wahr, dass er hinausging.*—*Er nimmt jede Gelegenheit wahr* (seize).—*Er hat meine Interessen in dem Prozess (law-suit) wahrgenommen* (look after).—The *wahr* of this verb has nothing to do with *wahr* (true), but comes from a noun "war" (observation, watch).

A number of verbs compounded with *wett* (die Wette = wager) are not often used except in the Infinitive, e.g., *wettfahren* (to take part in a race of vehicles), *die Wettfahrt* (competitive race), *der Wettfahrer*—*wettlaufen* (der *Wettlauf, der Wettläufer*)—*wettkämpfen* (der *Wettkampf, der Wettkämpfer*)—*wettrennen* (das *Wettrennen, der Wettrenner*)—*wettfliegen* (der *Wettflug, der Wettflieger*)—*wettrudern* (das *Wettrudern, der Wettruderer*)—*wettsegeln* (das *Wettsegeln, der Wettsegler*)—etc. When they are used as finite verbs it is usual to say: *Er fuhr* (lief, kämpfte, etc.) *mit ihm um die Wette* instead of *Er fuhr* (lief, kämpfte) *wett*.

Likewise *schautragen* (to wear for show), *schaustehen*, *schaustellen* (to stand, exhibit for show), are not generally used but *zur Schau tragen, zur Schau stehen, zur Schau ausstellen*.

*In sich inachtnehmen* (to take heed, be careful) we have the preposition *in*+*acht* of *achten* (to heed), *achthaben*, *achtgeben*: *Nehmen Sie sich inacht.* *Er hat sich nicht inachtgenommen.*

Compounds with *Lob* (praise) like *lobsagen*, *lobsingen*, *lobpreisen* are now obsolescent.

Compounds with *fehl*, due to the noun *Fehl(e)* (frei von Schuld) and *Fehl(e)* (failing) which comes from French *faillir* (to miss), are in regular use as separable verbs, e.g.:

*Fehlgehen* (to miss one's way), *fehlfahren*, *fehlgreifen*, *fehlschlagen* (to fail), *fehltreten*—*Ich war fehlgegangen.* Alles geht mir fehl. Sein Unternehmen hat fehlgeschlagen. Also compound nouns: *Der Fehlgriff, der Fehlschlag, der Fehltritt* (false step), *der Fehlbetrag* (deficit), *der Fehlzug* (wrong move in chess), *der Fehlschluss* (wrong conclusion).

(b) A number of compound verbs are not a composition of noun-verb but verbs formed from compound nouns—they are of comparatively recent formation and conjugated as *weak* verbs. Although they have the tonic accent on the first component they are inseparable, e.g.:

*argwöhnen* (to suspect) from *der Argwohn* (mistrust): *Er argwöhnt fortwährend.*

*handhaben* (to handle) from *die Handhabe*

(the handle by which one directs a thing). Er hat den Wagen schlecht gehandhabt, daher das Unglück.—Wenn er seine Geschäfte besser handhabte, würde es ihm gut gehen.

heiraten (to marry) from die Heirat (marriage): Er heiratete eine Schauspielerin.—Sie hat ihn geheiratet—sich verheiratet (to get married). The "hei" represents an old noun denoting "housemate," and the "rat" is the same word as Rat (advice) but in its original meaning of "goods and chattels" as in Vorrat (stock) Gerät (utensil).

wilddieben (to poach) from der Wilddieb (thief of game, poacher): Hier wird viel gewilddiebt.

kannegiessern (to talk twaddle about politics): Sie kannegiesserten jeden Abend im Wirtshaus bis in die späte Nacht hinein.—Kanne(n)-giesser means "pewterer," der politische Kanne(n)giesser is "the would-be politician." The origin of the word is due to a comedy (1722) of that title by the Danish poet Holberg in which "a pewterer" appears as a would-be politician.

herbergen (to shelter, lodge) from die Herberge (inn, place for shelter, cognate with English "harbour." More usual now — "beherbergen": Sie beherbergten in der kleinen Hütte ein halbes Dutzend Bergsteiger. The noun "Herberge" denotes now a public-house or inn for travelling journeymen, like a "sailors' home."

hofmeistern (originally "to act as private tutor," now "to tutor, sermonise, criticise") from der Hofmeister (steward, preceptor at a court): Er hat einige Jahre gehofmeistert, ehe er Professor geworden ist.—Er findet immer etwas an mir zu hofmeistern. Er hofmeistert gern (He is fond of playing the moralist). O.S.

## Round-the-Clock Reception

IN all probability it has not occurred to many listeners that it would be possible to listen in continuously for twenty-four hours. The object of this article is not to suggest that every listener should do this, but to show that there is always something "on the air" at any hour of the day or night, if only the listener knows where to tune in and what to expect at any particular hour. To demonstrate this we will imagine that the listener begins his day's listening at five o'clock one morning (G.M.T. not Summer Time) and continues until five the next morning.

The only station giving a musical programme at five in the morning is Moscow-Komintern. There are several other stations broadcasting at this hour, for it is then that most of the German stations give lessons in gymnastics. At about five-thirty Hamburg ends its gymnastics with a stirring march, thereby changing over to a musical programme which lasts until six. The Eiffel Tower gives a news bulletin at 5.45 a.m., so that by six o'clock there is a certain amount to choose from "on the air." Between seven o'clock and eight the Dutch and Italian stations usually begin their programmes. By the time the English stations have begun at half-past ten the air can be said to offer a good selection of entertainment.

The reason why most of these stations begin so early is because in many countries situated to the east of the British Isles they have Mid-European time, which is exactly one hour ahead of Greenwich time. In Far Eastern Europe and in Asia the time is more than an hour ahead of ours, so that the Russian and Turkish programmes will come at the end of our twenty-four hours. In listening, not only must time be considered but also reception conditions. As signals will be heard best when and where it is darkest, we must take into account the rising and setting of the sun, so that when possible

## ITALIAN

### Il "Carbone Rosso"?

(Idioms and words illustrating important rules of grammar are italicised)

A.—Interessante, questo fenomeno geologico di Larderello (un villaggio in provincia di Pisa). Se ben ricordo, Lei mi disse, la volta scorsa, che quei soffioni (*a kind of geyser*) *carichi di acido borico* potrebbero essere utilizzati come forza motrice. Ma io non ho capito se questa è una semplice proposta, o se è già un fatto compiuto.

B.—Un fatto compiuto, un fatto compiuto! I primi esperimenti rimontano al 1913 (mille novecento tredici) e furono *coronati da successo*. L'anno scorso si raggiunsero i settemila Kw. (mila, plural of mille). Non saprei dirle con precisione quanta energia si genera in questo momento; ma certamente *molta di più*, perchè recentemente s'è ottenuto un nuovo soffione—the più potente di tutti—che forse raddoppierebbe la produzione.

A.—Il sorgere d'un nuovo soffione dev'essere uno spettacolo imponente.

B.—*Altro che imponente!* (*More than...*) Io lo chiamerei addirittura pauroso. Perchè non c'è soltanto l'eruzione dei vapori, ma c'è anche il rumore assordante (*deafening*) che accompagna l'eruzione. Ed è il rumore la cosa che più impressiona. *S'immagini* che il boato (*booming noise*) di questo nuovo soffione si poteva sentire *fino a cinquanta chilometri di distanza*. I poveri abitanti di Larderello potevano a stento (*hardly*) dormire, ed eran costretti a portare legati (*fastened*) sugli orecchi degli spessi strati (*layers*) d'ovatta (*cotton-wool*), per non correre il rischio di diventar sordi. Naturalmente non riuscivano più a *parlarsi tra loro*, perchè il fracasso era tanto grande che non si poteva più sentire la voce umana; e dovevano comunicare

we listen with darkness between ourselves and the distant station. By an intelligent selection of programme we should be able to insure good distant reception without employing a very powerful receiver.

From five in the morning till sunset the foreign programmes from distant stations may not be received very well. At about six in the evening the stations in Eastern Europe—i.e. the Balkan and German stations—will begin to fade in with the approach of darkness. It will not be till later that the French and Spanish stations will begin to increase in strength. The Germans and the Eastern Europeans being ahead of us will naturally begin to close down before the English stations. There are, however, a few exceptions to this, for Berlin and other Germans often have a late night, when dance music goes on till after twelve.

When the English stations have closed down there is usually some foreign station giving a late night. The regular programmes between twelve and one are given by the Spaniards. For with the exception of Barcelona they always continue their programmes till one, if not later. The Spaniards frequently ignore the schedule of their programmes and often go on later than is expected. The German station of Norddeich gives weather reports after midnight.

By half-past one Europe has usually closed down. Now comes the turn of the Americas. Although the New York programmes begin at nine in the evening—Greenwich time—they are not usually at their loudest until between two-thirty and three. South America is not as difficult to receive as might be imagined, since there is a new powerful station at Buenos Aires. This station is at its strongest when it closes down at 2.45 a.m. The North American stations do not close down till after five, though they begin to fade before then. The stations on the west coast of America will not be heard as soon as those on the east, and they will not fade as early. At a quarter to four the Turkish

a segni o per iscritto! Non so come facessero i bambini, che non *sapevano* scrivere. . . . Dovette essere un brutto periodo, quello, per Larderello.

A.—Ma mi dica: questa energia motrice, che si ricava dalle viscere della terra, bisognerebbe chiamarla con un nome speciale. Perchè non la chiamano il "carbone rosso" (*red coal*)?

B.—*Ma guardi un po' (just look)* che cosa strana! Lo sa che uno scienziato italiano ha proposto *sul serio* questo nome? Perchè egli ha ragionato così; noi abbiamo il "carbon fossile," che è nero. Recentemente abbiamo creato il "carbone bianco" (*hydroelectric power*), utilizzando i corsi d'acqua e le cascate. Ora, questa terza forma d'energia che viene dalla terra, bisognerebbe chiamarla "il carbone rosso." Devo dire, però, che la sua proposta non è stata accettata dall'uso comune; forse perchè, il fenomeno, dopo tutto, è di limitata importanza nell'economia nazionale.

S. BREGLIA.

## Esperanto Transmissions (April 17—23)

Sunday.—Langenberg, etc., 8.30 a.m., Course (S-ro Wingen). Ljubljana, 9 a.m., Talk. Hilversum, 9.10 a.m., Course. Helsingborg, 9.45 a.m., "Parolado pri Estonujo" (Elinjo Pahn). Lille, 9 a.m., News (A. Trotin). Tuesday.—Tallinn, 8 p.m., News. Leningrad, 10.5 p.m., News and talk. Thursday.—Paris PTT, 5.45 p.m., Course and talk (Prof. Rousseau). Radio Suisse Romande, 7.10 p.m., Course and News (Prof. P. Bouvier). Breslau-Gleitwitz, 10 p.m., 10 minutes for workers. Friday.—Stuttgart, 7.30 p.m., Programme announcements. Leningrad, 10.5 p.m., News. Lisbon (CTAA-42.9 m.), 11.30 p.m., News. Saturday.—Heilsberg, 6.10 p.m., Week's Programme (F-ino Wermke). Huizen, 5.55 and 7.20 p.m., News and Course (P. Heikler). Lyon-la-Doña, 8.15 p.m., "Pri la 24a Universala Kongreso de Esperanto" (M. Borel). Lisbon, 11.30 p.m., Course (282 m.). NOTE.—These times may vary a little.

station of Ankara starts its programme, and is easily picked up. Programmes for night-workers are frequently given from Russia, and they continue till five. This brings us round to the hour at which we began.

## Interference between Stations

(April 1-9)

TWO severe new interferences have appeared during the above period, but have unfortunately not been counterbalanced by the disappearance of old ones. The first occurred on April 5 and was due to Radio-Algiers using almost the same frequency as Mühlacker, which was very severely interfered with. Fortunately, Algiers went back on the 6th to his usual place of 825 kc/s, where he still interferes with Mühlacker, but in a smaller degree, the separation between the two being only of seven kilocycles. Radio-Algiers should have worked, since October last, on 823 kc/s, which would give a 9 kc/s separation from Mühlacker.

The second began on April 1, when Madrid EAJ7 started using approximately 729 kc/s instead of 707 kc/s. This change in Madrid's wavelength was obviously made in order to remove the interference due to Moscow-Stalin, which has arbitrarily used this exclusive Spanish wavelength for several months. The rather weak power of Madrid, 1 kW, in comparison with Moscow's 100 kW, is certainly the reason why the Spanish authorities could not put up with the situation any more, in spite of the great distance between the two transmitters. Madrid is interfering now with Dublin and Katowice. Radio-España, Madrid, which was allotted 707 kc/s with Madrid Union-Radio, has not, up to now, accompanied Madrid in his move and is still using the frequency of 702 kc/s, where he interferes with Belgrade.

L. B.



# Last Week's Log

(April 3-9)

By "THE SEARCHER"

MY report for the past week is not, I am afraid, a very good one. It has been a period of very unsettled weather, and atmospheric conditions have been distinctly a nuisance. On the Sunday I was unable to use my set; from the Monday to the Wednesday atmospheric conditions increased steadily in number and intensity, while the Thursday was comparatively free. On the Friday violent hailstorms occurred at intervals during the day, and in the afternoon there was a good deal of thunder and lightning. I expected a very bad evening when I switched on the long-distance set, but was surprised to find that such interference as occurred was of a distinctly mild type. The Saturday was the best day of the week, for on that evening atmospheric conditions were completely absent, and stations on the whole were coming in well.

Owing to the prevalence of static interference, the long-wave stations were hardly worth bothering about from an entertainment point of view until the end of the week. As a matter of curiosity, though, I did run round the long-wave band each day and found that all-round signal strength was extraordinarily good, though there were one or two curious cases of variation. On the Friday, for instance, Königs Wusterhausen was distinctly below normal strength, while Warsaw, who for weeks has been a tremendous signal, was barely up to loud-speaker strength.

The evils of atmospheric interference were to some extent counterbalanced by a considerable reduction of the spark trouble below 270 metres. In previous weeks this has often been shockingly bad—so bad, indeed, that some of the strongest Continental transmissions were not worth tuning in. The Tuesday of the week now under discussion was the only night upon which I found spark signals really a nuisance in this portion of the medium wave-band.

One of the finest stations at the present time is Katowice. He has been coming in well for some little time on many nights, but during the past week he provided full loud-speaker strength on a four-valve set on every evening. Full marks for the week were also earned by Hilversum and Toulouse. Stations that missed full marks on one night only were Langenberg, Frankfurt, Bordeaux, Nürnberg, and Breslau. In nearly all these cases there was plenty of strength, but on odd occasions interference of one kind or another spoilt the quality of the transmissions.

Budapest is still variable; the Monday and Tuesday were his best nights, though he was quite good on the Friday. Munich had good nights on the Monday and the Wednesday. Brussels No. 1 was badly heterodyned on the Saturday. Prague does not seem to be up to the mark, and Rome has his "off" nights. Langenberg I find generally good, and Stockholm is distinctly better than he was. Beromünster is under a cloud for the moment, and Berlin Witzleben is not fulfilling the promise that he showed recently. Göteborg came in extraordinarily well on Saturday night, whilst Marseilles was particularly strong on the Wednesday. Bratislava provided excellent reception on the Thursday and Saturday. Heilsberg was at his best on the Monday, Thursday, and Saturday. Turin I heard really well only on the Thursday, and the same night was Trieste's beat. Strasbourg was better early in the week than late. Brussels No. 2 shows a curious record; he was very weak on Monday and Thursday, but excellent on the Wednesday. Milan is quite poor just now as a rule. Stuttgart is often an excellent signal when not heterodyned, and Rennes has been coming in rather well. I also heard Grenoble at big strength on the Thursday.

# Which Station Was That?

## Answers to Correspondents

**IN THE DARK (Rulland)**: Flensburg and Königsberg relaying dance music from Berlin. **BEGINNER (Serrard's Cross)**: Your wavelength must be wrong; Poste Parisien cannot be above 438 m.; regret, cannot trace. **CUT OUT (Hereford)**: Radio Sonora, experimental transmitter, Oporto (Portugal), on 243.5 m. **NOT SURE (Thornton Heath)**: Florence. **ENTENDU (Shefford)**: Possibly E.A.Q. Aranjuez-Madrid on 30,426 m. Tests have been recently carried out for the relay of broadcast programmes to South America. **AERIAL CONDENSER (Eaglescliffe)**: French experimental transmitter at Puteaux, (Seine). **JOE (Brighton)**: Radio Normandie (Fécamp) has no bird interval signal; just the call. **AERIAL CONDENSER (Eaglescliffe)**: We have no information regarding a Hamburg short-wave station on or near 43.40 m. **B.S.A. (Giffnock)**: (1) Hamburg; (2) Nürnberg relaying Munich. **RADIAC (Hornsey)**: Cannot trace as you give no estimate of wavelength. **NOVICE (Ingatstone)**: Brussels No. 1; gramophone records. Belgium adopted Summer time on April 2-3; hence one hour ahead of G.M.T. **PUZZLED (Birdwell)**: (1) WIOD, Miami Beach (Fla.); NBC network; (2) light-ship-shore telephony; (3) WIOD, Miami Beach; if programme heard on about 261 m. probably WHAM, Rochester (N.Y.) in same network. **T.S.F. (S.W.1)**: Moscow (Old Komintern); early morning physical exercises and concert. **OFTEN (Shefford)**: Apparently Sebastopol (473.2 m.). No. 13 (Leicester): Regret, cannot trace; there is no Italian station on or near 412 m. **DYS (Steyning)**: Poste Parisien, new high-power transmitter testing. **JOHN PEEL (Lampugh)**: (a) if French, either Radio Conférence (Brussels) on 216 m., or Radio Châtelineau (Belgium) on about 215.3 m.; (b) one of the small Swedish relays. **ETHER SLEUTH (Harlow)**: Radio Strasbourg. **PICK UP (Gosport)**: Regret, cannot trace. **W.E. (Masteg)**: WBZ, Springfield (Mass.), or KDKA, East Pittsburgh; both were taking the same NBC programme. **EITHIN (Abercromby)**: Possibly a test by Hilversum previous to wavelength change-over. **N.B.Z. (Birmingham)**: Lille (PTT); gramophone records. **ETHER SLEUTH (Harlow)**: (1) Barcelona (E.A.J.), if Spanish, but think announcement was probably in French and that you heard Radio Strasbourg with which programme details tally. **GOZ (Aintree)**: Harmonic of Daventry National. **GINGER (Redfield)**: Kalundborg; gramophone records. **MEERUT (Le Zoute-Belgium)**: Cork relaying Dublin. **HOT BUN (Margate)**: Florence relaying (on that evening) Rome-Naples programme. **MOHNA (N.W.6)**: Moscow (Stalin); (2) Madrid (E.A.J.). **B.R.S. (Ealing)**: French experimental transmitter at Puteaux (Seine) on 50.50 m. (announced). **DREADFUL GRIFFIN (Winchmore Hill)**: British amateur experimental transmitter. **U 4 (Petersfield)**: (1) GBC, Rugby; (2) French experimental transmitter; call sign is mutilated. **ANONYMOUS (Llandudno)**: British liner calling Valencia (Ireland). **PERPLEXED (Ludlow)**: Cannot trace transmitter as you give no estimate of wavelength, but a German station broadcasting early morning physical exercises. **MOLESKIN JOE (Edinburgh)**: Frankfurt-on-Main relaying Stuttgart. **SUSIE (Port Sunlight)**: Augsburg-Kaiserslautern (common wave) relaying Munich (Haydn anniversary programme). **SEARCHER (Oldham)**: Barcelona (E.A.J.). **NITWIT (Tolworth)**: Nürnberg relaying Munich. The time signal is now broadcast verbally by the announcer. **R.E.T.A. (Thornaby-on-Tees)**: (1) French experimental transmitter at Puteaux (Seine) on 50.50 m. (announced); (2) yes, UOR2, Vienna; (3) cannot trace without some indication of wavelength; (4) see No. 1. **CHEESEMITE (Southend-on-Sea)**: (1) Trieste. The call was (phonetically): "Tree-ess-tay"; (2) Leipzig relaying Berlin. **WJC (Maidenhead)**: VK7LO, Nairobi. **YOU RASCAL, YOU! (Bradford)**: Beromünster. **MAD HATTER (Berkeley)**: Hilversum; gramophone records. Dutch time is twenty minutes ahead of G.M.T., hence midnight at 11.40 p.m. **Q (Diss)**: Poste Parisien testing. **ROVI (Wolverhampton)**: Huizen; K.R.O. broadcast. **BOBBY (Cowdenbath)**: Apparently Madrid (E.A.J.) on lower WL. **KILOCYCLE (Leamington Spa)**: An harmonic of Midland Regional; (2) GORX, Rugby, on short wavelength. **ENQUIRY (Kendal)**: Regret, cannot trace. **PATIENCE (Handsworth)**: Please number your queries. (1) 1,547 kc/s, harmonic of Radio Toulouse; (2) Sebastopol (473.2 m.); (3) Milan (904 kc/s); (4) LR3 Radio Nacional, Buenos Aires (951 kc/s)—(5) possibly LR9, Radio Fenix, Buenos Aires (201.2 m.); this station has been reported by other listeners; (6) Norddeich (160 m.); Cuxhaven Radio (177.5.); (7) Luxembourg is reported to be testing at low power on 1,250 m. daily between 17.30-18.00 G.M.T. **ANTENNAE (Alloa)**: F3ICD, Chi-Hoa (Saigon). **SEZWHICH (South Harrow)**: Regret, cannot trace. **NORTON (Cuckney)**: Cannot confirm, but time and WL would tally with W8XK on 25.25 m. **IRIS (Wallington)**: (162) LS 5, Radio Rivadavia, on 280.5 m. (10 kW.) is the only Buenos Aires station near your wavelength; (163) LR 3, Radio Nacional, Buenos Aires; (165) cannot trace, but U.S.A. stations frequently transmit special programmes for the benefit of South American listeners; (166) details are vague, but possibly W0XAA relaying WFCL, Chicago, on 49.34 m. **THUMB CONTROL (West Malling)**: Bordeaux-Lafayette. **DIS DONG (Cambridge)**: Radio-Maroc (Rabat); relay of foreign transmissions. **LIZ (Holborn)**: Apparently, harmonic; cannot trace. **MAVIS (Disley)**: Heston Airport (London) on 833 m. **PRINCESS (Cardiff)**: Radio Normandie (Fécamp). **PEGASUS (Bristol)**: Regret, cannot trace. **POPSKI (Swindon)**: Yes, tallies with VQ7LO, Nairobi. **ARCH (Norwich)**: Geneva relaying Lausanne. **CREGORA (Ballywilliam)**: No relay advertised; we suggest that you were listening on medium waves. **J. C. M. (N.W.6)**: Radio Maroc (Rabat). **COOPER EYE (Berwick-on-Tweed)**: Ship-lightship telephony. **NITWIT (Tolworth)**: Katowice relaying Warsaw. **CADBOROUGH (Rye)**: Huizen; K.R.O. broadcast. **DIAL TWIDDLER (Blackburn)**: Radio Suisse-Romande (Sottens). **PUZZLED (Berkhamsted)**: Possibly WLW, Cincinnati. **WISH I KNEW (Prittlewell)**: (1) Chi-Hoa (Saigon) on 24.98 m. working with Ste. Assise (France); (2) more probably German; Nauen (25.2 m.) working with Cairo. **DSMOND (Faversham)**: Regret, cannot trace, but a Spanish call-sign. **MIDDY (Tipton)**: (1) LSX, Monte Grande (Buenos Aires), on 28.98 m.; (2) cannot trace; (3) possibly a test by French experimental station at Puteaux (Seine) on 50.5 m. (announced). **JUNKSET (Ramsgate)**: Apparently trans-Atlantic telephony with ships; regret, cannot trace call-sign. **GRID BIAS (Thornton Heath)**: Abu Zabal (Cairo); several wavelengths such as SUC, 27.27 m. (11,000 kc/s). **NAN (Wedmore)**: (1) Scheveningen-Haven (Holland); commercial transmitter; (2) Heston Airport (833 m.). **CANEMA (Glasgow)**: Kiev (U.S.S.R.). **KING COLE (Mill Hill)**: Radio Strasbourg relaying Paris P.T.T. **PANSY (South Lowestoft)**: Moscow (Stalin); news bulletins for night workers. **BUNTY (Newcastle-on-Tyne)**: This was Oslo. **HOBBY (N.W.6)**: Kiev. **RABAT (Plymouth)**: Radio Maroc; power was recently increased. **RADIO FAN (Worthing)**: Scheveningen-Haven (Holland). **J. L. S. (Dundee)**: Brussels (No. 1); gramophone records. **NABOONA (Upper Teddington)**: Scheveningen-Haven. **RECTIFIER (Leeds)**: Commercial transmitter at Writtle (Chelmsford). **KEEN (Nursling)**: Your letter received, but enquiry was inadvertently omitted.

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Each query should be numbered and the questions on the coupon carefully answered. Letters must be addressed to the Editor, *World-Radio*, Savoy Hill, W.C.2.

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# 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)				55	Stockholm (Sweden)	
167	1796	54	Lahti (Finland) (relays Helsinki)		697	430.4	2.5	Belgrade (Yugoslavia)	
174	1725	13.5	Radio Paris (CFR)				2	Madrid (Union Radio) (EAJ7) (Spain)	
183.5	1635	75						7-8.30 p.m. and (except Monday)	
		60	Königs Wusterhausen (Zeeseen) (Germany) Relays Berlin.		707	424.3		10 p.m. to 12 midnight.	
193	1554.4	30	Daventry National (Great Britain)					Madrid (Radio España) (Spain) 5-7	
195	1538	7	Ankara (Turkey)				100	p.m. (Mon. 5 p.m. to 12 midnight)	
202.6	1481	100	Moscow (Old Komintern) (RV1) (Russia)		715	419.5	1.5	Moscow-Stalin (Russia)	
					721.1	416	6	Berlin (Witzleben)	
207.5	1445.7	13	Eiffel Tower (FLE)		725	413	1.2	Rabat (Morocco)	
212.5	1411	120	Warsaw No. 1 (Poland)		734	408	16	Dublin (zRN) (Ireland)	
222.2	1350	0.5	Kasbah (Tunis)		743	403	25	Katowice (Poland)	
222.5	1348	30	Motala (Sweden) (relays Stockholm)					Radio Suisse Romande (Sottens)	
230.1	1364	100	Moscow (Trades Union)		752	398.9	25	(Switzerland)	
238.1	1260	4	Novosibirsk (Russia)		761	394	12	Midland Regional (Great Britain)	
242.5	1237		Vienna Experimental (Austria)		770	390	10	Bucharest (Romania)	
244	1229.5	0.6	Boden (Sweden)					Archangel (Russia)	
					779	385	8	Frankfurt (Germany)	
250	1200	5	Istanbul (Turkey)		788	381	16	Toulouse (Radio) (France)	
		21	Reykjavik (Iceland)		797	376.4	1	Lwów (Poland)	
260	1153	7.5	Kalundborg (Denmark) (relays Copenhagen).		806	372	1.5	Glasgow (5SC) (Great Britain)	
					810	370.4	0.5	Hamburg (Germany)	
268.5	1116	40	Moscow, Popoff					Radio LL (France)	
277	1083	60	Oslo (Norway)		815	368.1	13.2	Bolzano (Italy) (1BZ)	
284.9	1053	10	Tiflis (Russia)					Helsinki (Finland)	
300	1000	100	Leningrad (Russia)		816	367.6	0.7	Seville (Union Radio) (EAJ5) (Spain)	
320	937.5	20	Kharkov (Russia) RV20		824	364	1	Fredriksstad (Norway) (relays Oslo)	
353.5	848.7	4	Rostov-Don (Russia)		825.3	363.3	13	Bergen (Norway)	
368.1	815	20	Kiev (Russia)		832	360.5	60	Algiers (N. Africa)	
385	778	2	Petrozavodsk (Russia)		843	356	50	Stuttgart (Mühlacker) (Germany)	
389	770	0.6	Östersund (Sweden) (relays Sundsvall)		852	352.1	7	London Regional (Great Britain)	
394	761.4	1.8	Nijni Novgorod (Russia)		855.5	351	1.2	Graz (Austria) (usually relays Vienna)	
395	760	1.5	Geneva (Switzerland)		860	349	8	Leningrad (Russia)	
416.7	720	20	Moscow (Experimental)					Barcelona (Radio Barcelona) (EAJ1)	
428.6	700	4	Minsk (Russia)		869	345	11.5	(Spain)	
442	680	0.6	Lausanne (Switzerland)		878	342	35	Strasbourg (Brumath) (France)	
522	574.7	2.5	Ljubljana (Yugoslavia)		887	338.2	15	Brno (Czechoslovakia)	
527	570	0.25	Freiburg-im-Breisgau (Germany) (relays Stuttgart).					Brussels No. 2 (Belgium) (Flemish programme).	
					896	335	5.5	Cadiz (Spain)	
530	566	0.25	Hanover (Germany) (relays Hamburg)				1.9	Poznań (Poland)	
531	565	2	Smolensk (Russia)		905	331.5	7	Milan (Italy)	
533	563	16	Wilno (Poland)					Grenoble (PTT) (France)	
					914	328.2	2	Poste Parisien (Paris)	
		0.25	Augsburg (Germany) (relays Munich)					Breslau (Germany)	
		1.5	Kaiserslautern (Germany) (relays Munich).		923	325	1.5	Göteborg (Sweden) (relays Stockholm)	
536	560	0.7	Hamar (Norway) (relays Oslo)		932	322	10	Dresden (Germany) (relays Leipzig)	
		18.5	Budapest No. 1 (Hungary)		[941	319	0.25	Naples (INA) (Italy)	
545	550	3	Palermo (Italy)					Sofia (Rodno-Radio) (Bulgaria)	
554	542	10	Sundsvall (Sweden)		950	315	1.6	Marseilles (PTT) (France)	
563	533	1.5	Munich (Germany)					Cracow (Poland)	
572	525	15	Riga (Latvia)		959	312.8	10	Genoa (IGE) (Italy)	
581	517	15	Vienna (Rosenhügel) (Austria)					Radio-Vitus (France)	
590	509	15	Brussels No. 1 (Belgium)		968	309.9	1	Cardiff (5WA) (Great Britain)	
599	500.8	20	Florence (IFI) (Italy)		977	307	0.5	Falun (Sweden)	
603.6	497	1.2	Moscow (Russia)					Zagreb (Yugoslavia)	
608	493.4	1.2	Trondheim (Norway)		986	304	13	Bordeaux-Lafayette (PTT) (France)	
614	488.6	120	Prague (Czechoslovakia)		995	301.5	50	North National (Manchester) (Great Britain)	
625	480	50	North Regional (Manchester) (Great Britain)		1004	298.8	8.5	Hilversum (Holland)	
					1013	296.1	11	Tallinn (Estonia)	
630.2	476	1.2	Sebastopol (Russia)					Kosice (Czechoslovakia)	
635	473	60	Langenberg (Germany)		1022	293	0.7	Limoges (PTT) (France)	
		1.5	Lyons (La Doua) (France) (relays PTT).					0.25	Pietarsaari (Jacobstad) (Finland) (relays Helsinki)
644	465.8	0.5	Tartu (Estonia)		1031	291	1	Tampere (Finland) (relays Helsinki)	
653	459	60	Schweizerischer Landessender (Bernmünster) (Switzerland)				13.2	Viiipuri (Viborg) (Finland) (relays Helsinki)	
		0.5	Bödo (Norway)					British Relay Stations	
		0.5	Danzig (Free City) (relays Königsberg).					1	Aberdeen (zBD)
		0.5	Klagenfurt (Austria) (relays Vienna)					1	Bournemouth (6BM)
		0.7	Porsgrund (Norway) (relays Oslo)					0.12	Dundee (zDE)
662	453.2	1	Salamanca (Spain) (EAJ22)		1040	288.5	0.3	Edinburgh (zEH)	
		0.6	San Sebastian (Spain) (Mon., Wed. Fri. 7.30-9 p.m., other days 10 p.m. to midnight).					1	Newcastle (zNO)
		0.1	Tromsø (Norway)					0.12	Plymouth (5PY)
		0.15	Uppsala (Sweden) (relays Stockholm)		1043	287.6	0.7	*Sheffield (6FL)	
666	450.4	4	Odessa (Russia)					0.12	Swansea (5SX)
		0.35	Aalesund (Norway)		1049	286	0.8	Lyons (Radio) (France)	
		0.08	Notodden (Norway)					0.5	Montpellier (France)
671	447.1	0.7	Paris (PTT) (Ecole Supérieure) (France)		1058	283	0.5	Berlin Relay (Germany)	
		0.15	Rjukan (relays Oslo) (Norway)					0.5	Magdeburg (Germany)
680	441	50	Rome (IRO) (Italy)					0.5	Stettin (Germany) (relays Berlin)
								0.5	Innsbruck (Austria) (relays Vienna)

\* Not radiating.

STATIONS IN ORDER OF FREQUENCIES AND WAVELENGTHS (Continued)

Table listing radio stations with columns for Kc/s, M., kW., Station, and Dial Readings. Includes stations like Lisbon, Portugal; Copenhagen (Denmark); Radio Liège (Belgium); Bratislava (Czechoslovakia); Heilsberg (Germany); Turin (Italy); Rennes (France); Bremen (Germany); Oviedo (Spain); Radio Valencia (Spain); Lille (PTT) (France); Moravská-Ostrava (Czechoslovakia); London National (Great Britain); Leipzig (Germany); Hörby (Sweden); Toulouse (PTT) (France); Gleiwitz (Germany); Almeria (Spain); Barcelona (Association National); Trollhättan (Sweden); Varberg (Sweden); Juan-les-Pins (Nice) (France); Kalmar (relays Stockholm); Trieste (Italy); Berne (Switzerland); Cartagena (Spain); Cassel (Germany); Eskilstuna (Sweden); Kiruna (Sweden); Linz (Austria); Säfte (Sweden); Turku (Abo) (Finland); Basle (Switzerland); Belfast (2BE) (Ireland); Stavanger (Norway); Radio Beziens (France); Nürnberg (Germany); Bordeaux Sud-Ouest (France); Radio-Nimes (France); Örebro (Sweden); Christiansand (Norway); Lodz (Poland); Kiel (Germany); Norrköping (Sweden); Hälsingborg (Sweden); Malmö (Sweden); Umea (Sweden); Uddevala (Sweden); Hudiksvall (Sweden); Cork (6CK) (Ireland); Fécamp (Radio Normandie) (France); Flensburg (Germany); Pori (Björneborg) (Finland); Salzburg (relays Vienna); Karlstad (Sweden); Königsberg (Germany); Halmstad (Sweden); Radio Chatelineau (Belgium); Warsaw, No. 2 (Poland); Budapest, No. 2 (Hungary); Borås (Sweden); Ornsköldsövik (Sweden); Gävle (Sweden); Kristinehamn (Sweden); Jönköping (Sweden); Karlskrona (Sweden); St. Quentin (France); Tiflis (U.S.S.R.); Kiev (U.S.S.R.); Ljubljana (Yugoslavia); Palermo (Italy); Trondheim (Norway); Radio España (Spain); Madrid (Spain); Lyons (France); Rennes PTT (France); Radio Valencia (Spain); Barcelona (Ass'n Nat'l) (Spain); Bordeaux-sud-Ouest (France).

DEVIATIONS

Table of deviations with columns for Kc/s, M., kW., Station, and Dial Reading. Includes stations like Tiflis (U.S.S.R.), Kiev (U.S.S.R.), Ljubljana (Yugoslavia), Palermo (Italy), Trondheim (Norway), Radio España (Spain), Madrid (Spain), Lyons (France), Rennes PTT (France), Radio Valencia (Spain), Barcelona (Ass'n Nat'l) (Spain), Bordeaux-sud-Ouest (France).

(For List of Short-Wave Stations see page 746.)

Schedule of Advance Programmes

(STRICTLY COPYRIGHT)

For the benefit of traders who may wish to make arrangements for demonstrating, we are printing each week a schedule of the programmes to be transmitted by the National and Regional stations. It will be noticed that these schedules concern programmes to be transmitted a fortnight hence, and it is felt that they will also be of particular service to those of our readers living abroad who will be 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. (Saturdays, 12.45), 6.15 p.m., and midnight.

SUNDAY, MAY 1

Table showing programme schedule for Sunday, May 1, with columns for National, London Reg., Midland Reg., and North Reg. across Morning, Afternoon, and Evening.

MONDAY, MAY 2

Table showing programme schedule for Monday, May 2, with columns for National, London Reg., Midland Reg., and North Reg. across Morning, Afternoon, 1st Evening Programme, and 2nd Evening Programme.

TUESDAY, MAY 3

Table showing programme schedule for Tuesday, May 3, with columns for National, London Reg., Midland Reg., and North Reg. across Morning, Afternoon, 1st Evening Programme, and 2nd Evening Programme.

WEDNESDAY, MAY 4

Table showing programme schedule for Wednesday, May 4, with columns for National, London Reg., Midland Reg., and North Reg. across Morning, Afternoon, 1st Evening Programme, and 2nd Evening Programme.

THURSDAY, MAY 5

Table showing programme schedule for Thursday, May 5, with columns for National, London Reg., Midland Reg., and North Reg. across Morning, Afternoon, 1st Evening Programme, and 2nd Evening Programme.

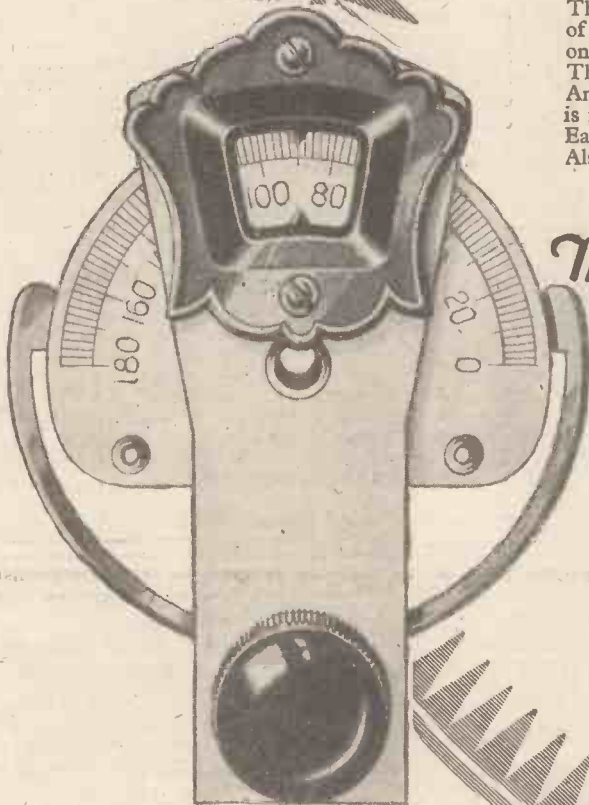
FRIDAY, MAY 6

Table showing programme schedule for Friday, May 6, with columns for National, London Reg., Midland Reg., and North Reg. across Morning, Afternoon, 1st Evening Programme, and 2nd Evening Programme.

SATURDAY, MAY 7

Table showing programme schedule for Saturday, May 7, with columns for National, London Reg., Midland Reg., and North Reg. across Morning, Afternoon, 1st Evening Programme, and 2nd Evening Programme.

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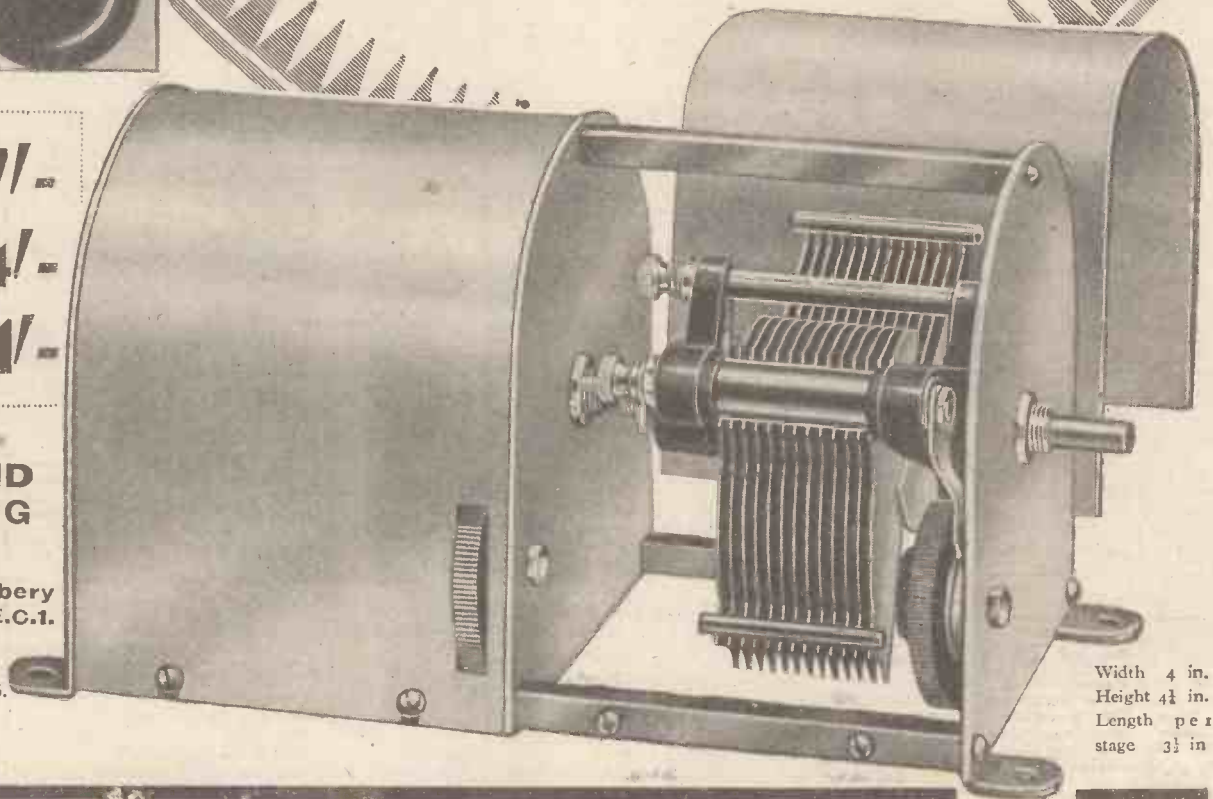
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# PROGRAMMES FOR SUNDAY (April 17)

## PRINCIPAL EVENTS

### CHURCH SERVICES AND SACRED MUSIC

- 10.0 a.m. Warsaw: High Mass from Cracow.
- 11.30 " Leipzig and all German Stations: Church Cantata No. 12 (Bach).
- 6.0 p.m. Munich: Choral programme.
- 8.55 " Huizen: Choral and orchestral.

### CONCERTS (Vocal and Instrumental)

- 7.0 a.m. Hamburg and other German Stations: Harbour Concert.
- 5.0 p.m. Rome: The Berlin Sing-Akademie.
- 7.30 " Stuttgart, Frankfurt: Dr. Albert Schweitzer (Organ).
- 8.0 " Hamburg: Verdi-Puccini programme.
- 8.0 " Leipzig: Wagner programme.
- 8.15 " Stockholm: Choral and Orchestral.
- 9.5 " London Regional: B.B.C. Orchestra, conducted by Bruno Walter.

### OPERAS AND OPERETTAS

- 8.0 p.m. Vienna, Berlin, Witzleben, Königs Wusterhausen: "The Last Waltz" (Straus)
- 8.0 " Langenberg: "Gipsy Love" (Lehár).
- 8.15 " Breslau: "Der Freischütz" (Weber).
- 9.0 " Italian Stations (Northern group): Opera relay.

### CHAMBER MUSIC

- 1.10 p.m. Huizen: Haydn.
- 10.25 " Copènhagen: Serenade, Op. 25 (Beethoven).

### MISCELLANEOUS

- 11.0 a.m. Hamburg: Hagenbeck's 25th Anniversary.
- 2.55 p.m. Hilversum, Brussels No. 1 and 2: Holland v. Belgium (Association Football).
- 7.5 " Stuttgart, Frankfurt: Germany v. France (Rugby).

### DANCE MUSIC

- 9.30 p.m. Radio-Paris.
- 10.30 " Strasbourg (till 12).



(Photo: German State Railways.)

### Hagenbeck's Lions' Den

Hamburg Station is to-day giving the first of a series of broadcasts to mark the 25th anniversary of the Stelligen Zoo.

### Hans Pfitzner's First Publication

Hans Pfitzner, whose opera, *The Heart*, was broadcast from the Vienna State Opera last week, is represented in the FRANKFURT programme to-day by his first published work, a sonata for 'cello and piano-forte. As has already been pointed out in these columns, Pfitzner is not only the most uncompromising, but the most important, of modern romantic composers, refusing to consider music as anything but an expression of emotion. During a recent conversation with our Frankfurt correspondent, when he was asked about his attitude towards those of his contemporaries who are attempting to exclude emotion from their art, and whose music is written for the head rather than the heart, he expressed himself rather strongly on the point. "Music," he maintained, "is purely an expression of the feelings, from which it cannot be separated."

### An Old Male-Voice Choir

The "Mastrechtster Staar" (an old-fashioned local spelling of which the meaning is obvious), which, along with the Municipal Orchestra of Maastricht, is providing the K.R.O. concert to-night, is one of the oldest and most famous, as well as probably the largest, male-voice choir on this side of Europe. Exactly when it first came into existence nobody knows, but it was after many vicissitudes that it was reorganised in 1893, and quickly began to win distinctions in Holland, Belgium, France and Germany. It now numbers about 250 members, drawn from all classes of the community, who sing with equal ease in various languages, although in the present programme only French and German appear. The conductor, Mr. Peter Gielen, has had that position for many years and is held in high esteem all over Holland. For two numbers he is stepping down to make way for the composers, H. Heydenaald and Charles Smulders. The latter, who was a fellow-student and friend of Alphons Diepenbrock, Holland's most famous composer, is conducting his best-known work, "La Mer," an exceptionally interesting piece for unaccompanied male-voice chorus.

NATIONAL				REGIONAL			
	kc/s.	m.	kW.		kc/s.	m.	kW.
London:	1,148	261.3	50	London:	842	356.3	50
Daventry:	193	1,554.4	30	Midland:	752	398.9	25
Northern:	995	301.5	50	Northern:	626	479.2	50

10.30-10.45 a.m.—Time Signal (Greenwich); Shipping Forecast.  
 3.0—Time Signal (Greenwich).  
 3.0—Frederick Hartley's Quintet.  
 3.45—"What is a Saint?"—XII. St. John B. Vianney. By the Rev. Father C. C. Martindale, S.J.  
 4.0—Missionary Talk. By the Rev. Reginald Bartlett, of the London Missionary Society.  
 4.15—British Music for Strings. The B.B.C. Orchestra (Strings of Section C). Conductor, Adrian Boult. Fantasy No. 1 in E Flat (Byrd, ed. Fellowes); Dances from "The Fairy Queen" (Purcell, ed. Rootham); An English Suite (Parry); Air and Dance (Delius); Suite, Capriol (Peter Warlock).  
 5.15—A Recital. Lina Lubera (Soprano). Serge Prokofiev (Pianoforte).  
 6.0-6.20—For the Children.  
 8.0—Evening Service. Relayed from Govan Parish Church.  
 8.50—"The News." Time Signal (Greenwich).  
 9.5—The B.B.C. Theatre Orchestra. Conductor, Leslie Woodgate. Trefor Jones (Tenor). Orchestra: Overture, Regina (Rossini); Suite Four Ways (Eric Coates). Trefor Jones and Orchestra: Quando le sera al placido (Softly the Breeze of Eve) (Verdi); The Death Song of the Cherokee Indians (E. Herbert Casari). Orchestra: Sunrise on Derry, Lost Colombine, and In Roman Land (Carlyon de Lyle). Trefor Jones: Vaghissima sembianza (Fleeting Vision), Luoghi sereni e cari (Far off, calm and clear), and Ah, mai non cessata (Never cease) (Danaudy). Orchestra: Selection of Favourite Hymns and Solos (arr. Leslie Woodgate). Trefor Jones: To the Children (Rachmaninov); Wear your White (Dunhill); Marching along (Julius Harrison). Orchestra: Serenade No. 2 (Toselli); An old Violin (Fisher); Negro Spirituals (arr. Finck).  
 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

#### ALGIERS (N. Africa)

825.3 kc/s (363.3 m.); 13 kW. Transmits at intervals from 11.30 a.m. 7.0 p.m.—Concert of Dance Music. 7.30—Songs from Operas: Selections from "The Damnation of Faust" (Berlioz), "Don Giovanni" (Mozart), "Le Roi d'Ys" (Lalo) and "La Favorita" (Donizetti). 7.50—Accordion Ensembles. 8.0—Request Concert by the Station Orchestra.

#### BARCELONA (Spain)

Radio-Barcelona (E.A.J.). 860 kc/s (349 m.); 8 kW. 8.30-9.45 a.m.—Topical Review. 12 noon—Chimes and Weather Forecast. 12.15 p.m.—Concert by the Municipal Band, conducted by Lamote de Grignon, relayed from the Palacio de Bellas Artes. 2.0—Light Music on Gramophone Records. 2.30—Concert by the Station Sextet. 3.0—Theatre Notes, Variety Music on Gramophone Records and Cinema Notes. 3.20—Sextet Concert (contd.). 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, Vltavan (Leopold). Waltz Selection (Waldteufel). Selection from "Boris Godounov" (Moussorgsky). Legend (Dvorak). 7.30—Song Recital by Ramón Pradell (Baritone). 8.0—Agricultural Talk in Catalan. 8.10—Concert by the Station Orchestra. Soloists: Maria Teresa Gonzalez (Soprano), Maximo Barrientos (Tenor). Overture "Joseph" (Méhul). Soprano and Tenor Duet from "Carmen" (Bizet). Ochaenmenuet (Haydn). Tenor Solo from "La Dolores" (Bretton). Soprano Solo: Recitative and Aria from "Lakmé" (Delibes). Gavotte-Caprice (Bortkiewicz). Soprano and Tenor Duet from "Aida" (Verdi). An-

dante from the Quartet (Debussy). Soprano and Tenor Duet from "La Dolores" (Bretton). Entr'acte Music to "Gismonda" (Février). 10.0—Request Concert on Gramophone Records. 11.45—Chess Lesson. 12 midnight (approx.)—Close Down.

#### BELGRADE (Yugoslavia)

697 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 9.0 a.m. 5.30 p.m.—Light Music on Gramophone Records. 6.55—Programme Announcements. 7.0—Talk (to be announced). 7.30—Violin Recital by Andrija Hauser. Ninth Sonata in A Major—the Kreutzer Sonata (Beethoven). 8.0—American Popular Songs by Herr Niksa Stefani. 8.30—"The Eucharistress"—Operetta (Davorin Jenko). In the interval at 9.30 (approx.)—News and Sports Notes. After the Programme, Czigany Music from the Amerikanac Restaurant.

#### BERLIN (Germany)

Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW. Transmits at intervals from 11.0 a.m. 11.30 a.m.—See Leipzig. 12.5 p.m.—Talk: Masterpieces of Plastic Art as portrayed in Literature. 12.25—Concert from Heilsberg. 1.0—See Frankfurt. 1.30—Concert from Heilsberg (contd.). 2.0—See Berlin (Witzleben). 2.30—See Stuttgart. 3.15—Programme for Children. 4.0-5.40—See Berlin (Witzleben). 5.40—Readings from the Works of Hans Henning, Baron von Grote. 6.0—The Younger Generation speaks—A Review of the Ideas of the Younger Generation—as revealed by the Listeners' Correspondence. 6.30—Sacred Concert from Munich. 7.30—Talk: Travelling in Germany. 7.50—Sports Notes. 8.0-12.30 a.m. (Monday)—See Berlin (Witzleben)—12.30 (approx.)—Close Down.

#### BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW. Transmits at intervals from 6.45 a.m. (Gymnastics and Hamburg Relay). 11.30 a.m.—See Leipzig. 12.5 p.m.—Reading of Lyrics. 12.15—Concert from Heilsberg. 2.0—Talk for

Parents: Walking Tours for Children. 2.30—Concert of Dances and Dance Songs from Five Centuries. 3.10—Walther Victor reads from his own Works. 3.35—Talk: Through Baluchistan on a Motor-Bicycle. 4.0—Concert from the Singakademie. The D.H.V. Orchestra, conducted by Georg Oskar Schumann and the D.H.V. Male Voice Choir, conducted by Helmut Miessner. 4.45—Topical Programme. 5.40—Talk: Verdi's "Othello," with Gramophone illustrations. 6.55—Fantasia in C Major, Op. 15, for Pianoforte (Schubert). 7.20—Notes of the Day. 7.50—Sports Notes. 8.0—See Vienna. 10.15—News Bulletin, followed by Dance Music from the Femina. 12.30 a.m. (Monday)—Close Down.

#### BORDEAUX-LAFAYETTE (France)

(P.T.T.) 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. 6.20—Sports Results. 6.30—Radio Journal. 8.0—Review by M. Salomon. 8.10—Lottery Results. 8.30—Concert of Light Music on Gramophone Records. 9.0—Concert of Popular Music on Gramophone Records. After the Programme, Amusement Guide and Time Signal.

#### BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by Giechwitz, 1,184 kc/s (253 m.). Transmits at intervals from 7.0 a.m. (Hamburg Relay). 9.30 a.m.—Divine Service for the Consecration of the Bells, relayed from the Church of Our Lady, Liegnitz. 11.0—The World of the Child—Readings (Cinna Hull). 11.30—"Leben in dieser Zeit"—a Lyric Suite in Three Movements (Erich Kästner, Music by Edmund Nick), relayed from the Municipal Theatre. 2.0—News Bulletin. 2.10—Talk: Cheaper Education. 2.25—Talk: A Silesian Frigate. 3.30—Concert by the Station Or-

SUNDAY continued

chestra, conducted by Franz Marszalek. 5.30—Radio Report on the Silesian Swimming Competition. 6.0—Talk: People around us. 6.20—Violin Recital by Diez Weismann 7.0—Weather Forecast and Sports Notes. 7.10—Talk: The Work of a Teacher. 7.30—Authors as Globetrotters—"A Journey through Spain" (Ernst Toller). 8.10 (from Gleitsitz)—Introductory Talk to the following Transmission. 8.15—"The Marksman"—Romantic Opera in Three Acts (Weber). In the first interval at 9.15—Announcements. In the second interval at 10.15—Time Signal, Weather, News, Sports Notes and Programme Announcements. 11.15—Dance Music from Berlin (Witzleben). 12.30 a.m. (Monday)—Close Down.

**BRNO (Czechoslovakia)** 878 kc/s (342 m.); 35 kW. Transmits at intervals from 7.30 a.m. 12.5 p.m.—Concert by a Brass Band. 1.5—See Prague. 1.30—Agricultural Report. 3.0—See Prague. 5.0—See Moravská-Ostrava. 5.30—Popular Songs. 5.50—"Grandmother's Tales." 6.0—German Transmission: Popular Songs. 6.45—Talk in Esperanto: The Ninth Sokol Congress. 7.0—See Prague. 7.30—"Leben in dieser Zeit"—Lyric Suite in Three Parts. (Kästner. Music by Ed. Nick). 9.0—See Prague. 10.15—News Bulletin. 10.20—See Prague.

**BRUSSELS (Belgium) (No. 1)** 1. N.R. 590 kc/s (509 m.); 15 kW. 7.0 a.m. and at hourly intervals throughout the day—Pigeon-flying Report. 12.15—1.45 p.m.—Weather and Variety Music on Gramophone Records. 3.0—Report on the Football Match, Holland v. Belgium, relayed from Amsterdam. 5.0—Concert, conducted by Mr. Poppelsdorf. 6.15—Gramophone Concert. Overture, "Der Freischütz" (Weber). Concerto for Violin and Orchestra (Tchaikovsky). Bolero (Mozzkovsky). Spanish Dance (Moszkovsky). Melody (Tchaikovsky). Aria (Lotti). Aria from "Monna Vanna" (Février). Hungarian Rhapsody, No. 12 (Liszt). 7.15—Religious Address by the Reverend Father Draime, O.P. 7.30—Le Journal Parlé. 8.0—"Le Postillon de Longjumeau"—Opéra-Comique (Adam), relayed from the Royal French Opera House, Amwerp. In the intervals, Songs and Monologues and Le Journal Parlé.

**BRUSSELS (Belgium) (No. 2)** N.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12.15—1.45 p.m.—Weather and Popular Music on Gramophone Records. 3.0—Report on the Football Match, Holland v. Belgium, relayed from Amsterdam. 5.0—Orchestral Concert, conducted by Arthur Meulemans. Soloist: Mr. Steylaerts (Violin). 6.0—Variety Music on Gramophone Records. 7.15—Religious Address by the Reverend Father Van Gestel, O.P. 7.30—Music Review by Paul Gilson. 8.0—Orchestral Concert, conducted by Jean Kumps. In the interval at 8.45—Dramatic Programme. 10.0—Le Journal Parlé.

**BUCHAREST (Romania)** Radio-Bucarest. 761 kc/s (394 m.); 12 kW. 10.15 a.m.—Programme for Children. 10.30—Religious Address. 10.45—Choral Selections of Religious Music. 11.0—Concert by the Station Orchestra. 12 noon—Popular Music on Gramophone Records. 12.45 p.m.—News and Time. 1.0—Variety Music on Gramophone Records. 4.0—Programme for Peasants. 5.0—Concert of Romanian and Light Music by the Marco Orchestra. 6.0—News and Time Signal. 6.10—Concert (cont'd). 7.0—Talk on Education and Health. 7.40—Light Music on Gramophone Records. 8.0—Concert by the Station Orchestra Overture, "Le Roi d'Ys" (Lalo). Lyric Suite (Grieg). 8.30—Talk to be announced. 8.45—Song Recital by Szekei (Tenor). 9.5—Orchestral Concert (cont'd). Autumn Twilight, for String Orchestra (Alessandresco). Romanian Pastoral Scene (Elinesco). Potpourri of Romanian Aires (Paschill). 9.45—Answers to Correspondents. 10.0—News Bulletin.

**BUDAPEST (Hungary)** 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.0 a.m. Also relayed on 210 metres from 3.0—3.45 p.m. and 5.0—12 midnight. 5.0 p.m.—Haydn Concert from the

Redoute. 7.0—Reading of Poems. 7.20—Concert of Gypsy Music. 8.40—The Evolution of the Operetta—Part V. Audran Concert by the Royal Opera House Orchestra, with Commentary. 10.20—Dance Music from the Ritz Hotel.

**COPENHAGEN (Denmark)** 1,067 kc/s (281 m.); 0.75 kW. Relay by Kalundborg, 260 kc/s (1,153 m.). 8.30 a.m.—Gymnastics. 10.0—Divine Service from the Garrison Church. 11.30—Weather and News. 12 noon—Time Signal. 12.2 p.m.—Concert from the Axelborg Studio. The Radio Orchestra, conducted by Emil Reesen. Overture, "The Caliph of Baghdad" (Boieldieu). The Children's Symphony (Haydn). Le Carnaval des Animaux (Saint-Saëns). Suite, Jeux d'enfants (Bizet).

1.0—Talk in English: British Statesmen of Yesterday and To-day—Balfour. 1.20—Talk in German: The Infancy of Social Democracy in Germany. 1.40—French Lesson. 2.0—Gramophone Records of Variety Music. 2.30—Talk for Children. 3.0—Choral Concert. 3.25—Twenty-Sixth Popular Concert from the Axelborg Studio. The Radio Orchestra, conducted by Launy Gröndahl, with Marius Jacobsen (Vocalist). Overture, "Norma" (Bellini). Waltz: Wine, Woman and Song (Johann Strauss). Introduction to the Third Act and Bridal Chorus from "Lohengrin" (Wagner). Selection for Strings: Saeterjensens Søndag (Ole Bull, arr. Svendsen). March, The Washington Post (Sousa). Two Songs from "Aucasin et Nicolette" (August Enna). Selection (Sextus Miskov). Spring Song (Fini Henriques). Overture, "Elisa" (Kuhlau). Minuet (Boccherini). Ballet Music from "Henry VIII." (Saint-Saëns). Gallop (Lumbye). 5.0—Divine Service Relay. 6.20—Talk by J. Holvard. 6.50—Weather and News. 7.15—Time and Sports Notes. 7.30—Talk: The Art of Travel. 8.0—Town Hall Chimes. 8.2—"Fatinitza"—Operetta Selection (Suppe) by the Radio Orchestra, conducted by Emil Reesen, and Soloists. 9.0—"The Hansen Family"—Humorous Episode (Jens Locher). 9.15—Talk on August Bournonville, with Musical Illustrations. 10.15—News Bulletin. 10.25—Serenade in D Major, Op. 25, for Flute, Violin and Viola (Beethoven). 10.55—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.); 15 kW. Transmits at intervals from 10.0 a.m. 5.45 p.m.—See Warsaw. 7.0—Miscellaneous Items and Announcements. 7.25—Talk on Bruges. 7.40—Programme Announcements. 7.45—12 midnight—See Warsaw. 12 midnight (approx.)—Close Down.

**DUBLIN (Ireland)** 2RN. 725 kc/s (413 m.); 1.2 kW. Relay by Cork, 1,337 kc/s (224.4 m.). 8.30 p.m.—Time Signal. 8.31—Concert by Tom Collins and his Orchestra. Soloists: May Busby (Soprano), Ben Williams (Tenor) and H. Dunkerley (Baritone). 9.30—"The Adventures of Ellis Palmer," presented by I. P. Mitchell and Company. 10.15—Piano Solos by Dina Copeman. 10.30—Gaelic Songs by Aine Ni Oisín. 10.45—Orchestral Music. 11.0—Time, News, Weather Report and Close Down.

**FÉCAMP (France)** Radio Normandie. 1,364 kc/s (219.9 m.); 1 kW. Transmits at intervals from 12 noon. 6.0 p.m.—Concert of Variety Music. 8.0—Selections from Opera and Operetta. 9.0—Concert of Variety Music. 12.30 a.m. (Monday)—Dance Music. 3.0 (approx.)—Close Down.

