

WORLD-RADIO

Christmas 3^d Number



"No, Gentlemen: the risks are great enough already; but if I am to be *televised*—!"



*There's always
good reading in
The Listener
3d Every Wednesday-a BBC Publication*

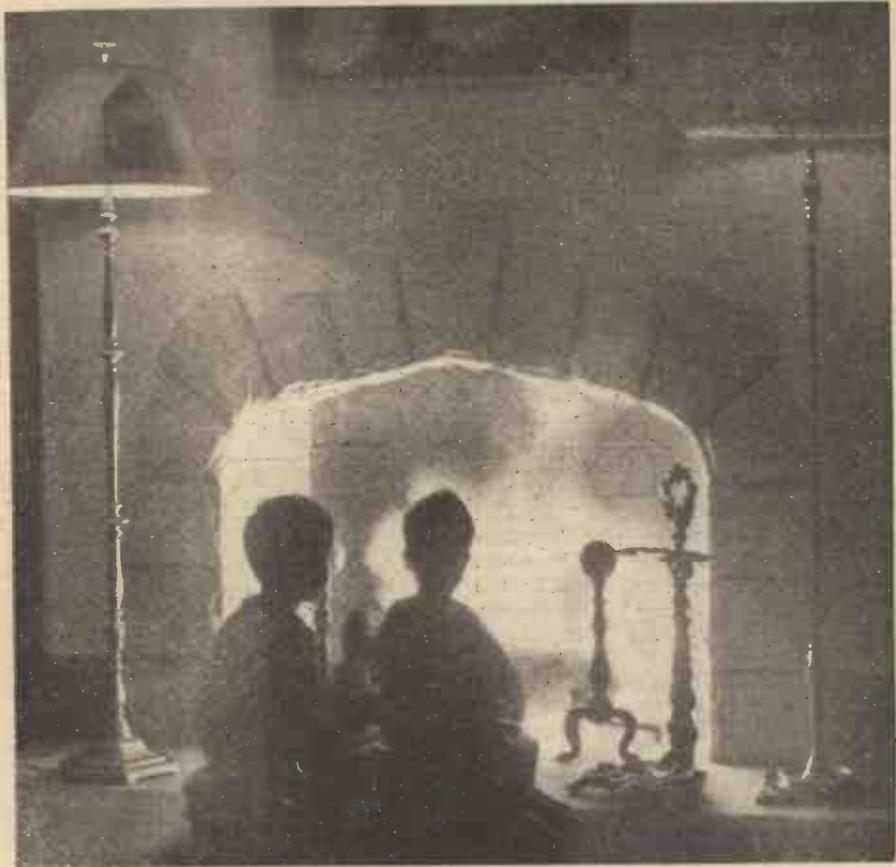
WORLD- RADIO

VOL. XXIII NO. 595 DECEMBER 18, 1936

(Right) HOW WILL FATHER
CHRISTMAS GET DOWN ?

A U.S.A. prize photograph showing
little brothers discussing the message
they will send to Santa Claus

(Below) A study of an old and poor,
but happy, Tyrol couple, celebrating
Christmas in their home



In Christmas Programmes Abroad

(From our Correspondents)

AUSTRIA

THE Ravag Christmas Eve programme will, of course, include chimes and the Christmas hymn, and Chancellor Dr. Schuschnigg will deliver an address. Between 8 and 9 p.m. there will be a broadcast called "The Homeland Calls," especially for Austrians abroad. In the afternoon, from 2 to 3 p.m., there will be a studio playlet of a Dickensian character, mainly intended for children. The Court Music Band (*Hofmusikkapelle*) will give a concert at 4.30 p.m. The Rev. Heinrich Suso Waldeck, poet and priest, will address the "lonely ones." "An Old Tyroler" will talk to his fellow Tyrolers in America. Then there will be songs by the Wiener Sängerknaben and by the Innsbruck Choral Society Wolkensteiner, and a concert by the Ganglberger orchestra.

During the small hours of Christmas morning, from 1 to 2 a.m. (midnight to 1 a.m. G.M.T.), Ravag will relay from the PCJ station at Eindhoven, Holland, on short waves (31.28 m.), a programme of merry music.

One of the most remarkable and beautiful features of the Austrian broadcasting celebrations at Christmas time will not be audible in Austria, though it will be heard throughout the American continent. It will begin at 4.45 a.m. G.M.T. on Christmas Day, which will be just before midnight on Christmas Eve in New York. A choir of children from Hallein and district, near Salzburg, will sing in the Hallein churchyard, before day breaks, the lovely hymn "Stille Nacht, heilige Nacht," beside the grave of its composer, Franz Xaver Gruber, conducted by Gruber's grandson. The National Broadcasting Company of America has arranged all the details with Ravag, and all South American stations will relay the song of poignant gladness which unites all German-speaking peoples in sentiment, very much as "Home, Sweet Home" and certain carols affect the English-speaking peoples. After they have done their chilly duty the children are to have a good hot breakfast, and parcels to take home. The cable will be used to England, whence Rugby will transmit to America upon short waves.

On Christmas Day, at 10.45 a.m., there will be a concert by the Vienna Philharmonic Orchestra and an Elisabeth Schumann concert at 6.10 p.m., followed by a performance of *The Merry Widow* of Franz Lehár, which is as popular in Austria now as it has ever been.

On Saturday, December 26, there will be an elaborate description of the Cathedral of St. Stephan in Vienna, from the catacombs to the summit of the spire, in which all the announcers of Ravag will take part, preparations for this broadcast having been in progress for months past, and the great ceremonies which take place there at the various seasons each year will be briefly indicated. It is timed to begin about 7 p.m. Afterwards there will be a great "Funkpotpourri," as it is called by Ravag, a hilarious kind of variety programme, lasting several hours.

BELGIUM

On Christmas Eve, the Brussels No. 2 station will broadcast from midnight to approximately

1.30 a.m. a midnight Mass celebrated in Antwerp Cathedral, with the "Maîtrise" of the Cathedral under the direction of Mgr. Ludervijk De Vocht.

The Brussels No. 1 station will broadcast on Christmas Day, at 10 a.m., a "Pontifical Mass" celebrated in the Cathedral of Malines.

The famous "Maîtrise" of Saint Rombaut, well known beyond Belgium, and directed by Canon Van Nuffel, embraces 225 performers, and will give the first performance in Belgium



The 300-years-old historic organ at Frederiksborg Castle, which will be heard in the Danish programme on Christmas Day

of the "Mass for four mixed voices, with organ," by J. von Wöss.

Joseph von Wöss, author of the Mass "In honorem Sancti Brunonis," which will be performed at the Saint Rombaut Cathedral, was born in 1863, at Cattaro, in Dalmatia. He spent much of his life in Vienna, and is the author of symphonies, operas, religious music, and chamber music. His "Mass for four mixed voices, with organ" is of romantic inspiration, somewhat comparable to the Masses of Anton Brückner, though of deeply religious character.

At 6 p.m., the Brussels No. 1 station will also broadcast "Christmas in Bruges" by M. M. Hankard.

CZECHOSLOVAKIA

President Benes to Broadcast

The main Christmas programme of the Czechoslovak broadcast begins on the evening of the 22nd with the great Christmas Oratorio, by J. S. Bach. On the 23rd we shall hear children's choirs and an old Czech folk Christmas play with music and carols. The programme of Christmas Eve will be given a special importance by a

Christmas message from the President of the Republic, Edward Benes. His Czech message will be transmitted at 4.28 p.m. and his message for German inhabitants at 5 p.m. At 6.55 p.m. will ring Christmas bells from St. Vitus's Cathedral, in Prague, founded by Charles IV on the remnants of a Roman crypt dating from the tenth century and other historic buildings. A Pontifical Mass will be transmitted from St. Vitus's Cathedral on the morning of Christmas Day, and on Saturday evening, from the Prague Opera, will be broadcast one of Dvofák's most popular operas *The Jacobin*.

DENMARK

A Historic Organ

The historic organ at Frederiksborg Castle, on which Mr. Laumann will play in the Danish broadcasting programmes at 5 to 5.30 p.m. on Christmas Day, was built about 1610 by the famous organ-builder and organist, Esaias Compenius. It was built by order of the Duke of Brunswick, Henry Julius, who married King Christian IV's sister, Elisabeth. The Duke, knowing his royal brother-in-law's interest in music, presented the King with this organ. It was placed in Frederiksborg Castle in 1616 by Esaias Compenius himself, and he died in Denmark a short time after having carried out this work.

The organ consists of 1,001 square pipes, all of which are of wood, forty-five of these being encased in ivory. The keys of the pedal are also of ivory. The keys of the manuals are covered with plates of silver. In spite of its 326 years, the organ is very well preserved: there are no faults anywhere, and its sonority is extraordinarily beautiful. The pipes are made of boxwood, pearwood, ebony, and other fancy woods.

The organ is a beautiful monument of the art of organ-building during the seventeenth century, and it is admired by connoisseurs from all over Europe. When Frederiksborg Castle was burnt down in 1859, the organ, fortunately, had been lent to Frederiksborg Castle at Copenhagen, and thus escaped the fire. After the rebuilding of the Castle

it was returned there, and in 1895 it underwent overhaul, and nothing required renewal. The organ is thus claimed to be the oldest in the world.

GERMANY

Cologne

The Cologne station will participate in the broadcast entitled "Bells Ring in Christmas" at 5 p.m. G.M.T. on December 24 with the traditional singing of the Soest (Westphalia) from the gallery of the spire of the Petri Church in Soest. Soest itself is famous for its altar pictures, its churches, and its "Pumpernickel"—the black bread eaten as a delicacy in Germany.

Leipzig

The Christmas programme of the Reichssender Leipzig reflects German Christmas customs.

For German children the most important part of Christmas is Christmas Eve. Very excited and impatient, they wait for the moment when the door will be opened, and, under the Christmas-tree decorated with burning candles, they will find all their lovely presents. The

Reichsender Leipzig will help them through the ordeal of waiting with a broadcast at 3 p.m. on December 24. "The door is still not yet opened" is the item, which includes humorous tales, short Christmas stories, and songs. At 5 p.m. the Leipzig trumpet-band greets Christmas. Christmas music at 5.20 p.m. leads to the celebration of Christmas Eve, which, at 7 p.m., is introduced by Christmas carols, sung by children's choirs from Central Germany, where especially are found children's choirs with excellent voices, some having gained world-wide fame. In that broadcast there will be heard the St. Thomas's Choir of Leipzig, the Kreuz Choir of Dresden, and other children's choirs from Thuringia and Saxony singing the old Christmas carols, partly originated in that part of Germany and especially characteristic of it.

HOLLAND

With St. Nicholas bringing his gifts on his name-day, three weeks before Christmas, and New Year's Eve celebrated with almost the same enthusiasm as it is in Scotland, the observance of Noël is not so great in Holland as it is in France or England. Its reflection in the wireless programmes is chiefly of a musical character, and already the Christmas Oratorio of Bach and a very popular Christmas Cantata by Hubert Cuyppers have been heard over the ether. The principal essentially-Christmas programme on December 25 will be that of the Catholic Radio (K.R.O.), which will start at 8.10 a.m. (G.M.T.) with a relay of the carillon concert from the tower of the Royal Palace at Amsterdam, given by M. Jac. Vincent, the famous carillonneur (who is, incidentally, the father of Jo Vincent, who has lately won a big reputation as a concert and oratorio soprano in England and on the Continent). This will be followed with a "Morning Dedication" during which the Rev. J. Dito, O.P. (Dominican) will speak on "Peace on Earth." The lunch-time music by the station orchestra will include Pfitzner's *Das Christelflein* and fragments from *Die Königskinder* by Humperdinck, while later a ladies' choir will sing a cantata by Flor. Peeters, the popular Antwerp organist, and a number of ancient and modern Christmas songs and carols. The chief items in the evening programme will be Bach's Cantata No. 142, "Uns ist ein Kind geboren" and a Christmas play, *The Silent Night*, dealing with modern industrial problems. And, as everywhere in Germany and Holland, Gruber's "Stille Nacht" will be in almost constant evidence.

The A.V.R.O. (301 m.) starts somewhat earlier with its celebrations, and begins on Sunday with a "Varied Christmas Evening," with fairy stories from the local Spaanders Forest (a romantic wood where one can easily lose oneself and imagine all the old stories dear to children of all ages), a Christmas competition; following, on Tuesday, with carols suitable for singing at home, and on Christmas Eve with a reading from Dickens' *A Christmas Carol*. This organisation has only an afternoon programme for Christmas Day, composed of a story, "The Three Kings in Sight of the Coast," a carillon concert from the Cathedral at Bois-le-Duc, a recital of Christmas poetry and Christmas carols and songs by the Children's choir, besides a short Beethoven concert under Albert van Raalte with Louis Zimmerman, violinist, as soloist.

The Protestant Society (N.C.R.V.) is broadcasting morning and evening services both on Christmas Eve and Christmas Day which contain Christmas hymns typical of the ordinary festival Church music in the Reformed Churches of Holland, as well as a number of gramophone records of Christmas music of various nations, while the V.A.R.A. will broadcast festival music of a more secular character, except that



A merry reportage from winter sports stations, with Miss Gladys Baxter, of the CBS, as the reporter

on Boxing Day they will relay the first three parts of Bach's "Christmas Oratorio" given by the Rotterdam Philharmonic Choir and Orchestra under Eduard Flipse.

HUNGARY

On Christmas Eve Radio Budapest offers a special programme for lonely people who lack friends or family, or who are unable to participate in the festivities of the season. "Everybody's Christmas Tree" is the name of this transmission. The tree will be placed in the open air on a fine square near to the Broadcasting House, the candles lighted in the presence of passers-by, and a priest will send greetings through the microphone. An organ-recital will follow and a member of the Budapest Opera House will sing Christmas airs. Beethoven's Ninth Symphony (from records) and the transmission of a Midnight Mass closes the programme of December 24.

On Christmas Eve, too, the Budapest Broadcasting Company will distribute receiving-sets among war-disabled men and blind people who have applied for such during the year.

Among the special programmes of the two following days the most notable is the first performance—on December 26—of the "Christmas Cantata" by Francis Joseph Vaszy, a young Hungarian composer. It is an oratorio for orchestra, chorus, and soloists which has been awarded an important prize by the Hungarian Musical Society, a prize which the jury has not awarded for a number of years owing to the absence of compositions of adequate merit.

IRISH FREE STATE

Christmas in Ireland is primarily a religious festival and in the Irish Free State broadcasting programmes this aspect is especially featured. During the week which includes Christ's Birthday practically no item in the programme is without the distinctive prefix "Christmas," and the week's programmes may truly be claimed to be commemorative.

On Christmas Day President de Valera will open the programme with a broadcast of Christmas greetings to the Irish at home and abroad. After a Children's Party, which will be given from one of the Dublin Children's Hospitals by a special party of broadcasting artists, from 10.30 p.m. until midnight Irish homes everywhere throughout the country will be able to hold a *ceilidhe* (sets of Irish dances) in co-operation with the station, in which

dancers will be present to go through the jigs, reels, hornpipes, etc., played by a special augmented *ceilidhe* band.

NORWAY

The best "listening-season" is undoubtedly the Christmas holidays. What, then, are we going to hear? With the third largest tonnage in the world, a nation numbering only 2½ million inhabitants must remember in many floating homes in foreign harbours, fathers, sons and brothers, whose longings and thoughts are drawn towards home and Fatherland. And this longing for contact with home broadcasting can satisfy more nearly than can any other agency.

A programme for our seamen, therefore, has been given a considerable part on the third Christmas day, and it is very varied.

Norwegian children have their Christmas-Puck, as English children have their Santa Claus. On the night before Christmas Eve the children themselves will tell about this Puck, who is a small, short-legged fellow, with a big red woollen cap. But we must go very far in the north of Norway's fanciful and isolated districts to find a child who really has seen this gentleman so near at hand that he can describe him and tell stories about him. A Northerner's little boy has promised to tell about him.

POLAND

More music and songs than in previous years will be broadcast from the Polish stations during this Christmas. Some forty musical and vocal programmes, apart from the special Christmas talks and plays, will be broadcast from the national transmitter in Warsaw, and simultaneously broadcast on all the regional stations.

The programme begins on December 24, at 10.30 a.m. G.M.T., with "Kolendy" Christmas songs by a children's choir conducted by Prof. Mayzner. There will be one foreign relay—namely, from Berlin—on the same day at about 2 p.m. It will consist of Christmas Eve songs of other nations.

The Christmas Eve programme will conclude with three items: a "Pastoral Poem"—a musical play from Lwów, fixed for 8.30 p.m.; "Christmas Oratorio," by J. S. Bach, by the choirs in Wilno; Midnight Mass from Gniezno Basilic Church, relayed from Posen at 10.50 p.m.

Christmas Day opens at 7 a.m. with "Kolendy" songs from Warsaw and Katowice. A famous choir will sing during the Service to be relayed from Posen Cathedral at 9.10 a.m. After a Christmas mystery play by W. Rachulski with Roman Palester at the piano, to be relayed from Cracow at 3.45 p.m., there will be, at 5 p.m., a programme of national light and dance music, in which a number of soloists will participate. The day's programmes include also a comic opera and dance music on gramophone records.

On Saturday, December 26, the programme opens at 7 a.m., with "Kolendy," followed by a morning concert by the Police Band. Among other items will be A Pastoral suite with a mixed choir and soloists, relayed from Posen, at 3 p.m.; "Nouvelles Cracoviennes"—an opera in three acts by K. Kurpinski, also relayed from Cracow, at 6.45 a.m.; and two musical items—a pianoforte recital by Mme. J. W. Ochlewska at 8.30 p.m., and dance music by the Polskie Radio Small Orchestra, from 9 p.m. onwards.

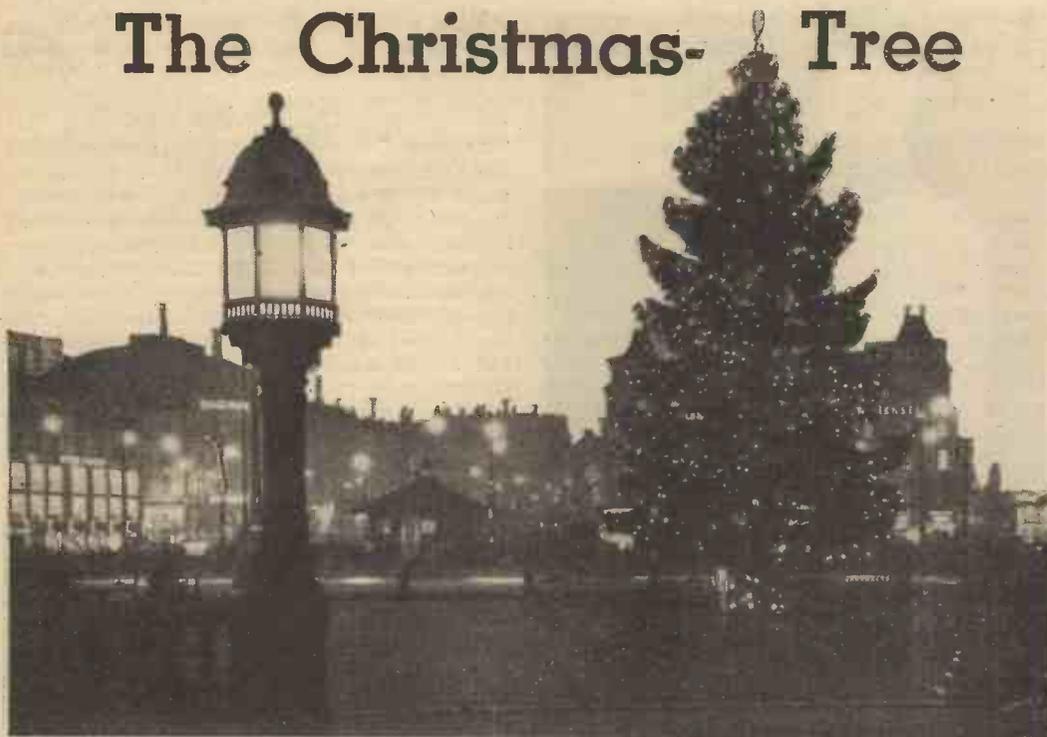
SWITZERLAND

Beromünster

The following Christmas programmes to be broadcast by Beromünster might be of some interest to the English listeners:—

December 24, 7 p.m. G.M.T., Organ and violin Christmas music by Stefi Geyer and Hans
(Continued on page 6, Col. 2).

The Christmas-Tree



A huge illuminated Christmas tree, in the City Hall Square, Copenhagen. Beside it is a collecting box for coins, to provide Christmas festivities for the poor children of the city

A number of German stations devote talks or otherwise refer to the Christmas-tree and its origin in this year's programmes.

NOWADAYS, the Christmas-tree seems to have become an almost universal custom throughout the world. Even in the tropics where the actual tree is not obtainable residents or their servants contrive some semblance of the pine tree with bamboo and green, or small artificial trees are used. But in spite of this seeming universality of the Christmas-tree, it is a comparatively recent introduction, even in Germany, its traditional home.

It may come as a surprise to some to hear that originally the Church and its dignitaries



A Christmas "pyramid" from Silesia (south-east Germany). The spreading of straw on the floor is a typical Slav custom were strongly opposed to the tree. As far back as 1525 the authorities of Salzburg issued a decree against the ripping off of "Christmas green." But "Christmas green" did not mean

a tree—yet. It referred to evergreens generally which were used to decorate the houses.

Some authors believe that the Christmas-tree is of heathen origin and try to explain the opposition of the Church in that manner. Actually the first authentic report known to exist dates from 1605. In that year at Strasbourg Christmas-trees were first recorded. They had developed from the Alsatian custom of hanging small trees or bunches of fir branches from the ceiling of the living-room during Christmas-tide. The first record of candles on a Christmas-tree dates from 1737.

Right up to the nineteenth century the Christmas-tree was considered a typical Protestant custom. In Roman Catholic districts the Christmas "crib" or manger, prevailed; this had been introduced, in the thirteenth century, by St. Francis, and its use in Churches had been permitted by the Pope, first in Italy, later in Germany and the Netherlands.

A well-known authority on the subject of German folk-lore explains the fact of the Protestant bias of the Christmas-tree, by pointing out that after the Reformation the Protestants were at pains to exterminate any customs in connexion with Church festivals which might be termed typically Roman Catholic. It seems a plausible explanation that the Protestants should therefore adopt a Christmas symbol which was new and had no connexion with the Roman Church.

If we go deeper into the origin of the Christmas-tree it is possible to say that it is a development of the old heathen custom of employing evergreens at the time of the Winter Solstice as a sign of fecundity and of the expected reawakening of nature to new life. The lights on the

tree certainly have some vague connexion with the old Germanic custom of employing fire to preserve them from the ghosts of the dead and of the evil spirits which are said to be especially active on the eve of the first of the twelve long nights. Evergreens were occasionally used in the same manner. The candle itself on the tree is, no doubt, due to Church influence, though it seems difficult to imagine heathen firebrands on the trees.

But, apart from these vague connexions, the tree is an Alsatian folk custom which has developed and spread over the world. Its march of triumph, as one might call it, started at the beginning of the nineteenth century, when it appeared in 1808 in Eastern Prussia, in 1813 in Graz, two years later in Danzig, a year later still in Vienna (1816). 1820 sees it in Hamburg, Weimar, and Prague. 1830 in Munich. In 1840 a Mecklenburg Grand Duchess introduces it to the French court. In the same year it appears in England through the influence of the Prince Consort. The Crimean War sees it in 1855; eight years later its appearance is recorded in Stockholm, and as late as 1902 it is introduced into the Pustertal, in the Tyrol, where it had been resisted owing to the predominance of the Roman Catholic *Krippe*, or manger.

In most Roman Catholic parts of Germany to-day the one-time "Protestant" Christmas-tree has been happily united to the "manger," and in many homes one sees the Christmas *Krippe* under the lowest branch of the tree. The original confessional associations have long been forgotten.

But in spite of its universal popularity there are regions even in the tree's "own" country, in Germany, where older or more individual forms of Christmas decoration prevail. The Christmas "pyramid," which is said to be a form of the tree, is at home in Silesia and in some parts of the province of Brandenburg. These pyramids are crowned by a kind of fan-wheel which revolves once the candles are lit.

On the German North Sea coast the fishermen decorate their "Christmas Room" with prunes and home-baked figures mounted on wire stands. In Pomerania a wooden stand is decorated with evergreen, mostly fir branches.

The manner of decoration also varies in each part of Germany. In former times there have been places where a small tree was decorated with one single apple, to represent the Tree of the Knowledge of Good and Evil. Some, no doubt, saw a semblance, although it has
(Continued at foot of col. 1, page 22)



Along the North Sea coast the Christmas tree is not customary, but a "Christmas Table" decorated with prunes and home-baked pastry figures takes its place

AMOS 'N' ANDY DISCUSS—



that likes to hear about the Kingfish, and the new baby and ever'thing. I figure with the NBC sending out our programme reg'larly on the short waves—

AMOS: On which?

ANDY: You heard 'bout them. The sort of little extra ultra frequent-sees they done use to skim us right over th' ocean.

AMOS: Somepin' kinda special, uh?

ANDY: You said it, Amos. Listen, I'll relucitate the whole mess for you. Ever' time we go on the air, we go on the reg'lar, ordinary waves, but to reach our overseas neighbours—say, that sounds real nice, don't it?—for our overseas friends and neighbours, why, they use the small little bits of waves. Get it?

AMOS: If we want long distance, we got to use short waves. That what you mean?

ANDY: That's right, Amos.

AMOS: Don't sound right, somehow, Andy.

This being the position, with the public constantly asking, like *Oliver Twist*, for more, Amos 'n' Andy continue to oblige with an easy-going, but apparently inexhaustible, supply of creative broadcasting characterisation, keeping a daily tryst with the microphone so faithfully that statistical records are shattered one after another.

The team started broadcasting as "Sam 'n' Henry" while "Amos 'n' Andy" still lingered among unborn immortals. After the first "Sam 'n' Henry" programme the couple waited three full days for any evidence that they had been listened to, as they fervently hoped, favourably. Finally, a single letter reached the studio, bearing the brief intimation: "DEAR SIRs,—I have heard your programme, but cannot say that I like it." That inauspicious opening of a joint career that now is unparalleled in radio in both duration and vitality, occurred

A Timely Message to WORLD-RADIO'S Readers

SCENE: The apartment in which the famous comedians foregather to prepare their daily broadcast.

ANDY: Now, Amos, before we start in on reg'lar business, they's something here in our mail that we'd ought to 'tend to.

AMOS: What's that, Andy?

ANDY: Why, it's this here reequest we got, to say somepin' 'bout Christmas.

AMOS: Christmas! Why, that ain't for more'n a month. What we have to say right now 'bout Christmas?

ANDY: I know, I know. But this here is different. This whatever it is we're gonna say has to be got ready in plenty of time on account this ain't like somepin' we says on a reg'lar programme for the NBC. This here is a different kind of a propolition altogether.

AMOS: Go on, respplain me what kind of a propolition it is.

ANDY: First let me just ask you somepin', Amos. Did you ever stop to figure out how many people, way over on the other side of the ocean, listen-in to us on the wireless?

AMOS: Wireless? Does you mean the radio? What kind of talk is this here "wireless" talk?

ANDY: I'm just giving it to you the way I got it, Amos, over in London, when I was circulatin' 'round there on my vacation.

AMOS: That's right, Andy; you *was* over there right enough. Remember the time you called up and talked to me and told me you was in London, and me talking back to you from Sam Francisco, and we was broadcasted just like we was in our reg'lar studio? Hot dawg!

ANDY: Sho', sho'. I 'member that ahlright. Didn't I have to get me a taxi in Piccadilly and drive on the wrong side of the road all the way to the BBC to git there in time?

AMOS: That whar you was?

ANDY: Sho' I was. 'Bout the middle of August it was, I 'member, that the BBC and the NBC hooked us up that away on the long-distance and we done make broadcastin' history.

AMOS: We did that? What you just said?

ANDY: Sho' we did. Just think of it, Amos, the most long distantish conversation ever put on th' air by the hand of man, most likely.

AMOS: You wouldn't kid me, Andy?

ANDY: Certainly not, Amos. I'se just resuscitating the facts, like they told me when we done it. And that brings us right back whar we started. It seems like they's more 'n more folks all the time, over on the other side,

ANDY: Well, anyway, that's the way it is. What you care how you git thar when they's all these nice people settin' waitin'.

AMOS: Certainly is nice of them to wait around listenin' in case we come bobbin' in on top of six or seven of them little old short waves.

ANDY: That's what I been tryin' to tell you, Amos. I'm glad you 'preciate our English listeners. With Christmas coming and ever'thing, seems like we'd ought to take advantage of this here invitation they done extend to us to send 'em some kind of a message in time to circulate through the foreign organ of the BBC.

AMOS: Somepin' musical, Andy?

ANDY: No, not that kind of a organ, Amos. When I speaks that away, I'se alludin' to a magazine—what they call WORLD-RADIO—that prints all about overseas programmes. You git it, Amos? That's fine! Come on, then, how about it? Does we or don't we?

AMOS: I'm right with yuh, Andy!

ANDY: That's the talk, boy! Then here we go! Concentrate, Amos!

AMOS: I is.

ANDY: Somepin' real nice, now, Amos, an' different. They'll expect somepin' special, coming all that distance.

AMOS: Like on the short waves?

ANDY: Don't let's start all that again, Amos, when I thought you was all set to concentrate.

AMOS: Andy! I got it! Just by concentratin'. How's this: "Merry Christmas, Amos 'n' Andy."?

ANDY: Fine, Amos, fine! I knew you'd help us both out once you got your mind on it. Try that again, see how it sounds.

TOGETHER: Merry Christmas, Amos 'n' Andy.

ANDY: Swell! Lemme git at that type-writer. I'll set right down and git that off.

nearly ten years ago. In view of earlier references in WORLD-RADIO'S columns to this aspect of the subject, it may be stated as a matter of record that the date on which "Sam 'n' Henry" first went "on the air" was January 12, 1926. They broadcast from the Chicago station WGN.

Behind them was experience gained in a still earlier phase in which they had broadcast over experimental stations—one in the Southern city of New Orleans. Details become a little vague, to the Correll and Gosden team of to-day, concerning those prehistoric times extending back as far as 1920. They are quite clear, however, on one point: they encountered no clairvoyant broadcasting pioneer with vision enough at that time to offer to pay for their services! It was not until they had had more than two years' experience in the professional parts of "Sam 'n' Henry" that their first big opportunity opened and Amos 'n' Andy braved the ether as studio characters brought into existence for presentation on a modestly extensive network, originating in station WMAQ, Chicago. In Santa Monica, California, recently,

(Continued on next page)



"The hunting was great." Amos (Freeman Gosden) left, and Andy (Charles Correll) pose with their bag, near Hancock, Maryland

The Popular Pair

THE comedy team credited with the authorship of the only classic which American radio has thus far developed are often asked the question "Aren't you tired of playing Amos 'n' Andy?" Freeman Gosden (Amos), a Virginian by birth, usually replies in a Southern idiom: "Did you ever hear of a coloured boy getting tired of watermelon?"

AMOS 'N' ANDY DISCUSS—

(Continued from previous page)

the Mayor unveiled a bronze plate for the information of posterity, reading: "Amos 'n' Andy broadcast to the world from this spot." It is fitting to be equally specific here, in deference to the fabulous stature which the masters of blackface comedy have attained, and to record the actual date of their microphone nativity. Amos 'n' Andy were "born," therefore, March 19, 1928. There is sometimes a certain confusion, in dealing with the almost astronomical figures with which the career of the comedians is sprinkled, in making calculations from August 19, 1929, the date upon which was begun the incredibly long sequence of sponsored programmes over NBC networks, and which marked the sharp acceleration of their rise in national popularity. The 2,395th programme was broadcast under NBC auspices last August, when they entered upon their eighth year of sponsored broadcasting. Adding the earlier years already mentioned, it will be seen that Messrs. Correll and Gosden have been leading figures in broadcasting for a decade, during which they have been on the air more than four thousand times.

In bringing into existence the Kingfish, Lightnin', Madame Queen, Pearly, the high diver from Kaufman's Koloed Karnival, the impressively-named Frederick Montgomery Gwindell, Señorita Butterfly, and a hundred and sixty-four more major characters in an exuberant galaxy, the joint authors have assembled more than seven million words. It is the blustering Andy, not the humble Amos, who in real life sits patiently at the typewriter as the two comedians work out the fate of their aerial puppets, making two copies of the conversations, including the all-too-rare observations of that magnificently designated person, "Pat. Pending."

Heavy responsibilities come with success of such magnitude as Amos 'n' Andy have attained. Reluctantly, their public permitted them a holiday, part of which Charles Correll spent in England, in 1934, after the team had completed five years of continuous broadcasts; but there was positive consternation when they were snowbound in northern Maryland and involuntarily missed their 2,202nd broadcast. A generation has grown up in America which takes as a part of daily life "Amos 'n' Andy" and the proceedings of The Mystic Knights of the Sea, the Valentine Matrimonial Society, and the fluctuating fortunes of the Fresh Air Taxi Cab Co. Letters bearing the signatures of inhabitants of entire towns flowed into NBC headquarters protesting against an announced change of Amos 'n' Andy's programme time. These faithful listeners announced themselves as "regusted," and means had to be found to placate them. Space remains for only one further example of the comedians' infiltration into the national life. More than a hundred pairs of twins in the United States are eating their morning porridge with silver spoons sent them by Messrs. Gosden and Correll in polite acknowledgment of their parents having enthusiastically named the children after radio's dusky favourites.

As Andy might ask, "Now, ain't dat sumpin'?"
D. G. R.

On December 11, 14, 16, and 18, Danish microphones were placed at the disposal of listeners who wished to send messages to friends and relatives in Greenland. Members of the Greenland choir shown in the picture are wearing national costume.

IN CHRISTMAS PROGRAMMES ABROAD

(Continued from page 3).

Steingrube; the Midnight Mass from St. Joseph's Church at Geneva, to be transmitted on all Swiss stations. On Christmas Day the poetical musical suite *Vom Schönen der Welt* is worth mentioning.

Sottens

A programme of quite a special kind has been prepared for the Christmas season by the French-Swiss Broadcasting Company (Radio Suisse Romande).

On Thursday the 24th, after a Christmas story by Maurice de Bouchor at 7.20 p.m., Sottens will relay from Lugano a programme of Christmas carols sung by Ticinese children, accompanied by the Italian Swiss Broadcast Orchestra. At 9.5 p.m. there will be a sacred concert by the Motet of Geneva, which will sing psalms set to music by Goudimel, the great Genevese Protestant composer of the sixteenth century, with words by Clément Marot. Then, after the relay of the Midnight Mass, a second sacred concert will be relayed from St. Joseph's Church.

The programme for Christmas Day will include a "Children's Christmas" at 6 p.m. and the Christmas Oratorio of J. S. Bach, relayed from the Church of St. Thomas, Leipzig. On Boxing Day there will be running commentaries of the International Ice Hockey Match from St. Moritz at 10.0 a.m. (G.M.T.).

U.S.A.

Columbia Broadcasting System

Plans already completed by the CBS start on December 20, with a relay from Kraslice, Czechoslovakia. CBS will broadcast an unusual concert by a children's orchestra, employing the toy instruments which have made the quaint little community famous everywhere, and the BBC Carol Singers from London, on December 23; the Palestrina Choir from Philadelphia; from Rome, a portion of the Midnight Mass from the historic church, Ara Coeli, will be broadcast on December 24; the famous children's chorus, "Bambini Ticinesi," from Lugano, Switzerland, and the Columbia Symphony Orchestra and a mixed chorus, conducted by Howard Barlow, and from far-away Bethlehem, listeners will hear a programme of Christmas carols from the court-yard of the Church of the Nativity,

near the spot where the shepherds knelt at the Christ Child's manger.

This year as in the past, on December 24, at 6.45 G.M.T., President Roosevelt will take the leading rôle in a ceremony to be broadcast by CBS as he lights the capital's Christmas tree in Washington, and wishes the nation a Merry Christmas.

National Broadcasting Corporation

The NBC's Christmas programmes include a broadcast in the course of which trans-



An NBC Christmas Night running commentary

missions from all parts of the world will be heard at 4.45 (G.M.T.) on Christmas morning. It will begin with the beautiful carol, "Stille Nacht, heilige Nacht," sung in the little church of the Austrian Alpine village, Oberndorf, where it was written 118 years ago. Further items in the programme are transmissions from the Argentine, from a Mission in San Francisco, from a church in Hawaii, from Japan, and from the Philippines.



On December 11, 14, 16, and 18, Danish microphones were placed at the disposal of listeners who wished to send messages to friends and relatives in Greenland. Members of the Greenland choir shown in the picture are wearing national costume.

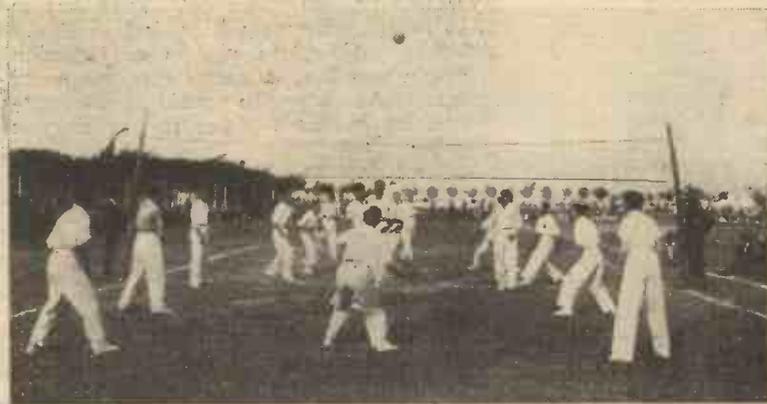
The Rebirth of Afghanistan

By J. M. RIZVI

ONE of the most colourful romances of modern times has been the resuscitation of Afghanistan. Other nations have thrown off the shackles of thralldom, other countries have more or less emerged from great economic crises, and again other peoples have fought their way back to social order and equanimity, but none has had that richness of setting which has been that of Afghanistan.

That country has been dazzled by the kaleidoscopic chapter of events which has made her history since the termination of the Great War. Several kings and would-be kings have flitted across the troubled scene since 1919 up to the present time. She has touched the depths of horror and affliction, only to rise again to a greater unity, and to a wider realisation of the independence which is hers.

These thoughts come to one's mind upon seeing the colourful scenes that are occurring at Kabul now, because now is the time of the



A handball game at Kabul, Afghanistan

festival of Idd, and thousands of Afghans, care-free and laughing once more, are trekking into their capital of Kabul, secure in the knowledge that they may leave their villages in peace and amity, and untroubled by what may befall them on the road.

Men from the great uplands of Kohistan mingle with the warriors of the south—the Hazaras, and the men of Jalalabad. With them are the gaily attired stalwarts of the eastern provinces, and men who have accomplished the long march from the Oxus and the borders of the Golden Samarkand.

But a very few years ago these men, now once again a unit, were split into factions by the misrule of one who promised to be a great king, and the men who have accomplished this gigantic task of unification have been his late lamented Majesty King Mohamed Nadir Shah and his brothers.

And how did Nadir Shah manage to re-establish the order of the kingdom after the revolution? The deeds of his gallantry and the sacrifices that his family made may now pass into a legend. Here we are more concerned as to the actual progress which his plan produced in Afghanistan, to the extent that within a surprising space of five or six years, that mountain country is now well-nigh her old self again.

At the outset it was realised that the Afghans needed internal peace and external security. Nadir Shah gave them both. He gave the people a constitutional Government with a fully representative Parliament—which they never had in their history—and, what is more, that he made it so firm that in virtue of one of its clauses it was that the present young king, H.M. Mohamed

Zahir Shah, was enthroned on November 8, three years ago. To a people used to a constitution as the soul of the nation, and who have always been brought up in its lap, this incident might not sound very important; but in relation to Afghanistan, it is one of the greatest steps that any monarch has ever taken. Taking the Royal Oath in respect of the Sixth Clause of the Fundamental Laws of Afghanistan would have been an unheard-of incident in the entire Afghan history six or seven years ago. Now it is an established fact.

The next step of considerable importance which has been taken by the present Government is in education. Since 1931, practically every village of any size has had a school, and primary education is compulsory; food and books are also given to the scholars. The National University of Kabul trains students even in medical science, and more than two hundred students are having advanced instruction in the various

European and American Universities.

Within the last two years nearly two thousand miles of metalled roads have been constructed, and it is only now that, through them, the capital has been linked with the Russian frontiers on the Oxus by means of motor roads. This is important in a country where not a single foot of railway exists, and all merchandise must be brought by way of caravan routes.

No longer do the chief cities of the country have to depend upon the arrival of a caravan of lumbering camels, for every week thousands of motor lorries arrive in and depart from Kabul laden with merchandise of all kinds.

Wireless and Broadcasting

Internal security and the proper organisation of trade connexions have enormously increased Afghan trade activities, so that—again for the first time—an Afghan National Bank has been installed at Kabul, with its branches in India, Persia, Russia, and England. The flow of Afghan trade in its turn has enriched the Government exchequer, and the salaries of practically all Government employees have been increased. Since no National Debt, as such, exists, and trade improves every year, life has become peaceful and happy in the country; nor does unemployment haunt Afghan homes. In consideration of the requirements of the country, further improvements have also been made towards the introduction of Western devices of progress, such as aviation on a considerable scale and wireless. For the latter endeavour a large wireless station now operates at the capital, and five smaller ones

in five remote parts of the country are in active construction, in which a British firm is assisting the Afghan Government. The time is not far distant when broadcasting will be started from a Kabul studio.

In the knowledge of all these factors, the people have now gathered at Kabul, for the Idd provides for Afghans a season of national reunion.

I can see now the roads and mountain tracks bearing their fullest complement, for the venue is the Chaman Huzuri, the national park at Kabul, which was once a golf course. The crowds press on jubilantly and joyfully, for there is a continual recognition of friends, relations, and acquaintances, and much felicitation. Eyes gleam, for in the memory of almost the youngest present, Afghanistan was so different, before Nadir Shah and his brothers came and gave it peace; it was being ravaged by sword and fire. The name of the bandit who caused so much misery and desolation is not mentioned, but his ferocious figure is still stamped on the people's mind.

Naturally, therefore, there is a reaction towards revelry and gaiety, and at the appointed time, when the religious ceremonials attaching to the Idd are concluded in the forenoon, laughter and the spirit of festival take charge.

The sweetmeat-sellers do a tremendous trade, as do the makers of sherbets, the sellers of fruit, and the brewers of the green tea of which the Afghan is inordinately fond. Fires are lighted in the dusk, swords are whipped from the scabbards, and they flash while the young men sing their martial songs to the fiery throbbing of the drums, and leap and cavort in physical and mental exuberance.

The great occasion, of course, is when the Afghans are vouchsafed a sight of their young King, for no event of moment in Afghanistan is complete without a ceremonial reviewing of the troops. The crashing of the band, the rippings of the *feu de joie*, the detonations of the artillery, and the headlong evolutions of the cavalry are dear to the Afghan heart.

On the dais, well in sight of all, stands the King, and the keen Afghan eye needs no binocular to observe movement and detail. When the midday gun booms forth, and the King departs for Dilkusha Palace, the cries of the food vendors rise to the heavens amidst the multitudes.

The King goes to his meat. So shall the people eat, for Afghanistan is free; for the Idd that they now celebrate is both a religious and a national festival; for under the progress of the present day, the people no longer bare their blades except on the occasions of their picturesque dances of the clans, and the hills do not see fires of battle, but of festivals and fairs, for all is peace now.



A view of Kandahar, from the eastern side

Via Black Light

By CHARLES GREGORY

CAUGHT in a terrific snowstorm, which swept Cornwall from end to end, Jack Lawrence, when walking from the lonely moorland station of Motterham to his brother's isolated bungalow on the North Cornwall coast, found himself compelled to seek the safety and shelter of the nearest habitation along his route.

This proved to be the residence of a Mr. John Markham, who was living in retirement there. Markham was alone in the house at the time, as his wife had gone to a nearby farm for a day or two to attend to a sick relative. He was therefore delighted at receiving an unexpected guest to lighten his loneliness, and although the two were strangers to each other, he at once made his visitor cordially welcome.

He quickly relieved his guest of his wet outer garments, ushered him into a well-furnished and cosy sitting-room, provided him with warm slippers and a comfortable armchair beside a roaring fire, and urged him to make himself "quite at home."

During the tea which followed almost immediately, Markham, having ascertained that Jack's non-arrival would cause no anxiety as he was not expected, insisted he must stay for the night. As the roads were now impassable with snow, Jack really had no choice but to accept.

Within an hour or two the two men had become fast friends. Both were keenly interested in science in general and radio and television in particular. For two or three hours after tea the two men sat round the fire chatting about various things.

Then the conversation turned to television, and Markham's manner underwent a definite change. At first almost secretive, he became gradually confidential, and finally unburdened himself by saying he had made some remarkable discoveries in that direction, but he could not divulge them without a promise of secrecy.

Partly from curiosity and partly because he was impressed by the sincerity of Markham's manner, Jack readily gave the desired pledge of secrecy.

Piling a few more logs on the fire, and filling his pipe once again from a china jar at his elbow, Markham now settled himself more comfortably in his armchair, in a manner which indicated a long discourse was forthcoming.

Having got his pipe going (temporarily), he resumed the conversation which had been broken off by these proceedings.

"Television has always fascinated me," he began, "and for ten years now I have spent all my available time and money on television experimental work."

"When, in 1926, Baird demonstrated to the world that it was possible to get, by means of infra-red or 'black light' illumination, a perfectly clear image of a person *who was in complete darkness*, I confess I was deeply thrilled, for it seemed a much more wonderful thing to me than television by visible illumination."

"For this reason I made a close study of all matters pertaining to infra-red rays, and it was not long before I formed the conclusion—contrary to Baird, I know—that the ultimate future of television lay in development along these lines. I was influenced in my decision, too, by the fact that ordinary illumination, in comparison with infra-red illumination, is far more inefficient in relation to expended energy. Speaking approximately, the energy value of the infra-red illumination from any visible object is nine times greater than the visible illumination."

As Markham paused to relight his pipe, Jack broke in, saying, "Yes, I think the general

principles of Baird's 'Noctovision' are fairly well known to most people to-day."

"Good!" grunted Markham between sundry puffs at his pipe, "then that will save further explanation."

"Subsequent developments in infra-red photography went, in my opinion, a long way towards proving my standpoint. You have perhaps seen, in the daily papers, the remarkable infra-red photographs, depicting with wonderful clarity the Isle of Man taken from the Lancashire coast, and the coast of France taken from Dover, and so on?"

"Yes," said Jack, "and I think them very wonderful."

"But not nearly so wonderful as the aerial infra-red photographs taken by Captain Albert Stevens, of the U.S. Air Force. One of these, taken from an aeroplane 21,000 feet over Central Argentina, was the first ever made showing laterally the curvature of the earth, and also mountain peaks, at a distance of 330 miles from the camera."

"The essential feature of these infra-red photographs is that *no visible light reaches the film, and they are taken wholly by an illumination the eye cannot see*. They definitely demonstrate that every object visible by the light of the sun is simultaneously radiating an invisible, or 'black light' image."

"All this is very interesting," interrupted Jack. "but I quite fail to see where it is leading us."

"Patience!" answered Markham. "By the time I have finished you will have learnt something about REAL television—a television as far in advance of the present day Alexandra Palace transmissions as a modern multi-valve set is of the ancient crystal."

"Although I worked hard, and was constantly experimenting, I made no real progress until 1935. In August of that year, I read an account of Professor Appleton's discovery of a vast layer of intense heat, situated approximately 150 miles above the earth's surface. It was this discovery which, in a flash, gave me a glimpse of a possible future for television which was almost beyond belief—a future so staggering and amazing that I felt its successful accomplishment would mark the greatest scientific achievement ever attained by man."

Jack stared at his host incredulously. Surely he must be mad! What possible connexion could there be between Appleton's "furnace belt" and television? To hide his perturbation regarding his host's sanity, he forced a laugh, saying, "What an ungodly mixture! Appleton's 'furnace belt' and television!"

"To you perhaps, but not to me," replied Markham sharply, and for the first time showing a little asperity.

"Now let me give you a simple illustration of diathermy. You may not be aware that infra-red rays from the sun differ in wavelength from those radiated by any earthly body. A clear glass screen will prove this. It readily passes heat from the sun, acquiring no heat in the process. But it refuses to pass heat from a coal fire, and thereby acquires heat."

"Appleton's ionised layer acts in precisely the same way as a glass screen. It

readily passes light and heat from the sun, earthwards, but, whilst passing reflected light from the earth, it refuses to pass reflected heat."

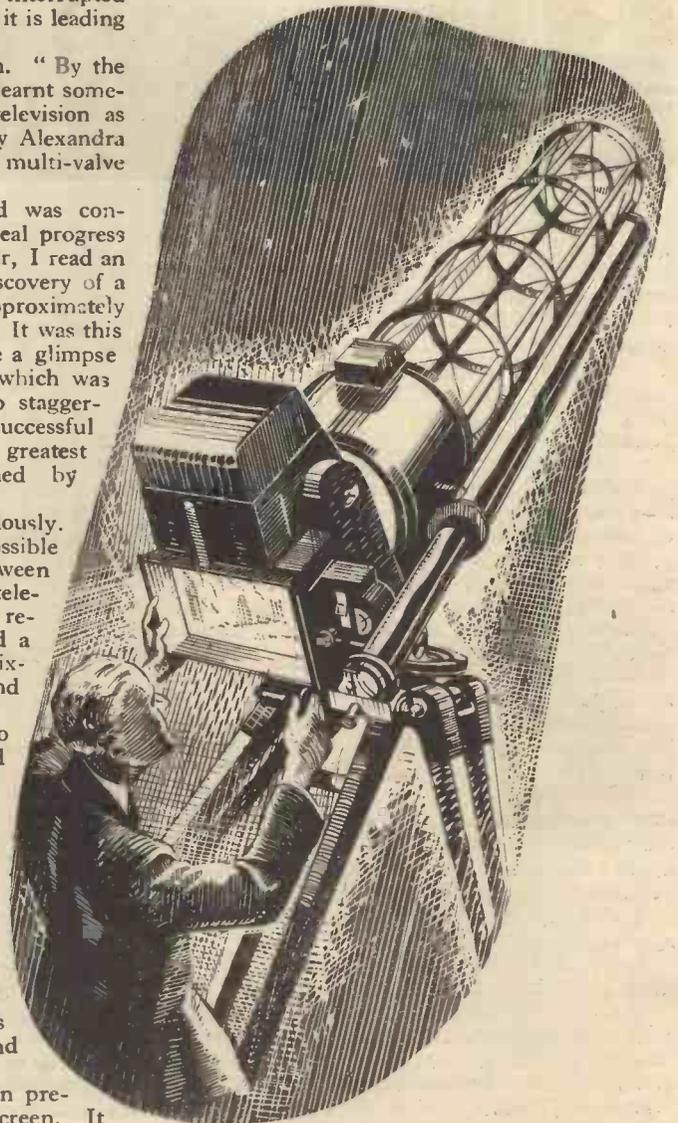
"And since a reflecting surface is also a mirroring surface, it follows that the ionised gas layer constituting Appleton's layer is also acting as a huge reflecting mirror for all infra-red images radiated from the earth's surface, just as a lake reflects all visible images from the skies above."

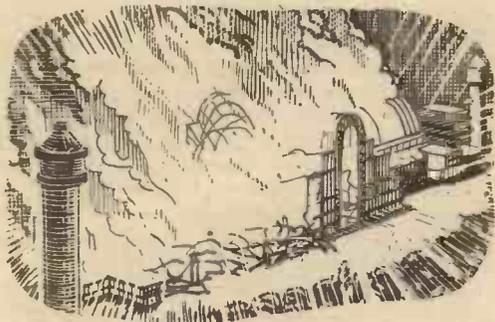
At this unexpected statement Jack sat up, both actually and metaphorically.

"You mean," he cried, "that if it were possible to gaze into this ionised gas layer mirror, with infra-red sensitive eyes, one would see reflected any, and every, part of the illuminated world below?"

"Yes. And—which is even more astounding—since every earthly object possesses some molecular movement which constitutes heat, the earth is always radiating infra-red images, *whether it is illuminated or not*. Such images are, of course, extremely faint, but in theory they exist, and, given powers of detection sufficiently sensitive, it means that the world beneath would always be visible to the infra-red eye, no matter whether it was day or night!"

"It hardly seems credible," said Jack. "I cannot believe it."





"Why not? The infra-red image reflected in Captain Stevens's camera at a horizontal distance of 330 miles, would also have been reflected there if taken from a vertical distance of 330 miles, or double the height of the Appleton layer—provided, of course, there was no change in the atmospheric conditions."

"Yes. But how can an ionised layer of gas act as an infra-red reflecting mirror?"

"I do not pretend to know. In any case, Appleton has proved this self-same layer does reflect wireless waves, and it is also intensely hot, which it could not be if it readily passed heat waves outwards to space."

"True. But the wireless waves referred to by Appleton are vastly greater in wavelength than infra-red waves. Why, even waves of one metre go off into space, never to return."

"Agreed. And a glass screen shows that even varieties of infra-red waves have different properties as regards reflection and absorption. Or, take the ozonised layer believed to be only thirty miles above the earth. It passes heat waves from the sun earthwards, but largely rejects the much shorter ultra-violet. And somewhere in the earth's atmosphere the deadly cosmic rays are practically refused admission earthwards. Yet these waves are billions of times smaller than light waves. For these reasons I do not think that wavelength alone means anything, one way or the other, because as a matter of fact I know this mirror actually exists!"

"You know it exists?" gasped Jack in amazement. "Do you mean to say you have actually gazed into it?"

"I have. But of course I didn't go up to it. I brought it down to earth within twenty feet of me, by means of an 'electric' telescope."

"An electric telescope! I have never heard of such an instrument. Besides, it would have to be 'some' telescope to let you see 150 miles."

"Oh no, it wouldn't. Are you aware the new 200-inch telescope now being made for the Californian Institute of Technology is about 640,000 times as far-sighted as the human eye? Were it not for the curvature of the earth, and haze and mist, one could get a splendid view of New York from here, and even read the names of the vessels in the harbour. That is a telescopic range of 3,000 miles, and we are discussing a paltry 150. Besides, an 'electric' telescope is immensely superior to an ordinary telescope."

"But how is it possible to see a reflected infra-red image in a telescope?"

"Quite easily. If a camera infra-red film can see it the human eye can, thanks to the fact that any reflected image, visible or infra-red, obtained by a camera, telescope, or microscope, can now be converted into an electron image, and in consequence is capable of magnification to an amazing degree."

"I fail to see why an electron image can be magnified more than an impulse image."

"There is, nevertheless, a very great difference. With an impulse image, inherent defects of the thermionic valve prevent magnifications beyond certain limits. These defects are known as 'interference noises.'

"The stream of an electron image, however, can be 'speeded up' by the application of an external voltage, and when directed with sufficient velocity against a suitable metal substance, the primary electrons "splash out" other secondary electrons from the surface, and the number of these secondary electrons so ejected may be many times greater than the number of primary electrons that ejected them. By repeating the process again at sufficient velocity, a second set of electrons can be initiated, and so on, until an enormous degree of signal magnification can be obtained—vastly greater than that of a signal impulse by a thermionic valve."

"And more amazing still, this system of electron multiplication can be used for amplifying the electron emission itself from a photo cell, and it is possible to magnify the cold metal output a million million times."

The sound of the hall clock striking twelve made Markham jump to his feet. "I am afraid I must postpone further theoretic details and get down to facts," he said, "it is getting very late now."

"About two weeks ago, in my laboratory near Manchester, I finished equipping my first electric telescope television camera. It consisted of the most powerful astronomical telescope I could afford, fitted with an infra-red filter of the kind used with infra-red cameras. In the body of the telescope was an infra-red prism, by means of which the reflected image was made to fall on a specially made, mosaic, infra-red sensitive photo-cell placed inside a cathode-ray tube. By suitably placed electron-multiplying units I was able enormously to increase the emissivity of the photo-cell plate used, and also to magnify, many millions of times, the electron image flow which resulted from the reflected infra-red image produced by the telescope. This amplified output I fed to a 'cathovisor,' or receiving cathode-ray tube, and thus obtained a visible picture, some twelve inches by nine, of the original invisible infra-red image."

"It was about 10 p.m. on November 30 when I had completed everything to my satisfaction, and my impatience was so great I could not wait for daylight next day, but decided on making an immediate trial. Quite arbitrarily I pointed the telescope skywards at about an angle of 45 degrees, and switched on."

"And what did you see?" queried Jack, who had been following all these details with the deepest attention.

"Nothing! Or practically nothing, since the very faint and baffling images thrown on the television screen were too indistinct to be of any use."

"Of course, this was to be expected since I had designed the amplification of the set for daylight scenes, and the infra-red radiation from the earth, at this time of the year, at night-time, was far too weak to energise it. Realising the futility of any further attempts, I gave the telescope one final swing preparatory to switching off. As I did so, the screen suddenly blazed with light, and I saw a sight I shall never forget!"

"For there, clearly and with amazing definition, I saw a huge building in an inferno of flame. It was the Crystal Palace, London, burning furiously, and ablaze from end to end! I could not believe my eyes! It was impossible! Inconceivable!!"

"But the two towers identified it beyond all doubt, and the flames, by comparison, must have been 500 feet high!"

"Feverishly I worked the controls so as to obtain a better view. Because smoke is no barrier to infra-red vision, I now succeeded in obtaining an amazingly clear view. The whole of London was visible in the intense glare—not the glare due to visible light, but the glare due to the infra-red radiation from an image so intensely hot that the heat could be felt by the spectators

half a mile away! It was a beautiful but unearthly sight."

"I could see even the tiny figures of hundreds of firemen clambering about near the fiery mass of molten glass and twisted steelwork, whilst from the water-towers thousands of gallons of water were being pumped on the blaze."

"Again adjusting the focus of the telescope for a 'close-up' I was enabled to see clearly, not only the white-hot girders twisting under the intense heat, but recognisable faces of the spectators gazing skyward in the immediate vicinity."

"I watched the scene until midnight, and then, taking very great care not to disturb the alignment of the telescope, I switched off, and crawled to bed, worn out physically and mentally."

"As soon as it was good daylight on the following morning I again switched on the apparatus, hoping against hope that my recollections of the previous night were not the result of a fantastic dream. But no! There, clear and sharp, I saw acre upon acre of tangled girders and broken glass—all that remained of the unique and incomparable Crystal Palace, now gone for ever!"

"Next I swept the telescope round in an arc to the west, but all I could see were the angry waves of the Atlantic in a storm. By a little 'searching' however, I was soon rewarded by finding a ship, which, when brought to close range, I could see was in serious difficulties. Soon it was apparent she was foundering, and fascinated, I watched the gruesome scene to a finish, seeing not only the actual foundering of the ship, but the terror and agony on the faces of the crew as they went to a watery grave. It was terrible, and made me feel quite sick!"

Jack's head was all in a whirl, as he stumbled to bed in the early hours of the morning, after listening for over an hour to Markham's vivid and, at times, almost frenzied details of the wonderful sights he had seen on his wonderful electric telescope television camera, which by his descriptions must have had a range anywhere between Iceland and Algiers.

He had asked, and even begged, to be allowed to witness a demonstration, but Markham was adamant in his refusal.

"Wait! Wait!" he cried. "Soon all the world shall know what I, John Markham, can do. The great cinema combines will be offering me millions for my invention, for the scenes can, of course, be broadcast, or relayed to any cinema for public exhibition. And I shall be hailed as the greatest inventor the world has ever known. But until then, I am showing my results to no one—not even to you, Jack."

And with this Jack had perforce to be content.

* * *

"You say you stayed overnight with old John Markham, of Rosecare?" said Jack's brother next day. "Well, I would sooner you than I."

"Good gracious! Why?" said Jack in amazement.

"Oh, I daresay he was all right when you were there, but as a general rule he is out of his mind for most of his time!"

"As mad as a March hare!" supplemented Mrs. Lawrence, who had been following the conversation. "He used to be, so I have heard, a very clever television engineer up Manchester way, but too much learning turned his brain, so they say."

Jack was too taken aback to discuss the point further. He had not, of course, mentioned television to them because of his promise. But later on, when he was able to take a long walk and calmly think things over, he could not bring himself to think that Markham's exposition on television had been the mere vapourings of a disordered brain. Might it not have been, instead, the last flaming spark of a man's genius before it passed into oblivion?

Time alone would tell.



"MY dear man," said the long Irishman with whom I had come over from Baghdad, "I hate wireless! And not without reason, since the Parker affair."

We were sitting in the *patio* of the Victoria Hotel at Damascus, and had just had a few words over the wireless set, which my friend had ordered to be taken away in a particularly angry voice. The name Parker seemed to have some association for me which I could not quite place.

"Parker," I said, "I seem to recollect something happening in the desert a few years ago that the name Parker was connected with. He died tragically or something, didn't he?"

"That's it," replied the Irishman. "He was with the Iraq Government until the abolition of the Mandate. That man and his assistant . . . if you are interested, I will tell you the story."

Of course I was interested, for the immense tragic fascination of the desert, which everyone experiences who has once lived through it, never fades.

One morning, about four years ago, Parker walked into my office at Baghdad. He had been very warmly recommended to me by my brother in London and he also had several letters of introduction from influential people to the King and the Government. He was a nice young man, with excellent manners; and as I learned from my brother's letters, a very well-known scientist. He told me he wanted to go into the desert particularly to discover the almost unknown tribes of Central Arabia. He said something about the "Darúb el mût," the paths of death. You know that this is a cursed region which even the Beduin avoid. I tried to talk him out of that idea. I pointed out the absolute lack of water in this part of the country. But neither Parker nor his assistant, a pink-cheeked lad about twenty-two years of age, would listen to reason. So all I could do was to provide a few camels for them—as you know, it's impossible to go there by car—and give them letters of introduction to the Amirs of the tribes through whose country they were to travel. With all this I had the feeling that I was helping a suicide to knot the rope with which he would eventually hang himself. We had agreed that he should send me news through each tribe along his route until he reached the unexplored area. There, he reckoned, they would stay for eight days and then make their way to the better-known country towards Kuwait. In this way I should have news from him every week or, at the worst, every fortnight.

I was present when they loaded the camels with their belongings, and I was somewhat reassured when I saw how splendidly this small expedition was equipped—even to a wireless receiver which, Parker said, would keep them in touch with Europe during the long desert evenings. I learnt, however, from the little assistant, that Parker's *fiancée*, whom he wanted to marry on his return from Arabia, was a well-known London singer, and he was far keener

on keeping in touch with a recital she was to give some weeks hence than with Europe.

One thing, however, continued to worry me. I could not get any Beduin as camel-drivers. No offer, were it never so high, could tempt the Beduin who had once crossed the Darúb el mût to go there again. At last I found an Armenian who, though he had never been to this area, knew a lot about camels and travelling in the desert. I dismissed my little caravan, and wrote to my brother that I had done my best and that Parker had left.

A week later an Adjman-Beduin, and, some ten days after, a man of the Amir Shá'alan's people, brought me a letter from Parker and a few letters to forward. Parker wrote enthusiastically and told me that he was now approaching the dreaded areas. "I am apprehensive," he wrote, "from my side because, from the tales of the Beduin, I fear that I shall not only find no undiscovered tribes, but no tribes at all." That was the last I ever heard from Parker. A week passed and nothing came, then a fortnight, and there was still nothing. At the end of the third week I succeeded in persuading the High-Commissioner to ask the R.A.F. whether anybody was willing to fly over the unexplored regions. Almost the whole corps was ready to do so. I flew with them.



"Why, that is Parker's fiancée," I screamed across the fox-trot . . . I lifted the little lamp and found—

On the morning of the following day we saw some objects. We flew as low as possible—there was no question of landing—and we distinguished a tent, camels, and men. Motionless, all motionless! With the utmost speed we flew back. The King immediately ordered a caravan, consisting of military camel-riders, and off we went. I do not want to tell you now of the tremendous difficulties of this journey, but, my God, it was one of the most dreadful a man can go through in the desert.

We kept losing our way, and could not find anything. Then, one night (the day had been too hot to travel), we suddenly heard a voice. A voice in the desert, a huge, loud voice! Do you know what it means, sir, to hear a voice in the desert? We flung our camels round and made for the voice, and suddenly we could even hear a few words. In English, the voice cried out to the vast star-lit skies of the solitude. "I have to announce." I have to announce? Announce? I did not finish my thought for suddenly my camel fell over a black something and threw me down head first. I tore the palms of my hands open to the bone, as I scrambled up and ran towards the black something. It was a dead camel. "Lights up," I shouted, and immediately a carbide-reflector shone over me. Trembling, we traced the tracks. But the light of the reflector broke on the dead walls of the rocks. The men divided into patrols. We had hardly gone two steps when suddenly there came the voice of a woman singing. Yes, in the middle of the night, in the middle of the desert of death the crystal-clear voice of a woman began to sing Grieg's "Love Song." The soldiers with me instantly threw themselves to the ground, and started to pray. "Sir," the sergeant whispered, "listen! The devil is singing; none of us will return from the desert." I lifted his lamp from the ground without answering him, the excitement compressing my throat, and I followed the voice. I ran over a small level patch, fell over the rocks, rushed into a wadi, always following the voice, until the song was finished, and another voice called in the desert. "This is London calling the British Empire. You have just heard a group of songs by Grieg, sung by Miss Evelyn Hopkins. Light dance music will follow." And already a fox-trot dashed into the desert. Evelyn Hopkins? Evelyn Hopkins? Why, that is Parker's *fiancée*! "Parker's fiancée," I screamed across the fox-trot. "Parker, where are you?" I got no answer. But as I jumped over a rock I saw something in front of me—an English army tent. Listen, sir, to what I am telling you now. I wanted to turn round that very moment, I wanted to turn, wanted to switch the light out and run away. A fear had caught hold of me, a raving lunatic fear of something vague, but indescribably dreadful. I did not run away, but, my hands trembling, I lifted the little lamp and found—you know it already—I found Parker, his assistant, and the Armenian. All three dead. The Armenian was lying next to me, then came the assistant who was lying near the tent door with a face like a suffocated infant, and at last Parker. Parker lay on his face, one rigid arm round the wireless set and in the other hand his notebook. Dead, all three dead. Dead for days. Dead from thirst. Parker's notes, written down to the last moment, told everything.

Do you now understand what irony means? A man dies in the desert while next to him, and still so unreachably far away, his girl sings songs of love to him; he dies of thirst—an agonising death—while dance music is played to him from a London cabaret, where people carelessly sip their wine. Can you understand that suddenly a blind frenzy took hold of me and that I drew out my revolver, burning to shoot into the fox-trot which floated over the dead bodies, to shoot

(Continued in col. 3, page 22)

The Televising of Father Christmas

The Story of WORLD-RADIO'S Christmas Cover

MR. FAWCETT MONTAGU yawned and switched off the television set.

"When one's seen five Lord Mayor's Shows televised, one gets tired of 'em," he grunted, and turned to his newspaper.

His wife sighed and shook her silvery head.

"Five years ago television was a marvel, Henry," she murmured; then her kindly little face lighted up. "Come, it's time we were going. The Raynhams always dine punctually."

Mr. Montagu rose, and together the pair made for the door.

"I'll speak to Nanny about the children as we go downstairs," said Mrs. Montagu. "Richard said he might not be back until late."

Husband and wife left the house after a word with Nanny, who passed into the nursery, saw that Derek, aged ten, Muriel, aged eight, and Sam, the nearly-two-year-old baby, were engaged upon lawful amusement with their toys, and slid out again to finish the exciting book she had started an hour ago.

"Mummy and Daddy have gone out, Derek," announced Muriel, when the door had closed behind Nanny.

Derek filled a water-pistol from a flower-vase and regarded it thoughtfully.

"And Nanny's got a book," he murmured, pointing the water-pistol in the direction of Sam, who was exploring the rent interior of his Teddy Bear. Sam, unconscious of the peril which menaced his two-year-old head, muttered "Glug-glug" in a hoarse undertone, and offered a handful of straw to Neddy, the toy donkey.

Derek laid the water-pistol down with a sigh.

"Suppose we go and have a look at the television set?" he suggested.

Muriel nodded.

"That'd be lovely," she observed, and made for the door.

"Come on, Sam," said Derek, and Master Sam, dragging Teddy by its torn stomach, lolloped unsteadily after them down the corridor. In the sitting-room Derek approached the television receiver with gleaming eyes.

"D'you know how it works, Derek?" inquired Muriel, a trifle apprehensively.

"Course I do!" Derek bent forward and did things to the knobs on the panel. He'd often watched his father switch the set on. Quite suddenly, two jovial coons appeared on the silver screen before the children. Muriel and Derek watched the performers with delighted eyes, but Sam, after a perfunctory glance at the two black-faced gentlemen, wandered off.

For a time peace reigned in the sitting-room. Then, quite suddenly, the air was rent by a series of terrific cracklings, followed by a loud crash in the loudspeaker. The two coons disappeared from the television screen as if they'd been wiped off by a sponge.

Sam peered round from the back of the expensive receiver and said, "Glug-glug" happily, as he rocked his Teddy Bear to and fro on the loop of cable connecting the set to the wall socket. At that moment, the door burst open.

"What the dickens!"

Derek looked round, and saw his elder brother, Richard, glaring at him in the doorway. The newcomer took one look at Sam and his occupation, and leapt across the room. Sam sat down forcibly and watched Richard as he refitted the connecting plug securely in the socket. "Glug-glug," murmured Sam in dignified protest.

"The Pater'll skin you kids," snarled Richard. "Get out!"

Derek and Muriel seized Sam and melted out through the doorway like smoke before a powerful draught.

Back in the nursery, Derek, Muriel, and Sam turned to their toys with somewhat subdued spirits.

"Richard's been the limit ever since he got a job with those film people," complained Derek, as he drew a picture of Grandpa on the nursery wall in beautiful red ink.

"Perhaps Richard will—" started Muriel, when Richard himself entered. The scowl had now left the young man's face.

"Good job I came in when I did," Richard chuckled.

Sam poked the second eye out of Matilda, his favourite doll, and maintained a dignified silence.

"Listen, you kids, I've some great news for you," continued Richard.

The "kids" regarded their elder brother uncertainly. Richard wasn't popular with his juniors—he had a way of tweaking hair and pinching arms.

"Wainwright, Mortimer, and Breedon have given me a scoop!"

"Wouldn't a shovel have been better?" asked Muriel, innocently.

A hoarse bray of laughter came from Richard's lips.

"Scoop—I mean an assignment—a commission—." Seeing that this conveyed nothing to his audience, he proceeded to explain carefully. "I've been promoted to the Research Department of my firm, and they've ordered me to go to Lapland to do film work for an expedition. And I've got a brain-wave—that is, to take a television camera and to televise a certain gentleman as he sets out on the world's most important journey!"

"Who's the gentleman?" inquired Derek, suspiciously.

"Father Christmas!" cried Richard, and struck an attitude.

"Crumbs!"

"Good gracious!"

"Glug-glug!"

Richard perceived that he had indeed created a sensation, and went on to enlarge his explanation.

"I'm setting out to-morrow for Lapland," he said, impressively, "with two members of our technical staff; we're taking oodles of apparatus with us. And when we get there, I'm going to persuade them to televise Father Christmas as he loads up his sledge and sets off for Europe behind his famous team of reindeer with Christmas gifts for all the children of the world!"

Derek, Muriel, and even Sam listened entranced as Richard told them of the great task he was to undertake in the next few days.

* * *

Four weeks later—actually it was Christmas Eve—the Montagu family were to be found in their dining-room. Only Richard was missing. Suddenly there came the sound of heavy feet, and the door flew open. Richard Montagu nodded mutely to his astonished family, dragged off the heavy fur coat he wore, and slumped into a chair.

"Hullo, Mum—'lo, Dad," he cried in excited tones. Then, noticing Derek, Muriel, and Sam, his expression changed to one of ruefulness.

"My dear boy!" exclaimed Mr. Montagu in staccato tones.

"What's the trouble?" inquired Mrs. Montagu, gently. Her motherly eye had at once remarked that her eldest son was upset.

"We've failed, Mother." Richard kicked the hassock, savagely.

"Failed?" Mr. Montagu leapt to his feet and stared at his son, sternly. "Your firm won't like that, my boy. This expedition was an important thing!"

Richard glanced towards the children, then back towards his father and winked surreptitiously.

"What's happened, Dick?" Derek hastened to interpose. "Couldn't you find Father Christmas?"

"We found him, all right," growled Richard. "In fact, we were about to start televising him—when things went wrong," the speaker swallowed, noisily.

"Go on, Dick—" Derek prompted.

"Well, it was this way," Richard sat up in his chair and waved his hands, excitedly. "We'd got the apparatus all set up—you've no idea what difficulties we were up against in all that snow and in that cold—and were all ready to start shooting, when the old boy simply held up his hands and cried: 'No, gentlemen; the risks I'm taking are great enough already; but if I'm going to be televised—!' That was all he said—" Richard paused, dramatically.

"You mean the old gentleman refused point blank to let you televise him?" demanded Mr. Montagu with every appearance of incredulity. "Why—why—I should have thought he'd have revelled in the publicity."

"Perhaps he was afraid if he once allowed himself to be televised people would want to see him climbing down chimneys," put in Mrs. Montagu, with one of her slow smiles. "And that would ruin everything for the children!"

Richard gave a gasp, and sat back in his chair. It was almost as if an idea had come to him. And during the conversation which followed, he was curiously inattentive.

"Well," said Derek, vigorously, when, a short while afterwards, the children were back in the nursery. "I'm glad Richard failed. It wasn't fair, bothering poor Father Christmas like that. As if he hasn't enough troubles—crooked chimneys to get down, hot fireplaces to step into, dangerous roofs to climb, and all that—without being bothered with television!"

Muriel nodded gravely, and Sam, having overbalanced, sat down heavily upon a rubber ball, which promptly burst.

* * *

It was nearly bed-time, and Muriel and Sam were upstairs alone. Nanny had gone to put the bath on. Suddenly the door flew open and Derek rushed in.

"What d'you think," he gasped. "Richard's got Mr. Bellamy and Mr. Spratt in the study, and they're going to trick Father Christmas!"

"How do you know?" breathed Muriel.

"Quick, tell us."

"I happened to be in the study," explained Derek, hurriedly. "They didn't seem to notice me, and they talked quite loudly, so I couldn't help hearing what they said."

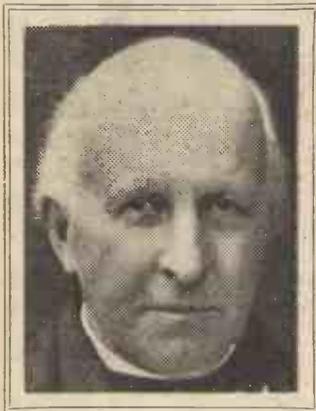
Muriel accepted this explanation without hesitation. Sam brandished a decapitated golliwog pugnaciously.

"What did they say?" demanded Muriel. She didn't like Richard's two television friends.

"I heard that blighter Bellamy say that Father Christmas had won the first round, but that he would win the second," said Derek with heat. "They're going to play a low-down trick on the old gentleman!"

(Continued in col. 2, page 12)

His Grace
**THE ARCHBISHOP
 OF CANTERBURY**



writes:—

I cordially commend this Appeal. The Royal Cancer Hospital deserves all the help which can be given to it in its ceaseless endeavours to combat this scourge by patient research into its causes, and by skilled and sympathetic treatment of those who suffer from it.

Please Send a Gift to the Earl of Granard

The Royal
Cancer
 Hospital

(FREE)
 FULHAM RD., LONDON, S.W.3

THE TELEVISING OF FATHER
 CHRISTMAS

(Continued from previous page)

"What're they going to do, Derek?"
 "They're going to rig up their television kit in the tennis pavilion opposite, and they're going to fix up a searchlight."

"Yes—yes—"
 "Then they're going to hide and watch our chimney."

"But—but—"
 "Listen," Derek went to the door, peeped out, then shut the door carefully. "They're going to let Father Christmas come down our chimney, then they're going to switch on the searchlight and televise him as he scrambles out!"

"Oh, I say!" Muriel's eyes glowed with anger, and Sam ate a large handful of earth from the flowerpot.

"And that beast Spratt thought it a fine joke when he said: 'We'll let the whole world see the old lunny come up all covered in soot!'" Derek pushed over a pile of music savagely as he concluded his recital. Muriel raised her hands in horror, and Sam spat out a mouthful of dirt.

"What can we do?" cried Muriel, much upset. "We can't let the poor old man be tricked like that!"

"Don't see what we can do," groaned Derek, thinking hard. "Whatever we tried, those blighters would probably—" the speaker broke off suddenly and his eyes glowed. "Got it!" he cried.

"An idea?" gasped Muriel. "Quick—tell us—"

"Tell you in the nursery," cried Derek, and went through the doorway at a run. Muriel and Sam followed.

* * *
 Christmas morning.

"Come, m'dear," said Mr. Montagu to his wife. "Let's slip upstairs and see what Father Christmas has brought the children this year!"

Smilingly, Mrs. Montagu followed her husband up the stairs. They paused to peep inside Richard's bedroom. Richard lay fast asleep, a heavy scowl upon his sleeping features.

"Looks as if he's had a sleepless night," observed Mr. Montagu, as they went on to the other bedroom. Here wild cries of delight greeted their appearance. Derek brandished a cowboy's outfit ecstatically, Muriel held up a life-like baby doll, and Sam hit the bed-post vigorously with a large toy duck.

"He brought us just the things we wanted!" roared Derek, happily.

"Isn't Father Christmas a dear!" crooned Muriel to her doll.

"Glug-glug!" observed Sam as, with a gesture of triumph, he dragged the tail out of his duck.

"Well, Father Christmas certainly seems to have treated you well this year!" boomed Mr. Montagu. "What do you say, Edith?" He turned to his wife. But Mrs. Montagu was staring at a dirty scrap of paper which had been pinned across the mantelpiece.

"Dear Father Christmas," said the scrawl on the note. "Richard is going to Telly Vise you when you clime out of the chimney all covered in sut. Richard is a beest. We are leaving the window open so that you can get out that way. Sined: Derek Muriel and Sam."

Mrs. Montagu stuffed her handkerchief in her mouth and left the room in some haste. Her husband followed her in mystified surprise.

Derek strolled over to the window, and was about to close it, when his eye lighted upon a sooty hand-mark on the sill.

"Crumbs!" he gasped, beckoning wildly to Sam and Muriel. "Come and look at this. Father Christmas did read our note!"

Tele-What-Next!

MARMADUKE had Christmas dinner. Then Marmaduke had that overfull feeling. So Marmaduke went up to lie down.

But the receiver downstairs wouldn't let Marmaduke sleep. So he lay and thought.

Now, when a genius has daydreams, it is apt to alter the history of the world. If George Stephenson hadn't started wondering why boiling water makes the kettle lid waltz, it is possible that we should have no 8.15 to take us up to work every morning.

So why be sceptical about the suggestion that Marmaduke's little attack of indigestion was responsible for changing the future of all of us?

At first, Marmaduke's thoughts were merely bitter, just like those of an ordinary person. He simply repeated to himself a number of variations of the idea: "Confound that blooming wireless!"

But this was only the starting-point for his extremely active imagination.

"If only that was television instead of tele-noise," he mused, "it wouldn't be such a confounded nuisance when I want to have a nap!"

But then he remembered that silent pictures are things of the past. So, cursing this noisy modern selfishness, he puffed mentally at his spark of genius.

"If only I hadn't eaten all that food, I shouldn't mind the noise from the set, because I shouldn't want to have a little snooze," he pondered.

"Why do I eat food?" he asked himself.

"To supply myself with energy," he answered, with the prompt intelligence which always delighted him when he answered his own questions.

"Couldn't I get the energy without eating the food?" he continued. "After all, radio is a

form of energy. Couldn't it be picked up by the proper apparatus and passed into our bodies in a suitable form? Why not have tele-energy instead of food?"

But then he remembered that he had had additional reasons for eating his Christmas dinner. He did not eat just to keep alive. He ate because he enjoyed doing it.

"But, anyhow," he reflected, "food tastes nice only because it tickles up my inside in an enjoyable way. Couldn't I tickle up my glands and things electrically so as to get the same effects? Why not broadcast Christmas dinners by teletaste, with a little tele-energy in with it?"

It occurred to him then that different people would want their glands tickled in different ways. He liked goose and boiled potatoes himself, but other folk preferred turkey and baked potatoes. Hundreds of stations, each broadcasting a different menu, would be needed to cope with all the varying tastes!

"Well, why not broadcast each single item of a meal on different wavelengths—turkey on one, goose on another, baked potatoes on another, Christmas pudding on another, various varieties of drinks on others, and so on? Each tele-eater could have a number of separate radio receivers. With no food to buy all the year, he could afford them. Then he could pick up one desired piece of food on each receiver and mix the electrical teletaste impulses before they passed into his body. The volume controls would ensure an ideal mixture for each of us. The man who liked his tea very sweet, for instance, would tune in an extra strong dose of the sugar-broadcast and mix it with the unsweetened tea which was coming from another station."

Marmaduke gave a shudder. For the melodious, but unwanted, radio sounds from downstairs had suddenly become definitely discordant. One of those advertising stations,

poaching on the wrong wavelength and spoiling its adjacent stations! Sordid commercialism interfering with the radio engineer's art!

Marmaduke snorted. Then from coherent thought he passed into semi-delirious nightmare. Possibly his indigestion was nearing its climax.

It seemed to him that he was sitting waiting for his teletaste Christmas dinner.

With a sudden moan he leaped up from the sort of electric-chair in which he imagined he was sitting. He tore off the contacts which were passing the teletaste impulses into his tongue. For his mouth seemed to be filled with an assorted flavour of turkey, goose, Christmas pudding, tea, coffee, beer, wine, sugar, salt, and all the other ingredients of Christmas meals.

This was monstrous! "We engineers arrange everything perfectly," roared Marmaduke, "and then these wretched commercial fellows spoil it all by edging in on their wrong wavelengths! They imagine, I suppose, that, by giving us a good teletaste dinner, they can bribe us into listening later to their talks about the excellence of their face creams and of their political aims! And they're so anxious that we shouldn't miss their dinners that we get half-a-dozen of them mixed up almost on the same wavelength!"

The noise of his roaring awakened him from his dreamy thoughts. But maybe those thoughts had already had time to alter the future of the world. For they had shown him the uselessness of taking radio science in hand. A genius, he now saw, must do work which cannot be interfered with by other people's foolishness!

So the world will now have to face a future which has no tele-energy or teletaste in it. For Marmaduke has decided that, with his genius and powers of imagination, he must earn his living by writing the sort of stories that H. G. Wells used to write—but better ones, of course!

R. A. S.



Outpost of Empire

By J. D. STRANGE



A DARK figure moved silently round the hut, feeling here and there among the packing-cases, empty bottles, books, and papers. There were two primitive beds in the hut, and the half-naked figure of the black man paused near one of the beds and, with a grunt of satisfaction, stowed an object away in his belt, a belt from which hung ostrich feathers, leaves, human hair, strange wooden ornaments, and other things.

Suddenly the native halted. A tall, broad-shouldered, booted figure appeared in the doorway. The newcomer's eyes narrowed as he looked the black man over.

"You are a long way from your people, O N'gola!" the Englishman spoke in the vernacular, his voice harsh, intimidating.

N'gola smirked in what was meant to be a conciliatory way.

"Lord," he said in the high-pitched voice of the Ijaw river people, "I was passing, and stepped in that I might talk with my lord N'temply."

Captain Miles Templeton crossed the hut and sat down on the bed, regarding the speaker through half-shut eyes.

"Doth a dog enter its master's home and search for a bone while the master is away?" he inquired softly.

N'gola's eyes flickered.

"Lord," he said, "there hath been no search!" His beady eyes dropped to the floor.

"No—?" the white man leapt from the bed and one hand swung out, plucking a revolver from the other's belt. He thrust the weapon under the native's nose. N'gola recoiled and the light of a great fear leapt into his eyes.

"Lord," he cried, his high-pitched voice having an almost womanish quality about it as terror took possession of him, "there be many enemies of my lord N'temply along the river, and I took the gun so that I might the better convince these enemies of their foolishness."

Templeton turned away, laid the revolver carefully on the bed, then swung back on the speaker. The next moment, numerous things happened to N'gola. They happened quickly, and within less than five seconds the Ijaw witch-doctor found himself reposing in the dust outside the hut, without being quite clear how he had got there. In the hut doorway the Captain studied the toe of his boot thoughtfully, and N'gola scrambled to his feet and departed in haste. The witch-doctor's face was not a pleasant sight.

* * *

The stocky Lieutenant rolled into the hut, and with a gasp of relief flung his topee across the room and ran a hand grimed with oil and grease through hair which showed glints here and there of pure auburn.

"Hullo, Templeton," he said, grinning across at his superior. "Been back long?"

The Captain grunted, without moving from his prone position on the far bed. "Ten minutes," he said, and waved a hand towards the whisky bottle. "Help yourself, Dane."

Dane did as he was bidden and sat down on the second bed.

"Skin off your nose," he said, and took a deep drink. "Ha—that's good. Met N'Gola of the Ijaw just now. The scoundrel looked as if he'd been conducting an argument with a traction-engine!"

Templeton's hard features relaxed for a moment.

"The skunk walked in here and lifted my revolver," he said. "But I spotted it just in time. I turfed him out—on his ear!"

Dane grinned. Then his rather boyish face grew grave.

"N'gola's a sneaky brute," he mused. "And this special December detachment work takes us far from the company. Hope he won't make trouble over this." Suddenly the speaker's voice changed. "Oh, I nearly forgot, here's the mail!" He tossed a packet of letters across to Templeton.

The Captain looked the letters over idly.

"Bills—bank—subs.—that old devil Fotheringay writing again—oh, lord—can't a fellow get away from it even in the African river country?"

Dane chuckled, and opened a letter himself.

"Ought to marry, Cap'n," he said. "Let the wife hide the bills from you. Marriage is a great—Hullo!" a sharp whistle came from the lieutenant's lips. "Just listen to this. The pup's got into the Fifteen and I'm going to hear him sing!"

"Eh?" Templeton looked at his brother officer as if he thought the sun had caught him.

"Sorry—" Dane hastened to explain. "The son and heir has got into the school rugger fifteen and is also singing in the permanent boarders' concert which is being given on Christmas Eve. And it's Christmas Eve to-day—if you take me!"

"I get the main facts, but I still don't understand the statement which went: 'I'm going to hear him sing,'" said his superior.

"Simple," observed his friend. "These Christmas celebrations are unique; the boy's singing solo; and the BBC are relaying the concert. I shall listen to the relay through the jolly old short-wave receiver, N'temply, my lad!"

Templeton regarded the paternal enthusiast wearily.

"You will, old man," he said. "If the signals don't fade, if the loudspeaker doesn't break down, if the batteries don't die out, and if—"

"Everything's in apple-pie order, fortunately." Dane had risen and, despite the appalling heat of the hut interior, was busily engaged sorting out a nest of wires which draped a box resting on a packing-case near his bed. At that moment, however, there came the pad of bare feet in the dust outside, and a tall native entered. The man's build, his intelligent,

fearless countenance, proclaimed him no member of the womanly Ijaw people or their immediate neighbours, the Nupé, but a runner from the Haufa tribe further up-stream.

"What is it, O man?" demanded Templeton brusquely.

The runner raised his spear in salute.

"Lord," he said. "Umdula bears a paper from the lord M'loki from up the river."

"Note from Lockwood?" The two Englishmen at once showed interest. Templeton took the missive the Haufa held out to him, and read it. "The Commissioner wants a report on that trouble last week with the Nupé, and orders you, Dane, to take it to him at Wangala in person."

"Oh, I say—at once!" Dane groaned heavily.

"Privilege of working on Outpost of Empire." Templeton's irony was almost a sneer. "Fraid your little date with your radio's off," he added, then turned to the Haufa. "It is well, O man, you may go."

The runner saluted and backed out through the doorway.

Dane rose and taking his Sam Browne belt from the wall, buckled it on over his khaki shirt with savage movements of his fingers. Suddenly, however, his face cleared.

"Got it!" he cried. "The Chief runs a radio, too. I'll be able to listen to-night, after all! You can listen here, old lad."

"Thanks," Templeton lay back on the bed and closed his eyes. "I hope the belly of 'Boanerges' doesn't fall out before you reach Wangala."

"Won't do that." Dane was stuffing papers into a haversack. "I tied the lad's petrol tank to the frame with a pair of your braces! Cheerio, N'temply—fifty miles to Wangala—back to-morrow for a spot of carol and some dear old Christmas pud!" and before his Captain could demand the return of his braces, Dane was out through the door. A few moments later he was rattling across country which would have tried a tank, seated astride a motor-bike whose open exhaust and many rattles made its approach audible from incredible distances.

* * *

It was dark. Had been dark for hours. Templeton fiddled clumsily with the short-wave receiver—he'd never been able to manage the thing like Dane could—and muttered, and even cursed to himself as he did so. One got into that habit in the bush.

"Why I should want to hear Gudda's brat sing, Heaven only knows. Must be getting soft . . . old age. Uncommon proud of the kid. Probably be het up myself if I had a youngster singing over the radio—which, thank goodness, I haven't. Only fools mar—"

Something hard and round descended on the back of the Captain's head and his vocal musings ceased abruptly. When Templeton came round he discovered that he was lying on his bed, bound hand and foot. The hut seemed to be full of black figures, foremost among which was a native about whose

(Continued on page 16)

The Rat Invasion

By A. J. PETCH

FEW who heard it will ever forget the extraordinary message which interrupted the programmes from London Regional and London National at 5.20 p.m. on Christmas Eve, 1947. The dramatic suddenness of that message—and its almost unbelievably fantastic portent—had a startling effect on those who chanced to be listening.

Let us recall the scene. In thousands of homes Henry Hall's tea-time dance music flowed rhythmically from the loudspeaker. In yet other thousands of homes the Children's Hour—with its irresistible appeal on the Eve of Christmas—had gathered enthralled youngsters round the receiver. Then suddenly and without warning both these programmes were interrupted. In their place came the even, serious voice of the Chief Announcer, saying:

"We have broken into the programme to give a message of grave importance to all inhabitants of London. Listeners who live in Greater London are earnestly requested to accept without question the seriousness of the warning I am about to give. It concerns the safety of every one of you. Here is the message: Enormous numbers of rats are over-running those parts of Central London lying near the River Thames. Their numbers are estimated at twenty millions, and they have already penetrated the streets on either side of the river for at least a mile. In spite of the active counter-measures taken by the police, the fire-brigade, and the military, it appears likely that they will penetrate farther into the suburbs. It cannot be stressed too strongly that these rats are extremely dangerous. We regret to announce that there have been many casualties already, and we must ask London listeners to remain indoors, and to keep their doors and windows shut until we are able to advise them that the present very grave danger has appreciably lessened. If you possess a telephone you are asked to pass on this message to your friends. But you are seriously warned that the streets of London within five miles of the Thames are likely to remain danger zones for many hours. Please stay indoors, until you are notified by us that the danger has abated. The authorities are doing everything in their power to exterminate the vermin, and hope to check and disperse them in the course of the evening. This message will be repeated every quarter of an hour, and any further information will be given as soon as it comes to hand."

Imagine the effect of this message on those who heard it. And then imagine the even greater horror of the thousands who were given no such warning, but suddenly found themselves in a nightmare. Probably no occurrence has so shocked the even tenor of London life as the great rat invasion. It was so unexpected, so inconceivably fantastic, and so tragic.

Christmas, 1947, promised to be the brightest and gayest and most care-free festive season for many a year. After the ominous tension and war-preparations of 1946, the summer of 1947 had at last seen Europe come to its senses. The great conference at The Hague—a real conference at last—had brought about the most extraordinary and wonderful reconciliation which

international politics had ever seen. Stalin had patted Hitler on the back, Mussolini had joked with Winston Churchill, and Laval had trotted about amongst the great men, scattering cigarette ash down his black coat and smiling like a friendly imp. As Winston Churchill broadcast to the expectant nation immediately on his return: "The miasmatic vapours of war have too long hovered over the marshes of misunderstanding. At last the fresh, clean wind of man's common sense has swept them away."

Yes, it promised to be a real Christmas. There was more money, more optimism, more genuine happiness everywhere. The millions of Greater London invaded the West End, and the brilliantly lighted streets and glittering shops were filled with an eddying, cheerfully impatient



throng of last-minute shoppers on that never-to-be-forgotten Christmas Eve, 1947.

Possibly some of those care-free shoppers had read stories of the lemmings, the strange Northern rodents which suddenly and unaccountably draw together in regiments and battalions—thousands—millions of them—and move irresistibly and like a tidal wave across the countryside. Now they were to experience a similar tidal wave, but a far more dangerous one. For the rats of London were on the move. Up from the drains and the sewers and the docks of London they came—an army of 20,000,000 rats sallying forth from the shadows of their underworld towards the spaciousness of Central London.

Possibly the first victim of the rat invasion was a police-patrol. As Big Ben struck five a police launch was steering down the river between Charing Cross and Waterloo Bridge. On the Embankment the headlights of passing cars shone like a stream of swift glow-worms; but all was quiet on the river. Suddenly the bows of the launch bumped into an obstruction and came to a sudden, lurching stop. One of the three officers immediately switched on the

tiny searchlight mounted in the bows and, to employ the words of P.C. Albert Jelks, which were to become history amongst his immediate circle of friends, "the blinking river was alive with rats."

The police launch had struck the vanguard of a solid mass of rats swimming strongly from the Southwark side towards the Embankment. The three horrified officers saw only a heaving multitude of sleek backs. It was as if the familiar grey-brown surface of the river were covered with a living carpet, and countless little eyes gleamed viciously in the yellow beam of the searchlight.

The quick-wittedness of Sergeant Dawes saved the three police officers. At the first appalling glimpse of the rats he sent the launch into reverse. Then he put her straight for the steps by Cleopatra's Needle at full speed. But it was only because they had struck the vanguard and not the solid mass of the rats that the three men got to the Embankment before the invaders and, abandoning their launch, ran up the slippery steps to give warning.

But they were too late. As they reached the Embankment pavement the first rats were mounting the steps behind them, and almost simultaneously the invading army was pouring into Central London from all parts of the river between Vauxhall Bridge and Blackfriars.

One moment the Embankment was a busy scene of swift-moving traffic. The next, chaos and tragedy took possession of it. Mr. John Griggs, a passenger on the top deck of a 33 tram which had just stopped at the stage before the Aldwych tunnel, is an eye-witness of the events on the Embankment.

"I was sitting," says Mr. Griggs, "reading my evening paper, when suddenly I heard a woman scream. I looked out—and I shall never forget what I saw. The Embankment was crawling with rats. They were coming up from the river like waves. Before you could say Jack Robinson the roadway was hidden under their running bodies. I saw a big Daimler coming at a good lick of speed from Charing Cross. Suddenly it seemed to skid and went right across the pavement and crashed into the iron railing of the Embankment Gardens. Below me four or five people, two women among them, were trying to get on to the tram. But the rats got them. One minute they were there, shrieking and kicking, the next they were on the ground, and the rats were all over them. I saw a policeman running towards the tram, kicking out now and then as if to shake off something that worried him. Something was worrying him all right—the rats. They got him about fifteen yards from the tram.

"About twelve of us gathered on the top deck, including the driver and conductor and three women. We were in a pretty sound position there. The rats could not get up the slippery sides; they could only come at us up the steps—front and rear. But even then we had all we could do to save ourselves. I must have killed hundreds. They came in solid masses up the stairs, and we took it in turns to stand and kick them down again until we could hardly stand for weariness. Some of them kept on getting past us and behind us, and they were out for blood. You wouldn't believe how fierce they were—absolutely fearless. Kept leaping at you and trying to get their teeth into you as if they hadn't had food for a year. Well, that went on for an hour or two—but it seemed like ages.

(Continued on page 16)

THE RAT INVASION

(Continued from page 15)

Then things got easier. Less rats came up the stairs at us and finally we were left alone. But it wasn't until a bus with a guard of soldiers came along about nine o'clock that we dared leave the tram."

So much for Mr. Griggs's version. The same sort of thing happened all over London. The brunt of the invasion was, of course, borne by Central London. The great battalions of the rats penetrated as far as Oxford Street. But companies and patrols of them got much farther than these places, invading the streets of Hampstead, Peckham, Brixton, Bloomsbury, and Bayswater.

Practically all the casualties came with the first sudden overwhelming rush of rats. The slow and the infirm—those who could not get to safety behind doors and windows quickly enough—were pulled down and lost in no time. The police were wonderful, and their casualties were heavy. They did all they could to get people to safety, and lost their own lives in doing so. Perhaps the most heroic story of all concerns the defence of the plinth of Nelson's Column by four policemen, two taxi-drivers, and thirty-four shoppers of both sexes. Drivers and passengers in closed cars were in most cases safe. The rats could not get at them; but Mr. Griggs's story of the siege of the tram was repeated in just as dramatic a form in the case of hundreds of trams and buses.

For two hours the rats ruled Central London. In all the big shops frenzied crowds were held at bay, while the streets held no living human being except those besieged and fighting for their lives in bus, or car, or tram. Every building became a citadel, each with its epic story of desperate—and in all but a few cases successful—defence.

