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THE NEW SCOTTISH REGIONAL STATION: Article by the Chief Engineer, B.B.C.



WORLD-RADIO

DOMINION & FOREIGN PROGRAMMES

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

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FRIDAY, MAY 20, 1932

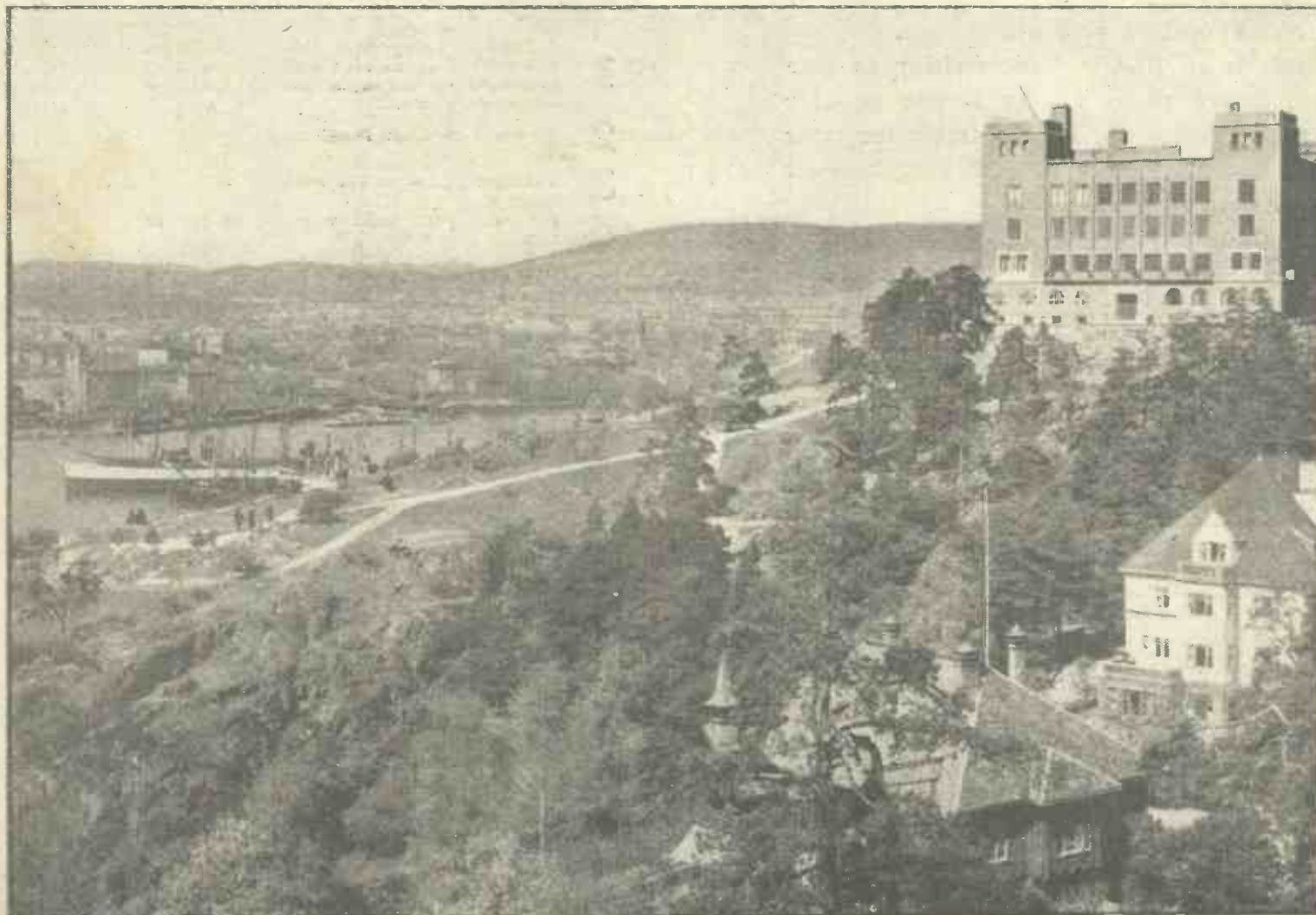
Three Pence

BROADCASTING IN CANADA. By Sir ROBERT DONALD

ELEMENTS OF WIRELESS: COMPETITION No. 3

A NEW STATION FOR SCOTLAND

THE JOY OF CHAMBER MUSIC. By W. W. COBBETT



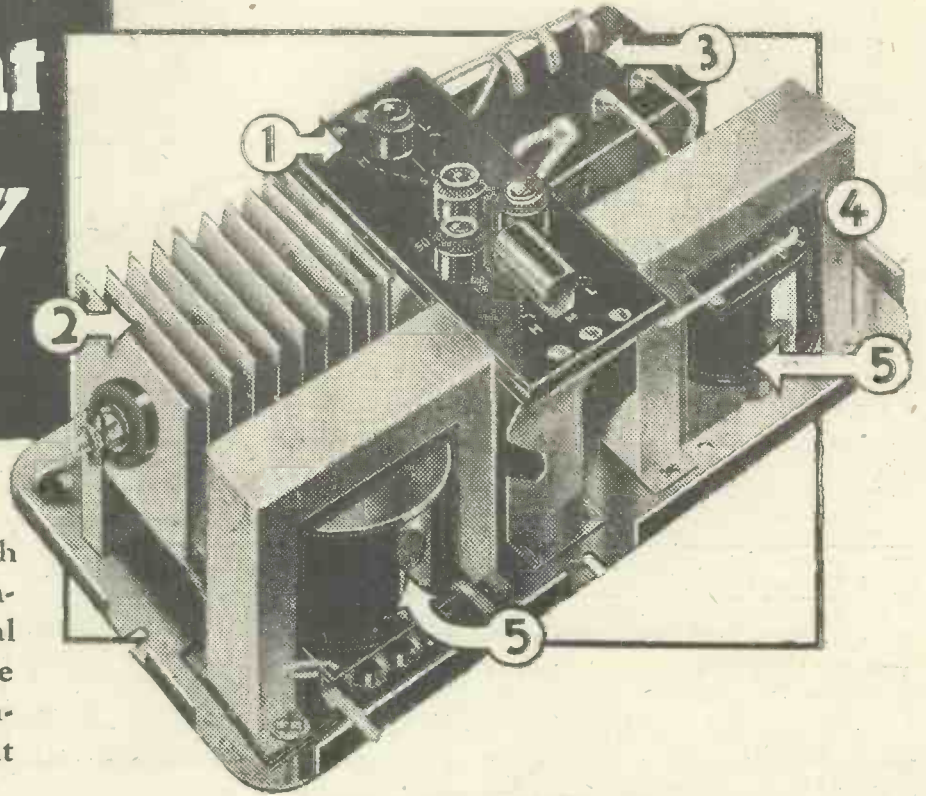
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WORLD-RADIO

Vol. XIV No. 356

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FRIDAY, MAY 20, 1932

THREE PENCE



Letters should be addressed to the Editor,
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Active v. Passive Listening

WHEN, on Saturday last, Savoy Hill bade "Farewell, a long farewell to all (its) greatness," opportunity was taken, so far as the limitations of time permitted, to pass in review the main activities of the B.B.C. during its tenancy of the now deserted premises at Savoy Hill. The development of the programmes was shown—from the days of telephone-mouthpiece microphones and more or less rudimentary apparatus, when anything was acceptable to the ordinary listener merely because it was the novel and wonderful—to the finest performance of the B.B.C. Symphony Orchestra. In every aspect of the programmes it may fairly be said that there was abundant evidence of the determination of the B.B.C. to live up to a declaration of its policy made in the early days of broadcasting, to the effect that it should be the endeavour of the broadcasting authority to bring to the greatest number of people as much as possible of contentment, of beauty, of wisdom (which comprehends knowledge and much more besides), and this over every range of worthy human endeavour and achievement.

World-Radio has, in its own sphere, tried to reflect those ideals, and has specially endeavoured to emphasise almost the last words spoken in Savoy Hill: "Nation shall speak peace unto Nation." We have not only drawn the attention of our readers to the broadcasting news and programmes of the world, but have enlisted their active interest wherever possible, so that, in order to make the most of the programmes, they must increase their own knowledge of the technical and other aspects of wireless. We have striven at all times against the insidious attraction of merely passive listening, against the Micawber-like tendency of twirling the tuning dial in the hope that something worth while may turn up. Thus a considerable section of the paper is devoted to technical information, in order that our readers may increase immensely their enjoyment of long-distance reception by the realisation that their own efforts have largely contributed to that enjoyment. Such is the reason for our Foreign Languages section and the idea behind the Elements of Wireless Competition. It seems to us relevant, at this season of farewell to Savoy Hill and of finding fresh woods and pastures new at Broadcasting House, to state our particular aims, which depend for their realisation so much on the active interest of our readers.

Via Ether

Next Week's Concerts

NEXT week's orchestral broadcasts will be opened on SUNDAY morning with two important transmissions, from Heilsberg and Warsaw respectively, the programmes of both being devoted to Beethoven. The Fourth Symphony (the Spring Symphony) constitutes the main item at Heilsberg, while the transmission from Warsaw is to include the Ninth. The evening programmes include also two outstanding broadcasts. One is the Concertgebouw Orchestra's concert of Russian music, which is to be played by Hilversum, and the other a Wagner anniversary concert coming from Berlin and relayed by Breslau. The latter will be conducted by Max von Schillings, and the soloist is Rudolf Watzke, a baritone whose fine singing I have mentioned on previous occasions. MONDAY's orchestral broadcasts are also very interesting. Thus, at 8 p.m., Schweizerischer Landessender and Budapest are relaying a concert of Italian music which Felix Weingartner is conducting at Basle. Gaspar Cassado, the well-known 'cellist, is the soloist. Tchaikovsky's Symphony No. 6 (Pathétique) is to be heard from Brussels No. 2 the same evening, and this symphony is again to be broadcast later in the week: from Warsaw at 12.15 p.m. on THURSDAY. I cannot conclude this review of coming events without mentioning the French PTT stations' transmission at 8.30 p.m. on FRIDAY, which will be relayed by Brussels No. 1, Radio-Suisse Romande, and the British Regional stations. Gustave Charpentier is to conduct a rendering of his early work, *La Vie du Poète*, a symphonic poem.

Hambach Castle and Germany's Republicans

THE Hambach Festival, which STUTTGART and FRANKFURT are relaying on Wednesday next, and MUNICH on Saturday afternoon and evening; is no old popular festival; it has a place in modern German history. One hundred years ago, on May 27, Germany's very first republicans met at Schloss Hambach, a few miles from the picturesque town of Newstadt a.d. Hardt in the Bavarian Palatinate; well-known men had called a meeting of the German people there at Whitsuntide, and it was then that black, red, and gold cockades were worn for the first time. The immediate result of the meeting was a rigid Press censorship and a prohibition of further meetings of a political nature, and a year later, when a few ardent spirits attempted to hold a second meeting at the same place, they found the ruins of the castle full of Bavarian soldiers. This year the German Press is holding an assembly there and the Bavarian stations are to relay speeches and an historical talk by Professor von Müller. Hambach, a small market village, is best known for its excellent wine, Hambacher Riesling, grown in the 350 vineyards of the neighbourhood. The castle, then called the Kestenburg, was demolished by Albrecht of Brandenburg in 1552, and was afterwards partly rebuilt by monks who lived there, and then it became the residence of the princely bishops of Speyer until 1789. The Palatinate bought the castle in

1842 and presented it to Crown Prince Max of Bavaria (later King Max II) as the Maxburg, and rebuilding operations began which were to turn it into a summer residence, but these were never completed.

Synthetic Applause

SOME amusing anecdotes of the French election period have been recorded. On May 1, when the first ballot took place, a correspondent tells me that he, in common with many other listeners, was surprised to hear a result broadcast as early as 7.30 p.m., less than one hour after the closing of the poll. Some listeners thought it was a joke, but it was not. M. Outrey, a Cochin China M.P., it was announced, had not obtained a majority, or, as the Frenchmen say, "il était en ballottage." Very few people realised that the difference of time between Cochin China and France was responsible for the quickness of the first result. During the election campaign, M. André Tardieu, the Prime Minister, was ill, so he asked his friend, M. Cathala, to read before the microphone his speech to his electors of Belfort. M. Cathala did his best to imitate M. Tardieu's voice. Another story was circulated about the transmission, by means of gramophone records, of a speech by M. René Renoult. When the orator concluded, listeners heard a formidable storm of continuous applause, so deafening, so persistent, that one of the more curious made inquiry and discovered that the spoken records had been followed by an "applause disc" specially made.

How Wireless Reporters are Made—and Unmade

IN searching for new talent for the microphone the Berlin Funk Stunde employs a method which may or may not be peculiar to itself, but which is certainly a stern test of a commentator's powers. They seek more particularly, according to information sent me, those who can give a concise and yet dramatic rendering of topical events. Reporting is a branch which, I am told, is not yet widely represented on German broadcasting staffs. A singular compliment is paid to English newspapers of the more pictorial kind by those responsible for developing the talent for vivid extempore description in German commentators. The candidates are shown a page or two of photographs depicting some highly topical or dramatic event, the accompanying text of which is difficult to read at a glance (two minutes only are allowed for preparation). He (or she—though there are very few feminine candidates for the post) then goes before the microphone with the picture-pages in his hand, and tells the story of the picture as he imagines it. Interruptions are thrown in every now and then by the examiner. The great disaster to R101 outside Paris, the Oxford and Cambridge boat race, and a visit to Buckingham Palace are events which have been chosen for such tests. Each attempt is recorded on a gramophone disc, and, in general, a candidate is quite willing to agree with the verdict of the examiners, as confirmed by the gramophone reproduction of his effort—a verdict which is only too often an unfavourable one. ETHERVIATOR.

Broadcasting in Canada

Recommendations of Parliamentary Committee

By Sir ROBERT DONALD

THE Parliamentary Committee on Broadcasting in Canada has reported in favour of establishing a State-owned system for the Dominion. This is the end of three years' controversy, supplemented by litigation; and it may be taken for granted that the Dominion Government will implement the recommendations.

Broadcasting in Canada was investigated by the Aird Commission, which reported in 1929 and recommended the adoption of the British system with some variations. The Province of Quebec challenged the right of the Dominion to own and administer radio, and claimed

of communication, it is immensely important that listeners should receive a service which is best in their own interests and in the interests of the community to which they belong.

The Parliamentary Committee which has just reported, besides investigating the scheme submitted by the Aird Commission, had to inquire into an alternative proposal made by Mr. Beatty, President of the Canadian Pacific Railway. This scheme was in favour of setting up a private monopoly, drawing revenue from commercial advertising, and a subsidy in the form of a proportion of licensing fees from the Government. It was quite a plausible

prevailed with the Committee, that commercialised programmes pall; listeners will turn the dial to something better and more continuous. That something Canada, freed from the handicap of advertising interests in its radio system, intends to give its people, and it would not be unsafe to prophesy that it will find an audience over the border also. There are other factors to be considered: educational and cultural interests must be served and protected; services to schools, to institutions, theatres, concert halls, public authorities, should appeal to national sentiment just as broadcasts from churches and from the universities. Canadian music and culture will be encouraged, and the unifying influence of leaders in Canadian thought and science will be accessible to every listener. The microphone will be an elevating element in national life. Programmes will be interchanged with the B.B.C. and other parts of the British



autonomy for the Provinces. The decision went against Quebec, although it will be found in the scheme now recommended that the special characteristics of the French-Canadians will be safeguarded, as an Assistant Commissioner will be appointed for each Province as Chairman of a Provincial Advisory Programme Committee. Advertising, which has up to now been the chief source of revenue of the Canadian broadcasting stations, will in future be limited to not more than 5 per cent. of each programme period, and the advertising will be of an indirect character. It is proposed to erect a chain of high-power stations throughout the Dominion, with many subsidiary lower-power stations—a complete network which will meet all national and local requirements.

In declaring in favour of a public utility undertaking, the Dominion will make a break in the sponsored system of broadcasting which exists in the Western Hemisphere. Canada will become an oasis in a world of commercialised radio. It is a welcome omen of the Ottawa Conference; it signifies that Canada means to live up to its high national cultural aspirations, and to establish a radio service with which the United Kingdom and the other parts of the Empire will be ready to interchange.

To no country in the world is the unifying influence of radio more important than to Canada. The only means of linking the sub-continent together is through the air. Aviation has its limitations. To radio no region is inaccessible: it penetrates into the unknown north and to unexplored regions which still exist in almost every Province. The lonely adventurer can listen wherever he may be; he is no longer isolated.

When radio is such an indispensable method

scheme and had the support of important national organisations and a powerful section of the Press. The British example in the end outweighed the strong case put up by Mr. Beatty.

Among the witnesses who gave evidence before the Parliamentary Committee was Mr. Gladstone Murray, nominated by the B.B.C. in response to an invitation received from the Committee. Mr. Murray's evidence received great attention from the Canadian Press. He gave an admirable and concise history of the creation and development of British broadcasting. As a Canadian himself, he seemed to be proud to have had the opportunity of explaining to Canada the supreme position in the world of radio occupied by the British system. Mr. Murray was cautious in his criticism and tactful in his comparisons. He naturally favoured the British model, and by implication indicated that Canada would do well to follow it. I am inclined to think that Mr. Murray's evidence was an important factor in influencing the Committee to recommend the British model.

The controversy in the Dominion has turned largely on advertising; should the "air" be commercialised? The temptation was strong; the competitive stations in the United States dominate Canada. Their good entertainment programmes are interspersed with advertising. Programmes are organised "by courtesy" of somebody's pills or tooth paste, or by manufacturers and the big stores. The programmes are snappy, bright, disjointed, for the man who buys his time "on the air" insists on having his full measure of seconds, just as he demands the full measure of his space in the newspaper.

It was pointed out in evidence, and the view

Empire. (Commercialised services are not easily interchangeable.)

The Dominion Government, in adopting the Parliamentary Committee's recommendations, as it is likely to do, will give a bold and statesman-like lead which will win the admiration of British peoples.

Copyright Costs: B.B.C. and Canadian (From our Montreal Correspondent)

In a letter written by Mr. K. B. Sandwell, of the Canadian Authors' Association, to the Hon. Raymond Morand, Chairman of the Parliamentary Committee on Radio Broadcasting, Mr. Sandwell compares the estimated operation costs of the Canadian Radio League's scheme with those of the British Broadcasting Corporation.

The letter reads:—

"Through the courtesy of your committee I was permitted to make a statement on behalf of the Canadian Authors' Association, in the course of which I submitted a resolution of our executive committee to the effect that, whether your Committee should decide in favour of Government control or private ownership, your Committee should recommend that rights and interests of authors should be duly protected in regard both to the copyright and performing rights. The wisdom of this recommendation is evident from the statement made on behalf of the Canadian Radio League by Mr. Graham Spry, who on page 573 of the Minutes of Proceedings and Evidence No. 13, quotes the estimated operation costs of a normal year under the scheme proposed by the Canadian Radio League. In this estimate he quotes for programmes: Canadian, \$250,000; Visiting artists, \$50,000; Total, \$300,000. The general contention of the Canadian Radio League is that they are recommending the type of programme corresponding to that of the British Broadcasting Corporation for Great Britain. I have just received the figures of expenditure for programmes of the B.B.C. for 1930, which are given on a percentage basis of total expenditures. . . . From these figures it is obvious that the amount allowed for programmes in the Canadian Radio League proposal is entirely inadequate, and that the allowance made for copyright and performing rights must be still more inadequate. The B.B.C. pays for copyright and performing rights \$155,000 more than the Canadian Radio League allows for the whole of its programme costs, including talent. I think you will recognise that authors and musical composers must naturally view with genuine apprehension any proposals which involve, as those of the Canadian Radio League appear to do, a complete disregard of their rights and interests in their intellectual property."

Letters to the Editor

Reception in New Zealand

To the Editor of WORLD-RADIO

SIR,—Readers of *World-Radio* may be interested in a short report of broadcasting reception from "down under" in New Zealand.

We are just entering upon our best period for listening. At nights now 6WF, 6ML, and 6PR, Perth, and 6KG Kalgoolie are all coming in at quite reasonable strength, although 3,500 miles away; KZRM Manilla, Siam, and Calcutta are heard on occasions, while the Japanese, between 10 p.m. and 1 a.m., are simply wonderful—JOAK, JOIK, JOHK, and JOBK being nearly always R7 or more on the loud-speaker.

The Americans are now heard every evening from sundown till 8 p.m., KF, KGO, KFOX, KNX, WBBM, WABC, KTW, WENX, and XER (Mexico), being the best because they close down later than most.

It being close to the "equinox" period, European stations are occasionally heard in the early mornings from 5 a.m. till sunrise. On a very good morning as many as twenty or more can be heard all over the dial. Already this season the following stations have been heard on several occasions at readable strength: 1RO Rome on 680 kc/s; Lwów, Poland, on 790 kc/s; Moscow on 710 kc/s; Heilsberg on 1090 kc/s; Bordeaux on 990 kc/s; Bratislava on 1080 kc/s, the last named being practically always the best.

The next two or three weeks should see many more Europeans logged. It seems as if nothing is impossible with wireless these days. Every few months see longer distance reception and greater discoveries and improvements.

Yours faithfully,

ALBERT L. STANTON.

127, Opoho Road, Dunedin, N.Z.,

March 29, 1932.

"Britain" or "England"

To the Editor of WORLD-RADIO

SIR,—Your Scotch correspondent takes exception to the use of "England" where "Britain" is intended, and courteously suggests to your English readers that this is an insult to the rest of the Empire. I suspect that he is really concerned with an imagined insult to Scotland. Let me set his mind at rest. We English are aware that our country is the finest in the world, and we pay some "less happier lands" the graceful compliment of including them in the term "England."

Yours truly,

A. E. BEADON, Lt.-Col.

Little Coxwell, Farringdon, Berks,

May 9, 1932.

The Katowice "Letterbox"

To the Editor of WORLD-RADIO

SIR,—I feel sure readers of your excellent journal will be interested to know that on every Wednesday and Friday evening from 11 o'clock till 1 o'clock Radio-Katowice transmits its most interesting "Boîte aux Lettres" (Letterbox), which is organised by Monsieur Stephan Tymieniecki, Director of Radio-Katowice.

Monsieur Tymieniecki founded this club, which has branches in Belgium, France, Italy, Rumania, Switzerland, etc, four years ago. It exists for the sole purpose of creating a more friendly feeling between the nations of the world, i.e., peace. The motto of the club is "Loin des yeux; près du cœur" ("far from the eyes; near the heart.")

Monsieur Tymieniecki answers all the correspondence from the members of this club over the wireless every Wednesday and Friday in French, and he has received over one and a half million letters and cards from members of



Maurice Ravel

It is an interesting measure of the rapid march of music in our time that Ravel, regarded less than a generation ago as the arch-apostle in France of modern impressionism, is now accepted as the foremost representative of the older order, upholding the tradition which can be logically traced from the classics through Saint-Saëns and Fauré. His work at first met with a good deal of opposition, and he still has opponents as well as enthusiastic admirers. But most musicians agree in regarding him as typical of French culture, of its delicacy and charm, its subtle humour, its eagerness to explore all manner of new possibilities. So firmly assured is his position now that a week hardly passes without the European listener having opportunities of hearing some of his music and within the past few weeks he has taken part in more than one important broadcast as pianist and conductor himself. This week, for instance, COPENHAGEN'S Friday evening programme includes his suite, *Le Tombeau de Couperin*.

this great movement. There is nothing whatever to pay, and no formalities of any kind.

Yours faithfully,

W. R. PRINCE STEVENSON.

Bonchurch, Isle of Wight.

Coincidences in Listening

To the Editor of WORLD-RADIO

SIR,—Your correspondent E. H. Palm must have had a very remarkable and interesting experience, according to his letter of the 23rd ult.

Although I have, during the course of the last eight years, listened to W8XK and Huizen on many occasions, I have yet to hear a clock in Amsterdam, or any other Dutch city, strike the hours at the same time as Big Ben. Surely something must have gone radically wrong with that Amsterdam clock!

It is notorious that our London public clocks rarely agree, but twenty minutes difference between that Amsterdam clock and the correct Dutch time suggests a flight of one's imagination!

Is he trying to pull the legs of the innocents?

Yours faithfully,

W. G. SUTHERLAND.

Sutton, Surrey, May 10, 1932

JOY OF CHAMBER MUSIC

(Continued from page 994)

subscribers to the B.B.C. and it is of thrilling interest to them if works they happen to be studying are broadcast by artists of note. Their diurnal programme was quite remarkable. They played quartets and quintets in the morning and afternoon, listened every evening after dinner for two hours to a chamber concert organised by the talented artists who officiated as coaches during the week, and from ten o'clock onwards would have continued to play far into the night if they had been allowed to do so!

Similar schools were organised in 1930 and 1931, and one is again planned for this year, at the Normal Training College, Bangor, North Wales, which has proved itself to be an ideal centre, with ample accommodation and every holiday attraction. The entries have increased by fifty per cent. each year, and the number of complete chamber music teams has grown still more rapidly. In 1929 only one previously

organised team enrolled; in 1930 there were fifteen, and last year thirty-seven.

I rely upon these experiences—they are, I suppose, what is known as "topical"—to strengthen my contention that there is a future for private music making, and I abstain from dwelling upon certain eternal verities that are in imminent danger of being classed as clichés. In this article I prefer to stress, in homely fashion, the purely human interest of the theme, and I would esteem myself supremely fortunate if I could succeed in piercing the thick rind of stolid indifference and ignorance which prevails in the minds of the Philistines who stigmatise chamber music as "dry." Good Heavens! It affords the jolliest entertainment in the world to those who have survived the early stages, which in every art are somewhat trying. What was the sentence I heard most often at Cambridge, from the lips of the many amateurs present who professed not merely a liking for chamber music but an urgency of desire to practise it which had been frustrated by lack of opportunity? "At home," they said, "we never have enough of it." That was the burden of their song, and it has been in a lesser degree the burden of mine during my long musical life. I am one of the many who have drunk at the Pierian spring and thereby contracted an unslakable thirst for the beauties and consolations of chamber music. I must, however, admit that, to my surprise, some of my friends consider my enjoyments to be not merely sufficient but positively orgiastic. These pious orgies are easily described: they consist mainly of tri-weekly practices each lasting about two hours—total, six quickly-spent hours snatched (as I wrote in my book) "from the 168 hours of prose which make up a normal man's existence transmuted into poetry." I stand by the Cambridge slogan. "I never have enough," and if it were my blessed lot to be a composer, I would write a nice little canon upon these words in the manner of Father Haydn in his last days of quartet writing. Perhaps some clever contrapuntist who reads these lines, and feels humorously and harmonically inclined, will do it for me and send it to me care of *World-Radio*.

The Joy of Chamber Music

By W. W. COBBETT

In the following article, the most distinguished amateur musician of our time tells something of his own delight in making music. To find a parallel to Mr. Cobbett's services to the cause of music, we have to look back to the wise and generous noblemen who were patrons of the art in Haydn's and Beethoven's days. A truly enthusiastic amateur violinist throughout his long and busy life, he has been the leader of more than one fine orchestra and of several string quartets. At the age of eighty-five he is as ardent as ever in his love of chamber music.

The prize competitions which he instituted have done a great deal to enrich British chamber music; to have won a W. W. Cobbett prize has been a feather in the cap of such men as Stanford, Vaughan Williams, John Ireland, and many another composer of the first rank. He has given prizes, too, for services to the cause of chamber music, for performances by students at the R.A.M. and R.C.M., and has encouraged the making of British violins in the same large-hearted way. As a writer, too, he has done much to pass on his own enthusiasm; his labours in that direction have recently been crowned by the publication of his "Cyclopædic Survey of Chamber Music," to which many eminent hands have contributed under his scholarly editorship—two volumes whose interest and value could hardly be overestimated.

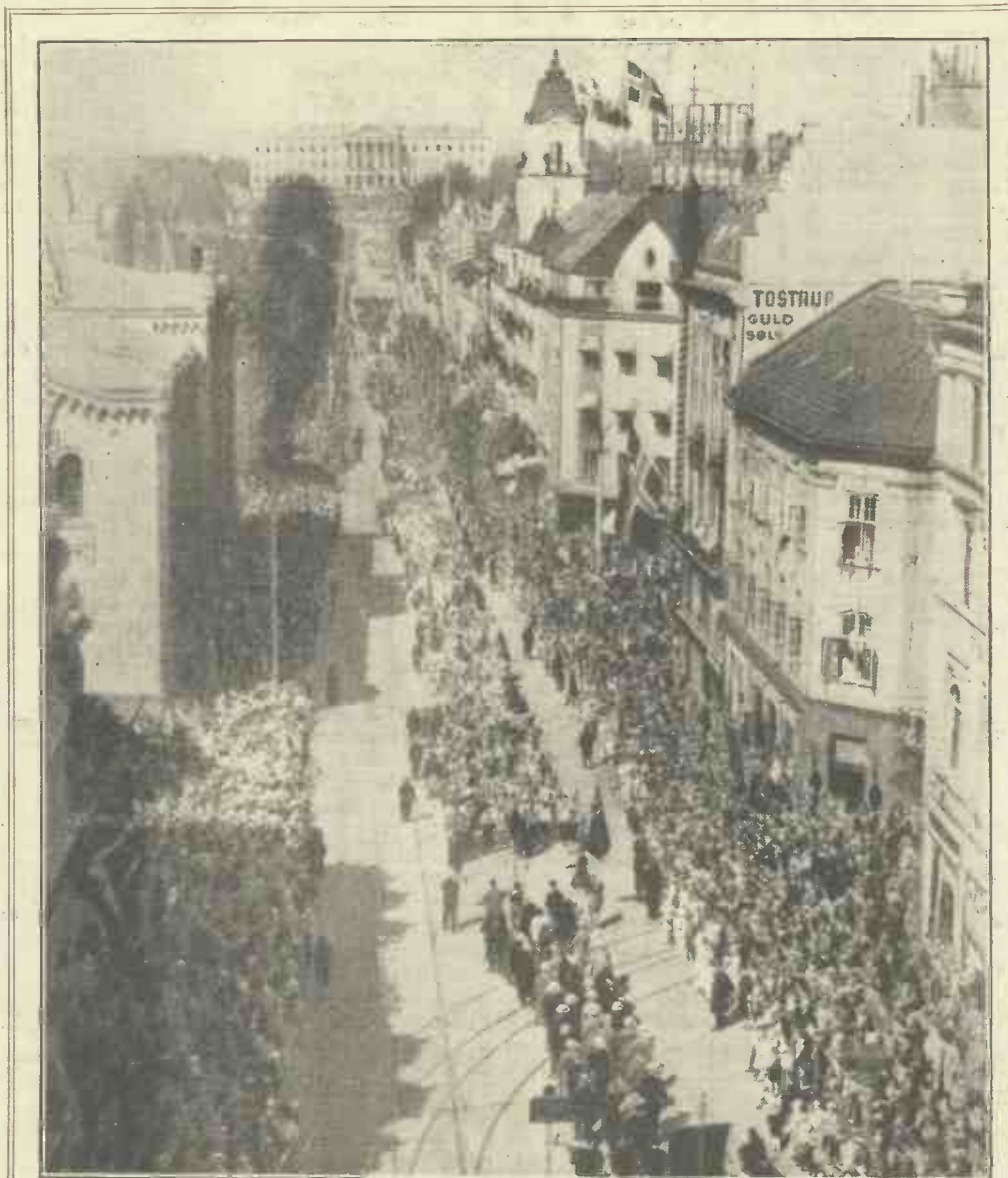
WHEN I was asked to tell something of the infinite delight which chamber music offers to those who play it and to those wise people who know how to listen, I hesitated. It seemed to me, who am a declared foe to prolixity, that I had said enough in the Epilogue to the article on the same subject in my "Cyclopædic Survey," the final paragraph of which runs thus:—

The transitory joys of appreciative audiences cannot compare with the lasting satisfaction gained by the player of chamber music who listens, bow in hand. The glimpses he obtains of its true inwardness, and the opportunities it presents of self-expression, are of priceless value to him—a truth the realisation of which may serve to allay the anxiety of many worthy musicians lest the facilities afforded to listeners by wireless and the gramophone may tend to weaken the will to perform.

Since these words were written it has come to my notice that to-day everyone is saying and writing with glib assurance that the wireless and the gramophone are "killing" private music making, evincing a lack of vision to my mind so lamentable that I gladly take up the pen to express my conviction that it will ultimately be found that, the more chamber music of the right sort that is heard through the media described (I think inaccurately) as "mechanical,"

the greater will be the stimulus to private performance.

As I write, my thoughts wander back to the early days of broadcasting, when the irrepressible pessimist, ever ready to heave half a brick at everything new, made his unwelcome appearance, gloating over certain defects of radio transmission, blind to the fact that it was one of the most astounding achievements of modern



A Norwegian "National Day" school-children's procession, which takes place in Oslo every year on May 17, as described in last week's *World-Radio*

science, and predicting, as far as music is concerned, its early discomfiture. In the event it is he who is discomfited in the way he least enjoys. He has been quietly ignored. It has become evident that wireless has aroused musical consciousness in thousands of minds otherwise musically sterile, and that incidentally those among them who happen to be by nature fitted for the enjoyment of chamber music (it is not a universal endowment) are in the way of becoming initiates in a new source of musical joy. The young will surely not rest satisfied with merely listening. They will feel, if they do not already feel, the urge to participate in the still greater and more subjective joy of personal

performance. As to their elders, it is their obvious duty to encourage them in taking up a pursuit so uplifting and so antagonistic to the vulgarity of an age which tolerates jazz. Warm encouragement has already been given to youthful violinists by the group of democratic idealists known as the National Union of School Orchestras, who are able to point with pride to a large number of boys and girls who have already made a promising commencement as orchestral players. I attended one of the Union's "monster" concerts at the Crystal Palace on June 21, 1929. On that occasion I noticed with much pleasure that certain items

played by selected teams of schoolchildren, victors in prize competitions, and forming what may be described as chamber orchestras, exhibited precisely the quality of refinement which is so important in the interpretation of chamber music proper. Bravo! Here was promise for the future, ground in which the seeds of wireless suggestion are likely to take firm root. Provided they possess the means to buy good instruments, and provided they have at command sufficient leisure for practice after leaving the day schools for good, these young people may be destined to take part in what I have described in my book as the "Chamber Music Life," which spells happiness for rich and poor alike.

The British Federation of Music Competition Festivals has good news to tell of the increasing interest taken, in the provinces, in chamber music: recent entries for competitions are more numerous than ever before, and the standard is steadily improving every year. Further good news reaches me of the formation of several new organisations for the promotion of chamber music practice. If I select one of them, the Summer School of Chamber Music, for special mention, it is not because I was allowed to lend a hand in the initial stages, but

because of my conviction that it will take an honourable place in history as the first society of outstanding importance devoted to the cult of intimate music of the kind said to be threatened with extinction.

The Summer School was inaugurated at Cambridge in August, 1929, and attended by a round hundred chamber music lovers to whom rooms were assigned in Westminster College for eight days. The enthusiasm for ensemble playing displayed by these inheritors of Elizabethan and Tudor traditions was exhilarating, and of good augury for the future of private music making. Most of them were

(Continued in col. 2, page 993)

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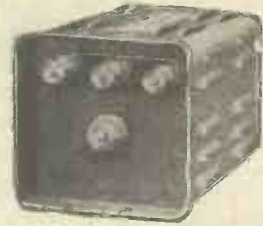
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Dominion and Foreign Broadcasting Intelligence

The Cape Town Broadcasting Station

(From a Correspondent)

At present the broadcasting station in Cape Town is having to submit to considerable criticism, mainly because many of the listeners seem to think too much use is being made of the Municipal Orchestra, which Mr. Bernard Shaw said was one of the brightest lights in a culturally dark continent. On an average, the Cape Town station broadcasts forty-seven hours a week, and of these five and a quarter hours are devoted to orchestral music. On Thursday nights only one and a half hours are devoted to the symphony concerts, which, of course, do not appeal to the bulk of the listeners, but which do find appreciation among a fair proportion. On the whole, there is little ground for complaint, for during the eight years it has been in existence, the station has followed new trends in broadcasting, and has put "on the air" most events which were possible and available. Cape Town's wireless population is not very large and local talent is limited. Without the orchestra the programmes would not be remarkable for substance or balance. Most of the aviators who have broken the trans-Africa records have been prevailed upon to broadcast from Cape Town station, from which more notabilities have spoken than from any other South African station. It was the first South African station to broadcast a football match, and the first to relay a concert picked up from a ship at sea. It has attempted many other experiments that have generally won the approval of subscribers, and the fact that even in these difficult times the number of local listeners is increasing is a sign that on the whole the public likes the sort of fare which the Cape Town station has so long been providing.

AUSTRIA

Programmes of Special Interest

(From our Vienna Correspondent)

Richard Strauss's *Electra* is to be relayed from the State Opera on Tuesday, May 24, at 7.55 p.m. The Vienna Symphony Orchestra has fallen upon anxious days, and to ensure its continuance a decision has been made to form an "Association of Friends of the Symphony Orchestra." The arrangement of special subscription concerts will be one of its chief aims, it is understood.

DENMARK

Broadcast Play Competition

(From our Copenhagen Correspondent)

For some time the Danish broadcasting authorities have made great efforts to procure good radio plays. Many plays and comedies have been adapted for broadcasting and several radio plays—both by Danish authors and by foreign playwrights, in translation—have been broadcast. It is felt, however, that dramatists need encouraging to write for broadcasting, as many authors prefer to write for the theatre, which hold out the possibility of many performances, rather than for the microphone, with its special technique and the promise of only one or two performances. It has therefore been decided to invite all authors to take part in a radio-play competition, with prizes of 5,000, 3,000, and 2,000 kroner (about £275 down to £110) for the three best plays. In addition to these prizes the usual broadcasting fee will be paid for the performance of the plays.

FRANCE

General Elections

(From our Paris Correspondent)

Many deputies who are known to take a keen interest in the Broadcasting Bill have been returned to Parliament in the recent general election, including the following Ministers or ex-Ministers, who at one time or another have had this Bill in their charge: M. Rollin, M. Guernier, M. Mallarmé, and M. Germain Martin.

GERMANY

A Haydn Symphony

(From our Königsberg Correspondent)

On Friday, May 27, from 8.15 p.m. to 8.45 p.m., Haydn's Maria Theresa Symphony, performed by the orchestra of the Königsberg Opera House, under Erich Seidler, will be relayed by all German stations. The relay will last exactly half an hour.

A Talk on English Law Courts

(From our Hamburg Correspondent)

A new series of talks will begin in Hamburg on Wednesday, May 25, at 6.30 p.m. They will give German listeners well-informed views of foreign law and law-courts. The first of the series will be by Frau Dr. M. Schoch on English judges and law-courts. She will tell listeners of the standing of English judges, and will speak of barristers and solicitors.

HOLLAND

(From our Correspondent at The Hague)

Scottish Regional Test Transmissions

The test transmissions of the new Scottish Regional station are being received in Holland with great interest, and reports from various parts of the country show that they come through with considerable strength and excellent modulation and also with little fading. The wavelength does not clash with any of the local stations, and the fact that Holland, through Willem Kes and Albert van Raalte, has long been musically associated with Glasgow, adds an interest on the part of Dutch music-lovers to this station. When the station is in regular working at full strength it is expected to be a very welcome addition to those obtainable by the average listener with a small receiving set.

"Sound and Picture" Exhibition

The exhibition "Klank en Beeld," which was opened at Amsterdam on May 6 by the Minister of Waterstaat, has a number of interesting features, not the least being the fact that it is laid out as much with the object of arousing interest in radio, gramophone, photography, and the other subjects with which it deals, on the part of the amateur, as merely providing a means of exchange for the trade. One would have liked to see more exhibits from England, but the dozen firms who are represented have all something to show that their Dutch and German competitors lack. One of the most interesting exhibits is a collection of historical objects, from the crude apparatus of Keperley, Mairne, and Volta in the middle of the eighteenth century, as well as the telephone of Robert Hooke in the 1660's, to the high-frequency alternating current apparatus of 1895, after which the story is left to be continued by the general exhibitors. There is also a reading-room with a wide selection of periodicals of a technical and cultural interest, while the printed catalogue supplies much of interest as to the present conditions in Holland so far as they relate to these subjects. The whole concern is, in fact, educational in the fullest and best sense of the term, and is up to the last moment in the activities and ideas it displays.

HUNGARY

New Stations Testing

(From a Correspondent)

Though the erection of the new high-power station at Budapest, which has just been begun, is likely to proceed more slowly than was intended, owing to the financial distress of Hungary, the four subordinate stations will soon be in operation, and that of Magyarovar, the first to be completed, is already making trial relays from Budapest. Each sub-station will have a power of 2 kW, and all four will use the same wavelength.

ITALY

St. Anthony of Padua Festival

(From our Turin Correspondent)

The festival of St. Anthony of Padua will take place at Padua at the end of this month and the beginning of June. The religious observances to be held in this connexion in the basilica church at Padua, as well as some of the concerts of sacred music, are to be relayed by all Italian stations.

NORWAY

A Radio Picture of Oslo

(From our Oslo Correspondent)

The Scandinavian microphones have already visited more than one great Northern city, and next Sunday there will be broadcast from all the Norwegian, Swedish, and Danish transmitters an international descriptive commentary on Oslo. Speakers of all three countries are to share in this radio visit, describing the chief points of interest in the city itself and in its surroundings. Oslo lies at the head of its own fjord, and all round it there rise rugged hills, thickly grown for the most part with firs, pines, and silver birches. From the heights there is a splendid view, not only of Oslo itself and its fjord, but of many picturesque islands. No big town by modern standards—it has only some 275,000 inhabitants—Oslo is important not only as the capital and the chief seaport for Norway's international trade; to Norwegians it has a further interest in being the residence of their King and Queen. Beloved by all their people as only few monarchs are, King Haakon and Queen Maud devote their lives in the most wholehearted way to Norway's interests, calling themselves, as indeed they are, its first citizens.

U.S.A.

Lewis Carroll Centenary: "Alice" Broadcasts

(From our New York Correspondent)

Sentiment of an uncommonly genuine nature has characterised the various celebrations this week in honour of Lewis Carroll. At Columbia University, the Centenary observances on May 4 were attended by a vast audience, eager to see and hear the original Alice of *Alice in Wonderland*—Mrs. Hargreaves—who crossed the ocean to be present. Still larger numbers listened to the broadcast of the proceedings over the NBC network. By a coincidence worthy of literary imagination, it was the eightieth birthday of Mrs. Hargreaves herself, and her voice, tremulous but articulate, came over the ether in a brief and gracious acknowledgment. Dr. Nicholas Murray Butler, President of Columbia University, gave the opening speech and an address on Lewis Carroll and his writings was given by Prof. H. Morgan Ayres, of the Department of English Literature. Excerpts were sung from Edgar Stillman Kelley's suite, "Alice through the Looking Glass," by a chorus of one hundred and twenty students from Barnard University and Hunter College, accompanied by the Student orchestra of Columbia University.

TECHNICAL SECTION

The New Station for Scotland

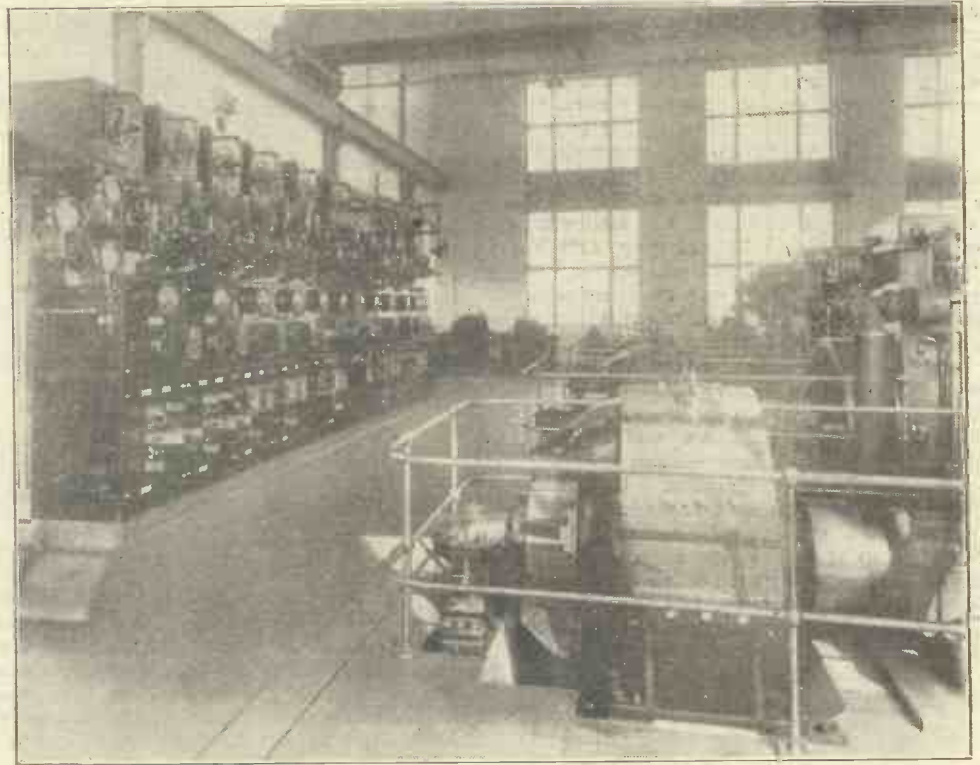
By NOEL ASHBRIDGE, Chief Engineer, B.B.C.

THE Scottish Regional Station began a series of public reception tests on Monday, May 2. Situated at Westerglen, near Falkirk, nearly mid-way between Edinburgh and Glasgow, the two great centres of population in Scotland, this station is the third of its type to be built by the B.B.C., the first two being at Brookmans Park, near London, and at Moorside Edge, near Huddersfield. All three stations are similar in general plan, and are intended to fulfil similar functions, but, naturally, Moorside Edge contains improvements in design as compared with London, while Westerglen has improvements not contained in either of the other two stations. However, before describing the technicalities of the new station, it might be as well to remind readers of the purpose which this station is intended to fulfil.

There are two transmitters at the new station, one of which will work on a wavelength of 376.4 metres, while the other will work on 288.5 metres. Two separate programmes will be transmitted, one being the National programme normally supplied from London, but at times taken from any part of Britain, while the other is a programme intended for Scotland and containing a considerable proportion of items originating in Scotland. Following our usual practice, the transmitter which radiates the Regional programme will use the better of the two wavelengths—namely, 376 metres. It is now well known that the longer the wavelength the better the service provided; and that shortness of wavelength cannot be compensated for by increase of power—at any rate, above a certain limit. Thus, the Regional, or Scottish, programme will cover a larger area than the National programme, but the latter is already transmitted by the long-wave station, Daventry 5XX, and therefore those areas which are not covered by the National transmitter at Westerglen must receive their service, so far as the National programme is concerned, from 5XX.

In the North of Scotland the service from the present 5XX is not strong, but when the new station is built, with about four times as much

power as the present one, reception of the National programme will be very greatly improved.



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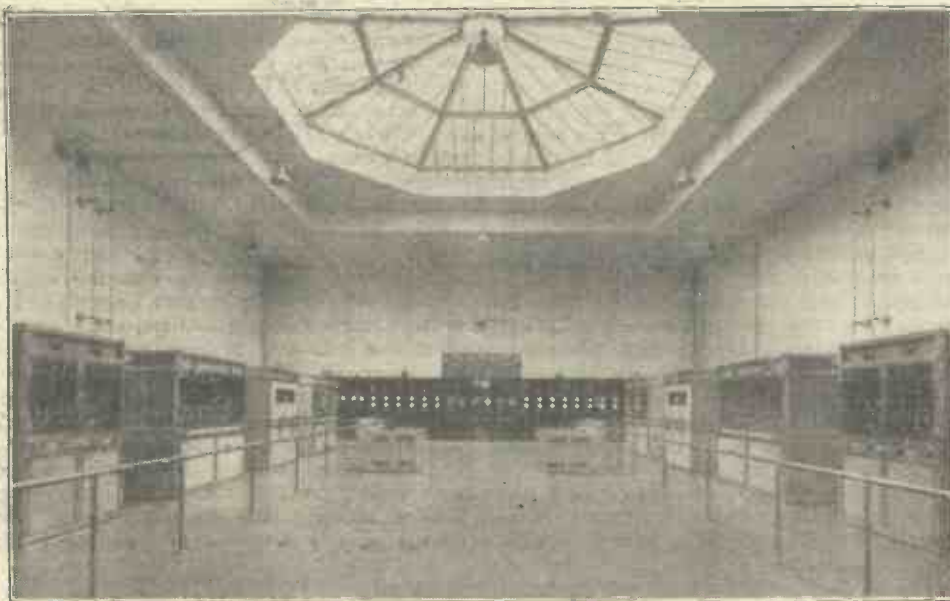
A Good Wavelength

Returning to the Regional transmitter, this has a slightly better wavelength than the London Regional transmitter, which will, in part, compensate for the more mountainous nature of the country to be served, but in general it must be said that the Regional transmitter will serve an area having a radius of some eighty miles.

has been taken that the strength available in both Glasgow and Edinburgh shall be more than adequate. The object of increasing the radiation in a northerly and southerly direction is to prevent a certain amount of wastage over the Firths of Forth and Clyde, and to help reception in the north and south of Scotland to the greatest extent possible. This distortion of the polar diagram, as it is called, is carried out by adjusting the reflection which is given by the masts. This is possible by earthing or unearthing the insulated masts, or earthing them effectively for one wavelength and insulating them for the other. This method has been developed by B.B.C. research engineers, by the use of special circuits, which are the subject of a patent.

The Question of Quality

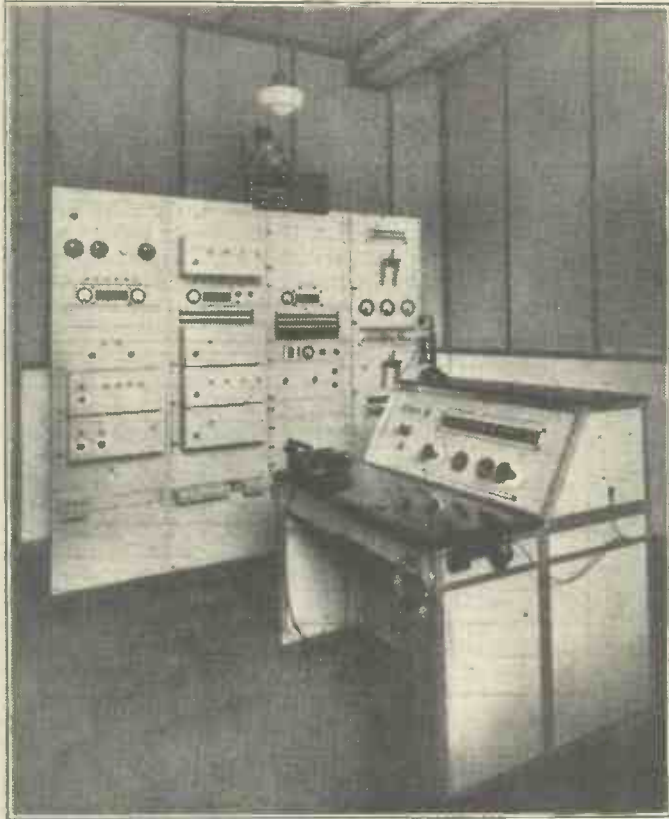
With regard to the important question of quality, there is little doubt that listeners with good sets will notice the improved frequency characteristic of the new transmitters. All the old transmitters in use at present have been in service for several years, and it is only natural that these should not be capable of the same grade of musical reproduction as the latest design. Of course, if a listener has a receiving set which already introduces considerable distortion, the improvement in the transmitter will be almost entirely masked. The superior quality was the subject of considerable comment in the north region when Moorside Edge was first started up. In general, the new standard regional transmitter is capable of reproducing frequencies of the order of 50 cycles per second with a loss of less than 1.5 decibels



The Transmitter Hall

below the mean, while at 8,000 cycles the loss is only approximately 0.5 decibel.

The National transmitter, although its range will be less than that given by the Regional transmitter, is in fact precisely the same from the point of view of design and power, and the quality obtainable is the same in both cases.



Control Desk and Amplifiers in Control Room

Perhaps, however, one should refer to the fact that very frequently the programme in the case of the National transmitter will come from London, and therefore there will be some 400 miles of telephone cable to be taken into account. This is bound to cut down the response at the extremes of the frequency spectrum to some extent, but here again an immense improvement has been effected by the adoption of the new Post Office buried cables, the whole way from London to Westerglen—in fact, the quality obtainable should be nearly equal to that produced by a “local transmission.” The cable is, in fact, capable of transmitting 50 cycles per second with a loss of 3 db. and 6,000 cycles with a loss of 2 db. approximately.

A Short General Description

It is not necessary to include a full technical description of the station in this article, as in effect this has appeared in previous articles in this journal, and a detailed description of the Moorside Edge Station appeared in this year's *Handbook*. There are, however, certain interesting differences to which reference has already been made, the most important being in connexion with the aerial system. At Moorside Edge three masts are used, and the aerial for the longer of the two waves, which is 479 metres, consists of the “T” type suspended between two of the masts, while the short-wave aerial consists of a simple vertical aerial suspended between the remaining mast and the one which is common to both aeriels. At Westerglen there are only two masts, and the aerial system in both cases consists of an aerial somewhat similar to the old “umbrella” type. In the case of both transmitters there are three wires extending from the top of the mast to a point approximately 150 feet from the base, each

aerial making an angle of 120° with its neighbour. Each one of the three aerial wires is brought into a feeder hut, where the necessary tuning apparatus is installed. As in the case of the other stations, the power is led from the transmitter hall by means of overhead transmission lines. The advantage of this type of aerial is a gain in economy without a loss in efficiency; at the same time very much greater reliability is obtained in the event of storms and blizzards. Apart from this innovation there are a number of detailed improvements in connexion with layout, while the crude oil engines which provide the power supply have a somewhat greater capacity. As for the building itself, this is similar in general design to the others, but it is constructed of “reformed” stone, as this was both an economical and attractive method, as applied to this site. It is thought that it will be agreed by most people that the appearance of the station is pleasing, and it most certainly does not disfigure the countryside.

The carrier power in the aerial is the same as for Moorside Edge, and is approximately 50 kW. in the case of each transmitter. This is rather more than 50 times the power of the Glasgow Station, which corresponds to a gain in strength at equal distance of approximately seven times. Publicity has already been given to the fact that the B.B.C. is only too ready to assist any listener who may live very close to one of the old transmitters and therefore receive a weaker signal. In numbers, compared with the total, these will be few, but in the introduction of a high-power station to cover a large area this difficulty has always occurred to a small extent, and is in fact inevitable.

The full programme will be taken over by the Regional transmitter as soon as we have evidence that listeners have adapted themselves to the new conditions. The engineers' tests of this transmitter were completed before the public tests started, and therefore the steps in the “sliding-in” process will depend entirely on the reports which we receive from the public. It is hoped that in any case the full service will be taken over within about six or eight weeks. After that, a process of gradually introducing the National transmitter on 288.5 metres will begin, and here there may be some trouble in connexion with receiver selectivity, although at each twin station which is opened less difficulty is likely to be experienced by listeners than in the case of the previous one, owing to steady improvement in receivers. There was very little trouble with Moorside Edge, and therefore, we expect still less with Westerglen.

Aberdeen and Newcastle;

New Wavelengths

Before concluding this article it is necessary

to say a word concerning the alteration of the wavelength which is necessary at Aberdeen and Newcastle. The only wavelength which is available for the National transmitter at Westerglen is 288.5 metres, the wavelength on which both Aberdeen and Newcastle are working at present. These two stations are too near to Westerglen geographically for satisfactory synchronising, while some independence with regard to programme is desirable at both Aberdeen and Newcastle. Therefore, it has been decided to change the wavelength of Newcastle to 211.3 metres and Aberdeen to 214.3 metres. These wavelengths have been borrowed from two Continental countries, and it will enable more freedom from the programme point of view than was the case with 288.5 metres. Although the wavelengths are short it would seem from actual tests that the range obtainable will be at least as great as is possible on the present conditions of “synchronised” working. In fact, the only disadvantage which is likely to be apparent is in connexion with some of the old types of receiving sets which do not tune as low as these new wavelengths. However, from inquiries, it seems that the number of such sets is not very great, and here again the B.B.C. is ready to give all assistance in its power. Pamphlets have been written to cover the conditions likely to exist in Newcastle and Aberdeen, which will be sent free on application to any listener who is in difficulties.

Bournemouth, Plymouth, and Swansea have also been sharing the wavelength of 288.5 metres with other stations. These three transmitters are at too great a distance to affect appreciably the transmissions of the Scottish National transmitter. On the other hand, the latter may, to some extent, interfere with them. It is thought, however, that this interference will not be serious, since a large number of small stations which have hitherto shared a wave with these three stations have recently been closed down, and this fact, taken in conjunction with the large distances involved, should compensate, to an extent, for the inclusion of the Westerglen National transmitter into the synchronised scheme.

Tests by Scottish Regional Station

Tests are carried out daily, except Sunday, from 11.5 a.m. to 11.45 a.m.

On nights when the Glasgow station closes down at 11 p.m. tests from the Scottish Regional transmitter will take place from 11.15 p.m. until midnight. On nights when Glasgow closes down at midnight tests will take place from 12.15 a.m. until 1 a.m.



The motor-generator room, showing 3 L.T. generators and 3 12,000-volt H.T. generators

Broadcasting House

7.—The Studios

(Continued from page 949, May 13)

IN considering the question of the optimum value of reverberation time for a broadcasting studio it must not be forgotten that most listening to-day is done, by means of a loud-speaker, and, as already mentioned, the effect of the reverberation in the listener's room becomes added to that of the acoustics of the studio. In the vast majority of cases listening will take place in a comparatively small room, fairly well filled with sound-absorbing furniture, carpets and hangings. The reverberation time of such a room is unlikely to exceed half a second and will often be considerably less than this. Compared, then, with a studio such as would be used for musical performances or for general purposes the listener's room has comparatively little effect, and the overall acoustical effect will be such that the listener, closing his eyes, might imagine himself, so far as the acoustical effect is concerned and assuming a sufficiently good standard of reproduction, in the comparatively spacious surroundings in which the music is actually being performed. In the case of talks, news bulletins, and similar matter, however, the ideal effect is that of the presence of the speaker in the listener's own room. That is to say, the voice must be modified only by the acoustics of the listener's room, whether the latter happens to be small or comparatively large. Thus, the ideal studio for this last purpose should possess



Fig. 2

as little reverberation as possible at any frequency. The walls of some of the talks and similar studios at Broadcasting House are therefore lined with material which absorbs as much as possible of the sound energy impinging upon it. The studio is then said to be acoustically "dead." A photograph showing the method of treating the walls of a studio with sound-absorbing wool is given in Fig. 2.

"Dead" Studios

Certain studios in the Productions Group also fall into the category of "dead" studios. In a broadcast play many varieties of effects are desirable, from the "intimate" effect just referred to, in which the speaker seems to be in the listener's room, to the effect of dialogue taking place in some large, empty building. This variation is best attained by the use of a "dead" studio, in conjunction with an "echo" room so that the apparent reverberation may be varied between very wide limits by the mere turning of a control handle. Thus some of the small studios intended for speech in plays are made as dead as possible, and the same treatment is applied to the effects studios.

A most important condition in the construction of a good studio is the avoidance, as far as possible, of any resonance in the walls, floor or ceiling. Such resonance takes the form of the vibration of the partition concerned as a large

semi-flexible diaphragm. The effect of partition resonance on the acoustics of a room varies according to the conditions, but it is nearly always undesirable. If the damping associated with the resonant member is light, corresponding with a comparatively long decay period, the effect is in general to increase the apparent reverberation time of the room for frequencies near the resonant frequency. There is, however, an important distinction to be drawn between such an increase, and one brought about by removing a certain amount of sound-absorbing material. In the latter case the sound intensity (not the reverberation period) in the room for a prolonged note from a given instrument is increased in proportion to the reverberation time; in the former it is not, but is decreased on account of the damping associated with the resonance.

If the damping of the resonance is increased by any means, the apparent increase in the reverberation time becomes less marked, but the absorption of energy may be greater, so that the intensity is still further reduced. Carrying the process still further, the absorption of energy may be so great that not only is the sound intensity very much reduced, but even the reverberation period may be diminished by the introduction of the resonant partition. It will be seen that it is possible to introduce into a room a resonant partition of such characteristics that the reverberation time, even at the resonant frequency, is unaffected, but if this is the case the sound intensity at that frequency is considerably reduced. As the net effect on the ear or the microphone is determined partly by the reverberation time and partly by the intensity it will be seen what a variety of different conditions may be introduced by partition resonance, particularly when it is realised that the effect of a given type of partition may be quite different in a small room with a short reverberation time from that which occurs in a large studio such as would be used for orchestral music, the determining factor being the relative values of the reverberation time of the room and the decay period of the resonant member.

Structural Difficulties

Unfortunately it is very difficult, in modern building construction, to make every part of the structure of a studio absolutely rigid, as required for ideal conditions. Resonance has therefore to be taken into account in studio design and rendered as innocuous as possible. The means which have been adopted in Broadcasting House for this purpose will be described later.

Another factor which contributes to the satisfactory acoustics of a broadcasting studio is its shape. It is clear that a studio must not possess any of the more extravagant architectural features. General experience has shown that domes, vaulting and pronounced curved surfaces always have the effect of producing very remarkable concentrations of sound. There are numerous well-known examples of this phenomenon in famous public buildings throughout the world, but any such properties are highly undesirable in a studio. Hence the studio must be made up of surfaces which are sensibly plane. Some writers on studio acoustics consider that the ratios of length, width, and height must be somewhat rigidly defined for good studio acoustics, but in the B.B.C. it is not considered that this is of great importance within obvious limits. On the whole, however,

height is considered to be an advantage in the larger music studios, in order that sufficient volume may be associated with a given floor space. It is upon these fairly general principles that the studios in Broadcasting House have been designed.

In considering the general question of the design of studios and their allocation for different purposes in Broadcasting House, it was necessary to take also into consideration the optimum size of studios for different purposes. We have already seen that a given size of studio has associated with it a certain optimum reverberation time. It is obvious, from general experience, that different types and sizes of orchestra are normally heard in concert halls of different sizes. For example, chamber music, as its name implies, is specifically written to be heard in a comparatively small room, originally in a private house. Symphony orchestras are not heard to advantage except in the surround-

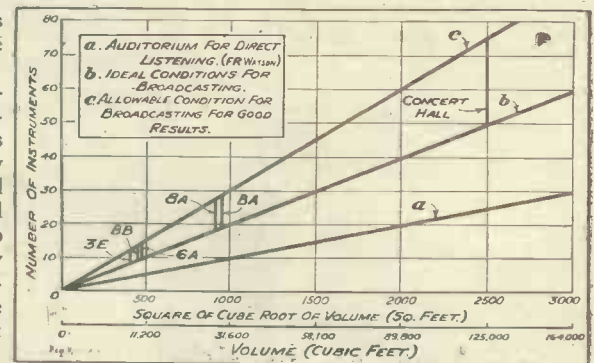


Fig. 3

ings of a large concert hall, which would not usually be employed for chamber music, although instrumental and vocal solos are sometimes heard under these conditions. This means, assuming that the acoustics are "good," that different types of music have come to be instinctively associated with reverberation times falling within fairly narrow limits. With a symphony orchestra we expect a relatively high reverberation time, with a string quartet we expect comparatively little reverberation, whereas solo items might be associated with either condition according to circumstances. Accepting the statement already made, that for good acoustics a given reverberation time must be associated with a studio of a given volume, it follows that studios of different sizes are required for different types of musical performance, quite independently of the actual floor space required to accommodate the performers.

Obtaining Correct Sound Intensity

It may be asked why it is not sufficient merely to ensure that the reverberation time is right for a particular class of item, without being concerned about the volume of the studio, apart from ensuring adequate floor space. Several factors enter into the consideration of this question. One of the most important concerns the sound intensity which is reached in the studio.

Like the optimum reverberation time, the optimum number of performers in a concert hall or studio of given volume must be fundamentally a matter of musical taste and experience. The upper limit, however, to the size of the orchestra seems to be set, so far as direct listening is concerned, by the sound intensity to which the ear can listen with comfort and pleasure. This is a constant quantity depending on the properties of the human ear. It follows, therefore, that in any hall there is a given loudness of the source of sound, proportional roughly to the number of performers in a normal orchestra, which cannot be exceeded for satisfactory listening.

(Continued in column 3, page 1004)

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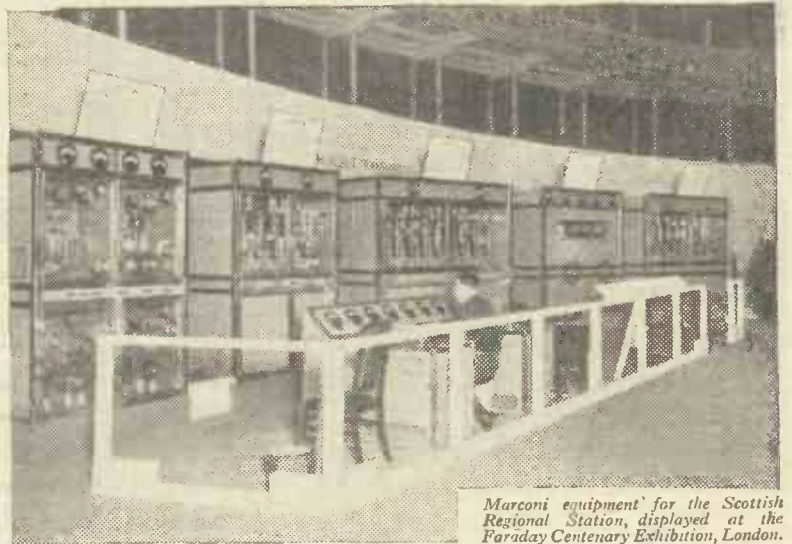
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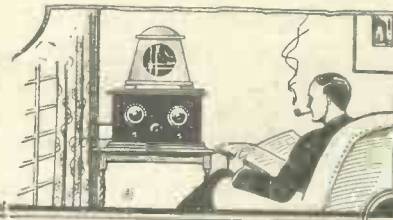
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The Elements of Wireless

(Part 15)

By RALPH STRANGER and E. REDPATH



INDUCTANCE COILS (contd.)

The two coils forming the complete unit shown in Fig. 47 (see previous article) are so placed upon the common former that, whilst not actually close together, they are nevertheless able to influence each other electromagnetically when an alternating current flows in either of them. Such a current flowing in the left-hand coil (which would then be termed the *primary* coil) would give rise to a fluctuating magnetic field and an induced alternating current in the right-hand (or *secondary*) coil. As the physical relationship of the coils is fixed, the *relative* value of the induced current to the original or primary current will be constant, or, in other words, the *electromagnetic coupling is fixed*. At the same time it can be seen that the two coils are by no means as close together as they might be. Were they closely adjacent—side by side, or even with one coil wound over the other—the coupling would be termed *tight*. As illustrated the coupling is relatively *loose*, and so we have to employ a technical Irishism and describe the arrangement as a *fixed loose-coupling*.

Plug-in Coils

Another type of inductance coil which has had a considerable vogue, and which is giving excellent service in many receiving sets at the present day, is illustrated in Fig 48. In this case turns of wire are wound upon a narrow former of relatively small diameter, and subsequent layers, suitably spaced, are wound over the first until the desired inductance value is obtained. By means of a properly proportioned set of such coils a wide range of inductance values can be obtained.

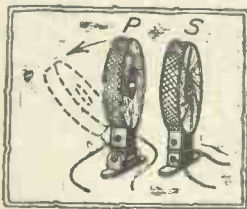


Fig. 48

As indicated in Fig. 48, this type of coil is mounted or carried upon a base or *coil-holder*, connexion to an external circuit being made by means of a metal pin and socket upon the coil which make contact with a corresponding socket and pin on the holder. The right-hand coil in Fig. 48 is mounted upon a fixed holder, while the left-hand coil-holder is pivoted so that the coil may be moved down and away from the neighbouring coil, thereby varying the electro-magnetic coupling between them to any desired extent.

If a considerable number of turns of wire are wound to form coils of the type illustrated in Fig 48, special precautions are necessary to prevent the complete coil having to a marked degree, an undesirable quality known as *self-capacity*. Owing to the property of inductance possessed by the complete coil there will be a constantly varying E.M.F. existing between the two ends of the winding when an alternating current is applied to, or induced in, the coil. This E.M.F. is the sum of all the potential differences from point to point (or we may say in this case from turn to turn), throughout the coil, and if we consider any two closely adjacent turns at different potentials, separated by the insulation (cotton, silk, or enamel) covering the wire, it will be seen that we have all the essentials of a condenser. The wire represents the plates, and the insulation serves as the dielectric. Therefore, between such turns there will be a small, but definite capacity.

This effect occurs, of course, with all types of

inductance coils, but with multi-layer coils the inter-layer capacity in addition to capacity between adjacent turns, became such a serious item that many ingenious methods of winding and general construction were adopted to overcome the defect. The turns forming each layer were spaced slightly from one another; distance pieces were placed between succeeding layers so as to introduce an air-space between them; special coil-formers were designed upon which the turns of wire were wound in a spiral and the turns above crossed these immediately beneath at right angles, thus reducing to a minimum the opposing areas at different potentials. Coils embodying this, or similar constructional features, were known as *honeycomb*, *duo-lateral*, *wave-wound*, and *basket-wound* coils. The actual reasons for this self-capacity being an undesirable feature of tuning inductances will be explained when tuned circuits are dealt with, in a subsequent article.

Variable Inductances

In the early days of wireless reception it was found necessary to provide a method of varying the number of turns of wire, and, consequently, the value of inductance included in a circuit. For example, in the aerial-earth circuit of crystal receivers which did not incorporate a variable tuning condenser a fine adjustment of inductance value was very necessary, and was obtained quite simply and effectively by winding the inductance coil of *enamel-insulated* copper wire and providing a metal bridge-piece running the full length of the coil and carrying a spring-contact slider which, in the course of its movement from one end of the bridge-piece to the other, made contact with each turn of wire individually, a little of the enamel insulation having been removed from each turn of wire along a narrow strip immediately below the bridge-piece to permit good electrical contact with the spring slider. The arrangement worked quite satisfactorily, but had the disadvantage that it was noisy and slightly awkward in operation.

(To be continued)

PROGRESS COMPETITION, No. 3

(For registered readers only)

TEST PAPER No. 3

Question 1.—(a) If the weight of a proton is approximately 3.66

1,000,000,000,000,000,000,000,000 lbs.,

and there are 207 protons in an atom of lead and 197 protons in an atom of gold, find the weight of an atom of lead and an atom of gold, assuming that electrons have no weight at all. (b) Gold is denser than lead—i.e., there are more gold atoms per unit volume, so that a cubic inch of gold weighs 0.696 lb. and a cubic inch of lead weighs 0.410 lb. Find the number of atoms in a cubic inch of each.

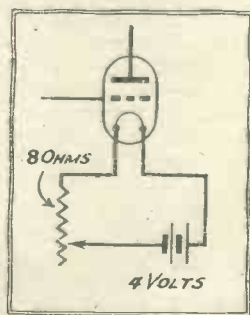


Fig. 1

Question 2.—In Fig. 1 is shown the filament circuit of a three-electrode valve. If the resistance of the filament is 20 ohms and there is a variable resistance of 8 ohms in series with the filament with an accumulator of 4 volts connected across the filament and the variable resistance as shown: calculate the currents flowing in the fila-

ment while the resistance is being varied in steps of 1 ohm, neglecting the resistance of the connecting wires.

What is the momentary current flowing through the filament with the full 8-ohm resistance being in the circuit if by mistake you connect across this circuit a 180-volt H.T. battery?

Question 3.—Explain briefly why in the case of a negatively charged sphere the charge is distributed on the surface and not inside the sphere. Why is this also the case when the sphere is charged positively?

Question 4.—If the capacity of an outdoor aerial is 0.00024 microfarad, what would be the effective capacity, in each case, if you connect condensers of the following capacities between the aerial and the aerial terminal of your set: 0.001 mfd., 0.0005 mfd., 0.0003 mfd., 0.0001 mfd. Also, how would you halve the capacity of your aerial without cutting down its length?

Question 5.—(a) A coil of wire is wound around a piece of iron and is connected as shown in Fig. 2a. Show the direction of current flowing in the circuit and the magnetic polarity of the ends of iron.

(b) A permanent magnet is being moved near coil of wire comprising the circuit shown in Fig. 2b. What will happen when the magnet is approaching the coil and when it is being withdrawn?

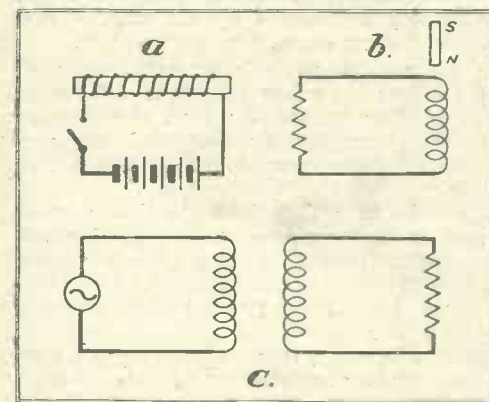


Fig. 2

(c) A source of an alternating E.M.F. is applied to the left-hand coil as shown in Fig. 2c. Describe the nature of currents and their directions in both coils.

What will happen if the source of alternating E.M.F. is replaced by a 6-volt accumulator?

Question 6.—Assuming that your landlord gives you permission to erect an outdoor aerial but forbids you to pierce brickwork, woodwork, or glass, how would you overcome the difficulty of leading in the aerial wire into your house, remembering that glass is an insulator?

RULES REMINDER

For full details of general rules regarding Test Papers see *World-Radio*, April 15 issue. Remember that:—

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

2. 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, the question number only being quoted. Leave a margin down both sides of the paper.

3. All answers to Competition No. 3 must reach the Editor not later than the first post on Monday, May 30. Any papers received later than this date cannot be examined.

Technical Topics

By "DECIBEL"

THOSE of you who have tried to operate a low-frequency amplifier having very high amplification close to the loud speaker which it supplies will no doubt have experienced the effect known to many people as "howling." The sounds from the loud speaker strike the first valve of the amplifier and set up vibration of the electrodes; these cause corresponding electrical oscillations to be set up and amplified in the following stages and fed to the loud speaker and then back to the first valve again. This, of course, is a form of reaction, and the result is that a continuous oscillation is set up at the frequency at which the electrodes vibrate.

It is not always necessary for the loud speaker to be emitting speech or music to cause this effect. Any slight vibration of the first valve, caused by any means whatever, will set up a corresponding sound in the loud speaker; this will feed back to the first valve, and the oscillation will gradually build up if there is sufficient feed-back to do this. In many cases, however, the amount of feed-back is not sufficient to cause continuous oscillation, and the sound is gradually damped and ceases altogether unless it is reinforced by further vibration of the first valve. The effect produced by vibration of the electrodes of a valve is usually referred to as "ponging" of the valve. It may occur, of course, in any stage of a low-frequency amplifier, but the effect is more pronounced in the first stage, because this is followed by the amplification of the succeeding stages.

In these days of radio-gramophones with loud speakers built into the same cabinet as L.F. amplifiers with fairly high amplification for use with gramophone pick-ups, it is necessary to take adequate precautions to avoid this trouble.

It will be seen that there are two ways of preventing the trouble—first, by making the electrodes so rigid that they do not vibrate relatively to each other, and second, by preventing mechanical shocks or sound waves reaching the electrodes and tending to make them vibrate. Obviously, it is an advantage to keep the loud speaker as far away as possible from the amplifier, but this is not a practicable solution in the case of a loud speaker contained in the same cabinet as the amplifier.

Much can be done by careful design of the valves themselves, and attention has been devoted to this side of the problem by valve manufacturers. The filament is chiefly responsible, and it is obviously undesirable to have a long, thin filament supported at its ends only. Thus short, thick filaments adequately supported to prevent vibration are desirable. This means, however, that the filament current will be greater than for a valve with a thin filament, and the filament voltage will be less than for a valve with a long filament. Thus two-volt valves with large filament current are usually better in this respect than six-volt valves with low filament current. The method of supporting the filament, however, is, of course, better in some valves than others, and it does not necessarily follow that a two-volt valve is always better as regards pong than a six-volt valve taking the same filament current.

In these days of all-mains receivers "ponging" troubles have been very largely eliminated by the use of indirectly heated valves. In these valves there is no filament to cause trouble, and any "ponging" which occurs is rapidly damped out, and seldom becomes sufficiently prolonged to cause continuous oscillation except in really exceptional cases. Even with indirectly heated valves, however, it may be desirable to take certain precautions with regard to the method of supporting the valves to minimise the effect

of vibration of the valve-holder. These precautions are, of course, very desirable when the valves are not indirectly heated. Any vibration of the supports for the valve-holders will be transmitted to the valves and to the valve electrodes if the valves are rigidly connected to holders which are in turn rigidly secured to the supports. It is desirable, therefore, to employ so-called "non-pong," or anti-microphonic, valve-holders, or, alternatively, to mount the valve-holders on rubber, or in some other manner, so that they are not in rigid contact with the main body of the amplifier. It is important to take care that such anti-pong devices are not "short-circuited" by semi-rigid connexions to the valve pins. It is surprising how much "pong" can be caused by what are thought to be flexible connexions between the anti-"ponged" valve and rigid parts of the amplifier.

When trouble is experienced with an existing amplifier it is very often possible to effect a cure by quite simple means. The sum involved is only of the order of sixpence, and the parts required can be purchased at branches of certain stores to be found almost everywhere. (No names, no pack drill!) These parts consist of two thin rubber sponges, or "soap dishes," which are placed round the first valve of the amplifier and held in place by a thin rubber band or piece of string. In really bad cases it may be necessary to do the same to the rest of the valves, but in most cases it is sufficient to treat the first valve only in this manner.

Another simple remedy for which I make no charge is still cheaper than the previous one, but perhaps not so effective, and possibly not so pleasant to look at, particularly if the rubber sponges used in the previous method have funny faces on them such as those used by a friend of mine in his amplifier. The parts required consist simply of the valve boxes in which the valves were packed. If these have been thrown away, others can be obtained by buying new valves! A valve box is simply placed over each offending valve, and it will usually be found that this damps out pongs sufficiently to prevent howling. In cases where the loud-speaker is not built into the same cabinet as the receiver, a cure may often be effected merely by turning the loud speaker so that the sound waves from it do not reach the valves with sufficient intensity to set up vibration of the electrodes.

Valves of the same type vary considerably in their liability to "pong," and if two or more valves of the same type are used in the receiver, one of these being the detector or first L.F. valve, less "ponging" may be obtained by interchanging them. By the way, I should perhaps point out that the detector is really the first low-frequency valve in a receiver, unless it is a diode, which, of course, does not amplify at all, and the "ponging" precautions apply particularly to it.

Book Review

The Mathematics of Wireless. By RALPH STRANGER. (George Newnes, Ltd., 5s.)

Ralph Stranger needs no introduction to *World-Radio* readers. His *Mathematics of Wireless* is a book which should be—one is almost tempted to say must be—in the hands of every radio enthusiast whose interest rises above the stage of just listening to broadcast programmes. It is well written in the style which has characterised other books by this writer—a popular, easy-to-read style, and yet one which preserves the scientific aspect demanded by the title.

