



# WORLD-RADIO

## DOMINION & FOREIGN PROGRAMMES

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

Vol. XIII No. 334

Registered at the G.P.O.  
as a Newspaper.

FRIDAY, DECEMBER 18, 1931

Two Pence

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### WORLD-RADIO

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(Revised)

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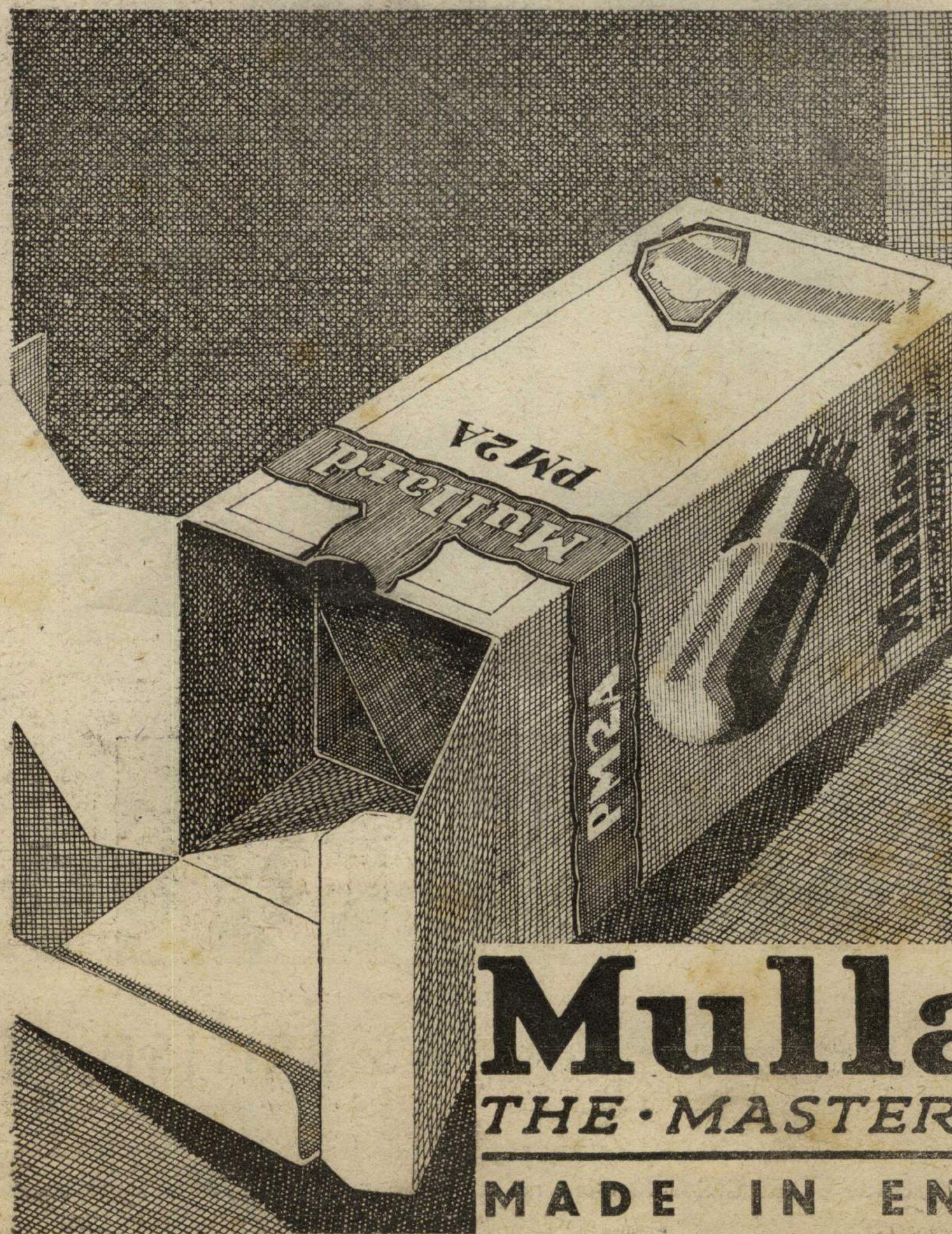
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TWO PENCE

## A Mexican Christmas

By J. W. BROWN

Mr. J. W. Brown, who was formerly Secretary of the International Federation of Trade Unions, has travelled much in Mexico and has an intimate knowledge of the daily life and picturesque customs of the Mexicans.

MEXICO to many people—and especially English people—means no more than an arid stretch of country inhabited by fierce and merciless tribes of revolutionaries; and mention of Christmas celebrations in such a land may serve merely to call up a smile, while the imagination dallies with scenes of debauched bandits who have only suspended their terrorising exploits for a few hours to indulge in a midnight orgy of feasting and drinking. But these are only extravagant fancies. Actually, Mexico is a land of beauty and glamour, mystery and fascination, weaving spells of magic and enchantment, and its people share all the atmosphere of romance that the country itself possesses in such abundance. Their costumes, too, are in complete harmony with their colourful and picturesque surroundings. Large numbers of the men are dressed in *Zarapes*, or brightly-coloured cloaks, and wear huge sombreros sometimes measuring nearly a yard across. Such are the unwieldy proportions of these hats that they have to be tipped to one side or taken off in public vehicles. In fact, they were found to be such a nuisance in one town that the local authorities imposed a tax of 1 peso for 10 centimetres of brim beyond a certain width. The Mexicans possess an inordinate love of all bright things, and the pedlar often includes amongst his stock-in-trade bright pottery, opals, and camelias.

Display and colour are, in short, a vital part of life for the Mexicans. You would not doubt this, if for one moment you could glimpse the *charro*, resplendent in his full costume, mounted upon his horse and joyful in the knowledge that he makes a goodly sight. The horsemanship of the *charro* is perfect. At a gallop all that is needed is the little finger on the reins; for the rest, the guidance is done with the legs.

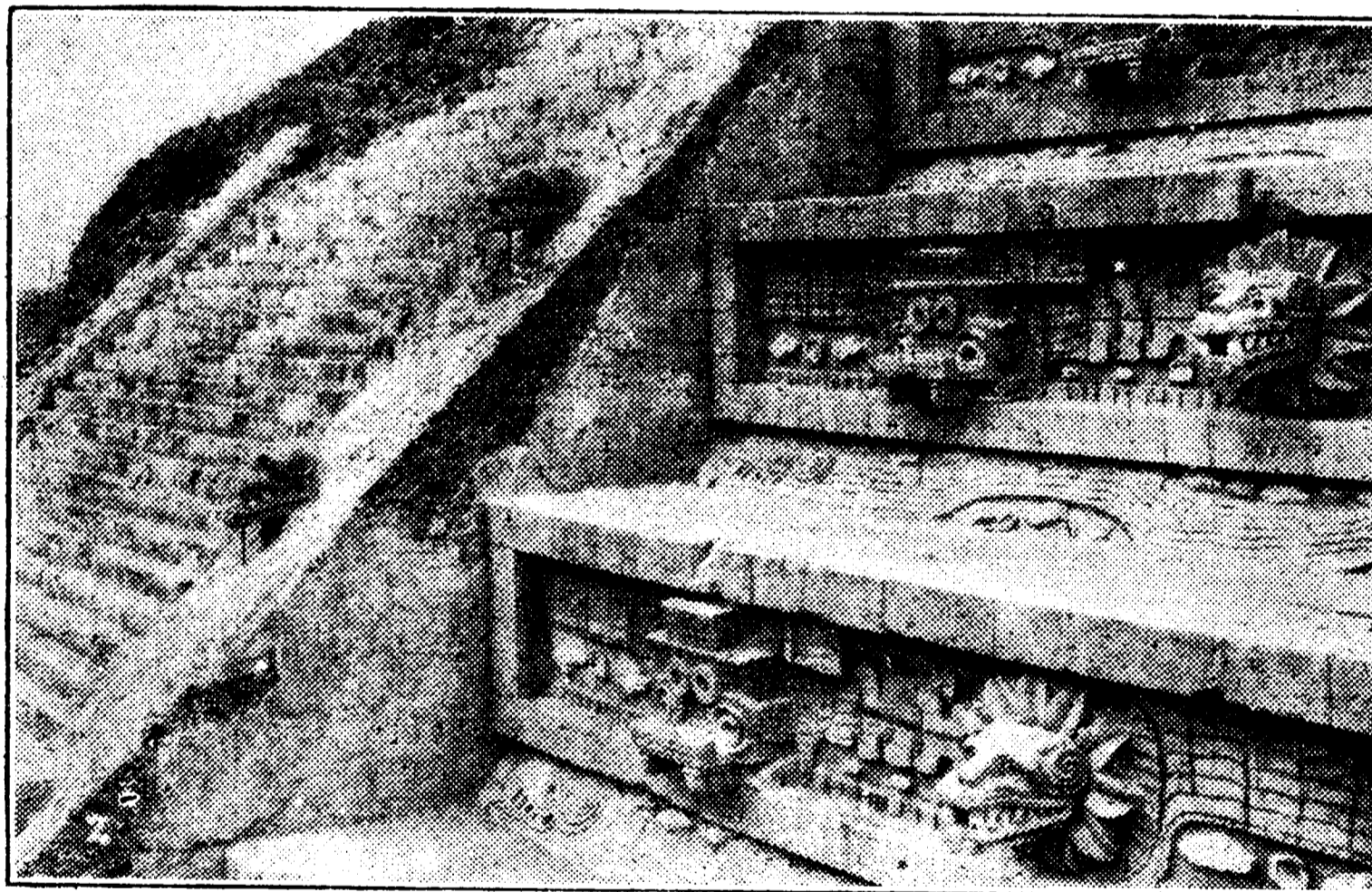
The love of bright things is one of the simple traits of their character. But something of the spirited side of their nature is apparent in their love of the contest of *Jarapeo*, which is considerably more humane than the repulsive butchery of the bull-fights, a popular national sport. Between two files of Indians bulls are driven at full speed. The animals, urged on by the Indians, are followed by horsemen. Each horseman gallops till he is abreast of the bull, usually on the left-hand side; then, in a twinkling of an eye, he swings his right leg over the head of the horse, retains his balance, while with the right hand he reaches down, catches the tail of the bull, and with a single movement swings the animal completely over, to the delight of the spectators, whose cheers for the horseman are mingled with jeers at the bull. It is a perfect exhibition of superb horsemanship; if the rider's pace is a fraction too fast or too

slow, it is he who is made to look ignominious. The excitement of the crowd is intense, and the yelling and shouting deafening. The victors in this feat do not go away unrewarded, and it has been my privilege to present the "prizes" on one such occasion in Zacetacas. These consist of sashes worn over the shoulder and down by the side—very reminiscent of the insignia of office used by the Ancient Order of Oddfellows.

With all his wild nature, the friendship of the Mexican is a thing worth having. Nor have I ever had experience of a more gracious, hospitable, and courteous race. In this connexion one incident comes to my mind. There exists in Mexico an old custom, which requires the host to say to any guest who may admire something in his house: "*a la orden de Usted*"—"It is yours." This is intended merely as a formal and courteous phrase; but on one occasion, to my horror, an American colleague of mine took our host at his word, and accepted a fine

This period of rejoicing is religious in its origin. The story of the Virgin Mary, wandering about for eight days and nights, seeking lodging before she found shelter at length in the stable, has given rise to a quaint ceremony among these people. Carrying an effigy of the Virgin from room to room in their house, they knock at each door praying for shelter, using old Biblical words and phrasing. This practice is continued each night till Christmas Eve, when the request for shelter is granted, and a Crib and Manger are set up in the house. The birth of the Child is symbolised by a cake being placed in the room with a china doll in it—or, should the means of the family permit, the doll may be of gold or silver. They call it "the baby in the cake." The ceremony has, of course, by this time, largely lost its religious character, and is carried on mainly as an old Christmas custom. But for us, at least, it becomes richer in meaning when we know in what tradition it has its roots.

A great feature of these evening entertainments is provided by the *pinato*. The *pinato* is a huge, balloon-like receptacle which is filled with candy, figs, nuts, and presents of all descriptions. It is often shaped like a human head, or like an animal, or perhaps some grotesque creature. It is suspended from the ceiling, and, in turn, boys and girls alternately are blindfolded, twisted round and round, after the manner of our blind-man's buff; then a stick, which might be described as a cross between a copper-stick and a policeman's truncheon, is put in their hands, and they aim a blow at the *pinato*. Sometimes they are allowed three tries, and misdirected hits are greeted with hilarious laughter, except on those occasions when the stick descends on the head of some unlucky spectator. When one of the children succeeds in breaking



Detail of pyramids at San Juan, Teotihuacan, Mexico

old piece of pottery. It required all my tact and diplomacy to persuade him that it was possible that our host might be perturbed by the loss of his treasure, and that it might be a mark in our favour if he returned it.

These people celebrate the Christmas season in their own picturesque fashion. In Mexico Christmastide, or, as they say, *Posados*, extends over eight days, or, to be more precise, I should say eight nights, from December 16 to Christmas Eve. And during that time there is a continual round of parties, dancing, music, drinking, and fun of all kinds. Parties gather in the house of a friend, who for one evening acts as host and bears all the expense of the festivities. But the next evening, when the revellers gather in the house of another friend, it is his turn to be guest. And thus the round of merriment goes on. The guests often attend their many parties in fancy costume—a picturesque people in a picturesque country. The *Posados* is the great event of the year with the Mexicans, and even the poorest families save up for this occasion so that they may take their part in the revels.

it there is a great rush to get the presents, which are scattered all over the floor. It is only among what might be described as the middle classes of Mexico that a Christmas-tree is found. The Christmas-tree custom has probably been introduced from the United States; the ceremony is very similar to our own. A ribbon is attached to the tree with a number on it, which corresponds to one of the presents which, at the appropriate moment, is delivered to the lucky person.

At midnight on Christmas Eve the great feast of the season takes place, the chief dish being a salad of the manifold fruits of Mexico. It is called a *Bunuelos*, and besides fruit contains also beetroot. It is made in a great bowl, measuring two to three feet across. In addition, a very crisp kind of cake bread is provided, which is broken into a plate and dipped into honey. This ceremony is called the *Misa de Gallo*, or, translated literally, the Cock's Mass.

During this whole period of merrymaking there are fairs in the market places, and present-buying goes on apace. The fairs, which

continue till Christmas Eve, do all their trade in the evenings. The crowds which throng there are in right good humour. The boys are for the most part engaged in letting off fireworks, and the louder the bangs the faster the fun; those who happen to have revolvers on them sometimes discharge them, adding not a little to the general disturbance. I remember one year, when I was in hospital in Mexico City at this season; it was the time when the revolutionaries had a good part of the country in their hands. The roars of the crowd and the reports of the fireworks seemed all the greater as I lay in the quiet ward, and more than once I was convinced that the rebels must have taken possession, and that I and the rest of the patients were not long for this world. I was always assured that everything was as it should be, but the tumult was not conducive to a quiet recovery after a severe operation.

On the last day of the year, the majority of the population attend Church service to give thanks for the health they have enjoyed during the year. This seems to me a most appropriate and necessary *finale* to such a consistent period of feasting. But festivities are not quite at an end even yet. There still remains the ceremony of the cake and the baby. The Virgin found refuge in the stable on Christmas Eve, and the Child born that night remained in the manger till *Santa Res* (January 6). The cake with the tiny china doll in it is cut on Santa Res Day. The person, whose luck it is to secure the slice containing the baby, has the honour of giving a further party. From time to time the baby is eaten, just as threepenny-bits in Christmas puddings are swallowed, and I am personally convinced that to omit the little doll would mean more whole-hearted enjoyment of the cake.

These people, generous at all times, genial and hospitable by nature, readily and deeply appreciate the meaning of friendship, and Christmas-tide, or *Posados*, affords an opportunity for them to give free play to all these qualities. Anglo-Saxons, in their contact with this race, should always remember that the Mexican is a *caballero*—a gentleman. And should he be treated as such, then the visitor will be welcomed with gracious cordiality; he will be allowed to take part in the customs of the people; he will learn of their traditions, and thus will he be led inevitably to an appreciation of Mexican ideals and culture, and will gain, moreover, an intimate knowledge of the most fascinating country in the world.

### Advertising and Mexican Broadcasting Stations

(From a Correspondent)

The majority of Mexican broadcasting stations have their own advertising staffs, and only in a few cases do they contract with independent advertising agencies. It is reported that advertising by means of broadcast programmes is growing as a practice in Mexico, and competition among the various stations is becoming keen. Charges for time are on the increase, and it is sold usually on a basis which provides that the station shall furnish the artists as well as the use of the studios and equipment.

(Continued from column 3)

I do not find the new Radio-Paris station any stronger. I have tried several times for the new high-power Russian station advertised to work on, or near, Madrid's wavelength on some unheard-of power, but all I can get—even with a borrowed super-het. (eight valves)—is a beautiful heterodyne note and a series of hoarse grunts, groans, and cackles. Perhaps, however, that is merely the Russian propaganda broadcasts!

## From the Swiss Alps

A Review of the November European Programmes  
By "YODELLER"

**M**Y prophecy in a recent issue, of an early and a severe winter, seems likely to go unfulfilled. November in the Alps has been a marvellous month: We have had much sunshine and at times it has been almost summer-like. On the 29th, we had a small snow fall, and it is a little colder as I write these notes.

**Sunday, 1st.**—I found the long waves free from atmospherics, so tuned in Königs Wusterhausen for a concert by the Berlin Philharmonic and heard, amongst other items, Pfitzner's Overture, "Kätchen von Heilbronn," Boccherini's famous "Minuet," and selections from Berlioz's *The Damnation of Faust*.

**Monday, 2nd.**—Picked up a relay by Vienna from the Imperial Vaults of the Capuchin Monastery on the occasion of the All Souls' Day commemoration service. The organ—a magnificent one—formed an impressive background for the slow, low-voiced commentary given by the Ravag announcer describing the proceedings.

**Tuesday, 3rd.**—Spent the evening listening to a concert from Warsaw, which included Bériot's Scènes de ballet for Violin and Orchestra, Tchaikowsky's "Romance," and Liszt's Second Hungarian Rhapsody. This concert ended, I stayed on at Warsaw for the harpsichord recital which followed.

**Friday, 6th.**—Called in on the Berne Municipal Theatre for a Swiss version of Johann Strauss's *Wienerblut*, which the Schweizerische Landessender was putting out with great vigour. Incidentally, I am rather surprised that this station is heard so well by my friends in England.

**Saturday, 7th.**—Heard the international relay by Vienna—a concert relay which, the announcer stated, in several languages, including English, was being taken by 113 stations. I tried a few of these, finally settling down to Vienna direct—although in many cases, there was little to choose between the relays and the original. The rebroadcast by the long-wave Daventry came back to me very well out here.

**Wednesday, 11th.**—Armistice Day. While I went to the local Armistice Day service (conducted by the Wartime Boulogne "Padre"), a member of my family listened to the Cenotaph relay from London. In the evening, I listened to the Albert Hall for the Legion "Festival of Remembrance."

**Thursday, 12th.**—One of the most reliable transmitters these days is Ljubljana, which station I found retransmitting a Yugoslav symphony concert from the National Theatre, Zagreb. The concert included Anton Lajovic's "Caprice," and Skerjanc's Lyric Overture, which—to be quite frank—although I listened to it very carefully, I could not grasp or follow.

**Saturday, 14th.**—Spent a delightful hour or two at Vienna, listening to a performance from the State Opera House of Gounod's *Faust*. This came through in the usual faultless way one has grown to expect from these Vienna Opera House relays.

**Sunday, 15th.**—Commenced the evening at Gleiwitz, which for once was free of its heterodyne trouble, and enjoyed a fine broadcast of Lehár's *The Merry Widow*.

**Monday, 16th.**—Tuned in the London National in order to hear the "Buy British" speeches by the Prince of Wales and Mr. Thomas, both of which came through excellently. I only wish our radio manufacturers would make an attempt to *Sell British* out here!

**Wednesday, 18th.**—Listened to the whole of Bizet's *Carmen* from the National Theatre, Munich. In the fifteen minute interval between Acts III and IV, I stumbled on Leipzig giving out Haydn's Harmonie-Messe in B Flat Major, the day being Germany's "Day of Penance." This relay was from the St. Thomas's Church,

Leipzig, and was provided by the local Riedel Society.

**Thursday, 19th.**—Heard, from Milan, one of the best versions of Mascagni's short opera *Cavalleria Rusticana* I have ever come upon.

**Friday, 20th.**—Early in the evening heard a fine military band concert from Bucharest, then changed up to Budapest for the song and cello recital from the High School of Music, one of the regular Hungarian broadcasting features I never miss. I liked, particularly, Tartini's Cello Concerto, which I heard for the first time on this occasion. This concert ended, turned to Strasbourg for the last part of Humperdinck's *Hänsel and Gretel*, but was rather disappointed in it.

**Saturday, 21st.**—From an old Rugger man's point of view, the relay from America (one of the best relays we have ever had!) of the Harvard-Yale football match was most interesting, particularly the quaint technical words, "Huddle" and so forth, used by the American commentator. I thought the game much slower than our handling code, but perhaps my American friends would disagree—emphatically—with this!

**Monday, 23rd.**—Spent one of the most enjoyable evenings I have known for some time at the Saalbau, listening, *via* Mühlacker, to a relay of the Fifth Monday Concert by the Frankfurt Orchestral Society. Beethoven's Pianoforte Concerto No. 4 in G Major was a veritable feast for the gods, whilst Bruckner's Third Symphony in D Minor was magnificent. May I draw my readers' attention to these concerts, and suggest that they tune in Stuttgart on forthcoming Monday evenings?

**Tuesday, 24th.**—My set broke down, and with a "dug-out" slider-and-bar crystal set, I listened to Radio Suisse Romande giving a symphony concert under the bâton of Ernst Ansermet. Reception was not too strong, but amazingly pure. I also logged Prague and Rome at excellent strength with my old "poste à galène."

**Wednesday, 25th.**—Again a symphony concert from Vienna drew me, of which the principal item—to me—was Schubert's Eighth Symphony, the "Unfinished"—incidentally, I like the French title better—"Symphonie Inachévé," which seems more romantic as well as more expressive.

**Saturday, 28th.**—Budapest advertised a symphony concert, but on tuning in this station, I found it giving forth a concert by Jack Hylton and his orchestra. The audience present in the hall from which this broadcast emanated were wildly enthusiastic, encoring item after item with delirious insistence.

**Sunday, 29th.**—My last notes of the month refer to Radio-Paris, from which station I heard, in the early evening, one of its famous Poulet concerts relayed from the Sarah Bernhardt Theatre. The orchestra treated us to an excellent rendering of Beethoven's Fifth Symphony.

### Summary

At times, atmospherics have been troublesome, much more so than one would expect at this time of the year. The interference of one station with another appears to be increasing. The best thing one can do is to pick out the strongest and the best signals and stick to these as much as possible. I notice the long-wave Daventry is badly heterodyned on frequent occasions, whilst a morse station frequently blots it out completely. This is a great pity. I can no longer separate the Northern Regional from Prague with my old set, although this can be done with a good super-het.—of which there is no British make on sale out here. To anyone who has a set which is inclined to "spread" a little, the giant Czechoslovak transmitter is a nuisance—yet, I am told, it is still to increase its power.

(Continued at foot of column 1)

# Viâ Ether

## Carmen from Frankfurt

ON SUNDAY next *Carmen* will be relayed at 7.30 p.m. from the Frankfurt studio. An interesting thing about this production, which is by Carl Stüber, is the restoration of the original spoken dialogue as it was used in the ill-fated Paris presentation of March 3, 1875. Beaumarchais, the author of *The Marriage of Figaro* and *The Barber of Seville*, is supposed to have said that words were only sung when they were too stupid to be spoken. (Oddly enough, his two best works have managed to survive only through the medium of song.) Whether the libretto of *Carmen* can be classed as stupid or not, it has been found that a spoken dialogue is more effective for broadcasting than the singing on the musical register called recitative. After that March première, Bizet sat in the directors' room at the back of the theatre and received the congratulations of the few friends present. He knew they meant well, but he was stunned by the hostility of the public. Presently he and Ernest Guiraud left the theatre together, and for a long time walked about the deserted streets, almost in silence. This original *Carmen*, when given on the 20th, will find a rather different audience. The recitatives usually sung in *Carmen* were written by his friend Guiraud for the more successful Vienna production in October of the same year, which Bizet did not see. He died in the previous June.