**FRANKFURT-am-MAIN (Germany)** 770 kc/s (390 m.); 1.5 kW. Relay by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 7.0 a.m. (Hamburg Harbour Concert). 9.15 a.m.—Choral Concert. 10.15—Sonata in F Sharp Minor, for Cello and Pianoforte, Op. 1 (Pfitzner), by Mauritz Frank (Cello) and Hans Rosbaud (Pianoforte). 11.0—The Younger Generation—A Talk with an Undergraduate. 11.30—See Leipzig. 12 noon—Gramophone Concert of Popular Music. 12.30 p.m.—Microphone Report from the German Wine Museum at Trier (Trèves).

1.0—Concert by the Saar Choral Society, relayed from Saarbrücken. Address by the Mayor. Two Selections (Silcher): (a) Zu Strassburg, (b) Der Soldat. Address by the President of the Society, Dr. Bongaard. Selection for Male Voice Choir with Trumpet and Drum (Liszt). Frech und froh (Trunk). 1.30—Wagner Gramophone Concert. 2.0—Talks arranged by the Wiesbaden Board of Agriculture. 2.10—Rural Programme—Two Talks. 3.10—See Stuttgart.

4.0—(from Wiesbaden)—Concert by the Municipal Orchestra, conducted by Hermann Irmer. Overture, "Meister Martin und seine Gesellen" (Weissheimer). Idyll, Ein Frühlingsmorgen (Haselöf). Selection from "Das Nachtlager in Granada" (Kreutzer). Waltz, Frühlingsstimmen (Johann Strauss). Concert Overture on Swedish Themes (Foroni). Slavonic Dances, Nos. 7 and 8 (Dvorák). Selection from "The Miracle" (Humperdinck). Tyrolse March (Dreyer). 5.30—Zither Recital. 6.0—Talk arranged by the Frankfurter Zeitung: Modern Fashion. 6.25—Thirty Gay Minutes—Programme conducted by Falke-Leonhardt. 7.5—Report on the International Rugby Match, Germany v. France (on Gramophone Records). Commentator: Dr. Paul Laven. 7.25—Weather and Sports Notes. 7.30—10.20—See Stuttgart. 10.20—Time, Weather, News and Sports Notes. 10.45—Concert from Langenberg. 12 midnight (approx.)—Close Down.

**HAMBURG (Germany)** Norag (Ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relay 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 7.0 a.m. (Hamburg Harbour Concert). 11.0 a.m.—Talk: The Hagenbeck Jubilee, 1932—Twenty-Five Years of Stellingen. 11.30.—See Leipzig. 12.5 p.m.—Time and Weather. 12.10—(from Flensburg) Orchestral Concert. 2.0—A Fairy Tale for Children. 2.45—Report from the Youth Hostel at Lüneburg. 3.30—(from Hanover) The Work of the Theatre in the Norag District, III. Göttingen in Literature and Music. A Relay from the Municipal Theatre, Göttingen. 5.30—"Der Schmiedenberg"—Play in Four Acts (Wilhelm Stender). 6.30—Concert of Romantic Music by the Uhlenhorst Quartet of 1881 and Carl Porteck (Tenor). 7.30—Talk: The Athlete and his Sport. 7.40—Sports Notes. 7.55—Weather Report. 8.0—Verdi and Puccini Concert by the Hamburg Philharmonic Orchestra conducted by Richard Richter and Willy Frey (Vocalist), relayed from the Musikhalle. Part One—Verdi Programme. Overture, "Sicilian Vespers." Two Songs from "Rigoletto." Selections from (a) "A Masked Ball" and (b) "Aida." Part Two—Puccini Programme. Selection from "Madame Butterfly." Songs from (a) "La Bohème." (b) "Turandot." Selections from (a) "La Tosca" and (b) "La Bohème." In the interval, News. 10.0—News Bulletin. 10.10—Topical Talk. 10.20—Dance Music from the Boccaccio. 11.10—Dance Music from the Astoria, Bremen.

**HEILSBURG (Germany)** 1,085 kc/s (276.5 m.); 60 kW. Relay by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.30 a.m. (Concert). 11.30 a.m.—See Leipzig. 12.5 p.m.—Concert by the Königsberg Opera House Orchestra, conducted by Werner Richter-Reichhelm. Overture, "Hansel and Gretel" (Humperdinck). Holberg Suite (Grieg). Concert Waltz (Glazunov). Ballet Music from "The Prophet" (Meyerbeer). Overture, "Die Opernprobe" (Lortzing). Selection from "The Pearl Fishers" (Bizet). Hungarian Rhapsody No. 4 (Liszt). Aus aller Herren Ländern (Moszkovsky). Variations on the Song "S'kommt ein Vogel geflogen" (Ochs). 2.0—Chess Lesson. 2.30—Programme for Children. 3.0—Talk by Baron von Ungern-Sternberg on his Film "Der Elch in Ostpreussen." 3.30—Radio Report (on Gramophone Records) on a Preliminary Round of the German Hand-Ball Championship. 4.0—Orchestral Concert, con-

ducted by Eugen Wilcken. In the interval at 4.50 (approx.)—Talk on Horse Racing. 5.45—Concert by the Königsberg Male Voice Choral Society. 6.15—Reading. 6.45—Relay from the Gymnastics Competition—Königsberg v. Berlin, in the "House of Technique" Königsberg. 7.10—Literary Guessing Competition. 7.30—Talk: Chemistry and the Microscope in the Detection of Crime. 8.0—Sports Announcements. 8.10 (from Danzig)—Soloist and Orchestral Concert, conducted by Otto Seiber. In the interval at 9.5 (approx.)—Announcements. 10.10—News and Sports Notes, followed by Dance Music from Berlin (Witzleben). 12.30 a.m. (Monday)—Close Down.

**HILVERSUM (Holland)** 1,004 kc/s (298.8 m.); 8.5 kW. 8.55—10.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 8.55—Physical Culture Lesson. 9.10—Lesson in Esperanto. 9.35—Football Notes. 9.45—Horticultural Talk. 10.10—Gramophone Records of Light Music. 11.10—Programme of the Liberal Protestant Radio Society (V.P.R.O.). Divine Service relayed from Harlem. 12.40—5.40 p.m.—Programme of the Algemeene Vereeniging Radio Omroep (A.V.R.O.). 12.40—Time Signal. 12.41—Concert by the Little Wireless Orchestra, conducted by Willem Knikker. Overture, "Si j'étais Roi" (Adam). Old Suite. Czardas No. 1 (Michiels). Under Florentine Skies (Ackermans). Auber's Marionettes (Urbach). Gramophone Records of Light Music. Waltz, A Dutch Peasant Wedding (Schouten). The Tyrol in Song and Dance (Fetras). The Bells o' Somerset (Hurst). The Clock is playing (Blauw). Selection from "Die Meistersinger von Berlin" (Lincke). March, The Rotterdam Flag (Verhallen). 2.25—Weekly Book Talk. 2.55—Running Commentary on the International Football Match—Holland v. Belgium. 4.0—Orchestral Concert of Light Music. 5.25—Sports Notes and Gramophone Records of Popular Music. 5.40—8.40—V.A.R.A. Programme. 5.40—Programme for Children. 6.30—Orchestral Concert. March from "The Merry Widow" (Lehár). Overture, "Poet and Peasant" (Suppé). Valse des brunes (Ganne). Dornröschen Brautfahrt (Rhode). Serenata Napolitana (Rivelli). Selection from "Rigoletto" (Verdi). Overture, "Waldmeister" (Strauss). Tango, Illusion (Henschel). March mignonne (Poldini). Czardas (Michiels). Waltz, Fin de réve (Bosc). Turkish Patrol (Michaelis). Réverie (Leoncavallo). Slavonic Rhapsody (Friedemann). In the interval at 7.25—Literary Talk.

8.40 till Close Down—A.V.R.O. Programme. 8.40—Time Signal. 8.41—News and Sports Notes. 8.55—Orchestral Concert, with Songs by Bob Scholte and Interlude by "The Twinkling Five." 10.10—A Radio Play. 10.40—Orchestral Concert. Soloists: Jaap Callenbach and Gerda Nette (Pianoforte) and Frank Titterton (Tenor). Concerto in E Flat Major for Two Pianos and Orchestra (Mozart). Overture, "Czar and Carpenter" (Lortzing). Songs: (a) Vision Entrancing from "Esmeralda" (Thomas), (b) On with the Motley from "I Pagliacci" (Leoncavallo), (c) Lend me your aid, from "The Queen of Sheba" (Gounod). Waltz and Czardas from "Coppelia" (Delibes). Songs: (a) Hindu Song (Rimsky-Korsakov), (b) Ouvre tes yeux bleus (Massenet), (c) Love (Bridge). Farandola, from the Second Suite from "L'Arlesienne" (Bizet). 12.10 a.m. (Monday)—Gramophone Records of Variety Music. 12.40 a.m. (approx.)—Close Down.

**HUIZEN (Holland)** 160 kc/s (1,875 m.); 8.5 kW. 9.10—10.10 a.m.—Programme of the Christian Radio Society (N.C.R.V.). Religious Programme with Selections by a Ladies' Choir. 10.10 a.m.—5.40 p.m.—Programme of the Catholic Radio Society (K.R.O.). 10.40—High Mass from the Church of St. Francis of Assisi, Amsterdam. After the Mass, Song and Organ Recital. Organist: G. de Barbanson. 12.25 p.m.—Talk. 12.40—Gramophone Records of Variety Music. 12.50—Literary Talk. 1.10—Haydn Commemoration Programme by the Concertgebouw String Quartet: Louis Zimmermann (First Violin), Johan Herbschleb (Second Violin), Frederick Denayer (Viola) and Mari Loevensohn (Cello). Quartet in B Flat

Major, No. 17. Talk on Haydn by Dr. Willem Mengelberg. Quartet in C Major, No. 12—the Emperor. Quartet in D Minor, No. 11. 3.10—Report on the International Football Match, Holland v. Belgium, relayed from the Stadium, Amsterdam. 5.10—Programme for Hospitals. 5.40—8.25—N.C.R.V. Programme. 5.40—Organ Recital by Chr. van Buuren. Andante religioso (Bartolan). Elegy (Bellando). Fugue (Cappelletti). Larghetto (Pagella). Andante (Galliero). Elévation et prière (Tafall). Elévation (Torres). 6.0—Divine Service from a Church in Dordrecht on the occasion of the Departure for Sumatra of the Missionary Dr. Rijkhoek. After the Service, Organ Recital (continued). Meditation (A. de Meulemeester). Andante cantabile (Luigi Bottazo). 8.25—11.40—K.R.O. Programme. 8.25—Literary Talk. 8.50—Football Notes.

8.55—Choral and Orchestral Concert from the Old Dominican Church at Maastricht. Conductor: Henry Hermans. Soloist: Anny Woud (Contralto). Symphony (Andriessen)—the Composer conducting. Contralto with Male Voice Choir and Orchestra: Rhapsody (Brahms). Selections for Male Voice a-cappella Choir: (a) Tears (Palmgren), (b) Psalm 121 (Millaud), (c) Autumn (Heyendaal)—the Composer conducting, (d) The Sea (Smulders)—the Composer conducting. Aria for Contralto and Orchestra from the Cantata "Ariana a Naxos" (Haydn). Suite from "The Fire Bird" (Stravinsky). In the interval at 10.10 (approx.)—Press Review. 11.20—Eulogie by the Choir. 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 10.25 a.m. 5.45 p.m.—Afternoon Concert. 8.15—Concert of Popular Music. 10.10—Soloist Concert. 11.0—Light Music and Dance Music.

**LAHTI (Finland)** 167 kc/s (1,796 m.); 54 kW. Relay by Helsinki, 815 kc/s (368.1 m.). Transmits at intervals from 7.45 a.m. 6.50 p.m.—Talk on History. 7.20—Song Recital by Hanna Granfelt. 7.40—Talk. 8.5—Orchestral Concert, conducted by Erkki Linko. 8.45—News Bulletin. 9.0—News in Swedish.

**LANGENBERG (Germany)** Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 7.0 a.m. (Hamburg Relay). 9.5 a.m.—Catholic Service. 11.0—Meeting of the Westphalian Association of Former Prisoners of War, relayed from Herne. 11.30—See Leipzig. 12.5 p.m.—Talk: The Music of the Week. 12.20—Report: The German Wine Museum, relayed from Trier.

1.0—Orchestral Concert, conducted by Wolf. Army March, No. 7. Waltz, Wiener Zugvogel (Translater). Suite, In the Circus (Armandola). Selections from "Martha" (Flotow). Gondola Song (Strauss). Overture, "Fräulein Loreley" (Lincke). Herzeleid (Esslinger). Un peu d'amour (Silesu). Potpourri, Auf Wiederhören (Weninger). 2.30—Lesson in Shorthand. 3.0—Celebration for the Fifteenth Anniversary of the Westphalian Branch of the Association of the War-blinded, relayed from Soest. 3.35—Concert by the Youth of Germany—Programme in connection with the National Propaganda Day for Youth Hostels. Address by Hermann Forscheppiepe. 4.10—Talk: Germany's History as mirrored by German Towns—Strausund. 4.30—Sacred Concert by the Paderborn Music Society and Cathedral Choir relayed from Paderborn. The Heavens declare the Glory of God, from "The Creation" (Haydn). Selection from "The Seasons" (Haydn). 5.15 (in the interval)—Part Relay of the West German Football Championship. 5.45—Concert (continued). Symphony in B Minor—the Unfinished (Schubert). Three Famous Marches: (a) Wedding March (Mendelssohn), (b) Turkish March (Beethoven), (c) Hungarian March (Berlioz).

6.5—Talk for Workers: Otto Hue, on the Tenth Anniversary of his

**SUNDAY**  
continued

Death. 6.30—Talk: The Physical Aspect of the World. 7.0—Variety Programme. 7.45—Sports Notes. 8.0—“Gipsy Love”—Operetta in Three Acts (Lehár). 10.20—News and Sports Notes. 10.45 (approx.)—Concert and Dance Music. 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 6.45 a.m. 11.30 a.m.—“Weinen, Klagen, Sorgen, Zagen.”—Cantata (Johann Sebastian Bach), by the Municipal and Gewandhaus Orchestra and the Choir of St. Thomas, with Soloists. Conductor: Dr. Carl Straube. 12.15 p.m.—See Heilsberg. 2.0—Weather and Time, followed by Talk. 2.15—Talk: A Vindication of Saxony. 2.30—Talk in Esperanto. 3.0—Concert by the “Sängerkreis” Male Voice Choir. 3.30—“Raps”—a Humoresque (Baron von Schlicht). 4.0—The Basque Folk Song—a Talk with Gramophone Illustrations. 5.0—Dance Music by the Emdé Dance Orchestra. 6.0—Talk: The Superstitious Person. 6.30—Chamber Music from the Works of German Composers, by Theodor Blumer (Pianist). 7.0—Two Sports Reports on Gramophone Records: (a) Report on the International Rugby Match, Germany v. France. (b) Report on the Football Championship Final. 7.45—Topical Report. 8.0—Richard Wagner Concert by the Dresden Philharmonic Orchestra, conducted by Dr. Ludwig Neubeck. Soloist: Eugenie Burckhardt (Soprano). Overture, “The Flying Dutchman.” Senta’s Ballad from “The Flying Dutchman.” Prelude to the Third Act of “Tannhäuser.” Elizabeth’s Prayer from “Tannhäuser.” Prelude to “Lohengrin.” Prelude and Death of Isolde from “Tristan und Isolde.” Finale from “The Twilight of the Gods.” 9.30—Concert by the Dresden Philharmonic Orchestra, conducted by Dr. Ludwig Neubeck. 10.15—News, followed by Concert and Dance Music. 12 midnight (approx.)—Close Down.

**LJUBLJANA (Yugoslavia)**  
522 kc/s (574.7 m.); 2.5 kW. 9.0 a.m.—Esperanto Lesson. 9.30—Concert of Sacred Music. 10.0—

Religious Talk. 10.30—Czech Lesson. 11.0—Quintet Concert. 12 noon—Time, News and Light Music on Gramophone Records. 3.15 p.m.—Programme for Girls. 3.45—Folk Song Recital. 4.30—Humorous Programme. 5.0—Dramatic Programme. 8.0—Symphony Concert on Gramophone Records. 9.0—Quintet Concert. 10.0—Time and News Bulletin. 10.15—Light Music.

**ŁWÓW (Poland)**  
788 kc/s (381 m.); 16 kW. Transmits at intervals from 10.0 a.m. 6.35 p.m.—Recital of French Songs by Mme. Zofia Drexler-Paslawska. 7.0—Miscellaneous Items. 7.25—Talk: The Private and Public Life of a Frenchman. 7.45—See Warsaw. 10.55—Sports Notes. 11.0—Concert by the “Serenada” Mandoline Orchestra conducted by R. Malewsky. 12 midnight (approx.)—Close Down.

**LYONS (France)**  
La Doua (P.T.T.). 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.). 12 noon—Relay from Paris (Ecole Supérieure). 2.30 p.m.—Orchestral Concert. 4.30—Pasdeloup Concert. 8.0—Relay from Paris (Ecole Supérieure).

**MADRID (Spain)**  
Union Radio (EAJ7). 707 kc/s (424.3 m.); 2 kW. 9.0—10.30 a.m.—Topical Review. 3.0 p.m.—Chimes, Time, Theatre Notes and Sextet Concert. 4.30—8.0—Interval. 8.0—Chimes and Request Gramophone Concert. 9.30—10.30—Interval. 10.30—Chimes, Time and Song Recital, followed by Piano-forte Recital by Gloria de Loizaga. 1.0 a.m. (Monday)—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 7.30 a.m. 5.0 p.m.—Orchestral Concert. 6.15—See Prague. 10.15—Programme Announcements and Theatre Review. 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. 9.0 a.m.—Proletariat Radio Journal. 9.55—Time Signal. 10.0—Orchestral Concert. 11.0—Peasants’ Radio Journal. 12 noon—Reading from the Works of Nekrasov. 12.30 p.m.—Notes on the Theatre, Music, the Cinema and Wireless. 1.0—Educational Programme. 2.0—Programme to be announced. 2.30—Recreative Programme. 2.45—Weather Forecast. 3.0—Agricultural Propaganda. 3.30—Talk (to be announced). 3.55—Time Signal. 4.0—Proletariat Radio Journal. 5.0—Peasants’ Radio Journal. 6.0—Communist Programme. 8.0—Talk in German and English: How the Defenceless Workers of the Gold-Mines of Lena in East-Siberia were slaughtered in 1912. 9.55—Chimes and 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.). 10.0 a.m.—Catholic Service. 10.45—Chimes from Our Lady’s Church. 11.5—Songs and Ballads of the Nations—Recital by Max Krauss (Baritone) and Ewald Balsler (Speaker). 11.30—See Leipzig. 12.5 p.m.—Open Air Concert by the Munich Concert Orchestra, relayed from the Pariserplatz. Conductor: Richard Planer. 1.5—Time, Weather, and Programme Announcements. 1.15—(from Nürnberg)—Talk: Fruit-growing. 1.55—Talk with Gramophone Illustrations: Light Music—a Heading difficult to apply correctly. 2.30—Elementary Chess Lesson. 3.15—Talk for Housewives. 3.30—Swabian Folk Song Recital by Ellen Beck of Stuttgart. 4.5—Talk by Ernst Behrens: Revisiting my Native Place. 4.30 (from Nürnberg)—Orchestral Concert. Xylophone Trios in the intervals. 8.0—Sacred Concert arranged by the Bruckner Society for the Preservation of Sacred Music. Part I. Conductor: Dr. Alfons Singer. Improvisations on a

Theme of Bruckner’s for Organ and Wind Instruments, Op. 19 (Messner)—the Composer at the Organ. Selections for Mixed Choir and Orchestra (Rüdinger): (a) Psalm, Der Herr ist König; (b) Attollite portas. Part II. Mass in B Flat, Op. 29 for Soprano Solo, Mixed Choir and Wind Instrument Sextet, (Messner), conducted by the Composer. 7.30—Weather and Sports Notes. 7.40—Talk by Dr. Matthias: I meet a Slave-Dealer. 8.0—See Leipzig. 9.30—“Station D in the Polar Sea”—a Radio Play (Hans Braun). 10.20—Time and News. 10.45—Concert from Langenberg. 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.); Porsgrund, 662 kc/s (453.2 m.) and Rjukan, 671 kc/s (447.1 m.). 10.20 a.m.—Chimes. 10.30—Divine Service relayed from St. Saviour’s Church. 5.0 p.m.—Concert by the Orchestra of the Cecil Restaurant. Overture, “The Flying Dutchman” (Wagner). Waltz, The Blue Danube” (Johann Strauss). Potpourri of the Works of Meyerbeer (arr. Urbach). Intermezzo (Filiassi). 6.0—Talk relayed from Christiansand, 1,274 kc/s (235.5 m.). 6.30—Piano-forte Recital by Mme. Signe Schoustad Nilsen. 7.0—Parliamentary Review. 7.15—Weather and News Bulletin. 7.30—Talk (to be announced). 8.0—Time Signal. 8.1—“The Link”—Play (August Strindberg). In the intervals, Weather and News Bulletin. After the Programme, Dance Music on Gramophone Records. 12 midnight (approx.)—Close Down.

**PALERMO (Italy)**  
Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 10.40 a.m. 5.30 p.m.—Light Music and Dance Music from the Olympia Tea Rooms. Sports Notes in the intervals. 6.30—8.0—Interval. 8.0—Announcements and Giornale Radio. 8.20—Sports Notes. 8.25—Light Music on Gramophone Records. 8.30—

Time Signal and Programme Announcements. 8.50—Symphony Concert, conducted by A. La Rosa Parodi. The Unfinished Symphony (Schubert). Overture, “Coriolanus” (Beethoven). Overture, “Le baruffe chiozzotte” (Sinigaglia). Largo (Mule). Selections from “El amor brujo” (Falla). Dances from “Prince Igor” (Borodin). In the interval, Talk on Art. After the Concert, Theatre Notes and Programme of Songs. 10.55—News Bulletin.

**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). 1.0 p.m.—News Bulletin. 1.10—Weather Report. 1.20—Concert conducted by Edouard Flament. Soloist: M. Charon (Violin). 6.45—Le Journal Parlé. 7.45—Programme for Children. 8.30—Weather Report. 8.35—Gramophone Concert of Variety Music.

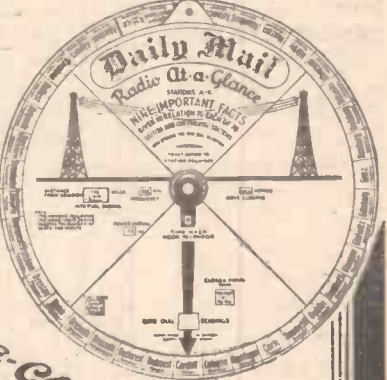
**PARIS (France)**  
Poste Parisien. 914 kc/s (328.2 m.); 1.2 kW. 12 noon—Gramophone Records, News and Announcements. 12.15 p.m.—Variety Music on Gramophone Records. 1.45—News and Announcements. 2.0—6.45—Interval. 6.45—News and Announcements. 7.0—Light Music on Gramophone Records, Talks and News. 7.30—Concert of Popular Music on Gramophone Records. 8.30—Light Music on Gramophone Records, Talk and News. 8.45—Vocal and Orchestral Concert. Selections from “L’Arlésienne” (Bizet). Scènes napolitaines (Massenet). Danse macabre (Saint-Saëns). Second Orchestral Suite (Guitraud). La Boîte à joujoux (Debussy). Two Symphonic Dances (Grieg). 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.—Variety Music on Gramophone Records. 8.0—News, Weather and Press Review. 8.30—Physical Culture. 10.20—Book-keeping Les-

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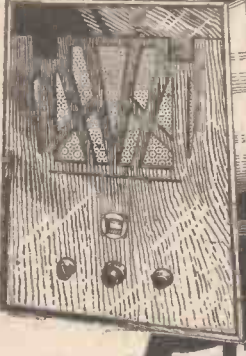


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**SUNDAY**  
continued

son, 10.40—Spanish Lesson, 12 noon—Religious Address by the Reverend Father Dassonville.  
12.20 p.m.—*Sacred Music on Gramophone Records*, Magnificat (Bach), Cantate Domine (Alain), Andante and Allegro (Bach).  
12.30—Bilboquet, 12.45—Press Review, News and Weather. 1.0—Variety Music on Gramophone Records. 1.30—Popular Gramophone Concert. 2.0—Concert of Decca Records. 3.0—Variety Concert on Gramophone Records.  
3.30 (approx.)—Running Commentary on the Football Match, Corinthians v. Sochaux. 6.45—Variety Music on Gramophone Records. 7.30—Radio-Paris Circus. 8.0—Gramophone Concert for Young People. 8.30—News, Sports Notes, Press Review and Weather.  
8.45—Dramatic and Symphony Music on Gramophone Records. 9.15—Press Review and News. 9.30—Dance Music on Gramophone Records.

**POZNAŃ (Poland)**

896 kc/s (335 m.); 1.9 kW. Transmits at intervals from 10.15 a.m. 7.0 p.m.—Miscellaneous Items and Announcements. 7.25—Light Music on Gramophone Records. 7.45—10.40—*See Warsaw*. 10.40—Time Signal, Sports Notes and Police Report. 11.0—Dance Music from the Esplanade Café. 12 midnight (approx.)—Close Down.

**PRAGUE (Czechoslovakia)**

614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 7.30 a.m. (Concert).  
10.0 a.m.—Sacred Concert from the Works of Bruckner. Mass in E Minor. Psalm 150.  
11.0—Chamber Music by the Ondricek Quartet. 12 noon—Chimes. 12.5 p.m.—*See Brno* Programme. 1.5—Two "Old Friends meet after Twenty Years' Separation"—Scene by Hugo Kraus and E. Sulc. 1.30—Agricultural Report. 1.45—Social Report.  
3.0—Report on the International Football Match, Czechoslovakia v. Switzerland, relayed from Zürich. 5.0—*See Moravská-Ostrava*. 6.15—German Transmission: Songs from Cheb, with Introductory Talk. 7.0—Brass Band Concert. 8.0—A Sunday Evening in 1832—Musical Programme. 8.30—Camp Songs. 9.0—Time Signal.  
9.1—Symphony Concert, conducted by Jeremias. 10.0—Time and News. 10.15—Miscellaneous Announcements. 10.20—Popular Gramophone 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.).  
10.0 a.m. (from Lausanne)—Protestant Service. 11.0 (from Lausanne)—Light Music on Gramophone Records.  
12.30 p.m.—Weather Report and News. 12.40—Concert by the Station Orchestra. 2.0—5.15—Interval.  
5.15 (from Estavayer-le-Lac, in Fribourg)—Old-Time Customs of Estavayer—Programme of Talks and Music arranged by Local Societies. 6.30 (from Geneva)—Catholic Address. 7.0 (from Geneva)—Popular Music on Gramophone Records. 7.50 (from Geneva)—Sports Notes. 8.0 (from Neuchâtel)—Song Recital by Mlle. Madeleine Marthe.  
8.30 (from Monthey, in Valais)—Concert by the Monthey Musical Society, conducted by Hector Lecomte. Solo Clarinet: M. E. Bertona. Overture, "Pyramus and Thisbe" (Trémisot). Pavane pour une Infante défunte (Ravel). Diver-tissement for Clarinet, Emma Livry (Pirouelle).  
9.0—Concert by the Station Orchestra, conducted by Fernand Closset. 10.5—Weather Report and News Bulletin. 10.15 (approx.)—Close Down.

**RIGA (Latvia)**

572 kc/s (525 m.); 15 kW. Transmits at intervals from 8.30 a.m. 5.0 p.m.—English Lesson. 5.30—Concert by a Students' Choir, conducted by T. Kalnins. 6.0—Agricultural Talk. 6.30—Talk on Psychopathy. 7.5—Orchestral Concert, conducted by Prof. Janis Medins. 8.0—News Bulletin. 8.20—Soprano Solos by Vilija Lanberts. 8.40—Pianoforte Recital by Vlna Berlin. 9.0—Weather Forecast and News. 9.15—Old Dances. 10.0—Modern Dances. 11.0 (approx.)—Close Down.

**ROME (Italy)**

Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.);

50 kW. Relaycd by Naples, 941 kc/s (319 m.) and 2RO, 11,810 kc/s (25.4).

9.45 a.m.—Agricultural Report. 10.0—Religious Programme. 10.15—Sacred Music. 10.45—Announcements. 11.0—16th Canto from the Paradiso relayed from the House of Dante. 12.45 p.m.—Concert of Light Music. Soloists: Sirenetta Altieri (Soprano), Giannetto Riccardi (Tenor), Nando Del Duca (Tenor) and Flora De Stefani (Soprano). 1.30—Time and Announcements. 4.15 (from Naples)—Programme for Children, Weather and Sports Notes. 4.45—Sports Notes.  
5.0—"The St. Matthew Passion" (Bach) for Soloists, Choir and Orchestra, relayed from the Augusteo. The Berlin Singakademie conducted by Georg Schumann. 7.0—Sports Notes and Announcements. 7.30—English Gramophone Records. 8.0—Time and Announcements. 8.5—Variety Music on Gramophone Records. 8.30—Sports Notes.  
8.45—Variety Concert. Soloists: Lina Spera (Violin), Gualda Caputo (Soprano), Luisetta Castellazzi (Mezzo-Soprano), Bianca Bianchi (Mezzo-Soprano), Guglielmo Castello (Baritone) and Felice Belli (Bass). Overture, Un Viaggio a Reims (Rossini). Spanish Symphony for Violin and Orchestra (Lalo). "Ad armi còrte"—One Act Comedy (Bracco), Aria and Duet for Soprano and Mezzosoprano from "La Bohème" (Leoncavallo). Tarentella (Martucci). Selections from "Don Carlos" (Verdi). Selection from "L'Africaine" (Meyerbeer). News after the Programme.

**SCHENECTADY (U.S.A.)**

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relaycd at intervals by W2XAF on 9,520 kc/s (31.48 m.); and by W2XAD on 15,340 kc/s (19.56 m.). Transmits at intervals from 2.0 p.m. 8.15 p.m.—7.0 a.m. (Monday)—New York Relay. 8.15 p.m.—Musical Programme. 8.30—Moanshine and Honeysuckle. 9.0—Wayne King's Orchestra. 9.30—National Sunday Forum. 10.0—Musical Programme. 10.30—Davey Tree Hour. 11.30—General Electric Circle. 12 midnight—Catholic Hour.  
12.30 a.m. (Monday)—Our American Schools. 1.0—L'Heure Exquise. 1.15—Rexall Radio Party. 1.30—Orchestral Gems. 2.0—Chase and Sanborn Programme. 3.0—David Lawrence—Talk. 3.15—American Album of Familiar Music. 3.45—The Buick Revellers.  
4.15—"What would you do?" 4.20—National Oratorio Society Programme. 4.45—Sunday at Seth Parker's. 5.15—Ralph Kirby (Baritone). 5.30—Jesse Crawford (Organist). 6.0—Palais D'Or Orchestra. 6.30—New Kenmore Orchestra. 7.0 (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.).  
10.30 a.m. (from Zürich)—Protestant address. 11.15 (from Zürich)—Concert of Chamber Music. 12 noon—Popular Music on Gramophone Records.  
12.28 p.m.—Time Signal and Weather Report. 12.30—News Bulletin.  
12.40—Concert by the Station Orchestra. 1.45—3.0—Interval. 3.0 (from Zürich)—Programme to be announced. 4.0—Light Music on Gramophone Records. 5.0—Dance Music on Gramophone Records. 5.30—6.30—Interval.  
6.30 (from Zürich)—Talk, illustrated by Gramophone Records: Mexican Folk Songs. 7.25—Sports Results. 7.28—Time Signal and Weather Report. 7.30 (from Zürich)—Humour throughout the Ages—by Benno Haller.  
8.0 (from Zürich)—Neapolitan Evening by the Station Orchestra, conducted by Hermann Hoffmann. Soloists: Salvatore Salvati (Tenor), Otto Strauss (Pianoforte), and Dr. Jakob Job (Readings). 9.10 (approx.)—Musical Guessing Competition. 10.0—Weather, News and Sports Report. 10.15 (approx.)—Close Down.

**STOCKHOLM (Sweden)**

Radiorjäst (SASA). 689 kc/s (436 m.); 55 kW. Relaycd 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, 380 kc/s (770 m.) and Sundsvall, 554 kc/s (542 m.).  
10.30 a.m.—Talk on Music. 11.0—

Divine Service relayed from St. Peter's Church. 12.45 p.m.—Weather Report. 2.0—Orchestral Concert. 3.0—Talk by A. Lloyd James: Broadcasting and the English Language. 3.30—Programme for Children. 4.0—Concert of Light Music. 4.30—Talk: The Law with regard to Alcohol in Holland and Belgium. 5.0—Choral Concert relayed from Göteborg. 5.30—Geographical Talk. 6.0—Divine Service, relayed from Ystad. 7.15—Weather, News and Sports Notes. 7.30—Swimming Report. 7.45—Play (Ivan Oljelund).  
8.15—Orchestral and Choral Concert. Overture, Ossia (Gade). Choral and Orchestral Selection from "Olav Trygvason" (Grieg). Two Icelandic Melodies for Strings (Svendsen). Orchestral Suite, Master Olof (Aulin). I. Pan and Echo (Sibelius). Legend (Dvorák). Humoresque (Dvorák). Waltz for Choir and Orchestra, The Blue Danube (Johann Strauss). 9.45—Weather and News. 10.0—Cabaret Programme on Gramophone Records. 11.0 (approx.)—Close Down.

**STRASBOURG (France)**

Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW.  
10.45 a.m.—Protestant Service. 11.30—Catholic Service. 12 noon—Gramophone Concert of Classical and Light Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert of Light Music. 2.0—Agricultural Talk in German.  
2.15—Dance Music on Gramophone Records. 3.0—Talk for Cyclists in German. 3.45—Dance Music on Gramophone Records. 4.30—Dialogue in German: For-and-against Rationalisation. 4.45—Agricultural Talk in German. 5.0—Dance Music. 6.0—Health Talk in French. 6.15—Sports Results. 6.20—Sports Talk in French.  
6.30—Orchestral Concert. Overture, "The Ruins of Athens" (Beethoven). Violin Solo: Romance in F (Beethoven). Ballet Music from "Alceste" (Gluck). Andante for Flute and Orchestra (Mozart). Invitation to the Waltz (Weber). Selection from "The Mastersingers" (Wagner).  
7.30—Time Signal. 7.32—News in French and German. 7.45—Orchestral Concert.  
8.30—Concert relayed from Mulhouse. 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. Relaycd by Freiburg. 527 kc/s (570 m.). Transmits at intervals from 7 a.m. (Hamburg Harbour Concert).  
8.30 a.m.—Choral Concert. 9.45—Evangelical Service. 10.45—Dance Music from Three Centuries, relayed from Mannheim. 11.30—See Leipzig.  
12.15 p.m.—Recital from the Works of René Monché, by the Composer (Pianoforte) and Martha Hengel (Soprano). Two Songs to Verse by Heine: (a) Minnelied, (b) Nacht liegt auf fremden Wegen. Pianoforte Solo: Sonntagmorgen, from Impressionen aus dem Münsterstal. Two Songs: (a) Meinem verstorbenen Vater, (b) Stimme des Kindes. Pianoforte Solos: "Two Selections from Impressionen aus dem Münsterstal: (a) Grossmutter erzählt, (b) Abendfrieden. Two Songs: (a) Sommerabend, (b) Traumverloren.  
12.30—Spanish Pianoforte Music—Recital by Alfred Reiff. El amor y la muerte, from Goyescas (Granados). In the Gipsy Quarter of Granada (Albéniz). Waltzes (Granados).  
1.0—Topical Talk. 1.15—Gramophone Concert of Marches. 1.35 (from Karlsruhe)—Talk: Tobacco-growing in Germany. 2.0—Provincial Programme—a Relay from Zell. 2.30—Mandoline and Zither Concert. 3.10—Play for Children. 4.0—6.25—See Frankfurt.  
6.30—Spring Songs—Recital by Anita Oberländer (Soprano). Selections (Schubert): (a) Wehmüt, (b) Rosen-baum, (c) Im Haine, (d) Frühlings-glaube. Selections (Schumann): (a) Frühlingsnacht, (b) Nussbaum, (c) Schneeglöckchen. Selections (Brahms): (a) Es kehrt die dunkle Schwalbe, (b) Geheimnis, (c) Wie Melodien. 7.0—Sports Notes.  
7.30—Organ Recital by Albert Schweizer, with Choral Selec-

tions. Prelude and Fugue in F Minor (Bach). Choral Prelude and Selection: Wer nur den lieben Gott lässt walten (Bach). Choral Prelude and Selection: Gottes Sohn ist kommen (Bach). Prelude and Fugue in G Major (Bach). 8.0—Humorous Programme.  
9.25—National Dances—Concert by the Stuttgart Philharmonic Orchestra, conducted by Emil Kahn. Spanish Dances (Mozzkovsky). Piedmontese Dances (Sinigaglia). Hungarian Dances, Nos. 1 and 3 (Brahms). Styrian Dances (Pacher-negg). German Dances (Schubert-Weber).  
10.20—News, Time and Programme Announcements. 10.45—Concert from Langenberg. 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—Musical Programme. 1.15—Orchestral Selections: (a) Marche aux flambeaux (Meyerbeer), (b) Les Préludes (Liszt). 1.30—Agricultural Notes. 1.45—Protestant Service. 5.0—Television Transmission. 5.15—Esperanto Lesson. 5.30—Old French Songs.  
5.45—Orchestral Concert. Triumphant March from "Aida" (Verdi). Selection from "William Tell" (Rossini). Selection from "Pollen-blur" (Nédal). Barcarolla veneziana (Leoncavallo). Estase (Gammé). España (Costoncello).  
6.15—Songs from Opera. Pamina's Aria from "The Magic Flute" (Mozart). Selections from "Don Giovanni" (Mozart). Air from "Le Roi d'Ys" (Lalo). 6.30—News Bulletin.  
6.45—Musical Selections. Narcissus (Nevin). Evensong (Martin). Theme and Variations (Tchaikovsky). 7.0—Accordion Solos. 7.15—Chansonnettes. 7.30—News Bulletin and Racing Results. 7.45—Dance Music. 8.0—Balalaika Selections. 8.15—Operatic Songs. Two Airs from "Mireille" (Gounod). Harlequin's Serenade from "I Pagliacci" (Leoncavallo). 8.30—Orchestral Concert. 9.0—"The Merry Widow"—Operetta Selection (Lehar). 9.30—Accordion Solos. 9.45—Orchestral Selections. Potpourri of the Works of Lehar. Selections from "Le Bourgeois Gentilhomme" (R. Strauss). 10.0—Operatic Songs. Air from "Werther" (Massetet). Air from "Don Giovanni" (Mozart). Air from "The Damnation of Faust" (Berlioz). 10.15—Overtures to "The Bartered Bride" (Smetana) and "La belle Hélène" (Offenbach). 10.30—News Bulletin. 10.45—Orchestral Selection. 11.0—Russian Songs. 11.15—North African News.  
11.30—Symphony No. 5 (Beethoven). 12 midnight—Weather and Announcements.

**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. Overture in G Major (Azzoni). Intermezzo from "L'Amico Fritz" (Mascagni). Dorfkindler (Kálmán). Sorrentina (Tartarini). Selection from "Rigoletto" (Verdi). Selection (Stran-sky). Ali (Lanzetta).  
8.0 till Close Down—See Turin.

**TURIN (Italy)**

Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relaycd by Milan, 905 kc/s (331.5 m.), and Genoa, 959 kc/s (312.8 m.).  
9.40 a.m.—Giornale Radio. 9.55—Chimes and Missa Cantata from the Cathedral of San Giusto. 11.0—Religious Programme.  
12.30 p.m.—Concert. Overture, "Maritana" (Wallace). Emperor Waltz (Johann Strauss). Pianoforte Solo: Second Hungarian Rhapsody (Liszt). Fiammata d'amore (Solazzi). Selection (Korn-zak). Réve de fleurs for Strings (Tradulateur). Minuet (Paderewsky). Selection from "The Land of Smiles" (Lehar).  
1.0—Time Signal and Announcements. 4.0—Sports Notes. 4.10—Variety Music on Gramophone Records. In the intervals, Sports Notes.  
5.0—Variety Concert. In the intervals, Sports and Art Notes. 6.15—Giornale Radio and Football Report. 6.25—Variety Programme. 7.0—Football Results. 7.5—Announcements. 7.10—Concert of Light Music. 7.30—Time Signal

and Announcements. 7.31—Light Music on Gramophone Records. 8.0—Giornale Radio and Sports Notes.

8.15—Concert of Popular Music, Overture, "Banditenstreich" (Suppé). Träumerei (Schumann). Girandoloni (Hummer).  
9.0—Relay of an Opera. In the intervals, Talk, Theatre Notes and Giornale Radio. After the Programme, Announcements.

**VIENNA (Austria)**

Radio-Wien. 581 kc/s (517 m.); 15 kW. Relaycd 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.—Organ Concerto in C Minor (Moser) played by the Cofn-poser. 10.30—Talk: How much does Modern Physics comprehend of Light and Matter?  
11.0—Concert by the Vienna Symphony Orchestra conducted by Theodor Christoph. Soloist: Wilhelm Winkler (Cello). Spring Overture (Brahms). "Cello Concerto in A Minor Op. 129 (Schumann). Fourth Symphony in A Major Op. 90 (Mendelssohn).  
12.10 p.m.—Orchestral Concert conducted by Marek Weber.  
1.10—The Development of the Male Voice Choir from Michael Haydn to Paul Hindemith. I. From Haydn to Mendelssohn—Concert by the Vienna Teachers' a cappella Choir. Introductory Talk. Sehnsucht nach dem Landleben (J. M. Haydn). Meister und Gesell (Zelter). Die Kapelle (Kreutzer). Anchen von Tharau (Sücher). Lützows wilde Jagd (Weber). Grab und Mond (Schubert). Der träumende See (Schumann). Der frohe Wandersmann (Mendelssohn).  
3.0—Time and Programme Announcements. 3.5—Book Review. 3.30—Chamber Music by the Rothschild Quartet. String Quartet in A Minor, Op. 41, No. 1 (Schumann). 4.5—Talk: Fishing in Anatolia. 4.50—Talk by Professor Winifred Cullis of London: The International Work of University Women (translated in German). 4.50—Orchestral Concert conducted by Johann Ganglbberger. 6.20—Grieg! Bokavide reads from his own Works, with Introductory Talk. 6.50—Mass in B Flat Major (Johann Nepomuk Hummel), by the Hofmusikkapelle, conducted by Carl Luze.  
7.50—Time, Sports Notes and Programme Announcements.  
8.0—"The Last Waltz"—Operetta in Three Acts (Oscar Straus). 10.10—News Bulletin. 10.25—Dance Music.

**WARSAW (Poland)**

Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW.  
10.0 a.m.—High Mass, relayed from Cracow, 959 kc/s (312.8 m.). 11.58—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Weather Forecast. 12.15—Symphony Concert by the Warsaw Philharmonic Orchestra, conducted by Z. Dymowski. Soloists: Dora Braude (Pianoforte) and H. Sawicka (Soprano). Programme from the Works of Tchaikovsky. Fifth Symphony in E Minor. Four Soprano Solos: (a) Song from "The Queen of Spades"; (b) Printemps précoce, (c) Berceuse, (d) Est-ce pendant le jour? Concerto in B Flat Minor for Pianoforte and Orchestra.  
2.0—Talk on Gardening. 2.20—Concert by the State Police Orchestra. Soloist: Mme. J. Mech. (Soprano). 2.40—Agricultural Talk. 3.0—Concert (contd.). 3.55—Programme for Young People. 4.20—Light Music on Gramophone Records. 4.40—Talk: A Cure without a Journey. 4.55—Popular Music on Gramophone Records. 5.15—Talk: The Polish Louvre and Versailles, relayed from Lwów. 5.30—Useful Information. 5.45—Concert of Popular Music by the Station Orchestra and a Soloist. News in the interval. 7.0—Miscellaneous Items. 7.25—Light Music on Gramophone Records. 7.40—Programme Announcements. 7.45—Dramatic Programme: "I am a Murderer"—(after A. Fredro). 8.15—Concert of Popular Music by the Station Orchestra, conducted by J. Oziminski and F. Plat (Soprano). 9.55—Literary Reading. 10.10—Solo Selections. 10.40—Weather and Police Report. 10.45—Sports Notes. 10.55—Interval. 11.0—Dance Music. 12 midnight (approx.)—Close Down.





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PRINCIPAL EVENTS

MONDAY (April 18)

SYMPHONY CONCERTS

- 7.30 p.m. Budapest: Ravel programme.
- 8.0 " Brussels, No. 2: Mortelmans programme.
- 8.10 " Berlin, Witzleben, Königs Wusterhausen, Breslau, Heilsberg, Vienna: The Berlin Philharmonic Jubilee.
- 9.0 " Italian Stations.

CONCERTS (Vocal and Instrumental)

- 8.0 p.m. Langenberg.
- 8.0 " Leipzig: Choral programme.
- 8.55 " Huizen: The "Apollo" Choir.

OPERAS AND OPERETTAS

- 7.30 p.m. Stockholm: "Lohengrin" (Wagner) from the Royal Opera.
- 7.35 " Munich: "Friedemann Bach" (Paul Graener)
- 8.0 " Copenhagen: "Khovantchina" (Musorgsky).
- 8.15 " Warsaw: "Madame Butterfly" (Puccini) (gramophone).
- 8.30 " Strasbourg: "La Mascotte" (Audran).
- 8.45 " Palermo: "Aida" (Verdi) (gramophone).

CHAMBER MUSIC

- 6.30 p.m. Brussels No. 1: Belgian Sonata Series, No. 23.
- 8.0 " Frankfurt, Stuttgart: The Amar Quartet.
- 8.0 " Schweizerischer Landessender: Franck programme.
- 9.0 " Hamburg: The Schneider Quartet.

RECITALS

- 7.30 p.m. Heilsburg: Günter Raphael (pianoforte)
- 10.30 " Warsaw: Chopin.

DANCE MUSIC

- 10.0 p.m. Stockholm (till 11).
- 10.15 " Copenhagen (till 12.30): Jens Warny's Band.

Cherubini's First String Quartet

Known to the average listener of to-day almost solely by his great operas, Cherubini has a place of his own in the affections of chamber music players. He left two sets of string quartets, three in each, the last of which, so he said,



Cherubini

its lines than true chamber music. Especially does the big slow introduction with which it begins, suggest an orchestra rather than a team of four. But the movement is eminently shapely and easy to follow, though it has three distinct themes instead of the customary two. The slow movement, a theme with four variations, is like a prayer; more than once it is strongly reminiscent of Beethoven. The next movement, almost Spanish in its character, is strikingly vigorous, and the last is again in the conventional sonata form, broad and vigorous as one expects from the composer of such great classics as *Iphigenia*.

The Jubilee of the Berlin Philharmonic Concerts

A Festival programme given by the Berlin Philharmonic Orchestra, conducted by Furtwängler, this evening, marks the Jubilee of the organization. It is to be broadcast by BERLIN, WITZLEBEN, KÖNIGS WUSTERHAUSEN, and relayed by several of the other GERMAN STATIONS and VIENNA. The *Ninth*

*Symphony* of Beethoven forms the programme, as so often on festival occasions in Germany. The orchestra, ever since its foundation in 1882, has maintained the closest association with the Sing-Akademie, and it was the latter which gave a special concert to celebrate the 25th Anniversary of the orchestra's foundation. Dr. Furtwängler has been conductor since 1922; in that year he succeeded the late Arthur Nikisch, who had held the post for twenty-six seasons. Karl Klindworth and Josef Rebiček were among its distinguished conductors before Nikisch's day, and the standard of the concerts has always been a very high one. Within recent years, the orchestra has more than once toured abroad, so that other parts of Europe are bound to share in the interest of its Jubilee.

A Distinguished Flemish Composer

Beginning at 8 o'clock, the first part of this evening's concert from BRUSSELS No. 2 is devoted to the music of Lodewyk Mortelmans, one of the representative leaders of the modern Flemish school. Born at Antwerp in 1868, M. Mortelmans was a pupil of the two Conservatoires of Brussels and Antwerp, and in 1893 won the Grand Prix de Rome with a cantata on the subject of Lady Macbeth. In 1902, he was appointed professor of counterpoint at the Antwerp Conservatoire, of which he is now Director. He has already composed a number of symphonic poems, and an opera, *Les Enfants de la Mer*, which was successfully produced in 1920. But it is by his songs that he is, as yet, best known, truly representative as they are of the Flemish spirit. A disciple of Peter Benoit, the founder of the national school—and of Jan Blockx, Mortelmans has carried on the task which they began, of raising the real Flemish music to a plane of high art. This evening's programme, given by the Grand Orchestra of the I.N.R., directed by M. Meulemans, includes the *Symphonie Homérique*, the tone-poem *Herdinking*, and a group of songs, with Madame Severius as the singer. The second part of the programme presents two contrasted moods of Richard Strauss—the solemnity of the symphonic poem *Death and Transfiguration*, and the irresistible Viennese gaiety of the waltz from his opera *Der Rosenkavalier*.

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—10.45—Time Signal (Greenwich), Shipping Forecast.  
 12 noon—Winifred Campbell (Soprano). The Rene Cook Trio: Anne Macnaughten (Violin), Joan Bonner (Violoncello), Rene Cook (Pianoforte).  
 12.45 p.m.—The Commodore Grand Orchestra, directed by Joseph Muscant.  
 1.0—Time Signal (Greenwich).  
 1.45—"Hints from Other Cooks"—XVI.  
 2.0—Housewives' News.  
 2.5—Gramophone Records.  
 2.25—For the Schools. Reception Test.  
 2.30—3.0—World History. Mr. J. A. White: "Empires, Movements and Nations—I, Britain."  
 3.45—A Sonata Recital. Phyllis McDonald (Violin). Kathleen Murray (Pianoforte).  
 4.15—Moschetto and his Orchestra, from the Dorchester Hotel.  
 4.45—Time Signal (Greenwich).  
 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."  
 6.30—Time Signal (Greenwich).  
 6.30—"The Foundations of Music." Debussy's Pianoforte Music, played by Lafitte.  
 6.50—7.20—"New Books." Mr. Desmond MacCarthy.  
 7.30—"Music—Old and New"—II. Mr. Victor Hely-Hutchinson.  
 8.0—Jack Payne's Dance Band.  
 9.0—Time Signal (Greenwich).  
 9.0—"The Second News."  
 9.15—Shipping Forecast; New York Stock Market Report.  
 9.20—"The Unknown Island"—XV. Mr. S. P. B. Mais.  
 9.35—"Beau Brummell." An Operetta. Book and Lyrics freely translated and adapted from the French of Rip and Robert Dieu-donné by Dennis Arundell. Music by Reynaldo Hahn.  
 11.5—12 midnight—Dance Music.  
 12.30—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—10.45 (London and Northern) Daventry National Programme.  
 11.30—12 noon (London)—Experimental Television Transmission (Baird Process).  
 12—Ernest Parsons and his Orchestra.  
 1.0 p.m.—Reginald Dixon at the Organ.  
 1.45—3.0—Midland Studio Orchestra. Winifred Morris (Contralto).  
 3.45 (London and Northern)—A Sonata Recital. Phyllis McDonald (Violin). Kathleen Murray (P'fite).  
 3.45—4.15 (London)—Television Transmission (Baird Process).  
 4.15 (London and Northern)—Moschetto and his Orchestra.  
 5.15—"The Children's Hour."  
 6.0—"The First News."  
 6.30 (London)—Callender's Band. Arthur Cox (Tenor).  
 6.30 (Midland)—The Midland Studio Chorus.  
 6.30 (Northern)—Jack Martin and his Hotel Majestic Orchestra.  
 7.0 (Midland)—The Band of H.M. Royal Marines, conducted by Lieut. F. V. Dunn.  
 7.30 (Northern)—The Studio Orchestra (Augmented). Horace Vincent (Tenor).  
 8.0 (London and Midland)—Chamber Music. Louise Marshall (Mezzo-Soprano). The Stratton String Quartet: George Stratton (Violin); William Manuel (Violin); Lawrence Leonard (Viola); John Moore (Violoncello).  
 9.0 (Northern)—Bertini's Dance Band.  
 9.15 (London)—The B.B.C. Orchestra (Section D), conducted by Stanford Robinson.  
 9.15 (Midland)—The Music of Coleridge-Taylor. The Midland Studio Orchestra, Horace Priestley (Tenor).  
 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

**ALGIERS (N. Africa)**  
 825.3 kc/s (363.3 m.); 13 kW. Transmits at intervals from 12.30 p.m. 7.0 p.m.—Instrumental Solos. 7.10—Financial Notes, Exchange, and Market Prices. 7.20—Shipping Notes, Weather Forecast and Agricultural Report. 7.25—Cinema Review. 7.35—Songs from Films. 7.55—News and Time Signal.  
 8.0—"For All Tastes"—Concert by the Station Orchestra. Overture, Mozart (Hahn). Valse Romantique (Déodat de Séverac). Gothic Minuet (Boellmann). Selection from "Le Rouet d'Omphale" (Saint-Saëns). 8.30—Tourist Talk.  
 8.45—Concert (cont'd.). M. Dessagnes (Pianoforte). Kinderszenen (Schumann). Waltz, Les Amourettes (Gungl). Selection from "Hérodiade" (Massenet). Menuet Vif (Ganne). Selection from "The Merry Widow" (Léhar).  
 9.15—Song Recital. 9.30—Dance Music relayed from the Casino.  
**BARCELONA (Spain)**  
 Radio-Barcelona (E.A.J.1). 860 kc/s (349 m.); 8 kW. Transmits at intervals from 12 noon. 8.0 p.m.—Concert by the Station Trio. Chant russe from the Concerto, Op. 29 (Lalo). Selection from "The Valkyries" (Wagner). Largo from the String Quartet, No. 12 (Haydn). Romance (Chopin).  
 8.30—Exchange Quotations, Theatre and Film Notes, Talk, and Request Programme on Gramophone Records, followed by Sports Notes and News.  
 10.0—Chimes and Weather Forecast.  
 10.5—Humorous Review of the Week's Events in Verse. 10.15—Concert by the Station Orchestra.  
 10.45—Concert of Sardanias. 11.0—Choral Concert of Spanish Music by the "Orfeo Barcelones," conducted by Juan Altisent. 12.30 a.m. (Tuesday)—Dance Music from the Excelsior Restaurant. 1.0 (approx.)—Close Down.  
**BELGRADE (Yugoslavia)**  
 607 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Light Music on Gramo-

phone Records. 4.30—Recital of Yugoslavian Melodies on the Accordion. 5.0—Popular Music on Gramophone Records. 6.55—Programme Announcements. 7.0—French Lesson. 7.30—Gymnastics. 8.0—Popular Music on Gramophone Records.  
 8.30—Concert from the Works of Brahms and Beethoven. Soloist: Rudolf Ertl (Vocalist). Songs (Brahms and Beethoven). Trio, Op. 1, No. 2 (Beethoven). 9.30—Comedy (to be announced).  
 10.15—Concert by the Station Orchestra. Overture, "The Marksman" (Weber). Ballet Music from "Czar and Carpenter" (Lortzing). 10.35—News and Concert (cont'd.). Spanish Fantasia, A Fête in Aranjuez (Demersermann). Suite, Im Zirkus (Armandola).

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 Talk for Schools. Typical English Customs. 12.30 (approx.)—Gramophone Records from the Operatic Works of Verdi and Lortzing, followed by Weather for Farmers. 12.55—Nauen Time Signal. 1.30—News Bulletin. 2.0—Gramophone Concert from Berlin (Witzleben). 2.45—Programme for Children—The Children's Newspaper. 3.30—Weather Forecast and Exchange Quotations. 3.40—Programme for Young People. Dialogue: School-leaving Certificates. 4.0—Educational Talk.  
 4.30—See Berlin (Witzleben). 5.30—Talk: Superstitions in Business and in Private Life. 6.0—Making Music with Invisible Partners. 6.30—Elementary Spanish Lesson. 6.55—Weather for Farmers. 7.0—Topical Talk. 7.30—Agricultural Talk, followed by Weather for Farmers, and Reading from the Works of Goethe. 8.10—12.30 a.m. (Tuesday)—See Berlin (Witzleben). 12.30—Close Down.

BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW. Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert). 4.30 p.m.—Recital of Songs by Paula Geller (Mezzo-Soprano). Mittelalterliche Venusymnie

(d'Albert). Aria from "Joan of Arc" (Tchaikovsky).  
 4.45—Concert of Modern Austrian Music. Baritone Solos from the Cycle "Auf meines Kindes Tod" (Richard Mandl): (a) Was ist mir denn so wehe, (b) Die Welt treibt fort ihr Wesen, (c) Dort ist so tiefer Schatten. Legend (Othmar Wetzky). Two Night Fantasias, Op. 13 (Karl Weigl). Gavotte for Pianoforte from the "Dance Suite" (Wilhelm Grosz). Baritone Solos: (a) Du bist der Garten (Wildgans), (b) Am Scheideweg (Scholtys), (c) Bitte and (d) Nachtwandler (Othmar Wetzky). Rondo Burlesque Op. 32 (Egon Kornauth). Minuet from the Little Suite, Op. 11 (Paul Amadeus Pisk). Idyll, Op. 21 (Egon Wellesz). Pianoforte Solo: Hornpipe from "Much Ado about Nothing" (Korngold).  
 5.30—Talk for Young People: The Origin of Ball Games and Ball Game Regulations. 5.50—Talk: Charles Darwin. 6.10—Talk on Social Insurance. 6.30—Reading: "A Journey in Morocco" (Ernst Toller). 6.55—"The Witzleben Station informs its Listeners." 7.0—Topical Talk. 7.10—Concert of Light Music from the "Traube Weinrestaurant."  
 8.5—Labour Market Report.  
 8.10—Festival Concert on the Fifth Anniversary of the Berlin Philharmonic Society, relayed from the Philharmonic. The Berlin Philharmonic Orchestra, conducted by Dr. Wilhelm Furtwängler, the Bruno Kittel Choir, Ria Ginster (Soprano), Frieda Dierolf (Contralto), Helge Roswaenge (Tenor) and Rudolf Bockelmann (Bass). The Ninth Symphony in D Minor, Op. 125, with Choral Finale on Schiller's Ode "An die Freude" (Beethoven).  
 9.35—News Bulletin. 9.45—"The Nations laugh"—Programme arranged by Gerhart Pohl. 10.45—Second News, followed by Dance Music from the Eden Hotel. 12.30 a.m. (Tuesday)—Close Down.  
**BORDEAUX-LAFAYETTE (France)**  
 (PTT). 986 kc/s (304 m.); 13 kW. Transmits at intervals from 12.45 p.m. 7.30 p.m.—News, Exchange, Market Prices. 7.40—Sports Notes. 7.55—Lottery Results. 8.0—Programme for

MONDAY continued

Children. 8.15—Charades from the Prima Café. 8.20—News and Weather Forecast.

8.30—Concert of Modern and Classical Music. Soloists: Mlle. Boy Forester (Harp), M. Janguy (Bartone), M. Barouk (Cello), M. Champeil (Violin) and M. Grange (Pianoforte). Violin Solo: Two Caprices (Paganini). Solo Two Harp Solos: (a) En Bateau (Debussy), (b) Patrouille (Hasselmans). Baritone Solo: Song from "The Marriage of Figaro" (Mozart). Cello Solo: Etudes nocturnes (Martini). Pianoforte Solo: First Sonata (Beethoven). Violin Solo: Poem (Chausson). Two Harp Solos: (a) Variations pastorales sur un vieux Noël (Rousseau), (b) Die Quelle (Blumenthal). Two Baritone Solos: (a) Song from "Le Roi de Lahore" (Massenet), (b) Le Soir (Gounod). Two Cello Solos: (a) Réverie (Vallauray), (b) En la Alhambra (Breton). Two Pianoforte Solos: (a) The Road to the Alhambra (Turina), (b) Fire Dance (Fallá). After the Programme, Amusement Guide and Time Signal.

BRATISLAVA

(Czechoslovakia)

1,076 kc/s (279 m.); 14 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Variety Music on Gramophone Records. 4.10—Orchestral Concert, conducted by Fr. Dyk. Slavonic Rhapsody (Tittl), Carpathian Picture (Jedec), Selection (Kostal), Intermezzo (Stary), Waltz (Fucik), Selection from "The Land of Smiles" (Lehar), March (Bernhard). 5.10—Chess Programme. 5.40—Recital of Music for Three Violins. Sonata, No. 1, in G Major (Bella), Sonata, No. 2, in E Flat (Bella), Trio for Two Violins and Viola. 6.40—Serbo-Croatian Language Lesson. 7.0—See Prague. 7.5—Musical Report and News. 7.15—Brass Band Concert, conducted by K. Nagl. March, The Gipsies (Kovarik), Serenade (E. Paps), Polka (Vackar), Waltz (Cernak), Polka (Hoi), Merry Company (Stolz), Songs, Polka (Hotovy), Waltz (Bucheltr), Songs, Mazurka (Enoch), March (Penc). 8.10—Introductory Talk to the following Transmission. 8.15—Concert relayed from the Government House. Conductor: Fr. Prochazka. 10.0—See Prague. 10.15—Programme Announcements and News. 10.20—Programme of Light Music.