The task of writing a book on this subject for the layman is a very difficult one. The writer has had to adopt all the tactics of the class teacher, with the disadvantage that he is unable to explain further the points which

(Continued on column 3 page 1005)

BROADCASTING HOUSE

(Continued from page 1000)

It can be shown, by simple mathematics, that for halls of similar acoustics, and halls of "good" acoustics, which necessarily fall into this category, the total number of performers is approximately proportional to the total surface of the walls, floor, and ceiling of the room. The square of the cube root of the volume of the hall is usually taken to be sufficiently nearly proportional to the total surface to be used as the determining factor in estimating the maximum permissible number of performers. Fig. 3 (a) shows a curve, due to F. R. Watson, giving the relation between these two quantities. The linearity of the curve follows from the mathematical reasoning referred to above.

Avoidance of Microphone Overloading

When we consider what modification, if any, to the ideal conditions for direct listening are necessary in the case of broadcasting, we find that certain types of microphone are themselves liable to overloading in the same way as the human ear, so that the sound intensity reached again limits the number of performers in a given studio. Moreover, the permissible intensity is of the same order in the case of the microphone as in that of the ear. Also it is necessary to consider the performers themselves, who cannot give a satisfactory performance if the conditions of listening differ greatly from the ideal.

Reviewing the whole situation, some compromise is necessary. Several of the microphones now available for broadcasting are not subject to serious overloading, and some reduction of the orthodox value of reverberation time for a given instrumental combination is not undesirable, particularly when the acoustics of the listener's room are taken into account. Hence, for the purposes of broadcasting the maximum number of performers for which a given studio is suitable is considered to be somewhat higher than that indicated by Watson's curve. Actually from two to three times that number is taken as a guide. Curves 3 (b) and 2 (c) actually represent this condition. Marked on the curves are the points corresponding with the volumes of various studios in Broadcasting House.

Optimum Conditions

It seems probable that yet another factor enters into the problem of providing a suitable acoustic environment for an orchestra and prevents us from using a comparatively small studio to give the effect of a large hall simply by increasing the reverberation time. In a room of good acoustics a certain number of reflections of a given sound occur before it is sufficiently attenuated to be no longer audible. This number does not vary very much for different rooms over very considerable limits of volume, provided the reverberation time approximates to the optimum value. If, however, a small room is given a long reverberation time very many more reflections occur during the reverberation period. It is not unlikely that the latter phenomenon is responsible for the unpleasant muddling effect, as distinct from a pleasant prolongation of the sound, which is observed when the expedient in question is attempted. This factor, in addition to the unpleasantly high sound intensity which occurs under these conditions, renders it necessary that optimum conditions in broadcasting studios should not differ very greatly from those generally accepted for direct listening.

TO OUR READERS

When replying to Advertisements please mention WORLD-RADIO

Testing Wireless Receivers

By R. L. SMITH-ROSE, D.Sc., Ph.D., A.M.I.E.E.

(Continued from page 950, May 13 issue)

THE next test is concerned with a measurement of the overall selectivity of the receiver, and is carried out either by varying the carrier frequency of the input supply while the receiver tuning is maintained constant, or by keeping the supply frequency constant and detuning the receiver by known amounts. In either case the modulation is kept constant throughout the test. Under practical conditions interfering signals would usually give a much weaker response than those from the wanted station to which the receiver is tuned. Thus, if the receiver tuning is maintained constant while the input frequency is varied, the rate at which the output power decreases is a measure of the selectivity of the set. It is more convenient in the tests, however, to increase the input during the detuning process so as to keep the output up to the standard value mentioned above. In this way a kind of inverted resonance curve is obtained from which the selectivity of the receiver may be judged. This selectivity test may be carried out at one or more points in each wavelength range of the receiver.

The fidelity test is concerned with the capability of the audio-frequency portions of the receiver to reproduce accurately the modulation over the full range of audio-frequencies required. This test is, therefore, made at a constant radio-frequency by varying first the frequency and then the amount of the modulation. In this way the measurements show the degree of constancy of the output for constant input over the audio-frequency range, and also the proportionality of input to output at one or more audio-frequencies, and thus the amount of amplitude distortion produced in the receiver. A further test may be carried out to show the amount of total harmonic content present in the output when a pure sine wave input at the fundamental frequency is employed.

Conditions of Test

So far no standardised conditions have been set up in this country for testing receiver performance, but the Committee on Standardisation of the Institute of Radio Engineers in U.S.A. has published details of "Proposed Standard Tests of Broadcast Radio Receivers" in the Proceedings of the Institute for August, 1930. The conditions outlined in this publication are already being adopted by manufacturers and others in America, and it is possible that they may form the basis of specifications in this country. It will be interesting, therefore, to give here briefly the quantities proposed in relation to these standard tests which are to be carried out on the lines described above.

The standard artificial antenna proposed is a series circuit comprising a capacity of 200 μ F., an inductance of 20 microhenries, and a resistance of 25 ohms. For the sensitivity and selectivity tests the fixed modulation frequency is 400 cycles per second, and the normal amount of modulation is 30 per cent. The standard audio-frequency output proposed is 50 milliwatts in a non-inductive resistor arranged to carry alternating current only, and connected across the output terminals of the radio receiver. This resistance is adjusted to the value recommended by the valve manufacturer to give maximum undistorted output for the type of output valve employed. If the receiver is not arranged to filter out direct current, then an external filter circuit is to be employed with a negligible

d.c. resistance, and comprising an inductance of not less than 100 henries when carrying 50 milliamperes direct current, and a condenser of not less than 8 microfarads, these components being connected in the usual manner for the a.c. output circuit.

Typical Results Obtained

An indication of the performance to be expected from modern receivers may be obtained

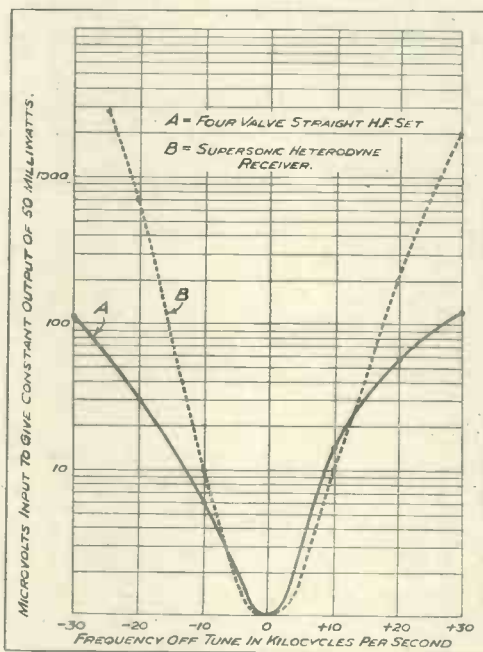


Fig. 3

from a brief discussion of the results of tests on two British receivers, as published by the manufacturers.*

The first receiver is of the four-valve type, containing two screen-grid radio-frequency amplifying stages, a detector, and one power output audio-frequency stage. A sensitivity test carried out on this receiver, over both the medium and long broadcasting bands of wavelengths, showed that over most of the useful range of the set an input of about 1 microvolt, or less, is required to produce the standard output of 50 milliwatts in an external circuit which, in this case, consists of a 4,000 ohm non-inductive resistor.

The selectivity performance of this receiver is illustrated by a curve A shown in Fig. 3. This curve shows the extent to which the input to the receiver has to be increased, from its resonant value as the set is detuned, in order to maintain a constant output. It is seen that in this case for a signal 9 kilocycles per second

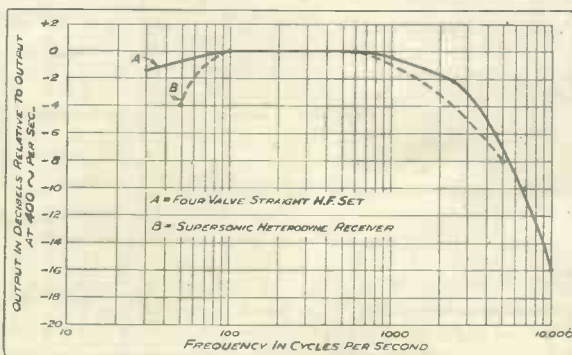


Fig. 4

out of tune with the receiver (equal to the separation of European broadcasting stations) about seven times the input is required to produce the same output as that obtained from a signal on the wavelength to which the receiver is tuned. While this selectivity is not excessive, it is probably adequate for most ordinary situations of the receiver. At 30 kilocycles per second off tune the sensitivity of the set has decreased to one-hundredth of that at the resonance point.

The corresponding selectivity curve for the supersonic-heterodyne receiver is given at B in Fig. 3. In this case it is seen that, while over a band of about 9 kilocycles per second on either side of resonance the receiver is comparable in selectivity with the former type, for greater amounts of mistuning the receiver is much less sensitive, and is thus more selective.

The audio-frequency characteristic of the first receiver is shown at A in Fig. 4, from which it is seen that the reproducing quality is very good from 30 to 1,000 cycles per second, and that even up to 5,000 cycles per second the output has only decreased 7 decibels (about 0.45 in amplitude) from its value at the standard frequency of 400 cycles per second. In the same diagram (Fig. 4) curve B shows the audio-frequency response of the supersonic-heterodyne receiver. At each end of the audio-frequency range the decrease in output is somewhat greater than in the case of the former receiver. The sharp fall in output at frequencies above 1,000 cycles per second in the case of each receiver is largely due to the general decrease in sensitivity of the receiver as determined by the selectivity curves given in Fig. 3.

The above graphs are merely intended as a selection taken at random to illustrate the type of performance curve that is obtained under the conditions of measurement which were described in the early portion of this article. When the habit of taking quantitative measurements on receivers and the subsequent publication of results becomes more widespread, the user and purchaser of the receiver will be in a position to appreciate the exact capabilities of any particular set and the direction in which advance is being made in receiver design and construction.

(Concluded)

BOOK REVIEW

(Continued from page 1004)

still puzzle his readers. The book must not be considered as a text-book on radio mathematics. It is written to give the novice an insight into the mathematical aspect of radio problems and radio design. Thus it covers only the merest fringe of the subject, but it succeeds in its object of opening up the field of wireless mathematics to the layman.

Naturally, in a book of this type the author cannot explain every term and every step in the development of his theme, and he, quite rightly, refers his readers to standard text-books on mathematics for further information. A little more space might have been devoted to the all-important and fundamental aspect of manipulation in algebra, the changing of the subject of formulæ. One case of congruency of triangles has been omitted from the section on geometry, the case of right-angled triangles with hypotenuse and one other side equal. The service area diagram on page 104 is not a polar diagram as suggested in the text, but is a contour chart. One or two other errors have occurred in the mathematical statements, but they are of minor importance and do not affect the general reading of the book.

The drawing and illustrations are quite clear, and the plates in the last chapter on the use of the slide rule are exceptionally good and leave the reader in no doubt as to the instructions in the text.

* See *Experimental Wireless*, November, 1930, page 605, and *Wireless Engineer*, November, 1931, page 587.

Some Hints for New Short-Wave Listeners

A Brief Article for the Non-Technical Listener "Below 100 Metres"
By "VERNIER"

I FREQUENTLY find that newcomers to the short waves express disappointment with the results achieved by their receivers during the first few weeks. Such poor results, however, are usually less the fault of their sets than of themselves, for they have not yet learned which are the most reliable stations below 100 metres, and at what time of the day they are best heard. I am giving, therefore, in this article, a list of such stations for new short-wave listeners, and also some information as to how they may be identified.

Let us assume that the new listener has either a commercial or a home-made receiver equipped with the usual plug-in coils for the short waves. These coils are usually arranged to cover three wavebands: the first from 14 metres to 27 metres; the second from 25 metres to 40 metres; and the third from 35 metres to 100 metres.

When searching for stations, the receiver should be kept on the verge of oscillation so that the presence of a station may be detected by a whistle or heterodyne heard in the headphones. This procedure, however, should never be adopted on the medium or long wavebands, otherwise serious interference with the reception of other listeners by oscillation will result.

Starting off on the lower waveband, the first station from which reliable reception may be obtained is LSY, Buenos Aires, on 14.47 metres. This station, as I have mentioned in my notes "Below 100 Metres," is usually engaged in commercial telephony with London or other stations, but often switches over to one of the local broadcasting stations or to gramophone records. He is to be heard at excellent strength at this time of year during the early evening.

One of the most distant stations heard regularly in this country is Bandoeng (PLE), Java, on 15.93 metres. This station, like LSY, is also engaged in commercial telephony, but with Amsterdam, and a concert of gramophone music is broadcast each Tuesday afternoon, from 2.40 p.m. to 4.40 p.m. Listeners should have no difficulty in tuning-in this station at that time, when it is often received at excellent loud-speaker volume. Announcements are given in English, French, German, and Dutch, and gramophone records of native music are often broadcast.

Tuning a little higher up the wavebands, we find one of the most popular short-wave stations, W2XAD, which is situated at Schenectady, New York, and operates on a wavelength of 19.56 metres. This station relays the programmes of WGY, and those of the "Red" network of the National Broadcasting Company. The same programme is usually broadcast by W2XAF, to which I shall refer at a later date.

According to information received from Schenectady, the transmissions of W2XAD are "beamed" or "focused" on Europe, and, therefore, European listeners should obtain very good reception from this station. As a matter of fact, signals have been very poor during the past few months, and only just recently have they increased in strength. W2XAD is now to be heard from 9 p.m. to midnight, but signals should be strongest between 9 p.m. and 10 p.m. The call sign of W2XAD is announced at every quarter of the hour.

A high-power short-wave transmitter operated by the Vatican, with call sign HVJ, can be heard at excellent strength on 19.84 metres, whenever transmissions are taking place. According to schedule, this station is "on the air" between 12 noon and 12.30 p.m., but it is also to be heard irregularly at other times of the day. This transmitter is utilised by the Vatican for maintaining communication between the Holy See and the Papal delegates and members of the Roman Catholic Church Overseas. It is also used for frequent broadcasts to Latin-America and the U.S.A. Announcements are made in many languages, but usually in Latin or Italian. Frequent relays are made of the services held at St. Peter's.

Just above the dial readings of HVJ will be found Radio Colonial, which broadcasts daily from 1 p.m.—4 p.m. This station, which is situated at Pontoise, near Paris, was built specially to give publicity to the French Exhibition which was held in Paris last year. The studios, which were situated in the grounds of the Exhibition, have now been moved into the heart of the City. Owing to its close proximity to this country, signals from this station on 19.68 metres are not heard at very good strength here, although they may at times attain fair volume in the very North of the

British Isles and in the West of Ireland. News bulletins in English are broadcast for the benefit of English-speaking listeners overseas, and very often the programmes are announced in the English language.

A transmitter which can be received at excellent strength on Sunday mornings from 12.30 p.m. onwards is Rabat, which relays the programmes of Radio Maroc on 23.8 metres. This station can be identified by an interval signal which somewhat resembles that given out by the B.B.C. stations, only that it is more metallic. Announcements are, of course, made in French, and good loud-speaker volume can usually be obtained in this country.

Radio Colonial, to which I have referred above, also broadcasts on 25.2 metres and 25.63 metres; on the first wavelength from 4.30 p.m. to 7.30 p.m., and on the second wavelength from 9 p.m. to midnight. Signals on both these wavelengths are, however, usually weak in this country. Just above Radio Colonial will be found W8XK, which is situated at Pittsburgh, U.S.A., and relays the programmes of KDKA and those of the "Blue" network of the National Broadcasting Company. At the present time of year reception from this station is not too good, although he can usually be heard at weak strength between 9 p.m. and midnight. Like W2XAD, and in fact all American transmitters, W8XK announces his call sign at every quarter of the hour.

One of the most powerful signals heard in this country is that from Rome on 25.4 metres. This transmitter, however, does not keep to a fixed schedule or even a fixed wavelength, but will often be heard between the hours of 5 p.m. and 9 p.m. (B.S.T.). If the listener, however, does not pick up this station in the course of a few moments, he can assume that no transmission is taking place, for it is almost impossible to miss the carrier wave.

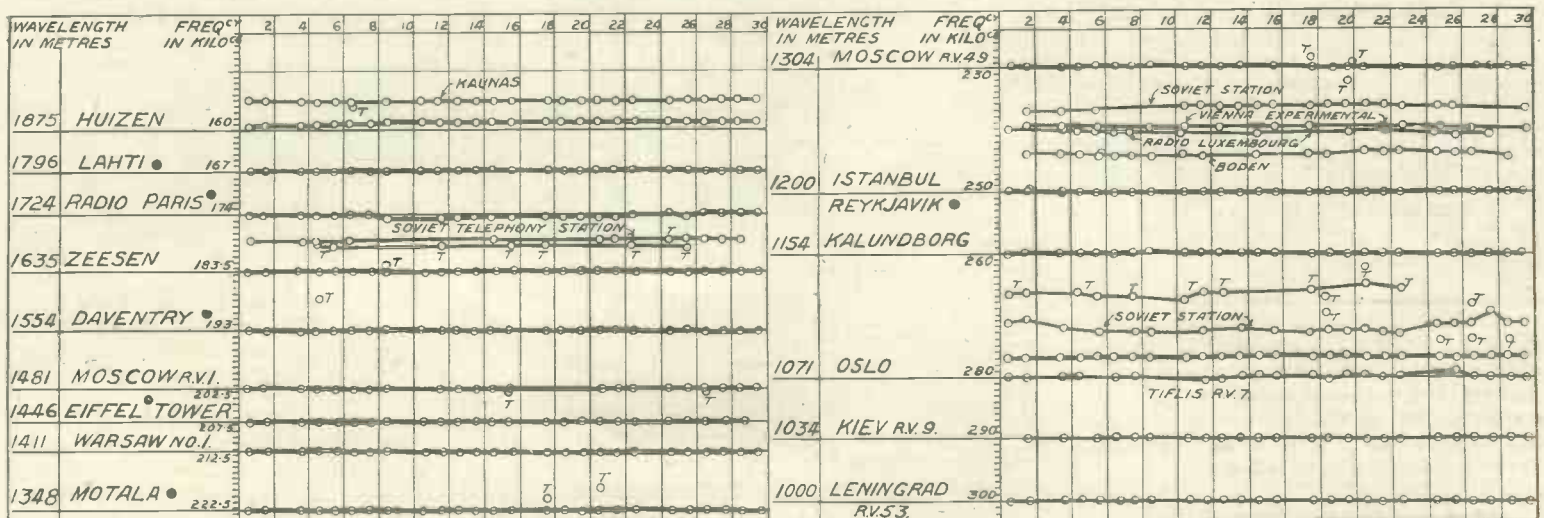
Just above Rome will be found G5SW, the experimental station of the B.B.C. at Chelmsford. This station, which sometimes relays the National programme and sometimes the Regional programme, operates on a schedule which will be found each week in the Short-Wave List. Signals at the moment are heard at quite fair strength in the South of England, although during the night they are not very strong in the North. Owing to the close proximity of the transmitter, also, signals are often distorted.

(To be continued.)

Frequencies of Long-Wave European Broadcasting Stations

April Measurements by the Brussels Laboratory of the Technical Committee of the U.I.R.

The Letter T indicates Telegraphy transmission. Stations marked * are provided with U.I.R. wave-meter



Short-Wave Reports

Below 100 Metres

By "VERNIER"

To the Editor of WORLD-RADIO

SIR,—Herewith my log for Friday, May 6:—

- 20.15 Moscow (T.U.) (50 m.). LS R7/N/N. Call.
- 21.30 Moscow (REN) (45.38 m.) LS R5/N/N. Music.
- 21.45 Radio L.L. (33 m.) LS R4/FS/X. Call.
- 22.15 2RO (43 m.) LS R9/N/N. Opera.
- 22.45 OXY (31.5 m.). Tel. R6/FS/N. Talk.
- 22.50 Radio Colonial (25.6 m.) LS R4/N/X. News.
- 23.00 Zeesen (31.38 m.) LS R8/FS/X. Call.
- 23.10 G5SW (25.53 m.) LS R4/N/X. American Programme.
- 23.16 CTIAA (42.9 m.) LS R6/N/N. Call.
- 23.30 W8XAL (49.5 m.). Tel. R6/FS/N. Talk.
- 23.35 W1XAZ (31.35 m.). Tel. R3/FFS/X. Call.
- 23.45 W2XAF (31.48 m.) LS R3/FS/X. Silver Streaks.
- 23.50 EAR8 (41.5 m.) LS R3/FS/N. Call in English.
- 24.00 W3XAU (49.5 m.). Tel. R3/FS/N. Talk.
- 00.15 VEQDR (49.96 m.). Tel. R5/FS/N. Music.
- 00.20 W8XV (25.25 m.). Tel. R7/FFS/XX. Relay.
- 00.30 W2XV (34.68 m.). Tel. R4/FS/X. Talk.
- 11.15 Vatican City (19.84 m.) LS R7/FS/N. Talk.
- 11.25 VK3ME (31.28 m.). Tel. R7/FFS/N. Speech.
- 15.30 F3ICD (49.05 m.). Tel. R6/FS/X. Guitar Solo.
- 17.30 Radio Colonial (25.4 m.) (a approx.). Tel. R5/FFS/X. Talk.
- 17.45 WQV (20.27 m.) (approx.) LS R7/FS/X. Call; Organ, followed by Orchestral Programme.
- 19.15 W9XAD (19.56 m.). Tel. R7/FS/N. Soprano singing.
- 19.20 EAQ (30.4 m.) LS R6/FS/N. Call in English, French, Spanish.
- 20.30 Zeesen (31.38 m.) LS R7/N/N. Call.
- 19.35 OXY (31.5 m.). Tel. R7/FFS/N. Talk.
- 19.45 Radio LL. (33 m.). Tel. R6/FS/N. Speech.
- 21.20 Moscow (T.U.) (50 m.) LS R8/N/N. Guitar players and Call.
- 21.25 Moscow (25.25 m.) LS R4/FFS/N. Opera selection.
- 21.30 W9XAA (16.57 m.). Tel. R3/FFR/X.elayed play, followed by orchestral selections.

Receiver used: o—v—2. Indoor aerial.

Yours faithfully,

Hampstead. J. F. E.

To the Editor of WORLD-RADIO

SIR,—Herewith extracts from my short-wave log for the period April 17-24, 1932:—

- April 17—16.45 Moscow (50 m.) 'Phones R4/N/X. Talk.
- " 17—18.50 7LO, Nairobi (49.5 m.) 'Phones R5/FFS/X. Records and call.
- " 17—20.05 Rome (42.7 m.) LS R6/FS/N. Time Signal, Call, Records.
- " 17—21.12-21.45 Radio Maroc (32.26 m.) LS/R6/FS/N. Orchestral and Vocal Concert; Call.
- " 19—14.40 Zeesen (31.38 m.) LS R7/N/N. Orchestra and call.
- " 19—14.45-16.40 Bandoeng, Java (31.86 m.) 'Phones R7/FFR/X improving to LS R4/FR/N. Violin solos, etc., call.
- " 19—19.00 Rome (42.7 m.) LS R6/N/N. Call.
- " 19—19.05 Moscow (50 m.) LS R7/FS/N. Talk.
- " 19—00.15-13.15 W3XAL (49.18 m.) 'Phones R5/FFR/X. Various, including Amos 'n' Andy.
- " 20—17.55 Moscow (50 m.) LS/RS/FS/N. "Internationale."
- " 20—18.00 Moscow (45.38 m.) 'Phones: R6/N/N. Talk.
- " 20—18.05 Rome (42.7 m.) LS/R7/N/N. Records, call.
- " 20—19.50 7LO, Nairobi (49.5 m.) 'Phones R5/FFS/X. Records, call.
- " 20—23.47 W2XAF (31.48 m.) 'Phones R5/FFR/N. Piano, call.
- " 20—24.15-01.10 W3XAL (49.18 m.) 'Phones R7/FFS/X. Various, including Amos 'n' Andy.
- " 21—18.20 Rome (42.7 m.) LS R6/N/N. Piano, call.
- " 21—22.30 CTIAA (31.25 m.) LS R7/N/N. Records, call.
- " 21—23.40 G5SW (25.53 m.) 'Phones R4/FFR/N. Service (National programme).
- " 22—20.00 Vatican (50.26 m.) LS R8/FR/N. Call and talk.
- " 22—23.50 W2XAF (31.48 m.) 'Phones R6/FFR/X. Organ recital, call.
- " 22—00.05 W3XAL (49.18 m.) 'Phones R6/FFR/XX. Syncopated duets, call.
- " 23—20.15 Rome (42.7 m.) LS R7/N/N. Records, call.
- " 23—20.18 Vatican (50.26 m.) LS R6/N/N. Closing announcement.
- " 24—20.45-22.30 Rome (42.7 m.) LS R8/FFR/N. Call, orchestral and vocal concert, talk.
- " 24—22.35 Radio Maroc (32.26 m.) LS R6/FS/N. Orchestra, call.

Receiver: 2-valve, home-constructed, incorporating dual-range S.W. coil. Ordinary outdoor aerial. I should also like to report that at about 17.55 B.S.T. on April 24 the following call was received: "This is VK2ME, Sydney, testing on a wavelength of 28.5 metres, 10,525 kilocycles." Strength on phones, R5/N/N.

Nothing more was heard, and the carrier was switched off at about 18.00.

Yours faithfully,

Walcot, Bath, Somerset. J. R. W.

THE all-too-brief period of summer weather which we experienced last week brought with it an unusual amount of atmospheric and static disturbances, which were particularly bad over the week-end, when local thunderstorms were widespread over the South of England. Reception conditions, consequently, were somewhat variable, but were naturally better on the lower wave-bands. Over the week-end, even signals on 14 metres were badly marred by static, which is quite an unusual experience.

One of my best stations recently has been LSY, Buenos Aires, which is generally to be heard between the hours of 4 p.m. and 7 p.m. B.S.T. This transmitter is usually engaged in commercial telephony with either London, Madrid, or New York, but when business is slack it switches on to one of the local broadcasting stations or gives a transmission of gramophone records. It is to be identified by its unusual interval signal, which takes the form of three oscillating notes, which sound somewhat like a hooter. Regular broadcast transmissions have now, I understand, been discontinued from LSX on 28.98 metres.

W2XAD was received at good strength on the evening of Thursday, May 12, about 9 p.m., and also on other evenings; but his signals began their nightly fade-out just before 10 p.m. The schedule of the Schenectady transmitter must have been altered considerably of late, for it was not "on the air" until shortly before 10 p.m. on Sunday, whereas it should have started its programme, according to schedule, at 7 p.m.

Another "mystery transmitter," however, could be heard relaying the NBC programme from the "Red" Network, on approximately 21.8 metres, from 7.30 p.m. onwards. Signals from this station faded to unintelligible strength between 8 and 9 p.m., but were again fair at 10 p.m., and the same programme was being broadcast as from W2XAD. Signal strength was not as good, however, as from the Schenectady transmitter. No call-sign or any hint as to identity was given by the 21-metre station, although according to the ruling of the Federal Radio Commission this should have been done—as it is from W2XAD and from other U.S.A. transmitters—every quarter of an hour. I wonder whether any readers can inform me as to the identity of this new station, which, by the way, could not be heard on the evening of Whit-Monday.

Signals from Poznań were exceptionally good on the evening of Thursday, May 12. Volume and quality of reproduction are now often better from this transmitter than from his neighbour in wavelength, Zeesen. The Polish transmitter, as I have mentioned before, is working on a far wider schedule than his official one, which is published in the *World-Radio* short-wave list.

Rome has now left his 43-metre wavelength and returned to 25.4 metres. I should think that the Italian transmitter has probably abandoned entirely his 80-metre wavelength and taken up 43 metres. No doubt, however, he will stick to 25.4 metres during the summer months. Rabat, as usual, provided an excellent signal on 32.26 metres on the evening of Sunday, May 15.

Signals from Moscow have, during the past week, been heard more satisfactorily from the harmonic on 25 metres than from the actual transmission on 50 metres. This has generally been because reception on the lower wave-band has been freer from atmospheric; but on Whit-Monday, when static disturbances had somewhat modified, quality of reproduction was actually better when the station was received on the higher frequency. The number of English propaganda talks from the Russian transmitter

(Continued at foot of column 1)

SHORT-WAVE STATIONS

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

M.	Kc/s	Station
70.2	4273	Khabarovsk (U.S.S.R.), 20 kW. 10-1 p.m.
62.5	4800	Long Island, W2XV. FRI., 12-2.30 a.m.
58	5172	Prague. TUES. and FRI., 8.30-10.30 p.m.
54.52	5502	Brooklyn (N.Y.) W2XBH. Relays WCGU.
51.22	5857	Chapultepec (Mexico) XDA, 20 kW. Daily 4-5 p.m.
50.28	5969	Vatican City (Italy) HVJ. 10 kW. D'ly 9.0-9.15 p.m. SUN. 12-12.30 p.m. also.
50	6000	Barcelona Radio Club EAJ25. SAT. 9-10 p.m.
50	6000	Bucharest (Romania), 0.3 kW.
50	6000	Moscow (Relays Moscow T.U.).
49.96	6005	Drummondville, Quebec VEQDR. 4 kW.
49.96	6006	Tegucigalpa (Honduras), HRB, 2.5 kW. Daily (except SUN.), 1 a.m.-6 a.m.
49.83	6020	Chicago (Ill.) W9XF, 5 kW. Relays WENR. SUN., 5-7 a.m., 1-5.30 p.m., 8.30-11 p.m., and 1-6 a.m. (MON.). Weekdays, 3.15-4.45 p.m., 8.30 p.m.-12 m't and (ex.SAT.) 1.30-6 a.m.
49.59	6050	Halifax, N.S. Relays CHNS.
49.5	6060	Cincinnati, W8XAL, 10 kW. Relays WLW.
49.5	6060	Nairobi (Kenya), 7LO.
49.5	6060	Philadelphia (Pa.) W3XAU, 0.5 kW. Relays WCAU. Daily 2-9 p.m. THURS. and FRI., 2 p.m.-6 a.m.
49.43	6089	Vancouver (B.C.) VEQCS.
49.4	6072	Johannesburg (S. Africa) D'ly 4.30-9.30 p.m.
49.4	6072	UOR2, Vienna Experimental.
49.34	6080	Chicago (Ill.) W9XAA, 0.5 kW. Relays WCFL. Daily 2-5 a.m.
49.22	6095	Bowmanville (Canada) VE9GW, 0.028 kW. Weekdays, 11.45 a.m.-3 p.m. and 8 p.m.-3 a.m. SUNDAYS, 5.30 p.m.-4.15 a.m.
49.18	6100	Bound Brook (N.J.) W3XAL, 20 kW. Daily 10 p.m.-6 a.m.
49.05	6116	Saigon (French Indo-China) F3ICD, 12 kW. Daily 1 p.m.-4.45 p.m.
49.02	6120	Richmond Hill (N.Y.) W2XE, 0.5 kW. Relays WABC, D'ly 1 p.m.-5 a.m. next day.
48.86	6140	Pittsburgh East (W8XK). Relays KDKA. WED., and SAT., 10 p.m.-5 a.m.
48.8	6147	Winnipeg (Canada) VE9CL, 2 kW. Daily (except SUN.) from 12.30-2.30 a.m.
48.65	6167	Mexico City X1F.
48.35	6205	Bogotá (Colombia) HKC. Daily, 4 p.m.
48.05	6243	Barranquilla (Colombia), HKD.
48.2	6220	Rome (Italy) 2RO, 9 kW.
48	6250	Casablanca (N. Africa) CN8MC. Relays Rabat, MON., 9-10 p.m. TUES., 1 p.m.-2 p.m. and 9-10 p.m.
46.69	6425	Bound Brook (N.J.) W3XL. FRI. 10-11.45 p.m. and 4-6 a.m. SAT. 6.30-11.45 p.m. and 4-6 a.m.
45.33	6611	Moscow, REN (Russia).
45	6667	Constantine (Algeria) 8KR, 0.2 kW.
43	6976	Madrid (EAR 110). TUES. & SAT., 11.30 p.m.
43	6976	Rome (Italy) 2RO, 9 kW.
42.9	6991	Lisbon, CTIAA, 2 kW. FRI., 11 p.m.
41.7	7195	Singapore VS1AB, SUN. & WED. 3.30-5 p.m.
41.6	7211	Tenerife Radio Club EAR8, 0.05 kW.
41	7313	Bangkok HSP2, 2.5 kW. (Testing). MON. only 2-5 p.m.
39.7	7556	Bogotá (Colombia) HKF.
39.4	7612	Nuevo Laredo (Mex.) X26A. THUR., 5-6 p.m.
34.68	8650	Long Island W2XV. FRI. 11 p.m.-1.30 a.m.
33	8090	Radio LL (France), 0.5 kW. Daily 12.30-1 p.m. and 6-6.30 p.m. SUN., MON., WED. and FRI., 8-10 p.m. SAT., 7-8.30 p.m. SUN., 10 a.m.-12.30 p.m. and 2.30-4 p.m.
32.5	9230	Paris (FL). Time Sig. 8.56 a.m. and p.m.
32.26	9300	Rabat (Radio Maroc), 6 kW. SUN. 8-10 p.m.
31.86	9416	Bandoeng (PLV) BokW. TUES. 2.40-4.40 p.m.
31.75	9450	Rio de Janeiro (Brazil), 10.30 p.m.-12.30 a.m.
31.55	9510	Melbourne (Australia) VK3ME, 5 kW. WED. and SAT., 11 a.m.-12.30 p.m.
31.51	9520	Skamlebaek (Denmark) OXY, 0.5 kW. Relays Copenhagen. Daily from 7 p.m.
31.48	9530	Schenectady, N.Y. (W2XAF), 40 kW. Relays WGY. Daily, 10 p.m.-4 a.m.
31.38	9560	Zeesen (Germany), 8 kW. Relays various stations, generally 1 p.m.-1.30 a.m.
31.35	9570	Poznań (Poland), SR1, 1 kW. TUES. 6.45-9.45 p.m. THURS., 6.30 p.m.-1 a.m.
31.35	9570	Springfield (Mass.) W1XAZ.
31.3	9582	Philadelphia (Pa.) W3XAU, 0.5 kW. Daily (except THURS. and FRI.), 9 p.m.-6 a.m.
31.28	9590	Melbourne (Australia) VK3ME, 20 kW. WED. and SAT., 11 a.m.-12.30 p.m.
31.23	9590	Sydney (Australia) VK2ME, 20 kW. SUN., 7-9 a.m. and 3.30-5.30 p.m.
30.4	9869	Madrid (Spain) EAQ, 20 kW. Daily, 12.30 a.m.-2 a.m. SAT., 6-8 p.m.
30	10,000	Belgrade. MON. only 8-9 p.m.
29.3	10,238	Heredia (Costa Rica) NRH, 7.5 watts. Daily 11 p.m.-12 m't and 3-4 a.m.
28.98	10,350	Buenos Aires LSX, 20 kW. 9.30 p.m.-1.30.
25.63	11,705	Radio-Colonial (Paris), D'ly 9 p.m.-12 m't.
25.53	11,750	Chelmsford (G5SW), 12 kW. 12.30-1.30 p.m. & 6.45 p.m.-12 m't. News Bulletins at 12.30 p.m. (SAT. 12.45) 8.15 p.m., & 12 m'd'n't.
25.5	11,763	Chapultepec XDA, 20 kW. Daily, 8-10 p.m.
25.46	11,777	Saigon (French Indo-China) F3ICD, 12 kW.
25.4	11,810	Bowmanville (Canada) VE9GW. (Exptl.)
25.4	11,810	Rome (Italy) 2RO, 9 kW.
25.34	11,840	Chicago (Ill.) W9XAA. Relays WCFL.
25.25	11,880	Pittsburgh East (W8XK), 5 p.m.-3 a.m.
25.2	11,905	Radio-Colonial (Paris), Daily 4.30-7.30 p.m.
24	12,500	Funchal (Madeira) CT3AQ, 0.05 kW. TUES. and THURS. 10.30-12.30 a.m. SUN. 4.30-6 p.m.
23.8	12,605	Rabat (Radio Maroc), 6 kW. SUN. 12.30 p.m.
20.5	14,630	Chapultepec XDA, 20 kW. D'ly 8.30-9 p.m.
19.84	15,123	Vatican City (Italy) HVJ. 10 kW. Daily 12 noon-12.20 p.m.
19.72	15,210	Pittsburgh East (W8XK). Relays KDKA WED. and SAT., 12 noon-4 p.m.
19.88	15,234	Radio-Colonial (Paris). Daily, 1-4 p.m.
19.56	15,340	Schenectady (W2XAD), 20 kW. Weekdays, 8-11 p.m. SAT., and SUN., 6-11 a.m.
16.57	18,105	Chicago (Ill.) W9XAA. Relays WCFL.
15.93	18,830	Bandoeng (PLE) 80 kW. TUES. 2.40-4.40 p.m.

has now been greatly increased, and can be heard nearly every night about 9 p.m. It must be remembered, however, that at the time these talks are received in this country all good Russian listeners have gone to bed, and that they, therefore, do not have to listen to the propaganda given by the U.S.S.R. Government for the benefit of foreign listeners.

FRENCH

(Supplementary Notes in connexion with the French Talk, Tuesday, May 17)

(A) *Les adverbes de négation (Suite).*

1. *Pas, point, plus* se construisent comme les adverbes. Il en résulte qu'ils ne se mettent pas à côté de *ne*, puisque la négation se met avant le verbe, tandis que les adverbes se mettent après le verbe dans les temps simples et entre l'auxiliaire et le participe passé dans les temps composés : Ex. *Nous ne le savons pas ; elle n'avait plus d'argent ; il ne comprend point du tout ; etc.*

Pourtant dans certains cas *pas, point et plus* peuvent s'établir à côté de *ne* ; par exemple, devant l'infinitif sur lequel porte la négation : *pour ne pas chanter ; pour ne plus rentrer ; pour ne point résister ; il vaut mieux ne pas y aller ; mieux vaudrait ne plus lui parler de cette affaire ; faites en sorte de ne point dépenser cette somme ; je préfère ne pas en parler, etc.*

Cette construction s'évite parfois dans la langue écrite quand le verbe est à l'infinitif parfait : *je voudrais n'avoir plus besoin de vous ; elle aimerait n'être pas venue si tôt ; etc.* Admettons, cependant, qu'il y a là une élégance qui sent la recherche.

2. A force de dire *pour ne pas, pour ne point, pour ne plus* devant un infinitif, on est arrivé à employer la même construction devant *que* : Ex. *Je lui ai écrit pour ne pas qu'il le répète ; papa a fermé la porte pour ne pas que je sorte, etc.* Il vaut mieux éviter cette façon de parler et d'écrire, bien qu'on la rencontre chez quelques auteurs contemporains ; disons donc : *je lui ai écrit pour qu'il ne le répète pas ; papa a fermé la porte pour que je ne sorte pas.*

3. La négation porte sur le verbe qui l'accompagne ; ce verbe peut être celui de la proposition principale ou bien celui de la proposition subordonnée, de sorte qu'à une phrase telle que : *je désire que vous chantiez* correspondent deux propositions négatives : (a) *je ne désire pas que vous chantiez* (ici la négation porte sur le verbe de la proposition principale) ; (b) *je désire que vous ne chantiez pas* (ici la négation porte sur le verbe de la proposition subordonnée). Les deux sens sont bien clairs ; impossible de les confondre.

(B) . . . et mes ouailles . . . les sonnaillles du mulet (Lettres de mon Moulin, p. 13, l. 4 et l. 12).

1. L' *l* double est *moillée* (c'est-à-dire qu'elle se prononce comme *y* dans *payer, tuyau, etc.*) sans exception dans la finale—*aille* : Ex. *bataille, écaille, médaille, ouaille, sonnaillle, muraille, etc.*

2. La prononciation de la *voyelle* dans la finale—*aille* mérite un examen particulier.

Dans un très grand nombre de mots qui se terminent en—*aille*, surtout à Paris, la voyelle est fermée et longue, *â*, exactement comme dans *pâte, pâte, mâle, etc.*

Toutefois cette prononciation n'est pas universelle aujourd'hui. Elle me paraît justifiée, je dirais même indispensable, dans les mots où la finale—*aille* marque une intention péjorative : Ex. *canaillle, marmaille, ferraille, valetaille, racaille, etc.*

Il en est de même dans les verbes en—*ailer*, de même intention : *il braille ; les enfants piaillent ; elles se chamaillent ; l'enfant criaillle, etc.*

D'autre part dans certains mots, *médaille et faille* (soie) par exemple l'*a* doit rester ouvert et bref (comme dans *salle, femme, travail*). Il faut aussi prononcer *a* ouvert et bref, dans les verbes qui correspondent à des substantifs en—*ail* : Ex. *il travaille, elle détaille, etc.*

Pour les autres mots : *écaille, maille, paille, bataille, etc.* . . . on hésite souvent et la prononciation parisienne ne s'impose pas. Mieux vaut s'en tenir à un *a* moyen, demi-long, intermédiaire entre *a* et *â*.

FOREIGN LANGUAGES
SECTION

3. La terminaison—*aille* est une désinence collective : Ex. *bataillle, ensemble de gens qui se battent, grande batterie ; muraille, ensemble ou suite de murs, ou mur étendu dans ses différentes dimensions ; volaille, ensemble de volatiles qu'on nourrit dans une basse-cour ; sonnaillles, ensemble de clochettes, etc.*

Nous avons de même des verbes et des adjectifs péjoratifs les premiers en—*ailer*, les seconds en—*aille* : Ex. *brailleur, braillleur ; ferrailleur, ferrailleur, rimailleur, rimailleur, etc.*

(C) [Translation of Exercise 136, from Intermediate Exercises in French Grammar and Composition, Harrap & Co.]

Il connaissait beaucoup d'Anglais, et il était sur le point d'envoyer son fils à une école anglaise. En entendant cela le cocher (conducteur) nous raconta l'histoire de deux écoliers anglais qui avaient voyagé avec lui deux ou trois auparavant.

Ils lui demandaient les noms français des différentes choses qu'ils voyaient sur la route. A un moment donné (à un certain moment) ils virent une bande (un troupeau) d'oies, et demandèrent comment on appelait ces oiseaux en français. Le cocher leur dit qu'on les appelait "des Anglais" parce qu'ils sifflaient et babillaient comme les gens parlant anglais. Les jeunes garçons ne soufflèrent mot (ne dirent rien) ; mais voyant un cochon sur le chemin, ils demandèrent comment on l'appelait. "Un cochon," répliqua-t-il. "Ah !" s'écria l'un des écoliers, "en Angleterre nous appelons ces animaux 'conducteurs.'" Il faut rendre cette justice au cocher (conducteur) qu'il jouit (rit, s'amusa) de la plaisanterie tout autant que les deux (jeunes) garçons.

(D) Text of the French Dictation given during the French Talk, Tuesday May 17.

Un Français montrait un jour à un fameux humoriste américain, une statue qui représentait une jeune femme occupée à se coiffer.

—C'est très beau, fit l'Américain ; mais ce n'est pas naturel.

—Pas naturel ? que voulez-vous dire ?

—Regardez bien, dit l'humoriste ; cette femme ne tient pas d'épingles à cheveux entre ses lèvres.

E. M. STÉPHAN.

GERMAN

Compound Verbs—(XXII)

A.—Enough has been said in last week's article to make it plain that compound verbs with *ein* are a complicated business and require investigation, if the student is to acquire sufficient "Sprachgefühl"—instinctive feeling for what is right or wrong in a language, to understand their meaning and to use them intelligently. The following results of a lengthy investigation will, it is hoped, serve to enable students to do so, although the examples given are only types of large sections of verbs too numerous to be dealt with exhaustively.

I.—The action of the subject is directed into itself, e.g., *Ich atme ein* (I breathe in).

II.—The destination of the action is not definitely stated except that it is "in" and may indicate commencement or sudden appearance :—*Er trat ein* (He stepped, came in, entered), *Ritte, treten Sie ein!* (Please enter)—*Sie gehen ein und aus.*—Das Wasser fließt ein und aus.—Das Licht fällt von oben (durchs Fenster) ein. (The light comes in from above (through the window)).—Die Nacht bricht ein.—Der Feind brach (stürmte) ein.

III.—The object or the place or both are definitely stated and an indirect object may be present as well :—

Ich atme Luft ein.—*Ich trete ins Zimmer ein.*—*Ich atme Luft in die Lungen ein.*—*Ich pauke ein* (I memorize).—*Ich pauke Vokabeln ein* (I hammer in vocabulary).—*Ich pauke ihnen die Daten ein* (I hammer the dates into their heads).—*Ich pauke (hämmere) ihnen die Daten ins Gedächtnis ein.*—*Er steckte die Rechnung (bill) (das Geld) ein* (He put the bill (money) into his pocket or purse). *Er steckte das Geld (die Uhr, die Rechnung) in die Tasche (ein).*—*Sie luden die Kohlen (in das Schiff, in den Waggon, den Karren or die Karre) ein.* *Er schrieb seinen Namen in die Liste ein.*—*Er hüllte sie in eine Wolke ein* (He wrapped them in a cloud).—*Er goss ihnen Wein (in die Gläser) ein* (He poured wine into their glasses).

The purpose of the action may be :—

(1) *to get inside* (subject or object) : *Er stieg ein.* *Er stieg (in den Wagen (carriage, car), in den Zug (train), in das Schiff) ein.* *Er nimmt Medizin ein* (He takes medicine).—*Er warf den Brief ein* (in den Kasten (letter box)).—*Sie saugen den Honig ein* (They suck in the honey).—*Er jagte ihnen Furcht ein* (He frightened them).

(2) *to join in* : *Die Flöten (flutes), die Hörner (horn-instruments), der Chor (chorus) fielen zu spät ein.*—*Die Regimentsmusik (regimental band) fiel ein* (struck in).—*Sie stimmten in den Jubel ein* (They joined in the shouting).

(3) *to reach a destination* (through the post office or other medium) : *Er schickt (sends) seine Rechnung (bill) (die Quittung (receipt), einen Scheck (cheque), ein Gesuch (request) Bittschrift, (petition)) ein.*—*Er brachte einen Antrag (resolution) ein* (He brought in, moved a resolution).—*Er hat seine Entlassung eingereicht* (He has sent in his resignation or papers).—*Er hat die Dokumente eingesandt.*

(4) *to put into, or under the ground, bury* : *Er hat den Dünger (manure) eingegraben* (dug in). Similarly *einackern, einpfügen* (to plough in), or *einharcken* (to rake in).

(5) *to harvest, collect* : *Sie bringen or fahren das Heu (das Korn (corn), den Weizen (wheat), den Hafer (oats), den Klee (clover)) ein.*—*Die Landwehr (second reserves) wird einberufen* (called up).—*Sie kassieren das Geld ein* (They collect the cash).—*Er sammelt Briefmarken ein* (He collects stamps).—*Er kauft alte Bilder ein* (He buys up old pictures).—*Er tauscht Briefmarken ein* (exchange).

(6) *to find shelter* : *Die Feldhühner (partridge) fielen im Kornfeld ein* (alighted).—*Kehren wir in die Scheune ein* (Let us go for shelter into that barn).—*But Wir kehrten im ersten Hotel ein* (We put up at the first hotel).—*Er kehrte die Spitze ein* (He turned the point).—*Sie kehrte den Kehrriech in das Kehrriechloch ein* (She swept the sweepings into the dust-hole).

(7) *to receive* : *Er fordert das Geld (die Zinsen (interest), die Schulden (debts), die Rechnungen (bills), die Steuern (taxes)) ein* (to call in, to demand). *Bücher eintauschen* (to obtain by exchange).—*Geld einwechseln* (to change money).—*Ein Pfand einlösen* (to redeem a pawn).—*Lob einheimen* (to get praise).—*Gemüse (vegetables), Eier (eggs), Obst (fruit), einkaufen* (to purchase).

(8) *to put away or maybe to appropriate, steal* : *Er hat das Geld eingesteckt.*—*Er hat den Gewinn (profit) (in seine eigene Tasche) eingesteckt.*—*Man hat den Dieb eingesteckt or eingesperrt* (The thief has been put to prison).

(9) *to go for* : *Er schlug auf ihn ein* (He went for him).—*Er hat gehörig auf sie eingehauen* (He gave them mighty blows).—*Sie stürmten auf den Feind ein.*

B. Exercise 27 (Siebenundzwanzigste Aufgabe) (Pr. G. C., p. 193)

I (b).—(1) *Ich habe nicht gekonnt.* (2) *Er hat*

nicht gedurft. (3) Er hat nicht gewollt. (4) Er hat gemusst. (5) Ich habe gesollt, aber ich habe nicht gewollt. (6) Er hat nicht kommen können. (7) Ich habe nicht gehen dürfen. (8) Er hat es nicht tun wollen. (9) Wir haben lernen müssen. (10) Sie haben gehen sollen, aber sie haben nicht gewollt.

(c)—(1) Ich soll nach London gehen. (2) Ich sollte zu Hause bleiben (or Ich habe zu Hause bleiben sollen). (3) Ich habe nach Berlin gehen sollen. (4) Er soll nach Hause kommen. (5) Er sollte Deutsch lernen. (6) Er hat Deutsch lernen sollen (or Sie haben gewollt, dass er Deutsch lerne). (7) Er sollte spielen. (8) Er hätte spielen sollen. (9) Ich muss nach London gehen. (10) Ich musste nach Deutschland gehen (or Ich habe nach D. gehen müssen). (11) Ich habe spielen müssen. (12) Er muss nicht, wenn er nicht will. (13) Er musste gehen (or Er hat gehen müssen). (14) Sie haben nach Hause gehen müssen. (15) Ich hatte Deutsch lernen müssen. (16) Ich will spielen. (17) Ich will nach Hause gehen. (18) Er soll es nicht tun. (19) Er sollte es nicht tun. (20) Er hätte nicht nach Hause gehen sollen. (21) Darf (or Kann) ich gehen? (2) Ja, sie können (or dürfen) gehen. (23) Ich kann nicht Deutsch lernen. (24) Ich mag nicht spielen. (25) Er mochte es nicht sagen. (26) Kann er sprechen? (27) Er kann, wenn er will. (28) Wir möchten (gern) spielen. (29) Ich möchte nach Hause gehen. (30) Das mag wahr sein, aber sie sollen gehorchen.

2.—Zwei Knaben, die Brüder waren, arbeiteten zusammen, als ihre Mutter ihnen sagte: Ihr könnt eine Weile hinausgehen und spielen, aber Ihr müsst um zehn Uhr wieder hereinkommen. Sie waren fröhlich und lustig und gingen hinaus in den Garten (or in den G. hinaus). Als sie im Garten waren,

sagte der eine von ihnen: "Was sollen wir spielen?" Sein Bruder sagte: "Ich möchte Verstecken spielen." "Versteckenspielen mag ich nicht," antwortete der andre, "spielen wir Blindekuh." "Das ist ein dummes Spiel" war (or kam) die Antwort. Und so ging es weiter bis ihre Mutter das Fenster öffnete und rief: "Es ist zehn Uhr, ihr müsst jetzt herein-kommen." Und so mussten sie wieder hinein (or zurück) an die Arbeit gehen, ohne gespielt (or sich amüsiert or Vergnügen gehabt) zu haben, weil sie sich stritten und nicht einig werden konnten.

O. S.

SPANISH

To go astray, to mislay, etc.

HACE poco un estudiante me pidió le tradujera (to translate for him) la frase: "Your letter has evidently gone astray; we will make inquiries at the Post Office."

En este caso to go astray se traduce por extraviarse, de modo que en español diríamos:

"Por lo visto (sin duda, al parecer) se ha extraviado, su carta; nos informaremos en correos (o en la administración de correos)."

"Informarse en" quiere decir to inquire at. Por to inquire of or to apply to una persona, se dice "dirigirse a," como en la frase:

"Para más informes dirigirse al director" (for further information apply to the manager).

El verbo *traspapelarse* (perderse entre papeles) se emplea en frases como: "Se me ha traspapelado el recibo" (*I have mislaid the receipt*).

Lectura. (continúa el relato). Al cabo de algún tiempo, empecé a cansarme de la pura (sheer) monotonía del viaje. Varias veces traté de mirar por la ventanilla para ver si el paisaje (landscape) cambiaba de aspecto, pero el árido y reseco (parched) terreno reflejaba de tal manera el sol que cada vez quedé deslumbrada, cegada (dazzled, blinded).

Desde París yo había enviado un telegrama a mi

amiga de Valladolid, anunciándole que llegaría a la estación a eso de (at about) las cuatro, ¡y ya eran las cinco! Me sentí cada vez más emocionada (increasingly excited).—¿Cómo seran?—me pregunté.—¿Qué pensarán de mí cuando me vean por primera vez?

Por fin, entramos en la estación de la histórica ciudad, y yo, toda nerviosa, estaba ocupada en bajar mis maletas cuando oí preguntar:—¿Es la señorita M. ?— Y, gracias a la fotografía que de ella tenía, reconocí a mi corresponsal, que venía acompañada de una hermana y un hermano. Todos tres se pusieron a (began to) hablar a la vez (al mismo tiempo), de modo que yo me quedé casi en ayunas (lit. fasting—in the dark, sin comprender) de lo que me decían. Pero la intensa cordialidad de la acogida (reception) que me dieron no dejó de conmovirme, y mi agradecimiento (gratitud) se centuplicó (aumentó cien veces) cuando supe que, estando en la duda de si eran las cuatro de la madrugada o de la tarde cuando mi tren había de llegar, habían acudido a la estación antes del amanecer (daybreak), ¡y después habían salido al encuentro de (gone to meet) todos los rápidos que pasaban durante el día! ¡Así es la hospitalidad española!

(continuará)

W. F. BLETCHER.

Esperanto Transmissions (May 22-28)

Sunday.—Langenberg, 8.30 a.m. Course (W. Wingen).

Hilversum, 9.10 a.m., Course.

Toulouse, 5 p.m., Course.

Leningrad, 10.5 p.m., News.

Wednesday.—Stuttgart, 6.25 p.m., "El originala Verkaro" (Dr. Vogt).

Marseille-Provence, 7.15 p.m., News.

Leningrad, 10.5 p.m., News.

Thursday.—Paris, 5.45 p.m., Talk. Kaunas, 9 p.m., Talk.

Grenoble, 5.45 p.m., Talk.

Breslau, Gleiwitz, 10 p.m., "Je la Goethe-jaro" (11).

Leningrad, 10.5 p.m., News.

Friday.—Stuttgart, 7.30 p.m., Week's Programme (Prof. Cristaller).

Radio-Côte d'Azur, 8.10 p.m., Talk.

Radio-Normandie, 9.0 p.m., News.

CTAA (42.9 m.), 10.30 p.m., Talk.

Saturday.—Heilsberg, 6.10 p.m., Week's Programme.

Lyon-la-Doua, 8.15 p.m., "Humora dialogo" (Fino Mage, S-ino Borel).

Lisbon (282 m.), 10.30 p.m., Course.

Men, Women, and Wireless

MANY years ago Bernard Shaw put forward the theory that women ought not to be treated as though their minds were different from those of men. Women were womanly, he maintained, simply because they had always been trained and expected to be so. Fundamentally there was no appreciable difference.

Events seemed to prove his correctness. When the opportunity arose for women to do men's work they did it, and showed that they did not lack the mental capability. They joined in his sports and enjoyed them. Each time a girl has swum the Channel or flown from somewhere to somewhere else several thousands of miles away, or adopted another of men's habits, newspaper leaderette writers have been set to work putting Shaw's old theory into new journalistic jargon.

Now probably a large percentage of the men who read and agree with this sort of thing own wireless sets. Yet they fail to see that their own everyday experience utterly shatters the theory of the similarity between masculine and feminine mentality!

Can you point to any married couple whom you know and declare with confidence that they rarely have differences of opinion regarding foreign stations? Do you know any woman who would prefer to listen to an indifferent programme coming from a thousand miles away rather than to a good programme from the local station? Yet you know very well that nine men out of ten will eagerly spend hours extracting atmospheric-infested speech in an unintelligible language from the ether, and feel thoroughly entertained simply because of the knowledge that the words that they are failing to understand are coming from Moscow or Bandoeng or somewhere else equally remote!

It may be suggested that women object to

foreign listening simply because they are expected to do the listening whilst their husbands do the really enthralling part of the business—the knob-turning. But the argument won't hold. If that were true, you would find wives furtively neglecting their daytime housework, trying to pick up Rome in daylight, and boasting about their successes over the supper table. The nightly skirmishes would be, not to decide whether foreign or home stations were to provide the evening's entertainment, but to decide who was to have the pleasure of tuning-in to the foreign stations.

Surely it can hardly be denied that woman's interest in wireless programmes varies definitely in proportion to the pleasantness or unpleasantness of the sound coming from the loud-speaker. She is entirely unattracted by the romance of long-distance listening. If a singer sounds unpleasing, she will refuse to listen to him even though her husband informs her in an awed voice that the man is singing right from the other side of the world. She will ruthlessly interrupt breathless masculine listenings to faint murmurs from hitherto uncharted stations by inquiring, "Would you like haddock or egg and bacon for breakfast to-morrow, John?"

It is impossible to maintain that this difference between men and women is due merely to the fact that women have never been encouraged or expected to share men's interest in the subject. For it is of extreme importance to men that women should share in the enthusiasm for foreign stations. Husbands of the past could enjoy most of their pleasures all the better for the absence of their wives. But wireless is a home occupation in which the co-operation of the whole household is essential if things are to run smoothly. So wives have been coaxed, coerced, trained, and encouraged to acquire an interest in experimental foreign listening. But they remain unaffected. Their difference from men is obviously fundamental. R.A.S.

Receiving Sets in Schools

THE Central Council for School Broadcasting, a body representative of the Central and Local Education Authorities—inspectors, administrators and teachers associated with schools of all types—and which body is responsible for the educational side of the B.B.C. transmissions to schools, has decided, as a result of three years' experience, to advise those concerned to install in schools only such wireless receiving apparatus as has been approved by the Council.

Having studied the special needs of schools, the Council has come to certain conclusions as to their chief requirements in the matter of design of apparatus and quality of performance. The Council has, therefore, arranged for the compilation of a list of apparatus so approved, together with a non-technical description of each type, the price, the name of the manufacturer, and the date of approval; such list to be available to education authorities for their information.

Apparatus will be approved on behalf of the Central Council by an Approval Sub-Committee composed of representatives of the Council, technical experts and teachers having experience of the reception of broadcast lessons. Manufacturers who so desire can arrange for their apparatus to receive an additional test by the National Physical Laboratory, in accordance with their special schedule of tests.

The Council's list of apparatus will be confined to that in respect of which the value of any component part manufactured outside the United Kingdom shall not exceed five per cent. of the retail price in the United Kingdom of the marketed apparatus.

Makers of wireless receiving apparatus who wish to be included in the Council's list can apply for further information to the Secretary of the Central Council for School Broadcasting, Broadcasting House, London, W.1.

Which Station Was That?

Replies to Queries

U.5 (Petersfield): (1) Cannot trace, as call-sign appears to be incorrect; (2) amateur experimental transmitter (Lisbon). **MUSHER (Dartford):** (a) possibly W8XK, Pittsburgh, on 25.24 m.; (b) regret, cannot trace; (1) would tally with W2XE, relaying WABC, New York, on 49.02 m.; (2) cannot confirm, as programmes are not available, but wavelength and time would point to Moscow (REN), on 45.38 m. **NORTHERN (Scarborough):** British amateur transmitter (Manchester). **TOBIAS ET L'ANGE (N.1):** WQV, Rocky Point (N.Y.), on 20.26 m., relaying NBC programme. **BOUBUTY (St. Peter's Port):** EAQ, Madrid (30.4 m.). **DE MONTFORT (Leicester):** WEM, Rocky Point (N.Y.), on 40.54 m. **ACK DON (N.7):** WAJ, Rocky Point (N.Y.), on 16.66 m. These programmes are transmitted through three channels, and you may have heard them on 20.26 m., or on 40.54 m. **D. D. D. (Helsinki):** You do not say whether a.m. or p.m.; regret, cannot trace. **GASBURNER (N.W. 6):** WEM, Rocky Point (N.Y.); relays NBC programme to Europe. **CURIEUSE COMME UNE CHATTE (Bourne End):** (168) see previous reply; 40.54 m. **GT. OUSE (St. Ives):** WAJ and WQV, Rocky Point (N.Y.), on 20.20 m.; used for relay of U.S.A. programme to Berlin, etc. **ST. MARTIN (S.W. 2):** See previous reply. **HONTUS (Colne):** (168) Scottish Regional testing; (169) Poste Parisien (Paris); (170) possibly an amateur experimenter; (171) Trieste. **AFRIKANDER (N. 16):** Craow (the call was "Polskie-Radio"). **RUSSIAN (Hanley):** (1) probably Kiev (1032.6 m.); (2) Leningrad; (3) Brno relaying time signal from Prague. **WOTISUR (Mintelad):** Barcelona (E.A.J. 1); gramophone records. **CARLO (Swanley):** Kanna. **OSCULATOR (Bradfield College):** Königs Wusterhausen, relaying concert from Königsberg. **WESPAR (Southport):** Lodz relaying Warsaw. **SCHULJUNGE (Witham):** Kharkov. **WAITING (Broadstairs):** Cannot trace, as you give no indication of time or wavelength, but a Berlin programme relayed to other German stations. **PERPLEXED (Ghislehurst):** Radio Normandie (Fécamp); apparently some fault in your receiver. **ENROB (Skinningrove):** Ship-shore telephony. **WAIT (Wigan):** Warsaw according to programme. **SAMMY (Plymouth):** Grenoble PTT on 566 m.; (2) San Sebastian (E.A.J. 8). **BITEX (Cubitt Town):** Amateur transmitter in your neighbourhood. **R. G. O. M. (Nenagh):** (171) WAJ and WQV, Rocky Point (N.Y.) on 20.26 m.; (170) French amateur station calling; (appel général—general call). Cannot trace without knowing call-sign. Names of towns were given to represent initial letters, thus "Santiago" for S. **ROETEM (Stoke-by-Nayland):** (1) the programme was broadcast through various channels via Rocky Point (N.Y.); possibly heard in this instance through WKM, 16.234 m.; (2) WEM, Rocky Point, 40.54 m. **SHORT WAVE FAN (Southampton):** (1) see previous reply; (2) too vague; cannot identify. **JASPER (Salisbury):** (1) Cuba Transatlantic Radio Corporation, Cuba, if call-letters correct; (2) Dutch amateur experimental transmitter; write for further information to N.V.I.R., Postbox 400, Rotterdam. **LSX (Leytonstone):** We have no knowledge of any American station other than W2XAF, Schenectady, on that immediate wavelength. **SPIDER (Willesden):** (1) Eiffel Tower; (2) Scheveningen-Haven (Holland); commercial transmitter only. No broadcast entertainments. **NEWCOMER (Mansfield):** (1) WEM, Rocky Point (N.Y.); (2) W8XK, Pittsburgh, on 25.24 m. **KING RICHARD II. (Maidenhead):** Motala relaying Stock-

holm. **SIT UP NIGHT (Liverpool):** Cannot understand your wavelengths; (1) WIXAZ, Springfield, on 31.35 m.; (2) WEM, Rocky Point, on 45.4 m. **IGNO RAMUS (Swansea):** **STRATASPHERE (Carterton):** WEM, Rocky Point. **JUNKSET (Rams-gate):** Your details are too vague for identification of a short wave station; regret, cannot trace. **P. L. (Newcastle-on-Tyne):** Lvons PTT. **WHATISIT (Shepperton):** Prague. **SHORT WAVE TWO (Seaton):** (1) Radio Corporation of America, Rocky Point (N.Y.); (2) Rocky Point (N.Y.) on 30.77 m. **TWIN (Aldrie):** British amateur transmitter; you cannot trace without hearing call-letters.

The Alternative Postal Service

In addition to the free service of "Which Station Was That?" printed in these columns, replies to queries can be obtained within forty-eight hours of receipt of details, on payment of 6d. per query, in stamps or P.O., accompanied by stamped addressed envelope (marked in left hand top corner "Postal Query Service"), and coupon as per conditions for "Free Queries."

IDENTIFICATION COUPON (No. 173)

This coupon is valid for ONE QUESTION only, and should be cut out and attached to a separate sheet, upon which the following questions should be answered in the order shown, and, in the case of FREE queries, a copy of the answers should be enclosed. No coupon more than one month old is valid.

1. Time and Date of reception.
2. Approximate frequency in kilocycles per sec. (or wavelength in metres).
3. Nearest known stations, above and below.
4. Call or interval signal, if heard.
5. Language.
6. Type of receiver in use and strength of signal.
7. Details of programme or signal received.
8. Name and address.
9. Nom de plume. (Proprietary names must not be used.)

Interference between Stations

(May 6—13)

ON the long-wave band two interferences of short duration have been noted during the above period. The first, which occurred on the 7th, was a very severe one: it was due to Moscow, RV49, being off his allotted frequency of 230 kc/s and interfering badly with Motala (221.5 kc/s), by using 225 kc/s. The second interference took place on May 9 and was due to Vienna Experimental, working on Mondays, Wednesdays, and Saturdays, which was using 248 kc/s instead of 240 kc/s. Vienna was thus heterodyning Istanbul (250 kc/s), and later in the evening Reykjavik (also 250 kc/s).

On the medium wave band, the severest interference was undoubtedly experienced by the Midland Regional transmitter on May 11. The trouble was due to the Suisse-Romande station, which was 12 kilocycles off his allotted frequency. Sottens was using 755 kc/s (and was thus separated from Midland Regional by only three kilocycles, which explains the severity of the interference).

Tallinn, which was off its wave of 1,004 kc/s and had been found this week so high as 1,008 kc/s (on the 13th), returned to his correct frequency on May 13.

Grenoble PTT, which had been found last week on 530 kc/s, where it was mixing with Wilno and Hanover, has modified its wavelength and is now on 528 kc/s, where it is received more easily. It is now interfering with Freiburg on the one hand, and with Hanover and Wilno on the other hand.

Radio-Vitus, the French private station, interfering with Cardiff, was last mentioned on 972 kc/s. He had made, since the 9th, a satisfactory move towards 978 kc/s, and was using 974.5 kc/s. The interference was thus much less painful for Cardiff. Unfortunately, on May 13, he was on 970 kc/s, only two kilocycles from that station, and the interference was again very bad.

L. B.

Last Week's Log

(May 8—14)

By "NORTHERNER"

MY first impressions during the week between May 8 and May 14 were far from good. Early on the morning of the 8th I was greeted with a most violent outburst of atmospherics, and after a search on both medium and long wave-bands I reluctantly switched off again to await more favourable conditions. Late in the afternoon a thunderstorm passed swiftly over my locality and it was not until about 10 p.m. that pleasant reception was possible when, apart from a distant crash, the ether was certainly more congenial. From Monday to Friday, in spite of the queerest mixture in the weather, conditions remained fairly good, while Saturday showed a further increase in atmospherics, which did not, however, trouble the medium-wave band.

Daylight signals were as usual, all the better-known long-wave transmitters giving really fine performances, while Brussels No. 1, Langenberg and Hilversum made fairly good reception possible on the medium waves during the daylight hours.

The long-wave stations during the evening reception were all splendid with the exception of Motala, who seems to be suffering badly from interference at the moment. Oslo, too, seems to have had a good share of jamming during the week.

A few changes were noted on the medium-wave band, but a decrease in the strength of one or two stations seems to have been compensated by a considerable increase in several others. Barcelona was very well received during the period under review, after a fairly long spell of indifferent results. Budapest and Vienna are now showing signs of deterioration, and even Prague is not so powerful as he was. Toulouse, although little short of his usual volume, does not seem to have given such good quality transmissions of late, and Hamburg, once a good station, is now very badly jammed. Florence, and Poste Parisien are excellent new-comers, while Lwów, contrary to any expected seasonable change, seems rather to increase in strength, and has provided first-rate results at all times with hardly any fading.

Katowice is still received at full loud-speaker strength from day to day without exception. Trieste, Rome, Stockholm, Heilsberg, and Breslau were as good as I have ever heard them. Genoa is not quite so reliable, and Turin, although a steady, strong signal, was, on occasion, badly marred through interference. The Friday was his worst night, when signals were hopelessly jammed from an unknown source. Moravská-Ostrava was very well heard on the Tuesday, Thursday and Friday, and he is well worth attention for some time yet, judging by the present strength of his transmissions.

Little has been heard of Graz during the past week, and he, too, seems to be falling back in strength with the approaching summer season. From the commencement of his transmissions Fécamp has always been well received in the north, but unfortunately interference is often very much in evidence around his wavelength. Dublin still provides the same moderate signal as he has done in the past, which is just sufficient for loud-speaker reception. Cork has his good nights and poor nights, with considerable interference on most occasions.

Lyons (La Doua), and Bordeaux seem to have had more than a normal share of heterodynes during the week, but Brussels No. 2 can well be included among the really well-received stations. Hilversum was not quite so steady as during my previous review, but on the whole has given first-rate results.