## Dr. Curtius to Broadcast

ON the same afternoon (the 20th) *Kasperl's Theater* (a Punch and Judy show for children) will be broadcast. Kasperl is own brother to the more phlegmatic Punch and the more sentimental Petrouschka, and in the difficult situations in which he is always finding himself he is no less likeable. In the evening at 6.45 Dr. Curtius—until recently German Foreign Secretary—will speak on Franco-German relations. On MONDAY, the 21st, the Amar Quartet, often heard from Stuttgart, will play the Brahms Op. III.

## The Florence Station

No doubt many readers have heard the new Florence station testing. These special transmissions have been taking place each day shortly after 1 p.m. and again after midnight on Milan's old frequency of 599 kc/s. The official inauguration of the station is likely, I believe, to take place between now and Christmas Day. The Genoa station will also be using its increased power of 12 kW., I am informed, during the course of the next week or so. There is some doubt at the time of writing, as to which station—Milan, Turin, or Naples—is using which wavelength, and it is possible that Turin is temporarily broadcasting on Milan's old wave. The calls and interval signals being identical, one cannot say for certain.

## Turin's Christmas Day Rest

Do not wonder what has happened to Turin if you cannot find that station on Christmas Day. It seems that during the Christmas holidays each one of the three Northern Italian stations, Milan, Turin, and Genoa, will

take a day's rest, and Christmas Day will be Turin's turn. On Christmas Eve, at 7.30 p.m., the Northern Italian stations will relay the ringing of the famous bell of Rovereto. Readers may remember that a little more than a year ago I mentioned this bell in these notes, and a picture of it was printed. The bell, called "La Campana dei Caduti," which is erected on the bastion of Rovereto Castle, was inaugurated in October, 1925, by the King of Italy and was cast from the metal of guns given by the Allies of the Great War. The bell itself weighs ten tons and it is rung in honour of those who fell in the War. At 8 p.m. on the same evening these stations will broadcast a symphony concert conducted by Otterino Respighi and, still later, will relay Midnight Mass from a Turin church.

## "Bells! Bells! Bells!"

THE relay of Italy's memorial bell will not be the only broadcast of this nature. Indeed, the music of famous bells will be a prominent feature of Frankfurt's Christmas Eve programme, which will be broadcast also by Stuttgart-Mühlacker as well, probably, as other German stations. Between 8 p.m. and 9 p.m. will be heard Germany's most famous bells. Thirty cathedrals will be laid under contribution, including those of St. Lawrence, Nürnberg (1302), Freiburg (1258), Erfurt (1497), and Würzburg (1706), which are famous for their ancient bells. There will be a running commentary by Carl Stüber, who will have some interesting things to say about the homes of these bells. For instance, the Cathedral of Trier—which was built by Helena of York, the wife of Constantine the Great, and has a bell, dating from 1628, which is named after her—is the resting-place of St. Matthew the Apostle. The largest bell, in St. Stephen's Cathedral at Vienna, will not be heard. It has not been rung for fifty years because the bell tower is not strong enough to stand the vibrations.

## Broadcasting Germany's Greatest Peal

THE heaviest bell in Germany, one of those to be heard, is that in Cologne Cathedral; it weighs 541 cwt and is the seventh largest in the world, the largest being that in the Kremlin in Moscow, weighing 3,600 cwts. In the Cathedral at Fulda lies St. Boniface, who was the first to convert the Germans to Christianity and was killed here by the Saxons. The bells at Mainz (Mayence) were cast from guns which had been used at the Battle of Jena. They were installed by the French, whose territory at that time extended to the Rhine and therefore included Mainz. The greatest peal in Germany will be heard from the Marienkirche, in Dantzig. The carillon of thirty-seven bells will play Christmas tunes. From Hamburg will be heard the Bell of St. Michaelis, a famous landmark to German sailors. Frankfurt was for long the capital of the so-called Holy Roman Empire, and in the Cathedral here many of the emperors were crowned after being chosen by the Electors in the Kaisersaal. A good many of the old emperors were buried in the Cathedral at Speyer. Other cathedrals whose bells will be relayed on Christmas Eve are the Kreuzkirche, in

Dresden, the Frauenkirche, in Munich, the cathedrals of Bremen, Bonn, and Berlin, and the monastery of Beyron, in Württemberg.

## Christmas Programmes

THE Christmas programmes will be worthily inaugurated by two transmissions on SUNDAY next. One is Hilversum's relay of Bach's Mass in B Minor from the Concertgebouw, Amsterdam, where it is to be rendered under the direction of Willem Mengelberg. The other is the relay by Leipzig of Bach's Christmas Oratorio from the St. Thomas Church, at Leipzig, of which he was Precentor. Other outstanding transmissions on Sunday are the relay of the "Concert Poulet" by Radio-Paris, the broadcast from Vienna of a song recital by a great favourite of mine, Frau Lotte Lehmann; the above-mentioned relay of *Carmen* by the Frankfurt, Stuttgart, and Heilsberg stations; and finally a relay by Brussels No. 2 of Mascagni's *L'Amico Fritz* from the Antwerp Opera House. THURSDAY'S programmes, needless to say, are largely influenced by the Christmas season. The Symphony Concerts announced from Bucharest for 7 p.m., and from Radio-Paris for 9 p.m., attract my special attention. Romanian Christmas music is then to be heard at the former, while at the latter the well-known German conductor, Herr Max Klemperer, is to conduct the Paris Symphony Orchestra. Two performances of *Tannhäuser* from two houses of Opera steeped in the Wagner tradition—i.e., Dresden and Munich—are to be relayed on FRIDAY and SATURDAY respectively. Leipzig will take the former and Munich the latter.

## More about Figaro

A PROPOS of my reference to the *Marriage of Figaro*, last Sunday's broadcast from Langenberg of Mozart's comic opera *chef d'œuvre*, which was relayed by all German stations, with one exception, was made notable by the fact that an entire new libretto was then used for the first time. As is well known, Mozart wrote the music to an Italian version of Da Ponte's, who, as is equally well known, based his story on Beaumarchais' comedy. Since then various German versions of Da Ponte's libretto have been rendered at Continental opera-houses, none of which, has, however, been quite satisfactory, since all aimed at being too literal. Cologne's able producer, Dr. Siegfried Anheisser, has just completed a new German version to which he had devoted many years' work and for which the claim is made that, while it retains the spirit of the original, the musically-illustrated words remain in the same place in the German text. I listened to Dr. Anheisser's introductory talk, as well as to two acts of the opera, on Sunday week. I had not an old textbook by me, and, therefore, could not make any comparison. Musically, however, the performance went with a great swing, and once again we were made aware that the *Marriage of Figaro* is Mozart's most valuable and most mature comic opera. Dr. Anheisser produced the work in the Cologne studio, Dr. Buschkötter conducted, and the singing of the artists was excellent.

ETHERVIATOR

# Dominion and Foreign Broadcasting Intelligence

## Extension of U.S.A. Opera Broadcasts

(From our New York Correspondent.)

The decision of the Board of New York Metropolitan Opera to allow its performances to be broadcast opens one more avenue to those interested in hearing good music "on the air." American listeners have been very fortunate of late in the musical programmes which have been presented and they are congratulating themselves that this new source—perhaps unique in the musical world for the perfection of its rendering—will shortly be available. The engineers at present engaged in installing the necessary equipment expect to have everything ready for the first broadcast early in January, 1932, if not before. When that occurs the New York Opera will join the Chicago Opera, which for some time past has permitted broadcasts of its performances. Among the outstanding programmes enjoyed during the past fortnight may be mentioned Shura Cherkassky, Russian boy pianist (Nov. 22, WEAf);

Symphony orchestra, Walter Damrosch, conductor (Nov. 22, WJZ);

Margaret Matzenauer, former leading contralto of the Metropolitan Opera Company (Nov. 22, WABC);

Chamber music: violin recital by Toscha Seidel (Nov. 24, WOR);

A dramatic musicale devoted to Saint-Saëns by a symphony orchestra (Nov. 26, WEAf);

New York Philharmonic Symphony Orchestra, Toscanini conducting, at the Metropolitan Opera House, was broadcast throughout the United States, France, Hungary and Czechoslovakia (Nov. 29, WABC);

Beniamino Gigli, Metropolitan Opera tenor, recital of Italian melodies (Nov. 29, WEAf);

Symphony concert, directed by Maurice Baron (Jacques Gosselin, soloist) (Nov. 29, WABC);

Toscha Seidel, violinist, and Egon Kornstein, cellist (Nov. 30, WABC);

Elisabeth Schumann, prima donna soprano of the Vienna Staatsoper, sang for the first time for American broadcasting in an orchestral concert, conducted by her husband, Dr. Alwin (Dec. 2, WABC);

Dramatic musicale of Mozart's work (Dec. 3, WEAf);

Rochester Philharmonic Orchestra, Fritz Reimer, conductor; George McNab, pianist (Dec. 4, WJZ);

Philadelphia Orchestra, Leopold Stokowski, conductor. Programme: Weber, Schubert, Berlioz, Mendelssohn, and Schumann (Dec. 5, WABC).

## AUSTRALIA

### A National Broadcasting Service

(From our Australian Correspondent)

It is now understood that the intention of the Commonwealth Government is to set up a board to control broadcasting in Australia. How far this new authority is to be independent of Ministerial control is not yet clear. The board will take over the programme side of broadcasting from the Australian Broadcasting Company, whose contract expires at the end of June, 1932. Meanwhile, the Government will have to pass certain legislation providing for the change. At present the licence fee in

Australia is 24s. a year, and many listeners have hoped for a reduction, but it is now announced that a reduction is exceedingly unlikely as it is intended to establish a National Broadcasting Orchestra, for which one shilling per licence will be required. The new board will also control the "B" Class (privately owned) stations, with which they are in competition.

## CANADA

### The "National Service Loan"

(From our Montreal Correspondent)

Full use was made of broadcasting in advertising Canada's "National Service Loan," and much

been so presented for centuries. On Christmas Day peace and good-will speeches will be broadcast, and a concert by the Philharmonic Orchestra will be relayed. A lively operetta will be broadcast from the studio in the evening, but the difficult selection cannot be made perhaps until the last moment. On December 26 there will be a concert of records taken at Bayreuth of a festival performance of *Tannhäuser*.

## GERMANY

### Opera Relay

(From our Frankfurt Correspondent)

On Christmas Day the third act of the *Meistersinger* will be relayed from the Landestheater of Hessen at Darmstadt. Weingartner will conduct. The opera will begin at about 4 o'clock in the afternoon, and the final act is timed to last from 7 p.m. to 9 p.m. Apart from anything else, the presence of Felix Weingartner is an assurance that this will be a brilliant finale to the Christmas programme.

### Christmas Relays

(From our Leipzig Correspondent)

Two programme items of recent years which had met with listeners' particular approval will be relayed again this Christmas. On December 20, at 7.15 p.m., the Christmas Oratorio by J. S. Bach will be transmitted from St. Thomas's Church in Leipzig, at which Bach was the Precentor for many years. On Christmas Day the Central German Broadcasting Company will relay Matins from the village church in Sehna, a small place in the Saxon Erzgebirge. In the evening of Christmas Day Leipzig and Dresden are to transmit, at 5.30 p.m., *Tannhäuser* from the Dresden State Opera.

## POLAND

### Christmas Programmes

(From our Warsaw Correspondent)

Special items chosen for the Christmas holidays are included in Thursday's programme. The morning will begin, as usual, with the time signal and the chimes from Cracow—from 10.58 a.m. until 11.5 a.m. (Greenwich Time). In the afternoon a Christmas Eve radio play for children, *Christmas in the Woods*, will be broadcast from Warsaw, followed

by a concert of children's choir relayed from Katowice. During the evening programme a mixed choir will be rebroadcast from Cracow. A programme of Christmas songs—called in Polish, "Kolendy"—sung by a chorus, will be relayed from Lwów at 10.25 p.m. The first day's Christmas programme will close at 11 p.m. with a relay of "Pasterka"—a special Christmas Service—from Notre Dame in Cracow. On December 25 the programme opens about 10 a.m. with a relay of a Christmas service from the Ostra Brama Cathedral in Wilno. Saturday, December 26, opens at 9.50 a.m. with a relay of a service from the Katowice Cathedral. At 6.45-7.15 p.m., Charles Dickens's *Christmas Carol* will be broadcast, and the second part, from 9.10 p.m., will be devoted to Chopin's masterpieces.



St. Thomas's Church in Leipzig, from which Bach's Christmas Oratorio will be transmitted by Central German Broadcasting Company on December 20. J. S. Bach was Precentor of this church

of the success which that issue achieved must be attributed to the publicity so obtained. On one evening nine Provincial Premiers and the Acting Premier of the Dominion broadcast appeals to the public to take advantage of the excellent investment offered, and thus aid both themselves and the country, as the greater part of the loan will go to provide work for the unemployed, and will be used for road-making and other public undertakings. The amount asked for was \$150,000,000, and it was over-subscribed.

## AUSTRIA

### Vienna's Christmas Items

(From our Vienna Correspondent)

On December 23 there is to be a relay of a Christmas performance of The Adoration of the Shepherds, from a country village where it has

# The Tribulations of Must-Avva Dinn

An (Almost) Oriental Fable, with copious Notes by the Translator

ONCE upon a Time in the far-famed City of *Saa-Voi* there dwelt a Wealthy Merchant whose Son, Must-Avva Dinn, much to the Chagrin of his Parents, by Evil Association with other Youths of his Age had been led to live a very Careless and Idle Life. It is said that he was of an Obstinate Disposition and that gainsaying all Wise Counsels tendered to him by his Elders he did refuse to learn a useful Trade wherefore in this Way he had acquired the Vicious Habit of shutting himself up in a Closet during a great Part of the Day and Night whereby he asserted he did hear Music disseminated from the local Bazar and even Voices from Distant Places far beyond the Confines of the City. It is also stated in the Annals of the Period that to satisfy his Desire in this Direction he did sell some of the Treasures most prized by his Parents "for" he observed, "by so doing shall I provide the Wherewithal to purchase from Foreign Places clever Devices which will permit me to listen to the *wyse-kraks* of he-men from *Kay-dee-kay-ay* and *Mos-kō* (1) in the Still Hours of the Night. And oft would he indulge in these Wild Orgies in the Society of Worthless Companions, wherefore the Neighbours who heard of these Things shook their Heads dubiously for albeit the Youths did meet secretly their Fraternity was recognised by the Sign of a *Radiant Fan* which they displayed as a Token on the Hem of their Garments.

Now it came to pass that in this Land of *Saa-Voi* there appeared one Day an Elderly Man of not unprepossessing Appearance who forthwith on his Arrival in the Market Square did display a black Box of curious Form and in which there glowed dimly Magic Lamps wherewith by artful Means he cast upon a small Silver Screen Pictures and Designs which were strange to the Eyes of the Populace. Must-Avva Dinn who had been apprised of the new Magic which the Stranger had exhibited wended his Way quickly to the Place and without haggling over the Price demanded of him did give the Vendor *um-teen* sequins (2) in Exchange for the Wonderful Box. Concealing It under his Garments he quickly carried It to the House of his Father and proceeded in all Haste to hide his valuable Purchase in his private Closet for, as it is said, he was a Youth of great Wisdom and it came to his mind that the Magic he had acquired from the Foreign Merchant would vouchsafe to him the *Bul-ge* (3) over his less-favoured Friends. After Sunset having made all due Preparations he invited his Companions to a light Collation, telling Them that all was *o-kay* (4) as his Father and Mother had been bidden by the *Sen-Sor* to witness some *Fill-ums* before they were shown to the Sultan at the Royal *See-nee-ma* Palace. Whereupon much to the Surprise of Must-Avva Dinn and equally to the Astonishment of his Friends who had disbelieved All that which he had promised them by Virtue of the Magic Box there was *bared to their Vision* a Picture of a Most Wondrous Nature. For albeit it was slightly veiled as in a Mist they did easily recognise the Face of a Lovely Woman far more beautiful than any *Houri* of the Innumerable Nights of Araby wherefore they did give forth pleasant Noises and laughing did slap Must-Avva Dinn on the Back saying the while that for a Certainty he had delivered the *Gúds* and was *ITT*. And the *Taleteller* says that Must-Avva Dinn had no Eyes but for that Fair Vision and in his Abstraction was deaf to all Remarks made around him. And I as a Poor and Humble Scribe do not possess Expressions strong enough nor sufficient Knowledge to paint in words any Resemblance of the Beautiful Object which

appeared before his Eyes. But it is said that her Hair was of a Golden Tint yet of two Colours that her Eyes were black and full of Fire her Nose of Perfect Proportion her Mouth small of vermilion Hue and that when she smiled her Lips revealed a complete *Ginny-Sett* (5). When Must-Avva Dinn heard her speak her Voice emitted the Sweet Tones of the *Ee-yan-kay Bül-Bül*, a Bird which was oft heard in the Land of *Saa-Voi* and the Verses she sang indicated the Vivacity of her Wit. But, alas, the noisy Chatter of his Bosom Friends was such that he was unable to understand all the Words of his Charmer's song a Fact which he sorely regretted inasmuch as she frequently repeated endearing Terms such as *Hun-nie*, *Bay-bee* and described *blew skies*, *Luv*, *Lon'liness* and *Thrills* which wrapt him in Ecstasy. Whereupon when the little Lamps dimmed and the Picture faded away Must-Avva Dinn did recover his wandering Senses and did exhort his Companions to depart forthwith to leave him with his Thoughts which with artful Noddings of their Heads and Hearty Laughter they proceeded to do.

Now, for many Days Must-Avva Dinn's Mind was as disordered as a *Kros-wurd* anagram. He refused both Food and Drink and would have no Discourse with the other Members of his Family the which caused to his Parents great Anxiety and Chagrin. "For" said his Father, "it is not meet that so young a Youth should spend Hours alone on the bank of the *Tem-se* albeit it is the Place where People of the Best Fashion do walk." And for many nights Must-Avva Dinn seeking no Rest did remain in his Closet in the Hope that he might again see the Vision which had ravished his Heart. But Fate was unkind and the Magic Box did not reveal the features of his Charmer whereupon on one morning as Day was breaking he hied to the Bazar and there sought a Public Letter-Writer whom he conjured to indite without Delay a Message to the Lady of his Dreams. The Scribe who took Pity on the Youth did use all his Knowledge and his Art to make the Terms sufficiently endearing to soften the Maiden's Heart. And the Narrator relates that the Letter was of so beautiful a Nature and couched in such exquisite Form that for the Benefit of Future Lovers it was later engraved in letters of Gold on the Portals of the House which disseminates all Good Things to the Four Winds (6). He wrote: *This Love-Sick Swain will not trouble you with a Recital of the exquisite Pains he has endured since the fatal Evening on which through the Magic of the Ee-Thur your melodious Voice and Beauteous Features deprived him of a Heart which he had resolved to preserve as long as he lived. He has presumed to present you with a Token of his Passion. If you will condescend to meet him he will esteem himself the happiest of all Lovers; if not the Sentence of Death which your denial would bring will be received with all Resignation as he dies for Love of You. He will wait outside the Estu-dee-oh* (7) for your Answer and with this Burning Message Must-Avva Dinn did send one hundred *Ku-pons* (8). The Letter-Writer who was justly proud of his Composition faithfully promised his Patron that without Dalliance he would make a fair Copy and by Means only known to Pliers of his Trade would convey the Message to Must-Avva Dinn's *gy-url friend* which so pleased the Youth that in the Goodness of his Heart he emptied the Contents of his Purse in the Lap of the Scribe. Whereupon inflamed by his Devastating Love he could hardly contain his Impatience until the next Day and returning to

(Continued at foot of col. 3.)

## Letters to the Editor

To the Editor of WORLD-RADIO

Broadcasting and Languages

DEAR SIR,—I read the article "The Linguist Rejoices" with much interest, and, would like to express my deep appreciation of wireless as a means of perfecting one's knowledge of foreign tongues. I have derived great benefit through listening to most of the stations mentioned in the article and shall not hesitate to adopt the advice given with reference to lessons from Continental stations.

I take this opportunity of suggesting that enthusiasts should use headphones (rather than a loud speaker) when listening to speech, as reception is usually sharper and, therefore, easier to follow.

Yours faithfully,  
Chester Road, Stretford. "A LINGUIST."  
December 4, 1931.

### Transatlantic Wireless: 30th Anniversary

TO mark the thirtieth anniversary of Marchese (then Signor) Marconi's first test in trans-Atlantic wireless telegraphy between Cornwall and Newfoundland, with the now famous "S" signal, the American stations organised a commemorative programme on December 12 last, in which a number of European stations participated.

Signor Marconi had met with many disappointments, culminating in the complete wrecking, by a gale, first of the transmitting station on this side and then of the receiving installation at Cape Cod, Massachusetts, U.S.A. Rather than wait yet another year for the reconstruction of the two stations, Signor Marconi decided to make a preliminary trial between England and Newfoundland. On Thursday morning, December 12, 1900, on Signal Hill, Newfoundland, despite a gale, he managed to fly a kite to a height of about 400 feet. It had been agreed that a series of "S's," at a given speed, should be transmitted from Poldhu at prearranged intervals. At 12.30 p.m. his hopes and efforts were rewarded by the reception of a succession of three faint clicks.

his Closet he seized the Magic Box and begged It to vouchsafe unto him the Reply his Heart so violently craved. And later in the still Night, as before he saw the Pleasant Vision and to his Ears came that Beloved Voice. "Must-Avva Dinn, Jewel of my Life" it said, "I have not the Courage to keep Thee in Suspense but will quickly put an End to Thy Anguish" and in a few well-chosen Words the Fair one told him the Hour at which he could meet her at the *Estu-dee-o*. "O! Happy Mortal that I am. O! Allah be praised for evermore" cried Must-Avva Dinn and as the Hour grew near without waiting to don more fitting Apparel he made his Way in all Haste to the chosen Trysting Place on the bank of the *Tem-se*. And although the Portals of the Great House were guarded by Attendants he was able to slip past them unmolested. Whereupon as he approached the Room he heard a male Voice say: "And that, Ladies and Gentlemen, concludes the second Television broadcast of Mr. Bill Higgins, the renowned Female Impersonator."

Moral: *All is not Bold that Titters.*

JAY COOTE.

#### TRANSLATOR'S NOTES:

(1) Not mentioned in the maps of the period; (2) at the present rate of exchange, roughly 8s. 4½d.; (3) in the original manuscript, the word *Wun-nub* is given as an alternative and might denote: an advantage; (4) presumably an Arabic dialect; (5) in his excellent treatise on Levantine Customs, Professor Bolony (Chicago University) uses the word to denote a suite of dining-room furniture; this is in accordance with the Translator's reading; (6) a Temple of Music, Poetry, Science and Letters of which there remain no traces to-day; (7) a well-known meeting place on the banks of the *Tem-se*; (8) the Oriental scholars Fagg and To-Bak explain this term as a measurement for costly tissues and valuable china wares such as grace the Sultan's Palace.

# Broadcasting and Languages

## FRENCH

(Supplementary Notes in connexion with the French Talk, Tuesday, December 15)

(A).—*Emploi des pronoms se et soi.*

(a) *Se* est la forme atone du pronom réfléchi de la troisième personne; *se* est des deux genres et des deux nombres; il se dit également des personnes et des choses. Sa syntaxe est la même que celle de *me* et *te*; il se place donc toujours devant le verbe, et bien qu'il soit quelquefois complément indirect, il est essentiellement complément direct: Ex. *il se promène, elles se sont levées, ces fleurs se flétrissent, ils se sont arrogés des droits*, etc. . . .