But then the resources of London began to bear down on the invaders. Organisation took the place of panic. The police, the fire brigade, and the garrisons from the Tower and the various barracks began the counter-attack. Fleets of armoured cars arrived from Aldershot and rushed to danger zones. Who will ever forget the sight of armoured cars roaring up and down Regent Street, crushing like steam-rollers the fearless but ineffective hordes of the invading rodents? Tear-gas was used with tremendous effect by the police and military, who also advanced to the attack with leather-padded clothes and heavy leather gloves, swinging clubs or iron bars until their arms ached.

These methods began to tell. Even an army of 20,000,000 begins to feel its casualties when every minute brings a massacre. From being invaders the rats became fugitives. The people of London themselves began to emerge from their fortresses, and grasping anything that might serve as a weapon, rushed in to complete the rout. For it became a rout. Cohorts of rats dwindled to regiments of rats. Regiments became companies. And companies were reduced to individual rats turning fiercely at bay in whatever corner they were hunted down.

By 9 p.m. Central London was clear; the sorry remnants of the invaders had scuttled back to the underworld of the river whence they came. A shocked but victorious London began to look to its wounds and reason out the why and wherefore of the appalling episode.

Naturalists are still divided in their theories of the phenomenon which gathered together the millions of Thames rats and flung them like a fearful wave at the Metropolis. But there seems to be no doubt that it was a similar instinctive and irresistible urge as that demonstrated periodically by the strange lemming migrations.

(Continued in col. 3, page 22)

OUTPOST OF EMPIRE

(Continued from page 13)

waist hung eagle-feathers dipped in blood.

"My lord N'temply hath had a long sleep," cried N'gola, the Ijaw witch-doctor, shaking his spear so that the two skulls which hung from it rattled like castanets.

"A short sleep compared with the one N'gola will take very soon," Templeton told the native coldly. His head ached as though a hammer wagged within it but his senses functioned perfectly. He had summed up the situation in a glance.

"A cock croweth before it is taken for the Chief's Wedding Feast," quoted N'gola smugly.

"You plan my death?" It was a statement more than a question.

N'gola slapped his shrivelled thighs and cackled womanishly.

"My lord N'temply laid hands upon N'gola," he said and, strutting forward, struck the white man across the face with the leopard's tail he carried in his left hand. Templeton's eyes flickered, and the corners of his mouth went white.

"For that, I shall hang you from a very high tree, O N'gola," he said with icy deliberation. N'gola repeated the blow and those behind him wriggled their ash-smearred bodies and laughed in great delight.

"N'gola is a Great Man!" The witch-doctor beat his bony chest with his clenched fist. "My young men follow my greatness."

"A fool will follow a fool," Templeton quoted a native proverb, and a snigger of merriment was heard.

"Ohee!" screamed N'gola. "That we shall learn—for I have brought my young men here to watch the white man die!"

"My spirit tells me that death stalks in the shadow of N'gola," observed Templeton with conviction.

The witch-doctor looked taken aback. Then he recovered and, raising his spear, shook it again.

"What I shall do this night shall be carried through the land on the war-drums!" he howled. "And I, N'gola, shall be truly great. I shall be above all men!"

"That is true, N'gola," said Templeton with grim humour.

"Come," yelled the witch-doctor, turning to his followers. "N'temply shall die, but he shall not die too soon!"

A wild yell from his black-faced audience greeted this speech, and N'gola swung round to the bed. Bending down, he pulled away the shirt from the prostrate man's neck, and taking a little circular metal disc from the rags about his waist, he laid it on Templeton's exposed chest. Then he beckoned to one of his men, who stepped forward bearing a small brazier from which trailed a thin sliver of smoke.

"My lord is strong," cackled the witch-doctor. "We would see how strong he is!" Saying which, he thrust the haft of his spear and one horn-like finger into the brazier, withdrew a glowing fragment of wood, and dropped it deftly on the metal plate which lay on his victim's chest. He repeated the operation until there was a little pile of burning embers on the plate.

"It is said among the Ijaw people that my lord N'temply hath a cold heart," laughed N'gola. "I would warm it for him!"

Templeton shut his teeth, and his breath began to come slowly, then more rapidly. Already the glowing fragments were beginning to heat the metal plate on his chest. Presently the heat grew intense. N'gola watched his victim like a hawk.

"You will die for this, N'gola!" Templeton rapped out suddenly.

"He, he, he—the white man burns!" N'gola laughed gleefully. One of the men

behind him began to shout, and soon the others were shouting, too.

Templeton's face grew deadly pale. The metal plate on his chest was like a ball of fire. The urge came upon him to scream, to shout, to beg for mercy. But his lips remained shut. A look of disappointment crossed the witch-doctor's face.

"N'temply is still cold," he sneered, and took more pieces from the brazier, setting them on the metal plate.

Agony swept over the doomed man in an all-enveloping cloud. His lungs, his chest, his whole body was on fire! Suddenly he opened his mouth to scream—the urge could no longer be checked. But the scream never came.

A shot rang out, and N'gola crashed forward on his face. Two more shots followed, and pandemonium broke loose within the hut. The natives rushed for the door, jostling and fighting like mad to get through. In an instant they were gone.

A moment later, Dane rushed in. Taking a leap over the witch-doctor's prostrate form, the stocky Lieutenant hit the metal tray from Templeton's chest with the barrel of his revolver. "Thanks—old—man," sobbed the Captain, and fainted.

Dane's good-natured face was white and frozen as he stared at the mark on his friend's chest. Bending down, he turned the witch-doctor over. N'gola opened his eyes. A bullet along the side of the head—a mere graze—had momentarily stunned him. Dane seized the man and dragged him from the hut. A stream of curses issued from the Englishman's lips, but he did not know he spoke. Presently he returned, empty-handed.

Cutting Templeton's bonds, he proceeded to do what he could for the burn on his friend's flesh. After a time the Captain opened his eyes. He moved—he flinched—

"I did what I could to take the sting out of it," said Dane gently. "Is it very bad?"

"Might be worse, old chap," whispered Templeton. "Why did you come back to-night?"

"Got to the Chief, handed in the reports, found his radio out of order, so belted Boanerges back to try and hear the nipper warble."

"I see." Templeton looked about him.

"Where's N'gola? I promised I'd hang him!"

"Your promise has been kept," said Dane curtly, and stared morosely at the wireless set. "My God, what a Christmas!"

Templeton regarded the other's back with a slight smile. He felt better now.

"Well—aren't you going to let us hear the son and heir?" he demanded.

"But I—well—I thought you wouldn't be able to—"

"Good lord, I'm O.K. now. I can stand a lot more than that."

"Then—you don't mind if I switch the thing on, old boy?" there was a great deal of eagerness in Dane's eyes.

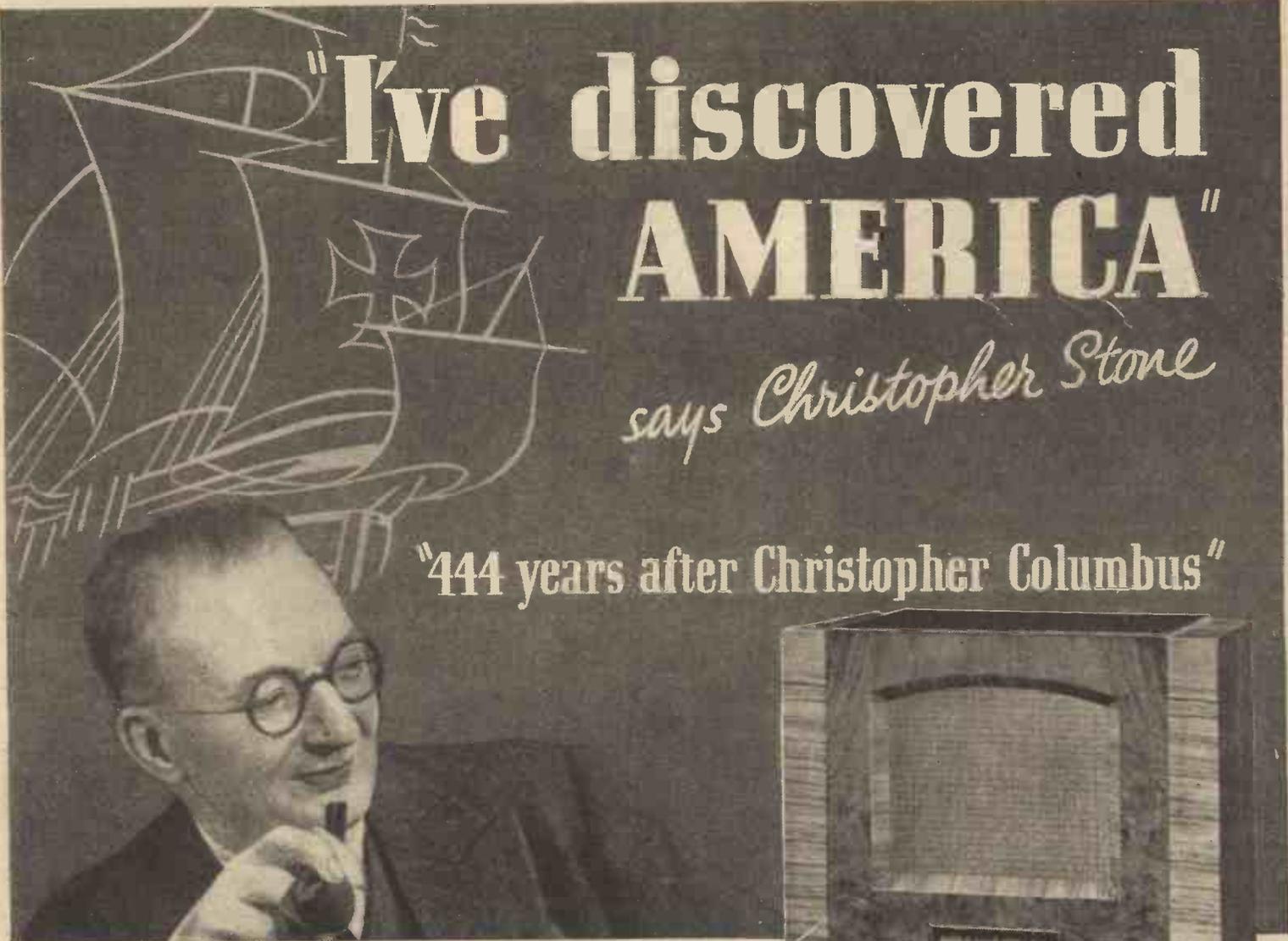
Templeton shook his head. "As a matter of fact, I was trying to get London myself when those thugs got me."

"No!" Dane grinned as he commenced to rotate the dials. "We've just got time, I think—" There was a pause, then, quite suddenly, crystal clear in the silence of the African night, a boyish treble filled the hut:

"Hark the Herald Angels Sing,
Glory to the New-Born King . . ."

Every note of the carol rang out clean and true, bringing to the two exiles a smell of frost, the crisp crunch of snow underfoot and the crackle and warmth of a great log fire.

Templeton watched his friend's rapt face as the Lieutenant listened to his son's voice. Suddenly Templeton smiled. England—Carols—Christmas—Outpost of the Empire . . . there was no ironical bitterness in his face now.



"I've discovered AMERICA"

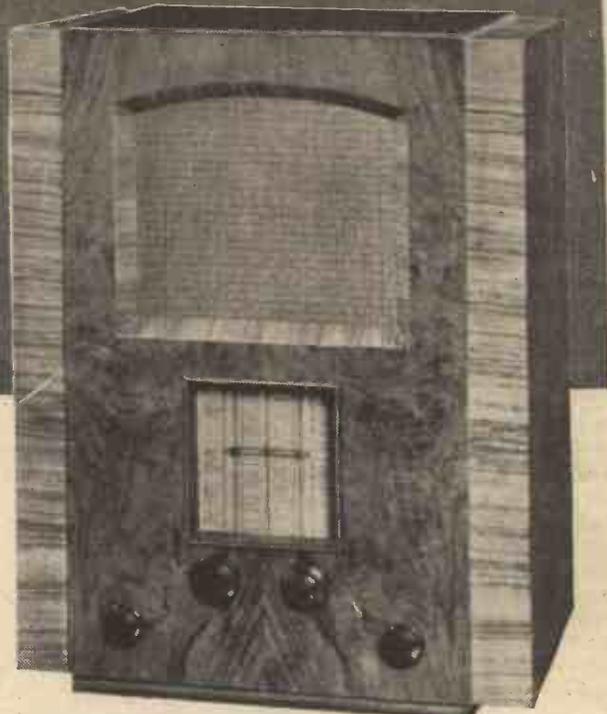
says Christopher Stone

"444 years after Christopher Columbus"

IF you remember your history you may recall that Columbus discovered America practically by accident. I've just done exactly the same thing. But whereas Columbus took something like 10 weeks to make his discovery, I made mine in about 10 seconds! And instead of turning a great big helm I twiddled a little knob! You see, I was "exploring" the SHORT wave-bands of this Bush All-Wave Superhet.

Besides giving you endless fun on the SHORT waves, this remarkable new model enables you to enjoy the consistently good reception of stations on the more familiar LONG and MEDIUM waves. So you can well imagine how surprised I was to learn that the set costs only 15 gns. You'd be surprised too—if you were to hear it!

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Plato on Broadcasting

The Director of Irish Free State Broadcasting, Dr. T. J. Kiernan, tired one night, had an interview in a dream with Plato, and remembered enough next morning to communicate this to the readers of WORLD-RADIO

If broadcasting is permitted to enter the homes of citizens, said Plato, it must be regulated so that the content of the broadcasts is good. The Egyptians, recognising this general truth, though not themselves concerned with broadcasting, standardised the best specimens of music and painting and all other arts, and consecrated them in their temples; so that in 10,000 years the same technique was followed. Now, change for the sake of change, is senseless; change from less good to good is indeed desirable; change to bad is deplorable. The canonisation of art forms means what we call laying down canons of art. The craving for novelty can be permitted to satisfy itself with change and experiment so long as the entire body of citizens is educated to appreciate the canonised forms of art.

The first aim of the broadcasting organisation, then, I take it, he said, is to detect the right forms and types of music and other aural arts to offer to listeners; and, after that, to systematise the broadcasts so that the listeners may feel pleasure in the national programmes constructed on this plan, and pain with the less wise, less healthy programmes transmitted from foreign countries.

Broadcasting is primarily entertainment and that programme receives the palm which gives most pleasure and enjoyment to listeners. But the tiny children enjoy certain programmes, the bigger boys others; the cultivated women and youths others; and old ones, like ourselves, have our quieter, finer tastes. Which of all these groups is the Director of Broadcasting to set himself to please? That—may I take it?—is our next question.

It would obviously be impossible to please all listeners all the time. Are you then to imitate the practice of other countries by introducing Children's Hours, Women's Hours, Unemployed Men's Hours, Hours for the Religious, Hours for the Highbrow, and Hours for the Browbeaten? Clearly, you will agree, chuckled Plato, that is an illogical compromise for which your nation has little aptitude. The best music, the best talks and drama and variety are, let us say, such as please the best men, men of goodness and wisdom.

Pseudonymous Letters

But wisdom and goodness are not enough, unless fortified by courage; else, the wise good man is intimidated in his judgment by popular clamour, letters received at the Broadcasting Station from "Pro Bono Publico," "Distressed Listener," "ros. Wasted;" and he is in grave danger of learning from such anonymous listeners when, in truth, provided his standards have been chosen with care and he is a good and wise and courageous man, his duty is to repel performers who seek to give pleasure to listeners in improper ways. The choice is between leaving the judgment to the listeners—and we have already shown how varied are their tastes—and, on the other hand, training them by good and varied programmes to take pleasure in what is good and pain in what is bad.

Music is sweet concord, and songs are spells for souls; but they must be based, in their composition and interpretation, on noble conceptions. We speak of good music and bad music when we should speak of right and wrong music. In order to judge a composition or a production of it, the judges must know the purpose of the production, the image or reflection it is intended to portray to the imagination

of the listener. If a painter makes a likeness of a human being, the observer must know, if he is to judge it properly, first that it does represent a human being—not always, in much of your modern art, an easy accomplishment; then having satisfied himself that the artist intended to represent a human being, and not a dying sunset or the genesis of the human race, he must be qualified to judge the correctness of the representation; and finally, how well it has been portrayed. It is so with the compositions of musicians. The judge must know what is being reproduced, how correctly, and how well, in melody, language, and rhythm.

The broadcaster, then, must possess, or have about him colleagues who possess, these qualifications. It is perhaps best, added Plato, that Directors of Broadcasting should not themselves possess any such specialised qualifications, but should be helped in the different programme sections by expert judges of music, drama, variety, literature, news, and sport. So will a commonwealth of wise, good, and courageous men be fitted to undertake, to the benefit of the citizens, the duties of broadcasting.

But, said Plato with a sigh, what is ridiculous is less reprehensible than what is erroneous and immoral; the animal noise of crooning, less melodious than the voices of the pigeons which sit outside your bedroom window here; the imitations of machinery and other noises by "effects" records; the senseless exhibitionism and confusion of many modern composers; the playing of themes based on the music of slaves and bondsmen, called hot jazz; the broadcasting of effeminate music. This may be popular, but is in the worst taste; and those citizens who enjoy it are not good through any ideal of goodness, but only because of fear and hypocrisy, and may be trusted to fall to evil practices when unwatched.

Importance of a Good Cellar

The function of broadcasting is to charm listeners into virtuous ways of living and thinking. Now, you will agree that the older citizens, especially those so old that the fire which leads to sin is dead in them, are the most virtuous. But diffidence as well as virtue increases with old age. It is difficult to persuade elders to sing. For these, Dionysus grants the stimulus of the wine-cup, as a pleasure for advancing years, to ward off the dryness of old age and to give forgetfulness. The Broadcasting Directors should, then, keep always a well-filled cellar of the oldest and most mellow wines, and engage choruses of old and virtuous citizens to render songs, reminding them, through the Announcer, that their audience is only in reality one listener; because all of the listeners can be reduced by an easy process of argument to one. Have then a Drinking Chorus of elders attached to your Athlone, Dublin, and Cork Stations; and as the songs grow noisy, when the drinking goes to greater bounds, what then should you do? Why, insist on young Announcers and forbid them the use of wine, since you think too highly of their fiery, passionate temperaments to feed their bodies or souls with an artificial current of fire, unneeded by any Announcer who is fit for his high art. By setting the sober Announcers to guide the unsober broadcasters, as sober Generals give rum to their men before sending them over the top, will not broadcasts be merrier, and international relations be based on friendship rather than, as to-day, on enmity?

TELEVISION PROGRAMMES

Frequencies—Vision: 45 Mc/s; Sound: 41.5 Mc/s.

THIS WEEK THE MARCONI-EMI SYSTEM WILL BE USED

At the close of each afternoon programme a chart arranged in co-operation with the Air Ministry will forecast the weather.

MONDAY, December 21

- 3.0 p.m.—Programme Summary; Christmas Toys.
3.20—News Reel.
3.30—Joan Luxton's Children's Theatre Company with The Television Orchestra Trio. 4.0—Close.
9.0—Programme Summary; See 3.0.
9.20—News Reel.
9.30—Scenes from "Murder in the Cathedral," by T. S. Eliot; Cast includes Robert Speaight, Guy Spaul, G. R. Schjelderup, Norman Chidgey, E. Martin Browne. 10.0—Close.

TUESDAY, December 22

- 3.0 p.m.—Programme Summary; Vivienne Brooks (Songs at the Pfte.) and Van Dock (Quick Fire Cartoonist).
3.10—News Reel.
3.20—Royal Institution Lecture by G. I. Taylor, F.R.S.
3.35—Film: "Morocco."
3.45—Animals All! 4.0—Close.
9.0—Programme Summary: Nancy Logan (Songs at the Pfte.).
9.10—See 3.35. 9.20—See 3.45.
9.35—News Reel.
9.45—Starlight: Bebe Daniels and Ben Lyon.
10.0—Close.

WEDNESDAY, December 23

- 3.0 p.m.—Programme Summary; Guila Bustabo (Violin). 3.15—News Reel.
3.25—Elsie Carlyle (Pfte.), Ken Harvey (Banjo), Gaston Palmer (Juggler); The BBC Television Orchestra. 4.0—Close.
9.0—Programme Summary; See 3.0.
9.15—News Reel.
9.25—See 3.25. 10.0—Close.

THURSDAY, December 24

- 3.0 p.m.—Programme Summary; Bransby Williams as "Scrooge." 3.15—News Reel.
3.25—Interval, Time, Weather; Christmas Party; The BBC Television Orchestra.
4.0—Close.
9.0—Programme Summary; See 3.0.
9.15—News Reel.
9.25—Interval, Time, Weather; See 3.25.
10.0—Close.

FRIDAY, December 25

- 3.0 p.m.—Programme Summary: The Christmas Turkey—a demonstration of Carving by B. J. Hulbert.
3.15—News Reel.
3.25—"A Lonely Christmas in the Arctic," by Edward Shackleton.
3.30—"Picture Page" devised by Cecil Madden.
4.0—Close.
9.0—Christmas Carols—The Singing Boys from St. Mary-of-the-Angels Song School.
9.10—Film: A Seasonal Tour through the Empire.
9.20—"Some Unusual Christmases," by Commander A. B. Campbell.
9.30—News Reel.
9.35—Television Party. 10.0—Close.

SATURDAY, December 26

- 3.0 p.m.—Programme Summary; Bruce McLeod's "Punch and Judy"; Sutherland Felce (Conjurer and Comedian).
3.15—News Reel.
3.25—Variety. 4.0—Close.
9.0—Programme Summary; Bruce McLeod's "Punch and Judy"; Russell Swann (Conjurer and Comedian).
9.10—News Reel.
9.25—Cabaret. 10.0—Close.

TELEVISION

Television Production

Relationship with Screen and Stage

By DALLAS BOWER

TELEVISION is a hybrid of stage and studio; but before we can consider some of the many problems of the new craft of television production, it is necessary briefly to survey the manner in which a producer sets about his job,

over and above the normal theatrical planning, includes such vital technical work as the preparation of set-building schedules, shooting schedules (number of days allotted for various scenes, etc.), dress charts (clothes necessary for



The inn scene from the television production of Mr. Pickwick (Marconi-EMI process).

both in the theatre and cinema, his limitations and facilities, and, irrespective of personal methods (no single producer works quite like another), to appreciate certain conditions which always obtain in both cases.

Before a play or musical piece is staged the preliminary work, apart from anything on the stage itself, entails careful planning under the separate categories of casting, design, dressing, lighting, detailed work on script (such matters as action tempo, possible inflexions, timing, etc.), and sometimes a complete action plan in drawings or models. The time taken up for this varies with individual producers, but usually is not more than two weeks. Work in the theatre with the cast begins when these projects are decided, and, simultaneously with first rehearsals, start coming into being. The time allowed for the rehearsal of a modern play with cast is usually about three weeks. That is to say, for a play whose running time is three hours, production time is one hour per week or five minutes per day, assuming a five-day week and twelve-hour day. A play is not necessarily produced in five-minute "lumps," but for purposes of establishing a ratio of work done to time, we will assume it is.

For the production of a film—say, a subject of medium scope from the point of view of the resources required—the preliminary work is very much more complicated and detailed, and

actors to wear on certain days), property lists, and a "breakdown" sheet—a document which breaks down the continuity of the script into a form whereby it can be seen which widely dispersed groups of scenes take place in the same set and have, therefore, to be shot out of continuity. This work is handled by the assistant director, working in close co-operation with the director, and takes anything between three and eighteen days to complete according to the size of the production.

Shooting for a film of normal "feature" length (running one hour and fifteen minutes approximately) is usually scheduled for five or six weeks, according to the number of exterior location scenes. Assuming the script contains four hundred scenes, the thirty-six days allowed means that eleven scenes are shot each day, or approximately two minutes' screen time. But the screen time shot per day varies enormously with the type of work being undertaken, and the speed at which particular directors work. Ten scenes (or set-ups) per day, however, is considered a good

average; on the other hand, there are directors who are not happy unless they have done twenty scenes (usually, but not always, they are bad directors), and others who consider they have worn themselves out if they have succeeded in doing three. Intimate and emotional scenes take much longer than scenes of a broader and less intimate kind. Large crowd scenes, in the hands of a capable director, often take less time than a series of quite short, close shots of the star actor or actress.

In television practical working conditions for the actor are, on the whole, nearer to the stage; on the other hand, for the producer they are much nearer to the studio. Like sound broadcasting, television at present is a kind of journalism. Individual productions are really "leading articles," viewed from the aspect of a programme-builder who, in effect, is an editor in the broad sense. A daily programme is prepared much as an issue of a newspaper is prepared. In sound-broadcasting the problems are all entirely aural and with no precedent. But in television the wide panorama of work entailed in the visual half of the stage and screen production comes into operation. Now, it is axiomatic in theatre and cinema that what the spectator's eye sees is much more important than that which his ear hears. Let me hasten to add that by this I do not mean to excuse inaudibility of actors or any lack of proper attention to dialogue, music, or singing, but merely to make quite clear that which his *primary* value is the visual; without it there is no theatre and no cinema. This being so, by far the greater part of the producer's time is occupied with visual matters, and the work itself is more crowded with the *mechanics* of production than anything purely aural. Composition, grouping, gesture in relation to dialogue, lighting, are more mechanically complicated in the film studio than they are on the stage. The frame in which the action takes place is smaller; actors must come to positions very accurately; camera manipulation to suit action, and action to suit camera manipulation is a compromise which is inevitable in nearly every scene. Lighting, although monochromatic, needs a greater subtlety in adjustment and diffusion.

These same conditions apply in television, but with this singular and exclusive difference; in television there is no repeating a scene if it is wrong technically, histrionically, or for any other reason; rehearsals take place as they do on the stage, and once the show is in transmission it must run just as any "live," in distinction from mechanical, entertainment does in the theatre. It is in this that one finds the closest synthesis in television between theatre and cinema from a producer's point of view.



The Pearly King, Queen, and Prince of Blackfriars in "a picture page" television programme. (Baird process).

In a film studio most scenes are done at least twice, sometimes as many as seven or eight times. A tracking shot—that is to say, a shot which moves forward from a long view to a closer view or *vice versa*—always takes much longer to do on account of the mechanics being more complicated.

Elaborate tracking shots, known in studio parlance as “side tracks in three quarters,” “zoom backs,” “crane shots,” etc., take anything between four to thirty-six hours to do, according to the action involved.

Appreciating these facts, it will be understood that in television, where the camera technique must approach that of the film in operative technical efficiency, the production of a two-hour *daily* programme is very much more of an undertaking than might be superficially supposed. Rehearsal time is necessarily reduced to times far below anything comparable to achieve the same result in the theatre or the cinema. It is true that in these early days of the BBC service transmissions only a few original productions are taking place, the material consisting almost entirely of vaudeville entertainment, novelties, illustrated talks, existing ballets, and so on; in fact, *re-production* describes the producer's business more accurately when applied to this kind of programme material. Yet, where production mechanics pure and simple are concerned there is little between

re-production of a vaudeville act, and the production of a simple play or unambitious musical work.

All original work in the theatre or cinema naturally requires more rehearsal than merely the transference of existing material in one medium into [another, but the longer time needed, provided the work has been properly thought out on paper, is devoted to histrionics, the producer's most important and fundamental business. This can be, and usually is, done in a rehearsal room away from the stage or studio. There is no substantial difference between produced and *re-produced* programme material in the television studio where mechanics are concerned; for efficient work both need highly specialised attention of much the same sort. An example may be cited in the case of the television presentation of the BBC Dance Orchestra and the recent presentation of excerpts from the new opera *Mr. Pickwick*. *Primâ facie* the opera would seem to need more rehearsal time than the dance orchestra, but the rehearsal times were the same *in the studio* in each case. The opera had, of course, been in musical and preliminary action rehearsal in premises away from the studio, but the mechanics, when *planned*, needed no more time than those necessary for the dance orchestra doing a normal dance-tune programme. The chances are that a producer will

need to devote more time in achieving an efficiently-done piece of camera manipulation than the actual direction of the action which causes the manipulation to take place. Holding proper centre, keeping correct head room, and such-like details take some years of training in camera operation for film production. Considerable credit is due to the camera operators in the television service for the high degree of efficiency already attained; they work under the disadvantage of being asked by producers to do shots of such a kind in the short rehearsal time available as would make the most experienced film camera operators white with fury. This is not a matter of over-ambitiousness on the part of producers, but necessity in order to achieve the best effect and use the new medium to its best possible advantage.

In conclusion, a brief word concerning the actor—more popularly misnamed the artist, that word covering all categories of performer. In the film studio he has no audience; he plays to *one* individual, his director. And that individual can completely alter a performance in the editing of the film, and the good actor is very well aware of this fact. In the theatre there is the psychological “contact” between actor and audience, the give-and-take across the footlights. Something of this, which is an element in the quintessence of great acting, returns in television.

Television Topics

Television O.B.s—Women's Interests

By “THE SEER”

WHEN television was first mooted, the public, with the natural apprehensiveness that safeguards the race, imagined that it was just another scientific “horror,” enabling the few to see the many—a disturbing thought. Very soon, of course, it came to be realised that the boot was on the other leg—that television would permit many to see the few, that it would permit the eyes of the world to be focused on a given point, on things pleasant to look at and on events, at the moment of their happening. And, this being so, it is natural that one of the fondest dreams of workers in television should be to develop the “O.B.,” or “outside broadcast,” side of the art. In 1932, the Baird Company made a praiseworthy attempt to televise the Derby, and although the low-definition system then in use gave a very crude image with a picture frequency of only 12½ per second, it was possible to distinguish the blurred image of the winning horse as it passed the post. Recently the German television authorities had considerable success in transmitting scenes at the Olympic Games, using the intermediate film system on a mobile van. But it has been left to the BBC to make the first serious attempt at direct television of scenes in the open air. Since regular transmissions from the Alexandra Palace began in October, viewers have seen car parades, a tour of the North London Exhibition, golfing lessons, pony riding and jumping, sheep-dog trials, and enough other outdoor events to give a foretaste of the good things to come.

All these “O.B.s” have, of course, been confined to the very near neighbourhood of Alexandra Palace, short, flexible lengths of cable being the only link at present available between the Emitron cameras and the television transmitter. As time goes on, however, use will be made of coaxial, or high-frequency, cable, enabling great distances to be covered; it is also likely that use will ultimately be made of micro-waves to form a wireless link between the cameras and the nearest coaxial cable point. In the meantime, the BBC is fortunate in

having in Alexandra Park an ideal natural arena for all kinds of outdoor pictures. A fine belt of trees just below the terrace makes a splendid setting for games and “countryside” pictures, while, if the cameras are swung round, the Palace building gives a good solid background for pictures of a more intimate kind.

With only an hour at their disposal, and that comparatively early in the evening, the Television Production staff are not attempting a very ambitious New Year's Eve programme. There will, however, be a special celebration of the occasion during the last ten minutes of television in 1936—from 9.50 to 10.0 p.m.—with the Television Orchestra in support.

The first television “O.B.” after dark—and the most spectacular yet staged—took place on Saturday last, when anti-aircraft defence was demonstrated on the terrace of Alexandra Palace. Under by no means favourable weather conditions, two Emitron cameras, helped by some 24 kW of studio lights, taken out of doors for the occasion, gave a vivid picture of searchlight and gun crews at work before and during a mimic air-raid and gas attack.

Women's interests are not being forgotten in the compilation of

forthcoming programmes. On December 29, Mrs. Daisy Pain, who recently gave a successful demonstration of ironing in the television studio, will show how home washing can be carried out with a minimum of trouble. In a way that would probably be impossible in sound broadcasting, Mrs. Pain will explain how woollens can be washed without shrinking them, how to find grease spots on wet clothes, and how to remove stains.

Another “women's interest” feature will be seen on January 1, when beach fashions are to be shown. An entirely new fabric for women's bathing-dresses is to be shown for the first time in television.



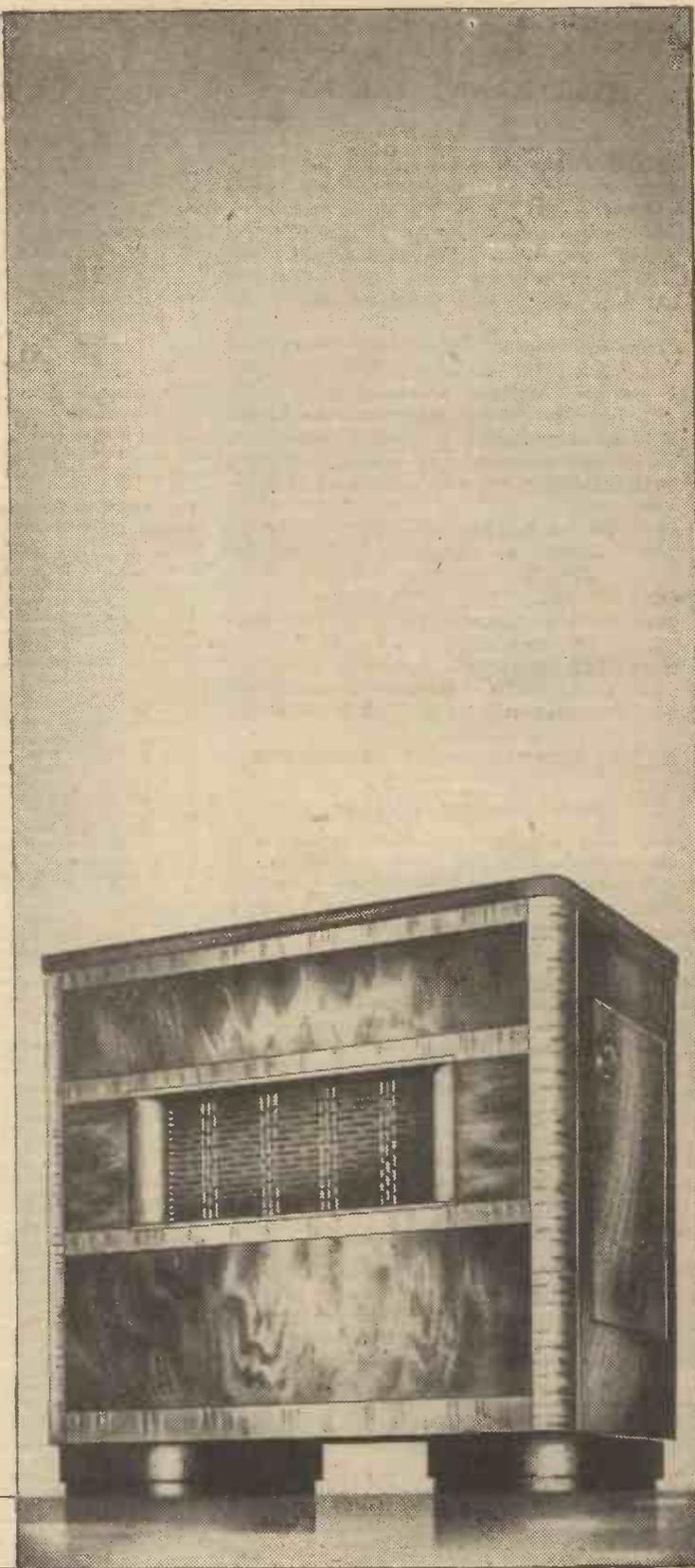
ANTI-AIRCRAFT DEFENCE.—The 31st (11th London) A.A. Brigade, R.A.; with two anti-aircraft guns, and the 36th A.A. Battalion, R.E.; with three searchlights, in co-operation with the Royal Air Force, staged a short action in repelling the attack of hostile aircraft on Saturday, December 12. (Marconi-EMI System, Alexandra Palace.)

U NCOMPROMISING and traditional quality of tone, performance and appearance, has made Marconiphone the first choice in Radio and Radio-gramophone entertainment. This quality is just as apparent in the inexpensive models as in the luxurious Radio-gramophone illustrated. Whether you pay 9½ guineas for an all-wave (3-waveband) table model or 38 guineas for the all-embracing 5-waveband Radio-gramophone, you will enjoy that same unapproachable combination of perfect musical reproduction and sound engineering. Indeed, there seems to be no good reason for accepting second or third best when a Marconiphone costs really no more. These Marconiphones are also identified, of course, with the most successful transmission and reception of Television. Marconi receivers are as clearly masters of *Television* as they have been of *Sound Radio* for over 40 years.

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Letters to the Editor

TRANSATLANTIC STATIONS

"The Snips"

SIR,—I imagine the reception of the "Snip" stations, mentioned in several of your correspondents' letters in recent issues, is not so unusual as appears to have been made out.

On the 28th ult., on Hilversum (301.5 m.) closing down at 11.40, WBZ came through at once, and gave perfect reception except for fading.

Thus encouraged, the medium-wave band was searched between midnight and 12.30 a.m. and no less than the following were easily logged and identified; many on the higher wavelength could have been made a proposition, but were hopelessly spoilt by bad atmospherics. All stations were at R8, with moderate fading:—

12.08 WCAU (Appeal by Mayor of Pa. on behalf of Christmas "Community Sing.")

12.15 WNAC.

12.25 WBT (Account of Army v. Navy football match).

12.35 WJZ and WOR.

After working the American Continent on short waves, this makes a pleasant change.

Yours faithfully,

St. Ives, Cornwall. J. W. SKELTON.

Annoyance by Wireless

SIR,—May I reopen a subject at one time much in evidence in the Press, but which has of late not been widely mentioned. I refer to annoyance by wireless. The reason which I assign for the loss of public interest in this matter is that sufferers like myself, of whom there must be thousands, are in despair of any redress. Complaints to the police give only a temporary relief, even if taken seriously, and in any case result in bad feeling among neighbours.

May I suggest that the BBC could do much to help its listeners by occasional references at news time to the effect that using wireless in such a way as to annoy others is illegal, and also to appeal to the better feelings of the culprits by suggesting that wireless at secondhand is an irritating sound which decent people would not wish to inflict on others?

Yours faithfully,

F. LUCAS MITCHELL.

Hemel Hempstead, Herts.

[Appeals to the listening public to exercise restraint in this direction have been made from time to time in the News Bulletins—particularly during the summer months.—Ed.]

ERRATUM.—Mr. R. T. Coales, in his letter published in last week's issue, included the station VAS among those of 1 kW. He points out that its power should be 2 kW.

THE CHRISTMAS-TREE

(Continued from page 4)

nothing whatever to do with Adam or the apple. The apples and other edibles which are hung on the tree in Germany are a true modern continuation of the old heathen symbols of fecundity—a kind of sacrifice offered that the coming year might bring fruit and food in abundance. In some parts red-checked apples and candles are the only decoration, in others an angel is at the top of the tree, and it is heavily laden with glittering decorations.

In modern times it is the custom in Germany and other countries to erect big trees on the public squares of the cities and in the railway stations so that all may partake of a Merry Christmas.

A. A. G.

LISTENERS' QUERY SERVICE

Which station was that?

The Alternative Postal Service

In addition to the free service of "Which Station Was That?" printed in these columns, replies to station identification 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."

Time of Reception

The identification of stations will be greatly facilitated if readers, in answering the first question in the Identification Coupon, will always add a.m. or p.m. to the hour of reception—e.g., 12.5 a.m. to indicate five minutes after midnight.

LUXEMBOURGIAN (Banstead): Possibly Leningrad. R.E.M. (N. 17): (1) cannot trace in lists, but presumably Lima (Peru); (2) PPZ (16.52 m.); PPH (25.15 m.), both at Sepetiba (Brazil); (3) XOD, Shanghai (50.42 m.); (4) WEM, Rocky Point (N.Y.), 40.54 m.; (5) WCB, Hicksville (N.Y.), 19.26 m. FINSIN (Derby): If your call is correct, possibly CB106, Santiago (Chile), 1 kW., on 282.8 m., but it might also be CP4, La Paz (Bolivia), Radio Iliamano, on 288.4 m.; the airlines from La Paz and Santiago to London are approximately 6,220 and 7,230 miles respectively. NEWNU (Lee-on-Solent): TIRCC, San José (Costa Rica), last reported on 45.8 m.; the call is: *Radioemisora Catolica Costarricense*. C.H.A.R. (Derby): COCX, Havana (Cuba), on 26.5 m. WINKLE (Dunham Massey): Apparently HJ4ABL, Manizales (Colombia), 6.07 Mc/s; interval signal recorded is 4 chimes. DOPEY (Dublin): PLP, Bandoeng (Java), 27.25 m. GIARC (Glasgow): Probably GBB, Rugby (22.08 m.) or GBU, Rugby (24.41 m.). INST. ENG. (New Motion): W9XAZ (pronounced zee), Milwaukee (Wis.), relays WTJM, Milwaukee, on 31.6 Mc/s. BUN (Bingley): PMN, Bandoeng (Java), 29.24 m. PATROL LEADER (Brighton): Suggest Frankfurt-am-Main, night concert, G.M.T. 23.00-01.00. EDSOME (Canterbury): Spain has recently adopted a number of new frequencies which have not been officially allotted and, in consequence, are not in lists for that country; EAN is a call-sign of Aranjuez-Madrid. AULD KILLIE (Kilmarnock): CJHX, Halifax (Nova Scotia), on 6.11 Mc/s. SEARCHER (Heaton): ORK, Ruysselede (Belgium), on 29.04 m. GING (Swansea): GWMS, Manchester City (Manchester Liners); cannot say where the ship was at the time. SIKO (Portsmouth): (1) PKYDC, Batavia (Java), on 19.8 m.; (2) W2EAR is the call-sign of an amateur experimental transmitter at Brooklyn (N.J.). W.B.P.W. (Torquay): (1) PMC, Bandoeng (Java), 16.54 m.; (2) COCO, Havana (Cuba), 9.75 Mc/s; (3) LSX, Buenos Aires (Argentina), on 10.35 Mc/s; (4) RAN, Moscow (16.3 Mc/s), 15 kW.; (5) B. Groom, 157, Wood St., Galashiels. SCHOOL BOY (West-cliff-on-Sea): LKJ1, Jeløy, relaying an English lesson broadcast in the Oslo programme. BRUMMY (Birmingham): (1) W8XAL, Cincinnati (49.5 m.); (2) yes, Vienna, OER3, on 25.42 m.; (3) possibly UGG, Madrid, 30 m.; it is run by the General Trades Union of Spanish Operators. BARBARA (North Bersted): WNA, Lawrenceville (N.J.), on 32.72 m.; works with Great Britain. SMUDGE (Forest Hill): YV11RB, Bolivar City (Venez.), 45.84 m. WASP (S.E. 27): Regret, cannot trace. BLANKIE (Antwerp, Belgium): Either GBU (24.41 m.) or GBS (24.69 m.), Rugby, relaying a talk to the U.S.A. ECNALL (Lancing): (1) COCO, Havana (Cuba), 30.77 m.; (2) regret, cannot trace. NEW TIMES (Peckham): DGR, Nauen (Germany), 17.30 m., 7.2 kW.; directional aerial for South America; HJ4ABD, Manizales (Colombia), 49.10 m., G.M.T. 01.00-03.30; JVN, Tokio (Japan), 28.14 m., now replaced by the new 50 kW. stations: G.M.T. 19.00-20.00; RW96, Moscow, 19.76 m., Sundays: G.M.T. 18.00-19.00; TIRCC, San José (Costa Rica), 45.8 m., G.M.T. 16.00-18.00 and 00.00-01.00 daily; 22.00-02.00 (Thursday); 15.00-24.00 (Sunday). SPARROWSEED (Edgbaston): WNA, Lawrenceville (N.J.), 32.72 m. RUSSELL (Blyth): Proprietary names must not be used as *noms de plume*; PK1DP, amateur transmitter at Batavia (Java). JACK (Dublin): (2) too vague; regret, cannot trace; (3) if wavelength correct, Seville (410.4 m.). PIEFACE (Hull): Cannot trace in published programmes; there are a number of small Spanish stations around this wavelength, but transmitter cannot be identified from details given. J. S. S. (Skipton): If above W2XAF, Schenectady, WNA, Lawrenceville (N.J.), 32.72 m., which was used as a check channel by the operators in the relay from London to New York; the talk was fed back to London through WNA for the purpose of checking quality.

Broadcasting House, London, W.1. The 1937 Edition of the "Radio Amateur Handbook" will be available shortly, price 5s. 6d. post free, from the above address.

Esperanto Transmissions

Sunday: Lille, 9.40 a.m. Leciono kaj Parolado. Leningrad (1,293 m.) 9.20 p.m. Koncerto: Soveta Esperanta Poezio. Monday: Vienna, 2.40 p.m. Course. Sottens, 5.30 p.m. Elementa Kurso. Radio-Lyons (215 m.), 6.30 p.m. G. Pouchet: Course. Tuesday: Moravská-Ostrava, 5.0 p.m. Rilatoj inter Ĉeĥoslovakujo kaj Pollando. Hilversum (1,875 m.), 6.20 p.m. Kurso kaj Rakontoj. Tallinn, 7.0 p.m. Informoj pri Estonio. Rio de Janeiro (31.58 m.) 10.30 p.m. Oficialaj kaj Esperantistaj Informoj. Wednesday: Paris (PTT), 2.0 p.m. Course. Barcelona (41.72 m.), 8.10 p.m. Informoj pri la Hispana Milito. Leningrad (1,293 m.), 9.50 p.m. Kollozoj de la Leningrada Regiono. Thursday: Kaunas, 8.45 p.m. Informoj pri Litovujo. Friday: Leningrad (1,293 m.), 9.50 p.m. Politika Revuo. Vienna ĉirk. 10.40 p.m. Esperanta Servo por Eksterlando. Saturday: Hilversum (1,875 m.), 5.10 p.m. Esperantistaj Komunikaĵoj. Rome (medium and short-wave), 6.5 p.m. Turismolokoj de Italujo.

IDENTIFICATION COUPON (No. 410)

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. A copy of the answers should be enclosed with FREE queries. No coupon more than one month old is valid. A coupon is not required from readers living in countries outside Europe who desire identification of transmissions.

1. Time and date of reception.
2. Approximate frequency in kilocycles (or, for short waves, in megacycles) 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 signals.
7. Details of programme or signal received.
8. Name and address.
9. Nom de plume. (*Proprietary names must not be used.*)

THE MAN WHO HATED WIRELESS

(Continued from page 10)

that wireless set until it split into splinters of glass and wood? But before I could fire that damned music died away and by contrast the silence of death descended about these three unburied bodies, and then I became conscious of a faint rhythmic "tick-tick"—which apparently emanated from the set and, which, on examination, I found was caused by the clock of a time-switch. Evidently selected transmission times had been switched on daily since the travellers had met their death.

"Damned nasty thing, a wireless set," he said, and he spat out the end of his cigarette towards the place where the wireless had been standing.

THE RAT INVASION

(Continued from page 16)

Over 400 people lost their lives in the rat invasion: This was tragedy. But there is consolation in the knowledge that the rat population of the Thames was practically wiped out in a few hours. And even the diminished numbers which retired to their haunts were not left in peace. The L.C.C. became a tireless and ingenious Pied Piper in its efforts to exterminate every rat in London. Similar campaigns were pursued all over the country, and the nation now finds itself undamaged in health and in property by the foul rodents which for centuries have so mercilessly ravaged mankind.

No Londoner will ever forget the great rat invasion, and I, for one, never wish to hear again so strange a warning as that broadcast to the listening public on Christmas Eve, 1947.

AMATEUR TRANSMITTERS

The identity of amateur transmitters may be found in the "Radio Amateur Call Book." Orders for the Winter Edition (price 6s. post free), which will be ready in the course of a few weeks, may now be placed with the Publications Department, BBC,

Letters should be addressed to the Editor, "WORLD-RADIO," Broadcasting House, London, W.1. Letters intended for publication should be as brief as possible, and should always be accompanied by the full name and address of the writer, though not necessarily for publication.

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Christmas Fun with a Microphone

By A. W. BEATT

IN the world of entertainment the valve has brought about a revolution in the past fourteen years. In broadcasting, the cinema, and the theatre it is proving indispensable. In connexion with the latter, microphones may be hidden on the stage to pick up the voices of the actors, while loudspeakers project the sound, after amplification, into parts of the auditorium where it was previously difficult to hear. In many of the super-theatres of the present day the voices of the artists would be hardly audible in the more distant seats if it were not for the artificial distribution of sound. With a properly installed and correctly operated sound reinforcement system, used simply for the latter purpose, the audience should not be aware that such a system is in use. The loudspeakers should help the direct sound, but not replace or drown it.

The sound reinforcement system is put to other uses, however, by many broadcasting and variety artists, and an entirely new kind of act has appeared which depends for its effect on the skilful use of a microphone. An almost infinite variety of novel effects can be obtained by deliberately juggling with sound perspective with the aid of a microphone, in much the same manner as striking effects can be produced with a camera if the latter is moved from its normal position and used at close quarters and unusual angles. The crooner is a product of sound amplification—or sound “over-amplification,” according to one’s views on the matter—and microphone, amplifier, and loudspeaker are now part of the normal equipment of many dance bands.

Individual instruments in an orchestra can be accentuated by moving the microphone close to them, and instruments previously limited in sound output can now be given in “close up,” and can compete on equal terms with a brass band if so desired. These sound “close ups” are practically the equivalent of the photographic “close up” of the cinema, where the features of the players can be shown magnified to fill a screen twenty or thirty feet wide, so that their expressions are easily visible to patrons in the most distant seats of a super-cinema.

Home Broadcasting

Much amusement is to be obtained in experimenting with a “home broadcasting” outfit, particularly if the results can be used to amuse the guests at a party. The guests themselves may even like to try their skill as “Popeye the Sailor,” or some other screen, stage, or broadcasting star. Most listeners have available the principal requirements for a successful sound amplification system, since a receiver can be used as an amplifier and a spare loudspeaker as a microphone.

One might start by staging a fake broadcast, using another room as a studio, when a little mild leg pulling of the guests at the end of a programme made to sound more or less probable, would serve to “break the ice.” A loudspeaker extension line could be used as the connecting link to the “studio.” The latter could conveniently be a small room hung with curtains, the heavier the better, to deaden any echo. Competitions could be arranged in which the listeners were invited to guess who was speaking at the microphone, while that person did his or

her best to mislead them by imitating someone else or by speaking very close to the microphone.

As in normal theatre practice, the microphone and loudspeaker may be in the same room, when the performers can be seen as well as heard. In this case the loudspeaker and microphone must not be too close together, or a howl will be set up every time the volume control is turned up. The loudspeaker may be placed in such a position that direct sound from it cannot reach the microphone; that is, it may be just “out of sight” of the microphone behind a chair or screen. It is, perhaps, much more fun to have microphone and loudspeaker in one room, and it gives the performers an opportunity to introduce comedy by their actions.

Technical Requirements

As to the technical side of the matter, as already mentioned a wireless set with pick-up terminals provides the amplifier, volume control, and loudspeaker. The microphone may be a special one purchased from a radio store—there are some quite good ones available for about 25s. to 30s., though they are also obtainable



at prices varying from a few shillings to several pounds, according to quality of workmanship.

Alternatively, a microphone may be improvised from a moving-coil loudspeaker, which makes quite a good and moderately sensitive microphone, and if fitted with an input transformer the latter will serve also as a microphone transformer, and its primary terminals—which will now be its secondary terminals—should be connected to the pick-up sockets on the receiver. If there is no transformer fitted to the loudspeaker it will be necessary to obtain one.

Amongst the microphones obtainable commercially in forms suitable for amateur use are carbon, condenser, moving-coil and ribbon-type microphones. There are also obtainable outfits containing complete materials for the home construction of a microphone, and quite a useful “solid backed” transverse-current carbon model may be constructed without involving very much trouble. Carbon microphones are the most generally obtainable in cheap models, and they require a battery of about 4 to 6 volts and a microphone transformer. A grid-bias battery will serve for the former, as the drain amounts to only a few milliamps. Carbon microphones are sensitive, but are liable to give a varying amount of background hiss, depending on the quality of the microphone and other factors. Moving-coil, condenser, and ribbon

microphones give a silent background, but are not so sensitive.

The microphone will need to be mounted on some shock-proof stand, especially if it is to be handled much while in use. A usual method of mounting it is to sling it in a strong wire ring about two or three times its diameter by means of “catapult” rubber, the ring being mounted on a solid base or telescopic stand. The telescopic stands are most useful, but quite a cheap desk stand can be obtained or made up that can be placed on a pedestal at a suitable height.

Amplification Necessary

The amplification obtainable through the gramophone amplifier portion of a wireless receiver varies according to different makes, and more amplification than usual is necessary for the purpose in hand, so it may be necessary to interpose a stage between the microphone and the receiver if the former is of an insensitive type. A single-valve, or in the case of a very insensitive microphone a two-valve, battery-driven amplifier may be required. The H.T. voltage need be only 30 to 60 volts, and most home constructors will have the necessary components. An L.F. transformer may be employed to couple the output of the amplifier to the input of the receiver—i.e., to the pick-up sockets. The pre-amplifier may be resistance-capacity coupled to the receiver in most cases, if a transformer is not available, but the condenser in the anode lead should be a good one with mica insulation. In the case of battery receivers it may be necessary to apply grid-bias through the microphone or coupling transformer to the valve used as first L.F. amplifier.

The microphone leads should be kept as short as possible, especially with insensitive types. They should also be kept away from electric-light leads in case they pick up hum. A switch in the microphone circuit, or in the output to the loudspeaker, is a useful item, and may be coupled to a red warning lamp to indicate when the “mike” is “alive.”

PHASING LOUDSPEAKERS

WHEN two or more loudspeakers are worked in parallel in the same room they must be correctly phased; that is, the diaphragms must move in and out in step when a signal is applied. If the speakers are connected out of phase the diaphragm of one will be moving out while the diaphragm of the other is moving in, and one will tend to cancel the sound issuing from the other. When two speakers connected out of phase are working close together, the bass response will be much reduced and reproduction will sound rather “thin.”

It is an easy matter to phase the speakers correctly, since, in the case of two speakers it is necessary to reverse the connexions to one speaker only. In the case of a larger number of speakers the correct phasing may be found by trial, connecting them up one at a time.

There is, however, another and better method of phasing loudspeakers. If a direct current from one or two cells of a dry battery is applied to the speech-coil of a speaker, the connexions to produce a movement of the cone in a given direction may be noted. Thus, if the battery is always connected so that it causes the cone to move inwards, the wire connected to the positive of the battery may be marked with a red thread. When all the speakers have been marked in this manner, if all the marked wires are connected together and to one terminal of the output, and the other wires are connected to the remaining terminal, all speakers will be correctly phased. A flashlamp bulb may be connected in series with the battery and speech-coil to prevent an excessive current that might damage the latter. In the case of 15-ohm speech-coils a slightly higher voltage may be required to produce a visible movement of the cone.

B. A. M.

I Remember

By "DECIBEL"

It was a wild winter's night a few years ago, and the control-room at one of the broadcasting stations in the provinces was about to settle down for what was normally the most peaceful part of the day's work—the relaying of the late dance music from London. This was a job that could be done quite well by one engineer, for once the music had started it could be left to look after itself; and, apart from attending to occasional telephone calls from other control-rooms along the line, there was nothing for the engineer on control to do so long as music continued to pour forth from the loudspeaker used for checking purposes.

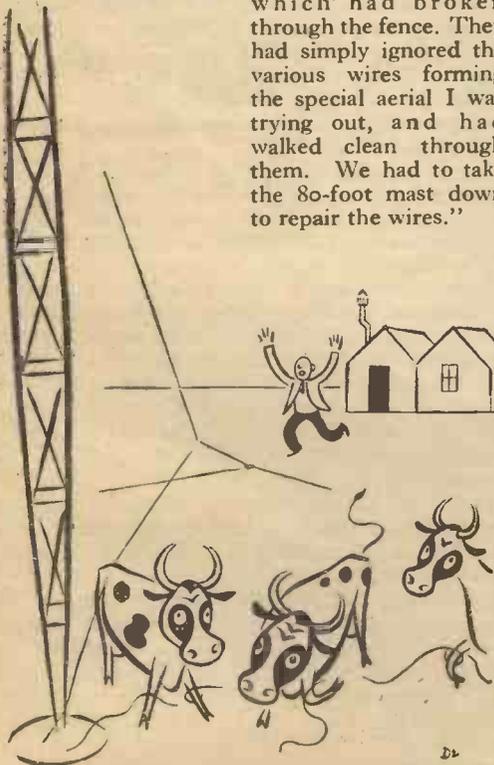
On this particular evening the late dance music was even more welcome than usual. The evening so far had been rather hectic; the programme had been a varied one, including broadcasts from the station's own studios and relays from other stations, and the lines to other stations had been badly damaged by the terrific gale which had been raging. There had been constant changing over of lines, and on several occasions the lines had failed completely. Wireless link had been used where possible, but conditions had not been good, and the station log contained more references to poor quality and breaks in the programme than a conscientious engineer-in-charge could contemplate with equanimity.

It was with some relief, therefore, that the engineers gathered round for a cup of tea in the knowledge that the lines were now behaving themselves, and that even if they failed, the wireless link was a reasonably good alternative.

"I only hope the cows won't get to the wireless link aerial, as they did once," remarked Brown. (That isn't his real name, of course.)

"When was that?" asked George, the youngest member of the staff.

"It was a year or two ago, when I was out at the receiving post doing some experiments with the receiver. I was sitting in the hut with a pair of 'phones on, and suddenly I heard terrific bangs and crackles in my 'phones. I looked out of the window and I saw a herd of cows which had broken through the fence. They had simply ignored the various wires forming the special aerial I was trying out, and had walked clean through them. We had to take the 80-foot mast down to repair the wires."



"They simply ignored the aerial wires . . ."

When the laughter had subsided Brown followed with another story.

"Talking of animals and wireless links," he said, "reminds me of another incident in connexion with our wireless link. We found one day that, when we switched on the receiver from the control-room, we got no signals, so I jumped into the car and dashed off to the receiving post. I soon found that the trouble was due to a break in the line between there and the control-room.

"I hadn't much time in which to do anything before we were due to use the link for a transmission to schools. In those days school broadcasts were done by wireless link, as Post Office lines were not handed over to us until six o'clock in the evening.

"On leaving the receiving hut, the line to the control-room ran along the bank of a deep ditch at the side of a potato field before reaching some poles, after which it ran overhead.

"I couldn't examine the portion of the line in the potato field, as it was buried in the ground, but about fifty yards ahead from the hut I found signs of excavations having been carried out in the ditch. I called to some people who were working in the field and asked them if they knew anything about these excavations. The reply I got set me to work in earnest.

"It appeared that a horse had fallen into the ditch earlier in the day and had to be dug out. I was informed that a cable had been encountered in the process and had been treated like a tree root and cut into little pieces. A hasty search soon revealed to me two bare ends of cable with a gap of about 10 or 15 ft. between them.

"Fortunately, I managed to find sufficient wire in the hut to bridge the gap, and I succeeded in making a temporary connexion just in time for the broadcast."

"We often had the same sort of difficulty during the War," remarked Smith, "but we hadn't stocks of wire in a convenient hut near by. When we found parts of our telephone lines cut to pieces by shell-fire, and there wasn't sufficient slack left to make the ends meet, we looked round for some lines belonging to somebody else, usually the artillery. Two snips with a pair of pliers and we had sufficient wire to mend our lines. That was all right until the artillery people came along to repair their own lines and returned the compliment by cutting a chunk out of ours."

"So that's how you won the War," said George.

"No cheek from you, my lad," continued Smith. "You ought to have been the fellow up the pole when we were just finishing running some overhead wires on one occasion. We had a lot of trouble in keeping our lines in repair owing to the large amount of traffic about—horses, lorries, and limbers—apart from shells, so it was decided to run them overhead on poles instead of along the ground as they had been. We were a few thousand yards behind the front line, so we thought our poles wouldn't be very conspicuous and would not be likely to attract enemy shell-fire.

"After considerable work we got all the poles erected without any interference from the enemy, and a linesman was up the last pole making the final connexions. Suddenly a shell came over and landed right at the foot of this pole. The pole and the wires collapsed, and, strange to relate, the wireman escaped unhurt. But it was the beginning of the end. The shells continued to arrive, and in about half an hour our overhead lines were a complete wreck."

At that moment the Engineer-in-Charge of the station looked into the control-room to see that everything was going on all right.

"What's this?" he said. "A family party?"

"We were just swopping yarns," replied Brown. "Have you any to tell us?"

"Well," said the E.I.C., "you remember the old woman who called here the other day to say that the wireless was troubling her, although she hadn't a receiver?"

"Oh, yes," Brown replied. "She complained of music running through her head all the time, owing to all these wireless waves that are knocking about. You advised her to connect a



"The programme was running loose in the garden . . ."

wire between her gas-ring and the water-pipe to short-circuit the waves, didn't you?"

"That's right," said the E.I.C., "and I've just heard that she has carried out my suggestion, and it has proved completely successful."

Howls of laughter greeted this information.

"Yes," continued the E.I.C., "and I can tell you something even more remarkable than that. Last night a friend of mine was connecting up a short-wave receiver that he had just finished making. He had a pair of 'phones on his head with the leads hanging down and not connected to anything. He was about to connect up the batteries to his receiver when he suddenly heard music in the 'phones.

"He made certain that his receiver was completely disconnected and couldn't possibly be working, but he could still hear music in the 'phones. When he found that the music continued as he walked out of the house into the garden, still wearing the 'phones, he thought it was time to send for me, particularly as the other members of the family had the same experience when they put on the 'phones."

"And did you hear the music?" asked Smith.

"I did," was the reply, "and it was quite loud. Very good reproduction of the National programme, in a pair of 'phones with their leads dangling free in the air."

"That's rather a teaser," said Brown. "Did you solve the mystery?"

"We did in the end, when I suddenly remembered that the rediffusion people supplied programmes to a lot of the houses in that particular neighbourhood. One of their overhead feeders had fallen down and was making contact with a wire fence. The National programme was running loose in the garden, and was sufficiently strong to induce audible signals direct in the telephones."

"I remember—" began Brown, but he was interrupted by Smith.

"Sorry to break up the party," Smith said, "but I must be off. I promised my wife to go straight home after coming off duty. If I miss the next bus you won't need even a pair of 'phones to hear the music at our house. Good-night, all."

THE SHORT WAVES

Short Waves on the North Atlantic

NOT everyone realizes that 50 per cent. of the radio traffic of a trans-Atlantic "express" liner such as the *Queen Mary* is handled by short waves. It was quite a long time ago, as radio history goes, that long waves (of the order of 2,000 metres) began to supplant the original 600-metre wave for long-distance working. Now the long waves in their turn are yielding to short waves. These waves have, however, one property which is often a great disadvantage. Their range is world-wide. The number of ships which are being fitted with short-wave installation in order that their owners may keep in touch with them in all parts of the world, is constantly increasing, with the result that the limited short-wave bands allocated to shipping are becoming very congested.

The main wavebands allotted to short-wave marine working are around 36, 24, and 17 metres, and if you can read morse you will be able to hear ships working around these waves almost any time. Also on the same bands, you will be able to hear such coast stations as WSL, WCC, WBF, WMR, and VBS on the American side, and GKC, GKT, DAN, PCH, and FFS on the European side.

It is generally possible to establish communication with the United States immediately on leaving England. Suppose we are leaving Southampton on a typical trans-Atlantic liner. After notifying the various local coast stations on 600 and 2,100 metres that we are leaving, we turn to the more serious business of raising WCC or WSL on short waves. Since it is a typical sailing we shall be leaving some time in the middle of the day, and under these conditions 24 metres is the wave we shall be using. Before we can call we must obviously hear the station we want, and so the next thing to do is to pick out WCC or WSL from the signals audible on the 24m. band.

"Raising" U.S.A.

It is not so difficult as it might sound. First, we have the receivers very closely calibrated, and secondly, each of these two stations, like many others, sends out a distinctive signal continuously, except when it is working to a ship with normal traffic. WSL's signal is probably the most distinctive. He sends "dit-dit dit-dit dit-dit"—groups of two dots—and his call-sign. It is a very easy signal to pick out and WSL is familiarly known as the "Galloping Major." Try the "dit-dit" signal over a few times and you'll see why! WCC's signal is more straightforward, consisting of a number of V's and his call-sign three times; the whole being repeated indefinitely. It may take five minutes or so of calling before we "raise" either of these stations, but we call and listen continuously, until the station we are after "breaks" us with a long dash and we then know he has heard us. After that it is just a matter of collecting from him any messages he may have and sending to him any that we may have for the States.

After "clearing" the States in this way we can often give the short-wave transmitter a rest. We do not need it for the English side, for we are close enough to work on 2,100 metres. There is no need to start up again until we have collected more traffic for the United States, or until we think WCC or WSL has collected some for us. We may have to start up if we have radio-telephone calls to England, but more of that later.

We are fairly certain to collect messages for the States after dinner—that is a very popular message-sending time. By this time darkness has fallen. Twenty-four metres is no longer possible and 36 is the wave to use. Once having

set up the transmitter on 36 metres we can feel pretty sure that we shall not have to retune it again until the morning, for 36 metres "stays good" all through the night. This wave reaches a "peak" just as dawn is breaking locally. That is the most suitable time to clear messages addressed *via* KFS and KOK—stations on the Pacific coast of the United States. It is also the best time to dispose of traffic to VIS, Sidney, Australia, for then he comes in at good strength for about three-quarters of an hour and will probably not be heard again during the day.

After this brief period of DX, signals fade away quite suddenly and the 36-metre wave is empty once more. So back we go to 24 m. and probably start the morning off by clearing WSL and WCC once more.

The days go on in that regular procession of conditions as we get farther across towards New



By courtesy of International Marine Radio Co., Ltd.

A small part of the radio control room of the "Queen Mary".

York, and the only change is when we leave England so far behind that we have to go to short waves to reach GKT (24 m. and 17 m.) and GKC (36 m.), both at Portishead near Bristol. The American stations become easier to raise until we find we can work them on 2,100 metres and after that short waves are used only for England and for the Pacific coast of America.

And so we pass Nantucket Lightship with its deep toned siren, and early in the morning we are lying at Quarantine just inside the "Narrows" off New York. And here we raise GKT and get the last of our English messages.

All the biggest trans-Atlantic ships—such as the *Queen Mary*, *Bremen*, *Normandie*, *Aquitania*, *Berengaria*, *Europa*, and *Rex*—are fitted with radio-telephone equipment which works on short waves. Thus, from a liner anywhere in the North Atlantic one may telephone to any part of the world. The ships, however, work to only two or at the most three of the nearest coast stations. The rest of the distance to be covered is taken care of by the normal inland and foreign telephone services. A British ship, for instance, will probably work to WOO, Ocean Gate, New Jersey, and to GBC, Rugby, England. A telephone call to Paris will go from the ship to Rugby's receiving station, from there to the International Telephone Exchange at London, and after that it is handled as an ordinary Continental call.

Dealing with telegraphy we spoke of the

36 m., 24 m., and 17 m. bands. In telephony the bands are designated in megacycles to avoid confusion with the telegraph waves. The main telephone bands are 4 Mc/s, 8 Mc/s, 13 Mc/s, and 17 Mc/s, corresponding approximately to 72 m., 36 m., 21 m., and 17 m. respectively. On leaving England we should use 4 Mc/s for English calls and we should have a very successful "circuit." For calls to America at this time we should probably find 13 Mc/s the best frequency.

Radio-Telephone Calls

With regard to English calls, a few more hundred miles out, and we are in a position where 8 Mc/s or 13 Mc/s will be better, according to the time of day. Eight Mc/s will be best in darkness and 13 Mc/s best in daylight. These conditions hold good for several days, by which time we shall be offering 'phone calls to Ocean Gate and to Rugby with equal ease. The 17 Mc/s wave will not be used except under freak daylight conditions which make both 8 Mc/s and 13 Mc/s impracticable. A day or so more and we shall be losing GBC and going up to 4 Mc/s for WOO calls. Any calls we have after arriving within 500 miles of the American coast will be handled on this frequency.

A few words about the method of operating these calls. On the ship one man handles the complete call. On the shore side there are two parts to the circuit, namely, a technical operator who is responsible for making the original contact, choosing the right frequencies, and adjusting the circuit generally so that "commercial" quality speech is possible, and a traffic operator who is responsible only for the shore subscriber and for connecting up the ship and shore parties.

Suppose we have a telephone call from mid-

Atlantic to London *via* GBC, Rugby. We send, *via* GKT over the normal telegraphic channels, a special message having a certain priority and ask GBC to meet us on 13 Mc/s at a given time. The time having arrived we tune in to GBC's 13 Mc/s wave on the calibrated receiver and having put our own transmitter "on the air," call him telegraphically on "tone"—that is, a steady continuous wave carrier modulated by a keyed audio-frequency note. When we hear him reply using the same system, we can tune up the receiver and judge whether the call is going to be successful.

If the tone is good and strong we send to him the telegraphic warning "sp" meaning "speech" and switch on the microphone. He does the same and we begin to converse with the technical operator. Perhaps we shall now ask GBC for a "few words" so that we can line up our receiver and then if the circuit is good and speech is "commercial" we go "up to traffic." This means the technical operator switches in the lady at the International Telephone Exchange in London, and then we arrange details of the actual call. At this stage our passenger is advised that the circuit is ready. The conversation then proceeds until eventually the familiar "three minutes please" comes out across the Atlantic, the last good-byes are said, and so ends the call to GBC.

W. A. R.

+ + Short-Wave Technical Press Review + +

NEW VALVE FOR ULTRA-SHORT WAVES

INCREASING attention is being paid to the possibilities of utilising for the purposes of radio communication, the so-called "ultra-high" frequencies. As the process of development goes on, "ultra-high" becomes a more elastic term, having continually to be stretched in its applications to include shorter and shorter wavelengths. The peculiar properties exhibited by valves with increasing signal frequency are now becoming better understood and changes in design make their appearance almost from week to week, embodying the latest conceptions of what is necessary to produce reasonable amplification, output, and so on, of signals ranging in wavelength roughly from eight metres down to, say, sixty centimetres and shorter. The average user of a medium and long-wave receiver would probably find it difficult to recognise in the latest "acorn" size triodes and pentodes (now almost standard on wavelengths of the order of 7 metres downwards) the close relatives of the relatively giant valves in his own set.

The development of radio valves of very small dimensions—the latest example of which is about to be described—arises largely from the fact that the time of flight of electrons through the interior of the valve, and the inductances of the leads from the electrodes to external components, become of paramount importance at very high frequencies of oscillation. It is an easy conception that a frequency may be reached which is so high, that the time required for a single oscillation is comparable with, if not shorter than, that required for an electron to travel from the filament to the grid of a valve.

The grid-cathode path of a valve, with a tuned circuit placed across it, may conveniently be considered as a resistance; while at the frequencies used at present for medium- and short-wave broadcasting, this resistance is high, and can be considered to have no serious damping effect on the tuned circuit, at higher frequencies this resistance may drop off severely. The combined effects of inter-electrode capacities, the possibility of the frequency being so high that the time of flight of electron is no longer negligible compared with it, contribute to the difficulties in the way of effective amplification. The principles involved in overcoming the first-mentioned effect are reasonably obvious when the grid and filament are considered as the plates of a condenser. The second case presents two possibilities; the electron transit time may be reduced either by placing the electrodes closer together—i.e., smaller valves—or higher accelerating voltages may be applied to the anode. The best arrangement is found to be a combination of the two. The matter of lead inductances is largely a mechanical one.

The American Institute of Radio Engineers publish in their *Proceedings* (November, 1936), a Paper describing a further departure in the design of ultra-short-wave valves—two specially designed pentodes of very small dimensions,

contained in a single glass envelope (See Figs. 1 and 2). The overall dimensions are of the order of two inches. Some idea of the performance claimed for this minute valve may be gained from the published characteristics. At 150 Mc/s (2 metres) the value of grid-to-filament impedance is 30,000 ohms compared with 2,000 which is a common figure at these frequencies for two conventional valves in push-pull. At one metre this quantity is still above 5,000 ohms "while for conventional tubes it is so low as to make them

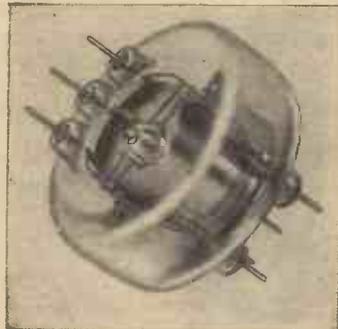


Fig. 2—The new valve

completely inoperative."

The valve has been found useful as a high-quality "Class-A" amplifier, a "Class-B" amplifier, and as a modulator and frequency changer at wavelengths of 1 metre and above. Stable operation with some gain has been obtained on test, it seems, at wavelengths of 60 centimetres, though it should be borne in mind that as the importance of external circuit design goes up with increased frequency, such a result is not a true measure of the capabilities of the valve. In "Class-B" operation, at 2 metres a stage gain of 10 decibels was obtained. In "Class-A" the stage gain was 20 decibels.

In construction the valve constitutes an advance on the acorn pentodes in several respects. As in the case of the latter, only glass is used in the structure of the envelope. It being decided that push-pull operation was best suited to the provision of reasonable power at the frequencies in question (the valve is intended, by the way, for transmission as well as reception), in view of the required shortness of leads "it seemed logical, if not essential" to include both valves in a single envelope and provide internal by-pass condensers between screen and earth, or filament. The suppressor grid being connected direct to filament, it is arranged that the capacity between this electrode and the screen grid should provide the requisite by-passing. The screen-grid element, which is common to both valves, is extended inside the valve envelope in such a way as to link up with an external screen, effectively shielding input (grid) from output (anode) circuits, an essential to stable operation.

Experimental models in which the screen and suppressor consisted of large plates, with suitable slots for the mounting of the other electrodes, proving difficult to construct, in the final model these large electrodes took the form of concentric cylinders. Special construction has made possible a reduction of the filament-to-grid path to dimensions comparable with the diameter of the filament—an effective measure to reduce the transit time of electrons. While care has been taken to keep unwanted inter-electrode capacities small, it has been considered even more important that the inductances of all leads be kept at a minimum—i.e., leads of a minimum length compatible with mechanical rigidity. In the experimental amplifier, the longest lead, including the total distance from electrode to external component, did not exceed three centimetres.

To summarise the characteristics of the new valve relevant to short-wave reception:—

- (1) Mounting of two sets of electrodes in one envelope.
- (2) Absence of "lossy" insulating materials in construction.
- (3) A method of interconnecting the two screen grids by a low impedance conductor.
- (4) A method of by-passing the screen grids to earth without the need for an external condenser and associated relatively long leads.
- (5) Complete shielding between input and output sides.
- (6) Absence of any leads common to both input and output.
- (7) Extremely short leads.
- (8) Maintenance of extremely short distances between electrodes.

AN "ALL-WAVE" CONVERTER

A WELCOME improvement upon even the best of short-wave converters is an instrument which can be attached to a broadcast receiver and used for tuning on all wavebands. With such a converter attached, the broadcast set may be tuned to some wavelength free of interference (if any!), and all tuning and band-switching, whether on the short or medium and long waves may be carried out on the added unit.

Such units are now making fairly frequent appearances in the technical press. Here, for instance, is an example from the French *Toute la Radio* (November, 1936). The designer has used an octode valve as frequency-changer.

It should be noted that he does not propose that the unit should work below about 19 metres, the range 19-50 metres, approximately,

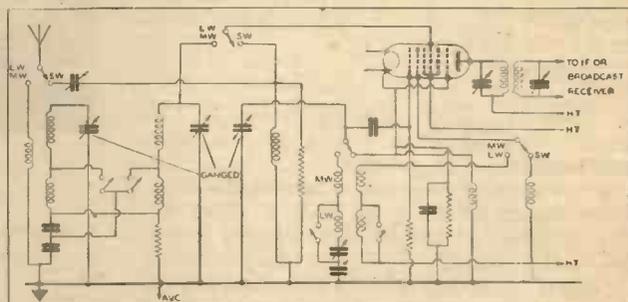


Fig. 3—Circuit of French "all-wave" converter

being covered in a single sweep. It is strongly recommended, however, that automatic volume control should not be applied to this valve. The reason is that even slight changes in grid bias will cause serious shifts of frequency. To the many reasons that have appeared in these columns against the use of heptodes and octodes for short-wave frequency changing, the writer in *Toute la Radio* adds the fact that these valves perform satisfactorily in proportion to the magnitude of signal applied to them. The signals usually received on the short waves being comparatively weak, the moral is clear.

A tuned signal-frequency circuit before the frequency-changer is used on the long and medium waves, but is considered useless on the short waves in the absence of any stages of signal-frequency amplification. Instead, a choke is connected across the input to the octode, with a resonance frequency remote from any within the band covered. To make the arrangement more aperiodic, a fixed resistance is connected across the choke. No attempt is made to eliminate image frequencies on the short waves. The converter is shown diagrammatically in Fig. 3.

M. S.

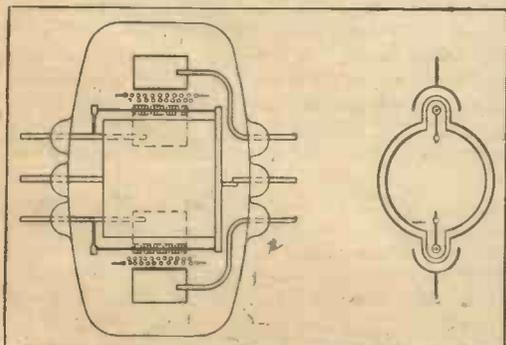


Fig. 1—Arrangement of elements within the valve

Short-Wave News Reel

News from Overseas

DURING the evening of December 10, the programmes of W2XE were repeatedly interrupted by up-to-the-minute items of news from England and the Continent.

At 19.05 I heard the clattering of typewriters and news-recording instruments, as we were switched over to the Press Radio Bureau in New York. "London, England. Baldwin makes his announcement in the House of Commons! The King has abdicated!" And later, "Maxton considers the Monarchy has outlived itself!"—followed by another dash to the Bureau, where we learned that the Harbour Master at Dunkirk, France, was holding himself in readiness with extra guards on the waterfront, in case Prince Edward should decide to land there. These, the actual Press bulletins, gave place at 19.15 to the relay from London, of a talk by Hector Bolitho, the well-known author, on the life of the new King, with which he was very familiar. The quality of the reception was in no way impaired by the distance covered.

At 23.45 W1XK afforded me the opportunity of listening to a discussion on the possible effect the abdication would have on the Dominions. Were the abdication not accepted by their Governments, it would probably cause an irrevocable split. The chief danger lay, it continued, in Mr. de Valera's decision, for were he to refuse to accept the Abdication and Accession Acts, Edward VIII would remain King of the Irish Free State!

Dorchester.

J. L. LE B.

Personal Column of the Air

At 19.45 on Thursday, December 10, I listened, through the medium of W2XAD, to the fifteen-minute feature entitled "The Personal Column of the Air." The object behind the venture is to reunite relatives or friends who have become estranged, and the appeals are made by the party who is seeking them.

The first personal appeal was made by a young woman whose sister was suffering from a nervous breakdown, brought about as the result of a lovers' quarrel. The man in the case had apparently cleared out without a further word, but the lady was now convinced she was in the wrong and her sister appealed for the return and reconciliation which would mend the invalid sister.

Another poignant case was that of George, who had left home ten years ago. His parents, now dead, and his brothers and sisters, had forgiven him long ago, and to prove it his sister said, "We still have your pipe and tobacco pouch in the spot where you left them."

The most pathetic appeal of the broadcast, however, was made by a man practically down and out, who, in his prosperous days, had made a loan of \$100 to a friend, so that this friend would be enabled to pass his medical examinations in Boston. He understood his friend had passed and started to

practise, so he now earnestly appealed for the return of his \$100, as since he had parted with the money he had come upon bad times, losing his job and savings, and now he was threatened with the loss of his home, which was already heavily mortgaged.

Dundee.

J. O. B.

An Empire Tour

As world interest centred upon Britain on Thursday, December 10, I searched the short waves at various times of the day anticipating that transmitters in different parts of the Empire would be active. Somewhere about noon, Lyndhurst, Australia, was audible, and for a while several musical items were heard at fair strength.

Long before the usual schedule time in the afternoon, VUB, Bombay, began its transmission with a special programme of Indian music. The Indian songs characteristic of this type of broadcast were heard frequently, and a glance at my collection of WORLD-RADIO S.W. Station Identification Panels indicated that Hindi was the language used between the items. Besides the "tablas," or drums, the stringed instruments, the sitar, sarangi, and tambora, which constitute an Indian orchestra, accompanied the singer.

After listening to many items, including "God Save the King," VQ7LO, Nairobi, was tuned in broadcasting an African programme of music about 17.00 G.M.T. The beating of the drums, and singing of songs resembling the weird chanting of native "boys" while "on safari," were excellent features. Lastly, through the facilities offered by W2XAD, a speech in English and French on the topic of the hour by the Canadian Prime Minister himself concluded this "Empire tour."

With a total listening time of about two hours, I had heard, through the medium of the short waves, four parts of His Majesty's Dominions on a day when new pages in their history were being written.

Newcastle-on-Tyne.

C. A. R.

DEVELOPMENTS IN JAPAN

THE first short-wave broadcast from Japan to Germany probably took place during the Olympic Games last summer, when transmissions were made on a 30-kW test-transmitter. The decision to organise the Japanese stations, on the German model, into a world-wide service had already been taken. By doing this it is hoped permanently to link up with the homeland Japanese Nationals living abroad, and to keep the world at large informed regarding conditions in Japan. A new 50-kW transmitter, which will be equipped with a number of aerials directional to U.S.A., South America, Europe, etc., is to begin operation before the end of the year. Transmissions to Europe are to be made from 4-5 a.m. Japanese time (19.00-20.00 G.M.T.) in Japanese, English, and French.

Below 100 Metres

By "SCOTIAN"

(December 6-10)

VERY good reception conditions have been experienced during the week under review, with the exception of Sunday and Monday evenings when the 31 m. U.S. transmitters were affected by severe selective fading. Strong and reliable signals have been obtained in the afternoons and early evenings from W3XAL (16.87 m.) and W2XAD. The Bandoeng transmitters PMN (29.24 m.) and YDC (19.8 m.) continue to be well heard, usually signing-off at 15.30.

W2XE (13.94 m.) was an R6 signal from 13.00 on Sunday until declining slightly around 17.00. W2XAF, R5 at 18.15, became affected by severe flutter shortly after 19.00—as did all other 31 m. stations. Much better evening conditions prevailed on Monday, although the 31 m. U.S. trio were still unreliable owing to flutter. At 21.50, PRF5 was the outstanding signal on the 31 m. band. The bulletin (in English) of the Inter-American Conference from LSX (28.98 m.) also came over well.

W3XAL faded out much earlier than usual on Tuesday, being inaudible at 17.30. W2XAD, however, was still an excellent deeply-modulated signal at 20.00. W8XK (19.72 m.), and W2XE (19.65 m.) attained peak strengths of R7 and R5 respectively around 18.30. W2XAF and W1XK (31.35 m.) were both R6 at 17.45, improving to really good signals shortly afterwards. W3XAU (31.28 m.), R6 around 19.00, attained R7 by 20.30. LSX was R6 but rather unsteady, and PRF5 was R5 at 21.30. Later, HJ1ABP (31.22 m.), COCQ (30.77 m.), and COCH (31.8 m.) were well received.

W2XAD provided rather unusual results on Thursday by maintaining an R8 signal as late as 22.40. W3XAL also performed very well after his usual fade-out time. W8XK (19.72 m.) had improved to R7 around 18.30, continuing so until 22.30. W2XAF and W1XK, both a steady R6 at 18.45, soon provided really excellent reception. Later, W1XAL and W2XE (25.36 m.) were well in evidence, and the 49 m. band was quite lively.

I take this opportunity of wishing all my readers a Merry Christmas and a Happy New Year.

All-World Christmas Programmes . . . on your own Set!



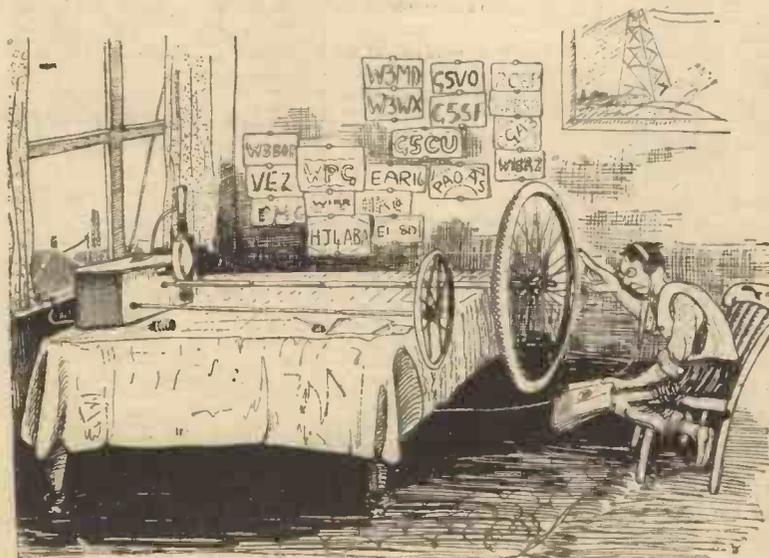
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A Reader's Suggestion for Simplifying Short-Wave Tuning



SIR,—I have pleasure in submitting a simple method for tuning in those elusive short-wave stations, which you may consider good enough to pass on to your readers. I think the drawing is self-explanatory, but should further technical details of the additional components be required I shall be pleased to supply them. It is amazing what results can be obtained by using such simple apparatus intelligently.

Yours faithfully,

N. THUSIAST.

Wigton.

Short-Wave Programmes

All times are given in G.M.T. The daily transmission schedule is shown in brackets after the name of each station
For Wavelengths see Short-Wave List

* Electrical Recordings.
† Gramophone Records.

SUNDAY, December 20 EMPIRE

The Empire Programmes are printed in outline for the convenience of overseas readers.

Transmission 1 (GSP, GSO, GSB), 08.00—Big Ben; Military Band; Robert Easton (Bass).* 09.00—Newsletter, Sports Summary. 09.25-10.15—Service.*

Transmission 2 (GSH, GSG, GSB), 11.00—Big Ben; Symphony Concert. 12.00—Football Commentary.* 12.30—Orchestra. 12.55—Newsletter, Sports Summary. 13.20—Music.† 13.25—Service.* 13.40-13.45—Envoi.†

Transmission 3 (GSH, GSF, GSB), 14.00—Big Ben; Isobel Baillie (Soprano). 14.20—Military Band. 15.00—"Trinity House."* 15.40—Service.* 16.30—Newsletter, Sports Summary. 16.55-17.00—Envoi.†

Transmission 4 (17.15-20.45 GSI, GSD, GSB; 21.00-22.45 GSD, GSC, GSB), 17.15—Big Ben; Orchestra. 18.00—Newsletter, Sports Summary. 18.20—Pfte. Music.† 18.30—Theatre Organ. 19.00—Talk. 19.20—Quintet. 19.50—Music.† 19.55-20.45—Service. 21.00—Newsletter, Sports Summary. 21.20—John McCormack (Tenor).† 21.30—Orchestra; Douglas Taylor (Bartitone); Percy Whitlock (Organ). 22.30-22.45—Epilogue.

Transmission 5 (GSD, GSC, GSB), 23.00—Big Ben; Elsie Owen (Violin); Harry Isaacs (Pfte.). 23.30—Service.* 23.45—Royal Air Force Band; Joseph Farrington (Bass). 00.40-01.00—Newsletter, Sports Summary.

Transmission 6 (GSD, GSC, GSB), 02.00—Big Ben; Service.* 02.51—Jean Pougnet (Violin). 03.10—Hand Loom Weaving. 03.25—Stanley Pope (Bartitone). 03.40-04.00—Newsletter, Sports Summary.

Transmission 7 (17.00-00.00), (a) 16.00—Old South Church, Boston. (b) 22.00—Overture. "Lohengrin." 22.15—Pan-American Conference—Review by Saville R. Davis. 22.30—Science Review by Dr. Loring B. Andrews. 22.45—Music Review. 23.00—World Review. 23.15—Books. 23.30—Orchestra, Chorus, Soloists.

BOUND BROOK (14.00-03.30), (a) 17.00—American Youth. 22.30—Stoepnagle and Bud. BUDAPEST (14.00-00.00), (a) 14.00—Orchestra. 14.50—News. 15.00—Anthem. (b) 23.00-00.00—See 14.00.

CARACAS (13.30-02.30), 13.30—Roman Catholic Service. 14.00-16.30—Baseball. 18.30—Racing. 22.30-02.30—Dance Band. CHICAGO (W9XF) (01.00-06.00), 04.05—Globe Trotter. 04.10—News. EINDHOVEN (12.30-20.00), (a) 12.30-13.30—For Africa and Asia; Music; Talks; Mission News; News. (b) 19.00-20.00—For Africa; See 12.30.

HUIZEN (13.30-15.30), (b) 13.30—Anthem; Call; Y.M.C.A. 13.50—For the Dutch Indies; Music; Talks; Mission News; News. 14.50—Music. 14.55—News. 15.05—Chimes. 15.15—Records; Peer Gynt Suite (Grieg). Conductor, Barbirolli. 15.30—Anthem. MOSCOW (11.00-01.00), (a, c) 11.00—English Programme: (a) Talk on Soviet Armenia, (b) Armenian Music, (c) Questions and Answers. 12.00—For Germany. 13.00—For Holland. 15.00—See 11.00. 17.30—Opera or Concert. 20.00—For Germany. 21.05—See 11.00. 22.00—For Germany. (b) 23.00—For Spain. 00.30—For Germany.

PARIS (Radio-Colonial) (07.00-06.00), (b) 07.00—News; Records; Topical. 08.30—Review; Records. 09.15—News. 09.45—News (Eng.). (a) 10.55—News. 11.00—Concert at 12.00; News (Eng.). 12.30—Records. 12.45—News. 13.15—Concert. 14.00—Reviews. 14.20—Markets. 14.30—To be announced. (b) 16.15—News (Fr., Arabic).

17.00—Concert. 18.30—Music-Hall. 18.45—News; Records. 19.30—News (Eng., It., Fr.). 20.45—Play (Racine) from Paris (Radio-Paris). 22.45—News (Port.). (c) 23.15—Music. 00.10—News (Fr., Sp.). 01.00—News (Eng.). 01.15—Play or Records. 03.45—News. 04.20—News (Eng., Sp.). 04.40—Records or Play. 05.45—News (Ger.).

PHILADELPHIA (17.00-04.00), (b) 01.00—See Wayne.

PITTSBURGH (14.00-06.00), (a) 14.00—For Children. 15.00—Southernaires. 15.30—Strings. 15.52—Christian Science Churches. 17.30—Music Hall. 18.30—Jolly Time Popper. 18.45—Christian Endeavour. 19.00—R.C.A. Magic Key. 20.00—Your English. 20.15—Captain Diamond. 20.45—Harmonica Band. 21.00—Shady Side Church. 22.00—We, the People. 22.30—Stoepnagle and Bud. 23.00—News. 23.15—Thank you, Stusia. 23.30—Golden Gate Park Band. (b) 00.00—Helen Traubel. 00.30—Variety. 02.00—Walter Winchell. 02.15—Paul Whiteman. (c) 03.00—Edwin C. Hill. 03.30—Y.M.C.A. 04.00—Organ. 04.15—Missionary Broadcast. 05.00-06.00—Orchestras.

ROME, (a) 13.20-13.55—Pfte.; Violin; Popular Music. 16.30-17.30—News; Folk Music; Poems. 19.05-22.15—From Rome (420.8 m.). RUYSELEDE (18.30-20.00), 18.30—Records. 19.30—News (Flem., Fr.).

SCHENECTADY (15.00-05.00), (a) 15.00—Radio Pulpit. 15.30—Musical American Youth. 16.00—News; Pfte. Duo. 16.15—Trio. 16.30—"The World is Yours." 17.00—Sleigh Bells. 17.30—Chicago University Discussion. 18.00—Soprano. 18.30—Melody Matinée. 19.00—Beneath the Surface. 19.30—Mysteries. 20.00—Metropolitan Opera Auditions. (a, b) 20.30—Grand Hotel. (b) 21.00—Widow's Sons. 21.30—1847 Musical Camera. 22.00—Soprano. 22.30—Ed. McConnell. 23.00—Roman Catholic Hour. 23.30—A Tale. 00.00—Jack Benny. 00.30—Variety. 02.30—Familiar Music. 03.00—Symphony Orchestra. 04.00—Harvey Hays; Orchestra. 04.30-05.00—News; El Chico.

SKANLEBAEK (18.00-23.30), From Kalundborg. SOFIA (05.00-21.30), From Sofia (352.9 m.). STOCKHOLM (08.00-22.00), From Stockholm (426.1 m.). VATICAN CITY, (b) 10.00—For Invalids (Latin, Fr.). WAYNE (12.30-04.00), (b) 19.00—Pittsburgh Symphony Orchestra. 20.00—New York Philharmonic. (c) 01.00—Nelson Eddy (Bartitone).

ZEESEN (DJA, DJB) (05.05-10.15), 05.05—Call (Ger., Eng.); Concert. 06.00—News; Concert. 07.00—News (Eng.). 07.15—Symphony Concert. 08.30—Old Music. 09.30-10.15—News; Variety. ZEESEN (DJA, DJB, DJE, DJQ) (10.55-16.00), 10.55—Call (Ger., Eng.); Music. 12.00—News (Eng.); Music. 13.00—News. 13.15—Service. 13.30—For Women. 14.00—News (Eng., Dutch). 14.15—"The Judge's Tale"—Play about E. T. A. Hoffmann (Lange). 15.15-16.00—Folk Play and Folk Music.

ZEESEN (DJD, DJL, DJC) (11.00-21.20), 11.00-13.00—Orchestra. 16.35—Call (Ger., Eng.). 16.45—Army Band. 17.15—News. 17.30—Service. 17.45—For Children. 18.00—Concert. 19.00—News (Eng.). 19.15—Newcomers. 20.00—Music and Poems. 20.45—Sports. 21.00—News (Ger., Eng.). ZEESEN (DJA, DJN) (21.50-03.45), 21.50—Call (Ger., Sp.). 22.00—For Children. 22.30—Bartitone. 22.45—News. 23.00—Service. 23.15—Concert. 00.15—News (Sp.). 00.30—New Artists. 01.15—Sports. 01.30—For Hitler Youth; Folk Play. 02.00—News; Band. 03.30—News (Sp., Ger.). ZEESEN (DJD, DJC) (16.10-03.50),

16.10-17.25—Symphony Concert. 21.50—Call (Ger., Eng.). 22.00—For Children. 22.30—Bartitone. 22.45—News. 23.00—Service. 23.15—Concert. 00.15—Sports. 00.30—Newcomers. 01.15—News (Eng.). 01.30—Hitler Youth Programme. 02.00—News; Band. 03.30—News (Sp.).

MONDAY, December 21 EMPIRE

Transmission 1 (GSP, GSO, GSB), 08.00—Big Ben; Musical play.* 08.30—Test Match account. 08.45—Orchestra. 09.20—Music talk. 09.40-10.00—News.

Transmission 2 (GSH, GSG, GSB), 11.00—Big Ben; "Turn Round."* 11.32—"The Policeman's Lot."* 11.47—Band. 12.15—Dance Orchestra.* 13.00—News. 13.20—Test Match account.* 13.35-13.45—Envoi.†

Transmission 3 (GSH, GSF, GSB), 14.00—Big Ben; Dance Band.* 14.21—Dance Music.† 14.30—Sophie Rowlands (Soprano) and Tom Kinniburgh (Bass). 15.00—Brass Band.† 15.30—Harp Trio. 15.45—Test Match account.* 16.00—Margot MacGibbon (Violin); Frederick Jackson (Pfte.). 16.30—News. 16.50-17.00—Orchestra.

Transmission 4 (17.15-20.45 GSI, GSD, GSB; 21.00-22.45 GSD, GSC, GSB), 17.15—Big Ben; "The Policeman's Lot."* 17.32—The Alphas. 18.00—News. 18.20—The Kentucky Minstrels. 19.20—Orchestra.† 19.30—Welsh Carols. 20.00—Street Show. 20.30-20.45—Test Match account.* 21.00—News. 21.20—Talk. 21.35—Orchestra and Chorus. 22.35-22.45—Dance Music.

Transmission 5 (GSD, GSC, GSB), 23.00—Big Ben; Test Match account.* 23.17—Dance Band. 23.30—"Round London at Night."* 00.00—Reading. 00.10—Irene Crowther (Pfte.). 00.25—"The Policeman's Lot."* 00.40-01.00—News.

Transmission 6 (GSD, GSC, GSB), 02.00—Big Ben; Street Show.* 02.31—G. Thalben-Ball (Organ). 02.55—"The Policeman's Lot."* 03.10—Quintet.* 03.40-04.00—News.

BOSTON (22.00-02.00), (a) 22.00—Talks. 23.00—News. (b) 00.00—Modern Radio Course: Amplifiers. 01.00—Morse. 01.30—Radio Forum. Three X Sisters. 23.45—Top Hatters. 00.00—Amos 'n' Andy. 00.15—Bridge. 00.30—Stocks. 00.50—News (Sp.). 01.00—Spanish Programme. 01.30—Variety. 03.30—Musical Toast. 04.00-05.00—Orchestras.

BOUND BROOK (15.00-04.00), (a) 17.00—Time Signals. 19.00—U.S. Navy Band. (b) 01.00—Helen Hayes. 03.30—Radio Forum. CARACAS (15.45-02.45), 15.45-18.30—Records and Songs. 21.00—Music and Songs. 22.15—For Children. 22.30—Dance Music and Songs. 23.00—News. 23.30—Talks. 23.45—Quartet. 00.00—Trio. 00.15—Mariblanca. 00.30—Orchestra and Rafael Guinand. 00.45—Betty and Micky. 01.00—Orchestra. 01.30—Duet. 01.45-02.45—Amateurs.