BRESLAU (Germany)

.923 kc/s (325 m.); 1.5 kW. Relayed by Gleiwitz, 1,184 kc/s (253 m.). Transmits at intervals from 6.30 a.m. 6.5 p.m.—English Lesson. 6.20—Review of Periodicals. 6.50—Surprise Programme. 7.10—Weather Forecast, followed by Ballet Music by the Station Orchestra, conducted by Franz Marszalek. Selections from "Lazy John" (Nedbal), Selection from "Le Roi s'amuse" (Delibes), Waltz from "Raymonda" (Glazounov), Ballet Suite (Glydmark). 7.45—Weather Forecast and a Conversation with Children: The Artistic World of the Child. 8.10—See Berlin (Witzleben). 9.35—Announcements. 9.45—Hans Franck reads from his own Works. 10.20—Time Signal, Weather Forecast, News, Sports Notes and Programme Announcements. 10.45—Answers to Technical Queries. 11.0—Talk on Horse Racing. 11.20 (approx.)—Close Down.

BRNO (Czechoslovakia)

878 kc/s (342 m.); 35 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Talk for Women: Eggs. 4.10—See Bratislava. 5.10—See Prague. 5.25—Review of Books on Political Economy. 5.50—Talk: Sports in Relation to Health. 6.0—Topical Talk. 6.15—See Prague. 6.25—German Transmission: News and Agricultural Talk. 7.0—See Prague. 7.5—Talk: Let us build and live in the Modern Style—New Material. 7.20—See Prague. 7.40—Concert by a Jazz Band. 8.25—See Prague. 10.15—Announcements. 10.20—See Bratislava.

BRUSSELS (Belgium) (No. 1)

I.N.R. 590 kc/s (509 m.); 15 kW. 12.15—2.0 p.m.—Concert by the Max Alexys Orchestra and Weather Report. 2.0—2.30—Educational Programme. 2.0—Lesson in Natural Science. 2.25—Gramophone Records. 2.30—Talk, with Illustrations: From the Voice to the Symphony. 5.0—Orchestral Concert, conducted

by Franz André. March (Bades). Dream of Love after the Ball (Czibulka). Cortège Catalan (de Sévéric). Chanson Javanaise (de Sévéric). Selection from "La Traviata" (Verdi). La Lettre de Manon (Gillet). Festival of Spring in Old Japan (Delmas). Berceuse mélancolique (Leemans). Parade of the Wooden Soldiers (Jessel). Selection from "Show Boat" (Kern). Reverie (Lauweryns). Tango (Bruske). Campana a Sera (Billi).

6.0—Gramophone Concert of Light Music. 6.15—Talk: Alfred Bastien—a Belgian Painter.

6.30—Belgian Sonata Recital. Soloists: Henry Wagemans (Violin) and Charles Scharrés (Pianoforte). Sonata (Van Durme).

7.0—Gramophone Concert. Prelude to Act I of "Le Roi malgré lui" (Chabrier). Waltz (Chopin-Aubert). Kamarinskaya (Glinka).

7.15—Talk: Aviculture. 7.30—Theatre Notes.

8.0—Gramophone Records. Shepherds' March (Leopold), Waltz, Estudiantina (Waldteufel), Pasodoble (Rovec), Waltz, The Skaters (Waldteufel), March, Old Comrades (Teike).

8.15—Walloon Programme. "Li P'tite Wesens"—One Act Play (Closset). Music by M. C. Delvigne.

8.45—Talk: Pierre Daye, a Belgian Writer. 9.0—Concert relayed from the Memling Hall, Antwerp. 10.0—Le Journal Parlé.

BRUSSELS (Belgium) (No. 2)

N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish.

12.15 p.m.—Weather and Gramophone Concert. March, Stars and Stripes (Sousa), Mascarade (Lacôme), Serenade (Mozart), "Faust" Overture (Wagner), Hungarian March in C Minor (Schubert-Liszt), Overture, "Banditenstriche" (Suppé), Aria from "André Chenier" (Giordano), Oriental Dance (Glazounov), March (Ivanov), Fantastic Dances (Turina), Liebesträume, No. 3 (Liszt), Kamennoi-Ostrov (Rubinstein), Easter Overture (Rimsky-Korsakov).

2.0—Music Talk: From the Voice to the Symphony, with Illustrations. 2.28—Gramophone Record. 2.30—Talk: The Harmony of Nature in the Woods.

5.0—Orchestral Concert, conducted by Jean Kumpfs. March, Les Cadets de Picardie (Allier). Selection from "Les Mousquetaires au Couvent" (Varney). Aubade (Gillet). Selection (Poliakin), Waltz, Les Sirènes (Waldteufel), Selection from "Boccaccio" (Suppé). Selection (Pierré).

6.0—Gramophone Records. Overture, "Oberon" (Weber), Polonaise in A Flat (Chopin). 6.15—Talk by Dr. Jozef Muls.

6.30—Gramophone Concert. The Wedding of the Winds (Hall), Waltz, Sincerity (Pignoloni), Troika, Waltz (Andreef), The Gladiators' Farewell (Blankenburg), The Bells of St. Malo (Rimmer), Potpourri of Old Airs. I kiss your little Hand, Madame (Erwin). Love sends a little Gift of Roses (Openshaw), Waltz (Ipolito), Mazurka, La Czarina (Ganne), Waltz (Rizzi), Triumphant March (Grieg).

7.15—Variety Programme. 7.30—Le Journal Parlé.

8.0—Orchestral Concert, conducted by Arthur Meulemans. Soloist: Mme. Sererivius (Songs). Part I. Mortelmans Programme. Iliac Symphony. Songs. Herdenking. Part II. Richard Strauss Programme. Death and Transfiguration. Songs. Waltz from "Der Rosenkavalier". In the interval at 9.0—Humorous Items. 10.0—Le Journal Parlé.

BUCHAREST (Romania)

Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 12 noon. 5.0 p.m.—Concert by the Station Orchestra. Selection (Harras), Waltz, Telegrams (Johann Strauss), Overture, "Frau Luna" (Lincke), Vers l'infini (Nigrim), Selection from "La Bohème" (Puccini), Larghetto for Violin and String Orchestra (Händel). 6.0—News and Time Signal. 6.10—Concert (cont'd). Madrigal (Wande-Walle), Potpourri of the Waltzes of Johann Strauss (Weber), Suite, Holiday Sketches (Foulds), Waltz, Wald-nixen (Ertl), Selection (Cambrier).

7.0—Scientific Talk. 7.40—Light Music on Gramophone Records. 8.0—Harp Recital by Mme. Pleskov. 8.30—Talk (to be announced). 8.45—Song Recital by Mme. Stern. 9.15—Trio (Schumann), by Alfred Alessandresco (Pianoforte), Alex. Theodoresco (Violin) and Josef

BUDAPEST (Hungary)

545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Also relayed on 210 metres from 6.30 p.m.—12 midnight.

5.0 p.m.—Orchestral Concert. Selections (Delibes): (a) Selection from "Le Roi Pa dit", (b) Suite from "Le Ballet", "Naila", Selection from "Prinz Methusalem" (Johann Strauss), Die Kaiserin wünscht tanzen (Granchaesteden), Tango Song (Kálmán), Lied (Banyai), Selection from "Gipsy Love" (Lehar), Pasodoble, Madrid (Speyer).

6.0—Talk by Andor Medriczky: My Experiences in Turkey. 6.30—Song Recital. 7.0—Ravel Concert, relayed from the Redoute. Soloist: Marguerite Long (Pianoforte). Le tombeau de Couperin. La Valse, Pianoforte Concerto, Bolero. Selection from "Pictures from an Exhibition" (Ravel-Mussorgsky). 10.0—Concert by the Imre Magyari Triazine Orchestra from the Hotel Hungaria. In the interval at 11.0—Talk in German: The Hungarian Influence in German Culture.

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).

12 noon—Town Hall Chimes. 12.2 p.m.—String Ensemble Concert from the Hotel d'Angleterre. 2.0—3.20—Interval. 3.20—Talk for the Housewife.

3.30—Benefit Concert for the Unemployed, relayed from the Oddfellows' Hall. The Radio Orchestra, conducted by Emil Reesen, with Kirsten Engquist and Holger Bruusgaard (Vocalists), Overture, "Light Cavalry" (Suppé), Waltz, "The Skaters" (Waldteufel), Minuet from the Symphony in E Flat Major (Mozart), Overture, "Die Fledermaus" (Johann Strauss), Seven Songs, Overture, "William Tell" (Rossini), Variations on the Emperor Quartet for Strings (Haydn), Ballade and Thème slave varié from "Coppélia" (Delibes), Waltz, Mein Lebenslauf ist Lieb und Lust (Joseph Strauss), Gallop from "Livjaegerne paa Amager" (Lumbye).

5.40—Exchange and Market Prices. 5.50—Talk: Claus Johanssen. 6.20—Elementary English Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Talk: Danish Church and Parish Life. 8.0—Town Hall Chimes.

8.2—"Khovantchina"—Opera in Five Acts (Mussorgsky) by the Danish Philharmonic Society, relayed from the Oddfellows' Hall. Conductor, Anders Rachelew. 10.0—News Bulletin. 10.15—Dance Music from the Nimb Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (Tuesday)—Close Down.

CRACOW (Poland)

959 kc/s (312.8 m.); 1.5 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items and Sports Notes. 7.15—Light Music on Gramophone Records. 7.25—Programme Announcements. 7.30—Popular Music on Gramophone Records. 7.45—12 midnight—See Warsaw. 12 midnight (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—Gaedhlig. 7.45—Recitations by C. N. Dhaluigh.

8.0—Violin Duets by Mrs. Larchet and Mrs. Lange. 8.25—Vocal Duets by Eileen Driscoll and Mme. Eira Haise. 8.40—Plain Songsters Choir. 9.10—"The Pathfinder"—Sketch by the Studio Players. 9.30—Sponsored Programme. 10.30—Time Signal, News, Weather Forecast and Close Down.

FÉCAMP (France)

Radio Normandie. 1,364 kc/s (219.9 m.); 1 kW. Transmits at intervals from 12 noon. 7.30 p.m.—Light Music on Gramophone Records. 7.45—Announce-

ments. 8.0—News Bulletin. 8.30—Café Concert. 11.0—Concert of Dance Music. 1.0 a.m. (Tuesday)—Close Down.

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. 6.50 p.m.—English Language Lesson. 7.15—Time, Programme Announcements, Weather and Economic Notes. 7.20—Theatre Talk: The Dream and how to stage it. 7.30—Talk: Goethe or the Present Day. 7.45—Reading of Lyrics (Ina Seidel), by Charlotte Christann.

8.0—Chamber Music, by the Amar-Quartet, relayed from the Saalbau. String Quartet in E Flat Major (Cherubini).

8.30—"Cassel"—a Descriptive Sketch. 9.15—Popular Song Recital by Robert Koppel. 10.20—Time, Weather, News and Sports Notes. 10.45—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. 5.55 p.m.—Talk: The Music in Language. 6.30—A Conversation with Two Saleswomen. 6.50—Frankfurt Exchange and Hamburg Market Prices. 6.55—Weather Report. 7.0—Topical Talk.

7.15 (from Hanover)—Instrumental Cabaret, by the Hanoverian Norag Orchestra, conducted by Otto Ebel von Sosen, Heinrich Sippel (Trombone), Albert Rothschild and Hans Wegener (Pianofortes) and Fritz Ziller (Piccolo), Overture; "Prince Carnival" (Blasius), The Artist (Smatek), Trombone Solo: A Negro Serenade (Prior), Jazz on Two Pianofortes in Four Minutes, Bib and Bob (Demare), Piccolo Solo: American Reminiscences (Bursee), The Curtain Lecture (Helmbergh-Holmes), Fox-trot, Ironic (Lincke).

8.0—Report from an Intellectual Theatre of War. 9.0—Concert by the Schneider Quartet. String Quartet in E Flat Major, Op. 12 (Mendelssohn), Quartet, No. 14, in D Minor—Variations on "Der Tod und das Mädchen" (Schubert). 10.0—Time and News Bulletin. 10.20—Relay of Foreign Stations.

HEILSBURG (Germany)

1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert).

5.5 p.m.—Concert by the Little Orag Orchestra, conducted by Eugen Wilcken. Florentine March (Fucik), Overture, "Der Opernball" (Heuberger), Waltz, Rheingruss (Grünfeld), Fantasia on the Works of Verdi (Rhode), Occhi di Zingara (Filipini), Ein Liebesbrief, in G Flat Major (Königsberger), Slavonic Rhapsody (Friedemann), Waltz (Ketelbey), Overture, (Czibulka).

2.30—4.0—No Transmission. 4.0—Programme for Children. 4.30—Concert from Breslau. 5.30—Book Review. 5.50 (from Danzig)—Talk: Danzig and the West. 6.15—Market Prices. 6.25—Talk: On Numismatics. 6.50—Talk: Memorable Days of the Week. 7.0—Short-hand Dictation. 7.30—Pianoforte Recital by Günter Raphael from his own Works. Little Sonata in E Minor, Op. 2, No. 1. Three Pieces from the Improvisations, Op. 3: (a) Scherzino, (b) Fughetta, (c) Burlesque. Little Sonata in F Major, Op. 25, No. 2.

8.5—Weather Report. 8.10—See Berlin (Witzleben). 9.35—Announcements. 9.40—Authors Programme—Roda Roda. 10.15—Weather, News and Sports Notes.

HILVERSUM (Holland)

1,004 kc/s (298.8 m.); 8.5 kW. 7.25—10.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 7.25—7.40 and 8.10—8.25—Physical Culture Lesson. 8.40—Variety Music on Gramophone Records. 9.40—Concert by the Amsterdam Soloist Quintet conducted by L. Cohen. In the intervals, Variety Music on Gramophone Records.

10.40—Religious Programme by the Liberal Protestant Radio Society (V.P.R.O.). 10.55 till Close Down—V.A.R.A. Programme. 10.55—Recitations. 11.10—Quintet Concert (continued),

12.25 p.m.—Recitations (continued). 12.40—Septet, Concert conducted by Is. Eyl. March Potpourri, Forward March! (Ciere), Waltz, O Frühling wie bist du so schön (Lincke), Variety Music on Gramophone Records. Serenade, Isola bella (Beccce), The Sultan's Dream (Rosey), Song, Die eine Frau (Korngold), Gayotte, En badinant (d'Ambrosio), Popular Gramophone Music. Potpourri, ABC (Kozák), Canzone di Maggio (de Micheli), Variety Music on Gramophone Records. Waltz, The Passing of Salome (Joyce), Gavotte, Rendez-vous (Aletier), Entr'acte and Barcarolle from "The Tales of Hoffmann" (Offenbach), Popular Gramophone Music. Selection from "La Mascotte" (Audran), Parade of Jack and Jill (Lake).

2.25—2.55—Interval. 2.55—Literary Talk. 3.40—Flute Recital by Johan Feltkamp. P. Tiggers at the Pianoforte. Sonata (Telemann), Sonata (Platti), Sonata (Schulhoff).

4.10—Song Recital by E. de Haas (Soprano), Johan Jong at the Pianoforte. Aria from "The Messiah" (Händel), Aria from "Rinaldo" (Händel), Aria from "The Marriage of Figaro" (Mozart), Ridente la calma (Mozart), Popular Gramophone Music. Spring Song (Mendelssohn), Maria Wiedenling (Reger), Der Vogel im Walde (Taubert), Selection (v.d. Linden).

4.40—Popular Gramophone Music. 5.10—Programme for Children. 5.40—Concert by the Drukker Trio, with Gramophone Interludes. Dew Drops (Rapee), Ay Chiquita (Yradier), Albumblatt (Wagner), German Dance (Mozart), Popular Gramophone Music. Barcarolle (Tchaikovsky), Chant du Ménestrel (Glazounov), Slumber Song (Squire), Variety Gramophone Music. Nuit d'étoiles (Debussy), Lotusland (Cyril Scott), La Gitana (Kreisler), Serenade (Tarenghi), Popular Gramophone Music. Nur wer die Sehnsucht kennt (Tchaikovsky), Selection from "Werther" (Massenet), Popular Gramophone Records. Selection from "Victoria and her Hussar" (Abraham), 7.20—Talk: Population.

7.40—Concert by the VARA Orchestra conducted by Hugo de Groot. Soloists: G.v. Rensse (Cembalo) and L. Spouwerman (Flute). Introductory Talk by P. Tiggers. Concerto in E for Cembalo and String Orchestra (Bach), Concerto in D for Flute and Orchestra (Mozart).

8.40—Talk. 9.0—Popular Gramophone Music. 9.40—"Sonja" Radio Play in One Act (Grekov). 10.10—Orchestral Concert conducted by Hugo de Groot. 10.40—News Bulletin. 10.55—Concert (continued). 11.40—Variety Music on Gramophone Records. 12.40 a.m. (Tuesday)—Close Down.

HUIZEN (Holland)

160 kc/s (1,875 m.); 8.5 kW. Programme of the Christian Radio Society (N.C.R.V.). 8.40 a.m.—Bible Reading. 8.55—10.10—Gramophone Records of Light Music. 11.10—Programme for Hospitals. 11.40—Reading.

12.10 p.m.—Gramophone Records of Light Music. 12.40—Police Notes. 12.55—Gramophone Records of Variety Music. 1.10—Organ Recital by Jan Zwart. Ricercare (Bach), Four Arrangements by Zwart, Fantasia in C Major (C. Franck), Sonata in D Minor (Topfer), Selections (Karg Elert): (a) Prologus tragicus, (b) Quasi marcia, (c) Madrigal. Selections (Guilmant): (a) Allegro vivace from the Second Sonata, (b) Meditation, (c) Scherzo from the Eighth Sonata. "Pontifical Sonata (Lemmens).

2.40—Programme for Schools. 3.15—Horticultural Talk. 3.55—Dress-making Lesson. 4.25—Interval. 4.40—Programme for Invalids. 5.40—Gramophone Records of Variety Music. 6.10—Religious Songs with Explanatory Notes. 7.10—Answers to Correspondents. 8.10—Police Notes. 8.25—Religious Information. 8.40—Gramophone Records of Light Music. 8.55—Choral Concert on the occasion of the Eightieth Birthday of Cornelius Galesloot. The "Apollo" Male Voice Choir conducted by Andriessen. Soloists: W. Snoeks (Tenor) and J. Keessen (Violin). Address by J. M. Lambooy, Mayor of Hilversum. Ave Maria and Media Vita (Galesfoot), Chaconne (Vitali), De klare dag (Dickenbrock), Adoro Te (Averkamp), Ecce Panis

**MONDAY**  
continued

Angelorum (Galesloot). Ecco Quomodo Moritur (Galesloot). Naarshied (Galesloot). Address by M. Labooy. 9.55—Talk on the Zuider Zee. 10.10—Concert (continued). Sonata No. 5 in F Major (Beethoven). La Procession (C. Franck). Non Credo (Widor). Mainacht (Brahms). O liebliche Wangen (Brahms). Die Vester (Beethoven). Le Rossignol (Grétry). Les Marins de Kermor (Saint-Saëns). La Grand' Route (Gevaert).  
11.25—News Bulletin. 11.35—Gramophone Records of Popular Music, 12.10 a.m. (Tuesday)—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. 5.35 p.m.—Concert of Light Music. 8.15—"Madame Butterfly"—Opera (Puccini), on Gramophone Records. 10.30—Pianoforte Recital by Suzanne de Mayere. 11.15—Dance Music.

**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. 6.40 p.m.—Songs by the Wireless Quartet. 6.50—Talk. 7.15—Songs by the Radio Quartet. 7.30—Talk: Classical and Romantic Music. 8.0—Orchestral Concert, conducted by Toivo Haapanen. Soloist: Erik Cronvall (Violin). Overture, Prometheus (Beethoven). Symphony in G Minor, No. 2 (Mozart). Minuet from the Symphony in D Major (Haydn). Abandoned (Schumann). Violin Solo: "Träume" (Wagner). Overture, The Hebrides (Mendelssohn). 8.45—News in Finnish and Swedish and 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 Gramophone Concert.

11.20 a.m.—Gramophone Concert of Classical and Popular Music. 12 noon—See Stuttgart. 12.50 p.m.—Weather, News, and Time Signal.

1.0—Orchestral Concert conducted by Eysoldt. Soloist: Helene Guermannova (Contralto). Overture, "Hamlet" (Tchaikovsky). Ballad for Chamber Orchestra (Spies). Rhapsody in C Major (Dohnanyi). Ballet Suite from "Sylvia" (Delibes). Songs for Contralto: (a) Prelude (Kahn), (b) Plaisir d'amour (Martini), (c) Hopak (Moussorgsky). Dionysian Feast (Hupperts). Waltz, Mephistos Höllenrufe (Strauss). Scenes from "Othello" (Verdi). Frühlingsmarsch (Mausz).

2.30—Cattle Market Report. 3.30—Economic Notes and Time. 3.50—Programme for Children. 4.20—Young People's Programme. 5.0—Concert from Munich. 6.15—Talk for Women: Froebel and Children. 6.40—Two Stories (Hans Siemsen). 7.0—Weather, Time, Economic and Sports Notes. 7.15—Topical Talk. 7.30—Industrial Review. 7.55—First News Bulletin.

8.0—Vocal and Orchestral Concert, conducted by Kühn. Soloist: Wanda Achsel (Soprano). Overture and Aria from "The Bartered Bride" (Smetana). Overture, "The Cunning Peasant" (Dvorak). Aria from "Russalka" (Dvorak). Slavonic Dances (Dvorak). Dances from Austria (Bittner). Songs for Soprano and Orchestra (Ast): (a) Und gegen Abend, (b) Es ist alles wie ein wunderbarer Garten. Selections from "Die silberne Tänzerin" (Bittner). Songs for Soprano with Orchestra (Korngold): (a) Sommer, (b) Liebesbriefchen. Waltz Idyll, Märchen aus dem Wiener Wald. Anina Waltz from "A Night in Venice" (Johann Strauss—Korngold). Overture, "Cagliostro in Wien" (Johann Strauss). 10.5 (approx.)—News and Sports Notes, followed by Concert and Dance Music, 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 6.30 a.m. 6.0 p.m.—Review of New Books. 6.30—Literary Talk on Joseph von Görres. 6.50—Talk by Dr. Kurt

Fischer: The Musical Element in the Radio Play. 7.0—Dialogue: Man and Machine. 7.30—Readings from his own Works by Reinhard Goering.

8.0—First Part of the Choral Concert by the Volks-Singakademie, relayed from the Alberthalle. The Singakademie Choir, the Leipzig Symphony Orchestra, conducted by Otto Didam, and Walter Zimmer (Baritone). Gesang der Parzen—for Six-Part Choir and Orchestra, Op. 98 (Brahms). Prometheus—for Baritone and Orchestra (Hugo Wolf). Schicksalslied for Choir and Orchestra (Brahms).

9.0—Recitations with Music from "Pergamon" (E. Kurt Fischer) on Gramophone Records.

9.30—Concert by the Leipzig Symphony Orchestra, conducted by Theodor Blumer. Part I. Selections from "Die drei Pintos" (Weber). German Dances (Schubert). Italian Caprice (Tchaikovsky). Selections from "Der Kuhreigen" (Kienzl). Part II. Operetta Music. Selections from "The Little Dutch Girl" (Kalmán). Carlotta Waltz from "Gasparone" (Millöcker). March from "The Maid of the Black Forest" (Jessel). Selections from "Grigri" (Lincke). Radium-Marsch from "Die Dame in Rot" (Winterberg). Selections from "Der lachende Ehemann" (Eysler). March from "Die Landstreicher" (Zichrer). 10.30 (in the interval)—News. 12 midnight (approx.)—Close Down.

**LJUBLJANA (Yugoslavia)**  
522 kc/s (574.7 m.); 2.5 kW. Transmits at intervals from 12.15 p.m. 7.0 p.m.—Czech Lesson. 7.30—Talk on Hygiene. 8.0—Recital of Chamber Music. 9.0—Quintet Concert. 10.0—Time and News Bulletin.

**LWÓW (Poland)**  
788 kc/s (381 m.); 16 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items. 7.15—Economic Talk. 7.30—See Warsaw. 7.45—Announcements. 7.45—See Warsaw. 8.0—Talk on Rubinstein,

relayed from Wilno, 533 kc/s (563 m.). 8.15—See Warsaw. 11.10—Dance Music from the Szkoeka Café. 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. 4.30 p.m.—Popular Music on Gramophone Records. 7.0—Light Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South-East. 8.30—Instrumental Concert, conducted by Charles Strony.

**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 Concert. 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. 7.0 p.m.—See Prague. 7.5—Lecture by Dr. Martinek, followed by Songs from Hlucin Tvrdy. 7.30—Selection, "Military Life" (Tvrdy). 8.0—Orchestral Concert, conducted by Tvrdy. 8.25—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. 4.0 p.m.—Proletariat Radio Journal. 5.0—Peasants' Radio Journal. 6.0—Talk (to be announced). 7.0—Talk (to be announced). 8.0—Talk in German and English: Dneprostroi. 9.55—Chimes and 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. 6.30 p.m.—Talk: Therapeutics. 6.50—Talk for Workers. 7.15—Introductory Talk to the following Transmission.  
7.35—"Friedemann Bach"—Opera in Three Acts (Paul Graener), relayed from the Municipal Theatre, Kaiserslautern. 10.20—Time, Weather and News. 10.45—Orchestral Concert, conducted by Erich Kloss. 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.); Porsgrund, 662 kc/s (453.2 m.) and Rjukan, 671 kc/s (447.1 m.). Transmits at intervals from 11.10 a.m. 5.0 p.m.—Chamber Music by the Wireless Ensemble. 6.0—Talk in English by A. Lloyd James: Radio and the English Language. 6.30—Light Music on Gramophone Records. 7.0—Announcements, Weather and News Bulletin. 7.30—Agricultural Talk: Planting Forests 8.0—Time Signal. 8.1—Sacred Music relayed from the Cathedral, Christiansand. 8.30—Norwegian Songs by Johannes Dueland (Baritone). 8.55—Flute Solos by M. Naess. 9.10—Political Review. 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Concert of Light Music by the Station Orchestra, conducted by Hugo Kramm. Soloist: Kari Arvold-Glaser (Pianoforte). Selection from "Die lustige Schmeide" (Fucik). Overture (Offenbach). Rhapsody in Blue for Pianoforte and Orchestra (Gershwin). Humorous Variations on German Student Songs (Suppe). Comic Intermezzo for Piccolo and Double Bass: "The Elephant and the Midge" (Kling). Potpourri of Modern Dance Music (Niemann). Musical Intermezzo (Kling). The Cuckoo, the Nightingale (Kratz). Polka Pizzicato (Strauss). Selection from "Die geschiedene Frau" (Fall).

**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 and Dance Music from the Olympia Tea Rooms.

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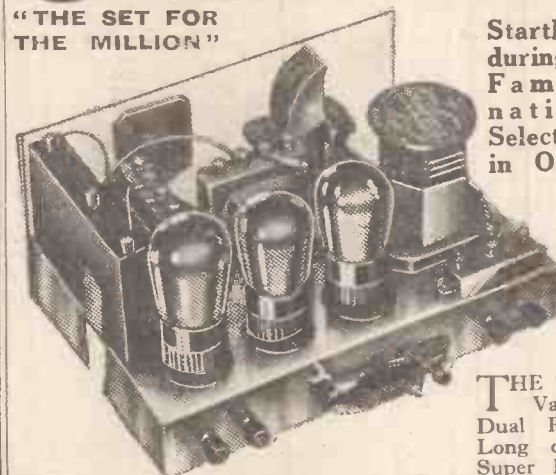
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**MONDAY**  
continued

6.30—8.0—Interval. 8.0—Announcements, Radio-giornale dell'Ente, Agricultural News, Report of the Royal Geographical Society and Giornale Radio. 8.20—Light Music on Gramophone Records. In the interval at 8.30—Time Signal and Announcements.  
8.45—"Aida"—Opera (Verdi), on Gramophone Records. In the intervals, Fashion Notes and Talk. 10.55—News Bulletin.

**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 on Films. 7.0—Le Journal Parlé. 8.20—Weather Report.  
8.30—Gramophone Concert. Prelude to the Third Act of "Lohengrin" (Wagner). Le Temps des Lilas (Chausson). Duet with Guitar accompaniment: (Palaia). Reflets d'Allemagne (Schmitt). Humorous Item: Fifi recites her Piece (Urban). Japanese Lantern Dance (Yoshitomo).  
9.0—Concert in aid of the "Radio for the Blind" Society. Soloists: Georges Chepfer and Lucy Vauthrin (Songs), Jean Noceti (Violin) and Jane Valenti (Pianoforte). Address by General Mariaux.  
10.0—Concert. Soloist: Marie Antoinette Pradier (Pianoforte) and Mme. Laming and Mme. Choumouovskiy (Duets) with Commentary by André Delacour. Pianoforte Solo: Polish Songs (Chopin-Liszt). Russian Songs for Duet: (a) Song (Gouriev), (b) Vanka (Darjomitsky), (c) Song (Giazoumouov), (d) Waltz (arranged Mme. Choumouovskiy). Pianoforte Solos: "Three Hungarian Dances (Brahms-Philipp). Ukrainian Songs for Duet.

**PARIS (France)**  
Poste Parisien. 914 kc/s (328.2 m.); 1.2 kW.  
12 noon—Gramophone Records, News and Announcements. 12.15 p.m.—Variety Music on Gramophone Records. 1.45—News and Announcements. 2.0—6.45—Interval. 6.45—News and Announcements. 7.0—Light Music on Gramophone Records, Talks and News. 7.30—Concert of Popular Music on Gramophone Records. 8.30—Light Music on Gramophone Records, Talk and News.  
8.45—Vocal and Orchestral Concert. Overture, "Gillette de Narbonne" (Audran). Waltz, Galante Aventure (Waldeufel). Selection from "La Roussotte" (Lecocq). Russian Rhapsody (Olson). Selection from "Surcouf" ("La Jolie Parfumuse" (Offenbach). Suite, Joyous Youth (Coates). Ballet, La Source (Delibes). Menuet guillèret (Fili-pucci). Dances from "La plus jolie Fille de France" (Fouadrain).  
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 Lesson. 7.0—Weather and Physical Culture (continued). 7.45—Variety Music on Gramophone Records. 8.0—News, Weather and Press Review.  
12.30 p.m.—Chamber Music Concert on Gramophone Records. Sonata for Flute and Strings (Scarlatti). Largo for Violin (Vivaldi). Lamento (Duparc). Le Colibri (Chausson). Pianoforte Solos: (a) Hommage à S. Pickwick, Esq. (Debussy) (b) Ondine (Debussy). Cello Solos: (a) Spanish Dance (Granados), (b) Vito (Popper). Songs (Hahn): (a) Les Etoiles, (b) La Delaissee. Andante from the Quartet in D (Tchaikovsky). Piece in C Sharp Minor for Cello (Boulinger). Pianoforte Sonata in F Minor—the Assonata (Beethoven). 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 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—Popular Gramophone Music. 8.15—News, Sports Notes and Weather. 8.25—Review by Paul Reboux.  
8.30—"Bérénice"—Tragedy in Five Acts in Verse (Racine), relayed from the Odeon. In the interval at 9.15—Press Review and News.

**PARIS (France)**  
10.0—Concert. Soloist: Marie Antoinette Pradier (Pianoforte) and Mme. Laming and Mme. Choumouovskiy (Duets) with Commentary by André Delacour. Pianoforte Solo: Polish Songs (Chopin-Liszt). Russian Songs for Duet: (a) Song (Gouriev), (b) Vanka (Darjomitsky), (c) Song (Giazoumouov), (d) Waltz (arranged Mme. Choumouovskiy). Pianoforte Solos: "Three Hungarian Dances (Brahms-Philipp). Ukrainian Songs for Duet.

**PARIS (France)**  
12 noon—Gramophone Records, News and Announcements. 12.15 p.m.—Variety Music on Gramophone Records. 1.45—News and Announcements. 2.0—6.45—Interval. 6.45—News and Announcements. 7.0—Light Music on Gramophone Records, Talks and News. 7.30—Concert of Popular Music on Gramophone Records. 8.30—Light Music on Gramophone Records, Talk and News.  
8.45—Vocal and Orchestral Concert. Overture, "Gillette de Narbonne" (Audran). Waltz, Galante Aventure (Waldeufel). Selection from "La Roussotte" (Lecocq). Russian Rhapsody (Olson). Selection from "Surcouf" ("La Jolie Parfumuse" (Offenbach). Suite, Joyous Youth (Coates). Ballet, La Source (Delibes). Menuet guillèret (Fili-pucci). Dances from "La plus jolie Fille de France" (Fouadrain).  
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 Lesson. 7.0—Weather and Physical Culture (continued). 7.45—Variety Music on Gramophone Records. 8.0—News, Weather and Press Review.  
12.30 p.m.—Chamber Music Concert on Gramophone Records. Sonata for Flute and Strings (Scarlatti). Largo for Violin (Vivaldi). Lamento (Duparc). Le Colibri (Chausson). Pianoforte Solos: (a) Hommage à S. Pickwick, Esq. (Debussy) (b) Ondine (Debussy). Cello Solos: (a) Spanish Dance (Granados), (b) Vito (Popper). Songs (Hahn): (a) Les Etoiles, (b) La Delaissee. Andante from the Quartet in D (Tchaikovsky). Piece in C Sharp Minor for Cello (Boulinger). Pianoforte Sonata in F Minor—the Assonata (Beethoven). 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 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—Popular Gramophone Music. 8.15—News, Sports Notes and Weather. 8.25—Review by Paul Reboux.  
8.30—"Bérénice"—Tragedy in Five Acts in Verse (Racine), relayed from the Odeon. In the interval at 9.15—Press Review and News.

**PARIS (France)**  
10.0—Concert. Soloist: Marie Antoinette Pradier (Pianoforte) and Mme. Laming and Mme. Choumouovskiy (Duets) with Commentary by André Delacour. Pianoforte Solo: Polish Songs (Chopin-Liszt). Russian Songs for Duet: (a) Song (Gouriev), (b) Vanka (Darjomitsky), (c) Song (Giazoumouov), (d) Waltz (arranged Mme. Choumouovskiy). Pianoforte Solos: "Three Hungarian Dances (Brahms-Philipp). Ukrainian Songs for Duet.

**POZNAŃ (Poland)**  
806 kc/s (335 m.); 1.0 kW.  
Transmits at intervals from 11.45 a.m.

6.50 p.m.—Miscellaneous Items and Announcements. 7.15—English Lesson on Linguaphone Records. 7.30—Topical Talk. 7.45—11.15—See Warsaw.  
11.5—Time Signal, Amusement Guide. 11.55—Time Signal, Sports Notes and Police Report. 11.15 (approx.)—Close Down.

**PRAGUE (Czechoslovakia)**  
614 kc/s (488.6 m.); 120 kW.  
Transmits at intervals from 11.0 a.m. 4.10 p.m.—Orchestral Concert, conducted by Fr. Dyk, relayed from Bratislava. 5.10—Talk in Russian. 5.25—Talk: Czechs in Italy and France. 5.35—Programme for Children. 5.45—Talk: A Wedding in Ruthenia. 5.55—Variety Music on Gramophone Records. 6.5—Agricultural Report. 6.15—Talk for Workers: Economics in Ruthenia. 6.25—German Transmission: Talk: Music and Modern Music Critics. 7.0—Time and News. 7.5—Review of Literature on Music. 7.20—Songs by Mila Kocova. 7.40—See Brno Programme. 8.25—Songs and Dances of America, India and Venezuela. 8.55—News Bulletin. 9.0—Time and News.  
9.10—Sonata for Cello and Piano-forte, Op. 65 (Chopin).  
9.30—Pianoforte Recital by Hlona Stepanova-Kurzova. Organ Concerto in D Minor (Friedmann Bach). Allegro (Rossi). Ecossaises (Beethoven). Rondo in G Major (Beethoven).  
10.0—Time and News. 10.15—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.).  
Transmits at intervals from 12.30 p.m. 4.32 p.m. (from Geneva)—Concert by the Station Orchestra. 6.0 (from Lausanne)—Programme for Children. 6.30 (from Lausanne)—Popular Music on Gramophone Records. 7.0—Weather Forecast. 7.11 (from Lausanne)—Gramophone Records (cont.). 7.30 (from Lausanne)—Legal Talk: The Family in the Swiss Civil Code (III). 7.55—Announcements. 8.0 (from Geneva)—Talk: The Work of the Disarmament Conference. 8.10 (from Geneva)—Weekly Gazette. 8.20 (from Geneva)—Recital of Operatic Airs by M. Corbaz (Bass). 8.35 (from Geneva)—Concert by the Station Orchestra, with Edmond Appia (Violin). 10.0—Weather and News. 10.15 (from Geneva)—Report of the "Friends of Radio Geneva." 10.30 (approx.)—Close Down.

**RIGA (Latvia)**  
572 kc/s (525 m.); 15 kW.  
Transmits at intervals from 6.0 a.m. 4.30 p.m.—Lecture: Recital: The Development of Music, with Gramophone Selections from the Works of Anton Dvorak. 6.0—Talk: The Rearing of Fur-Bearing Animals. 6.30—English Lesson. 7.0—Weather Forecast. 7.5—Concert from the Works of Dvorak. 8.0—News Bulletin.  
8.20—Concert of Popular Music. Soloist: Elisabete Nesvanova (Vocalist). Selection from "Tristan and Isolde" (Wagner). Two Pieces for String Orchestra, Two Oboes and Two Horns (Nicodé). Four Solos: (a) Song from "The Huguenots" (Meyerbeer), (b) Waltz (Strakos), (c) The Dance (Torre-Pellaerta), (d) Waltz from "Mireille" (Gounod). Scènes de féerie (Massenet).  
9.0—Weather and News Bulletin. 9.35—Concert of Light Music. 10.30 (approx.)—Close Down.

**ROME (Italy)**  
Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayd by Naples, 941 kc/s (319 m.) and 2RO, 11,810 kc/s (25.4 m.).  
Transmits at intervals from 8.15 a.m. 12 noon—2.0 p.m.—Variety Music on Gramophone Records. In the intervals at 12.45—Weather; at 1.15—Giornale Radio and Exchange and at 1.30—Time and Announcements. 5.0—Exchange, Programme for Children, Giornale Radio and Announcements. 5.30—Instrumental Concert from the Works of Modern Italian Composers, relayed from the Royal Philharmonic Academy. 6.55 (from Naples)—Shipping and Sports Notes. 7.0—Agricultural Report, Weather, Announcements, Giornale Radio and Press Review. 8.0—Time and Announcements. 8.45—Sports Notes and Announcements. 9.0—See Turin. 10.0—Fashion Review.  
10.10—Concert of Light Music and Folk Music. Soloists: Elsa Del Re

**RIGA (Latvia)**  
572 kc/s (525 m.); 15 kW.  
Transmits at intervals from 6.0 a.m. 4.30 p.m.—Lecture: Recital: The Development of Music, with Gramophone Selections from the Works of Anton Dvorak. 6.0—Talk: The Rearing of Fur-Bearing Animals. 6.30—English Lesson. 7.0—Weather Forecast. 7.5—Concert from the Works of Dvorak. 8.0—News Bulletin.  
8.20—Concert of Popular Music. Soloist: Elisabete Nesvanova (Vocalist). Selection from "Tristan and Isolde" (Wagner). Two Pieces for String Orchestra, Two Oboes and Two Horns (Nicodé). Four Solos: (a) Song from "The Huguenots" (Meyerbeer), (b) Waltz (Strakos), (c) The Dance (Torre-Pellaerta), (d) Waltz from "Mireille" (Gounod). Scènes de féerie (Massenet).  
9.0—Weather and News Bulletin. 9.35—Concert of Light Music. 10.30 (approx.)—Close Down.

**ROME (Italy)**  
Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayd by Naples, 941 kc/s (319 m.) and 2RO, 11,810 kc/s (25.4 m.).  
Transmits at intervals from 8.15 a.m. 12 noon—2.0 p.m.—Variety Music on Gramophone Records. In the intervals at 12.45—Weather; at 1.15—Giornale Radio and Exchange and at 1.30—Time and Announcements. 5.0—Exchange, Programme for Children, Giornale Radio and Announcements. 5.30—Instrumental Concert from the Works of Modern Italian Composers, relayed from the Royal Philharmonic Academy. 6.55 (from Naples)—Shipping and Sports Notes. 7.0—Agricultural Report, Weather, Announcements, Giornale Radio and Press Review. 8.0—Time and Announcements. 8.45—Sports Notes and Announcements. 9.0—See Turin. 10.0—Fashion Review.  
10.10—Concert of Light Music and Folk Music. Soloists: Elsa Del Re

**MONDAY**  
continued

(Soprano), Petrilli (Tenor) and Ruggiero (Tenor). Selection from "Her Highness Commands" (Heymann). Soprano Solo: Vene l'amore (Di Ferdinando). Tenor Solo: Mandolinata d'autunno (Cosentono). Din. Dan. (Kaslar). Tenor Solo: Adduomete cumme (Tagliaferri). Soprano Solo: E llampadine (Capaldo). Two Selections (Bixio). Tenor Solo: Sigismund from "White Horse Inn" (Abraham). You brought me love (Heymann). Soprano Solo: Ro-sate (Bonavolonia). Tenor Solo: Aranci (Mariotti). Tenor Solo: To-day I feel so happy from "Sunshine Susie" (Abraham). 10.55—News Bulletin.

**SCHENECTADY (U.S.A.)**  
General Electric Company (WGY). 700 kc/s (379.5 m.); 50 kW. Relayd at intervals by W2XAF on 9,520 kc/s (31.48 m.), and by W2XAD on 15,340 kc/s (19.56 m.).  
Transmits at intervals from 12.45 p.m. 9.30 p.m.—Woman's Radio Review from New York. 10.0—Book Chat. 10.15—Chester Vedder (Baritone). 10.30—Stock Reports and Police Notices. 10.45—Musical Ad Men. 10.55—News Bulletin. From 11.15—12 midnight—Programme relayed from New York. 11.15—"Skippy." 11.30—Sweetheart Programme. 11.45—Happy Rose Dance Orchestra. 12 midnight—Jack Pettis' Orchestra. 12.30 a.m. (Tuesday)—Blue Coal Fireside Reveries. 12.45—Three Shades of Blue. 1.0 (WGY only)—Musical Programme from New York. 1.0 (W2XAF only)—Stock Reports and News Items. 1.15—5.0—New York Relay. 1.15—Campbell Orchestra. 1.30—Prince Albert Quarter Hour. 1.45—Trials of the Goldbergs. 2.0—Soconyland Sketch. 2.30—Voice of Firestone. 3.0—A. & P. Gysies. 3.30—Parade of the States. 4.0—National Radio Forum. 4.30—Mr. Bones and Company. 5.0—Armchair Chats. 5.15—John Albright (Crooner). 5.30—Jack Pettis' Orchestra. 6.0—Gordie Randall's Orchestra. 6.30—New Kenmore Orchestra. 7.0 (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.).  
12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather Report 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—Concert by the Station Orchestra. 4.0—Concert for Children on Gramophone Records. 5.0 (from Basle)—Programme for Children. 5.30—Weather Report. 5.35—6.30—Interval.  
6.30—Famous Artists on Gramophone Records. 7.0 (from Berne)—Talk: Positions for Women in the Financial World. 7.20 (from Berne)—Review of Memorable Events. 7.28—Time Signal and Weather Report. 7.30 (from Berne)—Talk: The Origin of Jewish Family Names. 8.0 (from Berne)—César Franck Concert by the Station Orchestra, the Berne String Quartet, Franz Josef Hirt (Pianoforte) and Otto Schärer (Organ). Organ Compositions. Quintet in F Minor for Two Violins, Viola, Cello and Pianoforte. Orchestral Selections.  
9.15—Orchestral Concert conducted by Hermann Hofmann. 9.40—Haydn's Life as mirrored in Four Songs—Recital by the Helliggen-Fischermätteli Mixed Choir, conducted by Huber. 10.0—Weather and News Bulletin. 10.15 (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. 1.0—1.30 p.m.—Broadcast for Schools Reading. 5.0—Reading (Sternvall). 5.25—Variety Music on Gramophone Records. 6.0—Parliamentary Review. 6.20—Variety Music on Gramophone Records. 6.45—Talk in Danish. 7.15—Weather and News. 7.30—Lohengrin—Opera in Three Acts (Wagner) relayed from the Royal Opera House. 10.5 (in the

interval—Weather and News). Dance Music. 11.15 (approx.)—Close Down.

**STRASBOURG (France)**  
Radió-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW.  
11.30 a.m.—Gramophone Concert. Slavonic March (Tchaikovsky). Romeo and Juliet (Tchaikovsky). Selection from "André Chénier" (Giordano). Selection from the "Requiem" (Verdi). Selections (Chopin): (a) Fantaisie impromptu, (b) Mazurka in B Flat. Reviews (Fragon). Mississipi (Kern-Boyer). Serenade (Metra). Czardas (Michiels). Min Elsass (Erb-Mathis). Min Elsass-Schaezel (Gasser). Reminiscence (Polito). Two Guitars (Makarov).  
12.45 p.m.—News in French and German. 1.0—Time Signal.  
1.2—Gramophone Concert. Overture, "Don Juan" (Mozart). Selections from (a) "Faust" (Gounod), (b) "Manon" (Massenet), (c) "Le Jongleur de Notre Dame" (Massenet), (d) "La Dame blanche" (Boieldieu), (e) "Lucia di Lantermoor" (Donizetti), and (f) "La Tosca" (Puccini). Träume (Wagner). Hindu Song (Rimsky-Korsakov). La campanella (Liszt). Selection from "Le Miracle" (Huc).  
2.0—4.45—Interval. 4.45—Talk in French: Goethe.  
5.0—Orchestral Concert. Monte Carlo (Schreiner). Waltz, A Day in Seville (Waldeufel). Sérénade à Lisette (Caludi). Ballet égyptien (Luigini). Prologue to "I Paggiacci" (Leoncavallo). Selection from "La Reine Piamette" (Leroux). Trio Selection from "Mignon" (Thomas). March, Souvenir de Locarno (Schreiner).  
6.0—Talk in French: Goethe and Balzac. 6.15—Topical Talk.  
6.30—Gramophone Concert. Moonlight on the Alster (Petras). Dorfschwaben aus Oesterreich (Strauss). Zweimärensäugen und Grüss mir mein Wien (Kálmán). In a Toy Shop (Jessel). In a Clock Store (Orth). Punculi-Funicula (Denza). Maria-Mari (Capua). Emeraude (Warms). Ständchen (Schubert). Pour un peu d'amour (Silesu). Quand l'amour meurt (Crémieux). All the King's Horses (Gay). Selection (Brown). Dark Night (Heymann). With my Guitar and You (Morris). Selections (Kammerstein-Kern): (a) Je n'aime que toi, (b) L'oiseau s'envole.

7.30—Time Signal. 7.32—News in French and German.  
7.45—Gramophone Concert. Valse caprice (Rubinstein). Mazurka (Godard). Selections (Manfred): (a) La valse oubliée, (b) Desir. Selection from "Feramos" (Rubinstein). Romance in F Minor (Tchaikovsky). Mon cœur aimait ton cœur (Gruber). Par un doux soir de bonheur (Reitinger). Selections (Lecocq) from: (a) "Les Journées de la Nuit" (b) "Les Cents Vierges" "Parce-qu'il est grand lenoir." Quand une femme dit non (Mario). The Japanese Sandman. Kicking a Hole in the Sky. 8.30—"La Mascotte"—Opera-Comique in Three Acts (Audran). 10.30 (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. 10.0 a.m.—Haydn Gramophone Concert. 11.0—News, Time and Weather. 12 noon—Orchestral Concert, conducted by Gustav Górllich. March, Wien-Berlin (Schrammel). Overture, "The Nuremberg Doll" (Adam). Waltz from "The Merry Widow" (Lehar). Suite, Luxus-telegramme (Holländer). Martin-Walzer (Zeller). March, Zum Tor hinaus (Lageur).  
12.50 p.m.—Time, News, Programme Announcements and Weather. 1.0—See Langenberg. 2.0—Sponsored Gramophone Concert. 2.15—News Bulletin. 2.30—Elementary Spanish Lesson. 3.0—Elementary English Lesson. 4.0—Talk: Stamp collecting. 4.30—Talk: Men playing Women's Parts and Women in Men's Parts. 5.0—Concert from Munich. 6.15—Time and Agricultural Notes. 6.50—10.20—See Frankfurt. 10.20—News, Time, Programme Announcements and Weather. 10.40—Advanced Chess Lesson. 11.5—Concert from Munich. 11.30 (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. 10.0 a.m.—Haydn Gramophone Concert. 11.0—News, Time and Weather. 12 noon—Orchestral Concert, conducted by Gustav Górllich. March, Wien-Berlin (Schrammel). Overture, "The Nuremberg Doll" (Adam). Waltz from "The Merry Widow" (Lehar). Suite, Luxus-telegramme (Holländer). Martin-Walzer (Zeller). March, Zum Tor hinaus (Lageur).  
12.50 p.m.—Time, News, Programme Announcements and Weather. 1.0—See Langenberg. 2.0—Sponsored Gramophone Concert. 2.15—News Bulletin. 2.30—Elementary Spanish Lesson. 3.0—Elementary English Lesson. 4.0—Talk: Stamp collecting. 4.30—Talk: Men playing Women's Parts and Women in Men's Parts. 5.0—Concert from Munich. 6.15—Time and Agricultural Notes. 6.50—10.20—See Frankfurt. 10.20—News, Time, Programme Announcements and Weather. 10.40—Advanced Chess Lesson. 11.5—Concert from Munich. 11.30 (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.

**TURIN (Italy)**  
Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayd by Milan, 995 kc/s (331.5 m.), and Genoa, 959 kc/s (312.8 m.).  
Transmits at intervals from 8.15 a.m. 7.10 p.m.—Light Music on Gramophone Records. 7.30—Time Signal and Announcements. 8.0—Giornale Radio and Weather Forecast.  
8.15—Concert of Light Music. Overture, "Franz Schubert" (Suppé). Solennita della Notta (Lattuada). On the Green Narenta (Komzak).  
9.0—Sponsored Concert. 10.0—A Comedy (to be announced). 11.0—Giornale Radio and Close Down.

**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. 6.0 p.m.—Talk: Reference Books and Aids to the Week's Talks. 6.5—Dramatic Criticism. 6.25—Melodies of the Bavarian and Austrian Minnesingers by Josef Papier (Vocalist), arranged and presented by Dr. Bernhard Paumgartner. 7.5—Notes on the Broadcasts for Schools. 7.10—English Lesson. 7.35—Time, Weather and Programme Announcements. 7.45—Talk: The Recent Discovery of Platinum and Diamonds in South Africa.  
8.10—See Berlin (Witzleben). 9.30—News, Weather Report and Announcements.  
9.45—Concert by the Alois Dostal Orchestra, with Lya Beyer (Soprano). Overture, "The Merry Wives of Windsor" (Nicolai). Waltz, La Hussarde (Ganne). Potpourri of the Works of Verdi (Morena). Soprano Solos: (a) Song from "The Chocolate Soldier" (Oscar Straus), (b) Song from "Das Modell" (Suppé). Tarantella (Hüllmesberger). Johanniszäuber (Kurt Andres). Contrasts, a Potpourri (Robrecht). Soprano Solos: (a) Tales from the Vienna Woods (Johann Strauss), (b) Song from "Die Katzechen" (Felix). Potpourri, From A to Z (Geiger). March (Dostal).

**WARSAW (Poland)**  
Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW.  
11.20 a.m.—Aviation Weather Forecast. 11.25—Interval. 11.45—Polish Press Review. 11.58—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow.  
12.15 p.m.—Programme Announcements. 12.10—Light Music on Gramophone Records. 1.20—Weather Forecast. 1.25—Interval. 1.35—Popular Music on Gramophone Records. 1.55—Interval. 2.45—Light Music on Gramophone Records. 3.5—Economic Report and Exchange. 3.15—Traffic and Transport Notes. 3.25—Historical Talk. 3.45—Hydrographic Report. 3.50—Literary Talk. 4.10—Light Music on Gramophone Records. 4.20—Elementary French Lesson. 4.40—Popular Music on Gramophone Records. 5.10—Talk relayed from Cracow, 959 kc/s (312.8 m.). 5.35—Concert of Light Music. 6.50—Miscellaneous Items. 7.15—Agricultural Report. 7.25—Programme Announcements. 7.30—Sports Notes. 7.35—Light Music on Gramophone Records. 7.45—Radio Journal. 8.0—Talk on Music: Rubinstein, relayed from Wilno, 533 kc/s (563 m.).  
8.15—"Madame Butterfly"—Opera (Puccini), on Gramophone Records, by the Cast of the Scala, Milan. 10.30—Pianoforte Recital from the Works of Chopin by Mme. Suzanne de Meyère, a Prize-Winner at the Second International Chopin Competition. 11.0—Radio Journal. 11.5—Weather Forecast and Police Report. 11.10—Dance Music. 12 midnight (approx.)—Close Down.

**WILNO (Poland)**  
533 kc/s (563 m.); 16 kW.  
Transmits at intervals from 11.58 a.m. 7.0 p.m.—Talk in Lithuanian: Wilno in the Seventeenth and Eighteenth Centuries. 7.20—Humorous Monologue. 7.35—Programme Announcements and Miscellaneous Notes. 7.45—See Warsaw. 8.0—Talk: Rubinstein. 8.15—"The Valkyries"—Opera in Three Acts (Wagner) on Gramophone Records, with Introductory Notes by M. Stefan Kolaczky. 10.30—See Warsaw. 12 midnight (approx.)—Close Down.

PRINCIPAL-EVENTS

TUESDAY (April 19)

SYMPHONY CONCERTS

- 8.0 p.m. Oslo: Finnish programme.
8.0 " Schweizerischer Landessender: The Zurich Tonhalle Orchestra.
8.40 " Hilversum: The Hague Orchestra.
9.10 " Berlin Witzleben.

CONCERTS (Vocal and Instrumental)

- 7.30 p.m. Leipzig: In memory of Eugen d'Albert.
8.0 " Brussels No. 2: The Music of Poot and D'Hoedt.
8.0 " Langenberg: B Minor Mass (Bach).
8.30 " Vienna: Modern Ballads.
8.45 " Rome.
9.0 " Frankfurt, Stuttgart: Mussorgsky programme.
10.15 " (app.) Leipzig: Modern Cembalo music.
10.20 " Hamburg, Königs Wusterhausen: Schubert programme.

OPERAS AND OPERETTAS

- 7.30 p.m. Budapest: "The Flying Dutchman" (Wagner), from the Royal Opera.
8.30 " Radio-Suisse Romande, Strasbourg: "Mirella" (Gounod) from Paris.

RECITALS

- 4.40 p.m. Hilversum: Violin and pianoforte.
9.45 " Heilsberg: Hugo Wolf programme.
10.15 " Warsaw: Violin.

PLAYS AND TALKS

- 8.0 p.m. Frankfurt, Stuttgart: "Old Frankfurt."
8.25 " Heilsberg: "Prince Friedrich of Homburg" (Kleist).
9.0 " Hamburg, Königs Wusterhausen: 3,000 years of Parliaments and Law-Suits -IX.
9.30 " (app.) Rome: "I Carabinieri" (D'Ambra).

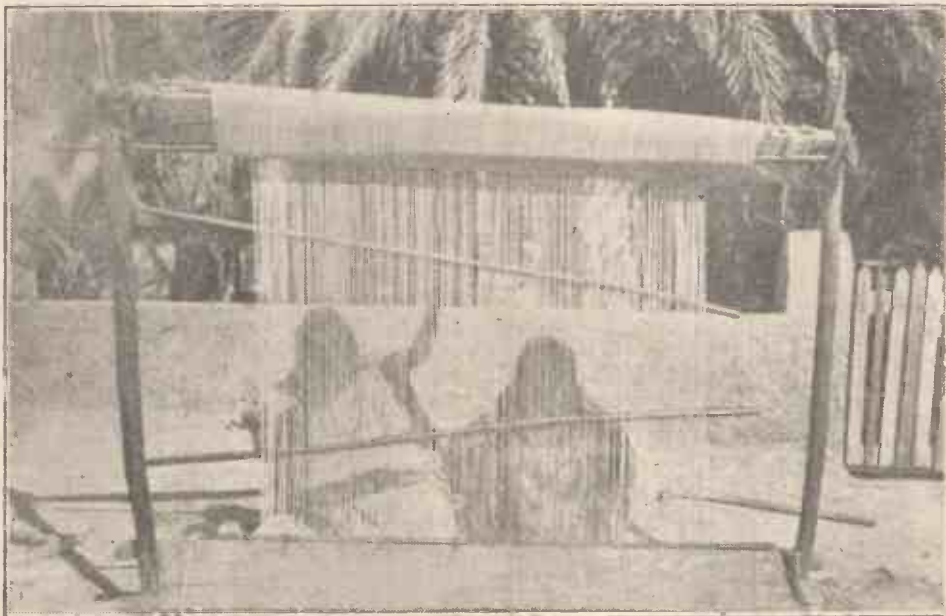
DANCE MUSIC

- 10.0 p.m. Stockholm: (till 11).
10.45 " Copenhagen: (till 12.30) Teddy Petersen's Band.

Old Algerian Arts and Crafts

In a talk from Algiers this evening, Mr. F. K. Brennan is to give an account of the recent revival, under the guidance of the French Government, of the age-old arts and crafts of northern Africa. Our picture shows native women weaving in the traditional manner, which the march of time has left very much as it has been for centuries, and that is typical of the way in which the ancient art is being fostered. The Colonial Exhibition in Paris last year showed visitors some beautiful examples of the old handicrafts which the Government had succeeded

in reviving, as well as a number of exhibits of native works of art. These have been collected in museums, partly to ensure that they will be preserved, and also to serve as models in the re-education of the people in their own old methods of work. These had been so seriously menaced by the importing of cheap manufactured articles, that they would have died out altogether but for the wise and timely intervention of the French authorities. Marshal Lyautey did a great deal also to help the movement, and tourists have encouraged the natives to revive their ancient skill. The important view which the French Government takes of the revival may be gauged by the fact that budget subventions have been allotted for the establishment of museums and schools of arts and crafts.



Native Women weaving in Southern Algeria. (See Algiers, 9.55 p.m.)

NATIONAL

- London: 1,148 kc/s, 261.3 m., 50 kW.
Davertry: 193 kc/s, 1,554.4 m., 30 kW.
Northern: 995 kc/s, 301.5 m., 50 kW.
10.15 a.m.—The Daily Service.
10.30—Time Signal (Greenwich); Shipping Forecast.
10.45—11.0—"New Ways for Hard Times"—XVI.
12 noon—Edward O'Henry (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—For the Schools. Nature Study. Mr. Eric Parker.
2.30—Music. Sir Walford Davies.
3.35—French. Monsieur E. M. Stéphan. "Early Stages in French."
4.0—The Edinburgh Studio Orchestra, directed by Guy Daines.
4.30—The Grosvenor House Orchestra, directed by Joseph Meeus.
4.45—Time Signal (Greenwich).
5.15 (Davertry)—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. Debussy's Pianoforte Music.
6.50—Mr. H. Wickham-Steed: "How the House received the Budget."
7.20—Vaudeville. Andrée Conti. Pianoforte Impressions. Haver and Lee (The Fun Racketeers). Florence Desmond (Impersonations). Ronald Gourley (Whistling Solos). Stainless Stephen (Comedian). Violet Martin (Contralto). Murray Ashford and Edgar Sawyer (Entertainers). The B.B.C. Dance Orchestra, directed by Henry Hall.
8.20—"Artists at Work"—II "Sculpture"—A dialogue between Mr. Stanley Casson and Mr. Frank Dobson.
9.0—Time Signal (Greenwich).
9.0—"The Second News."
9.15—Shipping Forecast: New York Stock Market Report.
9.20—The Wireless Military Band; Conductor, B. Walton O'Donnell. Thelma Bryan (Pianoforte).
10.30—12 midnight—Dance Music.
11.30—Time Signal (Greenwich).

REGIONAL

- London: 842 kc/s, 356.3 m., 50 kW.
Midland: 752 kc/s, 398.9 m., 25 kW.
Northern: 626 kc/s, 479.2 m., 50 kW.
10.15 a.m. (London and Northern)—The Daily Service.
10.30—11.0 (London and Northern)—Davertry National Programme.
11.30—12.0 noon (London)—Experimental Television Transmission (Baird Process).
12 noon—A Ballad Concert.
1.0 p.m.—Gramophone Records.
1.15—The Manchester Tuesday Midday Society Concert. The McCullagh String Quartet.
2.0—3.0—The Midland Studio Orchestra.
4.0 (London)—Davertry National Programme.
4.0 (Northern)—Evensong from York Minster, York.
4.45 (Northern)—Davertry National Programme.
5.15—"The Children's Hour."
6.0—"The First News."
6.30—Regional Bulletin for Farmers.
6.35 (London)—An Orchestral Concert. Valentina Aksarova (Soprano). The B.B.C. Orchestra (Section E).
6.35 (Midland)—The Studio Orchestra. Winifred Firth (Pianoforte).
6.35 (Northern)—Laddie Clarke's Imperial Hydro Hotel Orchestra.
7.20 (Northern)—Mr. F. Stacey Lintott: "The Month in Northern Sport."
7.40 (Northern)—Negro Spirituals. By Stanley Jenson (Bass-Baritone).
7.45 (Midland)—"A Tale of Old Japan" (Coleridge-Taylor), from the Shire Hall, Hereford. Eveline Stevenson (Soprano). Elsie Bryant (Contralto). Ian Glennie (Tenor). Percy Underwood (Baritone). The Chorus and Orchestra of The Hereford Choral Society, Conducted by Dr. Percy Hull.
8.0 (London)—The Pini Tango Septet.
8.0 (Northern)—The Besses o' th' Barn Band.
8.45—"Beau Brummell" An Operetta.
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

ALGIERS (N. Africa)

825.3 kc/s (363.3 m.); 13 kW. Transmits at intervals from 12.30 p.m. 7.0 p.m.—Pianoforte and Violin Recital. 7.15—Financial Quotations, Exchange and Market Prices. 7.25—Shipping Notes, Agricultural Report and Weather Forecast. 7.30—Selections by a Military Band. 7.45—Melodies. 7.55—News and Time Signal. 8.0—Instrumental Concert by the Dajos Bela Orchestra. 8.30—Talk on Algiers. 8.45—Songs from "Orpheus in the Underworld" (Offenbach). 9.0—Concert of Oriental Music. 9.55—Tourist Talk in English: Algeria. 10.0 (approx.)—Close Down.