L'emploi de ce pronom ne présente aucune difficulté. Rappelons, qu'en parlant des choses, nous avons fréquemment recours à la conjugaison pronominale avec *se*, alors que logiquement nous devrions nous servir du passif: Ex. *ce roman ne se lit plus, cela ne se dit pas, ces choses se feront bientôt, cela s'est fait par erreur, du temps que ces habits se portaient*, etc. . . .

(b) *Soi* est la forme tonique du pronom réfléchi; il est des deux genres et se dit des personnes et des choses; aujourd'hui il s'emploie généralement au singulier. De plus, en principe il n'a rapport qu'à un sujet indéfini ou indéterminé, exprimé ou sous-entendu, comme *on, quelqu'un, chacun, nul, aucun, personne, tout le monde, tout homme, celui qui*, etc. . . . Il est généralement complément direct avec une préposition: Ex. *Chacun pour soi et Dieu pour tous, il faut prendre garde à soi, celui qui ne pense qu'à soi est malheureux, il est bon de rentrer en soi, être trop mécontent de soi est une faiblesse, le beau en soi, l'amour de soi*, etc. . . .

Appliqué aux choses, le pronom *soi* peut se rapporter à un sujet déterminé, surtout avec les expressions *de soi et en soi*: Ex. *Cela va de soi, des choses qui sont belles en soi, la franchise est bonne en soi, un bienfait porte sa récompense avec soi*, etc. . . .

On peut aussi avoir besoin de *soi* pour l'opposer à *lui*, ou pour éviter une équivoque: Ex. *L'avare qui a un fils prodigue n'amasse ni pour soi ni pour lui, un fils qui travaille pour son père travaille pour soi*, etc. . . .

Enfin *soi* s'emploie dans les cas où *lui, eux, elle, elles* seraient trop faibles: Ex. *L'egoïste ne pense qu'à soi*.

L'ancienne syntaxe nous a donné l'expression *soi-disant*, qu'on emploie souvent à tort et à travers. *J'ai rencontré un soi-disant acteur, de soi-disant officiers*, est fort bien dit. On peut même dire *je suis un soi-disant poète, tu es un soi-disant docteur*; mais il ne faut pas dire: *je suis soi-disant riche, tu es soi-disant généreux*. D'autre part, *soi-disant* ne devrait pas s'employer en parlant des choses, puisque les choses ne parlent pas; ne disons donc pas: *il m'a rendu un soi-disant service, c'est un soi-disant piano*, etc. . . . Puisque nous avons le mot *prétendu*, pourquoi ne pas nous en servir?

(B).—Le Comte Alfred de Vigny naquit à Loches en 1797. Il était issu d'une famille de soldats, et se sentant porté vers la carrière militaire il entra, en 1814, comme sous-lieutenant dans le corps très aristocratique des *Compagnies rouges*. Quand les *Gendarmes rouges* furent licenciés, il passa dans la *Garde royale*. Pour chasser l'ennui de cette vie de caserne, Vigny travailla beaucoup, il lut, il médita et il composa. En 1822 il publia, sans nom d'auteur, un recueil de *Poèmes*. Les *Poèmes*, malgré la haute valeur de certaines pièces, passèrent à peu près inaperçus. Pour être certain de prendre part à l'expédition d'Espagne, Vigny alla rejoindre, au mois de mars 1823, le 55<sup>ème</sup> régiment d'infanterie de ligne. Son régiment quitta Bordeaux et partit pour Orthez, mais la compagnie de Vigny fut envoyée à Oloron, puis revint à Orthez, et enfin son régiment, qui décidément n'allait pas en Espagne, fut envoyé

à Pau. C'est ici qu'il écrivit le poème intitulé "*Le Cor*." Son séjour dans les Pyrénées fut très fructueux; il avait consacré ses loisirs à l'étude, à la méditation et à la composition; et en 1826 il publia les *Poèmes antique et modernes* qui, outre les poèmes de 1822 contenaient six poèmes nouveaux: *Le Trappiste, Dolorida, Moïse, le Déluge, le Cor, la Neige*.

De nombreux reproches ont été adressés au poème qui nous occupe. Pourquoi, dit-on, Vigny a-t-il pris comme thème de son poème *le Cor* un des épisodes les moins caractéristiques de la *Chanson de Roland*? Pourquoi cette composition décousue? Surtout, pourquoi cette inégalité et ce manque de lien entre les différentes parties? Ces critiques tombent toutes pourvu qu'on n'oublie pas que ce poème est une "symphonie" sur le son du cor. Vigny l'a composé comme un musicien compose une symphonie musicale. Une fois ceci bien compris, tout s'explique.

Au moment où Vigny écrivit *le Cor*, la vieille épopée, la *Chanson de Roland*, n'était pas encore connue, puisqu'elle ne fut publiée que douze ans plus tard (1837). Le poète ne lui doit donc rien; mais la légende de Roland était bien connue. Dans la *Chanson de Roland*, l'évêque Turpin est resté avec Roland et Olivier, et comme eux, il a été tué. Dans son poème, Vigny s'écarte du récit épique: Turpin accompagne Charlemagne et traverse les Pyrénées avec le gros de l'armée.

(C).—"*Que de fois seul dans l'ombre à minuit demeuré.*"

Vigny aimait le crépuscule et la nuit. C'était le moment favorable pour rêver et travailler. Dans la *Maison du Berger* ne nous parle-t-il pas du *crépuscule ami*? et dans *Stello*, ne nous dit-il pas? "Les heures de la nuit, quand elles sonnent, sont pour moi comme les voix douces de quelques tendres amies qui m'appellent et me disent, l'une après l'autre: *Qu'as-tu?*"

Et c'est sans doute pour cela que Vigny a toujours mieux réussi la peinture des crépuscules et des nuits que celle des aurores.

E. M. STÉPHAN.

## GERMAN

### A.—Compound Verbs—(III)

1 (b) *durch* (separable).—Remember that the tonic accent is on *durch*, e.g., *dürchfahren*: *ich fahre bis Berlin durch—ich fuhr .. durch—ich bin .. durchgefahren, um .. durchzufahren*. Separable compounds of verbs which are intransitive can also become transitive, but in the first place only if stress is laid on the notion of "*durch*" (through), e.g., *dürchsitzen* (to pierce by sitting): *Die Schwerenöter* (young scamps) *haben die Seide des Stuhls durchgesessen*.—*dürchliegen*: *Sie liegen sich die Haut durch* (they have been lying so long that they got bed-sores)—*dürchtanzen*: *sie haben die Dielen* (floor) *durchgetanzt*.—*dürchlaufen*: *er hat sich die Füße durchgelaufen* (He has walked until his feet became sore). Then by extension when the Accusative denotes the object which has been completely mastered, e.g., *dürcharbeiten* (to work through thoroughly): *Ich habe die Grammatik durchgearbeitet*.—*Er arbeitet das Pensum* (task, lesson) *durch*.—*dürchgehen* (to go through): *Wir gingen das Pensum noch einmal durch*. Slightly different is the case when the Accusative is not the object through which the action passes, but with regard to which one reaches one's aim, e.g., *dürchkämpfen* *dürchfechten*, (to fight through to victory): *Sie haben den schweren Kampf durchgekämpft* or *durchgefochten*.—Separable Reflexive verbs with *durch* are very common, e.g., *sich durcharbeiten*: *Er hat sich wacker durchgearbeitet* (He has bravely struggled through)—*sich durchbetteln*: *Sie betteln sich so durch* (They work their way through by asking alms)—*sich durchlügen*: *Er lügt sich immer durch* (He always manages to come through all right by telling lies)—

*sich durchschlagen*: *ich schlage mich schon durch* (I shall manage to get through all right, don't worry)—*sich durchfinden*: *ich finde mich schon durch* (I shall find my way through all right, don't you trouble)—*sich durchfragen*: *er hat sich einfach durchgefragt* (He has reached his goal simply by asking and asking the way to it)—*sich durchfressen* (to eat through): *Er wird sich schon durchfressen* (He is sure to get through all right by struggling on). Sometimes the meaning of the preposition *durch* (separable) used in a *local* sense is intensified by adding the adverb *hindurch*, e.g., *durchblicken*: *Die Sonne blickte durch die Wolken hindurch*.—*durchfliegen*: *Der Stein war durch das Fenster hindurchgeflogen*.—*durchziehen*: *Sie zogen durch die Stadt hindurch*. In a *temporal* sense the Preposition *durch* is left out—e.g., *Viele Jahre hindurch* (through or for many years)—*wir sassen Monate hindurch* in der Klemme (We were in a fix for months). Let us now take the most common of the separable verbs with *durch* and students should place them in the categories explained above to which they belong:—

*durcharbeiten* (to work through): *Er hat das Kapitel durcharbeitet*.

*sich durcharbeiten* (to make his way through):

*Er wird sich schon durcharbeiten* (or *durchbeissen*) *durchbeissen* (to bite in two): *Er biss den Apfel mitten durch und gab mir eine Hälfte*. *durchblasen* (to blow through): *Blasen Sie den Rauch durch* (i.e., *durch den Ring*, etc.).

*durchbleuen* (to give a sound thrashing): *Er hat ihn gehörig durchgebleut* (likewise *durchgerben, durchhauen, durchholzen, durchprügeln*).

*durchblicken* (to peep through): *In diesen Worten blickt die Absicht durch*.

*durchbohren* (to bore through): *Bohren Sie doch ein Loch durch*.

*durchbraten* (to roast thoroughly): *Das Fleisch ist nicht durchgebraten* (underdone).

*durchbrechen* (to break in two): *Er brach den Stock durch und warf ihn fort*.

*durchbringen* (to get through with, squander): *Er hat das ganze Vermögen* (fortune) *durchgebracht*. *Der Arzt hat ihn durchgebracht* (cured)—*Er bringt die Familie kaum durch* (He finds it difficult to make ends meet).—*Er bringt sich ehrlich durch!*

*durchdrängen* (to push one's way through): *Drängen wir uns durch!*

*durchdringen* (to work its way through): *Die Flüssigkeit dringt nicht durch*.—*Damit dringt er nicht durch* (He will not carry that through, i.e., succeed with it).

*durchfahren* (to travel through): *Der Zug fährt hier durch, aber hält nicht*.—*Sie haben die Strasse durchgefahren* (made holes)—*Wir fahren durch* (do not stop).

*durchfallen* (to fall through, fail): *Der Stein fiel durch*.—*Er ist im Examen* (in der Prüfung) *durchgefallen*.—*Wenn er drauf steht, fällt er durch*.

*durchfechten* (to fight through to the end): *Wir fechten die Sache durch* (likewise *durchkämpfen*).

*durchfeilen* (to file through): *Er hat den Draht durchgefeilt*.

*durchfinden* (to find one's way through): *Ich habe den Weg durch gefunden*.

*durchfliessen* (to flow through): *Der Rhein fließt da nicht durch*.

*durchführen* (to lead (take) through, execute): *Führen Sie ihn durch zum Minister*.—*Er führt seinen Plan durch, koste es, was es wolle*.

*durchgehen* (to go through, run away): *Gehen Sie, bitte, durch*.—*Der Gaul* (steed) *geht immer durch*.—*Das geht durch* (is allowed to pass).

*durchgreifen* (to grip through, to prevail): *Er griff nicht durch* (das Hindernis).—*Das greift nicht durch*. (That sort of thing does not prevail).



**B.—EXERCISE 18 (Achtzehnte Aufgabe)**

II (a).—Wilhelm der Erste—Wilhelm der Zweite—Georg der Fünfte—Friedrich der Dritte—der zweiundzwanzigste März—am ersten April—London, den neunten Mai neunzehnhundert elf.

(b).—Wieviel Uhr ist es? Es ist ein Uhr (or eins)—um zehn Minuten nach zwei—es ist halb acht—um fünfundzwanzig Minuten nach acht—um halb zehn—um zwanzig Minuten vor zehn—es ist zehn (Minuten) vor elf—um viertel vor zwölf—um ein Uhr sechsdreissig—vor vierzehn Tagen—über vierzehn Tage (or in vierzehn Tagen)—heute über acht Tage (or in acht Tagen or über acht Tage)—vor acht Tagen—auf drei Tage—drei Wochen lang.

IV.—(1) Am Montag den ersten Januar neunzehnhundert zwölf um halb sieben. (2) Napoleon der Dritte ergab sich am zweiten September achtzehnhundert siebzig mit vierundachtzig tausend Mann. (3) Fürst Bismarck ist am ersten April achtzehnhundert fünfzehn geboren. (4) Am achtzehnten Juni desselben Jahres erlitt Napoleon der Erste bei Waterloo eine vollständige Niederlage. (5) König Georg der Fünfte ist sechs Jahre (und) fünf Monate jünger als Kaiser Wilhelm der Zweite. (6) Goethe und Schiller waren grosse Freunde; Goethe war vierundachtzig Jahre alt, als er starb; Schiller fünfundvierzig. (7) Die französische Revolution brach am vierzehnten Juli siebzehnhundert neunundachtzig aus, als die Bastille erstürmt wurde. (8) Dreissigtausend Hugenotten wurden in Frankreich in der Nacht vom dreiundzwanzigsten August fünfzehnhundert zweiundsiebzig ermordet. (9) Prinz Albert, der Gemahl der (or von) Königin Victoria ist am vierzehnten Dezember achtzehnhundert einundsechzig gestorben. (10) Luther ist im Jahre vierzehnhundert dreiund-

achtzig geboren, im selben Jahre wie Rabelais und Raphael. O. S.

**SPANISH**

Sobre algunas consultas

**V**OLVIENDO sobre lo de (*reverting to the matter of*) las múltiples funciones del pronombre *se*, me complace contestar hoy a un lector que, entre otras preguntas, me hace la siguiente:—

“Tratándose, por ejemplo, de artículos de comercio ¿no estaría bien decir: ‘*se los hace en el extranjero*’ en vez de: ‘*son hechos*’?”

No, señor. En este caso sería un galicismo emplear *se* como sujeto indefinido; es decir, como *on* en francés. En español esto se hace únicamente (*only*) cuando el objeto, directo o indirecto, es personal. Ejemplos: Se les escribirá (*they shall be written to*) Se la vió (*she was seen*). En la frase que cita mi corresponsal, siendo *inanimado* el objeto—los artículos—hay que decir: “*se hacen o son hechos en el extranjero.*”

A muchos estudiantes del español, incluso mi corresponsal, no les resulta nada (*at all*) fácil traducir correctamente *to be pleased, to be sorry*, etc. A estos les aconsejo que se fijen bien en los ejemplos que doy a continuación (*below*) y en los que aparecerán en mi próximo artículo

Nos alegramos mucho *del* resultado.

Nos alegra mucho *el* resultado.

Celebramos mucho *el* resultado.

Estamos muy contentos *del* resultado.

En todas estas frases se expresa alegría (*rejoicing*), pero en una frase como: “*We shall be pleased or glad if you will kindly send us a copy*” lo que se expresa es más bien *agradecimiento* que alegría, y tendríamos que decir:—

Agradeceremos o estaremos a Vds. (que) se sirvan mandarnos una copia (*We shall be grateful that, or esteem—as a favour—that, you kindly send us a copy.*)

*Lectura.* ¿Cuántas personas hay que sepan el origen de la antigua costumbre del “Christmas Box” (“*aguinaldo*” en español)? ¿Y cuántas saben el verdadero significado de esas dos palabras?

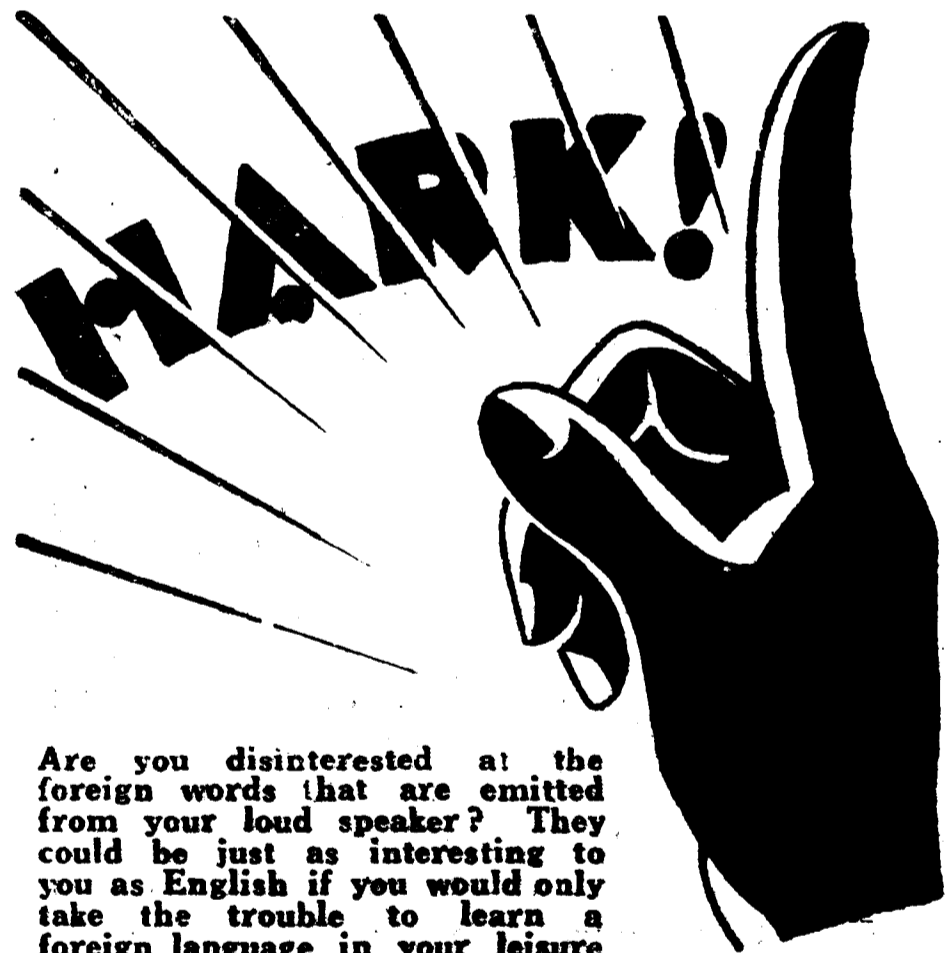
Según un periódico semanal, hace más de mil años, cuando toda Europa era católica romana, se estableció la costumbre de colocar cajitas (*boxes*) bajo la protección de algún santo, para que los pobres contribuyesen sus peniques hacia el costo de las misas (*Masses*) que decían los sacerdotes en sufragio de sus almas. Estas cajitas eran en verdad “*Mass Boxes*,” y la costumbre se fué extendiendo hasta que la petición de este donativo, primero para pagar las misas en general, y más tarde para la misa de Cristo (*Christ Mass*) en particular, llegó a ser cosa habitual entre toda la gente de clase humilde.

Pero con el tiempo se olvidó el objeto a que iba destinado el dinero recaudado (*collected*), pasando éste a ser una dádiva o regalo de los ricos a los pobres. Antiguamente, las cajitas se abrían (eran abiertas) el día después de Navidad (*Christmas-day*). De aquí (*hence*) el nombre de “*Boxing Day*.”

W. F. BLETCHER.

**Esperanto Transmissions December 20-26**

*Sunday.*—Langenberg, etc., 7.30 a.m., Course (S-ro Wingen). Lille, 8.30 a.m., News (A. Trotin). Leipzig, 1.30 p.m., Course (Prof. Dietterle).  
*Tuesday.*—Leningrad, 9.5 p.m., News.  
*Wednesday.*—Stuttgart, “*El originala Verkaro*” (Dr. Vogt).  
*Thursday.*—Vienna, 3.45 p.m., Austrian news (Smital). Paris PTT, 5.45 p.m., Course (P40f. Rousseau). Radio Suisse Romande, 6.20 p.m., Course (Prof. P. Bouvier). Kaunas, 8.20 p.m., News.  
*Friday.*—Stuttgart-Frankfurt, 6.30 p.m., Week's Programme (Prof. Christaller). Leningrad, 10.5 p.m., News.  
*Saturday.*—Heilsberg, 5.40 p.m., Week's Programme (Fino Wermke). Huizen, 6.20 p.m., Course (P. Heilker). Lyon-la-Doua, 8.15 p.m., News (M. Borel). Strasbourg gives news once or twice a week in Esperanto.



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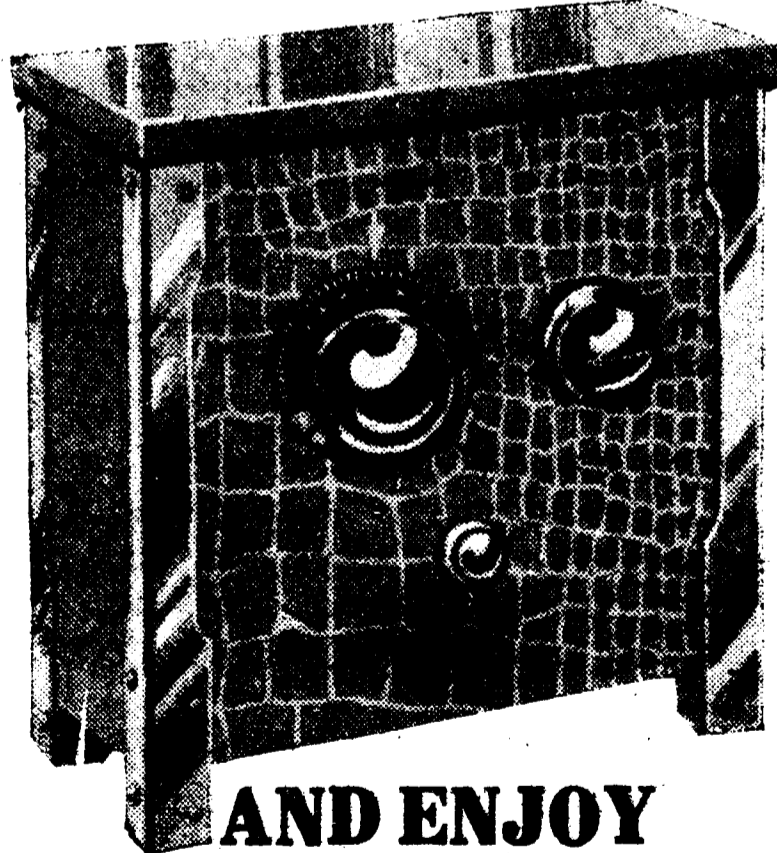
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# TECHNICAL SECTION

## Notes on Coupled Circuits in Broadcast Receivers

IN the writer's opinion the least developed, or the least satisfactorily developed, parts of a modern receiver are those for obtaining selectivity. The difficulty is, of course, to obtain selectivity and at the same time to retain good quality. It is unfortunate that these two considerations are mutually antipathetic in the ordinary tuned circuit. This article, however, will not consider the selectivity of one-tuned circuit, but rather what can be achieved by the use of coupled circuits, and will suggest some of the considerations which point to a practical solution of our difficulties along one or other line. It is to be emphasised that a practical solution is the real difficulty, for a broadcast receiver must be capable of being handled by people who have neither knowledge of the details of its working nor the necessary skill to operate complicated controls.

Fig. 1 shows six different methods of coupling two circuits together. These six methods by no means exhaust all the possibilities, but they are representative of three general methods of coupling—viz., inductance, capacity, and resistance. Fig. 1 (a) shows the ordinary conventional inductive coupling which has been used in commercial wireless telegraph receivers for many years. It has the advantage of simplicity, and the coupling is easily variable by an alteration of the relative positions of the two coils. If variable coupling is required in a receiver, this method has many advantages but suffers from difficulties of mechanical arrangement. While these can, with mechanical ingenuity, be overcome in the construction of a new receiver, it is not usually possible to make a good job of applying this form of coupling to an existing receiver. The use of modern dual-range coils increases this difficulty considerably.

Fig. 1 (b) shows the simplest method of capacity coupling, which is very useful in that it allows a coupled circuit to be applied to an existing receiver quite simply. It is sometimes referred to as "Top" capacity coupling. The extra tuned circuit can be made up separately, care being taken that there is no inductive coupling between the coils. A small condenser of the neutrodyne type connected as shown will then provide the necessary coupling. On the broadcast wave-band a value of about 10 micro-microfarads will be found suitable with ordinary coils.