CHICAGO (W9XF) (01.00-06.00), 04.05—Globe Trotter. 05.00—Minstrels. EINDHOVEN, (b) 00.00-01.00 (Tues.)—For the Americas; Music; Talks; Mission News; News. HUIZEN (13.30-15.30), (b) 13.30—Anthem; Call; Music. 13.40—News. 13.50—Pfte. Records. 14.00—Sports. 14.20—Reading; at 14.40; Talk. 15.20—Dance Music. 15.30—Anthem. MOSCOW (17.30-01.00), (a, c) 17.30—Opera or Concert. 20.00—For Germany. 21.05—English Programme: (a) U.S.S.R. Review, (b) 1905 Revolution Reminiscences, (c) Revolution Songs, (d) Russian Lesson. 22.00—For Hungary. (b) 23.00—For Spain. 00.00—News (Eng.).

PARIS (Radio-Colonial) (07.00-06.00), (b) 07.00—News; Records; Topical. 07.40—Review; Records. 08.30—Topical; Records. 09.15—News; 09.45—News (Eng.). (a) 10.55—News. 11.00—Concert; at 12.00; News (Eng.). 12.30—Records. 12.45—News. 13.15—Concert. 14.00—Reviews. 14.20—Markets. 14.30—To be announced. (b) 16.15—News (Fr., Arabic).

10.55—Notes. 11.00—Concert; at 12.00—News (Eng.); at 12.45; News. 14.00—Talk. 14.10—For Women. 14.20—Markets. 14.30—Chamber Music (Locatelli, Mozart, Brahms, etc.). 15.55—Exchange; Markets. (b) 16.15—News (Fr., Arabic). 17.00—Concert; at 18.30—News; Review. 19.30—News (Eng., It., Fr.). 20.45—Douval Ensemble. 22.45—News (Port.). (c) 23.15—Concert. 00.15—News (Fr., Sp.). 01.00—News (Eng.). 01.15—Records or Play. 03.45—News. 04.20—News (Eng., Sp.). 04.40—Records or Play. 05.45—News (Ger.).

PHILADELPHIA (17.00-04.00), (b) 03.00—See Wayne. PITTSBURGH (11.45-06.00), (a) 14.00—Breakfast Club. 14.30—Style and Shopping. 15.00—News; Music. 15.15—Jones. 15.30—Pepper Young. 15.45—Rhythm. 16.00—O'Neill's. 16.15—Personal Column. 16.30—Vic and Sade. 16.45—Edward MacHugh. 17.00—News. 17.15—Slim and Jack. 17.30—Farm and Home. 18.45—Values. 19.00—U.S. Navy Band. 19.30—Home Forum. 20.00—Rochester Civic Orchestra. 21.00—Laff and Swing. 21.30—P.T.A. 21.45—Young Hickory. 22.00—For Children; at 22.15; Community Forum. 22.45—Dan and Sylvia. 23.00—News. 23.15—Music. 23.30—Sports. 23.45—Lowell Thomas. (b) 00.00—Variety. (c) 03.00—Variety. 03.30—Radio Forum. 04.00—News; Dream Ship. 04.15—Dynamos. 04.35-06.00—Orchestras.

RIO DE JANEIRO (22.30-23.30), 22.30—News. 23.00—Talks (Eng., etc.). ROME, (a) 13.20—News; Talks; Band. 14.00-15.30—News (Eng.). "Cello"; Pfte.; Arias. News. 16.30-17.30—News, Dances; Songs; Poems. 17.40—Music and News (Arabic). 18.00—News (Ger.). 18.21—News (Eng.). 18.44—News (Fr.). 19.05-22.15—From Rome (420.8 m.). 22.59—American Hour from Rome. News (Eng., It.). Opera Music. Talk. Songs. Review.

RUYSELEDE (18.30-20.00), 18.30—Records. 19.30—News (Flem., Fr.). SCHENECTADY (14.55-05.00), (a) 14.55—News. 15.00—Mrs. Wiggs. 15.15—John's other Wife. 15.30—Plain Bill. 15.45—To-day's Children. 16.00—David Harum. 16.15—Backstage Wife. 16.30—Charm. 16.45—Experience. 17.00—Girl Alone. 17.15—Mary Marlin. 17.30—Farm Programme. 18.00—Tenor. 18.15—High Hatters. 18.30—Harding's Wife. 18.45—Happy Jack. 19.00—Character Building. 19.30—Pfte. 19.45—Personal Column. 20.00—Pepper Young. 20.15—Ma Perkins. (a, b) 20.30—Vic and Sade. (b) 20.45—O'Neill's. 21.00—Charm. 21.30—Claudine MacDonald. 21.45—Grandpa Burton. 22.00—Stocks. 22.15—Tom Mix. 22.30—Jack Armstrong. 22.45—For Children. 23.00—Education. 23.15—Bass. 23.30—News; Three X Sisters. 23.45—Top Hatters. 00.00—Amos 'n' Andy. 00.15—Bridge. 00.30—Stocks. 00.50—News (Sp.). 01.00—Spanish Programme. 01.30—Variety. 03.30—Musical Toast. 04.00-05.00—Orchestras.

SKANLEBAEK (18.00-23.00), From Kalundborg. SOFIA (10.00-11.30 and 17.00-19.45), From Sofia (352.9 m.). STOCKHOLM (06.20-22.00), From Stockholm (426.1 m.). SUVA, 05.30-06.30—Records. VATICAN CITY, (a) 15.30—Religious Notes (It.). (b) 19.00—See 15.30. WARSAW, 17.30-18.30—Mazurka (Moniuszko); News; Polonaise in B flat (Oginski); Talk; Polish Music. WAYNE (12.30-04.00), (b) 20.30—Schmitz (Pfte.). (c) 22.45—Sketch. (d) 03.00—Wayne King's Orchestra. ZEESEN (DJA, DJB) (05.05-10.15), 05.05—Call (Ger., Eng.); Music. 06.00—News; Music. 06.55—Greetings. 07.00—News (Eng.); Topical. 07.30—Folk Play. 08.00—Dance Music. 09.15—Sports; News. 09.45-10.15—For Children. ZEESEN (DJA, DJB, DJE, DJQ) (10.55-16.00), 10.55—Call (Ger., Eng.); Music. 12.00—News (Eng.); Music. 12.55—Greetings. 13.00—News; Call (DJQ). 13.15—New Artists. 14.00—News (Eng., Dutch). 14.15—Topical. 14.30—Sketch. 14.45—Orchestra. 15.45-16.00—Sports.

ZEESEN (DJD, DJL, DJC) (16.35-21.20), 16.35—Call (Ger., Eng.). 16.45—Folk Songs. 17.00—Sketch. 17.15—News. 17.30—German Chamber Music (Locatelli, Mozart, Brahms, etc.). 15.55—Exchange; Markets. (b) 16.15—News (Fr., Arabic). 17.00—Concert; at 18.30—News; Review. 19.30—News (Eng., It., Fr.). 20.45—Douval Ensemble. 22.45—News (Port.). (c) 23.15—Concert. 00.15—News (Fr., Sp.). 01.00—News (Eng.). 01.15—Records or Play. 03.45—News. 04.20—News (Eng., Sp.). 04.40—Records or Play. 05.45—News (Ger.).

PHILADELPHIA (17.00-04.00), (b) 03.00—See Wayne.

PITTSBURGH (11.45-06.00), (a) 14.00—Breakfast Club. 14.30—Style and Shopping. 15.00—News; Music. 15.15—Jones. 15.30—Pepper Young. 15.45—Rhythm. 16.00—O'Neill's. 16.15—Personal Column. 16.30—Vic and Sade. 16.45—Edward MacHugh. 17.00—News. 17.15—Slim and Jack. 17.30—Farm and Home. 18.45—Values. 19.00—U.S. Navy Band. 19.30—Home Forum. 20.00—Rochester Civic Orchestra. 21.00—Laff and Swing. 21.30—P.T.A. 21.45—Young Hickory. 22.00—For Children; at 22.15; Community Forum. 22.45—Dan and Sylvia. 23.00—News. 23.15—Music. 23.30—Sports. 23.45—Lowell Thomas. (b) 00.00—Variety. (c) 03.00—Variety. 03.30—Radio Forum. 04.00—News; Dream Ship. 04.15—Dynamos. 04.35-06.00—Orchestras.

RIO DE JANEIRO (22.30-23.30), 22.30—News. 23.00—Talks (Eng., etc.). ROME, (a) 13.20—News; Talks; Band. 14.00-15.30—News (Eng.). "Cello"; Pfte.; Arias. News. 16.30-17.30—News, Dances; Songs; Poems. 17.40—Music and News (Arabic). 18.00—News (Ger.). 18.21—News (Eng.). 18.44—News (Fr.). 19.05-22.15—From Rome (420.8 m.). 22.59—American Hour from Rome. News (Eng., It.). Opera Music. Talk. Songs. Review.

RUYSELEDE (18.30-20.00), 18.30—Records. 19.30—News (Flem., Fr.). SCHENECTADY (14.55-05.00), (a) 14.55—News. 15.00—Mrs. Wiggs. 15.15—John's other Wife. 15.30—Plain Bill. 15.45—To-day's Children. 16.00—David Harum. 16.15—Backstage Wife. 16.30—Charm. 16.45—Experience. 17.00—Girl Alone. 17.15—Mary Marlin. 17.30—Farm Programme. 18.00—Tenor. 18.15—High Hatters. 18.30—Harding's Wife. 18.45—Happy Jack. 19.00—Character Building. 19.30—Pfte. 19.45—Personal Column. 20.00—Pepper Young. 20.15—Ma Perkins. (a, b) 20.30—Vic and Sade. (b) 20.45—O'Neill's. 21.00—Charm. 21.30—Claudine MacDonald. 21.45—Grandpa Burton. 22.00—Stocks. 22.15—Tom Mix. 22.30—Jack Armstrong. 22.45—For Children. 23.00—Education. 23.15—Bass. 23.30—News; Three X Sisters. 23.45—Top Hatters. 00.00—Amos 'n' Andy. 00.15—Bridge. 00.30—Stocks. 00.50—News (Sp.). 01.00—Spanish Programme. 01.30—Variety. 03.30—Musical Toast. 04.00-05.00—Orchestras.

SKANLEBAEK (18.00-23.00), From Kalundborg. SOFIA (10.00-11.30 and 17.00-19.45), From Sofia (352.9 m.). STOCKHOLM (06.20-22.00), From Stockholm (426.1 m.). SUVA, 05.30-06.30—Records. VATICAN CITY, (a) 15.30—Religious Notes (It.). (b) 19.00—See 15.30. WARSAW, 17.30-18.30—Mazurka (Moniuszko); News; Polonaise in B flat (Oginski); Talk; Polish Music. WAYNE (12.30-04.00), (b) 20.30—Schmitz (Pfte.). (c) 22.45—Sketch. (d) 03.00—Wayne King's Orchestra. ZEESEN (DJA, DJB) (05.05-10.15), 05.05—Call (Ger., Eng.); Music. 06.00—News; Music. 06.55—Greetings. 07.00—News (Eng.); Topical. 07.30—Folk Play. 08.00—Dance Music. 09.15—Sports; News. 09.45-10.15—For Children. ZEESEN (DJA, DJB, DJE, DJQ) (10.55-16.00), 10.55—Call (Ger., Eng.); Music. 12.00—News (Eng.); Music. 12.55—Greetings. 13.00—News; Call (DJQ). 13.15—New Artists. 14.00—News (Eng., Dutch). 14.15—Topical. 14.30—Sketch. 14.45—Orchestra. 15.45-16.00—Sports.

ZEESEN (DJD, DJC) (21.50-03.50), 21.50—Call (Ger., Eng.); Talk. 22.15—Harpischord. 22.45—News; Music. 00.15—Topical. 00.30—Music and Poems. 01.15—News (Eng.). 01.30—German Lesson. 01.45—Folk Songs. 02.00—News; Music. 03.30—News (Sp.).

TUESDAY, December 22
EMPIRE

Transmission 1 (GSP, GSO, GSB), 08.00—Big Ben; Dance Band.* 08.21—Marjorie Alexander (Pfte.). 08.30—Test Match account. 08.45—Marjorie Alexander (Pfte.) (cont.). 08.55—"The Policeman's Lot."* 09.10—"Round London at Night."* 09.40-10.00—News.

Transmission 2 (GSH, GSG, GSB), 11.00—Big Ben; Cinema Organ. 11.20—Christmas Reading. 11.30—Nancy Phillips (Violin). 11.45—Orchestra. 12.00—"Empire Magazine." 12.45—Light Music. 13.00—News. 13.20—Test Match account.* 13.35-13.45—Billy Mayerl.†

Transmission 3 (GSH, GSF, GSB), 14.00—Big Ben; "Imperial Affairs." 14.15—Orchestra and Trio. 15.15—"Round London at Night."* 15.45—Test Match account.* 16.00—Quintet.* 16.30—News. 16.50-17.00—Serenade.†

Transmission 4 (17.15-20.45 GSI, GSD, GSB; 21.00-22.45 GSD, GSC, GSB), 17.15—Big Ben; "Empire Magazine."* 18.00—News. 18.20—Gaelic programme. 18.40—"From the London Theatre." 19.00—Music.† 19.05—"Imperial Affairs."† 19.20—Dance Orchestra. 19.45—Test Match account.* 20.00—"Sealed Orders." 20.20-20.45—Dance Music. 21.00—News. 21.20—"Imperial Affairs."* 21.35—Adolph Hallis (Pfte.). 21.57-22.45—"Empire Magazine."*

Transmission 5 (GSD, GSC, GSB), 23.00—Big Ben; Dance Music. 23.30—"Imperial Affairs."* 23.45—Jean Hastings (Soprano); Annie Tait (Contralto). 00.00—Test Match account.* 00.15—Cinema Organ. 00.40-01.00—News.

Transmission 6 (GSD, GSC, GSB), 02.00—Big Ben; Street Show.* 02.31—"Imperial Affairs."* 02.46—Cecil Baumer (Pfte.). 03.10—"Turn Round."* 03.40-04.00—News.

BOSTON (23.00-02.00), (a) 22.00—Talks. 23.00—News. (b) 00.00—Symphonic Music. 00.15—Home Decorations. 00.30—The Camera Workshop. 00.45—Music. 01.00—Physics in Every Day Life. 01.15—Writing through Reading. 01.30—Music. 01.45—Pan-American Nations. BOUND BROOK (17.00-04.00), (a) 17.00—Time Signal. 18.45—Rochester Civic Orchestra. 20.00—U.S. Marine Band. (b) 23.30—News.

CARACAS (15.45-02.30), 15.45-18.30—Records and Songs. 21.00—Music and Songs. 22.15—For Children. 22.30—Dance Music and Songs. 23.00—News. 23.30—Economics. 23.45—For Farmers. 00.00—Thriller. 00.15—War Episodes. 00.30-02.30—Variety.

CHICAGO (W9XF) (01.00-06.00), 04.05—Globe Trotter. 05.00—Jesse Crawford (Organ). EINDHOVEN (09.30-20.00), (a) 09.30-11.00—Variety. (b) 18.30-20.00—Variety. MOSCOW (17.30-01.00), (a, c) 17.30—Opera or Concert. 20.00—For France. 21.05—For Holland. 22.00—For Sweden. (b) 23.00—For Spain. 00.00—News (Eng.).

(Dumas, fils). 15.55—Exchange. (b) 16.15—News (Fr., Arabic). 17.00—Concert; at 18.30: News; Shipping. 19.30—News (Eng., It., Fr.). 20.30—“Hansel and Gretel” (Humperdinck), from Paris (PIT). 22.40—News (Port.). (c) 23.15—Concert. 00.15—News (Fr., Sp.). 01.00—News (Eng.). 01.15—Records or Play. 03.45—News. 04.20—News (Eng., Sp.). 04.40—Records or Play. 05.45—News (Ger.).

PHILADELPHIA (17.00-04.00), (b) 01.00—See Wayne. 02.00—See Wayne.

PITTSBURGH (11.45-06.00), (a) 14.00—Breakfast Club. 14.30—Style and Shopping. 15.00—News; Just relax. 15.15—Jones. 15.30—Pepper Young. 15.45—Rhythm. 16.00—O'Neill's. 16.15—Personal Column. 16.30—Vic and Sade. 16.45—Edward MacHugh. 17.00—News. 17.15—Slim and Jack. 17.30—Farm and Home. 18.45—Stroller's Matinée. 19.30—Home Forum. 20.00—Clubs. 20.15—U.S. Marine Band. 20.45—Have you heard? 21.00—Bavarian Orchestra. 21.30—Anne Muenchen. 21.45—Young Hickory. 22.00—For Children; at 22.15: Bette Smiley. 22.45—Dan and Sylvia. 23.00—News. 23.15—Thank you, Stusia. 23.30—Sports. 23.45—Lowell Thomas. (b) 00.00—Variety. 02.30—Husbands and Wives. (c) 03.00—Advertising Club. 03.30—Portraits in Harmony. 04.00—News; Dream Ship. 04.15—Pan-American Peace Conference. 04.30-06.00—Bulletin; Orchestras.

RIO DE JANEIRO (22.30-23.30), 22.30—News. 23.00—Talks (Eng., etc.).

ROME, (a) 13.20—News; Talks; Arias. 14.00-15.30—News (Eng., Chin.). [Light Music. Harp. Arias. News. 16.30-17.30—News. Trio. Neapolitan Songs. 17.40—Music and News (Arabic). 18.00—News (Ger.). 18.21—News (Eng.). 18.44—News (Fr.). 19.05-22.15—From Rome (420.8 m.). 23.20—Call (It., Sp., Port.); News. Opera Music. Talk. South-American Songs. News (Sp., Port.).

RUYSSSELEDE (18.30-20.00), 18.30—Orchestra. 19.00—Records. 19.30—News (Flem., Fr.).

SCHENECTADY (14.55-05.00), (a) 14.55—News. 15.00—Mrs. Wiggs. 15.15—John's other Wife. 15.30—Plain Bill. 15.45—Today's Children. 16.00—David Harum. 16.15—Backstage Wife. 16.20—Mystery Chef. 16.45—Wife Saver. 17.00—Girl Alone. 17.15—Mary Marlin. 17.30—Farm Programme. 18.00—Orchestra. 18.15—High Hatters. 18.30—Harding's Wife. 18.45—Happy Jack. 19.00—Dr. Maddy's Band Lessons. 19.30—Soprano. 19.45—Personal Column. 20.00—Pepper Young. 20.15—Ma Perkins. (a, b) 20.30—Vic and Sade. (b) 20.45—O'Neill's. 21.00—Cheerio. 21.15—Marshalls. 21.30—Stocks. 21.45—Women's Clubs. 22.00—While the City sleeps. 22.15—Tom Mix. 22.30—Jack Armstrong. 22.45—For Children. 23.00—Science. 23.15—Crawford (Organ). 23.30—News; Mail. 00.00—Amos 'n' Andy. 00.15—Experience. 00.30—Stocks. 00.50—News (Sp.). 01.00—Orchestra. 01.30—Spanish Programme. 02.00—Interviews. 02.30—Fred Astaire; Variety. 04.00-05.00—Sport Shots; Orchestras.

SKAMLEBAEK (18.00-23.00), From Kalundborg.

SOFIA (10.0-11.30 and 17.00-19.45), From Sofia (352.9 m.).

STOCKHOLM (06.20-22.00), From Stockholm (426.1 m.).

SUVA, 05.30-06.30—Records.

VATICAN CITY, (a) 15.30—Religious Notes (Eng.). (b) 19.00—See 15.30.

WAYNE (12.30-04.00), (b) 18.00—Quartet. 20.30—21.00—Old English Christmas Ballads—Strings, Pftc., Vocal Solo. (c) 01.00—Music Hall. 02.00—Waring's Pennsylvanians.

ZEESEN (DJA, DJB) (05.05-10.15), 05.05—Call (Ger., Eng.); Music. 06.00—News; Music. 06.55—Greetings. 07.00—News (Eng.). 07.15—Topical. 07.30—Music and Poetry. 08.15—Concert. 09.30-10.15—News; Reading; Sketch (Klucke).

ZEESEN (DJA, DJB, DJE, DJQ) (10.55-16.00), 10.55—Call (Ger., Eng.); Music. 12.00—News (Eng.); Music. 12.55—Greetings to the Dutch East Indies. 13.00—News; Call (DJQ). 13.15—Folk Songs. 13.30—Harpichord. 14.00—News (Eng., Dutch); Topical. 14.30—Reading. 14.45—Concert. 15.45-16.00—Talk.

ZEESEN (DJD, DJL, DJC) (16.35-21.20), 16.35—Call (Ger., Eng.)

16.45—For Women. 17.00—Saxophone, Pftc. 17.15—News. 17.30—Talk. 17.45—Army Band. 18.15—Chamber Music. 19.00—News (Eng.). 19.15—Germany To-day. 19.30—Literature. 19.45—Opera Excerpts. 21.00—News (Ger., Eng.).

ZEESEN (DJA, DJN) (21.50-03.45), 21.50—Call (Ger., Sp., Port.). 22.00—Talk: The Olympiad. 22.15—Band. 22.45—News. 23.00—Opera Music. 00.15—News (Sp., Port.). 00.30—Chamber Music. 01.15—Topical. 01.30—For Women. 01.45—Saxophone, Pftc. 02.00—News. 02.15—Concert. 03.30—News (Sp., Ger., Port.).

ZEESEN (DJD, DJC) (21.50-03.50), 21.50—Call (Ger., Eng.). 22.00—Sports. 22.15—Band. 22.45—News. 23.00—Opera Music. 00.15—Topical. 00.30—Chamber Music. 01.15—News (Eng.). 01.45—Saxophone, Pftc. 02.00—News; Music. 03.30—News (Sp.).

and Leonhardt (Pftcs.). 23.55—“Empire Magazine.”* 00.40-01.00—News.

Transmission 6 (GSD, GSC, GSB), 02.00—Big Ben; Science Talk.* 02.21—Dance Band. 02.55—Talk.* 03.10—“Round London at Night.”* 03.40-04.00—News.

BOSTON (22.00-23.30), (a) 22.00—Talks. 23.00—News.

BOUND BROOK (17.00-02.00), (a) 17.00—Time Signals. 17.30—Farm and Home. (b) 23.30—News. 01.00—Fannie Brice. 01.30—Ethel Barrymore.

CARACAS (15.45-02.45), 15.45-18.30—Records and Songs. 21.00—Music and Songs. 22.15—For Children. 22.30—Dance Music and Songs. 23.00—News. 23.30—Educational. 23.45—Songs. 00.00-02.30—Variety. 02.30-02.45—Dance Music.

CHICAGO (W9XF) (01.00-06.00), 04.15—Levanti's Orchestra.

PITTSBURGH (11.45-06.00), (a) 14.00—Breakfast Club. 14.30—Style and Shopping. 15.00—News; Music. 15.15—Jones. 15.30—Pepper Young. 15.45—Rhythm. 16.00—O'Neill's. 16.15—Personal Column. 16.30—Vic and Sade. 16.45—Edward MacHugh. 17.00—News. 17.15—Slim and Jack. 17.30—Farm and Home. 18.45—Music. 19.00—Modern Romances. 19.30—Home Forum. 20.00—U.S. Marine Band. 21.00—The dansant. 21.15—Utility Hall. 21.45—Young Hickory. 22.00—For Children; at 22.15: Male Quartet. 22.45—Dan and Sylvia. 23.00—News. 23.15—Midge Williams. 23.30—Sports. 23.45—Lowell Thomas. (b) 00.00—Variety. (c) 03.00—Variety. 04.00—News; Dream Ship. 04.15—Minstrels. 04.30-06.00—Bulletin; Orchestras.

RIO DE JANEIRO (22.30-23.30), 22.30—News. 23.00—Talks (Eng., etc.).

Amos 'n' Andy. 00.15—Uncle Ezra. 00.30—Stocks. 00.50—News (Sp.). 01.00—Latin-American Concert. 02.00—Town Hall. 03.00—Hit Parade. 04.00-05.00—Orchestras.

SKAMLEBAEK (18.00-23.00), From Kalundborg.

SOFIA (10.0-11.30 and 17.00-19.45), From Sofia (352.9 m.).

STOCKHOLM (06.20-22.00), From Stockholm (426.1 m.).

SUVA, 05.30-06.30—Records.

VATICAN CITY, (a) 15.30—Religious Notes (Eng.). (b) 19.00—See 15.30.

WARSAW, 17.30-18.30—Mazurka (Moniuszko); Violin; Reading; Polish Hymns. 23.15—

WAYNE (12.30-04.00), (a) 16.30—Sketch. 19.15—19.45—Palastrina Choir from Philadelphia. Conductor: Montani. (c) 00.15—Pop-eye the Sailor. 01.30—Burns and Allen.

ZEESEN (DJA, DJB) (05.05-10.15), 05.05—Call (Ger., Eng.); Music; at 06.00: News. 07.00—News (Eng.); Topical. 07.30—Music. 08.15—Talk; Band. 09.00—Harpichord. 09.30—News. 09.45—For Women. 10.00-10.15—Saxophone and Pftc.

ZEESEN (DJA, DJB, DJE, DJQ) (10.55-16.00), 10.55—Call (Ger., Eng.); Music. At 12.00: News (Eng.). 12.55—Greetings. 13.00—News; Call (DJQ). 13.15—Music. 14.00—News (Eng., Dutch); Topical. 14.30—Opera Music. 15.45-16.00—Talk.

ZEESEN (DJD, DJL, DJC) (16.35-21.20), 16.35—Call (Ger., Eng.); Reading. 17.00—Schumann Songs. 17.15—News. 17.30—Cantata (Krüger). 18.15—Variety. 19.00—News (Eng.). 19.15—Talks. 19.45—Sequence. 21.00—News (Ger., Eng.).

ZEESEN (DJA, DJN) (21.50-03.45), 21.50—Call (Ger., Sp.). 22.00—Variety; at 22.45: News. 00.15—News (Sp.); Music; Talks. 02.00—News; Music. 03.30—News (Sp.).

ZEESEN (DJD, DJC) (21.50-03.50), 21.50—Call (Ger., Eng.). 22.00—Variety; at 22.45: News. 00.15—Topical. 00.30—Cantata (Krüger). 01.15—News (Eng.). 01.30—Schumann Songs. 01.45—Talk. 02.00—News; Music. 03.30—News (Sp.).

PRINCIPAL EVENTS

SUNDAY, Dec. 20

19.40 2RO: Variety Concert. 20.00 W2XE: New York Philharmonic. 20.00 W2XAD: Metropolitan Opera. 21.00 W8XK: Shadyside Church. 22.00 OXY: Dance Music. 22.15 W1XAL: Pan-American Conference. 22.30 W2XAF: Ed. McConnell. 22.30 W3XAL, W8XK: Stoopnagle and Bud. 23.30 W8XK: Golden Gate Park Band. 23.30 W1XAL: Orchestra, Choir. 00.00 W2XAF: Jack Benny. 00.30 W8XK: Variety. 01.00 W2XE, W3XAU: Nelson Eddy. 02.00 DJA, etc.: Band Concert. 02.15 W8XK: Paul Whiteman. 02.30 W2XAF: Familiar Music. 05.00 W8XK: Orchestras.

MONDAY, Dec. 21

16.15 W8XK: "Personal Column" (daily). 19.00 W3XAL: U.S. Navy Band. 20.00 W8XK: Rochester Civic Orchestra. 22.59 2RO: American Hour. 23.45 W2XAF: Top Hatters. 23.45 W8XK: Lowell Thomas. 00.00 W2XAF: Amos 'n' Andy. 01.00 W2XAF: Spanish Programme. 03.00 W8XK: Variety. 04.00 W2XAF: Orchestras.

TUESDAY, Dec. 22

18.45 W3XAL: Rochester Civic Orchestra. 20.00 W3XAL: U.S. Marine Band. 20.30 TPA3: "Hansel and Gretel." 20.30 W2XE: English Christmas Songs. 23.20 2RO: Opera Music. 23.30 W2XAF: "Mail-Bag." 00.00 W8XK: Variety. 01.00 W2XE, W3XAU: Music Hall. 02.30 W2XAF: Fred Astaire. 04.15 W8XK: Pan-American Conference.

WEDNESDAY, Dec. 23

EMPIRE Transmission 1 (GSP, GSO, GSB), 08.00—Big Ben; "Empire Magazine."* 08.45—"Imperial Affairs."* 09.00—Orchestra. 09.40-10.00—News. Transmission 2 (GSH, GSG, GSB), 11.00—Big Ben; "Imperial Affairs."* 11.17—Orchestra; Ceinwen John (Soprano). 12.15—Christmas Variety.* 12.45—Talk. 13.00—News. 13.20-13.45—Orchestra. Transmission 3 (GSH, GSF, GSB), 14.00—Big Ben; "Street Show."* 14.30—Band: Franklin Kelsey (Bass). 15.30—"The Policeman's Lot."* 15.45—"Empire Magazine."* 16.30—News. 16.50-17.00—Quintet. Transmission 4 (17.15-20.45 GSI, GSD, GSB; 21.00-22.45 GSD, GSC, GSB), 17.15—Big Ben; Talks. 17.37—Dance Orchestra. 18.00—News. 18.20—Folk-songs.† 18.40—Military Band. 19.10—"Soft Lights and Sweet Music."* 19.30—Talk.* 19.45—Band. 20.00-21.00—Orchestra: Eva Turner (Soprano).* 21.15—News. 21.35—Theatre Orchestra; Frank Titterton (Tenor). 22.00—Science Talk.* 22.20—Dance Music. 22.25-22.45—Dance Music. Transmission 5 (GSD, GSC, GSB), 23.00—Big Ben; Orchestra; Alleyne

WEDNESDAY, Dec. 23

18.45 W2XAD: NBC Music Guild. 19.15 W2XE: Palestrina Choir. 20.00 W8XK: U.S. Marine Band. 22.15 W2XAF: Tom Mix, Jack Armstrong. 22.59 2RO: Symphony Concert. 01.30 W3XAL: Ethel Barrymore. 01.30 W2XE, W3XAU: Burns and Allen. 04.15 W9XF: Levanti's Orchestra.

THURSDAY, Dec. 24

18.45 W2XE: From Bethlehem. 20.45 TPA3: "The Childhood of Christ" (Berlioz). 22.00 W2XE: The President's Greetings. 23.00 W2XE: Mass (part) from Rome. 01.00 W3XAL: Boston Symphony Orchestra. 03.00 W2XAF: Bing Crosby. 04.45 W8XK: "Holy Night."

FRIDAY, Dec. 25

21.30 W8XK: Concert Favourites. 22.45 W8XK: Dan and Sylvia. 00.00 W8XK: Variety. 01.00 W3XAL: Irene Rich. 02.00 W3XAL: Waring Orchestra. 02.00 W2XE: "Christmas Carol" (Dickens). 03.00 W2XE, W3XAU: Philadelphia Symphony Orchestra. 04.00 W2XAF: Geo. R. Holmes (organ).

SATURDAY, Dec. 26

19.30 W2XAD: Variety. 19.30 OXY: Christmas Ball. 20.00 W8XK: High Hatters. 20.30 W2XAD, W2XAF: Revue. 21.15 W1XAL: World Youth Congress. 22.00 W2XAF: Top Hatters. 22.30 W8XK: Webster Hall Orchestra. 23.20 2RO: Excerpt, "Falstaff" (Verdi). 00.30 DJA, etc.: Folk Music; 01.30, Carols. 01.00 W8XK: Ed. Wynne. 02.00 W3XAL, W8XK: Barn Dance. 02.30 W2XE: Columbia Symphony Orchestra. 03.00 W8XK: Nickelodeon. 05.00 W9XF: Glen Gray's Orchestra.

EINHOVEN, (a) 13.00-16.00—Variety.

MOSCOW (11.00-01.00), (a, c) 11.00—English Programme; (a) Talk on Soviet Shopping. (b) Music by Women Soloists. (c) Foreign Affairs. 17.30—Opera or Concert. 20.00—For Czechs. 21.05—See 11.00. 22.00—For Germany. (b) 23.00—For Spain. 00.00—News (Eng., Ger.).

PARIS (Radio Colonial) (07.00-06.00) (b) 07.00—News; Records. 07.40—Review; Records. 08.30—Topical; Records. 09.15—News. 09.45—News (Eng.). (a) 10.55—Notes. 11.00—Concert; at 12.00: News (Eng.) and at 12.45: News. 14.00—Economics. 14.10—Theatre Notes. 14.20—Markets. 14.30—Concert. Conductor: Tomasi. Mme. Diaz (Songs), Martin (Tenor). 15.55—Exchange; Markets. (b) 16.15—News (Fr., Arabic). 17.00—Concert; at 18.30: News; Talk. 19.30—News (Eng., It., Fr.). 20.45—"4 x 7=28"—Play (Coolool). 22.45—News (Port.). (c) 23.15—Concert. 00.15—News (Fr., Sp.). 01.00—News (Eng.). 01.15—Play or Records. 03.45—News. 04.20—News (Eng., Sp.). 04.40—Records or Play. 05.45—News (Ger.).

PHILADELPHIA (17.00-04.00), (a) 00.15—See Wayne. (b) 01.30—See Wayne.

ROME, (a) 13.20—News; Talks; Saxophone. 14.00-15.30—News (Eng.). Trio. Talk. Arias. News. 16.30-17.30—News; Orchestra: Songs. 17.40—Music and News (Arabic). 18.00—News (Ger.). 18.21—News (Eng.). 18.44—News (Fr.). 19.05-22.15—From Rome (420.8 m.). 22.59—American Hour from Rome. News (Eng., It.). Symphony Concert. Talk. Neapolitan Songs.

RUYSSSELEDE (18.30-20.00), 18.30—Records. 19.30—News (Flem., Fr.).

SCHENECTADY (14.55-05.00), (a) 14.55—News. 15.00—Mrs. Wiggs. 15.15—John's other Wife. 15.30—Plain Bill. 15.45—To-day's Children. 16.00—David Harum. 16.15—Backstage Wife. 16.30—Charm. 16.45—Experience. 17.00—Girl Alone. 17.15—Mary Marlin. 17.30—Farm Programme. 18.00—Tenor. 18.15—High Matters. 18.30—Harding's Wife. 18.45—NBC Music Guild. 19.45—Personal Column. 20.00—Pepper Young. 20.15—Ma Perkins (a, b) 20.30—Vic and Sade. 20.45—O'Neill's. 21.00—Orchestra. 21.30—Male Quartet. 21.45—Grandpa Burton. 22.00—Stocks. 22.15—Tom Mix. 22.30—Jack Armstrong. 22.45—For Children. 23.00—Our American Schools. 23.15—Soprano. 23.30—News; Romance. 23.45—Bridge. 00.00—

THURSDAY, Dec. 24

EMPIRE Transmission 1 (GSP, GSO, GSB), 08.00—Big Ben; Zara Nelson (Cello). 08.30—Street Show.* 09.00—Talks.* 09.20—Cinema Organ. 09.40-10.00—News. Transmission 2 (GSH, GSG, GSB), 11.00—Big Ben; Harry Hopeful's Party.* 11.47—Quintet.* 12.17—Variety.† 12.25—Talks.* 12.45—Merle Miller (Soprano); Roderick Lloyd (Bass-Baritone). 13.00—News. 13.20-13.45—Pantomime Memories.† Transmission 3 (GSH, GSF, GSB), 14.00—Big Ben; Theatre Organ. 14.30—Royal Air Force Band. 15.15—Pftc. Music.† 15.25—Carol Service. 16.10—Music.† 16.15—"Under Big Ben."* 16.30—News. 16.50-17.00—Old-time Dance Music.† Transmission 4 (17.15-20.45 GSI, GSD, GSB; 21.00-22.45 GSD, GSC, GSB), 17.15—Big Ben; Dance Music. 18.00—News. 18.20—Brass Band.† 18.40—"Christmas Crack."* 19.00—"Under Big Ben."* 19.15—Raymond Newell (Baritone). 19.30—Christmas Variety.* 20.00—Carols. 20.30-20.45—Paul Beard (Violin). 21.00—News. 21.20—Christmas Pageant. 22.05—"Under Big Ben."* 22.20—Dance Music.† 22.25-22.45—Dance Music.

Transmission 5 (GSD, GSC, GSB), 23.00—Big Ben; Dance Orchestra. 23.20—Studio Party. 00.00—Carols.* 00.30—Christmas Reading. 00.40-01.00—News.

Transmission 6 (GSD, GSC, GSB), 02.00—Big Ben; Carol Service.* 02.46—Samuel Kutcher (Violin). 03.05—"Under Big Ben."* 03.20—Dance Band.* 03.40-04.00—News.

BOSTON (22.00-23.30), (a) 22.00—Talks. 23.00—News.

BOUND BROOK (17.00-03.00), 17.00 (a)—Time Signals. 19.45—NBC Music Guild. (b) 23.30—News. 01.00—Boston Symphony Orchestra. 02.30—Town Meeting.

BUDAPEST, 23.00—Midnight Mass.

CARACAS (15.45-02.45), 15.45-18.30—Records and Songs. 21.00—Music and Songs. 22.15—For Children. 22.30—Dance Music and Songs. 23.00—News. 23.30—Talk. 23.45-02.30—Variety. 02.30-02.45—Dance Music.

EINDHOVEN, (b) 00.00-03.00 (Fri.)—Variety.

HUIZEN (13.30-15.30), (b) 13.30—Anthem; Call; Music. 13.40—News. 13.50—Mail; Music. 14.25—Talk. 14.45—Carols. 15.00—Talk; Chimes. 15.30—Anthem.

MOSCOW (17.30-01.00), (a, c) 17.30—Opera or Concert. 20.00—For Germany. 21.05—For France. 22.00—For Spain. (b) 23.00—For Spain. 00.00—News (Eng.).

PARIS (Radio-Colonial) (07.00-06.00), (b) 07.00—News; Records. 07.40—Review; Records. 08.30—Review; Records. 09.15—News. 09.45—News (Eng.). (a) 10.55—Notes. 11.00—Concert; at 12.00—News (Eng.); at 12.45—News. 14.00—Foreign Affairs. 14.10—Talk. 14.20—Markets. 14.30—Ortambert Quartet; Songs. 15.55—Markets. (b) 16.15—News (Fr., Arabic). 17.00—Records. 18.00—Concert. 18.30—News; Poems; Records. 19.30—News (Eng., It., Fr.). 20.45—“L'Enfance du Christ” (Berlioz), from Paris (Radio-Paris). 22.45—News (Port.). (c) 23.15—Concert. 00.15—News (Fr., Sp.). 01.00—News (Eng.); Talk. 01.30—Records or Play. 03.45—News. 04.20—News (Eng., Sp.). 04.40—Records or Play. 05.45—News (Ger.).

PHILADELPHIA (17.00-04.30), (b) 04.00 (Fri.)—See Wayne.

PITTSBURGH (11.45-06.00), (a) 14.00—Breakfast Club. 14.30—Style and Shopping. 15.00—News; Just relax. 15.15—Jones. 15.30—Pepper Young. 15.45—Rhythm. 16.00—O'Neill's. 16.15—Personal Column. 16.30—Vic and Sade. 16.45—46.30—Vic and Sade. 17.00—News. Edward MacHugh. 17.30—Farm and Home. 18.45—Stroller's Matinee. 19.30—Home Forum. 20.00—Penna. Women. 20.15—The dansant. 20.30—Light Opera Excerpts. 21.30—Anne Muenchen. 21.45—Young Hickory. 22.00—For Children; at 22.15: Tea Time Tunes. 22.45—Dan and Sylvia. 23.00—News. 23.15—Thank you, Stusia. 23.30—Sports. 23.45—Lowell Thomas. (b) 00.00—Variety. 01.45—Boston Symphony Orchestra. 02.30—Town Meeting. (c) 03.30—Variety. 04.00—Sports. 04.15—Pan-American Peace Conference. 04.30—Arm Chair Driver. 04.45—“Holy Night”—Round the World. 05.15-06.00—Orchestras.

RIO DE JANEIRO (22.30-23.30), 22.30—News. 23.00—Talks (Eng., etc.).

ROME, (a) 13.20—News; Talks; Music. 14.00-15.30—News (Eng., Jap.). Excerpt, “Falstaff” (Verdi). News. 16.30-17.30—News. Band. 17.40—Music and News (Arabic). 18.00—News (Ger.). 18.21—News (Eng.). 18.44—News (Fr.). 19.05-22.15—From Rome (420.8 m.). 23.20—Call (It., Sp., Port.); News. Symphony Concert. Address for Latin America. News (Sp., Port.).

RUYSSELEDE (18.30-20.00), 18.30—Records. 19.30—News (Flem., Fr.).

SCHENECTADY (14.55-05.00), (a) 14.55—News. 15.00—Mrs. Wiggs. 15.15—John's other Wife. 15.30—Plain Bill. 15.45—To-day's Children. 16.00—David Harum. 16.15—Backstage Wife. 16.30—Joan Ellington. 16.45—Wife Saver. 17.00—Girl Alone. 17.15—Mary Marlin. 17.30—Farm Programme. 18.00—Songs. 18.15—High Hatters. 18.30—Harding's Wife. 18.45—Happy Jack. 19.00—Logan's Musicale. 19.30—Golden Melodies. 20.00—Pepper Young. 20.15—Ma Perkins. (a, b) 20.30—Vic and Sade. (b) 20.45—O'Neill's. 21.00—Orchestra. 21.30—Stocks. 21.45—Answer me this. 22.00—While the City sleeps. 22.15—Tom Mix. 22.30—Jack Armstrong. 22.45—For Children. 23.00—Cabin in the Cotton. 23.15—Crawford (Organ). 23.30—News; Stocks. 00.00—Amos 'n' Andy. 00.15—Experience. 00.30—Science Forum. 01.00—Rudy Vallee. 02.00—Showboat. 03.00—Bing Crosby. 04.00—Pfte.; Sport. 04.15-05.00—Orchestras.

SKAMLEBAEK, 18.00-20.15—From Kalundborg.

SOFIA (10.00-11.30 and 17.00-19.45), From Sofia (352.9 m.).

STOCKHOLM (06.20-22.00), From Stockholm (462.1 m.).

SUVA, 05.30-06.30—Records.

VATICAN CITY, (a) 15.30—Religious Notes (Fr.). (b) 19.00—See 15.30.

WAYNE (12.30-04.30), (b) 18.30—Academy of Medicine. 18.45—Christmas Carols from the Church of the Nativity Courtyard, Bethlehem, with the Choir of St. George's Cathedral, Jerusalem. 19.15-19.30—Christmas Carols from Lugano. 21.00-21.30—Christmas Carols.

22.00-22.30—President Roosevelt's Greetings from Washington. 23.00-23.15—Excerpt, Midnight Mass. from the Ara Coeli Church, Rome. (e) 04.00—Orchestra. 04.15—Chimes and Carillon Recital. 04.30—Christmas Play. 05.00-06.00—Christmas Music—Symphony Orchestra; Choir.

ZEESEN (DJA, DJB) (05.05-10.15), 05.05—Call (Ger., Eng.). 05.10—Variety; at 06.00: News. 07.00-10.15—News (Eng.); Topical Music; Pfte.: Weihnachts.

ZEESEN (DJA, DJB, DJE, DJQ) (10.55-16.00), 10.55—Call (Ger., Eng.); Music. 12.00—News (Eng.); Music. 13.00—News; Call (DJQ); Music. 14.00-16.00—News (Eng.) Dutch; Concert.

ZEESEN (DJD, DJC, DJL) (16.35-21.20), 16.35—Call (Ger., Eng.); Talks; News; Carols. 19.00—News (Eng.); Talks; Concert. 21.00—News (Ger., Eng.).

ZEESEN (DJA, DJN) (21.50-03.45), 21.50—Call (Ger., Sp.); Talks; News; Music. 00.00—Talk by Rudolf Hess. 00.15—News (Sp.); Concert. 03.30—News (Sp.).

ZEESEN (DJD, DJC) (21.50-03.50), 21.50—Call (Ger., Eng.); Music. 22.45—News; Music. 00.00—Christmas Address; Concert. 01.15—News (Eng.); Greetings. 02.15—News; Music. 03.30—News (Sp.).

FRIDAY, December 25

EMPIRE

Transmission 1 (GSP, GSO, GSB), 08.00—Big Ben; Carol Service.* 08.45—“Under Big Ben”** 09.00—Harold Williams (Baritone). 09.15—Christmas Entertainment. 09.55-10.00—News.

Transmission 2 (GSH, GSG, GSB), 10.45—Big Ben; Service. 11.30—Oratorio.† 11.45—Street Show.* 12.15—“Under Big Ben”** 12.30—Dance Orchestra. 13.00—News. 13.05-13.45—Studio Party.*

Transmission 3 (GSH, GSF, GSB), 14.00—Big Ben; Christmas Reading. 14.11—Hetty Bolton (Pfte.). 14.35—Christmas Entertainment.* 15.15—Military Band and Men's Chorus. 16.00—Christmas Variety.* 16.30—News. 16.35-17.00—“Home Sweet Home.”†

Transmission 4 (17.15-20.45 GSI, GSD, GSB; 21.00-22.45 GSD, GSC, GSB), 17.15—Big Ben; Studio Party.* 18.00—Service. 18.50—News. 19.00—Christmas Day at Thorney How. 19.20—Symphony Orchestra. 19.50-20.45—Radio Christmas Party. 21.00—News. 21.10—Children's Music.† 21.20—Orchestras. 21.50-22.45—Dance Orchestra.

Transmission 5 (GSD, GSC, GSB), 23.00—Big Ben; Harry Hopeful's Party.* 23.47—Records. 00.05—Christmas Entertainment.* 00.45-01.00—News.

Transmission 6 (GSD, GSC, GSB), 02.00—Big Ben; “Empire Magazine.”* 02.46—Theatre Orchestra; Ernest Butcher (Baritone).* 03.35—Peggy Cochrane (Violin). 03.50-04.00—News.

BOSTON (22.00-02.00), (a) 22.00—Talks. 23.00—News. (b) 00.00—Mail. 00.15—A Christmas Story. 00.45—Music. 01.00—The Spirit of Christmas, by the Rev. James H. Perkins. 01.15—Christmas Music of the World.

BOUND BROOK (17.00-03.00), (a) 17.00—Time Signals. 20.30—Sketch (b) 23.30—News. 01.00—Irene Rich. 02.00—Waring Orchestra. 02.30—Variety.

BUDAPEST, 06.00—Repetition of Midnight Mass (Recorded).

CARACAS (15.45-02.45) 15.45-18.30—Records. 21.00—Music. 22.15—For Children. 22.30—Dance Music. 23.00—News. 23.30—Talks. 00.00—Thriller. 00.15—Trio. 00.30—Variety. 01.45-02.45—Orchestra; Crooner; Dance Music.

CHICAGO (W9XF) (01.00-06.00), 04.05—Globe Trotter. 05.00—Shandor (Violin).

EINDHOVEN (00.00-01.10), (b) 00.00—Greetings from Austria. 00.05 (Sat.)—Christmas Carols by the Vienna Boys' Choir. 00.25—Songs from Innsbruck. 00.40-01.10—Concert.

HUIZEN (13.30-15.30), (b) 13.30—Anthem; Call; V.P.R.O. Talk.

14.05—News. 14.15—Christmas Programme. 15.15—Talk. 15.30—Anthem.

MOSCOW (17.30-01.00), (a, c) 17.30—Opera or Concert. 20.00—For Czechs. 21.05—English Programme: (a) For Children; (b) Children's Songs; (c) Russian Lesson. 22.00—For Germany. (b) 23.00—For Spain. 00.00—News (Eng., Ger.).

PARIS (Radio-Colonial) (07.00-06.00), (b) 07.00—News; Records. 07.40—Foreign Affairs; Records. 08.30—Topical; Records. 09.15—News. 09.45—News (Eng.). (a) 10.55—Notes. 11.00—Records. 12.00—News (Eng.). 12.15—Organ; Roman Catholic Address. 12.45—News. 13.15—Songs; Records. 14.00—Talks. 14.20—Markets. 14.30—Concert (Saint-Saens, Franck, etc.). Conductor: Tomasi. (b) 16.15—News (Fr., Arabic). 17.00—Concert; at 18.30: News; Science. 19.30—News (Eng., It., Fr.). 20.30—Nativity Play from Paris (PTT). 22.40—News (Port.). (c) 23.45—Concert. 00.15—News (Fr., Sp.). 01.00—News (Eng.). 01.15—Records or Play. 03.45—News. 04.20—News (Eng., Sp.). 04.40—Records or Play. 05.45—News (Ger.).

PHILADELPHIA (17.00-04.00), (b) 01.30—See Wayne. 03.00—See Wayne.

PITTSBURGH (11.45-06.00), (a) 14.00—Breakfast Club. 15.00—News; Music. 15.15—Jones. 15.30—Pepper Young. 15.45—Rhythm. 16.00—O'Neill's. 16.15—Personal Column. 16.30—Vic and Sade. 16.45—Edward MacHugh. 17.00—News. 17.15—Slim and Jack. 17.30—Farm and Home. 18.30—Variety. 20.00—Davies (Baritone). 20.15—Variety. 20.30—Soprano. 21.00—The dansant. 21.15—Utility Hall. 21.30—Concert Favourites. 22.00—For Children; at 22.15: Tea Time Tunes. 22.45—Dan and Sylvia. 23.00—News. 23.15—Ensemble. 23.30—News. 23.45—Lowell Thomas. (b) 00.00—Variety. (c) 03.00—Radio Guide. 03.30—Choralists. 03.45—Orchestra. 04.00—News; Dream Ship. 04.15—Minstrels. 04.30-06.00—Orchestras; at 05.00: DX Club.

RIO DE JANEIRO (22.30-23.30), 22.30—News. 23.00—Talks (Eng., etc.).

ROME, (a) 13.20-13.55—News; Talks; Arias; Christmas Music. 16.30-17.30—News; Christmas Programme. 19.05-22.15—From Rome (420.8 m.).

RUYSSELEDE (18.30-20.00), 18.30—Records. 19.30—News (Flem., Fr.).

SCHENECTADY (14.55-05.00), (a) 14.55—News. 15.00—Mrs. Wiggs. 15.15—John's other Wife. 15.30—Plain Bill. 15.45—To-day's Children. 16.00—David Harum. 16.15—Backstage Wife. 16.30—Charm. 16.45—Experience. 17.00—Girl Alone. 17.15—Mary Marlin. 17.30—Arnold's Cadets. 17.45—Science Clubs. 18.00—Tenor. 18.15—High Hatters. 18.30—Harding's Wife. 18.45—Happy Jack. 19.00—NBC Music Appreciation Hour. 20.00—Pepper Young. 20.15—Ma Perkins. (a, b) 20.30—Vic and Sade. (b) 20.45—O'Neill's. 21.00—Morrell's. 21.30—Claudine MacDonald. 21.45—Grandpa Burton. 22.00—Orchestra. 22.15—Tom Mix. 22.30—Jack Armstrong. 22.45—For Children. 23.00—Moorish Tales. 23.15—Songs. 23.30—News. 23.35—Spanish Home Programme. 00.00—Amos 'n' Andy. 00.15—Bridge. 00.30—News. 00.45—Norsemen Quartet. 01.00—Concert. 01.30—Farm Forum. 02.00—Variety. 03.00—First Nighter; Variety. 04.00—Organ; George R. Holmes. 04.15-05.00—Orchestras.

SKAMLEBAEK, 13.00-14.30 and 18.00-22.00—From Kalundborg.

SOFIA (10.00-11.30 and 17.00-19.45), From Sofia (352.9 m.).

STOCKHOLM (08.00-22.00), From Stockholm (462.1 m.).

SUVA, 05.30-06.30—Records.

VATICAN CITY, (a) 15.30—Religious Notes (It.). (b) 19.00—Religious Notes (Dutch).

WARSAW, 17.30-18.30—Carols; Christmas at Home and Abroad—Sequence; Carols.

WAYNE (14.15-03.00), (a) 14.15-14.30—Santa Claus in an Orphanage. 16.00-16.30—Madrigals and Carols by the New English Singers of London. 17.00—Sketch. 20.00-20.30—Kreiner String Quartet. (b) 01.30—Orchestra. 02.00—“Christmas Carol” (Dickens), with Lionel Barrymore as “Scrooge.” (c) 03.00—Philadelphia Symphony Orchestra.

ZEESEN (DJA, DJB) (05.05-10.15), 05.05—Call (Ger., Eng.). 05.10—Concert; at 06.00: News. 06.55—Greetings. 07.00—News (Eng.); Topical. 07.30—Carols. 08.15—Concert. 09.00—Variety. 09.30—News; Talk. 10.00-10.15—Songs (Schumann).

ZEESEN (DJA, DJB, DJE, DJQ) (10.55-16.00), 10.55—Call (Ger., Eng.); Music. 12.00—News (Eng.); Music. 13.00—News; Call (DJQ); Variety. 14.00—News (Eng., Dutch); Topical. 14.30-16.00—Music.

ZEESEN (DJD, DJL, DJC) (16.35-21.20), 16.35—Call (Ger., Eng.). 16.45—Address by Rudolf Hess. 17.00—Music. 20.00—Orchestra, Pfte.

ZEESEN (DJA, DJN) (21.50-03.45), 21.50—Call (Ger., Sp., Port.). 22.00—Cantata (Barthel). 22.45—For Women. 23.15—Carols. 00.00—Excerpts, “A Night in Venice” (Strauss). 01.00—Topical. 01.15—Orchestra. 02.15—Gala Concert. 03.45—Greetings (Ger., Sp., Port.).

ZEESEN (DJD, DJC) (21.50-03.50), 21.50—Call (Ger., Eng.). 22.00—Music; Talks. 02.15—Concert.

SATURDAY, Dec. 26

EMPIRE

Transmission 1 (GSP, GSO, GSB), 08.00—Big Ben; Christmas Variety.* 08.31—Quintet. 09.00—Harry Hopeful's Party.* 09.45-10.00—News.

Transmission 2 (GSH, GSG, GSB), 11.00—Big Ben; Military Band.* 12.00—“Round London at Night.”* 12.30—Students' Songs.† 12.45—Children's Hour. 13.30-13.45—News.

Transmission 3 (GSH, GSF, GSB), 14.00—Big Ben; Cinema Organ. 14.25—“Hansel and Gretel” (Humperdinck). 15.25—Football Commentary. 15.50—News. 16.05-17.05—Christmas Pantomime.

Transmission 4 (17.15-20.45 GSI, GSD, GSB; 21.00-22.45 GSD, GSC, GSB), 17.15—Big Ben; The Children's Hour. 18.00—News. 18.15—“A Thieves' Kitchen.”* 18.45—Quintet; Essie Ackland (Contralto). 19.30—In Town To-night.” 20.00—Muriel Taylor (Soprano). 20.15-20.45—“Round London at Night.”* 21.00—News. 21.15—Music.† 21.20—Music Hall. 22.20—Dance Music.† 22.25-22.45—Dance Music.

Transmission 5 (GSD, GSC, GSB), 23.00—Big Ben; Christmas Pantomime.* 00.01—Harry Brindle (Bass); Derek Kidner (Pfte.). 00.25—Football Commentary.* 00.45-01.00—News.

Transmission 6 (GSD, GSC, GSB), 02.00—Big Ben; The Good Old Days. 02.20—Dance Orchestra.* 03.05—“Trinity House.”* 03.45-04.00—News.

BOSTON (21.00-23.00), (a) 21.00—Mail. 21.15—The World Youth Congress at Geneva—Report by Miss Marian Stanwood. 21.30—A World Youth Programme—Talks and Music. 22.30—Basic English. 22.45—Problems of the Pacific, by Prof. G. C. Allen. 23.00—News.

BOUND BROOK (15.15-02.30), (a) 15.15—Raising your Family—Milton Cross. 17.00—Time Signals. (b) 23.30—News. 02.00—Barn Dance.

CARACAS (15.45-02.45), 15.45-18.30—Records and Songs; 21.00—Music and Songs. 22.15—For Children. 22.30—Dance Music and Songs. 23.00—News. 23.30—Humorous Tales. 23.45—For Farmers. 00.00—Trio. 00.15—Dance Band. 00.30—Songs. 00.45—Theatre. 01.00—Waltzes. 01.30—Dance Band. 02.00—Anez Orchestra.

CHICAGO (W9XF) (01.00-06.00), 05.00—Glen Gray's Orchestra.

HUIZEN (13.30-15.30), (b) 13.30—Anthem; Call. 13.35—Variety Concert; at 13.40: News; at 14.00: Review; and at 14.40: Mail. 15.30—Anthem.

MOSCOW (17.30-01.00), (a, c) 17.30—Opera or Concert. 20.00—For Germany. 21.05—For France. 22.00—For Spain. (b) 23.00—For Spain. 00.00—News (Eng.).

PARIS (Radio-Colonial) (07.00-06.00), (b) 07.00—News; Records. 07.40—Review; Records. 08.30—Review; Records. 09.15—News. 09.45—News (Eng.). (a) 10.55—Notes. 11.00—Concert; at 12.00: News (Eng.), and at 12.45: News. 14.00—Talks. 14.20—Markets. 14.30—

Light Music. 15.55—Exchange. (b) 16.15—News (Fr., Arabic). 17.00—Concert. 18.30—News; Review. 19.00—Records. 19.30—News (Eng., Fr.). 20.30—To be announced. 22.40—News (Port.). (c) 23.15—Concert. 00.15—News (Fr., Sp.). 01.00—News (Eng.). 01.15—Records or Play. 03.45—News. 04.20—News (Eng., Sp.). 04.40—Records or Play. 05.45—News (Ger.).

PITTSBURGH (11.45-06.00), (a) 14.00—Breakfast Club. 15.00—News; Just relax. 15.15—Starlets. 16.15—Musical Romances. 16.30—Magic of Speech. 17.00—News. 17.15—Slim and Jack. 17.30—Farm and Home. 18.30—Our Barn. 19.30—Ensemble. 20.00—High Hatters. 20.15—Gale Page. 20.30—Orchestra. 21.00—Nixon Cafe Orchestra. 21.30—Joan's Escorts. 21.45—Concert Ensemble. 22.00—Cadet's Quartet. 22.15—Recreo. 22.30—Webster Hall Orchestra. 23.00—News; at 23.15: One-Minute Sermons. 23.36—Band Parade. (b) 00.00—Message of Israel. 00.30—Uncle Jim. 01.00—Ed Wynne; Orchestra. 02.00—Barn Dance. (c) 03.00—Nickelodeon. 03.30—Hildegard. 04.00—News. 04.15—Minstrels. 04.30-06.00—Orchestras; at 05.00: Far North Messages.

RIO DE JANEIRO (22.30-23.30), 22.30—News. 23.00—Talks (Eng., etc.).

ROME, (a) 13.20—News; Talks; Pfte. Duets. 14.00-15.30—News (Eng.). Violin. Light Music. News. 16.30-17.30—News. Excerpt, “Falstaff” (Verdi). 17.40—Music and News (Arabic). 18.00—News (Ger.). 18.21—News (Eng.). 18.44—News (Fr.). 19.05-22.15—From Rome (420.8 m.). 23.20—Call (It., Sp., Port.); News. Excerpt, “Falstaff” (Verdi). Talk. Songs. News (Sp., Port.).

RUYSSELEDE (18.30-20.00), 18.30—Records. 19.30—News (Flem., Fr.).

SCHENECTADY (14.55-05.00), (a) 14.55—News. 15.00—Charloeters. 15.15—Vaas Family. 15.30—Manhatters. 16.00—Our Schools. 16.15—Piano Impressions. 16.30—Mystery Chef. 16.45—Home Town. 17.00—Chasin's Music Series. 17.30—Farm Programme. 18.00—Stocks. 18.15—Ensemble. 18.30—Campus Capers. 19.30—Variety. (a, b) 20.30—Weekend Revue. (b) 21.30—Continental. 22.00—Top Hatters. 22.30—Kindergarten. 23.00—Orchestra. 23.30—News; Contralto. 23.45—Religion. 00.00—Variety. 00.30—Stocks. 01.00—Variety. 04.05—Sport Shots. 04.15-05.00—Orchestras.

SKAMLEBAEK, 13.00-14.30 and 18.00-22.00—From Kalundborg.

SOFIA (10.00-11.30 and 17.00-19.45), From Sofia (352.9 m.).

STOCKHOLM (06.20-22.00), From Stockholm (462.1 m.).

SUVA, 05.30-06.30—Records.

VATICAN CITY, (a) 15.30—Religious Notes (It.). (b) 19.00—Religious Notes (Dutch).

WAYNE (12.30-04.00), (a) 15.30—For Children. 16.00-16.30—Christmas Music—A cappella Choir. (b) 01.00—Columbia Workshop. 02.30—Columbia Symphony Orchestra.

ZEESEN (DJA, DJB) (05.05-10.15), 05.05—Call (Ger., Eng.); Music. 07.00—Talk. 07.15—Cantata (Wolff). 08.00—Talk. 08.15—Strauss Music. 09.15—Rococo Suite (Zilcher). 09.45-10.15—For Women.

ZEESEN (DJA, DJB, DJE, DJQ) (10.55-16.00), 10.55—Call (Ger., Eng.); Music. 12.00—Greetings; Music. 13.00—Christmas Variety. 13.45—Carols. 14.30—Pfte. Concerto in C (Beethoven) with Cortot (Recorded). 15.00-16.00—Excerpts, “Eine Nacht in Venedig” (Strauss).

ZEESEN (DJD, DJL, DJC) (16.35-21.20), 16.35—Call (Ger., Eng.). 16.45—Carols. 17.15—News. 17.30—Violin, Pfte. 17.45—“Wintermärchen” (Hilg). 19.00—News (Eng.). 19.15—Folk Music. 20.30—Pfte. 21.00—News (Ger., Eng.).

ZEESEN (DJA, DJN) (21.50-03.45), 21.50—Call (Ger., Sp.). 22.00—Rococo Suite (Zilcher). 22.30—Topical. 22.45—News. 23.00—Fairy Play with Music (Hilg). 00.15—News (Sp.). 00.30—Folk Music. 01.15—Topical. 01.30—Carols. 02.00—News. 02.15—Variety. 03.30—News (Sp.).

ZEESEN (DJD, DJC) (21.50-03.50), 21.50—Call (Ger., Eng.). 22.00—Rococo Suite (Zilcher). 22.30—Talk. 22.45—News. 23.00—“Wintermärchen” (Hilg). 00.15—Topical. 00.30—Folk Music. 01.15—News (Eng.). 01.30—Carols. 02.00—News. 02.15—Christmas Variety. 03.30—News (Sp.).

December 20 SUNDAY

11 a.m.

BERLIN and **MOST GERMAN STATIONS**, Light Music.
KALUNDBORG, Radio Orchestra.
MUNICH and **DEUTSCHLANDSENDER**, Military Band from the Feldherrnhalle. Conductor: Kohmüch.
PARIS (PTT), Locatelli Orchestra. Wilhelmine Coudray (Songs).
RADIO-PARIS, Paris Symphony Orchestra (Gaubert, Pierné, Yvain, Steck, Hué).
VIENNA, Vienna Symphony Orchestra. Steiner (Violin).
WARSAW, 11.3—Cracow Philharmonic. Conductor: Dymmek. Gimpel (Violin).

12 noon

BERLIN and **MOST GERMAN STATIONS**, Light Music.
HILVERSUM (1,875 m.). K.R.O. Orchestra. 12.40—Talk. **HILVERSUM** (301.5 m.). 12.10—Kovacs Lajos Orchestra. Palla (Organ).
KALUNDBORG, Radio Orchestra. 12.15—Reading. 12.35—Records.
MUNICH and **DEUTSCHLANDSENDER**, 12.10—Station Orchestra. Conductor: Mihalovic.
OSLO, Inauguration of the Nordsund Bridge.
PARIS (PTT), Popular Music and Dance Music by the Derveaux Orchestra. 12.45—News.
RADIO-PARIS, Paule Maxence (Organ) (César Franck and Vierne). 12.30—Religious Address. 12.50—News.
VIENNA, 12.5—Radio Orchestra.
WARSAW, Cracow Philharmonic and Violin (contd.).

1 p.m.

ATHLONE, 1.30—Records.
BERLIN, Records. **BRESLAU**, News. 1.10—For Women. 1.30—Announcements. 1.50—Sequence.
COLOGNE, Competition; Hints.
DEUTSCHLANDSENDER, Christmas Play. 1.30—Polish Music.
FRANKFURT, Play for Children. 1.45—Talk.
HAMBURG, Fairy Play, followed by "Das heimliche Haus"—Cantata (Baumann) (Recorded). **HILVERSUM** (1,875 m.). Records, K.R.O. Orchestra. 1.40—Address. **HILVERSUM** (301.5 m.). Records. 1.10—Kovacs Lajos Orchestra. 1.40—Books.
KALUNDBORG, Service. **KÖNIGSBERG**, Chess. 1.30—Report; Records.
LEIPZIG, 1.5—Talk, Records. 1.50—Fairy Play with Music.
MOSCOW, Swedish Talks. **MUNICH**, News; For Children; Records.
OSLO, Inauguration (contd.).
PARIS (PTT), Orchestra (contd.). 1.25—Talk. 1.30—From the Opéra-comique.
RADIO-NORMANDIE, Concert. **RADIO-PARIS**, Paris Symphony Orchestra. Conductor: Tomasi. Suzette Guilbert (Songs).
STUTTGART, See Frankfurt. 1.45—Talk.
VIENNA, Orchestra.
WARSAW, Report, Announcements. 1.45—For Farmers.

2 p.m.

ATHLONE, Records.
BERLIN, From the Kurmark.
BRESLAU, Sequence. 2.30—Fairy Play.
COLOGNE, Choir, Grape (Pfte.). 2.45—Reading.
DEUTSCHLANDSENDER, Talk. 2.15—Sequence.
FRANKFURT, For Country People.
HAMBURG, Records. 2.40—Talk. **HILVERSUM** (1,875 m.). Address. 2.10—K.R.O. Orchestra; Records. 2.55—Rosa Spier Trio. **HILVERSUM** (301.5 m.). Books. 2.10—Mozart Concert. A.V.R.O. Orchestra. Lili Krauss (Pfte.).
KALUNDBORG, Service. 2.20—Orchestra and Rytter (Pfte.). **KÖNIGSBERG**, Records (contd.). 2.10—Trombone Choir. 2.30—Fairy Play.
LEIPZIG, Fairy Play (contd.). 2.40—Talk.
MOSCOW, For Children. **MUNICH**, 2.5—Pfte.; Talk.
PARIS (PTT), From the Opéra-comique (contd.). **PRAGUE**, "The Devil and Kate"—Opera (Dvořák) from the State Opera.
RADIO-NORMANDIE, Records and Light Music. **RADIO-PARIS**, "Le prince charmant"—Opéra-comique (Fortolis-Brun); "La paix aux champs"—Poem (Suzanne de Sainte-Croix).
STUTTGART, "The First Performance of Weber's Freischütz"—Play (Locks).
VIENNA, News. 2.15—Books.

2.40—Chamber Music. Baller (Pfte.) and the Rothschild Quartet (Haydn, Zarebski).
WARSAW, For Farmers. 2.15—Paul Rynas Orchestra.

3 p.m.

COLOGNE, Orchestra, Violin. **DEUTSCHLANDSENDER**, Christmas Music—Violin and Harmonium. 3.15—Records.
HAMBURG, See Stuttgart. 3.50—Football Cup Match Report. **HILVERSUM** (1,875 m.). Trio (contd.). **HILVERSUM** (301.5 m.). Concert (contd.). 3.40—Dance Band.
KALUNDBORG, Orchestra and Pfte. (contd.). **KÖNIGSBERG**, Topical. 3.15—Station Orchestra, Quartets, Songs.
MONTE CENERI, 3.30—Lugano Philharmonic from the Kursaal, Lugano. Conductor: Dassetto.
MOSCOW, News. 3.13—Music. **MUNICH**, Orchestra.
OSLO, 3.30—Norwegian Folk Songs and Hardanger Fiddle Music.
PARIS (PTT), From the Opéra-comique (contd.). **PRAGUE**, "The Devil and Kate" (contd.).
RADIO-NORMANDIE, Concert. 3.45—Records. **RADIO-PARIS**, Mme. Sevrane (Songs). 3.15—Claude Vally (Songs). 3.30—Paris Plucked String Orchestra.
STRASBOURG, Fifth Nancy Conservatoire Concert from the Salle Poiré, Nancy. Madeleine Masson (Violin). **STUTTGART** and **SOME GERMAN STATIONS**, Light Music from Saarbrücken.
VIENNA, Chamber Music (contd.). 3.25—Talk. 3.50—Competition.
WARSAW, Dialogues of Plato: The Defence of Socrates.

4 p.m.

COLOGNE, Orchestra and Violin (contd.). 4.30—For Ex-Servicemen.
DEUTSCHLANDSENDER, Records. 4.15—South-Tyrolse Carols.
HAMBURG, Football Report (contd.). **HILVERSUM** (1,875 m.). 4.5—Roman Catholic Service. 4.35—Sports. 4.40—Service. **HILVERSUM** (301.5 m.). Dance Band. 4.10—Carols. 4.30—Sports. 4.40—Talk.
KALUNDBORG, Orchestra and Pfte. (contd.). 4.20—Children's Choir. 4.50—Records. **KÖNIGSBERG**, Orchestra, etc. (contd.). 4.45—Literary and Musical.
MONTE CENERI, Sports; Lugano Philharmonic (contd.). **MOSCOW**, Music; Notes. 4.30—Concert. **MUNICH**, Orchestra.
OSLO, Records. 4.40—Talk.
PARIS (PTT), From the Opéra-comique (contd.). 4.45—Reine Paulet-Guy Berry Programme. **PRAGUE**, "The Devil and Kate" (contd.). 4.15—Talk. 4.30—German Transmission: Talk; Review; Reading; Play with Music.
RADIO-NORMANDIE, Concert. **RADIO-PARIS**, Two One-Act Plays (a) "La coupe enchantée" (La Fontaine), (b) "Le cocher suppose" (Hauteroche). **ROME**, "Scugnizza"—Opérette (Costa).
STOCKHOLM, Swedish Academy's 150th Anniversary Festival from the Börhus. **STRASBOURG**, Concert (contd.). **STUTTGART** and **SOME GERMAN STATIONS**, Light Music (contd.).
TURIN, Symphony Concert from the Teatro Adriano, Rome, Conductor: Hidemaro Konoye.
VIENNA, Competition. 4.15—Reading. 4.30—Radio Orchestra.
WARSAW, Orchestra; Topical.

5 p.m.

ATHLONE, 5.30—Pipers Band. 5.50—Reading.
BERLIN, Literary and Musical Sequence to Verse of Wolfgang Pitow. **BRESLAU**, "Skat"—Play (Albrecht) with Songs. **BUDAPEST** (1), 5.15—Band.
COLOGNE, "Hänsel and Gretel"—Fairy Opera (Humperdinck).
DEUTSCHLANDSENDER, Von Gezy Band.
FRANKFURT, Scandinavian Songs and Dances. 5.30—Advent Concert. Station Choir. Becker (Organ).
HAMBURG, Dialect Play (Steen). 5.45—Folk Music. Mandoline Band and Choir. **HILVERSUM** (1,875 m.). Service (contd.). **HILVERSUM** (301.5 m.). Talks; Records. 5.55—News.
KALUNDBORG, Loewe Ballads. 5.20—Talk. **KÖNIGSBERG**, Literary and Musical. 5.15—Christmas Music.
LEIPZIG, "Das heimliche Haus"—Cantata (Baumann). 5.30—German Carols.
MONTE CENERI, For Children. 5.15—Orchestra; Sports. **MOSCOW**, Notes. 5.15—Talk. 5.45—Music. **MUNICH**, "Des Page des

Königs"—Play after Meyer (Schaeff-Scheefen).
OSLO, Dance Music. 5.30—Talk; Records.
PARIS (PTT), Reine Paulet-Guy Berry (contd.). 5.15—Records. 5.30—Colonne Concert. **PRAGUE**, German Transmission (contd.). 5.50—News (German).
RADIO-NORMANDIE, Records. 5.30—Light Music. **RADIO-PARIS**, Light Music—Pascal Orchestra.
ROME, "Scugnizza" (contd.).
STOCKHOLM, Service. **STRASBOURG**, Concert (contd.). 5.15—Records. **STUTTGART**, Brahms and Glazunov Music. 5.30—"Swabia"—Dialect Programme.
TURIN, Concert (contd.).
VIENNA, Radio Orchestra.
WARSAW, Topical; Orchestra.

6 p.m.

ATHLONE, Folk Music in Southern Europe. 6.20—Potted Novels. 6.35—Carols and Organ.
BERLIN, "Die Sternsinger"—Advent Play (Keienburg and Leberecht). Music by Hermann Simon. 6.40—Sports. **BEROMÜNSTER**, 6.30—News. 6.45—Orchestra. **BRESLAU**, Reading. 5.15—Dance Band. 6.35—Sequence. **BUCHAREST** and **RADIO-ROMANIA**, Jazz Band. 6.25—Romanian Programme. 6.45—Choir. **BUDAPEST** (1), Band. 6.10—Banda Marci Anniversary—Talk with Cigány Music.
COLOGNE, "Hänsel and Gretel" (contd.). 6.45—Sports.
DEUTSCHLANDSENDER, Band (contd.). 6.30—Sports.
FRANKFURT, Advent Concert (contd.). 6.50—Sports.
HAMBURG, Folk Music (contd.). 6.35—Sports. **HILVERSUM** (1,875 m.). Service (contd.); Organ. **HILVERSUM** (301.5 m.). V.A.R.A. Orchestra. 6.40—Ramblers Orchestra and Artists.
KALUNDBORG, News. 6.30—Talk. **KÖNIGSBERG**, Peter Arco—Records. 6.40—Sports.
LEIPZIG, "Thuringia"—Poem (Schrofer) with Christmas Carols and Music. 6.45—Sports.
MONTE CENERI, Sports. 6.15—Opera Records. 6.45—News. **MOSCOW**, Provincial Programme. **MUNICH**, "Des Page des Königs" (contd.). 6.5—Orchestra; Notes.
OSLO, Records. 6.10—News. 6.30—Orchestra. Tillus (Pfte.) (Svendén, Liszt, Tchaikovsky).
PARIS (PTT), Concert (contd.). **POSTE PARISIEN**, Records. **PRAGUE**, News; Record. 6.10—"Christmas Idyll"—Play (Saman). 6.30—Variety.
RADIO-NORMANDIE, Variety. **RADIO-PARIS**, Light Music (contd.). **ROME** and **TURIN**, Records; Sports.
SOTTENS, Roman Catholic Address. 6.25—Song Duets. 6.50—News. **STOCKHOLM**, Service (contd.). 6.15—News. 6.30—Talk. **STRASBOURG**, Talk; Records; Topical. **STUTTGART**, "Swabia" (contd.). 6.30—Talks.
TOULOUSE, 6.5—Music. 6.50—News.
VIENNA, Notes; Radio Orchestra. 6.45—Variety Concert.
WARSAW, Sketch; Notes; Records.

7 p.m.

ATHLONE, 7.5—Christmas Story. 7.20—Concert from Cork Municipal School of Music.
BERLIN, "Der Freischütz"—Opera (Weber). **BEROMÜNSTER**, Monteverdi Concert. 7.20—Light German Classical Music. **BRESLAU**, Sequence (contd.). 7.20—Christmas Oratorio (Bach). **BUCHAREST** and **RADIO-ROMANIA**, Choir. 7.20—Play. **BUDAPEST** (1), Talk and Music (contd.). 7.45—Budapest Concert Orchestra. Opérette Music.
DEUTSCHLANDSENDER, "The Deutschlandsender Toy Shop"—Fantasy (Illing) with Music by Hahn. Conductors: Dobrindt and Hahn.
HAMBURG, "Das Christelflein"—Opera in Two Acts (Pfitzner). Conductor: The Composer. **HILVERSUM** (1,875 m.). Records. 7.25—Sports; Talk; News. **HILVERSUM** (301.5 m.). Orchestra (contd.). 7.40—News. 7.55—"Christmas Roses"—Revue (de Haas), Music by Max Tak. Conductor: The Composer.
KALUNDBORG, Band. 7.20—Records. 7.30—"Soldier Memories"—Guards Band. Songs and Monologues. **KÖNIGSBERG**, "Immanuel Kant listens in 1776"—Literary and Musical Sequence (Hilpert).
LEIPZIG, **COLOGNE** and **FRANKFURT**, Variety Concert.

MONTE CENERI, "Two Dozen Red Roses"—Play (Benedetti).
MOSCOW, Provincial Programme.
MUNICH, Film Music. Station Dance Band, Orchestra, Choir, etc.
OSLO, Orchestra (contd.). 7.45—Talk.
PARIS (PTT), Concert (contd.). 7.30—News. **POSTE PARISIEN**, News; Records; at 7.52: Frères Jacasse. **PRAGUE**, Variety (contd.).
RADIO-NORMANDIE, Records. 7.15—Light Music. 7.40—News. **RADIO-PARIS**, Radio-Paris Guignol. 7.30—Jean Sorbier (Songs). 7.45—Pierrette Madd (Songs).
ROME, 7.5—News. 7.30—Talk. 7.40—"Le perle cinesi"—Play (Giachetti).
SOTTENS, Sports. 7.20—Carol by the Schola grégorienne. 7.35—Sketch. **STOCKHOLM**, Lazat, Lopatinov, Delius, Mendelssohn and Rubinstein Music. Orchestra. Lopatinov (Pfte.). **STRASBOURG**, Topical. 7.15—Folk Songs. 7.30—News. 7.45—News (German). **STUTTGART**, "The Pearl Fishers"—Opera (Bizet).
TOULOUSE, Light Music. 7.55—News. **TURIN**, See Rome. 7.40—"Madame Pompadour"—Opérette (Fall).
VIENNA, Variety Concert. 7.45—Ballad (Heine). 7.50—Report.
WARSAW, Records; Sports; Politics. 7.50—News.

8 p.m.

ATHLONE, Concert (contd.). 8.15—Talk in Irish. 8.30—Musical Variety.
BERLIN, "Der Freischütz" (contd.). **BEROMÜNSTER**, "Erasmus and Zwingli"—Radio Picture (Stokar). 8.40—Stämpfli Concert. **BRESLAU**, Oratorio (contd.). **BUCHAREST** and **RADIO-ROMANIA**, Play (contd.). 8.55—Orchestra. Margaretta Kozen (Songs). **BUDAPEST** (1), Orchestra (contd.).
DEUTSCHLANDSENDER, "The Deutschlandsender Toy Shop" (contd.).
EIFFEL TOWER, 8.15—News. 8.30—Liszt Anniversary. Hélène Pignari and Nicole Rolet (Pftes.) and Lucienne Astruc (Songs).
HAMBURG, "Das Christelflein" (Pfitzner) (contd.). **HILVERSUM** (1,875 m.). Records. 8.10—Recitations. 8.55—Leeb (Lute). **HILVERSUM** (301.5 m.). Revue (contd.).
KALUNDBORG, "Soldier Memories" (contd.). 8.20—Trios (Haydn). 8.40—Guards Band. **KÖNIGSBERG**, Christmas Concert. Conductor: Wöllner. Böhnke (Soprano).
LEIPZIG, **COLOGNE** and **FRANKFURT**, Variety Concert (contd.).
MONTE CENERI, Play (contd.). 8.15—Poltronieri Quartet. **MOSCOW**, German Talk. **MUNICH**, Film Music (contd.).
OSLO, Talk. 8.10—Cabaret. 8.40—News.
PARIS (PTT), News. 8.30—"Sophie"—Opéra-Comique (Levadé).
POSTE PARISIEN, Records. 8.7—Paul Reboux. 8.20—Sketch. 8.35—Concert. **PRAGUE**, Variety (contd.).
RADIO-NORMANDIE, Concert; at 8.30: Sports. **RADIO PARIS**, Historical Dialogues. 8.30—News. 8.45—"La Thébaïde"—Tragedy (Racine). **ROME**, "Le perle cinesi" (contd.). 8.15—Marta Linz (Violin).
SOTTENS, Radio Orch. 8.30: Fridolin and Partner. **STOCKHOLM**, Orchestra and Pfte. (contd.). 8.30—Topical. 8.45—News. **STRASBOURG**, Sports. 8.15—News (German). 8.30—Strasbourg Cathedral Choir, Station Orchestra Christmas Music. **STUTTGART**, "The Pearl Fishers" (Bizet) (contd.).
TOULOUSE, Light Music and Variety. 8.55—News. **TURIN**, "Madame Pompadour" (contd.).
VIENNA, Recitation. 8.10—"Dr. Abernethy"—Play (Alicia Ramsay de Cordova).
WARSAW, Variety. 8.30—Pfte. Sonata in B minor (Liszt).

9 p.m.

ATHLONE, Irish Programme. 9.20—Gaelic Talk. 9.30—Variety.
BERLIN, "Der Freischütz" (contd.). 9.15—News. 9.45—Dance Music from Deutschlandsender. **BEROMÜNSTER**, Sämpfli Concert. 9.15—Sports. **BRESLAU**, News. 9.30—Dance Band. **BRNO**, 9.35—Jazz Band. **BUCHAREST** and

RADIO-ROMANIA, Orchestra and Songs (contd.). 9.55—News. **BUDAPEST** (1), News. 9.20—Jazz Band.
DEUTSCHLANDSENDER and **MOST GERMAN STATIONS**, News. 9.30—Dance Music.
EIFFEL TOWER, Liszt Concert (contd.).
HILVERSUM (1,875 m.). Leeb (Lute). 9.10—Maastricht Municipal Orchestra. Anspach (Tenor). 9.55—Records. **HILVERSUM** (301.5 m.). Revue (contd.). 9.25—Christmas Puzzle. 9.55—News.
KALUNDBORG Wind Band; at 9.10: News; Records. **KÖNIGSBERG**, News. 9.20—Football Report. 9.40—Dance Music from Deutschlandsender.
MONTE CENERI, Poltronieri Quartet. 9.15—Sports. **MOSCOW**, 9.5—English Programme. **MUNICH**, Light and Dance Music.
OSLO, Topical. 9.30—Dance Records.
PARIS (PTT), "Sophie" (contd.).
POSTE PARISIEN, 9.5—Amateurs. 9.55—Dance Band. **PRAGUE**, News and Records. 9.35—See Brno.
RADIO-NORMANDIE, Concert. **RADIO-PARIS**, "La Thébaïde" (contd.). **ROME**, Choir. 9.40—Dance Music.
SOTTENS, Concert. 9.15—Talk. **STOCKHOLM**, Light Orchestral. **STRASBOURG**, Choir, etc. (contd.).
TOULOUSE, News. 9.10—Light Music. 9.45—Paris Programme. **TURIN**, "Madame Pompadour" (contd.).
VIENNA, "Dr. Abernethy"—Play (contd.). 9.10—News. 9.30—Lajos Kertész (Tenor).
WARSAW, Light Orchestral.

10 p.m.

ATHLONE, Variety. 10.35—News. **BRESLAU**, Dance Band. **BRNO** and **PRAGUE**, Jazz Band. **BUDAPEST** (1), Radio Orchestra.
DEUTSCHLANDSENDER and **MOST GERMAN STATIONS**, Dance Music.
HILVERSUM (1,875 m.). Records. 10.10—News. 10.20—Epilogue. **HILVERSUM** (301.5 m.). News. 10.10—Helene Cals (Soprano). **Lensky** (Violin), Palla (Organ). 10.40—News. 10.50—Dance Band. **KALUNDBORG**, Dance Band.
MOSCOW, German Talk. **MUNICH**, Music (contd.).
OSLO, Dance Records.
PARIS (PTT), "Sophie" (contd.). 10.30—News. 10.45—Dance Band. **POSTE PARISIEN**, Dance Band. 10.30—Records.
RADIO-NORMANDIE, Records. 10.15—Concert. **RADIO-PARIS**, "La Thébaïde" (contd.). 10.45—News. **ROME**, News. 10.15—Dance Music.
STRASBOURG, Choir, etc. (contd.). 10.15—Records. 10.30—News.
TOULOUSE, Paris Programme. 10.15—Light Music. 10.55—News. **TURIN**, News. 10.15—Dance Music.
VIENNA, Tenor (contd.). 10.10—Records. 10.30—News.
WARSAW, Dance Records.

11 p.m.

ATHLONE, Ceilidhe Music.
BERLIN, Dance Records. **BUDAPEST** (1), 11.5—News.
DEUTSCHLANDSENDER, Dance Records.
FRANKFURT and **STUTTGART**, Popular Opera Records.
HILVERSUM (301.5 m.). Dance Band.
KALUNDBORG, Dance Band.
MOSCOW, Spanish Talk.
PARIS (PTT), Dance Band. **POSTE PARISIEN**, Records; Light Music.
RADIO-NORMANDIE, Records and Light Music. **RADIO-PARIS**, Dance Music. 11.30—Light Music—Gouldy Orchestra.
STRASBOURG, News (German). 11.15—Dance Band from Paris (PTT).
TOULOUSE, Light Music. 11.55—News.

12 midnight

FRANKFURT and **STUTTGART**, Opera Records (contd.).
RADIO-NORMANDIE, Dance Music. 12.30—Orchestra. **RADIO-PARIS**, Light Music (contd.).
TOULOUSE, Light Music.

SUNDAY (December 20)

NATIONAL

Time Signals : Big Ben, 12.30, 10.45 p.m. Greenwich, 10.30 a.m., 4.0, 9.0 p.m. D=Droitwich.

9.25-10.15 a.m. (D)—Service.
10.30-10.45 (D)—Weather Forecast.
12.30 p.m. (D)—The Commodore Grand Orchestra.
1.30 (D)—Students' Songs : BBC Men's Chorus ; Stuart Robertson (Baritone) Ernest Lush (Pfte.).
2.0 (D)—Gardening Talk.
2.20 (D)—BBC Military Band.
3.0 (D)—Records.
3.40 (D)—"Christianity and its Critics."
4.0—The BBC Theatre Orchestra, conducted by Harold Lowe ; Erika Storm (Soprano).
5.0—Missionary Talk.
5.20—Reginald Kell (Clarinet) ; The Kutcher String Quartet.
6.15—Talk : The Cinema.
6.30—Reginald Foort—Theatre Organ.
7.0—Talk : I was There.
7.20—Fred Hartley Novelty Quintet.
7.55—Service.
8.45—Appeal on behalf of The Theatrical Ladies' Guild by Ivor Novello.
8.50—The News.
9.5—Tschiffely's Ride.
9.55—The BBC Singers.
10.30—Epilogue.

REGIONAL

Time Signals : Big Ben, 12.30, 10.45 p.m. Greenwich, 4.0, 9.0 p.m.
12.30 p.m. (ex. Midland)—Droitwich.
2.0 (Scottish)—"In Journeyings Oft."
2.20 (Scottish)—Droitwich.
4.0 (ex. Western, Northern)—Mozart. Elsie Suddaby (Soprano) ; John Francis (Flute) ; New London String Trio.
4.0 (Western)—"The Winter."
4.0 (Northern)—Halifax Festival Choir and Orchestra, Christmas Music.
4.30—For the Children.
5.0 (Regional)—Erih British Legion Band ; Eric Marshall (Baritone).
5.0 (Midland)—"Libel"—a play by Edward Woolf.
5.0 (Western)—"The Masque of Lob."
5.0 (Northern)—Recital.
5.0 (N. Ireland)—Carols.
5.0 (Scottish)—BBC Scottish Orchestra ; Margaret Murray (Soprano).
5.15 (Northern)—"In the Toy Shop."
5.30 (N. Ireland)—Records.
5.35 (Western)—"Extremes Meet."
6.0 (ex. Midland)—Barnabas Von Geczy's Orchestra, from Berlin.
6.30 (ex. N. Ireland)—Robert Soätens (Violin) ; BBC Orchestra (Section B), conducted by Sir Henry J. Wood.
6.40 (N. Ireland)—Service.
7.55—Services.
8.45—Appeals : (Regional, Midland, Northern)—Hospitals ; (Western)—Y.W.C.A. (Wales) ; (N. Ireland)—City Cripples' Christmas Treat ; (Scottish)—Boy Scouts' Association.
8.50—The News.
9.5 (ex. Western, Northern, N. Ireland)—Peter Dawson (Baritone).
9.5 (Western)—Reginald Porter-Brown—Organ.
9.5 (Northern)—Work in Progress.
9.5 (N. Ireland)—BBC Northern Ireland Orchestra, conducted by Peter Montgomery ; Frank Titterton (Tenor).
9.25 (Northern)—BBC Northern Orchestra, Conductor, T. H. Morrison.
9.30 (ex. Midland, Northern)—Bournemouth Municipal Orchestra ; Douglas Taylor (Baritone) ; Percy Whitlock (Organ).
9.30 (Midland)—BBC Midland Orchestra. Eric Coates' music, conducted by the Composer.
10.25 (N. Ireland)—Reading.
10.30—Epilogue.

Hours of Transmission in Greenwich Mean Time.

ATHLONE (Ireland)
565 kc/s (531 m.) ; 60 kW. Relayed by Dublin, 1,348 kc/s (222.6 m.) ; and Cork, 1,240 kc/s (241.9 m.).
1.30-3.0 p.m.—Records. 5.30—Churchtown Pipers Band. 5.50—Poetry Reading. 6.0—Folk Music in Southern Europe No. 2, by Dr. Walter Starkie. 6.20—Potted Novels, "The Christmas Carol" by Brian Coffey. 6.35—Carol and Organ Recital from St. Peter's Parish Church, Drogheda. Organist : L. E. Bartram. 7.5—A Christmas Story by Dorothy Macardle. 7.20—Concert from the Cork Municipal School of Music. 8.15—Talk in Irish by Nicolas Toibin. 8.30—"Waiting for a Tram"—Musical Variety. 9.0—An Irish Programme from Galway. 9.20—Gaelic Talk on the Week's Church Feast Days : An t-Ath Micheal, O.M.Cap. 9.30—Variety. 10.30—Five Minute Appeal : Inter-

11.0—Light Music. Station Orchestra, Conductor : Willy Steiner. Military Band, Conductor : Böhm. Prudentia Olbrich and Paul Noack-Ihlenfeld (Pftes.). March, Flieger empor (Buder). Overture, Bagatelle (Rixner). Waltz, A toi (Waldteufel). Fliegermarsch (Urbach). Selection, "Paganini" (Lehár). Bei den Zwergen in den Bergen (Prager). Mazurka-Minuet (Rust). Serenade (Husadel). Jagdgeschwader Richthofen (Husadel). Ein heiteres Vorspiel (Kark). Overture, "Princess Golden Shoes" (Rust). Liebeswerben (Derksen). Neapolitan Serenade (Winkler). Pftes. : Walt (Schütt). Mandolinen erklingen (Miller). Sonneberger Spielzeug (Ortleb). Waltz, The Secrets of the Adige (Carena). Pftes. : March and Humoresque (Noack-Ihlenfeld). Puszta-Märchen (Schulenburg). Polka, Schlittenfahrt (Klose).
1.0 p.m.—Records. Pfte. Concerto in

BEROMÜNSTER (Switzerland)

556 kc/s (539.6 m.) ; 100 kW. Relayed by Basle and Berne, 1,375 kc/s (218.2 m.).

9.0-11.0 a.m.—Programme from Basle.
9.0—Roman Catholic Service. 9.45—Violin Recital. 10.30—Hermann Schneider reads. 11.0—Zürich Radio Orchestra. Conductor : Hofmann ; at 11.30 : News. 12.30-1.30 p.m. (from Basle) "Winter" Stories, Poems and Songs. Albert Ginther and Otto Lehmann Choir.
4.0-6.30—Programme from Basle. 4.0—Advent Service from St. Martin's Church. 5.0—Dialect Talk : Birds in Winter. 5.20—The "Concordia" Music Society Concert. 6.0—"Hobbies"—Report. 6.30—News.
6.40-7.20—Programme from Basle. 6.40—Sports.
6.45—"Banchetto musicale" (Schein) by the Basle Station Orchestra. Conductor : Bernhard.

7.0—Monteverdi Concert. Basle Station Orchestra, Max Meili (Tenor), August Wenzinger (Viola da gamba) and Fritz Morel (Harpisichord).

7.20—Light German Classical Music. Zürich Radio Orchestra.

8.0 till Close Down—Programme from Basle. 8.0—"Erasmus und Zwingli"—Radio Picture (Stokar).

8.40—Eduard "Stämpfli" Concert. Monique Haas (Pfte.). Josef Bopp (Flute). Fritz Hirt (Violin). August Wenzinger (Cello). 9.15—Sports ; Programme Announcements.

BRATISLAVA (Czechoslovakia)

1,004 kc/s (298.8 m.) ; 13.5 kW.

5.45-8.0 a.m.—See Prague. 8.0—Roman Catholic Service from St. Martin's Cathedral. 9.0—Roman Catholic Address. 9.15—Announcements. 9.20—Record. 9.25—Literary Programme. 9.55—See Prague. 10.0—See Brno. 11.0-12.35 p.m.—See Prague. 12.35—For Farmers. 12.50—For Workers. 1.5-1.20—For Hungarian Farmers. 1.55-4.15—See Prague. 4.15—Talk from Kosice.

5.0-5.45—Hungarian Transmission : Talk : "Bethlehem"—Pastoral Play. 5.45—Sports. 5.50-6.5—See Prague. 6.5—Record. 6.15—Medical Talk. 6.30-9.20—See Prague. 9.20—News (Hungarian). 9.35-10.30—See Brno.

BRESLAU (Germany)

950 kc/s (315.8 m.) ; 100 kW. Relayed by Gleiwitz, 1,231 kc/s (243.7 m.).

4.0 a.m.—Folk Music from Beuthen. 5.0—See Hamburg. 7.0—Reading. 7.10-7.40—Folk Music from Beuthen. 7.50—News. 8.0—Schumann and Schubert Songs by the Plüddemann Choir, Hilde Zimmermann and Kaethe Baron. Part I. Schumann. Choir : (a) Jäger Wohlgemuth, (b) Soldatenbraut, (c) Waldmädchen, (d) Meerfey, (e) Der Wassermann. Des Knaben Berglied. Die Kartenlegerin. Part II. Schubert. Choir : (a) Jäger, ruhe von der Jagd, (b) Aria, "Die Zauberharfe." An die Entfernte. An Sylvia. Ständchen.
8.40—Dialogue : Christmas Bells. 9.0—See Königsberg.
9.30—Advent and Christmas Music of Five Centuries, from Hindenburg. Children's Choir and Orchestra. Conductor : Elisabeth Fister. 10.0—Bach, Schumann, Brahms—Bernhard Günther (Cello) and Hattwig (Pfte.) (Recorded). 10.40—Advice to Travelers.
11.0—See Berlin.
1.0 p.m.—News. 1.10—For Women.

PRINCIPAL EVENTS

SERVICES AND SACRED MUSIC

A.M.
9.0 Kalundborg : Service.
10.0 Italian Stations : Mass.
10.30—Leipzig, etc. : Bach cantata.
P.M.
12.30 Radio-Paris : Address.
6.35 Athlone : Carols.
7.20 Breslau : Christmas Oratorio (Bach).

SYMPHONY CONCERTS

2.10 Hilversum (301.5 m.) : Mozart.
3.0 Strasbourg : Bizet, Mozart, etc.
4.0 Turin : Hidemaro Konoye.
6.30 Oslo : Kramm, Tillus (pfte.).
6.30 Regional : Sir Henry Wood.
7.0 Stockholm : Grevilius, Lopatnikov (pfte.).
8.0 Brussels 2 : Classics.
9.10 Hilversum (1,875 m.) : Maestricht Orchestra, Anspach (tenor arias).

LIGHT CONCERTS

2.20 Kalundborg : Radio Orch.
5.0 Deutschlandsender, Regional (6.0) : von Geczy Band.
5.0 Radio-Paris : Pascal Orchestra.
7.0 Lelpzig, etc. : Variety.
7.20 Beromünster : German classics.
7.45 Budapest 1 : Operetta music.
8.0 Königsberg : Christmas music.
8.0 Sottens : Radio Orchestra.
8.30 Strasbourg : Christmas music.
9.0 Rome : Choir.
9.30 Munich, etc. : Light and dance music.

10.0 Budapest 1 : Radio Orchestra.
11.0 Frankfurt, Stuttgart : Opera rec.
11.30 Radio-Paris : Goldy Orch.

OPERAS

2.0 Prague : "The Devil and Kate" (Dvořák).

national Catholic Girls Protection Society. 10.35—News. 10.50—Irish Sports News by Sean O'Ceallachain. 11.0-11.30—Ceilidhe Music from Galway.

BANSKÁ-BYSTRICA

(Czechoslovakia)

392 kc/s (765 m.) ; 30 kW.

Relays Czechoslovak Stations.

BERLIN (Germany)

841 kc/s (356.7 m.) ; 100 kW.

5.0 a.m.—Call. 5.10—Gym. 5.30—Concert from Hamburg. 7.0—Gym. 7.25—Talk by Herr Hilgenfeldt. 7.55—Chimes and Service from Potsdam Garrison Church. 8.55—Cathedral Chimes. 9.0—Weather. 9.30-10.15—Fourth Symphony (Brahms) by the Station Orchestra, Conductor : Fiedler (Recorded).

3.0 Brussels 1 : "Prince Igor."
5.0 Cologne : "Hänsel and Gretel."
7.0 Berlin : "Der Freischütz."
7.0 Hamburg : "Das Christelflein."
7.0 Stuttgart : "The Pearl Fishers."
8.30 Paris (PTT) : "Sophie" (Levadé).