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OSBORN
RADIO
CABINETS

Stations in Alphabetical Order

(Above 100 metres)

Corrected according to the latest official information

EUROPEAN

(Including Stations connected with the European System)

Station	Kc/s	M.	kW.
Aalesund (Norway)	671	447.1	0.35
Aberdeen	1040	288.5	1
Algiers (North Africa)	825.3	363.3	13
Almeria (Spain), EAJ18	1193	252	1
Ankara (Turkey)	195	1536	7
Archangel (Russia)	770	390	10
Augsburg (Germany)	536	560	0.25
Barcelona, Radio Barcelona (Spain), EAJ1	860	349	8
Barcelona, Association National, EAJ15	1193	252	1
Basle (Switzerland)	1229	244.1	0.5
Belfast (N. Ireland)	1238	242	1
Belgrade (Yugoslavia)	697	430.4	2.5
Bergen (Norway)	824	364	1
Berlin (Germany)	1058	283	0.5
Berlin (Witzleben)	715	413.5	1.5
Berne (Switzerland)	1220	246	0.5
Beziers, Radio (France)	1250	240	1.5
Boden (Sweden)	244	1229.5	0.6
Bodø (Norway)	662	453.2	0.5
Bolzano (Italy), IBZ	815	368.1	1
Borås (Sweden)	1450	207	0.15
Bordeaux (Lafayette) PTT (France)	986	304	13
Bordeaux-Sud-Ouest (France)	1265	237.2	3
Bournemouth	1040	288.5	1
Bratislava (Czechoslovakia)	1076	279	14
Bremen (Germany)	1112	270	0.25
Breslau (Germany)	923	325	1.5
Brno (Czechoslovakia)	878	342	35
Brussels (No. 1) (Belgium)	590	509	15
Brussels (No. 2) (Belgium)	887	338.2	15
Bucharest (Romania)	761	394	12
Budapest (No. 1) (Hungary)	545	550	18.5
Cadix (Spain)	656	335	5
Cardiff	968	309.9	1
Cartagena (Spain)	1220	246	0.4
Cassel (Germany)	1220	246	0.25
Châtelain (Belgium)	1391	216	—
Christiansand (Norway)	1274	235.5	0.5
Copenhagen (Denmark)	1067	281	0.75
Cork (I.F.S.)	1337	224.4	1
Cracow (Poland)	959	312.8	1.5
Csepel (Hungary)	1428	210	3
Danzig (Free City)	662	453.2	0.5
Darenty National Stn. (Gt. Britain)	193	1554.4	30
Dresden (Germany)	941	319	0.25
Dublin (Ireland)	725	413	1.2
Dundee	1040	288.5	1
Edinburgh	1040	288.5	0.3
Eskilstuna (Sweden)	1229	246	0.2
Falun (Sweden)	977	307	0.5
Fécamp (Radio Normandie) (France)	1364	219.9	10
Flensburg (Germany)	1373	218	0.5
Florence (Italy)	599	500.8	20
Frankfurt-on-Main (Germany)	770	390	1.5
Fredrikstad (Norway)	810	367.6	0.7
Freiburg-im-Breisgau (Germany)	527	570	0.25
Gävle (Sweden)	1470	204	0.2
Geneva (Radio-Geneve) (Switzerland)	395	760	1.5
Genoa (IGE) (Italy)	959	312.8	10
Glasgow	797	376.4	1
Gleiwitz (Germany)	1184	253	5
Göteborg (Sweden)	932	322	10
Graz (Austria)	852	352.1	7
Grenoble (France) PTT	530	566	2
Halmstad (Sweden)	1391	216	0.2
Hälsingborg (Sweden)	1301	231	0.2
Hamar (Norway)	536	560	0.7
Hamburg (Germany)	806	372	1.5
Hanover (Germany)	530	566	0.25
Heilsberg (Germany)	1085	276.5	60
Helsinki (Finland)	815	368.1	13.2
Hilversum (Holland)	1013	296.1	7
Hörby (Sweden)	1166	257	10
Hudiksvall (Sweden)	1328	226	0.15
Huizen (Holland)	160	1875	8.5
Innsbruck (Austria)	1058	283	0.5
Istanbul (Turkey)	250	1200	5
Jönköping (Sweden)	1490	202	0.25
Kaiserslautern (Germany)	536	560	1.5
Kalmar (Sweden)	1211	247.7	0.2
Kalundborg (Denmark)	260	1153	7.5
Karlshamn (Sweden)	1530	196	0.2
Karlstad (Sweden)	1382	217	0.25
Kasbah (Tunis)	222.2	1350	0.5
Katowice (Poland)	734	498	16
Kaunas (Lithuania)	185	1935	7
Khar'kov (Russia), RV20	320	537.5	20
Kiel (Germany)	1292	232.2	0.25
Kiev (Russia)	368.1	815	20
Kiruna (Sweden)	1220	246	0.25
Klagenfurt (Austria)	662	453.2	0.5
Königsberg (Germany)	1382	217	0.5
Königs Wusterhausen (Zeeseen, Germany)	183.5	1635	60
Kosice (Czechoslovakia)	1022	293	2.5
Kristinehamn (Sweden)	1480	203	0.25
Lakti (Finland)	167	1796	54
Langenberg (Germany)	635	473	60
Lausanne (Switzerland)	442	690	0.6
Leipzig (Germany)	1157	259	2
Leningrad (Russia)	300	1000	100
Leningrad (Russia)	855.5	351	1.2
Liège (Belgium)	1071	280	—
Liège Experimental (Belgium)	1236	242.7	—
Lille (France) PTT	1130	265.4	1.3
Limoges (France)	1022	293	0.7
Linz (Austria)	1220	246	0.5

Station	Kc/s	M.	kW.
Lisbon (Portugal)	1063	282.2	2
Ljubljana (Yugoslavia)	522	574.7	2.5
London (Regional)	843	356	50
London (National)	1147	261.6	50
Łódź (Poland) Experimental	1283	235	2
Löwö (Poland)	788	381	16
Lyons (La Doira) (France), PTT	644	465.8	1.5
Lyons (Radio Lyons) (France)	1043	287.6	0.7
Madrid (Union Radio) (Spain), EAJ7	707	424.3	2
Madrid (Radio España) (Spain)	707	424.3	—
Magdeburg (Germany)	1058	283	0.5
Malmö (Sweden)	689	436	0.25
Malmö (Sweden)	1301	231	1.25
Marseilles (France), PTT	950	315	1.6
Midland Regional Stn. (Gt. Britain)	752	398.9	25
Milan (Italy)	905	331.5	7
Minsk (Russia)	428.6	700	4
Montpellier (France)	1049	286	0.8
Moravská-Ostrava (Czechoslovakia)	1137	263.8	11
Moscow (Russia)	603.6	497	1.2
Moscow (Old Komintern) (U.S.S.R.)	202.0	1481	100
Moscow (Trades Union)	230.1	1304	100
Moscow (Popoff)	268.5	1116	40
Moscow (Experimental)	416.7	720	20
Moscow-Station	707	424.3	100
Motala (Sweden)	222.5	1348	30
Munich (Germany)	563	533	1.5
Naples (Italy), INA	941	319	1.5
Newcastle	1040	288.5	1
Nice (Juan-les-Pins) (France)	1205	249	0.8
Nijni Novgorod (Russia)	394	761.4	1.8
Nimes (France)	1265	237.2	1
Norrköping (Sweden)	1292	232.2	0.25
North National Stn. (Gt. Britain)	995	301.5	50
North Regional Stn. (Gt. Britain)	625	480	50
Notodden (Norway)	671	447.1	0.08
Novosibirsk (Russia), RA33	238.1	1260	4
Nürnberg (Germany)	1256	239	2
Odesa (Russia)	666	450.4	4
Örebro (Sweden)	1265	237.2	0.2
Orskoldsvik (Sweden)	1460	206	0.2
Oslo (Norway)	277	1083	60
Östersund (Sweden)	369	770	0.6
Oviedo (Spain)	1121	267.6	0.7
Palermo (Italy)	554	542	3
Paris (Ecole Supérieure) (France), PTT	671	447.1	0.7
Paris (Eiffel Tower), FLB	207.5	1445.7	13
Paris (Poste Parisien)	914	328.2	60
Paris (Radio LL)	810	370.4	0.5
Paris (Radio Paris), CFR	174	1725	13.5 75
Paris (Radio Vitis)	959	312.8	—
Petrozavodsk (Russia)	385	778	2
Pietarsaari (Jakobstad) (Finland)	1631	291	0.25
Plymouth	1040	288.5	0.12
Pori (Björneborg) (Finland)	1373	218	0.7
Porsgrund (Norway)	662	453.2	0.7
Poznań (Poland)	896	335	1.9
Prague (Czechoslovakia)	614	488.6	120
Rabat (Morocco)	721.1	418	6
Rennes (France)	1103	272	1.3
Reykjavik (Iceland)	250	1200	21
Riga (Latvia)	572	525	15
Rjukan (Norway)	671	447.1	0.15
Rome (Italy), IRO	680	441	50
Rostov/Don (Russia)	353.5	848.7	4
Saffle (Sweden)	1220	246	0.4
Salamanca (Spain), EAJ22	662	453.2	1
Salzburg (Austria)	1373	218	0.5
San Sebastian (Spain), EAJS	662	453.2	0.6
Schweizerischer Landessender (Bernmünster) (Switzerland)	653	459	60
Scottish Regional	797	376.4	1.5
Seville (Spain), EAJ5	815	368.1	50
Sevastopol (Russia)	630.2	476	1.2
Smolensk (Russia)	531	565	2
Sofia (Rodno-Radio) (Bulgaria)	941	319	1
St. Quentin (France)	1714	175	—
Stavanger (Norway)	1247	240.6	0.5
Stettin (Germany)	1058	283	0.5
Stockholm (Sweden)	689	436	55
Strasbourg-Brumath (France)	869	345	11.5
Stuttgart (Mühlacker) (Germany)	832	360.5	60
Suisse Romande, Radio (Sottens) (Switzerland)	743	403	25
Sundsvall (Sweden)	554	542	10
Swansea	1040	288.5	0.12
Tallinn (Reval) (Estonia)	1004	298.8	11
Tampere (Tammerfors) (Finland)	1031	291	1
Tartu (Estonia)	644	465.8	0.5
Tashkent (Russia)	256	1171.5	—
Tiflis (Russia)	284.9	1063	10
Tiraspol (Russia)	842	356.3	—
Toulouse (France), PTT	1175	255	0.7
Toulouse (Radio du Midi) (France)	779	368	8
Trieste (Italy)	1211	247.7	10
Trohelätan (Sweden)	1193	252	0.25
Trondheim (Norway)	662	453.2	0.1
Trondheim (Norway)	808	493.4	1.2
Turin (Italy)	1096	273.7	7
Turku (Åbo) (Finland)	1220	246	0.6
Uddevalla (Sweden)	1310	229	0.05
Umeå (Sweden)	1301	231	0.2
Uppsala (Sweden)	662	453.2	0.15
Valencia, Radio (Spain)	1121	267.6	1.5
Varberg (Sweden)	1202	249.6	0.3
Vienna Experimental (Austria)	242.5	1237	—
Vienna (Rosenbügel) (Austria)	581	517	15
Viipturi (Viborg) (Finland)	1031	291	13.2
Warsaw, No. 1 (Poland)	212.5	1411	120
Warsaw, No. 2 (Poland) Experimental	1400	214.2	1.9
Wlino (Poland)	533	563	16
Zagreb (Yugoslavia)	977	307	1.75

EXTRA-EUROPEAN

Station	Kc/s	M.	kW.
Adelaide (Australia), ZCL	730	411	5
Alexandria (Va), WJSV	1460	205	10
Atlanta (Ga.), WSB	740	405	5
Atlantic City (N. J., U.S.A.), W.P.G.	1100	273	5
Auckland (New Zealand), IYA	900	333	0.5
Baltimore (Md.), WBAL	1060	283	10
Bombay (India), VUB	840	357.1	3
Boston (Mass., U.S.A.), WBZ	990	303	15
Bound Brook (N. J., U.S.A.), WJZ	760	395	30
Brisbane (Australia), 4QG	759	395	5
Calcutta (India), VUC	810	370.4	3
Calgary (Canada), CFCA	690	435	1.8
Cape Town	800	375	1.5
Carthage (Radio Tunis), TNV	164	1829.1	2
Casablanca (Morocco)	984	305	2.5
Chicago (Ill.), KYW—KFKX	1020	294	10
Chicago (Ill.), WMAQ	670	448	5
Chicago (Ill.), WGN—WLIB	1220	246	25
Chicago (Ill.), WBBM	770	390	25
Chicago (Ill.), WLS	870	345	50
Chicago (Ill.), WENR	870	345	55
Christchurch (New Zealand), 3YA	980	306	0.5
Cincinnati (O.), WLW	700	429	50
Cleveland (O., U.S.A.), WTAM	1070	280	50
Colombo (Ceylon)	700	428.5	1.75
Crystal Brook (Australia) (5CK)	720	417	7.5
Dairan, JOAK	759	395	1
Dallas (Tex.), WFAA	800	375	50
Dallas (Tex.), KRDL	1040	288	10
Davenport (Ia.), WOC	1000	300	5
Denver (Colo.), KOA	830	361	12.5
Des Moines (U.S.A.), WHO	1000	300	5
Detroit (Mich., U.S.A.), WJR	750	400	5
Dunedin (New Zealand), 4YA	647	463	0.25
Durban (South Africa)	731	410	1.5
Edmonton (Canada), CHMA—CKUA	580	517	0.5
Fort Wayne (Ind.), WOWO	1160	259	10
Fort Worth (Texas), WBAP	800	375	50
Gainsville (Fla.), WRUF	830	361	5
Hartford (Conn.), WTIC	1060	283	50
Hiroshima (Japan), JOFK	849	353	10
Hobart (Australia), 7ZL	580	517	3
Hollywood, KNX	1050	286	5
Hong Kong (China), ZBW	845	355	1.5
Hot Springs (Col.), KTHS	1040	288	10
Huntsville (Ala.), WBHS	1200	250	50
Johannesburg, JB	666.5	450	10
Kanazawa, JOJK	709	423	3
Kiijyo (Japan), JODK	690	435	1
Kumamoto (Japan), JOGK	789	380	10
Lima (Peru), OAX	799	380	5
Lincoln (Neb.), KFAB	770	390	5
Los Angeles (Cal.), KFI	640	468	50
Louisville (Ken.), WHAS	820	366	10
Melbourne (Australia), 3AR	800	484	5
Melbourne (Australia), 3LO	620	375	5
Miami Beach (Florida), WIOD	1300	231	1
Millard (Kan.), KFKB	1050	286	5
Minneapolis (Min., U.S.A.), WCCO	810	370	5
Moosheart (Ill.), WJJD	1130	265	20
Muscatine (Ia.), KTNT	1170	256	0
Nagoya (Japan), JOCK	811	370.3	10
Nairobi (Kenya), ZLO	750	400	—
Nashville (Tenn.), WSM	650	461	5
Newark (N.J.), WOR	710	422	5
New Orleans, WWL	850	353	5
New York (N.B. Co.), WEAF	660	455	50
New York City, WABC—WBOQ	860	349	5
New York City, WLWL	1100	273	5
Oakland (Cal., U.S.A.), KGO	790	380	7.5
Osaka (Japan), JOBK	750	400	10
Perth (Australia), 6WF	690	435	5

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)		680	441	50	Rome (IRO) (Italy)	
160	1875	8.5	Huizen (Holland)		689	436	0.25	Malmberget (relays Boden) (Sweden)	
167	1796	54	Lahti (Finland) (relays Helsinki)		697	430.4	55	Stockholm (Sweden)	
174	1725	13.5	Radio Paris (CFR)				2.5	Belgrade (Yugoslavia)	
		75					2	Madrid (Union Radio)(EAJ7) (Spain)	
183.5	1635	60	Königs Wusterhausen (Zeeseen) (Germany) Relays Berlin					7—8.30 p.m. and (except Monday) 10 p.m. to 12 midnight	
193	1554.4	30	Daventry National (Great Britain)		707	424.3		Madrid (Radio España) (Spain) 5—7 p.m. (Mon. 5 p.m. to 12 midnight)	
195	1538	7	Ankara (Turkey)				100	Moscow-Stalin (Russia)	
202.6	1481	100	Moscow (Old Komintern) (RV1) (Russia)		715	419.5	1.5	Berlin (Witzleben)	
					721.1	416	6	Rabat (Morocco)	
207.5	1445.7	13	Eiffel Tower (FLE) Paris, (France)		725	413	1.2	Dublin (Ireland)	
212.5	1411	120	Warsaw No. 1 (Poland)		734	408	16	Katowice (Poland)	
222.2	1350	0.5	Kasbah (Tunis)		743	403	25	Radio Suisse Romande (Sottens) (Switzerland)	
222.5	1348	30	Motala (Sweden) (relays Stockholm)				25	Midland Regional (Great Britain)	
230.1	1304	100	Moscow (Trades Union)		752	398.9	25	Bucharest (Romania)	
238.1	1260	4	Novosibirsk (Russia)		761	394	12	Archangel (Russia)	
242.5	1237		Vienna Experimental (Austria)		770	390	10	Frankfurt-a-M. (Germany)	
244	1229.5	0.6	Boden (Sweden)		779	385	8	Toulouse (Radio) (France)	
		5	Istanbul (Turkey)		788	381	16	Lwów (Poland)	
250	1200	21	Reykjavik (Iceland)		792.5	378.6		Moscow (Russia)	
256	1171.5		Tashkent (Russia)				1	Glasgow (Great Britain)	
260	1153	7.5	Kalundborg (Denmark) (relays Copenhagen)		797	376.4	50	Scottish Regional (Gt. Britain) (testing)	
					806	372	1.5	Hamburg (Germany)	
268.5	1116	40	Moscow, Popoff		810	370.4	0.5	Radio LL, Paris (France)	
277	1083	60	Oslo (Norway)				1	Bolzano (Italy) (1BZ)	
284.9	1053	10	Tiflis (Russia)		815	368.1	13.2	Helsinki (Finland)	
300	1000	100	Leningrad (Russia)				1.5	Seville (Union Radio) (EAJ5) (Spain)	
320	937.5	20	Kharkov (Russia) RV20		816	367.6	0.7	Fredriksstad (Norway) (relays Oslo)	
353.5	848.7	4	Rostov-Don (Russia)		824	364	1	Bergen (Norway)	
368.1	815	20	Kiev (Russia)		825.3	363.3	13	Algiers (N. Africa)	
385	778	2	Petrozavodsk (Russia)		832	360.5	60	Stuttgart (Mühlacker) (Germany)	
389	770	0.6	Östersund (Sweden) (relays Sundsvall)		842	356.3		Tiraspol (Russia)	
394	761.4	1.8	Nijni Novgorod (Russia)		843	356	50	London Regional (Great Britain)	
395	760	1.5	Geneva (Switzerland)		852	352.1	7	Graz (Austria) (usually relays Vienna)	
416.7	720	20	Moscow (Experimental)		855.5	351	1.2	Leningrad (Russia)	
428.6	700	4	Minsk (Russia)		860	349	8	Barcelona (Radio Barcelona) (EAJ1) (Spain)	
442	680	0.6	Lausanne AB2 (Switzerland)				11.5	Strasbourg (Brumath) (France)	
522	574.7	2.5	Ljubljana (Yugoslavia)		869	345	35	Brno (Czechoslovakia)	
527	570	0.25	Freiburg-im-Breisgau (Germany) (relays Stuttgart)		887	338.2	15	Brussels No. 2 (Belgium) (Flemish programme)	
		2	Grenoble (PTT) (France)				5.5	Cadiz (Spain)	
530	566	0.25	Hanover (Germany) (relays Hamburg)		896	335	1.9	Poznań (Poland)	
531	565	2	Smolensk (Russia)		905	331.5	7	Milan (Italy)	
533	563	16	Wilno (Poland)		914	328.2	60	Poste Parisien (Paris)	
		0.25	Augsburg (Germany) (relays Munich)		923	325	1.5	Breslau (Germany)	
536	560	1.5	Kaiserslautern (Germany) (relays Munich)		932	322	10	Göteborg (Sweden) (relays Stockholm)	
		0.7	Hamar (Norway) (relays Oslo)				0.25	Dresden (Germany) (relays Leipzig)	
545	550	18.5	Budapest No. 1 (Hungary)		941	319	1.5	Naples (INA) (Italy)	
554	542	3	Palermo (Italy)				1	Sofia (Rodno-Radio) (Bulgaria)	
563	533	1.5	Sundsvall (Sweden)		950	315	1.6	Marseilles (PTT) (France)	
572	525	15	Munich (Germany)				1.5	Cracow (Poland)	
581	517	15	Riga (Latvia)		959	312.8	10	Genoa (IGE) (Italy)	
590	509	15	Vienna (Rosenhügel) (Austria)				1	Radio-Vitus, Paris (France)	
599	500.8	20	Brussels No. 1 (Belgium)		968	309.9	1	Cardiff (Great Britain)	
			Florence (IFI) (Italy)		977	307	0.5	Falun (Sweden)	
603.6	497	1.2	Nijni Novgorod (Russia)				0.75	Zagreb (Yugoslavia)	
608	493.4	1.2	Moscow (Russia)		986	304	13	Bordeaux-Lafayette (PTT) (France)	
614	488.6	120	Trondheim (Norway)		995	301.5	50	North National (Manchester) (Great Britain)	
625	480	50	Prague (Czechoslovakia)				11	Tallinn (Estonia)	
			North Regional (Manchester) (Great Britain)		1004	298.8	20	Hilversum (Holland)	
630.2	476	1.2	Sebastopol (Russia)				2.5	Kosice (Czechoslovakia)	
635	473	60	Langenberg (Germany)		1013	296.1	0.7	Limoges (PTT) (France)	
		1.5	Lyons (La Doua) (France) (relays PTT)		1022	293	0.25	Pietarsaari (Jacobstad) (Finland) (relays Helsinki)	
644	465.8	0.5	Tartu (Estonia)				1	Tampere (Finland) (relays Helsinki)	
653	459	60	Schweizerischer Landessender (Bernmünster) (Switzerland)		1031	291	13.2	Viipuri (Viborg) (Finland) (relays Helsinki)	
		0.5	Bödo (Norway)					British Relay Stations	
		0.5	Danzig (Free City) (relays Königsberg)				1	Aberdeen	
		0.5	Klagenfurt (Austria) (relays Vienna)				1	Bournemouth	
662	453.2	0.7	Porsgrund (Norway) (relays Oslo)				0.12	Dundee	
		1	Salamanca (Spain) (EAJ22)		1040	288.5	0.3	Edinburgh	
		0.6	San Sebastian EAJ8 (Spain) (Mon., Wed., Fri. 7.30—9 p.m., other days 10 p.m. to midnight)				1	Newcastle	
		0.1	Tromsø (Norway)				0.12	Plymouth	
		0.15	Uppsala (Sweden) (relays Stockholm)				0.12	Swansea	
666	450.4	4	Odessa (Russia)		1043	287.6	0.7	Lyons (Radio) (France)	
		0.35	Aalesund (Norway)		1049	286	0.8	Montpellier (France)	
		0.08	Notodden (Norway)				0.5	Berlin Relay (Germany)	
771	447.1	0.7	Paris (PTT) (Ecole Supérieure) (France)		1858	283	0.5	Magdeburg (Germany)	
		0.15	Rjukan (relays Oslo) (Norway)				0.5	Stettin (Germany) (relays Berlin)	
							0.5	Innsbruck (Austria) (relays Vienna)	

* Up till 5.40 p.m.

STATIONS IN ORDER OF FREQUENCIES AND WAVELENGTHS (Continued)

Kc/s	M.	kW.	Station	Dial Readings	Kc/s	M.	kW.	Station	Dial Readings
1063	282.2	2	Lisbon (Portugal)		1283	235	2	Lodz (Poland) (Experimental)	
1067	281	0.75	Copenhagen (Denmark)		1292	232.2	0.25	Kiel (Germany) (relays Hamburg)	
1071	280		Radio Liège (Belgium)				0.25	Norrköping (Sweden)	
1076	279	14	Bratislava (Czechoslovakia)		1301	231	0.2	Hälsingborg (Sweden)	
1085	276.5	60	Heilsberg (Germany) (rel. Königsberg)				1.25	Malmö (Sweden) (relays Stockholm)	
1096	273.7	7	Turin (Italy)				0.2	Umea (Sweden)	
1103	272	1.3	Rennes (France)		1310	229	0.05	Uddevala (Sweden)	
1112	270	0.25	Bremen (Germany) (relays Hamburg)		1328	226	0.15	Hudiksvall (Sweden)	
1121	267.6	0.7	Oviedo (Spain)		1337	224.4	1	Cork (Ireland)	
		1.5	Radio Valencia (Spain)		1364	219.9	10	Fécamp (Radio Normandie) (France)	
1130	265.4	1.3	Lille (PTT) (France)				0.5	Flensburg (Germany) (relays Hamburg)	
1137	263.8	11	Moravská-Ostrava (Czechoslovakia)		1373	218	0.7	Pori (Björneborg) (Finland) (relays Helsinki)	
1147	261.6	50	London National (Great Britain)				0.5	Salzburg (relays Vienna)	
1157	259	2	Leipzig (Germany)		1382	217	0.25	Karlstad (Sweden)	
1166	257	10	Hörby (Sweden) (relays Stockholm)				0.5	Königsberg (Germany)	
1175	255	0.7	Toulouse (PTT) (France)		1391	216	0.2	Halmstad (Sweden)	
1184	253	5	Gleiwitz (Germany) (relays Breslau)				3	Radio Chatelineau (Belgium)	
		1	Almeria (Spain) (EAJ18)		1400	214.2	1.9	Warsaw, No. 2 (Poland) (Experimental)	
1193	252	1	Barcelona (Association National) (EAJ15)		1428	210		Csepel (Hungary)	
		0.25	Trollhättan (Sweden)		1450	207	0.15	Borås (Sweden)	
1202	249.6	0.3	Varberg (Sweden)		1460	206	0.2	Ornsköldsvik (Sweden)	
1205	249	0.8	Juan-les-Pins (Nice) (France)		1470	204	0.2	Gävle (Sweden) (relays Stockholm)	
1211	247.7	0.2	Kalmar (relays Stockholm)		1480	203	0.25	Kristinehamn (Sweden)	
		10	Trieste (Italy)		1490	202	0.25	Jönköping (Sweden) (relays Stockholm)	
		0.5	Berne (Switzerland)		1530	196	0.2	Karlskrona (Sweden) (relays Stockholm)	
		0.4	Cartagena (Spain)		1714	175		St. Quentin (France)	
		0.25	Cassel (Germany) (relays Frankfurt)						
1220	246	0.2	Eskilstuna (Sweden) (relays Stockholm)						
		0.25	Kiruna (Sweden) (relays Boden)						
		0.5	Linz (Austria) (relays Vienna)						
		0.4	Säffle (Sweden) (relays Stockholm)						
		0.6	Turku (Abo) (Finland) (relays Helsinki)						
1229	244.1	0.5	Basle (Switzerland)						
1236	242.7		Liège Experimental (Belgium)						
1238	242	1	Belfast (Ireland)						
1247	240.6	0.5	Stavanger (Norway)						
1250	240	1.5	Radio Beziere (France)						
1256	239	2	Nürnberg (Germany) (relays Munich)						
		3	Bordeaux Sud-Ouest (France)						
1265	237.2	1	Radio-Nimes (France)						
		0.2	Örebro (Sweden) (relays Stockholm)						
1274	235.5	0.5	Christiansand (Norway)						

DEVIATIONS

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

701	428	—	Madrid (Radio España) (Spain)
903.3	332.2	—	Milan (Italy)
1013	296.1	—	Hilversum (Holland)
1049.1	286	—	Montpellier (France)
1074.2	279.4	—	Bratislava (Czechoslovakia)
1095.5	274	—	Turin (Italy)
1352.1	221.9	—	Fécamp (Radio Normandie) (France)

(For List of Short-Wave Stations see page 1007.)

Schedule of Advance Programmes

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For the benefit of traders who may wish to make arrangements for demonstrating, we are printing each week 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. (Saturday, 12.45), 6.15 p.m., and midnight.

SUNDAY, JUNE 5

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Organ Recital		As National	
AFTERNOON	Light Music Gram. Records Play		As National As National	Studio Orch.
EVENING PROGRAMME	Orchestral Con.	Military Band Chamber Music	Military Band Orchestral Con.	As London Reg.

MONDAY, JUNE 6

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Studio Con.	As Midland Reg.	Cinema Orch.	As London Reg.
AFTERNOON	Cinema Orch. Gram. Records Hotel Orch.	As North Reg. As Midland Reg. As National	As North Reg. Studio Orch.	Organ Recital As Midland Reg. As National
1ST. EVENING PROGRAMME	Talks Play	Light Music Pianoforte Recital	Light French Music Studio Chorus	As London Reg. Promenade Con.
2ND EVENING PROGRAMME	Symphony Con. Dance Music	Vaudeville Dance Music	As London Reg. As London Reg.	Dance Music As London Reg.

TUESDAY, JUNE 7

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Cinema Organ	As North Reg.	As North Reg.	Buxton Orch.
AFTERNOON	Hotel Orchestra Talks Hotel Orchestra	As Midland Reg. As Midland Reg. As National	Ballad Concert Studio Orchestra	Gram. Records As Midland Reg. Evensong
1ST. EVENING PROGRAMME	French Talk Military Band	Light Orch. Con. String Orch. Con.	Light Music String Orch. Con.	Young Artists Con. Chamber Music
2ND EVENING PROGRAMME	Choral and Orch. Dance Music	Play Dance Music	As London Reg. As London Reg.	As London Reg. As London Reg.

WEDNESDAY, JUNE 8

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Cinema Organ	As Midland Reg.	Studio Orch.	As Midland Reg.
AFTERNOON	Gram. Records Hotel Orchestra Symphony Con.	As Midland Reg. As North Reg. As National	Organ Recital As North Reg.	As Midland Reg. Studio Orch. As National
1ST. EVENING PROGRAMME	Talks Jack Payne's Band	Tango Orchestra Orchestral Con.	Studio Orchestra Military Band	As London Reg. Studio Orchestra
2ND. EVENING PROGRAMME	Orchestral Con. Dance Music	"Songs from the Shows"	As London Reg.	As London Reg.

THURSDAY, JUNE 9

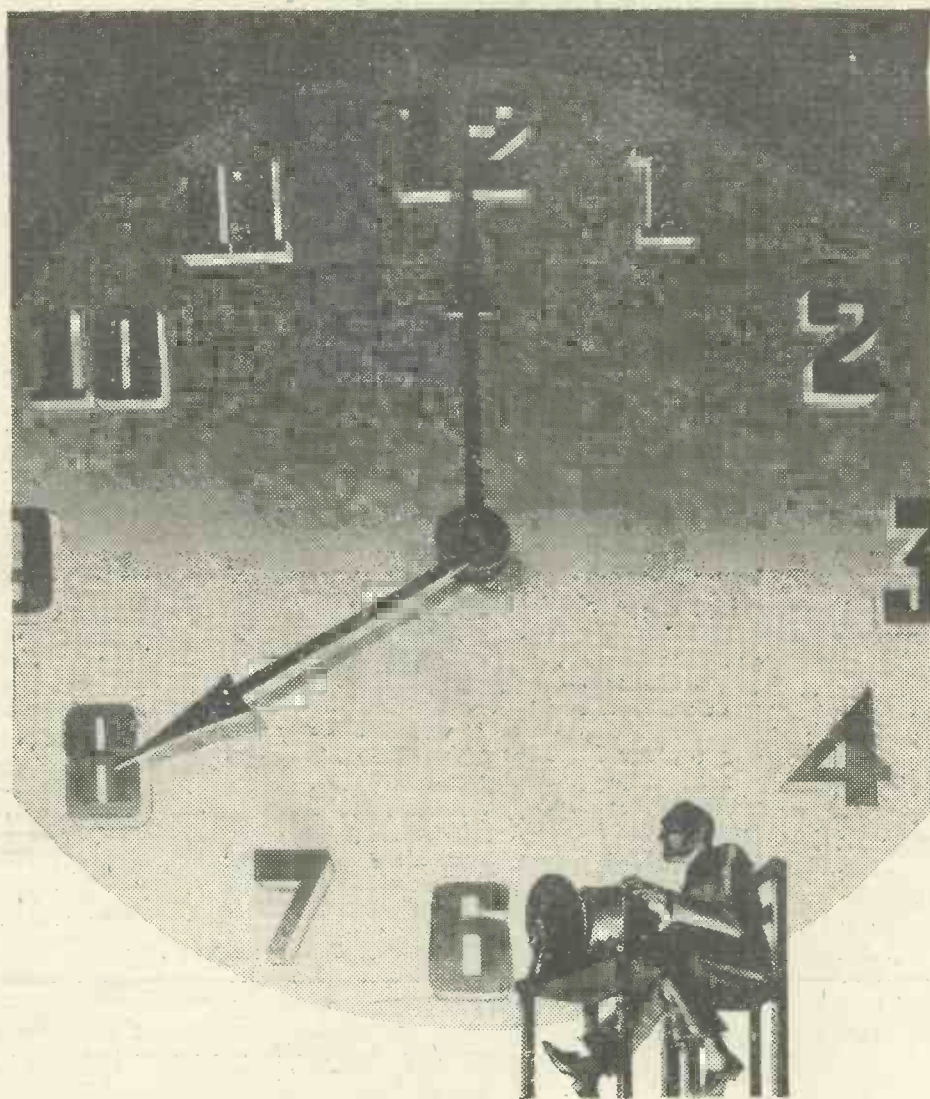
	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Scottish Studio Orch.	Cinema Organ	As London Reg.	As London Reg.
AFTERNOON	Cinema Orch. Abbey Evensong Studio Orch.	As North Reg. As North Reg. As National	As North Reg. As North Reg.	Studio Orchestra Hotel Orchestra As National
1ST. EVENING PROGRAMME	German Talk "Songs from the Shows"	Light Music Symphony Con.	Concert Party As London Reg.	Concert Party As London Reg.
2ND. EVENING PROGRAMME	Debussy Prog. Dance Music	Military Band Dance Music	Organ Recital As London Reg.	Studio Orchestra As London Reg.

FRIDAY, JUNE 10

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Cinema Orch.	As Midland Reg.	Cinema Organ	As Midland Reg.
AFTERNOON	Organ Recital Gram. Records Scottish Studio Orch.	As North Reg. As National	As North Reg.	Commentary on Auto-Cycle Tourist Trophy As National
1ST. EVENING PROGRAMME	Talks Orchestral Con.	Orchestral Con. Dance Music.	Light Music As London Reg.	Studio Orch. As London Reg.
2ND. EVENING PROGRAMME	Revue Dance Music	English Light Music Dance Music	Gram. Records As London Reg.	Studio Orch. As London Reg.

SATURDAY, JUNE 11

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Studio Orchestra	As National		As National
AFTERNOON	Cinema Orch. Light Music Cinema Organ	As National As National As National	Dance Music As National	As National As National As National
1ST. EVENING PROGRAMME	Talks Vaudeville	Band Concert As North Reg.	Military Band Studio Orchestra	Studio Orchestra Buxton Orchestra
2ND. EVENING PROGRAMME	Aldershot Military Tattoo	Chamber Music Dance Music	Dance Music As London Reg.	Band Concert As London Reg.



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5 minutes on
376.4 metres

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PROGRAMMES FOR SUNDAY (May 22)

PRINCIPAL EVENTS

SERVICES AND SACRED MUSIC

- 9.55 a.m. Italian Stations (N.): Missa Cantata from S. Giusto Cathedral.
- 10.0 „ Breslau: Roman Catholic Service.
- 10.0 „ Copenhagen: Protestant Service.
- 11.30 „ Leipzig and most German stations: Church Cantata (Bach).

SYMPHONY CONCERTS

- 12.10 p.m. Heilsberg: Symphony No. 4 (Beethoven), etc.
- 12.15 „ Warsaw: Beethoven programme (incl. the Ninth).
- 8.45 „ Palermo: Schubert's Unfinished Symphony, etc.
- 9.5 „ British Regional Stations: B.B.C. Orchestra. Conductor, Adrian Boult.

CONCERTS (Vocal and Instrumental)

- 6.15 a.m. Hamburg and all German Stations: Harbour Concert.
- 11.0 „ Copenhagen: Relay from Lahti.
- 7.55 p.m. Hilversum: Relay from Concertgebouw, Amsterdam.
- 8.0 „ Berlin, Brésiau: Wagner Anniversary Concert.
- 10.45 „ Langenberg, Munich: "Late" Concert.

OPERAS AND OPERETTAS

- 8.0 p.m. Frankfurt, Stuttgart: "Don Cesar" (A. Dellinger).
- 8.45 „ Rome: "The Girl in the Taxi" (Gilbert).

CHAMBER MUSIC

- 9.30 p.m. Munich: Quintets for Wind Instruments.

MISCELLANEOUS

- 8.0 p.m. Oslo, Copenhagen, Stockholm: Radio-picture of Oslo.

PLAYS AND TALKS

- 1.30 p.m. Copenhagen: English Talk.
- 8.0 „ Strasbourg: Excerpts from Molière comedies.

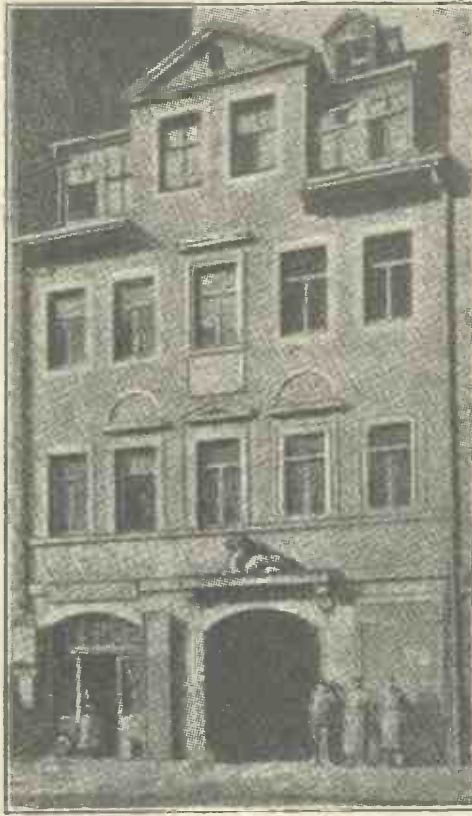


Photo: By courtesy of Mirag, Leipzig

The house in the Brühl, Leipzig, where Richard Wagner was born one hundred and nineteen years ago to-day. The building was known then as "Der röhre und weisse Löwe," (the red and white Lion).

Wagner's Birthplace

To commemorate the anniversary of Wagner's birth—he was born at Leipzig on May 22, 1813—BERLIN (WITZLEBEN) and BRÉSLAU stations are this evening broadcasting a special Wagner programme. A correspondent sends the following personal recollection of the locality. "The house in which he was born, is situated in a street which has the curious name 'Brühl,' so named after a great Saxon statesman, Count Brühl. The street is in the heart of the town, and for several generations past it has also been famous for another reason. It is here that the bulk of the city's very considerable fur trade is transacted. The picture on this page shows Wagner's birthplace as it was before its demolition early this century. I remember the building quite well—having lived for several years a few doors away, at No. 9—and when last I saw it, it had every appearance of being in very good condition, and likely to stand for many years yet. But I understand that when some adjoining buildings were turned into a large emporium, Brühl No. 3 was added to their number. And so another link with the past had disappeared. Was it not Schiller who expressed this constant change and evolution so well, when he said:

'Das Alte stürzt, es ändern sich die Zeit,
Und neues Leben blüht aus den Ruinen.'

(The old must fall, since Time is ever changing,
And new life springs from out the ruins.)"

St. John's Eve on the Mountain

Mussorgsky's tone poem, which HILVERSUM broadcasts this evening, depicts the traditional unearthly revels which the folk-lore of almost every land associates with St. John's Eve. There is a regular Witches' Sabbath and a glorification of the Evil One (Chernobog, in the Russian) with the rites of the Black Mass. But in the midst of the unholy orgies, the tolling of the village bell is heard in the distance, and the spirits of darkness disappear with daybreak. The piece comes to an end with a sense of deep peace, which is in striking contrast to the ghostly revelry of the main part of it.

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

- 10.30—10.45 a.m.—Time Signal (Greenwich); Shipping Forecast.
- 3.0—The B.B.C. Theatre Orchestra. Conductor, Leslie Woodgate.
- 4.0—Bible Reading.
- 4.15—Orchestral Concert. Megan Thomas (Soprano). The B.B.C. Orchestra (Section C), conducted by Joseph Lewis. Orchestra: Occasional Overture (Handel); Three Songs without Words (Mendelssohn, orch. by Alfred Pratt); Megan Thomas and Orchestra: So shall the Lute (Handel). Orchestra: Two Minuets: Minuet in G (Beethoven), Minuet (Samson) (Handel); Symphony No. 25, in C (Haydn). Megan Thomas: Songs. Orchestra: Ballet Music (The Sicilian Vespers) (Verdi).
- 5.30—Harpichord Recital by Alice Ehlers.
- 6.0—6.20—For the Children.
- 8.0—Trinity Sunday. Thanksgiving Service for Fifty Years' Work of the Church Army.
- 8.45—The Week's Good Cause. Appeal on behalf of Queen Charlotte's Maternity Hospital.
- 8.50—"The News."
- 9.0—Time Signal (Greenwich).
- 9.5—The Wireless Military Band, conducted by Capt. P. S. G. O'Donnell. Cedric Sharpe (Violoncello). Band: Grand March (La Reine de Saba) (The Queen of Sheba) (Gounod); Overture, The Sicilian Vespers (Verdi). Cedric Sharpe: Reverie (Frederic Ogilvy); Bohemian Love (Drigo); "Two penny Tune (John Moore). Band: Alsatian Scenes (Massenet). Cedric Sharpe: Romance (Rubinstein, arr. Cedric Sharpe); Lullaby (Cyril Scott); Gavotte (Branducukov). Band: Intermezzo, Pas des Fleurs (Dance of the Flowers) (Delibes); Harvard Dance (The Seasons) (Edward German); Spanish Scene, Sevillana (Elgar).
- 10.30—Epilogue.

- 3.0 p.m. (London and Northern)—The B.B.C. Theatre Orchestra. Conductor, Leslie Woodgate.
- 3.0 (Midland)—The Bentley Colliery Band, conducted by W. Halliwell.
- 4.0 (London)—Reginald King and his Orchestra. Barrington Hooper (Tenor). Orchestra: Prayer and Temple Dance (Grieg). Barrington Hooper: The Dream (Rubinstein); Where'er you walk (Händel). Orchestra: Three Famous Beauties (Fletcher). Barrington Hooper: Faery Song (Boughton); O that it were so (Bridge). Orchestra: Auf Wiedersehn (Till we meet again) (Hoffmann); March of the Dwarfs (Moszkovski). Barrington Hooper: Heart's Delight (Clarke); Where Haven lies (German). Orchestra: Jealousy (Gade); Russian Dance (Friml).
- 4.0 (Midland)—Chamber Music. The Alex Cohen Quartet: Alex Cohen (1st Violin), Roland Sirrell (2nd Violin), Lena Wood (Viola), Haydn Yorke (Violoncello).
- 4.0 (Northern)—A Chamber Music Programme (Brahms). Harry Mortimer (Clarinet). Kathleen Moorhouse (Violoncello). Eric Fogg (Pianoforte). Winifred Osborne (Contralto).
- 5.0—5.30—"Travellers from the East"—VI.
- 8.0—Trinity Sunday. Thanksgiving Service for Fifty Years' Work of the Church Army.
- 8.45—The Week's Good Cause. Appeal on behalf of Queen Charlotte's Maternity Hospital by Mrs. Edgar Wallace.
- 3.50—"The News."
- 9.5—Sunday Orchestral Concert—XXX. (Last Concert of the Second Season.) The B.B.C. Orchestra (Section B). (Leader, Arthur Catterall). Conductor, Adrian Boult. Symphony, No. 13, in D (Haydn). Symphony, No. 40, in G Minor (K. 550) (Mozart). Symphony, No. 5, in C Minor (Beethoven).
- 10.30—Epilogue.

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

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

- BARCELONA (Spain)**
Radio-Barcelona (EAJ1). 860 kc/s (349 m.); 8 kW.
8.15 a.m.—Physical Culture. 8.30—Topical Review. 9.0—Physical Culture (continued). 9.15—9.45—Topical Review (continued). 12 noon—Chimes and Weather Forecast. 12.15 p.m.—Photographic Weather Chart, followed by Municipal Band Concert, conducted by Juan Lamote de Grignon, relayed from the Palacio de Bellas Artes. 2.0—Gramophone Records of Light Music. 2.30—Sextet Concert. Wedding March from "A Midsummer Night's Dream" (Mendelssohn). Pavane (d'Ambrosio). Appassionato (Filippucci). Selection from "Eva" (Lehar).
- 3.0—Theatre Notes, Popular Music on Gramophone Records and Film Review.
- 3.20—Concert (continued). Trova lusitana (Pacheco). Selection from "El Principe Carnaval" (Serrano). Minuet from "La Viejeita" (Caballero). Pasodoble, Al quebro (Jarque).
- 4.0—Programme for Hospitals and Benevolent Institutions with Gramophone Records. 5.0—6.30—No Transmission. 6.30—Gramophone Records of Light Music. 7.0—Orchestral Selections. 7.30—Soprano Song Recital. 8.0—Agricultural Talk. 8.10—Vocal and Orchestral Concert. 9.0—Dance Music from the Excelsior. 10.0—Talk for Women. 10.15—Request 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 8.25 a.m. 5.30 p.m.—Dance Music. 6.55—Programme Announcements. 7.0—Gramophone Records of Light Music. 7.20—Concert of Yugoslavian Songs and Popular Music, followed by Football Results. 8.30—Quartet in

- E Minor for Two Violins, Viola and Cello (Mendelssohn). 9.10—Wireless Talk. 9.40—Song Recital by Bonzana Adamovic-Dubska. 10.10—News and Sports Notes. 10.30—Orchestral Concert of French Music.
- BERLIN (Germany)**
Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.
Transmits at intervals from 6.0 a.m. (Witzleben relay).
- 11.30 a.m.—See Leipzig. 12.10 p.m.—Josef Buchhorn reads from his own Works. 12.30—Concert from Breslau. 2.0—See Berlin (Witzleben). 2.30—Rural Programme—Talk. 3.0—Talk: German Landscapes. 3.25—Concert from Heilsberg. 4.15—6.40—See Berlin (Witzleben). 6.40—Talk: Care of Mother and Child during the Summer Months. 7.0—Talk: National Character as portrayed in World Literature—The Brothers Karamazov. 7.40—Talk: Travel in Germany. 8.0—10.0—See Stuttgart. 10.0—Weather, News and Sports Notes, followed by Dance Music from Berlin (Witzleben). 12.30 a.m. (Monday)—Close Down.
- BERLIN (Germany)**
Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m. (Gymnastics and Hamburg Relay). 11.30 a.m.—See Leipzig. 12.10 p.m.—George Goldschlag reads from his own Poems. 12.30 p.m.—Concert from Breslau. 2.0—Talk for Parents. 2.30—"Die Brückenfrosche"—Play (Annie Bmeyer), performed by Children.
- 3.0—"Seat No. 13—Row 13"—a Radio Play (Hans Philip Weitz). 4.15—Radio Report from the Avus of the International Motor Races. 4.40—Händel Variations for Piano-forte Op. 24 (Brahms). 5.5—International Motor Races (contd.). 5.25—Concert from the Kroll-Garten. Radio Report of the International Motor Races during the interval. 6.55—Gottfried Kapp reads from his own Works. 7.20—Sports Notes. 7.30—Talk: The Bayruth Production of Parsifal.

- 8.0—Wagner Concert by the Berlin Wireless Orchestra conducted by Max von Schillings, and the Berlin Wireless Choir conducted by Maximilian Albrecht. Soloist: Rudolf Watzke (Bass-Baritone). 10.0—News, followed by Dance Music. 12.30 a.m. (Monday)—Close Down.
- BORDEAUX-LAFAYETTE (France)**
(PTT) 686 kc/s (304 m.); 13 kW.
12 noon—Relay from Paris (Ecole Supérieure) 671 kc/s (447.1 m.). 2.0—Relay from Paris or Relay of a Local Festival. 6.20 (approx.)—Sports Results. 6.30—Radio Journal. 8.0—Sports Notes. 8.10—Lottery Results. 8.30—Concert of Light Music on Gramophone Records. 9.0—Concert of Classical and Modern Music. Soloists: M. Formichi and Mme. Garini (Vocalists), Jean Feillou (Viola), M. Beaucoïn (Clarinet), M. Barouk (Cello), M. Champel (Violin), and M. Grange (Pianoforte).
- BRATISLAVA (Czechoslovakia)**
1,076 kc/s (279 m.); 14 kW.
Transmits at intervals from 7.0 a.m. 7.20—Announcements and Sports Notes. 7.30—See Prague. 10.15—Miscellaneous Announcements. 10.20 See Prague.
- BRÉSLAU (Germany)**
923 kc/s (325 m.); 1.5 kW. Relay by Gliwicz, 1,184 kc/s (253 m.). Transmits at intervals from 6.15 a.m. (Hamburg Relay). 11.30 a.m.—See Leipzig. 12.15 p.m.—Concert by the Silesian Philharmonic Orchestra, conducted by Hermann Behr. Overture, "A Midsummer Night's Dream" (Mendelssohn). Serenade (Mozart). Overture, Scherzo and Finale, Op. 52 (Schumann). Overture, "Der Improvisator" (d'Albert). Danse macabre (Saint-Saëns). Suite from "The Nutcracker Ballet" (Tchaikovsky). Waltz, Wo die Zitronen blühen (Johann Strauss). 2.0—News Bulletin. 2.10—Talk on

SUNDAY continued

Gardening. 2.25—Talk on Chess. 2.40—Talk: The Aquarium. 2.50—Agricultural Talk. 3.5—Talk on Bishop Johann Michael Sailer, on the Centenary of his Death. 3.25—Talk: A Sentimental Journey to Budapest. 3.45—Goethe—A Sketch. 3.55—Concert of Operetta Music. 4.45—Talk: By the Side of the Law. 6.18—Pianoforte Recital. 6.50—Talk: All that can happen to a Reporter. 7.10—Weather for Farmers, and Sports Notes. 7.15—"Nikolaus v. Reimann"—a Battle of Words in Ten Rounds. 8.0—See Berlin (Witzleben). 10.0—Time, Weather, News, Sports Notes and Programme Announcements. 10.30—Dance Music from Berlin (Witzleben). 12 midnight (approx.)—Close Down.

BRNO (Czechoslovakia)

878 kc/s (342 m.); 35 kW. Transmits at intervals from 7.0 a.m. 7.0 p.m.—See Moravia-Ostava. 7.30—See Prague. 10.15—Announcements. 10.20—See Prague.

BRUSSELS (Belgium) (No. 1)

I.N.R. 590 kc/s (509 m.); 15 kW. 5.30 a.m. and at hourly intervals throughout the day—Pigeon Flying Report. 12 noon—Gramophone Concert of Popular Music. 12.30 p.m.—Weather, followed by Organ Recital from the Carmelite Church. 1.0—Song Recital by M. Souffret. 1.20—Gramophone Concert of Light Music. 5.0—Orchestral Concert conducted by Franz André. 6.0—Gramophone Records of Classical Music and Light Music. 7.15—Religious Address. 7.30—Le Journal Parlé. 8.0—Chopin Pianoforte Recital by Mlle. Suzanne de Meyere (Laureate of the Second International Chopin Competition). Fantasia in F Minor. Etude in A Flat. Etude in C Sharp Minor. Nocturne in E. Mazurka in B Flat. Mazurka in C. Polonaise in A Flat. 8.30—Gramophone Records of Debussy and Franck Music. 8.45—Humorous Dialogue. 9.0—Concert relayed from the Memline Hall, Antwerp. 10.0—Le Journal Parlé. 10.10—Concert (contd.). 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2)

N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 5.30 a.m., 7.0 a.m. and at hourly intervals throughout the day—Pigeon Flying Reports. 12 noon—Organ Recital from the Carmelite Church. 12.35 p.m.—Weather Report. 12.45—Song Recital. 1.0—Gramophone Records of Variety Music. 5.0—Concert relayed from the Memline Hall, Antwerp. 6.15—Gramophone Records of Light Music. 7.15—Religious Address. 7.30—Music Review. 8.0—Orchestral Concert conducted by Franz André. 8.45—Reading. 9.0—Concert (contd.). 10.0—Le Journal Parlé. 10.10—Concert relayed from the Memline Hall, Antwerp. 11.0 (approx.)—Close Down.

BUCHAREST (Romania)

Radio-Bucharest. 761 kc/s (394 m.); 12 kW. 9.0 a.m.—Programme for Children. 9.30—Choral Concert of Religious Music. 9.45—Religious Address. 10.0—Concert by the Station Orchestra. 11.0—Light Music on Gramophone Records. 11.45—News Bulletin and Time Signal. 12 noon—Popular Music on Gramophone Records. 4.0 p.m.—Concert of Light Music and Romanian Music by the Marco Orchestra. 5.0—News Bulletin and Time Signal. 5.10—Orchestral Concert (contd.). 6.0—Talks on Education and Health. 6.40—Variety Music on Gramophone Records. 7.0—Programme of Romanian Literature and Music.

BUDAPEST (Hungary)

545 kc/s (550 m.); 18.5 kW. Also relayed on 210 metres from 3.0—3.45 p.m. and 5.20 p.m. till Close Down. 9.0 a.m.—News and Beauty Hints. 10.0—Divine Service. 11.0—Sacred Music and Address, followed by Weather, Time and Orchestral Concert conducted by Michael Nador. 2.0—Gramophone Concert of Variety Music. 3.0—Agricultural Talk. 4.0—Concert by the "Diosgyor" Iron Workers' Choral Society. 4.50—Talk on Benares—the Holy City of India. 5.20—Concert of Light Music. 6.30—Programme by Stefan Berko. 7.0—Concert of Operatic Selections by the Royal Hungarian Opera House Orchestra, conducted by Otto Berg. Selections from "La

Traviata" (Verdi), "Faust" (Gounod), Fantasia (Goldmark), Carnival Wedding (Poldini). 8.30—Talk: The History of Hungarian Cabaret, followed by Cigany Concert from the Markus Restaurant on the "Margareteninsel." 11.0—Dance Music from the Rheinpark.

COPENHAGEN (Denmark)

1,067 kc/s (281 m.); 0.75 kW. Relayd by Kalundborg, 260 kc/s (1,153 m.). 8.30 a.m.—Gymnastics. 10.0—Divine Service from the Garrison Church. 11.0—Programme from Helsinki 815 kc/s (368.1 m.). 12 noon—Town Hall Chimes. 12.2 p.m.—Weather Forecast. 12.10—News Bulletin. 12.30—Concert from the Axelborg Studio. The Radio Orchestra, conducted by Launy Gröndahl. Overture, "A Midsummer Night's Dream" (Mendelssohn). Bourrée, Minuet and Hornpipe from the "Water Music" (Händel). Marche caractéristique (Schubert). Grätzer-Galop. Nocturne for Four Small Orchestras (Mozart). Slavonic Dance (Dvorak). 1812 Overture (Tchaikovsky). 1.30—Talk in English: British Statesmen of Yesterday and To-day—Mr. Asquith. 1.50—Talk in German: Poetic Realism in Austria. 2.10—Reading in French: "Les oiseaux du ciel et les lys des champs." 2.30—Programme for Children. Reading and Musical Selections. 3.0—Orchestral Concert, conducted by Emil Reesen. Soloist: Ernst Nielsen (Pianoforte). Spanish March, Los Banderilleros (Volpatti). Miniature Overture, The Merry-makers (Eric Coates). Waltz, Dreams on the Ocean (Gung'l). Three Selections from the Serenade for Strings in F (Herbert). Selection from "Countess Maritza" (Kálmán). Twelve Preludes for Pianoforte (Chopin). Overture, "The Vikings at Helgeland" (Emil Hartmann). Waltz from "The Merry Widow" (Lehár). Selection from "La Boutique Fantastique" (Rossini-Respighi). Scènes napolitaines (Massenet). Dance from "Maskarade" (Carl Nielsen).

5.0—Divine Service Relay. 6.20—Talk: Three Women in the Life and Works of Christian Winther. 6.50—Weather and News. 7.15—Time and Sports Notes. 7.30—Talk: Lord Beaverbrook. 8.0—11.0—Pictures of European Towns—Oslo. 8.0—Programme from Oslo. Nils Collett Vogt's Poem to Oslo. Talks by Eyvind Getz, Edvard Bull and Harald Aars. A Visit to Ekeberg, Karl Johan, the Ruined Park in the Old Town and the Akerhus Fortres. Old and Modern Scandinavian Music, by the Radio Orchestra, the Oslo Cathedral Choir and a Boys' Choir. 9.45—News Bulletin. 10.0—Programme from Oslo (continued). Interviews and Talks: (a) Oslo in the Past and Now, (b) An Excursion into the Fjords. Cabaret Programme with the collaboration of Lalla Carlsen and Victor Bernau. 11.0—Dance Music from the Wivex Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (Monday)—Close Down.

DUBLIN (Ireland)

(2RN). 725 kc/s (413 m.); 1.2 kW. Relayd by Cork, 1,337 kc/s (224.4 m.). 8.10 p.m.—Time Signal. 8.31—Alice McCarthy's Instrumental Trio. 8.45—Soprano Solos by Eileen Driscoll. 9.0—Dramatic Sketch. 9.30—Tenor Solos by W. F. Watt. 9.45—Clarinet Solos by Pat Ryan. 10.0—Soprano Solos by Mamie Dingle. 10.10—Instrumental Trio Recital. 10.30—Popular Music on Gramophone Records. 11.0—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France)

Radio Normandie. 1,364 kc/s (219.9 m.); 10 kW. 12 noon—Journal Parlé. 12.30 p.m.—Press News. 12.45—Concert of Variety Music. 6.0—Concert of Popular Music. 8.0—Programme of Popular Songs. 9.0—Variety Programme. 12.30 a.m. (Monday)—Dance Music and Variety Items. 3.0 (approx.)—Close Down.

FLORENCE (Italy)

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

FRANKFURT-am-MAIN (Germany)

770 kc/s (390 m.); 1.5 kW. Relayd by Cassel, 1,220 kc/s (246 m.).

Transmits at intervals from 6.15 a.m. (Hamburg Relay).

9.30 a.m.—Choral Concert of Folk Songs (1500—1800). 10.30—Reading (Nikolaus Schwarzkopf). 11.0—String Quartet in C, Op. 50, No. 2 (Haydn). 11.30—See Leipzig. 12 noon—See Munich. 1.0—See Langenberg. 1.50—Three Talks arranged by the Wiesbaden Board of Agriculture. 2.0—"The Black Sheep"—Play for Children. 3.0—Rural Programme—Two Talks. 4.0—6.0—See Stuttgart. 6.0—Talk: European Thinkers—Benedetto Croce. 6.25—Thirty Gay Minutes—Programme directed by Falke-Leonhardt. 6.55—Daily Encounters—Bookseller and Customer. 7.20—Weather for Farmers, and Sports Notes. 7.30—Literary Programme—Gottfried Benn. Readings by Alfred Döblin. 7.30—10.20—See Stuttgart. 10.45—Concert from Langenberg. 12 midnight (approx.)—Close Down.

HAMBURG (Germany)

Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayd by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.); and Kiel, 1,292 kc/s (232.2 m.). Transmits at intervals from 6.15 a.m. (Hamburg Harbour Concert).

10.25 a.m. (from Kiel)—Divine Service. 11.0—Round the Alster Valley—a Radio Report. 11.45—German Chorals in North German Dialect. 12 noon—Time and Weather. 12.5 p.m. (from Hanover)—Open Air Concert. 1.0 (from Hanover)—Orchestral Concert. 2.0—The Mecklenburg Festival—a Day in the Village of Hohenviecheln. 3.0—Fairy tale Reading: Pilzmännchens Abenteuer (Ise Berger). 3.45—Pictures of the Life of an Apprentice. Literary Selections and Songs to the Lute. 4.40—"The Hagenbeck Jubilee, 1932"—A Dialogue on the Hagenbeck Zoological Gardens and the Development of Hamburg and Altona. 5.10—Three Scenes from "Morgen geht's uns gut"—Musical Play (Benatzky).

6.30—Strasbourg—a Programme of Literature and Music. 7.30—A Radio Report from the Physical Training School: Jiu-Jitsu. 7.40—Sports Notes and Weather. 8.0—Concert by the Hamburg Philharmonic Orchestra. Soloists: Bernhard Jackschat (Baritone) and Herbert Ernst Groh (Bass). Overture, "Rienzi" (Wagner). Minuet for Strings (Boccherini). Selection from "The Girl from the Golden West" (Puccini). Korsholm (Järnefeldt). Song from "The Golden Cross" (Brüll). Rococo Serenade (Meyer-Helmund). Der Dichter spricht (Hans Hermann). Festival Overture (Lassen). Theme and Variations from the Third Suite (Tchaikovsky). Selection from "Der Trompeter von Sakkingen" (Nessler-Nikisch). Waltz from "Liebe im Schnee" (Benatzky). Potpourri, Der Teufel lacht dazu (Hollaender).

10.0—News Bulletin. 10.20—Gramophone Report of the last ten minutes of the Football Championship, Holstein-Kiel v. Nürnberg. 10.30—Dance Music from the Bocaccio. 11.10—Dance Music from the Atlantic, Bremen.

HEILSBURG (Germany)

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

Transmits at intervals from 6.15 a.m. (Concert). 12.10 a.m.—See Leipzig. 12.10 p.m.—Concert by the Danzig Municipal Theatre Orchestra, conducted by Dr. Hermann Scherchen. Soloist: Fritzkurt Welner (Tenor). Pulcinella Suite (Stravinsky). Lieder eines fahrenden Gesellen for Voice and Orchestra (Mahler). The Fourth Symphony in B Flat, Op. 60 (Beethoven). 2.0—Radio Report of the Start of the Great Motor-Cycle Races from the "Ostpreussenering," Sensburg (on Gramophone Records). 2.20 (from Danzig)—Talk for Young People: A Trip to Rio de Janeiro. 2.45—Radio Report of the Motor-Cycle Races (continued).

3.15—Concert by the Königsberg Opera House Orchestra, conducted by Karl Hrubetz. March, Freiheit (Laukin). Overture, "Maritana" (Wallace). Waltz, Wo die Zitronen blühen (Johann Strauss). Prelude, "The Cricket on the Hearth" (Goldmark). Selection from "The Goldsmith of Toledo" (Offenbach). Overture, "The Ace of Hearts" (Künneke). Waltz, Hoch

lebe der Tanz (Waldteufel). Potpourri, Wiener Leben (Komzak). Paraphrase on Loewe's Ballad, Die Uhr (Mannfred). Marsch der Hutmützenmännchen (Armandola). 4.0 (in an interval)—Talk by two Young People: Reminiscences of a Journey through East Prussia. 5.15—"Tom Thumb"—a Radio Fairy Play in Seven Scenes (Grimm, arr. Lili Martini). 6.0—Sports Notes. 6.10—Hildegard Agnes Noske reads from her own Poems. 6.40—"Joachim Hans von Zieten—the Hussar General"—Programme of Songs; Poems, Narratives and Anecdotes on the Two Hundred and Thirty-Third Anniversary of his Birth. 7.15—Hans Heymuth reads from his book, "Hier spricht Masuren." 7.45—Sports Notes. 8.0—Concert by the Königsberg Opera House Orchestra, conducted by Werner Richter-Reichhelm. In the interval at 9.0 (approx.)—Announcements. 10.0—News and Sports Notes, followed by Dance Music from Berlin (Witzleben). 12.30 a.m. (Monday)—Close Down.

HILVERSUM (Holland)

1,013 kc/s (296.1 m.); 20 kW. (7 kW. up till 4.40 p.m.). 7.55 a.m.—11.40—Programme of the Workers' Radio Society (V.A.R.A.). 7.55—Gymnastics. 8.40—Pigeon Flying and Football Notes. 8.55—Agricultural Talk. 9.10—Orchestral Concert conducted by Hugo de Groot. 9.40—Recitations. 10.0—Concert (contd.). 10.40—Addresses in Connection with the Disarmament Conference, relayed from Zurich. 11.10—Concert (contd.). 11.40—4.40 p.m.—Programme of the 'Algemeene Vereeniging Radio Omroep (A.V.R.O.). 11.40—Time Signal. 11.41—Concert by the Wireless Orchestra, conducted by Nico Treep. Overture, "The Water Carrier" (Cherubini). Dance Suite from "The Bartered Bride" (Smetana). Selection from "Turandot" (Puccini). Gramophone Records of Variety Music. Waltz, The Polar Star (Waldteufel). Selection from "Das Veilchen vom Montmartre" (Kálmán). Two Slavonic Dances (Dvorak). Gramophone Records of Variety Music. Potpourri, Hallo, Hallo, Hier Wien (Morena). Das ist noch ein Stückchen vom alten Wien (Komzak).

1.40 p.m.—Weekly Book Talk. 2.10—Quartet No. 3, Op. 67 (Brahms) by the Helmann Quartet. 2.40—A Radio Play. 4.10—Gramophone Records of Variety Music, and Sports Notes. 4.40—5.40—V.A.R.A. Programme for Children. 5.40—7.40—Programme of the Liberal Protestant Radio Society (V.P.R.O.). 5.40—Literary Talk. 6.10—Organ Recital by Anthon von Horst. 6.40—Talk: Johann Sebastian Bach. 7.40 till Close Down—A.V.R.O. Programme. 7.40—Time and News. 7.55—Concert relayed from the Concertgebouw, Amsterdam. The Concertgebouw Orchestra, conducted by Eduard van Beinum, with Theo van der Pas, (Pianoforte). A Night on the Bare Mountain (Moussorgsky). Second Pianoforte Concerto (Rachmaninov). 8.40—Recitations. 9.0—Concert of Light Music by Kovacs Lajos and his Orchestra. Songs by Bob Scholte. 9.40—A Radio Play. 10.10—Concert (contd.). 10.50—Gramophone Records of Variety Music. 11.40 (approx.)—Close Down.

10.0—News Bulletin. 10.20—Gramophone Report of the last ten minutes of the Football Championship, Holstein-Kiel v. Nürnberg. 10.30—Dance Music from the Bocaccio. 11.10—Dance Music from the Atlantic, Bremen.

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HUIZEN (Holland)

160 kc/s (1,875 m.); 8.5 kW. 8.10—9.10 a.m.—Programme of the Catholic Radio Society (K.R.O.). Religious Programme. 9.10—11.55—Programme of the Christian Radio Society (N.C.R.V.). 9.10—Organ Recital by F. Marx.

9.25—Divine Service from a Church in Bussum. After the Service, Organ Recital of Sacred Music by F. Marx. 11.55 a.m.—4.40 p.m.—K.R.O. Programme. 11.55—Concert by the K.R.O. Sextet, conducted by Piet Lustenhouwer. 1.10—Talk: Hungary. 1.35—Popular Gramophone Records. 1.50—Talk on Cardinal Newman. 2.10—Concert by the "Wilhelmina" Orchestra, conducted by A. van de Berg and the "Wilhelmina" Workers' Choir, conducted by H. Sonnenschein, relayed from the Wilhelmina State Mine at Terwiselen.

4.10—Programme for Children. 4.40—7.25—N.C.R.V. Programme. 4.40—Divine Service from a Church at The Hague. After the Service, Choral Concert of Sacred Music, conducted by S. Blom. Soloist: C. Vos (Organ). 7.25 till Close Down—K.R.O. Programme. 7.25—Talk: Southern Morocco. 7.50—Football Report. 7.55—Concert of Dances by the

K.R.O. Orchestra, conducted by Marinus van 't Woud. Invitation to the Waltz (Weber). Two Flemish Dances (Blockx). Polish National Dances (Scharwenka). Two Slavonic Dances (Dvorak). Three Dances from "Nell Gwyn" (German). Spanish Dance (Falla). Two Hungarian Dances (Brahms). 8.55—News Bulletin.

9.10—Baritone Song Recital by Henk Angenent. Frederick Boshart at the Pianoforte. Pensée d'automne (Massenet). Les Rameaux (Faure). Three Dutch Songs (Hullebroeck): (a) De Noordsee, (b) Het Kosterken, (c) Kermislied. 9.30—Concert by the K.R.O. Orchestra, conducted by Marinus van 't Woud. Soloist: Henk Angenent (Baritone). Overture, "Raymond" (Thomas). Song from "Hamlet" (Thomas). Prologue to "I Paggiacci" (Leoncavallo). Waltz from "The Doll Princess" (Fäll). March, Stars and Stripes (Souza). 10.40—Epilogue by the Choir. 11.0 (approx.)—Close Down.

KALUNDBORG (Denmark)

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

LANGEWEG (Germany)

Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 7.0 a.m. (Hamburg Relay).

11.30 a.m.—See Leipzig. 12.15 p.m.—Talk: Success—the Passport of the Age. 12.40—Talk on Workers of all Countries: The Timber Industry in Finnish Lapland. 1.0—Orchestral Concert of Light Music, conducted by Wolf March (Bondy). Waltz (Morena). Overture, "Si j'étais Roi" (Adam). Ballet Suite, La Source (Delibes). Selection from "Hänsel and Gretel" (Humperdinck). Song, Das Herz am Rhein (Hill). Potpourri, Musik (Zimmer). A Summer Night's Idyll, Fauns and Elves (Noack). Intermezzo, Lebe wohl (Theimer). Potpourri of Waltzes (Hildebrandt).

2.30—Shorthand Dictation. 2.50—Agricultural Programme. 3.10—Interval. 3.25—Talk: West Germany—Sauerland. 4.10—Talk: The Origins of Morals and Religion. 4.30—Orchestral Concert, conducted by Eysoldt. Overture, "Der Landstreicher" (Ziehrer). Potpourri of the Music of Schubert (Urbach). Suite from "Nell Gwyn" (German). Prelude (Rachmaninov). Waltz, Lieder der Liebesnacht (Lincke). A Wedding Day on Trolldhaugen (Grieg). Selection from "Paganini" (Lehar).

6.5—Topical Talk for Manual Workers. 6.30—Reading. 7.0—Variety Programme. 7.45—Sports Notes.

8.0—"Das verwunschene Schloss" (The enchanted Castle)—Operetta in Five Acts (Millocker). 10.0—News Bulletin and Sports Notes, followed by Concert and Dance Music, conducted by Eysoldt. 12 midnight (approx.)—Close Down.

LEIPZIG (Germany)

1,157 kc/s (259 m.); 2 kW. Relayd by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.0 a.m.

11.30 a.m.—Gelobt sei der Herr—Cantata for Trinity Sunday (Bach) by the Municipal and Gewandhaus Orchestras and Choir of St. Thomas, with Soloists. Conductor: Karl Straube. 12.15—Concert by the Leipzig Symphony Orchestra, conducted by Hilmar Weber. Overture, Wiener Jubel (Suppé). German Rococo—an Orchestral Suite in the Old Style (Güntner). Ballet Music from "The Goldsmith of Toledo" (Offenbach). Mazurka brillante in A (Liszt). Selection from "Undine" (Lortzing). Carnival in Paris (Svendsten). Selection from "Das Fürstentum" (Lehár). Waltz in A Minor (Dvorak). Waltz in D (Dvorak).

2.0—Weather Forecast and Time Signal, followed by Talk: The Week's Programme. 2.20—Agricultural Hints. 2.30—Lesson in Esperanto. 3.0—Recital of Songs, with two Settings, by Arthur Fleischer. Frühlingsglaube (Mendelssohn and Schubert). Allnächtlich im Traume seh ich dich (Mendelssohn and Schumann). Wer sich der Einsamkeit ergibt (Schubert and Hugo Wolf). Erlkönig (Schubert and Loewe). Minnelied im Mai (Mendelssohn and Brahms). Preciosas Sprüchlein gegen Kopfweh (Cornelius and Hugo Wolf).

4.0—"Miss Julia"—One Act Play (Strindberg). 5.0—Concert of Whitsun Music by the Leipzig Trombone Choir, conducted by Martin Wolfgram, relayed from the War Memorial.

SUNDAY continued

Intrade (Melchior Franck). Allein Gott in der Höh' sei Ehr (arr. Johannes Eccard). Wir glauben an einen Gott (Walter). Nun bitten wir den heiligen Geist (Walter). Du heilige Brunst, süßer Trost (Bach). Wach auf, wach auf, du deutsches Land! (Walter). Verzage nicht, du Häuflein klein (Reger). Erhalt uns, Herr, bei deinem Wort (Reger). Beweis dein' Macht, Herr Jesu-Christ (Bach). Gott Heiliger Geist, du Tröster wert (arr. Zahn). 5.30—Josef Ponten reads from his own Works.

6.0—Choral Concert by the Dresden Academy, conducted by Paul Scheinflug. Feierlicher Gesang, for Mixed a-cappella Choir and Soprano Solo (Mendelssohn). David's Lament for Absalom for Mixed Choir, Baritone Solo, Organ and Harp (Stern). Cantata on Goethe's "Epimenides Erwachen" for Mixed Choir, Baritone Solo and Organ (Wolfurt). 6.45—Time Signal. 7.0—Sports Notes.

8.0—Concert by the Leipzig Symphony Orchestra, conducted by Theodor Blumer. Soloist, Karl Schütte (Clarinet). Overture, "Beatrice and Benedict" (Berlioz). Clarinet Concerto in F Minor (Weber). Symphonic Poem, The Forest (Glazounov). Hungarian Dances, Nos. 1, 3 and 10 (Brahms). Fantasiestücke, Op. 73 (Schumann). Little Norwegian Suite (Schjelderup). Waltz from "Der arme Jonathan" (Millöcker). Polka and Fugue from "Schwanda the Piper" (Weinberger). Waltz from "Der Rastelbinder" (Lehar). March, In Wehr und Waffen (Blon).

10.15—News Bulletin, followed by Dance Music on Gramophone Records. 12 midnight (approx.)—Close Down.

LWÓW (Poland)

788 kc/s (381 m.); 16 kW. Transmits at intervals from 10.0 a.m. 5.45—7.0 p.m.—See Warsaw. 7.0—Miscellaneous Items. 7.25—Talk. 7.40—Racing News. 7.45—A Sketch from Cracow. 9.59 kc/s (312.8 m.). 8.15—See Poznan. 10.30—See Warsaw. 10.45—Sports Notes. 10.50—Concert by the "Serenada" Mandoline Orchestra, conducted by M. R. Malewsky. 12 midnight (approx.)—Close Down.

LYONS (France)

La Doua. (PTT). 644 kc/s (465.8 m.); 1.5 kW. 8.0 a.m.—Review of the Parisian Morning Press, relayed from Paris (Ecole Supérieure), 671 kc/s (447.1 m.). 12 noon—Relay from Paris (Ecole Supérieure). 2.30 p.m.—The Twentieth Civic Youth Festival, relayed from the Grand Theatre. 7.15—Sports Notes. 8.0—Relay from Paris (Ecole Supérieure).

MADRID (Spain)

Union Radio (EA)7. 707 kc/s (424.3 m.); 2 kW. 9.0—10.30 a.m.—Topical Review. 12.30 p.m.—Municipal Band Concert from the Retiro. 3.0—4.30 p.m.—Chimes, Time, Theatre Notes and Concert. 8.0—Chimes and Request Gramophone Records. 9.30—10.30—Interval. 10.30—Chimes, Time and Programme relayed from the "Casa del Pueblo." 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 7.0 a.m. 7.0 p.m.—Concert by the Radvanice Brass Band. 7.30—See Prague. 10.15—Programme Announcements and Theatre Guide. 10.20—See Prague.

MOSCOW (Russia)

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

MUNICH (Germany)

563 kc/s (533 m.); 1.5 kW. Relay by Augsburg and Kaiserslautern, 536 kc/s (560 m.), and Nürnberg, 1,256 kc/s (239 m.). 10.0 a.m.—Concert by the Chamber Orchestra. 10.45—Chimes from Our Lady's Church. 11.0—Modern South

German Lyrics. 11.25 (from Homberg)—Concert by the Saar Choral Society.

12 noon—Concert of Light Music, conducted by Erich Kloss. Overture, Morning, Noon and Night (Suppé). Clair de Lune (Debussy). Selections from "Tiefland" (d'Albert). Waltz, Wiener-Bonbons (Johann Strauss). Slavonic Fantasia (Dvorak-Kreisler). Little Suite, No. 1 (de Micheli). Hungary (Moszkovsky).

1.5—Time Signal, Weather Report and Programme Announcements. 1.15—Agricultural Talk. 1.35—Concert of Classical Music on Gramophone Records. 2.10—Chess Lesson. 3.15—Ferdinand Kollmanek in a Zither Recital of his own Music. 3.40—Programme for Women. 4.0—Concert by the Munich New Symphony Orchestra, conducted by Brückner, with Songs by the Solo Quartet of the Landshüter Singing Society. Overture, "Maritana" (Wallace). Waltz, Aquarellen (Johann Strauss). Symphonic Tone-Poem, Night on the Bare Mountain (Moussorgsky). Five Songs. Romance sans Paroles (Tchaikovsky). Mattinata (Leoncavallo). Selection from "Gipsy Love" (Lehar).

5.10—Reading (Ludwig Ganhofer). 5.40—Organ Recital by E. Kissel. 6.10—Talk on Events of Interest, by Alphon von Czibulka: The 160th Anniversary of the Death of Count Struensee—The Building of the St. Gotthard Tunnel—Lieutenant Franziska—A Hungarian Bomber. 6.5—Concert of Religious Music by Theodor Grau, by the St. Anna Choir, conducted by the Composer. 7.0—Weather Forecast and Sports Notes. 7.10—Bavarian Literature—Hermann Ebbsinghaus, Eugen Roth and Hans Brandenburg read from their own Works, followed by a Scene from a Drama by Ernst Penzoldt. Introductory Talk by Max Halbe.

8.0—Concert by the Station Orchestra, conducted by Karl List. Soloists: Joseph Bullinger (Tenor) and Josef Köhler (Cello). Overture, "Russlan und Ludmilla" (Glinka). Tenor Solo: Aria from "Der Evangelimann" (Kienzl). Scherzo from the Symphony in D Minor (Schumann). Dance from "Peer Gynt" (Grieg). Tenor Solo: Prayer from "Rienzi" (Wagner). Variations on a Rocooco Theme for 'Cello and Orchestra (Tchaikovsky). Overture, "Zampa" (Hérold). Barcarolle (Fischer-Frank). Aus vergangenen Tagen (Fischer-Frank). Viennese Waltzes (Benatzky). A Sleigh Ride in St. Petersburg (Eilenberg). March, Treu bewährt (Benzinger). 9.30—Concert by the Munich Wind Instrument Quintet. Quintet for Flute, Oboe, Clarinet, Horn and Bassoon (Mir. Weber). Quintet for Pianoforte, Flute, Clarinet, Horn and Bassoon (Spohr). 10.20—Time Signal, Weather Report, News Bulletin and Sports Notes. 10.45—Concert from Langenberg. 12 midnight (approx.)—Close Down.

OSLO (Norway) Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relay by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.) and Rjukan, 671 kc/s (447.1 m.). 10.20 a.m.—Chimes and Divine Service, relayed from Christiansand, 1274 kc/s (235.5m.). 1.0—Concert of Military Music. 4.30—Concert by the Orchestra of the Cecil Restaurant, conducted by Hans Bacho. Overture, "Les Abencérages" (Cherubini). Waltz (Hall). Selection from "The Circus Princess" (Kalman). Minuet (Rung). Berceuse (Rimsky-Korsakov). Lente from the Breton Suite (Rhené-Baton). Eastern Evening (Micheli). Humoresque (Sjögren). 5.30—Dramatic Programme. 6.30—Recital of Sacred Songs by Rasmus Rasmussen. 7.0—Parliamentary Review. 7.15—Weather and News. 7.30—Trio for Violin, 'Cello and Pianoforte (Dvorak). 8.0—Programme dedicated to Oslo: Concert by the Station Orchestra, Recitations and Reading, Accordion Solos, Talks on Oslo, and Songs by the Oslo Women's Choir. In the interval at 9.45—News and Weather Forecast. 11.0—Dance Music. 12 midnight (approx.)—Close Down.

PALERMO (Italy)

Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. 10.40 a.m.—Sacred Music. 11.5—Agricultural Notes. 12.45 p.m.—Giornale Radio. 1.0—2.0—Concert of Light Music. In the interval at 1.30—Time Signal, Announcements and Weather Forecast. 5.30—6.30—Concert of Light Music and Dance Music. In the intervals, Sports Notes. 8.0—Announcements and Giornale Radio. 8.20—Sports Notes. 8.25—Popular Music on Gramophone Records. 8.30—Time Signal and Announcements. 8.45—Symphony Concert, conducted by Armando La Rosa Parodi. Soloist: Zito Furlanetto (Soprano). The Unfinished Symphony (Schubert). Overture, "Coriolanus" (Beethoven). Talk: Sicily in the Works of Theocritus. Mattinata sull'Appennino (Vaccari). Soprano Solo: Nocturne (Franck). Children's Corner (Debussy). Introduction and Wedding March (Rimsky-Korsakov). In the interval, Theatre Guide. After the Concert, Programme of Songs. 10.55—News Bulletin and Close Down.

PARIS (France) Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW. Time signals (on 2,650 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—2.30—Concert conducted by M. Flament. 6.45—Programme for Children. 7.15—Le Journal Parlé. 8.20—Weather Forecast. 8.30—Gramophone Concert of Light Music. 10.0 (approx.)—Close Down.

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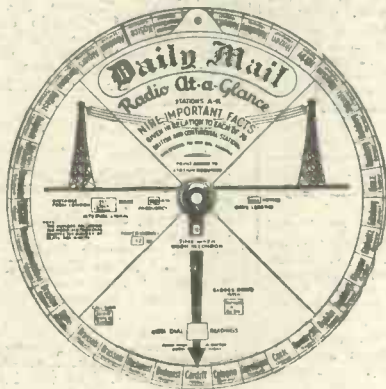
PARIS (France)

Poste Parisien. 914 kc/s (328.2 m.); 60 kW. 12 noon—Gramophone Records, News and Announcements. 12.45 p.m.—Concert of Light Music on Gramophone Records. 1.45—News and Announcements. 2.0—7.0—Interval. 7.0—Gramophone Records of Popular Music, News and Announcements. 7.30—Sponsored Gramophone Concert. 8.30—Gramophone Records, Talks and News.

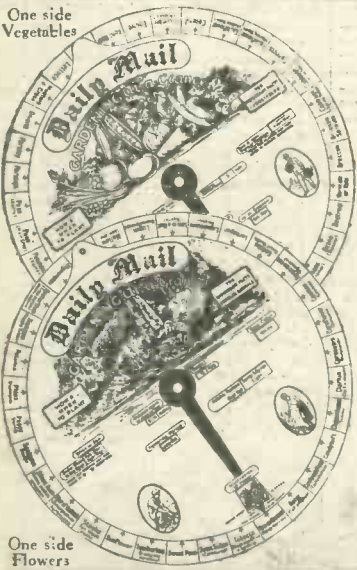
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SUNDAY continued

8.45—Local and Orchestral Concert, Overture, "Tannhäuser" (Wagner). Moroccan Suite from "Namouna" (Lalo). Ballet from "Phlémon et Baucis" (Gounod). Septet for Trumpet, Quintet and Pianoforte (Saint-Saëns). Divertissement from "Les Erynnies" (Massenet). Dance from "Tasso" (Godard). March from "The Prophet" (Meyerbeer). 10.45—News Bulletin. 10.50 (approx.)—Close Down.

PARIS (France) Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW. 7.45 a.m.—Light Music on Gramophone Records. 8.00—News, Weather and Press Review. 8.30—Physical Culture Lesson. 10.20—Book-keeping Lesson. 10.40—Spanish Lesson. 12 noon—Religious Address. 12.20 p.m.—Sacred Music. Andante from the Symphony No. 4 (Widor). Improvisation, Cortège (Vierne). Pilgrims' Chorus from "Tannhäuser" (Wagner). 12.30—Bilboquet. 12.45—Press Review, News and Weather. 1.00—Variety Music on Gramophone Records. 1.30—Popular Concert on Gramophone Records. 2.00—Concert of Decca Records. 3.00—Running Commentary on the Football Match, Newcastle v. Equipe Racing Club—Red Star, at the Colombes Stadium. 5.45—Light Music on Gramophone Records. 6.45—Concert by the Paris Alhambra Orchestra. 8.00—Radio Paris Music Hall. The Orchestra, conducted by Maurice André. In the intervals at 8.30—News, Sports Notes, Press Review and Weather; and at 9.15—Press Review and News.

PITTSBURGH (U.S.A.) Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Transmits at intervals from 3.55 p.m. 9.0 p.m.—Songs of Home, from New York. 9.30—Programme to be announced. 10.00—Shady-side Presbyterian Church Services. 11.00—Time Signal. 11.1—Temperature Report, Electric League. 11.2—Weather Report. 11.5—Teaberry Sport Review. 11.10—Press News Reeler. 11.15—Westinghouse Concert. 11.45—Programme to be announced. 12 midnight—KDKA Players. 12.15 a.m. (Monday)—Programme to be announced. 12.30—Three Bakers, from New York. 1.00—Programme to be announced. 1.15—S.R.O., from New York. 2.00—Enna Jettick Melodies, from New York. 2.15—Bayuk Stag Party, from New York. 2.45—Making the Movies, from New York. 3.15—The Old Singing Master, from New York. 3.45—War Stories by Walter Myers. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report, Electric League. 4.12—Weather Report. 4.15—Press Last Minute News. 4.20—Programme to be announced. 4.30—Ted Cook and his Orchestra, from New York. 5.0—Good Night.

POZNAN (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—A Sketch from Cracow. 959 kc/s; (312.8 m.) 8.15—Concert of Slav Music relayed from the University. Theatre Notes and Announcements in the interval. 10.30—Sports Notes and Police Report. 10.45—Dance Music relayed from the Esplanade Café. 12 midnight (approx.)—Close Down.

PRAGUE (Czechoslovakia) 614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.30 a.m. 10.0 a.m.—Talk for Workers: Insurance. 10.20—Light Music on Gramophone Records. 10.30—Literary Programme. 11.00—Choral Concert, conducted by Otakar Jeremias. 12 noon—Chimes. 12.5 p.m. Brass Band Concert, conducted by Adolf Hamol. 1.30—Agricultural Report. 2.0—Talk: The Agricultural Show. 2.15—Talk: The Importance of International Political Economy. 4.0—Concert from Bratislava. 5.30—Popular Music on Gramophone Records. 6.0—German Transmission: Reading from "Prometheus" (Goethe). In the intervals, News. 7.0—See Moravská-Ostrava. 7.30—Das Glöckchen des Eremiten—Comic Opera in Three Acts (Maillart). In the interval Sports Notes. 9.0—Time and News Bulletin. 10.0—News, Sports Notes, Theatre Guide and Programme Announcements. 10.20—Concert of Light Music on Gramophone Records.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland) 743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.). 9.55 a.m. (from Geneva)—Chimes from St. Peter's Cathedral. 10.0 (from Geneva)—Protestant Service. 11.0—Light Music on Gramophone Records. 12.30 p.m.—Weather Forecast and News Bulletin. 12.40—Orchestral Concert. 2.0—6.0—Interval. 6.0 (from Fribourg)—Talk: Swiss Peasants of the good old Days. 6.20 (from Fribourg)—Choral Concert by St. Nicholas' Choir. 7.0 (from Lausanne)—Protestant Service. 7.30—Popular Music on Gramophone Records. 8.0—Concert by the Station Orchestra, conducted by Fernand Clouet. 8.30 (from Geneva)—Comedy Programme by Carmen d'Assilia and Marcel Parmelin. 9.10—Concert of Light Music by the Station Orchestra. 10.0—Weather Forecast, News Bulletin and Sports Notes. 10.15 (approx.)—Close Down.

ROME (Italy) Ente Italiano Audizioni Radiofoniche (IRO). 685 kc/s (441 m.); 50 kW. Relayed by Naples, 941 kc/s (319 m.) and 2RO, 6,976 kc/s (43 m.). 9.40 a.m.—News Bulletin. 9.45—Agricultural Notes. 10.0—Religious Programme. 10.15—Sacred Music. 10.45—11.0—Sports Notes and Amusement Guide. 12.30 p.m.—2.0—Concert of Light Vocal and Instrumental Music. In the intervals at 1.30—Time and Announcements. 4.15 (Naples)—Programme for Children, followed by Weather and Sports Notes. 4.45—Sports Notes. 5.0—6.30—Vocal and Instrumental Concert. Sports Notes in the interval. 7.10 (Naples)—Shipping and Sports Notes. 7.15—Sports Notes, Announcements and News. 8.0—Time, Announcements and Gramophone Records of Variety Music. 8.30—Sports Notes. 8.45—"The Girl in the Taxi"—Opera in Three Acts (Gilbert). In the intervals: Talk and Recitations, News after the Programme.

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 1.0 p.m. 9.0 p.m.—Jodent Programme, with Jane Froman. 9.15—5.30 a.m. (Monday)—New York Relay. 9.15—Musical Programme. 10.30—General Electric Circle. 11.0—Catholic Hour. 11.30—Our American Schools. 12 midnight—Slow River. 12.30 a.m. (Monday)—Orchestral Gems. 1.0—Chase and Sanborn Programme. 2.0—Our Government—David Lawrence. 2.15—American Album of Familiar Music. 2.45—The Buick Revellers. 3.0—Musings. 3.15—Schaeffer Lifetime Revue. 3.30—L'Heure Exquise. 3.45—Sunday at Seth Parker's. 4.15—Russ Colombo. 4.30—Jesse Crawford (Organist). 5.0—Larry Funk's Orchestra. 5.30—New Kenmore Orchestra. 6.0 (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.). 10.0 a.m. (from Berne)—Protestant Address. 10.45 (from Berne)—Orchestral Concert. 11.30 (from Berne)—A Visit with the Microphone to the Berne Bear Pits. 12 noon—Orchestral Concert. In the interval at 12.28 p.m.—Time, Weather and News. 1.35 (from Berne)—Trio Concert. 2.15—3.30—Interval. 3.30—Gramophone Records: Excerpts from "Cavalleria rusticana"—Opera (Mascagni). 5.0 (from Berne)—Reading from the Works of Jeremias Gotthelf. 5.30—Gramophone Records of Ländler and Yodelling Selections. 6.0 (from Berne)—Chess Lesson. 6.30 (from Berne)—Talk with Illustrations: Old Songs of the Jura Mountains. 7.0—Gramophone Record of Songs. 7.28—Time and Weather. 7.30 (from Berne)—Talk: The Church and Social Activities. 8.0 (from Berne)—Folk Songs by the Concordia Male Voice Choir and the Station Orchestra. 8.50—Concert of Music by Fred Hay: Gerry Weissner (Soprano), Hans Blume (Viola) and Fred Hay (Pianoforte). Suite, Op. 22, for Viola and Pianoforte. Songs, Op. 20, for Soprano, with Viola and Pianoforte obbligato. 9.30—Weather and News. 9.45—

Mandoline Concert. 10.15—Sports Notes. 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden) Radiotjänst (SASA). 689 kc/s (436 m.); 55 kW. Relayed by Boden, 244 kc/s (1,220.5 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.). 10.30 a.m.—Programme for Workers. 11.0—The Ceremony of the Consecration of the Archbishop, relayed from Uppsala. 662 kc/s; (453.2 m.). 12.45 p.m.—Weather Forecast. 12.55—Time Signal. 1.20—Running Commentary on the Scandinavian Motor-Cycle Speed Championship. 2.15—3.10—Interval. 3.10—Book Review. 3.30—Concert of Light Music, relayed from Sundsvall. 4.0—Talk: Laws regarding Alcoholic Drinks in Sweden. 4.30—Concert by the Huddinge Male Voice Choir, conducted by Gustaf Adolf Ericsson. 5.0—Programme for Children. 5.30—Talk: The Fate of China. 6.0—Divine Service. 7.15—Weather Forecast, News and Sports Notes. 7.30—Quintet Concert. Quintet, Op. 124 (Briccialdi). Dance Suite, Op. 53 (T. Blumer). 8.0—Programme relayed from Oslo. 9.45—Weather and News Bulletin. 10.0—Oslo (contd.). 11.0 (approx.)—Close Down.