Fig. 1 (c) shows another form of capacity coupling—"Bottom" coupling—which has become popular recently. It generally forms the basis of the so-called "band-pass" filter, and if the capacity is associated with some inductance coupling as shown in the "link" circuit of Fig. 1 (f) it is often termed a "constant bandwidth" filter. But more of this later.

Fig. 1 (d) and (e) show resistance coupling. In these, as well as in the others, the coupling component is shown as being fixed, but for particular circuit arrangements it can equally

well be made variable, except that mechanical difficulties may be introduced thereby.

Let us consider how capacity coupling works by referring to Fig. 1 (c). If there is an oscillatory current in the left-hand circuit consisting of the tuning condenser  $C_1$ , the inductance  $L_1$ , and the condenser  $C_3$ , there will, of course, be a difference of potential across  $C_3$  which will be a fraction of the total potential across the circuit. But  $C_3$  also forms part of the circuit  $C_2$ ,  $L_2$ ,  $C_3$ , and this second circuit will, therefore, have a potential across it and a current will flow in it, by virtue of the common capacity  $C_3$ . It should be noted that apart from this common capacity the circuits are isolated one from the other, and in practice it is necessary to screen the coils so that there is no inductive coupling. Obviously the value of the voltage across  $C_3$  will, other things being equal, depend on its impedance. If the impedance is high the voltage will be large; if it is low, the voltage will be small. In the limit we have, firstly, the case where the impedance is infinite (*i.e.*, an open circuit, or  $C_3 = 0$ ), or, secondly, the case

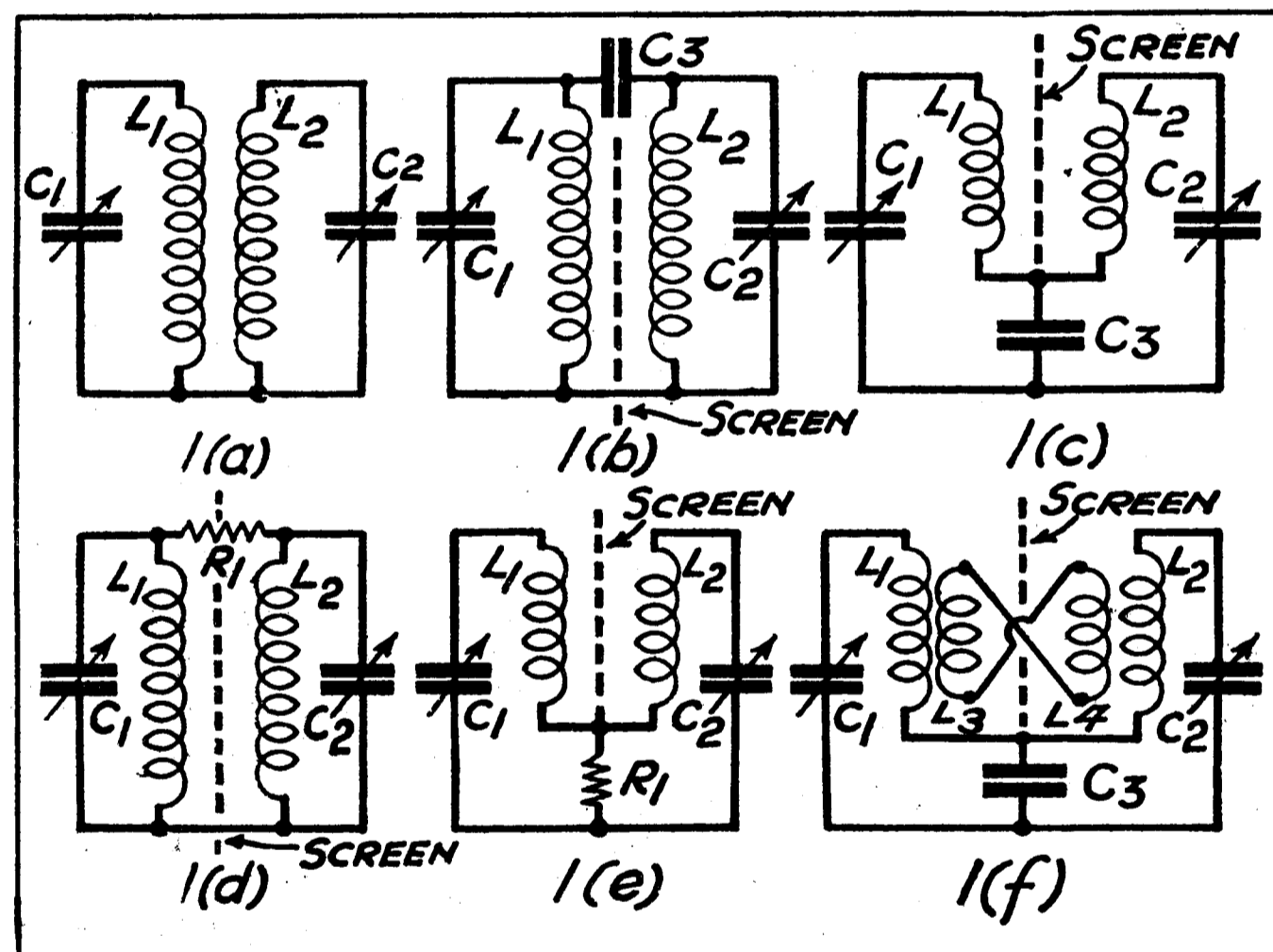


Fig. 1. Six alternative H.F. couplings

where it is zero (*i.e.*, a short circuit to alternating currents, or  $C_3 = \infty$ ). At the first of these two limits, we have very tight coupling, while at the second we have zero coupling. Note that the coupling increases as the condenser  $C_3$  is made smaller.

If we consider the alternative scheme in Fig. 1 (b), it will be seen that the reverse will happen, for here the path from one circuit to the other is through condenser  $C_3$ , and obviously the smaller its impedance the tighter will be the coupling. In other words, the more nearly the potential at the top of inductance  $L_2$  approaches to the potential of the top of  $L_1$ , the tighter will be the coupling. So, in this case of "top" or "series" capacity coupling (as it is variously called) the coupling will increase as the condenser  $C_3$  is made larger. For a given degree of coupling in the two cases 1 (b) and 1 (c) the condenser  $C_3$  will not, of course, have the same value, for it is its value relative to the other impedances in the circuit which determine the degree of coupling. In 1 (b) we have to consider the parallel impe-

dance of the circuit, and this may be of the order of 50,000 to 100,000 ohms for a normal tuned circuit in the broadcast band, whereas in 1 (c) we must consider the series impedance of the circuit, which under similar conditions may be of the order of 20 down to 5 ohms. There are other considerations to be taken into account, but very roughly we may expect the same coupling to be given by a condenser in 1 (c) which is of the order of 1,000 times the capacity of the one necessary in 1 (b)—*i.e.*, if we use .01 microfarad for 1 (c) we shall want about .0001 microfarad (10 micro-microfarads) in 1 (b).

Up to the present we have not considered a very important point of which we must take account in a broadcast receiver which necessarily has to be capable of tuning to a fairly wide range of wavelengths. We must realise that the impedance offered by a condenser to an alternating current does not depend only on the size of the condenser, but that it depends also on the frequency of that current. In fact the impedance  $Z$  is given by the simple formula

$$\frac{1}{2\pi fC}$$

where  $\pi$  is 3.14,  $f$  is the frequency in cycles per second, and  $C$  is the capacity of the condenser in farads. We normally think in microfarads, and so we have to remember that there are one million of these in one farad. Alternatively,

we can write our formula as  $\frac{1,000,000}{2\pi fC}$  where  $C$

is in microfarads. If we do this small sum for a condenser of .01 microfarad and a frequency of 1,500 kilocycles per second (wavelength of 200 metres) we shall find that the  $Z$  will come out at about 10 ohms if we have worked it out correctly.

If we do another sum for the same condenser at a frequency of 500 kilocycles per second (wavelength of 600 metres), we shall find that its impedance is about 30 ohms—exactly three times as much, because we have reduced the frequency by three times. If this .01 microfarad condenser is our coupling condenser,  $C_3$  in Fig. 1 (c), we shall then see that the value of our coupling impedance has changed very considerably as we tune our receiver over the whole medium-wave broadcast band. We shall also note that coupling has become much tighter as the wavelength is increased. This means that a broadcast receiver which is quite selective enough at 300 metres might well not be so at 500 metres, while at 200 metres it might be too selective. Actually, this is by no means the whole story of selectivity, and there are many other variables, such as the capacity—inductance—resistance ratio in each circuit, which modify the magnitude of the ultimate change in selectivity, the order of which is indicated by this simple numerical example.

The reader may by now have noticed a possible means of compensation for this change in impedance of the coupling condenser. If we use top and bottom capacity coupling together, then the top series capacity will provide coupling at the short-wave or high-frequency end of the scale, while the bottom shunt capacity will provide it at the longer wave or lower frequency end, and so by the proper proportioning of the two a compromise can be reached. Such an arrangement is in use at the present time in the writer's receiver with fair success—the bottom capacity being .02 mfd, and the top capacity being given by three turns of flex twisted together.

There is another method which makes use of inductance as well as capacity with the same

(Continued on page 1048)

# High-Quality Receivers

## 4.—Practical Arrangements of Detectors

(Continued from page 933, December 4)

AS modern transmitters are capable of modulating up to 100 per cent. and regularly modulate up to 75 per cent. or 80 per cent., it is now more important than it was a few years ago to ensure that the detector is linear up to high degrees of modulation. Practical methods of obtaining such linear rectification will now be discussed.

At the present time thermionic valve detectors are the only kind of detectors used to any appreciable extent in high-quality receivers. Crystal detectors at one time were considered to give very good quality, but as they are liable to lose adjustment easily they are not as satisfactory as valves. There is no doubt, however, that if they are used under proper conditions they give distortionless reception, even on fairly heavy modulation. It seems quite possible that if crystal detectors were properly studied in the light of present-day knowledge of the requirements of rectifiers for distortionless rectification of modulated signals, a very satisfactory detector of this type could be produced. However, the crystal seems to have been discarded in favour of the valve for the time being, at any rate, and practical forms of valve rectifiers only will be described in this article.

### The Diode

A two-electrode valve, or two electrodes of a valve with three or more electrodes, can be made to give practically linear rectification. Modern diodes used for rectification of alternating current for H.T. supply to receivers, have a very low resistance; they can therefore be used with load resistances of comparatively low value to give fairly linear rectification of high-frequency signals, particularly at large inputs. Rectifiers of this type do not easily saturate, and, therefore, they can be worked at large inputs in order to make the bend in the characteristic at low inputs negligible over the working range. By using higher values of load resistance this bend at low inputs can

farads if audio frequencies up to 10,000 cycles are to be reproduced equally. If some sacrifice of the higher audio notes is permissible the load resistance can be increased to half a megohm or one megohm without appreciable loss of high notes, but with appreciably better linearity at low inputs.

Methods of connecting a diode are shown in Fig. 1. They are all the same in principle, but are slightly different in operation. If the load resistance is connected across the rectifier as in Fig. 1 (b) the rectified voltage is not affected, but H.F. voltages are present as well and are not shunted by the condenser as in (a). A condenser is still required, however, as shown, to prevent the load resistance being shunted by the input circuit which will have low impedance at audio frequencies; the condenser is therefore effectively in parallel with the load resistance at audio frequencies, but not at radio frequencies. Further by-pass circuits will therefore be required if the H.F. voltages are not to be passed on to the low frequency stages.

Fig. 1 (c) shows the arrangement usually adopted. Care must be taken to ensure that the by-pass condenser, and the coupling condenser and grid leak of the L.F. stage, which are effectively across the load resistance, do not affect the total effective impedance sufficiently to upset the response at any frequencies within the audio band. The L.F. voltages could be taken off across the rectifier in Fig. 1 (a) in which case the same filter circuits would be required as in (c) to remove the H.F. voltages.

An alternative arrangement is shown in (d); this does away with the necessity for circuits to filter out the H.F., as the condenser performs this function. The steady voltage across the resistance due to the unmodulated carrier can be made to bias the L.F. valve to the required amount, and the audio-frequency voltages are then applied about this value in the usual way.

With this arrangement the tuned input circuit cannot have an "earth" on it if the filament (or cathode) of the detector or L.F. valve is earthed, as will usually be the case, otherwise the load resistance would be short-circuited. Stray capacity to earth of the tuned circuit will be effectively across the load resistance, and must therefore be allowed for when choosing the value of the by-pass condenser to avoid loss of high notes. Grid bias can be inserted in the lead to the grid of the L.F. valve if desired, but the battery must have low capacity to earth. Alternatively a coupling condenser and

grid leak can be used as at (c). Three electrode valves can be used as diodes, either by connecting the grid and anode together or by using the grid and filament only.

The grid rectifier, or so-called grid-leak rectifier, is no different in principle from the diode rectifier. It makes use of the rectifying properties of the grid-to-filament path of a triode,

or of a valve with four or more electrodes, but instead of using a separate valve to amplify the rectified voltages it makes use of the amplifying properties of the same valve. The rectified voltages are produced between the grid and filament acting as an ordinary diode, and are then fed into the anode circuit as in an ordinary amplifier. Provided the anode circuit is not overloaded there will then be distortionless amplification of the rectified signals.

### The Grid Detector

There is a difference, however, between this arrangement and an ordinary L.F. amplifier in that the H.F. voltages are usually by-passed in the latter case before they reach the amplifying valve. In the case of the grid rectifier, however, they cannot be by-passed before they are amplified; consequently the anode circuit has to handle both L.F. and H.F., and the H.F. is then filtered out before the signals are

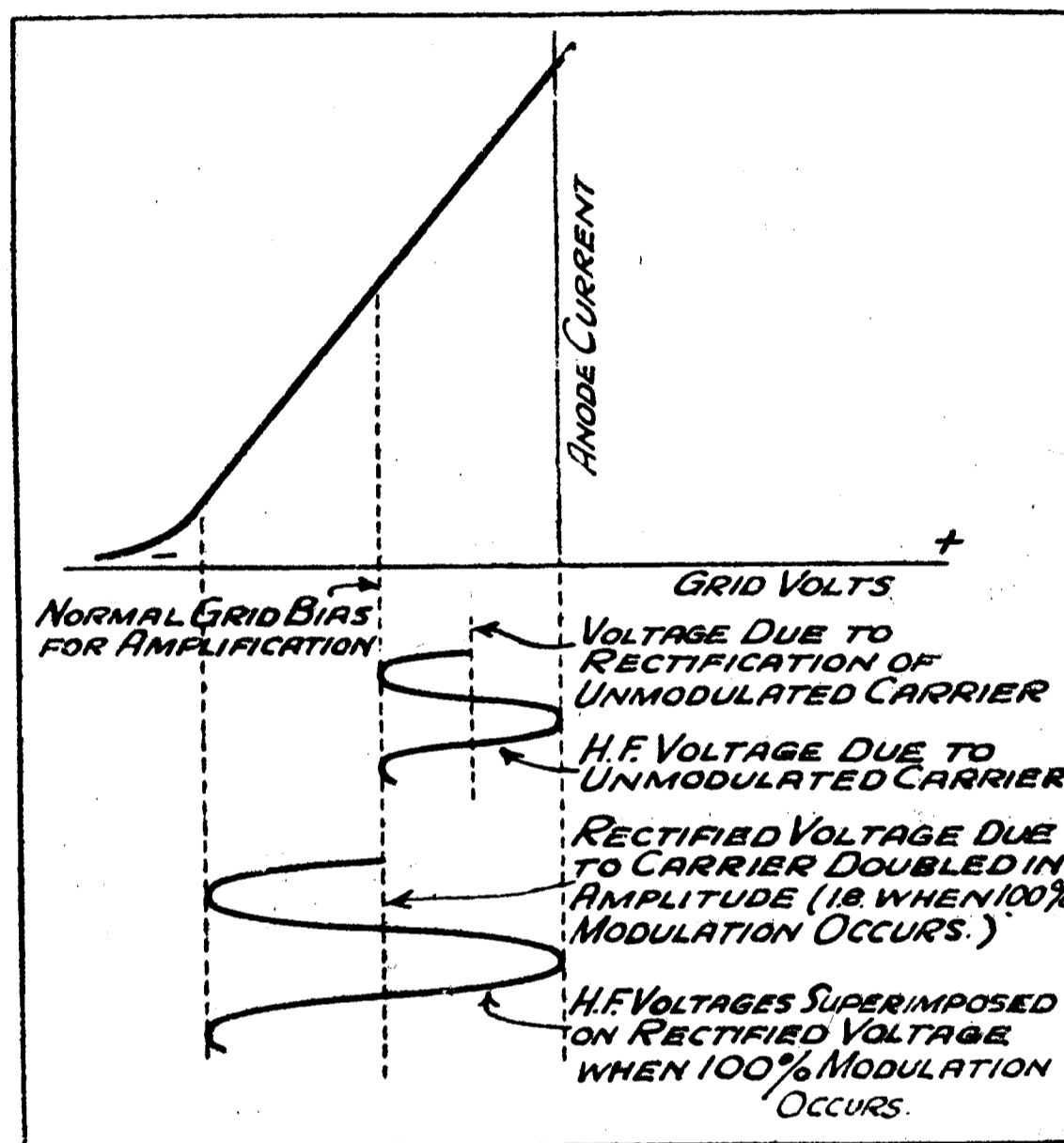


Fig. 2.—Illustrating voltage swing on modulation

passed on to the next L.F. stage. Particular care must be taken that overloading does not occur in the anode circuit of the detector valve, owing to the presence of the H.F. component.

If overloading occurs this means that anode rectification is taking place in the anode circuit of the detector valve, and the signals will be distorted just as they would be if anode rectification took place in any L.F. stage. Thus the H.F. signal applied to the grid of the detector must be such that its maximum peak amplitude on modulation, plus the rectified voltage due to it does not exceed the maximum peak amplitude which the valve can handle when operated as a straightforward amplifier. This means that the rectified voltage produced by the unmodulated carrier must not exceed half of the steady grid bias required to make the valve operate as a straight line amplifier if no distortion is to occur when the carrier is modulated 100 per cent. This can be seen from Fig. 2.

In the case of indirectly-heated valves it is not usually necessary to apply any polarising voltage to obtain the best working point on the grid-filament characteristic, and the grid leak can be brought direct to the cathode. In the case of directly-heated valves, however, a positive polarising voltage is usually necessary for best results, and this can be obtained by connecting the grid leak to the positive end of the filament.

For more accurate work, especially with 6-volt valves, this may give rather too high  
(Continued in col. 3, page 1050)

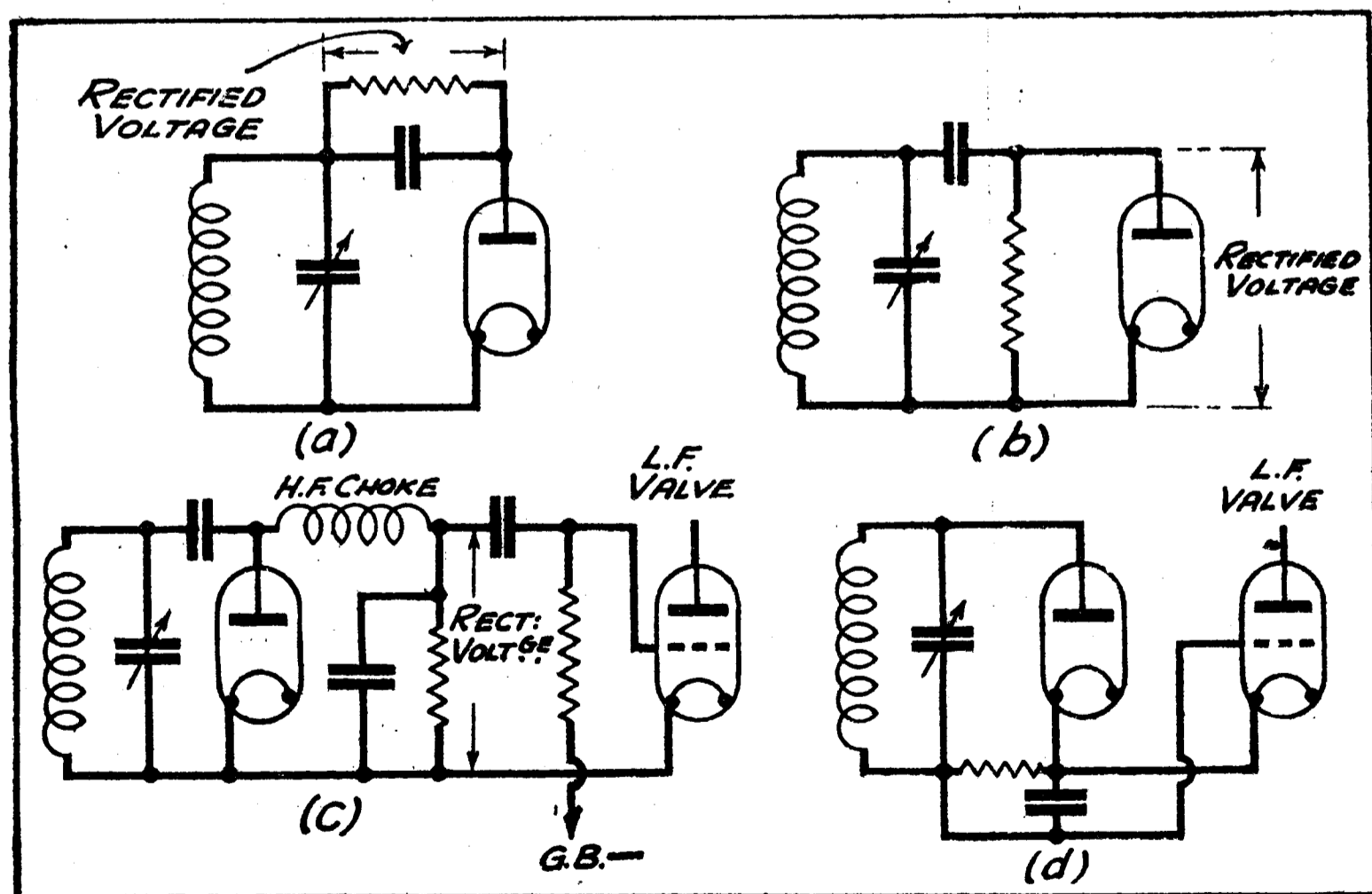


Fig. 1.—Four methods of using a diode detector

be made still more negligible, and practically linear rectification can be obtained for H.F. carrier inputs of considerably less than one volt, even when modulated 100 per cent.

A load resistance of 100,000 ohms is usually very satisfactory, and this requires a condenser across it of not greater value than 0.0001 micro-

**NOTES ON COUPLED CIRCUITS IN BROADCAST RECEIVERS**

(Continued from page 1046)

object in view. This is shown in Fig. 1 (f) and the inductance in question may take the form either of a separate winding on each coil, cross connected as shown, or, alternatively, of fixed mutual inductance the value of which is determined by the relative positions and sizes of the two coils. The latter has the advantage of simplicity, but the disadvantage of the difficulty in mounting the coils clear of screens and other metal objects; for, unless care is taken, the value of the inductance of the coils and therefore of their mutual inductance will be changed.

There is yet another method of coupling, in which the impedance of the coupling unit remains constant with change of frequency—*viz.*, the use of pure resistance. It was used in one form many years ago, and I believe Mr. J. H. Reyner suggested it again as a possible way out of the difficulty a year ago. However, as far as the writer is aware, no commercial application of this had been made to broadcast receivers or their components until recently, when this scheme was put forward by Capt. P. P. Eckersley and Mr. Rupert Carpenter. Resistance coupling in two forms is shown in Fig. 1 (d) and (e). It is true that the ideal coupling should not remain of constant impedance over the whole wave-band, for the impedance of the tuned circuits themselves varies and thus, to keep constant selectivity, the coupling impedance should vary too. But where there are so many variables it is exceedingly useful to be able to eliminate one of them, especially if it is one which, under certain conditions, may vary in the wrong direction.