OPERETTAS

4.0 Rome : "Scugizza."
7.40 Turin : "Madame Pompadour."

CHAMBER MUSIC

5.20 National : Quartet, clarinet.
7.0 Beromünster : Monteverdi.
8.15 Monte Ceneri : Quartets.
8.20 Kalundborg : Haydn.

RECITALS

4.15 Deutschlandsender : Carols.
5.30 Leipzig : Carols.
7.30 Radio-Paris : Songs.
8.30 Warsaw : Pfte. (Liszt).
9.30 Vienna : Songs, arias.
10.10 Hilversum (301.5 m.) : Song, violin, organ.

PLAYS

8.0 Radio-Paris : "La Régence" ; 8.45, "La Thébaïde" (Racine).
8.10 Vienna : "Dr. Abernethy."

LAST NEWS BULLETINS, see Monday.

DANCE MUSIC

9.30 Deutschlandsender, etc., Oslo ; 9.35, Prague ; 9.40, Rome ; 9.55, Poste Parisien ; 10.0, Kalundborg, Warsaw ; 10.10, Brussels 2 ; 10.45, Paris (PTT) ; 10.50, Hilversum (301.5 m.) ; 11.0, Radio-Paris ; 11.15, Strasbourg ; 12.0, Radio-Normandie.

B flat (Mozart), by Elly Ney and Orchestra, Conductor : Hoogstraaten. Songs (Hugo Wolf) by Heinrich Schlusnus (Baritone). Spanish Caprice (Rimsky-Korsakov), Conductor : Hamilton Harty.

2.0-2.30—Echoes from the Kurmark.

3.0—See Stuttgart. 5.0—"The Golden Sunday"—Literary and Musical Sequence to Verse of Wolfgang Pitow. Krepela Chamber Sextet. Kati Rauch (Soprano). Burchard Kaiser (Baritone). Willi Krause (Speaker). Peter Voelkner (Pfte.).

6.0—"Die Sternsinger"—Advent Play (Keienburg and Leberecht), with Music by Hermann Simon. 6.40—Sports.

7.0—"Der Freischütz"—Opera (Weber). Station Choir and Orchestra, Conductor : Heinrich Steiner. 9.15—News.

9.45—Dance Music from Deutschlandsender. 11.0-12.0 m't—Dance Records.

1.30—Call of Youth. 1.45—Greetings. 1.50 (from Gleiwitz)—“Der Förderturn”—Sequence. 2.30—“Tannenbaum und Kreuzschnabel”—Fairy Play (Gertraude Knab) (Recorded).

3.0—See Stuttgart.

5.0 (from Gleiwitz)—“Skat”—Play (Albrecht), with Music by the Upper Silesian Vocal Quartet. 6.0—Reading.

6.15—Station Dance Band. Conductor: Rau. 6.35—“A Small-town Holiday”—Sequence (Ackermann).

7.20—Christmas Oratorio (Bach). Station Choir and Orchestra. Conductor: Prade. Charlotte Kraeker-Dietrich (Soprano). Gertrud Pitzinger (Contralto). Heinz Marten (Tenor). Gerhard Bertermann (Baritone). 9.0—News.

9.30-11.0—Station Dance Band. Conductor: Rau.

BRNO (Czechoslovakia)

922 kc/s (325.4 m.); 32 kW.

Transmits at intervals from 5.45 a.m.

10.0 a.m.—Station Orchestra. Conductor: Bakala. Holub (Violin). Overture in D (Schubert). Excerpt from the Violin Concerto in C (Beethoven). Symphony in D—The Clock (Haydn).

11.0 a.m.—12.35 p.m.—See Prague. 12.35—For Farmers. 12.50-1.15—For Farmers (German). 1.55-4.15—See Prague. 4.15—Talk. 4.35—German Transmission: Recitation: Weber Music. Polacca brillante in E for Two Pftes. Arias, “Der Freischütz” and “Eury-anthe.” Excerpts from the Pfte. Trio. 5.50-6.5—See Prague. 6.5—Literary Programme. 6.30-9.35—See Prague. 9.35-10.30—Visváry Jazz Band.

BRUSSELS (No. 1) (Belgium)

620 kc/s (483.9 m.); 15 kW.

6.37-9.0 a.m.—Records; Gym. News. 9.0—Records: Classical Music. 10.45—Félicien Bellemans (Songs).

11.0—Light Orchestral. René Durand and Vocal Ensemble. Adam and Lauwers (Clarinets). René Segers (Accordion). 11.55—Weather. 12.0 noon—Records. 12.20 p.m.—Two Sketches.

12.30—Salon Orchestra. Conductor: Féron. 1.0—News.

1.10—Radio Orchestra. 1.30—Records: Light Music. 2.0—Art Notes. 2.3-2.15—Records: Overture, “William Tell” (Rossini). 2.30—Records.

3.0—Concert Version: “Prince Igor”—Opera (Borodin) (re-arranged by Rimsky-Korsakov and Glazunov) from the Mons Theatre. Conductor: Maurice Weynandt. 5.0—The History of Operetta—Lecture Recital: Football Results. 6.0—For Young People; Record. 7.0—Religious Address. 7.15—Records: Stenka Razin (Glazunov). 7.30—News.

8.0—Radio Orchestra. Conductor: Gilson. Suite (Haydn-Wood). Overture, “Mozart” (Hahn). Selection, “Mefistofele” (Boito). L'enfant prodigue (Wormser). Ballet Music, “Le Roi s'amuse” (Delibes); at 8.20: Sketch.

9.0—Topical.

9.10—Light Music. Radio Orchestra. Gras (Pfte.); at 9.40: Sketch. 10.0—News. 10.10—Popular Records.

11.0-12.0 m't—Brenders Jazz Band.

BRUSSELS (No. 2) (Belgium)

932 kc/s (321.9 m.); 15 kW.

Programme in Flemish.

6.37-9.0 a.m.—Records; Gym; News. 9.0—Gardening Talk; Records. 9.25—Liszt Records. 9.55—Aeronautics. 10.0—Light Orchestral. Conductor: Walpot. 10.45—Danze e arie antiche (Respighi) (Records). 11.0—Vaes

(Cinema Organ) and Van Schoeland (Songs) from Antwerp. 12.0 noon—Records. 12.30 p.m.—Radio Orchestra. Conductor: Gason. 1.0—News. 1.10—Salon Orchestra. Conductor: Féron. 1.30-2.0—Records. 2.15—Light Music by the Schnyders Orchestra. 3.0—Excerpts, “Feest” (Heyermans), spoken by Vandermeulen, etc. 3.15—Orchestra (contd.). 4.0—Excerpts, “Mädchen in Uniform” (Winsloe). 4.15—Records.

5.0—Robert De Kers Dance Band; at 5.30—Sports Results. 6.0—Salon Orchestra. Conductor: Féron. Madeleine De Beurme (Songs); Kovacs (Cymbalom). 6.45—Religious Address by the Rev. Fr. Callewaert, O.P.

7.0—Pfte. Concerto in G (Mozart), with Dohnányi (Records). 7.30—Film Review.

8.0—I.N.R. Symphony Orchestra. Conductor: Dejoncker. Hélène Dinsart (Pfte.). Overture, “Coriolanus” (Beethoven). Pfte. Concerto in F (Saint-Saëns). In the Steppes of Central Asia (Borodin). Overture,



Photo: Gulliland. A Berlin Museum model of “Star-singers,” about whose Christmas tradition Berlin broadcasts a play with music at 6 p.m.

“Polyeucte” (Tinell). Austrian Peasant Music (Schönherr). Antar (Rimsky-Korsakov); at 8.45—Topical. 10.0—News.

10.10—Brenders Jazz Band.

11.0-12.0 m't—Act III, “Siegfried” (Wagner), on Records.

BUCHAREST (Romania)

823 kc/s (364.5 m.); 12 kW. Relayed by Radio-Romania (Brasov), 160 kc/s (1,875 m.).

5.30-6.30 a.m.—To be announced.

9.30—Chimes, Address. 9.50—Sacred Music. 9.55—Church Notes. 10.10—Sacred Choral Music. 10.40—Time; Art, Literary and Sports Notes; Water Level. 10.55—Romanian Music by the Marcu Orchestra; at 12.10 p.m.—News. 1.0—For Peasants. 2.0—Romanian Folk Music. 2.45—For Farmers. 5.0—Time; Weather; Topical. 5.10—Radio Jazz Band. 6.25—Romanian Programme. 6.45—Choral Concert by the “Carmen” Society. 7.20—Play; in the intervals: News.

8.55—Radio Orchestra. Conductor: Rogaski. Margareta Kozen (Songs). Aria, Ah! Perfido! (Beethoven). Ballad, “The Flying Dutchman” (Wagner). Aria, “Oberon” (Weber). Overture, “Morning, Noon and Night” (Suppé). Tchaikovsky Potpourri (Urbach). Waltz, Bei uns zu Haus (Strauss). Canzonetta (Cortopassi). 9.55—News.

9.55—News.

BUDAPEST (No. 1) (Hungary)

546 kc/s (549.5 m.); 120 kW.

8.30 a.m.—News. 9.0—Protestant Service. 10.0—Roman Catholic Service. 11.30—Opera Orchestra. Conductor: Dohnányi. Gyula Károlyi (Pfte.). 1.0 p.m.—Records. 2.50—Hütter (Cello). 4.0—Choir. 5.15—Band. 6.10—Banda Marci—Anniversary Talk with Cigány Music. 7.45—Operetta Music. Concert Orchestra. Conductor: Rajter. 9.0—News. 9.20—Jazz Band. 10.0—Light Music. Station Orchestra. Conductor: Bertha. 11.5—News.

BUDAPEST (No. 2) (Hungary)

359.5 kc/s (834.5 m.); 18 kW.

11.35 a.m.—Records. 2.0 p.m.—Cigány Band. 4.15—Talk. 4.45—Band. 5.15—Talks. 6.30—Records. 7.50—News.

COLOGNE (Germany)

658 kc/s (455.9 m.); 100 kW.

5.0 a.m.—See Hamburg. 7.0—Weather; Water Level. 7.5—“Der alte Turmhahn”—Idyll (Mörke). 7.15-8.15—Station Chamber Orchestra. Conductor: Hagestedt.

9.0—See Königsberg.

9.30—Records: Classical Music.

10.30—Fritz Kober (Organ), from the Town Hall, Mülheim. Andante (Mozart). Prelude and Fugue in F (Reger). Prelude and Fugue in G (Bach).

11.0—See Berlin; at 12.0 noon: Announcements; Greetings. 1.0 p.m. Humorous Guessing Competition. 1.30—Hints for Everyone.

2.0—Mülheim Male Voice Choir, from the Town Hall, Mülheim. Conductor: Hücken. Grape (Pfte.). Lied der Bauleute (Schüler). Vespergesang (Kämpf). Jugend (Kämpf). Pfte. Pieces from “Spitzwegbilder” (Kaun). Empor (Kaun). Schwesterlein, wann geh'n wir nach Haus (Zuccalmaglio). Die Abreise (Schauss). Pfte. Pieces, from “Spitzwegbilder” (Kaun). Soldatenlied. Schlussgebet (Wüst). 2.45—Reading.

3.0—Light Orchestral. Conductor: Eysoldt. Schäffer (Violin).

4.30—Where are you, Comrade?—Programme for Ex-Servicemen.

5.0—“Hänsel and Gretel”—Fairy Opera (Humperdinck). 6.45—Sports.

7.0—See Leipzig.

9.0—Time; News.

9.30-11.0—See Deutschlandsender.

DEUTSCHLANDSENDER (Germany)

191 kc/s (1,571 m.); 60 kW.

5.0 a.m.—See Hamburg. 7.0—For Peasants. 8.0—Variety.

9.0—See Munich. 9.45—Richard Neumann (Wurlitzer Organ), from the Kamera, Berlin. 10.0—Poems (Thilo von Trotha). 10.15—Weather.

10.30—See Leipzig.

11.0—See Munich.

11.55—Time; Greetings.

12.10 p.m.—Munich.

1.0—Christmas Play for Children (Ilse Obrig). 1.30—Polish Songs, Dances and Music (Recorded). 2.0—Talk: Genealogy. 2.15—“A Winter Evening in a Peasant's Home”—Sequence (Heesemann). 3.0—Christmas Music. Werner Hank (Violin). Ernst Schauss (Harmonium). 3.15—Variety Records.

4.15—South-Tyrolese Christmas Carols (arr. Reimesch). Station Choir and Orchestra, Conductor: Görner. Edith Hölzl (Soprano). 5.0—Melody and Rhythm—Barnabas von Geczy Band. 6.30—Sports.

7.0—“The Deutschlandsender Toy Shop”—Radio Fantsay (Illing) with Music by Hahn. Emmy Goedel-

SUNDAY (December 20)

Dreising and her Children's Choir, and the Station Orchestra, Conductors: Dobrindt and Hahn. 9.0—News.

9.30—Dance Music—Barnabas von Geczy Band; at 9.45—Weather.

11.0-11.55—Dance Records.

FRANKFURT (Germany)

1,195 kc/s (251 m.); 25 kW. Relayed by Cassel, Coblenz, Freiburg and Trier, 1,195 kc/s (251 m.).

5.0 a.m.—See Hamburg. 7.0—News. 7.5-7.25—Gym. 7.45 (from Cassel)—Fritz Helbing (Organ). 8.0 (from Cassel)—Protestant Service. 8.45—Edwin Eric Dwinger relates his Experiences in Spain in November; 1936 (Recorded). 9.0—Christmas Appeal. 9.30—Wiesbaden Teachers' Choral Society. Conductor: Krollmann. 10.15—From the Chronicle of Anna Magdalena Bach.

10.30—See Leipzig.

11.0—See Berlin. 1.0 p.m.—“Punch and his Christmas Surprise”—Play for Children (Reymann). 1.45—Talk: Christmas. 2.0—For Country People.

3.0—See Stuttgart. 5.0 (from Cassel)—Scandinavian Songs and Dances. 5.30—Advent Concert. Station Choir, Conductor: Belker. Fritz Becker (Organ). 6.50—Sports.

7.0—See Leipzig.

9.0—Time; News. 9.15—Sports.

9.30—See Deutschlandsender.

11.0 p.m.—1.0 a.m. (Monday)—Popular Opera Music (Records). Hamburg Station Orchestra, Conductor: Schlemm. Eva Schlee, Gertrud Schnitzer, Emmy Wichmann, Stadelmaier, Jakschat and Herrmann. Excerpts from “The Seraglio” and “The Magic Flute” (Mozart), Overture, “The Taming of the Shrew” (Götz). Aria and Duet, “The Merry Wives of Windsor” (Nicolai). Entrance, “The Daughter of the Regiment” (Donizetti). Duet, “Don Pasquale” (Donizetti). Excerpts, “Der Wildschütz” (Lortzing). Selection, “The Flying Dutchman.” “Lohengrin” and “The Valkyrie” (Wagner).

HAMBURG (Germany)

904 kc/s (331.9 m.); 100 kW. Relayed by Bremen, Flensburg, Hanover, Magdeburg and Stettin, 1,330 kc/s (225.6 m.).

5.0 a.m.—Harbour Concert. 7.0—News. 7.20—Gym. 7.40—Art Notes.

8.0—Stettin Concert Orchestra. Conductor: Quast.

9.0—See Königsberg. 9.30—Meditation. 10.0—Christmas at Sea—Stories.

10.30—See Leipzig.

11.0—See Berlin. 1.0 p.m.—“Frau Holle”—Fairy Play (Hugin), Music by Girnatis, followed by “Das heimliche Haus”—Cantata (Baumann) (Recorded). 2.0—“Snow and Ice in Music”—Records. 2.40—Talk: Christmas Customs.

3.0—See Stuttgart; at 3.50—Football Cup Match Report. 5.0—Junge Lüüd vun Dörpen—Dialect Play (Steen).

5.45—Folk Music from Kiel. Ellerbek Mandoline Band and the Germania Choir. Conductor: Hasselheldt.

Marching Song Potpourri, Jung-Deutschland (Weninger). Folk Song (Bérat). Dat gift keen Land so grün und schön (Sonderburg). Unter der Dorflinde (Ritter). Wie's daheim war (Wohlgemuth). Paraphrase on “Das Geheimnis” (Lüling). Wo mag es wohl am schönsten sein? (Schuppert). Wanderlieder-Marsch (Lindemann). 6.35—Sports; Weather.

7.0—“Das Christelflein”—Opera in Two Acts (Pfitzner). Women's Choir

SUNDAY (December 20)

and Station Orchestra. Conductor: The Composer. 9.0—News.
9.30-11.0—See Deutschlandsender.

HILVERSUM (1,875 m.) (Holland)

160 kc/s; 10 kW until 2.40 p.m.; 100 kW from 2.40 p.m.

8.10 a.m.—N.C.R.V. Service.

9.10-4.40 p.m.—K.R.O. Programme. 9.10 a.m.—Records. 9.40—High Mass. 11.40—Records. 11.55—K.R.O. Orchestra. Conductor: van 't Woud. 12.40 p.m.—Literary Talk. 1.0—Records; K.R.O. Orchestra (contd.). 1.40—Religious Address. 2.10—K.R.O. Orchestra (contd.); Records.

2.55—Rosa Spier Trio. 4.5—Roman Catholic Service for the Sick. 4.35—Sports.

4.40-7.25—N.C.R.V. Programme. 4.40—Religious Service; Nieuwland (Organ). 6.55—Records: Sacred Music. 7.25 till Close Down—K.R.O. Programme. 7.25—Sports: Talk; News; Records. 8.10—Recitations. 8.55—Leeb (Lute).

9.10—Maestricht Municipal Orchestra. Conductor: Hermans. Anspach (Tenor). 9.55—Records. 10.10—News. 10.20-10.40—Epilogue.

HILVERSUM (301.5 m.) (Holland)

995 kc/s; 15 kW until 2.40 p.m.; 60 kW from 2.40 p.m.

8.35-9.40 a.m.—V.A.R.A. Programme. 8.35—Records; News; Talk. 9.10—Jong (Organ). 9.25—Talk.

9.40-11.40—V.P.R.O. Programme. 9.40—Religious Programme for Children. 10.10—Service.

11.40-4.40 p.m.—A.V.R.O. Programme. 11.40—Engels (Organ). from St. James' Church, The Hague. 11.45—Film Review. 12.10 p.m.—Kovacs Lajos Orchestra, Palla (Organ). 12.55—Gigli Records. 1.10—Kovacs Lajos Orchestra. 1.40—Books. 2.10—Mozart Concert. A.V.R.O. Orchestra. Conductor: Treep. Lili Krauss (Pfte.). 3.40—A.V.R.O. Dance Band. Conductor: Mossel. 4.10—Christmas Carols. 4.30—Sports.

4.40—V.P.R.O. Talk.

5.10-7.40—V.A.R.A. Programme. 5.10—Talk and Records. 5.55—News. 6.0—V.A.R.A. Orchestra. Conductor: Lohoff. 6.40—Rambler's Orchestra and Artists.

7.40 till Close Down. A.V.R.O. Programme. 7.40—News.

7.55—"Christmas Roses"—Revue (de Haas), Music by Max Tak. A.V.R.O. Orchestra. Conductor: The Composer. 9.25—Christmas Puzzle for the Poor Children's Fund. 9.55—News.

10.10—Helene Cals (Soprano), Lensky (Violin), Palla (Organ). 10.40—News.

10.50-11.40—A.V.R.O. Dance Band. Conductor: Mossel.

KALUNDBORG (Denmark)

240 kc/s (1,250 m.); 60 kW. Relays Copenhagen, 1,176 kc/s (255.1 m.).

7.0 a.m.—Gym. 7.35—Weather. 7.45—French Talk: A Day at the Trianon. 8.0—German Talk: A Winter Adventure in the Dolomites. 8.15—English Reading. 8.30—Talk: Literature and Youth. 9.0—Service from Haderslev Cathedral. 10.28—Weather. 10.40—News.

11.0—"The Instruments of the Orchestra"—Talk with illustrations by the

Radio Orchestra, from the State Broadcasting Building.

12.0 noon—Hollbøll (Songs). I Würzburg ringe de Klokker til Fest (Lange-Müller). Firenze (Lange-Müller). Liden Karen (Heise). Hør, hvor let cens Vinger smækker (Nielsen). Den danske Sang (Nielsen).

12.15 p.m.—Reading.

12.35—Records. In dulce júbilo (Buxtehude). Pastorale (Pachelbel) O, du fröhliche. Stille Nacht, heilige Nacht. Ave Maria (Schubert-Wilhelmi). Czech Carols.

1.0—Service from Christiansborg Castle Church.

2.20—Radio Orchestra. Conductor-Grøndahl. Rytter (Pfte.). Musketiers March. Overture, "Le Maçon" (Auber). Symphonic Rhapsody (Ludolf Nielsen). Gaelic Melody and Reel from "Scenes from the Scottish Highlands" (Granville Bantock). Excerpt, "The Witch" (Enna). March (Toft). Pfte.: Novelettes (Schumann). Overture, "Don Giovanni" (Mozart). Selection, "La vie parisienne" (Offenbach). Aladdin's Cradle Song (Kuhlau). Excerpts, By the Bosphorus (Lange-Müller). Neu-Wien (Strauss). Evensong (Alfred Berg). Gallop (Lumbye).

4.20—Children's Choir. Conductor: Kirstine Friis-Hjorth.

4.50—Pfte. Records. Für Elise (Beethoven) by Schnabel. La maja y el ruseñor (Granados) by Rubinstein.

5.0—Loewe Ballads by Per Bjørn. Spirito Santo. Die Uhr. Tom der Reimer. Heinrich der Vogler. Die nächtliche Heerschau.

5.20—Talk: Relics of Old South Jutland. 5.50—Weather. 6.0—Time; News. 6.30—Talk: Film Stars.

7.0—Danish Marches. Royal Life Guards Band. Conductor: Dyring. 7.20—Soldier Memories—Royal Life Guards Band. Conductor: Dyring. Semmy Nielsen (Songs and Monologues). Yesterday I got my Tunic (Horneman). Interview. Potpourri of Danish Soldier Songs (Fr. Nielsen). Monologue. Musical Pictures: In the Cantonment (Kok). Army Pictures. Monologue. Aarhus Tattoo (Møller). Comrade, be a Man! (Andersen).

8.20—Haydn Trios by Fessel (Violin). Frederiksen (Viola) and Dietzmann (Cello). Trio in B flat. Trio in D.

8.40—Royal Life Guards Band. Conductor: Dyring; at 9.10: News; Records.

10.0-11.30—Warny Dance Band; at 11.0: Chimes.

KATOWICE (Poland)

758 kc/s (395.8 m.); 12 kW.

5.0 a.m.—Fanfares. 5.13—Records. 7.18—Talk. 7.30—Records. 9.30—Records. 12.0 noon—Silesian Review. 1.15 p.m.—Records. 1.35—Talk. 1.45—To be announced. 6.15—Announcements. 6.20—Light Music. 6.50—Literary Programme. 7.20—To be announced. 7.40-10.0—Programme Announcements.

KÖNIGSBERG (Heilsberg) (Germany)

1,031 kc/s (291 m.); 100 kW. Relayed by Danzig, 1,303 kc/s (230.2 m.).

5.0-7.0 a.m.—See Hamburg. 8.0—Protestant Service. 9.0-9.30—"Sterne über den Hütten"—Sequence (Menzel), Music by Henning. 9.45—For Mothers: 9.55—Weather; Programme Notes. 10.5—New Poems by Gerhard Schumann.

"When a Limavady man tells you that he 'heered a fella spaykin on the wireless,' please remember that the famous Dr. Johnson said that 'heered' was the right way to say 'heard,' that an eighteenth century poet like Pope believed that 'fella' was the right way to say 'fellow,' and that neither of the two would have dreamt of pronouncing the final 'g' in a word like 'speaking.' Both of them would have said 'spaykin.' So there you are. *You* might toss your head at the Limavady man but Dr. Johnson wouldn't have rebuked *him*. He'd have rebuked *you*—in words of four syllables.

"Take the case of a Tyrone labourer. *You* may find it hard to believe, but this man talks the way that courtiers and Kings used to talk. There's an Irish flavour about it, of course, that English people didn't have, but still and all, it would have passed,

it would have been no discredit to him at the court of Queen Elizabeth. It's out of fashion now, but it was quite all right then. There was plenty of it at court in the middle of the eighteenth century. Some of it stayed among the gentry till a hundred years ago. And you can imagine how interested I was when a lady of station in the south of England told me about the traces of this speech that were in her own family. She could remember two of her relatives—they were 'county,' if you please—and, they always said 'chayney' for 'china,' and 'goold' for 'gold.'

"Wherever you go in the province, you'll hear cartloads of such survivals, and they all tell us the same story that here in Ulster in this twentieth century, we keep an English that was good enough for Queen Elizabeth and Charles II."

This is an extract from the new BBC booklet

Ulster Speaks

Here, in abridged form, are the talks on the dialects of Ulster which aroused such wide interest when broadcast last year in the Northern Ireland programme by

The Rev. W. F. Marshall, B.A., LL.B.

"ULSTER SPEAKS" WILL BE PUBLISHED NEXT MONDAY, DECEMBER 21st, and can be obtained through newsagents and booksellers in Northern Ireland, price 6d., or for 7d., including postage, from BBC Publications, 35, High Street, Marylebone, London, W.1., or from the BBC Northern Ireland Regional Offices, 31, Linenhall Street, Belfast.

10.30—See Leipzig.
 11.0—See Berlin.
 1.0 p.m.—Chess Lesson. 1.30—Report : Tahiti. 1.45—Records : Light Music. 2.10—"From Advent to Christmas"—Trombone Choir. 2.30—"Sternputzchens Weihnachtsabend"—Fairy Play (Ruth Geede). 3.0—Topical.
 3.15—Station Orchestra. Conductor : Wilcken. Schiffmann Quartet. Song Quartet. Ruth Norden (Soprano). Roth (Bass). Schupp (Tenor). 4.45—"The Fourth Sunday in Advent"—Literary and Musical Programme.
 5.15—Christmas Music by the Königsgberg Chamber Music Society. Conductor : Pogner. 6.0—Peter Arco—Records. 6.40—Sports.
 7.0—"Immanuel Kant listens-in to the Wireless in 1776"—Literary and Musical Sequence (Hilpert).
 8.0—Christmas Concert. Station Orchestra. Conductor : Wöllner. Heti Böhnke (Soprano). March, Weihnachtsklänge (Weninger). Overture, Heinkelmannchen (Erben). Selection, "Hänsel and Gretel" (Humperdinck). Christmas Carol (Berger). Christbaum (Cornelius). The Nutcracker Suite (Tchaikovsky). Seventeenth Century Folk Songs : (a) Die Weihnachtsnachtigall, (b) Wiegenlied in der Weihnacht. Die Petersburger Schlittensfahrt (Eilenberg).
 9.0—News. 9.20—Football Match Report.
 9.40-11.0—Dance Music from Deutschlandsender.

LAHTI (Finland)
 166 kc/s (1,807 m.); 150 kW. Relayed by Helsinki, 895 kc/s (335.2 m.).
 Transmits at intervals from 6.5 a.m.
 11.0 a.m.—Service in Swedish. 12.30 p.m.—Popular Music by the Helsinki Municipal Orchestra. 1.30—Classical Music. 2.0—Karelyi Cigány Band. 3.0—Records. 4.5—Talk.
 4.20—Vilho Koponen (Cello). Suite in G (Bach). Berceuse (Melartin). Romance sans paroles (van Goens). Swedish Dances (Bruch).
 4.45—Talk. 5.0—Time ; Weather (Finnish, Swedish). 5.10—Report. 5.35—Talk.
 6.0—Helge Virkkunen (Songs). 6.25—Talk.
 6.40—Radio Orchestra. 7.45—News (Finnish, Swedish). 8.10-10.0—Classical Music.

LEIPZIG (Germany)
 785 kc/s (382.2 m.); 120 kW. Relayed by Dresden, 1,285 kc/s (233.5 m.).
 5.0 a.m.—See Hamburg. 7.0—Records. 7.30—Willy Stark (Organ) from St. John's Church. 8.0-8.45—To be announced. 9.0—Records of Famous Virtuosi.
 9.30—Leipzig Symphony Orchestra. Conductor : Weisbach.
 10.30—"Das neugeborne Kindelein" Cantata (Bach). St. Thomas' Choir and Gewandhaus Orchestra. Conductor : Straube.
 11.0—See Berlin. 1.0 p.m.—Weather. 1.5—Talk. 1.25—Records. 1.50—"Der Wolf und die sieben Geisslein"—Fairy Play (Maria Ambrosius), Music by Hermann Ambrosius. Leipzig Symphony Orchestra and Station Women's Choir, Conductor : Blumer. 2.40—Talk : Ski-ing in the Erzgebirge. 3.0—See Stuttgart.
 5.0—"Das heimliche Haus"—Cantata (Baumann) (Recorded).

5.30—German Christmas Carols. Auf, auf, ihr Hirten. Sieh, dort steht ein zerissen Stälchen. Uns wird ein Kindlein heut' geboren. Heut's sind die lieben Englein. Auf, auf, ihr Hirten. Inmitten der Nacht. Auf! Auf! Ihr Buben steht alle g'schwind auf! Alle Engel zu diesem Fest. O heiliges Kind, wir grüssen dich.
 6.0—"Thuringia"—Wireless Poem (Schroer), with Christmas Music. 6.45—Football Cup Match Report.
 7.0—Leipzig Kaleidoscope—Variety Concert. Leipzig Symphony Orchestra and Station Choir. Conductor : Kretzschmar. Coba Wackers (Soprano). Groh (Tenor). Winterberg (Baritone). Hertha Glass (Pfte.). Fritz Schroder (Organ). Hilde Schmeck (Recitations). Commentary by Alexander Schettler. 9.0—News.
 9.30-11.0—See Deutschlandsender.



Pierre Palla, whose organ

recitals are popular features

of the Hilversum programmes.

He plays to-day (301.5 m.)

at 10.10 p.m.

LILLE (Radio PTT Nord) (France)
 1,213 kc/s (247.3 m.); 60 kW.
 Transmits at intervals from 6.50 a.m.
 6.30 p.m.—Topical. 7.0—Records : Songs and Light Music. 7.30—Records of Jack Hylton's Band. 8.0—Time ; Records. 8.15—Sports. 8.30—To be announced. 10.30—News.
MONTE CENERI (Switzerland)
 1,167 kc/s (257.1 m.); 15 kW.
 10.0 a.m.—Announcements ; Bible Reading. 10.30—Books. 10.45—Records. 11.30—News.
 11.40—Radio Orchestra.
 12.30-1.0 p.m.—Radio Competition.
 3.30—Lugano Philharmonic from the Kursaal, Lugano. Conductor : Dassetto. Symphony in C (Beethoven). Commiato (Dassetto). Leonora Overture No. 3 (Beethoven). Serenade (Moszkowski). Italian Caprice (Tchaikovsky); at 4.0 : Sports.
 5.0—For Children.
 5.15—Radio Orchestra. Overture, "Poet and Peasant" (Suppé). Russian Dance from "Boris Godunov" (Mussorgsky). Ballet, "Lakmé" (Delibes). Arab Dance (Ganne). Trot de Cavallerie (Rubinstein).
 5.45—Sports. 6.15—Opera Records. 6.45—News.
 7.0—"Two Dozen Red Roses"—Three-Act Play (Benedetti).
 8.15—Poltronieri Quartet. Quartet No. 5 (Bertoni-Toni). Chaconne (Vitali-Benvenuti). Death and the Maiden (Schubert). 9.15-9.30—Sports.

MOSCOW (No. 1) (Russia)
 172 kc/s (1,744 m.); 500 kW.
 1.0 p.m.—Swedish Talks : (a) The 1905 Revolution ; (b) U.S.S.R. Review. 2.0—For Children. 3.0—News. 3.13—Music ; Programme Notes. 4.30—

Concert. 5.0—Red Army Notes. 5.15—Talk. 5.45—Music. 6.0—Provincial Programme. 8.0—German Talk : The 1905 Revolution. 9.5—English Programme : (a) Talk on Soviet Armenia, (b) Armenian Music, (c) Questions and Answers. 10.0—German Talk : The 1905 Army Revolt in Literature. 11.0—Spanish Talk : Soviet Stamps.
MUNICH (Germany)
 740 kc/s (405.4 m.); 100 kW. Relayed by Nürnberg, 1,267 kc/s (263.8 m.).
 Transmits at intervals from 5.0 a.m.
 9.0 a.m. (from Augsburg)—Winter Solstice Celebrations from the Reich Labour Service Camp at Oberjoch-im-Allgäu. 10.30—See Leipzig. 11.0—Military Band Concert from the Feldhernhalle. Conductor : Josef Kohmünch. 12.0 noon—News. 12.10 p.m.

—Station Orchestra. Conductor : Mihalovic. 1.0—News. 1.15—For Children. 1.45—Puccini Opera Records. 2.5—Pfte. 2.40—Talk. 3.0—Orchestra. 5.0—"Der Page des Königs"—Play after Meyer (Schaeff-Scheefen). 6.5—Orchestra. 6.35—Call of Youth ; Sports. 7.0—Film Music, with the Station Dance Band, Orchestra, Choir, etc. 9.0—News. 9.30-11.0—Light and Dance Music.
OSLO (Norway)
 260 kc/s (1,153.8 m.); 60 kW. Relayed by Fredrikstad, 722 kc/s (415.4 m.); Hamar, 519 kc/s (578 m.); Notodden, 1,357 kc/s (221.1 m.); Porsgrund, 850 kc/s (352.9 m.); Rjukan, 1,348 kc/s (222.6 m.), and Trondelag, 629 kc/s (476.9 m.).
 8.0 a.m.—News. 8.5—Records. 9.35—Service. 11.45—News. 12.0 noon—Inauguration of the Nordsund Bridge.
 3.30—Norwegian Music. Egeil Nacking (Folk Songs); Gunnulf Borgen (Hardanger Fiddle). 4.0—Records.
 4.40—Talk. 5.0—Dance Music. 5.30—Talk. 5.50—Records of Guila Bustabo (Violin). 6.10—News. 6.15—Weather ; News.
 6.30—Time ; Station Orchestra. Conductor : Kramm. Carl Tillus (Pfte.). Symphonic Prelude, "Sigurd Slembe" (Svendsen). Pfte. Concerto in A (Liszt). Symphony No. 4 in F (Tchaikovsky). 7.45—Talk : Mild Winters. 8.10—Cabaret. 8.40—News. 9.0—Topical. 9.15—Sports Notes. 9.30-10.30—Dance Records.

PARIS (Eiffel Tower) (France)
 1,456 kc/s (206 m.); 5 kW.
 Transmits at intervals from 8.0 a.m.
 5.30 p.m.—Television. 7.30—News. 7.55—Topical. 8.15—News.

SUNDAY (December 20)

8.30—Eleventh Liszt Anniversary Concert. Hélène Pignari and Nicole Rolet (Pftes.). Lucienne Astruc (Songs). Apparitions. Songs : (a) Was Liebe sei, (b) Ihr Glocken von Marling. Concerto for Two Pftes. Talk : Liszt. Liebestraum. Ninth Hungarian Rhapsody. Songs : (a) S'il est un charmant gazon, (b) Mignons Lied. Ballad.
PARIS (Poste Parisien) (France)
 959 kc/s (312.8 m.); 60 kW.
 7.50 a.m.—Call. 7.52—Records : Gardoni Orchestra. 8.2—News. 8.26—Notes ; Dietetics. 8.36—Variety Records. 9.0—Talk : Ski-ing. 9.1—News. 9.25—Bourbié Records. 9.30—For Young People. 9.50—Records. 10.30—Sketches and Songs (Records). 10.45—Blareau Orchestra. 11.15—Song Records. 11.30—Clacquesin Trio. 11.45—Song Records. 12.5 p.m.—Records for Children. 12.15—Les Guignols de Rip. 12.45—Lise Florelly and Armand Dubos.
 1.0—Raymond Souplex and Jane Sourza. 1.30—Records. 1.45-2.0—Musical Sketch. 2.30—Sports Report. 5.0—Records : Light Music. 7.0—News. 7.27—Records : Excerpts, "Faites ça pour moi" (Gabaroché). 7.37—Records. 7.52—Frères Jacasse. 7.57—Film Records. 8.7—Paul Reboux. 8.20—"Yesterday and Today"—Sketch. 8.35—Variety Concert. 9.5—Amateurs at the Microphone. 9.55—Willie Lewis Dance Band. 10.30-11.30—Records : Light Music.
PARIS (PTT) (France)
 695 kc/s (431.7 m.); 120 kW.
 6.50-9.45 a.m.—News ; Topical. 9.45—Records.
 10.0—Locatelli Orchestra. Wilhelmine Coudray (Songs). Marche Guerrière (Filippucci). Ballet, "Coppélia" (Delibes). Conte d'Avril (Widor). Les berceaux (Fauré). Petite Suite (Borodin). Selection, "Le Chemineau" (Leroux). Plaisir d'amour (Martini). La boîte à joux (Debussy). Spanish Suite (Falla). Waltz, Myosotis (Waldteufel). Songs : (a) La lune sur le bois (Clergue), (b) Song (Bernard), (c) Nicolette (Ravel), (d) Le moulin d'amour (Paray). Ballet, "The Seasons" (Verdi). Air, "Mozart" (Hahn). Selection, "Le timbre d'argent" (Saint-Saëns). Badinage (Jongen). Guitarreros (Chillemont). Entre naranjos (Turin). Ronde des lutins (Nerini). Danse britannique (Fl. Schmitt).
 12.0 noon—Popular Music and Dance Music by the Derveaux Orchestra. 12.45 p.m.—News. 1.0—Orchestra (contd.). 1.25—Talk on the following Programme.
 1.30—From the Opéra-Comique. 4.45—Reine Paulet-Guy Berry Programme. 5.15—Records.
 5.30—Colonne Concert from the Théâtre du Chatelet. 7.30—News. 8.23—Sports.
 8.30—"Sophie"—Opéra-comique in Three Acts (Levadé). Conductor : Rosenthal. 10.30—News. 10.45—Robert Dance Band.
PARIS (Radio-Paris) (France)
 182 kc/s (1,648 m.); 80 kW.
 7.0 a.m.—Records. 7.15—News. 7.45—Gym. 8.0—Records : Songs and Light Music. 8.40—Italian Lessons. 9.20—English Lessons. 10.0—Book-keeping Lessons. 10.40—Spanish Lesson.
 11.0—Paris Symphony Orchestra ; Conductor : Tomasi. Concerto in F

SUNDAY (December 20)

(Gaubert). Ballet de cour (Pierne). Selection, "Kadubec" (Yvain). Gavotte (Steck). Scherzo (Steck). Ballet, "Siang Sing" (Huë).

12.00 noon—Paule Maxence (Organ). Third Choral (César Franck). Etoile du soir (Vierne). Toccata (Vierne).

12.30 p.m.—Religious Address. 12.50—News.

1.0—Paris Symphony Orchestra. Conductor: Tomasi. Suzette Guilbert (Songs). Soirs (Fl. Schmitt). Selection, "La Bohème" (Puccini). Songs. Dryade (Aubert). Serenade, Napoli (D'Ambrosio). Rustle of Spring (Sinding).

2.0—"Le prince charmant"—Opéramatique (Fortolis-Brun), followed by "La paix aux champs"—Poem for Four Part Choir and others (Suzanne de Sainte-Croix).

3.0—Mme. Sevrane (Songs). Trois minutes d'arrêt (Bayle-Betove). Paimpol (Batell). La marchande de cierges (Desty-Ackermans). La fête foraine (Maréze-Batell).

3.15—Claude Valty (Songs). Waltz, "Bye, Bye" (Raïter-Leval). Le marinier (Bousquet). Si tu savais (Ackermans). Vilja's Song (Lehár).

3.30—Paris Plucked String Orchestra. Old Comrades (Teike). Minuet (Mozart). Arlequin et Colombine (Lacôme). Glow-worm Idyll (Lincke). Tambourin (Rameau). Two Norwegian Dances (Grieg). Slav Dance (Dvořák). Napoli (Mezzacapo).

4.0—Two Eighteenth Century One-Act Plays by the "Enfants-sans-Soucy," presented by Pierre Berezzi: (a) "La coupe enchantée" (La Fontaine), (b) "Le cocher suppose" (Hauteroche).

5.0—Light Music by the Pascal Orchestra. 7.0—Radio-Paris Guignol by Bilboquet and Troupe: "Pif, le roi des lutins" (Crozière). In the interval: Polichinelle.

7.30—Jean Sorbier (Tenor). Cantique (Nadia Boulanger). The Rosary (Nevin). Noël naïf (Canal). Noël d'amour (Audrain).

7.45—Pierrette Madd (Songs). Noël noir (Lenoir). La pendulette et le coucou (Pearly). Musette à Vienne (Metayer). The Rose in her Hair (Warren).

8.0—"La Régence"—Historical Dialogues (Davenay). 8.30—News.

8.45—"La Thébaïde" or "Les Frères ennemis"—Tragedy in Five Acts (Racine) by Comédie-Française Players. 10.45—News. 11.0—Dance Music by the Goldy Orchestra.

11.30 p.m.—12.15 a.m. (Monday)—Light Music by the Goldy Orchestra. Selection, "The Circus Princess" (Kálmán). Je suis le passeur du printemps (Goublier). Vienna, City of my Dreams (Sieczinski). Gipsy Idyll (Ferrari). Selection, "Phi-Phi" (Christiné). Serenade (Drdla). Waltz, Gold and Silver (Lehár). Potpourri, Dixie Land (Stoddon).

PRAGUE (Czechoslovakia)
638 kc/s (470.2 m.); 120 kW.
Transmits at intervals from 5.45 a.m. 5.45 a.m.—Gym.; News; Records. 6.30—Police Messages. 6.40—Sacred Music by the Station Chorus. Conductor: Kuhn. Nemeč (Organ). 7.0—Karlsbad Municipal Orchestra. 7.45—Reading. 8.0—Record. 8.5—English Lesson. 8.20—Records. 8.30—For Workers. 8.50—Muzik Salon Quartet. 9.25—Literary Talk; Janosik. 9.55—Announcements.

10.0—Smetana Choir of Pilsen. Conductor: Gselhofer. 10.30—Classical Music from Brno. 11.0—Cathedral Chimes. 11.5—Records. 11.10—News.

11.20—Operetta Music. Singers, Chorus and Orchestra of the Prague Operetta Theatre. 12.35 p.m.—For Farmers. 12.50—Talk. 1.0-1.15—For German Farmers. 1.55—Talk on the following Opera.

2.0 p.m.—"The Devil and Kate"—Three-Act Opera (Dvořák), from the State Opera. Conductor: Skvor. 4.15—Talk.

4.30—German Transmission: Talk; Radio Review; Reading; Play with Music. 5.50—News (German). 5.55—Record. 6.0—News. 6.5—Record. 6.10—"Christmas Idyll"—Play (Samman).

6.30—Christmas Variety. 9.0—News. 9.20—Record. 9.25—News (German). 9.30—Record.

9.35-10.30—See Brno.

RADIO-NORMANDIE (France)

1,113 kc/s (269.5 m.); 10 kW.
7.0 a.m.—Records. 7.10—News. 7.50—Orchestra. 8.0—Records. 8.30—English Sacred Music. 8.45—Orchestra. 9.0—Records. 9.15—Marches. 9.30—Light Music. 9.45—Records. 10.0—Waltzes. 10.15—Light Music. 10.30—Records. 10.45—Light Music. 11.0—Popular Music. 11.15—Light Music. 11.30—Orchestra. 11.45—Dramatic Programme. 12.25 p.m.—Roman Catholic Address. 12.40—News. 1.0—Concert. 2.0—Records. 2.30—Light Music. 2.45—Records. 3.0—Light Music. 3.30—Music through the Ages. 3.45—Records. 4.0—Concert. 4.30—Light Music. 5.0—Records. 5.30—Light Music. 6.0—Popular Music. 6.15—Records. 6.30—Music Hall. 7.0—Records. 7.15—Light Music. 7.40—News.

8.0—Concert; at 8.30: Sports Talk.

9.15—Operetta Music. Excerpts, "Normandie" (Misraki), "Honolulu" (Cazes), "Au Soleil du Mexique" (Yvain), "Day and Night" (Lecocq), "Les Saltimbanques" (Ganne), "Die Teresina" (O. Straus), "Katharina" (Lober), and "Mariska" (Cazes).

10.0—Records. 10.15—Light Music. 10.30—Opera Music. 10.45—Light Music. 11.0—Records. 11.15—Light Music. 11.30—Records.

12.0 m't—Dance Music. 12.30-1.0 a.m. (Monday)—Orchestra.

RADIO-ROMANIA (Brasov)

(Romania)
160 kc/s (1,875 m.); 150 kW.
See Bucharest.

ROME (Italy)

713 kc/s (420.8 m.); 50 kW. Relayed by Naples, 1,104 kc/s (271.7 m.); Bari (No. 1), 1,059 kc/s (283.3 m.); Bari (No. 2), Milan (No. 2) and Turin (No. 2), 1,357 kc/s (221.1 m.).

7.30 a.m.—News. 9.0—Rural Programme.

10.0—See Turin. 11.0—Bible Reading. 11.20—See Turin. 11.50—Announcements. 12.0 noon—News. 12.15 p.m.—Sketch. 12.45-1.15—Orchestra. Conductor: Culotta. 1.20-2.0—Pfte. and Violin; Popular Music. 2.15—Records; Sports. 2.30—Football Report. 3.15—Sports; Records.

4.0—"Scugnizza"—Operetta (Costa). In the Interval: Weather; Sports. 6.0—Sports; Records. 7.5—Time; News. 7.30—Talk.

7.40—"Le perle cinesi"—One-Act Play (Giachetti).

8.15—Marta Linz (Violin). Music of Mozart, Pergolesi, Beethoven, Dohnányi, Schubert, Linz and Brahms.

9.0—Choral Concert. 9.40—Dance Music. 10.0—News. 10.15-10.55—Dance Music.

SOTTENS (Switzerland)

677 kc/s (443.1 m.); 100 kW. Relayed by Geneva, 401 kc/s (748 m.).
8.55 a.m.—Chimes. 9.0—Protestant

Address. 10.15—Concert. 11.30—News. 11.45-1.0 p.m.—Concert. 2.0—Records. 3.0-4.0—Sports.

5.0-8.0—Programme from Geneva. 5.0—Sorel Nitzberg (Pfte.). 5.30—Orphée Accordion Club. Conductor: Carmen Burkhardt. 6.0—Roman Catholic Address.

6.25—Duets from (a) "Don Giovanni" (Mozart), (b) "Mirella" (Gounod). La nuit (Fauré). Puisque ici-bas toute âme (Fauré). Duets from: (a) "Hercules" (Handel), (b) "Romeo and Juliet" (Gounod). "Lakmé" (Delibes).

6.50—News. 7.0—Sports.

7.20—Carols by the "Schola grégorienne" from Ste. Croix. Conductor: Carraz.

7.35—Erasmus and the Artists—Biographical Sketch (Hornung). 8.0—Radio Orchestra; at 8.30: Fridolin and Partner.

9.15-9.45—Talk: Winter Sports in Switzerland.



A scene from "Madame Pompadour," which Turin broadcasts at 7.40 p.m.

STOCKHOLM (Sweden)

704 kc/s (426.1 m.); 55 kW. Relayed by Motala, 216 kc/s (1,389 m.); Göteborg, 941 kc/s (318.8 m.); Hörby, 1,131 kc/s (265.3 m.); and Boden, 392 kc/s (765 m.).

8.0 a.m.—Talk. 8.20—Talk by Eric Westberg, with Gramophone Illustrations: Symphony in D minor (Franck). 9.15-9.45—Talk.

10.0—Service from Linköping Cathedral. 11.40—News.

2.0 p.m. (from Göteborg)—Duet in B flat (Berwald) by Greta Swedborg (Pfte.) and Fridell (Cello).

2.30 (from Göteborg)—"Herod and the Three Wise Men"—Children's Nativity Play; Songs. 2.55—Records.

4.0—Swedish Academy's 150th Anniversary Festival from the Börhus. 5.0—Baptist Service. 6.15—News. 6.30—Talk.

7.0—Radio Orchestra. Conductor: Grevillius. Lopatnikov (Pfte.). Radio Overture (Lazar). Pfte. Concerto No. 2 (Lopatnikov). Walk to the Paradise Garden from "A Village Romeo and Juliet" (Deliuss). Overture, "A Hymn of Praise" (Mendelssohn). Suite, "Feramors" (Rubinstein).

8.30—Topical. 8.45—News.

9.0-10.0—Light Orchestral.

STRASBOURG (France)

859 kc/s (349.2 m.); 100 kW.
7.0 a.m.—Topical. 7.30—Records. 7.40—News (German). 8.0—Gym. 8.30—News (German). 9.30—Records: Classical Music. 10.45—Protestant Service. 11.30—Roman Catholic Service (German).

12.0 noon—See Paris (PTT). 12.50 p.m.—News.

1.15—Viennese Operetta Music. Conductor: Bour. Turkish March (Suppé). Overture, "Die Fledermaus" (Strauss). Two Excerpts, "The Dance of the Dragonflies" (Lehár). Selection, "Roses of Florida" (Fall). Waltz, "Der Frauenfresser" (Eysler). Potpourri, Im Operettenrausch (Hruby). March, "Gasparone" (Millöcker).

2.15—Sports.

3.0—Fifth Nancy Conservatoire Concert from the Salle Poirel, Nancy. Conductor: Bachelet. Madeleine Masson (Violin). First Symphony (Bizet). Violin Concerto in A (Mozart). Impressions urbaines (Mariotte). Gigue for Violin (Bach). Noël (Bachelet). Introduction, Act III, "Lohengrin" (Wagner).

5.15—Records: Light Music. 6.0—Medical Talk. 6.15—Records. 6.30—Topical. 7.15—Folk Songs by La Violette Choir. 7.30—News. 7.45—News (German). 8.0—Sports. 8.15—Press Review (German).

8.30—Strasbourg Cathedral Choir, and Station Orchestra, Conductor: Abbé Hoch. Mlle. Ricklin (Soprano), Mlle. Rauh (Mezzo-Soprano), Mme. Debonte (Contralto), Le Breton (Tenor), Buchert (Tenor), Mary (Baritone), Mme. Briançon-Kauffmann (Harp), Grégoire (Violin) and Jude (Flute). Christmas Oratorio (Saint-Saëns). Tenor: Old German Carol. Harp Concerto in B flat (Handel). Two French Carols. Baritone: Jésus de Nazareth (Gounod). Schlummerlied (Brahms). Wiegenlied (Brahms). Andante (Mozart). Violin: (a) Andantino (Martini), (b) Chanson Louis XIII et Pavane (Couperin). Song of the Lark (Mendelssohn). Marching Song (Goller). Marche nocturne (Berlioz).

10.15—Records. 10.30—News. 11.0—News (German).

11.15—Dance Music from Paris (PTT).

STUTTGART (Germany)

574 kc/s (522.6 m.); 100 kW.
5.0 a.m.—See Hamburg. 7.0—Weather; Gym. 7.25-7.45—For Peasants. 8.0-8.30—Protestant Service.

9.0—See Munich.

9.30—Frohsinn Choir from Baden-Baden, Conductor: Schäfer.

10.0—See Hamburg.

10.30—See Leipzig.

11.0—See Berlin; at 12.0 noon—Topical. 12.50 p.m.—Announcements.

1.0 p.m.—See Frankfurt.

1.45—From Shops and Workshops. 2.0—"The First Performance of Weber's "Freischütz"—Play (Locks).

3.0—Light Music from Saarbrücken. Saarbrücken Orchestra, Conductor: Kasper. Marita Gründgens, Erwin Hartung (Tenor), Paul Zingel (Cello), Maria Fougner and Günther Wolfram (Pftes.).

5.0 (from Mannheim)—Gustel Schön (Soprano), Schery (Pfte.) and Gertrud Moch (Accompanist). Von ewiger Liebe (Brahms). Da unten im Tale (Brahms). Pfte.: Theme and Variations (Glazunov). Guten Abend, gut' Nacht (Brahms). Das Mädchen spricht (Brahms). 5.30—Swabia—Dialect Programme. 6.30—Talk: Gymnastics and Sport.

6.55—Talk on the following Opera.
7.0—"The Pearl Fishers"—Opera in Three Acts (Bizet). Station Orchestra and Choir, Conductor : Görlich. Cast : Fritz Krauss, Mathieu Ahlersmeyer, Georg Hann, and Felicie Hüni-Mihacsck. 9.0—Time ; News.
9.30—See Deutschlandsender.
11.0-1.0 a.m. (Monday)—See Frankfurt.

TOULOUSE (Radio-Toulouse) (France)
913 kc/s (328.6 m.) ; 60 kW.

Transmits at intervals from 11.0 a.m.
12.0 noon—News. 12.15 p.m.—Sketch.
12.40—Salon Orchestra. 12.55—News.
1.10—Operetta Songs. "Un de la Canebière" (Scotto), "La Fille de Madame Angot" (Lecocq), "Au pays du Soleil" (Scotto), "A Waltz Dream" (O. Straus).
1.25—Village Band. 1.40—Military Band. 1.55—News. 2.0-2.15—Protestant Service. 5.0—Orchestra. 5.15—Chansonnettes. 5.35—Dance Music. 5.55—News. 6.5—Light Music. 6.40—Salon Orchestra. 6.50—News.
7.0—"Amours de Marins" Fantasy. 7.40—Light Music ; at 7.55 : News. 8.17—Hunting Horns. 8.25—Variety. 8.40—Orchestra and Songs. 8.55—News. 9.10—Light Music. 9.45—Paris Programme.
10.15—Excerpts, "White Horse Inn" (Stolz-Benatzky). 10.40—Film Music and Songs. 10.55—News. 11.0—Orchestra. 11.15—Chansonnettes. 11.40—Dance Music. 11.55—News. 12.5 a.m. (Monday)—Light Music. 12.20—Jazz. 12.30—Announcements.

TURIN (No. 1) (Italy)
1,140 kc/s (263.2 m.) ; 7 kW. Relayed by Milan (No. 1) 814 kc/s (368.6 m.) ; Genoa, 986 kc/s (304.3 m.) ; Trieste,

1,140 kc/s (263.2 m.) ; Florence, 610 kc/s (491.8 m.) ; Bolzano, 536 kc/s (559.7 m.) ; and Rome (No. 3), 1,258 kc/s (238.5 m.).

7.30 a.m.—News. 9.0—Rural Programme. 10.0—Mass from the Church of the Annunciation, Florence. 11.0—Bible Reading.

11.20—Felice Lucia (Cello) and Luigi Gallino (Pfte.).

11.50-1.15 p.m.—See Rome.
2.15-4.0—See Rome.

4.0—Symphony Concert from the Teatro Adriano, Rome. Conductor : Hidemaro Konoye. Overture, "Carnaval romain" (Berlioz). Symphonie Concertante (Mozart). Oriente immaginario (Malipiero). Japanese Song Suite (Enteraciù). Seventh Symphony (Beethoven). 6.0-7.40—See Rome.

7.40—"Madame Pompadour"—Operetta (Fall). In the intervals : News (German) ; Talk.

10.0—News. 10.15-10.55 — Dance Music.

VIENNA (Austria)

592 kc/s (506.8 m.) ; 100 kW. Relayed by Graz and Linz, 886 kc/s (338.6 m.) ; Innsbruck, 519 kc/s (578 m.) ; Klagenfurt and Vorarlberg, 1,294 kc/s (231.8 m.) ; and Salzburg, 1,348 kc/s (222.6 m.).

Transmits at intervals from 6.45 a.m.

8.45 a.m.—"Cäcilienmesse" (Lemacher), from the Franciscan Church. 10.0—For Farmers. 10.40—Announcements.

10.45—Vienna Symphony Orchestra. Conductor : Nilius. Steiner (Violin). Symphony in E flat (Oberleithner). Violin and Orchestra : Phantastisches Nachtstück (Burgstaller). Overture in F (Pauspertl).

12.5 p.m.—Radio Orchestra. Conductor : Schönherr. 2.0—News. 2.15—Book Review.

2.40—Chamber Music. Baller (Pfte.) and the Rothschild Quartet. String Quartet in F (Haydn). Pfte. Quintet in G minor (Zarebski).

3.25—Talk : Christmas Eve in the Dolomites. 3.50—Christmas Competition. 4.15—Andreas Thom reads.

4.40—Radio Orchestra. Conductor : Holzer ; at 6.0 : Programme Notes ; Sports.

6.45—Variety Concert. Jecha Jazz Band ; the Mandl Quartet ; Mimi Brix (Soprano), Arnold (Tenor) ; Horn (Compère), Hruby (Pfte.).

7.45—"The Pilgrimage to Kevelaar," Ballad (Heine). 7.50—Report and Recitation.

8.10—"Dr. Abernethy"—Play (Alicia Ramsey and Rudolph de Cordova) Trans. : Fraser. 9.10—News.

9.30—Songs and Arias by Lajos Kertész (Tenor). Es muss ein Wunderbares sein (Liszt). Im Rhein, im schönen Strome (Liszt). Die Lorelei (Liszt). Aria, "Bánk bán" (Erkel). Wiegengesang (Dienzl). Tränen (Hubay). Song (Figedy). Three Hungarian Folk Songs (Dohnányi). Spring (Kodály).

10.10—"Greetings from Vienna"—Records. 10.30—News.

WARSAW (Poland)

224 kc/s (1,339 m.) ; 120 kW. Relayed by Cracow, 1,022 kc/s (293.5 m.) ; Katowice, 758 kc/s (395.8 m.) ; Łódź, 1,339 kc/s (224 m.) ; Lwów, 795 kc/s (377.4 m.) ; Poznań, 868 kc/s (345.6 m.) ; Torun, 986 kc/s (304.3 m.) ; and Wilno, 536 kc/s (559.7 m.).

SUNDAY (December 20)

7.0 a.m.—Time ; Hymn ; For Farmers. 7.50—News. 8.0 (from Lwów)—Service. After the Service : Records. 10.57—Fanfare.

11.3—Cracow Philharmonic. Conductor : Dymmek. Gimpel (Violin). Excerpts, "Pan Twardowski" (Rózycki). Violin Concerto in D minor (Wieniawski). Overture (Moniuszko). Gipsy Dance, "Jawnuta" (Moniuszko). Serenade for Strings (Karłowicz). Mazurka (Zarzycki) ; at 12.0 noon : Theatre Notes.

1.0 p.m.—Report. 1.15—Announcements. 1.45—For Farmers.

2.15—Rynas Orchestra. March (Grieg). Waltz (Schütt). Concert Polka (Poliakin). Serenade (Pinozzi). Melody (Rubinstein). Intermezzo (Kockert). Potpourri of Old Waltzes (Robrecht). Exotic Dance (Schmalstich).

3.0—The Dialogues of Plato—Part II. "The Defence of Socrates." 4.0—Station Orchestra from the Hotel Bristol. Conductor : Górczyński ; at 4.55 : Topical. 6.0 (from Lwów)—Literary Sketch. 6.15—Programme Notes. 6.20—Records. 7.20—Sports. 7.40—Politics. 7.50—News. 8.0 (from Lwów)—Variety.

8.30—Sonata in B minor (Liszt) by Woytowicz (Pfte.).

9.0-10.0 (from Lwów)—Seredyński Orchestra. Overture, "Lysistrata" (Lincke). Potpourri (Robrecht). Das Narzissenmädel (Siede). Waltz (Hilderbrandt). Suite, At the Circus (Armandola). Polka, Nelly (Eisler). Mazurka (Lewandowski).

10.0—Dance Records.

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**SUPERSENSITIVE
TELEPHONES**



MONDAY December 21

4 p.m.

BERLIN, Contralto, Pfte. (Bach, Reger), 4.30—Books, 4.50—Reading. **BEROMÜNSTER** and **SOTTENS**, Haydn Music, 4.50—Contredanses (Mozart). **BRESLAU**, Light Orchestral, 4.50—Books. **BUDAPEST (1)**, 4.25—Pfte. **COLOGNE**, 4.10—Violin Sonata (Bettingen), 4.40—Talk. **DEUTSCHLANDSENDER**, Light Orchestral. **FRANKFURT**, Carols, 4.30—Talk. **HILVERSUM** (301.5 m.), 4.40—V.A.R.A. Orchestra. **KÖNIGSBERG**, Light Orchestral, 4.35—Microphone Visit, 4.50—Books. **MOSCOW**, 4.30—Concert. **PARIS (PTT)**, Henriette Roget (Organ), 4.30—Poems; Talk. **PRAGUE**, 4.35—Quintet in D (Fibich). **ROME**, News, 4.15—Dance Music. **STRASBOURG** and **RADIO-PARIS**, Haydn and Ropartz Concert. **STUTTGART**, See Deutschlandsender, 4.45—Microphone Visit. **TURIN**, News, 4.15—Dance Music. **VIENNA**, 4.15—Advent Songs and Christmas Carols, Vienna Chamber Orchestra, 4.50—Pfte.; Kreisleriana (Schumann).

5 p.m.

BERLIN, Carols, 5.15—Records, 5.50—Address by Dr. Goebbels. **BEROMÜNSTER**, Talks, 5.5—Music, 5.30—Talk. **BRESLAU**, Light Orchestral, 5.50—See Berlin. **BUDAPEST (1)**, Pfte. **DEUTSCHLANDSENDER**, Books, 5.20—Talk, 5.40—Music, 5.50—See Berlin. **EIFFEL TOWER**, Sorbonne Lecture. **HAMBURG**, Opera Records, 5.50—See Berlin. **HILVERSUM** (1,875 m.), Records, 5.25—"Soli Deo Gloria" Orchestra. **HILVERSUM** (301.5 m.), V.A.R.A. Orchestra. **KALUNDBORG**, Viennese Songs, 5.20—Talk, 5.35—English. **LEIPZIG**, Orchestra and Munich Chamber Duo (Carols to the Lute), 5.50—See Berlin. **MOSCOW**, Notes, 5.15—Literature, 5.45—Concerts. **OSLO**, Radio Ensemble, 5.50—News. **PARIS (PTT)**, Paris Symphony Orchestra (Gluck), 5.30—Talks. **PRAGUE**, For Farmers, 5.10—German Talks, Reading and News, 5.55—Record. **RADIO-NORMANDIE**, Records, 5.30—Light Music, 5.45—London Productions. **RADIO-PARIS**, Anniversaries, 5.10—Talk, 5.30—Paris Symphony Orchestra. Marie-Louise Thiébault (Songs). **ROME**, 5.0-5.10—Poems, 5.50—Notes. **SOTTENS**, For Woman, 5.30—Esperanto; Chess, 5.50—Music Lesson. **STRASBOURG**, Markets, 5.15—Talk, 5.45—Records. **STUTTGART**, **COLOGNE**, **FRANKFURT**, **KÖNIGSBERG**, **MÜNICH**, Variety Concert. Olga Prager-Coeiho (Brazilian Folk Songs), Balalaika Orchestra, Brändle Band, etc. 5.50—See Berlin. **VIENNA**, Pfte. (contd.), 5.10—Talk, 5.35—English.

6 p.m.

ATHLONE, 6.15—Round the Counties, 6.35—Irish News, 6.45—News. **BERLIN**, Address (contd.), 6.15—Soprano, Pfte. (R. Strauss, Liszt, Marx), 6.45—Echoes. **BEROMÜNSTER**, Time, 6.5—Books, 6.15—Neapolitan Folk Songs, 6.30—News, 6.40—Classical Music, 6.50—Talk. **BRESLAU**, See Berlin. **BUCHAREST** and **RADIO-ROMANIA**, Talk, 6.45—Pictures from an Exhibition (Mussorgsky). **BUDAPEST (1)**, Songs, 6.35—Kosztolányi Commemoration. **COLOGNE**, See Berlin. 6.15—See Stuttgart, 6.45—Film Notes. **DEUTSCHLANDSENDER**, See Berlin. 6.15—Musical Sequence, 6.45—Topical. **EIFFEL TOWER**, Talks. **FRANKFURT**, See Berlin. 6.15—Winter Solstice Festival, 6.40—Topical; Markets. **HAMBURG**, See Berlin. 6.15—To be announced. 6.25—Concerto for Two Pftes. (Bresgen), 6.45—Topical. **HILVERSUM** (1,875 m.), Orchestra (contd.), 6.10—Letters

News. **HILVERSUM** (301.5 m.), V.A.R.A. Orchestra, 6.15—Talks. **KALUNDBORG**, Time; News; Talk. **KÖNIGSBERG**, See Berlin. 6.15—Old Folk Song Suite (Frotscher), 6.45—Topical. **LEIPZIG**, See Berlin. 6.15—Christmas Party, 6.50—Talk. **MÖNTE CENERI**, 6.15—Records, 6.30—Parliamentary Review, 6.45—News. **MOSCOW**, Concert. **MÜNICH**, See Berlin. 6.15—Winter Solstice Cantata. **OSLO**, News, 6.30—Indian Love Lyrics (Woodforde-Indien). **PARIS (PTT)**, Orchestra (contd.), Marie-Louise Thiébault (Songs) (Wagner, Fauré), 6.30—News. **POSTE PARISIEN**, Records, 6.30—Exchange; Topical, 6.55—Violin. **PRAGUE**, News, 6.10—French, 6.25—Light Orchestral, 6.55—Talk. **RADIO-NORMANDIE**, Children's Corner, 6.45—Talk; News.

PRINCIPAL EVENTS

SYMPHONY CONCERTS
4.0 Strasbourg, Radio-Paris: Haydn, Ropartz.
7.55 Hilversum (301.5 m.) Rotterdam Phil., Carl Flesch (violin).
8.45 Budapest 1: Christmas Cantata; Brahms No. 1.
LIGHT CONCERTS
12.15 Radio-Paris: Popular programme.
2.0 Kalundborg: Orchestral Suites.
3.0 Deutschlandsender: Popular orchestral.
5.0 Stuttgart, etc.: Variety concert.
6.30 Warsaw: Orchestra, songs.
7.0 Kalundborg: Russian programme.
7.0 Stockholm: Naval band, songs.
7.10 Breslau: Variety programme.
7.10 Deutschlandsender: Barnabas von Geczy.
7.15 Beromünster: Folk music.
7.40 Rome, Turin: Orchestral, vocal.
7.55 Athlone: Orch., contralto songs.
8.45 Eiffel Tower: French programme.
8.45 Radio-Paris: Conservatoire concert.
8.50 Rome: Variety concert.
9.30 Cologne, etc.: Serenade.
9.30 Warsaw: Folk music.
9.35 Regional, Prague: Scottish Dances.
11.30 Radio-Paris: Robert Orchestra.
OPERA
7.0 Vienna, Turin (8.50): "Oberon."

RADIO-PARIS, Talks, 6.30—Paris Symphony Orchestra (Schubert, Saint-Saens, Chabrier, Ravel). **ROME**, Records; Sports; Talk (French), 6.20—News (Foreign Languages). **SOTTENS**, Music Lesson, 6.15—Radio Magazine, 6.50—News. **STRASBOURG**, For Farmers, 6.15—Records, 6.30—News. **STUTTGART**, See Berlin. 6.15—Variety Concert (contd.), 6.45—Report. **TURIN**, News (Foreign Languages). **VIENNA**, News, 6.15—For Young People, 6.20—Talk, 6.30—Books, 6.45—Notes. **WARSAW**, 6.30—Orchestra, Tenor.

7 p.m.

ATHLONE, Variety in Irish, 7.40—Talk, 7.55—Orchestra, Sdney Giltrap (Contralto) (Mozart, Dvorák). **BERLIN** and **LEIPZIG**, News, 7.10—Dance Music. **BEROMÜNSTER**, Talk, 7.15—Grolimund's Folk Music Arrangements—Yodels and Heimatklänge Orchestra. Conductor: The Composer. **BRATISLAVA**, 7.40—"The Tidings brought to Mary"—Play (Claudel); Music by Odchazel. **BRESLAU**, News, 7.10—"Happy Holiday"—Christmas Sequence (Schenke); Music by Székely. **BUCHAREST** and **RADIO-ROMANIA**, Pictures from an Exhibition (contd.), 7.15—Talk, 7.30—Quartet in B flat (Beethoven) by the Theodorosko Quartet. **BUDAPEST (1)**, Kosztolányi Commemoration (contd.), 7.25—Cigány Band. **COLOGNE**, News, 7.10—Weekly Review. **DEUTSCHLANDSENDER**, News, 7.10—von Geczy Band. **EIFFEL TOWER**, News, 7.20—Foreign Affairs, 7.30—Talk: Scotland, 7.45—Review, 7.55—Home Affairs.

FRANKFURT, News, 7.10—Hauck Band, Soprano, Baritone. **HAMBURG**, News, 7.10—Hanover-Bremen Exchange Concert, 7.55—"Cello Concerto in A minor (Klughardt). **HILVERSUM** (1,875 m.), Report, 7.40—News, 7.50—N.C.R.V. Orchestra. **HILVERSUM** (301.5 m.), Talk, 7.10—Children's Choir, Records, 7.40—News; Records, 7.55—Rotterdam Philharmonic. Conductor: Swaap. Flesch (Violin). **KALUNDBORG**, Orchestra, Songs, 7.40—Revue. **KÖNIGSBERG**, News, 7.10—Revue (Albrecht-Walter-Knauer). **MÖNTE CENERI**, "Cello, Pfte. 7.30—Talk: Tolstoi, 7.45—Vocal and Instrumental. **MOSCOW**, Concert. **MÜNICH**, News, 7.10—"World Congress for Leisure and Recreation" in Retrospect—Reports and Music (Recorded). **OSLO**, Reports from Oslo and Bergen Ports, 7.30—Cabaret. **PARIS (PTT)**, Reviews, 7.38—Paris Symphony Orchestra (Delibes, Silver). **POSTE PARISIEN**, Violin, 7.6—News, 7.32—Records; Books, 7.52—Variety. **PRAGUE**, Talk, 7.10—To be announced, 7.40—

CHAMBER MUSIC
7.35 Sottens: Contemporary music.
8.0 Warsaw: Chamber orchestra.
9.0 Strasbourg: The Paris Quintet.
9.15 Oslo: Quartet (Debussy).
11.0 Stuttgart, Frankfurt: Classics.
RECITALS
4.0 Frankfurt: Carols.
6.0 Königsberg: Old folk-songs.
7.40 Kalundborg: Pfte. (Schubert).
8.0 Paris (PTT): Florent Schmitt prog.
8.5 Radio-Paris: Song, guitar.
9.30 Breslau: Alpine Christmas music.
PLAYS
8.0 Brussels 1: "Andromaque."
8.5 Kalundborg: An old Christmas play.
8.30 Paris (PTT): "The Critic" (Sheridan).
LAST NEWS BULLETINS (subject to slight alterations)
7.45 Warsaw; 8.30, Radio-Paris; 8.40, Oslo; 8.45, Stockholm; 9.0, German Stations, Prague, Vienna; 9.5, Beromünster, 9.45, Bucharest; 10.0, Brussels, Italian Stations; 10.30, Athlone, Paris (PTT); 11.5, Budapest 1.

DANCE MUSIC
7.10 Berlin; 9.30, Turin; 10.0, Warsaw; 10.15, Rome; 10.20, Hilversum (301.5 m.); 10.25, Regional; 10.35, National; 11.0, Radio Normandie, Radio-Paris.

"Bethlehem"—Nativity Play with Music (Masek). **RADIO-NORMANDIE**, Sports, 7.20—Xylophone, 7.40—News. **RADIO-PARIS**, Orchestra (contd.), 7.28—Markets, 7.30—Home Affairs, 7.40—Books, 7.50—Story. **ROME** and **TURIN**, 7.5—Time; News, 7.30—Talk, 7.40—Orchestra. Conductor: Antonicelli. Toti dal Monte (Soprano), Luigi Montesanto (Baritone). **SOTTENS**, Old Music for Violin, Viola da Gamba and Harpsichord, 7.20—Talk, 7.35—Contemporary Music (Ferroud, Hindemith, Meyrowicz). **STOCKHOLM**, Naval Band, Songs. **STRASBOURG**, Reviews, 7.15—Records, 7.30—News (French, German). **STUTTGART**, News, 7.10—Celebrity Records. **VIENNA**, "Oberon" (Weber), Vienna Opera Choir and Vienna Symphony Orchestra. Conductor: Kabasta. **WARSAW**, Orchestra (contd.), 7.45—News.

8 p.m.

ATHLONE, Orchestra (contd.), 8.25—Christmas Story, 8.40—Orchestra (Litov, Verdi). **BERLIN** and **LEIPZIG**, Dance Music. **BEROMÜNSTER**, Reading, 6.25—Polish Songs and Dances from Warsaw. **BRATISLAVA**, Play (Claudel). **BRESLAU**, Sequence (contd.). **BUCHAREST** and **RADIO-ROMANIA**, 8.5—Books, 8.10—Songs, 8.30—News, 8.45—Dinicu Orchestra. **BUDAPEST (1)**, Cigány Band, 8.45—Opera Orchestra. Conductor: Vaszy. **Palestrina Choir** (Vaszy, Brahms). **COLOGNE**, Cologne String Quartet

and Engels (Tenor) (Dittersdorff, Schutz, Haydn). **DEUTSCHLANDSENDER**, von Gezy Band. **EIFFEL TOWER**, Home Affairs, 8.30—Talk, 8.45—Symbolism in Music and Poetry—Orchestra, Maria Brancez and Verroust (Songs), Honnert (Recitations), Gouverner Choir. **FRANKFURT**, Band, etc. (contd.). **HAMBURG**, "Cello Concerto (contd.), 8.15—Light Orchestral. **HILVERSUM** (1,875 m.), Orchestra (contd.); at 8.40: Talk. **HILVERSUM** (301.5 m.), Rotterdam Philharmonic (contd.). **KALUNDBORG**, 8.5—18th Century Mystery Play (arr. Dumreicher); Incidental Music by Grøndahl, 8.55—News. **KÖNIGSBERG**, Revue (contd.). **LILLE**, Accordion Records, 8.15—Talk, 8.30—Orchestra, Songs. **MÖNTE CENERI**, Vocal and Instrumental, 8.30—To be announced. **MOSCOW**, German Talks. **MÜNICH**, "World Congress for Leisure and Recreation" (contd.). **OSLO**, Cabaret (contd.), 8.10—Foreign Affairs, 8.40—News. **PARIS (PTT)**, Florent Schmitt Music. Claire Chalande (Songs), the Com-

poser accompanying; Pauline Gordon (Pfte.) and Others, 8.30—Plays: (a) "The Critic" (Sheridan-Delacré), (b) "The Feast of Bacchus" (Schmitzler-Clauser). **POSTE PARISIEN**, Paul Reboux, 8.17—Songs of 1912, 8.32—Humorous Programme. **PRAGUE**, Play (contd.). **RADIO-NORMANDIE**, Records, 8.40—"The Bird's Awakening"—Variety. **RADIO-PARIS**, 8.5—Marcelle Samson and Léonor del-Castillo (Songs to the Guitar), 8.30—Review, 8.45—Concert arranged by the Conservatoire Old Students Association. Conservatoire Women's Choir, Recitations, Pfte. **ROME**, Concert. (contd.), 8.40—Talk, 8.50—Variety. **SOTTENS**, Contemporary Music (contd.). **STOCKHOLM**, Reading, 8.30—Records of Rubinstein (Pfte.), 8.45—News. **STRASBOURG**, News (German), 8.15—Rich (Organ), Mlle. Fricker and M. Mary (Songs) from the Church of Saint-Pierre-le-Vieux. **STUTTGART**, Austrian Christmas Music. Stuttgart String Quartet, Station Choir and Orchestra, etc. **TURIN**, See Rome, 8.40—Notes, 8.50—Act III, "Oberon" (Weber) from Vienna. **VIENNA**, "Oberon" (contd.). **WARSAW**, Records, 8.30—Pomeranian Music Society Concert from the Conservatoire. String Orchestra. Conductor: Guttry, Boczek (Flute). (dal Abaco, Bach, Handel).

9 p.m.

ATHLONE, Orchestra (contd.), 9.10—"The Closed Door"—Christmas Play (Rev. John Costello), 9.30—Variety. **BERLIN**, News, 9.15—Listen to this! 9.30—Orchestra, Pfte. **BEROMÜNSTER**, Polish Music (contd.).

BRATISLAVA, News (Czech, Hungarian), 9.30—Talk, 9.35—Scottish Dance Music from London. **BRESLAU**, News, 9.30—"Christnacht"—Nativity Play (Haas) (Recorded). **BRNO**, 9.30—Talk, 9.35—Scottish Dance Music from London. **BUCHAREST** and **RADIO-ROMANIA**, Dinicu Orchestra, 9.45—News (French, German, Romanian). **BUDAPEST (1)**, Orchestra and Choir (contd.). **COLOGNE**, Time; News, 9.20—Talk, 9.30—Orchestra, Flute. **DEUTSCHLANDSENDER**, News, 9.30—Il Trillo del Diavolo (Tartini). **EIFFEL TOWER**, Symbolism in Music and Poetry (contd.). **FRANKFURT**, Time; News, 9.15—A 1937 Calendar, 9.30—See Cologne. **HAMBURG**, News, 9.25—Variety, 9.50—Concert from Cologne. **HILVERSUM** (1,875 m.), Orchestra (contd.); at 9.40: News. **HILVERSUM** (301.5 m.), Rotterdam Philharmonic (contd.), 9.10—Recitations, 9.25—"De Stem des Volks" Workers' Choir and Artists; at 9.40: News. **KALUNDBORG**, News, 9.10—Reports, 9.40—Mandoline and Harp. **KÖNIGSBERG**, News, 9.20—"Feuer auf den Bergen"—Winter Solstice Cantata (Heubert), 9.50—Concert from Cologne.

LEIPZIG, News, 9.30—See Cologne. **LILLE**, Orchestra, Songs. **MOSCOW**, 9.5—English Programme: (a) U.S.S.R. Review, (b) 1905 Revolution Reminiscences, (c) Revolution Songs, (d) Russian Lesson. **MÜNICH**, News, 9.20—A German Express in telephonic communication with an American Express, 9.30—See Cologne. **OSLO**, Topical, 9.15—Quartet in G (Debussy). **PARIS (PTT)**, Plays (contd.). **POSTE PARISIEN**, Humorous Programme, 9.17—Lecture-Recital: The Piano, 9.50—Chamber Music. **PRAGUE**, News, 9.15—Records, 9.30—Talk, 9.35—Scottish Dance Music from London. **RADIO-NORMANDIE**, Concert. **RADIO-PARIS**, Concert (contd.). **ROME**, Variety. **SOTTENS**, Contemporary Music (contd.). 9.15—League of Nations Report. **STOCKHOLM**, Quartets (Henriques, Haydn). **STRASBOURG**, Paris Quintet. **STUTTGART**, News, 9.30—Trunk Songs, 9.45—Concert from Cologne. **TURIN**, "Oberon" (contd.), 9.20—Talk, 9.30—Dance Music. **VIENNA**, "Oberon" (contd.), 9.20—News, 9.30—Light Orchestral. **WARSAW**, Concert (contd.), 9.30—Folk Dances.

10 p.m.

ATHLONE, Variety, 10.30—News. **BRESLAU**, Play (contd.). **BUDAPEST (1)**, News (Ger.), Records. **COLOGNE** and **MOST GERMAN STATIONS**, Orchestra, Flute. **DEUTSCHLANDSENDER**, Cantata (Gerhard Schumann). **EIFFEL TOWER**, Symbolism in Music and Poetry (contd.). **HILVERSUM** (1,875 m.), Orchestra (contd.), 10.10—Records, Reading. **HILVERSUM** (301.5 m.), Choir (contd.), 10.10—Records, 10.20—Dance Band, 10.55—Records. **KALUNDBORG**, Christmas Greetings to the Faroe Isles. **PARIS (PTT)**, Plays (contd.), 10.30—News. **POSTE PARISIEN**, Chamber Music, 10.30—Records. **RADIO-NORMANDIE**, Concert. **RADIO-PARIS**, Concert (contd.), 10.45—News; Time. **ROME**, News, 10.15—Dance Music. **STRASBOURG**, Quintet (contd.), 10.30—News. **TURIN**, News, 10.15—Dance Music. **VIENNA**, Light Orchestral. **WARSAW**, Dance Records.

11 p.m.

BUDAPEST (1), 11.5—News. **HILVERSUM** (1,875 m.), Reading. **HILVERSUM** (301.5 m.), Records. **MOSCOW**, Spanish Talk. **RADIO-NORMANDIE**, Dance Music, 11.30—From the Cabane Normande. **RADIO-PARIS**, Dance Music, 11.30—Robert Orchestra. **STRASBOURG**, News (German). **STUTTGART**, and **FRANKFURT**, Serenade (Beethoven, Schumann).

12 midnight

RADIO-NORMANDIE, Dance Music, 12.30—Orchestra. **RADIO-PARIS**, Robert Orchestra. **STUTTGART**, and **FRANKFURT**, Serenade (contd.).

NATIONAL

Time Signals (normally): Big Ben. 10.15 a.m., 5.15 p.m., 12 midnight. Greenwich, 10.30 a.m., 2.0, 6.0, 9.0, 11.30 p.m. 8.30-8.50 a.m. (D)—Second Test Match—Alan Kippax from Sydney. 10.15 (D)—Service. 10.30 (D)—Weather Forecast. 10.45—Cinema Organ. 11.15—Records. 12.0 p.m.—The BBC Northern Ireland Orchestra, conducted by Peter Montgomery; David Wilson (Baritone). 1.0—See 8.30 a.m. 1.20—Arnold Goldsbrough—Organ. 2.0—Records. 2.30—Sophie Rowlands (Soprano); Tom Kinniburgh (Bass). 3.0—Records. 3.30—The Harp Trio. 4.0—Dance Records. 4.30—Maurice Reeve (Pfte.). 5.0—Five O'Clock—Phyllis Wager, "The Mountains of the Arctic." 5.15—The Alphas. 6.0—The First News. 6.20—The Kentucky Minstrels. 7.20—The Geraldine Orchestra. 8.0—Street Show. 8.30—Solomon (Pfte.). 9.0—The Third News. 9.20—World Affairs: 9.35—The BBC Orchestra (Section E), led by Laurance Turner; The BBC Chorus (Section A), conducted by Leslie Woodgate. 10.35—Billy Gerhardt Band. 11.30-12.0—Round London at Night.

REGIONAL

Time Signals (normally): Big Ben 10.15 a.m., 5.15 p.m., 12 midnight. Greenwich, 10.30 a.m., 2.0, 7.0, 10.0, 11.30 p.m. 10.30-10.45 a.m.—Droitwich. 10.45—BBC Scottish Orchestra; Marjory Lorimer (Mezzo-Contralto). 11.45—Haydn Heard and his Band. 12.45 p.m.—A Voyage on a Pilgrim Steamer—A. T. Bagot. 1.0—Records. 1.45—Arthur Salisbury Orchestra. 2.30—The BBC Welsh Orchestra; Gwladys Naish (Soprano). 3.30—Horace Finch—Organ. 3.45 (Scottish)—For Scottish Unemployed. 4.0 (ex. Midland)—Margot MacGibbon (Violin); Frederick Jackson (Pfte.). 4.0 (Midland)—Maebel Dunn (Soprano); Harold Green (Tenor)—Eileen Murphy (Pfte.). 4.30—Hotel Victoria Orchestra. 5.15—The Children's Hour. 6.0 (ex. Western, Northern)—Dudley Beaven—Theatre Organ. 6.0 (Western)—The Bath Guitar Octet, directed by Frances Tarrant Bailey; Hooper Bussell (Baritone). 6.0 (Northern)—George Wheldon Band. 6.20 (Regional, N. Ireland)—The Leslie Bridgewater Harp Quintet. 6.20 (Midland)—Eda Kersey (Violin); Margaret Ablethorpe (Pfte.). 6.20 (Scottish)—For Young Scots. 6.30 (Western)—Leila Megane (Contralto); Alwena Roberts (Harp). 6.30 (Northern)—The L.N.E.R. Mixed Voice Choir. 6.40 (Scottish)—Vera Canning (Cello); J. Wight Henderson (Pfte.). 7.0—The Second News. 7.20—Regional Announcements. 7.30 (Regional, Midland)—The BBC Midland Orchestra, conducted by Leslie Heward. 7.30 (Western)—Welsh Carols: Neville Williams (Trebble); Kenneth Owen (Trebble); Nantylfyllon Children's Choir. 7.30 (Northern)—Dorothy Beer, Dorothy Rice (Pftes.). 7.30 (N. Ireland)—For Ulster Farmers. 7.30 (Scottish)—Reading. 7.45 (N. Ireland)—Kathleen Daunt (Mezzo-Soprano); Eileen Ervine (Contralto); George Beggs (Baritone); Tina Bonifacio (Harp). 7.45 (Scottish)—"Holly Follies." 8.0 (Western)—Swansea Seamen's Christmas Party. 8.0 (Northern)—Northern Bell Music, "A Men from the Other Side"—a new Radio Thriller; Cast includes Carol Goodner, Hartley Power, Tony Quinn, Sydney Keith, Charles Mason, Hay Petrie. 9.20 (ex. Western)—The Aristocrats of Harmony in "A Song at Twilight." 9.20 (Western)—Carol Singing. 9.35 (ex. Midland, Western, Northern)—Scottish Dance Music, conducted by Jan Whyte. 9.35 (Midland)—Jean Salder and his Serenaders. 9.35 (Northern)—Henry Reed and his Orchestra, with Brent Wood. 10.0—News Summary. 10.25—Billy Gerhardt Band. 11.30—Late News Summary. 11.40-12.0—Dance Records.

ATHLONE (Ireland)

565 kc/s (531 m.); 60 kW. Relayed by Dublin, 1,348 kc/s (222.6 m.); and Cork, 1,240 kc/s (241.9 m.). 1.30-3.0 p.m.—Records. 5.30—Children's Hour. 6.15—Round the Counties—Monaghan: M. MacMahon (Fiddle); Kildare: Luke McGarr (Accordion). 6.35—Irish News Feature. 6.45—News. 7.0—Variety in Irish compered by Giolla Christ O'Broin. 7.40—An Expert in Obstruction—Joe Biggar, by John Muldoon, K.C. 7.55—Radio Orchestra. Conductor: Lieut. J. M. Doyle. Sidney Giltnap (Contralto). Excerpts, "Cosi fan tutte" (Mozart). Slav Dances (Dvorak). 8.25—A Christmas Story by Francis MacManus. 8.40—Radio Orchestra. Conductor: Lieut. J. M. Doyle. Overture, "Maximilian Robespierre" (Litolv). Selection "Il Trovatore" (Verdi). 9.10—"The Closed Door"—Christmas Play (Rev. John Costello). Produced by John MacDonagh. 9.30—Variety. 10.30-11.0—News.

BANSKÁ-BYSTRICA

(Czechoslovakia) 392 kc/s (765 m.); 30 kW. Relays Czechoslovak Stations.

BERLIN (Germany)

841 kc/s (356.7 m.); 100 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Hamburg. 1.0 p.m.—News. 1.15—March and Waltz Records. 2.0—Exchange; Markets. 3.30—Winter Evening in a Youth Hostel. 4.0—Bach and Reger Contralto and Pfte. Music. 4.30—Books. 4.50—Reading. 5.0—Old Favourite Carols. 5.15—Records: "Turandot" (Puccini). 5.50—N.S.D.A.P. Christmas Festival. Address by Dr. Goebbels. 6.15—Richard Strauss, Liszt and Marx Soprano and Pfte. Music. 6.45—Evening Echoes. 7.0—News. 7.10—Dance Music—Station Orchestra, Bund Band, etc. 9.0—News. 9.15—"Listen to this!" 9.30-11.0—Raue Orchestra. Hansche and Narath (Pftes).

BEROMÜNSTER

(Switzerland) 556 kc/s (539.6 m.); 100 kW. Relayed by Basle and Berne, 1,375 kc/s (218.2 m.). 11.0 a.m.-12.45 p.m.—See Sottens. 3.0—For Women. 3.30—Folk Music by a French Horn Quartet. 3.50—Haydn Music by d'Alessandro (Guitar) and the Deuber Trio. 4.50—Contre-dances (Mozart). 5.0—Talk. 5.5—Concert by School Children. Claire Meyrat (Pfte.). 5.30—For Young Philatelists. 6.0—Time. 6.5—New Books. 6.15—Neapolitan Folk Songs. 6.30—News. 6.40—Classical Music. 6.50—Talk: Taoism and Shintoism. 7.15—Grolimund's Folk Music Arrangements—Yodels and "Heimatklänge" Orchestra. Conductor: The Composer. 8.0—Johanna Siebel reads. 8.25-9.15—Polish Songs and Dances, from Warsaw; News.

BRATISLAVA

(Czechoslovakia) 1,004 kc/s (298.8 m.); 13.5 kW. Transmits at intervals from 5.15 a.m. 3.10 p.m.—Station Orchestra. Guest Conductor: Vincourek. Lida Komancova (Songs). 4.10—Sketch for Children. 4.25—Talk. 4.35—See Prague. 5.0-5.45—Literary Programme in Hungarian. 5.45-6.10—See Prague. 6.10—See Brno. 6.25—See Prague. 7.10—To be announced. 7.40—"The Tidings brought to Mary"—Play (Claude), with Music by Odchazel. 9.0—News. 9.15—News (Hungarian). 9.30—Talk on the 9.35 Transmission. 9.35—Scottish Dance Music from London. 10.0-10.20—See Prague.

BRESLAU (Germany)

950 kc/s (315.8 m.); 100 kW. Relayed by Gleiwitz, 1,231 kc/s (243.7 m.). Transmits at intervals from 4.0 a.m. 11.0 a.m.—See Leipzig. 1.0 p.m.—News. 1.15-2.0—Variety from Deutschlandsender. 3.0—Books. 3.20—Debussy Pfte. Music. Suite bergamasque. Jeux d'eau. 3.40—Reading. 4.0—Light Orchestral; at 4.50: Books. 5.50—See Berlin. 6.15—"Jakob Böhme"—Biographical Play (Hultsch). 7.0—News. 7.10—"Happy Holiday"—Christmas Sequence (Schenke); Music by Sczuka. Station Choir and Orchestra, at 9.0—News. 9.30-11.0—"Christnacht"—Nativity Play after Bavarian and Tyrolese Carols (Haas). Women's and Madrigal Choirs, Hirschberg Orchestra, etc. (Recorded).

BRNO (Czechoslovakia)

922 kc/s (325.4 m.); 32 kW. Transmits at intervals from 6.15 a.m. 4.40 p.m.—Talks in German. 5.15—News. 5.20—Art Review. 5.30—Record. 5.35—For Workers. 5.45-6.10—See Prague. 6.10—French Lesson. 6.25-9.30—See Prague. 9.30—Talk on the 9.35 Transmission. 9.35—Scottish Dance Music from London. 10.0-10.20—See Prague.

BRUSSELS (No. 1) (Belgium)

620 kc/s (483.9 m.); 15 kW. Transmits at intervals from 6.37 a.m. 6.15 p.m.—Salon Orchestra. 6.50—Sonata (Chopin) by Poussele (Cello) and Ebbecke (Pfte.). 7.15—Bridge; Colonial Review; Science Review. 7.30—News. 8.0—"Andromaque"—Tragedy in Five Acts (Racine), with Incidental Music by Saint-Saëns. Conductor: Dejoncker. 10.0—News. 10.10-11.0—Records: "Louise"—Opera (Charpentier).



Christmas in Poland; in a peasant's house

E.N.A.

BRUSSELS (No. 2) (Belgium)

932 kc/s (321.9 m.); 15 kW. Programme in Flemish. Transmits at intervals from 6.37 a.m. 5.0 p.m.—Light Orchestral. 7.0—Operetta Records. 7.30—News. 8.0—Radio Orchestra. Conductor: Gason. 8.45—Talk. 9.0—Radio Orchestra. Conductor: Gason. Gras (Pfte.). Overture, "Martha" (Flotow). Irish Sketches (O'Donnell). Fantasia, (Demersseman). La Morena (Chaminade). Sérénade (Godard). Petite Suite (Coleridge-Taylor). Slav Rhapsody (Friedeman). 10.0—News. 10.10-11.0—Records.

BUCHAREST (Romania)

823 kc/s (364.5 m.); 12 kW. Relayed by Radio-Romania (Brasov), 160 kc/s (1,875 m.). Transmits at intervals from 4.30 a.m. 4.0 p.m.—Reading. 4.15—Radio Orchestra. Conductor: Nottara. 5.0—Time; Weather; Topical. 5.10—Radio Orchestra. 6.0—Talk. 6.45—Pictures from an Exhibition (Musorsky). 7.15—Talk. 7.30—Quartet in B flat (Beethoven), by the Theodorresco Quartet. 8.5—Books. 8.10—Sophie Jianu (Songs): Aria, "A Masked Ball" (Verdi). Non mi sceta (Tagliaterra). Laissez-moi chanter (Sibiceano). Three Romanian Folk Songs (arr. Brdicceanu). 8.30—News. 8.45—Dinicu Orchestra. 9.45—News (French, German, Romanian).

BUDAPEST (No. 1) (Hungary)

546 kc/s (549.5 m.); 120 kW. Transmits at intervals from 5.45 a.m. 4.25 p.m.—Paul Kiss (Pfte.). 6.0—Songs. 6.35—Dezso Kozsoltányi Memorial Programme—Address by Michael Babits. 7.25—Vidák Cigány Band. 8.45—Opera Orchestra. Conductor: Vaszy. Palestina Choir. Ilonka Kovats and Vince Imre (Songs). Christmas Cantata (Vaszy). First Symphony in C minor (Brahms). 10.0—News (German). 10.5—Records. 11.5—News.

BUDAPEST (No. 2) (Hungary)

359.5 kc/s (834.5 m.); 18 kW. 4.45 p.m.—Talk. 6.0—Records. 8.30—News. 8.45—György Siet Quintet.

COLOGNE (Germany)

658 kc/s (455.9 m.); 100 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—Band. 12.0 noon—News. 12.15 p.m.—Concert from Hamburg. 1.0—News. 1.15—Station Schrammel Ensemble. 1.45—Markets. 2.0-2.30—Story. 2.45—Markets. 3.0—See Deutschlandsender. 4.0—Edmund Löns talks about his Brother, Hermann Löns. 4.10—Violin Sonata on Old Folk Songs and Dances (Bettingen). 4.40—Talk. 5.0—See Stuttgart. 5.50-6.15—See Berlin. 6.45—Film Notes. 7.0—News. 7.10—Weekly Review. 8.0—Cologne String Quartet and Engels (Tenor). Quartet in D (Dittersdorf). Songs (Schulz). Vogelquartett (Haydn).

MONDAY (December 21)

11.0 a.m.—Hanover Castle Concert 1.0 p.m.—News. 1.20—Music. 2.0—Shipping. 2.20—Soprano, Baritone. 2.50—Ice Report. 3.0—Station Dance Band. 4.0—Dialect Sequence (Schacht). 4.20—Sailors' Christmas Yarn (Plümpe). 4.45—Talk. 5.0—Opera Records. 5.40—For Farmers. 5.50—See Berlin. 6.15—To be announced. 6.25—Concerto for Two Pftes. (Bresgen). 6.45—See Deutschlandsender. 7.0—News. 7.10—Hanover-Bremen Exchange Programme Part I: From Bremen. Bremen Workers sing and play. Part II: From Hanover. Mandoline and Zither Bands. 7.55—Cello Concerto in A minor (Klughardt). 8.15—Station Orchestra. Festlicher Auftakt (Schmalstich). Flight of the Bumble-Bee (Rimsky-Korsakov). Mephisto-Walzer (Liszt). Irrlichter (Jensen-Lehnhoff). Rhapsody on Swabian Folk Songs (Kämpfert). Excerpt, "Romeo and Juliet" (Berlioz). 9.0—News. 9.25—Variety. 9.50-11.0—Concert from Cologne.

HILVERSUM (1,875 m.)

(Holland) 160 kc/s; 10 kW until 2.40 p.m.; 100 kW from 2.40 p.m. N.C.R.V. Programme. 7.40-9.10 a.m.—Bible Reading; Meditation; Records. 10.10—Service. 10.40—Reading. 11.10—Records; at 11.40: News. 12.10 p.m.—Zwart (Organ). 1.40—For Schools. 2.15—Records. 2.40-3.20—Talk. 3.40—Bible Reading. 4.40—Records. 5.25—"Soli Deo Gloria" Orchestra. Conductor: ter Braake. 6.10—Letter-box; News; Report. 7.40—News. 7.50—N.C.R.V. Orchestra. Conductor: v.d. Hurk; at 8.40: Talk and at 9.40: News. 10.10-11.0—Records, followed by Bible Reading.

HILVERSUM (301.5 m.)

(Holland) 995 kc/s; 15 kW until 2.40 p.m.; 60 kW from 2.40 p.m. V.A.R.A. Programme. 7.40 a.m.—Records. 9.40—V.P.R.O. Religious Programme. 10.0—Recitations and Records. 11.0—Steyn (Organ). 11.40—Records. 11.55—"Dance Music by 'De Flierefluiters'" Conductor: v.d. Horst, V. Degen (Songs). 12.40-1.25 p.m.—"Melody Circle." Conductor: Wins. 1.40—Educational. 1.55—Records. 2.10—Greet Swaanswijk (Pfte.). 2.40—Records and Talk. 3.10—Martha Rolloos (Songs), Rossican (Pfte.). 3.40—Talk with Records. 4.10—For Children. 4.40—V.A.R.A. Grand Orchestra. Conductor: de Groot. 6.15—Talks. 7.10—V.A.R.A. Children's Choir. Conductor: Mlle. Hulscher. Records in the intervals. 7.40—News; Records. 7.55—Rotterdam Philharmonic. Conductor: Svaap. Flesch (Violin). 9.10—Recitations. 9.25—"De Stem des Volks" Workers' Choir and Artists; at 9.40: News. 10.10—Records. 10.20—"Ramblers" Dance Band. 010.55-11.4—Records.