BARCELONA (Spain)

Radio-Barcelona (E.A.) 1. 860 kc/s (349 m.); 8 kW. Transmits at intervals from 8.30 a.m. 8.0 p.m.—Concert by the Station Trio. Selection (Elgar). Selection from "The Barber of Seville" (Rossini). Lyric Piece, Eroica (Grieg). La Voix des cloches (Luigini). 8.30—Exchange Quotations and Programme for Women. 9.0—Fortnightly Football Report. 9.15—Request Programme of Gramophone Records, followed by Press Notes. 10.0—Chimes, Weather Forecast and Exchange Quotations, followed by Relay of Foreign Stations. 10.30—Vocal and Orchestral Concert. 11.30—Reading from the Works of the poet, Vicente Querol, with Introductory Talk. 11.45—Quintet in F Minor (Frycek), by Rosaura Coma (Pianoforte), Julio Jarque (First Violin), Miguel Torrents (Second Violin), Francisco Cellos (Viola) and Jaime Torrents ('Cello). 12.15 a.m. (Wednesday)—Overture, Heimkehr aus der Fremde (Mendelssohn), by the Station Orchestra. 12.30—Dance Music relayed from the Excelsior Dance Hall. 1.0 (approx.)—Close Down.

BELGRADE (Yugoslavia)

607 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 11.0 a.m. 4.30 p.m.—Concert by the Station Orchestra. Overture, "Ruy Blas"

(Mendelssohn). Selection from "Dalibor" (Smetana). Römische Suite (Zimmer). Nymph Song (Krstic). Potpourri (Gervais). 5.30—Talk on Cosmetics. 6.55—Programme Announcements. 7.0—Czech Lesson. 7.30—Talk (to be announced). 8.0—Light Music on Gramophone Records. 8.30—Trio Concert relayed from Zagreb, 977 kc/s (307 m.). 10.30—News and Sports Notes. 10.50—Dance Music relayed from the "Sablja Dimiskije" Restaurant.

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.—Advanced French Lesson for Schools. 12.30 (approx.)—Gramophone Records of Chamber Music. 12.55—Time Signal. 1.30—News Bulletin. 2.0—Gramophone Concert of Bach Music from Berlin (Witzleben). 3.0—Fairy Tales for Children. 3.30—Weather Forecast and Exchange Quotations. 3.45—Talk for Women. 4.30—See Leipzig. 5.30—Review of Books. 6.0—Talk by Prof. Hans Mersmann: Composing Tunes. 6.30—Talk: The Great Religions of the East and West. 6.55 (approx.)—Weather for Farmers, followed by Advanced English Lesson. 7.20—Talk: Thoughts of the Time—The Return or the End of Capitalism?—followed by Weather for Farmers. 8.0—10.0—See Hamburg. 10.0—News Bulletin. 10.15—See Berlin (Witzleben). 10.30—Schubert Concert from Hamburg. 12 midnight (approx.)—Close Down.

BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW. Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert). 5.35 p.m.—Concert of Light Music from the Hotel Excelsior. 6.55—"The Witzleben Station informs its Listeners..." 7.0—Topical Talk. 7.10—Talk: Johann Gottlieb Fichte. 7.40—Otto Bernhard Wendler reads from his own Works. 8.0—Concert of Popular Melodies from Five Centuries. The Steiner Brothers Orchestra, the Berlin Wireless Chorus, Frida Weber-Flessburg (Soprano) and Max Kuttner (Tenor). Conductor: Maximilian Albrecht. Explanatory Notes by Dr. Henschel. 9.0—News Bulletin.

9.10—Classical Concertos for Wind Instruments—Concert by the Berlin Wireless Orchestra conducted by Bruno "Seldler-Winkler. Concerto for Oboe, Strings and Cembalo in G Minor (Händel). Concerto for Trumpet and Orchestra in E Flat Major (Haydn). Concerto for Bassoon and Orchestra in B Flat Major (Mozart). 10.15—Political Press Review. 10.30—Second News Bulletin.

BORDEAUX-LAFAYETTE

(France) (P.T.T.) 986 kc/s (304 m.); 13 kW. Transmits at intervals from 11.0 a.m. 7.30 p.m.—News and Exchange. 7.40—Talk: The Corporations of Bordeaux—The Locksmiths' Guild. 7.55—Lottery Results. 8.0—Topical Talk. 8.15—News and Weather Forecast. 8.30—"Mirella"—Comic Opera in Five Acts (Gounod). After the Programme, Amusement Guide and Time Signal.

BRATISLAVA

(Czechoslovakia) 1,076 kc/s (279 m.); 14 kW. Transmits at intervals from 11.0 a.m. 7.0—See Prague. 8.0—Dramatic Programme. 10.0—See Prague. 10.15—Programme Announcements. 10.20—Cigány Concert, conducted by Devinsky.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by Gleiwitz, 1,184 kc/s (253 m.). Transmits at intervals from 6.30 a.m. 4.30 p.m.—Recital of New Songs and Duets. Soloists: Erika Hoffmann (Soprano), Theodor Martin (Baritone), Paul Mittmann and G. F. Rischka (Pianoforte). Five Soprano Solos (Rischka). Four Duets for Baritone and Soprano (Mittmann). Four Baritone Solos (Mittmann). 5.10—A Tour through the "Home and Fashion" Exhibition, relayed from the Resselhof. 5.30—Market Prices and Talk on New Books. 5.50—Surprise Programme. 6.10—Radio Report from the Youth Hostel in the Kohlan Valley near Gottesberg. 6.45—Dialogue for Women. 7.5—Weather Forecast and Concert by the Station Orchestra. Overture,

TUESDAY continued

"Raymond" (Thomas). Forest Murmurs from "Siegfried" (Wagner). Basque Rhapsody (Pierne). Overture, "Sakuntala" (Goldmark). 8.0—Weather Forecast and Talk: The Present in the Teaching of History. 8.30—Programme of Gramophone Records arranged by Dr. Edmund Nick and Dr. Franz Joseph Engel. 9.30—Announcements. 9.40—An Illustrated Talk on Music, by Hans Reimann. 10.15—Time Signal, Weather, News, Sports Notes and Programme Announcements. 10.40—Programme of Old Dance Music by the Station Orchestra conducted by Bruno Janz. 12 midnight (approx.)—Close Down.

BRNO (Czechoslovakia) 878 kc/s (342 m.); 35 kW. Transmits at intervals from 11.0 a.m. 7.5 p.m.—Talk: The Power which it would be possible to obtain from Slovak Rivers. 7.20—See Prague. 8.0—"Jenufa"—Drama in Three Acts (Gabriela Praissova). 10.0—See Prague. 10.15—Announcements. 10.20—See Prague.

BRUSSELS (Belgium) (No. 1) I.N.R. 500 kc/s (599 m.); 15 kW. 12.15—1.45 p.m.—Weather and Gramophone Concert. Selection from "Lilac Time" (Schubert). Fantasias on the Works of Moretti, Padilla, Christine and Yvain. I bring a Love Song (Hammerstein-Romberg). You will remember Vienna (Hammerstein-Romberg). Two Selections. Pensée d'autonne (Massenet). L'Angelus de la Mer (Goublier). Paso doble (Jankovetz). Waltz (Jankovetz). Ce disque vous dira (Borel-Clerc). A Little Nest (Bill Buddie). Selection (Kálmán). Autumn Melody (Waldteufel). Bells across the Meadow (Ketelbey). Petite Suite de Concert (Coleridge-Taylor). Schottische and Waltz (Kid). Sparrows' Parade (Rathke). Clog Dance (Fetras). In a Chinese Temple Garden (Ketelbey). By the Blue Hawaiian Waters (Ketelbey). Ballet Music, La Source (Delibes).

5.0—Orchestral Concert, conducted by Franz André, arranged by the Belgian Catholic Radio Society. Ma-Da-Gas-Car (Monnier). Wenn der Mond (Winter). C'est un petit village (Mohr). Fantasia (Ganne). Havanaise (Février). Saharan Suite (Ackermans). Valse des Billets bleus (Popy).

5.45—Programme for Children, arranged by the Belgian Catholic Radio Society. 6.20—Literary Review. 6.30—Selections from "Faust" (Gounod) on Gramophone Records. 7.15—Report of the Belgian Catholic Radio Society. 7.30—Programme for Women.

8.0—Orchestral Concert, conducted by Franz André. Overture, Banditenstreich (Suppé). Selections (Ketelbey): (a) The Old Belfry, (b) On the Volga, (c) A Desert Romance, (d) Sunset Glow. Interlude by Mr. Cuff. So singt Holland (Sluyter-Weninger). 8.45—Talk: A Quarter of an Hour with People in their teens. 9.0—Concert (continued). The Triumph of Verdi (Leopold Weninger). Interlude by Mr. Cuff. Austrian Dance (Pachernegg). Im Marchenwald (Ganglberger). Ludoviko (Fall). Selection (Ganglberger). Interlude by Mr. Cuff. Waltz from "Gipsy Love" (Lehár). 10.0—Le Journal Parlé.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12.15-1.45 p.m.—Weather and Gramophone Dance Music.

5.0—Orchestral Concert, conducted by Jean Kumps. Overture, "The Black Domino" (Auber). Waltz Suite, Moonlight on the Alster (Fetras). Symphonic Poem, Phæton (Saint-Saëns). Mazurka, No. 2 (Godard). Hungarian Serenade (Joncières). Suite, Une Fête à Trianon (Popy). 5.45—Programme for Children.

5.30—Gramophone Concert. Overture, "The Gipsy Baron" (Johann Strauss). An Old Spanish Tango and a Girl like you (Jurmam). Selection (Reisfeld-Ferry). Popular Viennese Pot-pourri (Kornzik). Selections (Davids). Waltz, Wienerlied (Translater). Wienerprater (Translater). Two Selections (Stolz). Selection from "Schön ist die Welt" (Lehár). 7.15—Talk. 7.30—Sports Notes.

8.0—Orchestral Concert, conducted by Jean Kumps. Soloists: Cecil Gray (Soprano), M. Strauven (Flute). M. Ardenois (Pianoforte), J. Daems (Tenor), J. Lambrechts (Violin), M. Wangermée (Trumpet), and M. Toutenel (Baritone). Part I. Marcel Poot Programme. Rondo for Orchestra. Sonata for Violin and Pianoforte. Recitations. Fantasietta for Orchestra. Concertino for Trumpet. Burlesque for Orchestra. An Interview with Mr. Doms, the Louvain Deputy. Part II. D'Hoedt Programme. Two Tenor Solos and Soprano and Tenor Duet from "Klas in 't Luilekkerland." Children's Suite for Pianoforte. Baritone Solos: (a) Het regent in mijn hart, (b) Hemelblauw. Dialog van Dichter for Flute and Pianoforte. Soprano Solos: (a) De Kamer is vol zacht geruisch, (b) Het Borelingsken, (c) Nocturne. 10.0—Le Journal Parlé.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 12 noon. 5.0 p.m.—Concert of Light and Romanian Music by the Motoi Orchestra. 6.0—News and Time Signal. 6.10—Concert (contd.). 7.0—Talks on Literature and Language. 7.40—Light Music on Gramophone Records.

8.0—Concert by the Station Orchestra. Overture, "Poet and Peasant" (Suppé). Norwegian Dances, Nos. 1, 2 and 4 (Grieg). Intermezzo and Barcarolle from "The Tales of Hoffmann" (Offenbach). 8.30—Talk (to be announced). 8.45—Song Recital by Mme. Kozenn. Aria, Ah perfido! (Beethoven). Aria from "The Flying Dutchman" (Wagner). Aria from "Tannhäuser" (Wagner).

9.5—Concert by the Station Orchestra. Selection from "Boris Godounov" (Moussorgsky). Romanian Fantasia (Elnesco). Overture, "Fata Răzulesii" (Caudella). 9.45—News Bulletin.

BUDAPEST (Hungary) 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Also relayed on 210 metres from 6.30 p.m.—12 midnight.

5.0 p.m.—Hungarian Folk Songs by Gábor Erkel. 6.0—Programme by Alexander Petho. 6.30—Gramophone Records of Dance Music. 7.30—The Flying Dutchman—Opera (Wagner), relayed from the Royal Hungarian Opera House. In the interval, News, Time and Weather. After the Programme, Cigany Concert from the Café Baross.

COPENHAGEN (Denmark) 1,067 kc/s (281 m.); 0.75 kW. Relay by Kalundborg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. (Gymnastics).

12 noon—Town Hall Chimes. 12.2 p.m.—String Ensemble Concert from the Palace Hotel. 2.0-3.0—No Transmission. 3.0—Concert by Louis Preil's Instrumental Ensemble. Soloist: Einar Johansen (Pianist). Radetzky March (Johann Strauss, Sen.), Overture, "The Bohemian Girl" (Balfe). Flower Waltz from the Nutcracker Suite (Tchaikovsky). Tomfru, du ma ikke sove (Finn Henriques). Selection from "Marianello" (Auber). Viennese Song (May). Reberia del turia (Lucchesi). Pianoforte Solos: (a) From the "Paganini" Variations (Brahms), (b) Etude, Op. 10, in C Minor, and (c) Polonaise in A Flat Major, Op. 53 (Chopin). American Patrol (Mecham). Selection from "The Land of Smiles" (Lehár). Selection (Victor Bendix). Laurette (Ansell). Lykken (Lange-Müller). Waltz, Ballerine (Gillet). Hungarian March, Attila (Fucik).

5.0—Programme for Children. 5.40—Exchange and Market Prices. 5.50—Gardening Talk from the Odense Studio. 6.20—Elementary German Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Colonial Talk: Hawaii as a Link in the United States' Policy in the Pacific. 8.0—Town Hall Chimes. 8.2—"Mary Stuart"—A Drama in Five Acts (Schiller), arranged for Radio. 10.0—News Bulletin. 10.15—Mandoline Concert. Mignonnette (Godard). Gondola Song (Rung). Minuet (Merikanto). Selections (Zilcher): (a) The First Violin, (b) Legen under Linden. Au Matin (Godard). Pizzicato from "Sylvia" (Delibes). Waltz (Mitzitzky). Shadow Dance (Penn).

10.45—Dance Music relayed from the Industri Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (Wednesday)—Close Down.

CRACOW (Poland) 950 kc/s (312.3 m.); 1.5 kW. Transmits at intervals from 11.45 a.m.

6.50 p.m.—Miscellaneous Items and Announcements. 7.10—Talk: The Baltic as a Means of Communication. 7.25—Programme Announcements. 7.30—Light Music on Gramophone Records. 7.45—11.0—See Warsaw. 11.0—Dance Music. 12 midnight (approx.)—Close Down.

DUBLIN (Ireland) (2RN) 725 kc/s (413 m.); 1.2 kW. Relay 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 and British Market Report. 7.30—Time Signal. 7.31—Leigheacht Gaedhige. 7.45—Talk on Careers for Boys: Dentistry. 8.0—Selections by the Station Sextet. 8.15—Dramatic and Musical Recital. 8.40—Baritone Solos by C. G. Hearne. 8.50—Violin Solos by Signor Grossi. 9.5—Vocal Solos by Marie Hipwell. 9.15—Piano Solos by Sydney Green. 9.30—Sponsored Programme. 10.30—Time Signal, News, Weather Forecast and Close Down.

FÉCAMP (France) Radio Normandie. 1,364 kc/s (219.9 m.); 1 kW. Transmits at intervals from 12 noon.

7.30 p.m.—Light Music on Gramophone Records. 7.45—Announcements. 8.0—Local News. 8.10—Wireless News. 8.20—News Bulletin. 8.30—Le Havre Review, followed by Concert relayed from Le Havre. 11.0—Dance Music. 1.0 a.m. (Wednesday)—Close Down.

FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relay by Cassel, 1,220 kc/s (240 m.).

Transmits at intervals from 6.40 a.m. 7.15 p.m.—Time, Programme Announcements, Weather and Economic Notes. 7.30—A Story: The Man without Identity (Bernard von Brenna). 8.0—A Flying Visit to Old Frankfurt—a Radio Sequence with Gramophone Records.

9.0—Moussorgsky Concert by the Station Orchestra and Choir. Conductors: Hans Rosbald and Reinhold Merten. Soloists: Erich Itoer Kahn. "The Matchmaker"—One Act Opera. Two Selections for Mixed Choir: (a) Temple Scene from Oedipus, (b) The Destruction of Sennacherib. Night on the bare Mountain—Symphonic Poem for Orchestra. 10.20—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. Relay by Bremen, 1,112 kc/s (270 m.).

Fleensburg, 1,373 kc/s (218 m.). Hannover, 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. (from Bremen)—Eugen d'Albert Concert by Reinhold Krug (Pianoforte), Liane Müllerger-Weiss (Soprano) and Werner Riecke (Cello). Suite, Op. 1, for Pianoforte. Soprano Solos: (a) An den Mond, (b) Erwachen. Andante from the Cello Concerto, Op. 20. Soprano Solo from "Tiefland". 6.25—Agricultural Talk. 6.50—Frankfurt Exchange and Hamburg Egg Market Prices. 6.55—Weather Report. 7.0—Typical Talk. 7.15—Song Recital by Bernhard Jakschadt from the Works of Reutter. 8.0 (from Bremen)—Military Band Concert.

9.0—Three Thousand Years of Parliaments and Lawsuits—IX. "In the Name of Destiny"—A Radio Sketch about the Trial of a King (Ludwig Hinrichsen), with incidental music by the Little Norag Orchestra, conducted by Fritz Gartz. 10.0—Time and News. 10.20—Schubert Concert by Friedel and Hans Hermanns (Two Pianofortes), Herbert Ernst Groh (Vocalist), the Norag Male Voice Choir and the Norag Orchestra, conducted by Josef Eibenschütz. Overture, "Fierabras". Ballet Music from "Rosamunde". German Dances for Male Voice Choir and Orchestra. Military March, Op. 51, No. 1 (Instrumentation by Gustav Brecher). Wanderer-Fantasia for Two Pianofortes (arr. I. Kvasit). Songs: (a) Nacht und Träume, (b) Der Musensohn. Symphony in B Flat Major No. 5.

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relay by Danzig, 662 kc/s (453.7 m.). Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert).

11.40 a.m.—Orchestral Concert, conducted by Eugen Wilcken. Overture, "Das Nachtlager von Granada" (Kreutzer). Valse du blé d'or (Michely). Serenata (Moszkovsky). Suite from the Ballet "Sylvia" (Delibes). Slavonic Dances Nos. 16 and 8 (Dvorák). Waltz, Wo die Zitronen blühen (Joh. Strauss). Lehar Potpourri (Hruby). Overture, "The Thieving Magpie" (Rossini).

1.20 p.m.—News Bulletin. 1.30—Gramophone Concert of Variety Music. 2.30—3.30—Interval. 3.30—Music for Young Learners. 4.0—Religious Talk. 4.30—Concert from Leipzig. 5.10—Talk: Aquatic Life. 6.0—Book Review. 6.15—Market Prices. 6.25—Talk: The Unemployment Problem throughout the World. 6.50—Hans Franck reads from his own works. 7.20—Programme by Paul O'Montis and the Little Orag Orchestra, conducted by Eugen Wilcken. 8.20—Weather Report. 8.25—"Prinz Friedrich von Homburg"—Play (Heinrich von Kleist). 9.35—Announcements. 9.45—Hugo Wolf Song Recital by Georg Hölger (Baritone). Songs from the "Italienisches Liederbuch": (a) Gesegnet sei, durch den die Welt entstand, (b) Der Mond hat eine schwere Klage erhoben, (c) Und willst du deinen Liebsten sterben sehen, (d) Hebe auf dein blondes Haupt. Der Schäfer. Anakreons Grab. Fussreise. Literoff-Heimweh.

10.15 (approx.)—Weather, News and Sports Notes.

HILVERSUM (Holland) 1,004 kc/s (298.8 m.); 8.5 kW. Programme of the Algemeene Vereniging Radio Omroep (A.V.R.O.).

8.40 a.m.—Time Signal. 8.41—Gramophone Records of Light Music. 10.40—Time Signal. 10.41—Daily Service. 10.55—Gramophone Records of Light Music.

11.10—Organ and Violin Recital by Frans Hasselaar and Jo Juda. Organ Solos from "Musica Sacra" (Frescobaldi): (a) Preambuli, (b) Toccata, (c) Ricercare, and (d) Fugue. Violin Solos: (a) Arioso (Fiocco), (b) Grave (Friedemann Bach-Kreisler), (c) Sicilienne (Paradis) and (d) Andantino (Martini-Kreisler). 11.40—Talk. 12.10 p.m.—Recital (continued)—Concert for Violin (Nardini). Organ Solos: (a) Grand Choeur triomphal (Guilmant), (b) Improvisation (Hasselaar). 12.40—Time Signal.

12.41—Orchestral Concert conducted by Louis Schmidt. Overture, "La Dame blanche" (Boieldieu). Ballet Suite (Lacôme). Cradle Song (Kjerulf). Springanz (Kjerulf). Dance of the Dervishes (Bendix). Accordion Solos. Selection from "Rigoletto" (Verdi). Accordion Solos. Overture, "Nakisiris Hochzeit" (Lincke). Waltz, Dynamiden (Jos. Strauss). Tales from the Vienna Woods (Joh. Strauss). March, Per aspera ad Astra (Urbach).

2.55—3.10—Interval. 3.10—Gramophone Records of Variety Music. 3.40—Lesson in Cutting out Patterns. 4.40—Sonata in B Minor No. 2 for Violin and Pianoforte (Elisabeth Kuypers) by Andries Roodenburg (Violin) and the Composer. 5.0—Programme for Children.

6.10—Orchestral Concert conducted by Nico Treep. Overture, "Der Freischütz" (Weber). Selection from "Fedora" (Giordano). Selections (Wagner): (a) Am stillen Herd, (b) Walter's Prize Song. Gramophone Records of Light Music. Selection from "La Grande Duchesse de Gêrolstein" (Offenbach). Valse des blondes (Ganne). Selections (Gillet): (a) Passepied, (b) Au Moulin. Two Spanish Dances (Moszkovsky). In the Mystic Land of Egypt (Ketelbey). Spanish March, Curro Cuchres (Metallo). 7.50—Recitations. 8.10—English Lesson. 8.40—Time Signal. 8.41—Concert by the Hague Orchestra conducted by Albert van Raalte. Soloist: Lotte Schöne (Vocalist). España (Chabrier). Song: Frühlingsstimmen (Strauss). Polka and Fugue from "Schwanda der Piper" (Weinberger). 9.10—A Radio Play. 9.55—Concert (continued). National Anthem. Overture, Viva Carolina (Voormolen). Song (Mozart) from (a) "The Magic Flute," (b) "The Marriage

of Figaro." Third Symphony in F Major Op. 90 (Brahms). 10.55—Weather and News. 11.10—Orchestral Concert of Light Music. In the interval, Gramophone Records of Variety Music. 12.40 a.m. (Wednesday)—Close Down.

HUIZEN (Holland) 160 kc/s (1,875 m.); 8.5 kW. Programme of the Catholic Radio Society (K.R.O.).

8.40—9.55 a.m.—Light Music on Gramophone Records. 10.10—High Mass, from a Church in Nijmegen. 11.25—Popular Music on Gramophone Records. 12.10 p.m.—Religious Address. 12.40—Police Announcements. 12.55—Concert by the K.R.O. Trio. Waiting for you (Egen). Sylphiden (Lincke). Selection from "Phi-Phi" (Christine). Waltz, Vergissmeinnicht (Waldteufel). Divendend-potpourri (Morena). Waltz (Holländer). Selection from "The Geisha" (Jones). Ninna-Nanna (de Micheli). Waltz from "Die Puppenfee" (Bayer). Hungarian March (Naef).

2.25—Popular Music on Gramophone Records. 2.40—Programme for Women. 3.40—Dressmaking Lesson. 4.40—5.5—Interval. 5.5—Dressmaking Lesson (contd.). 5.40—Programme by the H.I.R.O.

6.40—Concert of Dutch Music conducted by Lustenhouwer. Selections (v. Lindern): (a) Dutch Dance, (b) The South Sea Waltz, (c) Quick Step. Waltz (Jakma). Intermezzo (Jakma). Suite, Old Holland (Lustenhouwer). Selections (Fresco): (a) The Capricious Musical Box, (b) The Neapolitan Flower Girl, (c) Waltz, Old Dutch Country Dances (Siep). Serenade (Grit). Carthagena (Grit). March (Schootemeyer).

7.50—Talk by Jos. ten Heerdt. 8.10—Police Notes. 8.25—Talk (to be announced).

8.40—Concert by the K.R.O. Orchestra, conducted by Johann Gerritsen. Overture, "La Caravane" (Grétry). Concerto in A Minor and Cello and Orchestra (Saint-Saëns). 9.10—"Biette"—Radio Play (Sabbé). 9.55—Press Review. 10.10—Concert (contd.). Overture, "Bastien and Bastienne" (Mozart). Suite of Dances for Chamber Orchestra, Aus galanter Zeit, Op. 10 (Klaas). Prelude to the Third Act of "The Mastersingers" (Wagner). Selection from "Siegfried" (Wagner). Selection from "Parsifal" (Wagner). Prelude to the Second Act of "Eugen Onegin" (Tchaikovsky). Italian Caprice (Tchaikovsky).

11.40—Light Music on Gramophone Records. 12.40 a.m. (Wednesday)—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. 5.35 p.m.—Symphony Concert. 8.15—Concert of Popular Music. 11.0—Dance Music.

LAHTI (Finland) 167 kc/s (1,796 m.). 54kW. Relay by Helsinki, 815 kc/s (368.1 m.).

Transmits at intervals from 7.10 a.m. 6.15 p.m.—Talk. 6.40—Talk by O. Räsänen. 7.5—Beethoven Concert relayed from the Conservatoire of Music. Quartet for Strings in C Major, Op. 18. Sonata in F Minor, Op. 57, for Pianoforte. Trio in B Minor, Op. 11, for Pianoforte, Violin and Cello. 8.45—News in Finnish and Swedish and 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).

11.20 a.m.—Gramophone Concert of Classical and Light Music. 12 noon—See Stuttgart. 12.20 p.m.—Sponsored Gramophone Records. 12.50—Weather, News and Time. 1.0—Orchestral Concert, conducted by Wolf. Overture, "Banditenstreiche" (Suppé). Traumländler (Fucik). Ballet Suite (Siede). Selections from "The Daughter of the Regiment" (Donizetti). Clog Dance from "Czar and Carpenter" (Lortzing). Fantasia, Der ewige Verdi (Morena). Intermezzo, Wiener Puppen (Müllena). Intermezzo, Funkmäuschen (Wetzl). Popular Song Potpourri. (Golwyn).



TUESDAY continued

3.30—Economic Notes and Time Signal. 3.50—Gymnastics for Children. 4.10—Notes on the Broadcasts for Schools. 4.20—Talk: The Psychology of Advertising. 4.40—Agricultural Talk. 5.0—See Stuttgart. 6.15—Famous Portraits of Nature—Readings from "A Naturalist's Voyage" (Charles Darwin), on the Fiftieth Anniversary of Darwin's Death. 6.40—French Conversation. 7.0—Weather, Time, Economic and Sports Notes. 7.15—Wireless Notes. 7.30—Introductory Talk to the 8 o'clock Transmission. 7.55—News Bulletin. 8.0—"High Mass in B Minor" (Bach), by the Essen Music Society's Mixed Choir and the Essen Municipal Orchestra, conducted by Max Fiedler. Soloists: Mia Pettenberg (Soprano), Ruth Kisch-Arndt (Contralto), Julius Patzak (Tenor), Felix Loeffel (Bass), Fritz Pottmann (Organ) and Bill Fiedler (Pianoforte). 10.0—News and Sports Notes. 10.20—Sports Talk by Dr. Bernhard Ernst, and Silent Night.

LEIPZIG (Germany) 1,157 kc/s (259 m.); 2 kW. Relayed by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.30 a.m., 4.30 p.m.—"Dances of the Nations." Concert by the Leipzig Symphony Orchestra, conducted by Hilmar Weber. March and Chaconne from "Les Indes galantes" (Rameau). Six German Dances (Haydn). English Dances from the Music to "Henry VIII" (Edward German). (a) Morris Dance, (b) Shepherd's Dance, (c) Torch Dance. Two Alsatian Peasant Dances (Merkling). Spanish Dances Nos. 1, 3 and 4 (Moszkowsky). Polka and Furiant from the Suite Op. 39 (Dvorak). Tarantella napolitana from the Italian Suite No. 2 (Becco). Hungarian Czardas No. 2 (Michiels). Waltz, Wiener Frauen (Johann Strauss). 5.30—Weather and Time. 5.50—Economic Notes. 6.5—Talk for Women: Fröbel and the Problem of the Education of Women. 6.30—French Lesson. 6.50—Talk. 7.0—Dialogue for Parents: What should our Children read? 7.30—Eugen d'Albert Commemoration Concert by the Leipzig Symphony Orchestra, conducted by Theodor Blumer. Soloist:

Theophil Demetrescu (Pianoforte). Introductory Talk. Overture, "Die Abreise." Pianoforte Concerto in E Major. Ballet Music from "Der Improvisor." Aschenputtel-Suite Op. 33. 9.0—Economic Notes. 9.10—Talk: The Fiftieth Anniversary of the Death of Darwin. 9.40—"The Ace of Clubs"—a Story (Ludwig Anzengruber). 10.10—News Bulletin. 10.15 (approx.)—Recital of Modern Cembalo Music. Lotte Erben-Groll (Cembalo), Theo Bauer (Violin) and Johannes König (Oboe). Four Miniatures for Violin and Cembalo (Kurt Schubert). Sonata for Cembalo Op. 33 (Wolfgang Jacobi). Partita for Oboe and Cembalo Op. 66 (Theodor Blumer). 11.15 (approx.)—Close Down.

LJUBLJANA (Yugoslavia) 522 kc/s (574.7 m.); 2.5 kW. Transmits at intervals from 11.30 a.m., 7.0 p.m.—German Lesson. 7.30—Talk on the History of Art. 8.0—Talk on Electricity. 8.30—Trio Concert and Dramatic Programme relayed from Zagreb 977 kc/s (307 m.). 10.30—Time and News Bulletin.

LWÓW (Poland) 788 kc/s (381 m.); 16 kW. Transmits at intervals from 11.45 a.m., 6.50 p.m.—Miscellaneous Items. 7.15—Talk: Reminiscences of a Skier. 7.30—See Warsaw. 7.35—Light Music on Gramophone Records. 7.45—See Warsaw. 10.0—Answers to Correspondents. 10.15—See Warsaw. 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., 4.30 p.m.—Popular Music on Gramophone Records. 7.0—Light Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South-East. 8.30—Relay from Paris (Ecole Supérieure). 671 kc/s (447.1 m.).

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

Concert. In the interval at 8.30—Talk by Joaquin 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, followed by Opera Selection on Gramophone Records: "Madame Butterfly" (Puccini). 12.45 a.m. (Wednesday)—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 11.0 a.m., 7.0 p.m.—See Prague. 7.20—Concert of Popular Music conducted by Plichta. 8.0—See Brno. 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., 4.0 p.m.—Proletariat Radio Journal. 5.0—Peasants' Radio Journal. 6.0—Programme to be announced. 8.0—Talk in Dutch and French: The First of May in the Soviet Republic. 9.55—Chimes and 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., 4.45 p.m.—Orchestral Concert conducted by Erich Kloss. Overture, "Tancred" (Rossini). Russian Song (Friml). Scenes from "Manon Lescaut" (Puccini). Waltz, Lotus Flowers (Ohlsen). Japanese Suite, From the Kingdom of the Sun (Yoshitomo). Heroic March (Schubert). 5.50—A Talk with Julius Wallach, relayed from the Textile Workshops

at Munich-Dachau. 6.15—Weather and Agricultural Notes. 6.25—Talk: The Oberhaus Fortress near Passau. 6.45—Talk: Dual Aspects of Bavaria. 7.5—Talk: The Rhineland Yesterday and To-day. 7.25—Choral and Orchestral Concert conducted by Karl List. Soloists: Josef Köhler (Cello) and Alice Brandt-Räu (Coloratura-Soprano). Overture, Allotria (Rorich). Selections from "Coppélia" (Delibes). Aria from "The Tales of Hoffmann" (Offenbach). Romance for Cello and Orchestra (Scharrer). Second Hungarian Rhapsody (Liszt). Selection from "Madame Butterfly" (Puccini). Scherzo from "A Midsummer Night's Dream" (Mendelssohn). Parla Waltz for Coloratura-Soprano and Orchestra (Arditi). Polonaise from "Eugen Onegin" (Tchaikovsky). 8.55—Literary Programme. 9.30—Concert of Chamber Music. Soloists: Ida Hartl zur Nieden (Mezzo-Soprano) and Annie Speckner (Cembalo). Ariadne's Lament, for Mezzo-Soprano and Chamber Orchestra, with Cembalo (Monteverdi-Orff). Concerto for Four Cembali (Vivaldi-Bach). A Rilke Cycle for Mezzo-Soprano, Two Flutes, Two Violas and Two Cellos (Karl Marx). 10.20—Time, Weather and News.

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.); Porsgrund, 662 kc/s (453.2 m.) and Rykan, 671 kc/s (447.1 m.). Transmits at intervals from 11.10 a.m., 4.30 p.m.—Concert by the Orchestra of the Cecil Restaurant. Overture, "Die Felsenmühle" (Reissiger). Waltz, Traumideale (Fucik). Selection from "Countess Maritza" (Kálmán). 5.15—Talk: The History of Light-houses. 5.45—Light Music on Gramophone Records. 6.0—Talk for Housewives. 6.45—Accordion Recital by Anker Wilhelmsen. 7.0—Announcements, Weather and News Bulletin. 7.30—Talk: Finnish Music. 8.0—Time Signal. 8.1—Symphony Concert of Finnish Music by the Philharmonic

Orchestra, conducted by Reidar Brehmer. Symphony No. 1 (Sibelius). Selections from the Works of Raitio, Ranta, Klami and Knula. 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Recitations. 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., 6.0 p.m.—Gramophone Records of Variety Music. 6.30—8.0—Interval. 8.0—Announcements, Radio-Giornale dell'Enit, Agricultural Notes and Giornale Radio. 8.20—Light Music on Gramophone Records. In the interval at 8.30—Time Signal and Announcements. 8.45—Concert of Chamber Music by the Station Quartet. Soloists: Hella Helt Di Gregorio (Soprano), Rondini (Violin), and Ruggieri (Cello). Quartet (Caminiti). Soprano Solo: Song from "Die tote Stadt" (Korngold). Violin Solo: Chaconne (Vitali). 9.30—A Comedy, followed by Concert (cont.). Soprano Solos: (a) Song from "Mignon" (Thomas), (b) Air from "Manon" (Massenet). Cello Solos: (a) Largo (Veracini), (b) Sonata in G Major (Boccherini). Quartet in C Minor, Op. 18, No. 4 (Beethoven). 10.55—News Bulletin.

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.—Dramatic Programme. 7.0—Le Journal Parlé. 8.20—Weather Report. 8.30—French Music from the Seventeenth Century to the Present Time—Pianoforte Recital by Marie-Antoinette Pradier, with Commentary by André Delacour. Musiques intimes (Schmitt). Bourrée (Roussel). Rondo (Roussel). 9.0—Concert by the Firmin Touche Quartet. Quartet No. 5 in D Minor (Mozart). Quartet, From out my Life (Smetana).

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**TUESDAY**  
continued

**PARIS (France)**  
Poste Parisien. 914 kc/s (328.2 m.); 1.2 kW.  
12 noon—Gramophone Records, News and Announcements. 12.15 p.m.—Variety Music on Gramophone Records. 1.45—Interval. 6.45—News and Announcements. 7.0—Light Music on Gramophone Records, Talks and News. 7.30—Concert of Popular Music on Gramophone Records. 8.30—Light Music on Gramophone Records, Talk and News.  
7.45—Vocal and Instrumental Concert. Academic Overture (Brahms), Symphonic Poem, Thus spake Zarathustra (Richard Strauss), Ballet, "Javotte" (Saint-Saëns), Scandinavian Impressions (Frederiksen), Suite africaine (Lacôme), Nocturne from "La Navarraise" (Massenet), Gopak (Moussorgsky), 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 Lesson. 7.30—Weather and Physical Culture (continued). 7.45—Variety Music on Gramophone Records. 8.0—News, Weather and Press Review. 12 noon—Jewish Address. Concert. Selections from "Le Martyre de St. Sébastien" (Debussy), L'Invention au voyage (Duparc), Habanera (Aubert), Marionette (Glazounov), Siegfried Idyll (Wagner), Selection from "Gwendoline" (Chabrier), Selection from "Sappho" (Massenet), Selection from "Isoline" (Messager), Ballet Music from "Le Cid" (Massenet), in the intervals, at 1.0—Exchange, News and Weather, at 1.30—Exchange, and at 2.0—Exchange and Announcements.

3.35—Exchange and Market Prices. 4.20—Elementary English Lesson. 6.30—Market Prices, Weather, Agricultural Report and Racing Results. 7.0—Theatre Notes. 7.15—Talk on Art by M. Arnaud: "The Museum at Aix-en-Provence." 7.30—Advanced English Lesson. 7.45—Review of the British Press, Commercial Prices and News. 8.0—Variety Programme with the Collaboration of Yvette Guilbert. 8.30—News and Weather. 8.40—Review by Miguel Zamacois. 8.45—Concert. The Orchestra, conducted by Eugène Bigot. Soloists: Jean Doyen (Pianoforte) and Alys Lautemann (Harp). Overture, Fingal's Cave (Mendelssohn). Concerto for Pianoforte and Orchestra (Hummel). 9.15—Press Review and News. 9.30—Concert (continued). Dryade (Aubert). Concert Piece for Harp and Orchestra (Pigné). Selection from "Sadko" (Rimsky-Korsakov). Hungarian Rhapsody No. 2 (Liszt).

**POZNAŃ (Poland)**  
866 kc/s (335 m.); 1.9 kW.  
Transmits at intervals from 11.45 a.m. 7.15 p.m.—Italian Lesson on Linguaphone Records. 7.30—Review of New Books. 7.45—8.15—See Warsaw. 8.15—Light Music by a Military Band. Soloists: Ernestine Andrzejewska (Soprano) and Kajetan Kopezyński (Baritone). In the intervals, Amusement Guide. 10.0—10.50—See Warsaw. 10.50—Dance Music from the Nouvel Café. 12 midnight (approx.)—Close Down.

**PRAGUE (Czechoslovakia)**  
614 kc/s (488.6 m.); 120 kW.  
Transmits at intervals from 10.30 a.m. 4.10 p.m.—Orchestral Concert conducted by Fr. Dyk relayed from Bratislava. 5.10—German Transmission by Dr. Hugo Siebenschlein. 5.25—Educational Talk. 5.35—Programme for Children. 5.45—Talk on Social Science. 5.55—Variety Music on Gramophone Records. 6.5—Market Prices. 6.15—Talk for Workers. 6.25—German Transmission: News; Modern Hungarian Songs; Rhapsody for Pianoforte in C Major (Dohnanyi). 7.0—News Bulletin. 7.5—Talk: The Canary Islands. 7.20—Cabaret Concert conducted by Balej. 8.0—See Brno Programme. 9.0 (in the interval)—Time and News. 10.0—Time and News. 10.15—Announcements. 10.20—Popular Gramophone 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.).  
Transmits at intervals from 12.30 p.m. 4.32 p.m. (from Geneva)—Concert by the Station Orchestra. 5.30

(from Lausanne)—Programme for Women. 6.0 (from Lausanne)—Popular Music on Gramophone Records. 7.0—Weather Forecast. 7.1 (from Geneva)—New Gramophone Records. 7.30 (from Lausanne)—German Lesson. 7.55—Announcements. 8.0 (from Geneva)—Talk on the Work of the Disarmament Conference. 8.10 (from Geneva)—Talk arranged by the International Labour Office. 8.30—"Mirella." Opera in Five Acts (Gounod), relayed from Paris. In the interval at 10.0 (approx.)—Weather and News. 11.45 (approx.)—Close Down.

**RIGA (Latvia)**  
572 kc/s (525 m.); 15 kW.  
Transmits at intervals from 11.0 a.m. 6.0 p.m.—French Lesson. 6.30—Talk on Psychology. 7.0—Weather Forecast. 7.5—Recitations. 7.30—Trio Recital of Old Dances. Pas d'Espagne. Papillon. Pas de Quatre. Vengereka. Tyrolese Dance. Polka. 8.0—News Bulletin. 8.20—Second Serenade for Orchestra (Brahms). 9.0—Weather and News Bulletin. 9.15—Schubert Song Recital by Emile Maurins (Baritone). 9.35—Concert of Popular Music. Soloist: Reinvalds (Flute). Meditation (Bach-Gounod). Gavotte (Bortkiewicz). Flute Solo. Selection from "The Dollar Princess" (Fall). Ballet Suite (Grétry-Mottl). Kamarinskaja (Glinka).

**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.).  
Transmits at intervals from 8.15 a.m. 12 noon—Popular Gramophone Music. 12.35 p.m.—Weather Report. 12.45—Vocal and Instrumental Concert. Soloists: Maria Senes (Soprano) and Maria Flori (Violin). Stornello toscano (Pieraccini). Aria from "Gianni Schicchi" (Puccini). Desio di voli (Zanella). Violin Solos: (a) Nocturne in E Flat (Chopin), (b) Burlesca (Somma), (c) Miramare (Sarasate). Sextet Selections: (a) Ballet Suite, Sylvia (Delibes), (b) Ich liebe dich (Grieg), (c) Anitra's Dance from "Peer Gynt" (Grieg), (d) Selection from "La donna perduta" (Pietri), (e) "One, Two, Three" (Reisfeld). In the interval at 1.15—Giornale Radio and Exchange and at 1.30—Exchange, Programme for Children, Giornale Radio and Announcements. 2.0—5.0—Interval. 5.0—Exchange, Programme for Children and Announcements. 5.30—Duet Recital by Bianca Bianchi (Mezzo-Soprano) and Carlo Terzi (Baritone). Duet from "Hamlet" (Thomas). Arioso and Duet from "Samson and Delilah" (Saint-Saëns). 5.45—Concert of Light Music. 6.15—Giornale dell'Enit. 6.20—Talk on Astronomy. 6.55 (from Naples)—Shipping and Sports Notes. 7.0—Atmospheric Signals, Morse Lesson, Agricultural Report. Weather, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Gramophone Records of Light Music. 8.30—Sports Notes and Announcements. 8.45—Concert. Soloists: Anna Steli (Soprano), Ofelia Parisi (Soprano), Tosca Ferroni (Mezzo-Soprano) and V. Sensi (Baritone). Old Airs and Dances for the Lute arranged for a String Quartet (Respighi): (a) Italiana, (b) Danze di Corte, (c) Siciliana (Besardo), (d) Passacaglia (Roncalli). Soprano Solos (Zandonai): (a) Mistero, (b) Serenata, (c) Aria from "Giuliano." Miniature Fantasia (Janssen). "I carabinieri"—Comedy (Lucio d'Ambr). Crepuscolo sul mar (Santoliquido). March from the Karelia Suite (Sibelius). Soprano and Mezzo-Soprano Duets from "Zanetto" (Mascagni). Soprano and Baritone Duet from "Manon Lescaut" (Puccini). Carnival Scene from "Casanova a Venezia." (Pick-Mangiagalli). 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 on 9,530 kc/s (31.48 m.) and by W2XAD on 15,340 kc/s (19.56 m.).  
Transmits at intervals from 12.45 p.m. 9.30 p.m.—Woman's Radio Review from New York. 10.0—Bridge Lesson by Ralph C. Blessing. 10.30—Stock Reports and Police Notices. 10.45—Studio Ensemble. 10.55—News Bulletin. 11.15—"Skippy" from New York. 11.30—Billy

Ross Popular Songs. 11.45—Annette McCullough (Crooner). 12 midnight—Joe and Eddie. 12.15 a.m. (Wednesday)—New Kenmore Orchestra. 12.30—With Gray McClintock in the Canadian North-West. 12.45—Sonata Programme. 1.0 (WGY)—General Electric Programme. 1.0 (W2XAF only)—Stock Reports and News Bulletin. 1.15—5.30—New York Relay. 1.15—Campbell Orchestra. 1.30—Prince Albert Quarter Hour. 1.45—Trials of the Goldbergs. 2.0—Blackstone Plantation. 2.30—True Story Programme. 3.0—McKesson Musical Magazine. 3.30—The Fuller Man. 4.0—Lucky Strike Dance Hour. 5.0—Freddy Engel's Orchestra. 5.30—Jack Pettis' Orchestra. 6.0—Ralph Kirby, the Dream Singer from New York. 6.5—Hotel Pennsylvania Orchestra from New York. 6.30—New Kenmore Orchestra. 7.0 (approx.)—Close Down.

**SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)**  
653 kc/s (459 m.); 60 kW.; Basle, 1,220 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.).  
12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather and News Bulletin. 12.40—Concert by the Station Orchestra. 1.35—Weather and Exchange Quotations. 1.45—3.30—Interval. 3.30—Concert by the Station Orchestra. 4.0—Concert of Light Music on Gramophone Records. 5.0 (from Berne)—Talk for Women. 5.30—Weather Report. 5.35—6.30—Interval. 6.30—Swiss Songs and Yodelling Selections on Gramophone Records. 7.0 (from Basle)—Elementary Italian Lesson. 7.28—Time Signal and Weather Report. 7.30 (from Basle)—Talk: New Forms of Industry. 8.0 (from Zürich)—Popular Symphony Concert, by the Tonhalle Orchestra, conducted by Volkmar Andreae, relayed from the Tonhalle. 10.0—Weather and News. 10.15 (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.); Hörby, 2,166 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. 2.50—3.10 p.m.—Broadcast for Schools. Talk: Gustavus Adolphus in Germany. 5.0—Concert of Country Music. Reading in the interval. 5.45—Variety Music on Gramophone Records. 6.45—Elementary French Lesson from Malin, 1,301 kc/s (231 m.). 7.15—Weather and News. 7.30—Talk for Workers: Swedish Workers to-day. 8.0—Talk by Gösta Atorps: English Music, with Illustrations by the Vocal Quartet. 9.15—Talk: Religion. 9.45—Weather and News. 10.0—Concert. Selection from "The Arabian Nights" (Bortkiewicz). Selection (Massenet). Waltz, La Sirène (Waldteufel). Serenade (Kallstenius). Two Norwegian Dances (Rachel). Selection from "Her Highness Commands." Potpourri (Hruby). 11.0 (approx.)—Close Down.

**STRASBOURG (France)**  
Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW.  
11.30 a.m.—Gramophone Concert. Overture and Gavotte from "Masques et bergamasques" (Fauré). Four Popular Russian Songs (Liadov). Selections from "Manon" (Massenet). "Les Huguenots" (Meyerbeer). "The Marriage of Figaro" (Mozart) and "The Mastersingers" (Wagner). Wohin? (Schubert). Minuet (Schubert). Selections (Tauber): (a) Your Rosy Lips, (b) Dream of Spring. Selections from "Les Deux Pigeons" (Messager) and "Tannhäuser" (Wagner). 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert. Larghetto (Weber). Waltz (Himmel). Selection from "Rigoletto" (Verdi). Mohndblumen (Moret). O Frühling wie bist du so schön (Lincke). Waltz: Wine, Woman and Song (Joh. Strauss). Selection from "La belle Hélène" (Offenbach). Waltz from "Faust" (Gounod-Liszt). Selections (Waldteufel): (a) Charme des Sirènes, (b) Mon rêve. Selections from "The Gipsy Baron" (Joh. Strauss). 2.0—4.45—Interval. 4.45—Legal Talk in French. 5.0—Dance Music.

6.0—Talk in German: Through Lorraine. 6.15—Topical Talk in French. 6.30—Orchestral Concert. March from "Sigurd Jorsalfar" (Grieg). Overture, Nachklänge aus Ossian (Gade). Violin Solo: Romance (Svendsen). Lyric Suite (Grieg). Solitude on the Mountain (Ole Bull-Svendsen). Troll-Tanz (Frederiksen). Legend for Orchestra, Zorahayde (Svendsen). 7.30—Time Signal. 7.32—News in French and German. 7.45—Orchestral Concert. Novelty March (Pellou). Waltz, Telegrams (Joh. Strauss). Overture, "Si j'étais Roi" (Adam). Selection from "Eva" (Lehar). "Extase (Ganne). March (Schneider). 8.30—"Mirella"—Opera (Gounod) 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. 10.0 a.m.—Song Recital by Johanna Orth. Selections (Robert Franz): (a) Die Trauernde, (b) Gute Nacht, (c) Marie, (d) Es hat die Rose sich beklagt, (e) Du liebes Auge, (f) Ständchen, (g) Lieber Schatz, sei wieder gut mir. Selections (Schubert): (a) Das Rosenband, (b) Geheimnis, (c) Wohin, (d) Die Forelle, (e) Auf dem Wasser zu singen. 10.30—Violin and Pianoforte Recital. Ciaccona (Vitali). Prelude and Allegro (Pugnani-Kreisler). Variations on a Theme by Corelli (Tartini-Kreisler). Rondino (Fritz Kreisler). Wienlied (Schubert-Elman). Turkish March (Beethoven-Auer). 11.0—News, Time and Weather Report. 11.45—Sponsored Concert. 12 noon—Orchestral Concert from the Hindenburgbau. Selection from "Prince Igor" (Borodin). Waltz, Badener Madln (Komzák). Violin Solo by Berndt Buehbinder: Czardas Scenes (Hubay). Song and Tango, Im Krug zum grünen Kranze (German). Slow Foxtrot, Mein Freund hat die reizendste Freundin der Welt (Erwin). Foxtrot, Blaue Nächte (Gerthe). Overture, "Rienzi" (Wagner). 12.50 p.m.—Time, News, Programme Announcements and Weather. 1.0—Concert from Langenberg. 2.0—Sponsored Gramophone Concert. 2.15—News Bulletin. 2.30—Advanced English Lesson. 4.0—Talk: Flowers. 4.30—Gardening Talk for Women. 5.0—Wagner Concert by the Philharmonic Orchestra, conducted by Kahn. 6.15—Time and Agricultural Notes. 6.25—Talk on the Fiftieth Anniversary of the Death of Charles Robert Darwin. 6.50 (from Mannheim)—Sports Talk by a Sports Club Doctor. 7.15—Time and Weather. 7.30—10.20—See Frankfurt. 10.20—News and Time. 10.45—Concert by the Haas Orchestra. 12 midnight (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. Alcova azzurra (Mastrocinque). Waltz, Golden Rain (Waldteufel). Ave Maria (Heykens). Luna felice (Moreno). Selection from "Déjanice" (Catalani). Dammi un bacio (Carminati). Sogno svanito (Borsatti). 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.); and Genoa, 959 kc/s (312.8 m.).  
Transmits at intervals from 8.15 a.m. 7.5 p.m.—Concert of Variety Music. Overture, "Zampa" (Hérold). To Spring (Grieg). Serenata dei sospiri (Senesi). Tzigana (Fronzini). 7.30—Time Signal and Announcements. 7.31—Light Music on Gramophone Records. 8.0—Giornale Radio and Weather Forecast. 8.15—Popular Music. Intermezzo (Franz Schmidt). Selection from "Tannhäuser" (Wagner). Turkish March (Andlovitz). 8.30—Talk by Salvatore Gotta. 8.45—"The Spider's Web"—Opera (Dona) and Michelotti. In the intervals, Talk and Literary Notes. After the Programme, Giornale Radio.

**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.—Concert by the Viennese Chamber Orchestra, conducted by Friedrich Hartmann, with Ernst Paul (Solo French Horn). Frühlingsoverture (Götz). Concerto in E Flat Major, Op. 11, for French Horn (Richard Strauss). Symphony No. 6 in F Major, Op. 68—the Pastoral (Beethoven). 6.15—Agricultural Talk. 6.40—Talk: Haydn and Mozart. 7.5—Physical Culture. 7.25—Time Signal, Weather Report and Programme Announcements. 7.35—Part Relay from the Hall of Industry of a Concert of Old German Folk Music and Love Songs, by the Wähing Male Voice Choir, conducted by Adolf Wodniansky, with Hermine Ortner (Songs to the Lute). 8.30—Recital of Modern Ballads, by Margarethe Roederer and Otto Löwe (Recitations), Elemer von John (Vocalist) and Margit Sackely (Accompanist). 9.30—News, Weather Report and Announcements. 9.45—Dance Music by the Charly Gaudriot Jazz Band, with the Hunoreskimos, and Dario Medina (Vocalist).

**WARSAW (Poland)**  
Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW.  
11.20 a.m.—Aviation Weather Report, 11.25—Interval. 11.45—Polish Press Review. 11.58—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracov. 12.5 p.m.—Programme Announcements. 12.10—Light Music on Gramophone Records. 1.20—Weather Forecast. 1.25—Interval. 1.35—Light Music on Gramophone Records. 1.55—Interval. 2.45—Popular Music on Gramophone Records. 3.5—Economic Report and Exchange. 3.15—Aviation Notes. 3.20—Interval. 3.25—Historical Talk. 3.45—Hydrographic Report. 3.50—Programme for Children. 4.15—Interval. 4.20—Talk on Napoleon. 4.40—Light Music on Gramophone Records. 5.10—Talk by Mme. Chmielewska. 5.35—Symphony Concert by the Warsaw Philharmonic Orchestra, conducted by Emil Młynarsky. Overture, "Hansel and Gretel" (Humperdinck). Siegfried Idyll (Wagner). Forest Murmurs (Wagner). Scherzo from the Second Symphony (Beethoven). Andantino for String Orchestra (Statkovsky). Overture, "Majara" (Statkovsky). Polonaise (Młynarsky). 6.50—Miscellaneous Items. 7.15—Agricultural Report. 7.25—Programme Announcements. 7.30—Sports Notes. 7.35—Light Music on Gramophone Records. 7.45—Radio Journal. 8.0—Reading. 8.15—Concert of Popular Music by the Station Orchestra. Soloist: A. Dobosz (Tenor). March (Noskovsky). Selection from "The Haunted Castle" (Moniuszko). Tenor Solos: (a) The Enchanted Princess (Zeleny), (b) The Swallow (Moniuszko), (c) The Pipe (Niewiadomsky). Suite from "Grandmother's Album" (Roxowsky). Three Tenor Solos: (a) Les plus belles chansons (Karłowicz), (b) Night in Venice (Gall), (c) Waltz (Bilinsky). Cracovienne fantastique (Paderewsky). Romance and Waltz from the Serenade for String Orchestra (Karłowicz). Lullaby (Michalovsky-Lefeld). Ukrainian Dance (Noskovsky). Prelude in A Major (Chopin). Mazurka No. 1 (Młynarsky). 9.30—"The Violin-Maker of Cremona"—Play, after François Coppée. 10.0—Answers to Correspondents and Technical Notes. 10.15—Violin Recital by E. Zathurecky. Sonata in G Minor, Il trillo del Diavolo (Tartini-Hubay). Air (Goldmark). Pastorale gentille (Frescobaldi). Rondino (Beethoven-Kreisler). Mosquitoes (Antalfy-Zsiris). Berceuse (Zsolt). The Swallow's Flight (Hubay). 10.45—Radio Journal. 10.50—Weather and Police Report. 10.55—Interval. 11.0—Dance Music. 12 midnight (approx.)—Close Down.

**WILNO (Poland)**  
533 kc/s (563 m.); 16 kW.  
Transmits at intervals from 11.58 a.m. 7.0 p.m.—Talk in Lithuanian: Wilno Thirteen Years Ago. 7.20—Talk on Wireless. 7.45—See Warsaw. 8.15—Musical Competition for Listeners. 8.45—Concert from Warsaw. 12 midnight (approx.)—Close Down.

PRINCIPAL EVENTS

WEDNESDAY (April 20)

SYMPHONY CONCERTS

- 8.15 p.m. Daventry: B.B.C. Concert, Conductor, Bruno Walter.
- 8.30 " Brussels No. 2: from the Royal Conservatoire.
- 9.40 " Stuttgart, Frankfurt: The Stuttgart Philharmonic Orchestra.

CONCERTS (Vocal and Instrumental)

- 7.5 p.m. Munich: String Orchestra.
- 8.0 " Copenhagen: Scandinavian dramatic music.
- 8.0 " Oslo: Norwegian programme.
- 8.0 " Prague: D'Indy's music.
- 8.15 " Leipzig: Soloists of the Orchestra.
- 8.15 " Stockholm: Students' Choir.
- 8.45 " Hamburg: Goethe programme.
- 8.45 " Palermo: Operetta selections.
- 8.45 " Radio-Paris: Goethe Festival.
- 9.20 " Copenhagen: Contemporary Danish Composers.

OPERAS AND OPERETTAS

- 7.15 p.m. Hamburg: "La Dame blanche" (Boieldieu).
- 8.45 " Rome: Opera relay.
- 9.0 " Prague: "La finca giardiniera" (Mozart).

RECITALS

- 8.0 p.m. Frankfurt: Songs.
- 9.30 " Warsaw: Songs.
- 9.50 " Munich: Violin.

PLAYS AND TALKS

- 7.0 p.m. Radio-Paris: "China of To-day"—II.
- 8.0 " Brussels No. 1: "Louison" (de Musset).
- 9.15 " Königs Wusterhausen: "Goethe and plastic art."
- 9.35 " Langenberg: Dr. Albert Schweitzer.

DANCE MUSIC

- 10.0 p.m. Stockholm (till 11).
- 10.30 " Strasbourg (till 12).
- 11.0 " Copenhagen (till 12.30).

The White Lady

Boieldieu, whose opera, *The White Lady*, is to be broadcast by HAMBURG station this evening, was so modest about his own work that he used to take the completed sections of his early opera, *The Caliph of Bagdad*, to the Conservatoire in Paris, where he was a professor, to ask his pupils for their verdict on the music. If they did not like it, he referred it to the great Méhul. He need have been in no doubt about the attractive qualities of his work; nearly all his lighthearted and melodious operas

won immediate success, and many of them held the stage for generations after his own day. For a time he was conductor of the Imperial Russian Opera, but in 1811, at the age of thirty-six, returned to Paris, and until his death, in 1831, dominated the operatic world there without much serious rivalry. *The White Lady*, produced in 1825, has always been counted his greatest success: within fifty years of its production it was played over thirteen hundred times in one theatre alone. The libretto was made by Scribe, author of more opera-texts than it would be easy to count, and the tale is borrowed from one of Sir Walter Scott's.



The Prague Station Orchestra with its Conductor, M. O. Jeremias

[Photo: Radiojournal, Prague]

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).
  - 10.45—11.0—"Through Foreign Eyes"—XII.
  - 12 noon—Quentin Maclean (Organ).
  - 12.45 p.m.—Gramophone Records.
  - 1.0—Time Signal (Greenwich).
  - 1.30—2.15—The Bradford Midday Society's Concert.
  - 2.25—Reception Test.
  - 2.30—Biology and Hygiene. Professor Winifred Cullis, C.B.E.
  - 3.0—English Literature. Miss N. Niemeier: "Delight in Poetry"
  - 3.30—The Bournemouth Municipal Orchestra. Conductors, Adam Carse and Sir Dan Godfrey Lillias Mackinnon (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)—The B.B.C. Dance, Orchestra.
  - 6.0—"The First News."
  - 6.30—Time Signal (Greenwich).
  - 6.30—The Foundations of Music. Debussy's Pianoforte Music.
  - 6.57—The Rt. Hon. Sir Henry Betterton, C.B.E.: "On Choosing a Career."
  - 7.5—Talk on Farming. Sir Daniel Hall, K.C.B., F.R.S.
  - 7.30—"Must Britain Starve?"—II. Sir John Russell, F.R.S.
  - 8.15—B.B.C. Symphony Concert—XXI. The B.B.C. Symphony Orchestra (Leader, Arthur Catterall) conducted by Bruno Walter.
  - 8.15—Overture, A Midsummer Night's Dream (Mendelssohn). Bruno Walter and Orchestra: Concerto in A, for Pianoforte and Orchestra (K.488) (Mozart).
  - 9.0—Time Signal (Greenwich).
  - 9.0—"The Second News"
  - 9.15—Symphony Concert. Part II. Symphony, No. 2, in D (Brahms).
  - 10.5—The Rt. Hon. Neville Chamberlain, M.P. Chancellor of the Exchequer: "The Budget."
  - 10.15—12 midnight—Dance Music.