And so a compromise which works and has the additional advantage of extreme simplicity

is very welcome. There is a further advantage which resistance coupling would appear to possess. In general, the performance of coupled circuits—especially those in which the coupling is adjusted to be fairly tight, with the object of obtaining a so-called “band-pass” filter due to the double-humped resonance curve—is profoundly modified by mistuning of the circuits owing to errors in ganging. The writer has found that with capacity-coupled circuits it is possible to obtain almost any shape of resonance curve by slight changes in ganging, and that even if the ganging is correctly set at the low end of the wave-band, it is most unlikely that it will hold over the majority of the wave-band. It is not only that tuning will become flat, but extraordinarily unsymmetrical resonance curves will result. With resistance coupling, however, this should not be so, and if ganging is not correct, then the only bad result will be a broadening of the overall resonance curve, manifested by less selectivity and better quality instead of by bad quality.

The reader may care to try out various schemes of coupling over the Christmas holiday. It is a most amusing and interesting pastime. The best way is to lay out the components of a simple H.F. and detector set on a board so that they can be got at easily to allow changes to be made. It is not necessary to possess many measuring instruments: one—*viz.*, a detector feed meter—is, however, essential if one is to obtain any quantitative idea of what is happening. The present-day power grid detector will have an anode current of between 5 to 10 milliamperes, and so a D.C. milliammeter 0/10 milliamperes will be required. If a new instrument is to be bought it would be worth while getting one of the special type made for this work, in which the zero is suppressed and the scale reads from 5 to 10 milliamperes. In this way the scale is more open and the change in anode current, due to rectified current, is more easily read. This change should be of the order of one-tenth to one-eighth of the total feed for linear detection with the average valve used in this position. The two condensers of the filter circuit can well be ganged, the trimmer being adjusted carefully at a low wavelength, the exact optimum tuning point being observed by means of the detector feed meter. This meter will show the performance of the circuit as other stations are tuned in. If no meter is available then the ear must be used, but a qualitative opinion only as to relative selectivity with different couplings will be obtained. Those who wish to try out this “top” resistance coupling, as shown in Fig. 1 (d), may want some indication of the order of value of resistance they should use. Perhaps they would like to work out another little sum to make quite sure they have understood how it is done. I am going to try it out too, and I shall provide myself with some of the grid-leak types of resistance to start with (they must be non-inductive and non-capacitative), of such values in ohms that they would approximately equal the impedance offered by 10, 8, 5 and 3 micro-microfarads at 300 metres (1,000 kilocycles per second). If they can't work it out, they will find the values of resistance I have in mind on page 1051 of this issue. L. W. H.

(Continued from col. 3.)

To the Editor of WORLD-RADIO  
 SIR,—With reference to your request for reports of reception, I give below details of transmissions recently received at 3 o'clock in the afternoon:—  
 Station. Sydney VK2ME (31.28 metres).  
 Strength. R6. No fading. Receiver. O-V-2.  
 Details of Transmission (gramophone records).  
 Organ solo: “Indian Love Lyrics,” “Memory Land,” Old fashioned songs with Dance Band accompaniment. Orchestral rendering of “Nearer, My God, to Thee,” followed by talk on “Australia.”  
 Yours faithfully,  
 W. W. A.  
 Wolverton, Bucks.

**Correspondence**

**Short-Wave Reception**

To the Editor of WORLD-RADIO

SIR,—Perhaps you may be interested in my ramblings round the short waves on Sunday, Nov. 29, when I had the good fortune to enjoy broadcast reception from transmitters in Europe, Asia, Africa, America and Australasia. All times are given in G.M.T.:—

13.23 G.M.T. VK2ME, Sydney. 31.28 metres (9,590 kc/s).—Annt.: “VK2ME, Sydney. The time is twenty-three minutes past eleven, Sunday evening in Sydney,” and details of pgm. Followed by waltz. Gramophone records. (R4-5 'phones. Usual interference from Morse transmitter.)

15.45 G.M.T. Annt.: “VK2ME, Sydney, on a wavelength of 31.28 metres. The time is a quarter to two, Monday morning in Sydney.” Orch. selections, lady singer. Annt. of time, etc., at 16.15. (R5-6 'phones. Still heterodyned).

14.42 G.M.T. F3ICD, Radio Saigon, 49.05 metres (6,116 kc/s).—News bulletin in English, including results of the Dublin sweepstake for the Manchester November Handicap. Annt. in French, then in English: “Good afternoon, everybody. You will now hear — by the Radio Saigon Orchestra.” Stroke on gong between each item; all selections by station orchestra. Annts. in French and English, followed by “Marseillaise,” at 15.15, close down. (R6, with high speed fading to R4, 'phones. No static. Morse interference at times.)

15.20 G.M.T. Eindhoven Exptl. 50.1 metres (5,988 kc/s).—Running commentary, in Dutch, on the International Soccer match, France v. Holland, from the Colombes Stadium, Paris. Also heard at 14.05, when the relay started. (R8, 'phones. Morse interference at times.)

17.47 G.M.T. W2XAD, Schenectady. 19.56 metres (15,340 kc/s).—Pgm. of the Near East, by orch. trio. 18.00—Air report. 18.05—Piano solos, and piano and violin duets by the Morensky Bros. 18.30—Travers Wells—talk, “In Dark Africa.” 18.45—Old Co's Lunch time hour, presumably. (R8 on L.S. till approx. 18.45, when fading getting bad, and loss of signal strength. Given up at 18.52 when R4-5 on L.S.).

20.00 G.M.T. Rabat (Radio Maroc). 32.26 metres (9,300 kc/s).—Usual Sunday evening concert by “L'Orchestre de Radio Maroc.” Int. signal, metronome, between some items\* (R7-8 on L.S. Interference from morse transmitter at times.).

My object in writing was that it might be of interest to would-be short-wave “fans,” and programme details are given only for checking purposes. The receiver used was o-v-2, with S.W. adaptor and outdoor 60ft. aerial with down lead 15ft. Other stations also heard included REN and RFN (Moscow), Zeesen, and Pontoise on his 25.2 metre wave, as well as English, French (and a Portuguese) amateurs, Rugby testing, and Mr. Hugh Walpole, over the N.B.C. network!

I am pleased to see that you intend to resume the publication of “Readers' S.W. Reception Reports,” as I want very much, if possible, to find out if anyone else notices the interference on VK2ME's wavelength when broadcasting. These Readers' Reports are a great help for keeping an eye on short-wave work in general.

Yours faithfully,

St. Albans, Herts. J. W. B.

To the Editor of WORLD-RADIO

SIR,—The following may be of interest to some of your readers. American stations I have received during the week ending November 29 on the “One-Valve Super-Het. Adaptor,” described in your issue of February 13 last, and in the current copy (November 27):—

W2XAD, W3XAL, W8XAL, W8XK, W2XAF; all of which were at good strength; W2XAD was at good loud speaker volume on each evening except Thursday, November 26; Sunday, November 29, 2.50 p.m. to 4.30 p.m.; VK2ME, Sydney, the programme from which consisted principally of gramophone records. This is certainly the simplest “short waver” I have handled.

Yours faithfully,

Eastbourne. W. M.

(Continued at foot of previous col.)

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# PROGRAMME SECTION

## Continental Programme Events

SUNDAY, DECEMBER 20

**Concerts**

- 10.30 a.m. Leipzig, Schweizerischer Landessender and all German stations: Bach Cantata.
- 11.15 ,, Warsaw: Philharmonic Orchestra.
- 4.45 p.m. Warsaw: Orchestral concert.
- 5.0 ,, Rome: Symphony concert from the "Augusteo."
- 5.30 ,, Radio-Paris: Relay of "Concert Poulet."
- 6.10 ,, Vienna: Lotte Lehmann song recital.
- 7.10 ,, Hilversum: Bach's Mass in B Minor.
- 7.15 ,, Leipzig: Bach's Christmas Oratorio.
- 7.45 ,, Copenhagen: Danish Christmas programme.
- Operas and Operettas**
- 7.0 p.m. Bucharest: "Eva" (Lehár).
- 7.30 ,, Frankfurt, Stuttgart, Heilsberg: "Carmen" (Bizet).
- 8.0 ,, Brussels No. 2: "L'Amico Fritz" (Mascagni).
- Other Events**
- 6.45 p.m. Frankfurt, Stuttgart: Dr. Curtius speaks on "Germany and France."

MONDAY, DECEMBER 21

**Concerts**

- 7.25 p.m. Schweizerischer Landessender: Songs from opera.
- 7.41 ,, Hilversum: Orchestral and vocal.
- 8.20 ,, Heilsberg: Chamber music.
- Plays**
- 8.5 p.m. Brussels No. 1: "Colonel Chabert" (Balzac).
- 8.30 ,, Radio-Paris: Two comedies relayed from the Odéon.

TUESDAY, DECEMBER 22

**Concerts**

- 7.0 p.m. Berne, Schweizerischer Landessender: Haydn concert.
- 7.0 ,, Vienna, Heilsberg: Excerpts from Viennese operettas.
- 7.15 ,, Warsaw: Orchestral concert.
- 7.40 ,, Hilversum: Orchestral concert.
- 8.0 ,, Brussels No. 1: Christmas programme.
- 8.0 ,, Milan, Turin: Respighi concert conducted by Composer.
- 8.10 ,, Stuttgart, Frankfurt: Symphony concert.
- 9.30 ,, Copenhagen: Chamber music for wind instruments (Mozart).
- 11.30 ,, Stuttgart: "Late" concert.
- Operas and Operettas**
- 8.0 p.m. Radio-Paris: "Tristan and Isolde" (Wagner) on gramophone records by the Bayreuth cast.
- Plays**
- 7.0 p.m. Munich: "Frau Holle" (a fairy-tale play).

WEDNESDAY, DECEMBER 23

**Concerts**

- 8.0 p.m. Brussels No. 1: Walloonian Christmas music.
- 8.0 ,, Schweizerischer Landessender: Orchestral and choral concert.
- 8.15 ,, Frankfurt, Stuttgart: Haydn chamber music.
- 8.15 ,, Warsaw: Violin recital by Roman Totenberg.

- 9.5 p.m. Copenhagen: Orchestral and soloist concert.

**Plays**

- 8.10 p.m. Heilsberg: "Christmas" (a radio sequence).
- 8.45 ,, Radio-Paris: "Les Folies Amoureuses" (Regnard).

THURSDAY, DECEMBER 24

**Concerts**

- 7.2 p.m. Copenhagen: Christmas concert.
- 7.10 ,, Hilversum: Choral and chamber music orchestral concert.
- 7.30 ,, Stockholm: Christmas programme.
- 7.40 ,, Vienna: "Gloria in Excelsis."
- 8.0 ,, Frankfurt, Stuttgart, Königs Wusterhausen: The Bells of 30 German Cathedrals.
- 8.0 ,, Milan, Turin: Christmas concert.
- 8.0 ,, Rome: Christmas concert.
- 8.20 ,, Munich: Christmas concert.
- 9.0 ,, Brussels No. 2: Christmas programme.
- 9.0 ,, Radio-Paris: Symphony concert.
- 9.20 ,, Warsaw: Christmas concert.

**Plays**

- 9.30 p.m. Heilsberg, Berlin, Breslau, Leipzig: "Die Heilige Nacht" (a Nativity play).
- 9.30 ,, Stuttgart, Frankfurt: "The Shepherd's Play."

**Other Events**

- 7.0 p.m. Hamburg: Christmas programme for lonely people.

FRIDAY, DECEMBER 25

**Concerts**

- 10.30 a.m. Leipzig, Schweizerischer Landessender and all German stations: Bach Cantata.
- 11.30 ,, Leipzig, Frankfurt, Stuttgart: Johann Strauss Concert.
- 6.30 ,, Stockholm: Handel's "Messiah."
- 8.0 ,, Milan-Turin: Chamber Music.
- 8.15 ,, Schweizerischer Landessender: Christmas oratorio.
- 8.45 ,, Radio-Paris: Gramophone records for children.
- 9.40 ,, Copenhagen: Classical dances by Viennese composers.

**Operas and Operettas**

- 6.30 p.m. Leipzig: "Tannhäuser" (from Dresden Opera House).
- 6.30 ,, Vienna: "The Bajadere" (Kálmán).
- 7.0 ,, Berlin, Königs Wusterhausen: "Il Trovatore" (from State Opera House).
- 7.15 ,, Frankfurt, Stuttgart: Act 3 of "The Mastersingers of Nuremberg."
- 8.0 ,, Rome: "The Blue Mazurka" (Lehár).

SATURDAY, DECEMBER 26

**Concerts**

- 7.15 p.m. Warsaw: Orchestral and soloist concert.
- 9.10 ,, Warsaw: Chopin pianoforte recital.
- Operas and Operettas**
- 6.35 p.m. Munich, Langenberg: "Tannhäuser" (from National Opera House).
- 7.0 ,, Stockholm: "La Bohème" (from Royal Opera House).

**Plays**

- 8.45 p.m. Brussels No. 1: "Eros and Psyché" (Giraud).

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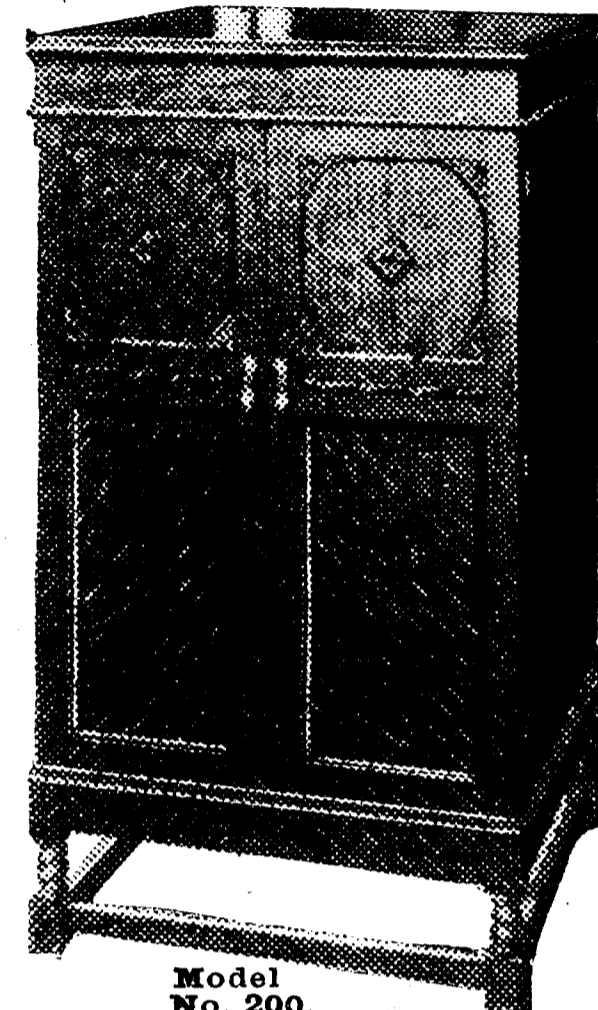
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# Which Station Was That?

## Answers to Correspondents

**BIG EARS (Goldthorpe)**: (1) and (2) cannot trace the transmission as French stations did not advertise a relay on that night, but your wavelengths would tally with Toulouse and Limoges, P.T.T. **STEELE (Skegness)**: Yes, Sydney, VK2ME which works for the benefit of U.S.A. listeners occasionally on 30.75 m. **MIDNIGHT OIL (Cheadleholme)**: Yes, Reykjavik. Local time is one hour behind G.M.T. **HIGH FREQUENCY (Morpeh)**: Moscow (T.U.) on 45.38 m. **RHOASTER (Cambridge)**: Wavelength vague; if p.m. might tally with Leningrad. **TERRY BOY (Drury Lane)**: (1) Brno; opera: "Othello" from local theatre; (2) Trieste; (3) Hilversum testing on 20 kW. **SPARKS (Morecambe)**: Vatican (Rome) on 50.26 m. **DON Q (Tralee, I.F.S.)**: Reykjavik. **CURIOUS (Catford)**: Hilversum testing. **MUIR (Inverness)**: Altered programmes: Frankfurt-am-Main (Memorial Hour to St. Elizabeth); Mühlacker (Christmas Cantata from St. Mark's Church, Stuttgart); Heilsberg (an Advent programme from Danzig). **NOVICE (Machynllech)**: Milan on 331.5 m. **WOP (West Calder)**: Boden relaying Stockholm. **BRACING (Skegness)**: a test by Hörby. **STRANGER (Liverpool)**: (1) Stavanger; (2) Hörby. **GLANSMAN (West Kilbride)**: possibly VK2ME, Sydney (N.S.W.). **ABOU-ABAS (Scarborough)**: Apparently a test, possibly by Hörby. **WATES (Plumstead)**: Proprietary names must not be used as *noms-de-plume*. Very vague; see previous reply. **JEFF (Greenwich)**: Cannot confirm as you give no indication of wavelength, but VK2ME, Sydney, now broadcasts on Sundays between 2.30 and 4.30 p.m., G.M.T. **TIMBER (Leeds)**: a test by Hilversum now using 20 kW. **V.H.N.C. (Leeds)**: Radio Normandie (Fécamp) on 245.9 m. (sponsored concert). **INTERESTED SCOT (Kintore)**: Hörby testing. **CARRINGTON (Ashton-upon-Mersey)**: Regret, cannot trace; no station advertised a relay of the Riga programme. **SMITH (Lincoln)**: Proprietary names must not be used as *noms-de-plume*. Direct "pick-up" on your receiver, on lower end of long wave coil, of B.B.C. station. **EASTON (Bristol)**: Mescow; early morning exercises and concert. **STODGER (Hessle)**: Probably U.S.A. station, but wavelength estimate too vague to trace transmitter. **ROBBO (Derby)**: Scheveningen-Haven (Holland); commercial transmitter only. **EX-CHAR (Cowfold)**: Vatican (Rome), on 50.26 m. **A. C. M. (Eastbourne)**: Leningrad; English lesson. **RABOONA (Upper Teddington)**: Brussels (No. 1). **NETTLEHAM (Sunderland)**: Hörby testing. **HUNSLY (Leeds)**: Radio-Idzerda, private transmitter, The Hague. Proprietary names must not be used as *noms-de-plume*. **HORKY (Glasgow)**: Hörby testing. **SCRUBBER (Southport)**: (1) Possibly Moscow (T.U.) on 45.38 m.; (2) Radio-Toulouse is occasionally relayed by a local station on 39.45 m. **MAC (Suffolk)**: Leningrad; English lesson. **LO-DOWN (Woodchester)**: Moscow (T.U.) on 45.38. **BEACH WAVES (Southsea)**: Hilversum. **WAS IST? (Hove)**: (1) Moscow (T.U.); (2) Kalundborg relaying Copenhagen. **ENQUIRER (S.W.7)**: (a) Flensburg relaying Hamburg; (b) Königsberg direct; (c) wavelength wrong; Radio-Normandie, Fécamp. **DIAL (Conon Bridge)**: WTIC, Hartford (Conn.) U.S.A., relaying National Broadcasting Company's programme from WEAF, New York. **FIVER (Birmingham)**: Radio-Idzerda, private transmitter, The Hague. **GHOSTLY (Bristol)**: Cannot trace; apparently a test by some transmitter. **RUBBRA (London, S.E.)**: Vague; possibly WGY, Schenectady. **SAN TOY (W.1)**: Yes, Reykjavik. **MAC (Portobello)**: Without

doubt, a test; it has been heard by many listeners. Possibly from Stavanger or Christiansand. **STILLWELL (Hove)**: Moscow (T. U.). **KILLOCH (Glasgow)**: Yes, Radio Saigon (Indo-China). **NEMINEM (Brotton)**: French amateur experimental transmitter. **WANIAC (Letchworth)**: Prague relaying Brno (musical play). **WYLEY (Coventry)**: Schweizerischer Landessender relaying gramophone records from Basle. **IMP (Aberdeen)**: Wilno relaying Warsaw. **????? (Waterford)**: Reykjavik. **LOCKARDION (Lockerbie)**: Hilversum; gramophone records. **N. S. C. (Midlothian)**: Reykjavik. Icelandic time is one hour behind G.M.T. **THREE VALVER (Weymouth)**: (1) LN, Radio Splendide, Buenos Aires; (2) Norddeich (Germany); transmission to ships. **BEN DEE (Skefeld)**: Reykjavik. **AERIAL BUG (Bromley)**: EAQ, Aranjuez, Madrid (30.42 m.). **KILLOCH (Glasgow)**: Sundsvall relaying Stockholm. **MUG (Argyll)**: Test by Falun. **RED SEA ROVER (Gravesend)**: Hilversum; gramophone Records. Dutch local time is 20 minutes in advance of G.M.T. **SEARCHING (Battersea)**: Cracow relaying Warsaw. **PETER PAN (Grosby)**: LN, Radio Splendide, Buenos Aires (315.8 m.). **DRUMMER (Fife Keith)**: PLE, Bandoeng, on 15.93 m. There are other Java transmitters, but you do not say near which "logged" U.S.A. station this broadcast was picked up. **OIDARDLROW (Salford)**: More likely Kiev on 1,034 m. **VICCO (Jersey, C.I.)**: Caracas, Venezuela, working with Nauen (Germany). Usual wavelengths 25.6 and 28.9 m., but possibly another channel may have been used. **AWDAWIT (Aberdeen)**: Please number your queries. We are replying to them in order of wavelength. (1) Göteborg relaying Stockholm; (2) Breslau relaying *The Marriage of Figaro* from Cologne; (3) probably Poznan. **SLEEPLESS (Norwich)**: Too vague; regret, cannot trace. **DODO (Heckington)**: Berlin (common-wave stations) on 283 m. **ELMDENE (Harrow)**: Reykjavik. **TENNIS (Derby)**: Not advertised, but certainly Kalundborg relaying Copenhagen. **SWIFTY (Glacou-on-Sea)**: Regret, cannot trace. **LINTO (Govan)**: Wilno on its new wavelength. **BONN (Blackpool)**: Regret, cannot trace. There is no Dutch station working on that wavelength. We very much doubt whether you would hear Radio Schaarbeek. **A. D. (Stockport)**: Milan testing. See under "Deviations" in current issue. **A. C. W. (Nottingham)**: (1) might tally with Radio-España, Madrid; (2) Katowice; "Letter Box" (answers to correspondents *via* microphone). **ONE VALVE (Letchworth)**: Not a broadcast; regret, cannot trace. **OOISIT (Ilford)**: Copenhagen. **JUMBO (Ashby-de-la-Zouch)**: (1) (2) and (3) these would appear to be transmissions by amateurs; if you can pick up call-signs would advise you to write to Radio Society of Great Britain, 53, Victoria Street, London, S.W.1. **QUESTION MARK (Sidcup)**: Lille P.T.T. **COPPER (Paris XVI)**: (148) this was Kalundborg relaying a late transmission from Copenhagen; (149) Radio-Maroc (Rabat). **INTRIGUE (Chelsea)**: (1) Radio-Idzerda, private transmitter at The Hage; (2) and (3) according to details given these transmissions do not appear to have been broadcast by stations over 1,000 metres. Are you sure that your receiver was not switched over to the lower broadcasting band? No. 3 might tally with Radio Normandie, Fécamp.

[The values of resistance indicated at the end of the article on Notes on Coupled Circuits in Broadcast Receivers are 15,000, 20,000, 30,000 and 50,000 ohms respectively.]

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

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5. Language.
6. Type of receiver in use and strength of signal.
7. Details of programme or signal received.
8. Name and address.
9. Nom de plume. (*Proprietary names must not be used.*)

## Schedule of Advance Programmes

(STRICTLY COPYRIGHT)

For the benefit of traders who may wish to make arrangements for demonstrating, we are printing each week a schedule of the programmes to be transmitted by the National and Regional stations. It will be noticed that these schedules concern programmes to be transmitted a fortnight hence, and it is felt that they will also be of particular service to those of our readers living abroad who will be able to use them in connexion with the reception of the Experimental Short Wave Station, G5SW, which relays either the National (5XX) or London Regional programme from 7 p.m.

