This Is a Radio Christmas
Your Choice in a Willard

There's a Willard that will fit your need—whether for "A" or "B" circuit. Ask your dealer, or the nearest Willard Service Station.

The Willard Radio "B" Battery is a 24 volt rechargeable battery. Glass jars—Threaded Rubber Insulation—screwed-on covers.

The Willard 6-volt All Rubber Radio "A" Battery has one-piece rubber case—Threaded Rubber Insulation—special Radio plates.

The new Willard lower priced radio "A" battery (Type FW). Willard quality plates—selected wood separators—tested rubber jars.

Westinghouse Types PX-2 and PX-3
Portable Radio Instruments

These portable instruments are particularly useful for temporary service, such as testing. They are also used where it is not convenient or desirable to mount instruments permanently on panels.

They have the same movements as our Types BX and CX panel-mounting instruments, and are enclosed in dust, moisture and acid-proof cases.

*Folder 4471-A tells all about them*

WESTINGHOUSE ELECTRIC & MANUFACTURING CO.
Newark Works, Newark, N. J.
Member of Radio Section
Associated Manufacturers of Electrical Supplies.

Type PX-2 Voltmeter

Type PX-3 Ammeter
Christmas Greetings From Radio Broadcasting News

We wish you all the very finest and best enjoyment of this Christmas season.

Into many houses new radio sets will be operating for the first time and thousands of new listeners will hear the beautiful Christmas story literally coming from the air, so like the first Christmas morning when the heavenly host proclaimed that wonderful message of Peace and Good Will to All Men.

Every one of these new radio enthusiasts will be anxious to get the fullest measure of enjoyment from his new receiving set, and we suggest that the readers of Radio Broadcasting News tell these latest additions to the great Radio family of the service they may receive from this magazine, in locating stations and in keeping informed regarding the programs of the more important stations.

Educational Talks On Radio Broadcasting

In order that the great listening public shall have the most complete knowledge of the problems involved in radio broadcasting, and of the conditions surrounding this new public service, Station KDKA, the pioneer of broadcasting, has arranged for a series of talks by men who are intimately acquainted with the radio situation.

The first of these messages was given December 13, by H. P. Davis, a vice president of the Westinghouse Electric and Mfg. Co. and better known to radio enthusiasts as the "father of radio broadcasting". In his talk on this occasion Mr. Davis stressed the value of knowing the thoughts of the public with respect to the service being received through radio broadcasting, and urged his listeners to write to the broadcasting stations and give expression of their appreciations, their disappointments, and their suggestions for the improvement of the broadcasting service.

Only as the public speaks its mind can those in authority hope to meet the wishes of the people, and we desire to emphasize the thought that each person who is the fortunate possessor of a radio receiving set has an implied responsibility for helping to increase the value of this great service to mankind. Even those who only occasionally listen to radio concerts at the home of a friend, share a measure of this responsibility. It is a very small return for the pleasure they receive to send the broadcasting station a few lines in the nature of a report on how the entertainment measured up to their idea of what it should be.

But to those who accept this responsibility and write to the broadcasting stations, let us say that it is not always possible for the stations to make immediate acknowledgment of their letters, and the fact that a reply is not always received at once does not indicate that the letter is not of value, nor that it is not appreciated by those in charge of the station. Most of these men and women are working over-time trying to improve upon their past performances, and you may be sure they will be glad to get suggestions and criticisms.

We trust our readers will take the same attitude toward Radio Broadcasting News, whose primary purpose is to increase your enjoyment of radio broadcasting by furnishing a service supplementary to that given by the broadcasting stations. We shall be glad to receive suggestions from our readers at all times, and wherever possible we shall endeavor to incorporate them in future issues.
Sunday, December 24, 1922