KALUNDBORG (Denmark)

240 kc/s (1,250 m.); 60 kW. Relays Copenhagen, 1,176 kc/s (255.1 m.). Transmits at intervals from 6.0 a.m. 11.0 a.m.—1.0 p.m.—Andersen String Ensemble. 2.0—Radio Orchestra. Conductor: Tuxen. Algerian Suite (Saint-Saëns). Serenade in C (Tchaikovsky). Suite, Belshazzar's Feast (Sibelius). 3.0—Talk. 3.10—Children's Choir. 3.30—Klinge (Brahms Songs). 3.50—Wireless Notes. 3.56—Poem. 4.0—Talk: Symbols and Allegories. 4.25—Weather. 4.40—Exchange; Markets. 4.50—Records. 5.0—Viennese Songs (Lehar, Stolz, Benatzky), by Villie Hagbo Petersen. 5.20—Talk. 5.35—English Lesson. 6.0—Time; News. 6.30—Talk. 7.0—Radio Orchestra. Conductor: Grondahl. Niels Hansen (Songs). Hartmann, Enna, Horneman, Smetana and Tchaikovsky Music. 7.40—"The Mouse on the Table"—Revue from the Apollo Theatre. 8.5—18th Century Mystery Play (arr. Dumreicher); Incidental Music by Grondahl. 8.55—News. 9.10—Reports from a Fire Station, Hospital, etc. 9.40—Mandoline and Harp. Largo

9.0—Time; News. 9.20—Talk: Paul de Lagarde. 9.30-11.0—Station Orchestra. Conductor: Kühn. Fritzsche (Flute).

DEUTSCHLANDSENDER

(Germany) 191 kc/s (1,571 m.); 60 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Leipzig. 12.45 p.m.—News. 1.0—Variety. 2.0—Exchange; Programme Notes. 2.15—Records. 2.25—Talks. 2.40—Norwegian Songs sung by Valborg Landberg (Recorded). 3.0—Light Orchestral; at 3.50—Reading. 5.0—Books. 5.20—Talk. 5.40—Music. 5.50—See Berlin. 6.15—"Be Like Children!"—Musical Sequence (Paris-Jönsson). 6.45—Topical. 7.0—Motto; News. 7.10—von Gezy Band. 9.0—News. 9.30—Il Trillo del Diavolo (Tartini). 9.45—Weather. 10.0-10.45—"Winter Solstice Festival"—Poem (Gerhard Schumann). Military Band and Choir. Conductor: Menzel.

FRANKFURT (Germany)

1,195 kc/s (251 m.); 25 kW. Relayed by Cassel, Coblenz, Freiburg and Trier, 1,195 kc/s (251 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Hamburg. 1.0 p.m.—News. 1.10—Records. 2.0—Talk; Markets. 2.15—For Children. 2.45—Light Orchestral. 3.45—Friendly Warning in Verse (Forster). 4.0—Carols by Lotte Jacobi (Soprano). 4.30—Talk: Christmas Eve. 5.0—See Stuttgart. 5.50—See Berlin. 6.15 (from Coblenz)—Labour Service Winter Solstice Festival. 6.55—Markets; Programme Notes. 7.0—News. 7.10—Hauck Band, Hertha Ferber (Soprano), Donneck (Baritone). 9.0—Time; News. 9.15—A 1937 Calendar. 9.30—See Cologne. 11.0 p.m.—1.0 a.m. (Tuesday)—See Stuttgart.

HAMBURG (Germany)

904 kc/s (331.9 m.); 100 kW. Relayed by Bremen, Flensburg, Hanover, Magdeburg and Stettin, 1,330 kc/s (225.6 m.). Transmits at intervals from 5.15 a.m.

MONDAY (December 21)

amoroso (Munier). Serenade, Noël de Pirot (Monti). Meditation (Calace). Romance without Words (Mezzacapo). To Spring (Pietrapetra).

10.0—Christmas Greetings to the Faroe Isles. 11.0—Chimes.

KÖNIGSBERG (Heilsberg)

(Germany)
1,031 kc/s (291 m.); 100 kW. Relayed by Danzig, 1,303 kc/s (230.2 m.).

Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Hamburg. 1.0 p.m.—News. 1.10—Reading. 1.25—Records. 2.15—Periodicals. 2.30—Talk. 2.50—Light Orchestra: at 3.30. Books. 4.35—Visit to Thüringian Home Workers. 4.50—Books. 5.0—See Stuttgart. 5.40—Announcements. 5.50-6.15—See Berlin.

6.15—Old Folk Song Suite (Frotscher)—Soprano, Baritone, and the Station Orchestra. 6.45—Topical 7.0—News. 7.10—Revue (Albrecht); Music by Fried Walter and Karl Knauer. Börschel Band, etc. 9.0—News. 9.20—"Feuer auf den Bergen"—Winter Solstice Cantata (Neubert). 9.50-11.0—Concert from Cologne.

LEIPZIG (Germany)

785 kc/s (382.2 m.); 120 kW. Relayed by Dresden, 1,285 kc/s (233.5 m.).

Transmits at intervals from 5.0 a.m. 11.0 a.m.—Leipzig Symphony Orchestra and Cello Quartet. Conductor: Blumer. 1.0 p.m.—News. 1.15—Records. 2.0—For Women. 2.10—Books. 2.50—Art Review. 3.0—Records. 4.0—Markets. 4.10—Talk. 4.30—Music. 4.40—Talk.

5.0—Station Orchestra. Conductor: Weber. Munich Chamber Duo (Carols to the Lute). Excerpts, "Nussknacker und Mausekönig" (Schubert). Carols (arr. Scherrer). Ein Märchen (Piccotti). Selection, "Christelfein" (Pfitzner). Carols (arr. Scherrer). Waltz (Brahms). 5.50-6.15—See Berlin. 6.15—Labour Service Christmas Party. 6.50—Talk. 7.0—News. 7.10—See Berlin. 9.0—News. 9.30-11.0—See Cologne.

LILLE (Radio PTT Nord)

(France)
1,213 kc/s (247.3 m.); 60 kW.

Transmits at intervals from 6.50 a.m. 8.0 p.m.—Time; Records of Marceau (Accordion). 8.15—Literary Talk. 8.30—Station Orchestra. Conductor: Soret. Mlle. Germain (Soprano) and Vienne (Tenor). 10.30—News.

MONTE CENERI (Switzerland)

1,167 kc/s (257.1 m.); 15 kW.

Transmits at intervals from 11.0 a.m. 6.45 p.m.—News. 7.0—Mottier (Cello); Herschel (Pfte.). Sonata in A (Boccherini). Excerpts from a Suite for Cello (Bach). Arioso (Bach). Intermezzo (Granados). Serenade (Sgambati). 7.30—Talk: Tolstoi. 7.45—Vocal and Instrumental. 8.30-9.15—To be announced.

MOSCOW (No. 1) (Russia)

172 kc/s (1,744 m.); 500 kW.

4.30 p.m.—Concert. 5.0—Red Army Notes. 5.15—Literature. 5.45—Concerts. 8.0—German Talks: (a) A Soviet Student at the Microphone, (b) A Red Army Soldier's Day. 9.5—English Programme: (a) U.S.S.R. Review, (b) 1905 Revolution Reminiscences, (c) Revolution Songs, (d) Russian Lesson. 10.0—Hungarian Talk: Foreign Affairs. 11.0—Spanish Talk: Soviet Students.

MUNICH (Germany)

740 kc/s (405.4 m.); 100 kW. Relayed by Nürnberg, 1,267 kc/s (236.8 m.).

Transmits at intervals from 5.0 a.m. 11.0 a.m.—Orchestra. Conductor: List. Marius Andersen (Tenor). 3.30 p.m.—Orchestra. 4.30—Books. 5.0—See Stuttgart. 5.50-6.15—See Berlin. 6.15—"Stent ein Flammenstoss in tiefer Nacht"—Winter Solstice Cantata (Lauer). 6.45—Talk: The 1936 German Himalayan Expedition. 7.0—News. 7.10—The "World Congress for Leisure and Recreation" in Retrospect—Reports with Records of Folk Music made during the Congress, and Music by the Station Orchestra. 9.0—News.

9.20—A German Express Train in telephonic Communication with an American Express Train. 9.30-11.0—See Cologne.

OSLO (Norway)

260 kc/s (1,153.8 m.); 60 kW. Relayed by Fredrikstad, 722 kc/s (415.4 m.); Hamar, 519 kc/s (578 m.); Notodden, 1,357 kc/s (221.1 m.); Porsgrund, 850 kc/s (352.9 m.); Rjukan, 1,348 kc/s (222.6 m.); and Trondheim, 629 kc/s (476.9 m.).

Transmits at intervals from 10.40 a.m. 4.55 p.m.—Light Music by the Radio Ensemble. 5.30—News. 6.0—Announcements. 6.30—Time; Indian Love Lyrics (Woodforde-Finden), by Rolf Tellander. 7.0—Reports from Oslo and Bergen Ports. 7.30—Cabaret. 8.10—Foreign Affairs. 8.40—Weather; News. 9.0—Topical. 9.15—Siring Quartet in G (Debussy).

PARIS (Eiffel Tower) (France)

1,456 kc/s (206 m.); 5 kW.

Transmits at intervals from 7.0 a.m. 5.0 p.m.—Lecture from the Sorbonne. 6.0-6.30—Educational. 6.45—Theatre Talk. 7.0—News. 7.20—Foreign Affairs. 7.30—Talk: Scotland. 7.45—Press Review. 7.55—Home Affairs. 8.30—Literary Talk: Valéry Larbaud.

8.45—Symbolism in Music and Poetry. Station Orchestra. Conductor: Clergue. Maria Branzée and Verroust (Songs). Robert Honcort (Recitations), the Gouverné Choir. Introductory Talk by Edouard Dujaudin. Prélude à l'après-midi d'un faune (Debussy). Poems. Songs. Hymne à la naissance du matin (Fort-Caplet). Choir: Inscriptions champêtres (de Gourmont-Caplet). Les parfums de la nuit (Debussy). Poems. Songs. Prélude, Act III, "Ariane et Barbe bleue" (Dukas). Poems. La bonne chanson (Fauré). Excerpts, "Pelléas et Mélisande" (Fauré).

PARIS (Poste Parisien) (France)

959 kc/s (312.8 m.); 60 kW.

Transmits at intervals from 7.10 a.m. 12.0 noon—Exchange. 12.5 p.m.—Variety Records. 12.35—Exchange. 12.39—Concert. 1.15—Dialogues and Military Band. 1.30—Records. 2.0, 3.45, 4.35—Exchange. 6.0—Call. 6.2—Records: Sonata in D minor (Brahms), by Yehudi and Hephzibah Menuhin. 6.30—Exchange. 6.35—Topical. 6.55—Mlle. Meyer (Violin). 7.6—News. 7.32—Records. 7.47—Books. 7.52—"Winter"—Variety. 8.2—Paul Reboux. 8.17—Songs of 1912. 8.32—Humorous Programme. 9.17—Lecture Recital: The Piano. 9.50—Chamber Music. 10.30-11.0—Records: Light Music.

PARIS (PTT) (France)

695 kc/s (431.7 m.); 120 kW.

Transmits at intervals from 6.50 a.m. 4.0 p.m.—Henricette Roget (Organ). 4.30—Poems (Kahn). 4.45—Talk: Winter.

5.0—Paris Symphony Orchestra. Conductor: Cloez. Ballet, "Paris and Helen" (Gluck). Excerpts, "Orpheus" (Gluck).

5.30—For Gardeners. 5.37—Social and Art Reviews. 5.52—Talk. 6.0—Orchestra (cont'd.). Marie-Louise Thiébaud (Songs). Shepherd's Song and Pilgrims' Chorus, "Tannhäuser" (Wagner). Träume (Wagner). Songs (Fauré).

6.30—News; Reviews. 7.20—Radio Press Review. 7.30—Weather. 7.38—Paris Symphony Orchestra. Conductor: Cloez. Excerpts, "Le roi s'amuse" (Delibes). Ballet de la Reine (Silver).

8.0—Florent Schmitt Music. Claire Chalande (Songs), the Composer accompanying; Pauline Gordon (Pfte.) and Others. Songs: (a) Les barques, (b) Musique sur l'eau. Sonatine en trio. Pfte. Dances: (a) Bocane, (b) Montferrine, (c) Danse de corde.

8.30—Plays: (a) "The Critic"—Comedy (Sheridan); trans. by Declaire; (b) "The Feast of Bacchus"—One-Act Play (Schnitzler); trans. by Anna Clauser. 10.30—News.

PARIS (Radio-Paris) (France)

182 kc/s (1,648 m.); 80 kW.

6.45 a.m.—Gym. 7.0—Records. 7.15—News. 7.45—Gym. 8.0—Records.

11.0—Poulet Concert Orchestra. Conductor: André. 12.0 noon—For Farmers. 12.15 p.m.—Poulet Concert Orchestra. Paulette Delrio (Songs); at 12.45: News; Review by Pierre Scize.

2.0—Women's Journals. 2.10—Talk by Georges Colin: Boutet de Monvel, 2.30—Three Plays (Mirbeau): (a) "L'Epidémie," (b) "Amants," (c) "Le Portefeuille." 4.0—See Strasbourg. 5.0—Anniversaries. 5.10—Educational Talk.

5.30—Paris Symphony Orchestra. Conductor: Cloez. Marie-Louise Thiébaud (Songs). Overture "Euryanthe" (Weber). Fantasie-

stücke (Schumann). Arias from "Perseus" (Lully), "Christmas Oratorio" (Bach), "The Messiah" (Handel). Song, Der Tod und das Mädchen (Schubert).

6.0—Art Review and Talks. 6.30—Orchestra (cont'd.). Overture and Ballet, "Rosamunde" (Schubert). Breton Rhapsody (Saint-Saëns). Pastoral Suite (Chabrier). Minuet (Ravel).

7.28—Markets. 7.30—Home Affairs. 7.40—Books. 7.50—"La Révelation" (Magog) by the Author and Léon Peltier.

8.5—Marcelle Samson and Léonor del Castillo (Songs). Part I. Popular Songs. Part II. Spanish and South American Songs to the Guitar and Mandoline. 8.30—Press Review.

8.45—Concert arranged by the Conservatoire Old Students' Association. Conservatoire Women's Choir. Conductor: Mazellier Paul Numa (Recitations) and Batalla (Pfte.). A la musique (Chabrier). Pfte.: (a) Barcarolle (Fauré), (b) Jardins sous la pluie (Debussy). Joli bâton (Busser). Partons joli cœur (Busser). Two Fables (Florian). Automne et printemps (Sokolov). La lune et le soleil (Gretchaninov). Pfte.: (a) Pantomime tendre (Rousseau), (b) Nocturne (Busser), (c) Pièce en forme de ballet (Hüe). C'était par un beau jour (Rabaud). Pastourelle (Rabaud). Recitation (de Musset). Excerpts, "Caligula" (Fauré). La chanson de frère Jacques (Paladilhe).

10.45—News; Time. 11.0—Dance Music.

11.30 p.m.—12.15 a.m. (Tuesday)—Robert Orchestra. Overture, "Semi-ramide" (Rossini). Serenade (Borodin). Chant sans paroles (Tchaikovsky). Aubade (Massenet). Les petits violons du roy (Chobillon). Dance (Brahms). Minuet (Luciani). Spanish Dance (Sarasate).

PRAGUE (Czechoslovakia)

638 kc/s (470.2 m.); 120 kW.

Transmits at intervals from 5.15 a.m. 4.35 p.m.—Quintet in D (Fibich). 5.0—For Farmers. 5.10—German Transmission. 5.45—News (German). 5.55—Record. 6.0—News. 6.10—French Lesson. 6.25—Orchestra. 6.55—Talk. 7.10—To be announced. 7.40—"Bethlehem"—Play (Masek), with Music. 9.0—News. 9.15—Records.

9.30—Talk on the following programme. 9.35—Scottish Dance Music from London. 10.0-10.20—News in German.

RADIO-NORMANDIE

(France)
1,113 kc/s (269.5 m.); 10 kW.

7.0 a.m.—Records. 7.10—News. 7.50—Orchestra. 8.0—Records. 8.15—Light Music. 8.30—Records. 8.45—Melody. 9.0—Records. 9.15—Light Music. 9.45—Records. 10.0—Popular Music. 10.15—Light Music. 10.30—Popular Music. 10.45—Records. 11.0—Chansonnettes. 12.0 noon—"Cello Records. 12.20 p.m.—Gouin Records. 12.40—News. 1.0—Concert. 2.0—Records. 2.15—Light Music. 2.30—Records. 3.0—Light Music. 3.30—Records. 3.45—Variety. 4.0—Concert. 4.45—For Children. 5.0—Records. 5.30—Light Music. 5.45—Current London Productions. 6.0—Children's Corner. 6.45—Talk; News; Racing. 7.0—Sports. 7.20—Xylophone. 7.40—News. 8.0—Records. 8.40—"The Birds' Awakening."—Sifféurs. 9.0—Concert. 9.0—Concert. 11.30—Variety. 12.0 m.—Dance Music. 12.30-1.0 a.m. (Tuesday)—Orchestra.

RADIO-ROMANIA (Brasov)

(Romania)
160 kc/s (1,875 m.); 150 kW.

See Bucharest.

ROME (Italy)

713 kc/s (420.8 m.); 50 kW. Relayed by Naples, 1,104 kc/s (271.3 m.); Bari (No. 1), 1,059 kc/s (283.3 m.); Bari (No. 2), Milan (No. 2) and Turin (No. 2), 1,357 kc/s (221.1 m.).

Transmits at intervals from 6.45 a.m. 6.0 p.m.—Records; Sports; Talk (French). 6.20—News in Foreign Languages. 7.5—Time; News. 7.30—Talk. 7.40—Orchestra. Conductor: Antonicelli. Toti dal Monte (Soprano). Luigi Montesanto (Baritone). 8.40—Talk. 8.50—Variety. 9.0—News. 10.15-10.55—Dance Music.

10.15-10.55—Dance Music. 10.55—News. 11.0—Songs. 11.15—Bal Champêtre Orchestra. 11.40—Film Music. 11.55—News. 12.5 a.m. (Tuesday)—Light Music. 12.30—Announcements.

11.45—Engel Orchestra. 12.30-12.45 p.m.—Records. 3.30-5.0—See Beromünster. 5.0—For Women. 5.30—Esperanto Lesson. 5.35—Chess. 5.50—Music Magazine. 6.30—News. 7.0 till Close—From Geneva.

7.0—Old Music for Violin, Viola da Gamba and Harpsichord. 7.20—Talk. 7.35—Contemporary Music. Colette Wyss (Soprano), Suzanne, Bolland (Violin), Walter (Cello), Cherechewsky (Viola), Dennes (Oboe), Hoogstoel (Clarinet) and Helaerts (Bassoon). Trio for Wood Wind (Ferroud). "Les Sérénades"—Cantata (Hindemith). Concerto for Voice, Harp and Strings (Meyrowicz).

9.15-9.35—League of Nations Report. 11.0—Dance Music. 11.30 p.m.—12.15 a.m. (Tuesday)—Robert Orchestra. Overture, "Semi-ramide" (Rossini). Serenade (Borodin). Chant sans paroles (Tchaikovsky). Aubade (Massenet). Les petits violons du roy (Chobillon). Dance (Brahms). Minuet (Luciani). Spanish Dance (Sarasate).

6.0—Art Review and Talks. 6.30—Orchestra (cont'd.). Overture and Ballet, "Rosamunde" (Schubert). Breton Rhapsody (Saint-Saëns). Pastoral Suite (Chabrier). Minuet (Ravel).

7.28—Markets. 7.30—Home Affairs. 7.40—Books. 7.50—"La Révelation" (Magog) by the Author and Léon Peltier.

8.5—Marcelle Samson and Léonor del Castillo (Songs). Part I. Popular Songs. Part II. Spanish and South American Songs to the Guitar and Mandoline. 8.30—Press Review.

8.45—Concert arranged by the Conservatoire Old Students' Association. Conservatoire Women's Choir. Conductor: Mazellier Paul Numa (Recitations) and Batalla (Pfte.). A la musique (Chabrier). Pfte.: (a) Barcarolle (Fauré), (b) Jardins sous la pluie (Debussy). Joli bâton (Busser). Partons joli cœur (Busser). Two Fables (Florian). Automne et printemps (Sokolov). La lune et le soleil (Gretchaninov). Pfte.: (a) Pantomime tendre (Rousseau), (b) Nocturne (Busser), (c) Pièce en forme de ballet (Hüe). C'était par un beau jour (Rabaud). Pastourelle (Rabaud). Recitation (de Musset). Excerpts, "Caligula" (Fauré). La chanson de frère Jacques (Paladilhe).

11.45—Engel Orchestra. 12.30-12.45 p.m.—Records. 3.30-5.0—See Beromünster. 5.0—For Women. 5.30—Esperanto Lesson. 5.35—Chess. 5.50—Music Magazine. 6.30—News. 7.0 till Close—From Geneva.

7.0—Old Music for Violin, Viola da Gamba and Harpsichord. 7.20—Talk. 7.35—Contemporary Music. Colette Wyss (Soprano), Suzanne, Bolland (Violin), Walter (Cello), Cherechewsky (Viola), Dennes (Oboe), Hoogstoel (Clarinet) and Helaerts (Bassoon). Trio for Wood Wind (Ferroud). "Les Sérénades"—Cantata (Hindemith). Concerto for Voice, Harp and Strings (Meyrowicz).

9.15-9.35—League of Nations Report. 11.0—Dance Music. 11.30 p.m.—12.15 a.m. (Tuesday)—Robert Orchestra. Overture, "Semi-ramide" (Rossini). Serenade (Borodin). Chant sans paroles (Tchaikovsky). Aubade (Massenet). Les petits violons du roy (Chobillon). Dance (Brahms). Minuet (Luciani). Spanish Dance (Sarasate).

6.0—Art Review and Talks. 6.30—Orchestra (cont'd.). Overture and Ballet, "Rosamunde" (Schubert). Breton Rhapsody (Saint-Saëns). Pastoral Suite (Chabrier). Minuet (Ravel).

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10.45—News; Time. 11.0—Dance Music. 11.30 p.m.—12.15 a.m. (Tuesday)—Robert Orchestra. Overture, "Semi-ramide" (Rossini). Serenade (Borodin). Chant sans paroles (Tchaikovsky). Aubade (Massenet). Les petits violons du roy (Chobillon). Dance (Brahms). Minuet (Luciani). Spanish Dance (Sarasate).

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10.45—News; Time. 11.0—Dance Music. 11.30 p.m.—12.15 a.m. (Tuesday)—Robert Orchestra. Overture, "Semi-ramide" (Rossini). Serenade (Borodin). Chant sans paroles (Tchaikovsky). Aubade (Massenet). Les petits violons du roy (Chobillon). Dance (Brahms). Minuet (Luciani). Spanish Dance (Sarasate).

6.0—Art Review and Talks. 6.30—Orchestra (cont'd.). Overture and Ballet, "Rosamunde" (Schubert). Breton Rhapsody (Saint-Saëns). Pastoral Suite (Chabrier). Minuet (Ravel).

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10.45—News; Time. 11.0—Dance Music. 11.30 p.m.—12.15 a.m. (Tuesday)—Robert Orchestra. Overture, "Semi-ramide" (Rossini). Serenade (Borodin). Chant sans paroles (Tchaikovsky). Aubade (Massenet). Les petits violons du roy (Chobillon). Dance (Brahms). Minuet (Luciani). Spanish Dance (Sarasate).

TURIN (No. 1) (Italy)

1,140 kc/s (263.2 m.); 7 kW. Relayed by Milan (No. 1), 814 kc/s (368.6 m.); Genoa, 986 kc/s (304.3 m.); Trieste, 1,140 kc/s (263.2 m.); Florence, 610 kc/s (491.8 m.); Bolzano, 536 kc/s (559.7 m.); and Rome (No. 3), 1,258 kc/s (238.5 m.).

Transmits at intervals from 6.45 a.m. 4.0 p.m.—News. 4.15-4.50—Dance Band. 5.50—Announcements. 6.0—News in Foreign Languages. 7.5-8.40—See Rome. 8.40—Announcements.

8.50—Part relay, "Oberon"—Opera (Weber), from Vienna. 9.20—Talk: Economic Reconstruction. 9.30—Dance Music. 10.0—News. 10.15-10.55—Angelina Dance Band.

VIENNA (Austria)

592 kc/s (506.8 m.); 100 kW. Relayed by Graz and Linz, 886 kc/s (338.6 m.); Innsbruck, 519 kc/s (578 m.); Klagenfurt and Vorarlberg, 1,294 kc/s (231.8 m.); and Salzburg, 1,348 kc/s (222.6 m.).

Transmits at intervals from 5.45 a.m. 11.0 a.m.—Ballads by Famous Poets.

11.20—Station Orchestra. Conductor: Holzner. Millöcker Potpourri (Morena). Kometenwalzer (Zeller) Selection, "The Bird Fancier" (Zeller). 12.0 noon—News.

12.10 p.m.—Orchestra (cont'd.). March, "Das Zauberaeradies" (Weinberger) Overture, "Die Diva" (Weinberger). Entr'acte, "Drei arme Teufel" (Weinberger). Polka, Flitterwochen (Weinberger). Overture "Der Henspiegel" (Eysler). Ich hab' so lang kein Mädel geküsst (Eysler). Eysler Potpourri (Hruby).

1.0—Records of Gigli (Tenor). 1.30—Announcements. 2.0—Weather; Markets. 2.20—Reading. 2.40—Esperanto Lesson. 3.0—Exchange. 3.5—Records. Sound Film Music. 3.35—Talk: Theodor Thomas. 3.55—Talk: Cancer.

4.15—Advent Songs and Christmas Carols. Vienna Chamber Choir. Conductor: Weissenböck. 4.50—Kreiserliana (Schumann) by Alice Haerdtl-Mo (Pfte.). 5.10—Theatre Talk: Viennese Premières. 5.35—English Lesson. 6.0—News. 6.15—For Young People. 6.20—Talk: Interesting Crimes. 6.30—Christmas Books. 6.45—Announcements.

7.0—"Oberon"—Opera in Three Acts (Weber), arranged for the Radio by Lothar Riedinger. Vienna Opera Choir and the Vienna Symphony Orchestra. Conductor: Kabasta. Talk by Otto Löwe. 9.20—News. 9.30—Light Music. Station Orchestra. Conductor: Holzner. 10.30—Announcements.

10.30—News. 11.0—News (German). 11.30 a.m.—Military Band.

4 p.m.

BERLIN, Variety, 4.30—Christmas Sequence. BUDAPEST (1), 4.30—Band.
 COLOGNE, Light Orchestral, 4.50—Reports: (a) Building a Trawler, (b) A Düsseldorf Foundry, (c) A Trawler Captain.
 DEUTSCHLANDSENDER and BRESLAU, 4.10—von Gezcy Band.
 FRANKFURT, Light Orchestral, 4.30—“Christmas in the Trenches.”
 HAMBURG, Books, 4.15—Variety.
 HILVERSUM (1,875 m.), K.R.O. Orchestra, Records, HILVERSUM (301.5 m.), Records, 4.10—Children's Choir, 4.40—For Children.
 MOSCOW, 4.30—Concert.
 OSLO, 4.15—Café Concert.
 PARIS (PTT), Songs (Stahlenberg), 4.15—Reading, 4.30—Singing Lesson, PRAGUE, 4.30—Nora van Rappard (Songs).
 RADIO-PARIS, Reading, 4.15—Alsatian Carols, 4.30—Records.
 ROME, News, 4.15—Soprano, Pfte.
 SOTTENS and BEROMÜNSTER, 4.30—Radio-Suisse romande Orchestra (de Micheli, Delibes).
 STOCKHOLM, 4.30—The Roving Microphone, 4.45—Scandinavian Music—Vocal Trio, Pfte. Duo.
 STUTTGART, 4.10—See Deutschlandsender, 4.30—“The Christmas Tree” Sequence.
 TURIN, News, 4.15—Records.
 VIENNA, 4.20—Lorenzi (Baritone), 4.40—Czackes (Pfte.) (Brahms, R. Strauss, Glazunov).
 WARSAW, Reading, 4.15—Trio in B flat (Schubert), 4.50—Monologue.

5 p.m.

ATHLONE, 5.30—Children's Hour.
 BEROMÜNSTER, Weather, 5.10—A Story, 5.30—Books, 5.40—Talk; Song, BRESLAU, See Königsberg, 5.50—Talk. BUDAPEST (1), Band.
 COLOGNE, Reports (contd.), 5.20—Review, 5.40—Opera Records.
 DEUTSCHLANDSENDER, Songs, 5.20—Review, 5.40—“Die Zupfgeigenhansl” (Recorded).
 EIFFEL TOWER, Sorbonne Lecture, HILVERSUM (1,875 m.), Orchestra; Records (contd.), HILVERSUM (301.5 m.), For Children, 5.10—Records, 5.40—Dance Band.
 KALUNDBORG, Jazz Records, 5.20—Talk, 5.35—German, KÖNIGSBERG and MOST GERMAN STATIONS, Orchestra, Adelheid Armhold (Soprano), (Cornelius, Chabrier, Strauss, etc.).
 LEIPZIG, Records of Famous Singers.
 MOSCOW, Red Army Notes, 5.15—Talk, 5.45—Concerts.
 OSLO, Café Concert, 5.20—For Women, 5.50—News.
 PARIS (PTT), Padeloup Concert Orchestra, (Hérol, Haydn), 5.30—Notes, PRAGUE, Markets, 5.10—Talk (German); Christmas Music, 5.45—News (German).
 RADIO-NORMANDIE, Records, Light Music, 5.45—London Productions, RADIO-PARIS, English, 5.20—Talk, 5.30—Padeloup Concert Orchestra, Jeanne Jaspard (Pfte.) (Gaubert, Lazzari, Schumann, Chopin, Debussy).
 SOTTENS, Literature, 5.20—Radio-Suisse romande Orchestra, Conductor: Appia, Gavalda (Violin) (Saint-Saëns, Cui, etc.).
 STOCKHOLM, Scandinavian Music (contd.), 5.45—Talk.
 TURIN, 5.0-5.10—For Women, 5.30—Notes.
 VIENNA, Talks, 5.35—French.
 WARSAW, Talks.

6 p.m.

ATHLONE, Children's Hour, 6.15—Radio Orchestra, 6.35—Irish News, 6.45—News.
 BERLIN, Talk, 6.15—Songs to the Lute, Flute, Violin, 6.45—Echoes.
 BEROMÜNSTER, Talk, 6.30—News, 6.40—Yodels and Ländler.
 BRESLAU, 6.10—Light Music.
 BRESLAU, “Der Genosse aus Brasilien”—Play (Schaferdiek) (Recorded).
 BUCHAREST and RADIO-ROMANIA, Talk, 6.10—Pfte. (Chopin, Liszt), 6.45—Romanian Carols by the Municipal Choir, BUDAPEST (1), Orchestra, 6.45—Play.
 COLOGNE, Records (contd.), 6.45—Snapshots.
 DEUTSCHLANDSENDER, “Die Zupfgeigenhansl” (contd.), 6.25—Report: Baltic Amber.
 EIFFEL TOWER, Educational, 6.45—Notes.
 FRANKFURT, “Friedrich List”—Sequence (Albrecht), 6.30—Anti-Waste Campaign, 6.40—Topical, 6.55—Markets: Notes.

HAMBURG, Light Orchestral, Soprano, Harpsichord, 6.45—Topical, HILVERSUM (1,875 m.) Orchestra; Records (contd.), 6.40—Police Messages, HILVERSUM (301.5 m.), Dance Band, 6.25—Christmas Carols, 6.40—For Children, 6.45—Records.
 KALUNDBORG, News, 6.30—Talk, KÖNIGSBERG, Orchestra (contd.), 6.45—Topical.
 LEIPZIG, “O Freude über Freude”—Christmas Play with Music (Andert), 6.50—Topical.
 MONTE CENERI, 6.45—News, MOSCOW, Concerts, MUNICH, Winter Solstice, 6.15—Folk Music.
 OSLO, News, 6.30—Rantzau (Pfte.), PARIS (PTT), Padeloup Concert Orchestra, Jeanne Jaspard (Pfte.), 6.30—News, POSTE PARISIEN, Call; Notes, 6.17—Records, 6.30—Exchange; Topical, 6.42—Talk, 6.50—Variety, PRAGUE News, 6.10—See Bratislava.
 RADIO-NORMANDIE, Children's Corner, 6.40—Light Music, 6.55—News, RADIO-PARIS, Dramatic, 6.30—Padeloup Concert Orchestra, (Mozart, Duparc, Samazeuilh, Duprier), ROME, Records; News; Talk in English, 6.20—News in Foreign Languages.

“A.V.R.O. Tuesday Night Train”—Variety.
 KALUNDBORG, “The Hansens”—Sketch (Locher), 7.15—Lehár Operetta Music—Radio Orchestra, 7.55—Records, KÖNIGSBERG and DEUTSCHLANDSENDER, News, 7.10—Naval Band and Singers, In the interval: Play, LEIPZIG, News, 7.10—“The Show of the Month”—Variety.
 MONTE CENERI, Italian Music, 7.45—Reading, MOSCOW, Concerts, MUNICH, News, 7.10—“The Escape”—War Play (Alverdes).
 OSLO, Report, 7.30—Orchestra, PARIS (PTT), Topical, 7.38—Padeloup Concert Orchestra (Flament, Biancheri), POSTE PARISIEN, Variety, 7.6—News, 7.25—Amusements, 7.32—Records, 7.47—Jean Lumière, PRAGUE, See Bratislava, 7.10—Talk, 7.25—Talk on the following Programme, 7.30—Christmas Oratorio (Bach).
 RADIO-NORMANDIE, Song Records, 7.20—Concert, 7.40—News, RADIO-PARIS, Orchestra (contd.), 7.30—Home Affairs, 7.40—Talk, ROME, 7.5—News, 7.30—Talk, 7.45—“Aida”—Opera (Verdi).
 SOTTENS, Slav Music—Romand Orchestra, Conductor: Haug, Bas-

December 22 TUESDAY

LEIPZIG, Variety (contd.), LILLE, Records, 8.15—Talk, 8.30—See Paris (PTT).
 MONTE CENERI, 8.5—Schubert and Schumann Sonatas by Casella (Pfte.) and De Signori (Violin), 8.45—Engel Orchestra, MOSCOW, German Talks, MUNICH, “The Flight”—Play (contd.).
 OSLO, Orchestra, 8.40—News.
 PARIS (PTT), Talks, 8.30—“Hänsel and Gretel”—Opera (Humperdinck) from the Conservatoire National Orchestra and Raugel Choir, Conductor: Inghelbrecht, Germaine Correy, Germaine Teugels and Germaine Martinelli, POSTE PARISIEN, Paul Reboux (Records), 8.17—Records, 8.35—Two Plays: (a) Sous le vent (Béart), (b) Trois Noël de la Vie d'un Homme (Ferry), PRAGUE and BRATISLAVA, Christmas Oratorio (contd.).
 RADIO-NORMANDIE, Light Music, 8.20—Talk; Records, RADIO-

Orchestra, Violin (contd.), 9.25—Te Deum (Bruckner) by the Harlem Catholic Oratorio Society, 9.55—Records, HILVERSUM (301.5 m.), Variety (contd.), 9.55—“Louise”—Opera (Charpentier) (Records).
 KALUNDBORG, Concert (contd.), 9.10—News, 9.25—Peer Gynt Suites (Grieg) by the Radio Orchestra, KÖNIGSBERG, News, 9.20—Review, 9.25—Music from Hamburg.
 LEIPZIG, News, 9.30—Books.
 MONTE CENERI, Engel Orchestra, MOSCOW, 9.5—Dutch Talk; Songs, MUNICH, News, 9.30—Old Pfte. Music.
 OSLO, Topical, 9.15—Hungarian Trio.
 PARIS (PTT) and LILLE, “Hänsel and Gretel” (contd.), POSTE PARISIEN, Plays (contd.), PRAGUE, News, 9.15 (approx.)—Christmas Oratorio (contd.).
 RADIO-NORMANDIE, Variety Concert, RADIO-PARIS, Soirée de Chansonniers (contd.), ROME, “Aida” (contd.).

PRINCIPAL EVENTS

SYMPHONY CONCERTS
 6.30 Radio-Paris: Mozart, French music.
 7.0 Sottens: Dvořák No. 5, etc.
 7.0 Warsaw: Modern music.
 7.30 Prague: Christmas Oratoria.
 7.50 Hilversum (1,875m.): Carl Flesch; 9.25, Te Deum (Bruckner).
 8.0 Brussels 1: Dvořák No. 5, etc.
 8.0 Deutschlandsender: Pfitzner and Berlin Philh. Orch.
 9.35 Vienna: Dvořák No. 5, etc.
 LIGHT CONCERTS
 12.15 Radio-Paris: Orchestra, songs.
 1.0 Kalundborg: Preil's Ensemble
 3.0 Deutschlandsender: Von Gezcy.
 3.30 Sottens: Pierné programme.
 5.0 Königsberg, Breslau; Orchestral and vocal.
 6.20 Warsaw: Wilno Orchestra.
 6.40 Beromünster: Folk music.
 7.0 Athlone: Classics.
 7.10 Cologne: “Popular tunes of yesterday.”
 7.10 Stuttgart: Orchestra, soprano, tenor.
 7.15 Kalundborg: Lehár music.
 7.30 Oslo: Popular orchestral.
 7.55 Hilversum (301.5 m.): Variety.
 8.0 Stockholm: Modern melodies.
 9.0 Regional: Pageant of Pantomime.

9.25 Kalundborg: “Peer Gynt” (Grieg).
 9.30 Hamburg, etc.: Folk and dance music.
 10.0 Budapest 1: Cigány Band.
 11.0 Frankfurt, Stuttgart: Records.
 11.30 Radio-Paris: Pascal Ofchestra.
 OPERAS
 6.30 Stockholm: “La serva padrona.”
 7.10 Frankfurt: “Der Günstling” (Wagner-Régeny).
 7.45 Rome: “Aida.”
 8.30 Paris (PTT), etc.: “Hänsel and Gretel.”
 9.55 Hilversum (301.5 m.): “Louise” (rec.).
 RECITALS
 6.30 Oslo: Pianoforte.
 6.45 Brussels: Marcelle Meyer (pfte.)
 8.0 Vienna, Kalundborg: Carols.
 8.45 Radio-Paris: Chansonniers.
 9.0 Budapest 1: Daisy Guth (pfte.).
 9.30 Munich: Old pianoforte music.
 PLAYS
 7.10 Munich: “The Escape” (Alverdes).
 7.20 Beromünster: Christmas play (dialect).
 8.0 National: The St. Hilary players.
 8.30 Eiffel Tower: The Odéon Players.
 LAST NEWS BULLETINS, see Monday
 DANCE MUSIC
 8.15 Beromünster; 9.45, Warsaw; 10.0, Deutschlandsender; 10.10, Brussels 1; 10.25, Regional; 10.50, Hilversum (301.5 m.); 11.0, National, Radio-Paris.

10 p.m.

ATHLONE, Variety, 10.30—News.
 BRESLAU, Concert (contd.), BUDAPEST (1), Cigány Band.
 DEUTSCHLANDSENDER, Dance Records.
 EIFFEL TOWER, The Odéon Players (contd.).
 HAMBURG and MOST GERMAN STATIONS, Music (contd.), HILVERSUM (1,875 m.), Records, 10.10—News, 10.15—Cigány Band, 10.40—K.R.O. Melodists, HILVERSUM (301.5 m.), “Louise”—Opera (contd.), 10.40—News, 10.50—Dance Band.
 KALUNDBORG, Christmas Greetings to the Faroe Isles.
 LEIPZIG, Dance Band.
 MOSCOW, Swedish Talks.
 PARIS (PTT) and LILLE, “Hänsel and Gretel” (contd.), 10.30—News, POSTE PARISIEN, Plays (contd.), 10.30—Cabaret, PRAGUE, English News.
 RADIO-NORMANDIE, Variety Concert, 10.30—Cuban Soirée from the Cabane Cubaine, Paris, RADIO-PARIS, Soirée de Chansonniers (contd.), 10.45—News, ROME, “Aida” (contd.).
 STRASBOURG, From the Opéra-Comique (contd.).
 TOULOUSE, Paris Programme, 10.15—Music, 10.55—News, TURIN, News, 10.15—Dance Music.
 VIENNA, Orchestra (contd.), 10.30—Notes.
 WARSAW, Dance Music.

SOTTENS, Orchestra (contd.), 6.10—Talk, 6.30—Interlude, 6.50—News, STOCKHOLM, Talk, 6.15—News, 6.30—“La serva padrona”—Opera (Pergolesi), Conductor: Hellman, STRASBOURG, 6.30—News, STUTTGART, Folk Music, 6.45—Talk.
 TURIN, News in Foreign Languages.
 VIENNA, News, 6.30—From Workshop and Office.
 WARSAW, Discussion, 6.20—Wilno Orchestra.

7 p.m.

ATHLONE, Radio Orchestra, Tenor, 7.50—Humorous Monologue.
 BERLIN, News, 7.10—“Ballade am Eisenstern”—Play (Huchel); Music by Stuhlmacher, BEROMÜNSTER, Yodels and Ländler, 7.20—“Drusbrönnern”—Christmas Play.
 BRATISLAVA, Light Music, 7.10—Talk, 7.25—See Prague, BRESLAU, News, 7.10—Winter Relief Fund Concert, Orchestra, Bands.
 BUCHAREST and RADIO-ROMANIA, Carols (contd.), 7.15—Talk; Orchestra, BUDAPEST (1), Play (contd.).
 COLOGNE, News, 7.10—“Anno Dazumal”—Song Hits of Yesterday and To-day.
 EIFFEL TOWER, News, 7.20—Foreign Affairs; Science, 7.45—Press Review, 7.55—Home Affairs.
 FRANKFURT, News, 7.10—“Der Günstling”—Opera (Wagner-Régeny), Conductor: Rosbaud.
 HAMBURG, News, 7.10—“The Smoking Factory Chimney”—Industrial Pictures (Albrecht), Music by Hahn, Orchestra, Male Voice Choir, etc., HILVERSUM (1,875 m.), Talk; Records, 7.25—Talk; News, 7.50—K.R.O. Symphony Orchestra, Conductor: van Goudoever, Flesch (Violin), HILVERSUM (301.5 m.), Records, 7.10—English, 7.40—News, 7.55—

sermann (Violin), STOCKHOLM, “La serva padrona” (contd.), 7.30—Talk, STRASBOURG, News, 7.15—Records, 7.30—News (French, German), STUTTGART, News, 7.10—Orchestra, Soprano, Tenor.
 TURIN, 7.5—News, 7.30—Talk, 7.40—“Al di sopra di noi”—Play (Gherardini).
 VIENNA, “Christmas”—Concert, Children's Choir, etc.
 WARSAW, Symphony Concert, Conductor: Fiteberg, Eve Bandrowska-Turska (Songs); Modern Music; Talk.

8 p.m.

ATHLONE, 8.5—Chamber Music by the Dublin Trio, 8.35—Sketch, 8.55—The Sutton Singers.
 BERLIN, Operetta and Film Records.
 BEROMÜNSTER, Three Cantatas (Stern)—Radio Berne Vocal Quartet and Instrumentalists, 8.15—Hot Jazz, BRESLAU, Concert (contd.).
 BUCHAREST and RADIO-ROMANIA, Orchestra; at 8.30: News, BUDAPEST (1), Play (contd.), 8.40—News.
 COLOGNE, “Anno Dazumal” (contd.), 8.45—Historical Sketch.
 DEUTSCHLANDSENDER, Hans Pfitzner conducts the Berlin Philharmonic with Ilse Warnecke (Pfte.) in a Concert of his own Music.
 EIFFEL TOWER, Home Affairs, 8.30—The Odéon Players.
 FRANKFURT, “Der Günstling”—Opera (contd.).
 HAMBURG, “The Smoking Factory Chimney” (contd.), HILVERSUM (1,875 m.), Orchestra, Violin (contd.), HILVERSUM (301.5 m.), Variety (contd.).
 KALUNDBORG, See Vienna, 8.35—Emborg Anniversary Concert, KÖNIGSBERG, Naval Band and Singers (contd.).

PARIS, Paul Reboux (Records), 8.5—Spanish Books, 8.20—Humorous Stories, 8.30—Review, 8.45—Soirée de Chansonniers—Songs, Melodies, Sketches, Comedy, Revue, ROME, “Aida” (contd.).
 SOTTENS, Slav Music (contd.), 8.10—Books, 8.40—Song Records, STOCKHOLM, Modern Light Music, 8.45—News, STRASBOURG, Press Review (German), 8.15—From the Opéra-Comique, Paris, STUTTGART, Orchestra (contd.), 8.10—Dance Records.
 TOULOUSE, News, Songs, 8.25—Light Music, 8.55—News, TURIN, “Al di sopra di noi”—Play (contd.).
 VIENNA, Austrian Christmas Carols, 8.35—Reading.
 WARSAW, News; Concert (contd.).

9 p.m.

ATHLONE, Sutton Singers, 9.15—A Christmas Story, 9.30—Variety.
 BEROMÜNSTER, Hot Jazz, 9.15—Notes, BRATISLAVA, See Prague, 9.15—News (Hungarian), 9.30—News, 9.35—Oratorio from Prague, BRESLAU, News, 9.30—Concert (contd.), BUCHAREST and ROMANIA, Orchestra, 9.20—Records, 9.45—News (French, German, Romanian), BUDAPEST (1), Daisy Guth (Pfte.), 9.45—Talk (German).
 COLOGNE, Music from Hamburg, DEUTSCHLANDSENDER, News, 9.30—Flinsch (Pfte.) (Weber, Liszt).
 EIFFEL TOWER, The Odéon Players (contd.).
 FRANKFURT, News, 9.30—Musical Sequence.
 HAMBURG, BERLIN, News, 9.30—Dance Music and Folk Music—Dance Band, Mandoline Band and others, HILVERSUM (1,875 m.),

11 p.m.

BUDAPEST, 11.5—News.
 FRANKFURT and STUTTGART, Concert on Records (Bach, Mozart, Haydn, Remy).
 HILVERSUM (1,875 m.), K.R.O. Melodists, 11.25—Records, HILVERSUM (301.5 m.), Dance Band, 11.10—Records.
 MOSCOW, Spanish Talk.
 RADIO-NORMANDIE, Cuban Soirée (contd.), RADIO-PARIS, Dance Music, 11.30—Light Music—Pascal Orchestra.
 STRASBOURG, News (German).
 TOULOUSE, Music, 11.55—News.

12 midnight

FRANKFURT and STUTTGART, Concert (contd.).
 RADIO-NORMANDIE, Records; Dance Music, RADIO-PARIS, Light Music (contd.).
 TOULOUSE, 12.5—News.

TUESDAY (December 22)

NATIONAL

For Time Signals, see Monday
8.30-8.50 a.m. (D)—Second Test Match—Alan Kippax from Sydney.
10.15 (D)—Service.
10.30 (D)—Weather Forecast.
10.45—Request Programme.
11.0—Cinema Organ.
11.30—Records.
11.45—Theatre Orchestra.
12.30 p.m.—Jack Wilson and his Versatile Five.
1.0—See 8.30 a.m.
1.20—Wellesley Colliery Prize Band; George Cunningham (Baritone).
2.15—The BBC Empire Orchestra; The Grinke Trio.
3.15—Records.
4.0—This Was News.
4.20—The Hungaria Gipsy Orchestra.
4.50—Records.
5.15—The Willie Walker Octet.
6.0—The First News.
6.25—The BBC Orchestra (Section E), conducted by Joseph Lewis; Jan Van Der Gucht (Tenor).
7.20—The BBC Dance Orchestra.
8.0—The St. Hilary Players in "The Stranger at S. Hilary."
9.0—The Third News.
9.20—Science Talk.
9.40—Mozart: Elsie Suddaby (Soprano).
10.0—"Folly and Mistletoe"—a revue for Christmas Week.
11.0—Joe Loss and his Band.
11.30-12.0—Dance Records.

REGIONAL

For Time Signals, see Monday
8.30-10.45 a.m.—Droitwich.
10.45—The New Victoria Cinema Orchestra.
11.30—The BBC Welsh Orchestra; Muriel Parkin (Soprano).
12.30 p.m.—Records.
1.15—Frederick Rimmer—Organ.
2.0—Dance Records.
2.30—Geiger and his Orchestra.
3.0—The Torquay Municipal Orchestra; Ellis Keeler (Baritone).
4.0 (Northern)—Evensong from York Minster.
4.30 (ex. Northern)—Poetry Reading.
4.45—The Philip Whiteway Ensemble.
5.15—The Children's Hour.
6.0 (ex. Western, Northern, Scottish)—Reginald King and his Orchestra.
6.0 (Western)—Blaina and District Silver Band; Ronald Chivers (Baritone).
6.0 (Northern)—Jack Bamford (Tenor); Elizabeth Walton (Pfte.); Ruth P. Jeffcote (Soprano).
6.0 (Scottish)—Christmas Concert in the Clachan (Gaelic).
6.40—From the London Theatre.
7.0—The Second News.
7.20—Regional Announcements.
7.30 (Regional, Midland, Northern)—The BBC Singers (A).
7.30 (Western)—Welsh News.
7.30 (N. Ireland)—Dance Records.
7.30 (Scottish)—Scottish Dance Music.
7.40 (Western)—Moura Lympny (Pfte.).
7.40 (N. Ireland)—Careers for Ulster Women—Rosella McClure.
8.0 (Regional)—Meyerbeer: May Blyth (Soprano); Parry Jones (Tenor); Kenneth Ellis (Bass); The BBC Chorus (Section A) and Orchestra (Section D), conducted by Charles Webber.
8.0 (Midland)—"Sealed Orders."
8.0 (Northern)—Triple Bill.
8.0 (N. Ireland)—The BBC Northern Ireland Orchestra, conductor, E. Godfrey Brown; Victor Hely-Hutchinson (Pfte.).
8.0 (Scottish)—"Here awa, there awa"—Alexander McOwan.
8.10 (Western)—Christmas Carols: The BBC Welsh Singers and Welsh Orchestra.
8.15 (Scottish)—Music from the Scottish Past: Marie Thomson (Soprano); Neil Forsyth (Baritone); BBC Scottish Singers and Strings of the Orchestra.
8.20 (Midland)—Harry Engleman's Quintet.
8.50 (Scottish)—Scottish News.
9.0 (ex. Midland, Northern)—Pageant of Pantomime; The BBC Revue Chorus and Theatre Orchestra, conducted by Mark H. Lubbock.
9.0 (Midland)—Radio Cracker—Variety.
9.0 (Northern)—Handel's "Messiah." Part 2; The Huddersfield Choral Society and Orchestra; Isobel Baillie (Soprano); Gladys Ripley (Contralto); Walter Widdop (Tenor); Harold Williams (Baritone); Conductor, Malcolm Sargent.
10.0—News Summary.
10.25—Joe Loss and his Band.
11.30—Late News Summary.
11.40-12.0—Records.

Hours of Transmission in Greenwich Mean Time

ATHLONE (Ireland)

565 kc/s (531 m.); 60 kW. Relayed by Dublin, 1,348 kc/s (222.6 m.); and Cork, 1,240 kc/s (241.9 m.)
1.30-3.0 p.m.—Records. 5.30—Children's Hour.
6.15—Radio Orchestra. Conductor: Lieut. J. M. Doyle. Excerpts, "Le roi Pa dit" (Delibes). Golden Waltz (arr. Winter). 6.35—Irish News Feature. 6.45—News.
7.0—Radio Orchestra; Conductor, Lieut. J. M. Doyle. Overture, "Il re pastore" (Mozart). Introduction and Pastorale, "The Messiah" (Handel). Suite for Strings (Lully). Christmas Songs and Ballads by Hubert Valentine (Tenor).
7.50—"Christmas Gifts"—Humorous Monologue by Truda Barling.
8.5—Chamber Music by the Dublin Trio. 8.35—"Scenes that are..."—Sketch presented by J. J. MacKeown.
8.55—Homely Songs sung by the Sutton Singers. 9.15—A Christmas Story. 9.30—Variety. 10.30-11.0—News.

BANSKÁ-BYSTRICA (Czechoslovakia)

392 kc/s (765 m.); 30 kW. Relays Czechoslovak Stations.

BERLIN (Germany)

841 kc/s (356.7 m.); 100 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Munich. 1.0 p.m.—News. 1.15—Berlin Opera Programmes. 2.0—Exchange; Markets. 3.30—Variety. 4.30—"Old German Wood Carving"—Sequence with Christmas Games and Poems (arr. Paessler).
5.0—See Königsberg. 6.0—Talk: Gymnastics.
6.15—Jäckel (Songs to the Lute), Mönckemeyer (Flute), Sedding (Violin). 6.45—Evening Echoes. 7.0—News; Topical.
7.10—"Ballade am Eisenster"—Play (Huchel); Music by Stuhlhammer. Station Choir and Artists. Conductor: Braun.
8.0—Operetta and Film Records. 9.0—News.
9.30-11.0—See Hamburg.

BEROMÜNSTER (Switzerland)

556 kc/s (539.6 m.); 100 kW. Relayed by Basle and Berne, 1,375 kc/s (218.2 m.).
11.0 a.m.—To be announced. 11.29—News. 11.40—To be announced. 12.45 p.m. (from Berne)—Parliamentary Review. 3.0—Surprise Programme. 3.29—Time.
3.30-5.0—See Sottens. 5.10—A Story. 5.30—Books. 5.40—Talk: General Scipio von Lentulus; The Lentulus Song, sung by Schläfli (Baritone). 6.0—Time. 6.1—Talk. 6.30—News. 6.40—Yodels and Ländlers. 7.20—"Drusbränner"—Three-Act Christmas Play.
8.0—Three Cantatas on Seventeenth Century Songs (Stern). Radio Berne Vocal Quartet and Instrumentalists. 8.15—Hot Jazz. 9.15—Announcements.

BRATISLAVA (Czechoslovakia)

1,004 kc/s (298.8 m.); 13.5 kW. Transmits at intervals from 5.15 a.m. 5.0-5.45 p.m.—Hungarian Transmission: Talk; Visváry (Violin). Czardas (Hubay). Caprice Viennois (Kreisler). Serenade (Mach). For Workers. 5.45-6.10—See Prague. 6.10—Light Orchestral. Topinka (Xylophone). 7.10—Talk. 7.25-9.15—See Prague. 9.15—News (Hungarian). 9.30—News. 9.35-10.0—Programme from Prague.

BRESLAU (Germany)

950 kc/s (315.8 m.); 100 kW. Relayed by Gleiwitz, 1,231 kc/s (243.7 m.). Transmits at intervals from 4.0 a.m. 11.0 a.m.—See Munich. 1.0 p.m.—News; Exchange.
1.15-2.0—Variety from Deutschlandsender. 3.0—For Women. 3.20—For Children. 3.40—Talk.
4.10—Band from Deutschlandsender. 5.0—See Königsberg. 5.50—Talk: Stud Farming.
6.0—"Der Genosse aus Brasilien"—Play (Schäferdiek) (Recorded). 7.0—News.
7.10-11.0—Winter Relief Fund Concert—Hindenburg Symphony Orchestra. Conductor: Humpert, Military Band, Glück-Auf Band; at 9.0—News.

BRNO (Czechoslovakia)

922 kc/s (325.4 m.); 32 kW. Transmits at intervals from 5.15 a.m. 4.40 p.m.—German Transmission. For Workers; Talk; For Farmers. 5.15—News. 5.20—Music Review; Record. 5.35—Labour Exchange. 5.45-6.10—See Prague. 6.10—Ondra Salon Trio. 6.40—"The Country Choir"—Sketch (Rysavy). Music by Kovalinka.
7.15-9.0—Programme from Moravská-Ostrava. 7.15—Folklore. Orchestra and Artists. 8.0—Talk. 8.15—"Musical Rarities"—Variety. 9.0—News; Review: Sports. 9.15-10—Records.

BRUSSELS (No. 1) (Belgium)

620 kc/s (483.9 m.); 15 kW. 6.37-9.0 a.m.—Records; Gym; News. 12.0 noon—Records.
12.30 p.m.—Jazz Band. 1.0—News. 1.10—Light Orchestral. Durand (Songs), Gilman (Flute). 1.30—Records. 2.0—Art Notes. 2.15-2.45—For Schools. 4.55—Notes.
5.0—Candrix Dance Band. 6.0—Talk: Political Economy. 6.15—Records. 6.45—Marcelle Meyer (Pfte.). 7.15—Records. 7.30—News.
8.0—National Orchestra. Conductor: Meulemans. "Misson" (Violin). Part I: Dvořák Music. Symphony; From the New World. Slav Dances. Part II: Violin Concerto, Ballet Suite (Scarlati-Tommasini). 10.0—News.
10.10-11.0—Dance Records.

BRUSSELS (No. 2) (Belgium)

932 kc/s (321.9 m.); 15 kW. Programme in Flemish.
6.37-9.0 a.m.—Records; Gym; News. 12.0 noon—Records: Light Music. 12.30—Weather.
12.31 p.m.—Operetta Waltzes. 1.0—News.
1.10—Brenders Jazz Band. 1.30—Records. 2.0—Announcements. 2.3-2.45—For Schools. 4.55—Notes. 5.0—Records: Operetta Music. 5.45—For Children.
6.30—Organ Records: Light Music. 6.45—Economics.
7.0—Records: Oscar Straus Music. 7.30—Talk: The Anti-Tuberculosis Campaign.
8.0—"Till Eulenspiegel": Talk: Christmas and Till Eulenspiegel. Records: Symphonic Poem, Till Eulenspiegel (R. Strauss). "Till Eulenspiegel"—Play after Charles de Coster (Nissen and Seitz). Translation by Priem. 10.0—News.
10.10-11.0—In a German Cabaret (Records).

BUCHAREST (Romania)

823 kc/s (364.5 m.); 12 kW. Relayed by Radio-Romania (Brasov). 160 kc/s (1,875 m.). Transmits at intervals from 4.30 a.m. 4.0 p.m.—Reading. 4.15—Records. 5.0—Time; Weather; Topical. 5.10—Records. 5.50—Talk.
6.10—Rodica Soutzo (Pfte.); Scherzo, and Ballad (Chopin), Tarantella (Liszt).
6.45—Romanian Christmas Carols by the Municipal Choir. 7.15—Talk. 7.30—Radio Orchestra. 8.30—News; Sports. 8.45—Radio Orchestra. 9.20—Records. 9.45—News (French, German, Romanian).

BUDAPEST (No. 1) (Hungary)

546 kc/s (549.5 m.); 120 kW. Transmits at intervals from 11.5 a.m. 4.30 p.m.—Kalmár Band. 6.0—Station Orchestra. 6.45—Historical Radio Play. 8.40—News. 9.0—Daisy Guth (Pfte.). 9.45—Talk (German). 10.0—Veres Cigány Band. 11.5—News.

BUDAPEST (No. 2) (Hungary)

359.5 kc/s (834.5 m.); 18 kW. 5.0 p.m.—For Farmers. 6.30—String Quartet in E minor (Beethoven), by the Lener Quartet. 6.15—Talk. 6.50—Station Orchestra. 7.20—News. 7.50—László Virányi Jazz Band.

COLOGNE (Germany)

658 kc/s (455.9 m.); 100 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—Band. 12.0 noon—News. 12.15 p.m.—Music from Munich. 1.0—News.
1.15-2.0—Variety from Deutschlandsender. 2.45—Markets. 3.0—Topical Review.

4.0—Light Orchestral. 4.50—Reports: (a) Building a Trawler, Cuxhaven, (b) Düsseldorf Foundry, (c) A Trawler Captain.
5.00—See Deutschlandsender.
5.40—Opera Records. Excerpts, "Oberon" (Weber), "La Traviata" (Verdi), "The Merry Wives of Windsor" (Nicolai), "Othello" (Verdi).
6.45—Snapshots. 7.0—News. 7.10—"Anno Dazumal"—Song Hits of Yesterday and Today. Station Chamber Choir and Orchestra, etc. Conductor: Breuer. 8.45—Historical Sketch (Griesse). 9.0—News. 9.30—English Talk.
9.45-11.0—Music from Hamburg.

DEUTSCHLANDSENDER (Germany)

191 kc/s (1,571 m.); 60 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Stuttgart. 12.45—p.m.—News.
2.0—Variety. 2.0—Exchange; Programme Notes. 2.15—Visit to a Christmas Toy Factory. 2.45—Books. 3.0—von Geizler Band; at 4.0: A Story.
5.0—Ilse Miehler (Rasch, Marx, Liszt, Mozart, and Bach Songs).
5.20—Political Press Review.
5.40—"Die Zufügigenhanslin" (Recorded). 6.25—Report: Baltic Amber. 6.55—Genealogy. 7.0—Motto; News. 7.10—See Königsberg.
8.0—Hans Pfizner conducts the Berlin Philharmonic, with Ilse Warneke (Pfte.) in a Concert of his own Music. Overture, "Käthchen von Heilbronn." Liebesmelodie, "Das Herz." Pfte. Concerto. 9.0—News.
9.30—Flüsch (Pfte.). Variations on "Schöne Minka" (Weber). Etude in F (Liszt). 9.45—Weather.
10.0-11.0—Records of the Kaiser and Woitschach Dance Bands.

FRANKFURT (Germany)

1,195 kc/s (251 m.); 25 kW. Relayed by Cassel, Coblenz, Freiburg, and Trier, 1,195 kc/s (251 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Munich. 1.0 p.m.—News; Records. 2.0—Talk. 2.15—For Women. 3.0—Light Orchestral. Conductor: Cujé.
4.30—"Christmas in the Trenches"—Reminiscences of Soldier-Poets. 5.0—See Königsberg.
6.0—"Friedrich List"—Sequence (Albrecht). 6.30—Anti-Waste Campaign. 6.40—Topical. 6.55—Programme Notes. 7.0—News.
7.10—"Der Günstling"—Three-Act Opera (Wagner-Régeny). Station Choir and Orchestra. Conductor: Rosbaud. 9.0—News.
9.30-11.0—See Hamburg.
11.0 p.m.—1.0 a.m. (Wednesday)—Concert on Records. Italian Concerto (Bach). Pfte. Concerto in B flat (Mozart). Sinfonie concertante for Violin, Cello, Oboe, Bassoon, and Orchestra (Haydn). Symphony in D minor (Remy).

HAMBURG (Germany)

904 kc/s (331.9 m.); 100 kW. Relayed by Bremen, Flensburg, Hanover, Magdeburg and Stettin, 1,330 kc/s (225.6 m.). Transmits at intervals from 5.15 a.m. 11.0 a.m.—Concert from Bremen. 12.5 p.m.—Topical.
12.15—Concert from Munich. 1.0—News; Light Music. 2.0—Shipping. 2.20—Ludwig Funk (Pfte.). 2.50—Ice Report.
3.0—See Deutschlandsender. 4.0—Books. 4.15—Variety. 5.0—See Königsberg. 5.40—Announcements.
6.0—Light Orchestral from Saarbrücken. Inge Campausen (Soprano), Neumeier (Harpischord). 6.45—Topical. 7.0—News.
7.10—"The Smoking Factory Chimney"—Industrial Pictures (Albrecht); Music by Hahn. Station Orchestra, Male Voice Choir, etc. Conductor: Secker. 9.0—News.
9.30-11.0—Dance Music and Folk Music—Station Dance Band, Mandoline Band, etc. Conductor: Gebhardt.

HILVERSUM (1,875 m.) (Holland)

160 kc/s; 10 kW until 2.40 p.m.; 100 kW from 2.40 p.m. K.R.O. Programme.
7.40-8.55 a.m.—Records. 9.40—Records. 11.10—Religious Address. 11.40—Police Messages.
11.55—K.R.O. Melodists, Conductor: Lustenhouwer; Records. 1.40 p.m. For Women. 2.45—Haak (Organ), Mue. José Candel (Soprano).

3.40—K.R.O. Orchestra. Conductor: van 't Woud; Records. 6.40—Police Messages; Talk; Records. 7.25—Talk; News.
7.50—K.R.O. Symphony Orchestra. Conductor: van Goudoever Carl Flesch (Violin).
9.25—Te Deum (Bruckner) by the Harlem Catholic Oratorio Society. 9.55—Records. 10.10—News. 10.15—Jercó Cigány Band.
10.40—K.R.O. Melodists. Conductor: Lustenhouwer. Klein (Refrains). 11.25-11.40—Records.

HILVERSUM (301.5 m.) (Holland)

995 kc/s; 15 kW until 2.40 p.m.; 60 kW from 2.40 p.m. A.V.R.O. Programme.
7.40 a.m.—Time; Records. 8.40—A.V.R.O. Orchestra. Conductor: Treep. 9.40—Service. 9.55—Records. 10.10—Palla (Organ). 10.40—For Women. 11.10—A.V.R.O. Orchestra; Conductor: Treep. In the interval: Records of Brailowsky (Pfte.). 12.55 p.m.—Eyra Trio. 1.40—Kovacs Lajos Orchestra. 2.40—Dressmaking Lesson. 3.40—Records. 4.10—Children's Choir. Conductor: Hamel. 4.40—For Children. 5.10—Records. 5.40—A.V.R.O. Dance Band. Conductor: Mossel. 6.25—Christmas Carols. 6.40—For Children. 6.45—Records. 7.10—English Lesson. 7.40—Time; News.
7.55—"A.V.R.O. Tuesday Night Train"—Variety: Kovacs Lajos Orchestra, Greta Burbach, Louis Noiret; The Song-Singers, Pierre Palla (Organ).
9.55—"Louise"—Opera (Charpentier) (Records). 10.40—News. 10.50—A.V.R.O. Dance Band. Conductor: Mossel. 11.10-11.40—Records.

KALUNDBORG (Denmark)

240 kc/s (1,250 m.); 60 kW. Relays: Copenhagen, 1,176 kc/s (255.1 m.). Transmits at intervals from 6.0 a.m. 11.0 a.m.—Bendix String Ensemble. 1.0 p.m.—Preil's Ensemble; at 1.50: Reading. 3.0—For Children. 3.50—Wireless Notes. 3.56—Poem. 4.0—Dialect Talk. 4.25—Weather. 4.40—Exchange; Markets. 4.50—Jazz Records. 5.20—Talk: Trajan Portraits in the Glyptotek. 5.35—German Lesson. 6.0—Time; News. 6.30—Medical Talk. 7.0—"The Hansens"—Sketch (Locher).
7.15—Lehar Operetta Music. Radio Orchestra. Conductor: Tuxen. Overture, "Gipsy Love." Selection, "The Land of Smiles." Russian Dances, "Tatjana." Selection, "Paganini." 7.55—Records.
8.0—See Vienna.
8.35—Emborg Anniversary Concert, by the Radio Orchestra. Conductor: Tuxen. 9.10—News. 9.25—"Peer Gynt" Suites (Grieg) by the Radio Orchestra. Conductor: Tuxen. 10.0—Christmas Greetings to the Faroe Isles. 11.0—Chimes.

KÖNIGSBERG (Heilsberg) (Germany)

1,031 kc/s (291 m.); 100 kW. Relayed by Danzig, 1,303 kc/s (230.2 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Munich. 1.0 p.m.—News. 1.10—Books.
1.25—New Choruses and Songs—Station Choir, etc. 2.10—Books. 2.20—For Children. 2.50—Records. 3.40—Talk. 3.45—Talk with Music (arr. Jäger). 4.25—Talk. 4.40—Discussion. 5.0—Station Orchestra. Conductor: Brückner, Adelheid Armhold (Soprano). Overture, "The Barber of Bagdad" (Cornelius). España (Chabrier). Suite (Schaub). Songs (R. Strauss). Swedish Dances (Graener). Aria, "The Hermit's Bell" (Maillart). Excerpts, "Tief-land" (d'Albert). Waltz (Ziehrer). Overture, "The Thieving Magpie" (Rossini); at 6.0: Announcements. 6.45—Topical. 7.0—News.
7.10—Naval Band and Singers. In the interval: "Der König und die lange Jungfer"—Play (Feinels). 9.0—News. 9.20—Political Press Review. 9.40-11.0—Music from Hamburg.

LEIPZIG (Germany)

785 kc/s (382.2 m.); 120 kW. Relayed by Dresden, 1,285 kc/s (233.5 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Munich. 1.0 p.m.—News. 1.15—Records. 2.0—For Women. 2.20—Talk.

3.0—Light Orchestral; Greta Kux (Soprano). 4.0—Markets. 4.10—For Young People. 4.30—Music. 4.40—Talk. 5.0—Records of Famous Singers. 6.0 (from Dresden)—"O Freede über Freede"—Oberlausitz Christmas Play with Music (Andert). 6.50—Topical. 7.0—News. 7.10—"The Show of the Month"—Variety. 9.0—News. 9.30—Books. 10.0-11.0—Fricke Dance Band.

LILLE (Radio PTT Nord) (France)
1,213 kc/s (247.3 m.); 60 kW.
Transmits at intervals from 6.50 a.m. 6.30 p.m.—News. 7.0—Music Lesson. 7.30—Records. 8.15—Legal Talk. 8.30—See Paris (PTT). 10.30—News.

MONTE CENERI (Switzerland)
1,167 kc/s (257.1 m.); 15 kW.
Transmits at intervals from 11.0 a.m. 6.0 p.m.—Reading, "Lady Windermere's Fan" (Oscar Wilde). 6.15—Variety. 6.45—News. 7.0—Italian Music. Radio Orchestra. Conductor: Casella. Overture, "Il giorno felice" (Cimarosa). Andantino and Fugue (Scarlattini-Limonta). Eight Songs for Strings (Bossi). Introduction, Theme and Seven Variations (Massarani). 7.45—Reading (Perri). 8.5—Schubert and Schumann Sonatas by Casella (Pfte.) and De Signori (Violin). Duet in A (Schubert). Sonata in A minor (Schumann). 8.45-9.15—Bob Engel Orchestra.

MOSCOW (No. 1) (Russia)
172 kc/s (1,744 m.); 500 kW.
4.30 p.m.—Concert. 5.0—Red Army Notes. 5.15—Talk. 5.45—Concerts. 8.0—German Talks: (a) Collective Farm Economics, (b) Questions and Answers. 9.5—Dutch Talk on the 1905 Revolution; Revolution Songs. 10.0—Swedish Talks: (a) Soviet Woman, (b) Foreign Affairs. 11.0—Spanish Talk: Foreign Affairs.

MUNICH (Germany)
740 kc/s (405.4 m.); 100 kW. Relayed by Nürnberg, 1,267 kc/s (236.8 m.).
Transmits at intervals from 5.0 a.m. 11.0 a.m.—Light Orchestral. 12.45 p.m.—News. 1.0-2.0—See Deutschlandsender. 2.30—To be announced. 3.50—Concert. 5.0—Light Orchestral. 6.0—Winter Solstice. 6.15—Folk Music. 7.0—News. 7.10—"The Escape"—War Play (Alverdes). 9.0—News. 9.30—Old Pfte. Music (Handel, Bach, Scarlatti) by A. Heyne. 10.0-11.0—Concert from Hamburg.

OSLO (Norway)
260 kc/s (1,153.8 m.); 60 kW. Relayed by Fredrikstad, 722 kc/s (415.4 m.); Hamar, 519 kc/s (578 m.); Notodden, 1,357 kc/s (221.1 m.); Porsgrund, 850 kc/s (352.9 m.); Rjukan, 1,348 kc/s (222.6 m.); and Trøndelag, 629 kc/s (476.9 m.).
Transmits at intervals from 10.40 a.m. 4.15 p.m.—Café-Concert. 5.20—For Women. 5.50—News. 6.30—Time; Brandt Rantzau (Pfte.). Ballet (Gluck-Friedman). Shadow Dance (MacDowell). Prelude in G flat minor (Chopin). Nocturne (Chopin). La Campanella (Liszt). 7.0—Report. 7.30—Station Orchestra. Conductors: Kramm. Overture, "William Tell" (Rossini). Delibes Potpourri (Urbach). Lyric Suite (Grieg). Csardas (Grossmann). En Troika (Moussorgsky). La Gitana (Kreitzer). Twilight (Günström). Johann Strauss Potpourri (Weber). 8.40—News. 9.0—Topical. 9.15—Czismas Hungarian Trio. Improvisations on Hungarian Songs and Dances. Hungarian Potpourri (Grünfeld). The Swallows migrate (Hubay). Improvisations on Hungarian Songs and Dances.

PARIS (Eiffel Tower) (France)
1,456 kc/s (206 m.); 5 kW.
Transmits at intervals from 7.0 a.m. 5.0 p.m.—Sorbonne Lecture. 6.0-6.30—Educational. 6.45—Theatre Notes. 7.0—News. 7.10—Racing. 7.20—Foreign Affairs; Science Review. 7.45—Press Review. 7.55—Home Affairs. 8.30—The Odéon Players.

PARIS (Poste Parisien) (France)
959 kc/s (312.8 m.); 60 kW.
Transmits at intervals from 7.10 a.m. 12.0 noon—Exchange. 12.5 p.m.—Records. 12.10—Radio Amateur

Prize-winners at the Microphone. 12.35—Exchange. 12.39—Records. 1.15—Film Records. 1.30—Liane Mairève. 1.40—Film Notes. 2.0, 3.45, 4.35—Exchange. 6.0—Call. 6.2—Protestant Notes. 6.17—Records: Overture, "Rienzi" (Wagner). 6.30—Exchange. 6.35—Topical. 6.42—Literary Talk. 6.50—Variety. 7.6—News. 7.32—Yvonne Georges Records. 7.47—Paris Programme with Jean Lumière. 8.2—Paul Reboux. 8.17—Fred Adison Records. 8.32—Waltz. 8.35—Dramatic Programme: (a) "Sous le vent"—Play in Three Scenes (Beart). (b) "Trois Noëls de la vie d'un Homme"—Sequence (Ferry). 10.30-11.0—Cabaret.

PARIS (PTT) (France)
695 kc/s (431.7 m.); 120 kW.
Transmits at intervals from 5.50 a.m. 2.30 p.m.—"Grand Guignol"—Three Pieces (André de Lorde): (a) "Le Maître de la Mort," (b) "Une Leçon à la Salpêtrière," (c) "Consultation de l'â." 4.0—Songs (Stalenberg), by Paulette Fouquet. 4.15—Reading. 4.30—Singing Lesson. 5.0—Pasdeloup Concert Orchestra. Conductor: Ellis. Overture, "Le Pré aux Clercs" (Hérold). Nocturne (Haydn). Variations on an Austrian Theme (Haydn). 5.30—Music Talk. 5.40—Art Notes. 5.50—Science Talk. 6.0—Pasdeloup Concert Orchestra. Conductor: Ellis. Jeanne Jaspard (Pfte.). Pieces (Strauss): (a) Heidebild, (b) Träumerei, (c) Waltz, "Der Rosenkavalier." Pfte.: (a) Prelude (Prokofiev), (b) Berceuse (de la Presle), (c) Boite à musique (Poldowski), (d) Bagatelles chinoises (Tcherepnin), (e) La danza d'Olaf (Pick-Mangiagalli). 6.30—News; Topical. 7.30—Weather. 7.38—Pasdeloup Concert Orchestra. Conductor: Ellis. Ballet, "Rosaine" (Flament). Suite, Music-Hall (Biancheri). 8.0—Talks. 8.30 (Also for Alpes-Grenoble (PTT), Bordeaux-Lafayette, Limoges (PTT), Lyons (PTT), Marseilles (PTT), Montpellier (PTT), Nice-Corse, Rennes-Bretagne, Toulouse (PTT)): "Hänsel and Gretel"—Three-Act Opera (Humperdinck), from the Conservatoire. National Orchestra and Raugel Choir. Conductor: Inghelbrecht. Germaine Corney, Germaine Teugels and Germaine Martinelli. 10.30—News.

PARIS (Radio-Paris) (France)
182 kc/s (1,648 m.); 80 kW.
6.45 a.m.—Gym. 7.0—Records. 7.15—Press Review. 7.45—Gym. 8.0—Messenger Records. 11.0—Paris Symphony Orchestra. Conductor: Labis. 12.0 noon—For Farmers. 12.15 p.m.—Orchestra (contd.). Maryse Tenneval (Songs); at 12.45: News; Sports. 2.0—Reading. 2.15—Talk. 2.20—Reading. 2.30—The Sea—Records. 3.0—University Lecture. 4.0—Reading (Michelet). 4.15—Alsatian Christmas Carols presented by Jean Viorot. 4.30—Records. 5.0—English Lesson. 5.20—Talk. 5.30—Pasdeloup Concert Orchestra. Conductor: Ellis. Jeanne Jaspard (Pfte.). Four Sketches (Gaubert). Eskualduna (Lazari). Pfte.: (a) Etude on a Paganini Caprice (Schumann), (b) Ballad in G minor (Chopin), (c) Two Etudes (Debussy). 6.0—Dramatic Excerpts. 6.30—Pasdeloup Concert Orchestra. Conductor: Ellis. Symphony (Mozart). Aux étoiles (Duparc). Divertissement and Musette (Samazeuilh). Images d'Epinal (Dupierrier). 7.30—Home Affairs. 7.40—Talk: Foreign Policy of the Second Empire. 8.0—Paul Reboux. 8.5—Spanish Book Review. 8.20—Humorous Stories. 8.30—Press Review. 8.45—"Soirée de Chansonniers"—Programme arranged by Jean Vocret: (a) Contes de fin d'année—Songs, Melodies, Sketches. (b) "Phédre ou ne pas Phédre"—A Tragi-Comedy. (c) "Au gai, l'an neuf"—Revue. 10.45—Time; News. 11.0—Dance Music by the Pascal Orchestra. 11.30 p.m.—12.15 a.m. (Wednesday)—Light Music by the Pascal Orchestra. Au printemps (Gounod). Marche des sous-offs (Fahey). Lady Love (Visciano). Souvenirs d'Ukraine (Ferraris). Hungarian Improprunte (Schubert). Coucou (Branger). Les Papillons (Berger).

PRAGUE (Czechoslovakia)
638 kc/s (470.2 m.); 120 kW.
Transmits at intervals from 5.15 a.m. 2.0 p.m.—Pilsen Trio. Song (Weber). Andante tranquillo (Mendelssohn). Scherzo (Beethoven). 2.30—Play (Hladik). 2.50—Records. 3.0—Exchange. 3.10—Military Band. March (Oberthor). Overture, "Norma" (Bellini). Selection, "Swan Lake" (Tchaikovsky). Polka (Paboucek). Waltz (Rehor). March (Misek). 3.50—Marianne Theiner (Violin). 4.10—For Children. 4.30—Nora van Rappard (Songs). 5.0—Markets. 5.10-5.45—German Transmission: Economics; Christmas Music with Martha Pilz (Soprano) and Instrumentalists. Pastoral (Vivaldi). Variations on a Christmas Carol (Murchauer). Christmas Music (Büchdecker). Carol (Bammer). Soprano Aria. (Handel). 5.45—News and Review (German). 6.0—News. 6.10—See Bratislava. 7.10—Talk. 7.25—Talk on the following Transmission. 7.30—Christmas Oratorio (Bach). Station Choir and Orchestra. Conductor: Jeremiás. Zdenka Spacková (Soprano), Marta Krásová (Contralto), Chorový (Tenor), Otava (Baritone); at 9.0: News. 10.0-10.15—English News.

PRAGUE (Czechoslovakia)
638 kc/s (470.2 m.); 120 kW.
Transmits at intervals from 5.15 a.m. 2.0 p.m.—Pilsen Trio. Song (Weber). Andante tranquillo (Mendelssohn). Scherzo (Beethoven). 2.30—Play (Hladik). 2.50—Records. 3.0—Exchange.

3.10—Military Band. March (Oberthor). Overture, "Norma" (Bellini). Selection, "Swan Lake" (Tchaikovsky). Polka (Paboucek). Waltz (Rehor). March (Misek). 3.50—Marianne Theiner (Violin). 4.10—For Children. 4.30—Nora van Rappard (Songs). 5.0—Markets. 5.10-5.45—German Transmission: Economics; Christmas Music with Martha Pilz (Soprano) and Instrumentalists. Pastoral (Vivaldi). Variations on a Christmas Carol (Murchauer). Christmas Music (Büchdecker). Carol (Bammer). Soprano Aria. (Handel). 5.45—News and Review (German). 6.0—News. 6.10—See Bratislava. 7.10—Talk. 7.25—Talk on the following Transmission. 7.30—Christmas Oratorio (Bach). Station Choir and Orchestra. Conductor: Jeremiás. Zdenka Spacková (Soprano), Marta Krásová (Contralto), Chorový (Tenor), Otava (Baritone); at 9.0: News. 10.0-10.15—English News.



Photo: Guillard

RADIO-NORMANDIE (France)
1,113 kc/s (269.5 m.); 10 kW.
7.0 a.m.—Records. 7.10—News. 7.50—Orchestra. 8.0—Records. 8.15—Light Music. 8.30—Records. 8.45—Popular Music. 9.0—Records. 9.15—Light Music. 9.30—Records. 9.45—Light Music. 10.0—Records. 10.15—Light Music. 10.30—Popular Music. 10.45—Records. 11.0—Opera Music. 12.0 noon—Clarinet Recital. 12.20 p.m.—Excerpts, "Les Gangsters du Château d'If" (Scotto-Sarvil). 12.40—News. 1.0—Concert. 2.0—Records. 2.15—Light Music. 2.30—Records. 3.0—Light Music. 3.30—Records. 3.45—Opera Music. 4.0—Concert. 4.45—For Children. 5.0—Records. 5.15—Light Music. 5.30—Records. 5.45—Current London Productions. 6.0—Children's Corner. 6.40—Light Music. 6.55—News; Racing Results. 7.0—Song Records. 7.20—Concert. 7.40—News. 8.0—Light Music. 8.20—Talk. 8.23—Records. 8.40—Tenor Records. 9.0—Variety Concert. 10.30—Cuban Soirée from the Cabane Cubaine, Paris. 12.0 m't.—Records. 12.15 a.m. (Wednesday)—Dance Music. 12.30-1.0—Records.

RADIO-ROMANIA (Brasov) (Romania)
160 kc/s (1,875 m.). 150 kW.
See Bucharest.

ROME (Italy)
713 kc/s (420.8 m.); 50 kW. Relayed by Naples, 1,104 kc/s (271.7 m.); Bari (No. 1), 1,059 kc/s (283.3 m.); Bari (No. 2), Milan (No. 2) and Turin (No. 2), 1,357 kc/s (221.1 m.).
Transmits at intervals from 6.45 a.m. 4.0 p.m.—News. 4.15-4.50—Maria Concetta-Zama (Soprano), Barbara Giuranna (Pfte.). 5.0—Morse. 5.50—Dopolavoro Notes. 6.0—Records; News; Talk in English. 6.20—News in Foreign Languages. 7.5—Time; News. 7.30—Talk. 7.45—"Aida"—Four-Act Opera (Verdi). In the intervals: Talks; News.

SOTTENS (Switzerland)
677 kc/s (443.1 m.); 100 kW. Relayed by Geneva, 401 kc/s (748 m.).
11.0 a.m.—12.45 p.m.—See Beromünster; at 11.30: News. 3.30 p.m.—Pierne Music by the Radio Suisse romande Orchestra. Conductor: Appia. Overture, "Ramuntcho." Ballet de cour. 4.0—Interlude.

4.30—Light Classical Music by the Radio Suisse romande Orchestra. Suite (de Micheli). Ballet, "Coppelia" (Delibes). 5.0—Literature. 5.20—Radio Suisse romande Orchestra. Conductor: Appia. Gavalda (Violin). Marche héroïque (Saint-Saëns). Suite brève (Aubert). Suite (Cui). Music from "Piccolino" (Gruard). Spanish Dance, "La vida breve" (Falla). A Manx Rhapsody (Wood). 6.10—Medical Talk. 6.30—Interlude. 6.50—News. 7.0—Slav Music by the Romand Orchestra. Conductor: Haug-Bassermann (Violin). Fifth Symphony, "From the New World" (Dvofák). Fantasia (Suk). Dances "Galanta" (Bartok). 8.10—Books. 8.40-9.15—Song Records.

STOCKHOLM (Sweden)
704 kc/s (426.1 m.); 55 kW. Relayed by Motala, 216 kc/s (1,389 m.); Göteborg, 941 kc/s (318.8 m.);

A "Christmas Angel," one of the toys whose making is to be described at Deutschlandsender at 2.15 p.m.

Hörby, 1,131 kc/s (265.3 m.); and Boden, 392 kc/s (765 m.).
Transmits at intervals from 6.20 a.m. 4.30 p.m.—The Roving Microphone. 4.45—Scandinavian Music. Vocal Trio, Pfte. Duo; Reading in the interval. 5.45—Talk. 6.15—News. 6.30—"La serva padrona"—Two-Act Opera (Pergolesi); Conductor: Heilmann. 7.30—Talk. 8.0—Modern Light Music by the Radio Orchestra. 8.45—News. 9.0-10.0—Records

STRASBOURG (France)
859 kc/s (349.2 m.); 100 kW.
Transmits at intervals from 6.15 a.m. 6.30 p.m.—News; Reviews. 7.15—Roussillon Song and Dance Records. 7.30—News. 7.45—News (German). 8.15—From the Opéra-Comique, Paris. 11.0 (approx.)—News (German).

STUTTGART (Germany)
574 kc/s (522.6 m.); 100 kW.
Transmits at intervals from 5.0 a.m. 11.0 a.m.—"Snowflakes"—Variety Concert. Station Orchestra, Wende Band, etc. 1.10-2.0 p.m.—See Deutschlandsender. 2.15—"Flowers and Animals." 2.45—Talk: The Canary Show. 3.0—See Deutschlandsender. 4.30—"The Christmas Tree"—Sequence (Lisa Heiss). 5.0—See Königsberg. 6.0—Folk Music. 6.45—Talk: Military Careers. 7.0—News. 7.10—Station Orchestra. Conductor: Görlich. Hedwig Jungkurth (Soprano), Suthaus (Tenor). 8.10—Dance Records. 9.0—News. 9.20—Political Press Review. 9.40—Music from Hamburg. 11.0 p.m.—1.0 a.m. (Wednesday)—See Frankfurt.

TOULOUSE (Radio-Toulouse) (France)
913 kc/s (328.6 m.); 60 kW.
Transmits at intervals from 8.0 a.m. 6.3 p.m.—Marches. 6.15—Chansonnettes. 6.40—Opera Music. Excerpts, "Tosca" (Puccini), "Rosamunde" (Schubert). 6.50—News. 7.0—Excerpts, "Parade du monde" (Scotto). 7.15—Salon Orchestra. 7.40—Songs; at 7.55—News. 8.25—Light Music. 8.55—News. 9.10—"Si vous voulez"—Fantasy. 9.45—Paris Programme. 10.15—Peyronnin Music. 10.40—Light Music. 10.55—News. "The Dubarry" (Millocker-Mackeben). "White Horse Inn" (Stolz-Benatzky). "Mamzelle Nitouche" (Hervé). "Un soir de Réveillon" (Moretti). 11.15—Argentine Tangos. 11.40—

TUESDAY (December 22)
Musical Comedy Music. 11.55—News. 12.5 a.m. (Wednesday)—Light Music. 12.20—Orchestra. 12.30—Announcements.

TURIN (No.1) (Italy)
1,140 kc/s (263.2 m.); 7 kW. Relayed by Milan (No. 1), 814 kc/s (368.6 m.); Genoa, 986 kc/s (304.3 m.); Trieste, 1,140 kc/s (263.2 m.); Florence, 610 kc/s (491.8 m.); Bolzano, 536 kc/s (559.7 m.); and Rome (No. 3), 1,258 kc/s (238.5 m.).
Transmits at intervals from 6.45 a.m. 4.0 p.m.—News. 4.15-4.50—Records. 5.0-5.10—For Women. 5.50—Dopolavoro Notes. 6.0—News in Foreign Languages. 7.5—Time; News. 7.30—Talk. 7.40—"Al di sopra di noi"—Three-Act Play (Gherardini). 9.10—Jacqueline Marcault (Pfte.). 9.40—Dance Music. 10.0—News. 10.10-10.55—Dance Music.

VIENNA (Austria)
592 kc/s (506.8 m.); 100 kW. Relayed by Graz and Linz, 886 kc/s (338.6 m.); Innsbruck, 519 kc/s (578 m.); Klagenfurt and Vorarlberg, 1,294 kc/s (231.8 m.); and Salzburg, 1,348 kc/s (222.6 m.).
Transmits at intervals from 5.45 a.m. 11.0 a.m.—Station Orchestra. Conductor: Schönherr. Rosner (Violin). Nibelungenmarsch (Sonntag); at 12.0 noon—News. 1.0 p.m.—Records of Marian Anderson (Contralto). 1.30—Announcements. 2.0—Markets. 2.20—For Children. 2.40—For Women. 3.0—News; Exchange. 3.5—Records. 3.45—Handiwork. 4.10—Literary Review. 4.20—Lorenzi (Baritone). 4.40—Czaczkes (Pfte.). Rhapsody and Caprice in B minor (Brahms). Ständchen (Strauss-Godowsky). Two Etudes (Glazunov). 5.0—Talk: Wireless Telegraphy in the last Century. 5.20—Philosophical Review. 5.35—French Lesson. 6.0—News. 6.30—From Workshop and Office. 7.0 (from Graz)—"Christmas"—Children's Choir, Vocal Quartet, Urania Quintet and others. Conductor: Janda. 8.0—Austrian Christmas Carols by the Jung-Urania Choir. Conductor: Lehner. Folk Song, Freu dich, Erd und Sternzelt Marienhändel. Weihnachtstlied. Christkindlmarkt. Marias Wiegendorf. Weihnachtstsegen. Maria im Schnee. Weihnachtswünsche. Grünet Felder, grünet Wiesen. Krippenzauber. Weihnachtshymne. Stille Nacht, heilige Nacht! (Gruber). 8.35—Reading. 9.0—Report: Exhibition of Models and Designs for the Kaiser Franz Joseph Memorial. 9.10—News. 9.35—Vienna Symphony Orchestra. Conductor: Fritz Fall. Serenade for Strings (Bayer). Symphony, "From the New World" (Dvofák). 10.30—Announcements.

WARSAW (Poland)
224 kc/s (1,339 m.); 120 kW. Relayed by Cracow, 1,022 kc/s (293.5 m.); Katowice, 758 kc/s (395.8 m.); Łódź, 1,339 kc/s (224 m.); Lwów, 795 kc/s (377.4 m.); Poznan, 868 kc/s (345.6 m.); Torun, 986 kc/s (304.3 m.); and Wilno, 536 kc/s (559.7 m.).
Transmits at intervals from 5.30 a.m. 11.3 a.m.—Records. 11.40—News. 11.50-12.0 noon—Farmers' Letter-box. 2.0 p.m.—Economics. 2.15—Records. 3.0—Holiday Hints. 3.10—Art Notes. 3.15—Letter-box. 3.30 (from Poznan)—Mme. Tomkiewicz (Soprano) and the Salon Trio. Piece (Liszt). Rustle of Spring (Sinding). Arias, "Turandot" (Puccini), "Othello" (Verdi). Piece (Weingartner). Serenata appassionata (Steiner). Pastoral (Bizet). Waltz (Strauss). 4.0—Reading. 4.15—Trio in B flat (Schubert). 4.50 (from Cracow)—Monologue. 5.0—Topical. 5.10 (from Łódź)—Talk. 5.20—Topical. 6.0—Discussion. 6.20—Wilno Orchestra. Overture, "Djamielh" (Bizet). Neapolitan Rhapsody (Barbieri). Waltz (Translator). Kisses in the Dark (de Micheli). Oriental Dance (Siede). Serenade (Drigo). 7.0—Symphony Concert from the Roma House. Station Symphony Orchestra. Conductor: Fiteberg. Eve Bandrowska-Turka (Songs). Introductory Talk. Overture, "Andromeda" (Elsner). Excerpts, "Fata morgana" (Wertheim). Songs. Symphony (Palester). Songs, Suite, "Der Geburtstag der Infantin" (Schrecker); at 8.0—News; Topical. 9.30 (from Cracow)—Poetry. 9.45—Dance Music.

WEDNESDAY Dec. 23

4 p.m.

BERLIN, Chamber Music. **BEROMÜNSTER**, MONTE CENERI, and **SOTTENS**, Christmas Chamber Music. 4.40—Carols. **BRESLAU**, Orchestra. Artists; at 4.50: Books. **BUCHAREST**, and **RADIO-ROMANIA**, Banat Folk Music. Iovitz Orchestra and Radio "Orchestra. Grotzuta (Songs). **BUDAPEST** (1), 4.25—Lakatos Cigány Band. **COLOGNE**, 4.30—Christmas Sequence. **DEUTSCHLANDSENDER**, Band. **FRANKFURT**, Old Christmas Music. 4.30—"Mother Goose"—Sketch. **HAMBURG**, Sketches; at 4.15: Songs by Hitler Youth. **HILVERSUM** (1,875 m.), Nurses' Christmas Festival. 4.40—For Children. **KÖNIGSBERG**, Orchestra. 4.30—Talks. **LEIPZIG**, Markets. 4.10—Records. 4.40—Talk. **MOSCOW**, 4.30—Opera. **MUNICH**, To be announced. **PARIS (PTT)**, Talks. 4.20—Records. 4.30—Songs. 4.45—Reading. **RADIO-NORMANDIE**, Concert. 4.45—For Children. **RADIO-PARIS**, Talks. 4.30—Songs. 4.45—Viennese Operetta Records. **ROME**, News. 4.15—Dance Music. **STOCKHOLM**, 4.45—Records. **STUTTART**, See Deutschlandsender. 4.45—Talk. **TURIN**, News. 4.15—Maria Golia (Pfte.). **VIENNA**, Contemporary Chamber Music—Ippisch and Lechthaler. 4.50—Talk. **WARSAW**, Talk. 4.15—Operetta Music. 4.50—Interview.

5 p.m.

ATHLONE, 5.30—For Children. **BEROMÜNSTER**, For Children. 5.45—Talk. **BRESLAU**, Orchestra. Artists. 5.50—Notes. **BUCHAREST**, and **RADIO-ROMANIA**, Folk Music (contd.). **BUDAPEST** (1), Lakatos Cigány Band. 5.50—Records. **COLOGNE**, Advent Music. 5.30—Talk. 5.45—Light Music. Chamber Quintet, Two Pfes. **DEUTSCHLANDSENDER**, Beethoven Pfte. Music. 5.30—Reading. 5.45—Sketch (Thaer). **FRANKFURT, BERLIN**, and **STUTTART**, Light Music and Opera Music. **HAMBURG**, Christmas Music, Choir, Organ. 5.40—Talk. 5.50—Notes. **HILVERSUM** (1,875 m.), For Children. 5.40—Talk. **HILVERSUM** (301.5 m.), 5.10—"Ramblers" Band, Records. **KALUNDBORG**, 5.20—Oslo-Copenhagen Christmas Exchange Programme for Boys. **KÖNIGSBERG**, See Frankfurt. 5.50—Report. **LEIPZIG**, Station Choir and Leipzig Symphony Orchestra (Weber, Liszt, Wagner). **MOSCOW**, Opera (contd.). **MUNICH**, To be announced. **OSLO**, 5.20—Oslo - Copenhagen Christmas Exchange Programme for Boys. 5.50—News. **PARIS (PTT)**, Poullet Concert Orchestra. 5.30—Review. 5.40—Talks. **RADIO-NORMANDIE**, Records; Light Music. 5.45—London Productions. **RADIO-PARIS**, Talk. 5.15—Review. 5.30—Poullet Concert Orchestra. Colette Réard (Pfte.) (Weber, Liszt, Chopin). **ROME**, Poetry. 5.50—Records. **SOTTENS**, For Children. 5.45—Durand (Accordion). **STOCKHOLM**, Records. 5.45—German Christmas—Talk, Carols. **STRASBOURG**, 5.30—Orchestra. Weber (Saxophone). **TURIN**, 5.50—Records. **VIENNA**, Talk. 5.25—Old Styrian Pastorales and Cub Songs. **WARSAW**, Topical.

6 p.m.

ATHLONE, For Children. 6.15—Radio Orchestra. Conductor: Lieut. J. M. Doyle (Edward German). 6.35—Irish News. 6.45—News. **BERLIN**, Carols. Winterberg (Bartone). 6.15—Festival Music (Nauermann). 6.45—Evening Echoes. **BEROMÜNSTER**, News. 6.15—Carols. 6.30—News. 6.40—Talk and Reading. **BRESLAU**, Report: Winter in Silesia. 6.45—Topical. **BUCHAREST**, and **RADIO-ROMANIA**, 6.5—Talk. 6.25—Romanian Christmas. Carols. **BUDAPEST** (1), Records. 6.30—

"Azra"—Opera (Zádor) from the Opera. **COLOGNE**, Light Music (contd.). 6.45—Snapshots. **DEUTSCHLANDSENDER**, Band; In the interval: Sketch. 6.45—Talk. **FRANKFURT**, Light Music and Opera Music. 6.45—Topical. **HAMBURG**, "23.12.1914 Flanders"—Play (Schmidt). 6.45—Talk. **HILVERSUM** (1,875 m.), Talk. Shipping. 6.40—News, Talks. **HILVERSUM** (301.5 m.), "Ramblers" Band, Records. 6.10—Talk. 6.40—Sports. 6.55—Songs. **KALUNDBORG**, News. 6.30—Talk: Stanley Baldwin. **KÖNIGSBERG**, News. 6.10—Christmas Programme. 6.45—Talk. **LEIPZIG**, Talk. 6.10—Variety. **MONTE CENERI**, Records; at 6.15: For Farmers. 6.45—News. **MOSCOW**, Opera (contd.). **MUNICH**, Concert.