### SUNDAY, JANUARY 3

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
AFTERNOON	Music by Roger Quilter	As London Reg.	Organ and Violin Recital	Band Concert
EVENING PROGRAMME	Military Band Oratorio	J. C. Bach music Hotel Orchestra	As London Reg. As London Reg.	As London Reg. Orchestral Con.

### MONDAY, JANUARY 4

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Studio Concert	As Midland Reg.	Cinema Orch.	As Midland Reg.
AFTERNOON	Cinema Orch. Gram. Records Hotel Orchestra	As North Reg. As Midland Reg. As National	As North Reg. Studio Orchestra	Hotel Orchestra As Midland Reg. As National
1ST EVENING PROGRAMME	Talks Vaudeville	Band Concert Literary Snow Scenes	Organ Recital Military Band	Studio Orchestra Hotel Orchestra
2ND EVENING PROGRAMME	Chamber Music Dance Music	Light Music Dance Music	As London Reg. As London Reg. (till 11 p.m.)	Talk As London Reg.

### TUESDAY, JANUARY 5

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Cinema Organ	Ballad Concert	As London Reg.	As London Reg.
AFTERNOON	Hotel Orchestra Gram. Records Cinema Orch.	As North Reg. As Midland Reg. As National	As North Reg. Studio Orchestra	Instrumental Con As Midland Reg. Evensong
1ST EVENING PROGRAMME	French Talk Orchestral Con.	Orchestral Con. Dance Music	Light Music As London Reg.	Organ Recital As London Reg.
2ND EVENING PROGRAMME	Orchestral Con. Dance Music	Play Dance Music	As London Reg.	As London Reg. As London Reg.

### WEDNESDAY, JANUARY 6

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Cinema Organ	As North Reg.	As North Reg.	Studio Orchestra
AFTERNOON	Gram. Records String Orchestra Symphony Con.	As Midland Reg. As Midland Reg. As National	Organ Recital Studio Orchestra	As Midland Reg. As Midland Reg. As National
1ST EVENING PROGRAMME	Talks Operatic Excerpts	Light Music Vaudeville	Band Concert As London Reg.	As London Reg. As London Reg.
2ND EVENING PROGRAMME	Play Dance Music	Military Band Dance Music	A Ballad Concert As London Reg. (till 11.5 p.m.)	Studio Orchestra As London Reg.

### THURSDAY, JANUARY 7

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Cinema Organ	Cinema Orch.	As London Reg.	As London Reg.
AFTERNOON	As Midland Reg. Abbey Evensong Hotel Orchestra	As Midland Reg. As North Reg. As National	Pianoforte and V'cello Rec. As North Reg.	As Midland Reg. Hotel Orchestra As National
1ST EVENING PROGRAMME	German Talk Orchestral Con.	Orchestral Con. Organ Recital	"Request" Con. Dance Music	Studio Orchestra Hallé Orchestra
2ND EVENING PROGRAMME	Vocal and Instr. Recital Dance Music	Musical Com. d y Dance Music	As London Reg.	Choral Concert As London Reg.

### FRIDAY, JANUARY 8

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Gram. Records	As Midland Reg.	Cinema Organ	As Midland Reg.
AFTERNOON	Organ Recital Gram. Records Hotel Orchestra	Cinema Orch. As Midland Reg. As National	As London Reg. Cinema Orch.	As London Reg. As Midland Reg. As National
1ST EVENING PROGRAMME	Talks Military Band	Light Music Gram. Records	Light Music Revue	Theatre Relay Band Concert
2ND EVENING PROGRAMME	Vaudeville Dance Music	Orchestral Con. Dance Music	As London Reg.	A Comedy As London Reg.

### SATURDAY, JANUARY 9

	NATIONAL	LONDON REG.	MIDLAND REG.	NORTH REG.
MORNING	Cinema Orch.	As National		As National
AFTERNOON	As North Reg. Cinema Organ	As North Reg. As National	Studio Orchestra Cinema Organ	Band Concert As National
1ST EVENING PROGRAMME	Talks Musical Comedy	Orchestral Con. Pianoforte Rec.	Light Music Dance Music	Studio Orchestra Symphony Con.
2ND EVENING PROGRAMME	Light Music Dance Music	As Midland Reg. Dance Music	Orchestral Con.	Vaudeville As London Reg.

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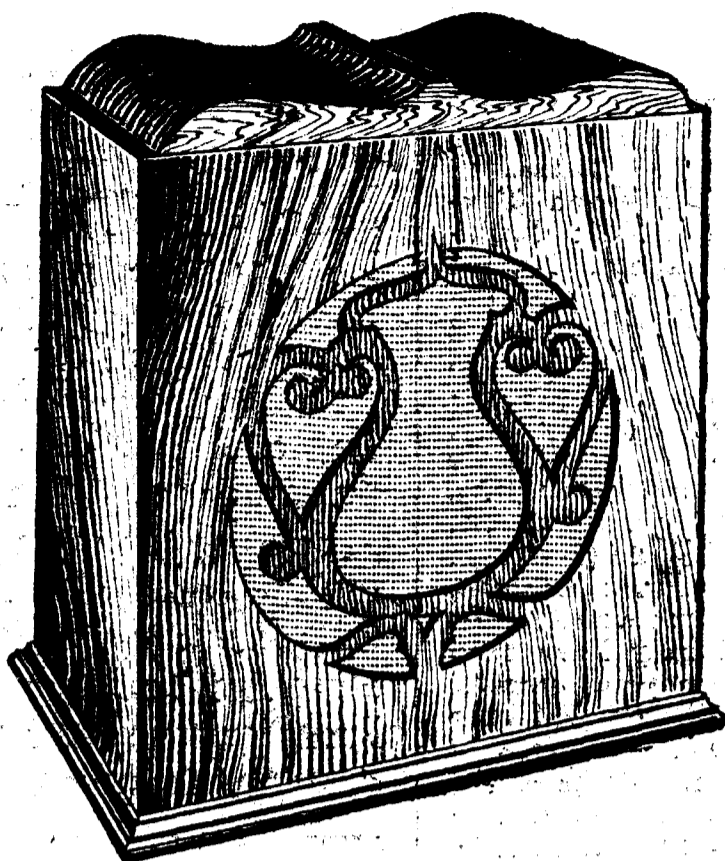
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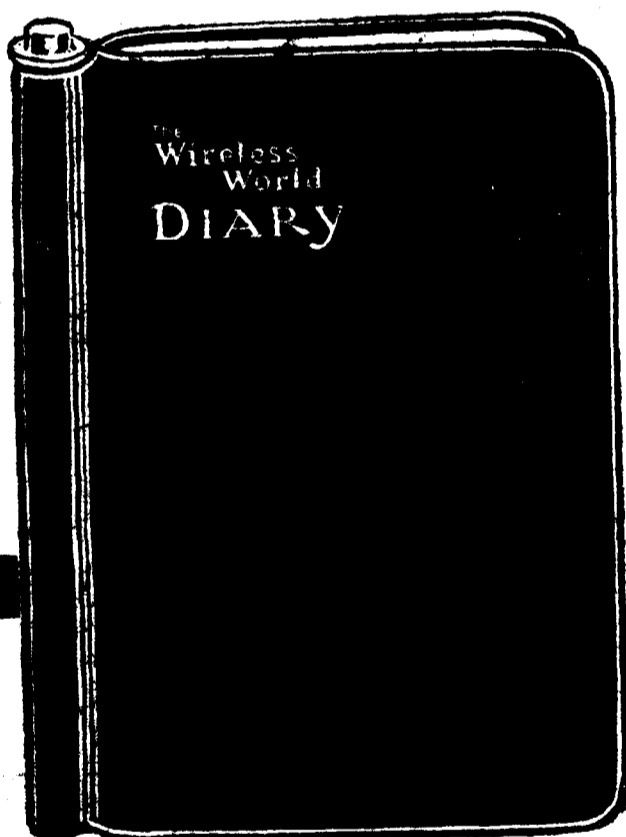
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(London)

# NATIONAL PROGRAMMES

(Northern)

1,148 kc/s (261.3 m.) (68 kW.)

(Davertry) 193 kc/s (1,554.4 m.) (35 kW.)

995 kc/s (301.5 m.) (70 kW.)

## SUNDAY (DEC. 20th)

8.0 p.m.—Church Cantata, No. 110 (Bach). Unser Mund sei voll Lachens (Then was our Mouth filled with Laughter). Singers: Freda Townson (Contralto), Walter Glynn (Tenor), Frank Phillips (Bass). The Wireless Chorus. Players: John Field (Oboe d'Amore), Herbert Dawson (Organ), The B.B.C. Bach Orchestra (Trumpets, Oboes, Bassoon, Flutes, Timpani and Strings) conducted by Stanford Robinson.

3.45—Bible Reading.

4.0—Missionary Talk. The Rev. W. B. Gill, of the Church Missionary Society Uganda Mission: "Christmas on the Equator."

4.15 p.m.—The Wireless Military Band. Conductor, B. Walton O'Donnell. Dorothy Bennett (Soprano).

5.30 p.m.—A Recital by Stuart Robertson (Bass-Baritone).

6.0—6.20 p.m.—For the Children. A Christmas Message to the Children.

7.55 p.m.—A Religious Service. Relayed from Cransley Church, Kettering.

8.45 p.m.—The Week's Good Cause. Appeal on behalf of The Elderly Nurses' Fund, inaugurated by the *Nursing Mirror* in 1925, by Mr. Sydney Walton, C.B.E.

8.50 p.m.—"The News." Weather Forecast, General News Bulletin; Shipping Forecast.

9.5 p.m.—Tom Jones and The Grand Hotel, Eastbourne, Orchestra. John Morel (Baritone).

10.30 p.m.—Epilogue.

## MONDAY (21st)

10.0 a.m.—King's College Commemoration Service. Relayed from St. Clement Danes.

10.45—11.0 a.m.—Mr. V. C. Clinton Baddeley. Pickwick Readings—I.

12 noon.—A Light Classical Concert. Fedora Roselli (Mezzo-Soprano), The Bronkhurst Trio.

1.0 p.m.—The Commodore Grand Orchestra, directed by Joseph Muscant.

2.0—2.30 p.m.—Gramophone Records.

4.0 p.m.—Moschetto and his Orchestra, from The Dorchester Hotel.

5.15 p.m.—The Children's Hour.

6.0 p.m.—"The First News."

6.30 p.m.—The Foundations of Music. Music for Two Pianofortes, played by Carl Weber and Maud Dixon.

6.50 p.m.—"New Books." Mr. Desmond MacCarthy.

7.10—7.25 p.m.—Mr. Ralph Dunstan, Mus.Doc.: "Typical Cornish Curlys," with Illustrations by a select Choir from Mutley Wesleyan Church, Plymouth.

7.30 p.m.—An Organ Recital by Guy Weitz.

(London)

# REGIONAL PROGRAMMES

(Northern)

842 kc/s (356.3 m.) (70 kW.)

(Midland) 752 kc/s (398.9 m.) (38 kW.)

626 kc/s (479.2 m.) (70 kW.)

## SUNDAY (DEC. 20th)

3.0 p.m. (London).—The B.B.C. Theatre Orchestra. Conductor, Leslie Woodgate. Trefor Jones (Tenor).

3.0 p.m. (Midland).—Chamber Music. The Alex Cohen Quartet: Alex Cohen (1st Violin), Rowland Sirrell (2nd Violin), Lena Wood (Viola), Haydn York (Violoncello).

3.0 p.m. (Northern).—The Studio Orchestra, directed by John Bridge. Fred Tilsley (Oboe).

4.0 p.m. (Northern).—A Chamber Concert. The Yorkshire Trio: Reginald Stead (Violin), Ronald Townsend (Violoncello), Henry A. Leah (Pianoforte). Rispah Goodacre (Contralto).

4.15 p.m. (London).—A Violoncello and Harpsichord Recital by Sheridan Russell and Jean Hamilton.

4.15 p.m. (Midland).—The Studio Orchestra.

5.0—5.30 p.m.—"The Modern Dilemma"—XII. The Rev. Nathaniel Micklem.

7.50 p.m. (Midland).—A Religious Service. Conducted by the Rev.

Canon Guy Rogers, M.A., M.C. From St. Martin's Parish Church, Birmingham.

7.50 p.m. (Northern).—The Northern Studio Orchestra, directed by John Bridge. Pastoral Symphony (Messiah) (Handel), followed by a Studio Service

8.0 p.m. (London).—A Religious Service. (From the Studio.) Conducted by the Rev. F. W. Chudleigh.

8.45 p.m.—Davertry National Programme.

8.50 p.m.—"The News," Weather Forecast, General News Bulletin; Regional News.

9.5 p.m.—Sunday Orchestral Concerts—X. Percy Heming (Baritone). The B.B.C. Studio Symphony Orchestra (Leader, Arthur Catterall), conducted by John Barbirolli. Orchestra: Concerto Grosso for Strings, Op. 6, No. 7 (Handel). Percy Heming and Orchestra: Two Arias (Figaro) (Mozart). Orchestra: In a Summer Garden (Delius); Symphony, No. 2, in D (Brahms).

10.30 p.m.—Epilogue.

## MONDAY (21st)

10.0—11.0 a.m. (London and Northern).—Davertry National Programme.

11.30 a.m.—12 noon (London).—Experimental Television Transmission by the Baird Process (356.3 m. Vision; 261.3 m. Sound).

12 noon.—The Regal Orchestra, conducted by Ernest Parsons.

1.0 p.m.—Reginald Dixon at the Organ.

1.45—3.0 p.m.—Jack Martin and his Hotel Majestic Orchestra.

4.0 p.m. (London and Northern).—Davertry National Programme.

5.15 p.m.—The Children's Hour.

6.0 p.m.—"The First News."

6.30 p.m. (London).—The B.B.C. Theatre Orchestra, conducted by Stanford Robinson. Raie da Costa (Pianoforte).

6.30 p.m. (Midland).—Pattison's Salon Orchestra, under the direction of Norris Stanley.

6.30 p.m. (Northern).—The Studio Orchestra, directed by John Bridge. Florence Fielden (Contralto).

7.30 p.m. (Midland).—The Birmingham Military Band, conducted by

W. A. Clarke. Charles Dean (Baritone), Mason and Armes (Entertainers with a Piano).

7.40 p.m. (Northern).—Mr. G. J. M. Fitzjohn: "Historic Houses of the North—Cumberland and Westmorland."

7.45 p.m. (London).—The B.B.C. Light Orchestra. Conductor, Adrian Boult. Ursula Greville (Soprano).

8.0 p.m. (Northern).—The Merseyside Military Band, conducted by Gordon Stuteley. Harry Howson (Tenor).

9.0 p.m.—Vaudeville. Bransby Williams in "Scrooge," from "A Christmas Carol," by Charles Dickens. The Savoy Hotel Orpheans, Alexander and Mose, "Dark Subjects." Jeanne de Casalis and Partner in another "Mrs. Feather" Episode. Stainless Stephen's Pantomime. The Revue Chorus will sing Pantomime Choruses during the programme. Orchestra under the direction of S. Kneale Kelley.

10.15 p.m.—"The Second News."

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

the day, it will be broadcast at 9.0 p.m.)

9.5 p.m.—Appeal on behalf of the British Wireless for the Blind Fund by the Right Hon. the Viscount Snowden of Ickornshaw.

9.20 p.m.—Christmas Songs by John Coates: Welcome Yule (Fifteenth Century Carol—Air from Deuteromelia, 1609); Cristemas (Gerrard Williams); The Monkey's Carol (Stanford); The Oxen (Edward Dent); Voici Noël (Christmas is here) (Weckerlin); Ships of Yule (Martin Shaw); Mistletoe (Armstrong Gibbs); New Year's Was-sailing Song (Mallinson); A Carol for the New Year (Greensleeves, 1580) (arr. J. F. Bridge).

9.45 p.m.—Half the World Away. An Experiment with Time and Christmas.

10.30 p.m.—Dance Music. The Savoy Hotel Orpheans, from The Savoy Hotel.

12 midnight—1.0 a.m. (Saturday).—Jack Payne and his B.B.C. Dance Orchestra.

## SATURDAY (26th)

10.15 a.m.—The Daily Service.

10.45—11.0 a.m.—Mr. Gillie Potter: "Christmas at Hogsnoton."

1.0—2.0 p.m.—The Commodore Grand Orchestra, directed by Joseph Muscant.

3.45 p.m.—The Wireless Military Band. Conductor, B. Walton O'Donnell. Archibald Winter (Tenor).

4.45 p.m.—Reginald Foort at the Organ.

5.15 p.m.—The Children's Hour.

6.0 p.m.—"The First News."

6.25 p.m.—Interval.

6.30 p.m.—The Foundations of Music. Music for Two Pianofortes, played by Carl Weber and Maud Dixon.

6.50—7.5 p.m.—"The Week in the Garden."

7.10 p.m.—"Healthy, Wealthy and Wise"—IX. Conclusion.

7.30 p.m.—Vaudeville. Cicely Courtneidge. Ernest Butcher. Mr. Flotsam and Mr. Jetsam. Tommy Handley. Elsie and Doris Waters. Clapham and Dwyer. With Remarks from The Buggins Family. Jack Payne and his B.B.C. Dance Orchestra will play during the programme.

9.0 p.m.—"The Second News."

9.15 p.m.—Shipping Forecast: New York Stock Market Report.

9.20 p.m.—A Pianoforte Recital by Cecil Dixon.

9.45 p.m.—"The Clock." A Fantasy on a familiar Sound.

10.15 p.m.—12 midnight.—Dance Music. Ambrose and his Orchestra, from The May Fair Hotel.

## TIME SIGNALS (Greenwich)

Sunday: 10.30 a.m., 3.0 p.m., 9.0 p.m.

Weekdays: 10.30 a.m. 1.0 p.m., 4.45 p.m., 6.30 p.m., 9.0 p.m., 11.30 p.m.

## DANCE MUSIC

5.15—6.0 p.m., each weekday from London and Northern National transmitters.

## FRIDAY (25th)

10.30—11.15 a.m.—A Christmas Service from York Minster.

12 noon.—Frank Newman at the Organ of Lozells Picture House, Birmingham.

1.0 p.m.—The Trocadero Cinema Orchestra, directed by Alfred Van Dam.

2.0 p.m.—The Regal Orchestra, conducted by Ernest Parsons.

3.0 p.m.—Reginald Foort at the Organ.

4.0 p.m.—Moschetto and his Orchestra, from The Dorchester Hotel.

5.15 p.m.—The Children's Hour.

5.50 p.m.—Birthdays.

6.0 p.m.—General Sports Bulletin.

6.10 p.m.—Interval.

6.15 p.m.—Gramophone Records.

6.30 p.m.—A Service from the Studio, conducted by the Rev. Canon C. S. Woodward, M.C.

7.30 p.m.—Ernest Longstaffe presents the Popular Oriental Pantomime "Aladdin."

9.0 p.m.—Weather Forecast, followed by Shipping Forecast. (If any news of importance is received during

## THURSDAY (24th)

10.15 a.m.—The Daily Service.

10.45—11.0 a.m.—Miss Rhoda Power: "Christmas."

12 noon.—An Organ Recital by Walter Vale.

**Regional Programmes—(Cont.)**

5.15 p.m.—The Children's Hour.  
 5.0 p.m.—"The First News" and Bulletin for Farmers.  
 6.35 p.m. (Northern and London).—Reginald Dixon at the Organ.  
 6.35 p.m. (Midland).—The Studio Chorus.  
 7.0 p.m. (London).—The Pall Mall Players. Gwladys Naish (Soprano).  
 7.0 p.m. (Midland).—Organ Recital by Dr. Harold Rhodes.  
 7.0 p.m. (Northern).—The Studio Orchestra.  
 7.45 p.m. (Midland).—The Regal Orchestra, conducted by Ernest Parsons.  
 8.15 p.m. (Northern and London).—A Discussion between Mr. L. du Garde Peach and Mr. Gerald Barry: "Northern and Southern Manners."  
 8.45 p.m. (Midland).—A Violin Recital by Harold Mills.  
 9.0 p.m. (London).—Band of H.M. Grenadier Guards. Director of Music, Captain G. Miller. Foster Richardson (Bass). Band: Marche, Pompeuse (Becker, arr. Winterbottom); Overture, Prince Igor (Borodin, arr. Hibbert). Foster Richardson: Is my Team ploughing? (Butterworth); Dear Jane (Butler). Band: Suite, Op. 39 (Dvorak, arr. Barker). Foster Richardson: She is Far from the Land (Lambert); Far across the Desert Sands (Woodforde-Finden). Band: You are my Heart's Delight (Lehar). Two Kentish Idylls: Morning Pastorale, and A Song in a Bwery (Graham Gill, arr. Hind). Foster Richardson: If thou wert blind (Johnson); Sons of the Sea (Coleridge-Taylor). Band: Fantasy on Seventeenth-Century Music (arr. Miller).  
 9.0 p.m. (Northern).—"Northern Notions"—A Revue. Book by Henrik Ege, Richard Fisher, Clifford Grey, Edwin Lewis, and H. C. G. Stevens. Music by well-known Composers. Produced by Victor Smythe.  
 9.20 p.m. (Midland).—The Studio Orchestra and "Delicate Ground." A Comic Drama, by Charles Dance. Presented by the Birmingham Repertory Theatre Co., in conjunction with Sir Barry Jackson.

10.15 p.m.—"The Second News."  
 10.35 p.m.—12 midnight (London and Northern).—Dance Music.  
 10.35—11.0 p.m. (Midland).—As London.

**WEDNESDAY (23rd)**

10.15 a.m. (London and Northern).—The Daily Service.  
 10.30—11.0 a.m. (London and Northern).—Davertry National Programme.  
 11.30 a.m.—12 noon (London).—Experimental Television Transmission by the Baird Process (356.3 m. Vision; 261.3 m. Sound).  
 12 noon.—The Northern Studio Orchestra, directed by John Bridge. Zelda Bock (Pianoforte).  
 1.15 p.m. (Midland and London).—Organ Recital by S. D. Cunningham.  
 1.15 p.m. (Northern).—A Cello Recital by Harold Warburton.  
 1.30 p.m. (Northern).—The Bradford Midday Concert. A Carol Concert given by Members of the Bradford Festival Choral Society, directed by G. W. Douglas.  
 2.15—3.0 p.m.—Gramophone Records.  
 3.30 p.m. (London and Northern).—Davertry National Programme.  
 5.15 p.m.—The Children's Hour.  
 6.0 p.m.—"The First News."  
 6.30 p.m. (London).—The Leslie Bridgewater Quintet. Winifred Bury (Soprano).  
 6.30 p.m. (Midland).—The Studio Orchestra. Leslie Bennett (Baritone).  
 6.30 p.m. (Northern).—Relays from The Paramount Theatre, Manchester; The Palace Theatre, Manchester; and the Argyle Theatre, Birkenhead.  
 8.0 p.m. (London).—Miss Helen Clarke: "An English Woman in Russia during the War and the Revolution."  
 8.0 p.m. (Midland).—The Cathedral Choristers' Carol Concert, from The Chapter House of Gloucester Cathedral.  
 8.0 p.m. (Northern).—Mr. W. Haworth: "The Northern Householder's Budget."  
 8.20 p.m. (Northern).—The Studio

Orchestra. The City of Bradford Co-operative Choir, conducted by J. W. Horsfall.  
 8.30 p.m. (London).—The B.B.C. Light Orchestra, conducted by Victor Hely-Hutchinson. Owen Bryngwyn (Baritone).  
 9.0 p.m. (Midland).—Vaudeville.  
 9.45 p.m. (Northern and London).—A Violin Recital by Henry Holst.  
 10.15 p.m.—"The Second News."  
 10.35 p.m.—12 midnight (London and Northern).—Dance Music.  
 10.35 p.m. (Midland).—Experimental Transmission for the Radio Research Board by the Fultograph Process.  
 10.40—11.0 p.m. (Midland).—As London.