STRASBOURG (France) Radio-Strasbourg (P.T.T.). 869 kc/s (345 m.); 11.5 kW. 10.45 a.m.—Service in German. 11.30—Catholic Service. 12 noon—Gramophone Records of Variety Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Records of Operatic and Variety Music. 2.0—Talk in French: Norway. 2.15—Gramophone Dance Music. 3.15—3.45—Interval. 3.45—Gramophone Dance Music. 4.45—Dialogue in German: Book-keeping for the Housewife. 5.0—Recital of Sacred Music, relayed from St. Paul's Church. Prelude and Fugue for Organ (Boehm). Reading from the Bible. Cantate Domino. Glory be to God (Mendelssohn). Dology (Bortniansky). O festin des bienheureux (Viadana). Adoramus te (Raff). Address. Offertory (André Raison). Ecce quomodo moritur (Handel). Ave verum (Mozart). Ich halte treulich still (Bach). Nearer my God to Thee (Mason). The Lord's Prayer. Prelude in B Minor for Organ (Bach). 6.0—Medical Talk in French. 6.15—Sports Notes. 6.30—Orchestral Concert, conducted by Maurice de Villiers. Joyeuse marche (Chabrier). Overture. "Phèdre" (Massenet). Selection from "Piccolino" (Guiraud). Symphonic Entr'acte from "Messidor" (Bruneau). Second Suite from "Peer Gynt" (Grieg). Bachanale from "Samson and Delilah" (Saint-Saëns). Persian Dance (Guiraud). 7.30—Time Signal, and News in French and German. 7.45—Dance Music. 8.30—Dramatic Evening in French: (a) "Les précieuses ridicules"—Comedy in One Act (Molière). (b) "Le Médecin malgré lui"—Comedy in Three Acts (Molière). 10.30—Dance Music relayed from the Savoy. 12 midnight (approx.)—Close Down.

STUTTGART (MÜHLACKER) (Germany) Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayed by Freiburg, 527 kc/s (570 m.). Transmits at intervals from 6.15 a.m. 10.0 a.m.—Chamber Music. 10.40 (from Freiburg)—Catholic Recital. 11.30—See Leipzig. 12.10 p.m.—Concert from Munich. 1.0—Topical Talk. 1.15—Gramophone Records of Songs by Heinrich Schlusnus. 2.0—See Frankfurt. 3.0—Choral Mass, relayed from a Church in Eutingen. 3.30—Agricultural Talk. 4.0 (from Baden-Baden)—Concert by the Municipal Orchestra, conducted by Karl Assmus. 5.0 (from Freiburg)—Concert by the Freiburg Concert Orchestra, conducted by Richard Fried. Soloist: Andreas Dollinger (Bass). 6.0—Authors and Authoresses—Gretl Günter. 6.30—Sports Notes. 6.35—Beethoven Recital by Günther

Homann. Thirty-Two Variations in C Minor. Rondo in G, Op. 51. Variations in F, Op. 34. 7.30—Tragedy in the Lives of Children—Recitations by Lisa Tetzner. 8.0—"Don Cesar"—Opera in Three Acts (Dellinger). 10.0 (from Freiburg)—Concert of Viennese Schrammel Music by the Vienna Schrammel Quartet. 10.20—Time and News. 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—Opera Songs. 1.15—Orchestral Selection: Mazeppa (Liszt). 1.30—Agricultural Report. 1.45—Protestant Service. 5.0—Lesson in Esperanto. 5.15—Orchestral Selections. 5.30—News Bulletin. 5.45—Orchestral Selections. Overture, "Zampa" (Hérold). Selection from "The Merry Widow" (Lehar). 6.0—Chansonnettes. 6.15—Military Music. 6.30—News Bulletin. 6.45—Ketilbey Music. 7.0—Light Music. 7.30—News and Horse Racing Results. 7.45—Selections by an Argentine Orchestra. 8.0—Orchestral Selections. Selection from "Countess Maritza" (Kálmán). Overture, "Banditenstreiche" (Suppé). 8.15—Vocal and Orchestral Concert. 9.30—Accordion Solos. 9.45—Songs from (a) "The Damnation of Faust" (Berlioz), (b) "The Valkyries" (Wagner), and (c) "Le Jongleur de Notre Dame" (Massenet). 10.0—Orchestral Selections. 10.30—News Bulletin. 10.45—Songs from (a) "The Drum Major's Daughter" (Offenbach), and (b) "Le Conte Obligado" (Moretti). 11.0—Accordion Solos. 11.15—North African News. 11.30—Concerto for Violin (Tchaikovsky). 12 midnight—Weather, Announcements and Close Down.

TRIESTE (Italy) Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 10 kW. 9.40 a.m.—12.20 p.m.—See Turin. 12.20—German Lesson on Gramophone Records. 12.30—7.5—See Turin. 7.55—Quintet Concert. Overture, "Lysistrata" (Lincke). Lullaby (Sampietro). Chrepe des alpes (Cortopassi). Crpuscolo orientale (de Micheli). Selection from "I Paggiacci" (Leoncavallo). Il tango della primavera (Apollonio). Selection (Schor). 8.0 till Close Down—See Turin.

TURIN (Italy) Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW. Relayed by Milan, 905 kc/s (331.5 m.); Genoa, 959 kc/s (312.8 m.); and Florence, 599 kc/s (500.8 m.). 9.40 a.m.—Giornale Radio. 9.55—Chimes and Missa Cantata from the Cathedral of San Giusto. 11.0—Religious Programme. 11.20—Agricultural Report. 12.30—2.30 p.m.—Variety Concert. In the interval at 1.0—Time and Announcements. 4.0—Football Results. 4.10—Concert of Light Music. In the intervals, Notes on Sports and Art. 6.15—Giornale Radio and Sports Notes. 6.25—Topical Review. 7.0—Giornale Radio and Football Results. 7.5—Announcements, followed by Light Music. 7.30—Time and Announcements. 7.31—Popular Music on Gramophone Records. 8.0—Giornale Radio and Sports Notes. 8.25—Programme of Light Music. 9.30—"Scampolo"—Comedy in Three Acts (Dario Niccodemi), followed by Gramophone Records of Variety Music. 11.0—Giornale Radio.

VIENNA (Austria) Radio-Wien. 581 kc/s (517 m.); 15 kW. Relayed by Graz, 851 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.). 9.30 a.m.—Organ Recital by Bruno Seidhofer. Prelude and Fugue in E Minor (Martini). Prelude and Fugue in E Flat (Bach). 10.0—Scientific Talk. 10.30—Concert by the Vienna Symphony Orchestra, conducted by Martin Sporr. Soloist: Marcell Dickel (Viola). Symphony No. 25 in C Minor (Haydn). Symphony with Viola Solo, Harold in Italy, Op. 16 (Berlioz). 11.45—Relay from the Racecourse at Prebichl. 12 noon—Concert by the Vienna Symphony Orchestra, conducted

by Theodor Christoph. Rakoczy Overture (Keler-Béla). Suite from "Sylvia" (Delibes). Polonaise from "Lazy John" (Nedbal). Third Scandinavian Suite (Hammerik). Valse triste (Sibelius). Minuet (Paderevsky). Waltz, Les Sirènes (Waldeufel). Overture, "Banditenstreiche" (Suppé). In an interval, Further Relay from the Prebichl Racecourse.

1.30—Mandoline Concert. 3.0—Time and Announcements. 3.5—Reading of Authors' Letters (Adalbert Stifter, Eduard Mörike, Max Dauthendey and Rainer Maria Rilke). 3.30—Chamber Music. Adagio and Rondo for Pianoforte Quartet (Schubert). Pianoforte Quartet in C Minor, Op. 13 (Richard Strauss). 4.30—Talk: Through Bosnia and Herzegovina. 4.50—Orchestral Concert. Overture, "Die Heimkehr aus der Fremde" (Mendelssohn). Waltz (Waldeufel). Selection from "The Black Orchid" (d'Albert). Am Isonzo (Bauer). Dornröschen Brautfahrt (Rhode). Violin Solo by Wilhelm Drahozal: Little Suite (Pehn). Divertissement from "Das Scherzgewicht" (Krenek). Tango, Wenn du einst diesen Tango hörst (Föderl). Furiant from the Musical Play, "Böhmisches Musikanten" (Grün). Waltz from "Das Veilchenmädchen" (Hellmesberger). March, Olympiasieger (Kreuzberger).

6.20—A Microphone Report from Stegersbach: A Visit to a Burgenland Gipsy Village. 7.0—Reading: Goethe in Anecdotes. 7.30—Time and Announcements. 7.40—Song Recital by Georg Majkl (Tenor) in Memory of Dr. Ludwig Kaiser. Der Felsen. Meiner Mutter. Sie singt. Zweifelder Wunsch. Der Kranke im Garten. Glückes genug. Einen Sommer lang. Ich lieb es. Ich bin dein Kind. Frühling. 8.10—"Into the Blue"—Comedy in Three Acts (Caillavet, Robert de Flers and E. Rey). 9.50—Announcements. 10.5—Dance Music with Vocal Refrains, relayed from the Café Sacher.

WARSAW (Poland) Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW. 10.0 a.m.—Service 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 Report. 12.15—Beethoven Concert by the Warsaw Philharmonic Orchestra and Opera Choir, conducted by Fitelberg. Soloists: M. Mckrzycka (Soprano), H. Leska (Mezzo-Soprano), Adam Dobosz (Tenor) and A. Michalovsky (Bass). Overture, "Coriolanus." Ninth Symphony. 2.0—Agricultural Talk. 2.20—Concert of Popular and Dance Music by the Adam Stromberg Orchestra. 2.40—Agricultural Talk. 3.0—Popular Concert (contd.). 3.55—Programme for Children. 4.20—Light Music on Gramophone Records. 4.40—Talk on the Railway. 4.55—Popular Music on Gramophone Records. 5.15—Medical Talk. 5.30—Useful Hints. 5.45—Popular Concert by the Station Orchestra, conducted by Josef Oziminsky. Soloist: Mme. Dvobor-Musnicka (Vocalist). The Nutcracker Parade (Ranzato). Selection from "Lucia di Lammermoor" (Donizetti-Schreiner). Ballet Music from "Faust" (Gounod). Soprano Solos: (a) Aria from "Gianni Schicchi" (Puccini), (b) Aria from "Adrienne Lecouvreur" (Cilea). Polonaise and Meditation (Noskovsky). Ukrainian Dance (Noskovsky). Cradle Song (Maszynsky). Three Songs. Mazurka (Osmansky). March, Diabolo (Pianovsky). Announcements in the interval. 7.0—Miscellaneous Items. 7.25—Light Music on Gramophone Records. 7.40—Programme Announcements. 7.45—Sketch from Cracow. 8.15—See Poznan. 10.30—Reading. 10.45—Weather and Police Notes. 10.50—Sports Notes. 11.0—Dance Music. 12 midnight (approx.)—Close Down.

WILNO (Poland) 533 kc/s (563 m.); 16 kW. Transmits at intervals from 10.0 a.m. 5.45 p.m.—Concert relayed from Warsaw. 7.0—Recital of Lithuanian Songs by Irena Bilinisowna. 7.20—Topical Talk. 7.40—Programme Announcements. 7.45 till Close Down—See Warsaw. 12 midnight (approx.)—Close Down.

PRINCIPAL EVENTS

MONDAY (May 23)

SYMPHONY CONCERTS

- 8.5 p.m. Prague: Conducted by Malko.
- 9.0 " All Italian Stations.
- 9.0 " Frankfurt, Stuttgart: Symphony in D Minor (César Franck), etc.

CONCERTS (Vocal and Instrumental)

- 12.30 p.m. Radio-Paris: Wagner programme (gram.).
- 7.40 " Hilversum: French operettas Music.
- 8.0 " Copenhagen: French Music (Dances).
- 8.0 " Schweizerischer Landessender, Budapest: Italian Music (Weingartner conducting, Cassado 'Cello).
- 8.0 " Hamburg, Breslau, Königs Wusterhausen, Vienna: Military Band.
- 8.0 " Radio-Paris: Beethoven programme.
- 10.45 " Munich, Frankfurt, Stuttgart, Königs Wusterhausen: "Late" Concert.

OPERAS AND OPERETTAS

- 7.5 p.m. Heilsberg: "The Two Marksmen" (Lortzing).
- 7.35 " Munich: "Il Seraglio" (Mozart).
- 8.15 " Warsaw: "Tosca" (Puccini) (gram.).
- 8.30 " Strassbourg: "The Pearl Fishers" (Bizet).
- 8.45 " Palermo: "The Barber of Seville" (Rossini) (gram.).

CHAMBER MUSIC

- 7.15 " Bucharest: String Quartet.
- 10.0 " Copenhagen: Contemporary Danish Music.

MISCELLANEOUS

- 9.10 p.m. Breslau, Königs Wusterhausen, Vienna: "Silesian Wedding in May."

DANCE MUSIC

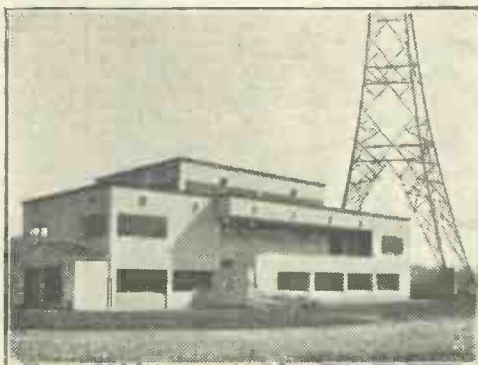
- 11.0 p.m. Copenhagen.

Gaspar Cassado

Gaspar Cassado, born in Barcelona in 1897, had his first lessons from his father, a composer and conductor of distinction. He was only eleven years old when Casals accepted him as a pupil, and long before reaching man's estate, he was himself acclaimed as a master of his instrument. He has already a secure place of his own in the front rank of living artists, and has played practically everywhere in the world, including many parts of South America, under the baton of many leading conductors and with most of the famous orchestras. More than one recent piece for the 'cello has been dedicated to him, and he has composed attractive music of his own, not only for it, but for other instruments. He is taking part, this evening, as soloist in the Basle Festival with the orchestra under Weingartner's direction, which SCHWEIZERISCHER LANDESENDER is to broadcast.

The Barber of Seville

The hero of several merry operas, the barber is



(Photo: Max Kettel, Genéve. By courtesy of the Swiss Federal Railways.)

Schweizerischer Landessender. The new station at Beromünster

the same engaging rascal as Mozart's Figaro. Rossini's, to be broadcast (on gramophone records) from PALERMO this evening, and from BUCHAREST on Friday, and Paisiello's, which ROME transmits on Saturday—it is many years older than Rossini's—both deal with an earlier episode in Figaro's career—one of the many intrigues and love affairs in which he had a hand. As he tells us himself in a sprightly aria near the beginning of the first act, he is in constant demand for delicate errands; he is enlisted by Count Almaviva as an ally in the siege he is laying to the fair Rosina, held a close prisoner by her guardian Bartolo. It is by his aid that the young people win in the end. Popular as the opera once was, it has so long been over-shadowed by Rossini's that there is now a special interest in hearing it sung in its native Italy by artists who still maintain the traditions of its own day. The part of Rosina, especially, is one in which Italian singers have always been very happily at home.

The Abduction from the Seraglio

The original name of the Mozart opera which MUNICH is broadcasting this evening, and which is usually called *The Seraglio*, is *The Abduction from the Seraglio*. The story was adapted from a play of that day, modified by Mozart himself; he has left it on record, in one of his letters, that the libretto delighted him whenever he saw it. He says: "In the overture, the chorus in the first act, and the last chorus of the whole thing, I shall work in Turkish music. I am so delighted at having it to compose, that the first songs and terzet in the first act are already finished." The plot turns on the capture of a fair lady by a Turkish "Bashaw" and her rescue by her faithful lover, a young Spanish nobleman. The whole story is treated in the most light-hearted spirit, and Mozart's gay and tuneful music suits it admirably. It is recorded that when the opera was first performed, in the presence of the Emperor, he thought the scoring too full—it probably was considerably richer than any he was accustomed to—and that he said to Mozart, "There are too many notes in the music." If report be true, Mozart replied that there were just as many as there ought to be.

NATIONAL

- | | | | |
|-----------|-------|---------|-----|
| | kc/s | m. | kW. |
| London: | 1,148 | 261.3 | 50 |
| Daventry: | 193 | 1,554.4 | 30 |
| Northern: | 995 | 301.5 | 50 |
- 10.15 a.m.—The Daily Service.
 - 10.30—Time Signal (Greenwich); Shipping Forecast.
 - 10.45—11.0—"Off the Shelf"—IV.
 - 12 noon—The British String Quartet. Dorothea Aspinall (Pianoforte).
 - 12.45 p.m.—The Commodore Grand Orchestra.
 - 1.0—Time Signal (Greenwich).
 - 2.0—Gramophone Records.
 - 2.25—For the Schools: Reception Test.
 - 2.30—3.0—World History. Mr. J. A. White: "Empires, Movements and Nations—V. Russia."
 - 3.25—French Dialogue. Mademoiselle Camille Vière and Monsieur E. M. Stéphan.
 - 3.45—A Sonata Recital. Yvonne Morris (Violoncello). Hinda Phillips (Pianoforte).
 - 4.15—Mozchetto and his Orchestra.
 - 4.45—Time Signal (Greenwich).
 - 5.15 (Daventry)—The Children's Hour.
 - 5.15 (London and Northern)—The B.B.C. Dance Orchestra.
 - 6.0—"The First News."
 - 6.30—Time Signal (Greenwich).
 - 6.30—"The Foundations of Music. Mozart's Pianoforte Variations, Played by Maurice Cole.
 - 6.50—"New Books." Mr. Desmond MacCarthy.
 - 7.10—7.25—The Lord Gorell, C.B.E., M.C.: "How Art can help Industry."
 - 7.30—"Music, Old and New"—VI. Mr. Victor Hely-Hutchinson.
 - 8.0—A Sonata Recital. Arthur Catterall (Violin). Victor Hely-Hutchinson (Pianoforte).
 - 9.0—"The Second News."
 - 9.15—Shipping Forecast; New York Stock Market Report.
 - 9.20—"The Rungs of the Ladder"—III.
 - 9.40—"The Mardy Dramatic Society presents "The Poacher," a Comedy by J. O. Francis.
 - 10.25—"The Gershom Parkington Quintet.
 - 11.0—12 midnight—Dance Music.
 - 11.30—Time Signal (Greenwich).

REGIONAL

- | | | | |
|-----------|------|-------|-----|
| | kc/s | m. | kW. |
| London: | 842 | 356.3 | 50 |
| Midland: | 752 | 398.9 | 25 |
| Northern: | 626 | 479.2 | 50 |
- 10.15 a.m. (London and Northern)—The Daily Service.
 - 10.30—11.0 (London and Northern)—Daventry National Programme.
 - 11.30—12 noon (London)—Experimental Television Transmission (Baird Process).
 - 12—Ernest Parsons and his Orchestra.
 - 1.0 p.m.—Reginald Dixon at the Organ.
 - 1.45—3.0—The Midland Studio Orchestra, directed by Frank Cantell. James Doherty (Baritone).
 - 3.45 (London and Northern)—Daventry National Programme.
 - 5.15—"The Children's Hour."
 - 6.0—"The First News."
 - 6.30 (London)—Callender's Band. Conductor, Tom Morgan. David Buchan (Pianoforte).
 - 6.30 (Midland)—Light Music. Margaret Jaques (Contralto). Pattison's Salon Orchestra, under the direction of Norris Stanley.
 - 6.30 (Northern)—Reginald Dixon at the Organ.
 - 7.15 (Northern)—The Studio Orchestra. "Money makes a Difference," a Comedy in One Act by F. Morton Howard.
 - 7.30 (Midland)—"The Music of Beethoven." A Pianoforte Recital by Tom Bromley.
 - 8.0 (London and Midland)—"The Chase." An Anthology of Prose and Verse, including "Songs of the Chase."
 - 8.40 (Northern)—Mrs. Masterson: "Holidaying with our Ancestors—The Druids in Anglesey."
 - 9.0—Interval.
 - 9.5—Act II of Wagner's "Tannhäuser." Relayed from The Royal Opera House, Covent Garden. Conductor, Sir Thomas Beecham.
 - 10.15—"The Second News."
 - 10.35—11.0—(Midland)—As London.
 - 10.35—12 midnight (London and Northern)—Dance Music. Ambrose's Blue Lyres, from The Dorchester Hotel. (And perhaps the Song of the Nightingale.)

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

- BARCELONA (Spain)**
Radio-Barcelona (EAJR). 860 kc/s (349 m.); 8 kW.
Transmits at intervals from 12 noon.
8.0 p.m.—Trio Concert. Czardas, Magyar (Michiels). Sarabande (Bach). Réverie for 'Cello (Valauray). Aria from "Louise" (Charpentier), followed by Talk in Catalan, Exchange, Request Gramophone Records, Sports Notes and News.
10.0—Chimes and Weather. 10.5—Concert of Sardanas. 11.0—Orchestral Selections.
11.30—Choral Concert. La Sardana de la patria (Morera). La gent de fora (Canteloube). Largo (Handel). Moment musical (Schubert). La sardana gran (Morera). Selection (Mendelssohn). Je n'irai plus au bois (Weckerlin). Els Xiquets de Valls (Clavé).
12.30 a.m. (Tuesday)—Dance Music from the Excelsior. 1.0 a.m. (approx.)—Close Down.
- BELGRADE (Yugoslavia)**
697 kc/s (430.4 m.); 2.5 kW.
Transmits at intervals from 11.0 a.m.
5.30 p.m.—Zither Recital by Ivan Skalar. 6.55—Time and Programme Announcements. 7.0—French Lesson. 7.30—Gramophone Records of Light Music.
8.0—Pianoforte Recital by Mira Mokranjac. Sonata, Op. 31, No. 2 (Beethoven). Dance (Pick-Mangiaggi). Selections (Liadov): (a) Two Preludes, (b) The Musical Snuff-box. Two Pieces (Smetana).
8.40—A Comedy. 9.10—Orchestral Concert. 10.10—News, followed by Dance Music on Gramophone Records. 11.30—Cigany Music, relayed from the Restaurant "Potrosacka Zadruga."
- 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 Records of Request Songs and Arias; and Second Weather for Farmers. 12.55 p.m.—Nauen Time Signal. 1.30—News Bulletin.

- 2.0—Gramophone Records of Arturo Toscanini and the New York Philharmonic Orchestra, relayed from Berlin (Witzleben). 2.45—The Children's Radio Journal. 3.30—Weather and Exchange. 3.40—Talk for Young People. 4.0—Educational Talk. 4.30—See Berlin (Witzleben). 5.30—Talk: From Daumier to Kokoschka—The History of Lithography.
 - 6.0—Talk: The Baltic and its Neighbouring Countries—the Neighbouring States and Poland. 6.30—Elementary Spanish Lesson. 6.55—Weather for Farmers. 7.0—Topical Talk. 7.20—Agricultural Talk. 7.35—Talk: The Progress of European Radio during 1932, followed by Weather for Farmers. 8.0—See Hamburg. 9.10 (approx.)—See Breslau. 10.20—Political Press Review. 10.40—News Bulletin. 11.0—Concert from Munich. 12 midnight (approx.)—Close Down.
- BERLIN (Germany)**
Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m. (Gymnastics and Concert from Breslau).
4.30 p.m.—Concert by the Schneider Quartet. Second String Quartet in C Minor, Op. 18 (Arthur Hartmann). String Quartet in C Minor, op. 18, No. 4 (Beethoven).
5.30—Programme for Young People.
5.50—Talk on Art. 6.10—Wireless Notes. 6.25—Medical Talk. 6.55—Item to be announced. 7.0—Topical Talk. 7.10—Gramophone Cabaret.
7.55—Labour Market Report. 8.0—Songs of the Day—Programme by Edith Braun, Erika Heimke, Ernst Busch and Gerd Fricke (arr. Hans Hermann Rosenwald). 9.0—News and Sports Notes.
9.10—Symphony Concert by the Berlin Wireless Orchestra, conducted by Bruno Seidler-Winkler. Soloist: Maurits van den Berg (Violin). Concerto for Violin and Orchestra in E Minor (Mendelssohn). Symphony No. 8 in F (Beethoven). 10.0—News Bulletin, followed by Dance Music from the Europa Pavilion. 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. (Concert).

- 7.30 p.m.—News, Exchange and Market Prices. 7.40—Sports Talk. 7.55—Lottery Results. 8.0—Talk on Hygiene. 8.15—Charades. 8.20—News Bulletin and Weather Forecast. 8.30—Variety Programme, Gascon Plays and Songs, with Introductory Notes.
- BRATISLAVA (Czechoslovakia)**
1,076 kc/s (279 m.); 14 kW.
Transmits at intervals from 11.0 a.m.
7.0 p.m.—Popular Music on Gramophone Records. 7.20—"Midnight"—Comedy (Georges Barbarin), relayed from the Studio. 8.0—See Prague. 10.15—Programme Announcements and Theatre Guide. 10.20—Concert of Popular Music.
- BRESLAU (Germany)**
923 kc/s (325 m.); 1.5 kW.
Relayed by Gleiwitz, 1,184 kc/s (253 m.).
Transmits at intervals from 6.0 a.m.
6.5 p.m.—Review of Periodicals. 6.35—English Lesson. 6.50—Surprise Programme. 7.0—Weather for Farmers.
7.5—Stravinsky Concert for his Fiftieth Birthday (on Gramophone Records.) Talk by Dr. Edmund Nick. Selection from "The Fire Bird." Selection from "The Symphony of Psalms." Pianoforte Solo by the Composer from the Caprice for Pianoforte and Orchestra. Selection from "Le Sacre du Printemps."
7.55—Weather for Farmers. 8.0—See Hamburg.
9.10—"A Silesian Wedding in May" (Hans Christoph Kaergel). Music by Karl Sczuka. 10.15—Time, Weather, News, Sports Notes and Programme Announcements.
10.35—"The Microphone listens to the Nightingale"—Experimental Relay from a Park in Breslau. 10.55—News Bulletin. 11.10—Answers to Technical Queries. 11.20 (approx.)—Close Down.
- BRNO (Czechoslovakia)**
878 kc/s (342 m.); 35 kW.
Transmits at intervals from 11.0 a.m.
7.0 p.m.—Variety Programme. 8.0—See Prague. 10.15—Announcements. 10.20—See Bratislava.

MONDAY continued

BRUSSELS (Belgium) (No. 1) I.N.R. 590 kc/s (599 m.); 15 kW. 12 noon—Orchestral Concert. 12.30 p.m. (in an interval)—Weather. 2.0—Programme arranged by the Ministry of Arts and Science. Talk on Lully, with Musical Illustrations. 2.30—Gramophone Record. 2.35—Talk: How to Read Weather Charts. 5.0—Dance Music from the Hotel Atlanta. 6.15—Hints for Amateur Photographers. 6.30—Gramophone Records. The Second Symphony in B Minor (Borodin). Oriental Fantasia for Pianoforte, Islamey (Balakirev). Aria from "Sadko" (Rimsky-Korsakov). A Night on the Bare Mountain (Moussorgsky). 7.15—Talk: Artan—A Belgian Painter. 7.30—Le Journal Parlé. 8.0—Violin Recital by Maurice Rtskin. Romance in G (Beethoven). Sarabande and Gigue from the Partita in D Minor for Violin (Bach). Berceuse (Radoux-Roglar). Sicilienne et Rigaudon (Francoeur). Spanish Serenade (Chaminade-Kreisler). 8.45—Readings of Poems by Max Elskamp; Ivan Gilken, D'Annunzio, Verhaeren, and Fernand Grehg. 9.0—Orchestral Concert, conducted by Charles Walpot. Soloist: Armand Crabbe (Baritone). Marche lorraine (Ganne). Overture, "The Daughter of the Regiment" (Donizetti). Wine, Woman and Song (Johann Strauss). Songs. Selection from "Les Dragons de Villars" (Maillart-Tavan). Waltz, Rose-mousse (Bosc). Fantasia on Airs by Scotto (arr. Salabert). 10.0—Le Journal Parlé. 10.10—Concert (cont.)—American Music. March, Stars and Stripes (Souza). Selection from "New Moon" (Romberg-Salabert). Argentine Songs. American Sketch, "Way down South (Myddleton). Brazilian Songs. Rumba Foxtrot, Chez moi (Michueloff). 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—Trio Concert. 12.30 p.m. (in an interval)—Weather. 2.0—Talk arranged by the Ministry of Art and Science: Floral Decoration in Schools. 2.15 (approx.)—"Elkerlijck"—a Radio Play (de Baere and Maes), relayed from Hasselt. 5.0—Orchestral Concert conducted by M. Walpot. Marche Florentine (Fucik). Waltz from "Gipsy Love" (Lehar). Overture, "La Dame blanche" (Boieldieu). Gavotte, Glühwürmchen (Lincke). Selection from "La Bohème" (Puccini-Gauwin). The Mill in the Black Forest (Eilenberg). Potpourri, Un diner chez Suppé (Morena). Foxtrot-Fantasia on "The Merry Widow" (Lehar-Robrecht). 6.0—Gramophone Records. Overture, "Véronique" (Messager). Czardas (Monti). Selection from "Frasquita" (Lehar). 6.15—Talk: The Marionette Theatre. 6.30—Gramophone Concert of Viennese Music. Selection from "A Waltz Dream" (Oscar Straus). Selection from "Die geschiedene Frau" (Fall). Caprice viennois (Kreisler). Mazurka, Frauenherzen (Joseph Strauss). Selection from "Frederica" (Lehar). Polka-Mazurka, Die schöne Polin (Millocker). Two Hearts and a Waltz Refrain (Stolz). Foxtrot (Hamilton). Quick Foxtrot, Mona Lisa (Carter). 7.15—Variety Items. 7.30—Sports Talk. 8.0—Concert by the Radio Symphony Orchestra conducted by M. Meulemans. Symphony No. 6 in B Minor—"The Pathetic" (Tchaikovsky). 8.45—Selections from "Het Gezin van Paemel" (Byssse). 9.30—Concert (cont.). Overture, "Semiramis" (Rossini). Dance of the Hours, from "La Gioconda" (Ponchielli). The Sanctuary of the Heart (Kettelbey). Waltz (Buccalossi). 10.0—Le Journal Parlé. 10.10—See Brussels 1. 11.0 (approx.)—Close Down.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (391 m.); 12 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Concert by the Station Orchestra. March (Blankenburg). Waltz (Cristofaro). Celtic Overture (Foulds). Persian Scene (Rust). Slavonic Dance No. 5 (Dvorak). Humorous Piece (Claudi). Symphonic Andante, King Lear (Rust). Paso-doble (Micheli). Potpourri of the Music of Hellmesberger (Ischpold). Petite valse triste (Kokka). In the interval at 5.0—News Bulletin and Time Signal.

6.0—Scientific Talks. 6.40—Light Music on Gramophone Records. 7.0—Introductory Talk to the following Transmission. 7.15—Chamber Music Concert. Quartet Op. 113 (Beethoven). Variations on a Theme by Mozart, for Two Pianofortes (Regger). Quartet No. 135 (Beethoven). 8.45—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 6.45 p.m. till Close down. 6.20 p.m.—German Lesson. 6.45—Recital of Classical Songs by Therese Koszegi with Gyula Revere (Harp) and Georg Hannover (Violin). Two Songs (Wagner): (a) Traume, (b) Schmerzen. Maria Wiegengiedl (Regger). Cradle Song (Tchaikovsky). Aria (Goldmark). Jeta, (Falla). Der Geiger (Hildach). Liebeslied (Hollmann). Gitana (Hasselmans). Aria from "The Duel" (Herold). Vöglein im Walde (Taubert). 8.0—See Schweizerischer Landesender (Beromünster). 10.0—News, followed by Concert of Jazz and Gipsy Music from the Café Ostende. Soloist: Paul Kalmár (Songs).

COPENHAGEN (Denmark) 1,067 kc/s (281 m.); 0.75 kW. Relayed by Kalundborg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. (Gymnastics). 11.0 a.m.—Weather Forecast. 11.10—Angling Notes. 11.15—11.45—Talk for Schools. 12 noon—Town Hall Chimes. 12.2—2.0 p.m.—String Ensemble Concert from the Palace Hotel. 2.50—Gramophone Records of Variety Music. Rösina's Aria from "The Barber of Seville" (Rossini). Aria from "The Force of Destiny" (Verdi). Song from "The Circus Princess" (Kálmán). Song (Ruby). Ragtime Revue. Good-night, little girl, good-night (Ege and Dobson). 3.20—Talk for the Housewife. 3.30—Orchestral Concert, conducted by Launy Gröndahl. Hungarian March, Hunyadi Laszlo (Erkel). Three Selections from the "Suite ancienne" (Hålvorsen). Myrthen-Walzer (Johann Strauss). Selection from "Samson and Delilah" (Saint-Saëns). Selection from the Suite "Caucasian Sketches" (Ippolitov-Ivanov). Readings (Gunnar Gunnarsson). Overture, "Tancredi" (Rossini). Spanish Serenade (Albeniz). Two American Folk Songs arranged for Strinas (Carl Busch): (a) My old Kentucky Home, (b) Old Folks at Home. Spanish Suite, La Feria (Lacôme). Entr'acte and Barcarolle from "The Tales of Hoffman" (Offenbach). Overture, "La Belle Hélène" (Offenbach). 5.40—Exchange and Fish Market Prices. 5.50 (from the Esbjerg Studio)—Talk by Axel Ammentorp. 6.20—Fleventary English Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Talk. 8.0—Town Hall Chimes. 8.2—Orchestral Concert of Old French Dance Music, conducted by Emil Reesen. Marche des communiers brugeois (de Bois). Waltz, Quand l'amour meurt (Crémieux). Tourniquet Polka (Ganne). Mazurka, La Mousmée (Ganne). Valse chaloupée (Dubourg). March, Monôme d'étudiants (Casadesu). Waltz, Rêve à deux (de Bossi). Polka for two Piccolo Flutes, Les Fauvettes (Bousquet). Bébé Polka (Lanciani). Mazurka from "Coppélia" (Delibes). March, En revenant de la revue (Desormes). 9.5—Reading. 9.45—News Bulletin. 10.0—Concert of Contemporary Danish Music. String Quartet No. 2 (Herman Sandby). Songs (Camillo Carlsen): (a) Dagen, (b) Aftenklokken, (c) Alverdens dejligste Rosen sprang ud, (d) Det var lutter Sol, (e) Foraar. Quintet for Strings in F Minor, Op. 40. 11.0—Dance Music, relayed from the Industri Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (Tuesday)—Close Down.

6.0—Gramophone Records. Overture, "Véronique" (Messager). Czardas (Monti). Selection from "Frasquita" (Lehar). 6.15—Talk: The Marionette Theatre. 6.30—Gramophone Concert of Viennese Music. Selection from "A Waltz Dream" (Oscar Straus). Selection from "Die geschiedene Frau" (Fall). Caprice viennois (Kreisler). Mazurka, Frauenherzen (Joseph Strauss). Selection from "Frederica" (Lehar). Polka-Mazurka, Die schöne Polin (Millocker). Two Hearts and a Waltz Refrain (Stolz). Foxtrot (Hamilton). Quick Foxtrot, Mona Lisa (Carter). 7.15—Variety Items. 7.30—Sports Talk. 8.0—Concert by the Radio Symphony Orchestra conducted by M. Meulemans. Symphony No. 6 in B Minor—"The Pathetic" (Tchaikovsky). 8.45—Selections from "Het Gezin van Paemel" (Byssse). 9.30—Concert (cont.). Overture, "Semiramis" (Rossini). Dance of the Hours, from "La Gioconda" (Ponchielli). The Sanctuary of the Heart (Kettelbey). Waltz (Buccalossi). 10.0—Le Journal Parlé. 10.10—See Brussels 1. 11.0 (approx.)—Close Down.

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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—See Warsaw. 7.25—Programme Announcements. 7.30—Light Music on Gramophone Records. 7.45—See Warsaw. 10.50—News Bulletin. 11.0—Popular Music on Gramophone Records. 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—Gaedhilg. 7.45—Talk: Water Sports in Germany. 8.0—The Station Sextet. 8.15—Soprano Solos by Winnie McGough. 8.25—Pianoforte Solos by Kitty Pyne. 8.40—Bass Solos by H. J. McCormick. 8.50—The Station Sextet. 9.5—The Emer Comedy Company. 9.35—Contraalto Solos by Florence Howley. 9.45—Violin Solos of Folk Music by Tom Collins. 10.0—Concert by the Siamsa Gaedheal Band. 10.30—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France) Radio Normandie. 1,364 kc/s (219.9 m.); 10 kW. 12 noon—Sponsored Gramophone Concert. 12.30 p.m.—Press News. 12.45—Concert of Light Music. 7.30—Journal Parlé. 8.0—News Bulletin. 8.30—Concert by the Symphony Orchestra of the Collège d'Eu, with Introductory Talk by M. Boulon. Selection from "A Midsummer Night's Dream" (Mendelssohn). Overture, "The Caliph of Baghdad" (Boieldieu). Selection from "Rodelinda" (Handel). Selection from "Benvenuto Cellini" (Rossini). Overture, "Tancredi" (Rossini). An die ferne Geliebte (Beethoven). Solveig's Song from "Peer Gynt" (Grieg). Andante and Minuet from The Surprise Symphony (Haydn). Spanish Dance (Granados). Prelude and Allegro (Kreisler). Overture, "Egmont" (Beethoven). 11.0—Dance Music. 1.0 a.m. (Tuesday)—Close Down.

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

FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relayed by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 12 noon—Gramophone Concert of Light Music. 12.50—News and Weather Report. 1.0—Concert from Langenberg. 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Time and Economic Notes. 3.20—Talk: Women in Modern India. 4.55—Economic Notes. 5.0—See Stuttgart. 6.15 p.m.—Economic Notes. 6.25—Talk: Births, Marriages and Deaths. 6.30 English Language Lesson. 7.15—Time, Programme Announcements and Weather. 7.30—Italian Folk Song Recital by Victor Orsin (Tenor) and Hans Rosbald (Pianoforte). 8.30—Sling Memorial Programme. Introductory Talk and Readings. 9.0—Symphony Concert. Soloist: Fritz Malata (Pianoforte). Pianoforte Concerto, Op. 36 (Roussel). Symphony in D Minor (Frank). 10.0—The Unemployed—a Gramophone Report. 10.30—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. 6.55 p.m.—Exchange and Market Prices. 7.0—Topical Talk. 7.15—Weather. 7.20—Jochen Klepper reads two of his stories. 8.0—Military Band Concert from the Café Kröpke. March (Lippe). Croatian Overture (Rosenkranz). Spanish Rhapsody (Richardy). Marche aux Flambeaux No. 1 in B Flat (Meyerbeer). Song, Sehnsucht (Rubenstein). Military Fanfare (Ascher). March, Der alte Berner (Schmelting). The Duke of Brunswick—Army March No. 9. Kreuzritzerfanfare (Henrión). March (Siemen). March on Motives from Quadrilles (Johann Strauss). Cavalry March. Potpourri of Soldier Songs. Erinnerung aus dem Militärleben. 9.10—Mystic Ballads—Programme by Ernst Ledesdorff (Recitations) and Bernhard Jakschat (Baritone). Song, Die nichtliche Heerschau (Loewe). Recitation, Hohenstaufen

(Justinus Kerner). Song: Reveille from "Des Knaben Wunderhorn" (Gustav Mahler). Recitation, Gesicht (Wilhelm Weigand). Song, Die verfallene Mühle (Loewe). Recitation, Hunnenzug (von Mänchhausen). Song, Drei Wanderer (Hans Heimann). Recitation, Der Totentanz (Goethe). Song from "The Flying Dutchman" (Wagner). 10.0—News Bulletin. 10.20—Bi-Monthly Report of the Norag Sound News Service.

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. 11.45 a.m.—Concert from Hamburg. 1.5 p.m.—Concert of Popular Music on Gramophone Records. Overture, "The Daughter of the Regiment" (Donizetti). Selig sind, die Verfolgung leiden (Kienzl). Lebe wohl, mein flandrisch Mädchen (Lortzing). O Santa justitia (Lortzing). Selection from "The Tales of Hoffmann" (Offenbach). Potpourri of Waltzes (Robrecht). Tango, It would be wonderful indeed (Benatzky). Mein Liebeslied muss ein Walzer sein (Stolz). Heut' Nacht hab' ich von dir getraut (Kálmán). Lieber kleiner Eintänzer (Rosen). Eine Liebelie, so rebenbei (Holländer). Kind, dein Mund ist Musik (Holländer). Kaiserwalzer (Jehann Strauss). Was war ich ohne Euch, Ihr wunderschönen Frauen (Lehar). Heut' geh' ich aufs Ganze (Ascher). Dance nègre (Scott). Tausendmal Du (Niederberger). Liebeslocken (Woitschak). Kein Feuer, keine Kohle (Haymann). Und der Hans schleicht herum (Seidler-Windkler). March (Souza). 3.30—Programme for Children. 4.0—(from Danzig)—Popular Folk Songs, by the MG V Choral Society, conducted by Walter Hanft. 4.30—Concert from Breslau. 5.30 (from Danzig)—"Danzig" Programme. 6.0—Review of Periodicals. 6.15—Market Prices. 6.25—Talk for Manual Workers: German Locksmiths. 6.50—Talk: Memorable Days of the Week. 7.0—Pianoforte Recital by Mara Cremer. 7.30—Authors' Programme: Günther Goldschmidt reads from his own works. 8.0—Weather Forecast.

8.5—"Die beiden Schützen"—("The Two Marksman") Comic Opera in Three Acts (Lortzing), relayed from the Danzig Municipal Theatre. News Bulletin in the Interval. After the Transmission, Weather, News Bulletin and Sports Notes.

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up to 4.40 p.m.). Programme of the Algemeene Vereeniging Radio Omroep (A.V.R.O.). 7.40 a.m.—Time Signal. 7.41—Programme of Light Music on Gramophone Records. 9.40—Time Signal. 9.41—Daily Service. 9.55—Popular Music on Gramophone Records. 10.10—Reading. 10.40—Organ Recital by Piet van Egmond, Jr. (Organ) and Jeanne de Ruijter (Vocalist). Organ Solo: Fugue in C (Buxtehude). Songs: (a) Col mio sangue (Stradella), (b) Canzonetta (Scarlatti). Organ Solos: (a) Prelude and Fugue in D (Bach), (b) Gothic Minuet (Böslmann), (c) Adagio molto (Guilmant). Songs (Puccini): (a) When I am laid in Earth, (b) I attempt from Love's sickness to fly, (c) Nymphs and Shepherds. Organ Solos: (a) Toccata (Widor), (b) Improvisation (Piet v. Egmond, Jr.). 11.40—Time Signal.

11.41—Concert by the Station Chamber Orchestra, conducted by Louis Schmidt. Soloists: Boris Lensky (Violin), Egbert Veen (Pianoforte). Overture, "Idomeneus" (Mozart). Selection from "Lucia di Lammermoor" (Donizetti). Canzonetta (Boccherini). Minuet (Boccherini). Slovak Dances (Felber). Items for Violin and Pianoforte: (a) Rondino (Beethoven-Kreisler), (b) Muscovite Dance, (c) Polichinelle Serenade (Kreisler), (d) Caprice (Benda). Waltz, Rudolfsklänge (Josef Strauss). Serenade amoroso (Bece). Reminiscences of Capri (Bece). Selection from "La Vie Parisienne" (Offenbach). "Der Zigeunerprimas" (Kálmán). Items for Violin and Pianoforte: (a) Poem (Fibich-Kubelik), (b) Dance (Lensky), (c) Love Fairy (Lensky). Selection from "Eine einzige Nacht" (Stolz). Serenade (Chaminade). Elevation (Chaminade). Teufelsmarsch (Suppé). 11.55—Interval. 2.10—Talk and

Light Music on Gramophone Records. 3.10—Concert of Light Music, relayed from the Hotel Central, The Hague. 4.10—Programme for Children. 5.10—Concert of Light Music by Kovacs Lajos and his Orchestra, with Songs by Bob Scholte and Anny Prins. Gramophone Records in the intervals. 6.40—Book Review. 7.10—Accordion Recital by the Three Hawk-courts. 7.40—Time Signal. 7.41—French Opereita Programme by the Station Orchestra, conducted by Nico Treep. Soloist: Grethe Weijnschenk-Hogenbirk (Soprano). Overture, "Orpheus in the Underworld" (Offenbach). Selection from "Les Cloches de Corneville" (Planquette). Bolero from "Le Cœur et la Main" (Lecocq). Barcarole from "The Tales of Hoffmann" (Offenbach-Fétrás). Soprano Solos: (a) Song from "Le Jour et la Nuit" (Lecocq), (b) Song from "Les petites Michus" (Messager). Selection from "Surcouf" (Planquette). 8.25—Concert by a Male Voice Choir. 8.40—German Opereita Programme. Overture, "Die schöne Galathée" (Suppé). Selection from "Der Bettelstudent" (Müllacker). Song from "Eva" (Lehar). Waltz from "The Count of Luxembourg" (Lehar). Song from "The Count of Luxembourg" (Lehar). Waltz-Song from "Herbstmanöver" (Kálmán). Selection from "The Circus Princess" (Kálmán). March (Kálmán). 9.25—Concert by a Male Voice Choir. 9.40—Weather Forecast and News Bulletin. 9.50—Concert by the Station Orchestra, conducted by Nico Treep. Marche lorraine (Ganne). Overture to a French Comedy (Keler-Bela). Canzonetta (Caludi). Romantic Waltz (Heinecke). The Mill in the Black Forest (Eilenberg). Tango, Bolivia (Castaldo). Potpourri of the Music of Jehann Strauss (arr. Weber). March, Blaze Away (Holzmann). 10.40—Light Music on Gramophone Records. 11.40 (approx.)—Close Down.

HUIZEN (Holland) 815 kc/s (1,875 m.); 8.5 kW. Programme of the Christian Radio Society (N.C.R.V.). 7.40 a.m.—Time Signal and Reading. 7.55—9.10—Morning Concert. 10.10—Service for Hospitals. 10.40—Reading. 11.10—Gramophone Records of Variety Music. 11.40—Police Notes. 12.10 p.m.—Time Signal, and Organ Recital, relayed from Amsterdam. 1.40—Gramophone Records of Variety Music. 2.25—Talk for the Housewife. 2.55—Dressmaking Lesson. 3.25—Programme to be announced. 3.40—Service for Hospitals. 4.40—Gramophone Records of Variety Music. 5.10—Recital of Sacred Songs, with Commentary. 6.10—Question Time. 7.10—Police Notes. 7.25—News Bulletin. 7.40—Concert by the N.C.R.V. Symphony Orchestra, conducted by Frits Schuurman, with Selections by the N.C.R.V. Ladies' Choir. Overture, "Michel Angelo" (Gade). Siegfried Idyll (Wagner). Choral Selections: (a) Lof en aanbidding (Rinck), (b) Lof des Heeren (Silcher), (c) Psalm 150 (McPhail). Evensong (arr. Schuurman). Hymn 96 (arr. Schuurman). Holy, Holy, Holy (Dykes). Choral Selections: (a) Lof zij den Heer (Melody of 1665), (b) Gloria (Bortniansky), (c) Selection from Psalm 24 (Vijveboom). 8.40—Talk: The Press and the Christian Workers' Movement. 9.10—Concert (cont.).—Serenade for String Orchestra (Wolf-Ferrari). Overture, "Manfred" (Schumann). Slavonic March ("Tchaikovsky). 9.40 (in an interval)—News. 10.10—Gramophone Records of Variety Music. 11.10 (approx.)—Close Down.

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

KATOWICE (Poland) 734 kc/s (408 m.); 16 kW. Transmits at intervals from 11.58 a.m. 5.35 p.m.—Concert of Light Music. 7.0—Literary Programme. 7.20—Talk: Works of Art. 8.0—Talk on Music. 8.15—See Warsaw. 10.30—Talk. 10.45—News Bulletin. 11.0—Dance Music.

KAUNAS (Lithuania) 155 kc/s (1,935 m.); 7 kW. Transmits at intervals from 12 noon. 4.45 p.m.—Concert of Popular Music, by a String Quartet. Liebes Täubchen

8.40—German Opereita Programme. Overture, "Die schöne Galathée" (Suppé). Selection from "Der Bettelstudent" (Müllacker). Song from "Eva" (Lehar). Waltz from "The Count of Luxembourg" (Lehar). Song from "The Count of Luxembourg" (Lehar). Waltz-Song from "Herbstmanöver" (Kálmán). Selection from "The Circus Princess" (Kálmán). March (Kálmán). 9.25—Concert by a Male Voice Choir. 9.40—Weather Forecast and News Bulletin. 9.50—Concert by the Station Orchestra, conducted by Nico Treep. Marche lorraine (Ganne). Overture to a French Comedy (Keler-Bela). Canzonetta (Caludi). Romantic Waltz (Heinecke). The Mill in the Black Forest (Eilenberg). Tango, Bolivia (Castaldo). Potpourri of the Music of Jehann Strauss (arr. Weber). March, Blaze Away (Holzmann). 10.40—Light Music on Gramophone Records. 11.40 (approx.)—Close Down.

8.40—German Opereita Programme. Overture, "Die schöne Galathée" (Suppé). Selection from "Der Bettelstudent" (Müllacker). Song from "Eva" (Lehar). Waltz from "The Count of Luxembourg" (Lehar). Song from "The Count of Luxembourg" (Lehar). Waltz-Song from "Herbstmanöver" (Kálmán). Selection from "The Circus Princess" (Kálmán). March (Kálmán). 9.25—Concert by a Male Voice Choir. 9.40—Weather Forecast and News Bulletin. 9.50—Concert by the Station Orchestra, conducted by Nico Treep. Marche lorraine (Ganne). Overture to a French Comedy (Keler-Bela). Canzonetta (Caludi). Romantic Waltz (Heinecke). The Mill in the Black Forest (Eilenberg). Tango, Bolivia (Castaldo). Potpourri of the Music of Jehann Strauss (arr. Weber). March, Blaze Away (Holzmann). 10.40—Light Music on Gramophone Records. 11.40 (approx.)—Close Down.

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MONDAY
continued

(Sosnauskas). Réverie (Vieuxtemps). Hungaria (Leopold). Pianoforte Solos. Ich liebe Dich (Grieg). Waltz (Kacanauskas). 8.40—Talk: The Preparation of Leather. 9.0—Concert of Chamber Music. 9.30—Talk on Children. 9.50—Concert of Popular Music. The Clock and the Dresden Figures (Kettelbey). Oriental Romance (Rimsky-Korsakov). Invitation to the Dance (Weber). Serenade (Schubert). Selection from "Sylvia" (Delibes).

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.—Reading. 5.20—German Lesson. 6.10—News in Swedish. 6.15—Agricultural News. 6.25—Musical Programme. 6.40—Talk. 7.5—Scandinavian Musical Festival. Concert by the Norwegian Orchestra, conducted by Harald Heide. Soloists: Erling Krogh (Songs) and Waldemar Alme (Pianoforte). Symphony, No. 3 in B Flat Minor (Säverud). Three Songs with Orchestral Accompaniment (Eggen). Norwegian Rhapsody (Reidarson). Pastorale (Valen). Two Songs with Orchestral accompaniment (Monred-Johansen). Pianoforte Concerto in F Minor (Gjerström). 8.15—Talk on Music. 8.45—News in Finnish. 9.0—News in Swedish.

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. Overture, "Der Freischütz" (Weber). Selections from "I Pagliacci" (Leoncavallo). Two Selections (Rubinstein): (a) Melody, (b) Torch Dance of the Brides of Kashmir. Volga Song. Stenka Razin. Potpourri of Rhineland Songs (Kernbach). Rumba, Arabella (Wayne). 12 noon—Concert of Light Music. 12.50 p.m.—Weather, News and Time Signal. 1.0—Orchestral Concert, conducted by Ralph Zurn, relayed from the Apollo Theatre, Düsseldorf. Overture, "William Tell" (Rossini).

Largo from the New World Symphony (Dvorak). Prelude "I Ranzau" (Mascagni). Symphonic Poem, Helvetia (Scassola). Waltz, Frühlingsstimmen (Johann Strauss). Tango, A Night in Monte Carlo (Heymann). Boston, Es führt kein and'rer Weg zur Seligkeit (Heymann). Potpourri, "Ufa" allen voran (Zurn). 2.30—Meat Market Prices. 3.30—Economic Notes and Time Signal. 3.50—Programme for Children 4.20—Programme for Young People. 5.0—Concert. Caspar Koch (Tenor), Walter Schneiderhan (Violin) and Egbert Grape (Pianoforte). Sonata No. 4, for Violin and Pianoforte (Mozart). Tenor Solos (Schubert): (a) Der Herbst, (b) Der Doppelgänger. Tenor-Solo: Frühlingsfahrt (Schumann). Tenor Solos: (a) Gesang Weylas, (b) Verborgenheit (Wolf), (c) Zueignung (Richard Strauss). Sonata in E Flat Op. 18 (Richard Strauss). 6.15—Talk: The New Position of the Arts. 6.40—Talk for Parents: Schoolchildren's Breakfasts. 7.0—Weather, Time, Economic and Sports Notes. 7.15—Topical Talk. 7.30—Talk: Everyday Legal Questions. 7.55—First General News. 8.0—Orchestral Concert, conducted by Eysoldt. March, Auf rauhen Pfaden zu den Sternen (Urbach). Reselrheinländer (Lüdecke). Waltz, Donauwellen (Ivanovici). March, Schneidige Truppe (Lehnhardt). Two Selections (Johann Strauss): (a) Annenpolka, (b) Pizzicato Polka. "Das Gesetz des Türmers"—a Radio Picture (Rudolf Predeck). March, Die Wachtparade (Blankenburg). Polka Mazurka, Fair Japan (Ganne). Radetzky March (Johann Strauss). Programme of New Dance Music. 9.45—Technical Talk. 10.20—News and Sports Notes. 10.35—Concert from the Café Wien am Ring, Cologne. 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 6.0 a.m. 6.0 p.m.—Review of New Books. 6.30—Literary Talk: Hansgeorg Maier. 6.50—Programme to be announced. 7.0—Talk: Faith and Superstition in Medicine. 7.30—

Gramophone Records of Operatic Music. 8.30—"Kampf um die Scholle"—A Literary Radio Sequence about Peasant Life (Alfred Matusche). 9.15—Concert of Musical Rarities by the Leipzig Symphony Orchestra, conducted by Theodor Blumer. Wellington's Victory or The Battle of Vittoria, Op. 91 (Beethoven). Iridesches und Göttliches im Menschenleben, for Double Orchestra, Op. 121 (Spohr). 10.15—News Bulletin. 10.30 (approx.)—Concert of Popular Songs by Leipzig Composers, by the Emde Dance Orchestra. Polonaise on Folk Songs (Reiny Roland). English Waltz, Leise klingt das Lied (Arno Elster), Foxtrot, Beim Maskenball (Artur Dvorschak). Tango, Sonne von Peru (Günter Hausswald). Tango (Freudenthal). Rumba, Wie sag ich's meiner Mutti? (Günther Hausswald). English Waltz (Gerhart Novotny). March Foxtrot, Es lebe hoch das Leben (Mentsche). Tango, Madonna Gioconda (Fred Richter). Tango, Und wer die Liebe kennt (Arno Elster). 12 midnight (approx.)—Close Down.

LJUBLJANA (Yugoslavia)

522 kc/s (574.7 m.); 2.5 kW. Transmits at intervals from 12.15 p.m. 6.0 p.m.—Quintet Concert. 7.0—Czech Lesson. 7.30—Talk on the History of Art. 8.0—Concert of Chamber Music. 9.0—Quintet Concert. 10.0—Time, News and Concert of Light Music.

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: The Tyranny of Conventions. 7.45 till Close Down.—See Warsaw. 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.—Light Music on Gramophone Records. 7.0—Popular 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 (E.A.7). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 12.45 p.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 Brno. 8.0—See Prague. 10.15—Programme Announcements and Theatre Guide. 10.20—See Bratislava.

MOSCOW (Russia)

Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in German and English: The Soviet Youth's Recreations. 9.55—Time Signal. 10.0—Weather Forecast.

MUNICH (Germany)

593 kc/s (533 m.); 1.5 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.) and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 4.50 p.m.—Orchestral Concert, conducted by Erich Kloss. Overture, "Il Guarany" (Gomez). Berceuse (Järnefeldt). Suite, Scènes pittoresques (Massenet). La Lettre de Manon (Gillet). Selection from "The Gipsy Baron" (Johann Strauss). March, Künstlerblut (Blankenburg). 5.50—A Radio Report from St. Ingbert. 6.15—Time Signal, Weather Report and Agricultural Notes. 6.25—Talk: Holderlin. 6.50—Talk: German History and German Character (II). 7.25—Introductory Talk to the following Transmission. 7.35—"Il Seraglio"—Opera in Three

Acts (Mozart), relayed from the Residenztheater.

10.20—Time Signal, Weather Report, News Bulletin and Sports Notes. 10.45—Concert of Light Music, conducted by Erich Kloss. 12 midnight (approx.)—Close Down.

OSLO (Norway)

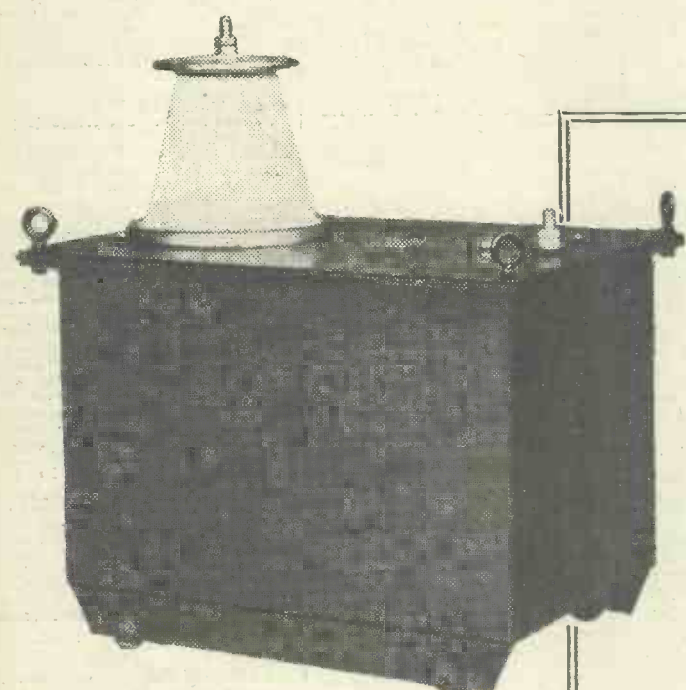
Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.); and Rjukan, 671 kc/s (447.1 m.). Transmits at intervals from 11.10 a.m. 5.0 p.m.—Chamber Music by the Station Ensemble, conducted by Oscar Gustavson. 6.0—German Lesson. 6.30—Sonata for Violin and Pianoforte (Max Reger). 7.0—Announcements, Weather Forecast and News Bulletin. 7.30—Talk: Colour and Shape, relayed from Troidheim, 608 kc/s (493.4 m.). 8.0—Time Signal. 8.1—Recitations. 8.25—Popular Music on Gramophone Records. 8.45—Review of Foreign Politics. 9.15—Songs and Review of the Week by Lyktemann. 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Recital by the Norwegian Students' Choir conducted by Sigurd Torkildson 10.45 (approx.)—Close Down.

PALERMO (Italy)

Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 5.30—6.30 p.m.—Concert of Variety Items and Dance Music. 8.0—Announcements, Giornale dell' Enit, Agricultural Notes, Report of the Royal Geographical Society and Giornale Radio. 8.20—Popular Music on Gramophone Records. In the interval at 8.30—Time Signal and Announcements. 8.45—"The Barber of Seville"—Opera (Rossini), on Gramophone Records. In the intervals, Fashion Review and Notes on Art. 10.55—News Bulletin and Close Down.

PARIS (France)

Eiffel Tower (F.L.E.). 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.—Cinema Review. 7.0—



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MONDAY continued

Le Journal Parlé. 8.20—Weather Forecast.
8.30—Variety Program. Talk by Mme. Beatrix Dussane. "The Kiss"—Comedy in One Act in Verse (de Barville).
9.35—Hawaiian Guitar Recital. 10.5 (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.—Wagner Concert on Gramophone Records on the Anniversary of the Composer's Birth. Overture, "The Flying Dutchman." Chorus from "Lohengrin." March from "Tannhäuser." Entry of the Gods into Valhalla from "The Ringgold." Aria from "The Valkyries." Forest Murmurs from "Siegfried." Siegfried's Rhine Journey from "The Twilight of the Gods." Overture, "The Master-Singers." Death of Isolde from "Tristan and Isolde." Transformation from "Parsifal." In the intervals at 1.0—Exchange, News and Weather, and at 1.30 and 2.0—Exchange. 3.45—Exchange and Market Prices. 6.30—Market Prices, Weather, Agricultural Report, Talk for Housewives, and Racing Results. 7.0—Talk: The German Film Director Pabst. 7.10—Review of New Books. 7.30—Elementary English Lesson. 7.45—Commercial Prices and News.

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PITTSBURGH (U.S.A.)

Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW.
Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Business News. 9.15—Programme to be announced. 9.30—Pebeco Weather Report. 9.32—Market Report. 9.45—Kiddies Klub. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Bulletin. 10.12—Programme for the Evening. 10.15—Programme to be announced. 10.30—The Singing Lady, from New York. 10.45—Little Orphan Annie. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sport Review. 11.12—Press News-Reeler. 11.15—Westinghouse Parade. 11.45—Literary Digest Topics, from New York. 11.59—Bulova Time.

12 midnight—3.0 a.m.—New York Relay. 12 midnight—Pepsodent Amos and Andy. 12.15 a.m. (Tuesday)—Tasty-east Jesters. 12.30—Stebbeins Boys. 12.45—Billy Jones and Ernie Hare. 1.0—Carnation Contended Programme. 1.30—Death Valley Days. 2.0—Sinclair Minstrels. 2.30—George Olsen's Orchestra. 3.0—Bob Nolan's San Felicians. 3.15—Programme to be announced. 3.30—Love Songs and Waltzes from New York. 3.45—Contract Bridge by E. Hall Downs. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News Flashes. 4.20—Programme to be announced. 4.30—Stanley-Warner Theatre of the Air. 5.0—Hal Kemp and his Orchestra. 5.30—Good Night.

POZNAN (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—10.35—See Warsaw. 10.35—Sports Notes and Police Report. 10.50 (approx.)—Close Down.

PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW.
Transmits at intervals from 6.30 a.m. 4.0 p.m.—Programme for Sokols. 4.10—Orchestral Concert conducted by Olchazal, relayed from Bratislava. 5.10—Russian Lesson. 5.25—Educational Talk. 5.35—Programme for

Children. 5.45—Talk on Economics. 5.55—Light Music on Gramophone Records. 6.5—Agricultural Report and Talk on Summer Camping. 6.25—German Transmission: News and Medical Talk. 7.0—See Brno. 8.0—Introductory Talk to the following Transmission.
8.5—Festival Concert by the Czech Philharmonic Orchestra, conducted by Nicolai Malko. Symphony No. 4, Op. 36, in F Minor (Tchaikovsky). The Rite of Spring (Stravinsky). Symphonic Poem, Prague (Suk). In the interval at 9.0—Time Signal.
10.0—Time Signal, News, Sports Notes, Theatre Guide and Programme Announcements. 10.20—See Bratislava.

RABAT (Morocco)

721.1 kc/s (416 m.); 6 kW.
Transmits at intervals from 1.30 p.m. 8.30 p.m.—Gramophone Records of Variety Music. 9.0—Sponsored Gramophone Concert. 11.30 (approx.)—Close Down.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)

743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.).
12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.32—Weather Forecast and News Bulletin. 12.40 (from Lausanne)—Concert of Popular Music on Gramophone Records. 1.0—Exchange Quotations. 1.5—Gramophone Concert (cont'd.). 1.45—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1 (from Lausanne)—Handwork for Children.
5.30—Concert by a String Orchestra, conducted by Robert Echenard. 7.0—Weather Forecast. 7.1 (from Lausanne)—Light Music on Gramophone Records. 7.32 (from Lausanne)—Talk: The 50th Anniversary of the Inauguration of the St. Gotthard Railway Line. 7.55—Announcements. 8.0—Concert by the Station Orchestra. 8.45 (from Lausanne)—Cello Recital by Ivan d'Archembeau. 9.15—Concert of Light Music by the Station Orchestra. 10.0—Weather Forecast and News Bulletin. 10.10 (from Lausanne)—Answer to Correspondents. 10.30 (approx.)—Close Down.

RIGA (Latvia)

572 kc/s (525 m.); 15 kW.
Transmits at intervals from 6.0 a.m. 6.0 p.m.—Talk: Beekeeping. 6.30—English Lesson. 7.0—Weather Forecast.

7.5—Rimsky-Korsakov Concert, conducted by Medins. Overture, "The Czar's Bride." Suite from "The Snow Maiden." Overture, "A Night in May." Spanish Caprice.
8.0—News Bulletin.

8.20—Mozart and Schubert Concert, by Paul Schubert (Pianoforte) and Milda Brechmanis-Stengels (Songs). Rondo in A Minor (Mozart). Songs (Mozart): (a) To Chloe, (b) Wiegandied. Pianoforte Solos (Schubert): (a) Impromptu in C Minor, (b) Minuet in B Minor, (c) Der Erlkönig. Songs (Schubert): (a) Death and the Maiden, (b) Am Meere, (c) Der Müller und der Bach, (d) Heiden-Röslein.

9.0—Weather and News. 9.15—Ballet Suite (Raff). 9.35 (on 198.5 m.)—Popular Concert on Gramophone Records. 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, 6,976 kc/s (43 m.).

8.15—8.30 a.m.—Announcements. 12 noon—2.0 p.m.—Gramophone Concert of Variety Music. In the intervals: Weather, Giornale Radio, Exchange, Time and Announcements. 5.0—Exchange, Children's Radio Review, Giornale Radio and Announcements. 5.30—Vocal and Instrumental Concert. Soloists: Antonio Saldarelli (Cello), Germano Annaldi (Pianoforte) and Margherita Cossa (Soprano). Third Sonata in A for Cello and Pianoforte (Beethoven). Soprano Solos: (a) Aria from "Démophon" (Cherubini), (b) Toglietemi la vita (Scarlatti), (c) Aria from "Il mondo della luna" (Galuppi). Largo and Rondo from the Sonata in C for Cello and Pianoforte (Casella).

6.15—Giornale dell'Enit. 6.55 (Naples)—Shipping and Sports Notes. 7.0—Agricultural Notes, Weather, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Gramophone Records of

Variety Music. 8.45—Sports Notes and Announcements.

9.0—See Turin. 10.0—Fashion Review.

10.10—Concert of Light Music and Folk Music. I cavalieri della luna (Schor). Soprano Solo: The Streets of Paris (Unnarino). Soprano Solo: Se non mi vuoi più bene (Franco). Curcineide—Potpourri of Dances (Anepeta). Tenor Solo: Pierrot in Marsina (di Ferdinando). Soprano Solo: Sotto le stelle (Unnarino). Città cinese (Gerrebos). Soprano Solo: Spanish Ladies (Jurnann). Tenor Solo: Din dan (Caslar). Silver Rain (Castegnaro). Soprano Solo: Tutto quel che fa papà (Mascheroni). Tenor Solo: Sei tu, Margot (Staffelli). Soprano Solo: Leggenda azzurra (Bixio). Selection from "White Horse Inn" (Benatzky). 10.55—News Bulletin.

SCHENECTADY (U.S.A.)

General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayd at intervals by W2XAF on 9,530 kc/s (31.48 m.) and by W2XAD on 15,340 kc/s (19.56 m.). Transmits at intervals from 11.45 a.m.

9.0 p.m.—Book Chat. 9.15—William Steven (Baritone). 9.30—Bridge Lesson from New York. 9.45—Musical Ad Men. 9.50—News Items. 10.0—Stock Reports and Police Notices. 10.15—Skippy from New York. 10.30—Swanee Serenaders from New York. 10.45—The Songsters from New York. 11.0—DeWitt Clinton Orchestra. 11.30—Music Weavers. 11.55—Baseball Scores.

12 midnight (WGY only)—Musical Programme. 12 midnight (W2XAF only)—Stock Reports and News Items. 12.15 a.m. (Tuesday)—Weather Report. 12.16—New Kenmore Orchestra. 12.45—4.0 a.m.—New York Relay. 12.45—Trials of the Goldbergs. 1.0—Soconyland Sketch. 1.30—Voice of the Firestone. 2.0—A. and P. Gipsies. 2.30—Parade of the States.

3.0—National Radio Forum. 3.30—Do You Remember? 4.0—Arm-chair Chats. 4.15—John Albright (Crooner). 4.30—DeWitt Clinton Orchestra. 5.0—Ralph Kirby (Baritone), relayd from New York. 5.5—Buddy Rogers and his California Cavaliers from New York. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)

653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.).

12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather and News. 12.40—Musical Guessing Competition on Gramophone Records. 1.35—Weather and Exchange Quotations. 1.40—3.30—No Transmission. 3.30—Gramophone Records of Operetta Music. 4.0—Concert by the Don Cossacks' Choir on Gramophone Records. 4.30—Orchestral Concert. 5.0—6.30—Interval. 6.30 (from Zürich)—Programme for Children. 7.0—Time, Weather and Gramophone Records of Light Music. 7.30 (from Zürich)—Talk by Ernst Isler: The Coming Musical Festival.

8.0 (from Basle) Symphony Concert of Italian Music, relayd from the Musiksaal. The Basle Orchestral Society. Conductor: Dr. Felix Weingartner. Soloist: Gaspar Cassado (Cello). 10.0 (approx.)—Weather and News. 10.10 (approx.)—Orchestral Selections. 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden)

Radiotjänst (SASA). 689 kc/s (436 m.); 55 kW. Relayd by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.); and Smedstall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. (Gymnastics).

5.0 p.m.—Programme of Light Music relayd from Göteborg. 5.45—Popular Music on Gramophone Records. 6.45—Elementary English Lesson. 7.15—Weather Forecast and News Bulletin. 7.30—Parliamentary Review. 7.50—Part Relay of the Scandinavian Musical Festival from Lahti. 8.20—Talk (to be announced). 8.50—Concert of Old Chamber Music. Sonata in F for Violin and Cembalo

(J. S. Bach). Cembalo Solos: (a) Gavotte (J. S. Bach), (b) Minuet (J. S. Bach), (c) Selection (Ph. E. Bach). Grave for Cello (W. F. Bach). Minuet in A for Violin, Cello and Cembalo (J. Chr. Bach).

9.45—Weather Forecast and News Bulletin. 10.0—Concert of Light Music by Swedish Composers. 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, "Patrie" (Bizet). Cadence for "Il Trillo del Diavolo" (Tartini). Aria from "Rédemption" (Frank). Le Cor (Pflieger). Selections from "Marouf" (Rabaud). Scènes alsaciennes (Massenet). Selection from "Aida" (Verdi). Selections from "Tosca" (Puccini). Liebesfreud (Kreisler).
12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert of Variety Music. 2.0—4.45—Interval. 4.45—Scientific Talk in French: The Age of the Earth.

5.0—Orchestral Concert, conducted by M. Roskam. March, Entry of the Gladiators (Fück). Waltz, Transaktionen (Josef Strauss). Overture, "The Crown Diamonds" (Auber). The Dolls' Tea Dance (Rosen). Selection from "Polenbut" (Nedbal). March, "The Belle of Chicago" (Souza).

6.0—Talk in French: The Tour de Nesle. 6.15—Topical Talk in German.

6.30—Gramophone Concert. Overture, "Die Fledermaus" (Johann Strauss). Barcarolle from "The Tales of Hoffmann" (Offenbach). Demande et Réponse (Coleridge-Taylor). Overture, "Mignon" (Thomas). Legend of the Graal from "Lohengrin" (Wagner). Selection from "Schwanda the Piper" (Weinberger). Pastoral Suite (Scarlatti). Two Selections (Nevin): (a) Narcissus, (b) Troika. Selections (Albeniz): (a) Tango d'España, (b) Granada. 7.30—Time Signal. 7.32—News in French and German.

7.45—Gramophone Concert. Spring Song (Mendelssohn). Anitra's Dance from "Peer Gynt" (Grieg). The Mill in the Black Forest (Eilenberg). A Hunting Scene (Bucalossi). Overture, "Orpheus in the Underworld" (Offenbach). War March of the Priests from "Athalia" (Mendelssohn). Coronation March (Meyerbeer). Cavatina (Raff). Visions of Yesterday (Taylor). Marika (Collins). Restless Fingers (Cuvelier). Tourterelle (Damare).
8.30—"The Pearl Fishers"—Opera in Three Acts (Bizet). 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. 12 noon—Humorous Gramophone Records. 12.50 p.m.—Time, Weather, News and Programme Announcements. 1.0—See Langenber. 1.55—News Bulletin. 2.0—2.15—Sponsored Gramophone Concert. 2.30—Elementary Spanish Lesson. 3.0—Elementary English Lesson. 3.30—Talk for Young People: Stamp-collecting. 4.0 (from Freudenstadt)—Concert by the Albrecht Krüner Orchestra. Overture, "Undine" (Lortzing). Waltz, Dorfkind (Kálmán). International Suite (Tchaikovsky). Minuet in G (Paderewsky). Selection from "The Bird Fancier" (Zeller).

5.0—Talk on Music—The Romantic, the Viennese, and the New German Schools, with Illustrations by the Stuttgart Philharmonic Orchestra. 6.15—Time and Weather. 6.25 (from Karlsruhe)—Talk: The Industrialisation of South America and Prospects for the German Export Trade. 6.50—See Frankfurt. 7.15—Time and Agricultural Notes. 7.30—10.30—See Frankfurt. 10.30—Time, Weather, News and Programme Announcements. 10.45—Advanced Chess Lesson. 11.10—Concert from Munich. 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. Nel deserto (Brusso). Serenade (Grit).

Selection from "Die schöne Polin" (Lehár). Maria-Riri (Crossti). Madrigale (Brunetti). Alba di nozze (Travaglia). Perle havajane (Gramantieri). Oriente (Adduci). 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.), Genoa, 959 kc/s (312.8 m.), and Florence, 599 kc/s (500.8 m.).

Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural Report and Report of the Royal Geographical Society. 7.5—Announcements. 7.10—Popular Music on Gramophone Records. 7.30—Time and Announcements. 8.0—Giornale Radio and Weather. 8.25—Concert. Introduction to "The Bohemian Girl" (Balfe). Mezzanotte a Venezia (Ranzato). Selection from "Die schöne Polin" (Lehár). Vienna, Berlin (Hummer).
9.2—Symphony Concert. 10.0—A Comedy in One Act, followed by Variety Music on Gramophone Records. 11.0—Giornale Radio.

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.—Gramophone Concert of Symphony Music. The Amsterdam Concertgebouw Orchestra: Suite No. 2 in B Minor for Flute and String Orchestra (Bach). The Berlin State Opera House Orchestra: Eine kleine Nachtmusik (Mozart).

5.40—Concert by Jack Hylton's Band on Gramophone Records. Prelude in G Minor, Op. 23, No. 5 (Rachmaninov). Body and Soul. Excuse me Lady. Foxtrot, Watching my dreams go by. Foxtrot, Singing in the Bath-tub. Foxtrot, Ain't misbehavin'. Foxtrot, Beyond the Blue Horizon.

6.10—Wireless Technical Talk. 6.30—Talk: Reference Books and Aids to the Week's Talks. 6.35—Dramatic Criticism. 6.55—Notes on the Broadcasts for Schools. 7.0—English Lesson.

7.25—Talk by Dr. Bauer: The Austrians and their History. 7.50—Time and Announcements. 8.0—Military Band Concert from Hamburg. 9.10—See Breslau. 10.20—News Bulletin. 10.35—Dance Music from Berlin (Witzleben).

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—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 Report. 1.25—Interval. 1.35—Popular Music on Gramophone Records. 1.55—Interval.

2.45—Variety Music on Gramophone Records. 3.5—Economic Review and Exchange Quotations. 3.15—Traffic Report. 3.25—Talk: Aeroplanes and Aerial Transport. 3.45—Hydrographic Report. 3.50—Light Music on Gramophone Records. 4.20—Elementary French Lesson. 4.40—Course for Elementary School Music Teachers. 5.10—Talk: In the Arabian Desert. 5.35—Programme of Light Music, relayd from the Café Gastronomique. 6.50—Miscellaneous Items. 7.15—Agricultural Correspondence. 7.25—Programme Announcements. 7.30—Sports Notes. 7.35—Popular Music on Gramophone Records. 7.45—Radio Journal. 8.0—Talk on Music.

8.15—"Tosca"—Opera in Three Acts (Puccini), by Artists of the Scala Theatre, Milan, on Gramophone Records. 10.30—Talk: The Spring, Flowers and People. 10.45—Radio Journal. 10.50—Weather and Police Notes. 10.55—Interval. 11.0—Dance Music.

WILNO (Poland)

533 kc/s (563 m.); 16 kW.

Transmits at intervals from 11.58 a.m. 6.50 p.m.—Sports Notes. 7.0—Talk in Lithuanian. 7.20—Talk: The Development of Telegraphy. 7.40—Programme Announcements. 7.45—See Warsaw. 8.15—"Aida"—Opera in Four Acts (Verdi), on Gramophone Records. The Choir, Orchestra and Soloists of the "Scala," Milan. 10.30—See Warsaw. 12 midnight (approx.)—Close Down.

TUESDAY (May 24)

PRINCIPAL EVENTS

SYMPHONY CONCERTS

5.35 p.m. Warsaw: The Philharmonic Orchestra.
8.45 " Prague.

CONCERTS (Vocal and Instrumental)

7.0 p.m. Bucharest.
7.40 " Huizen: The Utrecht Male Voice Choir.
7.40 " Hilversum: Egon Petri (Pianoforte).
9.15 " Heilsberg: Pianoforte Concerto in G (Beethoven).
10.15 " Copenhagen: Operetta Selections.