2:15 P. M. Children's Bible Story by Rev. W. A. Logan, Pastor of the Alpha Lutheran Church, Turtle Creek, Pa.
2:30 P. M. Handel's "Messiah", the great Christmas Oratorio, by artists from the studio of Anne Griffith, Pittsburgh, Pa., with KDKA Little Symphony Orchestra under the direction of Victor Saudek; and Earl Mitchell at the organ. The overture, pastoral symphony, and the accompaniments will be played by the orchestra. The soloists include Clara Huhn and Marie Crawford Pease, sopranos; Rose Leader Chislett and Marie Lanz St. Clair, contraltos; Edgar A. Sprague and Roy Strayer, tenors; Adam McNaughton and George Wahl, basses. The oratorio will be broadcast direct from station KDKA at East Pittsburgh, Pa.
4:45 P. M. Vesper Services of the Shadyside Presbyterian Church, Amberson Ave., near Fifth Ave., Pittsburgh, Pa., Rev. Hugh Thompson Kerr, Pastor.
6:15 P. M. Musical concert arranged especially for the children, by the KDKA Little Symphony Orchestra, Victor Saudek, director.
Program: "March of the Toys," (Babies in Toyland) Herbert; (a) "Jingle Bells," (b) Waltz "Sleeping Beauty," and (c) "The Dream Song," (Hansel and Gretel), Humperdinck; "Yule Tide Song," and "Holy Night."
7:45 P. M. Services of the Calvary Episcopal Church, Shady Ave., Pittsburgh, Pa. Rev. E. J. Van Etten, Rector.
11:30 P. M. Midnight program including Christmas Carols. Chimes, Story of the Birth of the Child, cornet and instrumental selections from KDKA Little Symphony Orchestra, and a prayer. NOTE—This program will be broadcasted from the roof of a nine-story building (in the open) in order to get the best results from the chimes and carols.

WJZ—360 Meters, Radio Corporation, Westinghouse, Newark, N. J.
10:30 A. M. Musical program.
11:00 A. M. Morning services and sermon at Saint Thomas’ Church, 5th Ave. Rev. Ernest M. Stires, D.D., Rector and Rev. Floyd S. Leach, Ph. D. assistant, officiating. T. Terrius Noble, M.A., Organist will direct the choir of 60 voices. Nine microphones are used to broadcast this service.
3:00 P. M. Harry E. Fosdick, Pastor of the First Presbyterian Church, New York City will conduct the Radio Chapel Services. Sacred Music Program.
4:00 P. M. Handel’s “Messiah” by the choir of St. Thomas’ Episcopal Church, of which T. Terrius Noble is director and choir master.

Prominent Men Recently at Station WJZ

Left to Right: Top—Philip Berolzheimer, bandmaster of Police Band: Vladimir Rosing, Russian Tenor; Ralph Julian MacBrayne, basso; Arthur Maude, lecturer; Nathan Radoff, violinist; Leonard Snyder, tenor.

6:30 P. M. “Readings and Records from the Bubble Books that Sing”, by Ralph Mayhew, Harper & Bros.
7:00 P. M. “Is there a Santa Claus?” by Jacob Rills, Macmillan Co.
7:20 P. M. “Twas the Night Before Christmas”, by a small boy.
7:30 P. M. “Peace” by Hugh Black; Union Theological Seminary, New York City.
7:45 P. M. Christmas carols, appropriate music by the Estey Organ, from the Estey Auditorium, New York City.

8:45 P. M. The Annual Christmas Eve message from WJZ will be delivered by the Reverend George P. Dougherty, Rector of Christ Episcopal Church, Bloomfield and Glen Ridge, N. J.
9:05 P. M. Talk by a prominent author; Doubleday Page & Company.
9:45 P. M. Brick Presbyterian Church Quartet of New York City, through the courtesy of the Betty Tillotson Concert Bureau; Program of Christmas music.

KYW—400 Meters, Westinghouse, Chicago, Illinois

Central Standard Time
KYW Sunday Program—Continued

The Christmas Carol Quartette composed of: Miss Ruth Williams, soprano; Miss Adele Brandt, contralto; Donald L. MacWhor, tenor; Alfred T. Heath, baritone.

Order of Service

WGY—400 Meters, General Electric Company, Schenectady, N. Y.