**THURSDAY (24th)**

10.15 a.m. (London and Northern).—The Daily Service.  
 10.30—11.0 a.m. (London and Northern).—Davertry National Programme.  
 11.30 a.m.—12 noon (London).—Experimental Television Transmission by the Baird Process (356.3 m. Vision; 261.3 m. Sound).  
 12 noon.—The Shepherd's Bush Pavilion Orchestra, conducted by Harry Fryer.  
 1.15 p.m. (London and Northern).—Dorothy Kitchen (Mezzo-Soprano). Ernest Lush (Pianoforte).  
 1.15 p.m. (Midland).—A Carol Service from St. Martin's Parish Church, Birmingham.  
 2.0—3.0 p.m.—Laddie Clarke's Imperial Hydro Hotel Orchestra.  
 3.0 p.m. (Northern).—The Studio Orchestra.  
 3.30 p.m. (London and Northern).—Davertry National Programme.  
 5.15 p.m.—The Children's Hour.  
 6.0 p.m.—"The First News."  
 6.30 p.m. (London and Northern).—The Doveholes Public Band, conducted by J. Fletcher. Fred Sugden (Baritone).  
 6.30 p.m. (Midland).—Bulletin for Midland Farmers.  
 6.35 p.m. (Midland).—The City of Birmingham Orchestra (Leader, Paul Beard), conducted by Leslie Heward. Eda Kersey (Violin). Emily Broughton (Soprano).  
 7.30 p.m. (London).—Music for the Theatre. Henry Ainley. The

B.B.C. Light Orchestra, conducted by Norman O'Neill.  
 7.30 p.m. (Northern).—Carols, sung by the Choir of St. Asaph Cathedral, relayed from the Cathedral, St. Asaph. Conductor, Dr. H. C. L. Stocks.  
 8.0 p.m. (Northern).—The Studio Orchestra.  
 8.30 p.m. (Midland).—Dance Music.  
 9.0 p.m. (London).—Chamber Music: Robert Maitland (Baritone). The International String Quartet: André Mangeot (Violin); Walter Price (Violin); Eric Bray (Viola); Jack Shinebourne (Violoncello).  
 9.0 p.m. (Northern).—"The World of Sam Shorrocks," a Radio Play by Edwin Lewis.  
 9.30 p.m. (Midland).—A Carol Concert from The Church of The Messiah, Birmingham.  
 10.15 p.m.—"The Second News."  
 10.35 p.m.—12 midnight (London and Northern).—Dance Music.  
 10.35—11.0 p.m. (Midland).—as London.

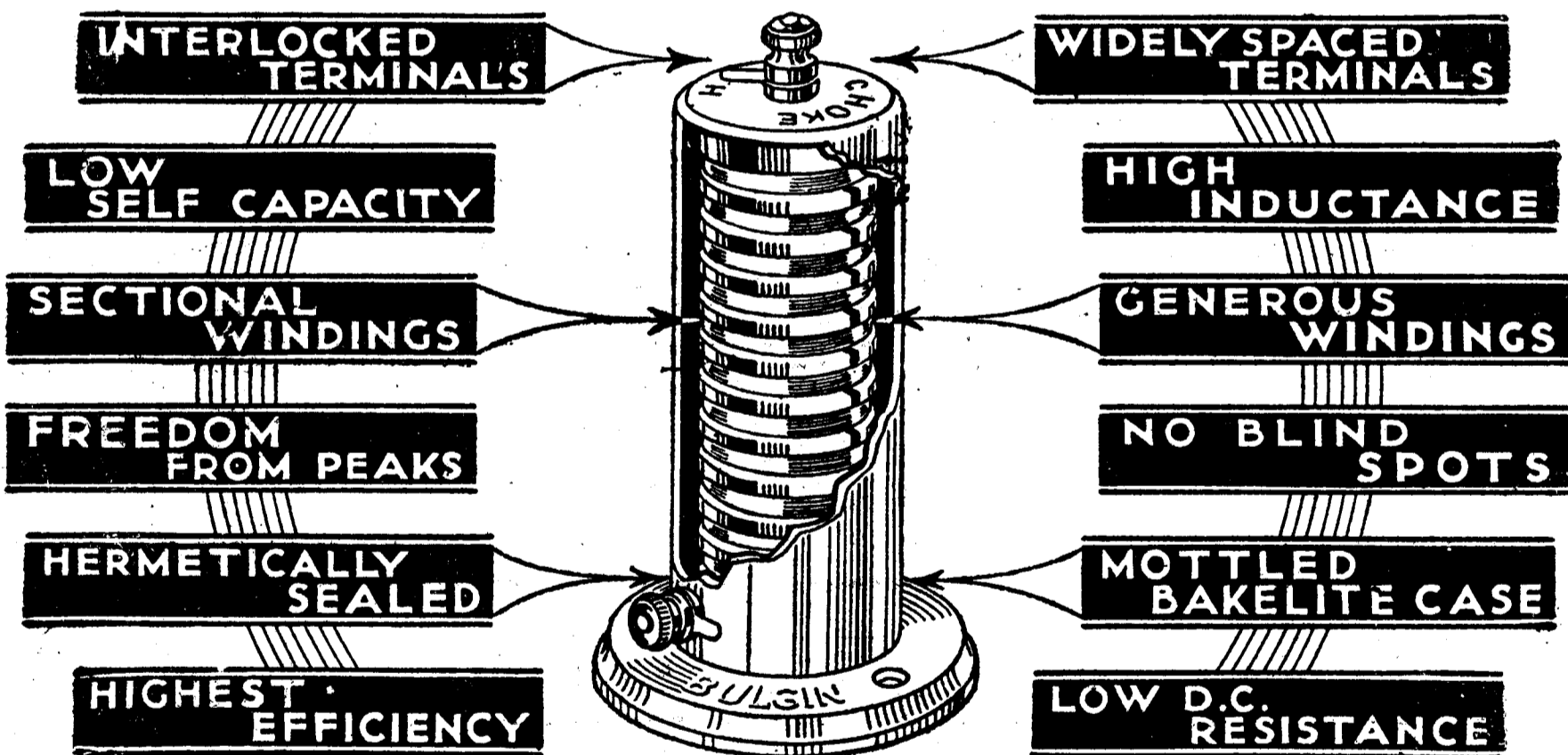
**FRIDAY (25th)**

10.15—11.15 a.m.—Davertry National Programme.  
 10.15 a.m. (Midland).—A Seasonable Greeting to Midland Hospital Patients by the Rt. Rev. the Lord Bishop of Birmingham (Dr. E. W. Barnes).  
 12 noon.—Davertry National Programme.  
 5.15 p.m.—The Children's Hour.  
 5.50 p.m.—Birthdays.  
 6.0 p.m.—First General News Bulletin.  
 6.10 p.m.—Regional Sports Bulletin.  
 6.15 p.m.—Davertry National Programme.  
 7.15 p.m.—Reginald King and his Orchestra. Kate Winter (Soprano).  
 8.30 p.m.—A Violin Recital by Albert Sammons.  
 9.0 p.m.—Massenet's "Cinderella," a Fairy Tale in four Acts and six Tableaux. Poem by Henri Cain, after the Tale of Perrault (English Translation by Henry Grafton Chapman). Acts III and IV. The Wireless Chorus. The B.B.C. Studio Symphony Orchestra, conducted by Percy Pitt.  
 10.15 p.m.—Gramophone Records of

Dance Music, preceded by News, if any.  
 10.45 p.m.—Dance Music. The Savoy Hotel Orpheans, from the Savoy Hotel.  
 10.45—11.0 p.m. (Midland).—As London.  
 12 midnight—1.0 a.m. (Saturday).—Jack Payne and his B.B.C. Dance Orchestra.

**SATURDAY (26th)**

10.15 a.m. (London and Northern).—The Daily Service.  
 10.30—11.0 a.m. (London and Northern).—Davertry National Programme.  
 1.0—2.0 p.m. (London and Northern).—Davertry National Programme.  
 2.0—3.45 p.m. (London).—Davertry National Programme.  
 2.0—3.45 p.m. (Northern).—The Studio Orchestra. John Baron (Baritone).  
 3.30 p.m. (Midland).—Dance Music.  
 3.45 p.m. (London and Northern).—Davertry National Programme.  
 4.45 p.m. (Midland).—Reginald New at the Organ.  
 5.15 p.m.—The Children's Hour.  
 6.0 p.m.—"The First News."  
 6.30 p.m.—Ernest Longstaffe presents the Popular Oriental Pantomime, "Aladdin." Written, produced, conducted, orchestrated and, with the exception of certain interpolated numbers, composed by Ernest Longstaffe.  
 8.0 p.m. (London).—The Gershon Parkington Quintet.  
 8.0 p.m. (Midland).—Dance Music.  
 8.0 p.m. (Northern).—A Concert. Laddie Clarke's Imperial Hotel Orchestra.  
 9.0 p.m.—An Orchestral Concert. "Memories." Mary Hamlin (Soprano). Doris Owens (Contralto). Bradbridge White (Tenor). Stanley Riley (Bass). The Wireless Chorus. The B.B.C. Light Orchestra, conducted by Joseph Lewis.  
 10.15 p.m.—"The Second News."  
 10.35 p.m.—12 midnight.—(London and Northern).—Dance Music.  
 10.35—10.40 p.m. (Midland).—Experimental Transmission for the Radio Research Board by the Fultograph Process.  
 10.40—11.0 p.m.—(Midland).—As London.

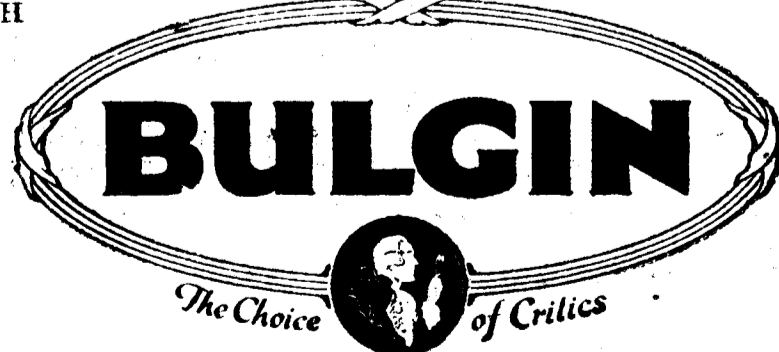


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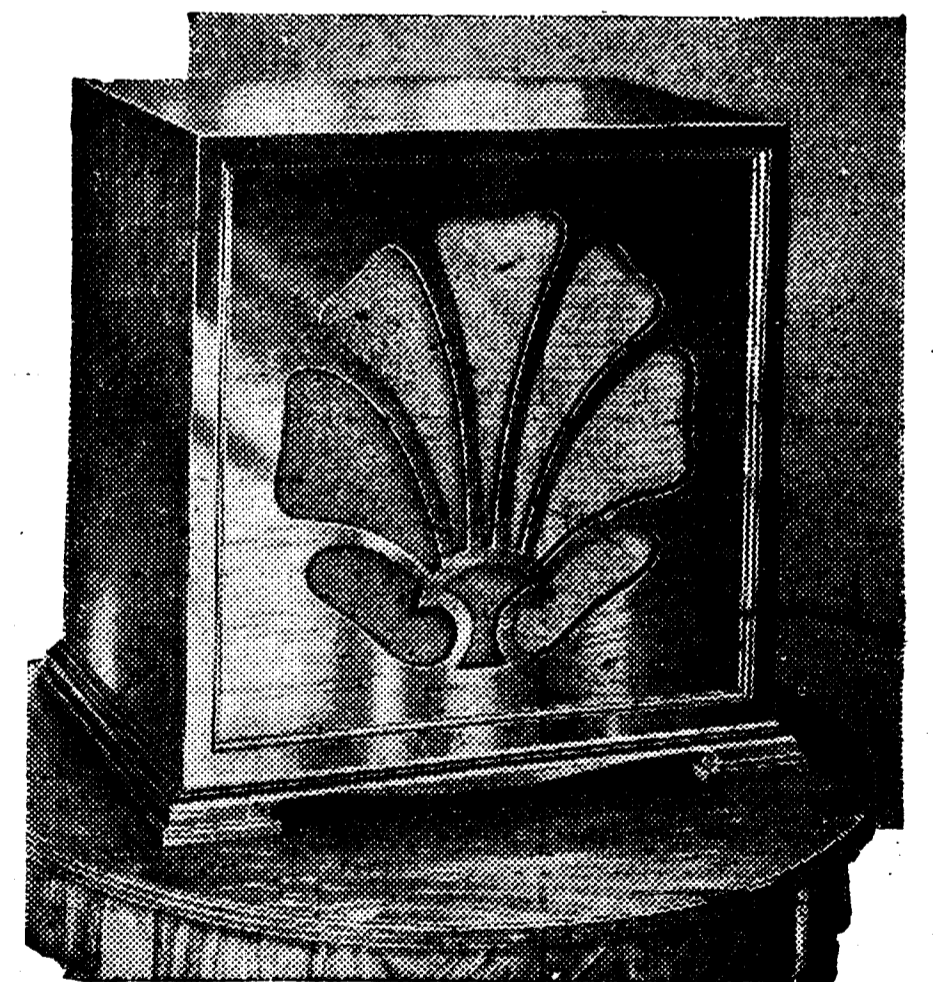
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# PROGRAMMES FOR SUNDAY (December 20)

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

**NOTE: THE HOURS OF TRANSMISSION ARE REDUCED TO GREENWICH MEAN TIME**

### BARCELONA (Spain)

Radio-Barcelona (EAJI). 860 kc/s (349 m.); 8 kW.  
 7.30-8.30 a.m.—Topical Review.  
 11.0 a.m.—Chimes and Weather.  
 1.0 p.m.—Light Music on Gramophone Records.  
 1.30 p.m.—Sextet Concert.  
 2.0 p.m.—Theatre Notes, Gramophone Records and Film Review.  
 2.20 p.m.—Sextet Concert (continued).  
 2.50 p.m.—Labour Market Report.  
 3.0 p.m.—Programme for Hospitals and Benevolent Institutions, with Gramophone Records.  
 4.0-5.30 p.m.—Interval.  
 5.30 p.m.—Agricultural Report in Catalan, followed by Part Relay of an Opera, from the Gran Teatro del Liceo.  
 9.0 p.m. (approx.)—Close Down.

### BERLIN (Germany)

Königs Wusterhausen. 183.5 kc/s (1,635 m.); 75 kW.  
 Transmits at intervals from 5.45 a.m. (Witzleben Relay)  
 10.30 a.m.—See Berlin (Witzleben)  
 1.0 p.m.—Reading from his own Works by Gustav Kohné.  
 1.25 p.m.—Talk: The meaning of Distress.  
 1.50 p.m.—See Berlin (Witzleben).  
 3.30 p.m.—Dialogue: The Children's Theatre on the Wireless and the Stage.  
 4.0 p.m.—See Breslau.  
 5.15 p.m.—Talk: The War Destiny of an East Prussian Girl.  
 5.35 p.m.—Talk: Trade in the Crisis.  
 6.5 p.m.—See Langenberg.  
 6.30 p.m.—See Berlin (Witzleben).  
 8.0 p.m.—News Bulletin.

8.10 p.m.—Concert from Hamburg.  
 9.10 p.m.—News Bulletin.  
 9.30 p.m.—Concert from Langenberg.  
 11.0 p.m. (approx.)—Close Down.

### BERLIN (Germany)

Witzleben. 715 kc/s (418 m.); 1.7 kW.  
 Transmits at intervals from 5.45 a.m. (Gymnastics).  
 10.30 a.m.—See Leipzig.  
 11.10 a.m.—Orchestral Concert, conducted by Bruno Seidler-Winkler, relayed from the Kroll-Oper.  
 1.0 p.m.—Programme for Children.  
 1.50 p.m.—Concert of Light Music.  
 3.30 p.m.—Christmas Stories.  
 4.0 p.m.—Orchestral Concert, conducted by Eugen Sonntag.  
 6.0 p.m.—Talk: The Intellectual Needs of the Age.  
 6.25 p.m.—Sports Notes.  
 6.30 p.m.—"A Nativity Play"—relayed from the Kreuzkirche, Schmargendorf.  
 7.55 p.m.—See Leipzig.  
 9.55 p.m.—News, followed by Dance Music.  
 11.30 p.m. (approx.)—Close Down.

### BORDEAUX-LAFAYETTE (France)

(PTT). 986 kc/s (304 m.); 35 kW.  
 12 noon.—Concert relayed from Paris (Ecole Supérieure), 671 kc/s (447.1 m.).  
 2.0 p.m.—Relay from Paris or Relay of a Local Festival.  
 4.30 p.m.—Pachelbel Symphony Concert relayed from the Théâtre des Champs Elysées, Paris.  
 6.20 p.m.—Sports Notes.  
 6.30 p.m.—Radio Journal.  
 8.0 p.m.—Boxing Report.  
 8.10 p.m.—Results of the Prize Draw.  
 8.15 p.m.—Gramophone Records.  
 8.30 p.m.—Comedy Programme, followed by Amusement Guide and Time Signal.

### BRESLAU (Germany)

923 kc/s (325 m.); 1.7 kW. Relay by Gleiwitz, 1,184 kc/s (253 m.).  
 Transmits at intervals from 6.0 a.m.  
 10.30 a.m.—See Leipzig.  
 11.10 a.m.—Concert by the Silesian Philharmonic Orchestra.  
 1.0 p.m.—Mid-day Report.  
 1.10 p.m.—The Rhymed Unrhymed, by Traugott Conrad.  
 1.25 p.m.—Agricultural Talk.  
 1.40 p.m.—Talk: How to make a "Gingerbread House."  
 1.55 p.m.—Reading: Breslau Industries 130 Years Ago.  
 2.15 p.m.—Talk: Christmas on the High Seas.  
 2.40 p.m.—Cabaret of Unemployed Artists.  
 4.0 p.m.—Wind Instrument Concert.  
 6.0 p.m.—Weather and Dialogue: Christmas Presents.  
 6.25 p.m.—Weather; Sports Notes.  
 6.35 p.m.—Soprano Recital of Christmas Carols. In the interval, Silesian Winter Relief Talk.  
 7.30 p.m.—Variety Programme.  
 9.10 p.m.—Time and News.  
 9.40 p.m.—Legal Letter Box.  
 10.0 p.m. (approx.)—Dance Music from Berlin (Witzleben).  
 11.30 p.m. (approx.)—Close Down.

### BRUSSELS (Belgium) (No. 1)

I.N.R. 590 kc/s (509 m.); 20 kW.  
 12.15-1.45 p.m.—Gramophone Records.  
 5.0 p.m.—Orchestral Concert.  
 6.0 p.m.—Gramophone Records.  
 7.15 p.m.—Religious Talk.  
 7.30 p.m.—Le Journal Parlé.  
 8.0 p.m.—Orchestral Concert. Soloist: Mme. Florival (Vocalist). Marche aux Flambeaux (Meyerbeer). Wedding Cake, for Pianoforte and Orchestra (Saint-Saëns). Two Songs (Mozart). Ballet Music from "Cydalise et le chèvre-pied" (Pierné). Military March (Schubert). Selection from "Faust" (Gounod). Orientale (Cui). Hindu Song (Rimsky-Korsakoff). Selection from "Manon Lescaut" (Auber). Dances from "Prince Igor" (Borodin). In the intervals at 8.45 p.m.—Reading of Poems dedicated to Christmas, and at 9.30 p.m.—Reading of Christmas Prose.  
 10.0 p.m.—Le Journal Parlé.

10.0 p.m.—Le Journal Parlé.

### BRUSSELS (Belgium) (No. 2)

N.I.R. 887 kc/s (338.2 m.); 20 kW.  
 Programme in Flemish.  
 12.15-1.45 p.m.—Gramophone Records.  
 5.0 p.m.—Orchestral Concert.  
 6.0 p.m.—Gramophone Records of Ballet Music.  
 7.15 p.m.—Religious Talk: Eternity.  
 7.30 p.m.—Music Review.  
 8.0 p.m.—Programme relayed from the Flemish Royal Opera House, Antwerp. Two Operas: (a) "L'Amico Fritz" (Mascagni), (b) "Jean Marie" (Verbeeck). In the intervals, Reading and Le Journal Parlé.

### BUCHAREST (Romania)

Radio-Bucarest. 761 kc/s (394 m.); 16 kW.  
 Transmits at intervals from 9.15 a.m.  
 6.0 p.m.—Educational Programme.  
 6.40 p.m.—Gramophone Records.  
 7.0 p.m.—"Eva"—Operetta in Three Acts (Lehar). News in the intervals.

### BUDAPEST (Hungary)

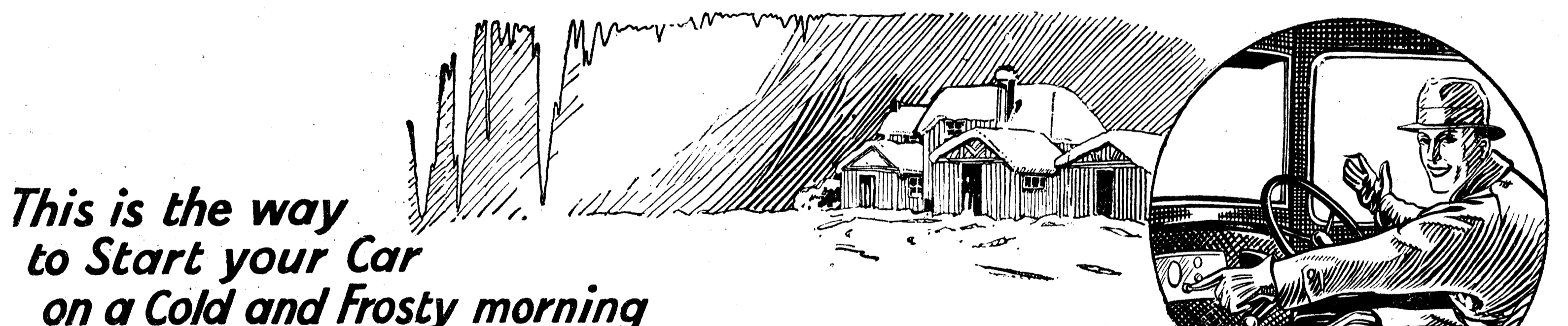
545 kc/s (550 m.); 23 kW.  
 8.0 a.m.—Press Review and Beauty Culture.  
 9.0 a.m.—Reformed Church Service, followed by a Concert by the Royal Hungarian Opera House Orchestra.  
 1.0 p.m.—Gramophone Concert.  
 2.0 p.m.—Agricultural Notes.  
 2.45 p.m.—Choral Selections and Address.  
 4.0 p.m.—Hungarian Provincial Relay.  
 5.0 p.m.—Concert by the Royal Hungarian Opera House Orchestra.  
 6.10 p.m. (approx.)—A Studio Play. News in the interval.  
 9.30 p.m. (approx.)—Concert and Tzigane Music with Vocal Selections from the Café Ostende.

### COLOGNE (Germany)

Westdeutscher Rundfunk. 1,319 kc/s (227 m.); 1.7 kW.  
 See Langenberg.