OPERAS AND OPERETTAS

7.55 p.m. Vienna: "Electra" (Richard Strauss) from the State Opera House.
8.0 " Heilsberg, Königs Wusterhausen: "Der Holzdieb" (Marschner).
8.45 " Italian Stations (Northern): "I Puritani" (Bellini).
9.30 " Rome: "L'Arlesiana" (Cilea), Acts 2 and 3.

CHAMBER MUSIC

8.30 p.m. Langenberg: 17th and 18th Century Music.
9.45 " Budapest: Trios.

RECITALS

8.15 p.m. Budapest: Song and Pianoforte.
9.0 " Munich: Wilhelm Rode (baritone).
10.0 " Warsaw: Vera Brock (pianoforte).

PLAYS

8.45 p.m. Radio-Paris: "The old Mother" (John Barry).

MISCELLANEOUS

8.45 p.m. Rome: National Festival.
9.25 " Daventry: Empire Day.
9.30 " Stuttgart, Frankfurt: A Concert at Hans Fugger's House.

DANCE MUSIC

10.20 p.m. Hamburg, Königs Wusterhausen: The Weintraubs.

Islamey

It was Balakirev who founded the Russian school which included César Cui, Mussorgsky, Rimsky-Korsakov, and Borodin. These men together launched the famous movement which put Russia so definitely on the map that, with the exception of



(Photo: by courtesy of the German Railways Information Bureau)

The Fugger House in Augsburg

Wagner's, no influence has more emphatically made its mark on modern music than theirs. Balakirev's watchful care of them was neatly summed up by Borodin; he said: "As long as we were eggs of one laying (meaning Balakirev's) we were very

much alike; only when the chicks were hatched, did each have its different plumage and fly off in its own chosen direction." But throughout their careers, all those younger composers—and others too, like Tchaikovsky—were glad to acknowledge their debt to his inspiration, and Russia undoubtedly owes him a great deal. His own music—there is not much of it—is of superb quality, rich, vivid and picturesque; it has been well said of it, of *Islamey* as much as of any, that it lies on the fringe of immortality. That particular piece is nowadays more often heard in arrangements either for orchestra or military band, but it was originally composed for pianoforte as an Oriental Fantasy, and it is in that form that it is included in this evening's pianoforte recital by Vera Brock at WARSAW station.

A Concert at Hans Fugger's.

From a stately room in the Fuggerhaus, Augsburg STUTTGART and FRANKFURT stations are broadcasting a programme of sixteenth-century music this evening, such as Hans Fugger might have heard in those far off days in his own music-room. His family is one of the most illustrious in the annals of German banking and commerce, and the city of Augsburg, the birthplace of Johann, founder of the family's fortune, is full of interesting mementoes of them. The Fuggerhaus, still in their possession, their chapels in the churches of St. Anna, St. Ulrich and St. Afra, and a statue of Johann Jakob, one of the most famous members of the family, are all well-known to visitors. Many of the Fuggers were patrons of the arts, devoting much of their great wealth to the causes of painting and music, and several attained to princely or noble rank; one, at least, was a bishop. Johann, or Hans as South Germany calls him, was keenly interested in music, and must often have arranged for his household's entertainment just such a concert as is to be broadcast to-night. Born in 1531, he died in 1598, leaving three sons, each of whom added his own share to the lustre of the family's name, though none is remembered as an enthusiast on behalf of music in the way that their father still is. A devout Roman Catholic, as all the family are, his tastes naturally inclined to such Church music as Lasso's, with which this evening's programme opens.

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—"Sense and Sustenance"—II. Professor S. J. Cowell: "Eating by Habit."		
11.0—11.10—An Empire Day Message to Schools. Admiral of the Fleet Earl Jellicoe, G.C.B., O.M., G.C.V.O.		
12 noon—Reginald Foort at the Organ.		
1.0 p.m.—Time Signal (Greenwich).		
1.0—Leonardo Kemp and his Piccadilly Hotel Orchestra.		
1.55—Experimental Transmission by the Fultograph Process.		
2.5—For the Schools. Nature Study. Mr. Eric Parker.		
2.30—Music. Sir Walford Davies.		
3.30—Interval.		
3.35—French. Monsieur E. M. Stéphan: "Early Stages in French"—V.		
4.5—"The Claims of Science"—II. Mr. Gerald Heard.		
4.30—The Grosvenor House Orchestra.		
4.45—Time Signal (Greenwich).		
5.15 (Daventry)—The Children's Hour.		
5.15 (London and Northern)—The B.B.C. Dance Orchestra.		
6.0—"The First News."		
6.30—Time Signal (Greenwich).		
6.30—The Foundations of Music. Mozart's Pianoforte Variations. Played by Maurice Cole.		
6.50—French Talk. Monsieur E. M. Stéphan.		
7.20—The B.B.C. Orchestra (Section E). Conductor, Adrian Boult.		
8.30—"Life Among Native Tribes"—I. The Reverend J. W. Welch.		
9.0—Time Signal (Greenwich).		
9.0—"The Second News."		
9.15—Shipping Forecast; New York Stock Market Report.		
9.25—Empire Day Programme.		
10.30—12 midnight—Dance Music. (And perhaps the Song of the Nightingale.)		
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—11.10 (London and Northern)—Daventry National Programme.		
11.30—12 noon (London)—Experimental Television Transmission (Baird Process).		
12 noon—The Buxton Municipal Orchestra, conducted by Horace Fellows.		
1.0 p.m.—A Ballad Concert. Hilda Roberts (Soprano). Ena Webster (Violin). Kenneth Stafford (Bass).		
2.0—3.0—The Midland Studio Orchestra.		
4.0 (Northern)—Evensong. Relayed from York Minster, York.		
4.30 (London)—Daventry National Programme.		
5.15—"The Children's Hour."		
6.0—"The First News."		
6.30—Regional Bulletin for Farmers.		
6.35 (London)—The Wireless Military Band. Foster Richardson (Baritone).		
6.35 (Midland)—"Requests." The Midland Studio Orchestra. Geoffrey Dams (Tenor). Walter Randall (Pianoforte).		
6.35 (Northern)—The Whitby Municipal Orchestra, conducted by Frank Gomez.		
7.40 (Northern)—Mr. J. Cuming Walters: "The Magic of Snowdonia."		
8.0—Vaudeville. John Tilley (Raconteur). Harry Welchman. George Gee (Comedian). Irene Russell (Impressions). Henri Benito. Yvette Darnac (Light Ballads). Chick Farr. The B.B.C. Theatre Orchestra.		
9.5 (London)—The B.B.C. Orchestra (Section D). Monica Warner (Soprano).		
9.5 (Midland)—The Studio Orchestra. Millicent Ward (Soprano).		
9.5 (Northern)—The Craghead Colliery Band. James Etherington (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

BARCELONA (Spain)

Radio-Barcelona (EAT). 860 kc/s (349 m.); 8 kW.
Transmits at intervals from 8.15 a.m.
8.0 p.m.—Trio Concert. Serenata (Amadei). Selection from "Hamlet" (Thomas). Romantic Concerto (Demaret). Minuet No. 2 in G (Beethoven).
8.30—Exchange, Request Gramophone Records and News. 10.0—Chimes from the Cathedral, Weather Forecast, Market Prices, Exchange Quotations and Relay of Foreign Stations. 10.30—Orchestral Concert of Light Music. 11.0—Lope Martinez de Ribera recites from his own Poems. 11.15—Mandoline Concert. Pastoral Gavotte (Durand). Selections from the Peer Gynt Suite (Grieg): (a) Morning. (b) The Death of Aase. (c) Anitra's Dance. Mement musical (Schubert). Selection from "Samson and Delilah" (Saint-Saëns). La leyenda del beso (Soutullo-Vert). Sardana. La processó de Sant Bartomeu (Catala).
12.15 a.m. (Wednesday)—Gramophone Records of Light Music. 12.30—Dance Music from the Hotel Colon. 1.0 (approx.)—Close Down.

BELGRADE (Yugoslavia)

607 kc/s (430.4 m.); 2.5 kW.
Transmits at intervals from 11.0 a.m.
6.45—Time and Programme Announcements. 6.50—Czech Lesson. 7.20—Talk on the Use of Cosmetics. 7.50—Recital of National Songs by Mara Pecic. 8.30—Part Relay from the State Opera House, Vienna. 10.30—News and Sports Notes. 10.50—Concert relayed from the Imperial Hotel.

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 Records of Request Orchestral Music and Second Weather for Farmers. 12.55 p.m.—Nauen Time Signal. 1.30—News Bulletin. 2.0—Tchaikovsky Concert on Gramophone Records, relayed from Berlin (Witzleben).

3.0—Tales and Poems for Children. 3.30—Weather and Exchange. 3.45—Talk for Women: Fashionable Knitted Garments. 4.30—See Leipzig. 5.30—Talk: Life in the Light of Modern Research. 6.0—Talk: The Theme in Instrumental Music. 6.30—Advanced English Lesson. 6.55—Weather for Farmers. 7.0—Talk on Contemporary Problems. 7.35—Review of World Politics. 8.0—See Heilsberg. 8.50—Talk: Germany's Year of Destiny—Democracy in the Crisis. 9.15—Concert from Berlin Castle on the occasion of "Berlin Art Week." Music by Frederick the Great, Haydn and Mozart, by the Berlin State Opera House Orchestra, conducted by Erich Kleiber. 10.15—Weather, News and Sports Notes. 10.35—Concert from Hamburg. 12 midnight (approx.)—Close Down.

BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m.
(Gymnastics and Concert from Hamburg).
5.0 p.m.—Violin Recital by Professor Henri Marteau. Sonata in C Minor (Biber, arr. Marteau). Caprice in B Flat (Benda). Swedish Dance (Tor Aulin). Im Anmarsch (Marteau). 5.30—Reading from "The Last Day at School" (Else Lasker-Schüller), by the Authress. 6.0—Review of Books. 6.30—Programme for Young People. Spring Songs by a Women's Choir with Pianoforte accompaniment, Op. 38 (Camillo Hildebrand). Der Vögel Heimkehrlied. Der vergnügte Mond. Wie die Kirschen. Der Weiden Frühlings-tanz. Am Himmel leise Silberwolken ziehen. Frühling zieht ein. 6.55—The Witzleben Station informs its Listeners. . . . 7.0—Topical Talk. 7.10—A Variety Dance Programme by the Alfred Beres Band, with Vocal Refrains. 9.0—News and Sports Notes. 9.10—Sling (Paul Schlesinger, the Author) Memorial Programme—Readings by Renée Christian. 10.0—Political Press Review, followed by Second News.

BORDEAUX-LAFAYETTE

(France)
(PTT) 986 kc/s (304 m.); 13 kW.
Transmits at intervals from 12 noon.

7.30—Announcements and Exchange Quotations. 7.40—Talk. 7.55—Lottery Results. 8.0—Topical Talk. 8.15—News and Weather Forecast. 8.30—Programme to be announced.

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 Moravská-Ostrava. 8.0—Concert of Popular Music by a Military Band, conducted by Neyer. 8.45—See Prague. 10.15—Programme Announcements. 10.20—Concert by a Cigány Band.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by Gleiwitz, 1,184 kc/s (253 m.).
Transmits at intervals from 6.0 a.m.
6.5 p.m.—A Report on the Latest Excavations in Greece. 6.30—Talk: Cairo. 7.0—Weather for Farmers. 7.5—Concert by the Wireless Orchestra conducted by Franz Marszalek. Paso doble. Cagancho (Escuela Perez). Castilian Dance (Turina). Spanish Suite (Albéniz). Czardas (Michiels). Two Selections (Noskovsky): (a) Cracovienne. (b) Ukrainian Dance. Dances (Mory). Swedish Dance (Pinet). Two Cigány Dances (Heidingsfeld). Neapolitan Tarantella, La danza (Rossini).
8.0—Weather for Farmers. 8.5—Modern Young People tell the Story of their Lives. 9.0—News Bulletin. 9.10—Jazz on Two Pianos by Samuel Kaufmann and Kurt Hattwig. 9.45—Topical Talk. 10.10—Time, Weather, News, Sports Notes and Programme Announcements. 10.35—Concert of Light Music. 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. 7.20—See Moravská-Ostrava. 8.0—See Prague. 10.15—Programme Announcements. 10.20—See Prague.

BRUSSELS (Belgium) (No. 1)

I.N.R. 590 kc/s (509 m.); 15 kW.
12 noon—Gramophone Concert of Popular Music. 12.30 p.m. (in an interval)—Weather.
5.0—Orchestral Concert, conducted by Jean Kumps. Overture, "Le cheval de bronze" (Auber). Selection

TUESDAY continued

from "Hérodiade" (Massenet). Selection from "Les Fantoccini" (Lecocq). Waltz, Violets (Waldteufel). 5.45—Programme for Children. 6.20—Literary Review. 6.30—Gramophone Records. Selection from "Parsifal" (Wagner). Selections from the "St. John Passion" (Bach). Choral in A Minor (Franck). Selection from "Il re pastore" (Mozart). Halle-lujah from "The Messiah" (Handel). 7.15—Report of the Belgian Catholic Radio Society. 7.30—Talk for Women. 8.00—"Insects and Animals in Music" Orchestral Concert, conducted by Franz André. Marche du Lion (Saint-Saëns). Cello Solo: La Mouche (Mastrucci). Les ânes (Ibert-Saint-Saëns). Waltz, The Cuckoo (Jonasson). The Butterfly Chase (Kéler-Béla). L'éléphant (Saint-Saëns). Le Cygne (Saint-Saëns). Selection (Noacik). Pianistes (Saint-Saëns). Oprezza Songs. 8.45—Dialogue: Good Holidays at Home. 9.00—Concert (contd.).—Romanian Dances (Burch). Hungarian Rhapsody (Liszt). The Blue Danube (Strauss). Songs. Selection from "Le train bleu" (Milhaud). Spanish Dances (Granados). Scottish Dances (German). Request Items: (a) Foxtrot, Home (van Steeden), (b) Valse Musette, Ca tourne (Gailhard), (c) The Will of the Wind (Campbell), (d) Bubbling over with Love (Russel). 10.00—Le Journal Parlé. 10.10—Gramophone Records of Light Music. 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2) 4 N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—Gramophone Concert of Light Music. In the interval at 12.30 p.m. Weather Report. 5.0—Dance Music relayed from Antwerp. 5.45—Programme for Children. 6.30—Variety Concert. 7.15—Talk. 7.30—Le Journal Parlé. 8.0—Vocal and Instrumental Concert, relayed from Antwerp. In the interval at 10.0—Le Journal Parlé. 11.0 (approx.)—Close Down.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Concert of Light and Romanian Music, by the Motzoî Orchestra. In the interval at 5.0—News Bulletin and Time Signal. 6.0—Talks on Literature and Language. 6.45—Light Music on Gramophone Records. 7.0—Concert by the Station Orchestra. Overture, "Die Geschöpfe des Prometheus" (Beethoven). Poetic Suite (Dvorak). 7.30—Talk (to be announced). 7.45—Songs by Stefanovici (Tenor). 8.5—Orchestral Concert (continued). Divertissement from "Les Erynie" (Massenet). Actualités (Milhaud). Waltz from "Der Rosenkavalier" (Richard Strauss). 8.45—News Bulletin.

BUDAPEST (Hungary) 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.15 a.m. Also relayed on 210 m. from 6.30 p.m. till Close Down. 6.0 p.m.—French Lesson. 6.30—Band Concert, conducted by Richard Fricas. Overture, "Raymond" (Thomas). Waltz (Strauss). Fantasia on Melodies by Rubinstein (Urbach). Prelude (Járnfeldt). Ein Abend in Grinzling (Dol Dauber). Selections of Light Music. 7.45—Programme by Nicholas Kallay. 8.15—Vocal and Instrumental Recital by the Laurisín Sisters. Prelude and Fugue in C (Bach). Prelude and Fugue in E (Bach). Mimi's Aria from "La Bohème" (Puccini). Aria from "Lakmé" (Delibes). Song (Jensen). Suzon (Delibes). Aria from "Manon" (Massenet). Song from "Sadko" (Rimsky-Korsakov). Two Mazurkas (Chopin). Old Hungarian Melodies. Song from "The Swineherd and the Princess" (Poldini). Fantasia on B.A.C.H. (Liszt). 8.45—Concert by the Debreczener Trio. Pianoforte Trio (Radnai). Pianoforte Trio in F Sharp, Op. 7 (Wolf-Ferrari). 10.15—Weather Forecast. 10.35—Cigány 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 con-

ducted by Max Skalka, relayed from the Hotel d'Angleterre. 2.0—3.0—Interval. 3.0—Concert by Otto Fessel's Instrumental Ensemble. Soloist: Per Biörn (Vocalist). March, Fairest of the Fair (Souza). Overture, "The Italian Girl in Algiers" (Rossini). Waltz, Immortellen (Gungl). Selection from "La Bohème" (Leoncavallo). Toréador et Andalouse from the "Bal costumé" (Rubinstein). Dream Pictures (Lumbye). Songs (Gade): (a) Knud Lavarc. (b) Vær hilset mit gamle Fædreland, (c) Til Rosengården gik jeg, (d) I alle de Riger og Lande. Song, Der er en Trolddom paa din Læbe (Heise). Waltz, Roses from the South (Joh. Strauss). Selection from "En Søndag paa Amager" (Fr. Nielsen). Catalan Caprice (Albeniz). Dalmarch (Peterson-Berger). Selection from "Les Brigands" (Offenbach). Parade March (P. Lacombe). 5.0—Programme for Children. 5.40—Exchange and Fish Market Prices. 5.50—Talk. 6.20—German Lesson for Beginners. 6.50—Weather Forecast. 7.0—News Bulletin. 7.15—Time Signal. 7.30—Agricultural Talk. 8.0—Town Hall Chimes. 8.2—"Kjærlighed uden Strømper" Play (Wessel). with Music by Scalabrini. 9.45—Four Pieces from the Suite for Pianoforte, Dresden China (Niemann). 10.0—News Bulletin. 10.15—Orchestral Concert of Modern Operetta Music. Selections (Lehar): (a) March from "Eva", (b) Tango from "The Czarevitch", Selection from "Good News" (Sylvia Brown-Henderson). Waltz from "Zigeunerprimas" (Kálmán). Selections (Lehar): (a) Selection from "The Land of Smiles", (b) Chinese Onestep from "The Yellow Jacket". March from "Sunny" (Kern). 11.0 (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 Announcements. 7.10—Talk on Careers. 7.25—Programme Announcements. 7.30—Popular Music on Gramophone Records. 7.45—See Warsaw. 10.45—News Bulletin. 10.50—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—Leighceacht Gaedhlice. 7.45—Talk on Birds. 8.0—The Augmented Station Orchestra. 8.15—Recital by the "Celtic Singers" Male Quartet. 8.35—Traditional Fiddle. 8.45—Soprano Solos by C. Manning. 9.0—The Augmented Station Orchestra. 9.15—Revue presented by Eva Brennan and Company. 9.55—Concert by the Augmented Station Orchestra. 10.30—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France) Radio Normande, 1,364 kc/s (219.0 m.); 10 kW. 12 noon—Light Music on Gramophone Records. 12.30 p.m.—Press News. 12.45—Concert of Popular Music. 7.30—Journal Parlé. 8.0—Press News. 8.30—Topical Talk by Jean Le Pôvre Moyné. 8.45—Concert by the Damais String Quartet, relayed from Havre. 11.0—Dance Music. 1.0 a.m. (Wednesday)—Close Down.

FLORENCE (Italy) Ente Italiano Audizioni Radiofoniche. 599 kc/s (500.8 m.); 20 kW. See Turin. FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relay by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 12 noon—See Stuttgart. 12.50 p.m.—News and Weather. 1.0—Gramophone Concert. Overture, "Le Bourgeois Gentilhomme" (Richard Strauss). Symphonic Poem, Les Préludes (Liszt). Pianoforte Concerto No. 1 in B Flat Minor (Tchaikovsky). 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Time and Economic

Notes. 3.20—Talks for the Housewife. 4.55—Economic Notes. 5.0—See Munich. 6.15—Economic Notes. 6.25—7.15—See Stuttgart. 7.15—Time, Programme Announcements, Weather and Economic Notes. 7.30—10.30—See Stuttgart. 10.30—Time, Weather, News. 10.45—See Stuttgart. 12 midnight (approx.)—Close Down.

HAMBURG (Germany) Norag (na, 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 5.45 a.m. 6.30 p.m. (from Bremen)—Talk: The Cultural Life of Java. 6.55—Exchange Quotations and Market Prices. 7.0—Topical Talk. 7.15—Weather Forecast. 7.20 (from Hanover)—Mandoline, Guitar and Zither Concert. Overture in C for Mandoline and Guitar (Maciocchi). Julfeier for Zither (Kollmanek). Paraphrase on Nessler's Song, "Behüt dich Gott" (Urbach) for Mandoline and Guitar. Potpourri of Folk Songs for Zither (Mickenschreiber). March for Mandoline and Guitar, La Rivista (Sartori). 8.5—Concertina Recital. March, Dem Kampf entgegen (Grosch). Intermezzo, Die kleine Patrouille (Siede). Spanish Waltz, El Turia (Granados). March, Wien bleibt Wien (Schrammel). 8.25 (from Hanover)—Concert by the Silber Society's Double Quartet and the Music Society's Symphony Orchestra, conducted by Otto Ebel von Sosen. Soloist: Max Ladscheck (Violin). Weihe der Töne (Spohr). Im Schatten des Waldes (Marschner). Concerto for Violin and Orchestra (Spohr). Overture, "Der Vampyr" (Marschner). Liebesfreiheit (Marschner). Choral Selection from "Der Vampyr" (Marschner). Rosen Romanze (Spohr). Quartet Selections (Methfessel): (a) Stimmt an, (b) Turner-Wanderlied, (c) Hinaus in die Ferne. Festmarsch (Spohr). 10.0—Time, Weather and News. 10.20—Concert by the "Weintraubs." Introduction—Grenadiers March from "The Love Parade" (Schertzing). Symphonic Arrangement of Roy Turk's "Mütterlein, bleib immer bei mir" (Franz Wachsmann). Just one more Chance (Coslow-Johnston). It happened in Monterey—from "The King of Jazz" (arr. John Kaiser). You are my Heart's Delight (Lehar, arr. Franz Wachsmann). Trombone Solo: Berceuse (Godard). Violin Solo: Cigány Melodies on Hungarian and Russian Motives (arr. Jack Rosner). Pianoforte Solo: Sonny Boy—arranged in the Style of Old Masters (Franz Wachsmann and Marcel de Ridder): (a) Original Theme, (b) A la Puccini, (c) A la Chopin, (d) A la Beethoven, (e) A la Wagner. Clarinet Solo in Negro Style, Clarinet-Tickles (Boyd Senter, arr. Horst Graff). Potpourri on "Bombers sur Monte Carlo" (Heymann—arr. John Kaiser). Symphonic Arrangement of "How am I to know" (Ring). Tango, Wenn du mal in Hawaii bist (Willi Rosen). Foxtrot, Eine kleine Frau macht den Himmel blau (Chernam and Lewis). Potpourri of Chinese Songs (arr. George Haentzschel). Symphonic Arrangement, You're driving me crazy (arr. de Ridder). Mominez—an Original Cuban Rumba. My melancholy baby (Barnett and Norton, arr. Franz Wachsmann). Ten Years of Jazz—Potpourri of Old and New Popular Songs (arr. John Kaiser).

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relay by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. 11.30 a.m.—Concert by the Königsberg Opera House Orchestra, conducted by Werner Richter-Reichhelm. Overture, "Le roi l'a dit" (Delibes). Selection from "Le Tribut de Zamora" (Gounod). Suite in D Minor (Lachner). Russian Folk Melodies (Liadoff). Selection from "A Masked Ball" (Verdi). Two Military Marches (Schubert). 1.20 p.m.—News Bulletin. 1.30—Gramophone Concert. Second Movement from Symphony No. 7 (Beethoven). Overture, "The Force of Destiny" (Verdi). Oscar Straus Potpourri (Dostal). Selection (Rollins). Flirtation (Steck). Coeur brisé (Gillet). Minuet

(Paderevsky). Der verliebte Nussknacker (Dicker). Froschkönigs Fackelzug (Kronberger). Hoch Heidecksburg (Herzer). 2.30—Sponsored Gramophone Concert. 4.0—Music for Children. 4.30—See Leipzig. 5.30—Review of Books. 6.0—Talk on Copernicus. 6.15—Agricultural Market Prices. 6.30—Talk: A Sailor tells of his Life as a Ship's Boy on Board a German Training Ship. 7.0—Talk: The East Prussian Tournament at Königsberg, May 26 to 29. 7.25—Concert by a Male Voice Choir, conducted by Otto Groke. Wanderers Nachtlied (Reichardt). Es war zwei Königskinder (Mai Maier). The King of Thule (Zelter). Der liebste Buhle (Rein). Bohemian Melody: Auf, auf ihr Wanderleute (Wein). Donaustudel (Rein). 7.55—Weather Forecast. 8.0—"Der Holzdieb"—Comic Opera in One Act (Marschner). 8.50—Talk: The Old University of Dorpat. 9.15—Beethoven's Pianoforte Concertos—IV. Concerto in G Major Op. 58, No. 4, for Pianoforte and Orchestra. Soloist: Margarete Schuchmann. After the Recital: Concert by the Königsberg Opera House Orchestra, conducted by Erich Seidler. Two Pieces for Small Orchestra (Delius): (a) On hearing the First Cuckoo in Spring, (b) Summer Night on the River. Symphonic Poem, Lebenskampf (Fritz Theil). 10.20—News Bulletin.

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up to 4.40 p.m.). Programme of the Algemeene Vereeniging Radio Omroep (A.V.R.O.). 7.40 a.m.—Time Signal. 7.41—Light Music on Gramophone Records. 9.40—Time Signal. 9.41—Daily Service. 9.55—Popular Music on Gramophone Records. 10.10—Ballad Concert by Gerarda Ankersmit-Strating (Pianoforte) and Jo Toet (Vocalist). 10.40—Talk. 11.10—Ballad Concert (contd.).—11.40—Time Signal. 11.41—Concert by the Little Station Orchestra, conducted by Nico Treep. Soloist: Gerard Holthaus (Vocalist). Overture, "Alessandro Stradella" (Flotow). Three Dances from "Nell Gwynn" (German). Menuet des petites Précieuses (Pares). Serenade (Widor). Selection from "Carmen" (Bizet). Songs: (a) Wenn Nacht mich hüllt (Rachmaninov), (b) Wohl zu eigm Leid hab' ich Liebgeweiht (Rachmaninov), (c) Warum (Tchaikovsky), (d) None but the weary Heart (Tchaikovsky). Waltz, Mon Réve (Waldteufel). Aubade à Musette (Popy). Mariette—Coquette (Ancliffe). Selection from "Die Puppenfee" (Bayer). Moment Musical (Schubert). Songs: (a) Tom der Reimer (Löwe) (b) Das Zauberkind (Meyer-Helmund), (c) Dein (Bohm). March (Morena). Plaisir d'Amour (Martini). Canto amoroso (Samaritini). Selection from "A Waltz Dream" (Oscar Straus). 1.55—Reading. 2.25—Interval. 2.40—Dressmaking Lesson. 3.40—Pianoforte Recital by Greet Vortman. 4.10—Concert by a Children's Choir, conducted by Jacob Hamel. 4.40—Light Music on Gramophone Records. 5.10—Concert of Light Music relayed from "La Gaité" Amsterdam. 6.10—Organ Recital by Pierre Palla, with Songs by de Booy. Rhapsody No. 1 (Liszt). Still wie die Nacht (Bohm). Campana a sera (Billi). Marigold (Mayerl). Selection from "Mignon" (Thomas). 7.10—Talk (to be announced). 7.40—Time Signal. 7.41—Concert by the Station Orchestra, conducted by Nico Treep. Soloist: Egon Petri (Pianoforte). Pianoforte Concerto (Schumann). 8.10—A Radio Play. 8.55—Orchestral Concert (contd.). Overture, "Light Cavalry" (Suppé). Air (Kling). Waltz, Weaner Mädchen (Ziehrer). In a Monastery Garden (Kettelbey). American Cake-Walk (Lincke). Liebesangst (Benatzky). Der alte Brummbar (Fücki). March (Heinecke). 9.40—Weather Forecast and News Bulletin. 9.55—Concert of Light Music by Kovacs Lajos and his Orchestra, with Songs by Bob Scholte. 11.40 (approx.)—Close Down.

HUIZEN (Holland) 160 kc/s (1,875 m.); 8.5 kW. Programme of the Catholic Radio Society (K.R.O.). 7.40—8.55 a.m.—Popular Music on Gramophone Records. 9.45—Variety Music on Gramophone Records.

10.10—Religious Address. 11.40—Police Notes. 11.55—Concert of Light Music by the K.R.O. Trio, conducted by Piet Lustenhouwer. March (Jong). La Nuit de Saragozza (Frey). Waltz from "The Rose of Stamboul" (Fall). Romance sans paroles (Wieniawsky). Potpourri of Music by Weber (arr. Tavan). Mir fehlt ein Freund wie du (May). Potpourri, Lehariana (Geiger). Plaisir d'Amour (Martini). Waltz, Himmlenfunkeln (Waldteufel). Little Elisabeth (Rosen). Finale. 12.25—Light Music on Gramophone Records. 1.40—Programme for Women. 2.40—Dressmaking and Millinery Lessons. 3.40—3.55—Interval. 3.55—Popular Music on Gramophone Records. 4.40—Concert by the K.R.O. Ensemble, conducted by Piet Lustenhouwer. 6.50—Talk by Jan Taal. 7.10—Police Notes. 7.25—Talk. 7.40—Concert by the Royal Utrecht Male Voice Choir and the K.R.O. Orchestra, conducted by Bernard Diamant. 10.40—Variety Music on Gramophone Records. 11.40 (approx.)—Close Down.

KALUNDBORG (Denmark) Kalundborg Radio. 260 kc/s (1,153 m.); 7.5 kW. See Copenhagen. KATOWICE (Poland) 734 kc/s (408 m.); 16 kW. Transmits at intervals from 11.45 a.m. 5.45 p.m.—Symphony Concert. 7.20—Talk by Dr. Czeslaw Pordes. 8.0—Talk. 8.15—Concert of Popular Music. 9.45—Answers to Correspondence. 10.0—See Warsaw. 10.40—News Bulletin. 10.55—Dance Music.

KAUNAS (Lithuania) 155 kc/s (1,935 m.); 7 kW. Transmits at intervals from 12 noon. 7.45 p.m.—Concert of Light Music. Foxtrot (Plessow). Intermezzo, Die Sylphiden (Lincke). Erinnerung an Potsdam (Noack). March-Intermezzo, Blumenkorso (Siede). The Wedding of the Winds (Hall). The Teahouse with a Hundred Steps (Yoshitomo). 8.45—Review of Foreign Affairs. 9.0—Talk in Esperanto. 9.15—Concert. Potpourri (Donizetti). Suite (Knühmann). Waltz (Waldteufel). Dramatic Legend (Becca). 10.30 (approx.)—Close Down.

LANGENBERG (Germany) Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 6.45 a.m. 11.20 a.m.—Light Music on Gramophone Records. Overture, "The Bohemian Girl" (Balfe). Potpourri of Waltzes (Robrecht). Selection from "Gasparone" (Müllacker). Selection from "The Tales of Hoffmann" (Offenbach). Jazz-Humoresque after "The Tales of Hoffmann" (Offenbach-Scott-Wood). Potpourri of Dance Music. 12 noon—See Stuttgart. 12.20 p.m.—Sponsored Gramophone Concert. 12.50—Weather Report, News Bulletin and Time Signal. 1.0 (from Essen)—Orchestral Concert by Unemployed Musicians, conducted by Anton Novakovsky. Overture, "The Merry Wives of Windsor" (Nicolaï). Waltz, Roses of the South (Johann Strauss). Suite from "Der Rosenkavalier" (Richard Strauss). Ballet Suite from "Coppélia" (Delibes). Selection from "Madame Butterfly" (Puccini). Selection from "Polenblut" (Nedbal) Overture, "The Armourer" (Lortzing). 3.30—Industrial News Bulletin and Time Signal. 3.50—Programme for Children. 4.20—Notes on the Broadcasts for Schools. 4.30—Talk: The New Educational Arrangements for High Schools. 5.0—Concert of Popular Music. 6.15—Programme for Women. 6.40—Dialogue in French. 7.0—Weather Report, Time Signal, News Bulletin and Sports Notes. 7.15—Wireless News. 7.30—Talk on Political Economy. 7.55—News Bulletin. 8.0—Talk on Music by Hans Ebert: From the Flute to the Kettle-Drum. 8.30—Concert of Seventeenth and Eighteenth Century Chamber Music by the Municipal Orchestra, conducted by Wolf. Soloists: Ewald Kaldeweyer (Bass). Hilde Göhré (Pianoforte and Cembalo), and Otto Noethe (Violin). Suite for Pianoforte and String Orchestra (Telemann). Two Songs (Löwe von Eisenach): (a) Ein angenehmes Lied erfreuet das Gemüt, (b) Geld macht den wahren Reichtum nicht. Aria from "Scipione" (Handel). Arietta from "Floridante" (Handel). Symphony No. 3 for String Orchestra and Pianoforte

10.10—Religious Address. 11.40—Police Notes. 11.55—Concert of Light Music by the K.R.O. Trio, conducted by Piet Lustenhouwer. March (Jong). La Nuit de Saragozza (Frey). Waltz from "The Rose of Stamboul" (Fall). Romance sans paroles (Wieniawsky). Potpourri of Music by Weber (arr. Tavan). Mir fehlt ein Freund wie du (May). Potpourri, Lehariana (Geiger). Plaisir d'Amour (Martini). Waltz, Himmlenfunkeln (Waldteufel). Little Elisabeth (Rosen). Finale. 12.25—Light Music on Gramophone Records. 1.40—Programme for Women. 2.40—Dressmaking and Millinery Lessons. 3.40—3.55—Interval. 3.55—Popular Music on Gramophone Records. 4.40—Concert by the K.R.O. Ensemble, conducted by Piet Lustenhouwer. 6.50—Talk by Jan Taal. 7.10—Police Notes. 7.25—Talk. 7.40—Concert by the Royal Utrecht Male Voice Choir and the K.R.O. Orchestra, conducted by Bernard Diamant. 10.40—Variety Music on Gramophone Records. 11.40 (approx.)—Close Down.

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TUESDAY
continued

(C. Ph. E. Bach). Solos for Cembalo. Aria from a Solo-Cantata, arranged for Violin (Caldara). Three Songs (Erlebach).
10.15—News Bulletin and Sports Notes. 10.20—Talk on Sports, and Close Down.

LEIPZIG (Germany)

1,157 kc/s (259 m.); 2 kW. Relayed by Dresden, 941 kc/s (319 m.).

Transmits at intervals from 6.0 a.m. 4.30 p.m.—Concert by the Leipzig Symphony Orchestra, conducted by Theodor Blumer. Soloist: Dr. Paul Klengel (Viola). Overture, "Il ritorno di Tobia" (Haydn). Concerto for Viola and Orchestra, Op. 1 (Stamitz, arr. Paul Klengel). Waltz, Dichterliebe (Johann Strauss). Lyric Suite, Op. 54 (Grieg).

5.30—Weather and Time. 5.50—Economic Notes. 6.5—Talk for Women: Personality and Destiny in Ibsen's Women Characters. 6.30—French Lesson. 6.50—Programme to be announced. 7.0—Dialogue: Are we still interested in Plastic Art? 7.30—Concert by the Leipzig Symphony Orchestra, conducted by Hilmar Weber. Overture, "Der Freischütz" (Weber). Variations on the Folk Song, Ach wie ist's möglich dann (Raff). Marche aux Flambeaux in C Minor, No. 3 (Meyerbeer). Entry of the Gods into Valhalla from "The Ringgold" (Wagner). L'Arlesienne Suite No. 2 (Bizet). Waltz from Op. 22 (Schumann).

8.40—Otto Heuschele reads from his own Works. 9.10—Economic Notes. 9.20—Organ and Violin Recital from St. George's Church. Rotha. Soloists: Johannes Piersig (Organ) and Walter Davison (Violin). Passamezzo in A Minor (Samuel Scheidt). Sonata in C Minor for Violin and Bass continuo (Biber). Fantasia on "L'homme armé" (Johann Nepomuk David). Two Selections (Bach): (a) Prelude and Fugue in G Minor for Violin, (b) Passacaglia and Fugue in C Minor.

10.20—News Bulletin, followed by Gramophone Concert of Light Music and 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. 6.0 p.m.—Programme for Children. 6.30—Quintet Concert. 7.30—German Lesson. 8.0—Esperanto Lesson. 8.30—Part Relay from the State Opera House, Vienna. 10.30—Time and News Bulletin.

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—Talk: Can the Deaf and Dumb be taught to speak? 7.30—See Warsaw. 7.35—News Bulletin. 7.45—9.45—See Warsaw. 9.45—Answers to Technical Correspondence. 10.0—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.—Popular Music on Gramophone Records. 7.0—Light Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South-East. 8.30—Readings from "Berenice"—Drama (Racine).

MADRID (Spain)

Union Radio (EA)7. 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. 8.15—8.30—News and Political Review. 10.0—French Lesson on Gramophone Records. 10.30—Chimes Time, Political Review. 10.45—"La Gioconda"—Opera (Ponchielli) on Gramophone Records. 12.45 a.m. (Wednesday)—News Bulletin. 1.0—Chimes and Close Down.

MILAN (Italy)

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

MORAVSKÁ-OSTRAVA (Czechoslovakia)

1,137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 10.30 a.m. 7.0 p.m.—See Prague. 7.20—"A Silesian Wedding"—Concert, conducted by Prasek. 8.0—See Prague.

10.15—Programme Announcements and Theatre Guide. 10.20—See Prague.

MOSCOW (Russia)

Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in Dutch: Bolsheviek Propaganda. Talk in French: The Work of Delegates to Moscow. 9.55—Time Signal. 10.0—Weather Forecast. 11.0 (approx.)—Close Down.

MUNICH (Germany)

563 kc/s (533 m.); 1.5 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.); and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 5.0 p.m.—Orchestral Concert, conducted by Erich Kloss. Overture "Semiramis" (Rossini). Romance (Tchaikovsky). Selection from "The Huguenots" (Meyerbeer). Waltz, O schöner Mai (Johann Strauss). Vindobona—a Potpourri of Viennese Airs (Leopold). Minuet (Paderewsky). Scherzerade (Schmalstich). 6.15—Time Signal, Weather Report and Agricultural Notes. 6.25—Talk: Sports in Finland. 6.45—Talk: German Sports. 7.5—Operetta Music by Leo Ascher. The Station Orchestra, conducted by Karl List. Soloists: Paula Menari (Soprano), Karl König (Tenor), Meta Liebermann (Soprano), and Philipp Fröbis (Tenor). Overture and Selection from "Der Soldat der Marie." Songs from "Hoheit tanzt Walzer." Selection from "La Barberina." Song from "Ich hab' dich lieb." Selection for Vocalists and Orchestra from "Frühling im Wienerwald." Songs from Sound Films. 8.30—Hermann Kesser reads from his own Works. 9.0—Song Recital by Wilhelm Rode (Baritone). Wie bist du meine Königin (Brahms). Die Mainacht (Brahms). Ständchen (Brahms). Im Kahn (Grieg). Der Schwan

(Grieg). Jägerlied (Grieg). Die Saat (Bergner). Zarathustra (Bergner).

9.35—Max Reyer in Munich. Programme by Philippine Knorr (Soprano), Hildegard Krafft von Dellmensingen (Violin), and Kurt Weiler (Organ and Pianoforte). 10.20—Time Signal, Weather Forecast, News Bulletin and Sports Notes.

OSLO (Norway)

Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hanar, 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. 2.0 p.m.—Promenade Concert. 3.0—5.0—Interval. 5.30—Popular Music on Gramophone Records. 6.0—Talk for Housewives, relayed from Trondheim, 608 kc/s (493.4 m.). 6.45—Accordion Recital. 7.0—Announcements, Weather and News Bulletin. 7.30—English Lesson. 8.0—Time Signal. 8.1—"The Seasons"—Oratorio for Soloists, Choir and Orchestra (Haydn) 9.35—Agricultural Report. 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Concert by the Station Orchestra, conducted by Hugo Kramm Soloists: Hans Brodal (Tenor) and Mlle. Waitz (Soprano). Selection from "The Flower of Hawaii" (Abraham). Selection (Jessel). March of the Gladiators (Souza). 11.30 (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—6.30—Popular Music on Gramophone Records. 8.0—Announcements, Giornale dell'Ente, Agricultural Notes and Giornale Radio. 8.20—Light Music on Gramophone Records. 8.30—Time Signal and Announcements. 8.45—Concert of Chamber Music. Pianoforte Solo: Sonata in B Minor, Op. 58 (Chopin). Quartet in F, Op. 18 (Beethoven). Sonata for Violin (Handel). 9.30—"Change of Front"—Play for Radio (Carlo Salsa), followed by Chamber Music (cont'd). Two Violin Solos: (a)

Berceuse (Manno), (b) Il Cuculo (Ranzato). Two Movements from the Quartet in F (Schumann). Pianoforte Solos: (a) Lithuanian Song (Chopin), (b) Etude in A Minor, Op. 25, No. 11 (Chopin). 10.55—News Bulletin and Close Down.

PARIS (France)

Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW. Time Signals (on 2,650 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.—A Scene from a Play now running. 7.0—Le Journal Parlé. 8.20—Weather Forecast. 8.30—Concert organised by the Composers' Society. Fantasia for Violin (Hue). Two Pieces for Pianoforte (Falkenberg): (a) Humoresque, (b) In April. Two Songs (Charles Koechlin): (a) Pleine eau, (b) Au temps des fêtes. Sérénade sérieuse, for Pianoforte and Three Violins (de Faye-Jozin), with the Composer at the Pianoforte. Epithalame for Three Violins, Voice and Pianoforte. Three Songs (Robert Siohan): (a) Vœu, (b) Derrière le silence, (c) Chemin de ronde. Barcarolle (Jean Doyen), played by the Composer. Five Songs (Dandelot): (a) Le Réveil, (b) Chanson, (c) Conversation, (d) La Pluie du matin, (e) Les Contes, with the Composer at the Pianoforte. Pianoforte Solos: (a) Suite, "Pour un arbre de Noël" (Gallon), (b) Berceuse, (c) Scherzetto. Six Short Pieces, for String Instruments (Letocart). 10.0 (approx.)—Close Down.

PARIS (France)

Poste Parisien. 914 kc/s (328.2 m.) 60 kW. 7.0 p.m.—Gramophone Records of Popular Music, News and Announcements. 7.30—Sponsored Gramophone Concert. 8.30—Gramophone Records, Talks and News. 8.45—Vocal and Orchestral Concert. Overture, "The Merry Wives of Windsor" (Nicolai). Intermezzo from "Si" (Mascagni). Orchestral Suite, Isclil (Pierne). Selection (Silver). Selection from "Paysages normands" (Sperck). Histoires, Suite No. 2 (Ibert). Introduction,

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TUESDAY continued

Dances, Scene and Waltz from "Pavillon d'Armide" (Tcherep-nin) Serenade (Widor). Fete des Vignerons (Doret). 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—Gramophone Records. Les Cherubins (Couperin-Salmon). Canzonetta (Tchaikovsky). Adagio in A (Boccherini). Plaisir d'amour (Martini). 8.0—News, Weather and Press Review. 12.30 p.m.—Gramophone Concert. Eine kleine Nachtmusik (Mozart). Habanera (Chabrier). Selections from "Lilac Time" (Schubert-Berthe). Waltz from "The Count of Luxembourg" (Lehar). Waltz from "Les Saltimbanques" (Ganne). Waltz, Gold and Silver (Lehar). 'Cello Solo: Selection from "Les Millions d'Arlequin" (Drigo). Scherzo in B Flat Minor (Chopin). Symphony No. 5 (Beethoven). In the intervals at 1.0—Exchange, News and Weather, at 1.30—Exchange and at 2.0—Exchange and Announcements. 3.45—Exchange and Market Prices. 6.30—Market Prices, Weather, Agricultural Report and Racing Results. 7.0—Theatre Notes. 7.15—Review of Art. 7.30—Advanced English Lesson. 7.45—British Press Review, Commercial Prices and News. 8.0—Variety Programme. 8.30—News and Weather. 8.40—Review by Pierre Scize. 8.45—"The Old Mother"—Play (John Barry), adapted by M. Noziere, with the Collaboration of M. Valmy-Baysse, Berthe Bovy and M. Ledoux. 9.15—Press Review and News.

PITTSBURGH (U.S.A.)

Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Business News. 9.15—Programme to be announced. 9.30—Pebecco Weather Report. 9.32—Market Reports. 9.45—KDKA Kiddies' Klub. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Booking Service. 10.15—Programme to be announced. 10.30—"The Singing Lady" from New York. 10.45—Little Orphan Annie, from New York. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sport Review. 11.12—Press News-Reeler. 11.15—KDKA Orchestra. 11.30—Ray Perkins—"The Old Topper". 11.45—1.0 a.m. (Wednesday)—New York Relay. 11.45—Literary Digest Topics. 12 midnight—Peposdent Amos n' Andy. 12.15 a.m. (Wednesday)—Just Willie. 12.30—The Stebbins Boys. 12.45—Billy Jones and Ernie Hare. 1.0—Programme to be announced. 1.15—Seiberling Singers. 1.30—Programme to be announced. 1.45—Sisters of the Skillet, from New York. 2.0—Household Finance Programme, from New York. 2.30—Great Personalities—Frazier Hunt, from New York. 3.0—Quaker State Carefree Programme. 3.15—Westinghouse Pioneers. 3.30—Paris Night Life from New York. 3.45—Chats between the Acts. 4.0—Time Signal. 4.1—Teaberry Sports Review. 4.11—Temperature Report. 4.12—Weather Forecast. 4.15—Press Last Minute News Flashes. 4.20—Hal Kemp and his Orchestra. 5.0—Dance Music from New York. 5.30—Good Night.

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—Italian Lesson on Linguaphone Records. 7.30—Book Review. 7.45—8.15—See Warsaw. 8.15—Orchestral Concert by the Amateur Oratorio Society, conducted by Stanislaw Wiechowicz. Soloist: Professor Feliks Nourirejski (Organ). In the intervals, Theatre Guide and Announcements. 10.0—10.45—See Warsaw. 10.45—Sports Notes and Police Report. 11.0—Dance Music from the Nouvel Cafe. 12 midnight (approx.)—Close Down.

PRAGUE (Czechoslovakia)

614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.30 a.m. 4.0 p.m.—Talk by Dr. Vesela. 4.10—Orchestral Concert, relayed from Bratislava. 5.10—Concert by the Zagreb Quartet. 6.5—Agricultural Report and Market Prices. 6.15—Programme for Workers. 6.25—

German Transmission. Talk on Greece, with Gramophone Illustrations. 7.0—News Bulletin. 7.5—Talk on the History of Art. 7.20—See Moravská-Ostrava. 8.0—Orchestral Concert of National Music. 8.45—Orchestral Concert, conducted by Otakar Jeremias. Third Symphony (Axman). Selection (Foerster). In the interval at 9.0—Time Signal and News Bulletin. 10.0—News, Sports Notes, Theatre, Guide and Programme Announcements. 10.20—Light Music on Gramophone Records.

RABAT (Morocco)

721.1 kc/s (416 m.); 6 kW. Transmits at intervals from 1.30 p.m. 8.0 p.m.—Arabic Transmission—Talk, Journal Parle and Gramophone Records. 8.45—Weather and News. 9.0—Concert. Overture, "La Petite Bohème" (Hirschmann). Waltz, "Die Doll" (Gilbert-Dorler). Wien-genlied (Schumann-Salabert). Aria from "Lakmé" (Delibes). La chaise à porteurs (Chaminade). Selection from "Don Giovanni" (Mozart-Eberle). Aria from "Lohengrin" (Wagner). Talk: The Pretenders to the Cherif Throne under the reign of Ahmed el Mansour. Pianoforte Solo: Novelletten No. 1 (Schumann). Suite, Agnes Dame galante (Fevrier-Mouton). Aria from "Tosca" (Puccini). March of the Tin Soldiers (Turina-Chapelier). Hungarian Dance No. 1 (Brahms-Malkine). 11.0—Gramophone Records: of Variety Music.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)

743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and News Bulletin. 12.40 (from Lausanne)—Concert of Popular Music on Gramophone Records. 1.0—Exchange Quotations. 1.5—Gramophone Concert (contd.). 1.45—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1 (from Lausanne)—Programme for Women. 5.30 (from Geneva)—Light Music on Gramophone Records. 6.30 (from Lausanne)—Talk: The Polar Expeditions of the Graf Zeppelin. 7.1 (from Geneva)—Programme of New Gramophone Records presented by Aloys Mosser. 7.30 (from Geneva)—Book Review. 7.55—Announcements. 8.0—Concert by the Station Orchestra. 9.0 (from Geneva)—Popular Programme, including Accordion and Zither Music and Yodelling. 10.0—Weather Forecast and News Bulletin. 10.15 (approx.)—Close Down.

ROME (Italy)

Ente Italiano Audizioni Radiofoniche (IRO). 630 kc/s (441 m.); 50 kW. Relay by Naples, 941 kc/s (319 m.) and 2RO, 6,976 kc/s (43 m.). 8.15—8.30 a.m.—Giornale Radio and Announcements. 12 noon—Gramophone Records of Variety Music. 12.35 p.m.—Weather Forecast. 12.45—2.0—Sextet Concert. Soloist: Del Signore (Tenor). Suite giordardica (Amadei). Love Song (Schutt). Tenor Solos: (a) Aria from "La Bohème" (Leoncavallo), (b) Regina (Braga). Canzonetta (Godard). Selection from "Manon Lescaut" (Puccini). Tenor Solos: (a) Core ingrato (De Curtis), (b) Stormelli marini (Mascagni). Waltz from "The Cinema Star" (Gilbert). In the intervals: Giornale Radio, Exchange, Time and Announcements. 5.15—Children's Radio Review, Giornale Radio and Announcements. 5.30—Song Recital by Luciana Casalbore (Mezzo-Soprano). Negro Cradle Song (Clutsum). Elegie (Massenet). Aria from "Faust" (Gounod). 5.45—"Variety Concert. Selection from "The Barber of Seville" (Rossini). Ciufluetto (Lao Schor). Fiesta arrababela (Gai). Waltz from "Coppélia" (Delibes). Rosalinda (Holmes). 6.55 (Naples)—Shipping and Sports Notes. 7.0—Agricultural Notes, Weather, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Gramophone Records of Variety Music. 8.30—Sports Notes. 8.45—Celebration of the National Festival. Patriotic Anthems. "Change of Front"—a War Scene in 1915 (Carlo Salsa). 9.20—March, Italia giovane (Del Giudice). 9.30—Second and Third Acts of "L'Arlesiana" (The Maid of Arles)—Opera (Cilea). News after the Programme.

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 15,340 kc/s (19.56 m.). Transmits at intervals from 11.45 a.m. 9.0 p.m.—Bridge Lesson. 9.30—Studio Ensemble. 9.35—New Items. 9.45—Stock Reports and Police Notices. 10.0—Sonata Programme from New York. 10.15—Skippy from New York. 10.30—The Success Doctor. 10.45—Annette McCullough (Crooner). 11.0—Joe and Eddie. 11.15—New Kenmore Orchestra. 11.29—Weather Report. 11.30—With Gray McClinton in the Canadian North-West. 11.54—Sonata Programme. 12 midnight (WGY only)—General Electric Programme. 12 midnight (W2XAF only)—Stock Reports and News Items. 12.15 a.m. (Wednesday)—New Kenmore Orchestra. 12.45—4.0—New York Relay. 12.45—Trials of the Goldbergs. 1.0—Blackstone Plantation. 1.30—True Story Hour. 2.0—Gay Vienna. 2.30—Ed Wynn and the Texaco Fire Chief Band. 3.0—Lucky Strike Dance Hour. 4.0—Freddy Engel's Orchestra. 4.30—DeWitt Clinton Orchestra. 5.0—Ralph Kirby (The Dream Singer), relayed from New York. 5.5—Hotel New Yorker Orchestra from New York. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)

653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather and News. 12.40—Orchestral Concert. 1.35—Weather and Exchange. 1.45 (approx.)—3.30—Interval. 3.30—Orchestral Concert. 4.0 (from Basle)—Quartet Concert 5.0—6.30—Interval. 6.30 (from Basle)—Talk on Everyday Psychology. 7.0—Time and Weather. 7.5 (from Basle)—Talk: Lake Maggiore. 7.30 (from Basle)—Talk: Dostoevsky's Wife. 8.0 (from Zurich)—"Mr. Babbitt buys Europe"—Comedy in Eleven Scenes (Max Braunschweig). 9.30—Weather and News. 9.45—Orchestral Concert. 10.30 (approx.)—Close Down.

STOCKHOLM (Sweden)

Radiojätäst (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 (1,343 m.); Östersund, 389 kc/s (770 m.) and Sundsvall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. 5.0 p.m.—Programme for Children. 5.45—Light Music on Gramophone Records. 6.45—Literary Review. 7.15—Weather and News Bulletin. 7.30—Talk on Friedrich Fröbel, relayed from Norrköping, 1,202 kc/s (232.2 m.). 8.0—The Practical Corner. 8.15—Concert by a Military Band, conducted by Viktor Fritzel. Södermanland (Widebeck). By the blue Hawaiian Waters (Ketelbey). Potpourri (Sjöberg). Waltz Potpourri No. 2 (Robrecht). Söderman-Mosaik (Rudolf). Potpourri of Marches (Fritzel). 9.15—Travel Talk. 9.45—Weather and News Bulletin. 10.0—Liszt Concert by the Station Orchestra. Soloist: Anita Harrison (Pianoforte). Symphonic Poem, "Tasso" Concerto No. 1, in E Flat, for Pianoforte and Orchestra. Hungarian Rhapsody No. 1, in F Minor. 11.0 (approx.)—Close Down.

STRASBOURG (France)

Radio-Strasbourg (PIT). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert of Light Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert of Popular Music. 2.0—4.45—Interval. 4.45—Talk in French. 5.0—Dance Music. 6.0—Talk in German: Alsatian Poets and Authors. 6.15—Topical Talk in French. 6.30—Orchestral Concert. Overture, "Oberon" (Weber). Selection from "Don Carlos" (Verdi). Two Hungarian Dances (Brahms). Ballet Music from "Sylvia" (Delibes). Melody (Rubinstein). Jewish Rhapsody (Monfred). Teufelsmarsch (Suppé).

7.30—Time Signal. 7.32—News in French and German. 7.45—Orchestral Concert. Overture, "Joseph" (Méhul). Song: Romance from "Ariodant" (Méhul). Selection from "The Daughter of the Regiment" (Donizetti). Songs (Pierné): (a) Le Retour des Marins, (b) Les Baleines. Nocturne from "Cocoricco" (Ganne). Waltz, Roses from the South (Joh. Strauss). March, Salut à la France (Scassola). 8.30—Comedy Evening relayed from Paris. 10.30 (approx.)—Close Down.

STUTT GART (MÜHLACKER) (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. 12 noon—Orchestral Concert from Greiner's Grossgaststätten. Oriental Foxtro Symphony, from Bagdad to Nanking (Berndt Buchbinder). Waltz, Wienerblut (Johann Strauss). Violin Solo: Scenes from the Czardas (Hubay). Hungarian Czardas, Was kann ich dafür (Eisenmann). Rumba, Der Onkel Rumba aus Colombia (Hupfeld). Selection from "Iolanthe" (Tchaikovsky). Vivat-Hungaria—March Divertissement from "Der Teufelsreiter" (Kálmán). 12.50 p.m.—Time, Weather, News and Programme Announcements. 1.0—Gramophone Concert of Strauss Music. Overture, "Die Fledermaus." Tenor Solo from "Eine Nacht in Venedig." Waltz, Dorfschwalben aus Oesterreich. Soprano Solos from "The Gipsy Baron." Perpetuum mobile. The Blue Danube. Waltz, Morgenblätter, Song from "Die Fledermaus." Czardas from "Die Fledermaus." Pizzicato Polka. Tales from the Vienna Woods. Frühlingstimmen. 1.55—News Bulletin. 2.0—2.15—Sponsored Programme—Musical Selections. 2.30—Advanced English Lesson. 3.0—4.0—Interval. 4.0—Talk on Flowers. 4.30—Talk: Woman as a Newspaper Reader. 5.0—Concert from Munich. 6.15—Time and Weather. 6.25—Talk on Marriage Contracts. 6.50 (from Freiburg)—Talk: America and the World Crisis. 7.15—Time and Agricultural Notes. 7.30 (from Schwetzingen)—"Springtime in Schwetzingen"—a Radio Report by Martin Lang and Carl Struve. 8.30—"Jünger Mond, du kommervolle Barke"—a Radio Literary and Musical Sequence (Oscar Ludwig Brandt). 9.30—A Chamber Concert at Hans Fugger's (1531-1598). Soloists: Oskar Wolf (Flute), Karl Hess (Viola), Artur Fais (Lute) and Louis Schuyer (Viol da Gamba). Introductory Talk. Choral Selection: Wemm soll man jetzund trawen di Lasso. Ricercar—for Flute, Viola and Lute (Melchior Rewsider). Recitation: "Three Hunor Stories (Sachs). Priamel—for Flute, Viola and Lute (Hans Judenking). Dance for Flute, Viola, Lute and Viol da Gamba (Anon). Choral Selections: Las sil convient (Certon). La Canzon degli uccelli, for Viola, Lute and Viol da Gamba (da Milano). Gros Jehan menoit for Choir (Rene). 10.30—News, Time, Programme Announcements and Weather. 10.45—Concert from Hamburg. 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. March (Römischi). Serenata sincera (Donati). Valzer delle Ninfe (Veronesi). Selection (Bullerian). Tango dell vento (Mariotti-Mendes). Comedy Overture (Lincke). Banderilleros (Montanaro). Selection (Nanti). 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. Relay by Milan, 905 kc/s (331.5 m.); Genoa, 959 kc/s (312.8 m.); and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural Report. 7.0—Announcements. 7.5—Concert. Soloist: Professor Ferro (Flute): Introduction to "Das Nachtlager in Granada" (Kreutzer). Flute Solo: "The Nightingale's Morning Song (Recktenwald). Mia! Mia! (Domons). Seguidilla (Frontini). 7.30—Time and Announcements.

7.35—Variety Music on Gramophone Records. 8.0—Giornale Radio and Weather. 8.15—Orchestral Selections: Pizzicato Polka (Strauss). Overture, "Zampa" (Hérold). 8.30—Scientific Talk. 8.45—"I Puritani"—Opera in Three Acts (Bellini). Conductor: Ugo Tansini. In the intervals, Talk and Literary Notes. Giornale Radio after the Programme.

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. 6.0 p.m.—Talk: The Vienna Festival Weeks. 6.10—Talk: Hunting and Agriculture. 6.35—Talk on Kant. 7.0—Physical Culture Lesson. 7.20—Viennese Song Recital by Ernst Arnold. 7.45—Time and Announcements. 7.55—"Elektra"—Opera in One Act (R. Strauss), relayed from the State Opera House. 9.50—News Bulletin. 10.5—Orchestral Concert. Overture, "The Land of Smiles" (Lehar). Waltz, Freudengrüsse (Jos. Strauss). "Tirili (Ganglbauer). Potpourri, Über Berg und Tal (Löwenthal). Souvenir (Schieder). Potpourri, So schön wie's einmal war (Dauber). Grossmütterchen (Lange). English Waltz (Ralton). Tango Sehr geschätztes Fräulein Laura (Rotter-Jurmann). Potpourri, Auf der Wanderschaft (Manfred). Slow Waltz, Verklingende Liebe (Richard Gluck). March, Trara (Morawetz).

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—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 Report. 1.25—Interval. 1.35—Popular Music on Gramophone Records. 1.55—Interval. 2.45—Variety Music on Gramophone Records. 3.5—Economic Report and Exchange Quotations. 3.15—Aviation Notes. 3.20—Interval. 3.25—Talk: Aerodromes. 3.45—Hydrographic Report. 3.50—Programme for Children. 4.15—Interval. 4.20—Talk from Lwów. 4.40—Light Music on Gramophone Records. 4.55—Talk in a Caucasian Dialect. 5.10—Talk from Lwów. 5.35—Symphony Concert by the Warsaw Philharmonic Orchestra, conducted by Emil Mlynarsky. Symphony in C Minor—the London Symphony (Haydn). Symphonic Poem, The Corsair (Rytel). Selections (Liadov): (a) The Enchanted Lake, (b) Baba Jaga. Selections from "The Damnation of Faust" (Berlioz). 6.50—Miscellaneous Items. 7.15—Agricultural News. 7.25—Programme Announcements. 7.30—Sports Notes. 7.35—Light Music on Gramophone Records. 7.45—Radio Journal. 8.0—Talk. 8.15—Popular Concert by the Station Orchestra, conducted by Josef Oziminsky, and the "Lutnia Warszawska" Choir, conducted by P. Maszynsky. Overture and Ballet Music from "Rosamunde" (Schubert). Choral Selection: German Dances (Schubert-Flitner). Perpetuum mobile (Johann Strauss). Egyptian March (Johann Strauss). Overture, "The Carnival in Rome" (Johann Strauss). Choral Selection: Waltz, Roses of the South (Johann Strauss-Reim). 9.45—Answers to Correspondence. 10.0—Pianoforte Recital by Vera Brock. Petrarch Sonnet (Liszt). Legend No. 2 (Liszt). St. François de Paul (Liszt). Caprice (Medtner). Berceuse, Op. 45 (Wihtol). Prelude (Wihtol). Etude, Op. 26 (Wihtol). The Lark (Glinka-Balakirev). 10.40—Radio Journal. 10.45—Weather and Police Notes. 10.50—Dance Music. 10.55—Answers to Correspondents. 11.0—Symphony Concert of Music by Beethoven and Mendelssohn, on Gramophone Records. Introductory Talk by Michal Jozefowicz. 12 midnight (approx.)—Close Down.

WILNO (Poland)

533 kc/s (563 m.); 16 kW. Transmits at intervals from 11.58 a.m. 7.0—Agricultural Notes. 7.20—Answers to Correspondents. 7.40—Programme Announcements. 7.45—See Warsaw. 11.0—Symphony Concert of Music by Beethoven and Mendelssohn, on Gramophone Records. Introductory Talk by Michal Jozefowicz. 12 midnight (approx.)—Close Down.

PRINCIPAL EVENTS

WEDNESDAY (May 25)

SYMPHONY CONCERTS

- 8.30 p.m. Hamburg: Symphony No. 4 (F. Woyrsch).
- 8.40 ,, Vienna: Stravinsky programme, (Gramophone).

CONCERTS (Vocal and Instrumental)

- 6.40 p.m. Budapest: Operetta Excerpts.
- 8.0 ,, Langenberg, Munich: Variety.
- 8.15 ,, Copenhagen: Haydn programme.
- 8.15 ,, Schweizerischer Landessender: Italian Sacred Music.
- 9.15 ,, Warsaw: Szymanowsky Programme.

OPERAS AND OPERETTAS

- 7.20 p.m. Prague: Opera Relay.
- 8.25 ,, British Regional Stations: "Das Rheingold" (Wagner), relayed from Covent Garden.
- 8.45 ,, Rome: "Le Villi," and "The Girl of the Golden West," Act 3 (Puccini).
- 9.10 ,, Breslau: Excerpts from "The Bartered Bride" (Smetana).

CHAMBER MUSIC

- 8.0 p.m. Radio-Suisse Romande
- 8.30 ,, Strasbourg: Sonatas and Songs.

RECITALS

- 7.40 p.m. Huizen: Dr. Schweitzer (Organ).
- 9.55 ,, Copenhagen: Loewe Ballads.

PLAYS AND TALKS

- 9.0 p.m. Munich: "Rescue" (H. Kesser).
- 9.10 ,, Heilsberg: "The Soldiers" (Lenz).

MISCELLANEOUS

- 9.0 p.m. Frankfurt, Stuttgart, Langenberg: "The Hambach Festival."
- 9.10 ,, Leipzig, Hamburg: "The Elbe"

DANCE MUSIC

- 10.20 p.m. Hamburg: Scarpa Band.
- 10.30 ,, Strasbourg.
- 11.0 ,, Copenhagen.

The Girl of the Golden West Puccini's opera, written to an Italian libretto made from David Belasco's play of the same name, was a triumphant success when it was first given in New York at the end of 1910. Elsewhere it has never been quite so popular as *La Bohème*, *Tosca* or *Madame Butterfly*, but its music is all of the melodious order of which he was so great a master. The story is drawn from a period of American history when California was attracting fortune hunters from all over the world. It was a wild and unruly time, and round the mixed and lawless gathering of gold



Minnie, Rance and Johnson in her House

seekers there sprang up a host of thieving and murdering gangs, as an inevitable outcome of the lust of wealth. The administration of justice was as primitive and brutal as the law-breaking. The "Girl" of the tale is Minnie, a typical figure of the gold rush days, and the other two principal characters are Rance, the Sheriff, and the Bandit Ramerrez, known as Dick Johnson, whom Minnie eventually saves from execution, to go away and begin a new life with him in another part of the world. Our picture was taken at the first New York performance when the cast included Destinn as Minnie, Caruso as Johnson and Amato as the Sheriff. ROME is broadcasting the third act this evening.

A Schubert Sonata

Although Schubert, more than any other of the great masters, is known and loved by the ordinary listener, it is on quite a small number of his pieces that that popularity rests. It is possible to produce a vast number of Schubert's pieces which are still unknown, not merely to the casual listener to whom it matters very little who made his music for him, but even to the enthusiast—even to all but a very few of Schubert's own special devotees. He left, for instance, four Sonatas, a Phantasia, and a Rondo, all for Pianoforte and Violin, which are practically unknown except to Violinists, though on the rare occasions on which they are played, as one is to be at STRASBOURG this evening, the listener always wonders why he has not had a chance of hearing them before. Like almost everything he wrote for string instruments, the violin parts are as grateful to play as they are to hear. All through his orchestral and chamber music, the melodies seem to play themselves, so naturally do they "lie," as fiddlers say, for the instruments. He learned the art of writing for strings in the best of all possible ways by playing a fiddle himself. Among the music published after his death were three Sonatas—sometimes called Sonatinas, although the term is wholly inadequate for music of such value and such bigness. They all belong to the last years of his life, to a time when struggle and sorrow had left their mark on his spirit, but gaiety and laughter are there too; in a word, the Sonatas are all genuine Schubert as we know him.

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—"New Pennies, Old Purses"—IV.		
12 noon—Quentin Maclean at the Organ.		
12.45 p.m.—Gramophone Records.		
1.0—Time Signal (Greenwich).		
1.30—Jack Martin and his Hotel Majestic Orchestra.		
2.25—For the Schools. Reception Test.		
2.30—Biology and Hygiene. Professor Winifred Cullis, C.B.E.		
2.55—Interval.		
3.0—English Literature. Miss N. Niemeier: "Delight in Poetry."		
3.25—Interval.		
3.30—The Penketh Tannery Band. Ronald Hoyle (Baritone).		
4.45—Time Signal (Greenwich).		
4.45—Reginald New at the Organ.		
5.15 (Daventry)—The Children's Hour.		
5.15 (London and Northern)—Dance Music. The Savoy Hotel Orpheans and Geraldo and his Gaucho Tango Orchestra.		
6.0—"The First News."		
6.30—Time Signal (Greenwich).		
6.30—"The Foundations of Music. Mozart's Pianoforte Variations.		
6.50—"The Cinema." Mr. Cedric Belgrave.		
7.5—7.25—Talk on Farming. Sir Daniel Hall, K.C.B., F.R.S.		
7.30—"Speech in the Modern World"—I. Mr. A. Lloyd-James.		
8.0—An Orchestral Concert. The B.B.C. Orchestra (Section D), conducted by T. H. Morrison.		
9.0—Time Signal (Greenwich).		
9.0—"The Second News."		
9.15—Shipping Forecast; New York Stock Market Report.		
9.20—Musings Without Method.		
9.25—"A Hundred Years Old." By Serafin and Joaquin Alvarez Quintero, English Version by Helen and Harley Granville Barker. Adapted for Broadcasting by Dulcima Glasby.		
10.50—12 midnight—Dance Music.		
11.30—Time Signal (Greenwich).		

REGIONAL		
	kc/s	m. kW.
London:	842	356.3 50
Midland:	752	398.9 25
Northern:	626	479.2 50
10.15 a.m. (London and Northern)—The Daily Service.		
10.30—11.0 (London and Northern)—Daventry National Programme.		
11.30—12 noon (London)—Experimental Television Transmission.		
12 noon—The Midland Studio Orchestra. Gwendoline Bishop (Contralto).		
1.15 p.m.—Organ Recital by Dr. Harold Rhodes.		
2.0—3.0—The Northern Studio Orchestra. Mary Dale (Contralto).		
3.30 (London and Northern)—Daventry National Programme.		
5.15—"The Children's Hour."		
6.0—"The First News."		
6.30 (London)—Orchestral Concert. The B.B.C. Orchestra (Section E). Gladys Parr (Contralto).		
6.30 (Midland)—The Birmingham Military Band, conducted by W. Arthur Clarke. Cuthbert Ford (Baritone), Dorothy Summers (Entertainer).		
6.30 (Northern)—The Northern Studio Orchestra, directed by John Bridge. Stanley Beckett (Baritone).		
7.40 (Northern)—A Relay from the Argyle Theatre, Birkenhead.		
7.45 (London)—Viennese Waltzes. The B.B.C. Theatre Orchestra.		
8.0 (Midland)—The Midland Studio Chorus, under the direction of Edgar Morgan.		
8.25—Wagner's "The Rhinegold," from The Royal Opera House, Covent Garden. Wogilde, Ina Souez; Wellgunde, Betty Thompson; Flosshilde, Gladys Palmer; Alberich, Eduard Habich; Fricka, Maria Olczewska; Wotan, Ludwig Hofmann; Freia, Josephine Wray; Fasolt, Otto Helgers; Fafner, Norman Allin; Froh, Edward Lege; Donner, William Michael; Loge, Fritz Wolf; Mime, Heinrich Tessmer; Erda, Rispah Goodacre. Conductor, Robert Heger.		
10.55—11.0 (Midland)—Experimental Transmission by the Fultograph Process.		
10.55—12 midnight (London and Northern)—Dance Music.		

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

BARCELONA (Spain)

Radio-Barcelona (EAJI). 860 kc/s (349 m.); 8 kW. Transmits at intervals from 8.15 a.m. 8.0 p.m.—Trio Concert. Selection from "La Villana" (Vives). Valgame Dios de los cielos I (Mariani). Oriental Dance (Breton). Bolero, Puerta de Tierra (Albeniz). 8.30—Exchange Quotations and Lesson in Catalan Grammar. 9.0—Request Gramophone Records and News. 10.0—Chimes from the Cathedral, Weather and Exchange Quotations. 10.5—Orchestral Selections. Overture, "Athalie" (Mendelssohn). Berceuse (Sgambati). 10.20—Dance Music. 11.0—Recital of Mariano Manent's Poems in Catalan with a Commentary. 11.15—Vocal and Instrumental Concert of Music by Vicente Maria de Gibert. 1.0 a.m. (Thursday)—Close Down.

BELGRADE (Yugoslavia)

697 kc/s (430.4 m.); 2.5 kW. Transmits at intervals from 9.55 a.m. 5.0 p.m.—Accordion and Violin Recital of National Songs. 5.30—Gramophone Concert of Variety Music. 6.55—Time Signal and Programme Announcements. 7.0—German Lesson. 7.30—Cigany Concert relayed from the "Rudnicanin" Restaurant. 8.0—Recital of Songs by Frau Mirolava Binicki. 8.30—Gramophone Records of Variety Music. 9.15—Stevan Mokranjac Concert by the Station Orchestra. Soloist: Zarko Cvejic (Vocalist). Iz stare Srbije i Makedonije. Haiduk Veljko. Songs. Selection from "Ivkova Slava." Songs. Choral Selection from "Obilic" (on Gramophone Records). 10.15—News and Sports Notes. 10.35—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. 12 noon—Weather for Farmers, followed by Gramophone Records of Request Songs and Arias; and

Second Weather for Farmers. 12.55 p.m.—Nauen Time Signal. 1.30—News Bulletin. 2.0—Gramophone Concert of Light Music, relayed from Berlin (Witzleben). 3.0—Tales for Young People. 3.30—Weather and Exchange. 3.45—Talk for Women. 4.0—Educational Talk. 4.30—See Hamburg. 5.30—Talk on Sport. 6.0—Talk: The Orchestra and its Instruments, with Illustrations. 6.30—Talk: The "Hambacher Fest." 6.55—Weather for Farmers, followed by Wireless Technical Talk. 7.10—See Berlin (Witzleben). 7.40—Talk for Civil Servants, followed by Weather for Farmers. 8.0—See Langenberg. 9.0—News Bulletin. 9.10—See Leipzig. 10.15 till Close Down—See Berlin (Witzleben). 12.30 a.m. (Thursday)—Close Down.

BERLIN (Germany)

Witzleben. 715 kc/s (419.5 m.); 1.5 kW. Transmits at intervals from 6.0 a.m. (Gymnastics and Concert). 6.15 p.m.—Gertrud Isolani reads from her own Works. 6.30—Sonata in F Minor for Pianoforte, Op. 57 (Beethoven), by Margarethe Ansgorge. 6.55—The Witzleben Station informs its Listeners. 7.0—Topical Talk. 7.10—Legal Talk. 7.35—A Radio Portrait—"Ernst Krenk." H. Stuckenschmidt before the Microphone. 8.0—See Breslau. 9.0—News and Sports Notes. 9.10—"Spring's Awakening"—A Tragedy of Childhood (Frank Wedekind). 10.15—Weather, News and Sports Notes, followed by Dance Music from the Hotel Excelsior. 12.30 a.m. (Thursday)—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 Bulletin and Market Prices. 7.40—Request Concert of Gramophone Records. 7.55—Lottery Results. 8.0—Agricultural Talk. 8.15—Local News. 8.30—Paer Festival—Concert by the "Arca" Symphony Orchestra. Soloists: Mlle. St. Val, M. Raynal, and M. Lafont (Vocalists). Introductory Talk by Pierre Caillejo, Overture, "Agnes." Overture, "Il Maniscalco." "Le Maître de Chapelle"—Comic Opera in

Two Acts. Overture, "Sofonisbe" (arr. Weninger). 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. 7.5—Introductory Talk to the Following Transmission. 7.30—"Beatrice"—Opera (Lilien), relayed from the Slovak National Theatre. 10.0—Popular Music on Gramophone Records. 11.5—Programme Announcements and Close Down.

BRESLAU (Germany)

923 kc/s (325 m.); 1.5 kW. Relayed by Glerwitz, 1,184 kc/s (253 m.). Transmits at intervals from 6.0 a.m. 5.40 p.m.—Pianoforte Recital by Paul Lassak. Songs without Words (Mendelssohn). Four Etudes (Neal). Selections (Schumann): (a) Des Abends, (b) Arabesque. Impromptu (Chopin). 6.10—Talk: Problems of Distant Reception. 6.30—Talk on Public Health. 6.45—Talk: Police Administrative Law. 7.5—Weather for Farmers.

7.7—Recital of Loewe Ballads, by Richard Cohn (Bass). Heinrich der Vögler. Herr Oluf. Edward. Der Nöck. Odins Meeresritt. 7.35—Talk: Art in need of Help. 7.55—Weather Forecast. 8.0—"Alla Turca"—Old and Modern Turkish Music by the Philharmonic Orchestra. Talk by Dr. Edmund Nick. 9.0—News Bulletin. 9.10—Extracts from "The Bartered Bride"—Opera in Three Acts (Smetana) with Introductory Talk and Commentary. 10.0—Time and News. 10.20—"The Microphone listens to the Nightingale"—an Experimental Relay from a Breslau Park. 10.40—News Bulletin. 10.45—Dance Music from Berlin (Witzleben). 12 midnight (approx.)—Close Down.

BRNO (Czechoslovakia)

878 kc/s (342 m.); 35 kW. Transmits at intervals from 11.0 a.m. 7.0 p.m.—Talk: Aviation in 1931. 7.20—See Prague. 9.5—Announcements and Close Down.

WEDNESDAY continued

BRUSSELS (Belgium) (No. 1) I.N.R. 500 kc/s (509 m.); 15 kW. 12 noon—Orchestral Concert. 12.30 p.m. (in an interval)—Weather. 5.0—Belgian Sonatas—Sonata, No. 2, Op. 32, for Violin and Piano forte (Desiré Paqué). 5.30—Gramophone Records of Light Music. 6.15—Talk for Amateur Photographers. 6.30—Gramophone Records. Overture, "Alessandro Stradella" (Flotow). Prince Galitzky's Song from "Prince Igor" (Borodin). A Trilogy, Le Camp de Wallenstein (d'Indy). Selection from "Marina" (Arrieta Correr). Symphonic Poem, Stenka Razin (Glazunov). 7.15—Talk: Oceanography. 7.30—Medical Talk. 8.0—Pianoforte Recital by Mlle. Tambuser. 8.30—Comedy in One Act (Georges Courteline and Edouard Norez). 9.5—Orchestral Concert relayed from the "Ancienne Belgique." 10.0—Le Journal Parlé. 10.10—Concert (cont'd.). 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—Orchestral Concert. In the interval at 12.30 p.m.—Weather Report. 5.0—Dance Music from the St. Sauveur Palais de Danse. 6.15—Talk: Aviation and Commerce. 6.30—Trio Concert by Fr. Wigy (Violin), P. Leemans (Pianoforte) and De Nocker (Cello). Cortège carnavalesque (Razigade). Extase (Ganne). Norwegian Dances (Grieg). Sérénade à l'Amour (Fauchey). Violin Solo: Tambourin chinois (Kreislér). Selection from "Cavalleria rusticana" (Mascagni). Cello Solo: Serenade (Holmann). Claironnerie (Ducasse). 7.15—Talk: The Problem of the Atlantic. 7.30—Review of World Events. 8.0—Guitar Recital by Mario Maccaferri. 8.30—Concert relayed from Madrid. In the interval at 8.45—Recitations. 10.0—Le Journal Parlé. 10.10—Orchestral Concert relayed from the "Ancienne Belgique." 11.0 (approx.)—Close Down.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. 6.40 p.m.—Song Recital by Mme. Vasiliu Cristesco. 7.0—Violoncello Recital by Georges Draghici. Sonata (Galliard). Sérénade (Schmitt). L'Hiver (Boulois). Noël (Boulois). Lament (Fauré). Fileuse (Fauré). Allegro spirituoso (Senaillé). 7.30—Talk (to be announced). 7.45—Pianoforte Recital by Radulesco. Sonata Op. 78 (Beethoven). Two Preludes (Respighi). Selection (Szymanowsky). 8.15—Violin Recital by Mme. Pollermann. Sérénade mélancolique (Tchaikovsky). Lilac (Hubay). Ave Maria (Schubert). Waltz (Chopin-Hubermann). Spanish Dance (Sarasate). 8.45—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 6.40 p.m. till Close Down. 6.15 p.m.—Italian Lesson. 6.40—Orchestral Concert, conducted by Karl Stephanides. Overture, "Die geschiedene Frau" (Fall). A Thousand and One Nights (Johann Strauss). Potpourri of Millöcker's Music (Morena). Selection from "Endlich allein" (Lehár). Selection from "Zigeunerprimas" (Kálmán). 8.0—A Play (to be announced). 10.30—News, followed by Dance Music from the Hotel Ritz.