10:30 A.M. Morning service of a Schenectady church.
4:30 P.M. Vesper service, sermon by Rev. Peter Heller, pastor of Bellevue Methodist church. Schenectady, N. Y.
7:45 P.M. Special Christmas Eve program in charge of Knickerbocker Press, of Albany, N. Y. Talks by Santa Claus and readings by Mary Christmas.

Artists from Studio of Madame Fitz Randolph Recently at KDKA

Left to Right—Upper—Mrs. J. J. Onnes, soprano; Marie L. Power; Marguerite M. Lang, soprano. Lower—Left—Emily Lanie, soprano. Right—Ida May Ewing, contralto.

Christmas Day Programs

Monday, December 25, 1922


May You All Have a Joyful Christmas
11:00 A.M. Services of the Calvary Episcopal Church, Shady Ave., Pittsburgh, Pa. Rev. E. J. Van Etten, Rector.
3:00 P.M. Concert by the Choir Boys of the Calvary Episcopal Church, under the direction of Harvey Gaul.
5:30 P.M. Play by play report of football game between University of West Virginia and Gowzaga University at San Diego California.
7:00 P.M. Concert by the Westinghouse Air Brake Band.
8:30 P.M. Concert by the American Legion Quartet, Post No. 347, New Kensington, Pa. Wilbert C. Black, first tenor; W. Hayde Stephens, second tenor; Geo. W. Brisbin, baritone, and Walter D. Patterson, bass; H. Russell Hoxworth, accompanist.

WJZ—360 Meters, Radio Corporation, Westinghouse, Newark, N. J.

Wishing You a Merry Christmas
11:00 A.M. Christmas Services and sermon at Saint Thomas' Church, Fifth Ave., New York. Rev. Ernest M. Stires, D.D. Rector and Rev. Floyd S. Leach, Ph. D. assistant, officiating. T. Tertius Noble, M. A. Organist will direct the choir of 60 voices.
1:15 P.M. Estey Organ Recital from the Estey Auditorium, New York City.

Lieut. Elmer Q. Oliphant, All-American Half-back, 1915-16-17, now Physical Director, Union College, Explained Football Rules from Station WGY
 programs

WJZ Program—Continued

pine Maid's Sunday,'" Ole Bull; "Vorspiel from Han-
sel and Gretel," Humperdinck; "Trotka from Seasons";
Tchaikowsky; "Largo from New World Symphony";
Dvorak; "Farandole," Bizet; "Hallelujah Chorus," 
Handel.
5:30 P. M. Concert by the St. John's Choristers 
from Paterson, N. J.
7:00 P. M. "The Christmas Joy of the Beautiful 
Pine," a copyrighted story by Thornton W. 
Burgess.
This beautiful story, which was written for a munici-
pal Christmas Tree celebration in Springfield, Mass., is 
one of the best ever written by Mr. Burgess. It epi-
tomizes the Christmas spirit. As a sidepiece for 
the family, or for amateurs to amplify in the city, 
town, or village Christmas tree, it cannot be excelled.
Thousands of children, as well as grownups, ought to 
hear it.
7:20 P. M. Stories from St. Nicholas Magazine.
8:30 P. M. Dance music by the Colonial Dance 
Orchestra of Ridgefield Park, N. J. Alternat-
ing with this Orchestra will be Milton J. Cross, tenor 
who will render an elaborate program. Mr. Cross is one of WJZ's an-
nouncers (AJN) and has a splendid voice.
9:55-10:00 P. M. Arlington Time Signals, weather 
forecast.
10:01 P. M. Continuation of program by Mr. Cross 
and dance music by the Colonial Dance 
Orchestra.

Pittsburgh, Pa.
No Program will be broadcast from Station KQV, 
Pittsburgh. The week's programs to be resumed on 
Tuesday noon, with full week's schedule. With 
regrets extended to KQV listeners, but wishing them a 
"Merry Christmas" and hoping that the "new set" 
will bring in all the big stations and their fine 
Christmas Day programs.

KYW—400 Meters, Westinghouse, Chicago, Illinois 
Central Standard Time 
Christmas Greetings To All 
8:30 P. M. Program Courtesy of Lyon & Healy 
Concert and Artists Department, to be an-
nounced by Radiophone.