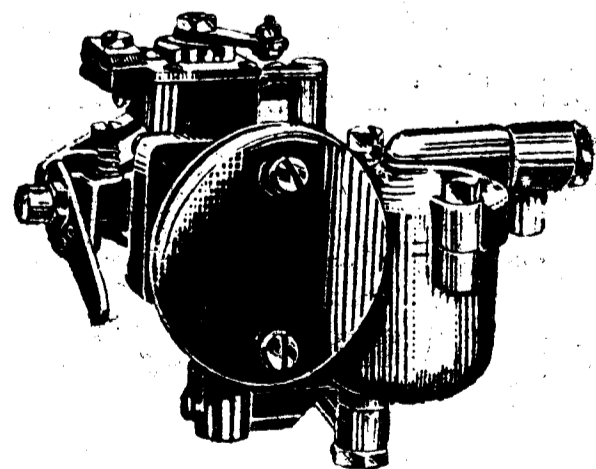
### COPENHAGEN (Denmark)

1,067 kc/s (281 m.); 0.75 kW. Relay by Kalundborg, 260 kc/s (1,153 m.).  
 Transmits at intervals from 7.30 a.m. (Gymnastics).  
 10.30 a.m.—Weather and News.  
 11.0 a.m.—Town Hall Chimes.  
 11.2 a.m.—Instrumental Concert.  
 12 noon.—Talk in English: British Statesmen of Yesterday and Today—The Duke of Wellington.  
 12.20 p.m.—Talk in German: Christmas.  
 12.40 p.m.—Reading in French (F. Coppée).  
 1.0 p.m.—Divine Service from the Garrison Church.  
 2.30 p.m.—Programme for Children.  
 3.0-5.0 p.m.—Concert for the benefit of the Children's Bureau, relayed from the Holberg Hall.  
 3.0 p.m.—Concert by Jacob Gade's Orchestra.  
 3.40 p.m.—Gramophone Records from the Axelborg Studio.  
 4.10 p.m.—Concert from the Holberg Hall.  
 5.20 p.m. (from the Esbjerg Studio).—Talk.  
 5.50 p.m.—Weather and News.  
 6.15 p.m.—Time; Sports Notes.  
 6.30 p.m.—Talk: Radio Technical Experts in Scandinavia.  
 7.0 p.m.—Town Hall Chimes.  
 7.2 p.m.—Weber Concert by the Radio Orchestra, conducted by Launy Gröndahl. Overture, "Euryanthe." Rondo from the Concerto for Bassoon and Orchestra in F Major. Overture, "Der Freischütz." Romance and Polonaise from the Concerto for Clarinet and Orchestra in C Major. Overture, "Oberon."  
 7.45 p.m.—Danish Christmas Programme.  
 8.30 p.m.—"A Child is born"—Radio Play (Soya).  
 8.50 p.m.—News Bulletin.



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**Programmes for Sunday—(Cont.)**

7.30 p.m.—Moonshine and Honey-suckle.  
 8.0 p.m.—Wayne King's Orchestra.  
 8.30 p.m.—National Sunday Forum.  
 9.0 p.m.—Florsheim Frolic.  
 9.30 p.m.—Wonder Programme.  
 10.0 p.m.—International Gypsies.  
 10.30 p.m.—General Electric Twilight Hour.  
 11.0 p.m.—Catholic Hour.  
 12 midnight.—Through the Opera Glass.  
 12.15 a.m. (Monday).—Jolly Time Revue.  
 12.30 a.m.—Iodent Club of the Air.  
 1.0 a.m.—Chase and Sanborn Programme.  
 2.0 a.m.—Talk: Our Government.  
 2.15 a.m.—American Album of Familiar Music.  
 2.45 a.m.—Buick Musical Comedy Programme.  
 3.15 a.m.—National Oratorio Society.  
 3.45 a.m.—Sunday at Seth Parker's.  
 4.15 a.m.—Ralph Kirbery (Baritone).  
 4.30 a.m.—Jesse Crawford (Organist).  
 5.0 a.m.—Orchestral Music.  
 6.0 a.m. (approx.).—Close Down.

**SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)**  
 653 kc/s (459 m.); 75 kW.  
 Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (246 m.).  
 9.30 a.m. (from Basle).—Protestant Address.  
 10.10 a.m. (from Basle).—Gramophone Records.  
 10.30 a.m.—See Leipzig.  
 11.28 a.m.—Time and Weather.  
 11.30 a.m.—News Bulletin.  
 11.40 a.m.—Orchestral Concert.  
 12.35—2.30 p.m.—No Transmission.  
 2.30 p.m. (from Basle).—Popular Concert.  
 3.15 p.m. (from Basle).—Reading in Dialect.  
 3.45 p.m.—Gramophone Dance Records.  
 4.30—5.30 p.m.—No Transmission.  
 5.30 p.m. (from Basle).—Chess Lesson.  
 6.0 p.m.—Gramophone Dance Records.  
 6.25 p.m.—Sports Results.  
 6.28 p.m.—Time and Weather.  
 6.30 p.m. (from Basle).—Dialogue: Plastic Art.

7.0 p.m. (from Berne).—Talk on Solothurn and the Swiss Federation.  
 7.20 p.m. (approx.).—Popular Concert.  
 8.0 p.m.—Schubert Song Recital by Ernst Schläfli (Baritone).  
 8.25 p.m.—Folk Music from the Tessin.  
 9.0 p.m.—Weather, News and Close Down.

**STOCKHOLM (Sweden)**  
 Radiotjänst (SASA). 689 kc/s (436 m.); 75 kW. Relayed by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.); and Sundsvall, 554 kc/s (542 m.).  
 10.0 a.m.—Divine Service Relay.  
 11.45 a.m.—Weather Report.  
 1.30 p.m.—Choral Concert relayed from Göteborg.  
 2.15 p.m.—Variety Programme relayed from Malmö, 1,301 kc/s (231 m.).  
 3.0 p.m.—Programme for Children, relayed from Sundsvall.  
 3.30 p.m.—Gramophone Records.  
 4.30 p.m.—Talk: Children in Swedish Poetry, relayed from Uppsala, 662 kc/s (453.2 m.).  
 4.55 p.m.—Chimes.  
 5.0 p.m.—Evensong.  
 6.15 p.m.—Weather and News.  
 6.30 p.m.—Talk on Franz Berwald.  
 7.0 p.m.—Symphony Concert from the Works of Franz Berwald. Soloists: Greta Söderman (Vocalist) and Astrid Berwald (Pianoforte). Symphonie sérieuse. Songs from "Estrella di Soria." Concerto in D Minor for Pianoforte and Orchestra. Overture, "The Queen of Golconda."  
 8.15 p.m.—"Columbus"—a Play (Hentzel).  
 8.45 p.m.—Weather and News.  
 9.0 p.m.—Concert of Light Music.  
 10.0 p.m. (approx.).—Close Down.

**STRASBOURG (France)**  
 Radio-Strasbourg (PTT). 869 kc/s (345 m.); 15 kW.  
 Transmits at intervals from 10.45 a.m.  
 6.0 p.m.—Instrumental Concert.  
 6.45 p.m.—Sports Notes.

6.50 p.m.—Sports Talk in French.  
 7.0 p.m.—Instrumental Concert.  
 7.30 p.m.—Time Signal.  
 7.32 p.m.—News in French and German.  
 7.45 p.m.—Gramophone Records.  
 8.30 p.m.—Two Plays: (a) "The Pretext"—in Two Acts (Riche), (b) "The Pascha" in Two Acts (Benjamin).  
 10.30 p.m.—Dance Music from the Savoy.  
 12 midnight (approx.).—Close Down.

**STUTTGART (MÜHLACKER) (Germany)**  
 Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 75 kW. Relayed by Freiburg, 527 kc/s (570 m.).  
 Transmits at intervals from 6.0 a.m.  
 10.30 a.m.—See Leipzig.  
 11.5 a.m.—Promenade Concert from the Schlossplatz.  
 12 noon.—Topical Talk.  
 12.15 p.m. (from Karlsruhe).—Choral Concert.  
 1.0 p.m.—See Frankfurt.  
 2.0 p.m.—Talk on Forestry.  
 2.30 p.m.—Readings (G. von der Vring).  
 3.0 p.m.—Chamber Music from a Private House in Stuttgart.  
 4.30 p.m.—See Langenberg.  
 6.0 p.m.—A German Choral Mass in Seven Movements for Soprano, Contralto, Tenor and Bass a cappella, with Prelude and Entrance, to Text by Silesius (Jos. Haas), by the Ulmer Madrigal Choir.  
 6.30 p.m.—Sports Notes.  
 6.45—11.0 p.m.—See Frankfurt. In the interval at 9.45 p.m.—News.  
 11.0 p.m. (approx.).—Close Down.

**TOULOUSE (France)**  
 Radiophonie du Midi. 779 kc/s (385 m.); 8 kW.  
 12.30 p.m.—Catholic Service.  
 1.0 p.m.—Military Music.  
 1.15 p.m.—Sound Film Music.  
 1.30 p.m.—Agricultural Report.  
 1.45 p.m.—Protestant Service.  
 5.0 p.m.—Transmission of Pictures.  
 5.15 p.m.—Three Selections from the Quintet in A Major (Schubert).  
 5.30 p.m.—Dance Music.  
 5.45 p.m.—Orchestral Selections.  
 6.0 p.m.—Operetta Songs.  
 6.15 p.m.—Dance Music.  
 6.30 p.m.—News Bulletin.  
 6.45 p.m.—Cello Recital.  
 7.0 p.m.—Concert.

7.30 p.m. (in the interval).—News Bulletin.  
 10.0 p.m.—Orchestral Selections.  
 10.30 p.m.—News Bulletin.  
 10.40 p.m.—Concert arranged by the Vocalion Gramophone Company of Hayes.  
 11.15 p.m.—North African News.  
 11.30 p.m.—Opéra-Comique Songs.  
 11.45 p.m.—Orchestral Selections.  
 12 midnight.—Weather, Announcements and Close Down.

**TRIESTE (Italy)**  
 Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 15 kW.  
 8.55 a.m.—Chimes and Missa Cantata from the S. Giusto Cathedral.  
 11.30 a.m.—Giornale Radio and Gramophone Records.  
 11.55 a.m.—German Lesson on Gramophone Records.  
 12 noon.—Time and Announcements.  
 12.2—12.45 p.m.—Light Music.  
 3.30 p.m.—Dance Music. Sports Notes in the interval.  
 7.15 p.m.—News Bulletin.  
 7.30 p.m.—Gramophone Records.  
 8.0 p.m.—Time and Announcements.  
 8.5 p.m. (approx.).—Variety Concert. Theatre Notes in the interval.  
 9.25 p.m.—Light Music or Gramophone Records.  
 9.55 p.m. (approx.).—News.

**VIENNA (Austria)**  
 Radio-Wien. 581 kc/s (517 m.); 20 kW. Relayed by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,058 kc/s (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.) and Salzburg, 1,373 kc/s (218 m.).  
 9.0 a.m.—Organ Recital.  
 9.30 a.m.—Talk: Love in German Lyrics.  
 10.0 a.m.—Christmas Festivities of the Vienna Branch of the Society for the Protection of Animals, relayed from the Volksgarten.  
 10.15 a.m.—Orchestral Concert, conducted by Dr. L. Kaiser. Soloists, Serge Bortkiewicz (Pianist) and Hans Skriwanek (Tenor).  
 12 noon.—Zither Concert, by the Central Branch of the Workers' Musical Associations of Austria.  
 2.0 p.m.—Time and Announcements.  
 2.5 p.m.—Readings: Children and Childhood.  
 2.30 p.m.—Orchestral Concert.

4.10 p.m.—Higher Grade English.  
 4.30 p.m.—The Schwarz Trio.  
 5.0 p.m.—"Mount Altvater"—the Land and People.  
 5.30 p.m.—"Don't stand still, go forward!"—a Well-Known Story.  
 6.0 p.m.—Time and News.  
 6.10 p.m.—Lotte Lehmann Song Recital. Erich Meller at the Pianoforte.  
 7.0 p.m.—Folk Singer Anecdotes (Josef Koller).  
 7.30 p.m.—Viennese Folk Singers (Viktor Leon).  
 9.0 p.m.—News Bulletin.  
 9.15 p.m.—Dance Music, with Vocal Refrains.

**WARSAW (Poland)**  
 Polskie Radio, 212.5 kc/s (1,411 m.); 158 kW.  
 9.15 a.m.—Divine Service relayed from Lwów.  
 10.58 a.m.—Time Signal and Bugle Call from the Tower of St. Mary's Church, Cracow.  
 11.5 a.m.—Programme Announcements.  
 11.10 a.m.—Weather Report.  
 11.15 a.m.—Concert by the Warsaw Philharmonic Orchestra. Soloist: Ela Kafarska (Pianoforte).  
 1.0 p.m.—Dialogue for Country Housewives.  
 1.25 p.m.—Gramophone Records.  
 1.40 p.m.—Talk.  
 2.0 p.m.—Concert of Polish Music by Mme. R. Benzef (Pianoforte) and H. Merkel (Bass).  
 2.55 p.m.—Programme for Children.  
 3.20 p.m.—Gramophone Records.  
 3.40 p.m.—Talk: Iron and Steel.  
 3.55 p.m.—Gramophone Records.  
 4.15 p.m.—Talk from Lwów.  
 4.30 p.m.—Useful Hints.  
 4.45 p.m.—Orchestral Concert. Soloist: L. Rudkiewicz ('Cello).  
 6.0 p.m.—Miscellaneous Items.  
 6.25 p.m.—Gramophone Records.  
 6.40 p.m.—Programme Announcements.  
 6.45 p.m.—Literary Programme, relayed from Wilno, 1,229 kc/s (244.1 m.).  
 7.30 p.m.—Orchestral Concert. Soloist: Mme. Zmigrod-Fedyczkowska (Soprano).  
 8.55 p.m.—Reading.  
 9.10 p.m.—Harpsichord Recital by Mme. M. Trombini-Kazuro.  
 9.40 p.m.—News Bulletin.  
 10.0 p.m.—Dance Music.  
 11.0 p.m. (approx.).—Close Down.

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Programmes for Tuesday—(Cont.)

5.40 p.m.—French Conversation.
6.0 p.m.—Time and News.
6.15 p.m.—The Mystery of Christmas—An Introduction to the Three Christmas Masses, by Herr von Lassaulx and the Choir of the Catholic Church Music Section of the Cologne Academy of Music.

LEIPZIG (Germany)
1,157 kc/s (259 m.); 2.3 kW. Relayed by Dresden, 941 kc/s (319 m.).
Transmits at intervals from 5.30 a.m.

4.30 p.m.—Weather and Time.
4.50 p.m.—Economic Notes.
5.5 p.m.—Announcements.
5.15 p.m.—Talk: Remember the Unemployed!

LJUBLJANA (Yugoslavia)
522 kc/s (574.7 m.); 2.8 kW. Transmits at intervals from 10.30 a.m.

LWÓW (Poland)
788 kc/s (381 m.); 21 kW. Transmits at intervals from 10.45 a.m.

MADRID (Spain)
Union Radio (EAJ7). 707 kc/s (424.3 m.); 2 kW. Transmits at intervals from 8.0 a.m.

MILAN (Italy)
Ente Italiano Audizioni Radiofoniche. 995 kc/s (331.5 m.); 8.5 kW. Relayed by Turin, 1,094 kc/s (274.2 m.) and Genoa, 959 kc/s (312.8 m.).

MUNICH (Germany)
563 kc/s (533 m.); 1.7 kW. Relayed by Augsburg and Kaiserslautern, 536 kc/s (560 m.); and Nürnberg, 1,256 kc/s (239 m.).

7.0 p.m.—"Frau Holle"—a Fairy Play (Joseph Steck). Music by Karl List.
8.0 p.m.—Orchestral Concert.
9.0 p.m.—A Dialogue on Welfare Work.

OSLO (Norway)
Kringkastingselskapet, 277 kc/s (1,083 m.); 75 kW. Relayed by Fredrikstad, 816 kc/s (367.6 m.); Hamar, 536 kc/s (560 m.); Notodden, 671 kc/s (447.1 m.); Porsgrund, 662 kc/s (453.2 m.); and Rjukan, 671 kc/s (447.1 m.).

PARIS (France)
Eiffel Tower (FLE). 207.5 kc/s (1,445.7 m.); 15 kW. Time Signals (on 2,650 m.) at 9.26 a.m. and 10.26 p.m. (preliminary and 6-dot signals).

PARIS (France)
Poste Parisien. 914 kc/s (328.2 m.); 1.2 kW.
8.15 p.m.—Gramophone Records and News.
8.45 p.m.—Sports Talk, Gramophone Records and News.

PARIS (France)
Radio-Paris (CFR). 174 kc/s (1,725 m.); 80 kW. Transmits at intervals from 6.45 a.m. (Physical Culture).

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Radio-Paris (CFR). 174 kc/s (1,725 m.); 80 kW. Transmits at intervals from 6.45 a.m. (Physical Culture).

RADIO-SUISSE ROMANDE (SOTTENS) (Switzerland)
743 kc/s (403 m.); 25 kW.; Lausanne, 442 kc/s (680 m.); and Geneva, 395 kc/s (760 m.).

7.0 p.m. (from Neuchâtel).—Talk: Fighting Noise in Towns.
7.25 p.m. (from Neuchâtel).—Organ and Cello Recital.
8.0 p.m. (from Geneva).—Christmas Carols.

RIGA (Latvia)
572 kc/s (525 m.); 15 kW. Transmits at intervals from 10.0 a.m.

ROME (Italy)
Ente Italiano Audizioni Radiofoniche. (IRO). 680 kc/s (441 m.); 75 kW. Relayed by Naples, 941 kc/s (319 m.); and 2RO, 3,750 kc/s (80 m.).

ROME (Italy)
Ente Italiano Audizioni Radiofoniche. (IRO). 680 kc/s (441 m.); 75 kW. Relayed by Naples, 941 kc/s (319 m.); and 2RO, 3,750 kc/s (80 m.).

SCHENECTADY (U.S.A.)
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STUTTGART (MÜHLACKER) (Germany)
Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 75 kW. Relayed by Freiburg, 527 kc/s (570 m.).

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Süddeutscher Rundfunk. 832 kc/s (360.5 m.); 75 kW. Relayed by Freiburg, 527 kc/s (570 m.).

SCHWEIZERISCHER LANDESENDER (BEROMÜNSTER) (Switzerland)
653 kc/s (459 m.); 75 kW.; Basle, 1,229 kc/s (244.1 m.); and Berne, 1,220 kc/s (244 m.).

TOULOUSE (France)
Radiophonie du Midi. 779 kc/s (385 m.); 8 kW. Transmits at intervals from 12.45 p.m.

4.35—5.30 p.m.—Interval.
5.30 p.m.—Gramophone Records.
6.0 p.m. (from Basle).—Talk: Switzerland, the Newspaper Country of the World.

STOCKHOLM (Sweden)
Radiotjänst (SASA). 689 kc/s (436 m.); 75 kW. Relayed by Boden, 244 kc/s (1,229.5 m.); Göteborg, 932 kc/s (322 m.); Hörby, 1,166 kc/s (257 m.); Motala, 222.5 kc/s (1,348 m.); Östersund, 389 kc/s (770 m.) and Sundsvall, 554 kc/s (542 m.).

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6.0 p.m.—Songs from (a) "Scheherazade" (Ravel), (b) "Boris Godounoff" (Moussorgsky), (c) "The Tales of Hoffmann" (Offenbach).

TRIESTE (Italy)
Ente Italiano Audizioni Radiofoniche. 1,211 kc/s (247.7 m.); 15 kW. Transmits at intervals from 11.30 a.m.

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VIENNA (Austria)
Radio-Wien. 581 kc/s (517 m.); 20 kW. Relayed by Graz, 852 kc/s (352.1 m.); Innsbruck, 1,958 kc/s (283 m.); Klagenfurt, 662 kc/s (453.2 m.); Linz, 1,220 kc/s (246 m.); and Salzburg, 1,373 kc/s (218 m.).

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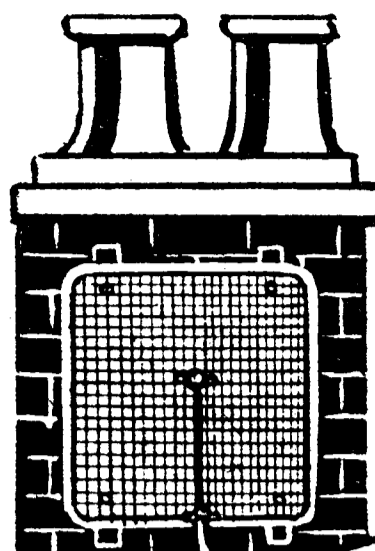






# COMPELS

Your Set to Give  
**BETTER RESULTS!**



The "GOLTONE" (Regd.)  
**NEGROLAC**  
**PLATE AERIAL**

IMPROVED 1932 MODEL.  
BRINGS IN STATIONS HITHERTO  
UNOBTAINABLE.  
PROVIDES INCREASED VOLUME,  
PURITY AND SELECTIVITY.  
INTERFERENCE REDUCED TO A  
MINIMUM.  
NO POLES OR MASTS.  
CANNOT BE BLOWN DOWN BY  
STRONGEST GALE.

THE "GOLTONE" (Regd.)  
**NEGROLAC**  
**PLATE AERIAL**

is Permanent and can be easily fitted  
without any technical knowledge.  
Obtainable from all First-Class Radio  
Stores. Refuse substitutes.  
Complete "down-lead".  
Ready for use. Price ... **21/-**  
No other Aerial Wire required.  
Write for Catalogue giving Full Particulars,  
with extracts from Technical Press Reports,  
and enthusiastic testimonials.



## "GOLTONE" Daily Dispatch SELECTOR UNIT

Enables you to cut out interference, however powerful, and bring in the selected stations loudly and clearly. There is no need for you to lose your favourite distant stations with the opening of the high-power Regional Transmitters. Not alone a Wave Trap, but a Selector Unit combining a complete extra tuning stage. Stations that were a mere whisper will now come in at good strength. Connected in a few seconds to any set from a crystal to a multi-valve. Pamphlet with full particulars on request. Other Wave Traps from 2/6. From all first-class Radio Stores or direct from manufacturers. Refuse substitutes. See the Trade Mark "GOLTONE" on every genuine coil.

R 43/66  
**6/6**



# "Negrolac" (REGD.) INDOOR AERIAL

## WHAT USERS SAY!

Mr. F. Fielding, "RADIDEA," Manchester  
*Evening Chronicle.*  
REPORT OF TEST.  
"I have been testing one of the 'Negrolac' short indoor aerials for the short waves and find the Americans romping in on 12 feet of this aerial and an earth."  
Mr. H. G., Scarsdale Rd., MANCHESTER,  
writes:—  
"The 'Negrolac' was stretched across the Dining Room, and fifty-five Stations were logged, all at full loud-speaker strength, i.e., equal in strength to ordinary gramophone volume.  
"All the stations logged were free from interference, and could be thoroughly enjoyed from a musical point of view."

The "NEGROLAC" Indoor Aerial has proved as comparatively efficient as the outdoor type. A multi-stranded enamelled aerial, covered with a bright, flexible, glossy insulated fabric. **IT IS THE MOST EFFICIENT INDOOR AERIAL EVER OFFERED.** Pick-up 30 per cent. superior to ordinary stranded aerials.

- R33/12 15 ft. lengths, complete 3/6
- R33/180 18 ft. " " 4/-
- R33/240 24 ft. " " 5/-

Each Aerial complete with Reel Insulators and insulated connection for down-lead. Your Radio Dealer can supply. Pamphlet with full particulars on request.

## "NEW RADIOS FOR OLD" BE UP-TO-DATE

WE TAKE YOUR OLD  
SET IN PART EXCHANGE  
FOR ANY 1932 MODEL

### BEST ALLOWANCE GIVEN

Here is an example:— OLD COSSOR SET AND ELIMINATOR (Original cost approx. 12 guineas). EXCHANGED for 1932 Ekco R.S.3 model (list price 24 guineas). ALLOWANCE GIVEN £9/9/0. BALANCE paid £15/15/0. Difference payable Cash or Instalments.

Send for Free Bargain Lists.

Send full particulars of present set and new set you require, enclosing 1d. stamp for reply.

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The arrangement of this well-known booklet has been changed completely to make the entry of dial-readings easier, and to leave room for the writing-in of any other notes necessary. Details of new stations are given: and innumerable revisions made. Here, then, is the perfect log-book! Wave-lengths, frequencies, power, call-signs, interval signals of every European station worth receiving, and some American stations: with a small map. Buy it now, and have it marked up and ready for your winter listening:

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Station Overlap is often due to the use of inefficient and out-of-date Screened Grid Valves

**T**HE separation of programmes is growing more difficult. Stations are daily increasing their power — Prague now radiates 200 kw., Warsaw 158 kw., Muhlacker 75 k.w.—all adding to the problem of preventing "station overlap."

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Because of their special design, their record low inter-electrode capacity (of the order of .001 m.m.f.) and unique Mica Bridge Construction Cossor S.G. Valves are exceptionally efficient. Their use ensures a marked improvement in the performance and selectivity of any Screened Grid Receiver.



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