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 conducted by Bendix relayed from the Wivex Restaurant. 1.15—English Reading. 1.45—3.0—Interval. 3.0—Orchestral Concert of Danish Music conducted by Emil Reseen. Overture, "Little Christie" (J. P. E. Hartmann). Slow Waltz from "The Little Mermaid" (Henriques). Two Pieces from "Maskerade" (Carl Nielsen). Suite from "Lackschmi" (Nielsen). Talk: Housewives and the Crisis. Hungarian Hussar March (Möller). Waltz, Nordlys (Lumbye). Selection from "Ved Bosporus"

(Lange-Müller). Selection from "Napoli" (Gade). Danish Rhapsody (Olsen). 5.0—Gramophone Concert. Angeles Ortein: Waltz, Frühlingstimmen (Joh. Strauss). Ernest Lough and the Temple Church Choir: Hear my Prayer (Mendelssohn). Alessandro Valente: Aria from "I Pagliacci" (Leoncavallo). Layton and Johnstone: Home (van Steeden Clarkson). Erik Kallquist: De' a' de' som gör sjömanslivet härligt (Garden). Debroy Semers' Band with Vocal Quartet: Marching Songs.

5.40—Exchange and Fish Market Prices. 5.50—Talk. 6.20—French Lesson. 6.50—Weather Forecast. 7.0—News Bulletin. 7.15—Time Signal. 7.30—Agricultural Talk. 8.0—Town Hall Chimes. 8.2—"The Hansen Family"—Humorous Sketch (Jens Locher). 8.15—Haydn Concert by the Station Symphony Orchestra conducted by Launy Gröndahl and Albert Fischer (Vocalist). Symphony No. 49 in F Minor. Arias from the Oratorios: (a) "The Seasons," (b) "The Creation." Symphony No. 102 in B Flat. 9.25—Talk on Contemporary Problems. 9.55—Ballads by Carl Loewe, sung by Albert Fischer (Vocalist). Die Uhr. Tom der Reimer. Der heilige Franziskus. Prins Eugen. 10.20—News Bulletin. 10.15—Mandoline Concert. Witches' Dance (Paganini). Selections (Munier): (a) Concert Mazurka, (b) Concert Waltz. Hungarian Dances Nos. 5 and 6 (Brahms). 11.0—Dance Music from Nimb's Restaurant. In the interval at 12 midnight—Time and Chimes from the Town Hall. 12.30 a.m. (Thursday)—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 Announcements. 7.15—See Warsaw. 7.25—Programme Announcements. 7.30—Answers to Correspondents. 7.45—See Warsaw. 10.35—News Bulletin. 10.45—Popular 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 p.m.—2.0—Time Signal, Weather Forecast, Stock Report and Light Music on Gramophone Records. 6.0—Popular Music on Gramophone Records. 6.15—Programme for Children. 7.0—Light Music on Gramophone Records. 7.20—News Bulletin. 7.30—Time Signal. 7.31—Gaedhilg. 7.45—German Lesson. 8.0—Concert by the Dublin Postal Band. 9.0—Dramatic Programme. 9.30—Mezzo-Soprano Solos. 9.45—Pipes and Fiddle Recital. 10.0—Tenor Solos by J. O'Neill. 10.15—The Station Sextet. 10.30—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France) Radio Normandie. 1,364 kc/s (219.9 m.); 10 kW. 12 noon—Sponsored Gramophone Concert. 12.30 p.m.—Press Review. 12.45—Concert of Popular Music. Selection from "Carmen" (Bizet). Selection from "La Fille de Madame Angot" (Lecocq). Selection from "Les Dragons de Villars" (Maillart). Selection from "Panurge" (Massenet). Lustige Brüder (Vollstedt). Selection from "La Bohème" (Puccini). Selection from "Galathée" (Masse). Amoureuse (Berger). 7.30—Journal Parlé. 8.0—Wireless News. 8.15—Press News. 8.30—Café Concert. 10.30—Transmission of Pictures. 11.0—Dance Music. 1.0 a.m. (Thursday)—Close Down.

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

FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relay by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 12 noon—Concert from Munich. 12.50—News and Weather. 1.0—Concert from Langenberg. 2.0—News Bulletin. 2.10—Sponsored Gramophone Records. 2.15—Sponsored Programme for Children. 3.0—Weather Report. 3.10—Time and Economic Notes. 3.15—Programme for Children. 4.55—Economic Notes. 5.0—Orchestral Concert, conducted by Hans Rosbaud: Soloist: Anita

Franz (Soprano). Suite, for Wind and Percussion Instruments, Op. 62 (Arnold Mendelssohn). Four Songs (Sulzbach). Suite in G, Op. 4 (Zilcher). 6.15—Economic Notes. 6.25—Talk: The Protection of Nature in Hessa. 6.50—See Stuttgart. 7.15—Time and Announcements.

7.30—Orchestral Concert, conducted by Hans Rosbaud. Soloists: Erich Itor Kahn (Pianoforte), and Heinz Korte (Bass-Clarinet). Overture, Le Déserteur (Monsigny). Songs (Bach and Paer). String Trio (Kauer). Two Arias (Kozeluh). Pianoforte Concerto (Hoffmeister). Concertino for Viola and Orchestra (Gerster). Concerto for Bass Clarinet and Ten Instruments (Schelp). 9.0—"Das Hambacher Fest"—a Historical Radio Sequence (Hermann Wendel), with Introductory Talk. 10.20—Time and News. 10.40—Talk: The German Film and the Cinema-going Public. 11.0 (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 5.45 a.m. 4.30 p.m.—Concert from the Municipal Theatre. The Norag Orchestra, conducted by Adolf Secker, with Matthias Ahlersmeyer (Vocalist). Geheimnisvoller See (Carl Schroeder). Songs: (a) Stille Tränen (Schumann), (b) Königlich Gebet (Hugo Wolf), (c) Der Leibzins-Entrichter (Rachmaninov). Irish Rhapsody (Stanford). Songs: (a) Ballad from the Second Act of "Der ferne Klang" (Schreker), (b) "The Mirror Song" from "The Tales of Hoffmann" (Offenbach). L'apprenti sorcier (Dukas). 5.30 (from Hanover)—Talk in North German Dialect. 5.55—Variety Programme. 6.30—Talk: Judges and Courts of Justice—England. 6.55—Market Prices. 7.0—Topical Talk. 7.15—Weather Forecast. 7.20—Concert of Dance Songs. The Norag Choir, the Male Voice Quartet, Erna Kroll-Lange, Gertrud Stocks, Gertrud Schnitzer, Herbert Ernst Groh, Erwin Bolt, Bernhard Jakschak and Hans Marten. Kaiser-Walzer (Johann Strauss-v. Clarnan). Czardas from "Die Fledermaus" (Johann Strauss). Foxtrot for Male Voice Quartet, Barcelona (Evans). English Waltz Song, Dir sing ich mein schönstes Lied. Polka, Serenade (Fahrbach). Duet from "Countess Maritza" (Kálmán). Ein Walzermärchen (Weinberger). Czardas from "The Gipsy Baron" (Johann Strauss). Tango: Wie geht es dir, mein Schatz (Grothe). A Rumba (Evans). Palatinat Dance from "Frederica" (Lehár). Mixed Choir: Mondnacht auf der Alster (Fétas).

8.30—The Fourth Symphony in F, Op. 71 (Felix Woerch), by the Norag Orchestra, conducted by the Composer. 9.10—See Leipzig. 10.10—Time and News Bulletin. 10.30—Dance Music from the "Haus Siegler" Café. HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relay by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. 11.30 a.m.—Concert from Leipzig. 1.5 p.m.—Concert, conducted by Ernst Eckhard. 2.30—3.20—Interval. 3.20—Talk for Housewives. 3.30—Programme for Children. 4.0 (from Danzig)—Talk for Parents. 4.30—Concert from Hamburg. 5.30—Josef Schmidt Song Recital on Gramophone Records. Aria from "Martha" (Flotow). Aria from "L'Africaine" (Meyerbeer). Two Arias from "Il Trovatore" (Verdi). Aria from "Tosca" (Puccini). España (Serrano). Wenn du treulos bist (Benatzky). 5.55—Review of Books. 6.15—Agricultural Market Prices. 6.25—Talk on Art.

6.50 (from Danzig)—Vocal and Instrumental Concert. Soloists: Aenne Martin (Soprano), Rudolf Döblin (Cello), Fritz Görlach (Violin), and Gotthold Ephr. Lessing (Pianoforte). Im Himmereich (Gal). Dort oben (Gal). Nachtigal (Scheinpflug). Traumklinge (Scheinpflug). Adagio (Marx). Songs (Weismann): (a) Wohin eilst du?, (b) Wenn die zwei Schwestern Wasser holen gehen, (c) Wanderer musst du

gehen? (d) Es war Mittag als du weggingst, (e) Der gelbe Vogel singt in ihren Räumen. 7.30—Johann Nepomuk Nestroy Memorial Programme (Herbert Eulenberg). 7.55—Weather. 8.0—See Langenberg. 9.0—News Bulletin. 9.10—"The Soldiers"—a Radio Play (Reinhold Lenz) on the 140th Anniversary of the Author's Death. After the Programme, Weather, News and Sports Notes and Dance Music from Berlin (Witzleben). 12.30 a.m. (Thursday)—Close Down.

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up till 4.40 p.m.). 6.25—9.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 6.25—6.40 and 7.10—7.25—Physical Culture. 7.40—Variety Music on Gramophone Records. 8.40—Concert by the Amsterdam Quintet. 9.40—Religious Programme by the Liberal Protestant Radio Society (V.P.R.O.). 9.55 till Close Down.—V.A.R.A. Programme. 9.55—Concert by the Amsterdam Quintet and Dramatic Programme by "Het Groot Volkstoneel." 10.40—Talk arranged by the People's Radio University. 11.10—"Vorsten en Valken"—Play in Two Acts and a Prologue (Dekker), for Verse-Speaking Choir. 11.40—Septet Concert, conducted by Is. Eyk, with Gramophone Interludes. 1.40—Talk on Cookery. 2.25—Song Recital by Mme. Hendrika Sündermann-Panhuizen. Johan Jong at the Pianoforte. In the interval at 2.40—Talk. 3.10—Programme for Children. 4.10—The Letter Box for Children. 5.10—Concert by the V.A.R.A. Mandoline Orchestra, conducted by J. Kok. Overture, Im Reich des Indra (Lincke). Tango (Malderen). Petite Flirtation (Kok). Waltz, Im Walzer-rausch (Lincke). Popular Music on Gramophone Records, Hawaiian Music, Fantasia, Sprookjesland (Kok). Goldiges Lachen (Klose). March (Roscy). 6.10—Talk arranged by the People's Radio University. 6.40—Popular Music on Gramophone Records. 7.0—Concert by the Synagogue Choir of Amsterdam, conducted by S. Engländer. Soloists: Obercantor 1st Alter (Songs), and M. Jessurun Cardoz. S. Engländer accompanying at the Pianoforte. 7.40—"Spanish Gold"—a Play adapted from the book by George Birmingham (Leo v. Dijk). 8.55—Concert by the V.A.R.A. Orchestra, conducted by Hugo de Groot. Soloist: Joh. Jong (Organ). Overture, "Light Cavalry" (Suppé). Waltz from "The Gipsy Baron" (Johann Strauss). Love's Garden of Roses (Haydn Wood). Dancing Dolls (Rust). Two Selections. Organ Solo: By the Blue Hawaiian Waters (Ketybel). Selection from "Les Saltimbanques" (Ganne). 9.40—Dialogue: The Adventures of Messrs. Wakker and Tropenduit. 9.55—Concert (continued). Overture "Czar and Carpenter" (Lortzing). Waltz, Estudantina (Waldteufel). Organ Solo: Interlude from "The Tales of Hoffmann" (Offenbach). Funeral March of a Marionette (Gounod). Glockchen im Tale (Sackur). Syncopation (Kreislér). Little Viennese March (Kreislér). Midnight Hells (Heuberger). Pierrette (Chaminade). Chant hindou (Rimsky-Korsakov). 10.40—News Bulletin. 10.55—Concert of Dance Music. 11.25—Variety Music on Gramophone Records. 11.40 (approx.)—Close Down.

HUIZEN (Holland) 163 kc/s (1,875 m.); 8.5 kW. Programme of the Christian Radio Society (N.C.R.V.). 7.40 a.m.—Time Signal and Reading. 7.55—9.10—Morning Concert. 9.40—Selections by a Ladies' Choir. 10.10—Service for Hospitals. 10.40—Harmonium Recital, with Soprano Solos. 11.40—Police Notes. 11.55—Vocal and Instrumental Concert. 1.40 p.m.—Programme to be announced. 2.10—Reading. 2.40—Quintet Concert. Overture, "The Nuremberg Doll" (Adam). Waltz, Morgenblätter (Johann Strauss). Piccolo Solo, Götterfinken (Wetzger). Selection from "The Huguenots" (Meyerbeer). Scandinavian Suite (Juel-Fredriksen). Serenade in F Major (Til). Overture, "Marinarella" (Fucik). Dorfschwalben aus Oesterreich (Josef Strauss). The Mill in the Black Forest (Eilenberg). Selections from "The Tales of Hoffmann" (Offenbach). 4.40—Programme for Children. 5.40—Agricultural Programme. 6.40—Programme arranged by the Department of Building and Roads. 7.10—Police Notes.

7.25—Talk by Prof. Albert Schweitzer: Dutch Organs. 7.40—Organ Recital by Prof. Albert Schweitzer, relayed from St. Jacob's Church, The Hague. The Sursum Corda Mixed Choir, conducted by Heer van der Horst. Toccata and Fugue in D Minor (Bach). Choral Selections (Bach): (a) Kyrie, Gott Vater, (b) Christe, aller Welt Trost, and (c) Kyrie, Gott heiliger Geist. Canzona in D Minor (Bach). Psalm 150 for Choir (Sweetinck). Fugue in G Minor (Bach). Choral Prelude and Choral for Choir: Vater unser im Himmelreich (Bach). Choral Preludes and Chorals for Choir (Bach): (a) Gottes Sohn ist kommen, (b) Komm Gott, Schöpfer, heiliger Geist. Allegro and Fugue in G (Bach). Choral Selection: Descende in hortum meum (Anton Fevin). Psalm 42 for Choir (Palestrina). The Fourth Organ Sonata (Mendelssohn). 9.25—Talk: The Organ in St. Jacob's Church, The Hague. 9.40—News Bulletin. 9.50—Gramophone Records of Variety Music. 11.10 (approx.)—Close Down.

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

KATOWICE (Poland) 734 kc/s (408 m.); 16 kW. Transmits at intervals from 11.45 a.m. 5.35 p.m.—Concert of Light Music. 7.5—Answers to Correspondents. 7.20—Talk: Shooting Stars and Comets. 8.0—Literary Talk. 8.15—Choral Concert. 9.0—See Warsaw. 10.30—News Bulletin. 10.45—Popular Music on Gramophone Records. 11.0—The Letter-Box, in French, for Foreign Listeners.

KAUNAS (Lithuania) 155 kc/s (1,935 m.); 7 kW. Transmits at intervals from 12 noon. 7.45 p.m.—Concert of Lithuanian Music. 8.40—Talk: Women and the Home. 9.0—Talk: The Chamber of Commerce and Industry. 9.20—Concert of Operatic Music. Overture, "William Tell" (Rossini). Selection from "Aida" (Verdi). Intermezzo from "Cavalleria Rusticana" (Mascagni). Aria from "I Pagliacci" (Leoncavallo). Selection from "Tosca" (Puccini). 10.30 (approx.)—Close Down.

LAHTI (Finland) 167 kc/s (1,796 m.); 54 kW. Transmits at intervals from 7.10 a.m. 6.40 p.m.—Talk. 7.5—Concert of Scandinavian Music, by the Danish Orchestra, conducted by Peder Gram. Festival Overture in C (Gram). Variations on a Danish Song (Bentzon). Felstavn (Risager). Fantasia for Pianoforte and Orchestra (Glass). Suite (Höfding). 8.20—Reading. 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. Ballet Music from "Undine" (Lortzing). Waltz from "Die Fledermaus" (Johann Strauss). Violin Solos: (a) Jota (Fall), (b) Spanish Serenade (Glazunov). Selections from "The Merry Peasant" (Fall). Selection from "White Horse Inn" (Benatzky). 12 noon—Concert from Munich. 12.50 p.m.—Weather, News and Time Signal.

1.0—Concert conducted by Wolf. Overture, "Donna Diana" (Reznicek). Waltz, Wiener Bürger (Ziehrer). Selection from "Tiefenland" (d'Albert). Symphonic Andante, Einsame Nacht (Clemus). Selections from "Die Puppenfee" (Bayer). Rhapsodic Fantasia (Urban). Waltz Intermezzo, In Sanssouci singt eine Nachtigall (Noack). Selection from "Die Fledermaus" (Strauss). 2.30—Sponsored Gramophone Concert. 3.30—Economic Notes and Time Signal. 3.50—Programme for Children. 4.20—Talk: The Feminist Movement. 4.30—Talk: Modern Problems of Education and the Sixth World Conference of the New Educational Fellowship in Nice. 5.0—See Frankfurt. 6.15—"The World in Books"—Review of Modern German Novels. 6.40—Talk: The Apprentice and the Proletariat. 7.0—Weather, Time, Economic Report and Sports Notes. 7.15—Talk: Health before Everything—Flies and their Dangers. 7.30—Talk: Cent

European Currency Problems. 7.55—First General News. 8.0—Variety Programme. Hansen and Berger (Sopranos), Guermanova (Contralto), Aramesco (Tenor), Wocke (Baritone), Schneiderhan (Violin), Feldin (Cello), Grape (Pianoforte) and Helmut Hirschland and Kurt Rothstein (Two Pianofortes). 9.0—See Frankfurt. 10.20 (approx.)—News and Concert Relay.

LEIPZIG (Germany)
1,157 kc/s (239 m.); 2 kW. Relay by Dresden, 941 kc/s (319 m.). Transmits at intervals from 6.0 a.m. 6.35 p.m.—Italian Lesson. 6.55—Programme to be announced. 7.5-7.30—Talk: Petroleum and its Importance in Industrial Life. 8.0—Dance Music by the Emdé Dance Band. Soloist, Liesl Otto (Songs). 9.0—Topical Report. 9.10—Elbe I.—a Radio Sequence (Kaerfel). 10.10—News Bulletin. 10.30—String Quartet in F, Op. 86 (Dvorák) by the Schneider String Quartet. 11.0—Concert of Light Music on Gramophone Records. 12 midnight (approx.)—Close Down.

LJUBLJANA (Yugoslavia)
522 kc/s (574.7 m.); 2.5 kW. Transmits at intervals from 12.15 p.m. 6.0 p.m.—Quintet Concert. 7.0—Russian Lesson. 7.30—Literary Talk. 8.0—Music Lesson. 8.30—Song Recital. 9.30—Quintet Concert. 10.0—Time, News and Concert of Light Music.

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. 7.45—10.40—See Warsaw. 10.40—Talk: The Greatest War Spy. 10.40—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. 8.0—Orchestral Concert, conducted by Gaston Billet. Soloists: Mlle. Marguerite Darmancier (Soprano), M. Dubuy (Baritone), M. Benoist

Mary, and a Hunting Horn Ensemble, conducted by M. Pouljol. Selection from "Le Jeune Henri" (Méhul). Les Vieilles de chez nous (Lévade). Si vous l'aviez compris (Denza). La Lettre du Sergent (Botrel). Le Centenaire (Marty). Selections from "Panurge" (Masset).

MADRID (Spain)
Union Radio. (EAJ7). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 9 a.m. 8.0 p.m.—Chimes, Exchange, Market Prices. 8.15—"Spain"—A European Concert relayed from the Monumental Cinema. The Philharmonic Orchestra, conducted by Maestro Perez Casas. Soloists: Rosita Garcia Ascot (Pianoforte) and Laura Nieto (Soprano). Fantastic Dance No. 3, Orgia (Turina). Night in the Gardens of Spain, for Pianoforte and Orchestra (Fallá). La Nochebuena del diablo (Esplá). Symphonic Music (Bacarrise). Prelude to "La Revoltosa" (Chapi). In the interval, News and Political Review. 10.0-10.30—Interval. 10.30—Chimes, Time, Political Review and "La voz sospechosa"—Play (Juan Ruiz de Alarcón) with Incidental Music. Wireless Adaptation by Abraham Polanco. 12.45 a.m. (Thursday)—News Bulletin. 1.0—Chimes and Close Down.

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

MORAVSKÁ-OSTRAVA (Czechoslovakia)
1,137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 11.0 a.m. 7.0 p.m.—See Prague. 7.5—Talk: May, The Month of Awakening in Nature. 7.20—See Prague. 11.5—Programme Announcements and Close Down.

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

WEDNESDAY
continued

shevik Propaganda. Talk in Swedish: The Work of Delegates to Soviet Moscow.

MUNICH (Germany)
563 kc/s (533 m.); 1.5 kW. Relay by Augsburg and Kaiserslautern, 536 kc/s (560 m.); and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 5.0 p.m.—Orchestral Concert conducted by Erich Klöss. Overture, "Rübezahl" (Weber). Ballet Music from "Paride ed Elena" (Glück). Selection from "The Flying Dutchman" (Wagner). Selection from "Der Evangelimann" (Kienzl). Clog Dance from "Czar and Carpenter" (Lortzing). Waltz, Die Romantiker (Lanner). Modern Dance Suite (Niemann). Sérénade pittoresque (Graener). 6.15—Time Signal, Weather Report, and Agricultural Notes. 6.25—Talk by Councillor Michael Casteiger: German Towns. 6.45—English Lesson. 7.5—Talk: Vocations for Women. 7.25—Concert by the Hortensia Mandoline Club. Humorous Stories in the interval. 8.0—See Langenberg. 9.0—"Rescue"—Drama in One Act (Kesser). 9.55—Concert by the Station Chamber Choir, conducted by Eduard Zengerle. A solis artu (Büchtger). Lux illuxit dominica (Büchtger). Odi et amo (Orff). Miser Catulle (Orff). Selections (Reutter). Ode am Meer for Women's Choir (Marx). Solange wir im Licht sind, for Mixed Choir (Marx). 10.20—Time Signal, Weather Report, News Bulletin and Sports Notes. 10.45—Dance Music from Berlin (Witzleben). 12 midnight (approx.)—Close Down.

OSLO (Norway)
Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relay by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.), and Rjukan, 671 kc/s (447.1 m.). Transmits at intervals from 11.10 a.m. 5.0 p.m.—Concert by the Orchestra of the Cecil Restaurant, conducted by

Hans Baeh. 6.0—French Lesson. 6.30—Programme for Girls. 7.0—Announcements, Weather and News Bulletin. 7.30—Talk (to be announced). 8.0—Time Signal. 8.1—Concert of French Music by the Station Orchestra, conducted by Hugo Kramm. Soloist: Astri Busgaard (Soprano). Overture, "Carnaval Romain" (Berlioz). Song from "L'Enfant Prodigue" (d'Indy). Petite Suite (Debussy). Chanson Perpétuelle (Chausson). L'Invitation au Voyage (Duparc). Spanish Rhapsody (Chabrier). 9.0—Recitations. 9.30—Announcements, Weather and News. 10.0—Topical Talk. 10.15—Accordion and Violin Recital of Popular Music. 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. 5.30-6.30 p.m.—Concert of Light Music and Dance Music. 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 Variety Music, conducted by F. Militello. Overture, "Banditenstreiche" (Suppé). Fantasia (Lumbye). Japanese Intermezzo, Ke-Sa-Ko (Chapuis). Vive Paris! (Gauwin). Overture, "The Caliph of Bagdad" (Boieldieu). "Talk: The Spread of the Latin Language in Antiquity, Italian Songs and Folk Songs. Literary Notes. March, Praina (Beretta). Intermezzo, Musmé (Manno). Selection (Uhl). 10.55—News Bulletin and Close Down.

PARIS (France)
Fiffel 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.—Music Talk with Illustrations. 7.0—Le Journal Parlé. 8.20—Weather Forecast. 8.30—Symphony Concert, conducted by M. Flament. Soloists: Mlle. Denyse Dixmier (Pianoforte) and M. Cantrelle (Violin). The Second

Symphony (Beethoven-Salabert). 9.10—Topical Talk and News. 9.20—Concert (contd.). Au Pays romand—Suite for Pianoforte (Albert Bertelin). Violin Solos. Prelude in G Minor (de Massi-Hardmann). Waltz, Gold and Silver (Lehár). 10.0 (approx.)—Close Down.

PARIS (France)
Poste Parisien. 914 kc/s (328.2 m.); 60 kW. 7.0 p.m.—Gramophone Records, News and Announcements. 7.30—"La Disparition de la mère Ansalade"—One-Act Play (Pelissier) by the "Amis de Guignol à Paris." 8.30—Gramophone Records, Talk and News. 8.45—Concert.

PARIS (France)
Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW. 6.45 a.m.—Physical Culture. 7.30—Weather and Physical Culture (continued). 7.45—Gramophone Records: Suite, "L'Arlesienne" (Bizet). 8.0—News, Weather and Press Review. 12 noon—Talk: Secondary Education for Women. 12.30 p.m.—"Day and Night"—Gramophone Concert. Sunrise from "Daphnis et Chloé" (Ravel). Aubade from "Le Roi d'Ys" (Lalo). Serenade from "L'Amant jaloux" (Grétry). Morning from "Peer Gynt" (Grieg). Hymne à la Nuit (Rameau). Aubade d'amour (Monti). Serenade from "Don Giovanni" (Mozart). Clair de Lune (Ketelbey). Mexican Serenade (Ponce). Nocturne (Sarmont). Serenade from "Iris" (Mascagni). En la Noche (Maduro). Chant d'après-midi (Cuvillier). Serenade andalous (Godard). The Midnight Review (Glinka). Serenata (Toselli). Still wie die Nacht (Bohn). Soir (Fauré). Chère nuit (Bachelet). Nocturne (Franck). Serenade (Schubert). Serenade (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, Talk and Racing Results. 7.0—Talk on German Literature: The Evolution of the Theatre towards Naturalism and Symbolism—Hebbel, Hauptmann and Hoffmannsthal. 7.30—Medical Talk.

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FEATURES

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7.45—Commercial Prices and News. 8.0 p.m.—Talk on French Literature: The Middle Ages—Aucassin et Nicolette. 8.30—News and Weather. 8.40—Fashion Review by Mlle. José. 8.45—Varney and Roger Concert, Part I. Varney Programme. Extracts from "Les Mousquetaires au Couvent," "Fanfan la Tulipe," "Les Petits Mousquetaires" and "L'amour mouillé." Part II. Roger Programme. Selection from "L'Auberger du Tohu-Bohu." Extracts from "Josephine vendue par ses Soeurs" and "Les Vingt-huit Jours de Clairette." In the interval at 9.15—Press Review and News.

PITTSBURGH (U.S.A.) Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Business News. 9.15—Programme to be announced. 9.30—Pebeco Weather Report. 9.32—Market Reports. 9.45—KDKA Kiddies' Klub. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artists' Bulletin. 10.12—Programme Announcements. 10.15—Songs in French Style by Mlle. Diane Laval. 10.30—"The Singing Lady" 10.45—Little Orphan Annie. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sports Review. 11.12—Press News-Reporter. 11.15—Westinghouse Watchmen. 11.30—The Royal Vagabonds. 11.45—Literary Digest Topics, from New York. 12 midnight—Amos 'n' Andy from New York. 12.15 a.m. (Thursday)—Esso Programme, Elsie Janis. 12.30—"The Stebbins Boys, from New York. 12.45—Billy Jones and Ernie Hare, from New York. 1.0—Colonial Tellers. 1.15—Willys Overland Silver Streaks, from New York. 1.30—Jack Prot Melodies. 2.0—Adventures of Sherlock Holmes, from New York. 2.30—George Olsen and his Orchestra, from New York. 3.0—Bob Nolan's San Felicians, from New York. 3.15—Ellsworth Giles' Home Singers. 3.30—Waves of Melody, from New York. 3.45—Around the Cracker Barrel. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Forecast. 4.15—Press Last Minute News Flashes. 4.20—Hal Kemp and his Orchestra. 5.0—Orchestra from New York. 5.30—Good Night.

POZNAŃ (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—Educational Talk. 7.30—Talk on Philosophy. 7.45—10.35—See Warsaw. 10.35—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 6.30 a.m. 4.0 p.m.—Talk on Education. 4.10—Orchestral Concert, conducted by Tvrdy, relayed from Moravská-Ostrava. 5.10—Dramatic Programme. 6.0—Light Music on Gramophone Records. 6.5—Talk: Bee-keeping. 6.15—Programme for Workers. 6.25—German Transmission: Programme for Children. 7.0—Announcements. 7.5—Talk: Technical Novelties. 7.20—Introductory Talk and Relay of an Opera from the Prague Theatre. In the interval at 9.0—Time and News Bulletin. 10.0 Announcements. 10.15—News, Theatre Guide, Sports Notes and Programme Announcements. 10.35—Time Signal and Close Down.

RABAT (Morocco) 721.1 kc/s (416 m.); 6 kW. Transmits at intervals from 1.30 p.m. 8.30 p.m.—Gramophone Records of Variety Music. 8.45—Weather and News. 9.0—Orchestral Concert. Rakoczy March. Overture, "La dame blanche" (Boieldieu). Melody, Paysage (Hahn-Mouton). Aria from "Sappho" (Gounod). Selection from "Le jour et la nuit" (Lecocq-Tavan). Serbian Songs and Dances (Hermann). Invocation to Venus from "La belle Hélène" (Offenbach). Waltz, Tales from the Vienna Woods (Strauss). Talk: The Repression of Crime. L'Arlesienne—First Suite (Bizet-Weninger). Midnight on Maundy Thursday from "Sevilla" (Turina-Chapelier). Aria from "Lucia di Lammermoor" (Donizetti). Selection from "Rose Marie" (Friml). March, The Gladiator (Sousa).

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland) 743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and News Bulletin. 12.40—Orchestral Concert. 1.0—Exchange Quotations. 1.5—Orchestral Concert (contd.). 1.45—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1—Concert by a String Orchestra, conducted by Robert Echanard. 6.0 (from Lausanne)—Programme for Children. 7.0—Weather Forecast. 7.1 (from Geneva)—Light Music on Gramophone Records. 7.10 (from Geneva)—Talk: The Work of the Disarmament Conference. 7.30 (from Lausanne)—Talk: The Vineyard. 7.55—Announcements.

8.0 (from Lausanne)—Concert by Greta Rumbeli-Trokay (Songs), Gabriel Bise, (Cello) and Jean Koella (Pianoforte). Songs: (a) Menuet chanté (Rameau), (b) Air (Rosa), (c) Cradle Song (Mozart). Cello Solos: (a) Larghetto (Mozart), (b) Adagio and Allegro (Schumann). Songs with Cello and Pianoforte accompaniment: (a) Les berceaux (Faure), (b) Le Soir (Faure). Cello Solo: Humoresque (Jullien). Selections for Voice, Cello and Pianoforte: (a) Night (Sokolov), (b) Prelude VII (Opieski).

8.45 (from Lausanne)—Literary Programme. 8.55—Vocal and Orchestral Concert of Operatic Music by the Station Orchestra and Paul Dutoit (Bass). 10.0—Weather Forecast and News Bulletin. 10.10 (from Geneva)—Answers to Correspondents. 10.30 (from Geneva)—Dance Music. 11.0 (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, 6,976 kc/s (43 m.). 8.15 a.m.—Announcements. 12 noon—Variety Music on Gramophone Records. 12.45—2.0 p.m.—Concert by the Radio Sextet. Soloists: Maria Elena Cattani (Soprano) and Walter Sommer (Cello). Serenade in G (Mozart). The Musical Box (Nikolaievsky). Soprano Solos: (a) Song (Beethoven), (b) Rispetto (Benvenuti), (c) Ogni sabato avrete il lume acceso (Gordigiani), (d) Jota (Falla). Baci al buio (De Michel). Selection from "Fedora" (Giordano). Cello Solos: (a) The Flute, the Little Bird and the Beetle (Cassado), (b) Ballet (Rossini). Serenata cilena (Ruello). Gli sciatori (Billi). In the intervals at 1.15—Giornale Radio and Exchange, and at 1.30—Time and Announcements.

5.0—Exchange, Report of the Royal Geographical Society, Radio Journal and Announcements. 5.30—Soprano Song Recital by Velia Capiano. Lontananza (Bettinelli). Aria from "Martha" (Flotow). Aria from "L'Etoile du Nord" (Meyerbeer). 5.45—Variety Concert. Soloist: Bottiglieri (Cello). Serenata amara (Culotta). Selection from "L'amico Fritz" (Mascagni). Selection (Jurmann). Russian Songs for Pianoforte and Cello (Lalo). The Current of the Stream (Knight). 6.15—Giornale dell'Enit. 6.25—6.40—Talk on Botany. 6.55 (Naples)—Shipping and Sports Notes. 7.0—Agricultural Report, Weather, Announcements, Giornale Radio and Press Review. 8.0—Time, Announcements and Gramophone Records. 8.15—Medical Talk. 8.30—Sports Notes and Announcements. 8.45—Puccini Evening, Part I. "Le Villi"—Opera in Two Acts. In the interval, Talk and Review of Reviews. Part II. Act III. of "The Girl of the Golden West"—Opera. Conductor: Riccardo Santarelli. Choirmaster: Emilio Casolari. 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 11.45 a.m. 9.0 p.m.—The Pilgrims from New York. 9.30—Bridge Lesson from New York. 9.45—Musical Ad Men. 9.50—News Items. 10.0—Stock Reports and Police Notices. 10.15—Skippy from New York. 10.30—Wayne King's Orchestra from New York. 10.45—Pianoforte Duets. 11.0—When Day is done. 11.25—Health Talk. 11.30—Weather Report. 11.31—Song and Story Man. 11.45—New Kenmore Orchestra. 11.55—Baseball Scores.

WEDNESDAY continued

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

SCHWEIZERISCHER LANDESSENDER (BEROMÜNSTER) (Switzerland) 653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather and News. 12.40—Gramophone Records of Richard Strauss' Music. 1.35—Weather and Exchange. 1.40—Interval. 3.30—Gramophone Records of Folk Music. 4.0—Gramophone Records for Children. 4.30 (from Basle)—Programme for Children. 5.0—6.30—No Transmission. 6.30 (from Berne)—Topical Talk. 7.0—Time, Weather and Market Prices, followed by New Gramophone Records. 7.30 (from Basle)—Introductory Talk to the following Transmission. 8.15—Choral and Orchestral Concert of Italian Music, relayed from St. Martin's Church. The Basle Chamber Choir and Orchestra. Soloists: Adelheid Armhold (Soprano), Christa Peter-Deschanden (Contralto), Max Meili (Tenor) and Carl Rehfuß (Bass). 10.0 (approx.)—Weather and News. 10.10 (approx.)—Orchestral Music. 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, 389 kc/s (770 m.); and Sundsvall, 554 kc/s (542 m.). Transmits at intervals from 7.20 a.m. (Gymnastics). 5.0—Popular Programme. 5.45—Light Music on Gramophone Records. 6.45—Agricultural Talk. 7.15—Weather and News Bulletin. 7.30—Concert. Tage Brostrom (Violin), Herman Muchow (Flute) and Sigrid Gyllencreutz-Fermæus (Pianoforte). Sonata No. 2 for Flute and Pianoforte (Handel). Violin Solos: (a) Idyll (Tor Aulin), (b) Lullaby (Tor Aulin), (c) Andantino (Martini-Kreisler). Gavotte (Rameau). Two Pieces for Flute and Pianoforte (Godard). 8.0—Talk on Carrier Pigeons. 8.30—Fifth Symphony (Nielsen), relayed from Helsinki, 815 kc/s (368.1 m.). 9.10—Reading. 9.30—Song Recital by Ragnar Hulton. Three Songs (Geijer). Three Songs (Josephson). 9.45—Weather and News Bulletin. 10.0—Modern Dance Music. 11.0 (approx.)—Close Down.

STRASBOURG (France) Radio-Strasbourg (PIT). 869 kc/s (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert of Classical Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert of Popular Music. 2.0—4.45—Interval. 4.45—Talk in German: Electricity in the Home. 5.0—Orchestral Concert. March, Under the Star of Peace (Schneider). Waltz (Fetras). Love Song (Sunkay). Overture, "Tancred" (Rossini). Cello Solg: Guitar (Moszkovsky). Selection from "La Navarraise" (Massenet). Selections from "Tannhäuser" (Wagner): (a) O Star of Eve, (b) Pilgrims' Chorus. Mattinata (Leoncavallo). Selection from "Ciboulette" (Hahn). March of the Gladiators (Sousa). 6.0—Talk in French: The Development of Grand Opera and Opera Buffa in Italy. 6.15—Medical Talk in German. 6.30—Orchestral Concert. Scènes pittoresque (Massenet). Tragic Overture (Brahms). Selection from "The Mastersingers" (Wagner). Une fête slave (Glazounov). Czar-das (Grossmann).

7.30—Time Signal. 7.32—News in French and German. 7.45—Orchestral Concert. March, Radio Strasbourg (Mélina). Waltz, Brune ou Blonde (Waldeufel). Rustle of Spring (Sinding). Saxophone Solos: (a) Hindu Song (Rimsky-Korsakov), (b) Waltz, Llewellyn (Wiedceft). Selection from "The Geisha" (Jones). Canzonetta (Filippucci). March-Intermezzo, A Wedding in Lilliput (Translator). 8.30—Concert, relayed from Metz. Sonata, Op. 137, No. 3, for Violin and Pianoforte (Schubert). Aria from "Judas Maccabæus" (Handel). Song, Le Bonheur est chose légère (Saint-Saëns). Berceuse (Chopin). Etude sou: ferme de valse (Saint-Saëns). Songs: (a) Le petit condorner (Huré), (b) Bourrée (Canteloube), (c) Ronde des filles de Quimperlé (Vuillemoz), (d) Zilimbina (Tomasi). Ave Maria (Schubert). Minuet (Mozart). Prelude (Debussy). Capriciosa (Ries). Songs: (a) Le Furet (de Bréville), (b) Mandoline and (c) Fantôches (Debussy). Sonata in F for Pianoforte and Violin (Grieg).

10.30—Dance Music from the Savoy. 12 midnight (approx.)—Close Down. STUTTGART (MÜHLACKER) (Germany) Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 60 kW. Relayd by Freiburg, 527 kc/s (570 m.). Transmits at intervals from 6.0 a.m. 12 noon—Concert from Munich. 12.50 p.m.—Time, Weather, News and Programme Announcements. 1.0—See Langenberg. 1.55—News Bulletin. 2.0—2.15—Sponsored Programme—Musical Selections. 2.30—Talk: Bernard Pankok's Sixtieth Birthday. 3.0—"The Faithful Princess"—A Radio Fairy Play for Children from an Old Fairy Tale (arranged by Sophie Tschorn)—Music by Gustav Görlich. 4.0 (from Badenweiler)—Orchestral Concert, conducted by Albert Hitzig. Overture, "Oberon" (Weber). Waltz, Künstlerleben (Strauss). Selection from "La Traviata" (Verdi). Serenade (Heykens). Selection from "The Maid of the Black Forest" (Jessel). March, Deutschlands Ruhm (Schroeder).

5.0—See Frankfurt. 6.15—Time and Weather. 6.25—Esperanto Lesson. 6.50—Wireless Service and Weather Report for Aviation. 7.15—Time and Agricultural Notes. 7.30—10.30—See Frankfurt. 10.20—Time, Weather, Programme Announcements and Silent Night for Distant Reception. 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. Diabolo (Ferruzzi). Der Himmel voller Geigen (Ziehrer). L'ultimo Pirotto (Marchi). Uruguiana (Stura). Waltz from "Der Rosenkavalier" (Rich. Strauss). Poesia (De Michel). Rosalinda (Hoims). Aranci (Mariotti). 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.); Genoa, 959 kc/s (312.8 m.); and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural Report. 7.0—Announcements. 7.5—Concert. Overture, "Light Cavalry" (Suppé). African Fantasia (Donati). Selection (Rust). Ein Freund, ein guter Freund (Heymann). 7.30—Time and Announcements. 7.35—Variety Music on Gramophone Records. 8.0—Giornale Radio and Weather. 8.15—Medical Talk. 8.30—Popular Music on Gramophone Records. 8.45—A Comedy in Three Acts. After the Comedy, Popular Music on Gramophone Records. 11.0—Giornale Radio.

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 7.20 a.m. 5.40 p.m.—Concert by the Vienna Madrigal Society. Crucifixus (Lotti). Moro (Gesualdo). Contrapunto bestiale Banchieri). Die Bredamskeit (Haydn). Songs (Siegl): (a) Ex tempore, (b) Ein Wiegeliend, im Mondschein zu singen. Wanderers Nachtlid

(Pahlen). Der Goldschmiedesell (Kienzl). Wir heissen euch hoffen (Piess). Landknecht-Trinklied (Hindemith). Songs (Brahms): (a) O schöne Nacht, (b) Warum? 6.25—Health Talk. 6.45—Talk arranged by the Labour Bureau. 7.5—Report on the Austrian Industrial Situation. 7.20—French Lesson. 7.45—Time and Announcements. 7.55—"Karamasov before the Judges"—a Radio Play (Stella Sorma and B. Marhold, after the Play "The Brothers Karamasov" by Dostoi-evsky).

8.40—Igor Stravinsky in a Programme of his own Music on Gramophone Records, with Introductory Talk and Commentary by Dr. Felber. Le Sacre du Printemps (The Rite of Spring) by a Symphony Orchestra conducted by the Composer. Caprice for Pianoforte and Orchestra, the Composer and the Pianoforte. Symphony of Psalms by the Walter Straram Orchestra and the Alexis Vlassof Choir, conducted by the Composer. In the interval at 9.25 (approx.)—News. 10.45—Orchestral Concert 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—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 Report. 1.25—Interval. 1.35—Popular Music on Gramophone Records. 1.55—Interval. 2.45—Variety Music on Gramophone Records. 3.5—Economic Report and Exchange Quotations. 3.15—Boy Scouts' Report. 3.20—Co-Operative Report. 3.25—Answers to Correspondents. 3.45—Hydrographic Report. 3.50—Light Music on Gramophone Records. 4.15—Physical Culture Lesson. 4.20—Talk by Prof. Palmbach. 4.40—Light Music on Gramophone Records. 4.55—Lingua-phonie English Lesson. 5.10—Talk relayed from Wilno.

5.35—Concert of Light Music by the Station Orchestra, conducted by Josef Oziminsky. Little Viennese March (Kreisler). Overture, "The Consul General" (Reinhardt). Im Märchenwald (Ganglbauer). The Dancer (Homasi) Waltz, La Fiancée (Waldeufel). Intermezzo (Köpping). Serenade (Grünfeld). Two Spanish Dances (Moszkovsky). Polonaise (Kurpinsky). Minuet (Paderewsky). Potpourri of National Dances (Mierzcynsky). Oberek (Lecvandovsky). 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—Reading. 8.15—Choral Concert of Popular Songs and Dance Music. 9.0—Talk: The Music of Charles Szymanowsky. 9.15—Concert of Music by Charles Szymanowsky. Mime. Korvin Szymanowska (Soprano), B. Kon (Pianoforte) and Josef Oziminsky (Violin). Pianoforte Solos: (a) Etude in B Flat Minor, Op. 4, (b) Variations for Pianoforte, Op. 3. Three Songs. Violin Solos: (a) Romance, (b) Mountaineers' Dance. Popular-Songs. Violin Solo: (a) Nocturne, (b) Tarantella. Aria from "King Roger." 10.30—Radio Journal. 10.35—Weather and Police Notes. 10.40—Interval. 10.45—Talk in English: Maritime Tariffs. 11.0—Dance Music.

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—Sports Notes from Warsaw. 7.35—Programme Announcements and Miscellaneous Items. 7.45—See Warsaw. 10.45—Concert of Old Music on Gramophone Records. 11.0—Dance Music, relayed from Warsaw. 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. 7.5—Programme for Children. 7.35—Announcements. 7.50—Talk for Sokols. 8.5—Talk on Chemicals. 8.30—Concert of Chamber Music by the Zagreb Academy Wind Instrument Ensemble. 9.45—Part Relay of a Sound Film. 10.30—News and Weather Forecast. 10.40—Sound Film (contd.). 11.0 (approx.)—Close Down.

PRINCIPAL EVENTS

THURSDAY (May 26)

SYMPHONY CONCERTS

- 12.15 p.m. Warsaw: Symphony No. 6 (Tchaikovsky).
- 7.20 „ Bucharest (continued at 8.15): Enesco, Beethoven.
- 8.0 „ Langenberg: 1st and 9th Symphonies, (Beethoven).
- 8.35 „ Vienna: Mass in D Minor (Bruckner).
- 9.0 „ Brussels No. 1: Brahms Programme.
- 9.0 „ Munich: The Station Orchestra.

CONCERTS (Vocal and Instrumental).

- 8.0 p.m. Daventry National: Celebrity Concert.
- 8.0 „ Hamburg: "The Rhine in Song."
- 8.0 „ Schweizerischer Landessender: Choral Music.
- 8.30 „ Strasbourg: The Municipal Orchestra.
- 8.45 „ Rome: Conducted by Rito Selvaggi.
- 9.25 „ Breslau: Popular programme.
- 10.45 „ Frankfurt, Stuttgart: "Late" Concert.

OPERAS AND OPERETTAS

- 7.10 p.m. Hilversum: "Tales of Hoffmann" (Offenbach).
- 7.30 „ Budapest: Relay from the Opera House.
- 8.0 „ Copenhagen: "Die Fledermaus" (Johann Strauss).
- 8.0 „ Stuttgart, Frankfurt: "Die toten Augen" (D'Albert).
- 8.30 „ Italian Stations (Northern): "I Puritani" (Bellini).

CHAMBER MUSIC

- 9.30 p.m. Berlin, Königs Wusterhausen: The Zagreb String Quartet.
- 9.40 „ Heilsberg: Horn Trio (Brahms).

PLAYS AND TALKS

- 8.45 p.m. Radio-Paris: "La Dragonne" (Roger Verce).
- 11.0 „ British Regional Stations: Broadcast to America.

The Frauenkirche

The Frauenkirche in MUNICH, whose bells are a familiar feature to all who hear the station, is one of the few existing brick Gothic buildings. It dates from the fifteenth century. The towers are 99 metres in height; the south contains the bells, and the north is used as a distant view platform for visitors. Originally the towers were to have been finished in true Gothic style, but funds were not at hand at the moment, so the two "onions," as they are called in popular parlance, were put on the top until such time



(Photo: Verkehrsverband, München)

The Frauenkirche, Munich

as the building could be finished. But up to the present time, nobody has had enough money to complete the spires, and, nowadays no citizen would dream of changing Munich's "Wahrzeichen" (Hallmark). The town council laid it down some years ago that no building above a certain height might be erected within a mile of the church, so that aviators may always recognise Munich by the twin towers with the onion tops—the "Frauentürme."

Die Fledermaus

As conductor of the Court Balls at Vienna, himself a true Viennese of the old school, Johann Strauss the younger has left, in his immortal dance music, a picture of the life and laughter of that gay city much more vivid than history will ever show us. *Die Fledermaus*, produced in 1874, was, like every one of his little operas, played and sung all over the world a generation ago. Full of sparkling gaiety, instinct with the spirit of care-free youth, it is just such music as one looks for from the hand which gave us *The Blue Danube*. The story is the usual comic-opera plot of dancing and flirtations, masks and disguises; Falke, a young beau, has an old score to pay off against his friend the Baron Eisenstein, and takes advantage of Eisenstein's having to go to prison for a week; Falke persuades him to put that off until he has been to a ball given by the Prince Orlofsky. In her husband's absence, Rosalind, Eisenstein's good lady, receives another admirer, one Alfred, and while he is with her, the prison governor arrives to carry off Eisenstein with him. Alfred, to avoid compromising the Baroness, goes off to prison in the Baron's stead. The second act is at the ball, and through Falke's scheming, Eisenstein is caught flirting first with his wife's maid Adela, who has contrived to gain an invitation, and afterwards with his own wife, who is masked, and who has come to the ball as a Hungarian Countess. The third Act is in the prison, where everybody appears, and first Eisenstein's flirtations at the ball and then Rosalind's visit from Alfred are discovered and mutually forgiven, so that the story comes to an end with reconciliation and promises of good behaviour. COPENHAGEN station is broadcasting the opera from the Royal Theatre this evening.

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|-----------|-------|---------|-----|
| 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—Sister Drayton: "The New Baby"—III.
 - 12 noon—The Studio Orchestra, directed by Guy Daines.
 - 1.0—2.0—The Shepherd's Bush Pavilion Orchestra.
 - 2.5—"Tracing History Backwards"—V.
 - 2.25—Interval.
 - 2.30—Speech Training. Mr. A. Lloyd-James.
 - 2.50—Interval.
 - 3.0—Evensong from Westminster Abbey.
 - 3.45—Interval.
 - 3.50—German Dialogue.
 - 4.5—The B.C.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)—The B.C.C. Dance Orchestra.
 - 6.0—"The First News."
 - 6.30—Time Signal (Greenwich).
 - 6.30—The Foundations of Music. Mozart's Pianoforte Variations.
 - 6.50—German Talk. Mr. Otto Siepmann.
 - 7.20—The Wireless League Quarterly Bulletin.
 - 7.30—Professor Arnold J. Toynbee: "The Disintegration of the Modern World"—I.
 - 8.0—Celebrity Concert. Florence Austral, Elena Gerhardt, Friedrich Schorr, Wilhelm Backhaus, Guilhermina Suggia. The Royal Philharmonic Orchestra and the B.C.C. Symphony Orchestra, conducted by Adrian Boult. Sir Edward Elgar, Bt., O.M., Sir Landon Ronald, Sir Henry Wood.
 - 9.0—Time Signal (Greenwich).
 - 9.50—"The Second News."
 - 10.5—Shipping Forecast, New York Stock Market Report.
 - 10.10—"The Way of the World." Mr. Vernon Bartlett.
 - 10.30—A Short Service relayed from St. Michael's, Chester Square.
 - 10.45—12 midnight—Dance Music.
 - 11.30—Time Signal (Greenwich).

REGIONAL

- | | kc/s. | m. | kW. |
|-----------|-------|-------|-----|
| London: | 842 | 356.3 | 50 |
| Midland: | 752 | 398.9 | 25 |
| Northern: | 626 | 479.2 | 50 |
- 10.15 a.m. (London and Northern)—The Daily Service.
 - 10.30—11.0 (London and Northern)—Daventry National Programme.
 - 11.30—12 noon (London)—Experimental Television Transmission.
 - 12—Edward O'Henry at the Organ.
 - 1.0 p.m.—The Northern Studio Orchestra. Mary Kay (Contralto).
 - 2.0—3.0—Laddie Clarke's Imperial Hydro Hotel Orchestra.
 - 3.0 (Northern)—The Studio Orchestra.
 - 3.30—3.45 (Northern)—Miss Nellie Kirkham: "Short Stories by Northern Authors."
 - 4.5 (London and Northern)—Daventry National Programme.
 - 5.15—The Children's Hour.
 - 6.0—"The First News."
 - 6.30—Regional Bulletin for Farmers.
 - 6.35 (Northern and London)—The Studio Orchestra, directed by John Bridge. Harold Hallas (Baritone).
 - 6.35 (Midland)—Light Music. Ernest Parsons and his Orchestra.
 - 7.40—"A Hundred Years Old," by Serafin and Joaquin Alvarez Quintero. English Version by Helen and Harley Granville Barker. Adapted for Broadcasting by Dulcima Glasby. Produced by Howard Rose.
 - 9.0—"The Second News."
 - 9.20 (London)—The London Cigarette Orchestra. Patricia Rossborough (Pianoforte).
 - 9.20 (Midland)—Charles H. Chandler: "Midland Rambles"—II.
 - 9.20 (Northern)—Mr. W. E. Shewell Cooper: "The Northern Garden."
 - 9.40 (Northern)—The Rossendale Male Voice Choir. Don Hyden (Violin Solos).
 - 9.50 (Midland)—"You ought to go on the Wireless." A Review of Ave-ditions by Graham Squiers.
 - 10.30—Dance Music.
 - 11.0—Broadcast to America, "University Life in England." Mr. C. K. Allen, Warden of Rhodes House, Oxford.
 - 11.30—12 midnight (London and Northern)—Dance Music.

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

- BARCELONA (Spain)**
Radio-Barcelona (EA)11. 860 kc/s (349 m.); 8 kW.
Transmits at intervals from 8.15 a.m.
- 8.0 p.m.—Trio Concert. Canzonetta No. 2 (d'Ambrosio). Ballet Music from "Sylvia" (Delibes). Intermezzo (Mommart). Der Erlkönig (Schubert).
- 8.30—Exchange, Talk, Request Gramophone Records and News.
- 10.0—Chimes from the Cathedral, Weather and Exchange.
- 10.5—Orchestral Concert. March (Lindsay). Selection from "Madame Pompadour" (Fall). "March of the Tin Soldiers (Turina). Humoresque (de Taeye). Sur le rocher (Gachet). Polonaise (Dvorak).
- 11.0—"Girasol"—Comedy in Three Acts (Ignacio Iglesias). 1.0 a.m. (Friday)—Close Down.
- BELGRADE (Yugoslavia)**
697 kc/s (430.4 m.); 2.5 kW.
Transmits at intervals from 9.55 a.m. (Programme Announcements).
- 5.0 p.m.—Concert by a Tango Jazz Orchestra. 6.55—Time Signal and Programme Announcements. 7.0—French Dialogue. 7.30—Gramophone Records of Variety Music. 8.0—Medical Talk. 8.30—Programme from Ljubljana. 10.30—News and Sports Notes.
- 10.50—Orchestral Concert. Overture, "Hans Heiling" (Marschner). Selection from "Where the Lark sings" (Lohár). Romantic Suite (Armandola).
- BERLIN (Germany)**
Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.
Transmits at intervals from 5.45 a.m.
- 12 noon—Weather for Farmers, 12.2 p.m.—Gramophone Concert of Request Music, followed by Weather for Farmers. 12.55—Näuen Time Signal. 1.30—News Bulletin.
- 2.0—Gramophone Concert of Opera Songs relayed from Berlin (Witzleben).
- 3.0—Programme for Children. 3.30—Weather and Exchange Quotations. 3.45—Talk for Women. 4.0—Educational Talk. 4.30—See Berlin

- (Witzleben). 5.30—Talk by Dr. Siegfried Scharie: Reminiscences of the United States of America. 6.0—Flute and Pianoforte Recital of Music by Jarnach, Schulhoff and Transman. 6.30—Spanish Lesson. 6.55—Weather for Farmers. 7.0—Talk: Pictures of Modern Russia. A Theatre Manager in Soviet Russia. 7.20—Agricultural Talk. 7.35 till Close Down—See Berlin (Witzleben).
- BERLIN (Germany)**
Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m. (Gymnastics and Concert from Leipzig).
- 4.30 p.m.—Recital of Folk Songs by Minna Ebel-Wilde (Soprano) and Maria Peschken (Contralto). Duets (Brahms): (a) Die Sonne scheint nicht mehr, (b) Schwesterlein (Brahms, arr. Zilcher). Soprano Solos: (a) Vogeleins Begräbnis, (b) Mitten im Garten (Georg Schumann). Contralto Solos: (a) Aus der Jugendzeit (arr. Radecke), (b) Feinsliebchen, du sollst mir nicht barfuß gehen (arr. Brahms). Duets (arr. Hermann): (a) Das Lieben bringt gross' Freud, (b) Zwischen Berg und tiefen Tal, (c) Und der Hans schleicht umher.
- 5.0—Pianoforte Recital by Hansi Freuberg. French Suite in E (Bach). Impromptu in B Flat (Schubert). Waltz, Op. 39 (Brahms).
- 5.30—Tales by Dr. Ueberall. 5.50—Talk: The Art of Writing. 6.10—Review of Economics. 6.30—Talk: The "Hambacher Fest"—on the occasion of its Centenary. 6.55—The Witzleben Station informs its Listeners. . . . 7.0—Topical Talk.
- 7.10—Mendelssohn Concert by the Müngersdorf Choral Society, conducted by Theodor Müngersdorf. Mailied, Op. 41, No. 5. Der erste Frühlingstag: (a) Frühlingssahnung, Op. 48, No. 1, (b) Die Primel, Op. 48, No. 2, (c) Frühlingstfeier, Op. 48, No. 3. Morgengebet, Op. 48, No. 5. Die Nachtigall, Op. 59, No. 4. Frühzeitiger Frühling, Op. 59, No. 2.
- 7.30—Labour Market Report. 7.35—Variety Programme. Else Kochhann (Soprano), Wilhelm Strienz (Bass), Sigurd Rascher (Saxophone), Gerd Fricke (Speaker), the Berlin Trio (Three Pianofortes).

- 9.0—News and Sports Notes. 9.10—Topical Programme.
- 9.30—String Quartet No. 2 (Kesto Odak) relayed from the Singakademie. 9.50—Weather, News and Sports Notes, followed by Concert of Viennese Dances. Soloist: Alexandrine Alexandrowa. Overture, "Die Fledermaus" (Johann Strauss). Waltz from "Der Opernball" (Heuberger). Czardas from "Cagliostro" (Johann Strauss). Waltz: Tales from the Vienna Woods (Johann Strauss).
- 11.0 (approx.)—Quartet in A for Violins, Viola and Cello, Op. 18, No. 5 (Beethoven), by the Zagreb String Quartet, followed by Concert (contd.). Polka, Telephone (Johann Strauss). Light Viennese Dances (Fuchs). Waltz, Frühlingstimmen (Johann Strauss). Carinthian Waltz, Am Wörther See (Koschat). Waltz, Little Ida's Flowers (Klenau). Soprano Solo; Czardas from "Die Fledermaus" (Johann Strauss). Kaiser-Walzer (Johann Strauss).
- 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 Exchange Quotations. 7.40—Talk: Industrial and Commercial Cartels. 7.55—Charades and Lottery Results. 8.0—Light Music on Gramophone Records. 8.15—News Bulletin and Weather Forecast. 8.30—Popular Music on Gramophone Records.
- 9.0—Concert of Symphony Music by the Station Orchestra, conducted by A. Guitraud. Soloist: Mme. Dyrville (Vocalist). Overture, "Benvenuto Cellini" (Berlioz, arr. Salabert). Suite from the Opera "Nero" (Boito, arr. Billi). Songs. Symphony in D (Mozart). Songs. "The Nutcracker" Ballet Suite (Tchaikovsky, arr. Weninger).
- BRATISLAVA (Czechoslovakia)**
1,076 kc/s (279 m.); 14 kW.
Transmits at intervals from 1.0 a.m.
- 7.0 p.m.—See Moravská-Ostrava. 8.0—See Prague. 10.15—Programme and Miscellaneous Announcements. 10.20—See Moravská-Ostrava.

THURSDAY continued

BRESLAU (Germany) 923 kc/s (325 m.); 1.5 kW. Relayed by Gleiwitz, 1,184 kc/s (253 m.). Transmits at intervals from 6.0 a.m. to 5.50 p.m. That will interest you!—Surprise Programme. 6.10—Talk for Workers. 6.35—Talk with Gramophone Records: Casablanca. 7.5—Weather for Farmers. 7.7 (approx.)—Orchestral Concert, conducted by Franz Marzalek. (Joh. Strauß March (Morena). Comedy Overture (Bohm). Paraphrase on an Old Song, Der Spielmann (Sommer). Potpourri, An Excursion into the Land of Popular Songs (Grey). 8.0—"A Little Melody"—A Radio Play (Erik Schwabach). Music by Wilhelm Grosz on Gramophone Records. 9.15—News Bulletin. 9.25—Orchestral Concert conducted by Franz Marzalek. Selections from "Der Rastebinder" (Lehar). Waltz, Liebeslieder (Joh. Strauß). Suite, An Evening in St. Petersburg (Meyer-Helmund). Overture, "Zampa" (Hérold). March, Potpourri, Achtung, wir gehen voran! (Recktenwald). 10.25—Time and News. 10.40—Talk and Readings in Esperanto: The Goethe Year. 10.50—Dialogue: Professional or Amateur Football? 11.20 (approx.)—Close Down.

BRNO (Czechoslovakia) 878 kc/s (342 m.); 35 kW. Transmits at intervals from 7.0 a.m. to 4.0 p.m.—Orchestral Concert, conducted by Bakala. Overture, Switzerland (Naef). Suite, "The Arabian Nights" (Bortkiewicz). Selection from "Eugene Onegin" (Tchaikovsky). Dance (Konrad). Melancholy (Napravnik). Valse des Amourettes, Op. 32 (Prozavnik). Selection, (Leopold). Slovak Dance (Konrad). 5.30—See Prague. 6.0—German Transmission: Song Recital. Selection of Popular Songs of the Sixteenth Century. An die Hoffnung, Op. 32 (Beethoven). Six Songs, Op. 48 (Beethoven). Two Songs for Alto, Op. 91 (Brahms). Lullaby (Brahms). Four Songs, Op. 21 (Brahms). 7.0—See Moravsko-Ostrava. 8.0—See Prague. 10.15—Announcements. 10.20—See Moravsko-Ostrava.

BRUSSELS (Belgium) (No. 1) I.N.R. 590 kc/s (509 m.); 15 kW. 12 noon—Gramophone Concert of Light Music. In the interval at 12.30 p.m.—Weather Report. 5.0—Orchestral Concert, conducted by Charles Walpot. March (Weys-François). Waltz, Pomone (Waldteufel). Overture, "Semiramis" (Rossini). Jeannette Joyeuse (Mehgan). Selection from "Oh Kay" (Gershwin-Salabert). Selection (Kálmán). Rumba, Cubanita (Sentis-Salabert). 5.45—Programme for Children. 6.15—Talk. 6.30—Gramophone Concert. Overture, Egmont (Beethoven). Recitative and Air from "Joseph" (Méhul). Norwegian Rhapsody (Laló). La Golondrina (Serradell). La Paloma (Yradier). Selection (Green). Potpourri of German Music, Hört und staunt (Dostal). The Punch and Judy Show (Borel-Clerc). Dance of the Rain-drops (Evans). Selection from "Romeo and Juliet." 7.30—Review of Foreign Affairs. 8.0—Brahms Orchestral Concert. Soloist: Mme. Thelen (Vocalist). Academic Overture. Songs: (a) Das Geheimnis, (b) Song, (c) Liebestreu. Symphony No. 2. Four Songs: (a) Ständchen, (b) Song, (c) Meine Liebe ist grün, (d) Vergebliches Ständchen. Hungarian Dances. 9.0—Talk on Disarmament. 9.15—Concert of Opera Music. Overture, "Le Roi d'Ys" (Laló). Selection from "The Pearl Fishers" (Bizet). Méditation from "Thais" (Massenet). Waltz from "Faust" (Gounod). Ballet Music from "Hamlet" (Thomas). 10.0—Le Journal Parlé. 10.10—Gramophone Concert of Dance Music. 11.0 (approx.)—Close Down.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—Gramophone Concert of Classical Music. In the interval at 12.30—Weather Report and Songs. 5.0—Orchestral Concert of Flemish Music, conducted by M. Meulemans. March (Debocq). Petite Suite (Gilsen). Au Pays du Lin (Van-

dermeulen). Elévation (Douliez). Flemish Sketches (Brusselmsans). 5.45—Programme for Children. 6.15—Mothers' Programme. 7.15—Religious Talk. 7.30—Talk for Women. 8.0—Orchestral Concert, conducted by Charles Walpot. Soloist: M. Verbrugge (Vocalist). March, Cortège militaire (Faulx). Tarentella (Cantelouba). Waltz, Moonlight on the Alster (Fétras). Songs (Schubert): (a) Auf Wiedersehen, (b) Ständchen. Marche funèbre d'un Hanetton (Dubois). Sérénade à Lisette (Caludi). 8.55—Talk: Impressions of a Voyage. 9.10—Carillon Concert from the Church of St. Rombaut, Malines. Rubensmarsch (Benoit). Prelude pour Carillon (Nees). Ballade (Nees). Dance de Rythmes (Nees). Old Flemish Songs: (a) Zeg keweelken, (b) Des Winters als het regent, (c) Ghequetst ben ic van binnen. Intermezzo for Carillon (van Hoof). Menuet for Carillon (Veremans). Popular Songs: (a) Mocderke alleen (Hulleboeck), (b) Het Liedje van den Smid (Andelhof), (c) Mign Moederspraak (Benoit). Prelude in B Flat for Carillon (Denijn). 9.55—Evening Prayer. 10.0—Le Journal Parlé. 10.10—Orchestral Concert (contd.). Selection from "Il Trovatore" (Verdi). Selection from "Tosca" (Puccini). Songs: (a) Mign Moederspraak (Benoit), (b) Het Leid der Boomen (Verhaeren). Old Dances. 11.0 (approx.)—Close Down.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. to 4.0 p.m.—Concert of Light Music and Romanian Music by the Dinico News Bulletin. In the interval at 5.0—Talks on Art and Music. 6.40—Light Music on Gramophone Records. 7.0—Songs by Mme. Mari Simoni. 7.20—Symphony Concert, conducted by Jean Ghiga. Soloist: M. Koganov (Violin). Selection from "Euryanthe" (Weber). Symphonie espagnole for Violin and Orchestra (Laló). Rhapsody No. 2 (Enesco). Symphony No. 5 (Beethoven). In the interval at 8.0—Talk. 8.45—News Bulletin.

BUDAPEST (Hungary) 545 kc/s (550 m.); 18.5 kW. Transmits at intervals from 9.0 a.m. to 5.0 p.m. till Close Down. Also relayed on 210 metres from 5.0 p.m. till Close Down. 5.30 p.m.—Concert, conducted by Wilhelm Roubel. Hindou Song from "Sadko" (Rimsky-Korsakov). Selection from "Cavalleria Rusticana" (Mascagni). Selection from "La Bohème" (Puccini). Selection from "Orpheus in the Underworld" (Offenbach). 6.0—Talk on Films. 7.0—Humorous Talks. 7.30—Relay from the Royal Hungarian Opera House, followed by Cigány Concert from the Kovacsévics Restaurant.

COPENHAGEN (Denmark) 1,067 kc/s (281 m.); 0.75 kW. Relayed by Kalundborg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. (Gymnastics). 11.0 am.—Weather Forecast. 11.10—Angling Notes. 11.15—11.45—Reading in German for Schools. 12 noon—Town Hall Chimes. 12.2—2.0 p.m.—Concert by a String Ensemble, relayed from the Hotel d'Angleterre. 3.0—Reading (Jensen). 3.30—Orchestral Concert from the Wivex Restaurant. 5.0—Talk for Boys. 5.40—Exchange Quotations and Fish Market Prices. 5.50—Talk: Maladies of the Tropics: Malaria. 6.20—Elementary English Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Danish Lesson. 7.55—Talk on the following Transmission. 8.0—"Die Fledermaus" (The Bat) Operetta in Three Acts (Johann Strauß), relayed from the Royal Theatre. 11.30 (approx.)—News. 11.45—Dance Music relayed from the Ritz Restaurant. 12 midnight (in an interval)—Town Hall Chimes. 12.30 a.m. (Friday)—Close Down.

CRACOW (Poland) 959 kc/s (312.8 m.); 1.5 W. Transmits at intervals from 10.0 a.m. to 7.0 p.m.—Miscellaneous Items and Announcements. 7.10—Talk: The Teaching Profession. 7.25—Popular Music on Gramophone Records. 7.40—Programme Announcements. 7.45—See Lwów. 8.15—Orchestral Concert. 9.55—See Warsaw. 10.40—News Bulletin. 11.0—Dance Music. 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. 7.10—News and Dublin Cattle Market Report. 7.30—Time Signal. 7.31—Dialogue in French. 7.45—Talk (to be announced). 8.0—"L'Elisir d'Amore"—Opera (Donizetti), by the Dublin Operatic Society, relayed from the Gaiety Theatre. 10.30—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France) Radio Normandie. 1,364 kc/s (219.9 m.); 10 kW. 12 noon—Light Music on Gramophone Records. 12.30 p.m.—Press News. 12.45—Concert of Light Music. 7.30—Journal Parlé. 8.0—Press News. 8.30—Concert, relayed from Rouen. 11.0—Dance Music. 1.0 a.m. (Friday)—Close Down.

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

FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relayed by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. to 12 noon—Orchestral Concert, conducted by Hans Rosbaud. Soloist: Renate Noll (Organ). Overture, "Agrippina" (Handel). Selection for Organ and Orchestra from the Cantata No. 29 (Bach). Diver-timento in B Flat (Mozart). Sonata in C for Organ and Orchestra (Mozart). 12.50 p.m.—News and Weather. 1.0—Scenes from Act One of "Tristan and Isolde"—Opera (Wagner) on Gramophone Records. 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Time and Economic Notes. 3.30—Programme for Children. 4.30—4.55—Interval. 4.55—Economic Notes, followed by Concert from Langenberg. 6.15—Economic Notes. 6.25—Topical Talk. 6.50—Time and Announcements. 7.30—10.30—See Stuttgart. 10.30—Time and News. 10.45—Orchestral Concert. Soloists: Justus Gelfius (Flute), Jakob Zunker (Double Bass), Michael Furmann (Oboe) and Otto Angermann (Horn). Overture, "Das Modell" (Suppé). Caprice for Flute and Orchestra (Kempfer). Concerto for Double Bass and Chamber Orchestra (Diedrich). Die lustigen Hofmusikanten (Helm). Scenes écossaises for Oboe and Orchestra (Godard). Andante from the Concerto in E Flat, Op. 11, for French Horn (R. Strauss). Waltz, Op. 25 (Fuchs). Polonaise (Tuesta). 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. to 5.55 p.m. (from Bremen)—Programme on the occasion of the Fiftieth Birthday of the North German Author, Heinrich Deiters. Introductory Talk by Thomas Westerich. Heinrich Deiters reads from his own works. Songs to the Lute by Rudolf Moller. 6.30—Health Talk. 6.55—Frankfurt Exchange and Hamburg Market Prices. 7.0—Topical Talk. 7.15—Weather Report. 7.20—"Möchten Sie nicht rasch Ihr Geld verlieren?"—Play (D. Hammer). 8.0—"The Song of the Rhine"—Concert by the 1862 "Vorwärts" Glee Society, Wilhelm Harras (Songs) and the Little Station Orchestra, conducted by Fritz Handorf. Marching Song, Am Rhein (Rotter-Stransky). Waltz, Am schönen Rhein gedenk ich dein (Kéler-Béla). Selections for Choir and Soloist: (a) Frühling am Rhein (Brau), (b) Der Sang vom deutschen Rhein (Dürner). Potpourri, Rheinlandklänge (Frantzen). Choral Selections: (a) Gretula (Schwalm), (b) Ein rheinisches

Mädchen (Kraemer). Waltz, Ein Sommerabend am Rhein (Zimmer). Waltz, Loreley-Rheinklänge (Joh. Strauß). Selection for Choir and Baritone: Hoch lebe die Jugendzeit (Sonnet). Rheinlandsuite (Lüling). Choral Selection: (Rheinglaube (Sonnet). Potpourri, Achtung! Köln singt (Otten). 9.40—"The Song of the Radio" (Paul A. Pisk), by Helene Guhl, Erna Kroll-Lange and the Little Station Orchestra. 10.0—Time and News. 10.20—Hamburg Composers' Evening, in the "Haus Siegler."

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relayed by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. to 11.30 a.m.—Concert relayed from Hamburg. 1.5 p.m.—Gramophone Concert. March, Der alte Fritz (von Blon). Prelude to "Mona Lisa" (Schillings). Bacchanale from "Tannhäuser" (Wagner). Overture, "Fra Diavolo" (Auber). Tenor Solo: Aria from "The Flying Dutchman" (Wagner). Unter einem Fliederbaum (Schubert). Overture 1812 (Tchaikovsky). Waltz, Roses from the South (Johann Strauß). March Potpourri, Seid emig (Hackenberger). Man liebt nur einmal (Dostal). Mägdlein hor' meine Mahnung (Böhme). Overture, "Light Cavalry" (Suppé). 2.30—3.30—Interval. 3.30—Programme for Children. 4.0—Talk on Wilhelm von Kugelgen. 4.30—Concert by the Königsberg Opera House Orchestra conducted by Karl Hrubetz. Hungarian March, Fejervary (Müller). Overture, "Fra Diavolo" (Auber). Entr'acte Waltz (Hellsberger). Potpourri, Five O'clock Tea with Robert Stolz (Dostal). Song, Drogen am Kahlenberg (Mannfred). Offenbach Operetta Potpourri. March, Die dritte Eskadron (Haller). Cavalier Waltz (Nedbal). Operatic Melodies (Weber). Serenade, Vor Liebchens Fenster (Wetaschek). Chinese Intermezzo, Cherry Blossom Festival (Dicker). 6.15—Agricultural Market Prices. 6.25—Talk on Beekeeping. 6.50—Talk: Man and his Conception of Life—The Idealist. 7.15 (from Danzig)—French Conversation. 7.40—Reading of Anecdotes (C. Berg). 8.25—Weather Report. 8.30—"Annette von Droste-Hülshoff"—A Literary and Musical Programme on the Anniversary of her Death. 9.30—Programme Announcements. 9.40—Trio in E Flat, Op. 40 (Brahms), for Violin, French Horn and Piano-forte. 10.5—Weather, News and Sports Notes.

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up to 4.40 p.m.). Programme of the Algemeene Vereenigende Radio Omroep (AVRO). 7.40 a.m.—Time Signal. 7.41—Variety Music on Gramophone Records. 9.40—Time Signal. 9.41—Daily Service. 9.55—Popular Gramophone Music. 10.10—Concert. Soloists: Mrs. Orttman-Haye (Mezzo Soprano), Amalie Verschuyl ('Cello) and Egbert Veen (Piano-forte). 10.40—Dressmaking Lesson. 11.10—Concert (continued). 11.40—Time Signal. 11.41—Concert by the Wireless Chamber Orchestra, conducted by Louis Schmidt. Overture, "Le Maçon" (Auber). Children's Songs (Blech). Hungarian Dances Nos. 1 and 2 (Brahms). Selection from "Hansel and Gretel" (Humperdinck). Variety Music on Gramophone Records. Waltz, O schöner Mai (Johann Strauß). Serenade (Widor). Prelude, Chorus and Ballad from "Das Pensionat" (Suppé). Popular Music on Gramophone Records. Overture, "Der Königsleutnant" (Till). Selection from "Die Faschingsfee" (Kálmán). March, Maikäfer (Becker). 1.55 p.m.—Talk. 2.25—2.40—Interval. 2.40—Dressmaking Lesson. 3.25—Variety Music on Gramophone Records. 3.40—Programme for Hospitals. 4.40—Concert of Dutch Music. Soloists: Victorine v. d. Werff (Vocalist) and Dina Appeldoorn (Piano-forte). Songs: (a) Het avond (Mortelmans), (b) Hoe schoone de morgendaan (Mortelmans), (c) Mien Trukke (Zwevers). Piano-forte Solos: Preludes in B and D Minor (Appeldoorn). Songs: (a) De lange weg (Vredenburg), (b) Cupidoetje (Vredenburg), (c) De Maas (Sigtenthorst-Meyer), Piano-forte Solos (Appeldoorn): (a) In t bosch, (b) Je staat daar als een bloem, (c) Orpheus. 5.10—Concert by the Little Wireless Orchestra, conducted by Nicó

Treep. Overture, "Zampa" (Hérold). Suite, Jeux d'Enfants (Bizet). Intermezzo sinfonico (Mascagni). Selection from "Mir-ella" (Gounod). Marchiarz (Tosti). Pour un baiser (Tosti). Waltz, Bad'ner Mad'n (Komzak). American Patrol (Meacham). 6.10—Talk on Sport. 6.40—Concert (continued). Selection from "Schönist die Welt" (Lehar). The Girl of Seville (Grunow). Selection (Gillet). March, The Flag (Samehtini). 7.10—"The Tales of Hoffmann"—Opera (Offenbach), conducted by Pierre Monteux, relayed from the Municipal Theatre, Amsterdam. In the interval, Weather and News. 10.40—Variety Music on Gramophone Records. 11.40 (approx.)—Close Down.

HUIZEN (Holland) 160 kc/s (1,875 m.); 8.5 kW. 7.40—8.55 a.m.—Programme of the Catholic Radio Society (K.R.O.). Variety Music on Gramophone Records. 9.40—10.40—Programme of the Christian Radio Society (N.C.R.V.). 9.40—Gramophone Records of Light Music. 9.55—Programme for Invalids. 10.25—Gramophone Records of Light Music. 10.40—1.40 p.m.—K.R.O. Programme. 10.40—Popular Music on Gramophone Records. 11.10—Religious Address. 11.40—Police Notes. 11.55—Orchestral Concert. Overture, "Erlenhügel" (Kulau). Waltz, Mon rêve (Waldteufel). Ideale (Tosti). Toréador et Andalouse (Rubinstein). Suite, An Evening in St. Petersburg (Meyer-Helmund). Ballet égyptien (Luigini). Overture, "Nakirs" Hochzeit" (Lincke). March and Waltz from "The Golden Cross" (Brüll). Potpourri, Musikalische Seifenblasen (Urbach). Nebeligen Marsch (Sonntag). 1.40 p.m. till Close Down—N.C.R.V. Programme. 1.40—Lesson in Handicrafts. 2.40—Talk for Women. 3.10—3.40—Interval. 3.40—Programme for Invalids. 4.40—Handwork for Young People. 5.25—Trio Concert. Soloists: K. Hartvelt (Violin), P. Lentz ('Cello) and G. Seyler (Piano-forte). Concerts royaux No. 4 (Couperin). Concerto No. 3 (Rameau). Trio No. 13 in A (Haydn). Trio (Voormolen). 6.25—Dressmaking Lesson. 6.40—Talk. 7.10—Police Notes. 7.25—Religious Information. 7.40—Mouth-Organ Recital. 7.55—Orchestral Concert. Missionary Song Cycle: Potpourri of Dutch Songs (de Heer). 8.25—Mouth Organ Recital (continued). March, Old Comrades (Teike). Serenade (Drigo). Potpourri of Overtures. Fantasia, Le petit Instrument. March, Farewell of the Gladiators (Blankenburg). 8.40—Talk. 9.15—Concert (continued). Sinfonia (W. F. Bach). Choral Preludes (Bach-Kaun): (a) Erbarme dich, (b) Aus tiefer Not. Suite in F (Eisenach). Sinfonia pastorale (Tartini). Concerto, Op. 6 (Torelli). Minuet (Boccherini). In the interval at 9.40—News. 10.25—Gramophone Records of Light Music. 11.10 (approx.)—Close Down.

JUAN-LES-PINS. 1,205 kc/s (249 m.); 0.8 kW. Transmits at intervals from 12.30 p.m. to 8.0 p.m.—Amusement Guide and Weather Report. 8.10—Exchange Talk. 8.30—Press News, Scientific Quotations and Racing Results. 8.45—Sponsored Quartet Concert. 10.0 (approx.)—Marseillaise and Close Down.

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

KAUNAS (Lithuania) 155 kc/s (1,935 m.); 7 kW. Transmits at intervals from 10.0 a.m. to 7.30 p.m.—Concert. 8.45—Review of Foreign Events. 9.0—Talk in Esperanto: Lithuania—the Country of Songs. 9.20—Concert of Russian Music. Selection from "The Snow Maiden" (Rimsky-Korsakov). Waltz-Serenade (Tchaikovsky). Serenade mélancolique (Tchaikovsky). Suite, Caucasian Sketches (Ippolitov-Ivanov). 10.30 (approx.)—Close Down.

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. to 6.15 p.m.—Talk. 6.40—Song Recital. 7.5—Talk.