WGY—400 Meters, General Electric Company, 
Schenectady, N. Y.
Wishing You Yuletide Cheer 
7:45 P. M. Musical program as follows:
Instrumental selection—"'Around the Christmas Tree,'" 
Tobani, WGY Orchestra; Reading, Something of interest to 
all (Copyrighted story by the Company); Boy Soprano solo, "Come Unto Me," from 
"The Messiah," Handel, Master Walter Sickles; In-
stumental selection; Christmas Carol, (a) "Holy 
Night," German Polk Song, (b) "O Little Town of 
Bethlehem," Traditional Melody, WGY Orchestra; 
Tenor solo, "The Birthday of a King," Neidinger, 
Ramon Berini; Address, "Christmas," Rev. Clayton J. 
Potter; Baritone solo with orchestra, Christmas Carol, 
"God Rest You, Merry Gentlemen," Traditional Melody, 
Walter Treveres, with WGY Orchestra; Soprano solo, 
"Little Boy, Thou Little Tiny Child," from "Coventry 
Mysteries," Traditional Melody, Master Walter Sickles;
Instrumental selection, "Pastoral Symphony," from 
"The Messiah," for organ, piano, violin and cello, Han-
del, WGY Orchestra; Tenor solo, "Cantique de Noel," 
Adams, Ramon Berini, with violin obligato by Edward 
Rice; Violin solo, "A Christmas Air," Bach, Edward 
Rice, violinist, O. G. Yetta, accompanist; Boy Soprano 
solo, "Christmas Carol, (a) "Good Christian Man, Re-
joice," Old German (b) "Sleep, My Saviour, Sleep," 
Bohemian Carol, Master Walter Sickles; Baritone solo, 
with orchestra, Christmas Carols, (a) "The First Noel," 
Traditional Melody, Walter Treveres, with WGY Orchestra; 
Instrumental selection, Group of Christmas Melodies 
including, "Hark, the Herald Angels Sing," "Draw 
Nigh, Emmanuel," and "We Three Kings of the Orient 
Are," WGY Orchestra.

OUR BOOTH AT THE 
1922 ELECTRICAL EXPOSITION

Radio Dealers who attended the 1922 Electrical 
Exposition at Motor Square Gardens, 
Pittsburgh, Pa., were greatly impressed by the 
Ludwig Hommel & Company booth. It was 
dealers' exhibit throughout, in accordance with 
the Hommel policy of advertising for the 
dealer. A radio jobber who plays square for 
his dealers. All the radio marketed by our 
company is sold through the dealer, for Ludwig 
Hommel & Company is a strictly wholesale 
house.
Send your next order to Ludwig Hommel & Co. 
and learn what real jobber's service to dealers is.

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330-334 FERNANDO ST., PITTSBURGH, PENNA.

Pittsburgh's Pioneer Radio Distributors 
1913 1922

Radiola Sr.—insures reception of the Big Broad-
casting Stations Everywhere. 
Including all Equipment required for Complete 
Installation, - - - Price, $76.50
Radiola Sr. Amplifier - - - Price, $75.00
Increases receiving range, makes possible Loud-
Speaking Device.
King Amplitone - - - Price, $12.00
Well adapted for use with Above Equipment as 
Loud Speaking Device.
"Make This a Radiola Christmas" 

DOUBLE-DAY-HILL ELECTRIC CO. 
719-721 LIBERTY AVE., PITTSBURGH, PA.
Tuesday, December 26, 1922

7:00 P. M. News. Letter from FARM AND HOME. "Three Wise Men of the East," by Rev. S. M. Jordan, President, Teheran College, Persia. Mr. Jordan is a Presbyterian missionary just returned from Persia. He was at one time a Lafayette College football star.
7:30 P. M. Bed Time Story for the Children.
8:00 P. M. A talk on Woman's Fashions, prepared by the Joseph Horne Company, Pittsburgh, Pa. The Last Group of Radio Articles No. 36. Program: "Winter Sports Clothes and Accessories", VOGUE; "How to Construct a Wardrobe", VANITY FAIR; "Furnishing with Directoire Pieces", HOUSE AND GARDEN.