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 (Haird Process).
  - 12 noon—The Midland Studio Orchestra.
  - 1.15 p.m.—Organ Recital by G. D. Cunningham.
  - 2.0—3.0—The Northern Studio Orchestra. Mavis Stoddard (Mezzo-Soprano).
  - 3.30 (London and Northern)—Daventry National Programme.
  - 5.15—The Children's Hour.
  - 6.0—"The First News."
  - 6.30 (Northern and London)—The Northern Studio Orchestra, Dorothy Pilling (Pianoforte). John Fanshaw (Baritone).
  - 6.30 (Midland)—Ernest Parsons and his Orchestra.
  - 7.30 (Midland)—A Recital by Robert Maitland (Baritone).
  - 8.0—Vaudeville. Horace Kenney (Comedian). Alec McGill and Gwen Vaughan, the Cheerful Chatterers. Mario Lorenzi, Harp Solos. Abie and Sandy, Close Friends. Marie Blanche in Some of her Song Successes. Vivien Maurice and Barbara Francis, Syncopation. Walter Todd, Entertainer. The B.B.C. Dance Orchestra, directed by Henry Hall.
  - 9.0 (London and Northern)—Alice Lilley (Soprano). The B.B.C. Theatre Orchestra, conducted by Joseph Lewis.
  - 9.0 (Midland)—The Coventry Vauxhall Band, conducted by J. W. Cartwright. Compton Long (Entertainer).
  - 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

- ALGIERS (N. Africa)**  
825.3 kc/s (363.6 m.); 13 kW. Transmits at intervals from 12.30 p.m. 7.0 p.m.—Music from the West Indies. 7.10—Financial Notes, Exchange Quotations and Market Prices. 7.20—Shipping Notes and Weather Forecast. 7.25—Selections by an Argentine Orchestra. 7.40—Talk for Women. 7.55—News and Time Signal. 8.0—Concert of Music-Hall Songs. 8.30—Book Review.
- BARCELONA (Spain)**  
Radio-Barcelona (E.A.F.I.). 860 kc/s (349 m.); 8 kW. Transmits at intervals from 8.30 a.m. 8.0 p.m.—Concert by the Station Trio. Selection from "Il Trovatore" (Verdi). Gavotte from "Manon" (Massenet). Berceuse amoureuse (Vermeire). Serenade (Chaminade).
- BELGRADE (Yugoslavia)**  
697 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 9.55 a.m. 5.0 p.m.—Recital of Yugoslavian Songs by Herr Rasa Radenkovic. 5.30—Talk (to be announced). 6.25—Programme Announcements. 6.30—Divine Service Relay. 7.15—German Lesson. 7.45—Talk (to be announced). 8.15—Notes from

- Belgrade. 9.0—Light Music on Gramophone Records. 9.35—Song and Violin Recital by Miroslava Binicki and Prof. Vladimir Slatin. 10.15—News and Sports Notes. 10.30 (approx.)—Concert by the Station Orchestra. Overture, "The Crown Diamonds" (Auber). Selection from "Countess Maritza" (Kalmán). Suite, Ein Abend in St. Petersburg (Meyer-Helmund).
- 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: Our Song Composers—Schubert-Brahms. 12.55 p.m.—Nauen Time Signal. 1.30—News Bulletin. 2.0—"L'Elisir d'amore" (Donizetti) on Gramophone Records, relayed from Berlin (Witzleben). 2.30—Programme for Young People. 3.0—Talk: Ben Akiba on Ingratitude. 3.30—Weather Forecast and Exchange Quotations. 3.45—Talk for Women: How to obtain pure Milk. 4.0—Talk on Modern Literature. 4.30—Concert from Hamburg. 5.30—Talk on Settlement Problems: Which are the most profitable Settlements? 6.0—The Orchestra and its Instruments—Talk with Illustrations. 6.30—Talk: Plant Life in Germany. 6.55—Weather for Farmers. 7.0—Talk: How do Consumers try to overcome the Crisis? 7.30—See Heilsberg. 9.0—News Bulletin. 9.15—Talk: The Goethe Year—Goethe and Plastic Art. 10.0—News Bulletin. 10.20—See Hamburg. 12 midnight (approx.)—Close Down.
- BERLIN (Germany)**  
Witzleben. 715 kc/s (419.5 m.); 1.5 kW. Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert). 6.0 p.m.—Talk: Ernst von Leyden. 6.15—Talk: Practical Hints on Sailing. 6.30—Talk: The Cultural Needs of Young People in Cities. 6.55—"The Witzleben Station informs its Listeners..." 7.0—Topical Talk. 7.10—Concert of Marches. Moll-witzer (1741). Hohenfriedberger (Frederick the Great). Swabian March. Bavarian March. Army March (Wieprecht). Old Hunting

- March. "Der Jäger aus Kurpfalz (Rode). Waidmannsheil (Reckling). Sachsentreue (Schmidt). Regimentskameraden (Schwittmann). Treu dem Vaterland (Krause). 8.0—"Thrills at any Price"—or "How to Read Detective Novels"—a Programme by Hans Reimann, with Music by Walter Goehr. 9.10—News Bulletin. 9.20—Trio Concert by Simon Goldberg (Violin), Paul Hindemith (Viola) and Emanuel Feuermann (Cello). Trio in B Flat Major (Schubert). Trio in C Minor, Op. 9, No. 3 (Beethoven). 10.10—News Bulletin. 10.30—Topical Report. Ireland—England's Great Anxiety. After the Report: Dance Music. 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.—News and Market Prices. 7.40—Dramatic Criticism. 7.55—Lottery Results. 8.0—Agricultural Report. 8.15—News and Weather Forecast. 8.30—Orchestral Concert. Soloists: Mlle. Yvonne Cervino and M. Fleury. Selection from "Les Dragons de Villars" (Maillart-Ardailan). La Feria (Lacôme). Two Songs by Yvonne Cervino: (a) Song from "Les Saltimbanques" (Ganne), (b) Song from "La Mascotte" (Audran). Four Songs by M. Fleury: (a) Song (Tagliafico), (b) Fermions les rideaux (Audran-Gauwin), (c) Toujours fidèle (Waldteufel), (d) Polonaise de Concert (Rougnon). Two Songs by Mlle Cervino: (a) Song from "Miss Decima" (Audran), (b) Song from "Les Noces de Jeannette" (Massé). Two Songs by M. Fleury: (a) Pauvre Fou (Tagliafico), (b) Pourquoi pas (Tagliafico). Selection from "Coppélia" (Delibes). Fantasia on the Works of Yvain. After the programme—Amusement Guide and Time Signal.
- BRATISLAVA (Czechoslovakia)**  
1,076 kc/s (279 m.); 14 kW. Transmits at intervals from 11.0 a.m. 7.0 p.m.—See Prague. 7.20—See Brno. 8.0—See Prague. 10.45—

**WEDNESDAY**  
continued

Programme Announcements and News.

**BRESLAU (Germany)**  
923 kc/s (325 m.); 1.5 kW. Relay by Gliwicz, 1,184 kc/s (253 m.).

Transmits at intervals from 6.30 a.m. to 11.00 p.m.—Song Recital by Knut Marick (Tenor). Franz Kauf at the Piano. Song from "Il Seraglio" (Mozart). Song from "The Marksman" (Weber). Song from "La Juive" (Halévy). Siciliana from "Cavalleria Rusticana" (Mascagni). Song from "Manon" (Massenet).  
6.30—Talk by Alfred Kraemer. 6.45—Weather Forecast and Talk by the Chief of Police. 7.15—Concert relayed from the Haus Metropol, Hindenburg. 7.50—Topical Talk. 8.5—Weather Forecast and Talk on the Bringing up of Children.

8.30—Concert by the Silesian Philharmonic Orchestra conducted by Franz Marszalek. La Burla (Weingartner). Selection (Blumer). Symphonic Poem, Kneipe (Westberg). 9.10—Announcements.  
9.20—Concert (contd.). Polka-Mazurka (Lehar). Waltz (Meisel). Selection from "Der Tenor der Herzogin" (Künneke). 10.10—Time Signal, Weather, News, Sports Notes and Programme Announcements. 10.40—Light Music and Dance Music from Gliwicz. 12 midnight (approx.)—Close Down.

**BRNO (Czechoslovakia)**  
878 kc/s (342 m.); 35 kW. Transmits at intervals from 11.0 a.m. to 11.0 p.m.—Literary Review. 6.15—See Prague. 6.25—German Transmission: News, and Talk on Emigration for Workers.  
7.0—See Prague. 7.5—Talk: The Battlefield of Shanghai. 7.20—Concert by a Brass Band, conducted by Nevorál.  
8.0—"Sun and Clouds in the East"—Japan and China in Literature and Music. 9.0—See Prague. 10.15—Announcements.

**BRUSSELS (Belgium) (No. 1)**  
I.N.R. 590 kc/s (509 m.); 15 kW. 12.15—1.45 p.m.—Weather and Concert by the Max Alexys Orchestra.  
5.0—Orchestral Concert, conducted by Franz André. March (Ackermann). Sanctuary of the Heart (Ketelbey). Two Selections (Eilenberg). Selection from "Romeo and Juliet" (Gounod). Tarantelle (Bonincontro). La Palma (De Yradier). Charles Stratton (Dejoncker). Gipsy Romance (Boidi). Humoresque (Dvorák). Selection from Good News (De Sylva and Brown). Neapolitan March (Boidi).  
6.0—Light Music on Gramophone Records. 6.15—Talk by Gaston Huysman: Chemical Warfare. 6.30—Concert of Light Music on Gramophone Records. 7.15—Talk by Professor Albert Jacquemain. 7.30—Medical Talk.  
8.0—"Louison"—Comedy in Two Acts (de Musset).  
9.0—Orchestral Concert, conducted by Franz André. Ballet, Les Riches (Poulenc), sung by Mlle. Teugels, Mr. Letroye and Mr. Bracony. Selection from "Harold en Italie" (Berlioz). Soloist: Mr. Broos (Viola). 10.0—Le Journal Parlé.

**BRUSSELS (Belgium) (No. 2)**  
N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish.  
12.15—1.45 p.m.—Concert by the Max Alexys Orchestra and Weather Report. 5.0—Concert relayed from the Hotel Albert Ier. 6.10—Recitations.  
6.30—Song Recital by Theodor de Mulder-Mercier. Hemelhuis (Hullebroeck). De Vlaasche Tale (Mortelmans). Kerlingaland (Mesdagh). Mother (Gilson). Selection (Lebrun). 7.0—Ballet Music from "Le Cid" on Gramophone Records (Massenet). 7.15—Reading (De Lannoy). 7.30—Theatre Notes. 8.0—"Outside the Door"—One-act Play (Duvernois).  
8.30—Concert, conducted by Georges Pitsch, relayed from the Royal Conservatoire. Soloists: Mr. Hiquet (Double Bass), Mr. Borlic (Flute), Henry Wagemans (Violin) and Edmond Bouquet (Violin). Concerto from the Church Cantata, No. 142 (Bach). Sinfonia from the Church Cantata, No. 75 (Bach). Concerto for Double Bass and Orchestra (Dragonetti). Symphony, Op. 13 (Stamitz). Overture in B Minor for Flute and Strings (Bach). Concert for Two Violins (Bach). Symphony (Cana-bach). 10.0—Le Journal Parlé.

**BUCHAREST (Romania)**  
Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 12 noon. to 11.0 p.m.—Concert of Light and Romanian Music by the Station Orchestra. 6.0—News Bulletin and Time Signal. 6.10—Concert (contd.). 7.0—Talks on Social Problems and Foreign Politics. 7.40—Song Recital by Mme. Dorita Massini. 8.0—Flute Recital by Mr. Caratje. 8.30—Talk (to be announced). 8.45—Pianoforte Recital by Mileteanu Tremér.  
9.15—Violin Recital by A. Sarvas. Sonata in G Major (Grieg). Romance (Wieniawsky). Waltz from "Der Rosenkavalier" (Richard Strauss-Prihoda). 9.45—News Bulletin.

**BUDAPEST (Hungary)**  
545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Also relayed on 210 metres.  
5.35 p.m.—Concert by the Orchestra of the Royal Hungarian Opera House, conducted by Otto Berg. Overture, "Zampa" (Hérold). Suite algérienne (Saint-Saëns). Selection from "I Pagliacci" (Leoncavallo). Violin solo from "The Violin-maker of Cremona" (Hubay). Selection from "Manon Lescaut" (Puccini). 7.45—Programme by Georg Doros.  
8.0—Der Soldat der Gasse—a Radio Play (Fodor and Benedek).  
10.0—Pianoforte Recital by Tibor Szathmáry. Toccata and Fugue (Frescobaldi-Bartók). Sonata quasi una fantasia, Op. 27, The Moonlight Sonata (Beethoven). Kinderszenen (Schumann). 10.45—Concert by the Joska Radics Cigány Band, relayed from the Jägerhorn Hotel.

**COPENHAGEN (Denmark)**  
1,067 kc/s (281 m.); 0.75 kW. Relay by Kalundborg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. (Gymnastics).  
12 noon—String Ensemble Concert from the Wives Restaurant. 1.15—2.00 p.m.—Talk for Schools. 1.45—3.00—Interval.  
3.0—Concert by the Radio Orchestra, conducted by Emil Reesen. March, Le père La Victoire (Ganne). Overture, "Le Cheval de Bronze" (Auber). Waltz, Wienerblut (Johann Strauss). Frühlingsglaube (Schubert, arranged for Strings by Emil Reesen). Abendlied (Schumann, arranged for Strings by Svendsen). Selection from "La Tosca" (Puccini). Homage March from the Music to "Sigurd Jorsalfar" (Grieg). Talk for Women. Overture, "Maritana" (Wallace). Waltz, España (Waldteufel). Anna-Polka (Svendsen). Selection from "Romeo and Juliet" (Gounod). Humoresque (Dvorak). Entry March of the Gladiators (Fucik).  
5.0—Gramophone Records of Variety Music. 5.40—Exchange and Market Prices. 5.50—Talk: Johannes Clausen, on the Centenary of his Birth. 6.20—French Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Talk: Episodes in Modern Danish History from 1848 to 1914. 8.0—Town Hall Chimes.  
8.2—Concert of Scandinavian Dramatic Music by the Radio Orchestra, conducted by Launy Gröndahl. Three Selections from "Peer Gynt" (Grieg): (a) Prelude, (b) Anitra's Dance, (c) In the Hall of the Mountain King. Three Selections from "St. Swithin's Day" (J. P. E. Hartmann). Wedding March from the Music to "The Wedding at Ulfaa" (Södermann). Evening Music and Hunting Music from "Once upon a Time" (Lange-Müller). Overture, "Sigurd Slembe" (Svendsen).  
8.50—Talk: Epidemics in Modern Times.  
9.20—Recital from the Works of Contemporary Danish Composers. Sonata for Violin and Pianoforte (J. T. Larsen). Lento and Intermezzo for Violin and Pianoforte (Einar Jacobsen).  
9.40—Herman Bang—Readings and Songs. 10.20—News Bulletin. 10.35—Talk on Maori Music, with Illustrations. 11.0—Dance Music from the Palace Hotel. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (Thursday)—Close Down.

**CRACOW (Poland)**  
950 kc/s (312.8 m.); 1.5 kW. Transmits at intervals from 11.45 a.m. to 11.00 p.m.—Miscellaneous Items and Announcements. 7.15—Light Music on Gramophone Records. 7.25—Programme Announcements. 7.30—Popular Music on Gramophone

Records. 7.45—10.45—See Warsaw. 10.45—Light Music on Gramophone Records. 11.0—Dance Music. 12 midnight (approx.)—Close Down.

**DUBLIN (Ireland)**  
(2RN). 725 kc/s (413 m.); 1.2 kW. Relay 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—Popular Music on Gramophone Records. 7.20—News Bulletin. 7.30—Time Signal. 7.31—Gaedhlig. 7.45—German Lesson.  
8.0—Concert from the Works of Classical and Modern Masters, by the Station Sextet. Soloists: Violet Pearson (Soprano), Bay Jellett (Violin) M. G. Rigg (Contra).  
9.0—Organ Recital by George Harrison, relayed from St. George's Church, Dublin. 9.30—Sponsored Programme. 10.30—Time Signal, News, Weather Forecast and Close Down.

**FÉCAMP (France)**  
Radio Normandie. 1,364 kc/s (219.9 m.); 1 kW. Transmits at intervals from 12 noon. to 11.0 p.m.—Light Music on Gramophone Records. 7.45—Announcements. 8.0—News Bulletin. 8.30—Concert relayed from Le Tréport. 9.15—10.45—Transmission of Pictures. 11.0—Concert of Variety Items. 11.0 a.m. (Thursday)—Close Down.

**FRANKFURT-am-MAIN (Germany)**  
770 kc/s (390 m.); 1.5 kW. Relay by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. to 11.0 p.m.—Time, Programme Announcements. Weather and Economic Notes. 7.30—Talk by Hans Rosbaud: The Fundamental Principles of Music.  
8.0—Song Recital by Johannes Willy (Baritone). Hans Rosbaud accompanying. Selections: (Schubert) (a) An die Leier, (b) Nachtstück. Selections (Loewe): (a) Wanderers Nachtlied, (b) Erlkönig. Selections (Hugo Wolf): (a) Königlich Gebet, (b) Gesellenlied. Selections (Armin Knab): (a) Gleichnis, (b) Sommer. Morgenlied (Zilcher). Selections (Alexander Friedrich von Hessen): (a) Aus Todesdunkel, (b) Zwei Könige, (c) Gedicht, (d) Herbst. 9.0—10.20—See Stuttgart. 10.30—See Berlin (Witzleben). 11.0—Time, Weather, News and Sports Notes.

**HAMBURG (Germany)**  
Norag (ha, in Morse) 806 kc/s (372 m.); 1.5 kW. Relay 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 (233.2 m.). Transmits at intervals from 5.45 a.m. to 11.0 p.m. (from Bremen)—Concert relayed from the "Liner" "Bremen". Overture, "Frau Meisterin" (Suppé). Ballet Music from "La Gioconda" (Ponchielli). Im Walzertrausch (Lincke). Altpreuussische Leibregadiere (Lebede). Drei Sträusse (Lindemann). Selection from "Der Obersteiger" (Zeller). Ein Ehestreit (Ziegenhahn). Tango, Seit jener Stunde (Stransky). Hansensten-Festmarsch (Ziegenhahn).  
5.30—Educational Talk: North German Dialect in the City. 5.55—Review of New Books published by Alfred Kröner. 6.25—Legal Talk. 6.50—Frankfurt Exchange and Hamburg Market Prices. 6.55—Weather Report. 7.0—Topical Talk. 7.15—"La Dame Blanche"—Comic Opera in Three Acts (Boieldieu). 8.30—Reading of Two German Ballads.  
8.45—Goethe Programme. Talk with Musical Illustrations: Kennst du das Land from "Mignon" (Thomas Liszt, Schubert and Wolf). Der König in Thule (Zelter and Liszt). Erlkönig (Loewe and Reichardt). Ach neige du Schmerzensreiche from "Faust" (Gounod and Schubert). Mephisto (Gounod, Boito, Beethoven and Moussorgsky).  
10.0—Time and News. 10.20—Dance Music.

**HEILSBURG (Germany)**  
1,085 kc/s (276.5 m.); 60 kW. Relay by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert).

1.5 p.m.—Concert by the Little Orag Orchestra, conducted by Eugen Wilcken. March, Fanfarenklänge (Fucik). Overture, "Der Leibesmann" (Grünfeld). Suite, Im Puppenhaus (Englemann). Hearts and Flowers (Czibulka). The Lost Chord (Sullivan). Overture, "Edelweiss" (Komzak). Waltz, Frühlingsbotschaft (Fucik). Suite, In a Fairy Realm (Ketelbey).  
2.30—3.30—Interval. 3.30—Talk for Housewives. 3.45—Programme for Children. 4.5—Talk: School Gardens.  
4.30—See Hamburg. 5.30—Marches on Gramophone Records. 5.45—Book Review. 6.15—Market Prices. 6.25 (From Danzig)—Chamber Music by Elit Mertins (Pianoforte). Max Dovidet (Violin) and Johannes Hannemann (Cello). Pianoforte Trio in E Minor Op. 102 (Reger).  
7.0—Health Talk: Vegetarianism. 7.25—Weather Report. 7.30—Old and New Dance Music by the Little Orag Orchestra, conducted by Eugen Wilcken. 9.0—Announcements.  
9.10—Song Recital by Serge Gagarin. Songs (Schumann): (a) Am leuchtendsten Sommermorgen, (b) Aus meinen Tränen, (c) Das ist ein Flöten, (d) Die alten, bösen Lieder, (e) Die Rose, die Lilie, (f) Ein Jüngling liebt, (g) Hör ich das Liedchen, (h) Der Hans und die Grete tanzen herum, (i) In meiner Brust, da sitzt ein Weh, (k) Der arme Peter wandt vorbei. Songs (Schubert): (a) Wohin? (b) Erstarrung, (c) Die Forelle.  
9.40—Modern Authors on Gramophone Records. Introductory Talk, and Readings from their own Works by Theodor Däubler, Rudolf Binding, Ina Seidel, Wilhelm von Scholz, Carl Zuckmayer and Hans Rehfsch. 10.10—Weather, News and Sports Notes, followed by Dance Music from Berlin (Witzleben). 12.30 a.m. (Thursday)—Close Down.

**HILVERSUM (Holland)**  
1,004 kc/s (298.8 m.); 8.5 kW. 7.25—9.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 7.25—7.40 and 8.10—8.25—Physical Culture Lesson. 8.40—Gramophone Records of Light Music. 9.40—Trio Concert and Gramophone records of Light Music.  
10.40—Religious Programme by the Liberal Protestant Radio Society (V.P.R.O.). 10.55 till Close Down—V.A.R.A. Programme. 10.55—Concert, Recitations and Dramatic Selection. 11.40—Educational Programme. 12.10 p.m.—Concert (continued).  
12.40—Septet Concert. March, Seimen Kamerad (Gilbert). Waltz, Strandillydne (Fetras). Orientalische Streifwache (Siede). Gramophone Records of Light Music. Selection from "The Flower of Hawaii" (Abraham). Serenade, Baci al Buio (Micheli). Gramophone Records of Variety Music. Waltz, Remembrance (Joyce). When I take my sugar to tea (Fain). Waltz, Mein Herz hab' ich gefragt (Abraham). Puppenspiele (Ledzzer). Gramophone Records of Popular Music. Waltz, from "The Last Waltz" (O. Straus). Bayerische Ländler (Daxenberger). Gramophone Records of Variety Music. Melody (Rubinstein). Polish National Dance (Scharwenka). Ach komm' ich die Welt dir schenken (Haydn, Clarendon). Rosa, reizende Rosa (Salter).  
2.25—Interval. 2.55—Culinary Talk. 3.45—Programme for Children. 6.10—Gramophone Records of Variety Music. 6.40—Educational Talk. 7.10—Chess Lesson arranged by the People's Radio University. 7.40—Talk: The Principles of the Workers' Socialist Party.  
8.10—Vocal and Orchestral Concert of Contemporary Music Soloist: Hélène Ludolph (Vocalist). Frauentanz (Kurt Weill). Chansons maddoues (Ravel).  
8.40—Short Play after a Story by Oscar Wilde. 9.40—Orchestral Selections.  
10.15—Spring Cantata (Anna Lambrechts-Vos) relayed from the Concert Hall, Harlem. 10.40—Topical Dialogue: The Adventures of M.M. Walker and Tropicdult. 10.55—Orchestral Concert. 11.40—News Bulletin. 11.55—Gramophone Records of Variety Music. 12.40 a.m. (Thursday)—Close Down.

**HUIZEN (Holland)**  
160 kc/s (1,875 m.); 8.5 kW. Programme of the Christian Radio Society (N.C.R.V.). 8.40 a.m.—Bible Reading. 8.55—10.10—Variety Music on Gramophone Records. 10.40—Concert by the N.C.R.V. Women's Choir. 11.10—Programme for Hospitals.  
11.40—Concert. Soloists: M. F.

Jurjaanz (Harmonium) and G. Koeman (Soprano). Psalm 96 Verses 5 and 6. Hymn 77, Verses 1 and 4. Hope (Nägeli). Feuille d'Album (Kint). Andantino (Dicks). The Stars (Schütz). Curfew (Mohr). Andante pastorale (Stephens). Consolation (Lów). Ga van my (Bartelsman). Een kruis met rozen (Pomper). Berceuse (Dicks). Contemplation (Lów). Prayer (Händel). 12.40 p.m.—Police Notes.

12.55—Concert. Soloists: Mme. G. v. Ravenzwaay-Möllenkamp (Songs), H. Hermann (Violin), H. v. d. Horst Jr. (Cello) and Mme. R. A. v. d. Horst-Bleekrode (Pianoforte). Larghetto from the Second Symphony (Beethoven). Four Sacred Songs (de Heer). Second Movement from the Trio No. 3 (Schumann). Song without Words (Tchaikovsky). Four Salvation Army Songs. Selections from "La Favorita" (Donizetti). La Serenata (Tosti). An den Frühling (Grieg). Four Sacred Songs (Valerius). Moss Rose (Doss). Selection from "The Caliph of Baghdad" (Boieldieu). 2.40—3.10—Interval. 3.10—Religious Reading.  
3.40—Concert. Soloists: Cora de Lange-Van Rijn (Songs), A. J. Bergers (Oboe and Cor anglais), M. Root (Bassoon) and Luise Lauenroth (Pianoforte and Harmonium). Romance in B Flat Major, Op. 37a (Tillett). Aria for Contralto with Oboe d'amore obbligato: Schöne dich o Seele nicht (Bach). Contralto Solo: Ah mio cor, schermito sei andante stretto (Händel). Andante from the Concerto in F Major for Bassoon and Pianoforte (Mozart). Burlesque in G Minor, Op. 37a, for Bassoon and Pianoforte (Tillmetz). Three Songs (arranged Pijper and Kopp). Andante pastorale in F Minor, Op. 13 for Cor anglais and Pianoforte (Geist). Das Wirtshaus in F Major (Schubert). Die Forelle, in F Major (Schubert). Pastoral in B Major (Wernam). Songs: (a) Aufenthalt (Schubert), (b) Der Wanderer (Schubert), (c) Improptu in E Flat Major, Op. 9 (Schubert). Songs: (a) Die Uhr (Loewe), (b) Verborgeneheit (Wolf). Cantilène for Oboe and Pianoforte (Beliens). Wo die schönen Trompeten blasen (Mahler). Rheinlegendchen (Mahler). Concert Solo for Oboe and Pianoforte (Escobés).  
5.40—Programme for Children. 6.40—Agricultural Talk. 7.25—Talk by A. Stapelkamp. 7.40—Talk on Russia. 8.10—Police Notes. 8.25—Religious Notes. 8.40—Religious Address.  
9.10—Orchestral Concert conducted by G. F. Schuurman. Psalm 66 (Goudimel-Schuurman). Two Sacred Songs (Bach). Eine kleine Nachtmusik (Mozart). Overture, "Il Seraglio" (Mozart). Overture, "Fra Diavolo" (Auber). Selection from "La Tosca" (Puccini). Potpourri (Poussels). March (Hartnibrigg). In the interval at 9.40—Talk. And at 10.40—News Bulletin.

11.10—Variety Music on Gramophone Records. 12.10 a.m. (Thursday)—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. to 11.00 p.m.—English Lesson. 5.35—Concert by the Station Orchestra. Selections from the Works of Offenbach. 9.30—Song Recital by Françoise Platonova. 11.0—Answers to Correspondents in French.

**LAHTI (Finland)**  
167 kc/s (1,796 m.); 54 kW. Relay by Helsinki, 815 kc/s (368.1 m.). Transmits at intervals from 7.10 a.m. to 11.00 p.m.—Programme for Children. 6.15—Sports Notes. 6.40—Cello Recital. 7.0—Talk (to be announced). 7.25—Recitations. 7.45—Dance Music by the Station Orchestra. 8.5—Humorous Programme. 8.20—Dance Music (contd.).

**LANGENBERG (Germany)**  
Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time and Gramophone Concert).  
11.20 a.m.—Gramophone Concert of Popular Music. 12 noon—Concert from Munich. 12.50 p.m.—Weather, News and Time.

**WEDNESDAY**  
continued

1.—*Concert conducted by Wolf*. Bravour-Marsch (Knümann). Fest-Ouverture (Lortzing). Caucasian Sketches (Ippolitov-Ivanov). Waltz, Du und du, from "Die Fiedermaus" (Joh. Strauss). Rondino (Sibelius). Potpourri, Major and Minor (Schreiner). Serenade (Moszkovsky). Nächtlicher Ritt (Scheinflug). Potpourri, Frühling im Wiener Wald (Ascher).

2.30—Sponsored Gramophone Concert. 3.30—Economic Notes and Time. 3.50—Programme for Children. 4.20—Talk on the Women's Movement. 4.30—Talk on Friedrich Froebel.

5.0—*Paul Juon Concert* by Paul Juon (Pianoforte), Walter Schneiderhan and Josefa Kastner (Violin), August Schreiber (Cello), Georg Greike (Clarinet) and Peter Graeff (Viola). Pianoforte Trio for Pianoforte, Violin and Cello, Litanie. Clarinet Sonata for Pianoforte and Clarinet. Pianoforte Quintet for Pianoforte, Two Violins, Viola and Cello.

6.15—Review of Books on Classical Music. 6.40—Poems (Manfred Sturmman). 7.0—Weather, Time, Economic Notes and Sports Results. 7.15—Health Talk. 7.30—Talk: The Prussian Diet. 7.55—News Bulletin.

8.0—*Orchestral Concert of Operetta Music and Waltzes*, conducted by Eysoldt. Overture, "The Gipsy Baron" (Joh. Strauss). Waltz, The Skaters (Waldteufel). Selections from "Where the Lark sings" (Lehar). Waltz, Hofballtänze (Lanner). Selections from "The Merry Peasant" (Fall). Waltz from "Der Zigeunerprimas" (Kálmán).

8.30—*Dyckerhoff's Inheritance*—Comedy (Robert Grotzsch). 9.35—Talk by Prof. Albert Schweitzer: From my Life. 10.5—News and Sports Notes. 10.15 (approx.)—Light Music and Dance Music. 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 6.30 a.m. 6.10 p.m.—Talk on Friedrich Froebel, on the 150th Anniversary of his Birth. 6.35—Italian Lesson. 6.50—Talk on Dr. Richard Seyffarth on his Seventieth Birthday. 7.5—"The

Booksellers' Cantata 1932," by Dr. Albert Hess. 7.30—"Leipzig in 1905"—a Talk compiled from Documents of the Time.

8.15—*Concert by Soloists of the Leipzig Symphony Orchestra*. Part I, conducted by Theodor Blumer. Overture, "Oberon" (Weber). Ballad for Flute Op. 288 (Karl Reinecke). Hungarian Rhapsody for Cello in D Major Op. 68 (Popper). Andante from the Horn Concerto (Franz Strauss). Czardas for Violin (Monti). Waltz Aria No. 1 for Trombone (Alschausky). Part II, conducted by Hilmar Weber. Hungarian Rhapsody No. 14 (Liszt). Romance for Violin in F Minor (Dvorak). Piccolo Solo: Birds in the Tree (Rodominsky). Cello Solo: Chant du Ménestrel (Glazounoff). First Movement from the Concertino for Clarinet Op. 63 (Reissiger). Concert Polka for two Trumpets. Die beiden Finken (Henry Kling).

10.15—News Bulletin, followed by Gramophone Dance Music. 11.30 (approx.)—Close Down.

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

**ŁWÓW (Poland)**  
788 kc/s (381 m.); 16 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items. 7.15—See Warsaw. 7.25—Literary Talk. 7.45—See Warsaw. 10.45—Talk in Italian: Poland and Italy. 11.0—See Warsaw. 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. 4.30 p.m.—Light Music on Gramophone Records. 7.0—Popular Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South East. 8.30—Educational Talk. 8.45—Instrumental Concert, conducted by Gaston Billet.

**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 Popular Music on Gramophone Records. 9.15—News and Political Review. 9.30—10.30—Interval.

10.30—Chimes, Time, Political Review and Chamber Music Concert on Gramophone Records. Sonata for Violin and Pianoforte in A Major (Beethoven). Quartet in G Minor (Debussy). Quintet in F Minor (Franck).

12.45 a.m. (Thursday)—News Bulletin. 1.0—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. 7.0 p.m.—See Prague. 7.20—See Brno. 8.0—See Prague. 10.45—Programme Announcements.

**MOSCOW (Russia)**

Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 4.0 p.m.—Proletariat Radio Journal. 5.0—Agricultural Report. 6.0—Programme to be announced. 8.0—Talk in Czech and Swedish: "The First of May in the Soviet Republic" followed by Review of the Week and Answers to Correspondents in French. 9.55—Chimes and 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, "Zampa" (Hérold). Minuet in G Major (Moszkovsky). Scenes

from "Martha" (Flotow). Ilona (Tauber). Potpourri, Fünf-Uhr-Tea bei Robert Stolz (Dostal). Volksliedchen und Märchen (Komzák). Waltz, Bei uns zu Haus (Joh. Strauss).

6.15—Weather and Agricultural Report. 6.30—Talk: Poetry and Handicrafts. 6.45—Talk: The Position of Handicrafts.

7.5 (from Nürnberg)—*Concert*. Three Movements for String Orchestra and Cembalo (Lully): (a) Overture, (b) Entrée, (c) Air. Choral Selections: (a) Sanctus (Clemens non Papa), (b) Song (Marenzio), (c) Song. Trio Sonata in G Minor (Corelli). Choral Selections: (a) Du mein einzig Licht (Albert), (b) Ihr kleinen Vögelein (Gneist), (c) Salve (Knab). Festmusik for String Orchestra and Cembalo (Fischer): (a) Entrée, (b) Echo, (c) Gavotte.

7.45—Talk. 8.10 (from Nürnberg)—Variety Programme. 8.50—Variety Programme on Gramophone Records. 9.30—Talk: Women in Public Life. 9.50—Violin Recital by Elisabeth Bischoff. Concerto in A Minor (Vieuxtemps). Larghetto (Händel-Hubay). Basque Caprice (de Sarasate).

10.20—Time and News. 10.45—Dance Music from Berlin (Witzleben). 12 midnight (approx.)—Close Down.

**OSLO (Norway)**  
Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relayed by Fredriksstad, 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 11.10 a.m. 4.30 p.m.—*Concert by the Station Orchestra*, conducted by Hugo Kramm. Overture, "The Italian Girl in Algiers" (Rossini). Suite, Alsatian Scenes (Massenet). Poem (Drda). Siciliana (Boccherini). Guitare (Bizet). Ballet Suite (Gluck-Mottl).

5.30—Recitations by Fridtjof Krohn. 6.0—French Lesson. 6.30—Programme for Boys, relayed from Bergen, 824 kc/s (364 m.). 7.0—Announcements, Weather and News Bulletin. 7.30—Talk: Man in Sickness and in Health. 8.0—Time Signal.

8.1—*Concert* relayed from the Aula Concert Hall. The Kooboth Choir, conducted by Tor Staver. Soloists: M. Lasse Flagstad and Bjarne Amdahl (Pianoforte) and Mme. Kirsten Flagstad (Soprano). 9.45—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Dance Music on Gramophone Records. 12 midnight (approx.)—Close Down.

**PALERMO (Italy)**

Ente Italiano Audizione Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 8.0 p.m.—Announcements, Radiogiornale dell' Enit, Agricultural Notes and Giornale Radio. 8.20—Light Music on Gramophone Records. In the interval at 8.30—Time Signal and Announcements.

8.45—*Concert of Light Music and Operetta Selections*. Overture, "Princess Rosina" (Lincke). Selection (Zerkovitz). Selection from "The Blue Mazurka" (Lehár). Talk. Song from "La Fornarina" (Lombardo). Selection from "The Dollar Princess" (Fall). Soprano Solo: Aria from "La Vergine rossa" (Cuscina). Comic Duet from "La Fornarina" (Lombardo). Soprano and Tenor Duet from "Frasquita" (Lehár). Selection from "Acqua cheta" (Pietri). Literary Notes. Selection from "Malbruk" (Leoncavallo). Selection from "I granatieri" (Valenti). Overture (Lincke). 10.55—News Bulletin.

**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: Music and Musicians. 7.0—Le Journal Parlé. 8.20—Weather Report. 8.30—Programme for Young People. 9.0—Symphony Concert, conducted by Edouard Flament. Soloist: M. Cantrelle (Violin). Les Heures dolentes (Dupont-Mouton). Violin Solo: In the Steppes of Central Asia (Borodin). Sevilla (Albeniz). Selection from "Javotte" (Saint-Saëns).

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**RECORD FLIGHT TO THE CAPE!**

**K.L.G. PLUGS**

Mr. J. A. MOLLISON flying a Gipsy III Engine D.H. Puss Moth fitted with K.L.G. PLUGS, set up a new England to Cape Town record by completing the journey in 4 days, 17 hrs., 19 mins.

WEDNESDAY continued

PARIS (France)

Poste Parisien. 914 kc/s (328.2 m.); 1.2 kW. 12 noon—Gramophone Records, News and Announcements. 12.15 p.m.—Variety Music on Gramophone Records. 1.45—News and Announcements. 2.0—6.45—Interval. 6.45—News and Announcements. 7.0—Light Music on Gramophone Records. Talks and News. 7.30—Four Last Scenes of a Faust-Parody, by the Amis de Guignol à Paris. 8.30—Gramophone Records. Talk and News. 8.45—Vocal and Orchestral Concert. Overture, "Maritana" (Wallace). Selection from "Le Domino noir" (Auber). Sicilian Dances from "Carmosine" (Fœvier). Selection from "Le Coeur et la Main" (Lecocq). Selection from "Le Grand Mogol" (Audran). Suite, "Le Jardin du paradis" (Silver). Ballet Music from "Les Saltimbanques" (Ganne). Danse burlesque (Pesse). Manhattan Beach (Sousa). 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 Lesson. 7.30—Weather and Physical Culture (continued). 7.45—Variety Music on Gramophone Records. 8.0—News, Weather and Press Review. 12 noon—Educational Talk: The Life and Work of Félix Picaut. 12.30 p.m.—Gramophone Concert. "Musicians and Mythology." Symphonic Poem, Phaëton (Saint-Saëns). Aria from "Alceste" (Gluck). Selection from "Sylvia" (Delibes). Aria from "Thais" (Massenet). Dryade (Aubert). Jupiter Symphony (Mozart). Prélude à l'après-midi d'un Faune (Debussy). Overture to Aria and Bacchanale from "Philemon et Baucis" (Gounod). 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 and Racing Results. 7.0—Talk: The China of To-day. 7.30—Medical Talk. 7.45—Commercial Prices and News. 8.0—Literary Readings by Georges Colin: Sarah Bernhardt. 8.30—News and Weather. 8.40—Fashion Review. 8.45—Goethe Programme, with the collaboration of M. Dorival of the Comédie Française. "Landscapes," by M. Dorival. Selection from "Faust II." Der Erl König (Schubert). Selection from "Werther." Selection from "Wilhelm Meister." 9.15—Press Review and News. 9.30—Goethe Songs on Gramophone Records. Part I. Faust Selections: (a) Gretchen am Spinnrade (Schubert), (b) Chanson de la Puce (Berlioz), (c) Chanson du rat (Berlioz), (d) Invocation à la Nature (Berlioz), (e) Mephisto Waltz (Liszt). Part II. Six Songs from "Werther" (Massenet). Part III. Four Songs from "Mignon" (Thomas). Part IV. L'apprenti sorcier (Der Zauberlehrling) (Dukas).

POZNAŃ (Poland)

896 kc/s (335 m.); 1.0 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items and Announcements. 7.15—Light Music on Gramophone Records. 7.30—Talk: Artistic Life in Poznań. 7.45—10.35—See Warsaw. 10.35—Time Signal, Sports Notes and Police Report. 10.50—Dance Music from the Esplanade Café. 12 midnight (approx.)—Close Down.

PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 11.0 a.m. 4.10 p.m.—Orchestral Concert, conducted by Trdy, relayed from Moravská-Ostrava. 5.10—A Puppet Play. 6.0—Variety Music on Gramophone Records. 6.5—Agricultural Report. 6.25—German Transmission: News and Talk for Workers: The Employer and Insurance. 7.0—News Bulletin. 7.5—Talk: Contemporary Economic Problems. 7.20—See Brno Programme. 8.0—Vincent d'Indy Concert, relayed from the French Institute, with introductory Talk by Professor Jirak. Attente, Op. 3. Plainte de Thécia, Op. 10. Clair de Lune, Op. 13. Quartet, Op. 45, No. 2. Dance Melodies. 9.0—Time and News. 9.10 (approx.)—"La Finta Giardiniera"—Opera (Mozart). 10.0—Time and News. 10.45—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.). Transmits at intervals from 12.30 p.m. 4.32 p.m.—Orchestral Concert. 5.30 (from Geneva)—Programme for Children. 6.30 (from Geneva)—Popular Music on Gramophone Records. 7.0—Weather Forecast. 7.1 (from Lausanne)—Protestant Address: The World at the Crossroads. 7.30 (from Lausanne)—Agricultural Talk. 7.55—Announcements. 8.0 (from Geneva)—Talk: The Work of the Disarmament Conference. 8.10 (from Lausanne)—Two Radio Plays, by the "Compagnons du Masque." 9.0—Concert by the Station Orchestra, conducted by Fernand Closset. 10.0—Weather Forecast and News Bulletin. 10.15 (from Geneva)—Dance Music relayed from the "Moulin Rouge." 11.0 (approx.)—Close Down.

RIGA (Latvia)

572 kc/s (525 m.); 15 kW. Transmits at intervals from 6.0 a.m. 5.30 p.m.—Music on Hawaiian Guitars. 6.0—English Lesson. 6.30—Agricultural Talk. 7.0—Weather Forecast. 7.5—Concert from the Works of Offenbach: Overture, "Orpheus in the Underworld." Selection from "La vie parisienne." Selection from "La belle Héloène." Selection from "The Tales of Hoffmann." 8.0—News Bulletin. 8.20—Songs from Modern Operettas. 9.0—Weather and News Bulletin. 9.15—Marches by Sousa. 9.30 (approx.)—Close Down.

ROME (Italy)

Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayd by Naples, 941 kc/s (319 m.), and 2RO, 11,810 kc/s (25.4 m.). Transmits at intervals from 8.15 a.m. 12 noon—Variety Music on Gramophone Records. 12.35 p.m.—Weather Report. 12.45—Vocal and Instrumental Concert. Soloists: Vera Nadia Poggioli (Soprano), Renzo Bertucci (Violini), Soprano Solos: (a) Strana (Trindelli), (b) Aria from "Aida" (Verdi), (c) M'ama non m'ama (Mascagni). Violin Solos: (a) Tambourin (Lecclair), (b) Capriccio (Paganini). Sextet Selections: (a) Selection from "Light Cavalry" (Suppé), (b) Baci al buio (de Micheli), (c) Tristezza (Tosti), (d) Selection from "Lilac Time" (Schubert-Berthé), (e) Humoresque (Demaret) (f) Ronda brasiliana (Escobar). In the intervals at 1.15—Giornale Radio and Exchange, and at 1.30—Time and Announcements. 5.0—Exchange, Geographical Report, Programme for Children, Giornale Radio and Announcements. 5.30—Soprano Song Recital by Velia Capavo. Romance from "Luisa Miller" (Verdi). Two Irish Songs (Stanford): (a) Cradle Song (b) Ballad. Farfalla (Gelli). 5.45—Concert of Light Music. 6.15—Giornale dell'Enit. 6.20—Botanical Talk. 6.55 (from Naples)—Shipping and Sports Notes. 7.0—Agricultural Report, Weather, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Variety Music on Gramophone Records. 8.15—Medical Talk: Alcoholism. 8.45—Transmission of an Opera. In the intervals, Talk on Art and Review of Reviews. News after the Programme.

SCHENECTADY (U.S.A.)

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayd at intervals by W2XAF on 9,530 kc/s (31.43 m.) and by W2XAD on 15,340 kc/s (19.56 m.). Transmits at intervals from 12.45 p.m. 9.30 p.m.—Woman's Radio Review from New York. 10.0—The Pilgrims from New York. 10.30—Stock Reports and Police Notices. 10.45—Musical Ad. Men. 10.55—News Items. 11.15—Skippy from New York. 11.30—Wayne King's Orchestra from New York. 11.45—Soloist from New York. 12 midnight—When Day is Done. 12.25 a.m. (Thursday)—Health Talk. 12.30—New Kenmore Orchestra. 12.45—Banjoers. 1.0 (WGY only)—New York State Educational Series. 1.0 (W2XAF only)—Stock Reports and News Items. 1.15—5.15—New York Relay. 1.15—Campbell Orchestra. 1.30—Prince Albert Quarter Hour. 1.45—Trials of the Goldbergs.

2.0—Big Time. 2.30—Halsey Stuart Programme. 3.0—Goodyear Programme. 3.30—Mobiolo Concert. 4.0—Coca Cola Programme. 4.30—NBC Artists Service Musicale. 5.0—Voice of the Radio Digest. 5.15—Songs my Mother taught Me. 5.30—Jack Pettis' Orchestra. 6.0—Floyd Walter (Organist) Ritz Theatre, Albany. 6.30—New Kenmore Orchestra. 7.0 (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.). 12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather Report and News Bulletin. 12.40—Programme of Suites and Classical Dance Music on Gramophone Records. 1.35—Weather Report and Exchange Quotations. 1.45—3.30—Interval. 3.30—Cello Recital by Emanuel Feuermann on Gramophone Records. 4.0—Concert by the Station Orchestra. 5.0 (from Zürich)—Programme for Children. 5.30—Weather Report and Market Prices. 5.40—6.30—Interval. 6.30—Recital of Swiss Folk Music and Songs on Gramophone Records. 7.5 (from Berne)—Talk: Right and Wrong Methods of Forecasting Weather. 7.28—Time Signal and Weather Report. 7.30 (from Berne)—Talk on Photography. 8.0 (from Zürich)—Operetta Music by the Station Orchestra, conducted by Hermann Hofmann. 8.40—Hans Carosa Concert by the Station Orchestra. Soloist: Marga Muff-Stenz. Romanian Folk Melodies in the intervals. 9.20—Concert by the Station Orchestra, conducted by Hermann Hofmann. 10.0—Weather and News Bulletin. 10.15 (from Zürich)—The Listeners' Quarter of an Hour. 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden)

Radiotjänst (SASA). 680 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, 380 kc/s (770 m.); and Sundsvall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. 1.0—1.30 p.m.—Broadcast for Schools: Talk. 5.0—Talk on Wine. 5.30—The Practical Corner. 5.45—Gramophone Records of Variety Music. 6.45—Agricultural Report. 7.15—Weather and News. 7.30—Sonata for Piano forte in E Flat Minor No. 3 (Haydn). Soloist: Algot Haquinus (Piano forte). 7.45—Talk: Swedish History. 8.15—Concert by the Students of Stockholm, conducted by Einar Ralf, relayed from the Concert Hall. Soloist: Martin Ohman. High Barbary (arranged Arthur Hall). Shenandoah (arranged Bartholomew). Negro Spiritual, Keep in the middle of the Road (arranged Bartholomew). Negro Spiritual, Old Folks at home (arranged Ralf). Hallo Violet, for Soloist and Choir (Novotny). Kriegslied (Söderman). Virta venhettä vie (Kuula). Samsen (Palmgren). Under lövet (Schönning). Selections for Soloist and Choir: (a) Svenska manssångerna (Olsson), (b) Serenade (Kjerulf). 9.15—Legal Talk. 9.45—Weather and News. 10.0—Dance Music Programme. 11.0 (approx.)—Close Down.

STRASBOURG (France)

Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Records of Popular Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert. Fantasia in C Minor (Mozart). Gavotte (Gossec). Serenade (Cerné). Overture, "Banditenstreiche" (Suppé). Sobre las olivas (Rosas). Donauwellen (Ivanovic). Selection from "Her Highness Commands" (Heymann). Selections (Schmidt): (a) Mon coeur est à vos pieds, (b) Je vous ai embrassé en rêve. First Waltz Potpourri (Robrecht).

2.0—4.45—Interval. 4.45—Talk in French: Electric Trains. 5.0—Orchestral Concert. Military March (Schubert). Fantasia, Erinnerung an Chopin (Fetras). Eine kleine Nachtmusik (Mozart). Moderato gracioso (Schumann). Serenade from the Fifth Quartet (Haydn). In Memory of Beethoven (Urbach). 6.0—Talk in French: Italian Religious Music of the Sixteenth Century. 6.15—Medical Talk in German. 6.30—Orchestral Concert. Overture and Intermezzo from "Cavalleria rusticana" (Mascagni). Symphonic Poem, Helvetia (Scassola). Selection from "Samson and Delilah" (Saint-Saëns). Ballet, La Source (Delibes). Carnaval (Guiraud). 7.30—Time Signal. 7.32—News in French and German. 7.45—Dance Music. 8.30—Alsatian Evening. "D'r Schlittterhännchen"—Drama in Two Acts (Redslob). "Conceptio Divina"—a Play from the Time of Goethe (Abel). 10.30—Dance Music from the Savoy. 12 midnight (approx.)—Close Down.

STUTT GART (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. 10.0 a.m.—Gramophone Records of the Buxbaum Quartet. 11.0—News, Time and Weather. 11.15—Sponsored Gramophone Concert. 12 noon—Concert from Munich. 12.50—Time, News, Programme Announcements and Weather. 1.0—Lotte Lehmann Recital on Gramophone Records. Erikönig (Schubert). Selections (Schumann): (a) Ich grolle nicht, (b) Widmung, (c) Du bist wie eine Blume. Water Aria and Styrian Song from "Mignon" (Thomas). Zur Drossel sprach der Fink (d'Albert). Ach, wer das doch könnte (Berger). In the intervals Gramophone Records of Famous Orchestras: (a) Overture, "Der Freischütz" (Weber) by the Paris Conservatoire Concert Orchestra, (b) Selection from "Lakmé" (Delibes) by the Symphony Orchestra, conducted by Charpentier, (c) Overture, "Mignon" (Thomas) by the Berlin State Opera House Orchestra, conducted by Meyerowitz. 2.0—Sponsored Gramophone Concert. 2.15—Sponsored Programme for Children. 2.30—News Bulletin. 3.0—Song Recital by Wilhelm Fricke. Selection from "Lohengrin" (Wagner). Selections (Sülicher): (a) Juchhe, dich muss ich haben, (b) Böse Zeit. Papageno's Aria from "The Magic Flute" (Mozart). Du liebe, sel'ge Jugendzeit (Helmund). Was i hab (Bohn). 3.30 (from Mannheim)—Programme for Children—A Spring Excursion into the Country. 4.30—Talk: Is Mankind good? 5.0—Concert from Munich. 6.15—Time and Agricultural Notes. 6.25 (from Karlsruhe)—Talk: Old Conjuror Books. 6.50 (from Mannheim)—Talk: Humorous Aids to Ready Recollection. 7.15—Time and Weather. 7.30—9.0—See Frankfurt. 9.0—Unfamiliar Works of Famous Men—An Essay with Illustrations (Dr. Franz Leppmann), for Speakers and Soprano Soloist. 9.40—Concert by the Philharmonic Orchestra, conducted by Kahn. Rhapsody in Blue (Gershwin). Foxtrot from the Divertimento for Piano forte and Orchestra (Pillemy). Boston-Intermezzo (Nick). Kleine Dreigroschenmusik (Weill). 10.20—Topical Report from Berlin (Witzleben). 11.0—News, Time, Programme Announcements and Weather Report.

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. Festa a Siviglia (Scassola). Haravana (Bayer). Waltz Pomona (Waldteufel). Melody (Heykens). Selection from "The Bartered Bride" (Smetana). Penombra suggestiva (Nucci). Selection (Borsatti). 8.0 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.), and Genoa, 959 kc/s (312.8 m.). Transmits at intervals from 8.15 a.m.

7.5 p.m.—Concert of Variety Music. Overture, "The Marriage of Figaro" (Mozart). Butterfly (Katscher). "Santarellina" (Hervé). 7.30—Time Signal and Announcements. 7.31—Light Music on phone Records. 8.0—Giornale Radio and Weather Forecast. 8.15—Medical Talk. 8.30—Popular Music on Gramophone Records. 8.45—A Comedy (to be announced). After the programme—Orchestral Concert. Selection from "La battaglia di Legnano" (Verdi). Per sempre e ancor per sempre (Tosti). Waltz from a Suite (Chaikovsky). Torch Dance of the Brides (Rubinstein). March of the Scottish Highlanders (Godard). 11.0—Giornale Radio and Close Down.

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.—Concert of Potpourris by the Isy Geiger Orchestra. 6.15—Talk: Skin Diseases—Animal and Plant Irritants. 6.40—Talk: The Work of a Kindergarten Teacher. 7.0—French Lesson. 7.25—Time Signal, Weather Report and Programme Announcements. 7.35—Relay from the State Opera House. In the interval, Weather and News. 10.5—Concert by the Robert Hügel Orchestra, relayed from the Krantz-Ambassador Hôtel.

WARSAW (Poland)

Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW. 11.20 a.m.—Aviation Weather Forecast. 11.25—Interval. 11.45—Polish Press Review. 11.58—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Light Music on Gramophone Records. 1.20—Weather Forecast. 1.25—Interval. 1.35—Light Music on Gramophone Records. 1.55—Interval. 2.45—Popular Music on Gramophone Records. 3.5—Economic Report and Exchange Quotations. 3.15—Report for Boy Scouts. 3.20—Co-operative Report. 3.25—Historical Talk. 3.45—Hydrographic Report. 3.50—Literary Talk: Sienkiewicz. 4.10—Interval. 4.15—Weather Forecast. 4.20—Talk on New Books. 4.40—Light Music on Gramophone Records. 4.55—English Lesson on Linguaphone Records. 5.10—Dialogue by Prof. Suminsky and Mme. Krocowska. 5.35—Offenbach Concert by the Station Orchestra, conducted by J. Oziminsky. Selection from "La Vie Parisienne." Serenade from "The Goldsmith of Toledo." Intermezzo and Barcarole from "The Tales of Hoffmann." Selection from "La belle Héloène." Selection from "The Tales of Hoffmann." Selection from "Orpheus in the Underworld." 6.50—Miscellaneous Items. 7.15—Agricultural Report. 7.25—Programme Announcements. 7.30—Sports Notes. 7.35—Light Music on Gramophone Records. 7.45—Radio Journal. 8.0—Talk on Music. 8.15—Talk with Musical Illustrations: A Voyage round the World. 9.15—Literary Programme. 9.30—Song Recital by Françoise Plat. Song from "L'Africaine" (Meyerbeer). Pastorale (Bizet). Torna Amore (Buzzi-Peccia). Song of a Young Cossack Girl (Lipsky). Song (Zelenzky). 9.50—Sonata for Cello and Piano (Rachmaninov), by S. Adamska (Cello) and Z. Dymmek (Piano forte). 10.30—Radio Journal. 10.35—Weather and Police Report. 10.40—Interval. 10.45—See Lodz. 11.0—Dance Music. 12 midnight (approx.)—Close Down.

WILNO (Poland)

533 kc/s (563 m.); 16 kW. Transmits at intervals from 11.58 a.m. 7.0 p.m.—Lithuanian Press Review. 7.15—Light Music on Gramophone Records. 7.20—Topical Talk. 7.30—See Warsaw. 7.35—Programme Announcements and Notices. 7.45—See Warsaw. 10.45—Variety Music on Gramophone Records. 11.0—Dance Music from Warsaw. 12 midnight (approx.)—Close Down.

PRINCIPAL EVENTS

THURSDAY (April 21)

SYMPHONY CONCERTS

- 8.10 p.m. Copenhagen and most European Stations: Danish programme.
- 9.10 " Munich.
- CONCERTS (Vocal and Instrumental)
- 12.35 p.m. Warsaw: Philharmonic Concert to Schools.
- 5.0 " Frankfurt, Stuttgart: from Darmstadt.
- 7.30 " Frankfurt, Stuttgart: Operetta Selections.
- 7.30 " Hamburg: programme from Operettas.
- 8.0 " Brussels No. 2: Choral programme.
- 8.0 " Vienna: Military Band.
- 8.30 " Strasbourg: The music of M. J. Erb.
- 8.40 " Huizen: Choir.
- 8.45 " Rome: Rome and the Festival of Labour. Gala Concert.
- 9.0 " Leipzig: Choral programme.
- 9.20 " Frankfurt, Stuttgart: Contemporary music.

OPERAS AND OPERETTAS

- 8.0 p.m. Heilsberg: "Lilac Time," from the Königsberg Opera.
- 8.45 " Radio-Paris: "Cavalleria Rusticana" (Mascagni) (gram.).
- 9.0 " Italian Stations (Northern Group): Opera relay.
- 9.0 " Palermo: "La Cena delle beffe" (Giordano).

CHAMBER MUSIC

- 8.10 p.m. Radio Suisse Romande: The Dresden String Quartet.

PLAYS AND TALKS

- 7.0 p.m. Radio-Paris: "A European five-year plan" (M. le Trocquer).

MISCELLANEOUS

- 8.0 p.m. Schweizerischer Landessender: Centenary of the Swiss Gymnastics Society.

DANCE MUSIC

- 10.30 p.m. Copenhagen (till 12.30).
- 10.35 " Hamburg.

Danish Concert for Europe

Following the example of other broadcasters who have furnished concerts for relay to the rest of Europe, the Danish authorities are presenting a programme of their own music from COPENHAGEN this evening. It begins, most appropriately, with the first published work of Niels W. Gade, who is still regarded as their most representative composer. Friedrich Kuhlau, whose *Pianoforte Concerto in C* comes next, was a German by birth, who fled to Copenhagen to escape conscription in his own country. He

soon achieved a position of honour and importance in Denmark, and his music is still held in high esteem. Hartmann's *Liden Kirsten* (Little Christie) had its first performance in May, 1846, when its composer was forty-one, and was the last of his operas to be produced in Copenhagen, though he afterwards composed much other music on a big scale. He was Director of the Copenhagen Conservatorium for many years. Carl Nielsen, represented in the latter part of the programme, was a pupil of Gade's and afterwards his successor as conductor of the Musical Society of Copenhagen. He was his country's representative musician for many years, and his death last October was a grave national loss.



Copenhagen Exchange, one of the oldest buildings in Scandinavia, dated 1640

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

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

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 8.30 a.m.  
8.0 p.m.—*Concert by the Station Trio.* Overture, "Raymond" (Thomas). Romanze (Schmalstich). Melody-Serenade (Vanden Eync). Selection from "Le Carnaval des animaux" (Saint-Saëns).  
8.30—Exchange Quotations and *Advanced English Lesson.* 9.0—Request Programme of Gramophone Records followed by Press News, 10.0—Chimes, Weather Report and Market Prices.  
10.5—*Concert by the Station Orchestra.* March, Gaudemus (Smetana). Selection from "Jugar con fuego" (Barbieri). Serenata (Pacheco). La niña flamenco (Fernández). Serenata a Graciella (Despiez). Mimi en Marquise (de Séverac).  
11.0—"Los Malhechores del Bien"—Play in two Acts (Benavente) by the Station Players. 1.0 a.m. (Friday)—Close Down.

**BERLIN (Germany)**  
Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.  
Transmits at intervals from 5.45 a.m. 4.30 p.m.—*Concert from Berlin (Witzleben).* 5.30—Talk: The German Element in the Industry of Austria-Hungary. 6.0—Recital of New Songs. 6.30—Spanish Lesson. 6.55—Weather for Farmers. 7.0—Topical Programme. 7.30—Agricultural Talk. 7.55—E. H. Burg reads from his own works.  
8.10—**European Concert** relayed from Copenhagen. In the interval at 9.15—News and Sports Notes. 10.15—Weather, News and Sports Notes, followed by Dance Music from Hamburg. 12 midnight—Close Down.

**BERLIN (Germany)**  
Witzleben. 715 kc/s (410.5 m.); 1.5 kW.  
Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert). 2.0—2.55 p.m.—*Gramophone Concert.*

Pianoforte Solo by Rachmaninov: *Tanz der Gnomes* (Liszt). Violin Solo by Joseph Szigeti: *Romanian Folk Dances* (Béla-Bartok). Cello Solo by Gaspar Cassado: *Papillon* (Fauré). Third Movement from the Pianoforte Concerto in G Minor (Saint-Saëns) by Arthur de Greef and the New Symphony Orchestra, conducted by Sir Landon Ronald. Finale from the Violin Concerto (Tchaikovsky), by Bronislaw Huberman. Pianoforte Solo by Ignaz Friedman: *Songs Without Words* (Mendelssohn). Second and Third Movements from the Sonata in C Minor for Violin and Pianoforte (Grieg) by Fritz Kreisler and Serge Rachmaninov.  
3.20—Legal Talk. 3.45—Gardening Talk. 4.5—Topical Programme.  
4.30—Pianoforte Recital by Hermann Reuter. *Kinderszenen*, Op. 15 (Schumann). The Passion—in Nine Inventions (Reutter).  
5.5—*Song Recital* by Eiler Schiöler (Tenor). *Songs* (Grieg): *Ich liebe dich*, *Der Schwann*, *Tränen* (Swendsen). *Fallendes Blatt* (Lange-Müller). *Songs* from "Dances of Death" (Moussorgsky): (a) *Serenade*, (b) *Lullaby*, (c) *The Field-Marshal*.  
5.30—Talk: *Young People in Business.* 5.50—Topical Programme.  
6.15—Talk: *The Conditions of Life presupposed by the Dramatist.*  
6.35—Talk: *Prussia and Agriculture.*  
6.55—"The Witzleben Station informs its Listeners..." 7.0—Topical Talk. 7.10—Labour Market Report. 7.15—Dance Music and Talk. 9.0—News and Sports Notes.

9.10—"Comrades of 1812" Radio Play (Rossmann), followed by Weather, News and Sports Notes and *Concert by the German Symphony Orchestra*, conducted by Ludwig Preiss. Soloist: Erna Pigt (Soprano). Prelude to "The Vintager's Bride" (Nedbal). *Lyric Suite* (Grieg). *Soprano Solos*: (a) *La Pastorella* (Schubert), (b) *Aus deinen Augen fliessen meine Lieder* (Ries). *Scherzo Waltz* and *Malaguena* from "Boabdil" (Moszkovsky). Selection from "La Tosca" (Puccini). *Soprano Solos* (Franz): (a) *Vöglein, wohin so schnell*, (b) *Für Musik*, (c) *Willkommen, mein Wald*. *Waltz* from "Gipsy Love" (Lehár).

BORDEAUX-LAFAYETTE (France)

(PTT.) 986 kc/s (304 m.); 13 kW.  
Transmits at intervals from 12.45 p.m.  
7.30 p.m.—*News and Exchange.*  
7.40—Talk: *The League of Nations and the International Labour Office.*  
7.55—*Results of the Lottery and Charades Competitions.* 8.0—Request Concert on Gramophone Records. 8.15—*News and Weather Forecast.*  
8.30—*Concert of Classical Music on Gramophone Records.* *Largo* (Handel). *Ave Maria* (Bach-Gounod). Selection from "Don Quichotte" (Massenet). Selection from "Messaline" (de Lara). Selection from "Samson and Delilah" (Saint-Saëns).  
9.0—"Madame Chibosse reçoit le..." *Revue* (Maurice Laban). After the Programme, Amusement Guide and Time Signal.