THURSDAY
continued

7.30—*Concert by the Station Orchestra* conducted by Erkki Linko. Soloist: Tiitus Mantynen (Bassoon). Hungarian Overture (Kéler-Béla). Spanish Dances (Granados): (a) Andaluza, (b) Rondalla Aragonesa. Bassoon Solos. Variations on "s kommt ein Vogel geflogen" (Ochs).
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 7.0 a.m. (Gramophone Concert).
11.30 a.m.—Organ Recital by Hans Bachem. 12.5 p.m.—Talk: Industrial Mobilisation, a Complement to Disarmament. 12.30—Technical Talk.

1.0—*Concert of Light Music*, conducted by Eysoldt. March (Wochler). Overture, "Masaniello" (Auber). Waltz, Seid umschlungen, Millionen (Johann Strauss). Nocturne and March of the Dwarfs from the Lyric Suite (Grieg). Selections from "La Bohème" (Puccini). Roman Suite (Zimmer). Serenade, Toscanetta (Becc). Intermezzo, Xantippchen (Königsberger). Selection from "Das Dorf ohne Glocke" (Künneke).

2.30—Programme for Children. 3.10—Talk for Bee-keepers. 3.35—The World on Gramophone Records: Norwegian Folk Songs.
4.0—Talk: The History of Germany as portrayed by its Towns—Mannheim.

4.30—*Military Concert by the Band of the 1st Battalion of the 18th Infantry Regiment, Paderborn*, conducted by Ruhland. Badenweiler-marsch (Fürst). Hungarian Comedy Overture (Kéler-Béla). A Day in Sanssouci (Kockert). Waltz, Frühlingskinder (Waldteufel). March of the Duke of Brunswick. March (Becker). Fantasia on Four German Songs (Schmidt). March (Kühne). Zum Städtle hinaus (Meissner). Two Marches with Fanfares (Hendriot). March (Lubbert). Potpourri, Seid einig (Morena).

6.0—Italian Lesson. 6.20—Talk: Excursions in the Rhineland and Westphalia: The Middle Ruhr Valley. 6.40—Talk: Unemploy-

ment in West German Industry and Agriculture. 7.0—Report on the Corpus Christi Procession (on Gramophone Records). 7.50—Sports Notes.
8.0—*Beethoven Symphony Concert* by the Augmented Station Orchestra, the Station Chamber and Concert Choir, conducted by Zimmerman and a Cologne Folk Choir, conducted by Willi Brouwers. Soloists: Lotte Schrader (Soprano), Adelheid Wolgarten (Contralto), Hans Sträter (Tenor) and Fred Drissen (Bass). Symphony No. 1, Symphony No. 9, with Final Chorus.
10.5—News Bulletin and Sports Notes. 10.55—Concert conducted by Wolf. 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 6.0 a.m. 6.0 p.m.—Talk on Radium. 6.15—Talk on Taxation. 6.30—Spanish Lesson. 6.50—Fritz Wälther Bischoff reads from his own Works.
7.15—*Concert of Light Music* by the Leipzig Symphony Orchestra, conducted by Fritz Theil. Modern Comedy Overture (Theil). Suite from "Sigurd Jorsalfar" (Grieg). German Dances (Schubert). Serenade No. 3 in E Minor for Strings (Fuchs). Selection from "Le Domino noir" (Auber). Waltz, Die Werber (Lanner). Tarantella (Freudenberg). Festlicher Aufzug (Theil).

8.45—Talk: Will Things get worse? 9.25—"Girls wanted!"—A Radio Play (Martinsberg-Schäffers). 10.25—News Bulletin and Close Down.
LWÓW (Poland)
788 kc/s (381 m.); 16 kW. Transmits at intervals from 10.0 a.m. 7.0 p.m.—Miscellaneous Items. 7.25—Talk: Poles in Lithuania. 7.40—News Bulletin. 7.45—Dramatic Programme. 8.15—11.0—See Warsaw. 11.0—Dance Music relayed from the "Bayatela" Variety Theatre. 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.—Popular Music on Gramophone Records. 7.0—Light Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South-East.
8.30—Three Plays (Gabriel Timory): (a) "Un beau mariage," (b) "Le cultivateur de Chicago," (c) "Le vieil homme et l'homme cheveu."

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, Talk on Mountaineering and Request Gramophone Records. 9.15—9.30—News and Political Review. 10.0—French Lesson on Gramophone Records. 10.30—Chimes, Time, Political Review.
10.45—*Concert of Musical Comedy Music*. Ballad from "El señor Joaquín (Caballero). Duet from "El dúo de la Africana" (Caballero). Waltz from "El sueño de Pierrot" (Barrera). Jota from "El guitarrico" (Soriano). Selections from "La moza viega" (Luna). Selections from "La Ventera de Alcalá" (Calleja and Luna), followed by Violin Recital by Trude Armbruster-Blecher. Aria (Reger). Romance (Svendsen). Ländler (Strässer). Ave Maria (Schubert). Sonata in A (Mozart). Minuet (Beethoven). Jota (Falla). After the Programme, Song Recital by Concepcion Llorens.

12.45 a.m. (Friday)—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 7.0 a.m. 7.0 p.m.—Dance Music. 8.0—See Prague. 10.15—Programme Announcements and Theatre Guide. 10.20—*Orchestral Concert of Light Music*. Four Sketches (Armandola). Serenade (Kostal). Viennese Waltz (Delmas). Polka (Kricka). Waltz,

Hoch Leben der Tanz (Waldteufel). Krakowiak (Czajane). Gallop (Leopold).

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

MUNICH (Germany)
563 kc/s (533 m.); 1.7 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.); and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 10.0 a.m. 5.45 p.m.—*Orchestral Concert*, conducted by Erich Kloss. Overture, Heimkehr aus der Fremde (Mendelssohn). Romance (Sibelius). Selection from "Ballo in maschera" (Verdi). Cradle Song (Studený). Csardas from "Der Geist des Wojewoden" (Grossmann). Old Styrian Play and Dance Music (Pachernegg). March, In Troue fest (Teike).
7.0—Weather Forecast and Sports Notes. 7.10—Bavarian Literature: Georg Britting, Josef Schandler, Hans Friedrich and Hans Johst read from their own Works. Introductory Talk by J. M. Wehner. 8.0 (from Obermoschel)—Bavarian Programme. 9.0—Symphony Concert (by the Station Orchestra, conducted by Hans Winter. Soloist: Enrico Mainardi (Cello). Overture, "Hermann und Dorothea" (Schumann). Concerto for Cello and Orchestra (Schumann). Variations for Full Orchestra on a Theme by Haydn (Brahms).

10.0—Dialogue (to be announced). 10.20—Time Signal, Weather Forecast, News and Sports Notes. 10.45—Light Music and Dance Music, conducted by Erich Kloss. 12 midnight (approx.)—Close Down.
OSLO (Norway)
Kringkastingsselskapet. 277 kc/s (1,083 m.); 60 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.) and Rjukan, 671 kc/s (447.1 m.).

Transmits at intervals from 10.0 a.m. 2.15 p.m.—Promenade Concert. 6.0—German Lesson. 6.30—Divine Service. 7.0—Announcements, Weather and News. 7.30—Recital of Swedish Songs with Lute Accompaniment. 8.0—Time Signal. 8.1—Talk: Bee-keeping in Norway.
8.30—*Concert by the Station Orchestra* conducted by Hugo Kramm. Soloist: Oscar Holst (Violin). Northern Overture (Hans Hansen). Concerto for Violin and Orchestra (Viotti). Summer in Norway (Torjussen). Four Norwegian Dances (Hjellemo). Norwegian Rhapsody No. 4 (Svendsen). March (Olsen).

9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Talk (to be announced). 10.45 (approx.)—Close Down.

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

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: Theatrical Literature. 7.0—Le Journal Parlé. 8.20—Weather Forecast.
8.30—*Gramophone Concert. Part I*—Wagner Music. Overture, "Rienzi", Love Song from "The Valkyrie" (Wagner). Selections from Tannhäuser: (a) Bacchanale, (b) Star of Eve, (c) March. Finale from "The Twilight of the Gods."
Part II—Programme of Light Music. Potpourri, Souvenirs of Messenger. Mieux que les fleurs (Durke). Potpourri of Cigany Airs and Dances, Saschinka (arr. Ralf). Pas

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THURSDAY continued

des écharpes (Chaminade). Estrelita (Davis). Selection from "Il est charmant" (Moretti). Potpourri of Modern Dances (Dostal). Sobre las olas (Rosas). Waltz, Wienerblut (Strauss). The Caravan (Bayer). Selection from "The Rose of Stamboul" (Fall). Potpourri of Marches (Charlie). 10.0 (approx.)—Close Down.

PARIS (France) Poste Parisien. 914 kc/s (328.2 m.); 60 kW.

7.0 p.m.—Gramophone Records, News and Announcements. 7.30—Sponsored Gramophone Concert. 8.30—Gramophone Records, Talk and News. 8.45—Vocal and Orchestral Concert. Overture, "The Magic Flute" (Mozart). Minuet from "Henry VIII" (Saint-Saëns). Prelude and Variations (Franck). 16th Century English Suite. Allegro Vivace from Symphony No. 8. The Unfinished (Schubert). Concerto in D Minor (Bach). Hungarian Rhapsody No. 1 (Liszt). Ecossaise (Beethoven). March in D (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. 7.30—Weather and Physical Culture (continued). 7.45—Light Music on Gramophone Records. 8.0—News, Weather and Press Review. 12 noon—Protestant Address by the Reverend Jacques Monthonex. 12.30 p.m.—Gramophone Concert for Young People. Potpourri of Old French Songs. Slavonic Song. L'affaire blaureau (Oberfeld). Paraphrase on "Il Trovatore" (Verdi). Waltz from "Faust" (Gounod). Selection (Zamaçois). Too Late (Aurelli and Keyne). Round the World in Eight Minutes (Betove). The King's Horses (Gay and Graham). Les Arènes de Lutte (Bontemps). The Flight of the Bumble-bee (Rimsky-Korsakov). La Bataille de Marignan (Jannequin). The Children's Symphony (Haydn). 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, Talk, Agricultural Report and Racing Results. 7.0—Talk: Adventure in Modern Life. 7.30—German Lesson. 7.45—Press Review and Commercial Prices. 8.0—Gramophone Concert. España (Blanco). Tango, Voluptuosas (Padilla). Tango, Trajos viejos (Alongi). Selection from "The Blue Mazurka" (Lehar). Boston, Ton amour c'est ma vie (Dufas). Foxtro, True Happiness (Grock). Waltz from "The Love Parade" (Schartzinger). Soy de Madrid (Guerrero).

8.30—News Sports Notes and Weather. 8.40—Review by Christophe. 8.45—"La Dragonne"—Play (Vercel) after Desmarres, by Georges Colin and his Company. In the interval at 9.15—Press Review and News.

PITTSBURGH (U.S.A.) Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW.

Transmits at intervals from 12.30 p.m. 9.0 p.m.—Horne Decorating from New York. 9.15—Teaberry. Baseball Scores. 9.20—Business News. 9.25—David Lawrence Dispatch. 9.30—Pebeço Weather Report. 9.31—Market Reports. 9.45—KDKA Kiddies' Klub. 10.0—Coffee Matinee, from New York. 10.30—Singing—Lady, from New York. 10.45—Little Orphan Annie, from New York. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sport Review. 11.12—Press News—Reeler. 11.15—KDKA Orchestra. 11.30—Westinghouse Musical Maids. 11.45—Literary Digest Topics, from New York. 12 midnight—Pepsodent Amos n' Andy, from New York. 12.15 a.m. (Friday).—Programme to be announced. 12.30—The Stebbins Boys, from New York. 12.45—Billy Jones and Ernie Hare, from New York. 1.0—The Edgeworth Programme, from New York. 1.15—Rin Tin Tin Thrillers. 1.30—Ivory Programme, from New York. 1.45—Sisters of the Skillet. 2.0—Blackstone Plantation, from New York. 2.30—Thompkins Corners. 3.0—A. & P. Dance Gipsies, from New York. 3.30—Paris Night Life, from New York. 3.45—Contract Bridge by E. Hall Downs. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—

Weather Forecast. 4.15—Press Last Minute News Flashes. 4.20—Programme to be announced. 4.30—Hal Kemp and his Orchestra. 5.0—Charlie Olcott, Radio's Funniest Man. 5.15—Good Night.

POZNAŃ (Poland) 896 kc/s (335 m.); 1.9 kW.

Transmits at intervals from 10.0 a.m. 7.0 p.m.—Miscellaneous Items and Announcements. 7.15—Agricultural Notes. 7.30—English Lesson on Linguaphone Records. 7.45—See Livoro. 8.15—Recital of Sacred Songs by Mme. Jarochewska (Mezzo-Soprano) and Mr. Rvy (Tenor). 9.25—Light Music on Gramophone Records. 9.55—10.40—See Warsaw. 10.40—Sports Notes and Miscellaneous Items. 10.55 (approx.)—Close Down.

PRAGUE (Czechoslovakia) 614 kc/s (488.6 m.); 120 kW.

Transmits at intervals from 6.30 a.m. 4.0 p.m.—Orchestral Concert, relayed from Brno. 5.30—Concert of Popular Music on Gramophone Records. 6.0—German Transmission: Old and New Popular Songs by Prof. Hickmann. In the interval: Announcements. 7.0—See Moravská Ostrava. 8.0—Sports Notes. 8.5—"Edipus Rex"—Drama (Sophocles), from the Studio. 9.0 (in the interval)—Time Signal, News and Sports Notes. 10.15—Miscellaneous Announcements. 10.20—See Moravská Ostrava.

RABAT (Morocco) 721.1 kc/s (416 m.); 6 kW.

Transmits at intervals from 1.30 p.m. 5.0 p.m.—Gramophone Records of Light Music. 6.0—8.0—No Transmission. 8.0—Arab Transmission: Talk, Journal Parlé and Gramophone Records of Light Music. 9.0—Concert. Selection from "Paganini" (Lehar). Song from "The Desert Song" (Romberg). 9.30—"The Stradivarius"—Comedy in One Act (Max Maurey). 10.0—Haydn (Concert with Introductory Talk). Quartet. Song. The Surprise Symphony. 11.0—A Relay or Gramophone Concert of Variety Music.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland) 743 kc/s (403 m.); 25 kW.

Lausanne, 442 kc/s (680 m.) and Geneva, 395 kc/s (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and News Bulletin. 12.40 (from Lausanne)—Concert of Light Music on Gramophone Records. 1.0—Exchange Quotations. 1.5—Gramophone Concert (continued), with Humorous Programme in the interval. 1.45—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1—Concert by a String Orchestra, conducted by Robert Echenard. 5.45 (from Lausanne)—Literary Programme. 6.15—Concert by a String Orchestra (continued). 6.45 (from Geneva)—Programme for Children. 7.0—Weather Forecast. 7.1 (from Lausanne)—Film Talk. 7.20 (from Lausanne)—Report of the Swiss Peasants' Union. 7.30 (from Geneva)—Theatre Notes. 7.55—Announcements. 8.0 (from Lausanne)—Reading. 8.20—Concert by the Station Orchestra. 9.35 (from Geneva)—Organ Recital by William Montillet relayed from St. Joseph's Church. 10.0—Weather Forecast and News Bulletin. 10.15 (approx.)—Close Down.

ROME (Italy) Ente Italiano Audizioni Radiofoniche (IRO). 686 kc/s (441 m.); 50 kW.

Relayed by Naples, 941 kc/s (319 m.) and ARO, 6,976 kc/s (43 m.). 8.15—8.30 a.m.—Giornale Radio and Announcements. 12.30 p.m.—Gramophone Concert of Variety Music. In the intervals at 12.35 p.m.—Weather, at 1.15—Giornale Radio and Exchange and at 1.30—Time and News. 2.0—5.0—No Transmission. 5.0—Exchange Quotations. 5.5—Programme for Children. 5.25—Giornale Radio and Announcements. 5.30—Soprano Solos by Vera Nadia Paggioli. O bocca dolorosa (Sibella). Aria from "Aida" (Verdi). Aria from "André Chénier" (Giordano). 5.45—Concert. Selection from "Eva" (Lehar). Danza delle lucciole (Amadei). Bräun (Escobar). Selection (Grothe). Selection for Pianoforte and Violin: Celestial Reverie (Centola). Vorrei baciarti (Amato). 6.15—Giornale dell'Ente. 6.25—Course in Roman Studies. 6.55 (Naples)—Shipping News and Sports Notes. 7.0—Agricultural Report. Weather, Announcements, Giornale Radio and Press Review. 8.0—Time,

News and Gramophone Records of Light Music. 8.30—Talk for the Housewife. 8.45—Symphony Concert, conducted by Rito Selvaggi; including Violin Solos by Maria Flori: (a) Tempo di minuetto (Viotti), (b) Dushkin (Borodin), (c) Tango (Albeniz), (d) Russian Dance (Tchaikovsky). Film Review and Reading in the intervals. 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 9.50 kc/s (31.48 m.) and by W2XAD on 15,340 kc/s (19.56 m.). Transmits at intervals from 11.45 a.m. 9.0 p.m.—Musical Comedy Hits from New York. 9.30—Musical Ad Merit. 9.50—News Items. 10.0—Stock Reports and Police Notices. 10.15—Skippy from New York. 10.30—Bosco Children's Programme. 10.45—Swanee Serenaders from New York. 11.0—Joe and Eddie. 11.15—Annette McCullough (Crooner). 11.30—Musical Comedy Hits. 11.55—Baseball Scores. 12 midnight (WGY only)—Through the Opera Glass. 12 midnight (W2XAF only)—Stock Reports and News Items. 12.45—4.0 a.m. (Friday)—New York Relay. 12.45—Trials of the Goldbergs. 1.0—Fleischman Hour. 2.0—Big Six of the Air. 2.30—Adventures of Sherlock Holmes. 3.0—Lucky Strike Dance Hour. 4.0—Carmelo Cascio (Pianist). 4.15—Floyd Walter (Organist). 4.45—Cotton Club Orchestra from New York. 5.0—DeWitt Kenton Orchestra. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland) 653 kc/s (459 m.); 60 kW;

Basel, 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—Bird Songs on Gramophone Records. 1.35—Weather and Exchange. 1.40—3.30—Interval. 3.30 (from Berne)—Talk for Women. 4.0—Gramophone Records of Light Music. 5.0—6.30—Interval. 6.30 (from Basle)—Talk: Historical Notes on Delsberg and St. Ursanne. 7.0—Time, Weather, Traffic Notes and Gramophone Records of Light Music. 7.30 (from Basle)—Elementary Italian Lesson. 8.0 (from Zürich)—Choral Concert. The Zürich Liebfrauenchor, the Augmented Station Orchestra. Soloists: Hedwig Pfyster (Soprano), Margit Fuchs (Contralto), Max Kaufmann (Tenor) and Franz Kleboth (Bass). 9.30—Weather and News. 9.45—Orchestral Concert.—10.30 (approx.) Close Down.

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

Relayed by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.) and Sindsval, 554 kc/s (552 m.). Transmits at intervals from 7.20 a.m. (Gymnastics) 5.0 p.m.—Divine Service. 5.30—Programme for Children. 5.45—Light Music on Gramophone Records. 6.45—Elementary German Lesson. 7.15—Weather Forecast and News Bulletin. 7.30—Sonata No. 1, Op. 21 for Violin and Pianoforte (Goossens). 7.55—Songs by Elof Benktander. Four Songs (Richard Strauss): (a) Ich trage meine Minne, (b) Nachtgänger, (c) Ruhe, Meine Seele, (d) Zeugniss. The Goblin of the Wood (Peterson-Berger). 8.15—Play in Three Acts (Charles Wildrac). 9.45—Weather Forecast and News Bulletin. 10.0—Concert of Light Music. 11.0 (approx.)—Close Down.

STRASBOURG (France) Radio-Strasbourg (PTT). 869 kc/s (345 m.); 11.5 kW.

11.30 a.m.—Gramophone Concert of Popular Music. 12.45 p.m.—News in French and German. 4.0—Time Signal. 1.2—Gramophone Concert of Variety Music. 2.0—Programme for Children. 3.0—4.0—Interval. 4.0—Gramophone Dance Music. 4.45—Talk in French on Elocution. 5.0—Dance Music. 6.0—French Talk

on History. 6.15—Talk in French: Rugusa and Cattaro in Dalmatia. 6.30—Orchestral Concert conducted by Maurice de Villers. Overture, Die Heimkehr aus der Fremde (Mendelssohn). Ballet Music from "Faust" (Gounod). Selection from "La Gioconda" (Ponchielli). Simple avenu (Thomé). Carnaval (Giraud). 7.30—Time Signal and News in French and German. 7.45—Selection from "Madame Butterfly"—Opera (Puccini). 8.30—Orchestral Concert conducted by M. Munch, relayed from the Orangerie. Overture, "Poet and Peasant" (Suppé). Waltz, Très Jolie (Waldteufel). Ballet Music from "Alba Baba" (Lecocq). Overture, "Martha" (Flotow). Fantastic Dance, The Bell Boy (Clarke). Entr'acte. Thistle-down (Wood). Scenes from the South. 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. 12 noon—See Frankfurt. 12.50 p.m.—Time, Weather, News and Programme Announcements. 1.0—Gramophone Concert of Famous Conductors. Willem Mengelberg, conducting the Amsterdam Concertgebouw Orchestra: Turkish March from "The Ruins of Athens" (Beethoven). Sir Hamilton Hartly, conducting the Manchester Hallé Orchestra: Hungarian Rhapsody No. 4 (Liszt). Oskar Fried with the British Symphony Orchestra: Ballet Music from "Sylvia" (Delibes). Joseph Rosenstock with the Berlin State Orchestra: Carnival roman (Berlioz). Arthur Bodansky with the Berlin State Opera House Orchestra: Overture, "Mignon" (Thomas). Bruno Walter with the Berlin Philharmonic Orchestra: Dance of the Seven Veils from "Salomé" (Richard Strauss). Felix von Weingartner with the London Symphony Orchestra: Waltz, The Arabian Nights (Johann Strauss). 1.55—News Bulletin. 2.0—2.15—Sponsored Programme—Musical Selections. 2.30—Elementary Spanish Lesson. 3.0—Elementary English Lesson. 3.30—See Frankfurt. 6.0 (approx.)—See Langenberg. 6.15—Time and Weather. 6.25 (from Karlsruhe)—Talk: Miniatures from a Journey round the World. 6.50—Talk: Ireland and the Irish. 7.15—Time and Agricultural Notes. 7.30—Reading: "Das Mädchen von Zaccan" (Otto Emelin). 8.0—"Die toten Augen"—Opera (d'Albert), from the Württemberg Landtheater. 10.30—Time, Weather, News and Programme Announcements. 10.45—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. 7.5 p.m.—Quintet Concert. Selection (Heinecke). Estasi (Brunetti). Waltz, Wienerblut (Johann Strauss). Signor, addio (Rampoldi). Russian Suite (Hostal). L'ultima canzone (Bartizza). Adunata (Fiaccone). 8.0 till Close Down—See Turin. TURIN (Italy) Ente Italiano Audizioni Radiofoniche. 1,096 kc/s (273.7 m.); 7 kW.

Relayed by Milan, 905 kc/s (331.5 m.); Genoa, 959 kc/s (312.8 m.); and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural Report. 7.0—Announcements. 7.5—Variety Music. 7.30—Time and Announcements. 7.31—Popular Music on Gramophone Records. 8.0—Giornale Radio and Weather. 8.15—Popular Music on Gramophone Records. 8.20—Talk for Housewives. 8.30—"I Puritani"—Opera (Bellini). Conductor: Ugo Tansini. In the intervals, Cinema Notes, Talk and Giornale Radio. News after the Opera. 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 9.50 a.m. 11.30 a.m.—Programme in connection with the Bi-Centenary of George Washington. 12 noon—Concert by the Vienna Symphony Orchestra. 2.0

p.m.—Gramophone Records of Famous Singers. 2.30—3.0—Interval. 3.0—Time and Announcements. 3.5—Programme for Children. 3.30—Chamber Music by the Anita Ast Quartet and Carl Rafite (Pianoforte). Pianoforte Quintet in E Flat, Op. 44 (Schumann). Pianoforte Quintet (C. Franck). 4.35—Talk: The Lower Alps in Spring. 5.0—Orchestral Concert. Overture, "Die Fledermaus" (Joff. Strauss). Waltz from "Der Zigeunerprimas" (Kálmán). Selections (Pauspertl): (a) Liebele, (b) Tanzposi. Selection from "Tosca" (Puccini). Valse triste and Krakowiak from "Lazy John" (Nedbal). Selection from "Das Fürstentum" (Lehar). Das Glück is a Vogel (Kratzl). Potpourri. Telefonken (Morena). Waltz, Morgenblätter (Joh. Strauss). Potpourri, Für lustige Leut' (Komzak). March, Furchlos und treu (Fucik). 6.45—Talk on Carinthia. 7.15—Recital on Two Pianofortes, by Maryan Rawicz and Walter Landauer. Echo de Viende (Sauer). Polka, Pizzicato (Delibes). By the Lake (Lange). Virginia (Philips-Shuster-Brian). Waltz, Pikantier (Lehar). Dainty Miss (Barnes). Potpourri of Popular Songs (Rawicz-Landauer). 7.55—Time, Sports Notes and Programme Announcements. 8.5—Weekly Microphone Feuilleton (O. Henry). 8.35—Mass in D Minor (Bruckner) by the Orchestra, conducted by Carl Lutz. 9.40—News Bulletin. 9.55—Dance Music from the Schönbrunn Park Hotel.

WARSAW (Poland) Polskie Radio. 212.5 kc/s (1,411 m.); 120 kW.

10.0 a.m.—Service relayed from Livoro. 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 Report. 12.15—Symphony Concert by the Warsaw Philharmonic Orchestra, conducted by B. Szulc. Soloists: S. Feltenstein (Pianoforte) and M. Zeltraj (Songs). 1. Symphony No. 6—the Pathetic (Tchaikovsky). Pianoforte Concerto in E Flat (Liszt). Songs. 2.0—Agricultural Talk: The Forest Problem in Poland. 2.20—Musical Programme. 2.40—Talk: Things which should be known. 3.0—Musical Programme. 3.55—Programme for Children. 4.20—Light Music on Gramophone Records. 4.40—Talk: Ceremonies and Customs connected with Corpus Christi. 4.55—Popular Music on Gramophone Records. 5.15—Talk: Aegea, the Cradle of Civilisation. 5.40—Talk on the Polish Language. 5.50—Concert relayed from Wilno. 7.0—Miscellaneous Items. 7.25—Popular Music on Gramophone Records. 7.40—Programme Announcements. 7.45—See Livoro. 8.15—Concert of Light Music by the Station Orchestra, conducted by S. Navrot. Soloists: Sempolinsky (Songs) and E. Dubrovny (Balalaika). Ballet Suite (Gyldmark). Waltz (Meyer-Helmund). Carnaval japonais (Basque). Serenade (Gyldmark). Balalaika Songs; (a) Spanish Serenade (Ockartiz), (b) Song Potpourri (Jefimov). Three Songs. Serenade (Waldau). Hochzeitszug in Liliput (Translatour). Two Songs: Three Balalaika Sölos. Premier bolero brillant (Leybach). Waltz, "Je t'aime" (Waldteufel). Mürmelndes Lüttchen (Jensen). Mazurka (Cabella). Boston (Malka-kievicz). March, Frühlingkinder (Blankenburg). 9.55—Literary Programme. 10.10—Duets by H. Zboinska-Ruszkowska (Soprano) and J. Paszkowska (Mezzo-Soprano). Ecco il petto (Marcell). Minuet from "Erminia" (Bononcini). Duet from "The Queen of Spades" (Tchaikovsky). Two Roses (Arensky). Duet (Moniuszko). Song (Zelensky). La Nuit (Chausson). Réveil (Chausson). 10.40—Weather and Police Notes. 10.45—Sports Notes. 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 10.0 a.m. 7.0 p.m.—Answers to Correspondents. 7.20—Talk: The Arabian Nights. 7.35—Programme and Miscellaneous Announcements. 7.45—11.0—See Warsaw. 11.0—Relays from Foreign Stations. 12 midnight (approx.)—Close Down.

PRINCIPAL EVENTS

FRIDAY (May 27)

SYMPHONY CONCERTS

- 8.15 p.m. Heilsburg and all German stations: Haydn programme.
- 8.15 " Vienna: The Mahler Symphonies—No. 7. (The Vienna Philharmonic, conducted by Clemens Krauss).
- 8.15 " Warsaw: Philharmonic Orchestra.

CONCERTS (Vocal and Instrumental)

- 7.50 p.m. Stockholm: Swedish Music Festival.
- 8.0 " Radio-Paris: "Faust" music.
- 8.10 " Copenhagen: Danish Music.
- 8.30 " French P.T.T. Stations, British Regional, Brussels No. 1, Prague, Radio-Suisse Romande: European Concert, Charpentier programme.
- 8.40 " Budapest: Mozart programme.
- 8.45 " Berlin (Witzleben): Orpheus and Eurydice (Ernst Krenck).
- 9.35 " Daventry National: Requiem Mass (F. D'Erlanger).
- 10.25 " Copenhagen.
- 10.50 " Langenberg, Frankfurt, Stuttgart: "Late" concert.

OPERAS AND OPERETTAS

- 6.40 p.m. Bucharest: "The Barber of Seville" (Rossini).
- 8.45 " Italian Stations (N.): "Il marchese del grillo."

CHAMBER MUSIC

- 8.45 p.m. Rome: The Rome Quartet and vocal music.

RECITAL

- 10.0 p.m. Stuttgart, Frankfurt: Violin.

MISCELLANEOUS

- 8.0 p.m. Schweizerischer Landessender: Fiftieth anniversary of the St. Gotthard Tunnel.

The Saint Gotthard Tunnel

Although overshadowed by later achievements of the same order, the Saint Gotthard Tunnel must always remain as one of man's most courageous engineering feats. Work on it began in 1872, and the line was formally opened ten years later. SCHWEIZERISCHER LANDESENDER, is broadcasting an interesting programme this evening in honour of the jubilee of the Tunnel's inauguration. Our picture shows the northern entrance and above it the entrance to the shorter tunnel which runs up to Andermatt, as well as the beginning of the road which leads over the pass.



(Photo: Lauri, Berne, by courtesy of the Swiss Federal Railways)

The North End of the St. Gotthard Tunnel

The Brussels Conservatoire Centenary. At 8.30 this evening, BRUSSELS No. 2 station gives a big symphony concert in honour of the centenary of the foundation of the Royal Conservatoire there. The conductor is to be M. Josef Jongen, distinguished composer and Director of the Conservatoire. His own *Symphony with Organ* is to be played, with the composer himself taking the organ part. Arthur de Greef is also appearing as composer, taking the solo part in a concerto of his own. The singer is Fernand Anseau, of the Paris Opera, and the violinist Mathieu Crickboom is also to take part. Auguste de Boeck, whose portrait appeared in a recent issue, has a work included too, so that the programme is representative of the best music of present-day Belgium.

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—"The Week in Westminster." Major C. R. Attlee, M.P.			
12 noon—Emanuel Starkey and his Orchestra.			
12.45 p.m.—Organ Recital by Walter Vale.			
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., D.Sc.			
2.55—Interval.			
3.0—"Life and Work in the British Isles"—V. Mr. Clifford Collinson.			
3.30—Gramophone Recital for Schools.			
4.15—"The Studio Orchestra, directed by Guy Daines.			
4.45—Time Signal (Greenwich).			
5.15 (Daventry)—The Children's Hour.			
5.15 (London and Northern)—The B.B.C. Dance Orchestra.			
6.0—"The First News."			
6.30—Time Signal (Greenwich).			
6.30—The Foundations of Music. Mozart's Pianoforte Variations.			
6.50—Captain G. Crawshaw; "Your Week-End in the Garden."			
7.10—7.25—"The Theatre." Mr. James Agate.			
7.30—"Sir J. Arthur Thomson, LL.D.;" "Biology in the Service of Man."			
8.0—Vaudeville.			
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—Requiem Mass (Frederic D'Erlanger). Miriam Licette (Soprano), Astra Desmond (Contralto), Frank Titterton (Tenor), Keith Falkner (Baritone); A Section of The National Chorus (Chorus Master, Stanford Robinson); The B.B.C. Orchestra. Conductor, Adrian Boult.			
10.35—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 p.m. (London and Northern)—The Daily Service.			
10.30—11.0 (London and Northern)—Daventry National Programme.			
11.30—12 noon (London)—Experimental Television Transmission (Baird Process).			
12—Frank Newman at the Organ.			
1.0 p.m.—The New Victoria Studio Orchestra, conducted by Haydn Heard.			
2.0—3.0—The Northern Studio Orchestra. Gerald G. Pilcher (Pfte.).			
4.15 (London and Northern)—Daventry National Programme.			
5.15—"The Children's Hour."			
6.0—"The First News."			
6.30 (London)—Orchestral Concert. Frederick Woodhouse (Baritone). The B.B.C. Orchestra (Section E).			
6.30 (Midland)—"Rhythm." A Gramophone Recital.			
6.30 (Northern)—The Bolsover Colliery Band. Norman Crabtree (Tenor).			
7.15 (Midland)—"From the Musical Comedies." The Studio Orchestra. Nat Goulding (Tenor).			
8.0 (London)—Teresa del Riego—A Programme from her Music. May Busby (Soprano). Michael Collins (Violoncello).			
8.0 (Northern)—A Sonata Recital. Lupton Whitelock (Flute), Edward Allam (Pianoforte).			
8.30—European Concert. La Vie du Poète (The Poet's Life) (A. Dramatic Symphony in five Tableaux). Words and Music by Gustave Charpentier. Conducted by the Composer. Soloist, Madame Ritter Ciampi, of the Opera. Relayed from the Théâtre des Champs Elysées, Paris.			
9.45 (London and Midland)—"General Post" or "The B.B.C.'s Beanfeast." A new Revue by Mary Dunn. Music by Alan Slater.			
9.45 (Northern)—The Studio Orchestra.			
10.30—"The Second News."			
10.50—12 midnight (London and Northern)—Dance Music.			

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

BARCELONA (Spain)
Radio-Barcelona (EAJ1). 860 kc/s (349 m.); 8 kW.
Transmits at intervals from 8.15 a.m.
8.0 p.m.—Trio Concert. Spanish Serenade (Glazounov). Gavotte (Lincke). Hymn to the Sun (Rimsky-Korsakov). Selection from "The Tales of Hoffmann" (Offenbach).
8.30—Exchange and Request Gramophone Records. 10.0—Chimes from the Cathedral, Weather, Exchange Quotations and Relay of Foreign Stations. 10.30—Orchestral Selections. 11.0—Dance Music. 11.40—Orchestral Concert from the Café Español. 1.0 a.m. (Saturday)—Close Down.

BERLIN (Germany)
Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.
Transmits at intervals from 5.45 a.m. 12 noon—Weather for Farmers. 12.2 p.m.—Gramophone Concert of Folk Songs and Marches, followed by Weather for Farmers. 12.55—Nauen Time Signal. 1.30—News Bulletin. 2.0—Gramophone Concert of Light Music, relayed from Berlin (Witzleben). 3.0—Talk for Girls applying for Posts. 3.30—Weather and Exchange Quotations. 3.40—Talk for Children. 4.0—Educational Talk. 4.30—A Radio Report on Blind Craftsmen, relayed from Hamburg. 4.55—Concert from Leipzig. 5.30—Talk: Risks run by Men of To-day. 6.0—German Lesson. 6.30—Talk on Political Economy. 6.55—Weather for Farmers. 7.0—Topical Talk. 7.15—Talk for Veterinary Surgeons. 7.35—Talk for Workers, followed by Weather for Farmers. 8.0—Talk by Kurt G. Sell: What People are talking about in America, relayed from America. 8.15—See Heilsberg. 8.45—See Langenberg. 10.15—See Berlin (Witzleben).

BERLIN (Germany)
Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m. (Gymnastics and Concert).
6.5 p.m.—Talk: Friedrich Hölderlin. 6.30—Talk: The Week-end. 6.55—

The Witzleben Stations informs its listeners. . . . 7.0—Topical Talk. 7.10—Orchestral Concert. Overture, "The Nuremberg Doll" (Adam). Selections (Järnefelt): (a) Prelude; (b) Berceuse. Waltz from "Faust" (Gounod). Romance (Tchaikovsky). Gavotte (Gossec). Waltz Fantasia (Glinka). Liebesgespräch (Schmalstich). Selection from "La Traviata" (Verdi).
8.0—Talk by Kurt G. Sell: What People are talking about in America, relayed from America. 8.15—Relay from Schloss Monbijou of a Programme in connexion with "German Art Week." Scene from "Faust" (Goethe), Music by Radziwill. 8.45—"Orpheus and Eurydice" Opera (Krenck). 10.15—Talk: Hints for the Week-end. 10.20—Weather, News and Sports Notes. 10.30 (approx.)—Orchestral Concert, conducted by Clemens Schmalstich. Overture, "Rosamunde" (Schubert). Austria (R. Strauss). Symphonic Poem, Moldavia (Smetana). Scheherazade (Schmalstich). Soprano Solos (Schmalstich) by Mary Wurm-Meisenberg: (a) Trinkspruch, (b) Wiegenlied, (c) Der Torero. Overture, "Mignon" (Thomas). Kaiser-Walzer (Joh. Strauss). Selections (Schroter): (a) Traum, (b) Ballettszene. Selection from "The Gipsy Baron" (Joh. Strauss). 12 midnight—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. 7.55—Lottery Results. 8.0—Advanced Spanish Lesson. 8.15—News Bulletin and Weather Forecast. 8.20—Charades. 8.30—Charpentier Programme conducted by the Composer, relayed from Paris (Eiffel Tower).

BRATISLAVA (Czechoslovakia)
1,076 kc/s (279 m.); 14 kW.
Transmits at intervals from 10.30 a.m. 7.0 p.m.—See Prague. 7.20—Popular Music on Gramophone Records. 7.30—Haydn Concert, relayed from the National Theatre. Oratorio, "Il ritorno di Tobia." "The Apothecary"—Comic Opera.

10.30—See Prague. 10.45—Programme and Miscellaneous Announcements.

BRESLAU (Germany)
923 kc/s (325 m.); 1.5 kW. Relayed by Gleiwitz, 1,184 kc/s (253 m.).
Transmits at intervals from 6.0 a.m. 5.50 p.m.—That will interest you—Surprise Programme. 6.10—Talk: Night on the Acropolis in Athens. 6.35—Recitations from the Poems of Ilse Weiss with Introductory Talk. 7.5—Weather for Farmers. 7.7 (approx.)—Orchestral Concert, conducted by Franz Marszalek. Selections from "Königslieder" (Humperdinck). Two Pieces for Flute and Pianoforte (Zanke): (a) Improvisation, (b) Tanzarabeske. Suite: La Burla (Weingartner). L'Albe radiuse (F. Dyck).
7.55—Weather Report. 8.0—Talk by Kurt G. Sell: What People are talking about in America, relayed from America. 8.15—See Heilsberg. 8.45—News Bulletin. 9.0—"Geflügelte Erde"—Radio Sketch after Max Dauthendey (Oscar Brandt). 10.0—Time and News. 10.35—Concert from Berlin (Witzleben). In the interval from 11.10—11.25—Weekly Sound News from the Deli Theatre. 12 midnight—Close Down.

BRNO (Czechoslovakia)
878 kc/s (342 m.); 35 kW.
Transmits at intervals from 10.30 a.m. 6.15 p.m.—Talk for Workers: Population and the Economic Crisis. 6.25—German Transmission: News and Talk. 7.0—See Prague. 10.45—News Bulletin and Close Down.

BRUSSELS (Belgium) (No. 1)
I.N.R. 590 kc/s (509 m.); 15 kW. 12 noon—Trio Concert. In the interval at 12.30 p.m. Weather Report. 5.0 p.m.—Orchestral Concert, conducted by J. Kumps. Selection from "Le Festin de l'araignée" (Roussel). Suite in D. for Trumpet, Two Flutes and String Quintet (V. d'Indy). Symphony No. 5 (Beethoven).
6.0—Gramophone Records. Je pleure (Tosti). Saxophone Solo: La Cinquantaine (Marie-Wiedoeff). Selection from "Paganini" (Lehar). 6.15—Talk for Amateur Photographers. 6.30—Gramophone Con-

FRIDAY continued

cert of Light Music 7.15—Talk: "The Zimmer Tower at Lierre." 7.30—Music Review. 8.0—Impressions d'Italie (Charpentier) on Gramophone Records. 8.30—Charpentier Concert, relayed from Paris (Eiffel Tower). Talk: "La Vie du Poete." The Third Act of "Louise." In the intervals, Introductory Notes. After the Programme, Le Journal Parle.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon—Gramophone Concert. Selection from "Tosca"—Opera (Puccini). Overture, "Coriolanus" (Beethoven). In the interval at 12.30—Weather Forecast. 5.0—Concert by the Station Orchestra, conducted by Fr. André. Pasodouble, Manuela del Rio (Lucchesi). Suite, "Minnehaha" (Coleridge-Taylor). A Festival at Aranjuez (Demerseman). Foxtrot (Charig-Salabert). Suite Exotique (Delmas-Popy). Selection from "The Nuremberg Doll" (Adam). Waltz, Gold and Silver (Lehar). Fantastic Suite (Foulds). 6.0—Popular Music on Gramophone Records. Selection from "Die Kaiserin" (Fall). Selection (Duran). Pas Redoublé (Desrousseaux). 6.15—Talk: May Folklore. 6.30—Light Music on Gramophone Records. Valse Bluette (Drigo). Selection from "The Dollar Princess." Star of Love (Ponce). Clair de Lune (Debussy). Carnaval de Venise (Benedict). Overture, "Raymond" (Thomas). 7.15—Talk on German Politics. 7.30—Le Journal Parle. 8.0—Recitations. 8.30—Concert relayed from the Conservatoire, on the occasion of the Centenary of the Foundation of the Conservatoire. After the Concert, Le Journal Parle and Concert by the Station Orchestra, conducted by Charles Walpot. Soloists: M. Brenders and M. Gras (Pianoforte). March, The Entry of the Gladiators (Fucik). Waltz, "La Houssarde" (Ganne). Selection from "Miss Decima" (Audran). Intermezzo (Fletcher). The Man I Love, Duet for Two Pianofortes (Gershwin). Yvain Potpourri (Salabert). March (Planquette). 11.0 (approx.)—Close Down.

BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.—Concert by the Station Orchestra. In the interval at 5.0—News Bulletin and Time Signal. 6.0—Talks on Philosophy and Religion. 6.40—"The Barber of Seville"—Opera in Three Acts (Rossini). News in the intervals.

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—6.45 p.m. and 8.30 till Close Down. 6.15 p.m.—Shorthand Lesson. 6.45—Hungarian Folk Song Recital by Imre Varga, accompanied by the Jancsi Rigo Cigány Band. 7.45—Talk: What one can learn in Holland. 8.10—Talk on Politics. 8.30—Introductory Talk to the following Transmission. 8.40—Mozart Concert by the Royal Hungarian Opera House Orchestra, conducted by Ernest Dohnányi. Soloists: Béla Melles (Violin) and Stefan Gáti (Cello). Overture, Titus (Mozart). Symphonie concertante. Jupiter Symphony "After the Concert"—Music by the Eugen Farkas Cigány Band from the Café Spolarich. 12 midnight (approx.)—Close Down.

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). 11.0 a.m.—Weather Forecast. 11.10—Angling Notes. 12 noon—Town Hall Chimes. 12.2 p.m.—Concert by a String Ensemble, relayed from the Palace Hotel. 1.15—Talk for Schools, with Musical Illustrations. 1.45—2.40—Interval. 2.40—Wind Instrument Concert, conducted by Johannes Andersen. Soloist: Pauli Jensen (Violin). Triumphant March from "Thrymskviden" (J. P. E. Hartmann). Overture, "Masaniello" (Auber). Lagon Waltz (Johann Strauss). Madrigal from "Romeo and Juliet" (Gounod). International Suite (Tchaikovsky). Violin Solos: (a) Minuet (Porpora-Kreisler), (b) Romance (Svendsen) (c) Concert

Polonaise No. 2 (Wieniawsky). Bataille-March (Möller). Overture, "Czar and Carpenter" (Lortzing). Waltz, Dreams on the Ocean (Gungl). Juxed from "Mors et Vita" (Gounod). Selection from "Faust" (Gounod). Prelude and Homage March from "Sigurd Jorsalfar" (Grieg). 4.40—"The Foundling"—Play for Children after Hector Malot's "Sans famille." 5.40—Exchange and Market Prices. 5.50—Talk in English: Come to Scotland. 6.20—Elementary German Lesson. 6.50—Weather and News. 7.15—Time Signal. 7.30—Talk: New Traffic Ordinances. 8.0—Town Hall Chimes. 8.2—Item by Per Knutzon. 8.10—Concert of Danish Music by the Radio Orchestra, conducted by Emil Reesen. Overture, "Et Eventyr i Rosenborg Have" (Weyses). Scandinavian Folk Music (Emil Hartmann). Prelude to "Renaissance" (Lange-Müller). Dance from the Music to "Wayland the Smith" (Fini Henriques). Dance Divertissement, Polketta (Lumbye). 9.10—"Lasarus"—Comedy in One Act (Carl Gandrup), arranged for Radio. 9.55—Emil Hornemann Songs by Gustav Hallander Hellemann. To i Bauden. Paa Dampskibet. Ved Solnedgang. Grønne Kranske. Holder du af mig. 10.10—News Bulletin. 10.25—Orchestral Concert, conducted by Emil Reesen. Marionette Pieces for two Pianofortes, Pupazzetti (Casella). Suite, Le Tombeau de Couperin (Ravel). Nocturne, Musette and Ballad from the Incidental Music for "King Christian II" (Sibelius). 11.0 (approx.)—Close Down.

DUBLIN (Ireland) (R.N.). 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. 7.20—News Bulletin. 7.30—Time Signal. 7.31—Gardening Talk. 7.45—Talk on William Cobbett. 8.0—The Station Sextet. 8.15—Organ Recital by A. J. Thornton, relayed from the Unitarian Church. 8.45—Soprano Solos by Jean Nolan. 9.0—Historical Talk. 9.30—Harp Solos by Treasa Nic-Chormaic. 9.45—"The Three Wise Men"—Play presented by Kathleen Plunkett and Company. 10.15—The Station Sextet. 10.30—Time Signal, News, Weather Report and Close Down.

FÉCAMP (France) Radio Normandie. 1,364 kc/s (219.9 m.); 10 kW. 12 noon—Sponsored Gramophone Concert. 12.30 p.m.—Press News. 12.45—Concert of Popular Music. Selection from "Orpheus in the Underworld" (Offenbach). J'peux pas vivre sans toi (Oberfeld). Song (Sylviano). Pas de Quatre (Meyer). In the Year Two Thousand and (Scott). Coucou (Jonasson). Selection (Stolz). With a Song in my Heart (Rodgers). Selection from "The Czarina" (Ganne). C'est Jeannine (Scott). Lena (Mewes). 7.30—Journal Parle. 8.0—Press News. 8.15—Agricultural Programme. 8.30—Concert relayed from Havre. 11.0—Dance Music. 1.0 a.m. (Saturday)—Close Down.

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

FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relay by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 12 noon—Gramophone Concert. The Dance of the Blue Danube (Fred Fisher). Selection from "Einbrecher" (Holländer). Song, Ich hab' kein Auto (Hans May). Waltz, Im Walzerrausch (Lincke). Two Songs (Heymann): (a) Sieben Sterne hat der grosse Bär, (b) Bin kein Hauptmann. Selection from "The Merry Widow" (Lehar). Two Songs from "Das Veilchen vom Montmartre" (Kálmán). Waltz, Uhlenhorster Kinder (Fetras). Song from "Einbrecher" (Holländer). Song, Mein Herz ist ein Salon für schöne Frauen (Hans May). Schreibe deine Liebste dir. Duet from "Mr.

Cinders" (Davis-Coots and Swannstrom). Marie, Marie (Marc Roland). 12.50 p.m.—News and Weather. 1.0—See Langenberg. 2.0—News Bulletin. 2.10—Sponsored Gramophone Concert. 3.0—Weather Report. 3.10—Time and Economic Notes. 3.20—Talk: Young People and Literature—What do our Young People read? 4.55—Economic Notes. 5.0—Orchestral Concert, Part I, conducted by Hans Rosbald and Part II by Walter Caspar. Soloist: Herman Krauss (Violin). Part I. Spring Overture (Hermann Goetz). Violin Concerto No. 3 in B Minor, Op. 61 (Saint-Saëns). Don Quixote's Ride and Tragic Return, from "Don Quixote" (Kienzl). Part II. Programme of Old Dance Music. 6.15—Economic Notes. 6.25—7.15—See Stuttgart. 7.15—Time, Programme Announcements, Weather and Economic Notes. 7.30—8.15—See Stuttgart. 8.15—See Heilsberg. 8.45—10.35—See Stuttgart. 10.35—Time, Weather, News and Sports Notes. 10.50—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 5.45 a.m. 6.0 p.m. (from Kiel)—Recital of Folk Songs by Olly Lockewitz (Contralto). English Songs: (a) Home, Sweet Home, (b) May Rose. French Songs: (a) The Rose Tree, (b) Little Daughter. Swedish Song: Through Valleys and Meadows. Norwegian Song: Spring Murmurs. Danish Song: Parting. Finnish Songs: (a) Expectation, (b) The Forests of Finland. Russian Song: Lullaby. Bohemian Song: The Rejected Wooer. Italian Song: La Romanella Portuguese Folk Dance. Spanish Song: The Disdainful One. 6.35—Talk for Workers. 6.55—Frankfurt Exchange and Hamburg Market Prices. 7.0—Topical Talk. 7.15—Weather Report. 7.20—"A Visit to the Fairy Tale Painter, Hermann de Bruycker"—Programme of Music and Talks. Introductory Talk by Hans-Günther Marek. Pianoforte Solos by Gerhard Maasz: Melodies from Humperdinck's Fairy Operas. Talk by Walter Brauns: Secrets of the Studio. Scherzo in D Flat for Pianoforte (Schubert). Dialogue by Hermann de Bruycker and Walter Brauns: The World through the Eyes of a Fairy-Tale Painter. Poems (de Bruycker). Romance in A Flat for Pianoforte (Mozart). 8.0—See Berlin (Witzleben). 8.15—See Heilsberg. 8.45—"Deutsche Michel"—North German Peasant Comedy in Five Acts (Stavenhagen). 10.15—Time and News. 10.35—Concert from the Café Wallhof.

HEILSBURG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relay by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. 11.30 a.m.—Concert from Breslau. 1.0 p.m. (from Danzig)—Report of the German Automobile Club—The East Prussia Tour, 1932. 1.20—News Bulletin. 1.30—Gramophone Concert of Opera and Light Music. 2.0—A Radio Report. 2.30—Advertising News with Gramophone Records. 3.30—Programme for Children. 4.0—Talk for Women. 4.30—Concert from Leipzig. 5.30—Talk by Dr. Thiel. 5.55—Book Review. 6.15—Agricultural Market Prices. 6.30—Concert by the German Workers' Mandoline Society, conducted by Bruno Rückert. March, Amazonenritt (Ritter). Overture, Les Bibelots du Diable (Maciocchi). Andante grazioso (Kok). Waltz, Fior. Frentino (Sartori). Serenade (Maciocchi). Selection (Collin). March, Savoia (Agostine). 7.10—Talk: Three Historians—Leopold von Ranke, Johannes von Müller, and Oswald Spengler. 7.50—Weather Report. 8.0—Talk by Kurt G. Sell: What People are talking about in America, relayed from America. 8.15—Haydn Concert by the Königsberg Opera House Orchestra, conducted by Erich Seidler. Soloists: Traude Menzel - Dietzel (Mezzo-Soprano), Erwin Ross (Bass) Otto Boruvka (Cello) and the

Station Choir. Symphony in C, No. 48 (Maria Theresia). Ariadne auf Naxos for Mezzo-Soprano and Orchestra. Concerto in D for Cello and Orchestra. Choral Selections: (a) Die Beredsamkeit, (b) Die Harmonie der Ehe, (c) Der Greis. Die Teilung der Erde (Instrumentation by Erich Börschel). Der Sturm, for Choir and Orchestra. 9.50—"Dem dunklen Gott"—Poems (Paula Ludwig) by Kaete Foerder and H. Brüchberg (Block Flute). 10.15 (approx.)—Weather, News and Sports Notes.

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up till 4.40 p.m.). 6.25—9.40 a.m.—Programme of the Workers' Radio Society (V.A.R.A.). 6.25—6.40 and 7.10—7.25—Physical Culture Lesson. 7.40—Gramophone Records of Variety Music. 9.40—Religious Programme of the Liberal Protestant Radio Society (V.P.R.O.). 9.55—11.40—V.A.R.A. Programme. 9.55—Address. 10.10—Septet Concert. 10.40—Talk for Women. 10.55—Concert (continued). 11.40—11.55—3.40 p.m.—Programme of the Algemeene Vereeniging Radio Omroep (A.V.R.O.). 11.40—Time Signal. 11.41—Orchestral Concert, conducted by Nico Treep. 1.40 p.m.—Talk. 2.10—Orchestral Concert (continued). 2.40—Concert from the Restaurant du Lion d'Or, Rotterdam. 3.40—7.40—V.A.R.A. Programme. 3.40—Organ Recital. Prelude (Pièrre). Cantabile (Franck). Overture, "Orpheus in the Underworld" (Offenbach). Waltz, Tales from the Vienna Woods (Joh. Strauss). Home (Clarkson). 4.10—Programme for Children. 4.40—Orchestral Concert. Overture, "Le Roi l'a dit" (Delibes). Canzonetta (Godard). The Cuckoo (Arensky). The Tyrol in Song and Dance (Fetras). Suite exotique (Delmas-Popy). Marche des gamins parisiens (Berger). 5.40—Gramophone Records of Light Music. 5.55—Concert (continued). Overture, Le premier jour de bonheur (Auber). Potpourri, A musical Journey through Europe (Conradi). 6.20—Gramophone Records (continued). 6.40—Concert (continued). March (Holzmann). Waltz, Vision de Salomé (Joyce). The Mill in the Black Forest (Eilenberg). Fantasia on Old Folks at Home (Roberts). Organ Solos: (a) Salut d'amour (Elgar), (b) Cherry (Hofschna), (c) Waltz (Walldau). Waldteufel Potpourri (Mousseaux). Marche russe (Ganne). 7.40—10.40—V.P.R.O. Programme. 7.40—Time Signal. 7.41—Talk for Young People. 8.10—Programme by Mme. Cora de Langen van Rijn (Contralto - Mezzo - Soprano) and Jaap Spaanderman (Pianoforte). In the interval at 8.40—Religious Notes. 9.45—News Bulletin. 9.55—Address. 10.25—Gramophone Records of Popular Music. 10.40—V.A.R.A. Programme—Variety Music on Gramophone Records. 11.40 (approx.)—Close Down.

HUIZEN (Holland) 160 kc/s (1,875 m.); 8.5 kW. Programme of the Christian Radio Society (N.C.R.V.). 7.40 a.m.—Time Signal and Reading. 7.55—9.10—Gramophone Concert of Variety Music. 10.10—Service for Hospitals. 10.40—Gramophone Records of Tchaikovsky Music. Violin Concerto in D, Op. 35. The Nutcracker Suite. 11.40—Police Notes. 11.55—Instrumental Concert. Overture, "La Reine d'un Jour" (Adam). The Wedding of the Winds (Hall). Selections from "Les Cloches de Corneville" (Planquette). Two Selections (Friml): (a) Crépuscule, (b) Papijous. Overture, "Titus" (Mozart). Haydn's Himmelgrüsse (Urbach). Il Natale di Pierrot (Monti). Selections from "The Pearl Fishers" (Bizet), Selections from "The Valkyries" (Wagner). 1.40—Programme to be announced. 2.10—Indian Concert by Lena Kruthof with Diggelen (Vocalist) and Dina Appeldoorn (Pianoforte), with Talk by T. Kruthof. 4.10—Gramophone Concert. Overture "Les Saltimbanques" (Ganne). The Second Hungarian Rhapsody (Liszt). Torch Dance in B Flat (Meyerbeer). Overture, "Les Cloches de Corneville" (Planquette). 4.40—Talk for Young Stamp-Collectors. 5.10—Talk on Amateur Photography. 5.40—Talk by Heer Steenvoort. 6.10—Gramophone Record: Potpourri. An Evening with Liszt

(Urbach). 6.20—Talk on Gardening. 6.50—Talk by Heer Bloemendaal. 7.10—Police Notes. 7.25—Talk: The Weser. 7.40—Concert by the N.C.R.V. Symphony Orchestra, conducted by Frits Schuurman. Soloist: Annie Woud (Contralto). Suite (Couperin). Symphony in F (Bach). Songs (Handel): (a) Dank sei dir, Herr, (b) Verdi prati. Selections from "Alceste" (Gluck-Mottl). 8.40—Talk. 9.10—Concert (cont'd.)—Overture, "Oberon" (Weber). Songs: (a) Selection from the Third Symphony (Mahler), (b) Ich bin der Welt abhanden gekommen (Mahler). Selections from "The Damnation of Faust" (Berlioz). 9.40 (in an interval)—News. 10.10—Gramophone Concert. Heil Europa (v. Blon). Schön ist die Jugend (Max Rhode). Die Schmiede im Walde (Michaelis). The Mill in the Black Forest (Eilenberg). Land of Hope and Glory (Elgar). Kleiner Wiener Marsch (Kreisler). Kasperl's Wochenende (Hugo Flamm). Toporka's Song (Werstovsky). Selection for Cossacks' Choir and Balalaika Orchestra: Kazbek. Die Wachtparade kommt (Eilenberg). Westfalengruss (Blankenburg). Selection (Murzilli). Die kleinen Rekruten (Jessel). A Wedding Procession in Lilliput (Translatour). Soldatenblut (Blon). The Clock (Mark Andrews). Wilhelmus. 11.10 (approx.)—Close Down.

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

LANGENBERG (Germany) Westdeutscher Rundfunk. 635 kc/s (473 m.); 60 kW. Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time and Gramophone Concert). 11.20 a.m.—Gramophone Concert of Opera and Light Music. 12 noon—Concert. 12.50—Weather Announcements and Time. 1.0—Orchestral Concert, conducted by Kühn. Ballet Music from "Undine" (Lortzing). Waltz from "La Juive" (Halévy). Ballet Suite from "The Bartered Bride" (Smetana). The Veil Dance from "Hassan der Schwärmer" (Kienzl). Ballet Music from "The Queen of Sheba" (Goldmark). Ballet Music from "Carmen" (Bizet). 2.30—Sponsored Gramophone Concert. 3.30—Economic Notes and Time. 3.50—Programme for Children. 4.20—Concert for Children. 5.0—Gramophone Concert of Music by Puccini with Introductory Talk. Selections from (a) "Le Villi," (b) "The Girl of the Golden West," (c) "Suor Angelica," (d) "Gianni Schicchi" and (e) "Turandot." 6.15—Reading. 6.40—Talk on Trade Unions. 7.0—Weather, Time, Economic Report and Sports Notes. 7.15—Topical Talk. 7.30—Talk: The Union of South Africa—Gold. 7.55—News Bulletin. 8.0—Talk by Kurt G. Sell: What People are talking about in America, relayed from America. 8.15—See Heilsberg. 8.45—"Rescue"—Drama in One Act (Hermann Kessler). 9.40—Orchestral Concert. Overture, Im Herbst (Grieg). Ballet Music from "Robert le Diable" (Meyerbeer). Minuet (Paderevsky). Polish Dance. (Scharwenka). Hungarian Rhapsody No. 9 (Liszt). Selections from "Samson and Delilah" (Saint-Saëns). Little Waltz (Rubinstein). Serenade (Toselli). Der lustige Postillon (Pecce). Wanderer Suite (Knümann). 10.15—(approx.)—News and Sports Notes, followed by Concert. 12 midnight (approx.)—Close Down.

LEIPZIG (Germany) 1,157 kc/s (259 m.); 2 kW. Relay by Dresden, 941 kc/s (310 m.). Transmits at intervals from 6.0 a.m. 4.30 p.m.—Concert by the Leipzig Symphony Orchestra, conducted by Hilmar Weber. Overture, The Naiads (W. Bennet). Divertimento for Small Orchestra (Dehnert). Selection from "Die Vogel" (Braunfels). Ballet Music from "Faust" (Gounod). 5.30—Review of Scientific Books. 6.0—Dialogue: Freedom and Destiny. 6.25—English Lesson. 6.50—Programme to be announced. 7.0—Reading: Women of To-day. 7.30—Concert. Overture, "Poet and Peasant" (Suppé). Intermezzo, Was Blumen träumen (Translatour). D'Schnackler (Seidel). Einziger der Frühlingsblumen (Kockert). Folk

FRIDAY, continued

Song, Grusse an die Heimat. March, Telefonken (Evers). 8.0—Talk by Kurt G. Sell: What People are talking in America, relayed from America. 8.15—A Haydn Symphony. 8.45—Talk on Economics. 9.0—"Tausend und ein König"—a Radio Play (Herbau, after Kotzebue). 10.20—News Bulletin. 10.30—Concert by the Leipzig Symphony Orchestra, conducted by Dr. Ernst Praetorius. Soloists: Afrem Kinkulkin (Cello), Max Krämer (Violin) and Fritz Weitzmann (Pianoforte). Overture, "A Midsummer Night's Dream" (Mendelssohn). Andante from the Symphony in G (Haydn). Rondo from the Pianoforte Concerto in D Minor, (Mozart). Selections from "Don Juan" (Gluck). Andante con moto from the Fifth Symphony in C Minor, Op. 67 (Beethoven). Rondo from the Concerto in B Flat for Cello (Boccherini). Andante con moto from the Symphony in B Minor (the unfinished) (Schubert). Allegro moderato from the Violin Concerto No. 1 in G Minor, Op. 26 (Bruch). Scherzo and Pizzicato ostinato from the Fourth Symphony in F Minor, Op. 36 (Tchaikovsky). Kaiser-Walzer (Joh. Strauss). 12 midnight—Close Down.

MADRID (Spain) Union Radio (EAT). 707 kc/s (242.3 m.); 2 kW. Transmits at intervals from 9.0 a.m. 8.0 p.m.—Chimes, Exchange, Market Prices, Talk on Gardening and Request Gramophone Records. In the interval at 8.30—Educational Talk. 9.15—News and Political Review. 9.30—10.30—Interval. 10.30—Chimes, Time and Political Review. 10.45—Symphony Concert on Gramophone Records. Overture, "Don Giovanni" (Mozart). Entr'acte from "Kovantchina" (Moussorgsky). Three Dances (Granados). Concerto for Pianoforte and Orchestra (Schumann). Till Eulenspiegel's Merry Pranks (Richard Strauss). Spanish Caprice (Rimsky-Korsakov). Dance Music after the Programme. 12.45 a.m. (Saturday)—News Bulletin. 1.0 a.m.—Chimes and Close Down.

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

MORAVSKÁ-OSTRAVA (Czechoslovakia) 1,137 kc/s (263.8 m.); 11 kW. Transmits at intervals from 10.30 a.m. 6.25 p.m.—Polish Lesson. 6.45—Talk: Czechoslovakian Foreign Trade. 7.0—See Prague. 10.45—Programme Announcements, Theatre Guide and Close Down.

MOSCOW (Russia) Trades Union. 230.1 kc/s (1,304 m.); 100 kW. Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in German, Swedish and French: Bolsheviks and the Imperial War.

MUNICH (Germany) 563 kc/s (533 m.); 1.5 kW. Relay by Augsburg and Kaiserslautern, 536 kc/s (560 m.) and Nürnberg, 1,256 kc/s (239 m.). Transmits at intervals from 6.45 a.m. 5.0 p.m. (from Kaiserslautern)—Orchestral Concert, conducted

by Heinrich Heiger. Overture, "Rienzi" (Wagner). Selections from "Aida" (Verdi). Musical A.B.C. (Kozak). Waltz from "Brüderlein fein" (Fall). Selections from "The Land of Smiles" (Lehar). March, Gruss aus Kaiserslautern (Gundlich). 6.15—Time Signal, Weather Forecast and Agricultural Notes. 6.25—Talk: The Draining of the Zuiderzee. 6.45—Talk: The People of the Zuiderzee. 7.5—Programme for Workers. 7.25—Concert of Classical Music on Gramophone Records. 8.0—Talk by Kurt Sell: What People are talking about in America, relayed from America. 8.15—See Heilsberg. 8.45—Variety Programme. 10.20—Time Signal, Weather Forecast, News Bulletin, Sports Notes and Traffic Report.

OSLO (Norway) Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relay by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrunn, 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 Orchestra of the Cecil Restaurant, conducted by Hans Bache. Overture (Auber). Waltz, Gold and Silver (Lehar). Potpourri of Hebrew Songs (Dauber). Impromptu in A Sharp (Schubert). Air (Rimsky-Korsakov). Valse Caprice (Rubinstein). Gipsy Mazurka (Ganne). 6.0—French Lesson. 6.30—Concert of Light Music by the Hox Ensemble. 7.0—Announcements, Weather and News. 7.30—English Lesson. 8.0—Time Signal. 8.1—Orchestral Concert. Soloist: Oscar Holst (Violin). French Comedy Overture, (Kéler-Béla). Haydn Potpourri (Urbach). Moonlight on the Alster (Fétras). Serenata (Moszkovsky). Three Tunes (Svendsen). Rhapsody (Svendsen). Marche Militaire (Saint-Saëns). 9.0—Nils Collet Vogt reads his own Poems. 9.40—Weather and News Bulletin. 10.0—Topical Talk. 10.15—Instrumental Concert. M. Sigvard Fotland (Pianoforte), Arne

Melsen (Cello), Morten Vatn (Baritone). Arias from "St. Paul" and "Elijah" (Mendelssohn). Abendlied (Schubert). Two Songs (Johann Backer-Lunde). 11.15 (approx.)—Close Down.

PALERMO (Italy) Ente Italiano Audizioni Radiofoniche. 554 kc/s (542 m.); 3 kW. Transmits at intervals from 12.45 p.m. 5.30—6.30 p.m.—Concert of Variety Items and Dance Music. 8.0—Announcements, Giornale dell'Ente, Agricultural Notes, Report of the Royal Geographical Society and Giornale Radio. 8.20—Popular Music on Gramophone Records. In the intervals at 8.30—Time Signal and Announcements. 8.45—Concert. Soloists: O. Nicastro (Pianoforte) and Carducci (Tenor). Air de Ballet (Gluck). Two Pianoforte Solos: (a) Gavotte e Corrente (Zupoli), (b) Toccata (Scarlatti). Tenor Solos: (a) Quando mi guardi (Rotoli), (b) Song from "L'amicò Fritz" (Mascagni). Talk by F. De Maria. Overture, Fingal's Cave (Mendelssohn). Pianoforte Solos: (a) Etude (Chopin), (b) Polonaise in C Sharp Minor (Chopin). Tenor Solos: (a) Occhi di fata (Denza), (b) Finale from "Lohengrin" (Wagner). Overture, "Cosi fan tutte" (Mozart). After the Programme, Dance Music on Gramophone Records. 10.55—News Bulletin and Close Down.

PARIS (France) Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 13 kW. Time Signals (on 2,650 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.—Theatre Talk. 7.0—Le Journal Parlé. 8.20—Weather Forecast. 8.30—International Concert. Charpentier Programme conducted by the Composer. Soloists: Mme. Ritter-Chiampi, Marguerite Piteau, M. Verdière, Louise Jouatte and M. Messia (Organ). Part I. "La Vie du Poète"—Symphony-Drama in Four Parts. Part II. Selections from the Third Act of "Louise." 11.0 (approx.)—Close Down.

PARIS (France) Poste Parisien. 914 kc/s (328.2 m.); 60 kW. 7.0 p.m.—Gramophone Records, News and Announcements. 7.30—Concert of Dance Music on Gramophone Records. 8.30—Gramophone Records, News and Talk. 8.45—Concert of French Songs by Music Hall Artists.

PARIS (France) Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW. 6.45 a.m.—Physical Culture. 7.30—Weather and Physical Culture (continued). 7.45—Gramophone Records. A Wedding Day on Troidhaugen (Grieg). Merle et Pinson (Reynaud). Mazurka, La Gracieuse (Lavault). Gouttes d'eau (Petit). 8.0—News, Weather and Press Review. 12 noon—Jewish Talk. 12.30 p.m.—Gramophone Records. Selections from the Works of Victor Hugo on the Anniversary of his Death. Symphonic Poem, Death and Transfiguration (Richard Strauss). Selections from the works of François Coppée on the Anniversary of his Death: (a) Un Evangile, (b) Sérénade du Passant, (c) L'Espave. Aria from "Sappho" (Massenet). L'anneau d'argent (Chaminade). Meditation from "Thais" (Massenet). Prelude (Rachmaninov). In the interval at 1.0—Exchange, News and Weather and at 1.30 and 2.0—Exchange. 3.45—Exchange and Market Prices. 6.30—Market Prices, Weather, Agricultural Report, Talk and Racing Results. 7.0—Talk on the French Colonies: The Cotton Industry and Native Life. 8.0—Different Interpretations of Faust. The Orchestra, conducted by Eugène Bigot. Soloists: Mme. Martinelli, Georges Jouatte and M. Lovano (Vocalist). Prelude and Duet from "Faust" (Schumann). Selections from "Faust" (Gounod). Selections from "The Damnation of Faust" (Berlioz). Selections from "Mephistopheles" (Boito). A Faust Symphony (Liszt). In the intervals at 8.30—News, Weather and Gastronomic Review, and at 9.15—Press Review and News.

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—Answers to Correspondents. 7.30—Talk: Charity. 7.45—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—French International Concert, relayed from Paris (Eiffel Tower) Gustave Charpentier Programme, conducted by the Composer. "La vie du poète"—Symphony-Drama in Four Parts. Extracts from the Third Act of "Louise."

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PITTSBURGH (U.S.A.)

Westinghouse Electric (KDKA). 7.30-8.00 kcs (306 m.); 25 kW. Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Business News. 9.15—Rita Cavalieri, Spanish Soprano. 9.30—Pebecco Weather Report. 9.35—Market Reports. 9.45—KDKA Kiddies' Klub. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Bulletin. 10.12—Programme Announcements. 10.15—Dance Music by the KDKA Orchestra. 10.30—The Singing Lady, from New York. 10.45—Little Orphan Annie from New York. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sport Review. 11.12—Press News-Reeler. 11.15—Programme to be announced. 11.30—3.45 a.m. (Saturday)—New York Relay. 11.30 p.m.—Royal Vagabonds. 11.45—Literary Digest Topics. 12 midnight—Pepsodent Amos n' Andy. 12.15 a.m. (Saturday)—Esso Programme, Elsie Jans. 12.30—Stebbins Boys. 12.45—Billy Jones and Ernie Hare. 1.0—Nestlé's Programme. 1.30—Ivory Programme. 1.45—Sisters of the Skillet. 2.0—Friendship Town. 2.30—Armour Programme. 3.0—Whiteman's Pontiac Chieftains. 3.30—Love Songs and Waltzes. 3.45—Programme to be announced. 4.0—Bulwaga Time. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News Flashes. 4.20—Hotel William Penn Orchestra. 5.0—Cotton Club Orchestra, from New York. 5.15—Good Night.

POZNAN (Poland)

896 kcs (335 m.); 1.0 kW. Transmits at intervals from 11.45 a.m. 6.50 p.m.—Miscellaneous Items and Announcements. 7.15—Italian Lesson on Linguaphone Records. 7.30—Light Music on Gramophone Records. 7.45—10.45—See Warsaw. 10.45—Popal Talk. 11.0—Sports Notes and Police Report. 11.15—Dance Music on Gramophone Records. 12 midnight (approx.)—Close Down.

PRAGUE (Czechoslovakia)

614 kcs (488.6 m.); 120 kW. Transmits at intervals from 6.30 a.m. 4.0 p.m.—Orchestral Concert, relayed from Brno. 4.55—Talk: St. Wenceslas. 5.5—Concert of Chamber Music. Piano-forte Quartet Op. 1 (Suk). String Quartet (Toman). 6.5—Agricultural Report and Market Prices. 6.15—Programme for Workers. 6.25—German Transmission: Announcements and Talk. 7.0—News. 7.5—Talk on Hygiene. 7.20—Popular Programme. 7.50—Concert of Popular Music by the Aloha Hawaiian Trio. 8.20—Introductory Talk to the Following Transmission. 8.30—See Paris (Eiffel Tower). In the intervals at 9.0—Time and News Bulletin, and at 10.0—Time Signal. 10.30—News, Sports Notes, and Miscellaneous Announcements.

RABAT (Morocco)

721.1 kcs (416 m.); 6 kW. Transmits at intervals from 1.30 p.m. 5.0 p.m.—Gramophone Records of Light Music. 6.0—8.30—No Transmission. 8.30—Agricultural Report, Weather, News Bulletin and Part Relay of the *Chaprentier Concert* from Paris (Eiffel Tower.) 9.0—Vocal and Instrumental Concert. In the interval, Health Talk. 11.0 (approx.)—Close Down.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)

743 kcs (403 m.); 25 kW.; Lausanne, 442 kcs (680 m.); and Geneva, 395 kcs (760 m.). 12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and News Bulletin. 12.40 (from Lausanne)—Concert of Popular Music on Gramophone Records. 1.0—Exchange Quotations. 1.5—Gramophone Concert (contd.). 1.45—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1 (from Geneva)—Programme for Women. 5.30—Concert by a String Orchestra, conducted by Robert Echenard. 7.0—Weather Forecast. 7.1 (from Lausanne)—Cinema Organ Recital, by M. Cramer, relayed from the Capote Theatre. 7.25 (from Geneva)—Sports Talk. 7.45 (from Geneva)—Report of the Swiss Automobile Club. 7.55 (from Lausanne)—Talk: The 25th Anniversary of the Lausanne Stadium. 8.0 (from Lausanne)—Dramatic Programme by the "Compagnons du Masque." 8.30—Chaprentier Programme, by Orchestra, Soloists, Choir and Organ, relayed from Paris (Eiffel Tower).

Conductor: The Composer. Symphonic Drama, "La Vie du Poète. Selection from "Louisie." 10.0—Weather and News Bulletin. 10.15 (approx.)—Close Down.

RIGA (Latvia)

572 kcs (525 m.); 15 kW. Transmits at intervals from 6 a.m. 6.0 p.m.—French Lesson. 6.30—Latvian Lemony. 7.0—Weather Report. 7.5—Symphony Concert conducted by Medins. Soloist: Lilija Kalnins-Ozolins (Piano-forte). Symphony No. 1 (Brahms). Piano-forte Concerto (Dohnanyi). Symphonic Ballade (Tchaikovsky). In the intervals at 8.0—News Bulletin and at 9.0—Weather Report. 9.35—Light Music. 10.30 (approx.)—Close Down.

ROME (Italy)

Ente Italiano Audizioni Radiofoniche (IRO). 680 kcs (441 m.); 50 kW. Relayed by Naples, 941 kcs (319 m.) and 2RO, 6,976 kcs (43 m.). 8.15—8.30 a.m.—Giornale Radio and Announcements. 12 noon—Gramophone Records of Popular Music. 12.35 p.m.—Weather Forecast: 12.45—Sextet Concert with Ninu Borucchia (Soprano). Dance of the Dervishes (Bendix). Hymn to the Flowers (Fauchey). Songs: (a) Stornelli capricciosi (Carnovali), (b) Venetian Serenade, Colombetta (Buzzi-Peccia). Selection from "Carmen" (Bizet). "Seduzione (Paolo). Songs (Alvarez): (a) Los ojos negros, (b) Pesares. Song, Ciceronella (Sadero). Ritorno in città (Piccinelli). In the intervals at 1.15—Giornale Radio and Exchange, and at 1.30—Time and News. 2.0—4.45—No Transmission. 4.45 (Naples)—Talk for Women. 5.0—Exchange, Children's Radio Report, Giornale Radio and Announcements. 5.30—Soprano Song Recital, by Maria Concetta Zama. Concert Aria (Beethoven), Barcarolle (Schubert). Song from "Lakmé" (Delibes). 5.45—Concert. Il ritorno d'Ulisse (Donati). Selection (Chaminade). Fantastic Dance (Cuscina). Violin Solo: Spanish Serenade (Chaminade-Kreisler). La Mora torera (Ribas). Grotesque Intermezzo, Clowin (Culotta). 6.15—Giornale dell'Enit. 6.55 (Naples)—Shipping News and Sports Notes. 7.0—Agricultural Report, Weather Announcements, Giornale Radio and Press Review. 7.50—Gramophone Records of Light Music. 8.0—Time, News and Report of the International Institute of Agriculture (in Italian, French, English, German and Spanish). 8.30—Sports Notes and Announcements. 8.45—Concert by the Rome Quartet. O. Zuccharini (First Violin), F. Monielli (Second Violin), A. Perini (Viola), and L. Silva (Cello). Soloist: Irma Weile Barkany (Soprano). Quartet in D Minor, Death and the Maiden (Schubert). Songs of the Nations: (a) Swedish Love Song, (b) Silesian Eighteenth Century Christmas Carol, (c) Old French Song, Les cloches de Nantes, (d) Scottish Song, Charley is my Darling, (e) Catalan Song, The Girl and the Nightingale (arr. Manén), (f) Two Popular Hungarian Songs. Cello Solos, by Luigi Chiarappa: (a) Pavane pour une Infante défunte (Ravel), (b) Concert Waltz (Lalo), (c) Berceuse slave (Neruda), (d) Tarantella (Fiorino); followed by "Rapiolo 1905"—Comedy (Grella), and Gramophone Records of Popular Music. 10.55—News Bulletin.

SCHENECTADY (U.S.A.)

General Electric Company (WGY). 790 kcs (379.5 m.); 50 kW. Relayed at intervals by W2XAF on 9,530 kcs (31.48 m.) and by W2XAD on 15,340 kcs (19.56 m.). Transmits at intervals from 11.45 a.m. 9.0 p.m.—Decorating Notes from New York. 9.15—Old Time Tunster. 9.30—Musical Ad Men. 9.50—News Items. 10.0—Stock Reports and Police Notices. 10.15—Skipty, from New York. 10.30—The Success Doctor. 10.45—New York State Department Talk. 10.55—Musical Programme. 11.0—John K. Zorian (Organist). 11.24—Baseball Scores. 11.30—With Gray McClintock in the Canadian Northwest. 11.45—Silver Streaks. 12 midnight (WGY only)—General Electric Programme. 12 midnight (W2XAF only)—Stock Reports and News Items. 12.15 a.m. (Saturday)—WGY Farm Forum. 12.16—New Kenmore Orchestra. 12.45—Trials of the Goldbergs, relayed from New York. 11.0 (WGY only)—The Cities Service from New

FRIDAY continued

York. 1.0 (W2XAF only)—International General Electric Programme. 1.30—WGY Farm Forum. 2.0—Clicquot Club Eskimos from New York. 2.30—Pond's Programme from New York. 3.0—National Oratorio Society Programme from New York. 4.0—Freddy Engel's Orchestra. 4.30—DeWitt Clinton Orchestra. 5.0—Ralph Kirby (Dream Singer) from New York. 5.5—Hotel New Yorker Orchestra from New York. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)

653 kcs (459 m.); 60 kW.; Basle, 1,229 kcs (244.1 m.); and Berne, 1,220 kcs (246 m.). 12.28 p.m.—Time Signal. 12.30—Weather and News. 12.40—Concert by the Radio Orchestra. 1.35—Weather Report and Exchange. 1.45—3.30—Interval. 3.30—Concert by the Radio Orchestra. 4.30 (from Zürich)—Programme for Children. 5.0—6.30—Interval. 6.30 (from Zürich)—Talk: The Island of Rhodes. 7.0—Time, Weather, Market Prices, Motoring Notes and Variety Music on Gramophone Records. 7.30 (from Zürich)—Talk: The Present Position and Future of the Swiss Peasant. 8.0 (from Berne)—Radio Sequence for the Fiftieth Anniversary of the St. Gotthard Railway, arranged by César von Arx. Prelude (1932). The St. Gotthard Train stops for Five Minutes in Göschenen, followed by Six Scenes: (a) The Year 1220: The Legendary Smith of Göschenen starts the Building of the St. Gotthard Pass Bridge, (b) The Year 1867. The Gotthard Scheme of Alfred Escher for a Swiss Alpine Railway triumphs over the Rival Plans of Lukmanier, Splügen, Simplon and Grinsel, (c) The Year 1869. The Gotthard Mail rests at the Top of the Pass. Interlude: The Year 1932. The Train passes through the Gotthard Tunnel, (d) The Years 1872—1877. Louis Favre, the Constructor of the Tunnel in the Struggle against Nature and Man, (e) The Year 1880. The First Train and the Tunnel Celebrations in Airolo. Epilogue: The Year 1932. Memorial Address on the Opening of the Gotthard Railway on June 1st, 1882. 9.30—Weather and News. 9.45—Concert by the Radio Orchestra. 10.35 (approx.)—Close Down.