"Renewing the Finish of Old Furniture" prepared by The Joseph Horne Company, Pittsburgh, Pa.

8:30 P. M. Concert by Ella S. Bassett and Marion Bassett piano; Ruth Swank, soprano; Matthew Ekey, violin; Mrs. W. H. Yost, reader; and the American Glee Club from the Royal Lyceum Bureau, Syracuse, N.Y. Anthony Dvorak, bass; Dow Mooney, baritone; Lance-lot Bufton, second tenor; Cranfill Fowler, first tenor.


WJZ—360 Meters, Radio Corporation, Westinghouse
Newark, N. J.
5:30 P. M. Closing prices on stocks, bonds, grains, coffee and sugar.
5:45 P. M. Resume of Sporting events, etc.
7:00 P. M. Musical Stories" by Mary Plowden Ker-nan, lecturer for the New York City Board of Education.
7:30 P. M. Concert by Arthur Gordon Hudson, baritone.

7:50 P. M. "The Meaning of Service", by W. J. Reeves, General Secretary of the Savings Banks Association of the State of New York.
8:00 P. M. Dance Music by the Club Royal Dance Orchestra of Jersey City, formerly known as the Eddie Lent Orchestra, Ed. Lent piano; Harold Shick, saxophone; Chas. Hara, violin; Edwin McDowell, cornet; and Chas. H. Fraleigh, drums.

8:30 P. M. "Broadcasting Broadway", by Bertha Brainard.
8:45 P. M. Continuation of program by Club Royal Dance Orchestra of Jersey City.
9:00 P. M. Concert by Robert Armour, tenor; Betty Tillotson Concert Bureau.
9:15 P. M. Concert by Arthur Wilde, an American cellist who has been a member of the New York Symphony Orchestra under Walter W. Damrosch for six years and soloist at the Fifth Avenue Brick Presbyterian Church, and is now touring on the concert stage, Dan Dickinson, accompanist.

9:30 P. M. Program by Robert Armour, tenor.
Tuesday
Programs

WJZ Program—Continued
9:55-10:00 P. M. Arlington Time Signals, weather forecast.
10:01 P. M. Program by Arthur Wilde and Robert Armour.

KYW—400 Meters, Westinghouse, Chicago, Illinois
Central Standard Time
8:30 P. M. Musical Program including Fontella Jewett—soprano. Program will be announced by Radiophone.

WGY—400 Meters, General Electric Company, Schenectady, N. Y.
11:55 A. M. U. S. Naval Observatory time signals.
12:30 P. M. Noon stock market quotations.
12:45 P. M. Weather report on 485 meters wavelength.
2:00 P. M. Music and subjects of interest to women.
6:00 P. M. Produce and stock market quotations; news bulletins.
7:45 P. M. Musical program and Radio Comedy—"Nothing But The Truth" by James Montgomery.

The Cast
Bob Bennett .... Edward H. Smith
His senior partner .... Cortland Hopkins
A curb broker ..... James S. B. Mullarkey
A Bishop ............. Frank Oliver
Bob's friend .......... Henry Miller
Bob's fiancée ........ Viola Karwowska
Her mother ........... Ida Myrek
Her girl friend ........ Ruth Edmonds
Two chorus girls .......... Ruth Schilling
Margaret V. Smith

Instrumental selection, "Coquette," Arensky, WGY Orchestra; "Nothing But the Truth," 1st. Episode—Wherein a wager is made and it looks as if Bob were going to make a whole lot of easy money; Instrumental selection, "Pulcinello," Alloter, WGY Orchestra; "Nothing But the Truth," 2nd Episode—In which it is proven that the truth is more than painful many times; Instrumental selection, "Premier Amour," Benoist, WGY Orchestra; "Nothing But the Truth," 3rd Episode—It is not always as easy to tell the truth as it would seem. Bob wishes he had never made the wager and anxiously awaits the expiration of the twenty four hours; Instrumental selection, "Serenade," Ern, WGY Orchestra.