BRATISLAVA (Czechoslovakia)

1,076 kc/s (279 m.); 14 kW.  
Transmits at intervals from 11.0 a.m.  
4.0 p.m.—*Variety Music on Gramophone Records.*  
4.40—*Orchestral Concert* conducted by Fr. Dvk. Overture, "The Caliph of Baghdad" (Boieldieu). *Rhapsody in A Minor* (Dvorák). Selection (Leuschner). *The Dream* (Friml). *Gallop* (Chlup). Bratislava March (Hlza).  
5.10—Film Review. 5.35—See Prague. 6.5—Popular Gramophone Music. 6.40—Serbo-Croatian Report. 7.0—See Prague. 7.20—Introductory Talk to the following Transmission. 7.30—*News*, followed by "The Devil's Wall"—Opera in Three Acts (Smetana), relayed from the National Theatre. 10.0—*Variety Music* on Gramophone Records. 10.30—Programme Announcements and News. 10.35—See Prague.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed from Glerwitz, 1,184 kc/s (253 m.).  
Transmits at intervals from 6.30 a.m.  
4.30 p.m.—*Concert* by the Station Orchestra from the Works of Hans Alibout. 5.30—Market Prices and Book Review. 5.50—Talk on Music. 6.15—Talk on Hygiene: *The Teeth*

10.15 a.m.—The Daily Service.  
10.30—10.45—Time Signal (Greenwich), Shipping Forecast.  
12.0 noon—Reginald Foort, at the Organ.  
1.0 p.m.—Time Signal (Greenwich).  
1.0—The Shepherd's Bush Orchestra, directed by Harry Fryer.  
1.45—2.0—"The Problem of the Difficult Child"—X.  
2.5—For the Schools. Commander Stephen King-Hall: "Tracing History Backwards—1."  
2.25—Interval.  
2.30—Speech Training. Mr. A. Lloyd-James: "King's English."  
3.0—3.45—Evensong, from Westminster Abbey.  
4.0—The B.B.C. Dance Orchestra.  
4.30—The Midland Studio Orchestra.  
4.45—Time Signal (Greenwich).  
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. Debussy's Pianoforte Music.  
6.50—German Talk. Mr. Otto Siepmann.  
7.20—"The Weekly Bulletin of Special Notices."  
7.40—"The Growth of the Modern World Order"—II. Mr. J. L. Hammond.  
8.0—"The Little Ass." A Cornish Comedy by Bernard Walke. Produced by Bernard Walke and Filsen Young, relayed from St. Hilary, Cornwall.  
9.0—Time Signal (Greenwich).  
9.0—"The Second News."  
9.15—Shipping Forecast: New York Stock Market Report.  
9.20—"The Way of the World." Mr. Vernon Bartlett.  
9.35—The B.B.C. Orchestra (Section E), conducted by Victor Hely-Hutchinson.  
10.30—A Short Service, relayed from St. Michael's, Chester Square.  
10.45—12 midnight—Dance Music.  
11.30—Time Signal (Greenwich).

10.15 a.m. (London and Northern)—The Daily Service.  
10.30—10.45 (London and Northern)—Daventry National Programme.  
11.30—12.0 noon (London)—Experimental Television Transmission (Baird Process).  
12.0—Ernest Parsons and his Orchestra.  
1.0—The Northern Studio Orchestra. Harry Burley (Baritone).  
2.0—3.0—Laddie Clarke's Imperial Hydro Hotel Orchestra.  
3.0 (London)—Daventry National Programme.  
3.0—The Studio Orchestra.  
3.30—3.45 (Northern)—Short Stories by Northern Authors.  
4.0 (Northern)—Daventry National Programme.  
5.15—The Children's Hour.  
6.0—"The First News."  
6.30—Regional Bulletin for Farmers.  
6.35 (London)—The London Zigeuner Orchestra. St. Dunstan's Singers.  
6.35 (Midland)—Organ Recital by T. W. North.  
6.35 (Northern)—The Northern Studio Orchestra. The Manchester School Children's Choir, conducted by Gertrude Riall.  
7.10 (Midland)—The Midland Studio Orchestra.  
8.0—A Recital by Dorothea Helmrich (Contralto), and Marguerite de Pachmann (Pianoforte).  
9.0 (London)—A Recital of Gramophone Records, by Christopher Stone.  
9.0 (Midland)—Dance Music, including a Vaudeville Relay from a Birmingham Theatre.  
9.0 (Northern)—A Concert by the Winning Band of the West Riding Brass Band Society.  
9.35—"Mr. W. G. Shewell Cooper: The Northern Garden."  
9.45 (London)—A Reading of "L'Affair Jones," Hillel Bernstein.  
9.55 (Northern)—Concert, continued.  
10.15—"The Second News."  
10.35—11.0 (Midland)—As London.  
10.35—12.0 midnight (London and Northern)—Dance Music.

6.35—Talk: The Zeiss Factory at Jena. 6.55—Weather Report, followed by Surprise Programme. 7.15—See Berlin (Witzleben). 8.50—Announcements.  
9.0—“Hokuspokus”—Play (Curt Goetz). 10.30—Time, Weather, News, Sports Notes and Programme Announcements. 10.45—Esperanto Talk. 10.55—Sports Talk. 11.15 (approx.)—Close Down.

**BRNO (Czechoslovakia)**

87.8 kc/s (342 m.); 35 kW.  
Transmits at intervals from 11.0 a.m. to 1.45 p.m.—See Prague. 7.5—Russian Literature—Reading. 7.20—Introductory Talk to the following Opera. 7.30—“Jacobin”—Opera in Three Acts (Dvorak). 10.0—Light Music on Gramophone Records. 10.30—Announcements. 10.35—See Prague.

**BRUSSELS (Belgium) (No. 1)**

I.N.R. 590 kc/s (509 m.); 15 kW.  
12.15—1.45 p.m.—Weather and Gramophone Concert. Part I. “Cavalleria rusticana”—Opera (Mascagni). Part II. Orchestral Suite from “The Tale of Czar Saltan” (Rimsky-Korsakov). Polovtsian Dances (Borodin). 5.0—Concert relayed from the Hotel Atlante. 6.15—Talk: Pigeon Fanciers of the Past Century.  
6.30—Gramophone Concert. Overture and Rondo from “Manfred” (Schumann). Menuet antique (Ravel). Song of the Flea (Moussorgsky). Oriental Romance (Glasounov). Le Saule (Hahn). Berceuse slave (Neruda). Tes yeux mireurs d'amour (Sylvain Hamy). Crédo d'amour (René Jacobs). Unter dem Grillenbanner (Hankenburger).  
7.15—Talk on Wireless Disturbances. 7.30—Wireless Notes. 8.0—Gramophone Records: Prelude, Chorale and Fugue (Franck).  
8.10—European Concert relayed from Copenhagen. 10.15—Le Journal Parlé.

**BRUSSELS (Belgium) (No. 2)**

N.I.R. 887 kc/s (338.2 m.); 15 kW.  
Programme in Flemish.  
12.15—1.45 p.m.—Weather and Gramophone Concert. 8.41—Johann Strauss Potpourri. Offenbach Potpourri. Orchestral Suite, Namouna (Lalo). Two Selections by the Cuban Cossack Choir (Nitchinsky). Orchestral Suite, Pictures from an Exhibition (Moussorgsky). Dances (Mozart).  
5.0—Concert relayed from the St. Victor Hostel, Turnhout. Soloists: Mme. van Tulden (Accordion). A. Neyrinck and C. Baeten (Songs). March (Fremcoaut). Als 't Zondag is (Hullebroeck). Song, 't Liedeken van den Schilder (Hullebroeck). Accordion Solos: Two Waltzes (Wesly). Geertjes' Biecht (Van Hoey). Song, De Vink (De Klerk). March (Rousseau).  
5.45—Programme for Children by the St. Victor Choir, conducted by Brother Amand. 6.30—Talk on Art. 6.45—Concert conducted by Th. Van Sas. 7.15—Reading. 7.30—Programme for Women.  
8.0—Vocal and Instrumental Concert by the Orchestra of St. Joseph's College conducted by Julien Benoit, the Choirs of Notre Dame Médiatrice conducted by Van den Bogaert, and the Choir of the Parish of the Sacred Heart conducted by J. Brandt. Grand March from “Aida” (Verdi). Choral Selections (Van Hoof): (a) Klaar Bloed en louter worden. (b) O dierbaar Kruis Gods. Soprano and Tenor Arias from “Judas Maccabaeus” (Händel). O bone Jesus for Three Voices (Van den Bogaert). Sonata in G Minor (Tartini). Ave Maria for Mixed Quartet (Brahms). Soprano Aria (Brahms). Duet for Soprano and Contralto from “Judas Maccabaeus” (Händel). O Domine Jesu Christo for Four Voices (Palestrina). Maria Königin for Four Voices (Van den Bogaert). 8.45—Religious Address by the Reverend Father Van Gestel.  
9.0—Concert (continued). Minuet from the Symphony No. 39 in E Flat Major (Mozart). Licht zij uw Geest for A-Capella Male Voice Choir (Mortelmans). Hang nen truisch for Three Voices and Solo (Van Hoof). Song, Brulltied (de Boeck). Song, Paschen (De Boeck). Sunday, for A-Capella Male Voice Choir (Veremans). Te drinken, for Three Voices and Pianoforte (Peeters). Adagio for Violin, Cello and Pianoforte (Gounod). Solo with Pianoforte Accompaniment: Hee welig, won-

nig, milde (Peeters). Choral Selection for Three Voices: O mijn Dietsje (Nees). Psalm for A-Capella Male Voice Choir. KVRO strijdlid (Meulemans).  
9.55—Evening Prayer. 10.0—Le Journal Parlé.

**BUCHAREST (Romania)**

Radio-Bucarest. 761 kc/s (394 m.); 12 kW.  
Transmits at intervals from 12 noon. 5.0 p.m.—Concert of Light and Romanian Music by the Dinico Orchestra. 6.0—News and Time Signal. 6.10—Concert (continued). 7.0—Talks on Music and Art. 7.40—Light Music on Gramophone Records.  
8.0 till Close Down—Italian Evening. 8.0—Address by His Excellency Signore-Prezioso. 8.10—Symphony Concert of Italian Music, conducted by Carlo Brunetti. Solo Violin: M. Koganoff. Italian Hymns. Toccata (Frescobaldi-Malpietro). Two Dances in Old Style (Zecchi). Concerto for Violin and String Orchestra (Vivaldi). Concerto to the Memory of a Young Artist. (First Performance) (Sinigaglia). Piedmontese Rhapsody (Sinigaglia). Symphonic Poem, Eliana (Alfano). In the interval at 9.0—Talk by Alex. Marco on Italian Music. 9.45—News Bulletin.

**BUDAPEST (Hungary)**

545 kc/s (550 m.); 18.5 kW.  
Also relayed on 210 metres from 6.45 till Close Down.  
Transmits at intervals from 9.15 a.m. 6.15 p.m.—English Lesson. 7.45—Pianoforte Recital by Margarete Lidzoffy. Sonata in A Flat Major, Op. 110, No. 2 (Beethoven). Variations, Op. 122 (Chopin). Paysage (Stefániai). Paganini Etude, No. 6 (Liszt). 7.20—Cello Recital by Anton Friss. Larghetto con poco moto (Leonardo). Mazurka in G Minor (Popper). Adagio (Corelli). Larghetto (Weber). Ode (Tcherernin). Song (Debussy). Nocturne (Polgar). Minuet (Valensin). 7.50—Humorous Talk.  
8.10—European Concert relayed from Copenhagen. 10.20 (approx.)—Concert by the A. and J. Toll Cigány Orchestra, from the Kovacevics 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).  
12 noon—Town Hall Chimes. 12.2 p.m.—String Ensemble Concert from the Hotel d'Angleterre. 2.0—3.30—Interval. 3.30—Reading. 3.50—Orchestral Concert from the Wivex Restaurant. 5.0—Programme for Boys. 5.40—Exchange and Market Prices.  
5.50—Talk in English: Radio and the English Language. 6.50—Weather and News. 7.15—Time Signal. 7.16—Talk: The History of Danish Weapons. 7.45—Danish Lesson.  
8.10—Danish European Concert. Twenty-Seventh Concert from The State Broadcasting Building. The Radio Symphony Orchestra, conducted by Launy Gröndahl and Emil Reesen, and the Palestrina Choir, conducted by Mohens Wildike. Part I. Concert Overture, Nachklänge von Ossian, Op. 1 (Gade). Danish Folk Melodies, arranged for Mixed Choir by Thomas Laub: (a) Charsk Strig. Døtre. (b) Age og Else. (c) Stolt Vesselid. (d) Skon Jomfru. Concerto for Pianoforte and Orchestra in C Major, Op. 7 (Kuhlau). Part II. Overture, “Little Christie” (J. P. E. Hartmann). Choral Selections: (a) Modersmalet (Rung). (b) Eventyret i Dyrehaven (Weyse). (c) Natten er saa stille (Weyse). (d) Som en rejselysten Flaade (Carl Nielsen). Concert Overture, Helios (Carl Nielsen). Dance from “Maskerade” (Carl Nielsen).  
10.15—News Bulletin. 10.30—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 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. 7.10—News and Cattle Market Report. 7.30—Time Signal. 7.31—Dialogue in French.

7.45—Dr. Annie Patterson in a Programme of her own Compositions. 8.15—Mezzo-Soprano Solos by Bridie Molony. 8.30—Talk on the Spring Show by E. Bohane. 8.45—Selections by the Station Sextet. 9.0—Tenor Solos by W. G. McLoughlin. 9.15—Violin Solos by T. Collins. 9.30—Sponsored Programme. 10.30—Time Signal, News, Weather Forecast and Close Down.

**FÉCAMP (France)**

Radio Normandie. 1,364 kc/s (219.9 m.); 1 kW.  
12 noon—Popular Music on Gramophone Records. 12.30 p.m.—News Bulletin.  
12.45—Concert of Popular Music. Marcia alla Turca (Mozart). Les Fleurs du passé (Lenoir). Selection from “The Love Parade” (Schertzing). Nos héroïques diables bleus (Courtade). Selection from “La Traviata” (Verdi). Selection from “Manon” (Massenet). The Harmonious Blacksmith (Händel). Chant Vosgien (Marchais). La Vie en rose (de Sylva). En selle (Courtade).  
7.30—Popular Music on Gramophone Records. 7.45—Announcements. 8.0—News Bulletin. 8.30—Concert arranged by the Listeners' Association, relayed from Rouen. 11.0—Concert of Variety Music. 1.0 a.m. (Friday)—Close Down.

**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. 3.30 p.m.—Programme for Children. 5.0 (from Darmstadt)—Concert by the Darmstadt Instrumental Society; relayed from the Saalbau. Conductor: Professor Wilhelm Schmitt. Orchestral Suite, Die Flöte von Sanssouci (Paul Gräner). Concerto in F Minor for Pianoforte and Orchestra (Chopin). Symphonic Dances, Op. 64 (Grieg).  
6.15—Agricultural Notes. 6.25—Topical Talk. 6.50—Talk: Political Constitutions—Austria. 7.15—Time, Programme Announcements, Weather and Economic News.  
7.30—Opera Music by the Station Orchestra, conducted by Reinhold Merten. Soloist: Grete Saggau. Overture, “Robinson Crusoe” (Offenbach). Operatic Arias. Selection from “Die schöne Galathée” (Suppé).  
8.0—“Les Fourberies de Scapin”—Radio Play after Molière.  
9.20—Vocal and Instrumental Concert. Soloists: Herta Reinecke (Soprano) and Winfried Zillig (Pianoforte). Serenade for Pianoforte (Winfried Zillig). Six Songs for Voice, Clarinet, Bass Clarinet, Viola and Cello, Op. 14 (Anton Webern). Symphony, Op. 21 (Anton Webern). 10.20—Time, Weather, News and Sports Notes. 10.45—See Stuttgart. 12 midnight—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.—Dance Music. 6.25—Talk: Radium in the Treatment of Disease. 6.50—Frankfurt Exchange and Hamburg Egg Market Prices. 6.55—Weather Report. 7.0—Topical Talk. 7.15 (from Hanover)—Talk: Friedrich Fröbel, the Founder of the Kindergarten, on the occasion of the 150th Anniversary of his Birth.  
7.30—Opera Concert by the Little Norag Orchestra, conducted by Adolf Secker. Soloist: Herbert Ernst Groh (Vocalist). Overture, “Die Fledermaus” (Joh. Strauss). Song from “La Belle Hélène” (Offenbach). March from “The Merry Peasant” (Fall). Song from “The Count of Luxembourg” (Lehár). Waltz from “The Czardas Princess” (Kálmán). Song from “The Circus Princess” (Kálmán). Waltz from “Eva” (Lehár). Song from “The Rose of Stamboul” (Fall).  
8.10—European Concert relayed from Copenhagen. In the interval, News. 10.15—Time and News. 10.35—Concert of Dance Music, by the Little Norag Orchestra, conducted by Adolf Secker. Minuet (Mozart). Quadrille from “Die Fledermaus” (Joh. Strauss). Cigány Mazurka (Ganne). Waltz,

Hoffungsstrahlen (Lanner). Gallop, In Salk und Braus (Müllöcker). Rosen polka (Vollstedt). Waltz, Schlösser, die im Monde liegen (Lincke). March, Amors Siegeszug (Blon). Waltz, A toi (Waldteufel). Gavotte (Michaelov). Waltz, Barcarolle (Waldteufel). Gallop, Schilfenfahrt (Klose). Lieder-Quadrille (Strauss). Waltz, Hofballtänze (Lanner).

**HEILSBURG (Germany)**

1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.).  
Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert).  
1.5 p.m.—Gramophone Concert of Variety Music. 2.30—3.45—Interval. 3.45 (from Danzig)—Programme for Children.  
4.15—Concert by the Königsberg Opera House Orchestra conducted by Erich Borschel. March, Feuer und Flamme (Männecke). Spring Suite (Nevin-Artok). Hungarian Comedy Overture (Kéler-Béla). Potpourri, Echo der Welt (Zimmer). Waltz from “Gipsy Love” (Lehár). Selection from “The Bird Fancier” (Zeller). Lo studente passa (Ibañez). Gallop, Telefonen (Lüling).  
5.45—Book Review. 6.15—Market Prices. 6.30—Agricultural Talk. 7.0 (from Danzig)—French Conversation.  
7.25—Chamber Music by Willi Pommer (First Oboe), Artur Naatsch (Second Oboe) and Walter Hofstberger (Cor anglais). Trio for Two Oboes and Cor anglais (Artur Naatsch). Variations on the Theme “Reich mir die Hand, mein Leben,” from Mozart's “Don Giovanni” (Beethoven). 8.0—Weather Report.  
8.2—“Lilac Time”—Operetta in Three Acts (Schubert-Berte), relayed from the Opera House, Königsberg. In the intervals at 9.15 (approx.)—Announcements and at 10.30 (approx.)—Weather, News and Sports Notes.

**HILVERSUM (Holland)**

1,004 kc/s (298.8 m.); 8.5 kW.  
Programme of the Algemeene Vereeniging Radio Omroep (A.V.R.O.). 8.40 a.m.—Time Signal. 8.41—Gramophone Records of Light Music. 10.40—Time Signal. 10.41—Daily Service. 10.55—Gramophone Records of Popular Music.  
11.10—Pianoforte and Song Recital by G. J. Lemair and Gerhard Goehart. Prelude and Fugue in C Major for Pianoforte (Bach). Song from “The Magic Flute” (Mozart). Three Intermezzi, Op. 117 for Pianoforte (Brahms). Song from “La Gioconda” (Ponchielli). 11.40—Talk: Cutting out Patterns. 12.10 p.m.—Recital (continued). Pianoforte Solo: Hommage à Rameau (Debussy). Songs (Puccini) from (a) “The Girl of the Golden West.” (b) “La Tosca.” Song from “Rigoletto” (Verdi). Two Etudes in E Flat Minor and C Minor (Chopin). 12.40—Time Signal.  
12.41—Concert by the Little Wireless Orchestra, conducted by Nico Treep. Overture, The Hebrides (Mendelssohn). Andante from the Fifth Symphony (Tchaikovsky). Dance of the Hours from “La Gioconda” (Ponchielli). Selection from “Cavalleria rusticana” (Mascagni). Interlude, Der Rosenhochzeitszug (Jessel). Selection from “The Geisha” (Jones). Interlude, Waltz, Les Patineurs (Waldteufel). Algerian Revue (Kettelbey). Musical Comedy Revue (Petras). Hollywood March (Leopold).  
2.55—3.10—Interval. 3.10—Gramophone Records of Light Music. 3.40—Talk. 4.25—Gramophone Records of Light Music. 4.40—Programme for Hospitals. 5.40—Concert by a Children's Choir. 6.10—Concert relayed from the Central Hotel, The Hague. 7.10—Talk on Sports. 7.40—Song and Pianoforte Recital by Co van Geuns (Vocalist) and Egbert Veen (Pianoforte). 8.10—English Lesson. 8.40—Time Signal. 8.41—Orchestral Selections of Dance Music. 9.10—Recitations and Songs.  
9.30—Concert by the Wireless Orchestra, conducted by Nico Treep. March, Das Lied vom Garderegadier (Roland). Waltz, Ich weiss nicht zu wem ich gehöre (Holländer). Du warst was für mich (Gilbert). Heut' Nacht hab' ich geträumt von dir (Kálmán). Madrid (Speyer). Waltz (Michaelov). Tango (Rosen). March, Wenn di gehst, dann ist mir so zum weinen (Benatzky). 9.55—Accordion Music.

10.15—Concert (cont'd.)—Selection from “Lilac Time” (Schubert-Berte). Overture, “Die schöne Galathée” (Suppé). 10.40—Weather and News. 10.55—Pianoforte Synopses by Hans Beuker and Wouter Denijs. 11.15—Concert (cont'd.). Eine Walzer-Redoute (Hildebrandt). Selection (Borchert): Parade of Jack and Jill (Lake-Lincke).  
11.40—Concert of Light Music. 12.40 a.m. (Friday)—Close Down.

**HUIZEN (Holland)**

160 kc/s (1,875 m.); 8.5 kW.  
8.40—9.55—Programme of the Catholic Radio Society (K.R.O.). Variety Music on Gramophone Records.  
10.40—11.40—Programme of the Christian Radio Society (N.C.R.V.). 10.40—Popular Gramophone Music. 10.55—Programme for Invalids. 11.25—Variety Music on Gramophone Records.  
11.40—2.40 p.m.—K.R.O. Programme. 11.40—Popular Gramophone Music. 12.10 p.m.—Religious Address. 12.40—Police Notes.  
12.55—Concert by the K.R.O. Orchestra, conducted by Johan Gerritsen. March from “The Queen of Sheba” (Gounod). Overture “Ali Baba” (Cherubini). Woodland Sketches (MacDowell). Ballet Suite, Coppélia (Delibes). Overture, “The Gipsy Baron” (Johann Strauss). Waltz, Frühlingstimmen (Johann Strauss). Spanish Caprice, La Morena (Chaminade). Silver Clouds (Kettelbey). Potpourri, Notenregen (Urbach).  
2.40 till Close Down—N.C.R.V. Programme. 2.40—Lesson in Handicrafts. 3.40—Programme for Women. 4.10—4.40—Interval. 4.40—Programme for Invalids. 5.40—Handwork for Young People.  
5.25—Violin Recital by Siegfried Bähler. Mlle. Tr. Rieuverts for Violin and Pianoforte (Haydn). Variations for Pianoforte (Mozart). Minuet (Beethoven). Sonata in G Minor (Senaillé). Allegro spiritoso and Air (arr. de Boer). Gavotte (Bach). Gavotte (Gossec).  
7.25—Dressmaking Lesson. 7.40—Propaganda Talk on Frisia. 8.10—Police Notes. 8.25—Religious News. 8.40—Concert by the “Adama van Scheltema” Male Voice Choir, conducted by Th. v. Zutphen. Soloists: Mme. N. Jansen v. d. Geest (Pianoforte) and Mme. H. Verhoof-van Zutphen (Violin). In the interval at 9.40—Talk for Parents. 10.40—News Bulletin. 11.25—Variety Music on Gramophone Records. 12.10 a.m. (Friday)—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. 4.40 p.m.—Light Music on Gramophone Records. 5.35—Afternoon Concert. 8.10—European Concert, relayed from Copenhagen. 10.30—Dance Music.

**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. 5.0 p.m.—Military Band Music. 6.15—Talk. 6.40—Talk. 7.5—Concert by the Students' Orchestra. 9.25—Part Relay of the European Concert from Copenhagen. 10.35 (approx.)—Close Down.

**LANGENSBERG (Germany)**

Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW.  
Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time and Gramophone Concert).  
11.20 a.m.—Educational Talk. 12 noon—Concert from Munich. 12.50 p.m.—Weather, News and Time.  
1.0—Concert by the Düsseldorf Symphony Orchestra conducted by Hans Paulig, relayed from the Ibach Hall, Düsseldorf. Overture, “Salvator Rosa” (Gomez). Selections from “Mephistopheles” (Boito). Ballet Music from “Faust” (Gounod). Selection from “The Merry Peasant” (Fall). Waltz, Wiener Burger (Ziehrer). Two Songs from “The Flower of Hawaii” (Abraham). Potpourri, Ufa-Tombomben (Borchert). 2.30—Sponsored Gramophone Concert. 3.30—Economic Notes and



THURSDAY continued

Time. 3.50—Programme for Children. 4.10—Notes on the Broadcasts for Schools. 4.20—Educational Talk. 5.0—See Frankfurt. 6.15—Talk on Magdeburg. 6.40—Italian Lesson. 7.0—Weather, Time, Economic Notes and Sports Results. 7.15—Masters of Nature Description—Reading from the Works of Justus von Liebig. 7.35—Talk: The Aachen Coal Mining Industry. 8.0—News Bulletin. 8.10—European Concert relayed from Copenhagen. 10.15—News and Sports Notes. 10.45 (approx.)—Dance Music from Stuttgart. 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 6.30 a.m. 4.30 p.m.—Concert from Heilsberg. 5.30—Weather and Time. 5.50—Economic Notes. 6.5—Hygiene Talk. 6.15—Talk on Taxation. 6.30—Spanish Lesson. 6.50—Talk (to be announced). 7.0—Talk on Social Insurance. 7.30—Popular Song Composers conducting their own Works. Selections from "Traum einer Nacht" (Hans May): (a) Foxtrot, Geh's dir gut, komm' zu mir, (b) Waltz, Traum einer Nacht, (c) Slow Foxtrot, Es gibt Frau'n für's Leben. Selections from "Madame hat Ausgang" (Erwin): (a) Tango, O wie schön ist dein Mund wenn er "ja" sagt! (b) Foxtrot, Mein Herz hat heut' Besuch, (c) Foxtrot, Mein Freund hat die reizendste Freundin der Welt. Selections from "Melodie der Liebe" (Jurmänn): (a) Slow Foxtrot, Ein Lied aus meiner Heimat, (b) Tango, Schade, dass Liebe ein Märchen ist. Tango, Gern möcht ich dich verwöhnen from "Melodie der Liebe" (Kaper). Selections (Grothe): (a) Tango, Für dich für dich, mein Baby, (b) Waltz, Sei mir gegrüsst.

8.30—Dialogue: Music in Leipzig Now and in the Past. 9.—Concert by the "Kreuzchor," conducted by Mauersberger. Singet dem Herrn ein neues Lied (Bach). Spring Songs (Mendelssohn): (a) Vorzeitiger Frühling, (b) Die Nachtigall. Komm' lieber Mai und mache... (Mozart). 9.30—"A Mississippi Picture-Book"

—Literary Selections from Gerstcker to Hauser. 10.15—News and Close Down.

Ljubljana (Yugoslavia) 522 kc/s (574.7 m.); 2.5 kW. Transmits at intervals from 12.15 p.m. 7.0 p.m.—Italian Lesson. 7.30—Serbo-Croatian Lesson. 8.0—Educational Talk. 8.30—Pianoforte Recital. 9.30—Song Recital by Mme. Gjungenac. 10.0—Concert of Folk Music. 10.30—Time, News and Close Down.

LWÓW (Poland) 788 kc/s (381 m.); 16 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items. 7.15—See Warsaw. 7.25—Talk: In the Service of Charity. 7.35—See Warsaw. 8.10—European Concert relayed from Copenhagen. 10.15—See Warsaw. 10.25—Talk: The History of a Humorous Transmission. 10.40—Dance Music from the Bagatela Variety Theatre. 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. 4.0 p.m.—Programme for Children. 7.0—Light Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South East. 8.30—Literary Programme.

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 Concert. 9.15—News and Political Review. 9.30—10.0—Interval. 10.0—French Lesson on Gramophone Records. 10.30—Chimes, Time, Political Review and Song Recital. Piscatore e pusillero (Musolo-Tagliaferri). Guaparría (Falvo). Sweet Mystery of Life (Herbert). Selection (Cooke and Rey). Sevillana (Ochoa-Longás). Playera (Granados). A Cuba (Schipa). Gitana (Ochoa-Longás).

11.15—Concert conducted by Marquina, relayed from the Hotel Nacional. 12.45 a.m. (Friday)—

News Bulletin. 1.0 (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. 7.0 p.m.—See Prague. 7.20—Introductory Talk to the following Transmission. 7.30—"La Bohème"—Opera in Four Acts (Puccini), relayed from the National Theatre. 10.0—Light Music on Gramophone Records. 10.30—Programme Announcements and Theatre Guide. 10.35—See Prague.

MOSCOW (Russia) Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 4.0 p.m.—Proletariat Radio Journal. 5.0—Peasant's Radio Journal. 6.0—Programme to be announced. 8.0—Review of the Week and Answers to Correspondence in German and English. 9.55—Chimes and 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, "Hans Heiling" (Marschner). Intermezzo, No. 2 (Gal). Selection from "Rigoletto" (Verdi). Waltz-Intermezzo, Dreams of Old Vienna (Friday). Selection from "Die Dubarry" (Millöcker-Mackeben). Waltz, Weaner Madln (Ziehrer). Spring Serenade (Lacombe). March, Der Tausendkünstler (Blankenburg). 6.15—Weather and Agricultural Report. 6.25—Talk on Careers: The Teaching Profession. 6.45—Agricultural Talk. 7.5—"For the Peasant"—a Sketch of Peasant Life (Bernhard Wagner). 7.40—Gay Songs by the Weninger Double Quartet. 8.0—Talk on the Exhibition of Old Russian Art in Berlin. 8.20—Mandoline and Guitar Concert. Overture, "King Midas" (Eilenberg). Waltz, Fior Trentino (Sartori). Sinfonietta for Guitar (Schmid-Kayser). Caprice, Il canto del Diavolo (Sartori). March, Mit frohem Mut (Hoffmann). 8.50—Talk on Films. 9.10—Symphony Concert by the Wireless Orchestra, conducted by Hans Winter, Josef Pembaur (Pianoforte), Olga Wismüller (Soprano) and Irmingard Gross (Mezzo-Soprano). Musik zu einem romantischen Märchen (Kallenberg). Three Songs for Two Voices and Orchestra (Würz): (a) Dämmerung, (b) Der Abend, (c) Im Mondlicht. Wireless Suite in Four Movements (Zoellner). Todten Tanz—Paraphrase on "Dies Irae" for Pianoforte and Orchestra (Liszt). Easter Overture (Rimsky-Korsakov). 10.20—Time and News.

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.); Porsgründ, 662 kc/s (453.2 m.); and Rjukan, 671 kc/s (447.1 m.). Transmits at intervals from 10.0 a.m. 5.0 p.m.—Concert by the Station Orchestra conducted by Hugo Kramm. Soloist: Henry Alf (Vocalist). Prayer and Temple Dance from "Olav Trygvason" (Grieg). Norwegian Suite (Gaston Borch). Popular Norwegian Songs. Romance (Svendsen). Pierrette (Andersen-Wingar). Norwegian Songs. From Town to Village (Olsen). 6.0—German Lesson. 6.30—Divine Service. 7.0—Announcements, News and Weather Forecast. 7.30—Talk: The Land of Coffee. 8.0—Time Signal. 8.1—Agricultural Talk: The Feeding of Animals. 8.30—European Concert relayed from Copenhagen. 9.45—Weather and News Bulletin. 10.0—Topical Talk. 10.15 (approx.)—Close Down.

PALERMO (Italy) Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 6.0 p.m.—Programme for Children. 6.30—8.0—Interval. 8.0—Announcements, Agricultural Notes and Giornale Radio. 8.20—Light Music on Gramophone Records. 8.30 (in an interval)—Time Signal and Announcements. 9.0—"La cena delle beffe"—Opera in Three Acts (Giordano), conducted by Fortunato Russo. Film Notes and Talk in the intervals. After the Transmission, News Bulletin.

PARIS (France) Eiffel Tower (FLE). 297.5 kc/s (1,145.7 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: Amateurs, Actors and Audience. 7.0—Le Journal Parlé. 8.20—Weather Report. 8.30—Gramophone Concert. Symphony No. 35 (Mozart). Oriental Suite (Popy). Hungarian Air (Raes). Jamais (Cazes). Ce sont des mots (Gey). Waltz, Summer Evening (Waldteufel). Selection (J. Strauss). When the Butterflies (Gael). Gavotte, Princess (Scott). Jazz Caricature (Ralph). Monastery Bells (Myers). The Three Brothers (Myers). March of the Toreadors (Volpatti). Wienerspaziergange (Komzak). In a Persian Market (Ketebeq). Waltz from "The Countess Maritza" (Kalmán). Cuban Habanera (Fuentes). Ay, Ay, Ay! (Freire). Polka (Blanc). Accordion Solo: Simplement (Luty). March (Zita).

PARIS (France) Poste Parisien. 914 kc/s (328.2 m.); 1.2 kW. 12 noon—Gramophone Records, News and Announcements. 12.15 p.m.—Variety Music on Gramophone Records. 1.45—News and Announcements. 2.0-6.45—Interval. 6.45—News and Announcements. 7.0—Light Music on Gramophone Records, Talks and News. 7.30—Concert of Popular Music on Gramophone Records. 8.30—Gramophone Records, Talk, and News. 8.45—Vocal and Instrumental Con-

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## THURSDAY continued

cert. Overture and March from "The Ruins of Athens" (Beethoven). Symphony, No. 8—the Unfinished (Schubert). Selection from "Carmen" (Bizet). Scherzo (Moussorgsky). Wedding March from "A Midsummer Night's Dream" (Mendelssohn). 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 Lesson.  
7.30—Weather and Physical Culture (continued). 7.45—Variety Music on Gramophone Records. 8.0—News, Weather and Press Review. 12 noon—Protestant Address by the Reverend Freddy Durrelman.  
12.30—Gramophone Concert for Young People. 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 and Racing Results.  
7.0—Talk by M. Yves Le Trocquer: A European Five-Year Plan. 7.30—German Lesson. 7.45—Review of the German Press, Commercial Prices and News.  
8.0—Gramophone Concert. Overture, "The Barber of Seville" (Rossini). Villanelle (Dukas). Concerto in E Flat Major, for Piano and Orchestra (Liszt). 8.30—News, Sports Notes and Weather. 8.40—Review by Georges Colomb.  
8.45—"Cavalleria Rusticana"—Opera (Mascagni) on Gramophone Records by the Cast of the Scala Milan under the direction of Molajoli. In the interval at 9.30—Press Review and News.

### POZNAŃ (Poland)

896 kc/s (335 m.); 1.9 kW.  
Transmits at intervals from 11.45 a.m. to 6.50 p.m.—Miscellaneous Items and Announcements. 7.15—Agricultural Report. 7.30—See Warsaw. 7.50—English Lesson on Linguaphone Records. 8.10—10.20—See Warsaw. 10.20—Time Signal, Sports Notes and Police Report. 10.35 (approx.)—Close Down.

### PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW.  
Transmits at intervals from 11.0 a.m. to 4.10 p.m.—Orchestral Concert conducted by Fr. Dyk, relayed from Bratislava. 5.10—Talk in Russian. 5.25—Talk. 5.35—Programme for Children. 6.5—Agricultural Report. 6.15—Talk: Workers and Social Problems in Yugoslavia. 6.25—German Transmission: News; Talk on New Books; Agricultural Report. 7.0—News Bulletin. 7.5—Programme by Professor Zacek. 7.20—"A Spring Evening in Prague"—Programme of Recitations and Gramophone Records.  
8.10—European Concert relayed from Copenhagen. In the interval at 9.0—Time and News. 10.0—Time and News. 10.30—Announcements. 10.35—Gymnastics.

### RABAT (Morocco)

721.1 kc/s (416 m.); 6 kW.  
12.30 p.m.—Concert of Light Music. March (Souza). Waltz, España (Waldteufel). La Serenata (Braga). Selection from "Le Roi d'Ys" (Lalo-Mouton). Song: Estrellita (Ponce). Meditation from "Thais" (Massenet-Mouton). Selection from "Mignon" (Thomas-Tavani). Pianoforte Solo: Toccatina (Philipp). Petite Suite d'Orchestre (Bizet-Mouton). Neapolitan Song (Tosti). Arabesque No. 1 (Debussy-Mouton).  
2.0—3.30—Interval. 3.30—Programme for Children. 4.0—Light Music on Gramophone Records. 5.0—7.0—Interval. 7.0—Arab Transmission: Talk, Radio Journal and Gramophone Records. 7.45—Radio-Journal, Weather Report and News. 8.0—Bizet Concert. Introductory Talk by Jean Giardino. Overture, "Patrie." Song from "Carmen." Selection from "L'Arlesienne." 9.0—Talk by M. Richard. 9.15—Dance Music—from 1900 to 1932. 9.45—Relay of Foreign Stations.

### 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.).  
Transmits at intervals from 12.30 p.m. to 4.32 p.m. (from Montreux)—Concert by the Kursaal Orchestra, conducted by M. Spindler. 5.45 (from Lausanne)—Popular Music on Gramophone Records. 6.30 (from Geneva)—Talk on Film. 6.45 (from Geneva)—Programme for Children. 7.0—

Weather Forecast. 7.1 (from Geneva)—Light Music on Gramophone Records. 7.10 (from Geneva)—Esperanto Lesson. 7.30 (from Geneva)—English Lesson. 7.55—Announcements. 8.0 (from Geneva)—Talk: The Work of the Disarmament Conference.

8.10 (from Lausanne)—Concert by the Dresden String Quartet. Quartet in E Flat (Mozart). Quartet in E Minor, Op. 59, No. 2 (Beethoven).

9.5—Concert by the Station Orchestra, conducted by Fernand Clouet. 10.15—Weather and News. 10.30 (approx.)—Close Down.

### RIGA (Latvia)

572 kc/s (525 m.); 15 kW.  
Transmits at intervals from 11.0 a.m. to 4.30 p.m.—Concert by a Wind Instrument Band. Festival Overture (Smetana). Selection from "The Bartered Bride" (Smetana). Waltz, Radomir (Novy). Selection from "Der Freischütz" (Weber). Du Passé (Oberthor). Czardas (Grossmann). Selection from "Toreador and Andalous" (Rubinstein). March. 5.30—Talk on the results of Latvia. 6.0—Talk on Wireless. 6.30—English Lesson. 7.0—Weather Forecast.

7.5—Concert of Popular Music. Selection from "Fra Diavolo" (Auber). Songs and Airs. Suite L'Arlesienne (Bizet). Songs and Airs, España (Chabrier). 8.0—News Bulletin. 8.20—Concert of Waltzes and Marches. French Military March (Saint-Saëns). Waltz, El Turia (Granados). Swedish Wedding March (Södermann). Waltz (Josef Strauss). Waltz, Tounjours ou Jamais (Waldteufel). Radetzky March (Johann Strauss). Waltz, Die Schönbrenner (Lanner). Turkish March (Beethoven). 9.0—Weather and News Bulletin. 9.25—See Copenhagen.

### ROME (Italy)

Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relay by Naples, 941 kc/s (319 m.) and 2KO, 11,810 kc/s (25.4 m.).  
Transmits at intervals from 8.15 a.m. to 12 noon—Variety Music on Gramophone Records. In the intervals at 12.35 p.m.—Weather at 1.15—News Bulletin and at 1.30—Time and Announcements.  
5.30—Soprano Song Recital. Si cerca, si trova (Pergolesi). Aria from "La vergine del sole" (Cimarosa). Cavatina from "Linda di Chamounix" (Donizetti). 5.45—Orchestral Concert. Soloist: Adele Caputo (Pianoforte). Overture, "La dame blanche" (Boieldieu). Pianoforte Solos: Hungarian Rhapsody, No. 2 (Liszt). First Arabesque (Debussy). Pianoforte Solos: (a) Serenade (Schubert-Liszt), (b) Mazepa (Liszt). Dance of the Waves from "Loreley" (Catalani).  
6.15—Talk: The Roman Dialect. 6.55 (from Naples)—Shipping Report. 7.0—Agricultural Report, Announcements and Press Review. 8.0—Time, Announcements and Variety Music on Gramophone Records. 8.30—Talk for Housewives. 8.45—"Rome and the Festival of Labour"—Gala Concert. In the intervals, Cinema Notes and Talk. 10.55—News Bulletin.

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

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relay at intervals by W2XAF on 9.530 kc/s (31.48 m.); and by W2XAD on 15,349 kc/s (19.56 m.).  
Transmits at intervals from 12.45 p.m. to 9.30 p.m.—Woman's Radio Report from New York. 10.0—Musical Comedy Hits from New York. 10.30—Stock Reports and Police Notices. 10.45—Musical Ad Men. 10.55—News Items. 11.15—12 midnight—New York Relay. 11.15—"Skipper." 11.30—Swanee Serenaders. 11.45—Happy Rose Dance Orchestra. 12 midnight—Joe and Eddie. 12.15 a.m. (Friday)—Annette McCullough (Crooner). 12.30—Musical Programme. 12.45—Lady Fingers. 1.0 (WGY only)—Musical Programme from New York. 1.0 (W2XAF only)—Stock Reports and News Items. 1.15—5.0—New York Relay. 1.15—Campbell Orchestra. 1.30—Prince Albert Quarter Hour. 1.45—Trials of the Goldbergs. 2.0—Fleischman Hour.  
3.0—Big Six of the Air. 3.30—Adventures of Sherlock Holmes. 4.0—Lucky Strike Dance Hour. 5.0—Debate—Union v. St. Lawrence. 6.0—Jack Pettis' Orchestra. 6.30—New Kenmore Orchestra. 7.0 (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.).  
12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather Report 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. 4.0—Light Music on Gramophone Records. 5.0 (from Basle)—Book Review. 5.30—Weather Report. 5.35—6.30—Interval.

6.30—Favourite Theme Songs from Sound-Films on Gramophone Records. 7.0 (from Zurich)—Talk: The Education of Orphans. 7.28—Time Signal and Weather Report. 7.30 (from Zurich)—Talk: The Path to Happiness. 8.0 (from Basle)—Programme in Celebration of the Centenary of the Swiss Gymnastics Society. 8.30—Radio Sequence from the Festival Performance for the Centenary of the Swiss Gymnastics Society, by Bernhard Moser, with Music by Richard Flury. 10.0—Weather, News and Traffic Report. 10.15 (approx.)—Close Down.

### STOCKHOLM (Sweden)

Radiojäst (SASA). 689 kc/s (436 m.); 55 kW. Relay 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, 380 kc/s (770 m.); and Sundsvall, 554 kc/s (542 m.).  
Transmits at intervals from 7.20 a.m. to 5.0 p.m.—Divine Service. 5.30—Children's Correspondence. 5.45—Variety Music on Gramophone Records. 6.45—Elementary German Lesson from Göteborg. 7.15—Weather and News. 7.30—Talk: Careers for Boys. 8.0—"Doctor Knock"—Play (Romains), relayed from Malmö, 1,301 kc/s (231 m.). 9.25—Talk: Foreign Politics. 9.45—Weather and News. 10.0—Chamber Music Concert, conducted by Tor Mann. Suite, Studentenmusik (Rosenmüller). Four Old Dance Pieces (Niemann). Folk Songs for Strings Orchestra. Suite for Strings (Nielsen). 11.0 (approx.)—Close Down.

### STRASBOURG (France)

Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW.  
11.30 a.m.—Gramophone Concert. Selections from the Nutcracker Suite, (b) Si je le savais, (c) Nouvelle mariée. Selections (Chopin): (a) Berceuse in D, (b) Etude in C Sharp. Près de toi, ma brune (Raiter). A la loyale (Leroux). Entr'acte from "Mignon" (Thomas). Suite algérienne (Saint-Saëns). Czardas No. 2 and Zika No. 7 (Michiels). Do you like Chopin? (Huertas). Magica (Johansen). Un spectateur grincheux (Marsanche).  
12.45 p.m.—News in French and German. 1.0—Time Signal.  
1.2—Gramophone Concert. Prelude to "Tristan and Isolde" (Wagner). Selections from "Faust" (Gounod). (Rabaud) Selections from "Fortunio" (Messenger). Les Berceaux (Faure). Die Forelle (Schubert). Si mes vœux avaient des ailes (Hahn). Prayer (Hasselmanns).  
2.0—3.0—Programme for Children. 4.0—Gramophone Concert of Dance Music. 4.45—Elocution Lesson in French. 5.0—Dance Music. 6.0—Talk in French: The French Art Exhibition in London. 6.15—Talk in French: The Nutritive Value of Fish.  
6.30—Orchestral Concert. March (Translatour). Waltz, Aquarellen (Jos. Strauss). Serenade (Lalo). Overture and Song from "Armide" (Gluck). Selection from "The Barber of Seville" (Rossini). Song: Il neige (Bemberg). Selection from "Passionnement" (Messager). March (Blankenburg).  
7.30—Time Signal. 7.32—News in French and German. 7.45—Orchestral Concert. March Dansant (Rosen). Waltz, The "Casanova" (Lincke). Viennese Operetta Potpourri (Hruby). Havanaise (Février). Cocur brisé (Gillet). Fête Alsacienne (Missa).  
8.30—Concert from the Works of the Alsatian Composer, M. J. Erb, with the collaboration of the Composer.

Sonata for Pianoforte and Violin. Songs: (a) Cauchemar, (b) Sur le chant des Bateliers de la Volga. Three Pieces for Pianoforte, El Alsace: (a) Le Dimanche soir, les Filles d'Alsace chantent au loin, (b) Les Ruines de l'Abbaye de Murbach, (c) La Chanson du Finkwiller. Si le Roi n'avait donné. Des Oiseaux d'or se sont croisés. Suite for Clarinet and Pianoforte. Sonata for Horn and Pianoforte. Song: Dans le Jardin de Réve. Nocturne for Pianoforte. Humoresque for Pianoforte. Pourquoi je vous chante, prairies. Des Ormes, des haies délicieuses. Waltz for Pianoforte Duet, Violin and Cello. 10.30 (approx.)—Close Down.

### STUTTGART (MÜHL-ACKER) (Germany)

Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relay by Freiburg, 527 kc/s (570 m.).  
Transmits at intervals from 6.0 a.m. to 10.0 a.m.—Beethoven Concert on Gramophone Records. Leonora Overture, No. 3. Adagio from Sonata No. 6. Adagio. Overture, Coriolanus. Adagio from the Sonata in C Sharp Minor—the Moonlight Sonata. Adagio from the Sonata Pathétique in C Minor. Allegretto from the Eighth Symphony. Turkish March from "The Ruins of Athens." Overture, Egmont, by the Berlin State Opera House Orchestra.  
11.0—News, Time and Weather. 11.15—Sponsored Programme for Housewives. 12 noon—Concert from Munich. 12.50—Time, News, Programme Announcements and Weather. 1.0—Gramophone Concert of Light Music. 2.0—Sponsored Gramophone Concert. 2.15—News Bulletin. 2.30—Elementary Spanish Lesson. 3.0—Elementary English Lesson. 3.30—See Frankfurt. 4.30—Talk: Friedrich Froebel on the One Hundred and Fiftieth Anniversary of his Birth. 5.0—See Frankfurt. 6.15—Time and Agricultural Notes. 6.25—Talk: The Prevention of Noise. 6.50—10.20—See Frankfurt. In the interval at 7.15—Time and Weather. 10.20—News, Time, Programme Announcements and Weather Report. 10.45—Concert by the Dance Ensemble of the Philharmonic Orchestra. 12 midnight (approx.)—Close Down.

11.15—Sponsored Programme for Housewives. 12 noon—Concert from Munich. 12.50—Time, News, Programme Announcements and Weather. 1.0—Gramophone Concert of Light Music. 2.0—Sponsored Gramophone Concert. 2.15—News Bulletin. 2.30—Elementary Spanish Lesson. 3.0—Elementary English Lesson. 3.30—See Frankfurt. 4.30—Talk: Friedrich Froebel on the One Hundred and Fiftieth Anniversary of his Birth. 5.0—See Frankfurt. 6.15—Time and Agricultural Notes. 6.25—Talk: The Prevention of Noise. 6.50—10.20—See Frankfurt. In the interval at 7.15—Time and Weather. 10.20—News, Time, Programme Announcements and Weather Report. 10.45—Concert by the Dance Ensemble of the Philharmonic Orchestra. 12 midnight (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. to 7.5 p.m.—Quintet Concert. On the Wooden Horse (Evans). Selection (Reimers). Mattinata from the "Suite giardica" (Amadei). Passione mia (Leonardi). Selection from "Francesco da Rimini" (Zandonai). Hungarian Dances from "Il vassallo" (Smareglia). Picaflor (De Micheli).  
8.0 till Close Down—See Turin.

### TURIN (Italy)

Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relay by Milan, 995 kc/s (331.5 m.); and Genoa, 959 kc/s (312.8 m.).  
Transmits at intervals from 8.15 a.m. to 7.5 p.m.—Concert of Variety Music. Prelude, "Faust" (Gounod). Marisetta (Brancucci). Fascino (Marchetti). Nedy (Andlovitz). 7.30—Time Signal and Announcements. 7.31—Concert of Popular Music. Selection from "The Bartered Bride" (Smetana). L'ostessen! (Ziehrer). Festa villereccia (Billi). Chineseische Wachtparade (Lincke).  
7.30—Light Music on Gramophone Records. 8.0—Giornale Radio and Weather Forecast. 8.15—Instrumental Concert. 8.30—Talk for Housewives. 9.0—An Opera (to be announced) In the intervals, Film Notes. Talk: Unpublished Poems and Giornale Radio. After the Programme, News.

### VIENNA (Austria)

Radio-Wien. 581 kc/s (517 m.); 15 kW. Relay 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. to 5.45 p.m.—Concert by the Ija Livschakov Orchestra. Potpourri of Dance Music (Dostal). Slow Foxtrot, When the Wind blows (Heymann). Rustle of Spring (Sinding). Mattinata (Leoncavallo). Potpourri of Tunes from the Sound Film "Ronny" (Kalman). Selection from "White Horse Inn" (Benatzky-Krome). Paso doble, Mexico (Bibo-Rochr).

6.10—Talk: The History of the Play-Bill. 6.35—Talk: Permissible and Non-Permissible Advertisement. 7.0—Talk: Characteristics of the North German Race. 7.20—Time Signal, Weather Report and Programme Announcements. 7.30—Weekly Feuilleton.  
8.0—Military Band Concert, conducted by Gustav Gaigg. Florentine March (Fucik). Waltz, Faschingskinder (Ziehrer). Overture, "Der Königsleutnant" (Tittl). Selection from "Le Tribut de Zamora" (Gounod). Foxtrot (Strocker). March-Foxtrot (Ascher). Polka-Mazurka (Prayer). Lehár-March (Bass). Potpourri, From the Rhine to the Danube (Rhode). Waltz, Nachtschwärmer (Ziehrer). Jungschützenmarsch (Gaigg).

9.25—Part Relay of the European Concert from Copenhagen. 10.15—Weather, News and Announcements. 10.30—Programme of Dance Music by the Karl Krall Jazz Band, with Emil Petroff (Vocalist). Two Pieces from the Sound Film "Eine Stunde mit Dir" (Oscar Straus) conducted by the Composer. Foxtrot, For a Little Love (Nicholls). Foxtrot, Kiss Me (Kálmán). Foxtrot: Du bist verückt, mein Schatz (Rotter-Kaper). Rumba: Ruth, tanze heute mit mir kubanisch (Meisel). Tango, In Santa Lucia (Otto Stransky). Tango: Mein Fräulein, ich verehere Sie (Franz Grothe). Foxtrot Fantasia from "The Bird Fancier" (Kochmann-Zeller). Slow Foxtrot, I'm happy when you're happy (Davis Böer). English Waltz, Ich mocht' wieder einmal verliebt sein (Stolz). Foxtrot (Nicholls). Foxtrot, I'm just wearing out my heart for you (Keyes-Layton). Tango, The Neapolitan Flower Girl (Lander). Tango, Es muss was Wunderbares sein (Benatzky). Foxtrot, Rollin' down the river (Waller). Foxtrot, A Little Kiss each Morning (Woods). Slow Foxtrot, Die ganze Welt ist himmelblau (Stolz). English Waltz, Will dir die Welt zu Füßen legen (Abraham). Foxtrot (Ropollo-Mares-Morton).

### WARSAW (Poland)

Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW.  
11.20 a.m.—Aviation Weather Report. 11.25—Interval. 11.45—Polish Press Review. 11.58—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Weather Forecast. 12.15—Agricultural Talk.  
12.35—Twenty-Fourth Educational Concert by the Warsaw Philharmonic Orchestra. Mixed Choir and Soloists, with Address by T. Mayzner. 2.0—Interval. 2.45—Light Music on Gramophone Records. 3.5—Economic Report and Exchange Quotations. 3.15—Announcements. 3.20—Interval. 3.25—Historical Talk: Kosciuszko. 3.45—Hydrographic Report. 3.50—Programme for Young People. 4.15—Interval. 4.20—Intermediate French Lesson. 4.40—Light Music on Gramophone Records. 5.10—Talk: The Problem of Large Towns.  
5.35—Afternoon Concert. Soloists: Mme. Familier-Hepner (Pianoforte), Z. Kowarska (Soprano), and H. Dytner (Pianoforte). Pianoforte Solos: (a) Etude (Zareb-sky), (b) Tarantella (Zareb-sky). Soprano Solos: (a) Recitative and Romance from "Der Paria" (Moniuszko), (b) Song from "The Enchantress" (Tchaikovsky). Variations for Two Pianos on a Theme by Beethoven (Saint-Saëns). Two Soprano Solos: (a) The Swan (Szymanovsky), (b) Love (Nic-wiadomsky). Old Norwegian Song with Variations for Two Pianofortes (Grieg).  
6.50—Miscellaneous Items. 7.15—Agricultural Report. 7.25—Programme Announcements. 7.30—Sports Notes. 7.35—Radio Journal. 7.50—Talk on the Town of Lodz. 8.5—Interval.  
8.10—European Concert relayed from Copenhagen. 10.15—Radio Journal. 10.20—Weather and Police Report. 10.30—Dance Music. 12 midnight (approx.)—Close Down.

### WILNO (Poland)

533 kc/s (563 m.); 16 kW.  
Transmits at intervals from 11.58 a.m. to 7.0 p.m.—Answers to Correspondents. 7.20—Programme Announcements and Notices. 7.35—See Warsaw. 7.50—Talk on Music. 8.10—See Warsaw. 11.0—Relay of Foreign Stations. 12 midnight (approx.)—Close Down.

# FRIDAY (April 22)

## PRINCIPAL EVENTS

### SYMPHONY CONCERTS

- 7.35 p.m. Vienna: The Professors of the State Academy.  
 8.15 " Warsaw: The 9th Symphony (Beethoven).

### CONCERTS (Vocal and Instrumental)

- 5.0 p.m. Brussels No. 2: Goethe programme.  
 7.40 " Budapest: From the Hochschule.  
 8.0 " Stockholm: Swedish programme.  
 8.30 " Langenberg: Choral programme.  
 8.40 " Breslau: "Liebeslieder Walzer."  
 9.15 " Heilsberg: New Russian Music.  
 9.30 " Stuttgart, Frankfurt: Modern German Music.  
 10.10 " Copenhagen.

### OPERAS AND OPERETTAS

- 8.30 p.m. Strasbourg: "The little Michus" (Messenger).  
 8.45 " Rome: "The Countess Maritza" (Kálmán).  
 9.10 " Berlin (Witzleben): "Der reiselustige Kasperle" (first performance).  
 11.0 " British Regional: "Comus" (Milton), with music by Arne, relayed to the U.S.A.

### CHAMBER MUSIC

- 5.5 p.m. Prague: String Quartets.  
 8.5 " Munich: String Trios (Beethoven, Reger).  
 10.45 " Frankfurt, Stuttgart: for Strings, harp and wood-winds.

### PLAYS AND TALKS

- 4.45 p.m. Radio-Paris: "The History of Music" (M. Chantavoine) No. XXII.  
 8.45 " Munich, Königs Wusterhausen: "The Government Inspector" (after Gogol).  
 8.45 " Radio-Paris: Courteline Festival.  
 9.0 " Leipzig: "The Flood" (Barlach).

### DANCE MUSIC

- 10.45 p.m. Berlin (Witzleben), KönigsWusterhausen.

### Max Reger

Max Reger was a prolific composer in almost every known form, and though many of his larger works are as yet but little known, his chamber music and



Max Reger

songs especially, are now widely recognised as among the best things which Germany has given us since Brahms. But for the greater part of his short life he was involved in one conflict after another with most sections of the musical world

and only in his last years did anything like recognition of his great gifts come to him. He was not one who cared for honours and rewards, and though

his latter years these were accorded him in generous measure, it probably meant far more to him that the best intelligences of the world of music had begun to recognise him as above everything else an immensely sincere composer with a profound reverence for beauty. Uncompromisingly honest in character, as in his music, he had, too, a rich sense of humour, and that finds its way into his music no less certainly than his earnestness. The strong and vigorous trio which MUNICH station is broadcasting this evening, is full of a truly youthful spirit of vitality, and its departures from tradition are much more apparent than real. LEIPZIG Station is devoting a morning hour this week, from nine till ten on Sunday, to Reger's chamber music and songs.

A Crazy Friend of Schumann's According to Carlyle, E. T. A. Hoffmann "wasted faculties which might have seasoned the nectar of the gods." He was certainly gifted in a dozen ways as very few mortals are even in one, and as musician, painter, or author, could have been among the greatest men of his day had he devoted himself steadily to one calling. But his was a wayward and unstable character, though it must have been a lovable one; he had many staunch friends, Weber and Schumann among them. It is by the appearance of characters from his writings in Schumann's pianoforte music that he is best known now, but his own generation hailed his books with delight, and many of them were translated into other tongues. As a musician, his chief claim to be remembered is the composition of eleven operas and a good deal of other music for the stage, as well as many smaller pieces. But he was a distinguished conductor and performer too, and more than once had experience as a theatrical manager. It may be that his books and drawings will live longer than his music, full of original qualities though much of it is; it is so seldom heard now that listeners are bound to welcome the chance which FRANKFURT station offers this evening, of hearing one of his pieces.

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

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

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

#### ALGIERS (N. Africa)

825.3 kc/s (363.3 m.); 13 kW.  
 Transmits at intervals from 12.30 p.m. 7.0 p.m.—Tangos. 7.15—Financial Report, Agricultural Notes and Weather Forecast. 7.25—Shipping Report. 7.30—Agricultural Talk. 7.45—Instrumental Solos. 7.55—News and Time Signal. 8.0—Concert of Modern French Music by the Station Orchestra, conducted by Hubert Guillet. Soloists: M. Boussuge (Flute), M. Tessier (Violin), Mlle. Buffart (Viola), M. Neri (Cello) and M. Balzia (Oboe). Selection from "Cydalise et le Chevrepié" (Pierné). Serenade for Flute (Roussel). Divertissement (Ibert). Naissance du Poème (Divoire). Prelude to "Pénélope" (Fauré). Le Petit Elfe ferme l'Œil (Schmitt). Selection from "King David" (Honegger). 8.15—Songs. 8.30—Dance Music relayed from the Casino.

#### BARCELONA (Spain)

Radio-Barcelona (EAJI). 860 kc/s (349 m.); 8 kW.  
 Transmits at intervals from 8.30 a.m. 8.0 p.m.—Concert by the Station Trio. Serenade (Heymann). The Magic Moon (Humphries). Selection from "Le Roi l'a dit" (Delibes). Le Chant des Abeilles (Filipucci). 8.30—Exchange Quotations and Elementary French Lesson. 9.0—Request Programme of Gramophone Records, and Press News. 10.0—Chimes, Weather Report and Market Prices, followed by Relay of Foreign Stations. 10.30—Dance Music by the "Demons" Jazz Orchestra. 11.0—Talk in Catalan. 11.10—Concert by the Station Orchestra. Overture, "Undine" (Lortzing). En la Giralda (Turina). Selection from "Parsifal" (Wagner). 11.35—Concert by the Vilalta Orchestra, relayed from the Café Español. 1.0 a.m. (Saturday) (approx.)—Close Down.

#### BELGRADE (Yugoslavia)

697 kc/s (430.4 m.); 2.5 kW.  
 Transmits at intervals from 11.0 a.m. 6.55 p.m.—Programme Announce-

ments. 7.0—Czech Lesson. 7.30—Talk (to be announced). 8.0—Talk for Sokols. 8.30—Violin Recital by Herr Milan Dimitrijevic. Sonata in G Minor (Händel). Sixth Sonata (Bach). Sérénade mélancolique (Tchaikovsky). Romanza andaluzza (Sarasate). 9.10—Songs by Frau Ludmilla Slatin. 9.40—Pianoforte Recital by Frau Ivanka Petrovic. Suite in D (Rameau). Le tic-toc-choe (Couperin). Two Songs without Words (Mendelssohn). The Musical Box (Sauer). Islamey (Balakirev). 10.30—News and Sports Notes. 10.50—Dance Music relayed from the "Ruski Car" Restaurant.