PRINCIPAL EVENTS

SYMPHONY CONCERTS
8.0 National: Adrian Boult, Eva Turner.
8.0 Turin: Freccia, Milstein (violin).
LIGHT CONCERTS
12.15 Radio-Paris: Varied programme.
3.0 Deutschlandsender: Operetta music.
4.15 Warsaw: Operetta music.
5.0 Frankfurt, etc.: Variety concert.
6.10 Leipzig: Variety concert.
7.0 Beromünster: Old music.
7.0 Monte Ceneri: Christmas music.
7.30 Athlone: Orch. Christmas songs.
7.45 Frankfurt, etc.: Variety concert.
8.10 Oslo: Popular orchestral.
8.15 Deutschlandsender: Barnabas von Gezzy.
8.15 Stockholm: Choir.
8.20 Kalundborg: Viennese music; opera music (9.15).
8.50 Beromünster: For Swiss abroad.
9.30 Munich: Serenade.
9.30 Warsaw: Popular orchestral.
10.10 Budapest 1: Cigány Primas.
11.30 Radio-Paris: Mangeret Orchestra.
OPERAS
6.15 Vienna "Lucia di Lammermoor" (records).
6.30 Budapest 1: "Azra" (Zádor), from the Opera House.

OSLO, News, Topical. 6.40—Opinions on Father Christmas. **PARIS (PTT)**, Poullet Concert Orchestra. Colette Réard (Pfte.) (Schumann, Debussy). 6.30—News. **PRAGUE**, News. 6.10—Topical. 6.20—Folk Songs. 6.45—Talk. **RADIO-NORMANDIE**, For Children. 6.45—Talk; News. **RADIO-PARIS**, For Young People. 6.30—Lecture-Recital: Berlioz. **ROME**, Records; News; Talk in German. 6.20—News in Foreign Languages. **SOTTENS**, Talks. 6.50—News. **STOCKHOLM**, German Christmas (contd.). 6.15—News. 6.30—Christmas Eve Programme. **STRASBOURG**, Orchestra, Saxophone (contd.). 6.30—News. **STUTTART**, "Spinning in the Odenwald"—Play (Münlich). 6.45—Talk. **TOULOUSE**, 6.3—Concert. 6.50—News. **TURIN**, News in Foreign Languages. **VIENNA**, News. 6.15—"Lucia di Lammermoor"—Opera (Donizetti) by the Cast of the Scala, Milan (Records). **WARSAW**, Talk. 6.20—Station Trio.

7 p.m.

ATHLONE, Play in Irish. 7.30—Radio Orchestra. Conductor: Lieut. J. M. Doyle (Mozart, Gaiwin). In the interval: Christmas Carols by Charles Ryan (Baritone). **BERLIN**, News. 7.15—FOR ALL GERMAN STATIONS: German Youth celebrates the Winter Solstice. 7.45—Variety. **BEROMÜNSTER**, Old Tales and Music. **BRESLAU** and **HAMBURG**, News. 7.15—See Berlin. 7.45—See Frankfurt. **BRNO** and **PRAGUE**, Operetta Potpourri—Orchestra and Artists. **BUCHAREST** and **RADIO-ROMANIA**, The Planets (Gustav Holst) (Records of the London Symphony Orchestra). 7.25—

Talk. 7.40—Sabina Niculesco (Harp), Albu (Violin), Tournier, Saint-Saëns). **BUDAPEST** (1), "Azra" (contd.). **COLOGNE**, News. 7.15—See Berlin. 7.45—Concert. Bielefeld Children's Choir and Records. **DEUTSCHLANDSENDER**, News. 7.10—String Quartet in C (Mozart). 7.45—Youth Programme: Winter Solstice Celebration. **FRANKFURT**, News. 7.15—See Berlin. 7.45—Variety. **HILVERSUM** (1,875 m.), Records; Report. 7.40—News. 7.50—Arnheim Orchestra. Conductor: Spanderman; Aurora Male Voice Choir; Children's Choir, Organ. **HILVERSUM** (301.5 m.), Songs. 7.20—Talks; News. 7.55—V.A.R.A. Orchestra. **KALUNDBORG**, Danish Romantic Music. 7.30—Reading. 7.50—English Carols from the English Church, Copenhagen. St. Alban's Boys and Men's Choir. Rasmussen (Organ). **KÖNIGSBERG**, News. 7.15—See Berlin. 7.45—"The Magic Tree"—Play (Ties). Music by Kallenberg. **LEIPZIG**, News. 7.15—See Berlin. 7.45—Talk. **LILLE**, Records.

CHAMBER MUSIC
5.0 Hamburg: Christmas music—choir, organ.
7.0 Stockholm: Violin, pfte. (Franck).
7.10 Deutschlandsender: Quartet (Mozart).
8.0 Brussels, Eiffel Tower: Bach.
8.0 Sottens: Christmas music.
9.15 Paris (PTT): Instrumental, vocal.
9.30 Vienna: Beethoven, Schubert.
RECITALS
5.0 Deutschlandsender: Beethoven pfte. sonata.
7.0 Sottens: Organ—old Christmas music.
8.0 Warsaw: Chopin; 8.40, Schumann.
8.50 Athlone: Carols.
10.10 Hilversum (301.5 m.): Organ.
PLAYS
7.40 Rome: "L'uomo che sorride."
7.45 Königsberg: "The Magic Tree."
8.10 Athlone: "Holy Night."
8.30 Paris (PTT): "Ici Paris" (film).
8.30 Strasbourg: "Ste. Odile d'Alsace."
8.45 Radio-Paris: Aristophanes adaptations.
TALK
6.30 Radio-Paris: "Berlioz."
LAST NEWS BULLETINS, see Monday.
DANCE MUSIC
9.0 Stockholm; 9.15, Prague; 9.30, Breslau, Budapest; 9.45, Rome; 10.0, Deutschlandsender, Warsaw; 10.15, Turin; 10.25, Regional; 11.0, Radio-Normandie, Radio-Paris; 11.15, National.

MONTE CENERI, Christmas Music (Jachino, Corelli-Tini, Müller). 7.30—Report. **MOSCOW**, Opera (contd.). **MUNICH**, News. 7.15—See Berlin. 7.45—To be announced. **OSLO**, Opinions (contd.). 7.20—Lopatnikov Music by the Composer (Pfte.). 7.50—Reading. **PARIS (PTT)**, News. 7.38—Poullet Concert Orchestra (Rimsky-Korsakov, Mussorgsky). **POSTE PARISIEN**, 7.6—News. 7.37—Records. **RADIO-NORMANDIE**, Concert. 7.40—News. **RADIO-PARIS**, "Berlioz" (contd.). 7.30—Home Affairs. 7.40—Talk. 7.55—Poems. **ROME**, 7.5—News. 7.30—Notes. 7.40—"L'uomo che sorride"—Play (Bonelli-de Benedetti). **SOTTENS**, Montillet (Organ). 7.25—Report. 7.55—Talk. **STOCKHOLM**, Barkel (Violin), Brandel (Pfte.). 7.45—Review. **STRASBOURG**, Topical. 7.15—Records. 7.30—News (French, German). **STUTTART**, News. 7.15—See Berlin. 7.45—"A Child's Dream"—Hollinger Band. **TOULOUSE**, Concert. 7.45—Talk. 7.55—News. **TURIN**, 7.5—See Rome. 7.40—Light Music. **VIENNA**, "Lucia di Lammermoor" (contd.). **WARSAW**, Song Records. 7.35—Talk. 7.45—News.

8 p.m.

ATHLONE, Radio Orchestra (contd.). 8.10—"Holy Night" (Siena) with the Pilgrim Players. 8.50—Lesser-known Christmas Carols. **BERLIN**, Variety. **BEROMÜNSTER**, Station Orchestra. Conductor: Bernhard. Juanita Stoecklin (Pfte.). 8.50—For Swiss Abroad. **BRNO**, Operetta Potpourri (contd.). 8.20—See Prague. **BUCHAREST** and **RADIO-ROMANIA**, The Planets (contd.).

8.10—Mexine Vasiliu (Christmas Carols). 8.30—News. 8.45—Ionesco Orchestra. **BUDAPEST** (1), "Azra" (contd.). **COLOGNE**, Concert (contd.). **DEUTSCHLANDSENDER**, Youth Programme (contd.). 8.15—von Gezzy Band. **FRANKFURT, BRESLAU** and **HAMBURG**, Variety. **HILVERSUM** (1,875 m.), Orchestra, etc. (contd.); at 8.40: Competition. **HILVERSUM** (301.5 m.), V.A.R.A. Orchestra. 8.40—Play. **KALUNDBORG**, English Carols (contd.). 8.20—Viennese Music—Orchestra. 8.50—News. **KÖNIGSBERG**, Play (contd.). **LEIPZIG**, "Glück aus Glas"—Play (Duvigneau). Music by Fried (Walter). **LILLE**, Notes. 8.15—Records. 8.30—Tourcoing Conservatoire Concert. Alice Delcroix (Violin). Bracq (Pfte.). **MOSCOW**, Czech Talk: Stalin. **MUNICH**, To be announced. **OSLO**, Reading. 8.10—Light Orchestral; at 8.40: News; Topical. **PARIS (PTT)**, Talk. 8.15—Foreign Affairs. 8.23—Talk. 8.30—"Ici Paris"—Radio Film (Duhamel-Variot). **POSTE PARISIEN**, 8.2—Paul Reboux. 8.18—Variety. **PRAGUE**, See Brno. 8.20—

COLOGNE, News. 9.30—Review. **DEUTSCHLANDSENDER**, News. 9.30—Viebig Chamber Music. 9.45—Weather. **HAMBURG**, News. 9.25—"The First Wave"—Play (Thaer). 9.40—Music from Berlin. **HILVERSUM** (1,875 m.), Orchestra, etc. (contd.). 9.55—News. **HILVERSUM** (301.5 m.), Play. 9.25—Records; News. 9.45—"Ramblers"—Dance Band. **KALUNDBORG**, 9.5—Beethoven Records. 9.15—Opera Music (Bellini, Gounod, Ponchielli, Puccini, Saint-Saëns). **KÖNIGSBERG**, News. 9.20—Calendar. 9.40—Orchestra. **LILLE**, Concert (contd.). **MOSCOW**, 9.5—English Programme. **MUNICH**, News. 9.50—Serenade. **OSLO**, Light Orchestral. **PARIS (PTT)**, Radio Film (contd.). 9.15—Garde Républicaine Quintet. Songs, Pfes. (Letorey, Handel, Bach, etc.). **POSTE PARISIEN**, 9.5—Sketches; at 9.8, Talk. **PRAGUE**, News. 9.15—Czech Dance Band. 9.50—Pastorale in F for Organ (Bach). **RADIO-NORMANDIE**, Film Music. **RADIO-PARIS**, Plays (contd.). **ROME**, Orchestra. In the interval, Talk. 9.45—Dance Music. **SOTTENS** and **MONTE CENERI**, Concert (contd.). **STOCKHOLM**, Dance Music. **STRASBOURG**, Play (contd.). **STUTTART**, News. 9.30—"Christmas Eve in Alsace"—Dialect Sequence (Kipp). **TOULOUSE**, News. 9.10—Fantasy. 9.45—Paris Programme. **TURIN**, Concert (contd.). **VIENNA**, Variety. 9.10—News. 9.20—Snow Report. 9.30—Quartets (Beethoven, Schubert). **WARSAW**, Schumann Songs (contd.). 9.10—Light Orchestral.

10 p.m.

ATHLONE, Variety. 10.30—News. **BERLIN** and **FRANKFURT**, **HAMBURG**, **LEIPZIG**, Dance Music and Light Music. **BRESLAU**, Dance Band. **BUDAPEST** (1), News (French, Italian). 10.10—Cigány Primas. **COLOGNE**, Review. 10.15—Dance Music from Deutschlandsender. **DEUTSCHLANDSENDER**, Dance Music. **HILVERSUM** (1,875 m.), News; Chess. 10.15—Records. **HILVERSUM** (301.5 m.) "Ramblers" Dance Band. 10.10—Jong (Organ). 10.40—Books. **KALUNDBORG**, Christmas Greetings. **KÖNIGSBERG**, Orchestra. **LILLE**, Concert (contd.). 10.30—News. **MOSCOW**, German Talk. **MUNICH**, Concert. **PARIS (PTT)**, Quintet, etc. (contd.). 10.30—News. **POSTE PARISIEN**, Orchestra. 10.30—Records. **PRAGUE**, News (French). **RADIO-NORMANDIE**, Film Music. 10.30—Excerpts, "Rose de France" (Romberg). **RADIO-PARIS**—Plays (contd.). 10.45—News. **ROME**, News. 10.15—Dance Music. **STRASBOURG**, Play (contd.). 10.30—News (German). **STUTTART**, "Christmas Eve in Alsace" (contd.). 10.15—Dance Music from Deutschlandsender. **TOULOUSE**, Paris Programme. 10.15—Light Music. 10.55—News. **TURIN**, News. 10.15—Dance Music. **VIENNA**, Quartets (contd.). 10.30—Notes. **WARSAW**, Dance Music.

11 p.m.

BUDAPEST, 11.5—News. **FRANKFURT**, Operetta and Dance Records. **HILVERSUM** (1,875 m.), Records. 11.10—Bible Reading. **HILVERSUM** (301.5 m.), Books. 11.10—Records. **MOSCOW**, Spanish Talk. **PARIS (PTT)**, U.S.A. Bulletin. **RADIO-NORMANDIE**, Dance Music. 11.30—From The Cabane Normande. **RADIO-PARIS**, Dance Music. 11.30—Light Music by the Mangeret Orchestra. **STUTTART**, News. **STUTTART**, "The Nativity"—Sacred Play (Schneider) with the Station Choir. 11.45—Records. **TOULOUSE**, Light Music. 11.55—News.

12 midnight

RADIO-NORMANDIE, Dance Music. 12.30—Orchestra. **RADIO-PARIS**, Light Music (contd.). **STUTTART** and **FRANKFURT**, Records. **TOULOUSE**, 12.5—Light Music.

9 p.m.

ATHLONE, Carols (contd.). 9.15—Christmas Story (Francis Stuart). 9.30—Variety. **BERLIN**, **FRANKFURT**, **LEIPZIG**, News. 9.30—Dance Music and Light Music. **BEROMÜNSTER**, For Swiss Abroad. 9.30—Talk; Notes. **BRESLAU**, News. 9.30—Dance Band. **BUCHAREST** and **RADIO-ROMANIA**, Orchestra (contd.). 9.45—News (French, German, Romanian). **BUDAPEST** (1), "Azra" (contd.). 9.30—Jazz Band.

NATIONAL

For Time Signals, see Monday
10.15 a.m. (D)—Service.
10.30 (D)—Weather Forecast.
10.45—Cinema Organ.
11.15—The BBC Welsh Orchestra, conducted by Mansel Thomas; Ceinwen John (Soprano).
12.15 p.m.—Records.
1.0—The Birmingham Hippodrome Orchestra.
2.0—Records.
2.30—Callender's Second Band; Franklyn Kelsey (Bass).
3.30—Frederick Stone (Pfte.).
4.0—Evenson from St. Paul's Cathedral.
4.15—The John MacArthur Quintet.
4.50—The BBC Dance Orchestra, directed by Henry Hall.
5.15—The E. M. Stéphan.
6.40—The BBC Military Band, conductor, B. Walton O'Donnell.
7.10—Carroll Gibbons in "Soft Lights and Sweet Music."
7.30—"Melody out of The Sky"—Fredric Bayco (Organ).
8.0—The BBC Orchestra (Section D). Conductor, Adrian Boult; Eva Turner (Soprano). Overture, Fidelio (Beethoven); Aria, "Abscheulicher" (Fidelio) (Beethoven); Symphonic Poem, The Accursed Huntsman (César Franck); Prelude, Act 2, Scena and Aria (A Masked Ball) (Verdi); Valses Nobles et sentimentales (Ravel).
9.0—The Third News.
9.20—Music Talk by Adrian Boult, D.Mus., LL.D.
9.35—"Men from the other Side"—a new Radio Thriller. Cast includes: Hartley Power, Tony Quinn, Sydney Keith, Carol Goodner, Charles Mason, Hay Petric.
10.25—The Leslie Bridgewater Quintet. Constance Carrodus (Contralto); Tunes of Christmastide.
11.15—Maurice Winnick Orchestra.
11.30-12.0—Dance Records.

REGIONAL

For Time Signals, see Monday
10.15-10.45 a.m.—Droitwich.
10.45—Records.
11.30—Serge Krish Orchestra.
12.30 p.m.—Troise and his Banjoliers, with Don Carlos.
1.15—G. D. Cunningham—Organ.
2.0—The BBC Northern Orchestra; Nora Moore (Soprano).
3.0—The Policeman's Lot.
3.15—Records.
4.0—Dorothy Hogben's Singers and Players.
4.45—William McNulty (Violin).
5.15—The Children's Hour.
6.0—The Swingette.
6.20 (Regional, Northern)—The BBC Northern Orchestra, Conductor, T. H. Morrison.
6.20 (Midland)—The Ritz Players.
6.20 (Western)—The Western Male Voice Party; Tom Daniels (Baritone).
6.20 (N. Ireland)—Frank Rea and his Orchestra.
6.20 (Scottish)—Cinema Organ.
6.40 (Scottish)—With the Old Folk (Gaelic).
7.0—The Second News.
7.20—Regional Announcements.
7.30—The World goes by.
8.0 (ex. Western)—Variety. Claude Hulbert, Enid Trevor, Freddie Bamberger, Jeanne De Casalís, Jean Sablon, Elizabeth Welch, Jimmy Rogers; The BBC Variety Orchestra, conducted by Charles Shadwell.
8.0 (Western)—Sports Casuerie.
8.30 (Western)—Pantomime Preview.
9.0 (Regional)—The BBC Theatre Orchestra, conducted by Harold Lowe; Frank Titterton (Tenor). March (Bizet); Overture, La Princesse jaune (Saint-Saëns); Souvenir d'un bal (Gounod); Waltz (Strauss); Suite, Othello (Coleridge-Taylor); Selection, Haddon Hall (Sullivan); Oh Maiden, my Maiden (Lehár); Bells of Youth (Bantock); Tribute (Ewing); Captains Three (Cavendish); Love's Melody (Lehár).
9.0 (Midland)—"Bethlehem"—a Choral Drama by Rutland Boughton, conducted by the Composer.
9.0 (Northern)—"Pantomime Tour."
9.0 (N. Ireland)—The BBC Northern Ireland Male Voice Chorus and Orchestra, Conductor, E. Godfrey Brown. Stuart Robertson (Baritone).
9.0 (Scottish)—Round the Pantomimes.
9.30 (Western)—Clec a Chan—humorous Welsh programme for Christmas.
9.45 (Midland)—Ronald Gourley (Entertainer at the Pfte.).
10.0—News Summary.
10.25 (Midland 10.45)—Maurice Winnick and his Orchestra.
10.25 (Midland)—"The Old Wives' Tale"—reading.
11.30—Late News Summary.
11.40-12.0—Poetry Reading Works of Swinburne.

Hours of Transmission in Greenwich Mean Time

ATHLONE (Ireland)
565 kc/s (531 m.); 60 kW.
Relayed by Dublin, 1,348 kc/s (222.6 m.); and Cork, 1,240 kc/s (241.9 m.).
1.30-3.0 p.m.—Records. 5.30—Children's Hour.
6.15—Irish Radio Orchestra. Conductor: Lieut. J. M. Doyle. Neil Gwynn Dances (German). Selection, "Tom Jones" (German).
6.35—Irish News Feature. 6.45—News. 7.0—Play in Irish presented by Comhar Dramuiochta Chorcaighe.
7.30—Radio Orchestra. Conductor, Lieut. J. M. Doyle. Serenade (Mozart). Le Carillonner (Ganwin). In the interval: Christmas Carols by Charles Ryan (Baritone).
8.10—"Holy Night" (Siena), with the Pilgrim Players. 8.50—Hubert Rooney in illustrated Talk on the lesser known Christmas Carols, with a Group of Singers. 9.15—A Christmas Story by Francis Stuart. 9.30—Variety. 10.30-11.0—News.

BANSKÁ-BYSTRICA (Czechoslovakia)

392 kc/s (765 m.); 30 kW.
Relays Czechoslovak Stations.
BERLIN (Germany)
841 kc/s (356.7 m.); 100 kW.
Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Stuttgart. 1.0 p.m.—News. 1.15—Bund Band. 2.0-2.30—Exchange; Markets. 3.30—Books. 3.45—Chamber Music.
5.0—See Frankfurt. 6.0—Carols by Winterberg (Baritone).
6.15—"Die Liebe nimmt dich bei der Hand"—Festival Suite (Nauemann) for Soprano, Child's Voice, Flute, Harp, and Pfte. 6.45—Evening Echoes. 7.0—News.
7.15—For all German Stations: German Youth celebrates the Winter Solstice.
7.45—"Kling, Klang, Gloria"—Variety. Hass Quintet, Berlin Mandoline Orchestra. Reich (Accordion), Priegnitz (Pfte.). 9.0—News.
9.30-11.0—Dance Music and Light Music.

BEROMÜNSTER (Switzerland)

556 kc/s (539.6 m.); 100 kW.
Relayed by Basle and Berne, 1,375 kc/s (218.2 m.).
9.20-9.50 a.m.—For Schools.
11.0 a.m.-12.45 p.m.—See Monte Ceneri; at 11.29, News: 3.0 p.m.—Talk.
3.30—The Lanigiro Hot Players.
4.0—Christmas Chamber Music. 4.40—Carols by the Berne Boys' Choir.
5.0—For Children. 5.45—Till Close Down—Programme from Basle. 5.45—Music Talk. 6.0—News. 6.15—Carols to the Lute by Hugo Frühlin.
6.30—News. 6.40—Talk and Reading: Stendhal.
7.0—Old Tales and Music. Speakers, Recordors, Violins, Violas, 'Cello, Lute and Harpsichord.
8.0—Station Orchestra. Conductor: Bernhard Juanita Stoocklin (Pfte.).
8.50—For Swiss Nationals Abroad.
9.30—Tourist Talk. 9.35—Announcements.

BRATISLAVA (Czechoslovakia)

1,004 kc/s (298.8 m.); 13.5 kW.
Transmits at intervals from 5.15 a.m. 8.20 p.m.—Christmas Play from Kosice. 9.0—News. 9.15—News (Hungarian). 9.30-10.0—Programme from Prague.
BRESLAU (Germany)
950 kc/s (315.8 m.); 100 kW.
Relayed by Gleiwitz, 1,231 kc/s (243.7 m.).
Transmits at intervals from 4.0 a.m. 11.0 a.m.—See Stuttgart. 1.0 p.m.—News.
1.15-2.0—Variety from Deutschlandsender. 3.0—Violin and Pfte. Sonata (Respighi). 3.30—Children's Choir.
4.0—Beuthen Orchestra and Songs; at 4.50: Books. 5.50—Announcements. 6.0—Report: Winter in Silesia. 6.45—Topical. 7.0—News. 7.15—See Berlin.
7.45—See Frankfurt. 9.0—News. 9.30-11.0—Dance Band.

BRNO (Czechoslovakia)

922 kc/s (325.4 m.); 32 kW.
Transmits at intervals from 5.15 a.m. 7.0 p.m.—Opereita Potpourri. Station Orchestra and Artists. Conductor: Plichta.
8.20-10.0—See Prague.

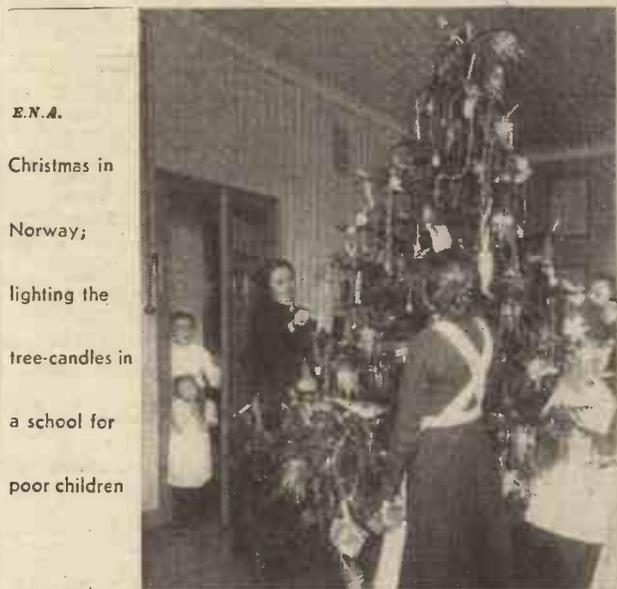
BRUSSELS (No. 1) (Belgium)

620 kc/s (483.9 m.); 15 kW.
Transmits at intervals from 6.37 a.m. 5.0 p.m.—"Winter"—Poems and Records. 5.30—Trio in F (Saint-Saëns). 6.0—Talk. 6.15—Records.

6.30—Mme. Broquet-Urbain (Pfte.). Symphonic Etudes (Schumann). Toccata (Jongen).
7.0—Talk: Belgium's War-disabled.
7.15—Géo Van den Fontyne (Songs).
7.30—For Ex-Servicemen. 8.0—Ex-Servicemen's Evening: Talks; Orchestra; Records.
9.0—"Travail de nuit"—Sketch (Charpentier-Brohé). 9.35—Records.
10.0—Fashion Talk; Sports Review.
10.10—Records. 11.0—Le Brabantonne.

BRUSSELS (No. 2) (Belgium)

932 kc/s (321.9 m.); 15 kW.
Programme in Flemish
Transmits at intervals from 6.37 a.m. 6.0 p.m.—Sixteenth Century Lute Music by Hermann Leeb. 6.15—Talk: Finland. 6.30—Salon Orchestra. 6.45—Talk.
7.0—Chamber Music. Sextet (Beethoven). Choros (Villa-Lobos). 7.30—News.
8.0—Wednesday Symphony Concerts—No. 4. Bach Programme. Cantata, "Tritt auf die Glaubensbahn." Harpsichord: (a) Chromatic Fantasia, (b) French Suite in C minor.



Sonata in E minor for Violin and Bass Continuo. Suite for Lute.
8.45—Recitations.
9.0—Bach Symphony Concert (contd.). Das musikalische Opfer. Cantata, "Ich bin vernügte." 10.0—News.
10.10—Report: The Six Days' Racing at Ghent.
10.25-11.0—Brenders Jazz Band.

BUCHAREST (Romania)

823 kc/s (364.5 m.); 12 kW.
Relayed by Radio-Romania (Brasov), 160 kc/s (1,875 m.).
Transmits at intervals from 4.30 a.m. 4.0 p.m.—Banat Folk Music: Iovitz Orchestra, and Radio Orchestra: Conductor: Rogalski. Grotzuta (Songs). 6.5—Talk. 6.25—Romanian Christmas Carols by the Pitesti Lyceé Mixed Choir. 7.0—The Planets (Mars, Venus and Jupiter) (Gustav Holst) (Records of the London Symphony Orchestra).
7.25—Talk.
7.40—Mme. Sabine Niculesco (Harp). M. Sandu Albu (Violin): Autumn Promenade (Tournier), Two Romantic Preludes (Tournier).
8.10—Maxime Vasiliu (Christmas Carols). 8.30—News; Sports. 8.45—Ionesco Orchestra. 9.45—News (French, German, Romanian).

BUDAPEST (No. 1) (Hungary)

546 kc/s (549.5 m.); 120 kW.
Transmits at intervals from 11.5 a.m. 6.30 p.m.—"Azra"—Opera (Zádor), from the Opera.
9.30—Javor Jazz Band. 10.0—News (French and Italian).
10.10—Cigány Primas from the Café Patria. 11.5—News.

BUDAPEST (No. 2) (Hungary)

359.5 kc/s (834.5 m.); 18 kW.
6.30—Band. 8.0—Talk. 8.30—Records.

COLOGNE (Germany)

658 kc/s (455.9 m.); 100 kW.
Transmits at intervals from 5.0 a.m. 11.0 a.m.—Orchestra. 12.0 noon—News. 12.15 p.m.—See Stuttgart. 1.0—News.

1.15—Variety from Deutschlandsender. 2.0—For Children. 2.30—Books. 2.45—Markets. 3.0—Genealogy.
3.30—See Deutschlandsender; at 3.50: A Flying Visit. 4.30—Christmas Sequence by Girls.
5.0—Advent Music. Soprano and Harpsichord. 5.30—Topical. 5.45—Chamber Quintet with Fassung and Mael (Pftes). 6.45—Snapshots. 7.0-7.10—News. 7.15—See Berlin.
7.45—Bielefeld Children's Choir and Records. Record: Overture, "Hansel and Gretel" (Humperdinck). Abend, gut' Nacht (Brhms). Guten Abend, gut' Nacht (Zuccolmaglio). Zwei feine Stiefel hab' ich an (Kahse). Wittewoll schlafen (Kahse). Schlaf' ein, mein Püppchen, schlaf' ein (Kahse). Records: Lyric Suite (Grieg). Es wird wohl Winter weit und breit. Es dehnt die schneige Fläche sich aus (Krause). Folk Song, Raube Tage. Records: Nutcracker Ballet (Tchaikovsky). Alle Jahre wieder kommt das Christkind (Silcher). Kling, Glöckchen klingeling (Wid-

DEUTSCHLANDSENDER (Germany)

191 kc/s (1,571 m.); 60 kW.
Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Munich. 12.45 p.m.—News.
1.0—Variety. 2.0—Announcements. 2.15—Records: Old Berlin Melodies. 2.45—Books.
3.0—Opereita Music; at 3.50: Story. 5.0—Rosl Schmidt (Pfte.). Bagatellen (Beethoven). Sonata in A flat (Beethoven).
5.30—Hans Watzlik reads.
5.45—"The First Red Wave"—Play about the Founding of the Finnish Republic (Thaer).
6.0—von Gezy Band; in the interval: Sketch. 6.45—Topical. 7.0—News. 7.10—String Quartet in C (Mozart) by the Peter Quartet.
7.45—Youth Programme: Winter Solstice Celebrations.
8.15—von Gezy Band. 9.0—News. 9.30-9.45—Viebig Chamber Music. Variations for Flute, 'Cello and Pfte. on "In dulci júbilo." Trio for Flute, 'Cello and Pfte.
10.0-11.0—Dance Music.

FRANKFURT (Germany)

1,195 kc/s (251 m.); 25 kW.
Relayed by Cassel, Coblenz, Freiburg and Trier, 1,195 kc/s (251 m.).
Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Stuttgart. 1.0 p.m.—News. 1.10—Records. 2.0—Talks. 2.30—Eifel District Legends; Zither Music.
3.0—Orchestra. 3.45—Talk. 4.0 (from Freiburg)—Old Christmas Music. Freiburg Chamber Trio, Stingl (Songs). 4.30—"Mother Goose"—Sketch (Recorded).
5.0—Light Music and Opera Music—Station Orchestra. Conductor: Merten, Hauck Band, Gertrud Eipperle

WEDNESDAY (December 23)

(Soprano), Sattler (Tenor). 6.45—Topical. 7.0—News.
7.15—See Berlin.
7.45—"Little Gifts for Grown-Ups."—Variety. Hauck Band and others. 9.0—News.
9.30—See Berlin.
11.0—"Die verlebte Tonleiter"—Opereita and Dance Records. 12.0 m't-1.0 a.m. (Thursday)—Music from Stuttgart.

HAMBURG (Germany)

904 kc/s (331.9 m.); 100 kW.
Relayed by Bremen, Flensburg Hanover, Magdeburg and Stettin 1,330 kc/s (225.6 m.).
Transmits at intervals from 5.15 a.m. 11.0 a.m.—Orchestra. 12.0 noon—Topical.
12.15 p.m.—See Stuttgart. 1.0—News; Music. 2.0—Shipping. 2.20 (from Stettin)—Christmas Music. 2.50—Ice Report.
3.0—See Deutschlandsender. 3.45—Talk.
4.0—Sketch (Albrecht). 4.15—Songs by Hitler Youth.
4.35—"The Winter Hearth"—Sketch (Heuer).
5.0—Christmas Music. Station Choir. Gregor (Organ). Choir: (a) Freut euch ihr lieben Christen (Schróter), (b) Macht hoch die Tür (Leising), (c) Lobt Gott ihr Christen allzugleich (Schróter). Organ Pastoral (Bach). Three Choral Variations on "Es ist ein Ros' entsprungen" (Brahm's-Distler). Organ Solo on "Es ist ein Ros' entsprungen" (Brahm's). Organ: In dulci júbilo (Liszt). Carols: (a) Schlaf mein Kindelein (Wickenhauser), (b) Kommet ihr Hirten, Motet, Singet dem Herrn (Schütz).
5.40—Talk. 5.50—Shipping.
6.0—"23.12.1914 Flanders"—Play (Schmidt). 6.45—Talk. 7.0—News. 7.15—See Berlin.
7.45—See Frankfurt. 9.0—News. 9.25—"The First Red Wave"—Play about the Founding of the Finnish Republic (Thaer) for the 75th Birthday of Hr. Svinhufvud, the Finnish President (Recorded).
9.40-11.0—Music from Berlin.

HILVERSUM (1,875 m.) (Holland)

160 kc/s; 10 kW until 2.40 p.m.; 100 kW from 2.40 p.m.
N.C.R.V. Programme.
7.40-9.10 a.m.—Bible Reading; Meditation; Records. 10.10—Service. 10.40—Van der Horst Ensemble; at 11.40: News and Records. 1.10 p.m.—Parker (Organ). 2.10-3.25—Records; at 2.40: Reading. 3.40—Nurses' Christmas Festival from the Raampoor Hospital, Rotterdam. 4.40—For Children. 5.40—Talk; Shipping. 6.40—News; Talks; Records; Report. 7.40—News.
7.50—Arnhem Orchestra. Conductor: Spaenderman; "Aurora" Male Voice Choir; Children's Choir; Jansen (Organ); at 8.40: Competition. 9.55—News; Chess. 10.15—Records. 11.10—Bible Reading.

HILVERSUM (301.5 m.) (Holland)

995 kc/s; 15 kW until 2.40 p.m.; 60 kW from 2.40 p.m.
V.A.R.A. Programme.
7.40 a.m.—Records. 9.10—Talk. 9.40—V.P.R.O. Religious Programme. 10.0—Records and Talk. 11.10—For the Unemployed. 11.40—Records. 11.55 a.m.-1.25 p.m.—V.A.R.A. Orchestra. Conductor: Lohoff. 1.40—Records. 2.10—For Women. 2.40—For Children. 5.10—"Ramblers" Band, and Records.
6.10—R.V.U. Talk. 6.40—Sports. 6.55—Songs. 7.20—Talk and News. 7.55—V.A.R.A. Orchestra. Conductor: v. Roekel. 8.40—Play. 9.25—Records and News.
9.45—"Ramblers" Dance Band. 10.10—Jong (Organ). 10.40—Books. 11.10-11.40—Records.

KALUNDBORG (Denmark)

240 kc/s (1,250 m.); 60 kW.
Relays Copenhagen, 1,176 kc/s (255.1 m.).
Transmits at intervals from 6.0 a.m. 11.0 a.m.-1.0 p.m.—Warny Orchestra. 1.40—Bramstoff (Violin). 2.0—Julian Orchestra from Aalborg. 3.50—Wireless Notes. 3.56—Poem. 4.0—For Farmers. 4.40—Exchange; Markets. 4.50—Records of the Pallas Salon Orchestra. 5.0—Overgaard (Folk Songs).
5.20—Oslo-Copenhagen Christmas Exchange Programme for Boys. 6.0—Time; News.
6.30—Talk: Modern Statesmen—Stanley Baldwin.
7.0—Danish Romantic Music. Radio Orchestra. Conductor: Grøndahl. Overture, "William Shakespeare"

WEDNESDAY (December 23)

(Kuhlau). Amelia Waltz (Lumbye). Overture, "Aladdin" (Horneman). 7.30—Reading. 7.50—English Christmas Carols, from the English Church, Copenhagen. St. Alban's Boys' and Men's Choir. Conductor: Lynggaard. Rasmussen (Organ). Adeste fideles. Good King Wenceslas (arr. Mansfield). The Coventry Carol (arr. Stainer). The first Noel (arr. Mansfield). Sleep, Holy Babe (arr. Dykes). Sixteenth Century Hymn. 8.20—Viennese Music. Radio Orchestra. Conductor: Grøndahl. Overture in E minor (Schubert). Three German Dances (Mozart). Overture, "Die Fledermaus" (Strauss). 8.50—News; Report. 9.15—Opera Music. Radio Orchestra. Conductor: Grøndahl. Overture, "Norma" (Bellini). Selection, "Faust" (Gounod). Dance of the Hours (Ponchielli). Selection, "Tosca" (Puccini). Bacchanal (Saint-Saëns). 10.0—Christmas Greetings to the Faroe Isles. 11.0—Chimes.

KÖNIGSBERG (Heilsberg)

(Germany) 1,031 kc/s (291 m.); 100 kW. Relayed by Danzig, 1,303 kc/s (230.2 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Stuttgart. 1.0 p.m.—News. 1.10—For Children. 1.40—Records. 2.10—For Women. 2.45—Orchestra; at 3.30: Sports. 4.30—Topical. 4.45—Talk. 5.0—See Frankfurt. 5.50—Traffic Report. 6.0—News. 6.10—Christmas Programme. 6.45—Topical. 7.0—News. 7.15—See Berlin. 7.45—"The Magic Tree"—Play (Ties); Music by Kallenberg. 9.0—News. 9.20—The German Calendar. 9.40-11.0—Light Orchestral. Conductor: Wilken.

LEIPZIG (Germany)

785 kc/s (382.2 m.); 120 kW. Relayed by Dresden, 1,285 kc/s (233.5 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—Band. 12.0 noon—News. 12.15 p.m.—See Stuttgart. 1.0—News. Records. 2.0-2.20—Talk. 2.30—Sketch. 3.0—Records. 4.0—Markets. 4.10—Records; Carols. 4.40—Talk. 5.0—Station Choir and Leipzig Symphony Orchestra. Conductor: Weber. Overture, "Der Freischütz" (Weber). Les Préludes (Liszt). Carols: (a) Es ist ein Reisent sprungen, (b) Weihnachtsglocken, Introduction to Act III and Bridal Chorus, "Lohengrin" (Wagner). Overture, "The Mastersingers" (Wagner). 6.0—Topical. 6.10—Variety. 7.0—News. 7.15—See Berlin. 7.45—Talk. 8.0—"Glück aus Glas"—Play (Duvigneau); Music by Fried Walter, the Composer at the Pfte. 9.0—News. 9.30-11.0—See Berlin.

LILLE (Radio PTT Nord)

(France) 1,213 kc/s (247.3 m.); 60 kW. Transmits at intervals from 6.50 a.m. 8.30—Tourcoing Conservatoire Concert. Alice Delcroix (Violin), Braço (Pfte.). Fourth Symphony (Schumann). Violin Concerto in B minor (Saint-Saëns). Pieces (Nivard): (a) Volutés pastorales, (b) Intempéries sentimentales, (c) Tambourin fantasque. Violin and Pfte.: (a) La chasse (Carlier-Kreiser), (b) Minuet (Porpora-Kreiser), (c) Gopak (Mussorgsky). Prelude, Choral and Fugue (Franck-Piërné). Dance of the Sylphs and Hungarian March, "The Damnation of Faust" (Berlioz). 10.30—News.

LYONS (PTT) (France)

648 kc/s (463 m.); 100 kW. Transmits at intervals from 6.50 a.m. 6.30 p.m.—News; Topical. 7.30—Surprise Programme. 8.0—Talks. 8.30—"Prince Igor"—Opera (Borodin), from the Salle Saint-Gilles, Moulins. Conductor: Labey. 10.30 (approx.)—News.

MONTE CENERI (Switzerland)

1,167 kc/s (257.1 m.); 15 kW. 11.0 a.m.—Records: Christmas Music. 11.30—News. 11.40—Melody and Rhythm. Radio Orchestra and Ambrosetti (Pfte.). 12.45 p.m.—Financial Bulletin. 2.0-2.30—For Schools. 2.30-5.0—See Beromünster. 6.0—Records. 6.15—For Farmers. 6.30—Records. 6.45—News. 7.0—Christmas Music by the Radio Orchestra. Pastoral (Jachino).

Concerto grosso for Strings (Corelli-Tini). Pastorale (Müller). 7.30—Report: The Swiss Frontier Guards. 8.0-9.10—See Sottens.

MOSCOW (No. 1) (Russia)

172 kc/s (1,744 m.); 500 kW. 4.30 p.m.—Opera. 8.0—Czech Talk: Stalin. 9.5—English Programme: (a) Talk on Soviet Shopping, (b) Music by Women Soloists, (c) Foreign Affairs. 10.0—German Talk: Bolshevik Reminiscences. 11.0—Spanish Talk: The 1905 Revolution.

MÜNICH (Germany)

740 kc/s (405.4 m.); 100 kW. Relayed by Nürnberg, 1,267 kc/s (236.8 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—Light Orchestral. 12.45 p.m.—News. 1.0-2.0—See Deutschlandsender. 2.40—Talks. 3.30—Würzburg Conservatoire Concert. Conductor: Schindler. 4.30—Talks; Records. 6.0—Munich Printers' Choral Society's Concert, with the Munich Philharmonic, etc. (Recorded). 7.0—News. 7.15—See Berlin. 7.45—Pfte. Quartet in E flat (Dvořák). 8.20—"Schneeföckchen und Bisbiglio" Fairy Tale (Arndt); Music by Jürgensohn. 9.0—News. 9.30—Chess. 9.50-11.0—Serenade.

OSLO (Norway)

260 kc/s (1,153.8 m.) 60 kW. Relayed by Fredrikstad, 722 kc/s (415.4 m.); Hamar, 519 kc/s (578 m.); Notodden, 1,357 kc/s (221 m.); Porsgrund, 850 kc/s (352.9 m.); Rjukan, 1,348 kc/s (222.6 m.); and Trondelag, 629 kc/s (476.9 m.). Transmits at intervals from 10.40 a.m. 5.20 p.m.—Oslo-Copenhagen Christmas Exchange Programme for Boys. 5.50—News. 6.30—For Farmers. 6.40—Opinion on Father Christmas. 7.20—Lottinokk Music by the Composer (Pfte.). Variations. Sonata. Gavotte. Danse ironique. Five Contrasts. 7.50—Reading. 8.10-10.0—Light Orchestral. At 8.40: News; Topical.

PARIS (Eiffel Tower) (France)

1,456 kc/s (206 m.); 5 kW. Transmits at intervals from 7.0 a.m. 4.0 p.m.—Television. 4.50—Exchange; Markets. 5.0—Lecture from the Sorbonne. 6.0-6.30—History Lesson. 6.45—Music Notes. 7.0—News. 7.10—Racing. 7.20—Foreign Affairs. 7.45—Press Review. 7.55—Home Affairs. 8.0—See Brussels (No. 1).

PARIS (Poste Parisien) (France)

959 kc/s (312.8 m.); 60 kW. Transmits at intervals from 7.10 a.m. 12.0 noon—Exchange. 12.5 p.m.—New Records. 12.35—Exchange. 12.39—Records. 12.54—Records: Orchestra and Songs. 1.15—Ninon Querard. 1.30—Records: Suite, "L'Arlésienne" (Bizet). 2.0, 3.45, 4.35—Exchange. 6.0—Call. 6.2—Jewish Programme. 6.17—Jehanne Chambard (Pfte.). 6.30—Exchange. 6.35—Records: Excerpt, "Marie Magdeleine" (Massenet). 6.42—Topical. 6.50—Song Records. 7.6—News. 7.32—Aviation. 7.37—Records. 7.52—Records: Lucienne Boyer (Songs). 8.2—Paul Reboux. 8.18—Variety. 9.5—Lightning Sketch. 9.8—Talk. 9.23—"In the Reformatory"—Sketch (Diamant-Berger). 10.0—Lido Orchestra. 10.30-11.0—Records: Light Music.

PARIS (PTT) (France)

695 kc/s (431.7 m.); 120 kW. Transmits at intervals from 6.50 a.m. 2.30 p.m.—Concert for the Blind. In the interval: "La Journée des Aveux"—Sketch (Duhamel). 3.45—Gabriello (Songs). 4.0—Talk: French Folklore. 4.10—Talk: Winter. 4.20—Records. 4.30—Alice Hena (Songs). 4.45—Reading. 5.0—Poulet Concert Orchestra. Conductor: Cloez. Ballet, "Idomeneo" (Mozart). 5.30—Literary Review. 5.40—Medical Talk. 5.55—Talks. 6.0—Poulet Concert Orchestra. Conductor: Cloez. Colette Reard (Pfte.). Kinderzengen (Schumann). Pfte.: Three Pieces (Debussy): (a) Prelude, (b) Sarabande, (c) Toccata. 6.30—News. 7.38—Poulet Concert Orchestra (contd.). Overture on Russian Themes (Rimsky-Korsakov). Overture, "Kovantchinka" (Mussorgsky). Suite, "Le Coq d'Or" (Rimsky-Korsakov). 8.0—Tourist Talk. 8.15—Foreign Affairs. 8.23—Talk: Men and Books.

8.30—"Ici Paris"—Radio Film

(Duhamel-Variot). 9.15—Garde Républicaine Quintet. René Mahé, Jenny Bachillat and Mme. Doniau-Blanc. (Songs). Martenet (Ondas Musicales) and Gilberte Lyon (Pfte.). Petite marche (Létory). Pfte.: (a) Sarabande and Bourrée (Handel), (b) Musette (Bach), (c) Minuet (Rameau). Song Trios (Büsser): (a) Au bois de Bettant, (b) Joli Bâton, (c) Partons joli cœur. Rhapsody (Jonson). "Ondes musicales" and Pfte.: (a) Suite Bergamesque (Fauré), (b) Humoresque (Hüß). Vocal Trios (Jacob): (a) Conseils au amants, (b) Conseils aux fillettes, (c) Hymn. Three Pieces for Quintet (Dupont). 10.30—News. 11.0—U.S.A. Bulletin.

PARIS (Radio-Paris) (France)

182 kc/s (1,648 m.); 80 kW. 6.45 a.m.—Gym. 7.0—Records. 7.15—Press Review. 7.45—Gym. 8.0—Records. 11.0—Pasdeloup Concert Orchestra. Conductor: Clergue. 12.0 noon—For Farmers. 12.15 p.m.—Pasdeloup Concert Orchestra (contd.). Mlle. Valdi (Songs); at 12.45: News; Review by Divoire. 2.0—Music: 2.10—Story (Supervielle). 2.30—Concert from Paris (Radio-Colonial). Conductor: Tomasi. Mme. Diaz (Songs), Martin (Tenor). 4.0—Talk. 4.15—Talk: The Cid. 4.30—Lyane Maïre (Songs). La Cloche (Saint-Saëns). Les Berceaux (Fauré). L'Heure exquise (Hahn). Retraite (Lélu). 4.45—Viennese Operetta Records. 5.0—Science Talk. 5.15—Books. 5.30—Poulet Concert Orchestra. Conductor: Cloez. Colette Reard (Pfte.). Invitation to the Waltz (Weber). Liebestraum (Liszt). Pfte.: (a) Waltz (Chopin), (b) Ballad in F minor (Chopin). 6.0—For Young People. 6.30—Lecture-Recital: Berlioz. 7.30—Home Affairs. 7.40—Talk: The French Theatre. 7.55—Poems. 8.0—Sonata No. 2 (Fauré) by Yvonne Astruc (Violin) and Doyen (Pfte.). 8.30—News. 8.45—Plays (Aristophanes): (a) "The Peace" (arr. Fleischman), (b) "The Wasps" (arr. Davenay). 10.45—News. 11.0—Dance Music—Mangeret Orchestra. 11.30 p.m.-12.15 a.m. (Thursday)—Light Music—Mangeret Orchestra. Overture, "Russian and Ludmilla" (Glinka). Amour et Printemps (Waldeufel). Nocturne, Cocorico (Ganne). Symphonic Poem, Leda (Irmisot). Ballet, "Isoline" (Messager). Orchestral Suite, Les Erynnies (Massenet).

PRAGUE (Czechoslovakia)

638 kc/s (470.2 m.); 120 kW. Transmits at intervals from 5.15 a.m. 6.0 p.m.—News. 6.10—Topical. 6.20—Folk Songs from Moravská-Strava. 6.45—Talk. 7.0—See Brno. 8.20—"Jesus is born this day"—Nativity Play (Müller), with Music (arr. Ponc). 9.0—News. 9.15—Czech Dance Band. 9.50—Pastorale in F (Bach) by Wiedermann (Organ). 10.0-10.15—News (French).

RADIO-NORMANDIE (France)

1,113 kc/s (269.5 m.); 10 kW. 7.0 a.m.—Excerpts, "Rose Marie" (Friml). 7.10—News. 7.50—Orchestra. 8.0—Records. 8.15—Music. 8.30—Songs: 9.0—Dance Music. 9.15—Records. 9.30—Popular Music. 10.0—Records. 10.30—Popular Music. 10.45—News. 11.0—Light Music. 12.0 noon—Records. 12.20 p.m.—Songs. 12.40—News. 1.0—Concert. 2.0—Records. 2.15—Light Music. 2.30—Records. 3.15—Orchestra. 3.30—Records. 3.45—Orchestra. 4.0—Concert. 4.45—For Children. 5.0—Records. 5.15—Light Music. 5.45—Current London Productions. 6.0—Children's Corner. 6.45—Talk; News; Racing Results. 7.0—Concert. 7.40—News. 8.0—Records. 8.30—Records: Ray Ventura's Collegians. 9.0—Film Music. 10.30—Excerpts, "Rose de France" (Romberg). 11.0—Dance Music. 11.30—From the Cabane Normande. 12.0 m't.—Dance Music. 12.30-1.0 a.m. (Thursday)—Orchestra.

RADIO-ROMANIA (Brasov) (Romania)

160 kc/s (1,875 m.); 150 kW. See Bucharest. 713 kc/s (420.8 m.); 50 kW. Relayed by Naples, 1,104 kc/s (271.7 m.); Bari (No. 1), 1,059 kc/s (283.3 m.); Bari (No. 2), Milan (No. 2) and Turin (No. 2), 1,357 kc/s (221.1 m.). Transmits at intervals from 6.45 a.m.

6.0 p.m.—Records; News; Talk in German. 6.20—News in Foreign Languages. 7.5—Time; News. 7.30 Government Notes. 7.40—"L'uomo che sorride," or "La bisbetica domata in un altro modo"—Three-Act Play (Bonelli-Benedetti). 9.0 (approx.)—Orchestra. Conductor: Gaudiosi. In the interval: Talk. 9.45-10.55—Dance Music; at 10.0: News.

SOTTENS (Switzerland)

677 kc/s (443.1 m.); 100 kW. Relayed by Geneva, 401 kc/s (748 m.). 9.5-9.35 (from Geneva)—For Schools: "God Jul"—Swedish Sketch (Rudhardt). 11.0 a.m.-12.45 p.m.—See Monte Ceneri; at 11.30: News. 3.30-5.0—See Beromünster. 5.0-9.30—Programme from Geneva. 5.0—For Children. 5.45—Durand (Accordion). 6.0—Talk: Merovingian and Carolingian Art. 6.15—Radio Magazine. 6.50—News. 7.0—Montillet (Organ), from St. Joseph's Church. Two Christmas Chorals (Bach): Trio on a Gregorian Chant (Pevotinus). Choral, Was Gott tut das ist wohlgetan (Kellner). Pastoral (Gullman). 7.25—Report from a Chocolate Factory. 7.55—Talk: Chocolate. 8.0—Christmas Concert from the Conservatoire. Romand Orchestra. Conductor: Baud-Bovy; Symphony Choir. Mlle. Tatianoff (Mezzo-Soprano). Sinfonia on French Carols (Lalande). "Das neugeborene Kindelein"—Cantata (Buxtehude). Concerto grosso con una Pastorale per il santissimo natale (Torelli). "Die Kindheit Jesu"—Biblical Tableaux (J. C. F. Bach). Pieces (Büsser, Franck). 9.10—Weather.

STOCKHOLM (Sweden)

704 kc/s (426.1 m.); 55 kW. Relayed by Motala, 216 kc/s (1,389 m.); Göteborg, 941 kc/s (318.8 m.); Hörby, 1,131 kc/s (265.3 m.); and Boden, 392 kc/s (765 m.). Transmits at intervals from 6.20 a.m. 5.45 p.m. (from Göteborg)—German Christmas. Talk in German; Carols by a Girls' Choir. 6.15—News. 6.30—"Christmas Eve." 7.0—Barkel (Violin) and Brandel (Pfte.). Sonata in A (Franck). Tambourin (Leclair). Prelude and Allegro (Pugnani-Kreiser). 7.45—Literary Review. 8.15 (from Göteborg)—Male Voice Choir. 8.45—News. 9.0-10.0—Radio Dance Band. 4.50—Talk: Travel in Austria. 5.0—Talk: Old Trade Customs. 5.25—Old Styrian Pastorales and Crib Songs from St. Anthony's Church, Graz. St. Peter's Children's Choir and the Graz Teachers' Orchestra. 6.0—News. 6.15—"Lucia di Lammermoor"—Three-Act Opera (Donizetti), by the Scala, Milan, Cast (Recorded). 8.0—Topical. 8.15—Rainer Maria Rilke Commemoration Sequence. 9.0—Variety. 9.10—News. 9.20—Snow Report. 9.30—Stross String Quartet. Quartet in F (Beethoven). Quartet in D minor (Schubert). 10.30—Announcements.

STRASBOURG (France)

859 kc/s (349.2 m.); 100 kW. Transmits at intervals from 6.45 a.m. 5.30 p.m.—Orchestra. Conductor: de Villers. Prelude, "Fiesque" (Lalo). Ballet Suite (Lauchaux). Slav Rhapsody (Friedemann). Saxophone Solo. Excerpts, "Hans the Flute Player" (Ganne). Suite funambulesque (Büsser). 6.30—News; Topical. 7.15—Records. 7.30—News. 7.45—News (German). 8.0—Press Review (German). 8.15—Records. 8.30—"St. Odile d'Alsace"—Three-Act Play (Darget); Music by Bertrand. Orchestra and Choirs. Conductor: de Villers. 10.30—News (German). 11.0—News.

STUTTGART (Germany)

574 kc/s (522.6 m.); 100 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—Hollinger Band, Trumpeter Corps. 12.0 noon—News. 12.15 p.m.—Band, etc. (contd.). 1.2-2.0—See Deutschlandsender. 2.15—Talks. 2.30—For Boys. 3.0—See Deutschlandsender. 4.45—Talk. 5.0—See Frankfurt. 6.0—"Spinning in the Odenwald"—Play (Münning). 6.45—Talk. 7.0—News. 7.15—See Berlin. 7.45—"A Child's Dream"—Hollinger Band from Karlsruhe. Puppenmarsch (de Micheli). Alte Humpelmänner tanzen (Lindemann). Märchenwalzer (Löhr). Bleisoldaten (Kockert). Fantasia. Ein Kindertraum (Rust). Die Liliputaner kommen (Lindemann). Puppenwalzer (Bayer). Overture, Felix the Cat (Kark). Der treue Humpelmann (Heykens). Im Nürnbergger Puppenladen (Wendel). Fairy-Tale Overture (Rust). Der kleine Reiter (Lincke). Tanzende Teppelung (Schmidt-Hagen). Puppenlustig und fidel (Siede). 9.0—News. 9.30—"Christmas Eve in Alsace"—Dialect Sequence (Kipp). 10.15—Dance Music from Deutschlandsender. 11.0—"The Nativity"—Sacred Play (Schneider) with the Station Choir. 11.45 p.m.-1.0 a.m. (Thursday)—Records.

TOULOUSE (Radio-Toulouse) (France)

913 kc/s (328.6 m.); 60 kW. Transmits at intervals from 8.0 a.m. 7.0 p.m.—Film Music. 7.15—Dance Music. 7.40—Viennese Orchestra. 7.45—Talk. 7.55—News. 8.10—Orchestra. 8.25—Ray Ventura and his Collegians. 8.55—News. 9.10—"Vacances de Noël"—Fantasy. 9.45—Paris Programme. 10.15—Salon Orchestra. 10.40—Film Music. 10.55—News. 11.0—Marches. 11.15—Chansonnettes. 11.40—Dance Music. 11.55—News. 12.5 a.m.—(Thursday)—Light Music. 12.30—Announcements.

TURIN (No. 1) (Italy)

1,140 kc/s (263.2 m.); 7 kW. Relayed by Milan (No. 1), 814 kc/s (368.6 m.); Genoa, 986 kc/s (304.3 m.); Trieste, 1,140 kc/s (263.2 m.); Florence, 610 kc/s (491.8 m.); Bolzano, 536 kc/s (559.7 m.); and Rome (No. 3), 1,258 kc/s (238.5 m.). Transmits at intervals from 6.45 a.m. 4.0 p.m.—News. 4.15-4.50—Maria Golia (Pfte.). 5.50—Records. 6.0—News in Foreign Languages. 7.5-7.40—See Rome. 7.40—Light Music. 8.0—Symphony Concert. Conductor: Freccia. Milstein (Violin). In the interval: Talk. 10.0—News. 10.15-10.55—Dance Music.

VIENNA (Austria)

592 kc/s (506.8 m.); 100 kW. Relayed by Graz and Linz, 886 kc/s (338.6 m.); Innsbruck, 519 kc/s (578 m.); Klagenfurt and Vorarlberg, 1,234 kc/s (231.8 m.); and Salzburg, 1,348 kc/s (222.6 m.). Transmits at intervals from 5.45 a.m. 11.0 a.m.—Operetta Music. Station Orchestra. Conductor: Holzer. 12.0 noon—News. 12.10 p.m.—German Operetta Music by the Station Orchestra. 1.0—Records: Polonaises (Chopin). Rubinstein (Pfte.). 1.30—Announcements. 2.20—For Children. 2.40—Astrological Talk. 3.0—News. 3.5—Christmas Concert. Strebersdorf Students' Choir; Innozenz (Pfte. and Harmonium), Peichel and Stadlbauer. 3.25—Records: Songs to the Guitar. 3.45—Art Talk. 4.0—Contemporary Music—Ippisch and Lechthaler. Vienna Concert House Quartet, Buxbaum ("Celli" and Kerschbaumer (Pfte.). Minuet with Variations from the Fantasia Sonata for Cello and Pfte. (Lechthaler). String Quartet in C minor (Ippisch). 4.50—Talk: Travel in Austria. 5.0—Talk: Old Trade Customs. 5.25—Old Styrian Pastorales and Crib Songs from St. Anthony's Church, Graz. St. Peter's Children's Choir and the Graz Teachers' Orchestra. 6.0—News. 6.15—"Lucia di Lammermoor"—Three-Act Opera (Donizetti), by the Scala, Milan, Cast (Recorded). 8.0—Topical. 8.15—Rainer Maria Rilke Commemoration Sequence. 9.0—Variety. 9.10—News. 9.20—Snow Report. 9.30—Stross String Quartet. Quartet in F (Beethoven). Quartet in D minor (Schubert). 10.30—Announcements.

WARSAW (Poland)

224 kc/s (1,339 m.); 120 kW. Relayed by Cracow, 1,022 kc/s (295.5 m.); Katowice, 758 kc/s (393.8 m.); Łódź, 1,339 kc/s (224 m.); Lwów, 795 kc/s (377.4 m.); Poznań, 868 kc/s (345.6 m.); Torun, 986 kc/s (304.3 m.); and Wilno, 536 kc/s (559.7 m.). Transmits at intervals from 5.30 a.m. 11.3 a.m.—Orchestra. Conductor: Cymerman. 11.40—News. 11.50—Talk. 2.0 p.m.—Economics. 2.15—Records. 2.55—Letter-box. 3.10—For Children. 3.40—Chamber Music. 4.0—Talk. 4.15 (from Cracow)—Operetta Music. 4.50—An imaginary interview. 5.0—Talks. 6.20—Station Trio. Serenade (Swierzyński), Descriptive Piece (Henriquez), Flourettes (Heller), Serenads (Hoherman), Crescendo (Lassen), Suite (Rybiicki), Les visites (Godard), Waltz (Helmesberger), Suite (Nawrocki), Hungarian Dance (Brahms). Serenade (Block). 7.0—Song Records. 7.35—Talk. 7.45—News; Topical. 8.0—"Chopin in a Paris Salon"—Lecture Recital by Hulewicz, with Szpinalski (Pfte.). Etude. Scherzo in B minor. Allegro from the Concerto. 8.40 (from Wilno)—Schumann Songs by the "Pro Arte" Double Vocal Quartet. 9.30—Light Orchestral. 10.0—Dance Records.

Dec. 24 THURSDAY

4 p.m.

ATHLONE, 4.30—Christmas Carols from St. Patrick's Cathedral, Dublin.
BRESLAU, Programme about Christmas Trees and Christmas Customs (Recorded) 4.30—Music from Cologne. **BUCHAREST** and **RADIO-ROMANIA**, Records. **BUDAPEST (1)**, 4.25—Opera Orchestra.
COLOGNE, Orchestra, Schrammel Quartet, Contralto, Flute, Pife. **DEUTSCHLANDSENDER**, 4.30—Lighting up the Christmas Tree. **FRANKFURT**, Lubrich Chamber Music. 4.30—Reading.
HAMBURG, 4.30—Records. **LEIPZIG**, Christmas Concert. **MOSCOW**, 4.30—Concert.
OSLO, Variety.
RADIO-PARIS, 4.0—Records. **ROME** and **TURIN**, News. 4.15—Christmas Music.
SOTTENS and **BEROMÜNSTER**, 4.20—Dance Band. **STUTTGART**, 4.30—"Peeping through the Keyhole" (Reichert).
VIENNA, Hofmusikappelle Concert. Conductor: Grossmann.

5 p.m.

ATHLONE, Carols (contd.). 5.30—"The Mummers"—A Christmas Eve Play (Sean Crawford).
BERLIN, **BRESLAU**, "The Candles burn on the Christmas Tree"—Orchestra, etc. **BEROMÜNSTER**, Notes. 5.10—Christmas Music. 5.40—A Christmas Tale. 5.50—"Christmas Music (Emil Holz)". Zither Quartet. Songs, Oboe, Recitations. **BUCHAREST** and **RADIO-ROMANIA**, News. 5.10—Christmas Music. 5.55—Talk. **BUDAPEST (1)**, Opera Orchestra.
COLOGNE, Chimes. 5.45—Carols. **DEUTSCHLANDSENDER**, "Christmas"—Cathedral Bells, Carols, Tales.
FRANKFURT, Chimes. 5.10—Carols by the Frankfurt Blind Choir. 5.45—Christmas Folk Music.
HAMBURG, "Doll Dance"—Play for Young and Old with Music. **HILVERSUM (1,875 m.)**, 5.10—Records. 5.25—Violin, Cello, Pife. Records. **HILVERSUM (301.5 m.)**, 5.10—Kovacs Lajos Orchestra. 5.55—Sports.
KALUNDBORG, 5.40—Nielsen (Pfte.) (Mozart, Weber). **KÖNIGSBERG**, Christmas with the Defence Forces. 5.30—Börschel Band.
LEIPZIG, Christmas Concert.
MOSCOW, 5.0—Notes. 5.15—Concert. **MÜNICH**, Music.
OSLO, 5.30—Christmas—Oratorio (Borch).
PRAGUE, 5.20—Bells. 5.55—Carols—Children's Choir.
RADIO-PARIS, Plays: (a) "L'école des bourgeois" (Allainval). (b) "Le cercle" (Poinsett). **ROME** and **TURIN**, 5.0-5.10—Talk. 5.50—Notes.
SOTTENS, Chimes. 5.15—Choir. 5.40—Interlude. **STOCKHOLM**, 5.15—Dance Music. **STUTTGART**, Christmas Concert.
VIENNA, Christmas in the Tyrol Alps—Report with Records. 5.35—Reading.
WARSAW, 5.15—Polish Stations Exchange Programme—Christmas at Home and Abroad. 5.55—Bethlehem—Musical Programme.

6 p.m.

ATHLONE, "The Mummers" (contd.). 6.15—Radio Orchestra. 6.35—News.
BERLIN, **BRESLAU**, Orchestra, etc. (contd.). **BEROMÜNSTER**, Music (contd.). 6.30—News. 6.40—Poems. **BUCHAREST** and **RADIO-ROMANIA**, Talk. 6.15—Radio Orchestra. 6.55—Carols. **BUDAPEST (1)**, Chimes. 6.30—Organ.
COLOGNE, Carols. 6.30—"German Christmas"—Contemporary Literature and Old Music.
DEUTSCHLANDSENDER, Christmas Greetings from the Deutschlandsender. Address, Choirs, Wind Band, Quartet, Organ, Songs. **FRANKFURT**, Folk Music (contd.).
HAMBURG, Christmas Bells over the Heath. 6.20-6.50—Old Melodies. **HILVERSUM (1,875 m.)**, Instrumental (contd.). 6.25—Talks. **HILVERSUM (301.5 m.)**, Sports. 6.25—Christmas Carols. 6.40—For Children. 6.45—Old Music. Quintetto Antiqua.
KALUNDBORG, News. 6.30—Reading. **KÖNIGSBERG**, Band. 6.30—"Stars over the Huts" (Menzel) with Music.
LEIPZIG, Carols by Mixed Choirs.

MONTE-CENERI, Duets. 6.15—Poems. 6.30—Duets. 6.45—News. **MOSCOW**, Concert. **MÜNICH**, "The Peasant's Calendar"—December. 6.45—Orchestra.
OSLO, Oratorio (contd.). 6.15—News. 6.30—Christmas Eve in Finnmark. 6.45—Carols.
PARIS (PTT), Organ, from the Schola Cantorum. 6.30—News. **PRAGUE**, Carols (contd.): 6.10—Christmas Message. 6.20—Records. 6.35—Sketch. 6.50—Orchestra.
RADIO-NORMANDIE, Symphony Orchestra. 6.30—Notes. 6.45—Talk: News. **RADIO-PARIS**, Plays (contd.). 6.45—Talks. **ROME**, Records, Announcements, and Talk (Spanish). 6.20—News in Foreign Languages.
SOTTENS, Interlude. 6.20—Play 6.50—News. **STOCKHOLM**, Dance Music. 6.15—News. 6.30—Report. **STRASBOURG**, 6.30—News. **STUTTGART**, Concert (contd.).
TURIN, News in Foreign Languages. **VIENNA**, News. 6.15—Vienna Chamber Orchestra. Conductor: Aude-rieth. (Lortzing, Mozart, Schubert, Humperdinck).
WARSAW, Musical Programme (contd.).

PRINCIPAL EVENTS

SERVICES AND SACRED MUSIC
 3.30 Kalundborg: Copenhagen Cathedral.
 10.20 Sottens: Carols; 11.0, Mass.
 10.30 Warsaw: Midnight mass.
 10.40 Hilversum (301.5 m.): From the "New" Church, The Hague.
 10.45 Paris (PTT): Carols.
 10.45 Strasbourg: Service.
 10.55 Rome, Turin: 11.0 Monte Ceneri, Prague, Radio-Normandie, Vienna; 11.50: Strasbourg: Midnight Masses.
SYMPHONY CONCERTS
 5.30 Oslo: Christmas Oratorio (Borch).
 8.45 Radio-Paris: "L'enfance du Christ" (Berlioz).
 9.10 Warsaw: Christmas Oratorio (Bach).
 9.30 Brussels 2: Belgian Music.
 9.30 Leipzig, etc.: Christmas Oratorio (Bach).
LIGHT CONCERTS
 12.15 Radio-Paris: Orchestra, songs.
 1.30 Kalundborg: Radio Orchestra.
 3.0 Deutschlandsender: "Dressing the Christmas Tree."
 5.0 Stuttgart: Christmas concert.
 6.45 Oslo: Christmas music.
 7.0 Breslau, Königsberg: "Christmas Eve."
 7.0 Kalundborg: Christmas concert.
 7.0 Monte Ceneri: Christmas music.

7 p.m.

ATHLONE, In the Garden. 7.10—"A Visit from Father Christmas." Soprano, Radio Orchestra.
BERLIN, **LEIPZIG**, "Holy Night"—Choir, Orchestra, etc. **BEROMÜNSTER**, Christmas Concert. Violin, Organ. **BRESLAU**, **KÖNIGSBERG**, Christmas Songs and Tales. **BUCHAREST** and **RADIO-ROMANIA**, Carols. 7.15—Talk. **BUDAPEST (1)**, Station Orchestra.
COLOGNE, "German Christmas" (contd.).
DEUTSCHLANDSENDER, Christmas Eve Concert.
HAMBURG, **FRANKFURT**, "Happy and Joyous"—A Merry Sledge Ride into the Land of Christmas. **HILVERSUM (1,875 m.)**, News: Christmas Story. 7.40—News. 7.55—To be announced. **HILVERSUM (301.5 m.)**, Old Music (contd.). 7.15—Talk. 7.40—News. 7.50—Aeolian Orchestra, Tenor, Violin.
KALUNDBORG, Christmas Concert.
MONTE CENERI, "The Star of Bethlehem"—Children's Choir. 7.15—Report. 7.30—Organ Records. 7.45—"If Christ came back"—Play. **MOSCOW**, Concert. **MÜNICH**, Orchestra. 7.15—Music.
OSLO, Carols. 7.40—Greetings.
PARIS (PTT), Talks. 7.38—Records. 7.45—Reading. **POSTE PARISIEN** 7.6—News. 7.32—Records. 7.47—Light Music. **PRAGUE**, Orchestra.
RADIO-NORMANDIE, Concert. 7.40—News. **RADIO-PARIS**, Talks Reading. **ROME** and **TURIN**, 7.5—News. 7.30—Talk. 7.40—Nativity Music. Conductor: Previtali.
SOTTENS, See Monte Ceneri. 7.15—Play. 7.35—Concert. **STOCK-**

HOLM, Report. 7.30—Christmas Carols. **STRASBOURG**, Reviews. 7.15—Records. 7.30—News (French, German). **STUTTGART**, "Father and Son after the Distribution of Presents"—Programme by Willy Reichert, Karl Berlin, Brändle Quintet, etc.
TOULOUSE, Light Music. 7.50—News.
VIENNA, Orchestra (contd.). 7.40—Reading.
WARSAW, Talk on the 7.10 programme. Songs, Pfte., Violin.
ATHLONE, Autobiography. 8.15—Variety.
BERLIN, See Deutschlandsender. 8.20—"Holy Night" (contd.). **BEROMÜNSTER**, "Das Gotteskind"—Play with Music. **BRESLAU** and **KÖNIGSBERG**, See Deutschlandsender. 8.20—Songs and Tales (contd.). **BUCHAREST** and **RADIO-ROMANIA**, Talk. 8.30—News; Topical. 8.45—Gala Christmas Programme. **BUDAPEST (1)**, Orchestra. 8.10—Records.

8 p.m.

7.10 Athlone: Christmas music.
 7.30 Stockholm: Christmas songs and greetings to Sailors.
 7.40 Rome, Turin: Nativity music.
 7.50 Hilversum (301.5 m.): Orch., song, violin.
 8.20 Deutschlandsender: Station Orchestra.
 8.22 Poste Parisien: Christmas concert.
 8.30 Eiffel Tower: Hospitals' Gala.
 9.0 Hamburg: Military Band.
 9.0 Rome, Turin: Orchestra, organ.
OPERAS
 8.30 Paris (PTT): Two Christmas operas. Stuttgart, Frankfurt: "Hänsel and Gretel" (rec.).
RECITALS
 3.25 National: Carols from King's College.
 6.0 Budapest 1: Chimes, organ (6.30).
 7.10 Warsaw: Song, pft., violin.
 8.0 Radio-Paris: Old carols, cello music.
 8.0 Vienna: Carols.
 8.20 Leipzig, etc.: German chimes.
PLAYS
 5.0 Radio-Paris: Classic comedies.
 8.0 Beromünster: "Das Gotteskind."
 10.0 Hamburg: "A Christmas Carol"
 10.30 Leipzig: "Die Nacht des Hirten."
LAST NEWS BULLETINS, see Monday
DANCE MUSIC
 4.20 Sottens; 10.25, Regional; 11.15, National; 12.0 (to 3 a.m.), Paris (PTT); 12.0 (to 2 a.m.), Poste Parisien.

9 p.m.

ATHLONE, Poems in Irish. 9.15—Story. 9.30—Variety.
BERLIN, Light Music. **BEROMÜNSTER**, Play with Music (contd.). 9.15—Notes. **BRESLAU**, Songs and Tales (contd.). 9.30—See Stuttgart. **BUCHAREST** and **RADIO-ROMANIA**, Gala (contd.). 9.55—News. **BUDAPEST (1)**, Records. 9.30—Ninth Symphony (Beethoven) (Records).
COLOGNE, Chamber Music. 9.30—See Leipzig.
DEUTSCHLANDSENDER, Light Music. 9.45—Weather.
EIFFEL TOWER, Gala Programme (contd.).
FRANKFURT, See Leipzig. 9.20—Dreamland Music. 9.40—See Munich.
HAMBURG, Military Band. **HILVERSUM (1,875 m.)**, Orchestra; at 9.40: News. **HILVERSUM (301.5 m.)**, Play (contd.).
KÖNIGSBERG, See Breslau. 9.30—See Stuttgart.
LEIPZIG, "Christmas Chimes" (contd.). 9.30—Christmas Oratorio (Bach).
MOSCOW, 9.5—French Talk. **MÜNICH**, Music. 9.40—"Heilige Nacht"—Old Bavarian Legend (Thoma), Music by Kusche. Conductor: The Composer.
PARIS (PTT) and **STRASBOURG**, Plays (contd.). **POSTE PARISIEN**, Concert (contd.). **PRAGUE**, 9.20—Records. 9.50—Play.
RADIO-NORMANDIE, Variety. **RADIO-PARIS**, Oratorio (contd.). **ROME** and **TURIN**, Orchestra. Conductor, Tansini. Matt'hey Organ. 9.40—Dance Music.
SOTTENS, Motet Society (contd.). 9.15—On the Track of Father Christmas. 9.35—Interlude. 9.50—"Christmas in Sweden"—Sketch. **STOCKHOLM**, Records. **STUTTGART**, See Leipzig. 9.30—"Listen, Footsteps in the Snow"—Christmas Folk Programme.
TOULOUSE, News. 9.10—Fantasy. 9.45—Paris Programme.

SOTTENS, 8.5—Geneva Motet Society. 8.25—Concert. 8.55—Motet Society (contd.). **STOCKHOLM**, Christmas Greetings to Sailors at Sea. 8.45—News. 8.55—Records. **STRASBOURG**, News (German). 8.15—Records. 8.30—See Paris (PTT).
TOULOUSE, News. 8.15—Variety. 8.55—News.
VIENNA, "Homeland Carols"—Wiener Sängerknaben. Conductor: Gruber. Wolkensteiner Choir, Ganglbeger Orchestra. Address by Chancellor Schuschnigg.
WARSAW, Exchange Programme (contd.). 8.30—"Christmas Eve Legend"—Pastoral Poem.

VIENNA, "Call of the Homeland" (contd.). 9.10—News. 9.20—The Voices of the Emperors Franz Joseph and Karl on Records. 9.30—Records.
WARSAW, Poem (contd.). 9.10—Christmas Oratorio (Bach).
ATHLONE, Variety. 10.30—News. **BERLIN**, Light Music. **BEROMÜNSTER**, Notes. 10.50—Midnight Mass. **BUDAPEST (1)**, Symphony (Beethoven) (contd.).
COLOGNE, See Leipzig. 10.30—Unfinished Symphony (Schubert) (Records).
DEUTSCHLANDSENDER, Christmas Concert.
EIFFEL TOWER, Gala Programme (contd.).
HAMBURG, 10.10—"A Christmas Carol"—Play after Dickens, with Music. **HILVERSUM (1,875 m.)**, Orchestra. 10.10—Choir. Conductor: Timmermans. (Carillon). 10.40—Service. **HILVERSUM (301.5 m.)**, Play (contd.). 10.10—Records. 10.40—Service.
LEIPZIG, Oratorio (contd.). 10.30—Play with Music.
MOSCOW, Spanish Talk. 10.30—Portuguese Talk. **MÜNICH**, **FRANKFURT**, "Heilige Nacht" (contd.).
PARIS (PTT), Plays (contd.). 10.30—News. 10.45—French Carols. **POSTE PARISIEN**, Concert (contd.). **PRAGUE**, Play. 10.25—Records. 10.45—Sketch. 10.55—Chimes.
RADIO-NORMANDIE, Variety. **RADIO-PARIS**, Oratorio (contd.). 10.45—News. **ROME** and **TURIN**, News; Dance Music. 10.40—Talk: The Birth of Christ. 10.55—Midnight Mass.
SOTTENS, Sketch (contd.). 10.20—"The Nativity". 10.35—Sacred Concert. **STOCKHOLM**, Records. **STRASBOURG**, See Paris (PTT). 10.30—News. 10.45—Service. **STUTTGART** and **MOST GERMAN STATIONS**, Folk Programme (contd.).
TOULOUSE, Paris Programme. 10.15—Music. 10.55—News.
VIENNA, Records.
WARSAW, Oratorio (contd.). 10.10—Poems. 10.30—Midnight Mass.

11 p.m.

BRATISLAVA, Midnight Mass. **BEROMÜNSTER** Mass (contd.). **BUDAPEST (1)**, Midnight Mass. **HILVERSUM (1,875 m.)**, Service (contd.). **HILVERSUM (301.5 m.)**, Service. 11.35—Christmas Bells. **MONTE CENERI**, Midnight Mass. **MOSCOW**, Spanish Talk. **PARIS (PTT)**, carols (contd.). **POSTE PARISIEN**, Concert (contd.). **PRAGUE**, Midnight Mass. **RADIO-NORMANDIE**, Midnight Mass. **RADIO-PARIS**, Dance Music. **ROME** and **TURIN**, Mass (contd.). **SOTTENS**, Midnight Mass. **STRASBOURG**, Service (contd.). 11.30—News (German). 11.50—Midnight Mass. **STUTTGART** and **FRANKFURT**, "Nostalgia"—Christmas Sequence.
TOULOUSE, Fantasy. 11.20—Light Music.
VIENNA, Midnight Mass.
WARSAW, Midnight Mass.

ATHLONE, Variety. 10.30—News. **BERLIN**, Light Music. **BEROMÜNSTER**, Notes. 10.50—Midnight Mass. **BUDAPEST (1)**, Symphony (Beethoven) (contd.).
COLOGNE, See Leipzig. 10.30—Unfinished Symphony (Schubert) (Records).
DEUTSCHLANDSENDER, Christmas Concert.
EIFFEL TOWER, Gala Programme (contd.).
HAMBURG, 10.10—"A Christmas Carol"—Play after Dickens, with Music. **HILVERSUM (1,875 m.)**, Orchestra. 10.10—Choir. Conductor: Timmermans. (Carillon). 10.40—Service. **HILVERSUM (301.5 m.)**, Play (contd.). 10.10—Records. 10.40—Service.
LEIPZIG, Oratorio (contd.). 10.30—Play with Music.
MOSCOW, Spanish Talk. 10.30—Portuguese Talk. **MÜNICH**, **FRANKFURT**, "Heilige Nacht" (contd.).
PARIS (PTT), Plays (contd.). 10.30—News. 10.45—French Carols. **POSTE PARISIEN**, Concert (contd.). **PRAGUE**, Play. 10.25—Records. 10.45—Sketch. 10.55—Chimes.
RADIO-NORMANDIE, Variety. **RADIO-PARIS**, Oratorio (contd.). 10.45—News. **ROME** and **TURIN**, News; Dance Music. 10.40—Talk: The Birth of Christ. 10.55—Midnight Mass.
SOTTENS, Sketch (contd.). 10.20—"The Nativity". 10.35—Sacred Concert. **STOCKHOLM**, Records. **STRASBOURG**, See Paris (PTT). 10.30—News. 10.45—Service. **STUTTGART** and **MOST GERMAN STATIONS**, Folk Programme (contd.).
TOULOUSE, Paris Programme. 10.15—Music. 10.55—News.
VIENNA, Records.
WARSAW, Oratorio (contd.). 10.10—Poems. 10.30—Midnight Mass.

ATHLONE: Christmas music.
Stockholm: Christmas songs and greetings to Sailors.
Rome, Turin: Nativity music.
Hilversum (301.5 m.): Orch., song, violin.
Deutschlandsender: Station Orchestra.
Poste Parisien: Christmas concert.
Eiffel Tower: Hospitals' Gala.
Hamburg: Military Band.
Rome, Turin: Orchestra, organ.
OPERAS
Paris (PTT): Two Christmas operas. Stuttgart, Frankfurt: "Hänsel and Gretel" (rec.).
RECITALS
National: Carols from King's College.
Budapest 1: Chimes, organ (6.30).
Warsaw: Song, pft., violin.
Radio-Paris: Old carols, cello music.
Vienna: Carols.
Leipzig, etc.: German chimes.
PLAYS
Radio-Paris: Classic comedies.
Beromünster: "Das Gotteskind."
Hamburg: "A Christmas Carol"
Leipzig: "Die Nacht des Hirten."
LAST NEWS BULLETINS, see Monday
DANCE MUSIC
Sottens; 10.25, Regional; 11.15, National; 12.0 (to 3 a.m.), Paris (PTT); 12.0 (to 2 a.m.), Poste Parisien.

12 midnight

BRATISLAVA, Mass (contd.). **PARIS (PTT)**, Dance Band. **POSTE PARISIEN**, Dance Records. **PRAGUE**, Mass (contd.). **SOTTENS**, Mass (contd.). **STRASBOURG**, Mass (contd.). **STUTTGART** and **FRANKFURT**, Records: "Hänsel and Gretel" (Humperdinck).
TOULOUSE, Carols. 12.30—Light Music.
1 a.m. (Friday)
PARIS (PTT), Dance Band. **POSTE PARISIEN**, Dance Records.
RADIO-NORMANDIE, Records. 1.15—Dance Records. 1.30—Orchestra.
TOULOUSE, Light Music.
2 a.m.
PARIS (PTT), Dance Band.

THURSDAY (December 24)

NATIONAL

For Time Signals, see Monday
10.15 a.m. (D)—Service.
10.30 (D)—Weather Forecast.
10.45—At Home To-day.
11.5—Records.
11.45—The BBC Welsh Orchestra; Margaret Wilkinson (Soprano).
12.45 p.m.—Merle Miller (Soprano); Roderick Lloyd (Bass-Baritone).
1.15—Charles Ernesco Quintet.
2.0—Eileen Pilcher (Contralto); The Bronkhurst Trio.
2.50 (ex. Scottish)—"This and That," John Hilton.
2.50 (Scottish)—Records.
3.10—Records.
3.25—Festival of nine Lessons and Carols from King's College Chapel, Cambridge.
4.45—The Cellini Trio.
5.15—Joe Loss and his Band.
6.0—The First News.
6.20—Talk by Commander R. T. Gould.
6.40—Mozart: Horace Green (Oboe); The London String Trio.
7.0—Boyd Neel String Orchestra.
8.0—Van Phillips' Two Orchestras.
8.30—Strange to Relate.
9.0—The Third News.
9.20—"Unto Us a Child is Born"—a Pageant of Christmas devised and produced by Robin Whitworth; The BBC Chorus and Orchestra.
10.5—Short Mid-Week Service.
10.25—The BBC Theatre Orchestra; Ernest Butcher (Baritone).
11.15—Lew Stone and his Band.
11.30-12.0—Dance Records.

REGIONAL

For Time Signals, see Monday
10.15-10.45 a.m.—Droitwich.
10.45—The BBC Northern Ireland Orchestra; Evelyn Gibb (Soprano).
11.45—Cinema Organ.
12.15 p.m.—Forum Orchestra.
1.15—Records.
2.0—Reginald Foort—Theatre Organ.
2.30—Royal Air Force Band.
3.15 (Scottish 4.0)—The Bournemouth Municipal Orchestra; Conductor, Richard Austin; Clifford Curzon (Pfte.).
3.30 (Scottish)—Mid-Week Service.
4.45—Records.
5.15—The Children's Hour.
6.0 (Regional)—Upper Norwood Salvation Army Band; Clifford Deri (Baritone).
6.0 (Midland)—Appleby Matthews (Pfte.).
6.0 (Western)—The Blaenclydach String Orchestra.
6.0 (Northern)—The BBC Northern Orchestra.
6.0 (N. Ireland)—Northern Ireland Brass Band, conducted by Edward Furness; William Whitford (Xylophone).
6.0 (Scottish)—Next Week You'll Hear 6.10—Saturday Sport.
6.15 (Midland)—The Teversall Colliery Band; Arthur Cranmer (Baritone).
6.20 (Scottish)—Wellesley Colliery Prize Band.
6.30 (Western)—Cinema Organ.
6.40 (N. Ireland)—Mrs. Rooney of Belfast and Mat Mulcaghey of County Tyrone, in "Christmas Crack."
7.0—The Second News.
7.20—Regional Announcements.
7.30 (Regional, Midland, Scottish)—Al Bollington—Theatre Organ.
7.30 (Western)—Welsh News.
7.30 (Northern)—Northern Carols sung by The Northumbrian Singers.
7.30 (N. Ireland)—Cinema Organ.
7.40 (Western)—"To-morrow will be Christmas."
7.55 (Scottish)—"A Bairn was Born."
8.0 (Regional, Western, N. Ireland)—Carol Service; BBC Chorus (Section C), and Military Band, conducted by Leslie Woodgate.
8.0 (Midland)—Christmas Carols; Peterborough Cathedral Choir.
8.0 (Northern)—"No Room."
8.15 (Northern)—Nativity Play, from the Cathedral, Blackburn.
8.30 (Regional, Western, N. Ireland)—Paul Beard (Violin).
8.30 (Midland)—"Club Night."
8.40 (Scottish)—Scottish Dance Music.
8.50 (Midland)—Leila Brittain (Pfte.).
9.0 (ex. Western, Scottish)—The Kentucky Minstrels.
9.0 (Western)—Welsh Programme.
9.10 (Scottish)—"Dick MacWhittington."
9.40 (Western)—Freda Samuel (Harp).
9.50 (Scottish)—Scottish News.
10.0—News Summary.
10.25—Lew Stone and his Band.
11.30—Late News Summary.
11.40-12.0 (ex. Scottish)—Records.
11.40 (Scottish)—BBC Scottish Singers, conducted by Ian Whyte.
11.50-12.0 (Scottish)—Readings.

Hours of Transmission in Greenwich Mean Time.

ATHLONE (Ireland)

565 kc/s (531 m.); 60 kW. Relayed by Dublin, 1,348 kc/s (222.6 m.); and Cork, 1,240 kc/s (241.9 m.).
1.30-3.0 p.m.—Records. 4.30—Christmas Carols from St. Patrick's Cathedral, Dublin. 5.30—"The Mummings"—a Christmas Eve Play (Sean Crawford).
6.15—Radio Orchestra. Conductor: Lieut. J. M. Doyle. Selection, "Chu Chin Chow" (Norton), Casino Tánze (Güngli).
6.35—Irish News Feature. 6.45—News. 7.0—Holiday Work in the Garden.
7.10—"A Visit from Father Christmas"—Helen Staunton with the Radio Orchestra. Conductor: Lieut. J. M. Doyle. Eileen O'Driscoll (Soprano). Christmas Medley (Aston), Christmas Bells (Eilenberg), Christmas (Tchaikowski).
8.0—Autobiography by Diarmuid O'Briain. 8.15—"Christmas comes but once a year"—Variety. 9.0—Christmas Poetry (in Irish)—L. S. Gogan. 9.15—"A Christmas Story. 9.30—Variety. 10.30-11.0—News.

BANSKÁ-BYSTRICA

(Czechoslovakia)
392 kc/s (765 m.); 30 kW.
Relays Czechoslovak Stations.

BERLIN (Germany)

841 kc/s (356.7 m.); 100 kW.
Transmits at intervals from 5.0 a.m. 11.0 a.m.-1.0 p.m.—See Frankfurt.
1.0—News; Records.
2.0—International Christmas Programme: Carols of America, Belgium, Italy, Yugoslavia, Poland and Sweden.
3.0—"Hansel and Gretel"—Fairy Opera (Humperdinck) (Recorded).
5.0—"The Candles burn on the Christmas Tree"—Programme by the Station Orchestra, Berlin Soloists Ensemble. Ramin Wind Instrument Ensemble, Höllger (Baritone), Ursula Prasch (Speaker).
7.0—"Holy Night"—Programme by the Station Choir, Orchestra and Artists. Conductors: Heinrich Steiner and Weigel Franziska Liebing and Paul Klinger (Recitations).
8.0—See Deutschlandsender.
8.20—"Holy Night" (cont'd.).
9.0-11.0—Light Music. Kauffmann Band, Jungherr Accordionists, Charlotte Toepfer (Soprano), Margarete Arnold (Contralto), Thiele and Hahn (Pftes.).

BEROMÜNSTER

(Switzerland)
556 kc/s (539.6 m.); 100 kW.
Relayed by Basle and Berne, 1,375 kc/s (218.2 m.).
11.0 a.m. (from Basle)—Opera, Operetta and Film Music. 11.29—News. 11.40-12.45 p.m.—Sextet. 3.0—Christmas Address for Invalids.
3.30-5.0—See Sottens.
5.0—Announcements. 5.10—Christmas Music. 5.40—"A Christmas Tale. 5.59—Christmas Music (Emil Holz). Zither Quartet, Elsa Holz (Songs), Welti (Oboe and Recitations). 6.30—News. 6.40—Christmas Poems.
7.0—Christmas Concert, by Geyer (Violin), Steingrube (Organ).
8.0—"Das Gotteskind"—Play with Music (Herrmann). 9.15—Announcements.
10.50-12.0 m't—Midnight Mass.

BRESLAU (Germany)

950 kc/s (315.8 m.); 100 kW. Relayed by Gleiwitz, 1,231 kc/s (243.7 m.).
Transmits at intervals from 4.0 a.m. 11.0 a.m.-1.0 p.m.—Orchestra and Dance Band. 1.0—News.
1.15—Variety from Deutschlandsender. 2.0—See Berlin. 3.0—Reading.
3.10—Clavichord, Spinnet, Harpsichord and Hammerklavier Recital. 3.40—Reading. 4.0—"Christmas Trees and Christmas Customs" (Recorded).
4.30—Music from Cologne.
5.0—See Deutschlandsender.
7.0—Christmas Songs and Tales, with Station Choir, Orchestra, Children's Choir, Singers, and Speakers (Recorded); at 8.0: See Berlin.
9.30-11.0—See Stuttgart.

BRUSSELS (No. 1) (Belgium)

620 kc/s (483.9 m.); 15 kW.
Transmits at intervals from 6.37 a.m. 5.0 p.m.—Jacques Stehmann (Pfte.).
5.30—For Children. 6.0—Art Review.
6.15—Salon Orchestra. Conductor: Féron. 6.45—Records. 7.0—International Labour Office Report. 7.15—Records. 7.30—Music Review.
8.0—Light Orchestral. 9.0—Talk for Young People. 9.15—"Christmas"—Topical Programme by Frédéric Denis.
9.45—Light Orchestral. 10.0—News.
10.10-12.0 m't—Records: Light Music.

BRUSSELS (No. 2) (Belgium)

932 kc/s (321.9 m.); 15 kW.
Programme in Flemish.
Transmits at intervals from 6.37 a.m. 5.0 p.m.—Light Instrumental.
6.0—Brenders Jazz Band. 6.25—Talk with Recitations in German and Flemish; Rainer Maria Rilke. Flemish Translations by Marix Gysen.
7.0—Das Marienleben (Hindemith) to Rainer Maria Rilke Text, by Flore Moulart-Maas, with Paul Collaer (Pfte.). 7.30—Art Review.
8.0—Koechlin Concert by the I.N.R. Symphony Orchestra, Choirs, and Singers, from the Conservatoire; Conductors: André and Weynandt. Part I. Music to Kipling's "Jungle Book." Introduction and Reading. Lullaby. Jungle Night Song. Kala Nag's Song. Part II. Symphonic Poem, La course de printemps.
8.45—"Decorated with the Star of Bethlehem"—Play (de Pilleycn); Music by Van der Avort.
9.30—I.N.R. Symphony Orchestra from the Conservatoire. Conductor: André. Symphony (Poot). Ballad. In memoriam Alban Berg (Van Durme). 10.0—News.
10.10—Commentary on the Six Days' Racing at Ghent.
10.25—Concert on Records. Part I. Lyric Suite (Alban Berg), The Creation (Milhaud). Part II. Noël for Organ (Daquin). Agnus Dei (Beethoven); European Carols: (a) France, (b) Austria, (c) Denmark, (d) Italy, (e) The Netherlands, (f) Belgium.
12.0 m't-1.30 a.m. (Friday)—Midnight Mass from Antwerp Cathedral.

BUCHAREST (Romania)

823 kc/s (364.5 m.); 12 kW.
Relayed by Radio-Romania (Brasov) 160 kc/s (1,875 m.).
Transmits at intervals from 4.30 a.m. 4.0 p.m.—Records: Sacred and Symphonic Music. 5.0—Time; Weather; Topical. 5.10—Christmas Music. Radio Orchestra. Conductor: Rogalski. 5.55—Talk.
6.15—Radio Orchestra. Conductor: Rogalski. In a toy-shop (Engelman). Carol (Dragoi). Five Romanian Christmas Carols (Cuclin). Weihnachtsen (Königsberger). 6.55—Carols (Brediceano), by Mme. Aca de Barbu. 7.15—Talk: "Christmas in different Countries." 8.30—News; Topical. 8.45—Gala Christmas Programme. 9.55—News.

BUDAPEST (No. 1) (Hungary)

546 kc/s (549.5 m.); 120 kW.
Transmits at intervals from 5.45 a.m. 4.25 p.m.—Opera Orchestra. Conductor: Fridl. 6.0—Chimes.
6.30—Organ Recital from the Academy of Music. 7.0—Station Orchestra. Conductor: Bertha. 8.10—Records. 9.30—Ninth Symphony (Beethoven), by the Philadelphia Symphony Orchestra (Records).
3.30-5.0—See Stuttgart.

BUDAPEST (No. 2) (Hungary)

359.5 kc/s (834.5 m.); 18 kW.
No Transmission.

COLOGNE (Germany)

658 kc/s (455.9 m.); 100 kW.
Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Frankfurt; at 12.0 noon—News. 1.0 p.m.—News.
1.15—Variety from Deutschlandsender. 2.0—Records. In the interval: The Microphone on a Christmas Trip.
3.0—Concert—Chamber Orchestra. Conductor: Hagestadt; Radio Schrammel Quartet; Helene Rott (Contralto), Fritzsche (Flute) and Kirst (Pfte.). 5.0—Cathedral Chimes. 5.45—Carols with Organ Accompaniment.
6.30—"German Christmas"—Contemporary Literature and Old Music. Trio Sonata in E minor (Buxtehude). Weihnachtspsalm (Euringer). Violin and Pfte.: Grave (Rust). Pfte. Pieces (Scarjatti). Poem: Gloria im Bergwerk (Stegeweit). Suite in B flat for Two Violin, Cello and Pfte. (Corelli). "Gespräch im Bauernhaus"—Scene (Gries). Pastoral for Flute, Cello and Pfte. (Vivaldi). Recitation: Und den Menschen ein Wohlgefallen (Helene Voigt-Diederichs). Pfte. Trio in D minor (Bossi).
8.0—See Deutschlandsender.
8.20—Chamber Music. Elisabeth Schmidt (Soprano), Isabella Schmitz (Violin), and Delscit (Pfte.). Larghetto (Handel). Sonata (J. C. Bach). Old German Carols. Variations in F minor (Haydn). Sonata in E (Bach). Old German Carols.
9.30—See Leipzig.
10.30-11.0—Unfinished Symphony (Schubert) (on Records), by the Berlin Philharmonic. Conductor: Kleiber.

DEUTSCHLANDSENDER

(Germany)
191 kc/s (1,571 m.); 60 kW.
Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Breslau. 12.45 p.m.—News.
1.0—Variety. 2.0—Christmas Variety. 3.0—"We decorate the Christmas Tree"—Programme by the Station Chamber Choir. Conductor: Aulich, von Gecky Band and Carla Spelter (Soprano). Lotte Braun (Recitations).
4.30—Lighting-up the Christmas Tree. 5.0—"Christmas"—Cathedral Bells, Carols, and Christmas Tales. 6.0—Christmas Greetings from the Deutschlandsender. Address by Goetz Otto Stoffregen. Station Chamber Choir. Conductor: Görner (Organ). Wind Band of the Berlin State Opera. Lutz Quartet. Boys' Choir. Hildegard Erdmann (Songs).
7.0—Christmas Eve Concert. Station Orchestra. Conductor: Libiszowski. Ballet, "Die Puppenfee" (Bayer), Selection, "Les petits riens" (Mozart). Intermezzo, "The Arabian Nights" (Strauss). The Nutcracker Suite (Tchaikovsky).
8.0—Christmas Address by Rudolf Hess, the Führer's Deputy.
8.20-9.45—Light Music. Station Orchestra. Conductor: Dobrindt, 10.0-11.0—Christmas Concert. von Gecky Band, Herbert Jäger and Leo Peukert.