STOCKHOLM (Sweden)

Radiotjänst (SASA). 689 kcs (436 m.); 55 kW. Relayed by Boden, 244 kcs (1,220.5 m.); Göteborg, 932 kcs (322 m.); Hörby, 1,166 kcs (257 m.); Motala, 222.5 kcs (1,348 m.); Östersund, 389 kcs (770 m.) and Sundsvall 554 kcs (542 m.). Transmits at intervals from 7.20 a.m. (Gymnastics). 5.0 p.m.—Recital of Accordion Music. 5.30—Talk: The Collection of Medicinal Plants. 6.0—Popular Music on Gramophone Records 7.0—"Spring"—a Sketch (Ove Ekeland). 7.15—Weather Forecast and News Bulletin. 7.30—Talk on Foreign Politics. 7.50—Relay of Swedish Music from the Scandinavian Music Festival at Helsinki; 815 kcs (368.1 m.). Conductor: Adolf Wiklund. Soloist: Sven Brandel (Piano-forte). Rhapsody No. 2 (Hugo Alfvén). Piano-forte Concerto in B Minor No. 2 (Adolf Wiklund). 8.45—Talk: The Political History of the Great Powers. 9.15—Choral Concert conducted by Einar Ralf. 9.45—Weather Forecast and News Bulletin. 10.0—Concert of Light Music by the Station Orchestra. Ballet Music from "Coppélia" (Delibes). Serenade, Carmencita (Mannfred). Selection from "Lucrezia Borgia" (Donizetti). Waltz (Stolz). Selection from "Where the Lark sings" (Léhar). 11.0 (approx.)—Close Down.

STRASBOURG (France)

Radio-Strasbourg (PTT). 869 kcs (345 m.); 11.5 kW. 11.30 a.m.—Gramophone Concert of Popular Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert of Variety Music. 2.0—4.45—Interval. 4.45—Talk in French; Goethe and Poland. 5.0—Orchestral

Concert, conducted by Roskam. 6.0—Talk in German: Present-day Problems. 6.15—Legal Talk in German. 6.30—Orchestral Concert, conducted by Maurice de Villers. Oriental Suite (Popy). Overture, Die schöne Galathée (Suppé). Selection from "Si j'étais roi" (Adam). Two Selections (Gillet): (a) La Chanson des feuilles, (b) La Lettre de Manon. Suite carnavalesque (Francis-Thomé). 7.30—Time Signal, followed by News in French and German. 7.45—Orchestral Concert, conducted by Maurice de Villers. Overture, "Fidelio" (Beethoven). Romance in G (Beethoven). Prelude to "Lohengrin" (Wagner). Adagio for Clarinet and String Quartet (Wagner). Selection from "Lakmé" (Delibes). Serenade for Flute, Horn and Orchestra (Titl). Turkish March (Mozart). 8.30—Chaprentier Programme, conducted by the Composer, relayed from Paris (Eiffel Tower).

STUTTGART (MÜHLACKER) (Germany)

Süddeutscher Rundfunk. 832 kcs (360.5 m.); 60 kW. Relayed by Freiburg, 527 kcs (570 m.). Transmits at intervals from 6.0 a.m. 11.0 a.m.—News, Time and Weather. 11.15—Sponsored Concert. 12 noon—Gramophone Concert of Folk Music. 12.50—Time and News. 1.0—Concert from Langenberg. 1.55—News Bulletin. 2.0—Sponsored Musical Programme. 2.30—English Lesson. 3.0—Talk: Lenau in America. 3.30—Talk: Women Sculptors—Elizabeth Ney. 4.0—Concert relayed from Wildbad. March, Veni, vidi, vici (v. Blon). Overture, King Stephen (Beethoven). Waltz, Traume auf dem Ozean (Gungl). Ballet Music from "Paris and Helen" (Gluck). Selection from "Countess Maritza" (Kálmán). Rhapsody on German Folk Songs, Der Mai (Kampfert). 5.0—Concert from Frankfurt. 6.15—Time, Weather and Agricultural Report. 6.25 (from Mannheim)—Talk: "The Hambacher Fest." 6.50—Medical Talk: Headaches. 7.15—Time and Announcements in Esperanto. 7.30—Concert of German Dances and Marches of the Seventeenth and Eighteenth Centuries by the Stuttgart Philharmonic Orchestra conducted by Emil Kahn. Fehrbelliner Reitermarsch. German Dances (arr. Kahn). March, Coburger Josias. German Dances of the Eighteenth Century. Torgau March. German Dances (Haydn). Petersburg March. 8.0—Talk by Kurt G. Sell: What People are talking about in America, relayed from America. 8.15—See Heilsburg. 8.45 (from Karlsruhe)—"The Drunken Tinker"—a Radio Play (Hagemann). 10.0—Violin Recital by George Beerwald. Air on the G String (Bach). Vivace (Haydn). Romance (Reger). The Minstrel's Song (Glazounov). Berceuse (Gretchaninov). Serenade (Arensky). Arabesque (Tcheropnin). Slavonic Dance Melodies (Dvorak-Kreisler). Hungarian Dance (Brahms-Jóachim). Spanish Dance, Habanera (Sarasate). 10.35—Time and News. 10.50—Concert from Langenberg.

TRIESTE (Italy)

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

TURIN (Italy)

Ente Italiano Audizioni Radiofoniche. 1,096 kcs (273.7 m.); 7 kW. Relayed by Milan, 905 kcs (331.5 m.), Genoa, 959 kcs (312.8 m.), and Florence, 599 kcs (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Agricultural Notes and Report of the Royal Geographical Society. 7.5—Announcements. 7.10—Concert. Introduction to "Die schöne Galathée" (Suppé). Arab Dance (Ranzato). Ballet Suite (Siede). 7.30—Time and Announcements followed by Variety Music on Gramophone Records. 8.0—Giornale Radio, Weather and Popular Gramophone Music. 8.45—"Il marchese del grillo"—Opera in Three Acts (Mascetti). Conductor; Nicola Ricca. In the interval—Talk and Miscellaneous Announcements. After the Operetta—Giornale Radio.

VIENNA (Austria)

Radio-Wien. 581 kcs (517 m.); 15 kW. Relayed by Graz, 852 kcs (352.1 m.); Innsbruck, 1,058 kcs (283 m.); Klagenfurt, 662 kcs (453.2 m.); Linz, 1,220 kcs (248 m.) and Salzburg, 1,373 kcs (218 m.). Transmits at intervals from 9.20 a.m. 4.50 p.m.—Orchestral Concert. Overture, "Erlenhügel" (Kuhla). Waltz, 'Toujours ou jamais (Waldteufel). Selection from "The Tales of Hoffman" (Offenbach). Czardas from "Der Geist des Wojewoden" (Grossmann). Tango Die Nacht von Saragossa (Roby Frey). Rumba, Hallo, heut' tanzen wir Rumba (Bernhard Grün). Operetta Potpourri (Morana). 6.5—Tourist and Traffic Report. 6.20—The Sports Programme of the Workers' Cyclists and Motorists Society. 6.35—Weekly Sports Review. 6.50—Talk: Men who wanted to change the World—Oscar Wilde's Characters. 7.20—Time, Weather and Programme Announcements. 7.30—Recital of Jazz Songs by the Humoreskos. 8.0—Talk by Kurt Sell: What they are talking about in America, relayed from America. 8.15—Mahler's Seventh Symphony, by the Vienna Philharmonic Orchestra conducted by Clemens Krauss. 9.45—News Bulletin. 10.0—Orchestral Concert. Overture, "Die schöne Galathée" (Suppé). Waltz, Auf Aetherwellen (Fayr). Siamesische Wächtparade (Lincke). Selection from "Carmen" (Bizet). Waltz from "Die Faschingsfest" (Kálmán). Potpourri, Rendszeres bei Léhar (Hrubý). Intermezzo, Die kleine Kompagnie (Ganzberger). Potpourri, Wiener Volksmusik (Komzak). Gärtner Schützenmarsch (Burgstaller).

WARSAW (Poland)

Polskie Radio. 212.5 kcs (1,411 m.); 120 kW. 11.20 a.m.—Aviation Weather Report. 11.25—Interval. 11.45—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 Report. 1.25—Interval. 1.35—Popular Music on Gramophone Records. 1.55—Interval. 2.45—Variety Music on Gramophone Records. 3.5—Economic Report and Exchange Quotations. 3.15—Report of a Polish Musical Society. 3.20—Interval. 3.25—Talk relayed from Wilno, 533 kcs (563 m.). 3.45—Hydrographic Report. 3.50—Light Music on Gramophone Records. 4.20—Talk relayed from Cracow, 959 kcs (312.8 m.). 4.40—Popular Music on Gramophone Records. 4.55—Linguaphone English Lesson. 5.10—Talk: The World Crisis and Technics. 5.35—Concert of Polish Music by the Band of the 32nd Infantry Regiment, conducted by A. Sikorsky. 6.50—Miscellaneous Items. 7.15—Review of the Foreign Agricultural Press, relayed from Wilno, 533 kcs (563 m.). 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—Symphony Concert by the Warsaw Philharmonic Orchestra, conducted by Emil Mlynarsky. Soloists: Mme. Dubiska (Violin) and I. Elinson (Piano-forte). Symphony No. 2 (Sikorsky). Violin Concerto No. 2 (Mlynarsky). Piano-forte Concerto in F Minor (Chopin). Nocturne for Symphony Orchestra (Maszynsky). Selection (Wielochwicz). Literary Programme in the interval. 10.40—Radio Journal. 10.45—Weather and Police Notes. 10.50—Dance Music.

WILNO (Poland)

533 kcs (563 m.); 16 kW. Transmits at intervals from 11.58 a.m. 7.0—Programmes for Poles in Lithuania. 7.15—See Warsaw. 7.25—Humorous Programme. 7.40—Programme Announcements. 7.45—Till Close Down. See Warsaw. 12 midnight (approx.)—Close Down.

ZAGREB (Yugoslavia)

Radioklub-Zagreb. 977 kcs (307 m.); 0.75 kW. Transmits at intervals from 12.20 p.m. 7.50 p.m.—Announcements. 8.5—Talk on Ethnology. 8.30—Programme from Vienna. 10.30—News and Weather Forecast. 10.40—Light Music on Gramophone Records. 11.0 (approx.)—Close Down.

PRINCIPAL EVENTS

SATURDAY (May 28)

CONCERTS (Vocal and Instrumental)

- 7.45 p.m. Strasbourg: Municipal Orchestra.
- 8.0 " Copenhagen: English Music of the seventeenth century.
- 8.0 " Vienna, Breslau, Hamburg, Heilsberg: Viennese operetta selections.
- 8.15 " Frankfurt, Stuttgart: Popular programme.
- 9.0 " Budapest: Operetta selections.
- 10.45 " Langenberg, Frankfurt, Stuttgart: "Late" concert.

OPERAS AND OPERETTAS

- 7.30 p.m. Stockholm: Aida (Verdi), from the Royal Opera House.
- 8.0 " Schweizerischer Landessender: "Lilac Time" (Schubert—Berte).
- 8.45 " Palermo: "The Gipsy Princess" (Kálmán).
- 8.45 " Radio-Paris: "Beaumarchais" (Rossini).
- 8.45 " Rome: "The Barber of Seville" (Paisiello).

CHAMBER MUSIC

- 9.0 p.m. London Regional: The Budapest Trio.

RECITALS

- 7.0 p.m. Vienna: Ada Sari (Songs and Arias).
- 10.10 " Warsaw: Chopin (pianoforte and songs).

TALK

- 8.0 p.m. Radio-Paris: Literary talk: "Goethe's mother—Napoleon's mother."

MISCELLANEOUS

- 10.0 p.m. Berlin, Königs Wusterhausen, Heilsberg: Dr. Brüning at the Foreign Press Club, Berlin.

DANCE MUSIC

- 10.20 p.m. Hamburg: Scarpa's Band.
- 10.30 " Strasbourg.
- 10.45 " Copenhagen: Kai Julian's Band.

Not a Drop in the Tankard

Students from Bonn University are to give a recital of student songs in the Daventry National Programme this evening. The last item in their programme is a song entitled *Keinen Tropfen im Becher mehr*, or, to give it the title by which it is generally



(Photo: Verkehrsamt Bad Godesberg)

"Das Gasthaus zur Lindenwirtin"

known, *Die Lindenwirtin*. The history of this song is unusually interesting. There is at Godesberg, on the Rhine, an inn with that name, which is probably known to many visitors to that part of the world. Its owner, Aennchen, as she is affectionately called by her many friends all the world over, became the proprietress of the inn when quite a young woman. The wine sold there has always been of the best, and this may have been one reason, but Aennchen's great beauty, no doubt, was an additional reason why many young students, when passing through Godesberg in their wanderings, were attracted to the inn. It was one of those students who wrote the song one summer's night; the last verse runs as follows:—

"Der dies neue Lied erdacht,
Sang's in einer Sommersnacht,
Lustig in die Winde.
Vor ihm stand ein volles Glas,
Neben ihm Frau Wirtin sass
Unter der blühenden Linde."

Franz Abt, the beloved song composer, set the words to music, a simple and melodious tune. Aennchen still carries on, and last year, on the occasion of her seventieth birthday, visitors from all parts of the world came to greet her. In spite of her age she has retained much of her beauty and charm. A picture of the inn appears on this page.

Plantin, the 16th Century Typefounder

A festival of old music, by the Coecilia Choir, conducted by Louis de Voght, at which H.M. the Queen of Holland is to be present, is being relayed from Antwerp to-day by BRUSSELS No. 2. It is in a specially interesting place—the house which used to belong to Christophe Plantin, and which is now a museum; it is a faithful reproduction of what such a house looked like during the Renaissance. Known to the whole world of printers by the type to which he gave his name, Plantin came from France to Flanders about the middle of the 16th century, and gave an extraordinary impulse to the printing there. The programme is almost wholly by Antwerp composers who lived about the same time as Plantin, and it includes a Paternoster written in 1589 on the occasion of his death.

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—Lady Baden-Powell: "Twenty-one Years of Guiding."
 - 12 noon—The Northern Studio Orchestra.
 - 12.45 p.m.—Reginald New at the Organ.
 - 1.0—Time Signal (Greenwich).
 - 1.30—The Commodore Grand Orchestra.
 - 2.30—The National Eisteddfod of the Welsh League of Youth.
 - 3.45—The Cedric Sharpe Sextet. Dale Smith (Baritone).
 - 4.45—Time Signal (Greenwich).
 - 4.45—Reginald Foort at the Organ.
 - 5.15 (Daventry)—The Children's Hour.
 - 5.15 (London and Northern)—The B.B.C. Dance Orchestra.
 - 6.0—"The First News."
 - 6.25—Interval.
 - 6.30—Time Signal (Greenwich).
 - 6.30—Amateur Golf Championship. An Eye-Witness Account by Mr. Bernard Darwin.
 - 6.45—Welsh Interlude.
 - 7.5—7.20—Topical Talk.
 - 7.30—Songs from the Rhineland, sung by Students of the Bonn University. Conductor, Johannes Lieske.
 - 8.0—Orchestral Concert. The B.B.C. Orchestra (Section D), conducted by Percy Pitt.
 - 9.0—Time Signal (Greenwich).
 - 9.0—"The Second News."
 - 9.15—Shipping Forecast; New York Stock Market Report.
 - 9.20—"Hazard"—II. Mr. G. W. T. Garrod, A.F.C. (late R.A.F.): "Lost in the African Jungle."
 - 9.50—"General Post," or The B.B.C.'s Banquet. A new Revue by Mary Dunn. Music by Alan Slater.
 - 10.35—Miss Viola Tree: Songs with a Preface.
 - 10.35—12 midnight—Dance Music. Ambrose and his Orchestra, from the May Fair Hotel. (And perhaps the song of the Nightingale).
 - 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—2.30 p.m. (London)—Daventry National Programme.
 - 12 (Northern)—The Studio Orchestra.
 - 12.45—2.30 (Northern)—Daventry National Programme.
 - 3.30 (London and Northern)—The Cedric Sharpe Sextet. Dale Smith (Baritone).
 - 3.30 (Midland)—Dance Music. Billy Merrin and his Commanders.
 - 4.45—Daventry National Programme.
 - 5.15—The Children's Hour.
 - 6.0—"The First News."
 - 6.25 (London and Northern)—Regional Sports Bulletin.
 - 6.25 (Midland)—The Studio Chorus.
 - 6.30 (London)—The B.B.C. Orchestra (Section E), Noel Eadie (Soprano).
 - 6.30 (Northern)—Mr. J. E. Sampson: An Eye-Witness Account of the Northern Lawn Tennis Tournament at Manchester.
 - 6.45 (Northern)—The Studio Orchestra.
 - 7.0 (Midland)—The City of Birmingham Police Band, conducted by Richard Wassell.
 - 7.45 (London)—The Wireless Military Band. Conductor, B. Walton O'Donnell. Arthur Jay (Baritone).
 - 7.45 (Northern)—Frank A. Terry presents the Famous "Super-Optimists" in their Summer-time Revue "Pleasure on Parade."
 - 8.0 (Midland)—Dance Music.
 - 8.30 (Northern)—Dance Music.
 - 9.0 (London)—Chamber Music. John Armstrong (Tenor). The Budapest Trio: Nicolas Roth (Violin), George Roth (Violoncello), Miklos Schwab (Pianoforte).
 - 9.0 (Midland)—The Studio Orchestra. Leonard Dennis (Violoncello).
 - 9.0 (Northern)—The Spa Orchestra, conducted by Alick Maclean, from The Spa, Scarborough.
 - 10.15—"The Second News."
 - 10.35—12 midnight (London and Northern)—Dance Music.

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

- BARCELONA (Spain)**
Radio-Barcelona (E.A.J.). 860 kc/s (349 m.); 8 kW.
Transmits at intervals from 8.15 a.m. to 11.0 p.m.—Programme for Children, followed by Trio Concert and Humorous Picture Transmission. 8.30—Exchange Quotations, Request Gramophone Records and News Bulletin. 10.0—Chimes from the Cathedral, Weather and Exchange Quotations.
- 10.5—Orchestral Concert. March, Parade of the Cadets (Bayer). Waltz, Wolga Wolgal (Noack). Selection (R. Strauss). A Summer Evening on the Terrace (Turina). 11.0—Programme from Madrid.
- BELGRADE (Yugoslavia)**
697 kc/s (430.4 m.); 2.5 kW.
Transmits at intervals from 11.0 a.m. to 5.0 p.m.—Concert by the Station Orchestra. Overture, "Ilka" (Doppler). Potpourri (Morena). Spanish Fantasia, A Festival in Aranjuez (Demersman). Selection from "The Bird Fancier" (Zeller). Wenn die Nacht kommt (Kockert). Petersburg Schlitzenfahrt (Eilenberg). 6.55—Time Signal and Weather Forecast. 7.0—Dialogue in German. 7.30—Popular Programme. 8.30—A Comedy.
- 9.10—Recital of French Music, by Vladimir Slatin (Violin) and Lovro Maticic (Pianoforte). Sonata in G for Violin and Pianoforte (Lekeu). Suite for Pianoforte, Children's Corner (Debussy).
- 10.0—News Bulletin. 10.20—Cigány Music, relayed from the "Dva Jclena" Restaurant.
- BERLIN (Germany)**
Königs Wusterhausen. 183.5 kc/s (1,635 m.); 60 kW.
Transmits at intervals from 5.45 a.m. to 11.0 p.m.—Gustavus Adolphus Memorial Programme and Festival of the Tenth Anniversary of the German Evangelical Society, relayed from Lützen. Selections by the Choir of St. Thomas'. Prayers, Bible Reading and Addresses. Laying of Wreaths. 12 noon—Weather for Farmers. 12.5 p.m.—Choral

- Concert of German Folk Songs, followed by Weather for Farmers. 12.55—Nauen Time Signal. 1.30—News Bulletin.
- 2.0—Gramophone Concert of Light Music, relayed from Berlin (Witzleben). 2.50—Programme for Children. 3.30—Weather and Exchange Quotations. 3.45—Talk for Women. 4.0—Talk: The Discovery of Beauties in Nature. 4.30—Concert from Hamburg. 5.30—Health Talk. 5.50—Talk: The Glatz Mountain District as a Health Resort. 6.5—Talk: Modern Music Instruction and Karl Friedrich Zelter. 6.30—Educational Talk. 6.55—Weather for Farmers. 7.0—English Lesson. 7.30—"The Quiet Hour," followed by Weather for Farmers. 8.0—See Vienna. 10.0—See Berlin (Witzleben). 12.30 a.m. (Sunday)—Close Down.

- BERLIN (Germany)**
Witzleben. 715 kc/s (419.5 m.); 1.5 kW.
Transmits at intervals from 6.0 a.m. (Gymnastics and Concert from Heilsberg).
- 4.5 p.m.—Orchestral Concert, conducted by Eugen Sonntag. Overture, Amid Nature (Dvorak). Ballet Music from "Rosamunde" (Schubert). Night in Madrid (Glinka). Selections from "Pierrette's Veil" (Dohnanyi). (Humperdinck). Russian, German and Hungarian from "Aus aller Herren Länder" (Moszkovsky). Waltz, Die Werber (Lanner). Selection from "Der Zigeunerprimas" (Kálmán). In the interval, Film Notes.
- 6.0—The Narrative of the Week. 6.30—Talk: Plastic Art. 6.50—Labour Market Report. 6.55—The Witzleben Station informs its Listeners. 7.0—Topical Talk. 7.10—Pianoforte Recital by Simon Barer. Symphonic Etudes (Schumann). Selections (Liszt): (a) Liebestraum, (b) Valse oubliée, (c) Etude. 7.40—Gardening Talk. 8.0—See Vienna.
- 10.0—Relay of the Annual Banquet of the Foreign Press Association from the Hotel Adlon. Speeches by Mgr. Cesare Orsenigo (Papal Nuncio) and Dr. Brüning. After the Programme: Weather, News and Dance Music from the Eden Hotel. 12.30 a.m. (Sunday)—Close Down.

BORDEAUX-LAFAYETTE

- (France)
(PTT) 986 kc/s (304 m.); 13 kW
Transmits at intervals from 12.45 p.m. to 6.30 p.m.—Radio Journal. 8.0—News, Exchange Quotations and Lottery Results. 8.5—Sports Notes. 8.10—Advanced English Lesson. 8.25—News Bulletin and Weather Forecast. 8.30—Classical Music on Gramophone Records. Selection from "El Amor Brujo" (Fallá). Selection from "La Vida Breve" (Fallá). Selection (Chopin). La Fille aux cheveux de lin (Debussy). Waltz Op. 39 (Brahms). Selection from "Prince Igor" (Borodine). 9.0—"Our Youth"—Comedy in Four Acts (Capus).

BRATISLAVA

- (Czechoslovakia)
1,076 kc/s (279 m.); 14 kW.
Transmits at intervals from 11.0 a.m. to 7.0 p.m.—See Prague. 7.20—See Brno. 8.0—See Prague. 9.0—Concert of Popular Music, conducted by F. Dyk. March, Per Aspera ad Astra (Urbach). Waltz, (Fucik). Polka (Ganglberger). Gavotte (Brumm). In a Monastery Garden (Ketelbey). Birds (Filipovsky). Gallop (Translatour). Selection (Hönig). The Lilliputians (Walling). Waltz (Nedbal). Selection (Fucik). The Soldier Svej (Vackar). 10.0—See Prague. 10.20—Programme and Miscellaneous Announcements. 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 6.0 a.m. to 5.55 p.m.—A Musical Journey down the Dnieper (Dr. Leo Matthias). 6.25—Weather for Farmers. 6.27 (approx.)—Orchestral Concert, conducted by Franz Marszalek. Pasodoble, Espana Torera (Palace). Potpourri, Zum Tanz, marsch—marsch! (Kernbach). Tango, Man kann sich Herz nur einmal verschenken (Buder). Paraphrase on Baumgartner's "Noch sind die Tage der Rosen" (Mannfred). Waltz, In Hamburg an der Elbe (Krome). Laila-Marsch (John).

SATURDAY continued

7.0-That will interest you! - a Surprise Programme. 7.20-Concert (continued). Intermezzo, Wer will unter die Soldaten? (Noack). Langsam fließt der Marosfluss (Kaldy). Serenade (Czernik). Waltz, Wiener Weisen (Joh. Strauss Jr.). Cello Solo by Curt Becker: Krotschak-Romanze (Recktenwald). Foxtrot, Nola (Arndt). Spanish Gypsy Dance (Marquina). 7.55-Weather Report. 8.0-Concert from Vienna. 10.0-Time and News. 10.30-Dance Music from Berlin (Witzleben). 12 midnight (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. 7.20-Concert by a Brass Band. March (Labsky). Zigarettent Walzer (Johann Strauss). Selection from "The Little Duke" (Lecocq). Selection from "Eva" (Lehar). Selection from "Prague's amuse" (Kovarik). March (Labsky). 8.0-Orchestral Concert of Dance Music of all Nations, conducted by Janota. Swedish Dance (Aulin). German Dances (Max Reger). Polish Dance (Novorcijsky). Rumanian Dances (Bela-Bartok). Hungarian Dance No. 5 (Brahms). Slavonic Dance No. 8 (Dvorak). Two Alsatian Dances (Merkling). Spanish Dance, No. 8, Op. 27 (Sarasate). Waltz, Moonlight on the Alster (Fétras). Czech Polka from "Schwanda the Piper" (Weinberger). 10.0-See Prague. 10.20-News Bulletin. 10.25-See Moravshi-Ostrava.

BRUSSELS (Belgium) (No. 1) I.N.R. 590 kc/s (509 m.); 15 kW. 12 noon-Gramophone Records of Opera and Light Music. In the interval at 12.30-Weather Report. 5.0-Orchestral Concert, conducted by Franz André. 6.0-Gramophone Records. Prélude à l'après midi d'un Faune (Debussy). Rédemption (César Franck). 6.15-Talk: The Film Operetta and its Technique. 6.30-Gramophone Records. Suite from "L'Arlésienne" (Bizet). Overture, "Tannhäuser" (Wagner). 7.15-Talk on Psychology. 7.30-Literary Review. 8.0-Orchestral Concert, conducted by Franz André. Soloists: M. Féron (Violin) and M. Gazon (Saxophone). Motor March (Rosely). Waltz, La Houssarde (Ganne). Potpourri (Urbach). Selections (Eddie Tower): (a) Hot Fiddle for Violin, (b) Caprice of Deltour for Saxophone. Chopineta (Doucet). The Will of the Winds (Campbell-Connelly). Old French Songs (Gymnastics). 8.45-Talk on Economics. 9.0-Concert (continued). March, Le Père La Victoire (Ganne). Suite, Jeux d'enfants (Bizet). 9.15-Recitations with Musical Setting by Ernest Montellier. 9.30-Concert (continued). Violin Solo: Méditation from "Thais" (Massenet). Gavotte for Cello (Popper). Rhythmic Paraphrase on Verdi's "La Traviata" (Gauwin). Russian Dance, Livonia (Barch). Mascarde (Lacôme). Quand l'amour meurt (Crémieux). Intermezzo, Echos d'Irlande (Lange). 10.0-Le Journal Parlé. 10.10-Dance Music on Gramophone Records. 11.0 (approx.)-Close Down.

BRUSSELS (Belgium) (No. 2) N.I.R. 887 kc/s (338.2 m.); 15 kW. Programme in Flemish. 12 noon-Concert by the Max Alexys Orchestra. In the interval at 12.30-Weather Forecast. 5.0 p.m.-Concert of Old Music, relayed from Antwerp. After the Concert, Talk: New Commercial Ideas. 6.30-Concert of Popular Music on Gramophone Records. Overture, "Der Freischütz" (Weber). The Two Grenadiers (Schumann). Millöcker Potpourri (Morena). The Clock and the Dresden Figures (Ketelbey). Le Petit Ange Blanc (Ibert). Czardas (MacDowell). Selections from Operettas (arr. Mizraki). American Fantasia, Down South (Middleton). Selection from "Le Grand Mogol" (Audran). 7.15-Talk. 7.30-Le Journal Parlé. 8.0-"Pinksternacht"-Opera (Oscar Roels). The Station Orchestra, conducted by Meulemans, and Soloists. In the first interval: Reading. In the Second interval: Journal Parlé. After the Concert, Light Music on Gramophone

Records. 11.0 (approx.)-Close Down. BUCHAREST (Romania) Radio-Bucarest. 761 kc/s (394 m.); 12 kW. Transmits at intervals from 11.0 a.m. 4.0 p.m.-Concert of Light Music and Romanian Music by the Sibiceano Orchestra. In the interval at 5.0-News Bulletin and Time Signal. 6.0-Educational Talks. 6.40-Light Music on Gramophone Records. 7.0-Dramatic Programme. 7.30-Concert of Viennese Music by the Kreuzer Schrammel Quartet. 8.0-Concert of Romanian Music, by the Luca Orchestra. 8.45-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 7.45 p.m. till Close Down. 9.15 a.m.-Concert by the Band of the Royal Hungarian Infantry Regiment, conducted by Richard Fricsay. 11.0-Tides Report. 12 noon-Chimes. 12.5 p.m.-Concert. Irene Weichherz (Violin) and Margarete Falvy (Songs). Violin Solos: (a) Elegy (Rachmaninov-Hubay), (b) Waltz (Brahms). Songs: (a) Selection from an Operetta (Jacobi), (b) Song from "Frasquita" (Lehar). Violin Solos: A Spanish Dance (Granados-Kreisler), (b) Styrian Dance (Königs). Two Tango Songs (Stolz). Violin Solo: Valse caprice (Zsolt). Der wogende Plattensee (Hubay). Hungarian Songs (Kurucz). 4.0-Programme for Children. 5.0-Concert by the Simi Kurina Cigany Orchestra. 6.0-Reading. 6.20-Choral Concert, conducted by Géza Paulovics. 7.0-Answers to Correspondence. 7.45-Concert of Light Music by the Mandits Orchestra. Selection from "Where the Lark sings" (Lehar). Romance (Lüling). Elegy (Tchaikovsky). Song, Alles vergeht (Saphir). Dorfszene (Ippolitov-Ivanov). Tango, Mimosa (Hartstein-Harmath). 9.0-The Growth of Operetta-X. Concert by the Royal Hungarian Opera House Orchestra, conducted by Bela Nagyfalvi. Soloists: Gisella Goda and Ladislás Szucs. Introductory Talk by Imre Farkas. After the Concert-Programme by the Joska Radics Cigany Orchestra, from the Hotel Jägerhorn. 11.30-Dance Music on Gramophone Records. 12.30 a.m. (Sunday)-Close Down.

COPENHAGEN (Denmark) 1,067 kc/s (281 m.); 0.75 kW. Relayd by Kalundborg, 260 kc/s (1,153 m.). Transmits at intervals from 7.30 a.m. (Gymnastics). 12 noon-Time and Chimes from the Town Hall. 12.2 p.m.-String Ensemble Concert from the Wivex Restaurant. 2.0-2.30-Interval. 2.30-Gramophone Concert. Hedwig von Debicka: Aria from "The Tales of Hoffmann" (Offenbach). Giovanni Martinelli: Aria from "I Pagliacci" (Leoncavallo). Lotte Lehmann: The Musician (Hildach). Mario Anderson: Heav'n, heav'n! The Russian Chauve Souris Ensemble: Selection. Frank Munn and the Boswell Sisters: I surrender dear (Clifford-Barris). Alexander Flessburg: Waltz Potpourri, Schlagsahne (Kernbach-Flessburg). 3.0-Programme for Children. 3.30-Orchestral Concert, conducted by Emil Reesen. Soloist: Rigmor Post (Vocalist). Overture, "Nebuchadnezzar" (Verdi). Waltz, Children of Spring (Waldeufel). Selection from "The Pearl Fishers" (Bizet). La fille aux cheveux de lin (Debussy). Elégie (Massenet). Helmsman's Song and Sailors' Chorus from "The Flying Dutchman" (Wagner). Songs: (a) Two Songs from "Lykkes Herberg" (Brandt), (b) Two Songs from "Congress Dances" (Heyman), (c) Song from "The Last Waltz" (Stolz). Overture, "Joan of Arc" (Verdi). Babillage (Bossi). Selection from "Scaramouche" (Sibelius). Viennese Dance (Friedmann-Gärtner). Selection from "Les Cloches de Corneville" (Planquette). A Norwegian Bridal Procession (Grieg). 5.40-Exchange and Fish Market Prices. 5.50 (from the Aabenraa Studio)-Talk: Wall Paintings in Old Danish Churches. 6.20-French Lesson. 6.50-Weather Forecast 7.0-News Bulletin. 7.15-Time Signal. 7.30-Talk: English Music of the Seventeenth Century and its Culmination in Henry Purcell. 8.0-Chimes from the Town Hall.

DUBLIN (Ireland) (2RN) 725 kc/s (413 m.); 1.2 kW. Relayd by Cork, 1,337 kc/s (224.4 m.). 1.30-2.0 p.m.-Time Signal. Weather Forecast, Stock Report and Light Music on Gramophone Records. 7.20-News Bulletin. 7.30-Time Signal. 7.31-Recitations by Frances Moynagh. 7.45-Gaedhlig. 8.0-Jonny (Abraham). Selection from "The Flower of Hawaii" (Abraham). Ballade vom grausamen Grossmogul (Wilczynski-Goehr). Eine schaurige Geschichte (Wilczynski-Goehr). Selection from "Hansel and Gretel" (Humperdinck). Eine schöne Frau (Roland). Geh nicht an mir vorbei (Roland). Ein Paradies am Meeresstrand (Abraham). Will dir die Welt zu Füssen legen (Abraham). Just Once for all Time from "Congress Dances" (Heymann). Erst kam ein Walzer (Salter). Overture, "Pique Dame" (Suppé). Selection from "Maritana" (Wallace). March, Treu und Tapfer (Rust). 2.30-3.35-Interval. 3.35 (from Danzig)-Handwork for Children. 4.5-Concert relayed from Berlin (Witzleben). In the interval from Danzig-Talk on Films. 6.0-Programme Announcements. 6.10-Programme Announcements in Esperanto. 6.15-Agricultural Market Prices. 6.20-World Market Prices. 6.30-Talk (to be announced). 7.0-Reading of Hungarian Poetry. 7.30-Monthly Review. 7.55-Weather Report. 8.0-Programme from Vienna, followed by Weather, News, Sports Notes and Dance Music from Berlin (Witzleben).

FÉCAMP (France) Radio Normande. 1,364 kc/s (219.9 m.); 10 kW. 12 noon-Light Music on Gramophone Records. 12.30-Press News. 12.45-Concert of Popular Music. 7.30-Journal Parlé. 8.0-Sponsored Programme. 8.45-Sponsored Concert. 9.0-Press News. 9.15-Concert of Popular Music. Selection from "Faust" (Gounod). Looking at the World through Rose-coloured Glasses (de Sylva). Selection from "La Traviata" (Verdi). Tes Yeux (Bonicontró). Selection from "La Vie parisienne" (Offenbach). Selection from "The Love Parade" (Scherzinger). Chanson triste (Duparc). 10.30-Picture Transmission. 11.0-Concert of Dance and Variety Music. 3.0 a.m. (Sunday)-Close Down.

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

FRANKFURT-am-MAIN (Germany) 770 kc/s (390 m.); 1.5 kW. Relayd by Cassel, 1,220 kc/s (246 m.). Transmits at intervals from 6.0 a.m. 11.0 a.m.-See Berlin (Königs Wusterhausen). 11.40 (from Lützen)-Divine Service. 12.35 p.m.-Time, Economic Notes, Weather and Programme Announcements. 12.45-News Bulletin. 1.0-Orchestral Concert, conducted by Walter Caspar. Part I. Potpourri, Was wir lieben (Ganglberger). Selection from "Ten Maids and No Man" (Suppé). Selection from "Der unsterbliche Lump" (Eysler). March Potpourri, Hurrah! Die Musik kommt (Zimmer). Part II. Dance Music. 2.0-News Bulletin. 2.10-Sponsored Gramophone Concert. 3.0-Weather Report. 3.10-Time and Economic Notes. 3.30-See Stuttgart. 4.55-Economic Notes. 5.0-See Stuttgart. 6.15-Economic Notes. 6.25-Talk for Workers: Intellectual Work during Leisure Hours. 6.50-Talk: The German Timber Industry. 7.15-Time, Programme Announcements, Weather and Economic Notes. 7.30-Reading of Lyrics by Armin Schoenberg. 7.45-Humorous Recollections, by Victor Auburtin.

8.2-Illustrations to the Talk on English Music, by the Station Orchestra, conducted by Launy Gröndahl, Johanne Karstens (Vocalist) and Folmer Jensen (Cembalo). Cembalo Music from Queen Elizabeth's Time: (a) Goe from my window (John Munday), (b) Galharda (William Byrd), (c) The King's Hunt (John Bull). Selections from "Dido and Aeneas" (Purcell): (a) Overture, (b) Song, Ah, Belinda I am pressed with torment, (c) Dance of the Furies, (d) Sailor's Dance, (e) Witches' Dance. (f) Dido's Recitative and Aria, When I am laid in Earth. Introductory Music and Trumpet Overture "The Indian Queen." 8.40-Reading. 9.0-Scouts' Celebrations relayed from "Ulvedaleen." 9.45-News Bulletin. 10.0-Orchestral Concert, conducted by Launy Gröndahl. Spanish Comedy Overture (Kóler-Béla). Salut d'amour (Elgar). Entr'acte Gavotte from "Mignon" (Thomas). Selection from "Orpheus in the Underworld" (Offenbach-Binder). Chanson de Pierrot (Drigo). African Dance (Ganne). To Spring (Grieg). Allegro and Tarantella from the "Gipsy Suite" (German). 10.45-Dance Music from the Lodbeg Restaurant. In the interval at 12 midnight-Time and Chimes from the Town Hall. 12.15 a.m. (Sunday)-Close Down.

HAMBURG (Germany) Norag (ha, in Morse). 806 kc/s (372 m.); 1.5 kW. Relayd by Bremen, 1,112 kc/s (270 m.); Flensburg, 1,373 kc/s (218 m.); Hanover, 530 kc/s (566 m.) and Kiel, 1,292 kc/s (232.2 m.). Transmits at intervals from 5.45 a.m. 4.30 p.m. (from Hanover)-Orchestral Concert, conducted by Ernst August Bürger, relayed from Bad Neundorf. Overture, Die Feen (Wagner). Selection from "Othello" (Verdi). Waltz from "Die keusche Barbara" (Nedbal). Overture, "Fesche Geister" (Zieher). Selection from "The Blue Mazurka" (Lehar). Selection from "The Flower of Hawaii" (Abraham). March from "Boccaccio" (Suppé). 6.5-Legal Talk. 6.30-Talk: The Catastrophe of the India-Rubber Industry. 6.55-Frankfurt Exchange and Hamburg Market Prices. 7.0-Topical Talk. 7.15-Weather Report. 7.20-Verse and Prose by Warblinded Soldiers-Readings (Hans Schmalfluss, Paul Cassun and Christian Bader), by Paul Cassun and Erna Mühlau. 8.0-Programme from Vienna. 10.0-Time, Weather and News. 10.20-Dance Music from the "Haus Sieglar."

HEILSBERG (Germany) 1,085 kc/s (276.5 m.); 60 kW. Relayd by Danzig, 662 kc/s (453.2 m.). Transmits at intervals from 6.0 a.m. 11.0 a.m.-See Berlin (Königs Wusterhausen). 11.40-Afternoon Concert, conducted by Ernst Eckhard. 1.5 p.m.-Gramophone Concert. Potpourri, Für alle (Dostal). Popular Song Potpourri (Lincke). Selection from "The Tales of Hoffmann" (Offenbach). Bin nur ein Jonny (Abraham). Selection from "The Flower of Hawaii" (Abraham). Ballade vom grausamen Grossmogul (Wilczynski-Goehr). Eine schaurige Geschichte (Wilczynski-Goehr). Selection from "Hansel and Gretel" (Humperdinck). Eine schöne Frau (Roland). Geh nicht an mir vorbei (Roland). Ein Paradies am Meeresstrand (Abraham). Will dir die Welt zu Füssen legen (Abraham). Just Once for all Time from "Congress Dances" (Heymann). Erst kam ein Walzer (Salter). Overture, "Pique Dame" (Suppé). Selection from "Maritana" (Wallace). March, Treu und Tapfer (Rust). 2.30-3.35-Interval. 3.35 (from Danzig)-Handwork for Children. 4.5-Concert relayed from Berlin (Witzleben). In the interval from Danzig-Talk on Films. 6.0-Programme Announcements. 6.10-Programme Announcements in Esperanto. 6.15-Agricultural Market Prices. 6.20-World Market Prices. 6.30-Talk (to be announced). 7.0-Reading of Hungarian Poetry. 7.30-Monthly Review. 7.55-Weather Report. 8.0-Programme from Vienna, followed by Weather, News, Sports Notes and Dance Music from Berlin (Witzleben).

HILVERSUM (Holland) 1,013 kc/s (296.1 m.); 20 kW. (7 kW. up till 4.40 p.m.). 6.25-9.40 a.m.-Programme of the Workers' Radio Society (V.A.R.A.). 6.25-6.40 and 7.10-7.25-Physical Culture Course. 7.40-Light Music on Gramophone Records. 8.40-Concert by a Schrammel Quintet and Gramophone Records. 9.40-Religious Programme by the Liberal Protestant Radio Society (V.P.R.O.). 9.55 till Close Down-Programme of the V.A.R.A. 9.55-Concert by a Schrammel Quintet. Soloists: Mia Dorel (Songs), Joh. Jong (Piano-forte). Selections by the V.A.R.A. Dramatic Group. 11.40-Concert by the V.A.R.A. Septet with Gramophone Records in the intervals. March, The Thunderer (Souza). Waltz, Am schönen Rhein gedenk' ich dein (Keler-Béla). Onestep, Pimpinella (Benatzky). Gramophone Records. Selection from "The Pearl Fishers" (Bizet). Waltz, Du, Du (Stolz). Wenn die kleinen Veilchen blüh'n (Stolz). Potpourri of the Music of Haydn-Wood (Heggs). Turkish March (Mozart). Gramophone Records. Tango (Heymann). Spring Song (Mendelssohn). Sefira (Siede). Was Blumen träumen (Translateur). Potpourri, In the Seventh Heaven (Fétras). Foxtrot, Tom Thumb's Drum (Sarony). 1.25-Interval. 1.55-Cello Duets by Frieda Belinfante and Amalia Verschuyl. Sonata

8.15-Concert of Light Music by the Radio Orchestra. 10.20-Time, Weather, News and Sports Notes. 10.45-Concert from Langenberg. 12 midnight (approx.)-Close Down.

HUIZEN (Holland) 160 kc/s (1,875 m.); 8.5 kW. Programme of the Catholic Radio Society (K.R.O.). 7.40 a.m.-Light Music on Gramophone Records. 8.55-Interval. 9.40-Concert by the K.R.O. Trio. 11.10-Religious Talk. 11.40-Police Notes. 11.55-Concert by the K.R.O. Sextet. 1.25-1.40-Interval. 1.40-Light Music on Gramophone Records. 2.10-Programme for Children. 3.40-Swimming Lesson. 4.10-Popular Music on Gramophone Records. 4.55-Sports Notes. 5.10-Variety Music on Gramophone Records. 5.40-Press Review. 6.0-Gramophone Concert of Light Music. 6.50-Talk: Music in America. 7.10-Police Notes. 7.25-Light Music on Gramophone Records. 7.40-Concert of Light Music by the K.R.O. Orchestra, conducted by M. van 't Woud. March, Liberty Bell (Souza). Overture, Berliner Luft" (Lincke). The Little Soldiers (Marks). Fantastic Ballet (Scassola). Leuchtkeferehens Hochzeit (Siede). March (Scassola). Liebesbotschaft (Siede). Czardas, Nos. 1 and 2 (Michiels).

8.30-Saxophone Recital by Marinus van 't Woud. 8.40-Accordion Music, Press News and Recitation. 9.25-Concert of Light Music by the K.R.O. Orchestra. Overture, "Light Cavalry" (Suppé). Waltz, La Gitana (Bucalossi). Rusticanella (Cortopassi). Oriental Suite, Reminiscences of Cairo (Armandola). March, Hoch Heideburg (Herzer). Potpourri, Das Beste vom Besten (Dostal). March, Follies Bergère (Lincke). 9.55 (in the interval)-Accordion Music. 10.40-Popular Music on Gramophone Records. 11.40 (approx.)-Close Down.

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

KATOWICE (Poland) 734 kc/s (408 m.); 16 kW. Transmits at intervals from 11.58 a.m. 5.20 p.m.-Orchestral Concert. 7.25-Talk on Egypt. 8.15-Concert of Light Music. 10.10-See Warsaw. 10.45-Dance Music.

KAUNAS (Lithuania) 155 kc/s (1,935 m.); 7 kW. Transmits at intervals from 12 noon. 7.45 p.m.-Concert of Light Music. March (Pischeck). Waltz, Frühlingskinder (Waldeufel). Intermezzo (Meyer-Helmund). Greenland Suite (Frederiksen). Intermezzo (Leopold). 8.40-Talk. 9.0-Talk: Lithuanian Exports and the English Market. 9.20-Concert of Classical Music. Overture, "The Marriage of Figaro" (Mozart). Pianoforte Concerto in B (Mozart). Symphony in G, No. 6-The London (Haydn). 10.30 (approx.)-Close Down.

LAHTI (Finland) 167 kc/s (1,796 m.); 54 kW. Relayd by Helsinki, 815 kc/s (368.1 m.). Transmits at intervals from 7.10 a.m. 4.0 p.m.-Orchestral Concert. Spanish March (Metallo). Waltz, Moonlight on the Alster (Fétras). Romanian Fantasia (Dimitrescu). Three Old Dances (Wood). Selection from "The Bartered Bride" (Smetana). Waltz, Hofballtänze (Lanner). Rusticanella (Cortopassi). 5.0-Dramatic Programme. 5.25-Talk. 5.50-News Bulletin. 6.10-Symphony No. 9 (Beethoven) by the Helsinki Municipal Orchestra on the occasion of its Fiftieth Anniversary. 8.0-Talk. 8.25-Gramo-

8.15-Concert of Light Music by the Radio Orchestra. 10.20-Time, Weather, News and Sports Notes. 10.45-Concert from Langenberg. 12 midnight (approx.)-Close Down.

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SATURDAY
continued

phone Records of Light Music. In the interval at 8.45—News in Finnish and Swedish. 10.0—Military Music from the Kappeli Restaurant.

LANGENBERG (Germany)
Westdeutscher Rundfunk. 635 kc/s (423 m.); 60 kW.
Transmits at intervals from 6.45 a.m. (Exercises, Weather, Time and Gramophone Concert).

11.0 a.m.—Festival Programme on the Tenth Anniversary of the German Evangelical Church Union and also on the occasion of the Third Centenary of the Death of Gustavus Adolphus, relayed from Lützen.

11.50—Relay from Essen of the Opening of the National Exhibition of the German Confectioners' Industry. 12.50 p.m.—Weather, Announcements and Time. 1.0—Concert from Frankfurt. 2.35—Gramophone Concert of Popular Music. 3.30—Economic Notes and Time. 3.50—Programme for Children. 4.20—Talk for Women. 4.40—English Lesson.

5.0—Orchestral Concert, conducted by Wolf. Overture, "Ruy Blas" (Mendelssohn). Selections from "Die Königskinder" (Humperdinck). Waltz, O Frühling wie bist du so schön (Lincke). Suite, Im Zeichen des Rokoko (Ailbott). Two Songs (Dvorák): (a) Songs my Mother taught me, (b) Leave me alone. Potpourri, Besuch bei Millöcker (Morena).

6.15—Legal Talk. 6.40—Talk: The Motor Car Industry in the Crisis. 7.0—Weather, Time, Economic Report and Sports Notes. 7.15—Wireless Notes. 7.30—Talk. 7.55—News Bulletin. 8.0—Variety Programme. 10.5—News and Sports Notes. 10.25—Concert conducted by Wolf. 12 midnight—Dance Music. 1.0 a.m. (Sunday)—Close Down.

LEIPZIG (Germany)
1,157 kc/s (259 m.); 2 kW. Relay by Dresden, 941 kc/s (319 m.).

Transmits at intervals from 6.0 a.m. 5.0 p.m.—Concert by the Leipzig Symphony Orchestra, conducted by Hilmar Weber. Overture, "Ilka" (Doppler). Selections from "L'Amico Fritz" (Mascagni). Dance Suite from "Ein Märchen in der Champagne" (Brüfl). Humoresque (Humperdinck). Nor-

wegian Rhapsody No. 3 (Svendsen). Waltz, Prima Ballerina (Translatour). Selections from "The Czardas Princess" (Kálmán).

6.30—Talk. 6.50—A Modern Dictionary. 7.0—Talk. 7.30—Humorous Ghost Stories—Harry Langewisch and Gert Randolf, read from the Works of Heine, Seidel, Dickens, Mark Twain and Boudet. 8.0—Variety Programme from Vienna. 10.5—News Bulletin, followed by Dance Music from Vienna. 12 midnight—Close Down.

LJUBLJANA (Yugoslavia)
522 kc/s (574.7 m.); 2.5 kW.
Transmits at intervals from 12.15 p.m. 5.30 p.m.—Quintet Concert. 6.30—Gymnastics. 7.0—English Lesson. 7.30—Travel Talk. 8.0—Humorous Programme. 9.0—Quintet Concert of Chamber Music. 10.0—Time Signal and News Bulletin. 10.15—Concert of Light Music.

ŁWÓW (Poland)
788 kc/s (381 m.); 16 kW.
Transmits at intervals from 11.45 a.m. 7.0 p.m.—Miscellaneous Items. 7.25—Geographical Talk. 7.40—Friendship. 10.50—Talk: 10.50—See Warsaw. 10.50—Talk: Friendship. 11.5—Concert by the "Hejnal" Mandoline Orchestra, conducted by Adam Epler. 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. 5.30 p.m.—French Opéra-Comique Concert. Selections from the Music of Audran, Varney, Lecocq, Ganne and Pierné. 7.0—Light Music on Gramophone Records. 7.30—Radio Gazette for Lyons and the South-East. 8.30—Concert. Leader: Raoul Barthalay (Violin).

MADRID (Spain)
Madrid Radio (E.A.J.T.) 707 kc/s (424.3 m.); 2 kW.
Transmits at intervals from 9.0 a.m. 8.0 p.m.—Chimes, Market Prices. Talk: The Law regarding Wireless Listeners and Request Gramophone Records. 9.15—9.30—News Bulletin. 10.0—French Lesson on Gramophone Records. 10.30—Chimes and Time. 10.45—Musical Comedy Selections: (a) "La Alegria del Batallon"

(Chueca), (b) El duo de la Africana (Caballero). 12.45 a.m. (Sunday)—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 10.0 a.m. 7.0 p.m.—See Prague. 7.20—See Brno. 8.0—See Prague. 9.0—See Bratislava. 10.0—See Prague. 10.20—Programme Announcements. 10.25—Musical Comedy in One Act.

MOSCOW (Russia)
Trades Union. 230.1 kc/s (1,304 m.); 100 kW.
Transmits at intervals from 5.0 a.m. 6.30 p.m.—Proletariat Radio Journal. 7.15—Programme for Young Communists. 8.0—Talk in German and their impressions of the Soviet Union. Talk in Spanish: Bolsheviki and the Imperial War. 11.0 (approx.)—Close Down.

MUNICH (Germany)
563 kc/s (533 m.); 1.5 kW. Relay by Augsburg and Kaiserlautern, 536 kc/s (560 m.) and Nürnberg, 1,256 kc/s (239 m.).
Transmits at intervals from 6.45 a.m. 5.0 p.m.—Concert by the Dietz Orchestra of Augsburg. 5.50—Programme for Girls. 6.20—Wireless News.

6.35—Concert of Light Music by the Station Orchestra, conducted by Karl List. Overture, "The Bohemian Girl" (Balfe). Waltz, Mon rêve (Waldfreud). Variations on a German Folk Song: "skönimt ein Vogel geflogen (Ochs). Serenade (Hevken). Waltz, Sonntagskinder (Millöcker). Selection from "The Maid of the Black Forest" (Jessel). Favourite Marches. 7.35—Talk: Outstanding Figures in the German Press World. 8.0 (from Hamburg)—Relay of the German

Press Demonstration, followed by Popular Music on Gramophone Records. 10.20—Time Signal, Weather Report, News Bulletin and Sports Notes. 10.45—Concert from Langenberg. 12 midnight (approx.)—Close Down.

OSLO (Norway)
Kringkastingselskapet. 277 kc/s (1,083 m.); 60 kW. Relay by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.); and Rjukan, 671 kc/s (447.1 m.).
Transmits at intervals from 11.10 a.m. 4.15 p.m.—Concert by the Station Orchestra, conducted by Hugo Kramm. Overture, "William Tell" (Rossini). Potpourri (Schmaltisch). Silver Clouds (Kettelbey). Ballad: Tom the Rhymer (Loewe). Nocturne in E Sharp (Chopin). Valse Infidèle (Mackeben). Selection from "Faust" (Gounod). Hunting March (Rode). 5.15—Programme for Children. 6.15—Recital of Popular Music. Aslak Brekko (Vocalist) and O. M. Sandvik (Hardanger Fiddle). 6.45—Talk on Economics. 7.0—Announcements, Weather and News. 7.30—National Programme of Talks, Songs and Orchestral Selections relayed from Fagernes. 9.40—Weather and News. 10.0—Topical Talk. 10.15—Choral Concert of Norwegian Music, conducted by Trygve Andersen. 10.45—Cabaret Music. 11.5—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.—Light Music on Gramophone Records. 6.0—6.30—Programme for Children. 9.0—Announcements, Giornale dell'Enit, Agricultural Notes and Giornale Radio. 8.20—Popular Music on Gramophone Records. In the intervals, at 8.25—Sports Notes and at 8.30—Time Signal and Announcements. 8.45—"The Gipsy Princess"—Opera in Three Acts (Kálmán). In the intervals, Book Review and Miscellaneous Announcements. 10.55—Hymns and Close Down.

PARIS (France)
Eiffel Tower. (FLE). 207.5 kc/s (1,445.7 m.); 13 kW.
Time Signals (on 2,650 m.) at 10.26 a.m. and 11.26 p.m. (preliminary and 6-dot signals).
Transmits at intervals from 1.0 p.m. 6.45 p.m.—Music Review. 7.0—Le Journal Parlé. 8.20—Weather Report.
8.30—"Miquette and her Mother"—Comedy in Three Acts (Robert de Flers and G. de Caillavet). In the interval, Wireless Notes.



PARIS (France)
Poste Parisien. 914 kc/s (328.2 m.); 60 kW.
7.0 p.m.—Gramophone Records, News and Announcements. 7.30—Sponsored Gramophone Concert. 8.30—Gramophone Records, Talk and News.

8.45—Vocal and Orchestral Concert. Overture, "Ramuntcho" (Pierné). Dance from "The Snow Maiden" (Rimsky-Korsakoy). Selection from "Passages Français" (Pierné). Lento and French Rondo from a Concerto for Pianoforte, Flute, Cello and Strings (d'Indy). Figures sonores (Delannoy). Selection from "Impressions d'Italie" (Charpentier). A l'Allemande (Gedalgé). Jota navarraise (Saraste). 10.45—News Bulletin. 10.50 (approx.)—Close Down.

PARIS (France)
Radio-Paris (CFR). 174 kc/s (1,725 m.); 75 kW.

6.45 a.m.—Physical Culture. 7.30—Weather and Physical Culture (continued). 7.45—Light Music on Gramophone Records. 8.0—News, Weather and Press Review. 12.30 p.m.—Gramophone Records, Nagent sur Marne (Paradis). Ecoute, O mon coeur (Lejay). Erste Begegnung (Grieg). Fantasia on a Neapolitan Air (Genin). Spring Song (Gounod). Si mes vers avaient des ailes (Hahn). The Festival of the Gnomes (Schmidt-Hajen). The Rosary (Nevin). Nuits algériennes (Grieg). Le Temps des cerises (Renard). Marche joyeuse (Chabrier). Rondel mélancolique (Rabey). Selection from "Le Grand Mogol" (Audran). Gopak (Moussorgsky). La voix des Chênes (Goublier). Chinese Serenade (Siede). New York (Padilla).

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SATURDAY continued

In the interval, News and Weather. 3.0—Programme for Children. 3.45—Market Prices. 6.30—Market Prices, Agricultural Report, Talk and Racing Results. 7.0—Talk arranged by the Union des Grandes Associations Françaises. 7.10—Scientific Talk: The Centenary of Dr. Carnot. 7.30—Book-keeping Lesson. 7.45—Latin Press Review, Commercial Prices and News. 8.0—Literary Programme: The Mothers of Goethe and Napoleon (Méry). 8.30—News, Sports Notes and Weather. 8.40—Review by Jean Rioux. 8.45—“Beaumarchais”—Operetta on Music by Rossini, with the Collaboration of André Bauge, relayed from the Théâtre de la Porte St. Martin. In the interval, Press Review and News.

PITTSBURGH (U.S.A.)
Westinghouse Electric (KDKA). 980 kc/s (306 m.); 25 kW. Transmits at intervals from 12.30 p.m. 9.0 p.m.—Teaberry Baseball Scores. 9.5—Pebeco Weather Report. 9.7—Rhythmic Serenade, from New York. 9.30—Tales of the Pennsylvania State Police: Behind the Law. 9.45—KDKA Kiddies' Klub. 10.0—Teaberry Baseball Scores. 10.5—David Lawrence Dispatch. 10.10—KDKA Artist Bulletin. 10.12—Programme Announcements. 10.15—Roseylights—A. K. Rowswell. 10.30—Stories for Children. 10.45—Little Orphan Annie, from New York. 10.50—Temperature Report. 10.51—Weather Report. 11.0—Time Signal. 11.1—Temperature Report. 11.2—Who's News To-day. 11.7—Teaberry Sport Review. 11.12—Press News-Reeler. 11.15—Programme to be announced. 11.30—Hal Kemp and his Orchestra, from New York. 12 midnight—Pepesident Amos 'n' Andy, from New York. 12.15 a.m. (Sunday)—Tastycast Jesters, from New York. 12.30—Sacred Songs. 1.0—Dancer Fighters, from New York. 1.30—Dance with Countess d'Orsay, from New York. 2.0—Porto Rican—American Tobacco Programme, from New York. 2.30—The First Nighter, from New York. 3.0—Honey and Old-Fashioned. 3.30—Twenty Fingers of Sweetness, from New York. 3.45—McCravy Brothers from New York. 4.0—Time Signal. 4.1—Teaberry Sport Review. 4.11—Temperature Report. 4.12—Weather Report. 4.15—Press Last Minute News. 4.20—Messages to Explorers and Missionaries.

POZNAŃ (Poland)
896 kc/s (335 m.); 1.9 kW. Transmits at intervals from 11.45 a.m. 7.0 p.m.—Miscellaneous Items and Announcements. 7.15—Light Music on Gramophone Records. 7.30—Talk on French Foreign Politics. 7.45—10.45—See Warsaw. 10.45—Sports Notes and Police Report. 11.0—Dance Music, relayed from the Polonia Café. 12 midnight (approx.)—Close Down.

PRAGUE (Czechoslovakia)
614 kc/s (488.6 m.); 120 kW. Transmits at intervals from 6.30 a.m. 4.0 p.m.—Talk on Medicine. 4.10—Orchestral Concert, conducted by Bakala, relayed from Brno. 5.10—German Transmission: Talk. 5.25—Reading. 5.35—Programme for Children. 6.5—Agricultural Report. 6.15—Programme for Workers. 6.25—German Transmission: Topical Talk. 7.0—Announcements. 7.5—Talk: Darwin and the Darwinian Theory. 7.20—See Brno. 8.0—Variety Programme. 8.30—Concert by a Bugle Quartet. 8.55—Time and News Bulletin. 9.0—See Bratislava. 10.0—News and Miscellaneous Items. 10.25—See Moravská-Ostrava.

RABAT (Morocco)
721.1 kc/s (416 m.); 6 kW. Transmits at intervals from 1.30 p.m. 5.0 p.m.—Gramophone Concert of Light Music. 6.0—8.0—No transmission. 8.0—Arab Programme: Talk, Journal Parlé and Gramophone Records of Variety Music. 8.45—Weather and News Bulletin. 9.0—Gramophone Concert. Selection from “Giroffé-Giroffa” (Leocantavani). Song relayed from “Les Mousquetaires au Couvent” (Varney). Selection from “The Count of Luxembourg” (Lehar). Song, Mais qu'est ce que j'ai (Christine). Selection from “Les Mousquetaires au Couvent” (Varney). Song (Lehar). Selection from “The Geisha” (Jones). 10.0 (approx.)—Close Down.

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)
743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.).

12.30 p.m.—Time Signal from Neuchâtel Observatory. 12.31—Weather Forecast and News Bulletin. 12.40 (from Lausanne)—Popular Music on Gramophone Records. 1.0—Exchange Quotations. 1.5—Gramophone Concert (contd.). 2.0—5.0—Interval. 5.0—Time Signal from Neuchâtel Observatory. 5.1—Concert by a String Orchestra, conducted by Robert Echenard. 6.30 (from Lausanne)—Dance Music on Gramophone Records. 7.10 (from Geneva)—Talk: The Work of the Disarmament Conference. 7.30 (from Lausanne)—Talk: The Week in International Politics. 7.55—Announcements. 8.0 (from Geneva)—Topical Talk: Week End Propositions. 8.15 (from Lausanne)—Humorous Monologues. 8.30 (from Vevey)—Concert by the Vevey-Montreux Mixed Choir and the Station Orchestra, relayed from the Casino du Rivage. Passacaille from “Armide” (Lully). Spartans' Chorus, and Menuet chanté from “Castor and Pollux” (Rameau). Sailors' Chorus from “Pêtes d'Hébé” (Rameau). Selection from “Indes galantes” (Rameau). Act from “Orphéus” (Gluck). 10.0—Weather Forecast and News Bulletin. 10.10 (from Montreux)—Dance Music relayed from “Le Perroquet” Dance Hall. 11.30 (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 IRO, 6,976 kc/s (43 m.). 8.15—8.30 a.m.—Giornale Radio and Announcements. 12 noon—Gramophone Records of Light Music. 12.35 p.m.—Weather Forecast. 12.45—Sextet Concerti with Anna Steli (Soprano) and Paolo Leonori (Cello). Wienerbrus (Strauss). Muchachas hermosas (Pennati-Malvezzi). Songs: (a) Le luciole (Broggi), (b) Al mulino (Borghen), (c) Simba, bimbetta (Sibella), (d) Scherzo (Respighi). Selection from “Samson and Delilah” (Saint-Saëns). Turkish March from “The Ruins of Athens” (Beethoven). Cello Solos: (a) Orientale (Cui), (b) Allegretto spiritoso (Senaillé). Spagnolina (Padilla). In the interval 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 Song Recital, by Virginia Brunetti. Aria from “Il trionfo di Clelia” (Gluck). Quando cammini, rispetto (Pieraccini). Forsc quello che faccio è male assai, from “La via della finestra” (Zandonai). 5.45—Concert of Light Music. 6.15—Giornale dell'Enit. 6.25—Talk on Orvieto. 6.55 (Naples)—Shipping News, Sports Notes, Morse Lesson, Agricultural Report, Weather, Giornale Radio and Press Review. 8.0—Time, Announcements and Gramophone Records. 8.30—Sports Notes and Announcements. 8.45—“Il barbiere di Siviglia” (The Barber of Seville)—Opera in Three Acts (Paisiello). In the interval, Book Review. After the Programme, News.

SCHENECTADY (U.S.A.)
General Electric Company (WGY). 790 kc/s (379.5 m.); 50 kW. Relayd at intervals by W2XAF on 953.0 kc/s (314.8 m.) and by W2XAD on 15,340 kc/s (19.56 m.). Transmits at intervals from 11.45 a.m. 9.15 p.m.—Waldorf Astoria Orchestra, from New York. 9.45—Studio Ensemble. 10.15—11.0—New York Relay. 10.15—Skippy. 10.30—Soloist. 10.45—Landy Trio. 11.0—Joe and Eddie. 11.15—Waldorf Orchestra. 11.30—American Trio. 11.45—DeWitt Clinton Orchestra. 11.55—Baseball Scores. 12 midnight (WGY only)—DeWitt Clinton Orchestra. 12 midnight (W2XAF only)—Stock Reports and News Items. 12.14 a.m. (Sunday)—Weather Report. 12.15—1.15—New York Relay. 12.15—Laws that Safeguard Society. 12.30—June Purcell in Popular Ballads. 12.45—Trials of the Goldbergs. 1.0—Bridge Lesson. 1.15—Bernard Silberg (Cello). 1.30—National Advisory Council in Radio on Education. 2.0—Drama “K—7” from New York. 2.30—Club Valspar from New York. 3.0—Lucky Strike Dance Hour from New York. 4.0—DeWitt Clinton Orchestra. 4.30—Hotel New Yorker Orchestra from New York. 5.0—Ralph Kirbery (Dream Singer) from New York. 5.5—Buddy Rogers and his Californian Cavaliers from New York. 5.30—New Kenmore Orchestra. 6.0 (approx.)—Close Down.

SCHWEIZERISCHER LANDESSENDER (BEROMÜNSTER) (Switzerland)

653 kc/s (459 m.); 60 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.). 12.28 p.m.—Time Signal from Neuchâtel Observatory. 12.30—Weather and News. 12.40—Variety Music on Gramophone Records. In the interval at 1.15 (approx.)—Surprise Programme. 1.50—Weather and Exchange. 2.0—3.30—Interval. 3.30—Chamber Music on Gramophone Records. 4.0—Gramophone Records of Modern Operatic Music. 4.30 (from Berne)—Talk for Workers. 5.0 (from Berne)—Concert by the Berne Accordion Society. 5.30 (from Berne)—Dialogue: Are Collapsible Boats Dangerous? 5.50—Roving Songs on Gramophone Records. 6.15 (from Berne)—Wireless Notes. 6.30 (from Zürich)—Talk: The Development of Modern Workers' Literature from the Social Literature of the Nineties. 7.0 (from Zürich)—Chimes. 7.0—Time, Weather and Agricultural Market Prices. 7.30 (from Zürich)—Musical Programme. 8.0 (from Berne)—“Lilac Time”—Operetta (Schubert-Berté). The Berne Municipal Orchestra and Artists of the Berne Municipal Theatre and the Biel-Solothurn Theatre. In the interval at 9.35 (approx.)—Weather and News. 10.25 (approx.)—Gramophone Dance Music. 11.0—

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. (Gymnastics). 4.0—Concert of Light Music by the Station Orchestra. Overture (Kark). Waltz from “Der Rosenkavalier” (Richard Strauss). Extase d'Amour (Ottoson). Dance (Smetana). Tanzo (Hajos). Two Pieces (Kreisler). Torna a Sorriento (de Curtis). Potpourri of Kálmán Music, Fortissimo (Fejgál). 5.0—Programme for Children. 5.30—Popular Music on Gramophone Records. 6.30—Cabaret Programme. 7.15—Weather Forecast and News Bulletin. 7.30—“Aida”—Opera (Verdi), relayed from the Royal Opera House. In the intervals at 9.20—Weather Forecast, and at 10.0—News Bulletin. 11.0—Modern Dance Music. 12 midnight (approx.)—Close Down.

STRASBOURG (France)
Radio-Strasbourg (P.T.T.). 869 kc/s (345 m.); 11.5 kW. Transmits at intervals from 11.30 a.m. 11.30 a.m.—Gramophone Concert of Light Music. 12.45 p.m.—News in French and German. 1.0—Time Signal. 1.2—Gramophone Concert of Classical and Light Music. 2.0—Talk in French. 2.15—Gramophone Records of Dance Music. 3.15—3.45—Interval. 3.45—Music Talk in French with Illustrations: J. S. Bach. 4.0—Gramophone Records of Dance Music. 4.45—Talk in German: “The Cinema and Social Life.” 5.0—Dance Music. 6.0—French Lesson given in German. 6.15—Talk in German on Horticulture. 6.30—Orchestral Concert. Overture, “The Thieving Magpie” (Rossini). Suite, Fête galante (Lacôme). Selection from “The Tales of Hoffmann” (Offenbach). Slavonic Dance No. 3 (Dvorak). Selections (Grieg): (a) Lyric Suite, (b) Norwegian Bridal Procession. 7.30—Time Signal. 7.32—News in French and German. 7.45—Orchestral Concert. Selections (Handel): (a) Campanella, (b) Minuet from the String Quintet. Aria from “Phobus and Pan” (Bach). Spring's Awakening (E. Bach). Moi, j'ai toi (Lenoir). Overture, “Haydée” (Auber). Aria from “Manon Lescaut” (Auber). Gavotte (Lacôme). Stances des petits pieds de Paris (Moreau). Tarantelle (Mezzacapo). 8.30—Concert, relayed from Thionville. March, Sabre and Lance (Starks). Overture, “The Merry Wives of Windsor” (Nicolai). Selection from “Madame Butterfly” (Puccini). Alleluja for Mixed Choir and Orchestra (Massenet). Talk: Thionville throughout the Ages. Selections (Ketilbey): (a) In a Persian Market, (b) In a Monastery Garden. Selection from “Paganini” (Lehar). Song for

Mixed Choir and Orchestra. Selection (Fahrbach). Florentine March (Fucik). 10.30—Dance Music from the Savoy. 12 midnight—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. 11.0 a.m.—See Königs Wusterhausen. 11.45—Sponsored Concert. In the interval at 12 noon—Weather Report. 12.20 p.m.—Concert from Munich. 12.50—Time and News. 1.0—Concert from Frankfurt. 2.0—Gramophone Concert of Italian Songs. Songs from (a) “The Barber of Seville” (Rossini) and (b) “Rigoletto” (Verdi). Two Songs (Sadero): (a) In mezzo al mar, (b) Fà la nana bambino. Two Songs from “La Bohème” (Puccini). O sole mio (di Capua). Serenade (Tarenghi). Ritorna (Carosio). Kiss Serenade (Micheli). La Falletta (Marchesi). 2.30—Balalaika Recital by Mischa Ignatiev. Träumerei (Schumann). Hungarian Dance No. 5 (Brahms). Czardas (Monti). Valse impromptu (Andriev). Si vous me l'avez compris (Denza). Fantasia on a Russian Children's Song, Tschishnk (Ignatiev). Russian Song, Hymn to Night (arr. Ignatiev). Variations on Sweet Messiez (Ignatiev). 3.0 (from Mannheim)—Report of the Thirty-Eighth Show of the German Agricultural Society. 3.30—Talk: What do Children require of the Wireless? 4.0—Programme for Children. 4.30—Quartet Concert relayed from Donaueschingen. Auf froher Wanderfahrt (Landhäuser). In die blühende Welt (Sonet). So muss mei' Schätzle sei' (Landhäuser). Bin i net a Bürschle (Silcher). Tanzlied (Döbert). Werbo (Silcher). Abschied (Kirch). 5.0—Scenes from “Gasparone”—Operetta (Millocker). 6.15—Time and Sports Notes. 6.25 (from Mannheim)—Talk by Prof. Maenner. 6.50—Talk: The Philosophy of a Churl. 7.15—Time and Weather. 7.30—10.30—See Frankfurt. 10.20—Time and News. 10.45—Concert from Langenberg. In the interval, Report from Brussels of the Heavy-weight Boxing Championship, Hein Müller v. Pierre Charles. 12 midnight—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. Parade (Strauss). Occhi di fuoco (Rizzola). Romantic Waltz (Heinecke). Selection (Siede). Mozart Potpourri (Urbach). Se tu mi baci (Macheroni). At Budapest (Plessov). 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.), Genoa, 959 kc/s (312.8 m.), and Florence, 599 kc/s (500.8 m.). Transmits at intervals from 8.15 a.m. 6.45 p.m.—Announcements. 7.5—Orchestral Selections. In the Mystic Land of Egypt (Ketilbey). Selection from “Countess Maritza” (Kálmán). Piedigrotta (Rico). 7.30—Time and Announcements. 7.31—Popular Music on Gramophone Records. 8.0—Giornale Radio and Weather. 8.15—Concert. Overture, “Figaro.” (Mozart). Romance for Violin (Swendsen). Selection (Ziehrer). 8.45—Talk: Events and Problems. 9.0—Variety Concert. In the interval, Review of New Books. 11.0—Giornale Radio and Dance Music from the Flascchetteria Toscana, Milan. 11.55—News Bulletin.

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.—Wind Instrument Concert. March (Gustav Macho). Festival Prelude (Smetana). Waltz, G'schichten aus Oesterreich (Anton Mader). Selection from “Der Feldprediger” (Millocker). Spanish Rhapsody (Richardy). Liebesglück—Serenade for Two Bugle-Horns (Max Bader). Waltz, The Carolines (Roderick Bass). Viennese Song, Geb's mir mein Wien zurück (Arnold Feith). French Polka, Prücke die Rose

(Ziehrer). Potpourri, Wienerisch (Wetascheck). March, Waitzendorfer (Walter Zorn). 6.30—Topical Talk. 7.0—Recital of Songs and Arias by Adi Sari. 7.45—Time, Weather, Sports Notes and Programme Announcements. 8.0—Concert of Viennese Operetta Music. The Josef Holzer Orchestra with Lya Beyer (Soprano) and Hans Skriwanek (Tenor). Overture, Introduction and Two Songs from “Der Carneval in Rom” (Johann Strauss). Overture, “Boccaccio” (Suppé). Song and Duet from “Der Bettelstudent” (Millocker). Selection from “The Bird Fancier” (Zeller). Selection from “Der Opernball” (Heuberger). Overture, “Die Diva” (Weinberger). Waltz Song and Selection from “Das süsse Mädel” (Rinhardt). Overture, “Wiener Frauen” (Lehar). Duet from “Der Rastelbinder” (Lehar). Tenor Solo from “Bruder Straubinger” (Eysler). Overture, “A Waltz Dream” (Oscar Strauss). Duet from “Die geschiedene Frau” (Fall). Waltz from “Der Frauenfresser” (Eysler). Tenor Solo from “Der Orlov” (Graničstæden). Selection from “The Circus Princess” (Kálmán). 10.0—News Bulletin. 10.20—Dance Music with Vocal Refrains.

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—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—Educational Programme from Luboa. 12.45—Light Music on Gramophone Records. 1.20—Weather Report. 1.25—Interval. 1.35—Popular Music on Gramophone Records. 1.55—Interval. 2.45—Variety Music on Gramophone Records. 3.5—Economic Report and Exchange Quotations. 3.15—Report of the Fire Brigade. 3.20—Interval. 3.25—Review of Periodicals. 3.45—Hydrographic Report. 3.50—Light Music on Gramophone Records. 4.10—Wireless Review. 4.30—Talk relayed from Cracow, 959 kc/s (312.8 m.). 4.55—Programme for Children. 5.20—Concert for Young People. 5.55—Interval. 6.0—Religious Service relayed from the Ostro Brama, Wilno. 7.0—Miscellaneous Items. 7.25—Agricultural Notes. 7.35—Programme Announcements. 7.40—Sports Notes. 7.45—Radio Journal. 8.0—“On the Horizon.” 8.15—Concert of Light Music by the Station Orchestra, conducted by S. Navrot, with Irene Carnero (Songs). Spanish Overture (Kéler-Béla). Valse lente (Schutt). Serenade (Moszkovsky). Scherzade (Schmalstich). Intermezzo, Apfellblüten (Siede). Three Songs. Ballet Music from “Hamlet” (Thomas). Three Songs. Canzone villerecia (Micheli). Waltz-Berceuse, Ninna-Nanna (Micheli). Polka, Tik-Tak (Johann Strauss). Gavotte, Stéphanie (Czibulka). Waltz, Unter den Linden (Johann Strauss). March (Novovjiesky). 6.55—Talk. 10.10—Chopin Recital by Mme. Rabczewicz and Georges Lefeld (Pianoforte), and Gluzinska-Makuszynska (Soprano). Songs: (a) Divertissement, (b) Triste rivière, (c) Lithuanian Song (d) Guerrier, (e) Député, (f) Ma mignonne, (g) Mélodie, (h) Désir. Ronde for Two Pianofortes. 10.40—Radio Journal. 10.45—Weather and Police Notes. 10.50—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.—Weekly Lithuanian Review. 7.15—Social Administration Report. 7.25—Programme Announcements and Miscellaneous Items. 7.40—See Warsaw. 8.15—Request Concert on Gramophone Records. 9.55—11.0—See Warsaw. 11.0—Literary Programme. 11.30—Dance 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. 7.10 p.m.—Announcements. 7.25—Talk on the History of Medicine. 7.50—Talk on the following Transmission. 8.0—Relay of an Opera from the National Theatre. In the second interval: News and Weather Forecast.

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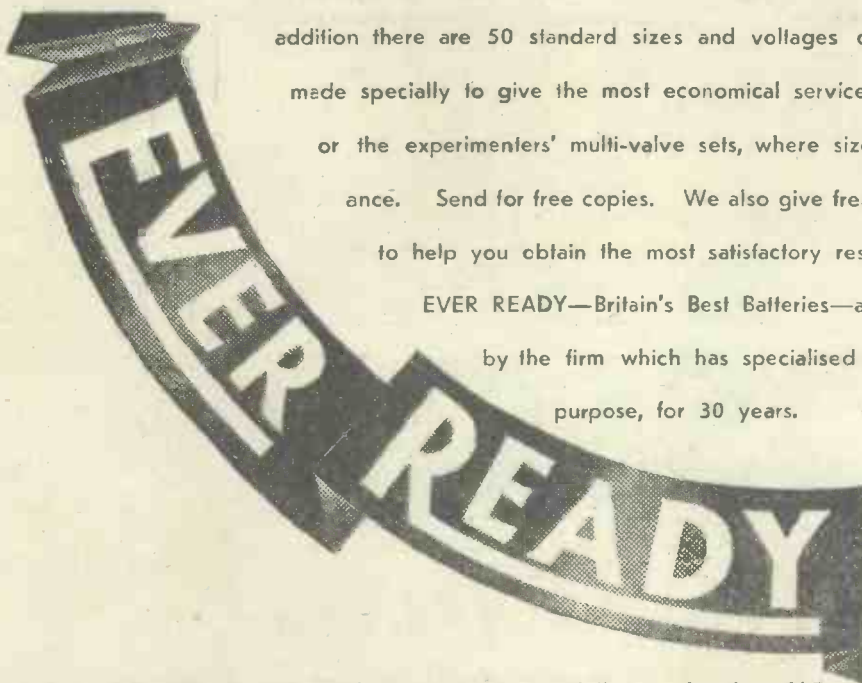
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