#### BERLIN (Germany)

Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.  
 Transmits at intervals from 5.45 a.m. 4.30 p.m.—Concert from Leipzig. 5.30—Talk: Realism in Literature of the Nineteenth Century. 6.0—Talk: Unfamiliar German Music from the time of Bach. 6.30—Talk: Political Economy. 6.55—Weather for Farmers. 7.0—Talk for Veterinary Surgeons. 7.30—Talk for Workers, followed by Weather for Farmers. 8.0—Orchestral Concert, conducted by Ilja Livschakoff from the Hotel Bristol. 8.45—See Munich. 10.20—Weather, News and Sports Notes, followed by Dance Music from Berlin (Witzleben).

#### BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW.  
 Transmits at intervals from 6.30 a.m. (Gymnastics and Concert). 4.30 p.m.—Concert from Leipzig. 5.30—Programme for Children. 5.50—Talk on New Books: "Ver-mächtnis" (Stresemann). 6.0—Paul Frischauer reads from his own Works. 6.35—Talk on Plastic Art. 6.35—Talk: The Listener and his Set. 6.50—Labour Market Report. 6.55—"The Witzleben Station informs its listeners. . . ." 7.0—Topical Talk. 7.10—Pianoforte Recital by Iso Elinson. Ballads (Chopin): (a) in G Minor, Op. 23, (b) in F Major, Op. 38, (c) in A Flat Major, Op. 47, (d) in F Minor Op. 52. 7.40—Round the World with the Microphone.—Variety Programme. 9.0—News and Sports Notes.

9.10—"The Wandering Punch"—Musical Play (Robert Seitz, Music by Wolfgang Jacob). 10.30—Weather, News and Sports Notes. 10.45 (approx.)—Dance Music from the Europa Pavillon. 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 p.m.—News Bulletin. 7.40—Educational Talk: Modern Methods of teaching Geography. 7.55—Lottery Results. 8.0—Advanced Spanish Lesson. 8.15—News and Weather Forecast. 8.30—Concert by the Arca Orchestra, conducted by A. Guitrard. Soloists: Mlle. Dyrville (Vocalist) and M. Lafont (Tenor). Overture, Leonora (Beethoven - Salabert). Quatre Esquisses (P. Gaubert). Songs by Mlle. Dyrville. Tenor Solos: (a) Song from "Le Roi d'Ys" (Lalo), (b) Pensée d'automne (Massenet). Selection from "Boris Godounov" (Moussorgsky). Selection from "Ascanio" (Saint-Saëns). Songs by Mlle. Dyrville. Two Tenor Solos: (a) Song from "Messaline" (de Lard), (b) Song from "Mignon" (Thomas). Norwegian Rhapsody (Lalo-Salabert). After the Programme, Amusement Guide and Time Signal.

#### BRATISLAVA (Czechoslovakia)

1,076 kc/s (279 m.); 14 kW.  
 Transmits at intervals from 10.30 a.m. 7.0 p.m.—See Prague. 8.20—Dramatic Programme. 8.40—German Transmission for Slovaks. 8.55—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 6.30 a.m. 6.30 p.m.—Talk: What is expected of the Younger Generation and what do they expect? 6.35—Educational Talk. 7.0—Weather Forecast, and Talk by Dr. Herbert Engler. 7.25—Weather and Concert by the Station Orchestra, conducted by Franz Marszalek. Selection from "Jenufa" (Janáček). Serenade

10.15 a.m.—The Daily Service.  
 10.30—Time Signal (Greenwich), Shipping Forecast.  
 10.45—11.0—"The Week in Westminster." Major C. R. Atlee, M.P.  
 12 noon—Emanuel Starkey and his Orchestra.  
 12.45 p.m.—Organ Recital by Herbert Dawson.  
 1.0—Time Signal (Greenwich).  
 1.30—A Recital of New Gramophone Records. By Christopher Stone.  
 2.25—Reception Test.  
 2.30—Rural Science. Sir John Russell, F.R.S.  
 3.0—"Life and Work in the British Isles"—I. Mr. A. K. Hamilton Jenkin.  
 3.20—Interval.  
 3.30—Gramophone Recital to Schools.  
 4.15—Moschetto and his Orchestra. From The Dorchester Hotel.  
 5.15 (Daventry)—The Children's Hour.  
 5.15 (London and Northern)—The B.B.C. Dance Orchestra.  
 5.35—"Here and There," a Summary of the Week's News, by Stephen King-Hall.  
 6.0—"The First News."  
 6.30—Time Signal (Greenwich).  
 6.30—The Foundations of Music. Debussy's Pianoforte Music.  
 6.50—"The Week-End in the Garden"—XV. Mr. A. N. Rawes.  
 7.5—7.25—The B.B.C. Music Critic. Mr. Ernest Newman.  
 7.30—"The Changing Face of Nature"—II. Professor James Ritchie, D.Sc.  
 8.0—"Cupid Plus Two." A Musical Golfing Interlude.  
 8.30—The B.B.C. Theatre Orchestra.  
 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—Chamber Music. Dorothy Mogridge (Pianoforte). The Spencer Dyke String Quartet.  
 11.0—12 midnight—Dance Music.  
 11.30—Time Signal (Greenwich).

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). (356.3 m. Vision; 261.3 m. Sound).  
 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 Orchestra. Directed by John Bridge. J. Tilston Roberts (Baritone).  
 4.15 (London and Northern)—Daventry National Programme.  
 5.15—The Children's Hour.  
 6.0—"The First News."  
 6.30 (Northern and London)—Reginald Dixon. At The Organ.  
 6.30 (Midland)—Light Music. Patison's Salon Orchestra. Edith Astey (Soprano)  
 7.0 (London)—Orchestral Concert. Audrey Piggott (Violoncello); The B.B.C. Orchestra (Section E.) (Led by Laurance Turner.) Conducted by Percy Pitt.  
 7.0 (Northern)—The Studio Orchestra. Professor Zweistein and Mr. Griffith-Griffiths in a Sketch "Wembleford Bridge."  
 7.30 (Midland)—The Band of the South Staffordshire Regiment. Conducted by James Turtle. Eric Brown (Baritone). Ernest Elliott (Entertainer with a Piano).  
 8.15 (London and Northern)—Concerts of Contemporary Music—VI. The Wireless Chorus. Conductor, Stanford Robinson.  
 9.15—"The Little Ass." A Cornish Comedy by Bernard Walke. Relayed from St. Hilary, Cornwall.  
 10.15—"The Second News."  
 10.35—Dance Music.  
 11.0—Broadcast to America. "Comus." By John Milton. A Masque presented at Ludlow Castle, 1634.  
 11.30—12 midnight (London and Northern)—Dance Music.

FRIDAY continued

(Heussler). Scherzo (Clemus). Intermezzo (Rusconi). Die Wolfsschlucht (Gauwin). Selection from "Notre Dame" (Schmidt). Mazurka (Grünfeld). 8.30—Announcements. 8.40—Love Songs, Waltzes by Brahms, by the Deutsche Musikbühne Orchestra, conducted by Hans Oppenheim 9.35—Topical Talk by Rudolf Mirbt. 10.0—Time, Weather, News, Sports Notes and Programme Announcements. 10.30—See Berlin (Witzleben). In the interval at 11.10 (approx.)—Weekly Sound News from the Gloria Palace. 12 midnight (approx.)—Close Down.

BRNO (Czechoslovakia) 878 kc/s (342 m.); 35 kW. Transmits at intervals from 10.30 a.m. 7.0 p.m.—See Prague. 8.20—Recitations from the Works of Franz Smarek. 8.55—See Prague. 10.15—Announcements. 10.20—See Prague.

BRUSSELS (Belgium) (No. 1) I.N.R. 590 kc/s (509 m.); 15 kW. 12.15—1.45 p.m.—Weather and Gramophone Concert. Overture, "Le Roi l'a dit" (Delibes). Polka Fantasia. La chanson des nids (Buet). Polka, Emma Livvy (Pisouelle). Selection from "Faust" (Gounod). Selection from "Hamlet" (Thomas). Selection (Dvorak). Song of the Volga Boatmen (arranged Kreisler). Gipsy Idyll (Ferraris). Hungarian Melodies (Leopold). Foxtrot, Always just a Dream. Blues, Wailin' the Yalc. Waltz, When will it be. Foxtrot, Dream Mother. Selection from "Ronny" (Kálmán). Holiday Hits. Waltz, Abandonata. Malaguena. Foxtrot, Bathing in the Sunshine. Foxtrot, I'm just wearing out my Heart for You. The Waltz you saved for me. Foxtrot, Would you like to take a Walk? When the Guards are on Parade. Tango, Oh Rosalita. Waltz, Reaching for the Moon. She is a very good friend.

Orchestral Concert, conducted by Franz André. Overture, "Le carillonneur" (Gauwin). Foxtrot, Can this be Love (Swift). Selection from "Il est charmant" (Moretti). Tango, First Love (de Caro). Foxtrot from "Nina Rosa" (Romberg). Selections from "Paganini" (Lehár). Ballet Music from "Philémon et Baucis" (Gounod). One-step (Oberfeld). Intermezzo (Bruna). Aragonese (Fallá). Les Millions d'Arlequin (Drigo). Ronde de Nuit (Boellman). Melody (Bolzoni). Ké-Sa-Ko (Chapuis).

Gramophone Records. Dancing in the Dark (Dietz and Schwartz). Spanish Fandango (Cantegini). Habanera (Oberstad). Serenade (Malots). 6.15—Talk: Joseph Vrintds, a Walloon Singer. 6.30—Lalo Concert on Gramophone Records, for the Anniversary of his Death. Overture, "Le Roi d'Ys." Selections from "Le Roi d'Ys." Russian Songs. Selection from "Namouna," Norwegian Rhapsody. 7.15—Talk: Goethe and Belgium. 7.30—Music Review by Marcel Poot. 8.0—Divertissement de la Soirée Bougeoise—Radio Play (Fleischmann). 9.0—Concert relayed from the "Ancienne Belgique." 10.0—Le Journal Parlé.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. 12.15—1.45 p.m.—Weather and Gramophone Concert. 5.0—Goethe in Music Orchestral Concert conducted by Arthur Meulemans. "Faust" Overture (Wagner). Gramophone Record: Gretchen am Spinnrade (Schubert). Overture, Meerestille und glückliche Fahrt (Mendelssohn). Three Selections from "The Damnation of Faust" (Berlioz). Erlkönig (Schubert). Overture, "Egmont" (Beethoven). 5.45—Pallier Programme. 6.30—Flemish Music on Gramophone Records. 7.15—Talk: The Flemish National Press. 7.30—Botanical Talk.

Orchestral Concert, conducted by Arthur Meulemans. Soloist: Clara Van Roey (Pianoforte). 8.45—Talk: Democracy and the Flemish Movement—a Historic Parallel. 9.0—Concert (continued). 10.0—Le Journal Parlé. BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 12 noon. 5.0 p.m.—Concert of Military Music. 6.0—News Bulletin and Time Signal. 6.10—Concert (cont'd.). 7.0—Talk on Philosophy and Religion. 7.40—Light Music on Gramophone Records. 8.0—Selections for Wind

Instrument Quartet. 8.30—Talk (to be announced). 8.45—Song Recital by Mme. Lupu-Morariu. An die Musik (Schubert). Immer leiser wird mein Schlummer (Brahms). Romanian Air (Skelety). Berceuse (Borgovan). 9.5—Sketch by Groner and Vasilake. 9.45—News Bulletin.

BUDAPEST (Hungary) 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Also relayed on 210 metres from 6.15 p.m. 6.15 p.m.—Concert by the Jancsi Rigo Cigány Band. 7.15—Talk by Elemér Miklos. 7.40—Concert by the Budapest Concert Orchestra, conducted by Ferdinand Zsolt, relayed from the Academy of Music. Chaconne (Bach-Hubay). Adagio from a String quartet (Kodály). Symphony (Zsolt). After the concert, at 10.0 (approx.)—Concert of Dance Music by the Jazz, Tango and Cigány Band, with Vocal Refrains by Paul Kalmar, relayed from the Café Ostende.

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) 12 noon—Time and Chimes from the Town Hall. 12.2 p.m.—Concert by Otto Fessel's Instrumental Ensemble. Overture, "Idomeneo" (Mozart). Musette from "Armide" (Glück). Selection from "Hansel and Gretel" (Humperdinck). Norwegian Bridal Procession (Grieg). Andante and Finale from the Military Symphony (Haydn). Reading. Overture, Nordisk Saeterreise (Gade). Selection from "King and Marshal" (Heise). Minuet and Country Dance from "Mödlinger Tänze" (Beethoven). Selections (Grétry): (a) Air de danse, (b) Ronde de nuit from "Les Deux Avarés." Slavonic Dance (Dvorak). 2.0-2.30—Interval.

Orchestral Concert, conducted by Launy Gröndahl. Soloist: Lis Mogensen Witte (Vocalist). March, Folies Bergère (Lincke). Prelude to "Frode" (Bechgaard). Waltz, Queen Louise (Lumbye). Selection from "The Barber of Seville" (Rossini). Elégie (Massenet). Two Spanish Dances, Nos. 1 and 3, in C Major and A Major (Moszkovsky). Seven Songs (Kjerulf). Overture, "La Petite Bohème" (Hirschmann). Waltz from "The Gipsy Baron" (Joh. Strauss). Adagio for Strings and Pianoforte, Notte di natale (Mercuri). American Rhapsody (Hosmers). Mars and Venus (Ganne). March, Kongemøde (Jespersen).

Programme for Children. 5.0—Divine Service Relay. 6.20—Talk. 6.50—Weather Forecast. 7.0—News Bulletin. 7.15—Time Signal. 7.17—Sports Notes. 7.30—Talk. 8.0—Chimes from the Town Hall. 8.2—Orchestral Concert of English Music conducted by Emil Reesen. Miniature Overture, The Merry-Makers (E. Coates). A Southern Rhapsody, Virginia (Haydn Wood). Suite, Four Ways (E. Coates). 8.30—"King of Chicago"—Radio Play (Gerhard Schücke). 9.15—Cello Recital by Rudolf Dietzmann. Minuet (Boccherini-Cassado). Allegretto grazioso (Schubert-Cassado). Yamilé (Bazelaire). Requiebros (Cassado). 9.35—Recital of Modern American Negro Spirituals. 9.55—News Bulletin.

Orchestral Concert, conducted by Emil Reesen. Overture, "Fernand Cortez" (Spontini). Selection from "La Boutique fantasque" (Rossini-Respighi). Adagio, Minuet and Allegro molto from the Divertimento No. 15 in B Flat Major (Mozart). Overture, "The Cunning Peasant" (Dvorak). 10.50 (approx.)—Close Down.

CRACOW (Poland) 959 kc/s (312.8 m.); 1.5 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items and Sports Notes. 7.10—Talk for Antiquarians. 7.25—Programme Announcements. 7.30—Popular Music on Gramophone Records. 7.45—12 midnight—See Warsaw. 12 mid-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—Gardening Talk. 7.45—Monologues by H. Frascr. 8.0—Concert by the Civil Service Choral Society conducted by Hubert Rooney. 8.30—Pianoforte Solos by Marie Mulcahy. 8.40—Soprano Solos by Norrine Murray. 8.55—Selections by the Station Celeste Orchestra. 9.5—Talk on Birds. 9.20 Contralto Solos by Aimee Gibbings. 9.35—Tenor Solos by William Fortune. 9.50—Variety Programme by George Hornsby and his Band. 10.30—Time Signal, News, Weather Forecast and Close Down.

FÉCAMP (France) Radio Normandie. 1,364 kc/s (219.9 m.); 1 kW. Transmits at intervals from 12 noon. 7.30 p.m.—Regional News. 7.45—Announcements. 8.0—Agricultural Report. 8.15—News Bulletin. 8.30—Esperanto Lesson, followed by Concert, relayed from Le Havre. 11.0—Dance Music. 1.0 a.m. (Saturday)—Close Down.

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—Wind Instrument Concert. 12.50 p.m.—News Bulletin. 12.55—Neuen Time Signal. 1.0—Concert from Langenfeld. 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.10—Time and Economic Notes. 3.20—Dialogue: Education and Culture. 4.55—Economic Notes. 5.0—See Munich. 6.15—Economic Notes. 6.25—10.30—See Stuttgart. 10.30—Time, Weather, News and Sports Notes.

Concert by the Amar Quartet and Rose Stein (Harp). Quintet for Harp and String Quartet (E. Th. A. Hoffmann). Adagio for Cor anglais and Strings (Mozart). Andante and Rondo on gongare for Bassoon and Orchestra (Weber). Adagio for Clarinet and Strings (Wagner). Crépuscule, for Flute, Violin and Cello with String Quartet (Massenet). Tarantella for Flute and Clarinet with Orchestra (Saint-Saëns), followed by Old Dance Music. 12 midnight (approx.)—Close Down.

HAMBURG (Germany) 1,072 (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. 2.0 p.m.—Gramophone Concert of Modern Opera and Revue Music. 3.0—Weather Report. 3.5—News Bulletin. 3.20—Exchange Quotations. 3.50—Shipping Intelligence. 4.0 (from Hanover)—Talk by Dr. Weygold: My Experiences on the Tibet Expedition. 4.30—Concert from Leipzig. 5.30—A Radio Report from a Woman Goldsmith's Workshop. 5.55—Variety Programme. 6.30—Dialogue for Workers. 6.50—Frankfurt Exchange and Hamburg Market Prices. 6.55—Weather Report. 7.0—Topical Talk. 7.15—Walter von Molo reads from his own Works. Introductory Talk by Dr. Max Sidow. 7.45—Concert by the Station Orchestra, conducted by Eibenschütz: Overture, "The Thieving Magpie" (Rossini). Waltz, Wo die Zitronen blühen (Johann Strauss). Tarantella from "Masaniello" (Auber). Ballet Music from "Faust" (Gounod). Polonaise in E Major (Svendsen). Humoresque, Polka (Reesen). Potpourri on Themes from "Eva" (Lehár). 9.0—"The Hole in the Hedge"—North German Dialect Comedy in Three Acts (Hans Balzar). 10.0—Time and News. 10.20—Concert in the Aalterpavillon.

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert). 11.30 a.m.—Concert from Breslau. 1.5—2.30 p.m.—Concert by the Little Orag Orchestra, conducted by Eugen Wilcken. Overture, "Maritana" (Wallace). Waltz, Klänge aus dem Paradies (Oscar Straus). Selection from "Der Mann mit den drei Frauen" (Lehár). Liebesfeier

(Weingartner). Marietas Lied zu Laute (Korngold). Suite from "The Queen of Spades" (Tchaikovsky). Waltz, La Hussarde (Ganne). Fantasia on the Works of Liszt (Morena). 3.30—Talk for Women: The Life of the Woman Artist. 3.55—"The Struggle between the Seasons"—Play for Children (Schoke). 4.30—Wind Instrument Concert by the Königsberg Orchestra of Unemployed Musicians, conducted by Felix Prawniczak. March, The Royal Dragoons (Blankenburg). Waltz, O Frühling, wie bist du schön (Lincke). Overture, "Zampa" (Hérold). Selection from "Fra Diavolo" (Steininger). Flieger-Marsch (Kreft). March, Der Jäger aus Kurpfalz (Rode). Waltz from "The Dollar Princess" (Fall). Marching Song from "The Flower of Hawaii" (Abraham). Potpourri, Viribus unitis (Richter). Army March 182 (Piefke). 5.50—Talk: As a Student on Tour. 6.15—Market Prices.

Concert by the Little Orag Orchestra, conducted by Eugen Wilcken. Overture, "Pique Dame" (Suppé). Selection from "Victoria and her Hussar" (Abraham). Waltz, Wiener Blut (Johann Strauss). Potpourri, Ein Rendezvous bei Lehár (Hrubý). Overture, "Lysistrata" (Lincke). 7.15—Talk on Kant. 7.45—Henny Wolf Song Recital. 8.15—Weather Forecast. 8.20 (from Danzig)—"Dickelpott's Inheritance"—a Comedy of Everyday Life, in Three Acts (Robert Grötzsch). 9.10—Announcements. 9.15—Concert of Modern Russian Music, by the Königsberg Opera House Orchestra, conducted by Bruno Vondenhov. Soloist: Leopold Premyslav (Violin). Music of Machines (Mossolov). Concerto for Violin and Orchestra, Op. 19 (Prokofiev). Symphony in F Minor, Op. 10 (Shostakovich). 10.15—Weather and News.

HILVERSUM (Holland) 1,004 kc/s (298.8 m.); 8.5 kW. 7.25—10.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 7.25—7.40 and 8.10—8.25—Physical Culture Lesson. 8.40—Variety Music on Gramophone Records. 9.40—Religious Programme by the Liberal Protestant Radio Society (V.P.R.O.). 10.55—12.40 p.m.—V.A.R.A. Programme. 10.55—Recitations. 11.10—Septet Concert conducted by Is. Eyl. In the interval at 11.40—Recitations. 12.40—4.40—Programme of the Algemeene Vereeniging Radio Omroep (A.V.R.O.). 12.40—Time Signal. 12.41—Orchestral Concert conducted by Nico Treep. Overture, "Jean de Paris" (Boeldieu). Aus Mozarts Reich (Urbach). Lyric Suite (d'Albert). Träume (Wagner). March of the Dwarfs (Moszkovsky). Popular Gramophone Music. Waltz, Tanzen mocht' ich (Kálmán). Minutenspiele (Petras). Une Fête à Aranjuez (Demersseman). Popular Gramophone Music. Overture, "Venus on Earth" (Lincke). Roccoo Love Song (Meyer-Holmann). March, Heil Europa (Blom). 2.40—Broadcast for Schools. 3.10—Concert by the Wireless Chamber Orchestra, conducted by G. Hemmes. Overture, "The Drum Major's Daughter" (Offenbach). Waltz, Summer Evening (Waldeufel). Russian Mazurka (Glinka). French Serenade (Grieg). Selection from "Faust" (Gounod). Popular Gramophone Music. Hungarian Comedy Overture (Kéler-Béla). Two Selections from "Paganini" (Lehár). Waltz, Tesoro mio (Becucci). Selection from "Rose Marie" (Friml). 4.40—8.40—V.A.R.A. Programme. 4.40—Pianoforte Recital by Johan Jong. Prelude (Glière). Waltz (Goedicke). In the Village (Moussorgsky). Une larme (Moussorgsky). Mazurka (Rebikov). Meditation (Gretchaninov). Troika (Tchaikovsky). 5.10—Programme for Children.

Concert by the V.A.R.A. Orchestra conducted by Hugo de Groot, with Gramophone Introductions. Overture, "Mignon" (Thomas). Tambourine (Brommert). Popular Gramophone Music. Suite, Four Ways (Eric Coates). Popular Gramophone Music. Waltz from "Die Puppenfee" (Bayer). Selection from "La Mascotte" (Audran). Gramophone Records. Overture, "Harale" (Leroux). Popular Gramophone Music, Spanish Suite, La Verbena (Lacôme). 7.25—Talk: The Principles of the Workers' Socialist Party. 7.55—Concert (continued). Selection (Rich). Waltz Blue Kentucky

Records. 6.15—Programme for Children. 7.0—Light Music on Gramophone Records. 7.20—News Bulletin. 7.30—Time Signal. 7.31—Gardening Talk. 7.45—Monologues by H. Frascr. 8.0—Concert by the Civil Service Choral Society conducted by Hubert Rooney. 8.30—Pianoforte Solos by Marie Mulcahy. 8.40—Soprano Solos by Norrine Murray. 8.55—Selections by the Station Celeste Orchestra. 9.5—Talk on Birds. 9.20 Contralto Solos by Aimee Gibbings. 9.35—Tenor Solos by William Fortune. 9.50—Variety Programme by George Hornsby and his Band. 10.30—Time Signal, News, Weather Forecast and Close Down.

Concert by the V.A.R.A. Orchestra conducted by Hugo de Groot, with Gramophone Introductions. Overture, "Mignon" (Thomas). Tambourine (Brommert). Popular Gramophone Music. Suite, Four Ways (Eric Coates). Popular Gramophone Music. Waltz from "Die Puppenfee" (Bayer). Selection from "La Mascotte" (Audran). Gramophone Records. Overture, "Harale" (Leroux). Popular Gramophone Music, Spanish Suite, La Verbena (Lacôme). 7.25—Talk: The Principles of the Workers' Socialist Party. 7.55—Concert (continued). Selection (Rich). Waltz Blue Kentucky

Moon (Donaldson). Nachtigall im Fliederbusch (Krome). Popular Gramophone Music. Selection (Malneck). The Belle of Barcelona (Payne). Variety Gramophone Music. English Waltz, Du, du, du schliesst deine Augen zu (Stolz). Foxtrot, Wenn die kleinen Veilchen blühen (Stolz). At your Command (Barris). 8.40—11.40—V.P.R.O. Programme. 8.40—Talk. 9.10—Violin and Pianoforte Recital by A. Knorre and Mme. Knorre-Dornay. Sonata in C Minor (Biber). Pastorale (Benda). Sonata in A Major (Händel). 9.40—Talk by Professor Lindboorn. 10.10—Recital (continued). Sonata in G Minor (Schubert). Sonata (Debussy). Slavonic Dance (Dvorak). 10.40—Religious News. 10.45—News Bulletin. 10.55—Recitations. 11.25—Popular Gramophone Music. 11.40—Variety Music on Gramophone Records by the V.A.R.A. 12.40 a.m. (Saturday)—Close Down.

HUIZEN (Holland) 160 kc/s (1,875 m.); 8.5 kW. Programme of the Catholic Radio Society (K.R.O.). 8.40 a.m.—Gramophone Records of Light Music. 10.40—Concert conducted by Piet Lustenhouwer. 12.10 p.m.—Programme for Invalids. 12.40—Police Notes. 12.55—Quintet Concert. Sound Film Selection (May). Waltz, Wienerblut (Johann Strauss). Selection from "The Merry Widow" (Lehár). Amina (Lincke). Sag' mir Darling (Reisfeld). Selection from "The Maid of the Black Forest" (Jessel). Waltz, Hochzeitsreigen (Lincke). In der Heintelmannchen-Bar (Rosen). Es sprach der weise Marabu (Egen). Russian Foxtrot (Geitner). 2.25—Gramophone Records of Popular Music. 3.10—Talk on Haydn by Mlle. Suzanne Proot.

Pianoforte and Baritone Recital by Anny Somers (Pianoforte) and Boris Pelsky (Baritone). Pianoforte Solos: (a) Ballad, Op. 24 (Grieg). (b) La Campanella (Liszt). Songs: (a) Nachtgang (Richard Strauss). (b) All' mein Gedanken (Richard Strauss). (c) Breit über mein Haupt dein schwarzes Haar (Richard Strauss). (d) Gesang Weylas (Hugo Wolf). (e) Wer sein holdes Lieb verloren (Hugo Wolf). (f) Er ist's (Hugo Wolf). Pianoforte Solos: (a) Ballad in F Minor (Chopin). (b) Jeux d'eau (Ravel). (c) L'isle joyeuse (Debussy). Russian Songs (Rimsky-Korsakov and Gretchaninov). 5.25—A Dialogue. 6.10—Quartet Concert. Louise Wyngaerden (Violin), Mia Tibbe (Pianoforte), Hans van den Bosch (Viola) and Jan Wagemakers (Cello). Pianoforte Quartet, Op. 16 (Beethoven). Trio in A Major (Haydn). Pianoforte Quartet, Op. 45 (Faure). 7.50—Talk on Esperanto. 8.10—Police Notes. 8.25—Gramophone Records of Popular Music. 8.40—Orchestral Concert conducted by Johan Gerritsen. Soloist: Caroline Lankhout (Pianoforte). Suite No. 1 from "The Gordian Knot untied" (Purcell). Pianoforte Concerto in A Minor, Op. 54 (Schumann), with Orchestral accompaniment. Suite pastorale (Godron). Pavane pour une infante défunte (Ravel). Pianoforte Solos: (a) Dance in the Cathedral (Turina). (b) La vieille boîte à musique (de Séverac). (c) Scherzo-Valse (Chabrier). Romanian Rhapsody, No. 2 (Enesco). Selection from "Manon" (Massenet). Three Dances from "Nell Gwynn" (German). In the interval at 10.10—News Bulletin.

Gramophone Records of Popular Music. 12.40 a.m. (Saturday)—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. 4.55 p.m.—English Lesson. 5.35—Concert, with the collaboration of Hedwige Hejdjukowska. 8.15—Symphony Concert from Warsaw. 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. 5.0 p.m.—Programme for Children. 5.25—Saxophone Solos with Piano Accompaniment. 6.15—Talk. 6.35—Talk.

**FRIDAY,**  
continued

**7.0—Concert by the Station Orchestra.** Scottish Symphony (Mendelssohn). Selection from "Tiefand" (d'Albert). 8.0—Reading by Selma Lagerlof. 8.25—Song Recital by Teddy Bjorkman. 8.45—News in Finnish and Swedish and 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 Gramophone Concert).

11.20 a.m.—English Conversation. 11.45—Sponsored Programme. 12 noon—See Frankfurt. 12.50 p.m.—Weather, News and Time.

1.0—Concert, conducted by Fyssoldt. Sonnenwend-Marsch (Perfall). Prelude to "Carmen" (Bizet). Selections from "La Tosca" (Puccini). Hindu Song (Rimsky-Korsakov). Réverie du soir (Saint-Saëns). Suite, The Awakening of Flora (Drigo). Waltz, España (Waldteufel). Spieluhr (Blauw). Gavotte (Sinding). Musikalisches Kunterbunt (Schmalstich).

2.30—Sponsored Gramophone Concert. 3.30—Economic Notes and Time. 3.50—Handwork for Children. 4.20—Programme for Children. 5.0—Concert from Munich.

6.15—Gramophone Records of Old Swedish Folk Songs. 6.40—English Conversation. 7.0—Weather, Time, Economic Notes and Sports Results. 7.15—Three Germans converse with one another. 7.55—News Bulletin.

8.0—Gramophone Concert of Operetta Music, with Explanatory Talk.

8.30—Choral and Orchestral Concert, conducted by Zimmermann. Soloists: Hansen (Soprano), Mann (Contralto), Wocke (Baritone) and Hilgers (Organ). Psalm No. 2 for Mixed Choir, Boys' Choir, Baritone, Orchestra and Organ (Spies). Orchestral Selection: Ein Minnelied (Rammath). Ein Sonnenlied, after Poems by Casar Flaischlen, for Soprano, Contralto, Baritone, Mixed Choir and Orchestra (Bettingen).

10.15—News Bulletin. 10.45—Light Music and Dance Music. 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 6.30 a.m. 4.30 p.m.—Concert by the Leipzig Symphony Orchestra, conducted by Theodor Blumer. Soloist: Paul Podelh (Violin). Ballet Overture, Op. 15 (Reifner). Concerto for Violin and String Instruments (Podehl). Two Pieces for String Orchestra, Op. 35 (Sinigaglia): (a) Rain Song, (b) Etude Caprice. Scherzo, Op. 45 (Goldmark). Scherzo, Op. 11 (Tsch.).

5.30—Book Review. 5.50—Economic Notes, Weather and Time. 6.5—Dialogue: Children's Handwriting as an Indication to their Character. 6.25—English Lesson. 6.50—Talk (to be announced). 7.0—Talk: The Sociology of Modern Architecture.

7.30—Julius Einödshofer Concert by the Leipzig Symphony Orchestra, conducted by Hilmar Weber. Soloist: Wilhelm Ulbricht (Tenor). Pomeranian March. Overture, "Das Paradies der Frauen." Song, Fata Morgana. Gavotte, Schneewittchen. Selection from "Die lustige Puppe." Overture, "Eine wilde Sache." Waltz from "Flirt in St. Moritz." Serenade from "Der Mandarin von Tsing-ling-ting." Mimmy ach tanz mit mir Shimmy. Waltz, In den Armen der Liebe. Barcarolle from "Tohuwabohu." March, Man lebt nur einmal.

9.0—"The Flood"—Drama in Five Acts (Ernst Barlach). 10.30—News Bulletin.

10.35 (approx.)—Fables for Soprano and Cembalo. Recital by Hedwig Didam-Borchers (Soprano) and Dr. Ernst Latzko (Cembalo). Five Fables (Joh. Ernst Bach), with Introductory Talk: (a) Der Affe, (b) Der Adler und der Tiger, (c) Der Schäfer und das Echo, (d) Die Eule, (e) Die Biene. 11.30 (approx.)—Close Down.

**LJUBLJANA (Yugoslavia)**

522 kc/s (574.7 m.); 2.5 kW. Transmits at intervals from 11.30 a.m. 7.0 p.m.—French Lesson. 7.30—Topical Talk. 8.0—Programme for Sokols. 8.30—See Belgrade. 10.30—Time, News and Close Down.

**ŁWÓW (Poland)**

788 kc/s (381 m.); 16 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items. 7.15—Historical Talk. 7.30—10.50—See Warsaw. 10.50—Talk on Music: A Contemporary Troubadour. 12 midnight (approx.)—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. 4.30 p.m.—Instrumental Concert. 7.0—Radio Gazette for Lyons and the South East. 8.30—Classical Concert, conducted by Jearf Witkovsky.

**MADRID (Spain)**

Union Radio (EA7). 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 Concert. 8.30 (in the interval)—Talk. 9.15—News and Political Review. 9.30—10.30—Interval. 10.30—Chimes, Time, Political Review and Symphony Concert on Gramophone Records. Overture, "Coriolanus" (Beethoven). Prelude and Death of Isolde from "Tristan and Isolde" (Wagner). Symphony in G Minor (Mozart). Ein Heldenleben (Richard Strauss). 11.30—Dance Music. 12.45 a.m. (Saturday)—News Bulletin. 1.0 (approx.)—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 p.m.—See Prague. 9.0—Concert of Popular Music. 10.0—See Prague. 10.15—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. 4.0 p.m.—Proletariat Radio Journal. 5.0—Pensants' Radio Journal. 6.0—Communist Programme. 8.0—Programme arranged by the "Komsomolskaja Pravda." 9.0—Programme in German and French: Lenin Evening (on the Anniversary of the Birth of Lenin on April 22nd, 1870). 9.55—Chimes and 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, "The Italian Girl in Algiers" (Rossini). Un poco triste (Suk). Suite, From the Works of Chopin. Florentine Intermezzo (Wagner). Selection from "Die Puppenfee" (Bayer). Plantation Melodies (MacDowell). Waltz, Blonde or Brunette (Waldteufel). Kleiner Wiener Marsch (Kreisler). 6.15—Weather and Agricultural Report. 6.25—Science—a Report by Dr. Fritz Gerathewohl. 6.45—Talk on Therapeutics. 7.5—Talk: The Power of Mountains. 7.25—Gramophone Records of Mexican Music. 8.0—Five Short Poems. 8.5—Chamber Music. Edith von Voigtländer (Violin), Philipp Haas (Viola) and Josef Discele (Cello). String Trio in G Major, Op. 9 (Beethoven). String Trio in A Minor, Op. 77 (Reger).

8.45—"The Government Inspector"—Comedy in Five Acts (Nicolai Gogol), arranged by August Scholz. 10.20—Time and News.

**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 10.0 a.m. 5.30 p.m.—Spanish Symphony (Lalo), played by Wolfgang Schneiderhan (Violin). 6.0—French Lesson. 6.30—Talk for Schools. 8.0—Announcements, Weather and News Bulletin. 7.30—English Lesson.

8.0—Time Signal. 8.1—Pianoforte Recital by Rolf Brandt Rantzaun. 8.30—Recitations. 8.45—Song Recital, by Madame Gorda Wilskow (Soprano). Song from "La Bohème" (Puccini). Song from "La Tosca" (Puccini). Two Norwegian Songs (Alnaes). 9.10—Agricultural Report. 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Choral Concert.

**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 and Dance Music from the Olympia Tea Rooms. 6.30—8.0—Interval. 8.0—Announcements, Radio-giornale dell'Enit, Agricultural Notes, Report of the Royal Geographical Society and Giornale Radio. 8.20—Light Music on Gramophone Records. In the interval at 8.30—Time Signal and Announcements.

8.45—Concert of Popular Music, with Talk in the interval. Soloists: Olga Nicastro (Pianoforte), R. Padova (Soprano), and A. Carducci (Tenor). Selection from "Sicilian Vespers" (Verdi). Pianoforte Solo: Sonata Op. 57 (Beethoven). Soprano Solos: (a) Donne vaghe (Pergolesi), (b) Serenade (Tosti). Tenor Solos: (a) Air from "La Favorita" (Donizetti), (b) Ay-ay-ay (Perez Freire). Pianoforte Solos: (a) Orientale (Albeniz), (b) Burlesca (Pick-Mangiagalli). Soprano Solos: (a) Serenata d'inverno (Bellini), (b) Strana (Tirindelli). Tenor Solos: (a) Una furtiva lacrima from "L'Elisir d'Amore" (Donizetti), (b) Air from "Zaza" (Leoncavallo). Selection from "The Thieving Magpie" (Rossini). After the Concert, Dance Music on Gramophone Records. 10.55—News Bulletin.

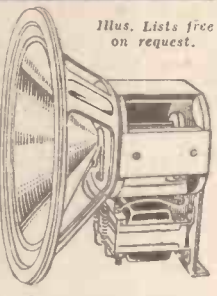
**PARIS (France)**

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.—Dramatic Programme. 7.0—Le Journal Parlé. 8.20—Weather Report.

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FRIDAY  
continued

8.30—*Baby Takes Medicine*—One-Act Play (du Pontavice).  
9.0—Haydn Commemoration Concert, conducted by Edouard Flament. Soloists: M. Marchesini (Cello) and M. Bas (Violin). The Surprise Symphony. Sonata No. 7 for Pianoforte. Andante from the Concerto for Cello. Serenade for Violin.

## PARIS (France)

Poste Parisien. 914 kc/s (328.2 m.) 1.2 kW.  
12 noon—Gramophone Records, News and Announcements. 12.15 p.m.—Variety Music on Gramophone Records. 1.45—News and Announcements. 2.0—7.0—Interval. 7.0—Gramophone Records, Talks and News.  
7.30—Concert by the Station Jazz Band, conducted by Crickett Smith with the collaboration of Miss Mabel Mercer. Rumba, Les trois Coups (Simons). Home (Van Steeden). By the Sycamore Tree (Wending). A faded Summer Love (Baxter). Why dance? (Albert). Makin' faces at the man in the moon (Rich-Hoffmann). Guilty (Kahn-Whiting). Rhymes (Sarony). When the Moon comes over the Mountains (Woods). Sweet and lovely (Tobias). I don't know why (Albert). Romany Rose (Mabel Wayne). Siboney (Lecuna).  
8.30—Gramophone Records of Light Music, 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 Lesson. 7.30—Weather and Physical Culture (continued). 7.45—Variety Music on Gramophone Records. 8.0—News, Weather and Press Review. 12.30 p.m.—Gramophone Concert. Part I. Lalo Programme. Overture to and Selections from "Le Roi d'Ys." Norwegian Rhapsody Selection from "Namouna." Harlequin. Part II. Allegro from the Double Concerto (Brahms). Minuet antique (Ravel). Cavatina from "Norma" (Bellini). Dance from "La Naissance de la Lyre" (Roussel). 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. 4.20—Elementary English Lesson. 4.45—Talk on the History of Music by M. Jean Chantavoine: Gounod, Bizet, Massenet. 6.30—Market Prices, Weather, Agricultural Report and Racing Results. 7.0—Talk: The Struggle against Sleeping Sickness in Cameroon. 7.45—Commercial Prices and News. 8.0—Talk on Music by Maurice Cauchie, with Gramophone Illustrations: Joseph Haydn, on the Second Centenary of his Birth. 8.30—News and Weather. 8.40—Gastronomic Review. 8.45—Courteline Programme with the Collaboration of Gaston Dubois and M. Dorival of the Comédie Française and Mme. Jeanne Faber. Le Pacha. Les Amoureux malades de la Paim. Les Balances. La Paix chez soi, followed by Romance in F for Horn and Orchestra (Saint-Saëns). Soloist: M. Dévény. In the interval at 9.15—Press Review and News.

## PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW.  
Transmits at intervals from 10.30 a.m. 4.0 p.m.—Orchestral Concert, conducted by Janota, relayed from Brno. 4.55—Talk: Christian Philosophy. 5.5—Concert by a String Quartet. Quartet in E Flat Major (Mozart). String Quartet in F Major, Op. 59, No. 1 (Beethoven). 5.0—Market Prices. 6.10—Talk for Workers: The Principles of Co-operation. 7.0—News Bulletin. 7.5—Talk on Hygiene. 7.20—Concert from the Works of Pospisil. 8.0—Russian Songs and Dances. 8.55—News, followed by Songs. 9.0—Time and News. 9.5 (approx.)—Male Voice Quartet Concert. 9.30—Pianoforte Recital. Suite in Old Style, Op. 21 (Jiráek). Two Wallachian Dances, Op. 34 (Novák). 10.0—Time and News. 10.15—Miscellaneous Notes. 10.20—Orchestral Concert, conducted by Jeremias. Concerto for Flute (Martini). Orchestral Suite (Reiner).

## 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.).

Transmits at intervals from 12.30 p.m. 4.31 p.m.—Orchestral Concert. 5.30 (from Geneva)—Programme for Women. 6.0 (from Geneva)—Light Music on Gramophone Records. 6.30 (from Lausanne)—Talk to be announced. 7.0—Weather Forecast. 7.1 (from Lausanne)—Popular Music on Gramophone Records. 7.30 (from Lausanne)—Talk on the Theatre. 7.55—Announcements. 8.0 (from Geneva)—Talk: The Work of the Disarmament Conference. 8.10 (from Geneva)—The State Gymnastic Society.—Talk and Choral Selections. 9.0 (from Geneva)—Humorous Cabaret, presented by Ruy Blag. 10.0—Weather and News Bulletin. 10.15 (from Lausanne)—Answers to Correspondents. 10.30 (approx.)—Close Down.

## ROME (Italy)

Ente Italiano Audizioni Radiofoniche (IRO). 680 kc/s (441 m.); 50 kW. Relayd by Naples, 941 kc/s (319 m.) and 2RO, 11,810 kc/s (25.4 m.).  
Transmits at intervals from 8.15 a.m. 12 noon—Variety Music on Gramophone Records. 12.35 p.m.—Weather Report.  
12.45—Vocal and Instrumental Concert. The Radio Sextet. Soloists: Flavio Dorini (Tenor) and Walter Sommer (Cello). Tenor Solos: Aria from "Falstaff" (Verdi). (b) A Columbine (Massenet), (c) A suon di baci (Baldelli). Cello Solos: (a) Pierrot (Magrini), (b) Intermezzo from "Goyescas" (Granados), Sextet Selections: (a) Selection from "The Water Carrier" (Cherubini), (b) Canzonetta abruzzese (De Nardis), (c) Estasi (Pampiana), (d) Legend (Donati), (e) Selection from "Manon" (Massenet), (f) Bolero d'amore (Liza). In the intervals at 1.15—Giornale Radio and Exchange and at 1.30—Time and Announcements. 4.45 (from Naples)—Talk. 5.0—Exchange, and Announcements. 5.30—Soprano Song Recital by Vela Capuano. Aria from "Il carnevale di Venezia" (Petrrella). Solveig's Song (Grieg). Bolero from "Sicilian Vespers" (Verdi). 5.45—Variety Concert. My Dream (Waldteufel). Bachica (Serafino). Curcineide (Anepeta). Stella bianca (Villa). Nostalgia (Culotta). Baby (Abel). 6.15—Giornale radio dell'Enit. 6.55 (from Naples)—Shipping and Sports Notes. 7.0—Agricultural Report, Weather, Announcements, Giornale Radio and Press Review. 7.50—Variety Music on Gramophone Records. 8.0—Time, Announcements and Report on the International Institute of Agriculture in Italian, French, English, German and Spanish. 8.30—Sports Notes and Announcements. 8.45—"Countess Maritza"—Operetta (Kálmán). The Orchestra, conducted by Alberto Paolletti. In the intervals, Talk on Literature and Art, and Topical Talk. News after the Programme.

## SCHENECTADY (U.S.A.)

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayd at intervals by W2XAF on 9,530 kc/s (31.48 m.), and by W2XAD on 15,340 kc/s (19.56 m.).  
Transmits at intervals from 12.45 p.m. 9.30 p.m.—Women's Radio Review from New York. 10.0—Decorating Notes from New York. 10.15—Rosewood and Ivory. 10.30—Stock Reports and Police Notices. 10.45—Musical Ad Men. 10.55—News Items. 11.15—Skiy from New York. 11.30—New York State Department Talk. 11.45—Happy Rose Dance Orchestra from New York. 12 midnight—All Saints' Cathedral Programme, from Albany. 12.30 a.m. (Saturday)—With Gray McClintock in the Canadian Northwest. 12.45—Musical Moments. 1.0 (WGY only). General Electric Programme. 1.0 (W2XAF only)—Stock Reports and News Items. 1.15—2.0—New York Relay. 1.15—Campbell Orchestra. 1.30—Prince Albert Quarter Hour. 1.45—Trials of the Goldbergs. 2.0 (WGY only)—Cities Service Programme from New York. 2.0 (W2XAF only). International General Electric Programme. 2.30—WGY Agricultural Programme. 3.0—5.0—New York Relay. 3.0—Clicquot Club Eskimos. 3.30—Pond's Programme. 4.0—Sampler Orchestra. 4.30—RKO Programme. 5.0—Freddy Engel's Orchestra. 5.30—Jack Pettis' Orchestra. 6.0—Ralph Kirby, the Dream Singer from New York. 6.5—Hotel New Yorker Orchestra from New York. 6.30—New Kenmore Orchestra. 7.0 (approx.)—Close Down.

SCHWEIZERISCHER  
LANDESENDER (BERO-  
MÜNSTER) (Switzerland)

653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.).  
12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather Report and News Bulletin. 12.40—Concert by the Station Orchestra. 1.35—Weather Report and Exchange Quotations. 1.45—3.30—Interval. 3.30—Viennese Waltzes on Gramophone Records. 4.0—Concert by the Station Orchestra. 5.0 (from Zürich)—Talk for Women. 5.30—Weather and Market Prices. 5.40—6.30—Interval. 6.30—Musical Sketch by Grock on Gramophone Records. 7.0 (from Basle)—Elementary Italian Lesson. 7.20—Sports Forecast. 7.28—Time Signal and Weather Report. 7.30 (from Basle)—Talk: The Peasants' Youth Movement. 8.0 (from Berne)—Swiss Dialect Programme: Five Swiss Poets read from their own Works, with Musical Interludes for Soprano and Two Tenors. 10.0—Weather, News and Tourist Report. 10.15 (approx.)—Close Down.  
STOCKHOLM (Sweden)  
Radiotjänst (SASA). 639 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.); Södertälje, 554 kc/s (542 m.).  
Transmits at intervals from 7.20 a.m. 1.0—1.30 p.m.—Broadcast for Schools. Reading in Norwegian. 5.0—Accordion Music. 5.30—Talk: Swedish Humorists: Strindberg. 6.30—Variety Music on Gramophone Records. 7.0—Agricultural Report. 7.15—Weather and News. 7.30—Talk: Choosing a Career for Girls. 8.0—Orchestral Concert of Swedish Music. Overture, Splmansvisa (Lilja). Variations on a Swedish Folk Tune (Wetterberg). Two Miniatures (Seymer). Suite, A Picnic (Hillfors). Air for Violin and String Orchestra (Schönning). Rhapsody (Trobäck). 9.15—Talk: Olympic Games, relayed from Göteborg. 9.45—Weather and News. 10.0—Concert. Waltz, Seid umschlungen Millionen (Johann Strauss). Czardas (Gabriel-Marie). Extase (Ganne). Tango (Lander). Princess Waltz (Jahn). Serenade (Giuliano). Cracovian (Rozycki). Hellmesbergiana (Ischpold). 11.0 (approx.)—Close Down.

## STRASBOURG (France)

Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW.  
11.30 a.m.—Gramophone Concert. Selection from "La Gioconda" (Ponchielli). Prayer from "William Tell" (Rossini). Selection from "La Bohème" (Puccini). Duet from "Lakmé" (Delibes). Aria from "Les Noces de Jeannette" (Masse). Selection from "Les Saltimbanques" (Ganne). Selection (Bohm). L'anc blanc (Huë). Tarantelle (Popper). Selection from "A Waltz Dream" (O. Straus). Nocturne from Quartet No. 2 (Borodin). Selection from "The Czardas Princess" (Kálmán).  
12.45 p.m.—News in French and German. 1.0—Time Signal. 1.1—Light Music on Gramophone Records. 4.45—Talk in French: Some Pages of French Literature. 5.0—Orchestral Concert conducted by Rosham. Radio Strasbourg March (Mélina). Waltz, The Wedding of the Winds (Hall). Serenade (Gyldmark). Overture, "Frau Luna" (Lincke). Dance Suite (Pierre). Selection from "Rip van Winkle" (Planquette). Oriental Suite (Poppy).  
6.0—Topical Talk in German. 6.15—Legal Talk in German. 6.30—Gramophone Concert. Selection from "Der Rosenkavalier" (Richard Strauss). Un Bal (Berlioz). Selection from "Alessandre Stradella" (Flotow). Serenade (Schubert). Nocturne (Chopin). Lehar Potpourri. Souvenir de Moisson (Vacher). Champs Elysées (Forester). Selection (Engel). Petit tourment d'amour (Chabran). Waltz, Wiener Blut (Johann Strauss).  
7.30—Time Signal. 7.31—News in French and German. 7.45—Gramophone Concert. Victory March (Whitlock). Step Out (Whitlock). 14 Waltzes (Wald-

teufel): (a) Les Patineurs, (b) Sirènes. Selection (Millock). Selection from "Frauenherz" (Joseph Strauss). A Viennese Waltz (Benatzky). Vienna City of my Dreams (Siczysky). "Les Millions d'Arlequin" (Drigo). Viennese Waltz (Dietrich). Song of the Hours (Privas). Selection (Alberti). Selection (Warms). 8.20—"Les Petites Michus"—Operetta in Three Acts (Messenger). 10.30—Concert relayed from Paris. Soloist: Mme. Roger Mitlos (Pianoforte). Ballet Music (Straggi). Concerto in C Minor for Pianoforte and Orchestra (Beethoven). Suite (Roussel). 11.30 (approx.)—Close Down.

STUTT GART (MÜHL-  
ACKER) (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. 10.0 a.m. (from Mannheim)—Cello Recital by Walter Kötscher. Adagio (Mozart). Minuet (Hugo Becker). Gedenken (Poppes). Gavotte (Poppes). German Dance (Ditters von Dittersdorf).  
10.30 (from Mannheim)—Pianoforte Recital by Rudolf Müller-Chapuis. Selections (Chopin): (a) Polish Song, My Pleasures, (b) Prelude in F Major, Op. 28, (c) Mazurka in G Major, Op. 50. Sonette 123 del Petrarca (Liszt). Selections (Ravel): (a) Minuet on the Name of Haydn, (b) Oiseaux tristes. Selections (Debussy): (a) Arabesque, No. 1, (b) Two Preludes (Debussy).  
11.0—News, Time and Weather. 11.15—Sponsored Programme—Nanne and Ella, the Exemplary Housewives. 11.30—Sponsored Concert. 11.45—Sponsored Gramophone Concert.  
12 noon—Wind Instruments Concert by Unemployed Musicians. March on Motives from the Opera, "Indra" (Neumann). Overture, "Mignon" (Thomas). Selections from "Le Postillon de Longjumeau" (Adam). King Albert March (Philipp). Army March. Waltz, Lustige Brüder (Vollstedt). March, Der Jäger aus Kurpfalz (Rode). 12.50—Time, News, Programme Announcements and Weather. 1.0—Concert from Langenberg. 2.0—Sponsored Gramophone Concert. 2.15—News Bulletin. 2.30—Advanced English Lesson. 5.0—Concert from Munich. 6.15—Time, and Agricultural Notes. 6.25—Talk: Fremchen. 6.50 (from Freiburg)—Health Talk: Children with perpetual Colds. 7.15—Time, Weather and Review of the Principle Events of the Coming Week, in Esperanto. 7.30 (from Karlsruhe)—Concert by the Karlsruhe Philharmonic Orchestra, conducted by Rudolf Kurt Guhr. Overture to a Revue (Lincke). Selections from "Die geschiedene Frau" (Fall). Waltz from "The Little Dutch Girl" (Kálmán). Selection from "The Merry Widow" (Lehar). Waltz, The Blue Danube (Johann Strauss). Selection from "A Waltz Dream" (Oscar Straus).  
8.30—A Flight round the World (arr. Karl Köstlin). Saltpetre, Gold and a little Lead—Chile, Peru and Bolivia.  
9.30 (from Freiburg)—Modern German Vocal and Instrumental Music by the Freiburg Chamber Orchestra conducted by Heinrich Pfaff. Soloists: Fritz Neumeyer (Baritone), Fritz Kiskalt (Flute), Margarethe Ritschl (Pianoforte). Suite for Chamber Orchestra (Balthasar Bettingen). Songs to Text by Huch (Fleischer): (a) So fern und so entlegen, (b) So weit wie die Welt geht, (c) Wüster nicht mehr liebten, (d) Süßer Schlaf lass mich allein. Improvisations for Flute with accompaniment by a Chamber Orchestra (Bettingen). Songs for Baritone (Pfaff): (a) Es rufen von drüben, (b) Die Orgel braust, (c) Lieber will ich, (d) Der Schäfer putzte sich.  
10.30—News, Time, Programme Announcements and Weather. 10.45—12 midnight—See Frankfurt. 12 midnight (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. Solitario voi (Stajano). Selection from "Die schöne Polin" (Lehar). Serenade from the Italian Suite (Hostel). Selection from "Herbstmanöver" (Kálmán). Schmetterlingspiele (Leopold). Desolazione (Borsatti). Al Bataclan (Ferrario).  
8.0 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.), and Genoa, 959 kc/s (312.8 m.).  
Transmits at intervals from 8.15 a.m. 7.5 p.m.—Announcements. 7.10—Variety Music. Overture, "Peter Schmolli" (Weber). Canto d'amore (Malvezzi). Third Slavonic Dance (Dvorak). Sotto i castagni (Rinaldi).  
7.30—Time Signal and Programme Announcements. 7.37—Light Music on Gramophone Records. 8.0—Giornale Radio, Weather Forecast, and Talk, followed by Gramophone Records of Light Music. 8.55—Wireless Notes. 9.0—Variety Programme. In the intervals, Talk on Music and Notes on Literature and Art. 11.0—Giornale Radio and Close Down.

## 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.); Lienz, 1,220 kc/s (246 m.) and Salzburg, 1,373 kc/s (218 m.).  
Transmits at intervals from 9.20 a.m. 6.15 p.m.—Report on Travel and Tourist Traffic. 6.30—Talk: Collapsible Boats and Foreign Travel. 6.45—Weekly Report on Physical Culture. 7.0—Talk: Education in Primitive Countries. 7.25—Time Signal, Weather and Programme Announcements. 7.35—Concert by the Professors of the State Academy of Music relayed from the Musikvereinsaal. Conductor: Oswald Kabasta. Organ Solo: Toccata and Fugue in F Major (Bach). Bass Solo: Aria from the "Kreuzstab" Cantata (Bach). Pianoforte Solo: Paraphrase on "Dies irae" (Liszt). Concertante Quartet in E Flat Major for Oboe, Clarinet, Bassoon, Horn and Orchestra. Pianoforte Solos: (a) Prélude à l'après midi d'un faune (Debussy), (b) Sonata in C Major, Op. 25 (Korngold). Songs for Soprano and Baritone (Joseph Marx) with the Composer at the Pianoforte. Academic Festival Overture (Brahms). 9.45—News, Weather and Announcements. 10.0—Dance Music by Marek Weber and his Orchestra, relayed from the Café Westminster.

## WARSAW (Poland)

Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW.  
11.20 a.m.—Aviation Weather Report. 11.25—Interval. 11.45—Polish Press Review. 11.58—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow. 12.5 p.m.—Programme Announcements. 12.10—Light Music on Gramophone Records. 1.20—Weather Forecast. 1.25—Interval. 1.35—Popular Music on Gramophone Records. 1.55—Interval. 2.45—Light Music on Gramophone Records. 3.5—Economic Report and Exchange Quotations. 3.15—Report of a Polish Music Society. 3.20—Interval. 3.25—Historical Talk: Napoleon and Poland. 3.45—Hydrographic Report. 3.50—Literary Talk: Kasprowiec. 4.10—Light Music on Gramophone Records. 4.20—Wireless Notes. 4.40—Popular Music on Gramophone Records. 4.55—English Lesson on Linguaphone Records. 5.10—Talk: Royal Love, relayed from Wilno, 533 kc/s (563 m.). 5.35—Orchestral Concert, conducted by A. Furmansky. Military March (Grit). Overture, Amour et Souffrance (Mouton). Waltz, Wienerblut (Johann Strauss). Fox-trot (Heymann). Selection from "Where the Lark sings" (Lehar). Polka (Edward Strauss). Indian Serpent Dance (Siede). Cracoviennes (Rajczak). Mazurka (Namy-slovsky). 6.50—Miscellaneous Items. 7.15—Agricultural Press Review from Wilno. 7.25—Programme Announcements. 7.30—Sports Notes. 7.35—Light Music on Gramophone Records. 7.45—Radio Journal. 8.0—Talk on Music. 8.15—Beethoven Concert by the Warsaw Philharmonic Orchestra, conducted by Oscar Fried and the Opera House Choir. Soloists: Sleminka (Soprano), Mme H. Leska (Contralto), Ad. Dobosz (Tenor), and Alex. Michalovsky (Bass). Overture, Leonora. No. 3. The Ninth Symphony. In the interval, Literary Reading. 10.40—Radio Journal. 10.45—Weather and Police Report. 10.50—Dance Music. 12 midnight (approx.)—Close Down.

# SATURDAY (April 23)

## PRINCIPAL EVENTS

### SYMPHONY CONCERTS

8.0 p.m. Brussels No. 1.  
9.0 " Italian Stations (Northern Group).

### CONCERTS (Vocal and Instrumental)

6.40 p.m. Munich: "A Musical evening with the Emperor (1760)."  
7.10 " Berlin (Witzleben), Königs Wusterhausen: The St. Mark Passion (a fragment) (Bach).  
8.10 " Radio Suisse Romande: "The Seasons" (Haydn).  
8.30 " Strasbourg.

### OPERAS AND OPERETTAS

6.30 p.m. Budapest: "Die Walkure," from the Royal Opera.  
8.0 " Brussels No. 2: Gala Evening of the Royal Opera, Antwerp.  
8.45 " Palermo: "A Waltz Dream" (Straus).  
8.45 " Rome: Opera relay.

### CHAMBER MUSIC

7.0 p.m. Leipzig: Paul Juon programme.  
7.10 " Heilsberg: for Violin, 'Cello and Harp.

### RECITALS

5.0 p.m. Langenberg: Schubert programme.  
10.10 " Warsaw: Chopin.

### PLAYS AND TALKS

7.35 p.m. Copenhagen, Oslo, Stockholm: The Chief Scout's talk to Scandinavian Scouts.  
8.10 " Vienna: "Kabale und Liebe" (after Schiller).  
8.45 " Radio-Paris: Humorous Dialogues.

### MISCELLANEOUS

1.0 p.m. All B.B.C. Stations: Opening of the Shakespeare Memorial Theatre.  
2.35 " All B.B.C. Stations: The Cup Final.

### DANCE MUSIC

10.20 p.m. Hamburg: Scarpa.  
10.30 " Strasbourg (till 12).  
10.45 " Munich.

### The Scandinavian Scouts

The Boy Scouts of the whole world are to-day celebrating St. George's Day, and the Scandinavian organisations have arranged with Lord Baden-Powell, the Chief Scout, to give a talk which will be relayed from London to the Scouts of Denmark, Norway and Sweden. The occasion is a notable



[By courtesy of the Boy Scout's Association.

Lord Baden-Powell, the Chief Scout, with the Kudu Horn with which he opened the world's first Boy Scouts' Camp.

one for the whole of the Scout movement there, and the Chief Scout's talk is being looked forward to with the keenest interest. He will speak in English at 7.35, and at the end of his talk, translations of it are to be broadcast by the stations concerned in Denmark, Norway and Sweden.

### Frederick the Great as Composer

A flute concerto by Frederick the Great, to be broadcast by the NORTHERN GROUP OF ITALIAN STATIONS at nine this evening, reminds us that monarchs and other great ones of the earth who put their names to works of art, have sometimes

fairly claim to be a well-equipped musician. In spite of his well-known passion for French literature and literary men, he hated the music of that country and of Italy; on behalf of German music he was a real enthusiast. As Crown Prince he had lessons from Hayn, a cathedral organist, and the two formed so happy a bond of friendship that all his life Hayn sent the King a new piece of his own composition each birthday. The flute was the instrument Frederick played best, and his master Quantz, is supposed to have composed no fewer than three hundred Concertos for him. In later life the King, so we are told, had not enough breath to play the flute, and took up again the playing of the klavier—the form of pianoforte in use in his day. Although it was known that Frederick was an enthusiastic composer in his lifetime, most of his pieces were lost sight of, and not until a search was made in 1835, nearly half a century after his death, were they rediscovered. King Frederick William III, who instituted the search, had the satisfaction of finding no fewer than a hundred and twenty pieces composed by the great man, and all of these were carefully edited and published in 1889.

### A Favourite Pianoforte Concerto

Ardent Scandinavian though he was, Grieg traced his pedigree back to a Scottish ancestor, one Alexander Greig, who went from Fraserburgh to Bergen in the century before last. It has more than once been suggested that traces of that Scottish ancestry can be discerned in his music, but it is probably nearer the truth to assume some kinship between Scottish and Scandinavian Folk music. Almost all Grieg's themes are inspired by an enthusiastic regard for the music of the Norse countries; it is that which gives his music its unmistakable character. His pianoforte concerto in A Minor has always been a favourite, alike with performers and audiences; its vivid and picturesque themes make it easy to forget that the piece as a whole suffers from Grieg's weakness in developing his subjects.