FRANKFURT (Germany)

1,195 kc/s (251 m.); 25 kW.
Relayed by Cassel, Coblenz, Freiburg, and Trier, 1,195 kc/s (251 m.).
Transmits at intervals from 5.0 a.m. 11.0 a.m.—Orchestra. 1.0 p.m.—Records. 2.0—For Children.
3.0—American, Belgian, Italian, Yugoslav, Polish and Swedish Carols (Recorded).
4.0—Lubrich Chamber Music. Irmgard Overhoff (Soprano), the Composer (Pfte.). Pfte.: Nachtstück. Soprano Songs. Weihnachtspastorale.
4.30—Reading. 5.0—Christmas Chimes.
5.10—Carols by the Frankfurt Blind Choir. Conductor: Wörner.
5.45—Christmas Folk Music. Klehammer (Guitar), Mandoline Ensemble and Children's Choir.
7.0—See Hamburg.
8.0—See Deutschlandsender.
8.20—See Leipzig.
9.20—"Dreamland Music." Hauck Band. Overture, "Princess Golden Shoes" (Rust). Märchenwalzer (Heumann). Sonneberger Spielzeug (Ortleb). Violin Solo (Bazzini). Excerpt, Fairy-tale Suite (Suk).
9.40—See Munich.
11.0 p.m.-1.0 a.m. (Friday)—See Stuttgart.

HAMBURG (Germany)

904 kc/s (331.9 m.); 100 kW. Relayed by Bremen, Flensburg, Hannover, Magdeburg and Stettin, 1,330 kc/s (225.6 m.).
Transmits at intervals from 5.15 a.m. 11.0 a.m.—Orchestra. 12.0 noon—News.
12.15 p.m.—Music from Frankfurt. 1.0—News; Music. 2.0—Reading; Records.
2.45—Variety.
3.30—Programme from Deutschlandsender. 4.30—Records.
5.0—"Doll Dance"—Play for Young and Old (Albrecht); Music by Girnatis. Station Orchestra. Conductor: Secker. Women's Trio, Beckmann (Celesta and Pfte.). 6.0—Christmas Bells over the Heath. 6.20-6.50—Old Carols.
7.0—"Happy and Joyous"—A Merry Sledge Ride into the Land of Christmas (arr. Maasz). Station Choir. Conductor: Gregor. Station Orchestra; at 8.0—See Deutschlandsender.
9.0-10.0 (from Stettin)—Military Band. Conductor: Möller.
10.10-11.0—"A Christmas Carol"—Play (Bryholdt) after Dickens; Music by Lürman. Station Orchestra. Conductor: Schlemm.

HILVERSUM (1,875 m.)

(Holland)
160 kc/s; 10 kW. until 2.40 p.m.; 100 kW from 2.40 p.m.
7.40-8.55 a.m.—K.R.O. Programme: Records.
9.40—N.C.R.V. Religious Programme and Records.
10.40 a.m.-1.40 p.m.—K.R.O. Programme. 10.40—Records. 11.10—Religious Address. 11.40—Police Messages.
11.55—K.R.O. Orchestra. Conductor: van 't Woud, and Records. 1.40 p.m. till Close—K.R.O. Programme.
1.40—Records.
2.10-3.23—Children's Choir, from the Zoological Gardens, The Hague. 3.40—Bible Reading. 4.40—Handwerk. 5.10—Records.
5.25—v.d. Vegt Violin, de Castro

('Cello), v.d. Pas (Pfte.). In the interval: Records. 6.25—Talks; News; Christmas Story. 7.40—News. 7.55—To be announced.
8.40—N.C.R.V. Orchestra. Conductor: v.d. Hurk; at 9.40: News. 10.10—The Dutch Reformation Church Choir. Conductor: Pul. Timmermans (Carillon).
10.40-11.40—Christmas Service. Officiating Clergy: Rev. Dr. J. G. Geelkerken and Rev. J. J. Buskes, Jr.

HILVERSUM (301.5 m.)

(Holland)
995 kc/s; 15 kW until 2.40 p.m.; 60 kW from 2.40 p.m.
A.V.R.O. Programme.
7.40 a.m.—Time; Palla (Organ). 8.0—Records. 9.40—Service. 9.55—Records.
10.10—Groningen Orchestra. Conductor: Kuiler. Herman Blazer ('Cello). In the interval, Egbert Ven (Pfte.). 12.10 p.m.—Kovacs Lajos Orchestra. 1.10—Records.
1.40—A.V.R.O. Orchestra. Conductor: Treep. In the interval: Reading. 3.40—For Hospitals. 4.10—Records. 4.25—For Children. 5.10—Kovacs Lajos Orchestra. 5.55—Sports. 6.25—Christmas Carols. 6.40—For Children.
6.45—Old Music by the Quintetto Antiquo. 7.15—Talk: The Saint Country. 7.40—Time; News. 7.50—Concert. Aeolian Orchestra. Viskil (Tenor), Lensky (Violin).
8.40—"Scrooge and Marley"—Play after Dickens's "A Christmas Carol" (Veterman). 10.10—Records. 10.40—Service from the New Church, The Hague. 11.35-11.40—Christmas Bells.

KALUNDBORG (Denmark)

240 kc/s (1,250 m.); 160 kW.
Relays Copenhagen, 1,176 kc/s (255.1 m.).
Transmits at intervals from 6.0 a.m. 11.0 a.m.-1.0 p.m.—Bendix String Ensemble. 1.10—Christmas Songs by Harriet Vendelhaven.
1.30—Radio Orchestra. Conductor: Grøndahl. Hellemann (Danish Songs).
3.30—Christmas Eve Service from Copenhagen Cathedral. 4.30—Weather. 4.45—Talk. 5.15—Weather. 5.20—Greetings to Danish Sailors afloat: Danish Songs.
5.40—Ernst Nielsen (Pfte.). Sonata in D (Mozart). Rondo in E flat (Weber).
6.0—Time; News. 6.30—Reading. 7.0-8.15—Christmas Concert.

KÖNIGSBERG (Heilsberg)

(Germany)
1,031 kc/s (291 m.); 100 kW.
Relayed by Danzig, 1,303 kc/s (230.2 m.).
Transmits at intervals from 5.0 a.m. 11.0 a.m.-1.0 p.m.—See Frankfurt. 1.0—News; Records; Reading.
2.0—See Berlin.
3.0—Orchestra.
4.0—Christmas Vespers. Mixed Choir and Tollkühn (Organ). 5.0—Christmas with the Defence Forces. 5.30—Börschel Band. 6.30—"Stars over the Huts" (Menzel); Music by Henning.
7.0—See Breslau; at 8.0—See Deutschlandsender.
9.30-11.0—See Stuttgart.

LEIPZIG (Germany)

785 kc/s (382.2 m.); 120 kW.
Relayed by Dresden, 1,285 kc/s (233.5 m.).
Transmits at intervals from 5.0 a.m. 11.0 a.m.-1.0 p.m.—See Frankfurt. 1.0—News; Records. 2.0-3.0—Christmas Variety. 3.30—Reading. 4.0—Christmas Concert—Leipzig Trumpeter Corps. 4.20—Christmas Concert. Station Orchestra and Choirs. Ely Volkenrath (Soprano), Göpelt (Baritone), Luh (Violin). Wawrowsky ('Cello), Sammler (Pfte.). Overture, A Winter's Tale (Humperdinck). Choral, Ach, mein herzlichstes Jesulein (Bach). Grazioso (Gluck). Children's Choir: (a) Alle Jahre weider (Anschütz), (b) Ihr Hirten (arr. Kurt Wolf), (c) Über die Hüte weht der Wind (Dost). Minuet (Mozart). Baritone Songs (Cornelius): (a) Die Könige, (b) Der Christbaum. Christmas Pastorale (Müller), Cantata, "Ihr Kinderlein, kommet" (Rein). Andante, "Cello Concerto (Haydn). Presto-Finale from Symphony No. 88 (Haydn). Brich an, o schönes Morgenlicht (Bach). Nun singet und klinget dem Höchsten zu Ehren (Göhler). Cinderella's Wedding Polonaise (d'Albert). Gott sei gelobt (Gebhard). Nun sei uns willkommen (Rein). Zug der Zwerge (Grieg). Duets (Göhler): (a) Schneeflocken, (b) Schönster Tag. Variations on "Queen pastores laudavere" (Blumer). Cantata, "Grünet Felder, grünet Wissen" (Knab). Singt und klingt (Knab). Andante, Violin Concerto in D (Mozart). Old Carols: (a) Wach, Nachtigall, erwach (Werner), (b) Es blühen die Maien (Winkler). Excerpts, "Sleeping

Beauty" (Humperdinck). Hallelujah (Kiessig).
 6.0—Carols by Massed Choirs.
 7.0—See Berlin. 8.0—See Deutschlandsender.
 8.20—Christmas Chimes. Music by Ambrosius, with Carl Stueber, Helmut Andrae and the Leipzig Symphony Orchestra. Conductor: Blumer.
 9.30—"Christmas Oratorio" (Bach). Gewandhaus Choir. St. Thomas's Choir, Municipal and Gewandhaus Orchestras and Singers. Conductor: Ramin. 10.30-11.0 (from Dresden)—"Die Nacht des Hirten" (The Shepherd's Night)—Play (von Heiser); Music by Müller.

LILLE (Radio PTT Nord) (France)
 1,213 kc/s (247.3 m.); 60 kW.
 Transmits at intervals from 6.50 a.m. 8.0 p.m.—Time; Polish Programme. 8.15—Records. 8.30—French Songs. 10.30—"Souper de Noël"—Musical Comedy (Cools). 11.30—Dance Records. 12.0 m.—News.

MONTE CENERI (Switzerland)
 1,167 kc/s (257.1 m.); 15 kW.
 Transmits at intervals from 11.0 a.m. 6.0 p.m.—Duets. 6.15—Old Christmas Poems. 6.30—Duets. 6.45—News.
 7.0—"The Star of Bethlehem"—Christmas Music by Children's Choirs. Conductor: Filippello; and the Radio Orchestra. Four Pieces from "The Star of Bethlehem" (Filippello): (a) Christ is born, (b) Christmas, (c) The Song of the Angels, (d) Lullaby. Christmas (Malfetti). 7.15—Report: Christmas in the Mountains. 7.30—Organ Records.
 7.45—"If Christ came back"—Play (Wyrsch).
 8.40-9.0—Christmas Carols by Dora Wynn.
 11.0-12.0 m.—Midnight Mass from the Cathedral, Lugano.

MOSCOW (No. 1) (Russ'a)
 172 kc/s (1,744 m.); 500 kW.
 4.30 p.m.—Concert. 5.0—Red Army Notes. 5.15—Concerts. 8.0—German Peace Programme with Ernst Buschif: Talk, Songs, Poems. 9.5—French Talk: A Great Pacificist; Moscow Conservatoire Concert. 10.0—Spanish Talk: Collective Farms. 10.30—Portuguese Talk: Soviet Daily Life. 11.0—Spanish Talk: The Triokh-gornaja Textile Factory

MUNICH (Germany)
 740 kc/s (405.4 m.); 100 kW. Relayed by Nürnberg, 1,267 kc/s (236.8 m.).
 Transmits at intervals from 5.0 a.m. 11.0 a.m.—Light Orchestral. 12.45 p.m.—News.
 1.0-2.0—See Deutschlandsender. 3.0—"Anticipation"—Musical Christmas Programme. 5.0—Music.
 6.0—"The Peasant's Calendar"—December. 6.45—Orchestra.
 8.0—See Deutschlandsender. 8.20—See Leipzig.
 9.40-11.0—"Heilige Nacht"—An Old Bavarian Legend (Ludwig Thoma); Music by Kusche. Conductor: The Composer. 11.0-12.0 m.—Records.

OSLO (Norway)
 260 kc/s (1,153.8 m.); 60 kW. Relayed by Fredrikstad, 722 kc/s (415.4 m.); Hamar, 519 kc/s (578 m.); Notodden, 1,357 kc/s (221.1 m.); Porsgrund, 850 kc/s (352.9 m.); Rjukan, 1,348 kc/s (222.6 m.); and Trondelag, 629 kc/s (476.9 m.).
 Transmits at intervals from 10.40 a.m. 1.30 p.m.—Norwegian National Music. Vocal Quartet and Soloists. 2.0—Variety.
 3.0—Service.
 4.0—Variety. Walter Schubert Ensemble. Talk, Elisabeth Munthe Kaas (Songs), Reading by Fridtjof Krohn.
 5.30—Christmas Oratorio (Borch). 6.15—News. 6.30—Time; Christmas Eve in Finnmark.
 6.45—Christmas Carols by the Walter Schubert Ensemble. 7.40—Greetings to Norwegians Afloat and Abroad.
 8.10—Christmas Chimes. 8.20-8.30—Christmas Address by Johan Hauge.

PARIS (Eiffel Tower) (France)
 1,456 kc/s (206 m.); 5 kW.
 Transmits at intervals from 7.0 a.m. 7.0 p.m.—News. 7.20—Foreign Affairs. 7.45—Press Review. 7.55—Home Affairs.
 8.30—Gala Programme for Hospitals from the Palais de la Mutualité.

PARIS (Poste Parisien) (France)
 959 kc/s (312.8 m.); 60 kW.
 Transmits at intervals from 7.10 a.m. 12.0 noon—Exchange. 12.5 p.m.—Records; Military Band. 12.15—For Children. 12.35—Exchange. 12.39—Variety Concert. 1.15—For

Children. 1.35—Records. 2.0, 3.45, 4.35—Exchange.
 6.0—Call. 6.2—Records. 6.25—Talk. 6.30—Exchange. 6.35—For Children. 7.6—News. 7.32—Records. 7.47—Light Music. 8.2—Paul Reboux. 8.17—Frères Jacasse.
 8.22—Christmas Eve Concert. 12.0 m.—2.0 a.m. (Friday)—Dance Records.

PARIS (PTT) (France)
 695 kc/s (431.7 m.); 120 kW.
 Transmits at intervals from 6.50 a.m. 6.0 p.m.—Litaize (Organ). 6.30—News; Review. 7.25—Talk: Hygiene and Sport. 7.30—Weather. 7.38—Records. 7.45—Reading.
 8.0—Rosenfeld (Songs). Ariette (Rosa). Pierrrot (Debussy). Myrto (Delibes). Au Pardon (Lutz). Par les bois (Lazzari).
 8.15—Records.
 8.30—Christmas Operas: (a) "Les santon de la crèche"—Pastorale (de Saix), Music by Passani, (b) "Le passager de cette nuit-là"—Christmas Miracle (Schwebel), Music by Del-



Les Petits Chanteurs à la Croix de Bois, who sing carols at 10.45 p.m. (Paris, PTT)

annoy and Beydts. 10.30—News. 10.45—French Carols by "Les Petits Chanteurs à la Croix de Bois," from the Church of Saint-Germain-l'Auxerrois. Conductor: Abbé Mailliet.
 12.0 m.—de Souza Dance Band with Paul Sandra.
 1.30-3.0 a.m. (Friday)—Gaily Dance Band with Jean Sorbier.

PARIS (Radio-Paris) (France)
 182 kc/s (1,648 m.); 80 kW.
 6.45 a.m.—Gym. 7.0—Records. 7.15—News; Gym. 8.0—Records. 8.30 For Housewives. 9.0—For Scouts. 11.0—Seventh Symphony (Beethoven) by the Station Orchestra. Conductor: Fourstier. 11.30—For Farmers. 11.45—Protestant Address. 12.15 p.m.—Station Orchestra. Conductor: Fourstier; Jeanne Montagne (Songs); at 12.45: News; Review. 2.0—Review. 2.10—Reading. 2.30—Massenet Opera Records. 3.0—Records. 3.30—Reading. 3.50—Talk: Legends of Annam. 4.0—Fairies in Music (Records). 4.30—Records.
 5.0—Plays by the Odéon Players: (a) "L'école des bourgeois" (Allainval); (b) "Le cercle" (Poinsinet). 6.45—Talk: Christmas in France. 7.15—Talk. 7.25—Markets. 7.30—Home Affairs. 7.40—Reading.
 8.0—Lucile Telly (Songs). Reine Bessis (Cello). Part I: Old Carols. Old Provençal Carol (Saboli-Aubanel). Old Doyenne Carols (arr. Fragerolle). Auvergne Carols (Versepeuy). Voici les Santons (Bernard). Burgundian Carol (arr. Tiersot). Noël des enfants pauvres (Versepeuy). Part II: Cello. Adagio (Corelli). Esquisse (Karkinsky). La fille aux cheveux de lin (Debussy). Piece in C sharp minor (Boulanger). 8.30—News.
 8.45—Time; "L'Enfance du Christ"—Oratorio (Berlioz). Cast: Mme. Martinielli, Planel, Morturier, Kilng, Gilles, Payen. 10.45 (approx.)—News; Dance Music.

PRAGUE (Czechoslovakia)
 638 kc/s (470.2 m.); 120 kW.
 Transmits at intervals from 6.15 a.m. 5.20 p.m.—Bells of the Republic. 5.55—Christmas Songs and Carols by a Children's Choir. Conductor: Kühn. 6.10—Christmas Message.
 6.20—From the Fields and Groves of Bohemia (Smctana). Station Orchestra. Conductor: Jeremiás (Records). 6.35—Sketch. 6.50—FOK Orchestra.

Conductor: Parik. 8.0—Chimes. 8.2—"Christmas Gifts."
 8.10—Russian School Choir and Balalaika Band. 8.30—For Czechs Abroad. 8.40—Variety. 9.0—Time. 9.20—Records. 9.50—Play (Zeman). 10.25—Records. 10.45—Sketch. 10.55—Chimes.
 11.0 p.m.—12.30 a.m. (Friday)—Mass from the Franciscan Church.

RADIO-NORMANDIE (France)
 1,113 kc/s (269.5 m.); 10 kW.
 7.0 a.m.—Records. 7.10—News. 7.50—Records. 8.30—Light Music. 8.45—Records. 9.0—Dance Music. 9.15—Records. 9.30—Light Music. 10.0—Records. 10.15—Light Music. 10.30—Popular Music. 10.45—Records. 11.0—Songs. 12.0 noon—Recitations. 12.20 p.m.—Military Band. 12.40—News. 1.0—For Children. 2.30—Records. 3.0—Variety Concert. 3.30—Records. 3.45—Popular Music. 4.0—Concert. 4.45



—For Children. 5.0—Records. 5.15—Light Music. 5.30—Records. 5.45—Current London Productions. 6.0—Symphony Orchestra. 6.30—Cinema Notes. 6.45—Talk; News; Racing Results. 7.0—Concert. 7.40—News. 8.0—Light Music. 8.40—Talk.
 9.0—Variety Concert. 11.0—Midnight Mass, from Rouen Cathedral. 1.0 a.m. (Friday)—Records. 1.15—Dance Music. 1.30-2.0—Orchestra.

RADIO-ROMANIA (Brasov) (Romania)
 160 kc/s (1,875 m.); 150 kW.
 See Bucharest.

ROME (Italy)
 713 kc/s (420.8 m.); 50 kW. Relayed by Naples, 1,104 kc/s (271.7 m.); Bari (No. 1), 1,059 kc/s (283.3 m.); Bari (No. 2), Milan (No. 2) and Turin (No. 2), 1,357 kc/s (221.1 m.).
 Transmits at intervals from 6.45 a.m. 4.0 p.m.—News. 4.15—Christmas Music. 4.50—Weather. 5.0-5.10—Talk. 5.50—Dopolavoro Notes. 6.0—Records; Announcements and Talk (Spanish). 6.20—News in Foreign Languages. 7.5—Time; News. 7.30—Talk: the War in Ethiopia. 7.40—Nativity Music. Conductor: Previtali. 8.30—"The Bells"—Christmas Play (Casella). 9.0—Mathey (Organ) and G. Valle Gazetta (Soprano). 9.40—Dance Music; at 10.0—News. 10.40—Talk: The Birth of Christ. 10.55—Midnight Mass from the "Chiesa dell'Ara Coeli."

SOTTENS (Switzerland)
 677 kc/s (443.1 m.); 100 kW. Relayed by Geneva, 401 kc/s (748 m.).
 11.0 a.m.—12.45 p.m.—See Beromünster; at 11.30—News.
 3.30-7.0—From Geneva.
 3.30—Radio-Geneva String Quintet. 3.50—Concerto for Pfte., Violin, and String Quartet (Chausson). 4.20—Illaraz Dance Band. 5.0—Chimes. 5.15—"Eaux-Vives" Choir. Conductor: Pochon. 5.40—Interlude.
 6.20—"A Christmas Story"—One-Act Play in Verse (de Boucher). 6.50—News.
 7.0—See Monte Ceneri. 7.15 (from Geneva)—The Nightingale—Play after Hans Andersen.
 7.35—Concert.
 8.5 (from Geneva)—Geneva Motet Society. Conductor: Lydie Malan. Three Psalms. Choral (Nicolai). Choral (Bach): (a) Liebestor Jesu, wir sind hier, (b) Dir, Dir, Jehova will ich sinen.

8.25—Concert.
 8.55 (from Geneva)—Motet Society (contd.). Adoramus. Jesu dulcis (da Vittoria). Gaudet in coelis. Ave Maria (Arcadelt). Holy Night. L'hiver sera et l'Esté variable (Arcadelt). Carol (Praetorius).
 9.15 till Close—From Geneva:
 9.15—"On the Track of Father Christmas." 9.35—Interlude.
 9.50—"Christmas in Sweden"—Sketch (Rudhardt). 10.20—"The Nativity." Sacred Concert from St. Joseph's Church. Christmas Nocturnes (Montillet). Te Deum. Mass. Tu es sacerdos (Montillet). Alma Redemptoris (Palestrina). Christus natus est (Clérambault). Carols (Carraz, Maeder, Bach, etc.).
 11.0 p.m. (approx.)—12.30 a.m. (Friday)—Midnight Mass from St. Joseph's Church, Geneva.

STOCKHOLM (Sweden)
 704 kc/s (426.1 m.); 55 kW. Relayed by Motala, 216 kc/s (1,389 m.); Göteborg, 941 kc/s (318.8 m.); Hörby, 1,131 kc/s (265.3 m.); and Boden, 392 kc/s (765 m.).
 Transmits at intervals from 6.20 a.m. 4.5 p.m.—Service. 5.15—Dance Music. 6.15—News. 6.30—Report. 7.30—Christmas Carols. 8.0—Christmas Greetings to Sailors at Sea. 8.45—News. 8.55-10.30—Records.

STRASBOURG (France)
 859 kc/s (349.2 m.); 100 kW.
 Transmits at intervals from 6.45 a.m. 6.0 p.m.—"Douce nuit, sainte nuit"—Christmas Play after Stifter (Nougès). 6.30—News; Reviews. 7.15—Records. 7.30—News (French, German). 8.15—Christmas Carol Records.
 8.30—See Paris (PTT). 10.30—News. 10.45—Christmas Eve Service from St. William's Church. 11.30—News (German).
 11.50—Midnight Mass from Strasbourg Cathedral.

STUTTGART (Germany)
 574 kc/s (522.6 m.); 100 kW.
 Transmits at intervals from 5.0 a.m. 11.0 a.m.—1.0 p.m.—See Frankfurt. 1.0 p.m.—See Deutschlandsender. 2.0—See Berlin.
 3.0—See Deutschlandsender; at 3.50: Congratulations to Parents of Large Families. 4.30—"Peeping through the Keyhole" (Reichert).
 5.0—Christmas Concert. Station Artists, Choir and Orchestra. Conductor: Schröder. Band.
 7.0—"Father and Son and the Distribution of Presents"—Programme by Willy Reichert, Karl Berlin, Brändle Quintet, Wassielke and Charlotte Nitsch-Wiegand (Bandonion and Pfte. Duo), Meister and Ladewig (Pftes.), Monarzik (Accordion), and his Six-year-old Son.
 8.0—See Deutschlandsender.
 8.20—See Leipzig.
 9.30—"Listen, Footsteps in the Snow!"—Christmas Folk Programme. Peasant Band, Stuttgart Folk Music Society and Artists.
 11.0 p.m.—"Nostalgia"—Christmas Sequence (Sonnen).
 12.0 m.—1.0 a.m. (Friday)—Records: "Hänsel and Gretel"—Fairy Opera (Humperdinck).

TOULOUSE (Radio-Toulouse) (France)
 913 kc/s (328.6 m.); 60 kW.
 Transmits at intervals from 8.0 a.m. 8.15 p.m.—Variety. 8.55—News. 9.10—"Noël de Chez-Nous"—Fantasy. 9.45—Paris Programme. 10.15—Carols. 10.40—Military Band. 10.55—News. 11.0—"Joujou de Noël"—Fantasy. 11.20—Viennese Orchestra. 11.40—Light Music. 11.55—News. 12.0 m.—Carols. 12.30 a.m. (Friday)—Variety Music. 2.0—Announcements.

TURIN (No. 1) (Italy)
 1,140 kc/s (263.2 m.); 7 kW. Relayed by Milan (No. 1), 814 kc/s (368.6 m.); Genoa, 986 kc/s (304.3 m.); Trieste, 1,140 kc/s (263.2 m.); Florence, 610 kc/s (491.8 m.); Bolzano, 536 kc/s (559.7 m.); and Rome (No. 3), 1,258 kc/s (238.5 m.).
 Transmits at intervals from 6.45 a.m. 4.0-6.0 p.m.—See Rome. 6.0—News in Foreign Languages.
 7.5 till Close Down—See Rome.

VIENNA (Austria)
 592 kc/s (506.8 m.); 100 kW. Relayed by Graz and Linz, 886 kc/s (338.6 m.); Innsbruck, 519 kc/s (578 m.); Klagenfurt and Vorarlberg, 1,294 kc/s (231.8 m.); and

THURSDAY (December 24)

Salzburg, 1,348 kc/s (222.6 m.).
 Transmits at intervals from 5.45 a.m. 11.0 a.m.—Vienna Women's Symphony Orchestra. Conductor: Lehnert. Christmas Concerto (Corelli). Angelus (Liszt). Little Serenade for Strings (Lars-Larsson). Intermezzo (Brahms). Suite for Strings (Hofmann). 12.0 noon—News.

12.10 p.m.—Orchestra (contd.). Prelude and Fugue (Esterhazy). Serenade (Dvořák). 1.0—Norwegian Carols (Records). 1.15—Announcements. 2.0—News.

2.15—"A Christmas Carol"—Play after Dickens (Rossi); 3.45 (approx.)—Children's Competition Announcements. 3.55—News.

4.0—Hofmusikkapelle Concert. Conductor: Grossman. Christnacht (Wolf). Es ist ein Ros entsprungen (Praetorius). Heilige Nacht (Tausche). Eia (Reiter). Hirtenlieder (Rebay). Tyrolese Carols (arr. Scholtys). Stille Nacht, heilige Nacht (Gruber).
 5.0—"Christmas in the Tyrolese Alps"—Report with Records. 5.35—Reading: Christmas Thoughts (Heinrich Suso Waldeck). 6.0—News.

6.15—Vienna Chamber Orchestra. Conductor: Auderieth. Overture, "Tsar and Carpenter" (Lortzing). Symphony in E flat (Mozart). Fantasia in F minor (Schubert-Mottl). Selection, "Hänsel and Gretel" (Humperdinck). 7.40—Reading.

8.0—"Call of the Homeland"—Wiener Sängerknaben. Conductor: Gruber. Wolkensteiner Choir and Ganglberger Orchestra. Address by Chancellor Schuschnigg. Part I: Wiener Sängerknaben. Adeste fidelis. O regem coeli (Vittoria). Hodie Christus natus est (Nani nus). Laudate Dominum (Mozart). Purificancie (Herbeck). Two Tyrolese Carols. Christmas Motet on "Stille Nacht, heilige Nacht" (Lechthaler). Part II: Wolkensteiner Choir. Part III: Orchestra. Schlummerliedchen (Kockert). Heinezmännchen (Hellmesberger). Ave Maria (Schubert). Potpourri, Tirol in Lied und Tanz (Feiras). 9.10—News.

9.20—The Voices of the Emperors Franz Joseph and Karl (on Records). 9.30—Records. 10.20—Announcements.

WARSAW (Poland)
 224 kc/s (1,339 m.); 120 kW. Relayed by Cracow, 1,022 kc/s (293.5 m.); Katowice, 758 kc/s (395.8 m.); Łódź, 1,339 kc/s (224 m.); Lwów, 795 kc/s (377.4 m.); Poznań, 868 kc/s (345.6 m.); Torun, 986 kc/s (304.3 m.); and Wilno, 536 kc/s (559.7 m.).
 Transmits at intervals from 5.30 a.m. 11.3 a.m.—Records. 11.40—News. 11.50-12.0 noon—For Farmers. 12.0 p.m.—See Berlin. 3.0—Letters. 3.10—Report: Warsaw. 3.25—Announcements. 3.30—Station Orchestra. Conductor: Górzyski. 4.0—For Children. 4.30 (from Lwów)—Report: Christmas Eve. 4.45 (from Lwów)—Carols (Soltys) by the Quartet of the Polish Music Society. 5.0—Recitation. 5.15—Lwów, Katowice, Łódź, Torun, and Warsaw Exchange Programme—Christmas Eve at Home and Abroad. 5.55—"Bethlehem"—Musical Programme. 7.0—Talk: Polish Stations Exchange Programme.

7.10—Poznań, Katowice, Warsaw Exchange Programme. Wanda Roessler-Stokowska (Songs) from Poznań, Brachocka (Pfte.) from Katowice, Roessner (Violin) from Warsaw. Violin: Suite (Sinding). Songs: (a) Christmas Night (Grieg), (b) Cradle Song (Humperdinck), (c) Légende du Christ (Tchaikovsky). Pfte. Variations in A minor (Paderewski). (b) Romance (Zelenki), (b) Cracovienne (Zarzycki), (c) Burlesque (Andrejewski), (d) Chant de Roxane (Szymanowski). Three Songs. Pfte.: (a) Etude in B flat minor (Szymanowski), (b) Solitude (Stojowski).
 8.30 (from Lwów)—"Christmas Eve Legend"—Pastoral Poem (Kowalcuk-Lipczynski) by Municipal Theatre Artists and a Male Voice Choir.

9.10 (from Wilno)—Christmas Oratorio (Bach). Echo and Conservatoire Choirs. Conductor: Kalinowski. String Orchestra. Conductor: Lewicki. Wanda Hendrich (Soprano), Dal (Contralto). 10.10 (from Poznań)—Poems.
 10.30 (from Poznań)—Midnight Mass from the Church of Gniezno.

FRIDAY December 25

4 p.m.

BEROMÜNSTER, "Hans im Glück"—Fairy Play (Korény-Scheck). **BRNO**, 4.35—German Transmission: "Flotte Bürsche"—Operetta (Suppé). **BUCHAREST** and **RADIO-ROMANIA**, Light Music. **DEUTSCHLANDSENDER**, "The Parade of the Tin Soldiers"—Christmas Play (Kleineberg) with Music by Sobanski (Recorded). **HAMBURG**, Variety. **HILVERSUM** (1,875 m.), Orchestra. 4.30—Records. 4.40—Church Choir and Records. **HILVERSUM** (301.5 m.), For Children. **LEIPZIG** and **SOME GERMAN STATIONS**, "Das Christelflein"—Fairy Opera (Pitzner). Conductor: The Composer (Recorded). **MOSCOW**, 4.30—Arctic Notes. **OSLO**, Johansen Ensemble. **PARIS (PTT)**, Concert for Children. Orchestra. Children's Choir, Marguerite Piñeteau (Songs) and Carmen Guilbert (Pfte.). **PRAGUE**, 4.35—German Transmission: Nativity Play. **RADIO-NORMANDIE**, Concert. 4.45—For Children. **RADIO-PARIS**, Records! Famous Choirs. 4.30—Records! Famous Violinists. **ROME**, News. 4.15—Orchestra. 4.50—Report. **STOCKHOLM**, Light Music. **STRASBOURG**, Christmas Concert. Orchestra. Conductor: Bour (Pfte.), Records. **TURIN**, News. 4.15—Orchestra. 4.50—Report. **VIENNA**, Records. 4.25—Talk. 4.45—Military Band. Conductor: Wacek. **WARSAW**, 4.30—Variety.

5 p.m.

ATHLONE, 5.30—The President greets the Nation. 5.40—A Children's Party from St. Ultan's Hospital, Dublin. **BERLIN**, Gay Songs and Melodies. **BEROMÜNSTER**, 5.5—The Swiss Singers. 5.25—Roman Catholic Service. **BRATISLAVA**, Hungarian Transmission: Christmas Play after Dickens. 5.45—Sports. 5.50—See Prague. **BRESLAU**, "The Quarrel about Jolanthe"—Folk Comedy (Hinrichs) with Music (Recorded). **BRNO**, "Flotte Bürsche" (cont'd.). 5.50—See Prague. **BUCHAREST** and **RADIO-ROMANIA**, Topical; Light Music. **BUDAPEST (I)**, Cigány Band. **COLOGNE**, Report. 5.15—Songs. 5.45—Pfte. Sonata in D (Haydn). **DEUTSCHLANDSENDER**, "Melodies from North and South." Orchestra, Instrumental Quartet. **HAMBURG**, A Christmas Legend (Herbert Scheffler) with Music by Siegfried Scheffler. 5.30—Band. **HILVERSUM** (1,875 m.), Choir and Records (cont'd.). 5.30—Service. **HILVERSUM** (301.5 m.), 5.10—V.A.R.A. Orchestra; at 5.40: Address. **KALUNDBORG**, Laumann (Organ), from Fredriksborg Castle. 5.30—Reading. **KÖNIGSBERG**, Report. 5.15—Southern Tyrolean Carols, by the Berlin (Deutschlandsender) Choir and Edith Hölzl (Soprano). **LEIPZIG**, "Das Christelflein" (cont'd.). **MOSCOW**, 5.15—Concerts. **MUNICH**, "The Game of Games"—Play about Chess (Steck). **OSLO**, "Christmas Eve"—Play (Fast-bom). 5.30—Pfte., Songs, Violin. **PARIS (PTT)**, Report. 5.15—Reading; 5.30—"Le miracle de Théophile", by the "Groupe des Théophilènes" of the Sorbonne. **PRAGUE**, Nativity Play (cont'd.). 5.50—News and Review (German). **RADIO-NORMANDIE**, Records. 5.15—Light Music. 5.45—Current London Productions. **RADIO-PARIS**, Reading. 5.20—Films. 5.30—Poulet Concert Orchestra. Albert Lévêque (Pfte.) (Boellmann, Dubois, Fauré, Bach). **SOTTENS**, 5.25—Christmas Vespers. **STOCKHOLM**, Evensong. **STRASBOURG**, Concert (cont'd.). 5.15—Talk. 5.30—Christmas Stories in Alsatian Dialect. **STUTTGART** and **FRANKFURT**, String Quartet and Others. In the interval: Readings. **TOULOUSE**, Band. 5.15—Songs. 5.35—Dance Music. 5.55—News. **VIENNA**, Military Band (cont'd.). **WARSAW**, Dance Music.

6 p.m.

ATHLONE, Children's Party (cont'd.). 6.20—We work today.—Talks. 6.45—Christmas Greetings.—Radio Orchestra and Vocal Quartet. **BERLIN**, "A Christmas Legend"—Play (Raschke) with Music. **BEROMÜNSTER**, Old Christmas Carols. 6.30—News. 6.40—Music. 6.50—"The Christ Child in Flanders"—Play after Timmermans (Dora May). **BRESLAU**, Folk Comedy (cont'd.). **BRNO**, 6.25—Talk. 6.30—"The Bartered Bride"—Opera (Smetana). **BUCHAREST** and **RADIO-ROMANIA**, Tanasa and his Music Hall Group. 6.45—Talk. **BUDAPEST (I)**, Talk. 6.30—Orchestra. **COLOGNE**, Quintet. 6.45—Sports. **DEUTSCHLANDSENDER**, Melodies (cont'd.). 6.40—Sports. **HAMBURG**, Band. 6.35—A Visit to the Hamburg Dom Fair. 6.50—Weather. **HILVERSUM** (1,875 m.),

7 p.m.

ATHLONE, Orchestra and Vocal Quartet (cont'd.). 7.30—Benediction from Mt. St. Alphonsus, Limerick. **BERLIN**, Gala Concert. Orchestra, Choir, Baritone. **BEROMÜNSTER**, Play (cont'd.). 7.20—Orchestra. **BRATISLAVA** and **PRAGUE**, Oscar Nedbal Concert. Orchestra. Conductor: Karel Nedbal. "Cello. In the interval: Anecdotes. **BRESLAU**, Orchestra, Band. **BRNO**, "The Bartered Bride" (cont'd.). **BUCHAREST** and **RADIO-ROMANIA**, Cabaret Music. **BUDAPEST (I)**, Orchestra. 7.10—"Christmas"—Play after Karl May (Vándor). **COLOGNE**, Gala Concert. Conductor: Müntzer. Kläre Hansen. (Soprano) and Kaldeweier (Bass). **DEUTSCHLANDSENDER**, Orchestra. Raba (Violin), Stech and Vultee (Pftes.). (Schillings, Liszt, Richard Strauss, Dvořák). **EIFFEL TOWER**, News. 7.30—Foreign Affairs, Talk, Notes. 7.45—Press Review. 7.55—Talk. **HILVERSUM** (1,875 m.), Sacred Music. 7.25—Talk, News. 7.50—

PRINCIPAL EVENTS

SERVICES AND SACRED MUSIC

12.30 Radio-Paris: Address.
1.0 Kalundborg: Service.
3.10 Hilversum (301.5 m.): Carols.
5.0 Stockholm: Evensong.

SYMPHONY CONCERTS

7.0 Cologne: Orchestral and vocal.
7.0 Deutschlandsender: Dvořák, etc.
7.0 Leipzig: Conductor, Weisbach.
7.0 Sottens: Christmas Oratorio (Bach).
7.20 Regional: Humperdinck, Wagner, Dvořák.

LIGHT CONCERTS

3.30 Kalundborg: Radio Orchestra.
4.0 Strasburg: Christmas music.
5.0 Deutschlandsender: Melodies.
6.30 Radio-Paris: French programme.
7.0 Königsberg: Orchestra, soprano.
7.0 Stuttgart, etc.: Variety concert.
7.40 Rome: Folk music.
8.0 Beromünster: Christmas programme.
8.50 Athlone: Christmas concert.
9.0 Stockholm: Chamber orch., songs.
9.20 British stations: Music for Christmas.
11.40 Radio-Paris, Strasburg: Popular orch.

OPERAS

2.0 Budapest 1: "Hänsel and Gretel."
4.0 Leipzig: "Das Christelflein."

Service; Sacred Music. **HILVERSUM** (301.5 m.), Orchestra. 6.40—Talk: Records.

KALUNDBORG, News. 6.30—Talk: Goethe. **KÖNIGSBERG**, Records. 6.30—"Dinner is served"—Gay Table Talk.

LEIPZIG, "Long live the Railway"—Play (Lange) with Music. **MOSCOW**, Concert. **MUNICH**,—Records.

OSLO, Pfte., Songs, Violin (cont'd.). 6.15—News. 6.30—Variety.

PARIS (PTT), "Le miracle de Théophile" (cont'd.). 6.30—News. **POSTE PARISIEN**, 6.2—Talks. 6.15—Debussy Records. 6.22—Talks: Exchange; For Women. **PRAGUE** and **BRATISLAVA**, News. 6.5—Variety.

RADIO-NORMANDIE, L'enfant (Carillon) from Rouen Cathedral. **RADIO-PARIS**, For Women. 6.30—French Music. Poulet Concert Orchestra (Berlioz, Pierné, Debussy, Edmond-Mare).

SOTTENS, "The Cricket on the Hearth"—Play (Dickens). 6.50—News. **STOCKHOLM**, Evensong. 6.15—News. 6.30—Folk Songs. 6.50—Play. **STRASBOURG**, Stories (cont'd.). 6.30—Records. 6.45—See Vienna. **STUTTGART** and **FRANKFURT**, String Quartet and Others. 6.30—Records.

TOULOUSE, 6.5—Light Music. 6.50—News. **VIENNA**, Programme Notes. 6.10—Elisabeth Schumann (Soprano). (Cornelius, Wolf, Richard Strauss, Brahms). 6.45—"The Merry Widow"—Operetta (Lehár). Conductor: Holzer.

WARSAW, Dance Music. 6.8—Pastorals. 6.36—Warsaw-Poznań Exchange Programme. Szczepańska (Songs), from Warsaw. Dancowski ("Cello"), from Poznań.

6.30 Brno: "The Bartered Bride."
8.0 Radio-Paris: From the Opéra.
11.0 Stuttgart, Frankfurt: "Der Freischütz."

OPERETTA

6.45 Vienna, Strasburg: "The Merry Widow."

RECITALS

5.0 Kalundborg: Jens. Laumann, Frederiks-borg Castle organ.
5.30 Oslo: Christmas songs, etc.
6.36 Warsaw: Song, 'cello.

PLAYS

2.30 Radio-Paris: "Monsieur Pickwick."
5.30 Paris (PTT): "Le Miracle de Théophile."
6.50 Beromünster: Nativity Play.
7.0 Kalundborg: "Faust" (Goethe), pt. 1.
8.30 Paris (PTT), etc.: "Le Noël sur la Place" (Ghéon).
8.30 Regional: "The Christmas Journey."
8.45 Turin: "Natale" (Niccodemi).

LAST NEWS BULLETINS, see Monday.

DANCE MUSIC

8.15 Warsaw; 9.5, Hamburg; 9.25, Vienna; 9.40, Rome; 10.0, Deutschlandsender; 10.5, Budapest 1; 10.15, Turin; 10.20, Brussels 2; 10.30, Athlone; 10.45, Paris (PTT); 11.0 Brussels 1, National, Radio-Normandie.

K.R.O. Chamber Orchestra. Annie Woud (Contralto), Kloos (Baritone). **HILVERSUM** (301.5 m.), Records. 7.10—Concert.

KALUNDBORG, Part I: "Faust"—Tragedy (Goethe; trans. P. Hansen). Music by Lassen. **KÖNIGSBERG**, Station Orchestra. Elisabeth Hallstein (Soprano).

LEIPZIG, Leipzig Symphony Orchestra. Conductor: Weisbach. **MOSCOW**, Concert.

OSLO, Variety. **PARIS (PTT)**, Topical. 7.45—Clara Tambour-René Dorin. **POSTE PARISIEN**, For Women. 7.6—News. 7.26—Amusements. 7.33—Records. 7.48—For Women. 7.53—Light Music.

RADIO-NORMANDIE, Concert. 7.40—News. **RADIO-PARIS**, Orchestra (cont'd.). 7.30—Home Affairs. 7.40—Notes. 7.50—Dietetics. **ROME**, 7.5—News. 7.30—Talk. 7.40—Folk Concert.

SOTTENS, Christmas Oratorio (Bach) from Leipzig. Conductor: Ramin. **STOCKHOLM**, Play (cont'd.).

STRASBOURG, See Vienna. **STUTTGART**, **FRANKFURT**, **MUNICH** and **HAMBURG**, A Musical Picture-Book (arr. Ganss). Orchestra, Choir and Others. **TOULOUSE**, Light Music. 7.55—News. **TURIN**, 7.5—News. 7.30—Talk. 7.40—"Christmas in the Alps"—Sketch.

VIENNA, "The Merry Widow"—Operetta (Lehár) (cont'd.). **WARSAW**, Songs, "Cello" (cont'd.). 7.35—"Moustaches"—Comic-Opera (Dmusczewski).

8 p.m.

ATHLONE, What are the other Stations doing? 8.50—Christmas Music of the Nations. **BERLIN**, Concert (cont'd.). **BEROMÜNSTER**, "The Beauty of the World"—Christmas Programme.

BRATISLAVA, Talk. 8.15—Band. **BRESLAU**; Orchestra and Band (cont'd.). **BRNO**, "The Bartered Bride" (cont'd.). **BUCHAREST** and **RADIO-ROMANIA**, Cabaret Music. **BUDAPEST (I)**, Play (cont'd.). 8.40—News. **COLOGNE**, Concert (cont'd.). **DEUTSCHLANDSENDER**, Orchestra and Pfte. (cont'd.). **EIFFEL TOWER**, 8.5—Home Affairs. 8.30—Poetry.

HILVERSUM (1,875 m.), Orchestra and Songs (cont'd.). 8.35—Recitations. 8.45—K.R.O. Chamber Orchestra and Choir. Annie Woud (Contralto), Kloos (Baritone). **HILVERSUM** (301.5 m.), Concert. Address. 8.40—V.A.R.A. Orchestra.

KALUNDBORG, "Faust" (Goethe) (cont'd.). **KÖNIGSBERG**, Orchestra and Soprano (cont'd.). **LEIPZIG**, Symphony Orchestra (cont'd.).

MOSCOW, Czech Talks. **MUNICH**, See Stuttgart.

OSLO, Variety, Repôts. 8.50—News. **PARIS (PTT)**, Clara Tambour-René Dorin. 8.15—Sports. 8.30—"Le Noël sur la place" or "Les enfances de Jésus"—Nativity Play (Ghéon) by Comédie-Française Players.

STOCKHOLM, Chamber Orchestra. Greta Soderman (Songs). **STRASBOURG**, See Vienna. 9.15—News (French, German). **STUTTGART**, News; Records. 9.30—Programme from Deutschlandsender.

TOULOUSE, News. 9.10—Sketch. 9.45—Paris Programme. **TURIN**, Play (cont'd.). 9.15—Dance Music.

VIENNA, "The Merry Widow"—Operetta (Lehár) (cont'd.). 9.10—News. 9.25—Jaritz Jazz Band. **WARSAW**, Literary Programme. 9.45—Dance Records.

10 p.m.

ATHLONE, Variety. 10.30—Irish Dance Music.

BUDAPEST (I), 10.5—Jazz Band. **DEUTSCHLANDSENDER** and **MOST GERMAN STATIONS**, Dance Orchestra.

EIFFEL TOWER, Chamber Music (cont'd.).

HAMBURG, Dance Music. **HILVERSUM** (1,875 m.), "Comedy Harmonists" and Records. 10.40—Records. **HILVERSUM** (301.5 m.), Orchestra (cont'd.). 10.10—News. 10.20—Service. 10.40—Records.

MOSCOW, German Programme. **OSLO**, Orchestra (cont'd.).

PARIS (PTT), Nativity Play (cont'd.). 10.30—News. 10.45—Dance Band.

POSTE PARISIEN, Thriller (Strongtone) (cont'd.). **PRAGUE**, **BRATISLAVA** and **BRNO**, Orchestra.

RADIO-NORMANDIE, Concert. **RADIO-PARIS**, From the Opera (cont'd.). **ROME**, News. 10.15—Dance Music.

STRASBOURG, Records: Christmas in French Songs. 10.30—News.

TOULOUSE, Paris Programme. 10.15—Excerpts. "Le Jongleur de Notre Dame" (Massenet). 10.40—Dance Music; News. **TURIN**, News. 10.15—Dance Music.

VIENNA, Jazz Band (cont'd.). 10.30—Announcements. **WARSAW**, Dance Records.

11 p.m.

ATHLONE, Irish Dance Music. **DEUTSCHLANDSENDER**, Dance Records.

HAMBURG, Dance Music. **HILVERSUM** (1,875 m.), Records. **HILVERSUM** (301.5 m.), Records.

MOSCOW, Spanish Programme. **PARIS (PTT)**, Dance Band. **POSTE PARISIEN**, Thriller (Strongtone) (cont'd.).

RADIO-NORMANDIE, Dance Music. 11.30—From the Cabane Normande. **RADIO-PARIS**, From the Opera (cont'd.). 11.40—Orchestra, Conductor: Gaillard (Wagner, Saint-Saëns, Fauré, Respighi, Silver, Widor).

STRASBOURG, News in German. 11.15—Records. 11.40—See Radio-Paris. **STUTTGART** and **FRANKFURT**, "Der Freischütz"—Opera (Weber) (Recorded).

TOULOUSE, Light Music. 11.55—News.

12 midnight

RADIO-NORMANDIE, Dance Music. 12.30—Orchestra. **RADIO-PARIS** and **STRASBOURG**, Orchestra (cont'd.).

STUTTGART and **FRANKFURT**, "Der Freischütz" (cont'd.). **TOULOUSE**, 12.5—Light Music. 12.30—Notes.

1 a.m. (Saturday)

RADIO-NORMANDIE, Records. 1.30—Orchestra.

NATIONAL CHRISTMAS DAY

For Time Signals, see Monday 10.30 a.m. (D)—Weather Forecast. 10.45 (D)—Christmas Morning Service from St. George's Chapel, Windsor. Address by the Very Rev. The Dean of Windsor. 11.35—Records. 12.00—Reginald Dixon—Organ. 12.30 p.m.—The BBC Dance Orchestra, directed by Henry Hall. 1.15—The BBC Northern Orchestra; Conductor, T. H. Morrison. Norman Walker (Bass). 2.15—The Coventry Hippodrome Orchestra. 3.15—"Christmas Songs from the Continent." (Records.) 3.45—The Hastings Municipal Orchestra, Conductor, Julius Harrison; Henry Wendon (Tenor). 5.15—Bram Martin and his Dance Orchestra. 6.0—A Christmas Evening Service, from the Concert Hall, Broadcasting House. Address by the Rev. Leslie D. Weatherhead, of the City Temple. 6.50—Weather, Sports. 7.0—A Radio Christmas Party. 9.0—News Summary. 9.10—Wireless for the Blind—an appeal on behalf of The British Wireless for the Blind Fund by Christopher Stone, D.S.O., M.C. 9.20—"Music for Christmas"—A Concert for the Christmas Fireside from Scotland, Ireland, Wales, the Midlands, the North, and the West of England; The BBC Midland Orchestra, conducted by Leslie Heward; The Nantyffyllon Children's Choir and the BBO Welsh Orchestra, Conductor, Idris Lewis; St. Mary Redcliffe Choir, Bristol. The BBC Northern Ireland Orchestra, Conductor, E. Godfrey Brown; The Hallé Chorus and BBC Northern Orchestra, Conductor, T. H. Morrison. Isobel Baillie (Soprano); The BBC Scottish Orchestra, conducted by Ian Whyte. 11.0-12.0—Joe Lell and his Band, with Peggy Dell, Monte Rey, and Chick Henderson.

REGIONAL

For Time Signals, see Monday 10.30-10.45 a.m.—Droitwich. 11.35—The BBC Welsh Orchestra, conducted by Mansel Thomas; Margaret Tann-Williams (Contralto). 12.30 p.m.—Records. 1.15—Eugene Pini and his Tango Orchestra. 1.45—Reginald Foot—BBC Theatre Organ. 2.15—Heddle Nash (Tenor); Leslie England (Pfte.). 3.15—The BBC Military Band and Men's Chorus, conducted by B. Walton O'Donnell. 4.0—Dance Records. 4.30—"Adolf"—a Short Story by D. H. Lawrence, read by Arthur Calder Marshall. 4.45—The John MacArthur Quintet. 5.15—"The Children's Hour: "A Christmas Carol," by Charles Dickens, adapted as a play by Philip Wade. 6.0—Sydney Baynes and his Band. 6.50—Weather, Sports. 7.0 (ex. Western, Northern)—Keith Falkner (Baritone); Mighty Lord (Christmas Oratorio)—Bach; Weihnachtslieder—Cornelius; The Shepherds, The Three Wise Men from the East, Simon, Christ, the Children's Friend, The Christ Child. 7.0 (Western)—Songs of the Home; Walter Glynn (Tenor). 7.0 (Northern)—Christmas Day at Thorney How, Youth Hostel in the North of England. 7.20—The London Symphony Orchestra, led by George Stratton, conducted by Malcolm Sargent; Overture, Hänsel und Gretel (Humperdinck), Siegfried Idyll (Wagner), Symphony No. 5 in E minor—From the New World (Dvořák). 8.30 (ex. Western)—"The Christmas Journey"—a Masque of the Nativity, compiled and arranged by C. Denis Freeman and M. H. Allen; Music chosen and composed by Frederick Stevens. Cast includes: Edgar Norfolk, Hubert Gregg, Norman Shelley, Adrian Thomas, Mary O'Farrell. Singers conducted by Frederick Stevens. 8.30 (Western)—Gweld Bwgan—Welsh programme. 9.0—News Summary. 9.10 (ex. Regional)—Droitwich. 9.20 (ex. Scottish)—Henry Hall's Christmas Tree, specially decorated for the occasion with Turner Layton/Oliver Wakefield, Haver and Lee, Molly, Marie and Mary, Dan Donovan, George Elrick, The Music Makers, The BBC Dance Orchestra. 9.10-12.0 (Scottish)—Droitwich. 11.0-12.0—Droitwich.

Hours of Transmission in Greenwich Mean Time.

ATHLONE (Ireland) 565 kc/s (531 m.); 60 kW. Relayed by Dublin, 1,348 kc/s (222.6 m.); and Cork, 1,240 kc/s (241.9 m.). 12.00 noon—High Mass. 2.30-4.0 p.m.—Records. 5.30—The President greets the Nation. 5.40—A Children's Party from St. Ultan's Hospital, Dublin. 6.20—We work to-day: Newspaper Man, Hospital Staff Nurse, Railway Worker and Radio Announcer. 6.45—"Christmas Greetings"—Radio Orchestra and Vocal Quartet. Conductor: Lieut. J. M. Doyle. Compered by W. J. Lemass. Christmas Overture (Colebridge-Taylor), Christmas Memories (Finck), Dream of Christmas (Keteley). 7.30—Benediction from Redemptionist Church, Limerick. 8.0—"What are the Other Stations doing?" 8.50—Christmas Music of the Nations—J. Harold Douglas. 9.30—Variety. 10.30-12.0 m.—Irish Dance Music.

BANSKÁ-BYSTRICA (Czechoslovakia) 392 kc/s (765 m.); 30 kW. Relays Czechoslovak Stations.

BERLIN (Germany) 841 kc/s (356.7 m.); 100 kW. Transmits at intervals from 5.0 a.m. 9.30-10.15 a.m.—Schubert Recital by Käthe Heinemann (Pfte.). 11.0—See Cologne. 1.0-2.0 p.m.—Opera Records. 3.0—See Leipzig. 5.0—Gay Songs and Melodies. 6.0—"A Christmas Legend"—Play (Raschke). Music by Rosenberger. 7.0—Gala Concert. Station Orchestra and Choir. Conductor: Fiedler; Hüsch (Baritone). Pastoral Music from the Christmas Oratorio (Bach). Eine heitere Sinfonie (Haydn). Songs from "Weihnachtslieder" (Cornelius). Serenade (Fiedler). Songs (Wolf). Nutcracker Ballet (Tchaikovsky). Overture and Chorus. "The Merry Wives of Windsor" (Nicolaï). The Blue Danube (Strauss). 9.0—News. 9.5-11.0—See Deutschlandsender.

BEROMÜNSTER (Switzerland) 556 kc/s (539.6 m.); 100 kW. Relayed by Basle and Berne, 1,375 kc/s (218.2 m.). 9.0 a.m.—Protestant Service. 10.5—To be announced. 10.30—Hans Huber Memorial Service. 11.5—Radio Orchestra. Conductor: Hofmann; at 11.30—News. 12.30 p.m.—Folk Songs by a Basle Orphans' Choir. 1.0-1.30 (from Basle)—Christmas in the Wood. 4.0-6.30—Programme from Basle. 4.0—"Hans im Glück"—Fairy Play for Young and Old (Korény-Scheck). 5.5—The "Swiss Singers". 5.25—Roman Catholic Service from St. Clara's Church, Basle. 6.30—Old Christmas Carols. 6.30—News. 6.40—Music. 6.50—"The Christ Child in Flanders"—Play after Timmermans (Dora May). 7.20—Radio Orchestra. Conductor: Hofmann. 8.0—"The Beauty of the World"—Christmas Programme. 9.15—Announcements.

BRATISLAVA (Czechoslovakia) 1,004 kc/s (298.8 m.); 13.5 kW. Transmits at intervals from 6.0 a.m. 7.0 p.m.—Oscar Nedbal Commemoration Concert by the Station Orchestra. Conductor: Karel Nedbal, Simandl (Cello). Suite, "Lazy John". Cello: Romance and Caprice. Scherzo-Caprice. In the interval, Nedbal Anecdotes. 8.0—Talk: Christmas Eve in Siberia. 8.15—Band. 9.5—News. 9.20—News (Hungarian). 9.35-10.30—See Prague.

BRESLAU (Germany) 950 kc/s (315.8 m.); 100 kW. Relayed by Gleiwitz, 1,231 kc/s (243.7 m.). Transmits at intervals from 4.0 a.m. 9.49 a.m.—Old Christmas Music (Recorded). Station Wind Quintet, Choir and Orchestra. Conductor: Prade. Birke (Oboe) and Hattwig (Harpichord). "Fürchtet Euch nicht"—Christmas Cantata (Aהל). Concerto in F minor for Oboe, Strings and Harpsichord (Telemann). "Das neugeborene Kindelein"—Cantata (Buxtehude). Two Suites (Pezel). Harpsichord Concerto in B flat (Dittersdorf). 10.45—Recitation. 11.0—Orchestra. Conductor: Anders. 1.0 p.m.—News; Recitations. 1.35—"The Snowflakes' Dance" (Stürm). 2.30—"Ein Pfefferkuchenpärchen reißt aus"—Christmas Play for Children after Gertrud Busch (Teuber); Music by Szuka (Recorded). 3.0—See Leipzig. 5.0—"The Quarrel about Jolanthe"—Folk Comedy (Hinrichs), with Music by Sattler (Recorded). 7.0—Hindenburg Symphony Orchestra. Conductor: Humpert. Glück-Auf Band. 9.0—News. 9.10-11.0—Orchestra from Deutschlandsender.

BRNO (Czechoslovakia) 922 kc/s (325.4 m.); 32 kW. Transmits at intervals from 6.0 a.m. 4.35 p.m.—German Transmission: "Flotte Bärsche"—One-Act Operetta (Suppl.). 5.50-5.55—See Prague. 6.25—Talk on the following Opera. 6.30—"The Bartered Bride"—Three-Act Opera (Smetana), from the National Theatre. Conductor: Sachs. 9.5-10.30—See Prague.

BRUSSELS (No. 1) (Belgium) 620 kc/s (483.9 m.); 15 kW. 3.15 p.m.—Brenders Jazz Band. 4.0—Alpaerts Trio (Rameau, Pierné). 4.40—Fétis Vocal Trio. 5.0—Poems. 5.30—For Children. 6.5—Christmas in Bruges—Programme by Maurice Hankard. 7.0—Roman Catholic Review. 7.15—Records. 7.30—News. 8.0—Symphony Orchestra. Conductor: André. Marguerite Thys (Soprano). Mireille Fleur (Harp). Franck, Bac'h, Pierné, Jongen. 9.0—Talk. 9.15—Light Orchestral. Conductor: Douliz. Théodora Lampert (Songs). 10.0—News. 10.10—Records. 10.55—Christus Vincit (Liszt). 11.0-12.0 m.—Brenders Jazz Band.

BRUSSELS (No. 2) (Belgium) 932 kc/s (321.7 m.); 15 kW. Programme in Flemish. 6.37-9.0 a.m.—Gym; Records; News. 9.0—Records. 10.0—Felleman Orchestra from the Scala, Antwerp. 10.45—Chamber Music. 11.15—Orchestra (cont'd.). 12.0 noon—Records. 12.31 p.m.—Salon Orchestra; at 12.45: Cabaret. 1.0—News. 1.10—Light Orchestral. 1.30—Cabaret. 1.40-2.0—Records. 2.15—Loiseau Orchestra. 3.0—Cécile Lucas (English Carols). He shall feed His Flock (Handel). Shepherd's Cradle Song (Somervell). The Knight of Bethlehem (Thomson). Why do the Bells of Christmas ring? (Martin Shaw). The Holy Child (Easthope Martin). 3.15—Loiseau Orchestra. 4.0—Records: "Aïda" (Verdi). 5.0—"Laudate"—Christmas Poem (Peleman), with Music. 5.30—Records: Christmas Concerto (Corelli). 5.45—For Children. 6.30—Records. 6.45—Talk. 7.0—Radio Orchestra. Suite, "L'Arlesienne" (Bizet). Noël's (Franck). 7.30—News. 8.0—Record. 8.5—Van de Velde a-cappella Choir. 8.15—"Het wonder van den zaaidok"—Play (Bauer-de Belder). 9.0—Record. 9.5—Choir (cont'd.). 10.0—News. 10.10—Report: The Ghent Six Days Race. 10.20—Records of Jack Payne's Band. 11.0-12.0 m.—Records.

BUCHAREST (Romania) 823 kc/s (364.5 m.); 12 kW. Relayed by Radio-Romania (Brasov); 160 kc/s (1,875 m.). Transmits at intervals from 5.30 a.m. 10.30 a.m.—Christmas Carols; by the Cotroceni Sextet. 11.0—Time; Art Notes: Water Level. 11.10—Sibiceno Orchestra. 12.10 p.m.—Time; News. 12.25—Cotroceni Sextet. 1.0—News. 4.0—Romanian Music and Light Music by the Julea Orchestra; at 5.0: Time; Weather; Topical. 6.0—Tanase and his Music-Hall Group. 6.45—Talk. 7.0—Cabaret Music.

BUDAPEST (No. 1) (Hungary) 546 kc/s (549.5 m.); 120 kW. 7.30 a.m.—News. 8.0—Protestant Service. 9.0—Roman Catholic Service. 10.20—Evangelical Service. 11.40—Budapest Concert Orchestra. 12.55 p.m.—Records. 2.0—Hänsel und Gretel—Opera (Humperdinck), from the State Opera. 5.0—Perts Cigány Band. 6.0—Talk. 6.30—Station Orchestra. 7.10—"Christmas"—Three-Act Play after Karl May (Vándor). 8.40—News. 9.0—Cigány Band. 10.5—Kertész Jazz Band. 11.5—News.

BUDAPEST (No. 2) (Hungary) 359.5 kc/s (834.5 m.); 18 kW. 4.0 p.m.—Weidinger Salon Orchestra. 6.45—Talk. 7.15—Orchestra. 7.30—Racing.

COLOGNE (Germany) 658 kc/s (455.9 m.); 100 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—Orchestra. Conductor: Hagedstedt. 1.0 p.m.—Opera Music.

Station Orchestra and Singers. Conductors: Müntzfer, Kühn and Eysoldt. 3.0—See Leipzig. 5.0—Report: The Christmas of Germans Abroad. 5.15—Children's Songs and Lullabies sung by Girls. 5.45—Pfte. Sonata in D (Haydn) by Hans Haas. 6.0—Station Quintet. Der Weihnachtsmann kommt (Lindemann). Dolls' March (de Micheli). Schneeflocken (Thiele). Engelreigen (Wolff-Ferrari). Baby plays Soldiers (de Micheli). Der treue Hanselmann (Heykens). Serenade (Weingartz). Albulblatt (Gade). Novallette (Gade). Little Doll's Curtsy (Bucceri). Die Post kommt (Eilenberg). 6.45—Sports Report. 7.0—Gala Concert. Conductor: Müntzfer. Kläre Hansen (Soprano) and Kaldewier (Bass). Overture in D minor (Handel). Two Songs (Caldara). Christmas Symphony (Manfredini). Toccata and Fugue (Bach-Pillny). Interlude: Stories by Jakob Kneip. Chaconna gotica (Dopper). Song: An die Hoffnung (Beethoven). Andante con moto from the Seventh Symphony in C (Schubert). Prelude, "Das Christfelein" (Pfitzner). 9.0—Time; News. 9.5—Records: Famous Choirs. 9.30-11.0—Orchestra from Deutschlandsender.

DEUTSCHLANDSENDER (Germany) 171 kc/s (1,571 m.); 60 kW. Transmits at intervals from 5.0 a.m. 11.0 a.m.—1.0 p.m.—See Hamburg. 1.0—Variety. 2.0—String Quartet in F (Stenhammer), by the Barkel Quartet. 2.30—"Die Sterntaler"—Fairy Play after Grimm (Zöllner). 3.0—Opera Records: "Tosca" (Puccini), "Carmen" (Bizet). 4.0—"The Parade of the Tin Soldiers"—Christmas Play (Kleinberg) with Music by Sobanski (Recorded). 5.0—Melodies from North and South. Gaden Orchestra and Freundorfer Instrumental Quartet. 6.40—Sports Notes. 7.0—Station Orchestra. Conductor: Stange. Stech (Pfte.). Symphony from the New World (Dvořák). Pfte. Concerto No. 1 in E flat (Liszt). Dance Suite, Schlagobers (Richard Strauss). 9.0—News. 9.5—Light Music—von Gezy Orchestra. 10.0-11.55—Dance Records.

FRANKFURT (Germany) 1,195 kc/s (251 m.); 25 kW. Relayed by Cassel, Coblenz, Freiburg and Trier, 1,195 kc/s (251 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Cologne. 1.0-3.0 p.m.—See Stuttgart. 3.0—See Leipzig. 5.0-9.30—See Stuttgart. 9.30—Orchestra from "Deutschlandsender". 11.0 p.m.—1.0 a.m. (Saturday)—See Stuttgart.

HAMBURG (Germany) 904 kc/s (331.9 m.); 100 kW. Relayed by Bremen, Flensburg, Hanover, Magdeburg and Stettin, 1,330 kc/s (225.6 m.). Transmits at intervals from 5.0 a.m. 5.0 a.m.—Concert from s.s. "Hamburg." 7.0—News. 7.20—Gym. 7.45—Christmas Thoughts. 8.0—Records. 9.0-9.15—Christmas in German Literature (Goethe, Heibel, Raabe). 9.30-10.0—Schwab (Organ). 10.15—Mozart Records. 10.45—Reading. 11.0—Christmas Concert from Bremen Old Town Hall. Part I: Niemann Wind Band. Part II: The Bremen "Stadt Musikanten." Conductor: Krug. Erna Maria Müller (Soprano). 1.0 p.m.—"Fleitenpeter"—Dialect Play for Children (Balzer). 2.0—Carols of U.S.A., Belgium, Italy, Yugoslavia, Poland, and Sweden. 3.0 (from Hanover)—"Distribution of Presents"—Variety Concert. Male Voice Quartet, Mandoline Quintet, Accordion Duo. Band, Symphony Orchestra and Others. Conductor: von Sosen. 5.0—"A Christmas Legend" (Herbert Scheffer) with Music by Siegfried Scheffer. Station Orchestra and Others. Conductor: Secker. 5.30—Light Music by the Becker Band. 6.35—A Visit to the Hamburger "Dom" Fair. 6.50—Weather. 7.0—See Stuttgart. 9.0—News. 9.5-12.0 m.—Dance Music. Station Dance Band. Conductor: Gebhardt. Ulli Engel (Discuse), Siegel (Refrains), Vocal Trio and Speakers.

HILVERSUM (1,875 m.) (Holland) 160 kc/s; 10 kW until 2.40 p.m.; 100 kW from 2.40 p.m. 7.10 a.m.—N.C.R.V. Programme. Service. 8.10-9.10—K.R.O. Programme. 8.10

FRIDAY (December 25) —Vincent (Carillon). 8.25—Service. 9.10-11.55—N.C.R.V. Programme. 9.10—Sacred Music and Service. Sadko (Tenor) and Mlle. Witting (Pfte.). 11.55 a.m.—4.40 p.m.—K.R.O. Programme. 11.55—K.R.O. Orchestra. Conductor: Reinards. 12.40 p.m.—Records. 1.0—K.R.O. Melodists. Conductor: Lustenhouer. 1.40—Records. 2.10—"Voce Concordi" Women's Choir. Conductor: Jo Immink. Mme. Kruijselberge-Blommaert (Pfte.). 2.30—Recitations. 2.50—Choir (cont'd.). 3.40—K.R.O. Orchestra. Conductor: Reinards. 4.30—Records. 4.40-7.25—N.C.R.V. Programme. 4.40—"Jeugdiddien" Church Choir. Conductor: Pul; Records in the intervals. 5.30—Service; Sacred Music. 7.25 till Close—K.R.O. Programme. 7.25—Talk; News. 7.50—K.R.O. Chamber Orchestra. Conductor: Reinards. Annie Woud (Contralto) and Max Kloos (Baritone). 8.35—Recitations. 8.45—K.R.O. Chamber Orchestra and Choir. Conductor: Reinards. Annie Woud (Contralto) and Max Kloos (Baritone). 9.35—The "Comedy Harmonists" and Records. 10.40-11.40—Records.

HILVERSUM (301.5 m.) (Holland) 995 kc/s; 15 kW until 2.40 p.m.; 60 kW from 2.40 p.m. 8.40-9.40 a.m.—V.A.R.A. Programme. 8.40—Records. 9.0—Recitation. 9.20—Records. 9.40-11.40—V.P.R.O. Programme. 9.40—Service. 11.10—Kloos (Songs). 11.40 a.m.—3.40 p.m.—A.V.R.O. Programme. 11.40—Time. 11.41—Reading. 12.10.—Carillon by Toon van Balkom from St. John's Cathedral, Bois-le-Duc. 12.30—A.V.R.O. Octet. 1.40—Ada Prins (Recitation). 2.0—A.V.R.O. Orchestra. Conductor: Van Raalte. Zimmermann (Violin). 3.10—Carols. 3.40—V.P.R.O. Programme: For Children. 5.10-7.10—V.A.R.A. Programme. 5.10—V.A.R.A. Orchestra. Conductor: Lohoff; at 5.30—Address. 6.40—Talk; Records. 7.10-8.40—V.P.R.O. Programme. Concert: Christmas Address. 8.40-10.20—V.A.R.A. Programme. 8.40—V.A.R.A. Orchestra. Conductor: Tiggers; at 9.20—Recitation. 10.10—News. 10.20—V.P.R.O. Service. 10.40-11.40—Records.

KALUNDBORG (Denmark) 240 kc/s (1,250 m.); 60 kW. Relays Copenhagen, 1,176 kc/s (255.1 m.). 7.35 a.m.—Weather. 7.45—Church Music. 8.30—Christmas Hymns. 9.0—Service. 10.40—News. 11.0—Chamber Music. Pfte Trio in G (Haydn). Pfte. Trio in E (Mozart). Pfte. Trio in D (Beethoven); at 11:35—Reading. 12.30 p.m.—Danish Sacred Songs by Edith Schmidt. 1.0—Service from Christiansborg Castle Church. 2.30—Talk: Christmas in San Cataldo. 3.0—Danish "Mensural Cantori." 3.30—Radio Orchestra. Conductor: Wendelboe-Jensen. Overture, "Euriesto" (Hasse). Christmas Concerto in G minor (Corelli). Dream Music from "Alcina" (Handel). Concerto grosso in D minor (Handel). 4.30—Records. 5.0—Jens Laumann, Fredricborg Castle Organ. 5.30—Reading. 5.50—Weather. 6.0—Time; News. 6.30—Talk: Goethe. 7.0-10.0—Part I, "Faust"—Tragedy (Goethe); trans. P. Hansen; incidental Music by Eduard Lassen.

KÖNIGSBERG (Heilsberg) (Germany) 1,031 kc/s (291 m.); 100 kW. Relayed by Danzig, 1,303 kc/s (230.2 m.). Transmits at intervals from 5.0 a.m. 11.0 a.m.—See Cologne; at 12.0 noon: Weather. 1.0 p.m.—Reading. 1.20—Records: Light Music. 2.0—Readings. 2.20—"Cinderella"—Fairy Play after Görner (Keller). 3.0—See Leipzig. 5.0—Report. 5.15—South Tyrolean Carols (arr. Reimesch-Prignitz), by the Deutschlandsender Choir and Edith Hölzl (Soprano). 6.0—Records. 6.30—"Dinner is served"—Gay Table Talk. 7.0—Station Orchestra. Conductor: Wilcken. Elisabeth Hallstein (Soprano). Overture, "Maritana" (Wallace). Invitation to the Dance (Weber). Ballet, "La Gioconda" (Ponchielli). Strahlender Mond (Künneke). Selection, "Marth."

FRIDAY (December 25)

(Flotow). Song (Sullivan). Songs. Brise de mer (Leoncavallo). Waltz, Gold and Silver (Lehar). Lach' in mein Herz (Meisel). Blumen aus Nizza (Buday-Hilm). Selection. "A Night in Venice" (Strauss). Overture, "Casanova" (Lincke). 9.0—News. 9.15—Reading. 9.30-11.0—Orchestra from Deutschlandsender.

LEIPZIG (Germany)

785 kc/s (382.2 m.); 120 kW. Relayed by Dresden, 1,285 kc/s (233.5 m.).

Transmits at intervals from 4.0 a.m. 10.30 a.m.—"Lasst uns ein Licht anzunden"—Christmas Cantata (Ambrosius). Chamber Orchestra. Conductor; The Composer. 11.0—See Cologne. 1.0 p.m.—Reading.

1.20 (from Dresden)—Trout Quintet (Schubert). 2.0—"Unto us a Child is born"—Play (Jurich). 2.30 (from Dresden)—"Der arme Heinrich" (von Aue).

3.0 (from Dresden)—Dresden Philharmonic. Conductor: Blumer. Martha Rohs (Mezzo-Soprano). Prelude to "Hansel and Gretel" (Humperdinck). Aria, "Figaro" (Mozart). Ballet, "Rosamunde" (Schubert). Romance (Svendsen). Polonaise, "Eugene Onegin" (Tchikovsky). Songs (Richard Strauss). Tanz unter der Dorflinde (Reinecke). Flute and Orchestra; Hungarian Fantasia (Doppler).

4.0—"Das Christelflein"—Two-Act Fairy Opera (Pfitzner). Hamburg Station Orchestra, Women's Choir and Others. Conductor: The Composer (Recorded).

6.0—"Long live the Railway"—Play (Lange) with Music by Hahn. 7.0—Leipzig Symphony Orchestra. Conductor: Weisbach. 9.0—News (Carossa). 9.45-11.0—Orchestra from Deutschlandsender.

LILLE (Radio PTT Nord)

(France) 1,213 kc/s (247.3 m.); 60 kW. Transmits at intervals from 6.50 a.m. 7.0 p.m.—Records. 7.30—Records: Wine in Music. 8.0—Time; Dance Records. 8.15—Sports. 8.30—See Paris (PTT). 10.30—News.

MONTE CENERI (Switzerland)

1,167 kc/s (257.1 m.); 15 kW. No Transmission.

MOSCOW (No. 1) (Russia)

172 kc/s (1,744 m.); 500 kW. 4.30 p.m.—Arctic Notes. 5.0—Red Army Notes. 5.15—Concerts. 8.0—Czech Talks: (a) Physical Culture, (b) Kiev, (c) Questions and Answers. 9.5—English Programme: (a) For Children, (b) Children's Songs, (c) Russian Lesson. 10.0—German Commemoration Programme for those killed in the Revolution. 11.0—Spanish Peace Programme.

MUNICH (Germany)

740 kc/s (405.4 m.); 100 kW. Relayed by Nürnberg, 1,267 kc/s (236.8 m.). 9.30 a.m.—Dietrich Eckart Commemoration Programme from Bayreuth. "9.55—Winter in the Bavarian Forest"—Words and Music. 10.40—A Christmas Ramble with a Nature Lover. 12.0 noon—Music from Cologne. 12.45 p.m.—News. 1.0—For Children. 1.45—Chamber Music. 3.0—Concert. 5.0—Play. 6.0—Records. 7.0—See Stuttgart. 9.5-11—See Deutschlandsender.

OSLO (Norway)

260 kc/s (1,153.8 m.); 60 kW. Relayed by Fredrikstad, 722 kc/s (415.4 m.); Hamar, 519 kc/s (578 m.); Notodden, 1,357 kc/s (221.1 m.); Porsgrund, 850 kc/s (352.9 m.); Rjukan, 1,348 kc/s (222.6 m.); and Trøndelag, 629 kc/s (476.9 m.). Transmits at intervals from 6.0 a.m. 4.0 p.m.—Willy Johansen Ensemble. 5.0—"Christmas Eve"—Play (Fastbom). 5.30—Mary Barratt Due (Pfte.), Ingeborg Vorbeck and Nancy Thoresen—(Song Duets), Knudsen (Violin). The Sussex Mummies' Christmas Carol (Grainger). Pfte.: Four Christmas Carols (Jensen). Song Duets: (a) O Friede, reich, "Judas Maccabaeus" (Handel), (b) Sonntagsmorgen (Mendelssohn), (c) Two Marienlieder (Reger). Violin: (a) Chaconne (Vivaldi-Charlier), (b) Adagio and Fugue (Bach). 6.15—News. 6.30—Time; Variety; Reports. 8.50—News. 9.0—Topical. 9.15-10.15—Bergen Radio Orchestra.

PARIS (Eiffel Tower) (France)

1,456 kc/s (206 m.); 5 kW. 7.0 p.m.—News. 7.20—Foreign Affairs; Science Talk; Colonial Notes. 7.45—Press Review. 7.55—Film Talk. 8.5—Home Affairs. 8.30—Poetry. 9.0—Chamber Music. Pauline Gordon and Maillard-Vergier (Pfte.) and Germaine Cernay (Songs).

PARIS (Poste Parisien) (France)

959 kc/s (312.8 m.); 60 kW. Transmits at intervals from 7.50 a.m. 12.0 noon—Exchange. 12.5 p.m.—Records. 12.35—Exchange. 12.39—Ramo Orchestra. 1.15—Records. 1.30—Radio Amateur Prize-winners at the Microphone. 1.45—Records. 2.0, 3.45, 4.35—Exchange. 6.0—Call. 6.2—Topical. 6.9—Talk. 6.15—Debussy Records: (a) Ballade à Notre-Dame, (b) Les Cloches. 6.22—For Farmers. 6.23—Topical. 6.30—Exchange. 6.34—For Women. 7.6—News. 7.33—Records. 7.48—For Women. 7.53—Light Music. 8.3—Paul Reboux. 8.18—"Under the Lamp"—Sketch (Diamant-Berger). 8.55 p.m.—12.0 m.—Thriller in Three Acts (Strongtone), from the Théâtre de Rochefort.

PARIS (PTT) (France)

695 kc/s (431.7 m.); 120 kW. Transmits at intervals from 6.30 a.m. 12.0 noon—Yatove Dance Band. In the interval, "La grande inquiétude des jouets de Noël"—Fantasy (Fabrice). 2.0 p.m.—"The Christmas Elves"—Fairy Play in Four Scenes (Le Lucien Vasseur) with Music by Dollet. Conductor: Mme. Dollet. 3.0—Concert for Children. Conductor: Rosenthal. Puteaux Schoolchildren's Choir, Marguerite Pifteau (Songs), Carmen Guilbert (Pfte.).

5.0—Report (Recorded): The Seine Swimming Contest for the Christmas Cup. 5.15—Maxime Léry reads his Christmas Story. 5.30—"Le miracle de Théophile" by the "Groupe des Théophiliens" of the Sorbonne. 6.30—News; Topical. 7.45—Clara Tambour-René Dorin. 8.15—Sports. 8.30 (also for Alpes-Grenobles, Lyons (PTT), Marseilles (PTT), Montpellier (PTT), Nice-Corse, Rennes-Bretagne, Toulouse PTT, Bordeaux-Lafayette)—"Le Noël sur la place" or "Les enfances de Jésus"—Nativity Play (Ghœn), by the Comédie Française Players. 10.30—News. 10.45—Gras Dance Band.

PARIS (Radio-Paris) (France)

182 kc/s (1,648 m.); 80 kW. 7.0 a.m.—Records: Carols. 7.15—News. 7.45—Gym. 8.0—Records. 11.0—Records for Children. 11.30—Records. 12.0 noon—Maurice Durufle (Organ). 12.30 p.m.—Religious Address by Fr. Dieux. Oratorian. 12.50—News; For Ex-Servicemen. 1.0—Records: Light Music. 1.15—Jeanne Andral (Songs). 1.30—Records. 2.0—Christmas Stories. 2.30—"Mr. Pickwick at the Children's Theatre"—Sketch after Dickens (Calmes), with Music by Darcieux. 3.30—Records. 4.0—Records: Famous Chorus. 5.0—Reading (Le Brez). 5.20—Films. 5.30—Poulet Concert Orchestra. Conductor: Cloez. Albert Lévêque (Pfte.). Prayer and Gothic Minuet (Boellmann). Petits rêves d'enfants (Dubois). Pastorale (Faure). Pfte.: Three Preludes and Fugue (Bach). 6.0—For Women: Notes; Gabrielle Gills (Carols); Danielle Werlin (Sailors' Carols). 6.30—Poulet Concert Orchestra. Conductor: Cloez. Suite, "L'enfance du Christ" (Berlioz). Prelude, "La Croisade des Enfants" (Pierné). Arabesque from Children's Corner (Debussy). Symphonie Poem, La petite fille aux allumettes (Edmond-Marc). 7.30—Home Affairs. 7.40—Hunting Notes. 7.50—Dietetics. 8.0—From the Opéra. 11.40 p.m. (approx.)—12.45 a.m. (Saturday)—Orchestra. Conductor: Gaillard. Prelude, "Parsifal" (Wagner). Rapsodie bretonne (Saint-Saëns). Elegy (Faure). Tristico Botticellano (Respighi). Jardin du Paradis (Silver). Marche de Noël (Widor).

PARIS (Radio-Romania) (Romania)

160 kc/s (1,875 m.); 150 kW. See Bucharest.

ROME (Italy)

713 kc/s (420.8 m.); 50 kW. Relayed by Naples, 1,104 kc/s (271.7 m.); Bari (No. 1), 1,052 kc/s (283.3 m.); Bari (No. 2), Milan (No. 2), and Turin (No. 2), 1,357 kc/s (221.1 m.). 7.30-7.50 a.m.—Time; News. 10.0—See Turin. 11.0—Bible Reading. 11.20—See Turin. 11.50—Announcements; Light Music. 12.0 noon—Announcements; News. 12.15 p.m.—Music Competition. 12.50—Announcements. 1.0—News; Records. 1.20-2.0—News; Talks; Arias; Christmas Music. 3.40—For Children. 4.0—News. 4.15—Orchestra. 4.50—Weather. 7.5—Time; News. 7.30—Talk. 7.40—Folk Concert. 8.30—Talk; Orchestra. 9.30—Talk. 9.40-10.55—Dance Music; at 10.0-10.15: News.

SOTTENS (Switzerland)

677 kc/s (443.1 m.); 100 kW. Relayed by Geneva, 401 kc/s (748 m.). 9.0 (from Geneva)—Protestant Service from the Victoria Hall. 10.0—Report from St. Moritz: The "Grand Trophée Blanc"—International Ice-Hockey Match. 11.30—News. 11.45—Chamber Music. 12.15-1.0 p.m.—Records. 5.0—For Children.

6.5—"A Merry Christmas to our Listeners 1"—Variety. 7.0—See Bratislava. 8.0—"Queen of the Winds"—Play (Klicpera). Music by Weis. 9.0—Time; News. 9.20—Records. 9.25—News and Sports (German). 9.30—Records. 9.35-10.30—Salon Orchestra. Conductor: Händel.

RADIO-NORMANDIE (France)

1,113 kc/s (269.5 m.); 10 kW. 7.0 a.m.—Records. 7.10—News. 7.50—Records. 8.0—Light Music. 8.45—Melody. 9.0—Records. 9.15—Light Music. 8.30—Records. 9.45—Light Music. 10.0—Pontifical High Mass from



E.V.A.
Christmas Day
in Switzerland;
Villagers of
Glaris, near
Davos, going
to church

Rouen Cathedral. 12.0 noon—Records. 12.40 p.m.—News. 1.0—Concert. 2.0—Records. 2.15—Light Music. 2.30—Records. 2.45—Light Music. 3.0—Records. 3.30—Light Music. 3.45—Records. 4.0—Concert. 4.45—For Children. 5.0—Records. 5.15—Light Music. 5.45—Current London Productions. 6.0—M. Lenfant in a Carillon Recital of "Christmas Carols, from Rouen Cathedral. 7.0—Concert. 7.40—News. 8.0—Records. 8.20—Light Music. 8.40—"Le Réveil du Pecheur". 9.0—Christmas Concert. 11.0—Dance Music. 11.30—From the Cabane Normande. 12.0 m.—Dance Music. 1.0 a.m. (Saturday)—Records. 1.30-2.0—Orchestra.

RADIO-ROMANIA (Brasov) (Romania)

160 kc/s (1,875 m.); 150 kW. See Bucharest.

STASBOURG (France)

859 kc/s (349.2 m.); 100 kW. Transmits at intervals from 7.0 a.m. 4.0 p.m.—Christmas Concert. Orchestra. Conductor: Bour (Pfte.). Christmas Concerto (Corelli). Hirtenmusik zur Weihnacht (Werner). Records: Old Carols. Pfte. Sonatina (Busoni). Records: Old Carols. Overture, Das Christelflein (Pfitzner). Hirtenmusik zur Weihnacht (Niemann). Christmas Carol Potpourri. 5.15—Talk: Christmas in French Folklore. 5.30—Christmas Stories in Alsatian Dialect. 6.30—Records: Songs and Old Dances. 6.45—See Vienna. 9.10—News (French, German). 10.0—Records: Christmas in French Song. 10.30—News. 11.0—News in German. 11.15—Christmas Records. 11.40 p.m. (approx.)—12.15 a.m. (Saturday)—See Paris (Radio-Paris).

STUTTGART (Germany)

574 kc/s (522.6 m.); 100 kW. Transmits intervals from 5.0 a.m. 10.15 a.m.—String Quartet in C sharp minor (Beethoven) by the Wendling Quartet. 11.0—See Cologne. 1.0 p.m.—"The Sleeping Beauty"—Fairy Play. 1.45—Hitler Youth Choir. 2.0—Records with Wilhelm Locks. 3.0—See Leipzig. 5.0—Music in the Twilight. Dagmar Benziger (Pfte.), Schimmer (Violin), Reichardt ("Cello"), the Stuttgart String Quartet, Maria Holz (Harp) and Müller (Baritone). In the interval, Readings. 6.30—"Our Fairy Tale Book"—Records. 7.0—"A Musical Picture-Book" (arr. Ganss). Station Orchestra, Choir and Others. Conductors: Buschkötter, Görlich and Zimmermann. 9.0—Time; News; Records. 9.30—Orchestra from Deutschlandsender.

5.25 (from Geneva)—Christmas Vespers by the Schola grégorienne from the Church of the Holy Cross. 6.0—"The Cricket on the Hearth"—Play (Dickens). 6.50—News. 7.0-9.0—Christmas Oratorio (Bach) from Leipzig. Conductor: Günter Ramin.

STOCKHOLM (Sweden)

704 kc/s (426.1 m.); 55 kW. Relayed by Motala, 216 kc/s (1,389 m.); Göteborg, 941 kc/s (318.8 m.); Hörby, 1,131 kc/s (265.3 m.); and Boden, 392 kc/s (765 m.). 6.0 a.m.—Service from Göteborg Cathedral. 9.0—Records. 10.0—Service from Skara Cathedral. 11.40—News. 12.0 noon—Military

11.0 p.m.-1.0 a.m. (Saturday)—"Der Freischütz"—Three-Act Opera (Weber). Leipzig Symphony Orchestra, Choir and Others. Conductor: Weisbach (Recorded).

TOULOUSE (Radio-Toulouse) (France)

913 kc/s (328.6 m.); 60 kW. Transmits at intervals from 11.0 a.m. 6.5 p.m.—Operetta Songs. "Song of Happiness" (Lehar). Waltz Song (Strauss). "The Gipsy Princess" (Kálmán). "Au Soleil du Mexique" (Yvain). 6.15—Salon Orchestra. 6.40—Tangos. 6.50—News. 7.0—Operetta Music. Excerpts, "Le Grand Mogol" (Audran), "Monsieur Beaucaire" (Messager), "Zou le midi bouge" (Scott), "Le Comte Obligado" (Moretti), "Rose of France" (Romberg). 7.40—Light Music; at 7.55: News. 8.40—Excerpts, "Un de la Canebière" (Scott). 8.55—News. 9.10—"The Birth of Fa-ti-ri"—Sketch. 9.45—Paris Programme. 10.15—Excerpts, "Le Jongleur de Notre-Dame" (Massenet). 10.40—Dance Music. 10.55—News. 11.0—Film Music. 11.15—Dance Music. 11.40—Songs. 11.55—News. 12.5 a.m. (Saturday)—Light Music. 12.30—Announcements.

TURIN (No. 1) (Italy)

1,140 kc/s (263.2 m.); 7 kW. Relayed by Milan (No. 1), 814 kc/s (368.6 m.); Genoa, 986 kc/s (304.3 m.); Trieste, 1,140 kc/s (263.2 m.); Florence, 610 kc/s (491.8 m.); Bolzano, 536 kc/s (559.7 m.); and Rome (No. 3), 1,258 kc/s (238.5 m.). 7.30-7.50 a.m.—Time; News. 10.0—Mass from the Church of the Annunciation, Florence. 11.0—Bible Reading. 11.20—Chamber Music. 11.50—Announcements; Light Music. 12.0 noon—News. 12.15 p.m.—Music Competition. 12.50—Announcements; Light Music. 1.0-1.20—News; Records. 3.40—Sketch. 4.0—News. 4.15-4.50—Orchestra. 7.5—News. 7.40—"Christmas in the Alps"—Sketch. 8.15—Gastronomic Concert. Conductor: Petralia. 8.45—"Christmas"—One-Act Play (Niccodeni). 9.15—Dance Music. 10.0—News. 10.15—Dance Orchestra.

VIENNA (Austria)

592 kc/s (506.8 m.); 100 kW. Relayed by Graz and Linz, 886 kc/s (338.6 m.); Innsbruck, 519 kc/s (578 m.); Klagenfurt and Vorarlberg, 1,294 kc/s (231.8 m.); and Salzburg, 1,348 kc/s (222.6 m.). Transmits at intervals from 6.45 a.m. 10.45 a.m.—Vienna Philharmonic. Conductor: Krips. Sixth Symphony in C (Schubert). Fourth Symphony in D minor (Schumann). Symphonic Poem, "Don Juan" (R. Strauss). 11.55 a.m.-12.20 p.m.—Station Orchestra. Conductor: Holzer. 2.0—News. 2.15—Talk: Christmas. 2.40—String Quartet No. 1 in F (Beethoven), by the Mairecker Quartet. 3.20—Talk: Children's Christmas Presents. 3.45—Records: South-American Songs and Dances. 4.25—Talk. 4.45—Military Band. Conductor: Wack. 6.0—Programme Notes. 6.10—Elisabeth Schumann (Soprano). Songs (Cornelius): (a) Die Hirten, (b) Christbaum. Songs (Wolf): (a) Schlafendes Jesuskindlein, (b) Ach, des Knaben Augen, (c) Auf ein altes Bild, (d) Der heilige Josef singt. Die Heiligen Drei Könige (R. Strauss). Songs (Brahms): (a) Ruhe, Süßliebchen, (b) Sandmännchen, (c) Wiegenlied. 6.45—"The Merry Widow"—Three-Act Operetta (Lehár). Conductor: Holzer. 9.10—News. 9.25—Jaritz Jazz Band. 10.30—Announcements.

WARSAW (Poland)

224 kc/s (1,339 m.); 120 kW. Relayed by Cracow, 1,022 kc/s (293.5 m.); Katowice, 758 kc/s (395.8 m.); Łódź, 1,339 kc/s (224 m.); Lwów, 795 kc/s (377.4 m.); Poznań, 868 kc/s (345.6 m.); Torun, 986 kc/s (304.3 m.); and Wilno, 536 kc/s (559.7 m.). Transmits at intervals from 7.0 a.m. 9.10 a.m.—Service from Poznań Cathedral. 11.3—For Children. 11.35—Concert. 1.0 p.m.—Play. 1.30—Folk Dances. 2.35—Records. 3.30—For Invalids. 3.45—"The Birth of Christ"—Contata (Palester). 4.30—Variety. 5.0—Dance Music. 6.8—Pastorales. 6.36—Szczerpańska (Songs) from Warsaw, Danczowski ("Cello") from Poznań. 7.35—Comic-Opera on Eighteenth and Nineteenth Century Songs (Dimuszewski). 8.15—Records. 9.0 (from Poznań)—Literary Programme. 9.45—Dance Records.

Dec. 26 SATURDAY

1 p.m.

ATHLONE, 1.30—Records.
BERLIN, Records. **BRESLAU**, News; Talk. 1.35—Mandoline and Lute Ensemble. **BUDAPEST (1)**, Cigány Band.
COLOGNE, See Leipzig. 1.30—Talk. **DEUTSCHLANDSENDER**, Christmas Songs and Tales. 1.30—"Der stille Klang"—Literary and Musical Sequence.
FRANKFURT and STUTTGART, For Children.
HAMBURG, Fairy Play. 1.30—Talks. **HILVERSUM (1,875 m.)**, K.R.O. Melodists. 1.40—For Young People. **HILVERSUM (301.5 m.)**, 1.0-1.25—Ramblers Dance Band. 1.40—Records.
KALUNDBORG, Service. **KÖNIGSBERG**, Talk. 1.10—Records.
LEIPZIG, Songs round the Christmas Tree.
PARIS (PTT), Light Music and Dance Music.
RADIO-NORMANDIE, Concert. 1.30—Records. **RADIO-PARIS**, Records: Cornet Solos. 1.15—Mme. Theureau de la Barthe (Songs). 1.30—Records: Ballads.
STOCKHOLM, For Children. 1.35—Light Music. **STRASBOURG**, 1.15—Light Orchestral, Violin and Cello.
TOULOUSE, News. 1.10—Ganne Music. 1.40—Songs. 1.55—News.

2 p.m.

ATHLONE, Records.
BRESLAU, Mandoline and Lute Ensemble. 2.30—For Children.
BUDAPEST (1), Cigány Band. 2.25—Records.
COLOGNE, Violin Sonata in B flat (Mozart). 2.30—For Girls.
DEUTSCHLANDSENDER, Sequence (cont'd.). 2.30—Records: Songs, Dances and Humour.
FRANKFURT and STUTTGART, "Under the Christmas Tree"—Sequence.
HAMBURG, Folk Music. 2.45—Talks. **HILVERSUM (1,875 m.)**, For Young People. 2.10—Records. 2.25—Children's Choir. 2.40—For Children. **HILVERSUM (301.5 m.)**, Chess. 2.10—Christmas Oratorio (Bach).
KALUNDBORG, Service (cont'd.). 2.30—Hansen's Ensemble and Augusta Erichsen (Songs). **KÖNIGSBERG**, "Christmas Carols and Customs"—Sequence. 2.35—Records from Deutschlandsender.
LEIPZIG, A Regimental Christmas Celebration.
PARIS (PTT), Records. 2.30—Song Programme. **PRAGUE**, 2.30—FOC Orchestra.
RADIO-NORMANDIE, Records. 2.30—Light Music. **RADIO-PARIS**, Talks. 2.40—Audran Records.
STOCKHOLM, Talk. 2.30—Records.
STRASBOURG, Theatre Review.

3 p.m.

ATHLONE, 3.0-3.15—The Cab Derby—Commentary from Phoenix Park, Dublin.
BUDAPEST (1), Records.
COLOGNE, Variety Concert.
DEUTSCHLANDSENDER, Records (cont'd.).
FRANKFURT, BERLIN, BRESLAU, HAMBURG, KÖNIGSBERG, LEIPZIG, MUNICH and STUTTGART, "A Christmas Dream"—Variety for Young and Old.
HILVERSUM (1,875 m.), For Children. 3.40—Children's Choir. 3.55—Records. **HILVERSUM (301.5 m.)**, Christmas Oratorio (cont'd.). 3.40—Esperanto.
KALUNDBORG, Ensemble (cont'd.).
MONTÉ CENERI, BEROMÜNSTER and SOTTENS, 3.30—Pfte. Duets: Christmas Music.
OSLO, 3.30—Café Concert.
PARIS (PTT), Song Programme. 3.30—Sonia Alny and Maud Laury (Duets and Songs). **PRAGUE**, FOC Orchestra.
RADIO-NORMANDIE, Light Music.
RADIO-PARIS, For Children.
STOCKHOLM, Records. 3.30—Reading. **STRASBOURG**, Mediaeval Nativity Play (adapted by Schneider).
VIENNA, 3.5—String Quartet in E flat (Dvorak). 3.40—Talk.
WARSAW, Pastoral Suite (Wichowicz). Choir, Orchestra.

4 p.m.

BUCHAREST and RADIO-ROMANIA, 4.15—Military Band.
BUDAPEST (1), Jazz Band.
COLOGNE, Variety Concert. 4.45—Christmas Concert—Children's Choir and Organ.
DEUTSCHLANDSENDER, "Das Sternchen"—Radio Ballad (on Records).