### 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—"What's in the Papers?"  
12 noon—The Northern Studio Orchestra, directed by John Bridge.  
1.0 p.m.—Time Signal (Greenwich).  
1.0—The Opening of the New Shakespeare Memorial Theatre. From Stratford-upon-Avon.  
2.20—Opening Ceremony and Speech by H.R.H. the Prince of Wales, K.G., from the New Theatre.  
2.35—The Football Association Cup Final. Arsenal v. Newcastle United. A Running Commentary on the Match by George F. Allison (by courtesy of the Football Association). Relayed from the Empire Stadium, Wembley. (Important Notice.—No unauthorised outside use may be made of a broadcast programme.)  
4.45—Time Signal (Greenwich).  
4.45—Reginald Foort.  
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—Saturday Sports Talk.  
6.45—A Recital. Alannah Delias (Pianoforte).  
7.5—7.25—"This Surprising World." Mr. Gerald Heard.  
7.30—The Wycliffe Orpheus Male Voice Choir. Conductor, W. Bromage Smith.  
8.0—The Wireless Military Band. Conductor, B. Walton O'Donnell. Billy Mayerl (Pianoforte).  
9.0—"The Second News."  
9.15—Shipping Forecast; New York Stock Market Report.  
9.20—"On the 9.20—Conversations in the Train"—XV.  
9.40—"The Life of King Henry the Fifth" (from William Shakespeare). A Chronicle Play for Broadcasting. Arranged and Produced by Peter Creswell.  
11.10—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 (London and Northern)—Daventry National Programme.  
1.0 p.m.—The Opening of the New Shakespeare Memorial Theatre. From Stratford-upon-Avon.  
2.35—Daventry National Programme.  
5.15—The Children's Hour.  
6.0—"The First News."  
6.25—Regional Sports Bulletin.  
6.30 (London)—The Gershwin Parkington Quintet. Ceredig Jones (Bass).  
6.30 (Midland)—"From the Musical Comedies." The Midland Studio Orchestra, directed by Frank Cantell. Evelyn Over (Soprano).  
6.30 (Northern)—Special Interlude.  
6.45 (Northern)—A Relay from the Argyle Theatre, Birkenhead.  
7.45—The B.B.C. Dance Orchestra, directed by Henry Hall.  
8.30 (London)—Talk.  
8.30 (Midland)—"Mike on the Hike." A Roving Revue by L. E. Williams.  
8.30 (Northern)—"Microperrots in a new and original Concert Party entertainment. Maymie Dean, Jean MacGregor, Eileen Whale, Doris Baker, Clifford Atkinson, Norman Fiddes, Arnold Helsby, F. A. Nichols. Produced by Harold Cluff.  
9.0 (London)—An Orchestra Concert. Stiles Allen (Soprano). The B.B.C. Orchestra (Section D). Conducted by Edward Clark.  
9.30 (Midland)—A Recital of Gramophone Records arranged by Robert Tredinnick.  
9.30 (Northern)—The Studio Orchestra.  
10.15—"The Second News."  
10.35 (Midland)—Experimental Transmission by the Futograph 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

#### ALGIERS (N. Africa)

825.3 kc/s (363.3 m.); 13 kW.  
Transmits at intervals from 12.30 a.m. to 7.20 p.m.—Financial Report and Market Prices. 7.25—Shipping Notes and Weather Forecast.  
7.30—Concert of Variety Music. Soloist: M. Néri (Cello). Waltz, "The Skaters (Waldteufel)." Cello Solo: Neapolitan Song (Rabey).  
7.55—News Bulletin and Time Signal.  
8.0—Concert (cont'd.). Danse Caractéristique (Tchaikovsky). Chanson Italienne (Volpatti). Selection, "Le Petit Choc" (Szule). Foxtrot (Vallaur). Overture to an Operetta (Lincke).  
8.0—Request Concert of Gramophone Records.

#### BARCELONA (Spain)

Radio-Barcelona (EAJ1). 860 kc/s (349 m.); 8 kW.  
Transmits at intervals from 8.30 a.m. to 9.0 p.m.—Programme for Children.  
8.0—Concert by the Station Trio.  
8.30—Exchange Quotations and Elementary English Lesson. 9.0—Request Programme of Gramophone Records followed by Press News.  
10.0—Chimes, Weather Report and Market Prices.  
10.5—Concert by the Station Orchestra. Pasodoble, Fiesta andaluz (Anás). Waltz (Edward Strauss). Prelude No. 4, in D Minor (Chopin). Prelude (Casademont). 10.30—See Madrid.

#### BELGRADE (Yugoslavia)

697 kc/s (430.4 m.); 2.5 kW.  
Transmits at intervals from 11.0 a.m. to 4.0 p.m.—Divine Service. Relay.  
4.30—Request Concert of Gramophone Records. 5.30—Recital of Yugoslavian Songs by Herr Bosko Nikolic. 6.15—Programme Announcements, followed by German Dialogue. 7.20—Comedy (to be announced). 7.50—Introduction to the following Transmission. 8.0—Relay of an Opera from the National Theatre, Zagreb, 977 kc/s (307 m.). In the interval at 9.30 (approx.)—News. After the Programme, Relay of Foreign Stations.

#### BERLIN (Germany)

Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.  
Transmits at intervals from 5.45 a.m. to 4.30 p.m.—Concert from Berlin (Witzleben). 5.30—Health Talk. 5.50—Wireless Technical Talk. 6.5—German for Germans. 6.30—Talk: The Modern Intellectual Outlook. 6.55—Weather for Farmers. 7.0—English Lesson. 7.30—Talk, followed by Weather for Farmers. 8.0—Variety Programme from Breslau. In the interval at 9.30—News and Sports Notes. 11.0—Weather, News and Sports Notes, followed by Dance Music from 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 6.30 a.m. (Gymnastics and Concert).  
4.5 p.m.—Orchestral Concert, conducted by Clemens Schmalstich. Im Frühling (Goldmark). Selections from the Suite "Aus dem Morgenlande" (Heuberger): (a) Mädchen beim Tanz, (b) Zweigespräch am Brunnen, (c) Ramadanfest. Two Piedmontese Dances (Sinigaglia). A Wedding Day on Troidhausen (Grieg). Italian Caprice (Tchaikovsky). Comedy Overture (Schmalstich). Mephistowalzer (Liszt). Neapolitanischer Mandolnenspieler (Reinecke). The Enchanted Lake (Liadov). Tanzwalzer (Busoni). Norwegian Artists' Carnival (Svendsen). In the interval, Film Notes.  
6.0—The Narrative of the Week. 6.30—Talk: Political Economy from 1789-1815. 6.55—"The Witzleben Station informs its listeners..."  
7.0—Topical Talk.  
7.10—Fragment from the "St. Mark Passion" by Bach, by Adelheid Arnold (Soprano). Grete Thürkov (Contralto), Heinz Marten (Tenor) and the Station Choir and Orchestra, conducted by Maximilian Albrecht.  
7.40—Labour Market Report. 7.45—Sports Notes.  
8.0—Mischa Spoliansky Concert by the Station Orchestra, conducted by the Composer and Dajos Bela and his Orchestra. 9.0—News and Sports Notes.  
9.10—Johann Strauss Concert conducted by Bruno Seidler-

Winkler. Overture, "Prinz Methusalem." Waltz. Nachtfalter. Polka, Leichtes Blut. Overture, "Waldmeister." Waltz, Schallwellen. Intermezzo from "The Arabian Nights." Waltz, Märchen aus dem Orient. Czardas from "Ritter Pasman." Persian March.  
10.0—Weather, News and Sports Notes. 10.15 (approx.)—Dance Music. 1.0 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 6.30 p.m.—Radio Journal. 8.0—News, Exchange and Lottery Results. 8.5—Sports Notes. 8.10—Advanced English Lesson. 8.25—News and Weather Forecast.  
8.30—Concert of Light Music on Gramophone Records. Sing a Little Love Song (Conrad Sydney Mitchell). A Selection (Oberfeld) Selection from "La Basoche" (Messager). Selection from "La Mascotte" (Audran). Selection from "Les Dragons de Villars" (Maillart). Selection from "La Belle Hélène" (Offenbach-Tavan).  
9.0—"Monsieur Lambert, Marchand de Tableaux"—Comedy in Two Acts (Max Maurey), followed by "Nouveau"—Comedy in One Act (Henri Duvernois). After the Programme, Amusement Guide and Time Signal.  
10.30—Relay from Toulouse PTT, 1,175 kc/s (255 m.) of the "Bal des petits lits roses," given at the Capitol Theatre.

#### BRATISLAVA (Czechoslovakia)

1,076 kc/s (279 m.); 14 kW.  
Transmits at intervals from 11.0 a.m. to 7.0—See Prague. 7.30—See Brno. 8.30—See Prague. 10.20—Programme Announcements and Theatre Notes. 10.25—See Moravská-Ostrava.

#### BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW.  
Relayed by Gleiwitz, 1,184 kc/s (253 m.).  
Transmits at intervals from 6.30 a.m. to 6.0 p.m.—Talk: A Character Study. 6.15—Review of the Week's Talks. 6.40—Surprise Programme.

SATURDAY  
continued

7.0—Weather Forecast, and Popular Music on Gramophone Records. Overture, "The Crown Diamonds" (Auber). "Ballet Music from 'Sylvia' (Delibes). Stephanie Gavotte (Czibulka). Intermezzo from "Bluebird" (Offenbach). Waltz, Bei uns zu Haus (Johann Strauss). Spanish Serenade (G. Margutti). Gavotte (Taraff). Potpourri of Strauss and Lanner Waltz (arr. Schütt). Schwäbische Ländler (Lindemann).  
7.55—Weather Forecast. 8.0—Variety Programme relayed from the Südpark Restaurant. Conductor: Herbert Brunar. Introductory Talk: Paul Nikolaus. In the interval, "The Wedding Present—a Sketch (Hofmann-Harnisch), and at 9.30—Time Signal, Weather, News, Sports Notes and Programme Announcements. 11.0—See Berlin (Witzleben). 12.30 a.m. (Sunday) (approx.)—Close Down.

## BRNO (Czechoslovakia)

878 kc/s (342 m.); 35 kW. Transmits at intervals from 11.0 a.m. 7.0 p.m.—See Prague. 7.30—Concert of Popular Music. 8.30—See Prague. 10.20—Announcements. 10.25—See Moravská-Ostrava.

## BRUSSELS (Belgium) (No. 1)

I.N.R. 590 kc/s (509 m.); 15 kW. 12.15—1.45 p.m.—Weather Forecast and Gramophone Concert. Aviators' March (Dostal). Waltz, Sobre las olas (Rosas). Foxtrot, Le petit ocar. Waltz, O Frühling wie bist du so schön (Lincke). Pasodoble (Santander). Waltz from "La Cocarde de Mimi Pinson" (Goublier). Selection from "Les 28 Jours de Clairette" (Roger-Tavan). Serenade from "Don Giovanni" (Mozart). Déjà (Aivaz). Foxtrot, Hallo, Romania (Michaelov). Just Like a Butterfly. Sweet Ma e. Flower of Love. Foxtrot, I'll get by. Mazurka, Chasse aux Cailles. Schottische, Linette. Tango Vagabondo. Waltz, Morgenblätter (Johann Strauss). Mais quand c'est toi (Sylviano). La Légende des Grains de Beauté (Archambaud). Waltz (Johann Strauss). Le Père des Montagnes (Nivelet). Tylrose Waltz. Fleurs de Lis. American Patrol (Meacham). Selection from "The Maid of the Black Forest" (Jessel). March (Krier).  
5.0—Concert by the Station Symphony Orchestra, conducted by Arthur Meulemans. Overture, "La princesse jaune" (Saint-Saëns). Prelude, Cortège et Danse (Massenet). Two Elegiac Melodies for Strings (C.rieg). Valse triste (Sibelius). Petite Suite (Bizet). Gopak (Moussorgsky).  
5.45—Programme for Children. 6.15—Talk: The Struggle against Drink. 6.30—Gramophone Concert. Overture, "Tannhäuser" (Wagner). Selection from "Benvenuto Cellini" (Berlioz). Selection from "The Tales of Hoffmann" (Offenbach). Wedding March and Scherzo from "A Midsummer Night's Dream" (Mendelssohn). The Stein Song. Dance of the Paperdolls. Foxtrot, The Watermill. Gipsy Melody (Carlton and Nicholl). Boulicot à Pécolé. Boulicot soldat. La Parade. Variety Items. 7.30—Literary Review.  
8.0—The Station Symphony Orchestra conducted by Jean Kumps. Soloist: M. Bèthune (Violin). Symphonic Poem, Don Juan (Richard Strauss). Concerto in G for Violin (Mozart). Viennese Rhapsody (Schmitt). 8.45—Talk: Towards Economy. 9.0—Concert (continued). Selections from "The Damnation of Faust" (Berlioz). Gramophone Records (Berlioz): (a) Air de la Puce, (b) Voix des roses. Wallonia (Guillaume). Overture, "The Barber of Seville" (Rossini). Two Arias on Gramophone Records from "The Barber of Seville" (Rossini). España (Chabrier). 10.0—Le Journal Parlé and Close Down.  
BRUSSELS (Belgium) (No. 2)  
N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12.15—1.45 p.m.—Weather and Concert by the Max Alexys Orchestra. 5.0—Orchestral Concert, conducted by Jean Kumps. Spring March (Filippucci). In a Persian Market (Ketelbey). Gipsy Waltz (Ketelbey). Intermezzo and Barcarolle from "The Tales of Hoffmann" (Offenbach). Selection from "The Barber of Seville" (Rossini). Funeral March of a Cockchafer (Dubois). Selection (Eilenberg). Waltz from "The Count of Luxembourg" (Lehár). Selection from "The Three Musketeers" (Friml). 6.0—Gramophone Concert. Five

o'clock (Ravel). Liebestraume (Liszt). Overture, "Der Opernball" (Heuberger).  
6.15—Talk: Europe in the 17th Century.  
6.30—Gramophone Concert. Turkish Patrol (Michaelis). Selection (Peres). Tunes of not so long ago, 1921. Tunes of not so long ago, 1922. Waltz from "Bitter Sweet" (Coward). La Presumida (Vives and Delgado). Roinance de Santa-Lucia (Toldra and De Sagarra). Dance of the Marionette (Winternitz). Polichinelle (Kreisler). Arlequin (Popper). Boisoir Madame la Lune (Marinier). Extase (Ganne). Carnival Suite (Thomé). 7.15—Talk: The Poet Marnix Gysen. 7.30—Agricultural Report. 8.0—Gala Programme relayed from the Royal Flemish Opera House, Antwerp. In the intervals, Recitations and Le Journal Parlé.

## BUCHAREST (Romania)

Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 12 noon. 5.0 p.m.—Concert of Light and Romanian Music by the Sibiceano Orchestra. 6.0—News Bulletin and Time Signal. 6.10—Concert (contd.). 7.0—Talks on Geography and History. 7.45—Light Music on Gramophone Records. 8.0—"St. George's Night"—Comic Opera. News in the intervals.

## BUDAPEST (Hungary)

545 kc/s (550 m.); 18.5 kW. Also relayed on 210 metres. Transmits at intervals from 9.15 a.m. 4.30 p.m.—Concert of Light Music, conducted by Stefan Bertha. 5.25—Recital of Hungarian Folk Songs, by Mme. Bodán, accompanied by the Inre Magyari Cigány Band. 6.30—"The Valkyrie"—Opera Wagner, relayed from the Royal Hungarian Opera House. News, Time Signal and Weather in the Interval. After the Opera, Dance Music by the Béla Galdy Jazz Band, with Nikolaus Vog, relayed from the Hotel Gellért.

## COPENHAGEN (Denmark)

1,067 kc/s (281 m.); 0.75 kW. Relay by Kalundborg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. (Gymnastics). 12 noon—Time and Chimes from the Town Hall. 12.2 p.m.—String Ensemble Concert from the Wivex Restaurant. 2.30 Relay of the English Football Cup Final in the Wembley Stadium, from London. 3.0—Programme for Children. 3.30—Orchestral Concert conducted by Launy Gröndahl. Tivoli March (Fahrbach). Waltz from "A Waltz Dream" (O. Strauss). Danish Rhapsody (Lindhardt). Two Songs from "Leonora Christina" (S. Salomon). Selection from "Javotte" (Saint-Saëns). March, Holger Danske (Norup). Reading. Overture, "Fra Diavolo" (Auber). Valse timbre (Nielsen). Selection from "The Bartered Bride" (Smetana). Rigaudon for Strings from the Holberg Suite (Grieg). Dance from "The King" (Halvorsen). March from "Stepan" (Hamerik). 5.40—Exchange and Fish Market Prices. 5.50—Talk on Lord Baden-Powell. 6.20—French Lesson. 6.50—Weather Forecast. 7.0—News Bulletin. 7.15—Time Signal. 7.35—An Address for St. George's Day by Lord Baden-Powell, relayed from London. 7.45—A Danish Translation of Lord Baden-Powell's Address. 8.0—Chimes from the Town Hall. 8.2—Talk: Women in Society. 8.30—Orchestral Concert conducted by Launy Gröndahl. Waltz, Die Rekruten (Lanner). Polka, Britta (Lumbye). Styrian Dance (Lanner). Selections (Lumbye): (a) Waltz, Caecilie, (b) Polka, Amager. Marienwälder (Lanner). Selections (Lumbye): (a) Mazurka, Helga, (b) Gallop, En Sommernat paa Moens Klint. 9.20—Scandinavian Gods—Poem by Adam Oehlenschläger (III). 10.0—News Bulletin. 10.15—Variety Programme: Songs, Pianoforte Solos and Parodies of Actors. 11.0—Dance Music from the Lodberg Restaurant. 12 midnight—in the interval) Time and Chimes from the Town Hall. 12.15 a.m. (Sunday)—Close Down.

## CRACOW (Poland)

950 kc/s (312.8 m.); 1.5 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items, An-

nouncements and Light Music on Gramophone Records. 7.30—Review of Foreign Politics for the Past Week. 7.45—till close down—See Warsaw. 12 midnight (approx.)—Close Down.

## DUBLIN (Ireland)

(2RN). 725 kc/s (413 m.); 1.2 kW. Relay 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—Duologues: "That's My Life," by Mai Neville. 7.45—Zehn. 8.0—Concert by the 2RN Symphony Orchestra, conducted by E. Godfrey Brown. Soloists: Claud Biggs (Pianoforte) and John Lynskey (Baritone). 10.30—Time Signal, News, Weather Forecast and Close Down.

## FÉCAMP (France)

Radio Normandie. 1,364 kc/s (210.9 m.); 1 kW. Transmits at intervals from 12 noon. 7.30 p.m.—Military Music. 7.45—Announcements. 8.0—Sponsored Programme. 8.45—News Bulletin. 9.0—"International Concert for French Listeners" on Gramophone Records. French Music. Selection from "Coppélia" (Delibes). Meditation (Massenet). Violin Solo from "Samson and Delilah" (Saint-Saëns). Serenade from "Les Millions d'Arlequin" (Drigo). Italian Music: Selection from "La Traviata" (Verdi). Song from "The Barber of Seville" (Rossini). Song from "A Masked Ball" (Verdi). Serenade (Toselli). Russian Music. Night on the Bare Mountain (Moussorgsky). Waltz (Moszkovsky). Song without Words (Tchaikovsky). Song: The Miller and the Brook (Dargomijsky). German Music: Selection from "The Marriage of Figaro" (Mozart). Violin Solo: Ballet Music from "Rosamunde" (Schubert). Quintet from "The Mastersingers" (Wagner). Selection from "Tannhäuser" (Wagner). 10.0—Concert of Dance Music and Variety Items. 3.0 a.m. (Sunday)—Close Down.

## FRANKFURT-am-MAIN (Germany)

770 kc/s (390 m.); 1.5 kW. Relay by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 1.0—Orchestral Concert, conducted by Reinhold Merten. Part I. Viennese Dances. Waltz, Die Werber (Lanner). Waltz, Das Leben ein Tanz, der Tanz ein Leben (Joh. Strauss Senior). Gallop, Ballnacht (Johann Strauss, Senior). Waltz, Nachtfalter (Johann Strauss). Polka, Zucker und Kaffee (Millock). Waltz, Hochzeitslieder (Eduard Strauss). Waltz, Diesen Kuss der ganzen Welt (Ziehrer). Gallop, Frisch durchs Leben (Joh. Strauss). Part II. Dance Music. Conductor and Saxophone Soloist: Franz Hauck. 2.40—News Bulletin. 2.50—Sponsored Gramophone Concert. 3.20—Weather Report. 3.25—Time and Economic Notes. 3.30—4.55—See Stuttgart. 4.55—Economic Notes. 5.0—See Stuttgart. 6.15—Economic Notes. 6.20—Dialogue: Neuroses and the Neurotic. 6.55—Daily Encounters: The Chauffeur and the Pedestrian. 7.20—Time, Programme Announcements, Weather and Economic Notes. 7.30—See Stuttgart. 8.30—Variety Programme from Langenberg. 10.30—Time, Weather, News and Sports Notes. 10.45—Concert from Berlin (Witzleben). 11.0 a.m. (Sunday)—Close Down.

## HAMBURG (Germany)

Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relay by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.), and Kiel, 1292 kc/s (232.2 m.). Transmits at intervals from 5.45 a.m. 2.0 p.m.—Orchestral Concert conducted by Gerhard Maasz. Bombardementmarsch (Brüll). Prelude to "Scherin und Gertraude" (Graener). Waltz from "As You Like It" (Zilcher). Oriental Dance Scene, Scheherazade (Schmalstitch). Suite from "As You Like It" (Wetzlar). Duett and Polka from "Rappelpopf" (Blech). Serbian Melodies (Gál). 3.0—Weather Report. 3.5—News Bulletin. 3.20—Exchange Quotations.

3.50—Shipping Intelligence. 4.0—Microphone Report—a Visit to a Chemist's Shop. 4.25—Talk for Countrywomen. 4.30—Concert from Berlin (Witzleben). 5.30—Talk: The Development of Aviation. 5.30 (from Kiel)—Dialogue: Culture and Education in Schleswig-Holstein. 5.55—Carl-Heinz Boese reads from his own Works. 6.25—Talk: Changes in the Indian Cotton Industry. 6.55—Weather Report. 7.0—Topical Talk. 7.15 (from Hanover). Music on National Instruments. 7.40 (from Kiel)—Variety Programme in Dialect. 8.0—See Langenberg. 10.0—Time and News. 10.20—Dance Music from Sound Films.

## HEILSBURG (Germany)

1,085 kc/s (276.5 m.); 60 kW. Relay by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.30 a.m. (Gymnastics and Gramophone Concert). 11.30 a.m.—Concert by the Little Orag Orchestra, conducted by Eugen Wilcken. Overture, "Maritana" (Wallace). Légende d'amour (Becc). Es war einmal ein Zigeuner (Eineg). Suite, Caucasian Sketches (Ippolitov-Ivanov). Thermen-Walzer (Johann Strauss). Overture, Vier Menschenalter (Lachner). Humoresque (Dvorak). Salut d'amour (Elgar). Selection from "Zigeunerprimas" (Kálmán). Wedding-Marsch (Büttner). 1.20 p.m.—News Bulletin. 1.30—2.30—Gramophone Records of Variety Music. 2.35 (from Danzig)—Handwork for Children—Building a Bridge. 4.5—Concert from Berlin (Witzleben). In an interval: Film Review from Danzig. 6.0—Programme Announcements for the Coming Week. 6.10—Programme Intelligence in Esperanto. 6.15—Market Prices. 6.30—World Market Report. 6.40—Talk: Industrial Life in the New Turkey. 7.10—Violin 'Cello and Harp Recital by Eugen Wilcken. Hermann Driehel and Friedel Ellguth. Elindu Lamnt for Violin and Harp (Barno). Variations for Violin, 'Cello and Harp (Braga). Harp. Serenade for Violin, 'Cello and Harp (Oehlschläger). 7.40—Talk: Wit of Yesterday and Today. 7.55—Weather Forecast. 8.0—See Langenberg. 10.10 (approx.)—News, followed by Dance Music from Berlin (Witzleben). 12.30 a.m. (Sunday)—Close Down.

## HILVERSUM (Holland)

1,004 kc/s (298.8 m.); 3.5 kW. 7.25—9.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 7.25—7.40 and 8.10—8.25—Physical Culture Lesson. 8.40—Gramophone Records of Light Music. 10.40—Religious Programme by the Liberal-Protestant Radio Society (V.P.R.O.). 10.55 till Close Down—V.A.R.A. Programme. 10.55—Concert, Dramatic Selection and Gramophone Records of Light Music. 12.40 p.m.—Septet Concert. March The Gladiators' Farewell (Blankenburg). Waltz, Münchner Kindl (Komzak). Serenatella (Orlando). Gramophone Records of Variety Music. Delibes Potpourri, Ein Plauderstündchen mit Delibes (Urbach). Waltz, Glocken der Liebe (Benatzky). Gramophone Records of Variety Music. Waltz, Donausagen (Fucik). Klein Flütentänzt (Hachspiel). Gramophone Records of Variety Music. Potpourri, Für Alle (Dostal). Valse triste (Sibelius). Gramophone Records of Popular Music. Selection from "Cavalleria rusticana" (Mascagni). Spanish One-step, Marietta (Kapplusch). 2.25—Interval. 2.40—Educational Talk. 2.55—Sonata in E Flat Major for Clarinet and Pianoforte (Brahms). 3.10—Address. 3.25—Pianoforte Recital by Frits Uyttenboogaard. Intermezzo, Op. 118, No. 2 (Brahms). Rhapsody, Op. 79, No. 2 (Brahms). 3.40—Address. 3.50—Song Recital by Mlle. Olly Oldenbroek. 4.5—Talk. 4.25—Song Recital (continued). 4.40—Mandoline Concert. Hungarian Dance No. 5 (Brahms). Minuet from the Eleventh Symphony (Haydn). Serenade (Gounod). Torna a Sorriento (de Curtis). Gramophone Records of Light Music. Selections by a Hawaiian Orchestra: (a) Waltz, Kilima (Awai), (b) Grüss' mir mein Hawaii (Koilo), (c) Aloha Oe. Gavotte (Gossac). March, Frühlingsskinder (Blankenburg). 5.25—Sports Talk. 5.40—Chamber Music. Les symphonies, for Two Flutes (Chédeville).

Sonata No. 4 for Two Flutes (W. F. Bach). Variations in F Minor for Pianoforte (Haydn). 6.25—Talk. 6.40—Choral Selections. 6.55—Talk for Young Socialists. 7.0—Concert (continued). 7.10—Literary Talk. 7.40—Septet Concert. March, Im Dienst (Rosly). Waltz, Winterstürme (Fucik). Aufzug der Lilliputaner Garde (Staub). 8.0—Announcements. 8.15—Septet Concert (continued). Liebeslied (Meyer-Helmund). Potpourri, Aus der Woche (Thiele). Waltz, Nur wer die Frau'n nie fragt (Brodsky). March, Uncle Sammy (Holzmann). 8.40—Variety Programme: Topical Talk, Humorous Items, Songs, Dramatic Selection, Whistling Solos, Accordion Selections and Gramophone Records. 11.40—News and Football Notes. 11.55—Gramophone Records of Variety Music. 12.40 a.m. (Sunday)—Close Down.

## HUIZEN (Holland)

160 kc/s (1,875 m.); 8.5 kW. Programme of the Christian Radio Society (N.C.R.V.). 8.40—9.55 a.m.—Gramophone Records of Popular Music. 10.40—Trio Concert. 12.10 p.m.—Religious Talk. 12.40—Police Notes. 12.55—Sextet Concert. March, En garde (Grit). Song and Tango (Erwin). Waltz, Lysistrata (Erwin). Overture, Pegasus (Dickel). Potpourri, Für Alle (Dostal). Who am I? (Clifford). Potpourri, Reife Früchte (Morena). Lola (Collazo). Waltz, Amabiles (Scavolla). Waltz, We'll be together again (Nicholls) Ludoviko (R. Fall). 2.25—2.40—Interval. 2.40—Gramophone Records of Popular Music. 3.10—Programme for Children. 4.40—Gramophone Records (continued). 5.40—News in Esperanto. 5.55—Gramophone Records of Variety Music. 6.40—Press Review. 7.0—Gramophone Records of Popular Music. 7.20—Esperanto Lesson. 7.50—Talk. 8.10—Police Notes. 8.25—Sports Talk. 8.40—Orchestral Concert, conducted by Johan Gerritsen. Overture, "Fra Diavolo" (Auber). Waltz, Le pas des fleurs from "Naila" (Delibes). Selection from "The Land of Smiles" (Lehár). 9.10—Dramatic Programme. 9.40—News Bulletin. 9.55—Concert (continued). In a Chinese Temple Garden (Ketelbey). Waltz from "The Count of Luxembourg" (Lehár). Selection from "Die Fledermaus" (Joh. Strauss). Overture, "The Caliph of Bagdad" (Boieldieu). The Rosary (Nevin). Invitation to the Dance (Weber). Vilja's Song from "The Merry Widow" (Lehár). Die Wachtparade kommt (Eilenberg). Potpourri, Hallo, Hallo, Hier Wien! (Morena). March, King Cotton (Souza). 11.40—Gramophone Records of Variety Music. 12.40 a.m. (Sunday)—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. 8.15 p.m.—Concert of Light Music. 10.10—Pianoforte Recital of Chopin's Works by Henri Sztompka. 10.55—Dance Music and Light Music.

## LAHTI (Finland)

167 kc/s (1,796 m.); 54 kW. Relay by Helsinki, 815 kc/s (368.1 m.). Transmits at intervals from 7.10 a.m. 4.0 p.m.—Talk for Scouts. 5.0—Estonian Lesson. 5.30—Accordion Recital. 6.15—Talk (to be announced). 6.40—Talk (to be announced). 7.5—Concert by the Viipurin Lauluveikot Choir, followed by Pässi Music, relayed from the Pörssi Restaurant. 7.45—News in Finnish and Swedish and Close Down. 11.0 (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 Gramophone Concert). 11.20 a.m.—Educational Programme: Sport in Literature. 12 noon—Gramophone Concert of Opera Music. 12.50 p.m.—Weather Report. 1.0—See Frankfurt. 2.35—Concert. 3.30—Economic Notes and Time Signal. 3.50—Programme for Children. 4.20



SATURDAY continued

Talk for Women: Froebel and Women. 4.40—English Lesson. 5.0—Schubert Concert by Anton Tausche (Bass-Baritone) and Karl Delseit (Pianoforte). Songs: (a) Der Wanderer, (b) Liebesbotschaft, (c) Wehmut. Three Impromptus, Op. 142, for Pianoforte. Songs: (a) Der Fischer, (b) An eine Quelle, (c) Schwanengesang. Sonata in A Major, Op. 120, for Pianoforte. Songs: (a) Nacht und Träume, (b) Der Lindenbaum, (c) Der Sieg.

6.15—Talk on Economics. 6.40—Talk: The Government and Agriculture. 7.0—Weather, Time, Economic Notes and Sports Notes. 7.10—Wireless Notes. 7.15—Talk: Treading in the Valley of the Eifel. 7.35—Talk: The Physical Aspect of the World. 7.55—News Bulletin. 8.0—Variety Programme, followed by News and Concert. 12 midnight—Dance Music. 1.0 a.m. (Sunday)—Close Down.

LEIPZIG (Germany)

1,157 kc/s (259 m.); 2 kW. Relayed by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.30 a.m. 6.0 p.m.—Commercial German Lesson. 6.20—A Modern Dictionary. 6.30—Talk on Arctic Explorations in the Past and the Future, by Prof. Ludwig Weickmann and Prof. Reginald W. James, a Member of the Shackleton Expedition. 7.0—Paul Juon Festival Programme. Sonata in D Major, Op. 15, for Viola and Pianoforte. 7.30—"People around us"—Anecdotes (Jo. Hanns Rosler). 8.0—Variety Programme relayed from Zittau. 10.15—News, followed by Dance Music from Berlin (Witzleben). 12 midnight (approx.)—Close Down.

7.0—Paul Juon Festival Programme. Sonata in D Major, Op. 15, for Viola and Pianoforte. 7.30—"People around us"—Anecdotes (Jo. Hanns Rosler). 8.0—Variety Programme relayed from Zittau. 10.15—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 12.15 p.m. 7.0 p.m.—English Lesson. 7.30—Elocution Lesson. 8.0—Concert by the Sloga Orchestra. 9.0—Vocal Quartet Concert. 9.30—Quintet Concert. 10.0—Time and News Bulletin. 10.15—Concept of Light Music.

LWÓW (Poland)

788 kc/s (381 m.); 16 kW. Transmits at intervals from 11.45 a.m.

6.30 p.m.—Polish Songs by Mme. Marja Lewicka (Soprano), followed by Pianoforte Solos by Mme. Stefania Spiegel. 6.50—Miscellaneous Items. 7.15—See Warsaw. 7.25—Talk: The Telephone. 7.45—See Warsaw. 10.45—Relay of Foreign Stations. 12 midnight (approx.)—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. 4.0 p.m.—Light Music on Gramophone Records. 5.0—Pardeloup Concert. 7.0—Popular Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South East. 8.30—Orchestral Concert, conducted by Gaston Billot.

MADRID (Spain)

Union Radio (FAJ7). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 9.0 a.m. 8.0 p.m.—Chimes, Market Prices and Request Gramophone Concert. 9.15 News Bulletin. 9.30—10.0—Interval. 10.0—French Lesson on Gramophone Records. 10.30—Chimes, Time and Musical Comedy Selections: Part I. "La Verbena de la Paloma" (Bretón). Part II. "Bohemios" (Vives). 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 11.0 a.m. 4.10 p.m.—Concert from Brno. 5.10—See Prague. 6.5—Variety Music on Gramophone Recprds. 6.15—See Prague. 6.25—Concert by the Mandoline Society. March (Kovarik). Popular Songs (Kovarik). Selection (Erich-Plessow), Vocal Foxrot (Gollwell). Serenade (Kovarik). Waltz Boston (Gollwell). Nuremberg March (Voprah). 7.0—See Prague. 7.30—See Brno. 8.30—See Prague. 10.20—Programme Announcements and Theatre Guide.

MOSCOW (Russia)

Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 4.0 p.m.—Proletariat Radio Journal. 5.0—Peasants' Radio Journal. 6.0—Communist Programme. 8.0—Talk in German and English: The First Day of May and the Second International. 9.55—Chimes and 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. 6.0 p.m.—Folk Songs to the Lute by Sepp Summer. 6.20—Talk: Hunting Wolves. 6.40—"Evening Music with the Emperor Francis I." by the Studeny Quartet, Hanna Eschenbrücher (Soprano), Erich Müller-Ahrenberg (Baritone), Richard Staab (Pianoforte), Karl Hanst and Max Weydner (Speaker). Conductor: Alfons von Czibulka. 7.30—Wireless Notes. 8.0—Wind-Instrument Concert, conducted by Ernst Hagel. Fest-Fanfare (Fürst). Overture, "Tempelweih." (Kéler-Béla). Selections (Wagner) from (a) "Rienzi," (b) "The Flying Dutchman." Waltz, Ball bei Hof (Ziehrer). Potpourri, Wenn die Soldaten (Krome). Wireless March (Holzhäuser). 9.0—Variety from Langenberg. 10.20—Time and News. 10.45—Dance Music. 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.); Porsgrund, 652 kc/s (453.2 m.); and Rykan, 671 kc/s (447.1 m.). Transmits at intervals from 11.10 a.m. 4.16 p.m.—Concert by the Orchestra

of the Cecil Restaurant. Overture, "Die Matrosen" (Flotow). Waltz (Gungl). Ballet Suite (Popy). Popular Norwegian Songs (Gaston Borch). Tempo di menuetto (Zanella).

5.0—Service for Children relayed from Stavanger, 1,247 kc/s (240.6 m.). 6.0—Play for Children. 6.30—Recital of Norwegian Music by Eivind Moe (Hardanger Fiddle) and Johann Austbø (Vocalist). 7.0—Announcements, Weather and News Bulletin. 7.30—Relay from London. (Lord Baden-Powell, the Chief Scout, Speaks to Scandinavian Scouts. 7.45—Norwegian Translation of the Speech. 8.0—Time Signal. 8.1—Song Recital by Louis Graveure, relayed from the Aula Hall. 9.10—Talk (to be announced). 9.40—Weather and News Bulletin. 10.0—Topical Talk.

10.15—Concert by the Station Orchestra, conducted by Hugo Kramm. Overture, "The Secret Marriage" (Cimarosa). Wedding Scenes (Smetana). Selection from "The Prodigal Son" (Debussy). Malaguena (Moszkovsky). Selection from "Gasparone" (Müllöcker). 11.0—Dance Music on Gramophone Records. 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.—Concert of Light Music on Gramophone Records. 6.0—Programme for Children. 6.30—8.0—Interval. 8.0—Announcements, Radio-giornale dell'Enit, Agricultural Notes and Giornale Radio. 8.20—Sports Report. 8.25—Concert of Popular Music on Gramophone Records. In the interval at 8.30—Time Signal and Announcements. 8.45—"A Waltz Dream"—Opera (Oscar Straus), conducted by F. Militello. In the intervals, Book Review and Announcements. After the Opera, News Bulletin.

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). 6.45 p.m.—Illustrated Talk: Music

and Words. 7.0—Le Journal Parlé. 8.20—Weather Report. 8.30—Two Comedies (de Croisset): (a) "Par politesse," (b) "Qui trop embrasse"

PARIS (France)

Poste Parisien. 914 kc/s (328.2 m.); 1.2 kW. 6.45 p.m.—News and Announcements. 7.0—Gramophone Records, Talks and News. 7.30—Concert of Popular Music on Gramophone Records. 8.30—Gramophone Records, Talk and News. 8.45—Vocal and Orchestral Concert. Prelude and Serenade from "Naimona" (Lalo). Selections from "Scheherazade" (Rimsky-Korsakov). Selection from "Impressions d'Italie" (Charpentier). Ballet and March (Charpentier). 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 Lesson. 7.30—Weather and Physical Culture (continued). 7.45—Variety Music on Gramophone Records. 8.0—News, Weather and Press Review. 12.30 p.m.—Gramophone Concert. A la Varenne (Jekyll). Santa Lucia (Mario). Liebesfreud (Kreiser). Serenade (Drigo). La Campanella (Liszt). Ton Sourire (Catherine). The Festival of the Gnomes. Selection (Spencer). Waltz from "The Desert Song" (Romberg). Selection from "Le Médecin malgré lui" (Gounod). Chéri (Monteux-Wilwite). Etude in G Flat (Zoubaloff). Pensee d'automne (Massenet). My Ideal, sung by Maurice Chevalier. Selections (Konguell). In the intervals, at 1.0—Exchange. 3.0—Programme for Children. 3.45—Exchange and Market Prices. 6.30—Market Prices, Weather, Agricultural Report and Racing Results. 7.0—Talk arranged by the Union des Grandes Associations Françaises. 7.10—Talk: The Centenary of Evaristo Galois. 7.30—Book-keeping Lesson. 7.45—Review of the Latin Press, Commercial Prices and News. 8.0—Literary Readings: Tales by Alphonse Daudet. 8.30—News, Sports Notes and Weather. 8.40—Review by René Dorin.

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SATURDAY continued

8.45—Humorous Dialogues by Pauline Carton and Lucien Brulé from the Works of Chavette, Henry Monnier, Jules Moineau and Courteline. 9.15—Press Review and News.

9.30—Gramophone Concert. Two Selections (Silésu): (a) T'amo, (b) Mon cœur est pour toi. Melody for Cello (Rubinstein). Dis-moi (Larrieu). Ce n'est pas vrai (Larrieu). Les Myrtes sont flétris (Fauré). Ma Normandie (Béart). Pour rire en société (Bach-Laverne). Selection from "Marietta" (O. Straus). Selection from "Die Fledermaus" (Johann Strauss). Moment Musical (Schubert-Kreisler). Mélancolie (Delmet). La Noce Bretonne (Willaume). Vive Monsieur l'inspecteur (Myral-Laverne). The Lark (Schubert-Liszt).

POZNAN (Poland)

896 kc/s (335 m.); 1.9 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items and Announcements. 7.15—Talk on Journalism. 7.30—10.45—See Warsaw. 10.45—Time Signal, Sports Notes and Police Report. 11.0—Dance Music from the Polonia Café. 12 midnight (approx.)—Close Down.

PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 11.0 a.m. 4.10 p.m.—Orchestral Concert, conducted by Bakala, relayed from Brno. 5.10—German Transmission by Dr. Hugo Siebenschein. 5.25—Talk: The Modern Girl in Modern Literature. 5.35—Literary Programme. 6.5—Agricultural Report. 6.15—Talk for Workers. 6.25—German Transmission: News; Orchestral Selections. 7.0—News Bulletin. 7.5—Talk: The History of Czechoslovakia from 1848—1914. 7.20—A Sketch. 7.30—See Brno Programme. 8.30—Authors' Cabaret. 9.0 (in the interval)—Time and News. 10.0—Time and News. 10.20—Programme Notes. 10.25—See Moravská Ostrava.

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.). Transmits at intervals from 12.30 p.m. 4.31 p.m.—Concert by the Station Orchestra. 6.0 (from Lausanne)—Dance Music. 6.30 (from Lausanne)—Literary Review. 7.0—Weather Forecast. 7.1 (from Lausanne)—Light Music on Gramophone Records. 7.30 (from Lausanne)—Talk: The Week in International Politics. 8.0 (from Geneva)—Talk: The Work of the Disarmament Conference. 8.10 (from La Chaux-de-Fonds)—"The Seasons"—Oratorio (Haydn), relayed from the German Temple. The German Mixed Choral Society and a Local Orchestra, conducted by G. L. Pantillon. Soloists: Mme. de Vigier (Soprano), Erwin Fuller (Tenor) and Ernst Schläfli (Bass). In the interval at 9.30 (approx.)—Weather and News Bulletin. 10.40 (from Montreux)—Dance Music relayed from "Le Perroquet." 11.45 (approx.)—Close Down.

RIGA (Latvia)

572 kc/s (525 m.); 15 kW. Transmits at intervals from 6.0 a.m. 4.0 p.m.—Talk (to be announced). 4.30—Russian Dance Music. Selection from "Prince Igor" (Borodin). Gopak (Moussorgsky). Waltz from "Eugen Onegin" (Tchaikovsky). Selection from the Nutcracker Suite (Tchaikovsky). Selection from the Petrushka Suite (Stravinsky). Selection from "The Fire Bird" (Stravinsky). 5.30—Talk (to be announced). 6.0—French Lesson. 6.30—Agricultural Talk. 6.58—Weather Forecast. 7.0—"Les Matelots de Catane"—Play in Three Acts (Friedrich Wolf), relayed from the Workers' Theatre. In the interval, News Bulletin. 9.0—Weather Forecast. 9.30—Dance Music. 11.0 (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.). Transmits at intervals from 8.15—8.30 a.m.—Giornale Radio and Announcements 12 noon—Gramophone Records of Light Music. 12.35 p.m.—Weather Report. 12.45—Vocal and Instrumental Concert. Soloists: Gina Manin (Soprano), and Gino del Signore (Tenor). Tenor Solos: (a) Due

rispetti (Wolf-Ferrari), (b) Jota (Serrano). Selection from "Fra Diavolo" (Auber). Suite, Jeux d'enfants (Bizet-Branga). Rustle of Spring (Sinding). Selection from "La Bohème" (Puccini-Tavan). Nocte argentina (Ruelli). March from "The Bartered Bride" (Smetana). In the intervals at 1.15—Giornale Radio and Exchange, and at 1.30—Time and News. 2.0—5.0—No Transmission. 5.0—Exchange, Report of the Royal Geographical Society, Giornale Radio and Announcements. 5.15—Reading.

5.30—Soprano Solos by Maria Baratta. Song from "Der Freischütz" (Weber). Song (Glück). Song from "Lorelei" (Catalani).

5.45—Concert. Je t'aime (Waldeufel). Marcellina (Lanzetta). Selection from "Wonder Bar" (Katscher). Biglietto rosa (Mariotti). Selection (Stolz). Naïfa (Culotta).

6.15—Giornale dell'Enit. 6.20—Talk on Perugia. 6.55 (from Naples)—Shipping News and Sports Notes. 7.0—Morse Lesson, Agricultural Notes, Weather, Giornale Radio and Press Review. 8.0—Time, News and Gramophone Records of Variety Music. 8.30—Sports Notes and Announcements. 8.45—Relay of an Opera. In the intervals, Book Review and News.

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.). 12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather and News. 12.40—Variety Programme on Gramophone Records. 2.0—Weather Report and Exchange Quotations. 2.10—3.30—Interval. 3.30 (from Zürich)—Accordion Concert. 4.0—Operatic Airs our Fathers loved, on Gramophone Records. 5.0 (from Berne)—Young Comrades' Programme. 5.30—Weather and Market Prices. 5.45—6.30—Interval.

6.30—Popular Music on Gramophone Records. 7.0 (from Zürich)—Chimes. 7.15 (from Zürich)—Talk: How Sound Films are Made. 7.28—Time Signal and Weather Report. 7.30 (from Zürich)—Talk: The Path to Happiness. 8.0—Vocal and Instrumental Concert of Unfamiliar Works. 9.15—Swiss Programme by a Mandoline Quartet, with Humorous Recitations in Dialect by Fritz Reinhardt. 10.0—Weather and News Bulletin. 10.15—Dance Music on Gramophone Records. 11.0 (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.); 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. 4.0 p.m.—Concert of Light Music, Polonaise (Berg). Liten danslek (Wesslander). Waltz and Foxtrot (Bratt). Intermezzo (Körling). Berceuse (Lundberg). Waltz (Ekström). Tango (Hylborn). Potpourri (Ahlberg). Söderman-Mosaic (Rudolf). 5.0—Programme for Children. 5.30—Variety Music on Gramophone Records. 6.30—Talk: The Swedish Language. 7.0—Reading. 7.15—Weather and News. 7.35—Talk by Lord Baden-Powell, relayed from London. 7.50—Old Time Dance Music. 8.30—Radio Play (Zetterström). 9.0—Musical Cabaret Programme. 9.45—Weather and News. 10.0—Dance Music from Göteborg. 11.0 (approx.)—Close Down.

STRASBOURG (France)

Radio-Strasbourg (P.T.T.). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert. Symphony No. 4 (Brahms). Selection (Brahms). Two Songs (Lehár). Aria from "Louise" (Charpentier). Autumn Song (Tchaikovsky). Humoresque (Dvořák). Grottesque March (Sinding). Bells of Joy (Blaaro). 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.1—Gramophone Concert. Carnaval romain (Berlioz). The Rosary (Ethelbert-Nevin). Allegro (Flocco). Waltz, Gold and Silver (Lehár). Selection (Resch). Selection from "La Fille de Madame Angot" (Lecocq). Selection from "Les Cloches de Corneville" (Planquette). Gouttes d'eau (Petit).

SATURDAY continued

Selection (Koch). Selection from "Cydalise et le Chèvre-pied" (Pierne). Romantic Waltz (Séverac). Hungarian Czardas Nos. 2 and 3 (Barbet). 2.0—Legal Talk in French. 2.15—Gramophone Dance Music. I'm the Words you're the Melody. There's something about an old girl. I'm alone because I love you. The Wedding Bells are ringing. You will remember Vienna. I bring a Love Song. The Wedding of the Birds. Parade of the Minutes. Here comes the Sun. Sing a happy little thing. I lost my gal again. I don't want to dream. Bathing in the Sunshine. On a Balcony in Spain. Blaze away. The Standard of St. George. You and mine. Bells of Normandy. 3.45—Music Talk in French: Kuhlmann's Bible Sonata. 4.0—Gramophone Dance Music. Lovea Illusion. C'est la grande vie. You're simple delight, something to remember you by. Body and Soul. O, ces yeux. Hurt. Hullabaloo. Golden Sands. Say oui! chérie. The Wedding of the Birds. 4.45—Wireless Talk in German. 5.0—Dance Music. Pasodoble, Pontonero. Foxtrot, Green Song. Foxtrot, At the End of the Road. Waltz, May Nights. Foxtrot, One more Night. Tango, Manuela. Foxtrot, Pat-Trick. Foxtrot, Lovebound. Slow Foxtrot, Wenn der Wind weht. Waltz, Pluie de diamants (Waldeufel). Foxtrot, River stay 'way from my Door. Tango, Je suis à vous Madame. The Wedding of the Three Blind Mice. Waltz, Deux copains. Foxtrot, Don't tell her. Foxtrot, Oh Boy, what a Girl. 6.0—Agricultural Talk in German. 6.30—Orchestral Concert conducted by Maurice de Villiers. Soloists: M. Pogoda (Pianoforte), M. Roskam (Cello). Overture, "Rosamunde" (Schubert). Ballet Music from "Cinq-Mars" (Gounod). Selection from "Rigoletto" (Verdi). Pianoforte Solo: Venetian Serenade (Pierne). Suite from "Le Roi s'amuse" (Delibes). 7.30—Time Signal. 7.31—News in French and German. 7.45—Concert (continued). March, The Derby Winner (Peckey). Waltz, Old Vienna (Ziehrer). Minuet (Paderewsky). Cello Solo; Serenade (Braga). Selection from "L'Ambassadrice" (Auber). Selection from "The Last Waltz" (O. Straus). Mattinata (Leoncavallo). March (Novacek).

8.30—Concert by the "Saint-Martin" Symphony Orchestra relayed from Colmar. Conductor: Joseph Rey. Overture, "Le Jeune Henri" (Méhul). Selection from "Le Timbre d'argent" (Saint-Saëns). Invitation to the Waltz (Weber). Selections from "L'Attaque au moulin" (Brünau). Prize Overture (Fernand). Suite from "L'Arlesienne" (Bizet). 10.30—Dance Music from the Savoy. 12 midnight (approx.)—Close Down.

STUTTGART (MÜHLACKER) (Germany)

Süddeutscher Rundfunk. 832 kc/s (369.5 m.); 60 kW. Relayed by Freiburg, 527 kc/s (570 m.). Transmits at intervals from 6.0 a.m. 10.0 a.m.—Mendelssohn Concert on Gramophone Records. 11.0—News and Time Signal. 12 noon—Weather Report. 12.5 p.m.—Sponsored Gramophone Concert. 12.20—Gramophone Concert of Light Music. 12.50—Time, News, Programme Announcements and Weather Report. 1.0—See Frankfurt. 2.40—Reading (Nikolaus Lenau) by Emil Hess. 3.0—Sorrow and Joy in Folk Songs—Concert by a Male Voice Choir. Über die Heide (Süssmuth). Abendglocke (Slicher). Der Krantz (Bezler). Die alte Mühle (Nagel). Sehnsucht nach der Heimat (arr. Arnold). Mei Schobeland (Kromer). Abmarsch (Heimrichs). Fidel und Brumbass (Schulke). Heimkehr (Jüngst). Wein, Weib und Gesang (Bein). 3.30—Programme for Children. 4.30—Accordion Recital. March, Feuer los (Holzmann). Two Folk Songs (Kreutzer): (a) Schon die Abendglocken klangen. (b) Droben steht die Kapelle. Schneidepolka (Schittenhelm). Waltz, Estudiantina (Waldeufel). Deutschmeister-Regimentsmarsch (Jurek). La Bourrasque (Péguri).

5.0—Concert by the Philharmonic Orchestra, conducted by Gustav Görlich. Soloists: Gerda Baumann (Soprano) and Günter Homann (Pianoforte). Overture, "Alphons und Estrella" (Schubert). Soprano Solo: Der Hirt auf dem Felsen (Schubert). Minuet in D Major (Mozart). Aria from "Il Seraglio" (Mozart). Pianoforte Concerto in A Minor, Op. 16 (Grieg). 6.15—Time and Sports Notes. 6.25—Rationalisation of Factory and Office Work by the Use of Machinery. 6.50—Talk: Modern Youth and the Pathos of Tradition. 7.15—Time and Weather. 7.30—Provincial Programme relayed from Heidenheim—The Brenz-Tal. 8.30—Variety Programme from Langenberg. 10.0 (from Freiburg)—Viennese Music by the Vienna Schrammel Quartet. March from "Der Obersteiger" (Zeller). Waltz, Faschingskinder (Ziehrer). Foxtrot for Accordion Solo. Potpourri, Eine Sängerschaft nach Wien—Part III (Silving). Waltz after Motives from "Die geschiedene Frau" (Fall). Ich möcht wieder mal in Grinzing sein (Benatzky). Foxtrot, Die Überlandpartie (Leopoldi). 10.30—News, Time, Programme Announcements and Weather. 10.45—Dance Music from Berlin (Witzleben). 1.0 (approx.)—Close Down.

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. 4.15 p.m.—Concert of Dance Music. Foxtrot, Kamerad, wir sind die Jugend (Stolz). Selections from "Mädel aus Wien" (Strecker): (a) Slow Foxtrot, In Schönbrunn, (b) Foxtrot, Weil du blond bist, mein Mädel. Waltz, Dir sing' ich mein lied (Lehar). Foxtrot, Du bist noch schöner als die schöne Helena (Strecker). Tango, Reizendes Cousinchen (Guttman-Salter). Tango, Ist dein Herz noch ledig? (Granichstaedten). Foxtrot Fantasia on Jessels' "The Parade of the Tin Soldiers" (Löhr). Rumba, O Don José (Grenet). Foxtrot, Ausgeschlossen (Schaa). Eine Liebesgeschichte in Versen und Schlagern (Sternau). Foxtrot, Wenn in blauer Nacht (Lecuona). Waltz, Ich habe ein Herz das nach Liebe sich sehnt from "Der Draufgänger" (Hans May). Foxtrot, Schlagerezept (Floyd-Danberg). Foxtrot, Ein bisschen Liebe für dich (Abraham). Tango, Le Tango du Reve (Maldere). Tango, Reg' mich nicht auf Johanna (Rotter-Jurmann). Foxtrot, Isabella (Mascheroni). Rumba, Der Onkel Bumba aus Columba tanzt nur Rumba (Hupfeld). Foxtrot, Jagsi (Böhm-

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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. Non sirmi "No 1" (Allegro). Happy End (Noack). Non ritornare romani (Billi). Pavane (Carabella). Suite, Chopin Reminiscences (Ferras). Brigata allegra (de Micheli). La cigogna (Malerba). In the interval at 7.25—French Lesson on Gramophone Records. 8.0 till Close Down—See Turin.

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. Non sirmi "No 1" (Allegro). Happy End (Noack). Non ritornare romani (Billi). Pavane (Carabella). Suite, Chopin Reminiscences (Ferras). Brigata allegra (de Micheli). La cigogna (Malerba). 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.), and Genoa, 959 kc/s (312.8 m.). Transmits at intervals from 8.15 a.m. 7.5 p.m.—Concert of Variety Music. Overture, "The Bohemian Girl" (Balfe). Burlesque (Carabella). Selection from "Where the Lark sings" (Lehár). Passeggiando (Di Piramo). 7.30—Time Signal and Announcements. 7.31—Light Music on Gramophone Records. 8.0—Giornale Radio and Weather Forecast. 8.15—Concert of Variety Music. Chronological Potpourri, From Gluck to Wagner (Schreiner). Waltz from "Where the Lark sings" (Lehár). Marcetta (Crisculolo). 8.45—Talk: Events and Problems. 9.0—Symphony Concert, conducted by D. Amfiteatroff. Overture, "Le Devin du Village" (Rousseau). Third Symphony (Schumann). Review of Books. Concerto in C Major for Flute and Orchestra (Frederick the Great). Symphonic Poem, Poem of the Sea (Amfiteatroff). Overture, "The Bartered Bride" (Smetana). 11.0—Giornale Radio, and Dance Music relayed from the Fiaschetteria Toscana, Milan. 11.55—News Bulletin.

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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. 4.15 p.m.—Concert of Dance Music. Foxtrot, Kamerad, wir sind die Jugend (Stolz). Selections from "Mädel aus Wien" (Strecker): (a) Slow Foxtrot, In Schönbrunn, (b) Foxtrot, Weil du blond bist, mein Mädel. Waltz, Dir sing' ich mein lied (Lehar). Foxtrot, Du bist noch schöner als die schöne Helena (Strecker). Tango, Reizendes Cousinchen (Guttman-Salter). Tango, Ist dein Herz noch ledig? (Granichstaedten). Foxtrot Fantasia on Jessels' "The Parade of the Tin Soldiers" (Löhr). Rumba, O Don José (Grenet). Foxtrot, Ausgeschlossen (Schaa). Eine Liebesgeschichte in Versen und Schlagern (Sternau). Foxtrot, Wenn in blauer Nacht (Lecuona). Waltz, Ich habe ein Herz das nach Liebe sich sehnt from "Der Draufgänger" (Hans May). Foxtrot, Schlagerezept (Floyd-Danberg). Foxtrot, Ein bisschen Liebe für dich (Abraham). Tango, Le Tango du Reve (Maldere). Tango, Reg' mich nicht auf Johanna (Rotter-Jurmann). Foxtrot, Isabella (Mascheroni). Rumba, Der Onkel Bumba aus Columba tanzt nur Rumba (Hupfeld). Foxtrot, Jagsi (Böhm-

Sobotka). Slow Foxtrot, Zwischen drei und vierer (Noble-Campbell-Connelly). Foxtrot, Mei Deandler, mei Deandler (Werner-Weiss). Wiener Schlagerpotpourri (Pauscher). 6.0 p.m.—Talk: The Latest Developments in the Elections in Lower Austria. 6.10—Talk: Towards the Understanding of Election Results. 6.30—Talk: Aesthetic Problems in connection with the Talking Film. 6.55—Time Signal, Weather, Sports Report and Programme Announcements.

7.10—Concert of Popular Music by the Fritz Reckleinwald Orchestra. Homage March from "Sigurd Jorsalfar" (Grieg). Overture, "The Thieving Magpie" (Rossini). Waltz, Pearls (Offenbach). Potpourri of the Operettas of Johan Strauss (arr. Schlögl). Austrian Peasant Dances (Pachernegg). Ein Loblied auf die Schwiegermama (Leopoldi). Slow Foxtrot (Laudauer). 8.10—"Kabale und Liebe"—Play (Schiller), arranged for the Radio by Carl Hageman. 9.50—News, Weather and Announcements. 10.5—Concert by the André Hummer Orchestra, conducted by Ernst Netsch. Overture, "Der Hofnar" (Müller). Waltz, An der schönen grünen Narenta (Komzak). Selection from "The Queen of Spades" (Tchaikovsky). Suite from "Les Millefleurs d'Arlequin" (Drigo). Waltz, Carnevals Botschafter (Johann Strauss). Selection from "Boccaccio" (Suppe). Ella-Gavotte (Hummer). March (Netsch).

WARSAW (Poland)

Polskie Radio, 212.5 kc/s (1,411 m.); 120 kW. 11.20—Aviation Weather Report. 11.25—Interval. 11.45—News Bulletin. 11.58—Time Signal and Bugle Call from the Tower of St. Mary's Church Cracow. 12.5 p.m.—Programme Announcements. 12.10—Educational Programme from Lwów. 12.45—Light Music on Gramophone Records. 1.20—Weather Forecast. 1.25—Interval. 1.35—Popular Music on Gramophone Records. 1.55—Interval. 2.45—Light Music on Gramophone Records. 3.5—Economic Report and Exchange Quotations. 3.15—Fire Brigade Report. 3.20—Interval. 3.25—Review of Periodicals. 3.45—Hydrographic Report. 3.50—Programme for the Sick, relayed from Lwów. 4.20—Literary Talk. 4.40—Light Music on Gramophone Records. 5.10—Talk: Deafness. 5.35—Talk on Music. 6.5—Programme for Young People. 6.30—Talk on Music. 6.50—Miscellaneous Items. 7.15—Agricultural Correspondence. 7.25—Programme Announcements. 7.30—Sports Notes. 7.35—Light Music on Gramophone Records. 7.45—Radio Journal. 8.0—Topical Talk. 8.15—Concert of Light Music conducted by St. Nawrot. Soloists: J. Orłowska (Soprano), W. Zywolwsky (Guitar). 9.55—Reading. 10.10—Pianoforte Recital of Chopin's Works by Henri Sztopka. Ballad in G Minor. Nocturne in D Flat Major. Mazurka in C Sharp Minor, Op. 36. Mazurka in B Flat Major, Op. 24. Two Etudes Op. 10, in A Flat Major and G Flat Major. Waltz in A Flat Major Op. 64. 10.40—Radio Journal. 10.45—Weather and Police Report. 10.50—Dance Music.

WILNO (Poland)

533 kc/s (563 m.); 16 kW. Transmits at intervals from 11.58 a.m. 7.0 p.m.—Lithuanian Review of the Week. 7.15—Programme for Students. 7.30—See Warsaw. 7.35—Programme Announcements. 7.45—See Warsaw. 8.0—Talk on Wireless. 8.15—Musical Competition for Listeners. 8.45—Request Gramophone Records. 9.55—See Warsaw. 11.0—"Akuku"—Humorous Journal Parlé. 11.30—Light Music on Gramophone Records. 12 midnight (approx.)—Close Down.

ZAGREB (Yugoslavia)

Radioklub Zagreb. 977 kc/s (307 m.); 0.75 kW. Transmits at intervals from 12.20 p.m. 6.30 p.m.—Concert of Dance Music. 6.30—7.10—Interval. 7.10—Miscellaneous Announcements and Reports of Various Societies. 7.25—Popular Medical Talk by Dr. Karlo Lusicky. 7.50—Introductory Talk to the following Transmission. 8.0—Relay of an Opera from the Zagreb National Theatre. In the first interval at 9.20 (approx.)—News and Weather.

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