FRANKFURT, BERLIN, BRESLAU, HAMBURG, KÖNIGSBERG, LEIPZIG, MUNICH and STUTTGART, Variety (cont'd.).
HILVERSUM (1,875 m.), Records. 4.10—Oranje Nassau Miners' Band. **HILVERSUM (301.5 m.)**, "Melody Circle." 4.40—Records.
KALUNDBORG, Ensemble (cont'd.). 4.30—For Children.
LILLE, Records: "Les Saltimbanques" (Ganne). 4.45—"Bal Champêtre."
MONTÉ CENERI, BEROMÜNSTER and SOTTENS, Christmas Music—Ticino Children's Choir. 4.15—The Bells of Rivera. 4.20—Yehudi Menuhin and General Motors Orchestra (on Records). **MOSCOW**, 4.30—Concert.
OSLO, Café Concert. 4.30—For Children. 4.55—Service.
PARIS (PTT), "Le Chat de la Mère Michel"—Play (Single); "Le Hérisson"—One-Act Comedy (Duvvernois). **PRAGUE**, Sketch. 4.35—German Transmission. Dauber Jazz Band and Records.
RADIO-NORMANDIE, Concert. 4.45—For Children. **RADIO-PARIS**, Pascal Orchestra. 4.45—Lamoureux Concert from the Salle Gaveau, Conductor: Bigot. Russian Programme. **ROME and TURIN**, News. 4.15—Dance Music.
STOCKHOLM, 4.5—Ballads, Songs. 4.30—Cabaret. **STRASBOURG**, Schubert, Duparc, Wolf and Mahler Songs by Albert Peters. 4.45—See Radio-Paris.
VIENNA, 4.5—Records. 4.55—Kammer (Violin); Raupenstrauch (Pfte.) (Beethoven, Schubert, Goldmark).
WARSAW, To be announced. 4.30—Dance Music.

5 p.m.

ATHLONE, Commentary on the Dublin Dog Show. 5.30—Ceilidhe Band.
BERLIN, Sequence with Music about Christmas Presents. **BEROMÜNSTER**, A Christmas Tale. 5.25—Lutes. **BRESLAU**, Sports. 5.30—"Hieronymus Knicker"—Opera (von Dittersdorf) on Records.
BUCHAREST and RADIO-ROMANIA, Topical. 5.10—Concert. **BUDAPEST (1)**, Jazz Band.
COLOGNE, Christmas Music (cont'd.). 5.30—"Christmas on the Battlefield"—Reminiscences of German Soldiers.
DEUTSCHLANDSENDER, Lovely Melodies—Krüger Band.
FRANKFURT and STUTTGART, Dierich Eckart Commemoration. 5.15—Operetta Records.
HAMBURG, Talk. 5.30—See Breslau. **HILVERSUM (1,875 m.)**, Band (cont'd.). 5.25—Records. **HILVERSUM (301.5 m.)**, Records. 5.20—Talk. 5.40—Steyn (Organ).
KALUNDBORG, To be announced. 5.30—Suzanne in her Repertoire. **KÖNIGSBERG**, Violin, Harpsichord, Choir and Organ. 5.25—Reading.
LEIPZIG, "The Three Holy Kings"—Play (Timmermans). **LILLE**, "Bal champêtre." 5.10—Records: Pfte. Music.
MOSCOW, Red Army Notes. 5.15—Talk. 5.45—Music. **MUNICH**, Variety Concert.
OSLO, Service (cont'd.).
PARIS (PTT), Carols. 5.30—Racz Cigány Band; Cymbalom, Violin. **PRAGUE**, Jazz Band (cont'd.). 5.50—News (German).
RADIO-NORMANDIE, Records. 5.30—Orchestra. 5.45—Current London Productions. **RADIO-PARIS and STRASBOURG**, Lamoureux Concert (cont'd.). **ROME and TURIN**, Talks. 5.50—Dopolavoro Notes.
SOTTENS, Renée Peter (Pfte.). 5.30—Sports. 5.45—For Alpinists. 5.55—Financial Review. **STOCKHOLM**, Cabaret. 5.15—Variety.
TOULOUSE, 5.45—Military Band. 5.55—News.
VIENNA, Violin and Pfte. (cont'd.). 5.45—Report.
WARSAW, Dance Music. 5.40—Sports; Notes.

6 p.m.

ATHLONE, Irish Radio Orchestra. 6.35—Irish News. 6.45—News.
BERLIN, Light Music. 6.30—"Wenn die Czarin lächelt"—Operetta (Schmalstich). Conductor: The Composer. **BEROMÜNSTER**, Chimes. 6.15—Markets. 6.30—News. 6.45—Hans Georg Nägeli Centenary Programme. **BRESLAU**, "Hieronymus Knicker"—Opera (cont'd.). 6.45—Reading. **BUCHAREST and RADIO-ROMANIA** Concert (cont'd.). 6.15—Love Songs of To-day and Yesterday. 6.40—Humorous Song Duets. **BUDAPEST (1)**, Jazz Band. 6.10—See Vienna.

COLOGNE, "Christmas on the Battlefield" (cont'd.). 6.30—Sports.
DEUTSCHLANDSENDER, Lovely Melodies (cont'd.). 6.40—Topical; Sports.
FRANKFURT and STUTTGART, "The Wanderer's Christmas Eve"—Play. 6.50—Sports.
HAMBURG, See Breslau. 6.45—Talk. **HILVERSUM (1,875 m.)**, Press Review; Records: Police Notes. 6.55—Talk. **HILVERSUM (301.5 m.)**, Organ (cont'd.). 6.10—For Young People. 6.15—A Film. 6.40—Records.
KALUNDBORG, News. 6.30—Reading. **KÖNIGSBERG**, Sports. 6.10—Records: Artists of La Scala, Milan.
LEIPZIG, "Cäcilienode" (Handel).
LILLE, Records: Night in Music. 6.30—News.
MONTÉ CENERI, Records: at 6.15: Review. 6.45—News. **MOSCOW**, Provincial Programme. **MUNICH**, Variety Concert. 6.40—Sports.
OSLO, Service (cont'd.). 6.10—News. 6.30—Variety. Station Orchestra and Artists.
PARIS (PTT), Cigány Band (cont'd.). 6.30—News. **POSTE PARISIEN**, 6.2—Religious Notes. 6.22—Borodin's Records. 6.30—Exchange; Dialogue; Record. 6.46—Foreign Affairs. **PRAGUE**, News. 6.5—Talks. 6.30—"The Jacobin"—Opera. (Dvořák) from the State Opera.
RADIO-NORMANDIE, Children's Corner. 6.45—Light Music. **RADIO-PARIS**, Lamoureux Concert (cont'd.). 6.45—Economics. **ROME**, Records: Talk (Esperanto). 6.20—News in Foreign Languages.
SOTTENS, Review (cont'd.). 6.15—Radio Magazine. 6.50—News. **STOCKHOLM**, Variety. 6.15—News. 6.30—Talk. **STRASBOURG** See Radio-Paris. 6.45—Topical.
TOULOUSE, 6.3—Songs. 6.15—Salon Orchestra. 6.40—Operetta Songs. 6.50—News. **TURIN**, News in Foreign Languages.
VIENNA, Announcements. 6.10—"St. Stephen's Cathedral"—Radio Film.
WARSAW, For Poles Abroad. 6.30—Reading. 6.45—Three-Act Opera (Kurpinski).

7 p.m.

ATHLONE, Interview. 7.15—Dublin enjoys itself—Variety. In the interval: Cinderella—Pantomime from the Queen's Theatre, Dublin.
BERLIN, "Wenn die Czarin lächelt"—Operetta (cont'd.). **BEROMÜNSTER**, Hans Georg Nägeli Programme (cont'd.). **BUCHAREST and RADIO-ROMANIA**, Duets (cont'd.). 7.10—Dance Music. **BUDAPEST (1)**, See Vienna. 7.50—Koloman Rozsahegyis. **BUDAPEST (2)**, Cigány Band.
COLOGNE, See Deutschlandsender. 7.35—Talk. 7.40—See Turin.
DEUTSCHLANDSENDER and HAMBURG, "Bright Lights and Dance Music"—Von Gecky Band.
FRANKFURT and STUTTGART, Light Opera and Operetta Music. **HILVERSUM (1,875 m.)**, Talk; Radio Journal; News. 7.50—Meditation. **HILVERSUM (301.5 m.)**, Records. 7.10—V.P.R.O. Christmas Programme for Young People. 7.40—News. 7.55—V.A.R.A. Orchestra.
KALUNDBORG, Quintet in B flat (Weber). 7.30—Christmas Ball. **KÖNIGSBERG and BRESLAU**, Variety.
LEIPZIG, "Dancing Snowflakes"—Variety. **LILLE**, Review. 7.30—Records: Popular Music.
MONTÉ CENERI, Records. 7.10—See Vienna. **MOSCOW**, Provincial Programme. **MUNICH**, Bruckner, Brahms and Richard Strauss Concert from the Odeon. Orchestra, Choirs and Karin Branzell (Contralto).
OSLO, Variety (cont'd.).
PARIS (PTT), Review. 7.38—Records 7.45—Romanian Carols (Bartok) by Arma (Pfte.). **POSTE PARISIEN**, 7.2—Record; Sports. 7.10—News. 7.32—Paul Coline. 7.47—Records. **PRAGUE**, "Jacobin"—Opera (Dvořák) (cont'd.).
RADIO-NORMANDIE, Concert. 7.40—News. **RADIO-PARIS**, Economics. 7.15—Talks. 7.40—See Turin. **ROME**, 7.5—News. 7.30—Talk. 7.40—"Die geschiedene Frau"—Operetta (Fall).
SOTTENS, Casino Theatre Troupe. 7.45—Variety Concert. **STOCKHOLM**, Operetta. **STRASBOURG**, Review. 7.15—Maurice Chevalier Records. 7.30—News (French, German).
TOULOUSE, Dance Music. 7.30—For Children. 7.45—Light Music.
TURIN, 7.5—News. 7.30—Talk. 7.40—"Falstaff"—Opera (Verdi) from La Scala, Milan.
VIENNA, Radio Film (cont'd.). 7.10—"A Flight round the World"—Radio Potpourri (Hrubv).

8 p.m.

ATHLONE, Dublin enjoys itself (cont'd.).
BERLIN, "Wenn die Czarin lächelt"—Operetta (cont'd.). 8.55—News. **BEROMÜNSTER**, Zürich Radio Orchestra. 8.30—Cossack Choir. **BUCHAREST and RADIO-ROMANIA**, Dance Music. 8.30—News. 8.40—Dance Records. **BUDAPEST (1)**, Koloman Rozsahegyis. 8.40—News. **BUDAPEST (2)**, Cigány Band.
DEUTSCHLANDSENDER and HAMBURG, "Bright Lights and Dance Music."
EIFFEL TOWER, Home Affairs. 8.30—Dramatic Programme. "Le Fête des Toits"—Play after a Daudet—Christmas Story; "Remords"—Play (Berthe d'Id).
FRANKFURT and STUTTGART, Light Opera and Operetta Music.
HILVERSUM (1,875 m.), 8.0-8.10—Meditation. 8.25—K.R.O. Chamber Orchestra; Hartvelt and Hinz (Violins). 8.55—Talk. **HILVERSUM (301.5 m.)**, Orchestra (cont'd.). 8.40—Play.
KALUNDBORG, Christmas Ball (cont'd.). **KÖNIGSBERG and BRESLAU**, Variety.
LEIPZIG, Variety (cont'd.). **LILLE**, Sports. 8.15—For Housewives. 8.30—"Le Chemineau"—Play in Verse (Richepin).
MONTÉ CENERI, See Vienna. 8.40—Talk. **MOSCOW**, German Talk. **MUNICH**, Bruckner, Brahms and Richard Strauss Concert (cont'd.).
OSLO, Variety (cont'd.). 8.40—News. **PARIS (PTT)**, Records. 8.25—Talk. 8.30—From the Opera-Comique. **POSTE PARISIEN**, 8.2—Paul Reboux. 8.17—Fanely Revolt. 8.32—Café Concert (Records). **PRAGUE**, "Jacobin"—Opera (Dvořák) (cont'd.).
RADIO-NORMANDIE, Records. 8.40—Light Music. **ROME**, "Die geschiedene Frau" Operetta (cont'd.).
SOTTENS, Variety Concert. **STOCKHOLM**, Operetta (cont'd.). 8.45—News. **STRASBOURG**, Sports. 8.15—Press Review (German). 8.30—"Hänsel and Gretel"—Opera (Humperdinck).
TOULOUSE, News, Light Music. 8.40—Music Hall. 8.55—News. **TURIN**, **COLOGNE and RADIO-PARIS**, "Falstaff"—(Verdi) (cont'd.).
VIENNA, "A Flight round the World" (cont'd.). 8.40—Films. 8.55—Excerpts. "Warum lügst du chéri"—Musical Comedy (Merker) from the Scala.
WARSAW, Opera (Kurpinski) (cont'd.). 8.25—Topical. 8.30—Jeanne Wysocka-Ochlewska (Pfte.).

9 p.m.

ATHLONE, Dublin enjoys itself (cont'd.). 9.15—If I were Director of Broadcasting. 9.30—Variety.
BERLIN, News. 9.20—"Wenn die Czarin lächelt"—Operetta (cont'd.). **BEROMÜNSTER**, Cossack Choir. 9.15—Report: A Weekend in the Snow. 9.45—Parliamentary Review. **BRESLAU**, News. 9.30—Dance Band. **BUCHAREST and RADIO-ROMANIA**, Dance Records. 9.55—News. **BUDAPEST (1)**, Operetta Music.
DEUTSCHLANDSENDER, News. 9.30—Quartet in A flat (Kreutzer). 9.45—Weather.
EIFFEL TOWER, Dramatic Programme (cont'd.).
HILVERSUM (1,875 m.), Talk. 9.15—Hartvelt (Violin). 9.25—K.R.O. Chamber Orchestra. **HILVERSUM (301.5 m.)**, Play (cont'd.). 9.10—Amsterdam Trumpet Quartet. 9.20—Address, News. 9.45—Trumpet Quartet (cont'd.).
KALUNDBORG, News; Christmas Ball (cont'd.). **KÖNIGSBERG**, News. 9.20—Books. 9.35—Dance Music from Munich.
LEIPZIG, News. 9.30—Dance Music and Light Music. **LILLE**, "Le Chemineau" (Richepin) (cont'd.).
MONTÉ CENERI, Dance Music. Part I: Country Dances. Part II: Jazz Records. **MOSCOW**, 9.5—French Talks. **MUNICH**, **FRANKFURT, HAMBURG and STUTTGART**, News. 9.30—Dance Music.
OSLO, Talk. 9.15—Records: Light Music and Dance Music.
PARIS (PTT), from the Opéra-Comique (cont'd.). **POSTE PARISIEN**, 9.5—"La Chanson du Tiroir." 9.55—U.S.A. Bulletin from New York. **PRAGUE**, News. 9.20

—News (German). 9.30—Dauber Jazz Band.
RADIO-NORMANDIE, Variety Concert. **ROME**, "Die geschiedene Frau" Operetta (cont'd.). 9.40—Dance Music.
SOTTENS, Dance Music. **STOCKHOLM**, Dance Music. **STRASBOURG**, "Hänsel and Gretel" (Humperdinck) (cont'd.).
TOULOUSE, News. 9.10—"A Montmartre"—Fantasy. 9.45—Paris Programme. **TURIN**, **COLOGNE and RADIO-PARIS**, "Falstaff" (Verdi) (cont'd.).
VIENNA, Musical Comedy Excerpt (cont'd.). 9.10—News. 9.25—Jazz Band.
WARSAW, Dance Music.

10 p.m.

ATHLONE, Variety. 10.30—News.
BERLIN, "Wenn die Czarin lächelt"—Operetta (cont'd.). 10.15—Dance Music from Munich. **BRESLAU**, Dance Band. **BUCHAREST and RADIO-ROMANIA**, Cristea Orchestra. **BUDAPEST (1)** Orchestra (cont'd.). 10.20—Salon Quintet; Songs.
DEUTSCHLANDSENDER, Dance Music. Barnabas von Gecky and Woitschach Bands.
EIFFEL TOWER, Dramatic Programme (cont'd.).
HILVERSUM (1,875 m.), Orchestra (cont'd.). 10.10—News; Records. 10.25—K.R.O. Melodists. **HILVERSUM (301.5 m.)**, Trumpet Quartet (cont'd.). 10.40—News. 10.45—Ramblers Dance Band.
KALUNDBORG, Christmas Ball (cont'd.).
LEIPZIG, Dance Music and Light Music. **LILLE**, "Le Chemineau" (Richepin) (cont'd.). 10.30—News. **MOSCOW**, Review (Spanish). **MUNICH**, **FRANKFURT, HAMBURG, KÖNIGSBERG and STUTTGART**, Dance Music.
OSLO, 10.0-10.30—Records (cont'd.). **PARIS (PTT)**, From the Opéra-Comique (cont'd.); at 10.30: News. **POSTE PARISIEN**, U.S.A. Bulletin (cont'd.). 10.30—Records: Light Music. **PRAGUE**, 10.0-10.30—Dauber Jazz Band.
RADIO-NORMANDIE, Café Concert. **ROME**, News. 10.30—Dance Music.
STRASBOURG, "Hänsel and Gretel" (Humperdinck) (cont'd.). 10.30—News.
TOULOUSE, Paris Programme. 10.15—Excerpts. "Louise" (Charpentier). 10.40—Orchestra. 10.55—News. **TURIN**, **COLOGNE**, and **RADIO-PARIS**, "Falstaff" (Verdi) (cont'd.).
VIENNA, Jazz Band. 10.30—Announcements.

11 p.m.

ATHLONE, 11.0-11.30—Ceilidhe Band.
BERLIN, Dance Records. **BUDAPEST (1)**, 11.5—News.
DEUTSCHLANDSENDER and HAMBURG, Dance Music (cont'd.).
FRANKFURT and STUTTGART, Records.
HILVERSUM (1,875 m.), K.R.O. Melodists. 11.10-11.40—Records. **HILVERSUM (301.5 m.)**, Ramblers Dance Band. 11.20-11.40—Records. **KALUNDBORG**, Christmas Ball (cont'd.).
LEIPZIG, Dance Music and Light Music.
MOSCOW, Spanish Talk.
RADIO-NORMANDIE, Dance Music. 11.30—From the Cabane Normande. **RADIO-PARIS**, Dance Music. 11.30—Light Music by the Golden Orchestra. **ROME**, 11.0-11.30—Dance Music.
STRASBOURG, News (Ger.). 11.15—Dance Music.
TOULOUSE, Light Music. 11.15—Dance Music. 11.40—Songs. 11.55—News. **TURIN**, Dance Music.

12 midnight

FRANKFURT and STUTTGART, Dance Records.
KALUNDBORG, Christmas Ball (cont'd.).
RADIO-NORMANDIE, Light Music. 12.15—Dance Music. 12.30—Orchestra. **RADIO-PARIS**, Light Music (cont'd.).
TOULOUSE, News. 12.5—Light Music. 12.20-12.30—Military Band.

1 a.m. (Sunday)

RADIO-NORMANDIE, Records. 1.30—Light Music.

SATURDAY (December 26)

NATIONAL

For Time Signals, see Monday
10.15 a.m. (D)—Service.
10.30 (D)—Weather Forecast.
10.45—The Lost Art of Staying at Home—Kevin FitzGerald.
11.0—Cinema Organ.
11.30—The Philharmonic String Trio.
12.30 p.m.—Dance Records.
.0—The Commodore Grand Orchestra.
2.0—Records.
2.25—Hänsel and Gretel (Humperdinck). Acts 1, 2, from Sadler's Wells Theatre.
3.25—Records.
4.0 "Pigs in Pigs"—a short story by Ellis Parker Butler, read by Eugene Leahy.
4.15—The BBC Northern Ireland Orchestra: Conductor, E. Godfrey Brown. Hugh Carson (Baritone).
5.15—The BBC Dance Orchestra.
6.0—News and Sports.
6.30 (ex. D)—The Radio Gazette.
6.30 (D)—Brenda Harris (Soprano).
6.45—The Gershwin Parkington Quintet; Essie Ackland (Contralto).
7.30—In Town To-night.
8.0—"The Strange Adventures of Mr. Penny," by Maurice Moisewitsch.
8.15—"The Vagabond Lover," with Rae Jenkins and his Bijou Orchestra.
8.30—Mozart: Elsie Suddaby (Soprano); John Francis (Flute); The London String Trio.
9.0—The News.
9.20—Music-Hall: Norman Long, The Western Brothers, Elsie and Doris Waters, Larry Adler, Gipsy Nina; BBC Variety Orchestra, conducted by Charles Shadwell.
10.20—The BBC Orchestra (Section E), conducted by Frank Bridge; The BBC Men's Chorus; Harold Williams (Baritone).
11.15—Jack Jackson and his Band.
11.30—Late News Summary.
11.40-12.0—Jack Jackson and his Band (contd.).

REGIONAL

For Time Signals, see Monday
10.15-10.45 a.m.—Droitwich.
10.45—The BBC Northern Orchestra, conducted by Alfred Barker; Arnall Osocroft (Pfte.).
11.45—Records.
12.15 p.m.—Berkeley Mason (Pfte.).
12.45—Christmas Football.
1.0—Garda Hall (Soprano); W. H. Squire (Cello).
2.0—Cinema Organ.
2.30—Carlton Hotel Orchestra.
3.15—Harlequins v. Richmond.
4.5—"Sindbad the Sailor".
5.5—Records.
8.15—The Children's Hour.
6.0 (Regional, Northern)—The Harton Colliery Band; Fred T. McIntyre (Baritone).
6.0 (Midland)—Records.
6.0 (Western)—Dance Orchestra.
6.0 (N. Ireland)—The Grand Central Dance Band.
6.0 (Scottish)—Jean Craig (Soprano); Robert Watson (Baritone); John C. Johnston (Piper).
6.30 (Western)—The Wessex Quartet.
6.30 (N. Ireland)—Radio Gazette.
6.40 (Midland)—Sports in the Midlands.
6.45 (N. Ireland)—Football Commentaries.
6.45 (Scottish)—Halbert Tatlock in "Bitter Breivites".
7.0—The London Flute Quartet.
7.20—Regional Announcements.
7.30 (Regional, Scottish)—May Blyth (Soprano); The Scottish Orchestra, conductor, Georg Szell.
7.30 (Midland)—Jan Berenska and his Orchestra; Alex Penney (Soprano).
7.30 (Western)—It has been announced.
7.30 (Northern)—Sporting Sketches.
7.30 (N. Ireland)—Records.
7.30 (Northern)—The BBC Northern Orchestra, conductor, T. H. Morrison.
7.50 (Western)—Oratorio—Solomon by Handel.
8.15 (N. Ireland)—George C. Nash.
8.30 (ex. Western, Northern, Scottish)—Tunes of the Town.
8.30 (Northern)—"The Bellman."
8.30 (Scottish)—Fan Fare.
8.50 (Western)—Around and About.
9.0 (Northern)—Reginald Dixon—Organ.
9.5 (ex. Western, Northern)—The BBC Dance Orchestra.
9.5 (Western)—"Death at the Symphony Concert."
9.20 (ex. Western)—Is Fleet Street What It Was?—discussion.
9.30 (Western)—Cabaret.
10.0—News Summary.
10.25 (Scottish 10.40)—Droitwich.
10.25 (Scottish)—The Week in Scotland.
11.30—Late News Summary.
1.40-12.0—Droitwich.

Hours of Transmission in Greenwich Mean Time:

ATHLONE (Ireland)

565 kc/s (531 m.); 60 kW. Relayed by Dublin, 1,348 kc/s (222.6 m.); and Cork, 1,240 kc/s (241.9 m.).

1.30 p.m.—Records. 3.0-3.15 The Cab Derby—Commentary by George Bonass, from Phoenix Park, Dublin. 5.0—Commentary on Dublin Dog Show, from the Horticultural Hall. 5.30—Sean Gilligan's Ceilidhe Band.

6.0—Radio Orchestra. Conductor: Lieut. J. M. Doyle. Suite, The Christmas Tree (Rebikov). Pastoral Suite (Ansell). Il Natale di Pierrot (Monti).

6.35—Irish News Feature. 6.45—News. 7.0—A Visitor interviewed.

7.15—"Dublin enjoys itself." A Miscellaneous Programme with Leo Rowsome (Pipes), T. Chevis (Mandoline), and Radio Orchestra. Conductor: Lieut. J. M. Doyle. In the interval: "Cinderella"—Pantomime from the Queen's Theatre, Dublin.

PRINCIPAL EVENTS

SYMPHONY CONCERTS

4.45 Radio-Paris, Strasbourg: Russian music.
6.0 Leipzig: Ode on St. Cecilia's Day.
7.0 Munich: Bruckner, Brahms, Strauss.
8.0 Brussels 2: National Orch.
LIGHT CONCERTS
2.30 Kalundborg: Hansen Ensemble.
3.0 Warsaw: Choir, orchestra.
4.0 Radio-Paris: Pascal Orchestra.
5.0 Deutschlandsender: Popular orchestral.
5.30 Paris (PTT): Cigány music.
6.10 Vienna, Budapest: Popular programme.
6.30 Oslo: Radio Orchestra.
6.45 Beromünster: Nägeli Festival.
7.0 Deutschlandsender, etc.: von Gecky.
7.0 Frankfurt, Stuttgart: Opera and operetta.
7.45 Sottens: Variety concert.
7.55 Hilversum (301.5 m.): Orchestra.
8.0 Beromünster: Orch.; 8.30, Cossack Choir.
8.25 Hilversum (1,875 m.): Orchestra, two violins.
9.0 Budapest 1: Operetta music.
9.0 Radio-Normandie: Variety Concert.
9.30 Leipzig: Light and dance music.
11.0 Frankfurt, Stuttgart: Records.

OPERAS

5.30 Breslau, Hamburg: "Hieronymus Knicker" (Dittersdorf).

presented by Desmond Bell. 9.15—If I were Director of Broadcasting. 9.30—Variety. 10.30—News. 11.0-11.30—Sean Gilligan's Ceilidhe Band.

BANSKÁ-BYSTRICA (Czechoslovakia)

392 kc/s (765 m.); 30 kW. Relays Czechoslovak Stations.

BERLIN (Germany)

841 kc/s (356.7 m.); 100 kW.

5.0-7.0 a.m.—Ferdý Kauffmann Band; Accordion; Guitar; Zither. 7.55—Chimes and Service from Potsdam Garrison Church; followed by Berlin Cathedral Chimes. 9.0—Weather. 9.30-10.30—"Vom Fischer und syner Fru"—Cantata (Schoeck) (on Records). 11.0—See Breslau.

1.0-2.0 p.m.—Records. Backhaus (Pfte.): Hungarian Rhapsody No. 2 (Liszt). Schlusnus (Baritone): Winterliebe and Der Nachigang (Strauss). Thibaud (Violin): (a) Poupée valsante (Poldini), (b) Tango (Albéniz). Erna Berger (Soprano): Aria, "The Barber of Seville" (Rossini). Rachmaninov (Pfte.): (a) Etude (Rachmaninov), (b) Gnomenszenen (Liszt). Tito Schipa (Tenor): (a) The Nightingale and the Rose (Rimsky-Korsakov), (b) Mu! Mu! Mildner (Pfte.). Arabesques on Strauss's "The Blue Danube" (Schulz-Eriker).

3.0—See Frankfurt. 5.0—"And what have you got?"—Sequence about Christmas Presents (Neubert); Music by Willy Hahn. 6.0—Light Music by the Hans Bund Band.

6.30—"Wenn die Zarin lächelt"—Operetta in Three Acts (Schmalstich).

Conductor: The Composer: Margerite Slezak as Catherine II; at 8.55-9.20—News.

10.15—Dance Music from Munich. 11.0-12.0 m't—Dance Records.

BEROMÜNSTER (Switzerland)

556 kc/s (539.6 m.); 100 kW. Relayed by Basle and Berne, 1,375 kc/s (218.2 m.).

11.0 a.m.—Zürich Radio Orchestra. Conductor: Gilbert. 11.30—News.

11.40-12.45 p.m.—Zürich Radio Orchestra. Conductor: Bernhard Incehl (Violin). O. Strauss (Pfte.). 1.0-1.30—Book Review. 3.0—Accordion Band.

3.30-5.0—See Monte Ceneri. 5.0—A Christmas Tale (Jehle). 5.25—Hermann and Erich Leeb (Lutes). 6.0—Chimes from Zürich Churches. 6.15—Time; Markets. 6.30—News.

6.45—Hans Georg Nägeli Centenary Programme.

8.0—Zürich Radio Orchestra.

8.30—Cossack Choir, from the Café Böse, Zürich. 9.15 (from Basle)—

Scherzo (van Goens). Blumengeflüster (von Blon). Selection, "Don Cesar" (Dellinger). Oriental March (van de Velde). Selection, "Ernani" (Verdi). Selection, "Cavalleria rusticana" (Mascagni). Fanfarenklänge (Fück). Overture, "Fra Diavolo" (Auber). Waltz, Kastagnetenklänge (Richardz). The Japanese Screen (Ketteley). Rhapsody in B minor (Hartung). Waltz, Frühlingsstimmen (Strauss). Persian Procession (Zimmer).

1.0 p.m.—News; Greetings. 1.10—Talk for Women: Christmas in Scandinavia.

1.35—Glogau Mandoline and Lute Ensemble. Conductor: Bitterlich. 2.30—For Children.

3.0—See Frankfurt. 5.0—Sports.

5.30—"Hieronymus Knicker"—Two-Act Opera (von Dittersdorf) (on Records). 6.45—Reading (Persich).

7.0—See Königsberg. 9.0—News.

9.30-11.0—Station Dance Band.

BRNO (Czechoslovakia) 922 kc/s (325.4 m.); 32 kW. Transmits at intervals from 5.45 a.m. 11.20 a.m.-12.35 p.m.—See Prague.

6.30 Prague, "The Jacobin" (Dvořák).

6.45 Warsaw: "Nouvelles Cracoviennes."

7.40 Turin, Cologne, Radio-Paris: "Falstaff."

8.30 Paris (PTT): From the Opéra-Comique.

8.30 Strasbourg: "Hänsel and Gretel."

OPERETTAS

6.30 Berlin: "Wenn die Zarin lächelt" (Schmalstich).

7.40 Rome: "La divorziata" (Fall).

CHAMBER MUSIC

5.0 Königsberg: Organ, violin, cembalo.

7.0 Kalundborg: Quintet (Weber).

9.30 Deutschlandsender: Quartet (Kreutzer).

RECITALS

4.0 Strasbourg: Songs.

4.5 Stockholm: Ballads and songs.

5.0 Paris (PTT): Carols.

8.30 Warsaw: Pianoforte.

PLAYS

5.0 Leipzig: "Die heiligen drei Könige."

8.30 Eiffel Tower: Two plays.

LAST NEWS BULLETINS, see Monday

DANCE MUSIC

4.0 Budapest 1; 7.30 (to 1 a.m.), Kalundborg: Christmas Ball; 9.0, Sottens, Stockholm, Warsaw; 9.15, Oslo; 9.30, Munich, Prague; 10.0, Deutschlandsender; 10.10, Brussels 1; 10.25, Regional; 10.30, Rome; 10.45, Hilversum (301.5 m.); After the Opera, Radio-Paris; 11.0, Berlin, Radio-Normandie; 11.15, Brussels 2, National, Strasbourg.

Report: A Week-end in the Snow. 9.45 (from Berne)—Parliamentary Review (Recorded). 10.0 (from Berne)—Announcements.

BRATISLAVA (Czechoslovakia)

1,004 kc/s (298.8 m.); 13.5 kW. Transmits at intervals from 5.45 a.m. 11.20 a.m.-12.35 p.m.—See Prague.

12.35—For Farmers. 12.50—Record.

Brenders Jazz Band. 1.0—News. 1.10—Salon Orchestra. Conductor: Féron. 1.30—Records. 2.0—Art Notes. 2.2—Light Orchestral. Conductor: Walpot. 3.0—Records. 3.15—Max Alexy Orchestra from the Théâtre de l'Alhambra. 4.0—Records. 4.10—Trio for Violin, Viola and Pfte. (Brahms). 4.40—Alfo de Quiek (Baritone). 4.55—News. 5.0—League of Nations Talk.

5.15—Candrix Jazz Band from the Pôle Nord. 6.0—Literary Talk: Cecile Douard.

6.15—Salon Orchestra. Conductor: Féron. Germaine Broka (Songs). 7.15—Reviews: (a) Literature, (b) Hygiene, (c) Foreign Affairs.

8.0—Radió Orchestra. Conductor: Gaéon. Belgian Music.

8.30—"La Chanson de Yara"—Play (Guéry). Music by Brusselmans. 9.5—Records.

9.30—Radio Orchestra, Vocal Quartet and Lombard (Xylophone). 10.0—News.

10.10—Brenders Jazz Band. 11.0-12.0 m't—Ravel Records.

BRESLAU (Germany)

950 kc/s (315.8 m.); 100 kW. Relayed by Gleiwitz, 1,231 kc/s (243.7 m.).

4.0 a.m.—Records.

5.0—See Berlin. 7.0-7.10—Reading.

8.0—Choir and Addresses from the Erlöserkirche. 8.30—Poems (Rosner).

8.40 (from Gleiwitz)—Schillings and Richard Strauss Songs by Käthe Kleiner (Contralto). 9.0—String Quartet in B minor (Streeck) (on Records). 9.35—Reading, "Under the Christmas Tree" (Jahr). 9.45—"Zoology"—Musical and Literary Sequence (on Records). 10.40—Report: The Gleiwitz Nurseries.

11.0—Silesian Orchestra. Conductor: Weissnagel. Graiek (Cello). March. Weihnachtsklänge (Wenger). Concert Overture (Reindel). Selection. "Hanneles Himmelfahrt" (Graener). Cello: (a) Adagio (Bargiel), (b)

and Czardas. Au temps des cerises (Renard). Zingaresca (Monti).

1.0—News. 1.10—Brenders Dance Band. 1.30—Records. 2.0—Shipping. 2.3—Alexys Orchestra from the Théâtre de l'Alhambra. 3.0—Records. 3.15—Light Orchestral. 3.45—Talk: Belgian Economics. 4.0—Records: "Dance of the Dragonflies" (Lehár). 4.55—News.

5.0—The Afrikaans Students Dramatic Society: "In die Wagkamer"—One-Act Play (Grosskopf). Recitations: (a) Sla mpampierleje (Leipoldt), (b) Die wad is my wonging (Visser), (c) Die valkte (Celliers). African Songs and Student Songs. 5.30—Quartet Op. 130, No. 13e (Beethoven) by the Brussels Quartet. 6.15—Talk: Masaryk. 6.30—Records. 6.45—Talk: Modern Intellectual Tendencies.

7.0—Mieczslas Szaleski (viola) and Janina Szaleska (Pfte). Sonata in E flat (Dittersdorf). Réverie (Wieniawski). Dumka (Statkowski). Lullaby (Friedman). Polish Song (Szymanowski). 7.30—News.

8.0—Belgian National Orchestra. Conductor: Lunssens. Aus Italien (Richard Strauss). 8.45—Interview.

9.0—Orchestra (contd.). Overture, L'estate (Pizzetti). Pfte. Concerto in G (Beethoven).

10.0—News. 10.10—Report: The Ghent Six Days Race. 10.25—Records: Symphony in C (Schumann).

11.15-12.0 m't—Brenders Dance Band.

BUCHAREST (Romania)

823 kc/s (364.5 m.); 12 kW. Relayed by Radio-Romania (Brasov), 160 kc/s (1,875 m.).

Transmits at intervals from 5.30 a.m. 11.10 a.m.—Salon Radio Orchestra. 4.15 p.m.—Military Band. 5.0—Time; Weather; Topical. 5.10—Instrumental Concert—Saxophone; Hawaiian Guitar, Xylophone, Musical-saw, Mandoline and Cymbal. 6.15—"Love Songs of To-day and Yesterday," by M. Alexandru. 6.40—Humorous Song Duets by MM. Stroe and Vasiliache. 7.10—Dance Music. 8.30—News. 8.40—Dance Records. 9.55—News. 10.0-11.0—Ionel Cristea Orchestra.

BUDAPEST (No. 1) (Hungary)

546 kc/s (549.5 m.); 120 kW. Transmits at intervals from 8.40 a.m. 11.30 a.m.—Opera Orchestra. Conductor: Rajter. 1.0 p.m.—Bura Cigány Band. 2.25—Records. 4.0—"Rhythmicus" Jazz Band (Hungarian Students' Union).

6.10-7.50—See Vienna. 7.50—Koloman Rozsahegyis. 8.40—News.

9.0—Budapest Concert Orchestra. Conductor: Fridl. Operetta Overture (Lincke). Wintergewitter (Fück). Excerpts, "The Girl in the Taxi" (Gilbert). Smiling (Szűcs). Russian Mazurka (Ganne). Pizzicato Polka (Strauss). Excerpts, "Der Teufelsreiter" (Kálmán). Excerpts, "Gül Baba" (Huszár).

10.20—László Magyar Salon Quintet; Sebó (Refrains). 11.5—News.

BUDAPEST (No. 2) (Hungary)

359.5 kc/s (834.5 m.); 18 kW.

11.35 a.m.—Records. 4.30 p.m.—Records. 5.0—For Farmers. 5.30—Iren Marik (Pfte.). 6.15—Talk. 7.35—Pertis Cigány Band.

COLOGNE (Germany)

658 kc/s (455.9 m.); 100 kW.

5.0 a.m.—See Berlin. 7.0—Reading (Euringer). 7.10—Light Music by the Station Quintet. 8.15-8.45—Talk. 9.0—Classical Records. 10.0—Talk on the 8.0 p.m. Programme. 10.30—Talk and Reading: Dietrich Eckart. 10.45—Pieces from Das wohltemperierte Klavier (Bach) by Willi Hölzer.

11.0 a.m.—See Breslau.

1.0—See Leipzig. 1.30—Talk.

2.0—Sonata in B flat (Mozart) by Hauck (Violin) and Traut (Pfte.). 2.30—Christmas Programme by Girls. 3.0—Variety Concert. Small Station Orchestra; Conductor, Eysoldt. Children's Choir; Conductor, Käthe Buss-Schmidt; the Fassbender Trio; Else Wünsche (Soprano); Merry Trautner (Contralto); Clemens Kaiser, Brene (Baritone); and Speakers.

4.45—Christmas Music. Bielefeld Children's Choir, Gerard Bunk (Organ). Choral Prelude (Bach). Choir: (a) Leise rieselt der Schnee (Ebel), (b) Folk Song, Süsser die Glocken in Klängen, (c) Cradle Song, Der Heiland ist geboren. Organ: Pastorate in A (Bunke). Choir: (a) Es ist ein Ros' ent-

BRUSSELS (No. 1) (Belgium)

620 kc/s (483.9 m.); 15 kW.

6.37-9.0 a.m.—Records; Gym; News. 12.0 noon—Records. 12.30 p.m.—Brenders Jazz Band. 1.0—News. 1.10—Salon Orchestra. Conductor: Féron. 1.30—Records. 2.0—Art Notes. 2.2—Light Orchestral. Conductor: Walpot. 3.0—Records. 3.15—Max Alexy Orchestra from the Théâtre de l'Alhambra. 4.0—Records. 4.10—Trio for Violin, Viola and Pfte. (Brahms). 4.40—Alfo de Quiek (Baritone). 4.55—News. 5.0—League of Nations Talk.

5.15—Candrix Jazz Band from the Pôle Nord. 6.0—Literary Talk: Cecile Douard.

6.15—Salon Orchestra. Conductor: Féron. Germaine Broka (Songs). 7.15—Reviews: (a) Literature, (b) Hygiene, (c) Foreign Affairs.

8.0—Radió Orchestra. Conductor: Gaéon. Belgian Music.

8.30—"La Chanson de Yara"—Play (Guéry). Music by Brusselmans. 9.5—Records.

9.30—Radio Orchestra, Vocal Quartet and Lombard (Xylophone). 10.0—News.

10.10—Brenders Jazz Band. 11.0-12.0 m't—Ravel Records.

BRUSSELS (No. 2) (Belgium)

932 kc/s (321.9 m.); 15 kW.

6.37-9.0 a.m.—Records; Gym; News. 12.0 noon—Records.

12.31 p.m.—Salon Orchestra. Vienne-Potpourri (Hruby). Slav Melody (Dury). Hungarian Song

sprungen (arr. Practorius), (b) Vom Himmel hoch, ihr Englein, kommt, (c) Westphalian Folk Song, Gespräch der Kinder mit dem Christkindlein, (d) Heilige Nacht (Reinhardt), (e) Schlaf wohl, du Himmelsknecht du (Reimann), Three Organ Chorals on "In dulci jubilo" (Bach), Choir, (a) Folk Song, O du fröhliche, o du selige, (b) Stille Nacht (Gruber), (c) Folk Song, Auf dem Berge, da geht der Wind, (d) Ehre sei Gott in der Höhe (Bortniansky).

DEUTSCHLANDSENDER (Germany)

191 kc/s (1,571 m.); 60 kW. 5.0 a.m.—See Berlin. 7.0—Light Music. 9.0—"The Gate to Light"—Christmas Programme (Gert Randolph-Schmalnauer). 9.30—"Serenade on Ice"—Jander Wind Band with Reports from the Berlin Skating Rinks; at 10.15-10.30: Weather. 11.0 a.m.-1.0 p.m.—See Königsberg; at 11.55: Time and Greetings. 1.0—Christmas Songs and Tales by Girls. 1.30—"Der stille Klang"—Literary and Musical Sequence (Wozniak-Dombrowski). Station Orchestra Hildegard Erdmann (Soprano) and Hartwig (Baritone). 2.30—Records: Songs, Dances and Humour. 4.0—"Das Sternelied"—A Radio Ballad (Karrasch), with Music by Dornbrowski (on Records). 5.0—Lovely Melodies—Klüger Band. 6.40—Typical Report; Sports. 7.0—Bright Lights and Dance Music—Station Orchestra. Conductor: Dobrindt; Barnabas von Gezy Band; Lilla Claus (Soprano); Herbert Ernst Groh (Tenor); Rolf Heide (Bass); Emmy Goedel-Dreising and Children's Choir; Engel (Xylophone); Ernst Petermann (Compère). 9.0—News; Topical. 9.30—Quartet in E flat (Kreutzer). Krüger (Clarinet), Müller (Violin), Seiler (Viola) and Metzler (Cello). 9.45—Weather. 10.0-11.55—Dance Music. Barnabas von Gezy and Woitschach Bands.

FRANKFURT (Germany)

1195 kc/s (251 m.); 25 kW. Relayed by Cassel, Coblenz, Freiburg, and Trier, 1,195 kc/s (251 m.). 5.0 a.m.—See Berlin. 7.0—Weather; Snow Report. 7.10—The Trout Quintet (Schubert) (on Records). 8.0—Service. Address by Dr. Dietrich; Music by the Mainz Academy Choir. Conductor: Kühner (Organ). 8.45—"Christmas on the Battlefield"—Sequence (Knoeckel-yoh Schramm). 9.0—Choir of the Erlöserkirche, Bad Homburg. Conductor: Unger. 9.45—"Christmas Library"—Sequence (Claudius Linke, etc.). 10.0—German Christmas Music. Günther Thellacker (Violin), Helen Cropp (Violin), Seibold (Viola), Weingandt (Cello), Röhler (Flute), Schröder (Flute), Anne Winter-haiter (Harpischord) and Adele Hügel (Soprano). Christmas Concerto for two Flutes, two Violins, Viola, Cello and Harpischord (Pez). Variations for Harpischord on "Lasst uns das Kindlein wiegen" (Franz Xaver Anton). Es ist ein Ros' entsprungen (arr. Practorius). Pastorelle for two Violins, Viola, Cello and Harpischord (Werner). Wie schön leucht' uns der Hoffnung Stern (Bach). Harpischord: Fuga pastorella (Mullat). Pastorelle for two Flutes, two Violins, Viola, Cello and Harpischord (Werner). 11.0—See Breslau. 1.0 p.m.—For Children. 2.0 (from Freiburg)—Musical and Literary Sequence (Köhler). 3.0—"A Christmas Dream"—Variety for Young and Old. 5.0—Dietrich Eckart Commemoration. 5.15—Operetta Records. Excerpts, "Der Obersteiger" (Zeller), Boccaccio (Suppe), Lehar's Operettas, "Die glückliche Reise" (Künneke), "Die grosse Sündlerin" (Künneke), "Ball der Nationen" (Raymond), "Die Vielgeliebte" (Dostal), and "Wild Violets" (Stolz). 6.0—"The Wanderers' Christmas Eve"—Christmas Play (Otomar Starke). 6.50—Sports. 7.0—Light Opera and Operetta Music. Station Orchestra. Conductor: Rösbaud; Hauck Band; Maria Madson (Soprano), Willy Frey (Tenor), Goldlieb Zeithammer (Bass). 9.0—Time; News.

9.30—See Munich. 11.0 p.m.-1.0 a.m. (Sunday)—Dance Records.

HAMBURG (Germany)

904 kc/s (331.9 m.); 100 kW. Relayed by Bremen, Flensburg, Hanover, Magdeburg and Steitin, 1,330 kc/s (225.6 m.). 5.0 a.m.—See Berlin. 7.0—News. 7.20—Gym. 7.45—Orchestra and Choir. Conductor: Räder. 9.30-10.0—Dietrich Eckart Commemoration. 10.15—Café Concert. 11.0 a.m.-1.0 p.m. (from Flensburg)—Orchestra from the Deutsches Haus. Conductor: Roder. Festival Overture (Lortzing). Polonaise in E (Liszt). Selection, "Die Königskinder" (Humperdinck). Hungarian Scenes (Dohnanyi). Waltz, Frauenliebe und -leben (von Blon). March, "Gasparone" (Millöcker). Overture, "Die Geschöpfe des Prometheus" (Beethoven). Sin-



E.N.A. Christmas in Hungary; children presenting their traditional play of the Three Kings, as they do from door to door

fonia in C (Boccherini). German Dances (Mozart). Minuet, Symphony in D (Schubert). Transaktionen (Strauss). Attila March (Fucik); at 11.55 a.m.-12.5 p.m.: Time and Weather. 1.0—"Tannenbaum und Kreuzschnabel"—A Fairy Play (Knab). 1.30—"The Christmas Tree"—Talks. 2.0 (from Steitin)—Folk Music. Mandoline and Accordion Bands; Bamert (Zither). 3.0—See Frankfurt. 5.0—Albert Bozenhardt and Theodor Grandt talk about themselves. 5.30—See Breslau. 6.45—Talk: The Work of the Schütz Staffel. 6.55—Weather. 7.0—See Deutschlandsender. 9.0—News. 9.30—See Munich. 11.0-11.55—Dance Music from Deutschlandsender.

HILVERSUM (1,875 m.) (Holland)

160 kc/s; 10 kW until 2.40 p.m.; 100 kW from 2.40 p.m. 8.10 a.m.—N.C.R.V. Programme. Service. 9.10 till Close—K.R.O. Programme. 9.10—High Mass. 11.40—Records. 11.55—K.R.O. Orchestra. Conductor: van 't Woud. 12.40 p.m.—Records. 1.0—K.R.O. Melodists. Conductor: Lustenhouwer. 1.40—For Young People. 2.10—Records. 2.25—Children's Choir. Conductor: de Jong. 2.40—For Children. 3.40—Children's Choir (contd.). 3.55—Records. 4.10—"Oranje Nassau" Miners' Band. Conductor: Bastin. 5.25—Records. 6.0—Press Review & Records; Police Notes. 6.55—Talk: Radio Journal; News. 7.50-8.10—Meditation. 8.25—K.R.O. Chamber Orchestra. Conductor: Reinards. Piet Hartvelt and Fritz Hinz (Violins). 8.55—Talk. 9.15—Hartvelt (Violin). 9.25—K.R.O. Chamber Orchestra. Conductor: Reinards. 10.10—News; Records. 10.25—K.R.O. Melodists—Conductor: Lustenhouwer. 11.10-11.40—Records.

HILVERSUM (301,5 m.) (Holland)

995 kc/s; 15 kW until 2.40 p.m.; 60 kW from 2.40 p.m. 8.40 a.m.—V.A.R.A. Programme: Records. 9.40-11.40—V.P.R.O. Programme. 9.40—Service. 11.10—Harpischord. 11.40 a.m.-7.10 p.m.—V.A.R.A. Programme. 11.40—"De Flieffluters". Conductor: v.d. Horst. 12.20—Talk. 12.40—Records. 12.50-1.25—"Ramblers" Dance Band. 1.40—Records; Chess Lesson. 2.10—Christmas Oratorio (Bach). Conductor: Flipse. 3.40—Esperanto Programme. 4.0—"Melody Circle". Conductor: Wins. 4.40—Records. 5.20—Talk. 5.40—Steyn (Organ). 6.10—For Young People. 6.15—A Film. 6.40—Records. 7.10—V.P.R.O. Christmas Programme for Young People.

KALUNDBORG (Denmark)

240 kc/s (1,250 m.); 60 kW. Relays Copenhagen, 1,176 kc/s (255.1 m.). 7.0 a.m.—Gym. 9.0—Service from Christiansborg Castle Church. 10.28—Weather. 10.40—News. 11.0 a.m.-1.0 p.m.—Rydahl Ensemble. Overture, "Morning, Noon and Night" (Suppe). Skaters Waltz (Waldteufel). Elegy (Ramm). Selection, "Manon Lescaut" (Puccini). Humoresque (Poulsen). Gipsy Music, "Countess Maritza" (Kálmán). Egyptian Dance (Frim). Pierrrot's Serenade (Gille). The Blue Danube (Strauss). Selection, "The Circus Princess" (Kálmán). Czardas (Monti). Suite (Gerald). Spanish Dance (de Gredos); at 11.50: Reading. 1.0—Service from Christiansborg Castle Church. 2.30—Hansen's Ensemble. Augusta Frichsen (Songs). Moment musical (Schubert). Arabesque in E (Debussy). Oriental Romance (Rimsky-Korsakov). Schön Rosmarin (Kreischer). Ave Maria (Schubert). Shake-speare Songs (arr. Grendahl): (a) Blow, blow, thou winter wind, (b) O, willow, willow, (c) It was a lover and his lass, (d) Sigh no more, ladies. Excerpt, "Tordenskjold" (Halvorsen). Waltz (Mozart). Songs: (a) Synnøves Sang (Kjerulf), (b) Sovnen (Kjerulf), (c) Kveldsang for Blakken (Grieg), (d) Lok (Grieg), (e) Ved Solnedgang (Nielsen), (f) Sommerregn (Nielsen). Selection, "The Lovely Galatea" (Suppe). Serenade (Moszkowski). Valse coquette (Moszkowski). Old Memories (arr. Møller). Andante (Mozart). Arioso (Bach). Selection, "Rigoletto" (Verdi). 4.30—For Children. 5.0—To be announced. 5.30—Suzanne in her Repertoire. 5.50—Weather. 6.0—News. 6.30—Reading.

KALUNDBORG (Denmark)

7.0—Quintet in B flat (Weber), by the Rafn Quartet and Oxenvad (Clarinet). 7.30 p.m.-1.0 a.m. (Sunday)—Christmas Ball; at 9.0 News. KÖNIGSBERG (Heilsberg) (Germany) 1,031 kc/s (291 m.); 100 kW. Relayed by Danzig, 1,303 kc/s (230.2 m.). 5.0-7.0 a.m.—See Berlin. 8.0-8.45—Roman Catholic Service. 9.50—Programme Notes. 10.0—String Quartet in A (Schumann) by the Königsberg String Quartet. 10.30—"Treasures from the Königsberg Station Archives"—Sequence (arr. Bartels). 11.0—Small Station Orchestra. Conductor: Wilcken; Börschel Dance Band. Overture, "Das Zauberschloss" (Rust). Foxtrot (Mohr). Waltz (Kreuder). Waltz, Traum im Frühling (Czernik). Two Tangos. Selection, "Die Hochzeitsreise" (Plessow). Waltz (Bordes-Jensen). Foxtrot (Winkler). Lullaby (Borchert). Waltz, Blumen im Frühling (Friedl). Overture, "Edelweiss" (Komzak). Waltz (Rixner). Foxtrot (Broder-sen). Kaiser-Walzer (Strauss). Tango (Leenen). Polka, Auf Wiedersehen (Will). Selection, "Der Tenor der Herzogin" (Künneke); at 11.55-12.10 p.m., Time and Weather. 1.0—Talk. 1.10—Records. Overture, "Figaro" (Mozart). Herzwunden (Grieg). En bateau (Debussy). Flower Waltz (Tchaikovsky). Turkish March (Mozart). Aria, "The Force of Destiny" (Verdi). Hungarian March in C minor (Schubert-Liszt). 2.0—"Christmas Carols and Customs"—Sequence (Zeisemer). 2.35—Records from Deutschlandsender. 3.0—See Frankfurt. 5.0—Otto-Erich Wichmann (Violin); Margarete Schuchmann (Harpischord); the Station Choir—Conductor, Firschow; and Werner Hartung (Organ). Sonata in F (Handel). O Freude (Eccard). Der Morgenstern (Practorius). Bot-schaft (Gronwald). Durch der Berge Schnee und Eis (Riedel). 5.25—Reading. 6.0—Sports. 6.10—Records of La Scala Milan Artists. Excerpts "Aida" (Verdi), "I Pagliacci" (Leoncavallo), "La Bohème" (Puccini), and "Cavalleria rusticana" (Mascagni). 7.0—Variety. Small Station Orchestra; Conductor, Wilcken; Börschel Band; Marion Lindt; Ruth Norden (Operetta Songs); Evelyn Rays (Songs at the Pic.). Oskar Paulig (Entertainer); Goerke (East Prussian Dialect Sketches); Karl Sydow; Hartung (Organ); Padubrin and Grossmann (Ptes.); Radio Quartet and an Accordion Band. 9.0—News. 9.20 Book Review. 9.35-11.0—Dance Music from Munich.

LEIPZIG (Germany)

785 kc/s (382.2 m.); 120 kW. Relayed by Dresden, 1,285 kc/s (233.5 m.). 5.0 a.m.—See Berlin. 7.0—Religious Address and Wind Quartet. 7.30—Strohbach (Organ) from the Lukaskirche. 8.0—Military Band. 9.30—German Songs by a Students' Choir. 10.0—Records: Fairy-Tale Music. 10.30—Quintet in E flat (Reicha). 11.0—See Breslau. 1.0 p.m.—Songs round the Christmas Tree. Station Orchestra; Conductor: Kreitzschmar; Station Choir; Sammler (Pfe.). Hilde Kimmel and Thea Teimann-Weide (Sopranos); Emmy Daehne (Contralto). "Sinet und klingt"—Christmas Airs for Voices, Choir, Violins, Violas, Cellos and Pte. (Knab). Lullaby: Kindlein zart. Mixed Choir: Friede auf Erden. Folk Song, Täublein weiss (arr. Georg Schumann). Vom Himmel hoch da komm' ich her (Schreck). Christmas Carol (Adam). Mixed Choir and Violin: Susani (Grabner). In dulci jubilo (Loewe). Two Carols with Violin and Pte. accompaniment: (a) Wieder ist es Weihnacht worden (Schreck), (b) An der Krippe (Nagler). Ihr Kindlein kommt, ihr Hirten erwacht vom Schlummer der Nacht. Stille Nacht, heilige Nacht (Gruber). 2.0—A Regimental Christmas Celebration (Flex). Music by Grabner. 3.0—See Frankfurt. 5.0—"The Three Kings"—Play (Felix Timmermans), translated from the Flemish by Autón Kippenberg. 6.0—"Cäcilienode" (Handel), by the Leipzig Symphony Orchestra, and

SATURDAY (December 26)

Choir, Conductor: Weisbach (Recorded). 7.0—"Dancing Snowflakes"—Variety (arr. Erwin Albrecht). 9.0—News. 9.30-12.0 m.t.—Dance Music and Light Music. Fricke Dance Band and Station Choir.

LILLE (Radio PTT Nord) (France)

1,213 kc/s (247.3 m.); 60 kW. Transmits at intervals from 6.50 a.m. 12.0 noon—Records: Violin Music. 12.15 p.m.—Station Orchestra. Conductor: Soret. March, Holly-wood (Leopold). Scènes de ballet (Almayrac). Musette (Pfeiffer). Selection, "Ta Bouche" (Yvain). Waltz, Dans tes yeux (Yvain). Song (Capri). Danse russe (de Taeye). Tartar Funeral March (Scassola). Adoration (Filippucci). Dances (Ganne). Moorish Rhapsody (Massard). 1.30—Records. 1.45—Weather; Variety Items. 2.0-2.10—Exchange. 2.30—See Paris (PTT). 3.30—Literary Talk. 4.0—Records: "Les Saltimbanques" (Game). 4.45—Bal Champêtre. 5.10—Records: Pte. Music. 6.0—Records: Night in Music. 6.30—News; Review. 7.30—Records: Popular Music. 8.0—Sports. 8.15—For Housewives. 8.30—"Le Chemineau"—Five-Act Play in Verse (Jean Richepin). 10.30—News.

MONTE CENERI (Switzerland)

1,167 kc/s (257.1 m.); 15 kW. 11.0 a.m.-12.45 p.m.—See Beromün-ster; at 11.30: News. 12.45-1.0 p.m.—Bridge Lesson. 3.29—Time. 3.30—Christmas Music by Giuseppina Pozzo and Anclia Anastasi-Quadri (Pte. Duets). Andante (Turini-Bornio). Gavotte (Pirani). Schizzo (Serra). Melody (Schumann). Valse romantique (Chabrier). Lullaby (Casella). Allegro festivo (Jesinghaus). 4.0—"The Star of Bethlehem"—Christmas Music by Ticino Children's Choirs—Conductor: Filippello. Four Pieces from "The Star of Bethlehem" (Filippello). Christmas (Malfetti). 4.15—The Bells of Rivera. 4.20-5.0—Yehudi Menuhin (Violin) and the General Motors Orchestra—Conductor: Rapee (on Records). Adagio from the Violin Concerto in G (Mozart). Perpetuum mobile (Novacek). Souvenir de Moscou (Wieniawski). Minstrel (Debussy). Schön Rosmarin (Kreischer). Selection, "The Dusk of the Gods" (Wagner). 6.0—Records. 6.15—Weekly Review. 6.30—Records. 6.45—News. 7.0—Cinema Organ Records. 7.10—See Vienna. 8.40—Talk: Statesmen of the Ticino—Romco Manzoni. 9.0-10.0—Dance Music. Part I; Country Dances. Part II: Jazz Records.

MOSCOW (No. 1) (Russia)

172 kc/s (1,744 m.); 500 kW. 4.30 p.m.—Concert. 5.0—Red Army Notes. 5.15—Talk. 5.45—Music. 6.0—Provincial Programme. 8.0—German Talk: A Soviet Worker's Family. 9.5—French Talks: (a) U.S.S.R. Review, (b) Questions and Answers. 10.0—U.S.S.R. Review (in Spanish). 11.0—Spanish Talk: The Soviet Family.

MUNICH (Germany)

740 kc/s (405.4 m.); 100 kW. Relayed by Nürnberg, 1,267 kc/s (236.7 m.). Transmits at intervals from 5.0 a.m. 9.0 a.m.—Dietrich Eckart Commemoration—Sequence of Prose and Verse. 11.0—Light Orchestral. 12.0—Concert from Breslau. 1.0—For Children. 1.40—Lamond, Petri, and Backhaus Records. 2.5—String Quartet in F (Beethoven). 2.40—"With the North Sea Fishing Fleet in Winter"—Sequence (Fritz Volberg). 3.0—See Frankfurt. 5.0—"Telemark and Christiana"—Variety Concert. 6.40—Sports. 7.0—Concert from the Odeon. Station Orchestra and Male Voice Choir and the Academy of Music Male Voice Choir, with Karin Branzell (Contralto). Conductor: Hans Winter. Symphony No. 4 in E flat (Bruckner). Rhapsody (Brahms). Till Eulenspiegels Merry Pranks (Strauss). 9.0—News. 9.30-11.0—Dance Music.

SATURDAY (December 26)

OSLO (Norway)

260 kc/s (1,153.8 m.); 60 kW. Relayed by Fredrikstad, 722 kc/s (415.4 m.); Hamar, 519 kc/s (578 m.); Notodden, 1,357 kc/s (221.1 m.); Porsgrund, 850 kc/s (352.9 m.); Rjukan, 1,348 kc/s (222.6 m.); and Trondheim, 629 kc/s (476.9 m.).

8.0 a.m.—News. 8.5—String Quartet in A minor by the Kolisch Quartet (Records). 8.35—Olaf Bull Literary Programme. 9.0—Grieg—Records. 9.55—Service. 11.45—News. 12.0 noon—Concert. Fladmoe (Violin), Aas and Nina Bergh Williams (Songs); Wang (Flute). 3.30—Café Concert. 4.30—For Children. 4.55—Service. 6.10—News. 6.30—Time; Radio Orchestra; Variety. 8.40—News. 9.0—Topical. 9.15-10.30—Records: Light Music and Dance Music.

PARIS (Eiffel Tower) (France)

1,456 kc/s (206 m.); 5 kW. 6.45 p.m.—Music Talk. 7.0—News; Racing. 7.20—Foreign Affairs. 7.45—Press Review. 7.55—Tourist Talk. 8.0—Home Affairs. 8.30—"La Fête des Toits"—Play after a Daudet, Christmas Story; "Remords"—Play in Four Scenes (Berthe d'Id).

PARIS (Poste Parisien) (France)

959 kc/s (312.8 m.); 60 kW. 7.10 a.m.—Fanfare; Records; at 7.30—News; at 8.10—Dietetics, and at 8.30—News. 12.0 noon—Exchange. 12.5 p.m.—From the Empire Theatre: 12.40—Records. Orchestras and Songs. 12.55—Records. 1.30—Exchange. 1.33—Records. 1.45—"And Life goes on"—Topical Sequence. 2.0-2.30—For Girls. 3.0—From the Alhambra Theatre. 4.30—Exchange. 6.0—Call. 6.2—Roman Catholic Notes. 6.22—Borodin Records. 6.30—Exchange. 6.35—Dialogue. 6.42—Record. 6.46—Foreign Affairs. 7.2—Record. 7.6—News. 7.32—Paul Colline. 7.47—Records. 8.2—Paul Reboux. 8.17—Fanely Revöil. 8.32—Café Concert (Records). 9.5—"La Chanson du Tiroir" (No-hain-Delettre). 9.55—U.S.A. Bulletin from New York. 10.30-11.0—Records: Light Music.

PARIS (PTT) (France)

695 kc/s (431.7 m.); 120 kW. Transmits at intervals from 6.50 a.m. 10.0 a.m.—Light Music. Cécile Solas Orchestra, Women's Choir, Alba Mazzoni (Songs) and Allard (Cymbalom). 11.45—Talk: Provence. 12.0 noon—Light Music and Dance Music; by the Fred Adison Orchestra; at 12.50-1.0 p.m.: News. 2.0—Records. 2.30—Song Programme. 3.30—Sonia Alnoy and Maud Laury (Duets and Songs). 4.0—"Le chat de la Mère Michel"—Three-Act Play (Suzanne Singla). "Le Hérisson"—One-Act Comedy (Duvernois). 5.0—Amicitia Choir, Conductor: Mme. Samuel. Mlle. Lecocq and M. Hoche (Songs). Two Old Carols. "La Vierge à la Crèche (Fränk). Cadet Rousselle (d'Indy). Compère Guillier, (d'Indy). Duet: "Cobinette" (Weckerlin). "La Perdriole (arr. Maurice Emmanuel). 5.30—Racz Giganey Band. Racz (Cymbalom), Zoubowsky (Violin), Rakoczy March, Waltz, Frühlingstimmen (Joh. Strauss), Hungarian Fantasia (Danko); Cymbalom: Hungarian Folk Dance (Hubay), Selection. "Countess Maritza" (Kálmán). "Waltz: Tales from the Vienna Woods (Strauss); Pizzicato Czardas (Maggari). Russian Dance (Makorov). Cymbalom: Zigeunerweisen (Sarasate). Romanian Fantasia (Ocki-Albi). Violin: Russian Romance (Makorov). Two Hungarian Dances (Brahms). Caucasian Dance (Stoloroff). Hungarian Fantasia (Berkes). In the interval: Jean, Jac and Jo (Trios). 6.30—News; Review. 7.30—Weather. 7.38—Records. 7.45—Romanian Carols (Béla Bartók) by Arma (Pfte). 8.0—Records. 8.25—Talk on the following transmission. 8.30—Programme from the Opéra-Comique; at 10.30: News.

PARIS (Radio-Paris) (France)

182 kc/s (1,648 m.); 80 kW. 6.45 a.m.—Gym. 7.0—Records. 7.15—Press Review. 7.45—Gym. 8.0—Records. 11.0—Records: French Opera Music. Overture, "Raymond" (Thomas). Arias, "Lakmé" (Delibes) and

"Le Cid" (Massenet). Prelude to Act II, "Carr'n" (Bizet). 11.30—Records. Nocturne (Chopin). La Leggercaza (Liszt). Song (Gounod). Chani d'automne (Tchaikovsky). Sicilienne (Fauré). Arabesque and Villageoise (Flament). A Mules (Charpentier).

12.0 noon—For Farmers. 12.15 p.m.—Records: From the Bal Champêtre to the Bal Musette. 12.45—News and Review. 1.0—Records: Cornet Solos. 1.15—Mme. Theureau de la Barthe (Songs). Aria, "Sosarme" (Handel). Phöus und Pan (Bach). Soupir (Duparc). Chanson du pêcheur (Fauré).

1.30—Records: Ballads. Song of the King of Thule, "Faust" (Gounod). Romanian Ballad (Golestan). Balades des femmes de Paris (Debussy). Ballade (Jaubert). 2.0—Political Review. 2.15—Talk: Cochinchina. 2.30—Theatre Review. 2.40—Audran Records: "La Mascotte"; and "Le Grand Mogol." 3.0—For Children.

4.0—Pascal Orchestra. Marche parisienne (Ganne). Waltz Suite, Venezia (Lonthian). Scenes from the Czardas (Lederer). Venetian Serenade (Pierne). La Pluie (David). Printemps qui commence (Saint-Saëns). Chanson russe (Leoni). Berceuse (Boëllmann). Die flotte Garde (Siedel). Nénuphars bleus (Visciano). Ninon caprice (Elsen). Retraite marche (Laporté).

4.45—Lamoureux Concert from the Salle Gaveau. Conductor: Bigot. Russian Programme. Dances, "Prince Igor" (Borodin). Tamara (Balakirev). La nier (Glazunov). Divertimento (Prokofiev). Scheherazade (Rimsky-Korsakov). 6.45—Economics. 7.15—Talks. 7.40—See Turin.

11.0 (approx.)—Dance Music by the Goldy Orchestra. 11.30-12.15 a.m. (Sunday)—Light Music by the Goldy Orchestra. Wagner Potpourri, Memories of Bayreuth. Chanson tendre (Carco). Pfte. "Le singe grimpeur (Carco). Selection, "No, No, Nanette" (Youmans). "Fascination (Marchetti). Potpourri, "On with the Show" (Nicholls).

PRAGUE (Czechoslovakia)

638 kc/s (470.2 m.); 120 kW. Transmits at intervals from 5.45 a.m. 11.20 a.m.—Variety Concert. Svanda Theatre Orchestra and Artists. 12.35 p.m.—For Farmers. 12.50—Talk. 1.0-1.15—For Farmers (in German). 2.30—FOC Orchestra. Conductor: Pekarek. 4.0—Sketch. 4.35—German Transmission. Request Programme by Dauber and his Jazz Band, with Records. 5.50—News and Review (German). 6.0—News. 6.5—Talk. 6.20—Record. 6.25—Talk on the following Transmission. 6.30—"Jacobin"—Three-Act Opera (Dvořák) from the State Opera. 9.0—Time; News. 9.15—Record. 9.20—News (German). 9.25—Record. 9.30-10.30—Dol Dauber Jazz Band.

RADIO-NORMANDIE (France)

1,113 kc/s (269.5 m.); 10 kW. 7.0 a.m.—Records. 7.10—News. 7.50—Orchestra. 8.0—Records. 8.15—Melodies. 8.30—Records. 9.0—Popular Music. 9.15—Dance Music. 9.30—Light Music. 9.45—Records. 10.0—Light Music. 10.15—Variety Music. 10.30—Popular Music. 10.45—Records. 11.0—Light—Orchestral. 12.0 noon—Light Music. 12.20 p.m.—Cinema Organ. 12.40—News. 1.0—Concert. 1.30—Records. 2.30—Light Music. 3.0—Instrumental. 3.15—Records. 3.30—Light Music. 3.45—Hawaiian Music. 4.0—Concert. 4.45—For Children. 5.0—Records. 5.30—Orchestra. 5.45—Current London Productions. 6.0—Children's Corner. 6.45—Light Music. 7.0—Concert. 7.40—News. 8.0—Records. 8.40—Light Music. 9.0—Variety Concert. 10.0—Café Concert. 11.0—Dance Music. 11.30—From the Cabane Normande. 12.0 m.—Light Music. 12.15 a.m. (Sunday)—Dance Music. 12.30—Orchestral. 1.0—Records. 1.30-2.0—Light Music.

RADIO-ROMANIA (Brasov) (Romania)

160 kc/s (1,875 m.); 150 kW. See Bucharest.

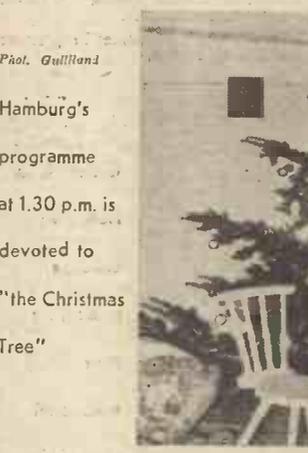
ROME (Italy)

713 kc/s (420.8 m.); 50 kW. Relayed by Naples, 1,104 kc/s (271.7 m.); Bari (No. 1), 1,059 kc/s (283.3 m.); Bari (No. 2), Milan (No. 2), Turin (No. 2), 1,357 kc/s (221.1 m.). 6.45 a.m.—Gym. 7.0-7.20—News. 11.15—Records. 11.30—Sports. 11.40-

a.m.—12.50 p.m.—Orchestra. Conductor: Mancini; at 12.0 noon: News. 12.50—Announcements. 1.0—News; Exchange. 1.20-2.0—News; Talks; Pfte. Duets. 3.25-4.0—See Turin. 4.0—News. 4.15—Dance Music. 5.0—Talk. 5.10-5.40—Rural Programme. 5.50—Dopolarvo Notes. 6.0—Records; Talk (Esperanto). 6.20—News in Foreign Languages. 7.5—Time; News. 7.30—Talk. 7.40—"Die geschiedene Frau"—Three-Act Operetta. (Fall). Talk and News in the intervals. 10.30-11.30—Dance Music; at 10.0: News.

SOTTENS (Switzerland)

677 kc/s (443.1 m.); 100 kW. Relayed by Geneva, 401 kc/s (748 m.).



Hamburg's programme at 1.30 p.m. is devoted to "the Christmas Tree"

STUTTGART (Germany)

574 kc/s (522.6 m.); 100 kW. 5.0-7.0 a.m.—See Berlin. 7.10-11.0—See Frankfurt.

TOULOUSE (Radio-Toulouse) (France)

913 kc/s (328.6 m.); 60 kW. Transmits at intervals from 8.0 a.m. 12.0 noon—Film Songs. 12.15 p.m.—Viennese Orchestra. 12.40—Light Music. 12.55—News. 1.10—Ganne Music. 1.40—Chansonnettes. 1.55-2.0—News. 5.45—Military Band. 5.55—News. 6.3—Songs. 6.15—Salon Orchestra. 6.40—Operetta—Songs, "Les noces de Jeannette" (Masse). "Faites ça pour moi" (Gaboroche). "Passionnement" (Messager). "Frasquita" (Lehar). "Les Cloches de Corneville" (Planquette). 6.50—News. 7.0—Dance Music. 7.30—For Children. 7.45—Light Music; at 8.0: News. 8.40—Music Hall. 8.55—News. 9.10—"A Montmartre"—Fantasy. 9.45—Paris Programme. 10.15—Excerpts. "Louise" (Charpentier). 10.40—Orchestra. 10.55—News. 11.0—Light Music. 11.15—Dance Music. 11.40—Chansonnettes. 11.55—News. 12.5 a.m. (Sunday)—Light Music. 12.20—Military Band. 12.30—Announcements.

STOCKHOLM (Sweden)

704 kc/s (426.1 m.); 55 kW. Relayed by Motala, 216 kc/s (1,389 m.); Göteborg, 941 kc/s (318.8 m.); Hörby, 1,131 kc/s (265.3 m.); and Boden, 392 kc/s (765 m.). 9.0-9.50 a.m.—Records of the New York Philharmonic. Conductor: Toscanini. 10.0—Service. 11.40—News. 12.0 noon—Light Music. 1.0 p.m.—For Children. 1.35—Light Music. 2.0—Talk. 2.30—Records. 3.30—Reading. 4.5—Sven Nilsson (Ballads and Songs) from Malmö. Der seltene Beter (Loewe). Meeresleuchten (Loewe). Verborgenhait (Wolf). Songs (Sjögren): (a) Bertmanden, (b) Isräjlers lustgård. 4.30—Cabaret. 5.15—Variety. 6.15—News. 6.30—Talk. 7.0—Operetta. 8.45—News. 9.0-10.0—Dance Music.

STRASBOURG (France)

859 kc/s (349.2 m.); 100 kW. Transmits at intervals from 7.0 a.m. 1.15 p.m.—Light Orchestral. Grégoire (Violin) and Remond (Cello). Overture, "Si j'étais roi" (Adam). Intermezzo and Florentine Serenade (Marchetti). Selection, "Eva" (Lehar). Violin. Waltz Suite, "Der Rosenkavalier" (Strauss). Cello. March (Candiolo). 2.0—Theatre Review. 3.0—Medieval Nativity Play. 4.0—Albert Peters (Songs). Songs (Schubert): (a) Feierabend, (b) Liebesbotschaft, (c) Nachtstück. Songs (Duparc): (a) L'invitation au voyage, (b) Chanson triste, (c) Le Manoir de Rosemonde. Songs (Wolf): (a) Der Gärtner, (b) Auch kleine Dinge können uns entzücken.

(c) Schlafendes Jesuskind, (d) Anakreons Grab, (e) Auf ein altes Bild. Songs (Mahler): (a) Ich bin der Welt abhanden gekommen, (b) Wer hat dies Liedlein erdacht. 4.45—See Paris (Radio-Paris). 6.45 (approx.)—Topical; Review. 7.15—Records of Maurice Chevalier. 7.30—Time; News. 7.45—News (German). 8.0—Sports. 8.15—Press Review (German). 8.30—"Hänsel and Gretel"—Three-Act Opera (Humperdinck). Station Orchestra and Artists. Conductor: de Villers. 10.30—News. 11.0—News (Ger.). 11.15—Dance Music.

VIENNA (Austria)

592 kc/s (506.8 m.); 100 kW. Relayed by Graz and Linz 886 kc/s (338.6 m.); Innsbruck, 519 kc/s (578 m.); Klagenfurt and Vorarlberg, 1,294 kc/s (231.8 m.); and Salzburg, 1,348 kc/s (222.6 m.). 6.45 a.m.—Chimes; Motto; News. 7.0—Viennese Operetta Music. Station Orchestra; Conductor: Holzer. Lillie Claus (Soprano); Karl Ziegler (Tenor). 8.0—Reading. 8.30—Records of the Vienna Philharmonic. 9.0—Pontifical High Mass from St. Stephen's Cathedral. 10.40—Announcements. 10.45—Vienna Symphony Orchestra. Conductor: Pachernegg. Fantasia Overture, Romeo and Juliet (Tchaikovsky). Invitation to the Dance (Weber-Berlioz). Viennese Suite (Pachernegg).

11.55 a.m.—1.20 p.m.—Light Music. Vienna Chamber Orchestra. Conductor: Eichinger. Kurz (Cello). Overture, "Russlan and Ludmilla" (Glinka). Waltz, Willkommgrüsse (Pehm). Cello: Berceuse de Jocelyn (Godard). Intermezzo, "The Arabian Nights" (Strauss). Song and Czardas (Lehar). Mattinata (Leoncavallo). Waltz, Carnevals Botschafter (Strauss). Selection, "The Bartered Bride" (Smetana). Potpourri (Komzak).

2.0—News. 2.15—Talk: Christmas in the Far North. 2.40—Melodrama. Maria Mayen (Speaker); Wallner (Pfte.). 3.5—String Quartet in E flat (Dvořák) by the Ast Quartet. 3.40—Talk: Reminiscences of the Marine Academy. 4.5—Records. 4.55—Kamper (Violin); Raupenstrauch (Pfte.). Sonata in A (Beethoven). Introduction and Variations on "Trockene Blumen" (Schubert). Three Movements, Suite for Violin and Pfte. (Goldmark). 5.45—A Report. 6.0—Time; Programme Notes. 6.10—"St. Stephen's Cathedral"—a Radio Film. 7.10—"A Flight round the World"—Radio Potpourri (Hruby). Station Orchestra. Conductor: Holzner. Mixed Choir: Maria Gerhart (Soprano); Karl Ziegler (Tenor); Emil Petroff (Tenor); Pflieger Wind Band; Mathe Jazz Band. 8.40—Film Review.

WARSAW (Poland)

224 kc/s (1,339 m.); 120 kW. Relayed by Cracow; 1,022 kc/s (293.5 m.); Katowice, 758 kc/s (395.8 m.); Łódź, 1,339 kc/s (224 m.); Lwów, 795 kc/s (377.4 m.); Poznań, 868 kc/s (345.6 m.); Torun, 986 kc/s (304.3 m.); and Wilno, 536 kc/s (559.7 m.). 7.0 a.m.—Time; Carol. 7.3—Police Band. 8.0—Service from the Church of Our Lady of Victories, Łódź; After the Service, Records. 10.57—Fanfare. 11.3 (from Lwów)—Salon Orchestra and Sereyński Jazz Band, the Wesola Piatká Choir, and Czeszko (Songs). March, Imperium (Wilke). Waltz (Kirsten). Choir: (a) Song (Altenberg-Lipczynski); (b) Waltz (Lipczynski). Piccolina and Song, "Rose-Marie" (Erjml-Górzyski). Film Song (Stolz). Operetta Potpourri (Hruby). Song (Halski). Praterbummel (Pachernegg). March (Schütz). Tango (Buday). Waltz in Strauss Style (Górzyski). Song (Krasznay-Kryszek). Ni oui—ni non (Lopczynski). Waltz (Lehar). Song, "Autumn Manoeuvres" (Kálmán). Song (Halski). March (Lincke). In the interval: Reading from Cracow.

TURIN (No. 1) (Italy)

1,140 kc/s (263.2 m.); 7 kW. Relayed by Milan (No. 1), 814 kc/s (368.6 m.); Genoa, 986 kc/s (304.3 m.); Trieste, 1,140 kc/s (263.2 m.); Florence, 610 kc/s (491.8 m.); Bolzano, 536 kc/s (559.7 m.); and Rome (No. 3), 1,258 kc/s (238.5 m.). 6.45 a.m.—Gym. 7.0-7.20—News. 10.30—Ambrosiana Orchestra. Conductor: Culotta. 11.15—Records. 11.30—Sports. 11.40 a.m.—1.20 p.m.—See Rome. 3.25—Art Talk: The French Impressionists (Manet, Van Gogh, Cezanne, etc.). 3.40—For Children. 4.0-6.0—See Rome. 6.0—News in Foreign Languages. 7.5—Time; Announcements. 7.30—Talk. 7.40—"Felsstaff"—Three-Act Opera (Verdi), from La Scala, Milan. Cast: Maria Caniglia (Soprano), Mafalda Favero (Soprano), Elvira Casazza (Contralto), Cloe Elmo (Mezzo-Soprano), Bruno Landi (Tenor), Giuseppe Nessi (Tenor), Mariano Stabile (Baritone), Ernesto Badini (Baritone) and Vincenzo Bettioni (Bass) and Luigi Nardi. 11.0-11.30 (approx.)—Dance Music.

TURIN (No. 2) (Italy)

1,140 kc/s (263.2 m.); 7 kW. Relayed by Milan (No. 1), 814 kc/s (368.6 m.); Genoa, 986 kc/s (304.3 m.); Trieste, 1,140 kc/s (263.2 m.); Florence, 610 kc/s (491.8 m.); Bolzano, 536 kc/s (559.7 m.); and Rome (No. 3), 1,258 kc/s (238.5 m.). 6.45 a.m.—Gym. 7.0-7.20—News. 10.30—Ambrosiana Orchestra. Conductor: Culotta. 11.15—Records. 11.30—Sports. 11.40 a.m.—1.20 p.m.—See Rome. 3.25—Art Talk: The French Impressionists (Manet, Van Gogh, Cezanne, etc.). 3.40—For Children. 4.0-6.0—See Rome. 6.0—News in Foreign Languages. 7.5—Time; Announcements. 7.30—Talk. 7.40—"Felsstaff"—Three-Act Opera (Verdi), from La Scala, Milan. Cast: Maria Caniglia (Soprano), Mafalda Favero (Soprano), Elvira Casazza (Contralto), Cloe Elmo (Mezzo-Soprano), Bruno Landi (Tenor), Giuseppe Nessi (Tenor), Mariano Stabile (Baritone), Ernesto Badini (Baritone) and Vincenzo Bettioni (Bass) and Luigi Nardi. 11.0-11.30 (approx.)—Dance Music.

STATIONS IN ORDER OF FREQUENCIES AND WAVELENGTHS

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

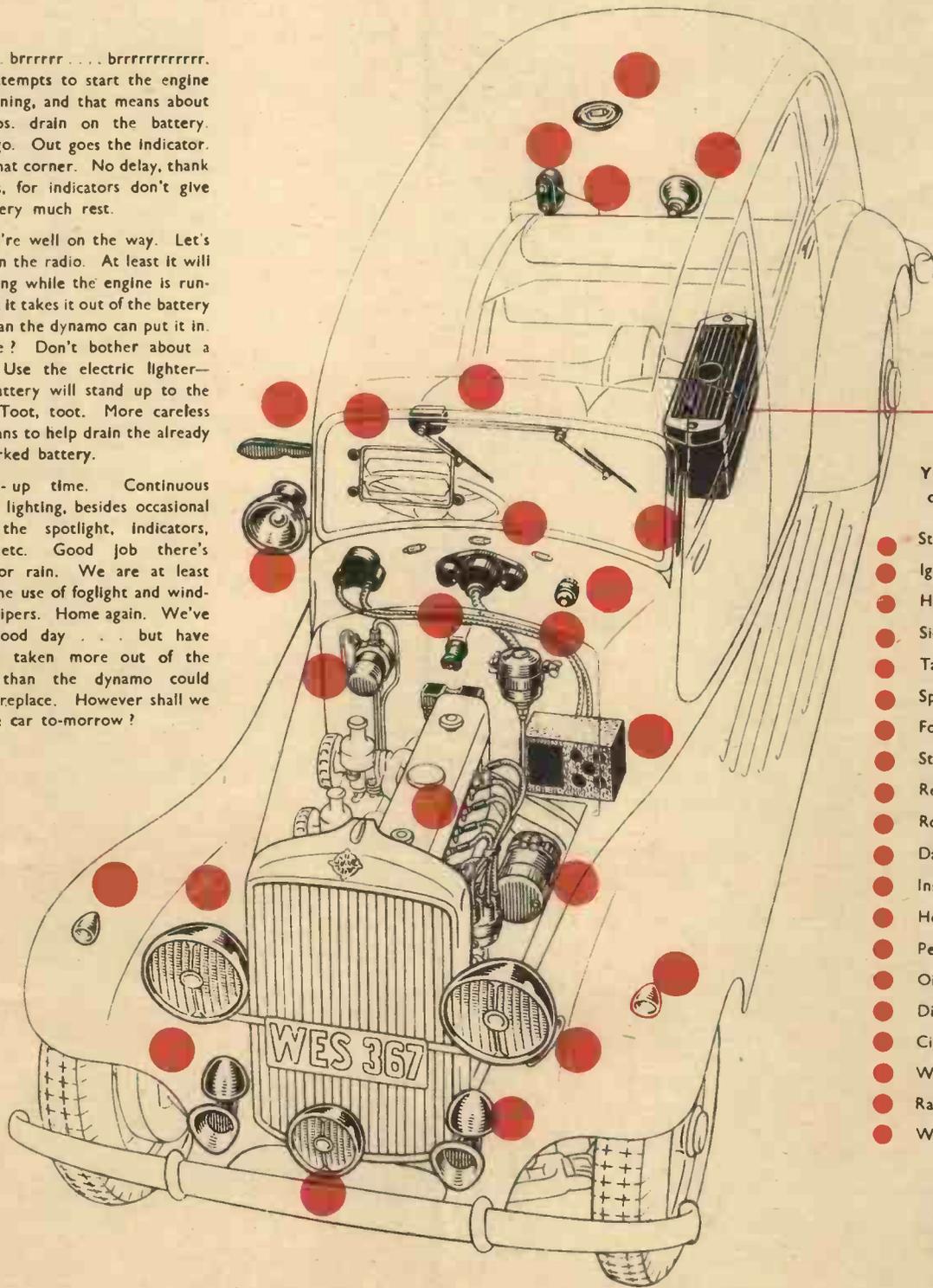
kc/s	m.	kW	Station	kc/s	m.	kW	Station	kc/s	m.	kW	Station
Band No. 1 150-300 kc/s.											
153	1961	5	Ankara (Turkey)	731	410.4	3	Madrid (EAJ2) (Spain)	1140	263.2	7	Turin (No. 1) (Italy)
		7	Kaunas (Lithuania)			5.5	Seville (Spain)			10	Trieste (Italy)
		100	Hilversum (No. 1) (Holland)			20	Assiut (Egypt)	1149	261.1	20	LONDON NATIONAL
			(Transmits K.R.O. and N.C.R.V. Programmes)	740	405.4	100	Tallinn (Estonia)			20	NORTH NATIONAL
			(Power 10 kW only until 2.40 p.m. G.M.T.)	749	400.5	90	Munich (Germany)	1158	259.1	10	WEST NATIONAL
160	1875		Radio-Romania (Romania)			1	Marseilles (PTT) (France)	1167	257.1	15	Kosice (Czechoslovakia)
		150	Lahti (Finland)	758	395.8	0.25	Pori (Finland)	1176	255.1	10	Monte Ceneri (Switzerland)
166	1807	150	Moscow (No. 1) (U.S.S.R.)	767	391.1	60	Sortavala (Finland)	1185	253.2	10	Kharkov (No. 2) (U.S.S.R.)
172	1744	500	Radio-Paris (France)			70	Katowice (Poland)			60	Nice-Corse (France)
182	1648	80	Radio-Paris (France)	776	386.6	10	BURGHEAD			0.5	Cassel (Germany)
185	1622	5	Istanbul (Turkey)			120	SCOTTISH REGIONAL	1195	251	2	Coblenz (Germany)
187.5	1600	20	Irkoutsik (U.S.S.R.)	785	382.2	120	Stalino (U.S.S.R.)			25	Frankfurt (Germany)
191	1571	60	Deutschlandsender (Germany)	795	377.4	7.5	Toulouse (PTT) (France)			5	Freiburg-im-Breisgau (Germany)
200	1500	150	DROITWICH	804	373.1	50	Leipzig (Germany)	1204	249.2	2	Trier (Germany)
208	1442	35	Minsk (U.S.S.R.)	814	368.6	50	Barcelona (EAJ1) (Spain)			5	Prague (No. 2) (Czechoslovakia)
216	1389	150	Reykjavik (Iceland)	823	364.5	12	Lwów (Poland)	1213	247.3	60	Lille (Radio PTT Nord) (France)
217.5	1379	100	Novosibirsk (U.S.S.R.)	832	360.6	100	WEST REGIONAL			50	Radio-Marconi (Bologna)
224	1339	120	Warsaw (No. 1) (Poland)	841	356.7	0.5	Milan (No. 1) (Italy)	1222	245.5		Temp'ly suspended
232	1293	150	Luxembourg			100	Bucharest (Romania)			0.3	Narvik (Norway)
		100	Leningrad (No. 1) (U.S.S.R.)	850	352.9	10	Moscow (No. 4) (U.S.S.R.)	1231	243.7	5	Gleiwitz (Germany)
240	1250	60	Kalundborg (Denmark)			10	Agen (France)	1240	241.9	1	Cork (Irish Free State)
		0.5	Vienna Experimental (Austria)			1	Berlin (Germany)	1249	240.2	17	Saarbrücken (Germany)
253	1186	10	Vigra (Aalesund) (Norway)			1	Bodö (Norway)			10	Riga (Latvia)
256.4	1170	25	Tashkent (U.S.S.R.)			3	Porsgrund (Norway)	1258	238.5	1	Rome (No. 3) (Italy)
260	1153.8	60	Oslo (Norway)			10	Stavanger (Norway)			1	San Sebastian EAJ8 (Spain)
271	1107	100	Moscow (No. 2) (U.S.S.R.)	859	349.2	100	Sofia (Bulgaria)	1267	236.8	2	Nürnberg (Germany)
282	1064	10	Tromsø (Norway)	868	345.6	16	Valencia (Spain)	1276	235.1	27	Radio Côte d'Azur (France)
283	1060	35	Tiflis (U.S.S.R.)	877	342.1	70	Simferopol (U.S.S.R.)			0.5	Christiansand (Norway)
Band No. 2. 300-500 kc/s.											
340	882.3	10	Saratov (U.S.S.R.)	886	338.6	15	Strasbourg (France)	1285	233.5	1	ABERDEEN
347	864	10	Finnmark (Norway)			7.5	Poznań (Poland)			0.25	Dresden (Germany)
355	845.1	20	Rostov-on-Don (U.S.S.R.)	895	335.2	1.5	LONDON REGIONAL	1294	231.8	5	Klagenfurt (Austria)
359.5	834.5	18	Budapest (No. 2) (Hungary)	904	331.9	100	Linz (Austria)			5	Vorarlberg (Austria)
375	800	40	Sverdlovsk (U.S.S.R.)	913	328.6	60	Graz (Austria)	1303	230.2	0.5	Danzig (Danzig Free City)
		0.6	Boden (Sweden)			10	Helsinki (Finland)			0.25	Karlstad (Sweden)
392	765	30	Banská-Bystrica (Czecho.)	922	325.4	32	Limoges (PTT) (France)	1312	228.7	2.5	Malmö (Sweden)
			(Power 15 kW after 5 p.m. G.M.T.)	932	321.9	15	Hamburg (Germany)			0.25	Norrköping (Sweden)
401	748	1.3	Geneva (Switzerland)	941	318.8	12	Dniepropetrovsk (U.S.S.R.)	1321	227.1	1.25	Magyaróvár (Hungary)
		100	Moscow (No. 3) (U.S.S.R.)	950	315.8	100	Toulouse (Radio - Toulouse) (France)			2	Bremen (Germany)
413.5	726	0.6	Östersund (Sweden)	959	312.8	60	Brno (Czechoslovakia)	1330	225.6	2	Hanover (Germany)
431	696	1.2	Voronezh (U.S.S.R.)	968	309.9	30	Brussels (No. 2) (Belgium)			2	Kiel (Germany)
Band No. 3. 500-1,500 kc/s.											
519	578	1	Innsbruck (Austria)	977	307.1	100	Algiers (North Africa)	1339	224	2	Stettin (Germany)
522	575	0.7	Hamar (Norway)			10	Göteborg (Sweden)			1.2	Montpellier (PTT) (France)
527	569.3	6.3	Ljubljana (Yugoslavia)	979	306.4	0.4	Breslau (Germany)			2	Lódz (Poland)
		10	Viipuri (Finland)			24	Poste Parisien (France)			0.5	Dublin (Irish Free State)
536	559.7	10	Bolzano (Italy)	986	304.3	10	Bordeaux-Sud-Ouest (France)	1348	222.6	0.15	Rjukan (Norway)
		16	Wilno (Poland)	995	301.5	60	Odessa (U.S.S.R.)			2	Salzburg (Austria)
546	549.5	120	Budapest (No. 1) (Hungary)			60	NORTHERN IRELAND REGIONAL			0.7	Tampere (Finland)
556	539.6	100	Beromünster (Switzerland)			100	Rueil - Malmaison (Beziers) (France)			0.5	Cairo (No. 2) (Egypt)
		60	Athlone (Irish Free State)	1004	298.8	13.5	Genoa (Italy)	1357	221.1	2	Königsberg (No. 2) (Germany)
565	531	10	Klaipeda (Lithuania)	1013	296.2	70	Torun (Poland)			0.15	Notodden (Norway)
		3	Palermo (Italy)			5	Hilversum (No. 2) (Holland)			4	Milan (No. 2) (Italy)
574	522.6	100	Stuttgart (Germany)	1022	293.5	3	(Transmits A.V.R.O., V.A.R.A. and V.P.R.O. Programmes) (15kW only until 2.40 p.m. G.M.T.)	1366	219.6	0.2	Turin (No. 2) (Italy)
583	514.6	50	Madona (Latvia)			5	Bratislava (Czechoslovakia)	1375	218.2	2	Bari (No. 2) (Italy)
586	512	10	Alpes-Grenobles (PTT) (France)	1028	293.5	2	MIDLAND REGIONAL			0.7	L'Île de France (France)
592	506.8	100	Archangel (U.S.S.R.)	1031	291	100	Chernigov (U.S.S.R.)	1384	216.8	0.5	Basle (Switzerland)
		25	Rabat (Morocco)			5	Barcelona (EAJ15) (Spain)	1393	215.4	0.5	Berne (Switzerland)
601	499.2	10	Sundsvall (Sweden)	1040	288.5	120	Cracow (Poland)	1402	214	2	Warsaw (No. 2) (Poland)
610	491.8	20	Florence (Italy)	1050	285.7	50	Oviedo (Spain)	1420	211.3	0.5	Radio-Lyons (France)
620	483.9	15	Brussels (No. 1) (Belgium)	1059	283.3	20	Königsberg (No. 1) (Heilsberg) (Germany)	1429	209.9	0.5	Stara-Zagora (Bulgaria)
		20	Cairo (No. 1) (Egypt)	1068	280.9	0.8	Paredé (Portugal)			0.5	Vaasa-Vasa (Finland)
629	476.9	15	Trondelag (Norway)	1077	278.6	12	Leningrad (No. 2) (U.S.S.R.)	1438	208.6	1.25	Alexandria (No. 2) (Egypt)
		15	Lisbon (Emissora Nacional) (Portugal)	1086	276.2	2	Rennes-Bretagne (France)	1456	206	5	Kaiserslautern (Germany)
638	470.2	120	Prague (No. 1) (Czechoslovakia) Temp'ly on 5 kW only	1095	274	10	Radio-Cité (Paris) (France)	1465	204.8	0.1	Turku (Finland)
		100	Lyons (PTT) (France)	1104	271.7	1.5	Tiraspol (U.S.S.R.)			1.25	Miskolc (Hungary)
648	463	10	Petrozavodsk (U.S.S.R.)			50	Bordeaux-Lafayette (France)	1474	203.5	0.1	Antwerp (Belgium)
658	455.9	100	Cologne (Germany)	1113	269.5	10	Falun (Sweden)	1487	201.7	0.1	Courtrai (Belgium)
668	449.1	70	NORTH REGIONAL			11.2	Zagreb (Yugoslavia)			1	BOURNEMOUTH
677	443.1	100	Sottens (Switzerland)	1122	267.4	6.25	Madrid (EAJ7) (Spain)	1492	201.1	0.3	PLYMOUTH
686	437.3	2.5	Belgrade (Yugoslavia)			0.25	Vinnitsa (U.S.S.R.)			0.1	Binche (Belgium)
695	431.7	120	Paris (PTT) (France)			10	Naples (Italy)			0.1	Chatelaineau (Belgium)
704	426.1	55	Stockholm (Sweden)	1131	265.3	10	Kuldiga (Latvia)	1500	200	0.1	Wallonia (Belgium)
713	420.8	50	Rome (No. 1) (Italy)			1	Moravská-Ostrava (Czechoslovakia)			0.1	Nimes (France)
		35	Kiev (U.S.S.R.)			6.25	Radio - Normandie (Fécamp) (France)			0.2	Albacete (Spain)
722	415.4	10	Kharkov (No. 1) (U.S.S.R.)			0.25	NEWCASTLE	1530	196	0.2	Santiago (Spain)
		1	Bergen (Norway)			10	Nyireghyáza (Hungary)	1737	173	0.1	Liepaja (Latvia)
		1	Fredrikstad (Norway)				Hörby (Sweden)			0.1	Liège Experimental, Radio-Cointe (Belgium)

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Brrrr . . . brrrrr . . . brrrrrrrrrrr. Three attempts to start the engine this morning, and that means about 300 amps. drain on the battery. Off we go. Out goes the indicator. Round that corner. No delay, thank goodness, for indicators don't give the battery much rest.

Now we're well on the way. Let's switch on the radio. At least it will keep going while the engine is running, but it takes it out of the battery faster than the dynamo can put it in. Cigarette? Don't bother about a match. Use the electric lighter—if the battery will stand up to the strain. Toot, toot. More careless pedestrians to help drain the already over-worked battery.

Lighting - up time. Continuous drain for lighting, besides occasional use of the spotlight, indicators, horns, etc. Good job there's no fog or rain. We are at least spared the use of foglight and windscreen wipers. Home again. We've had a good day . . . but have certainly taken more out of the battery than the dynamo could possibly replace. However shall we start the car to-morrow?



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 - Side Lamps
 - Tail Lamps
 - Spotlight
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 - Stop Light
 - Reversing Light
 - Roof Lamp
 - Dash Lamps
 - Inspection Lamp
 - Horns
 - Petrol Pump
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