WDAP—broadcasting station of the Midwest Radio Central Inc., Chicago, Ill. give a Sunday night concert from 8:30 to 10:30 P. M.

Daily, except Saturday and Sunday foreign exchange reports are broadcasted at 9:45 A. M., 11:45 A. M., 1:45 P. M., 3:15 P. M. At 3:17 P. M. the closing Chicago stocks. On Saturday, foreign exchange at 9:45, 10:45, 11:45 A. M. and 12:45 P. M. Closing Chicago stocks at 12:17 P. M.

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Know where your calls come from. Tack this big Burgess Map right above your set, and see at a glance. Every radio district and all time divisions marked in red; state divisions in black. Broadcasting Stations, Army, Navy and Commercial Stations, and a down-to-the-minute alphabetical list of call numbers.

This is a real map—28 by 36 inches on bond paper, made to fold conveniently for the pocket. 6000 name places. Latest U. S Government Radio data. Usually priced at 50 cents. We'll mail one to you on receipt of 10 cents to cover postage and packing—if you'll send us your radio dealer's name. We're doing this because we want every radio enthusiast to know about Burgess "B" Batteries. Don't forget to send your dealer's name. Just address:

Burgess Battery Company
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BURGESS "B" BATTERIES
"Ask Any Radio Engineer"

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www.americanradiohistory.com
Wednesday, December 27, 1922

6:15 P. M. Special Dinner Concert by KDCA Little Symphony Orchestra, Victor Saudek, Director.
7:15 P. M. News. Letter from FARM AND HOME.
7:30 P. M. Bed Time Story for the children.
7:45 P. M. Summary of the Iron and Steel Industries, prepared by The Iron Age.


8:00 P. M. Continuing the series of talks on Radio began last week. Mr. Frank Conrad, Radio Engineer of the Westinghouse Company, will talk on THE PROPER ANTENNA FOR TUNING.

"What is Hockey," an interesting talk on this, one of the chief sports of winter, by Ray D. Schooley, Secretary of the National Hockey Association.

8:30 P. M. Concert by James E. Bell, tenor; Brinley Jones, baritone; and KDCA Little Symphony Orchestra, under the direction of Victor Saudek. Mrs. James E. Bell, accompanist.


WJZ—360 Meters, Radio Corporation, Westinghouse Newark, N. J.
2:00 P. M. Program arranged by Ellen Marie Jensen, elocutionist, New York City.
5:30 P. M. Closing prices on stocks, bonds, grains, coffee and sugar.
5:45 P. M. Resumé of sporting events, etc.
6:00 P. M. Musical program.
7:00 P. M. "Animal Stories" by Florence Smith Vincent, author of the "Peter's Adventures" Book, and Editor of the Woman's Page of the New York Evening Telegram.
9:00 P. M. "The Business Outlook", by Dr. Warren Hickernell, Alexander Hamilton Institute of New York.
9:15 P. M. Concert by the Amphon Orchestra of Newark composed of Johnson Jones, pianist; Thomas R. Jones, banjoist, Paul Schnell, saxophonist; Albert Darby, cornetist; Frank Darby, trombone; Raymond Cadby, banjo mandolin. Program of popular music; Thomas Jones and Raymond Cadby will render a banjo duet.
9:40 P. M. "Weekly Book Reviews", by Grace Isabel Colbran.

Wednesday Programs

9:55-10:00 P. M. Arlington Time Signals, weather forecast.
10:01 P. M. Continuation of program by the Amphon Orchestra of Newark.

10:00 P. M. Program will be given by Miss Margaret Buckey, soprano and Ken Hudson ukulele and steel guitarist, both of Pittsburgh, who will present a holiday program of the most popular sort. Miss Buckey excels in the songs being heard on Broadway and will sing several new ones and Mr. Hudson will play guitar accompaniment to some of them. The Hawaiian songs, native to his own country to also be a part of the program. Interspersed a number of new dance novelties will be broadcast. A program with a flavor of the holiday season. Ralph Skiles, guitarist will furnish some of the ensemble for both instrumental and vocal numbers.


KYW—400 Meters, Westinghouse, Chicago, Illinois

Central Standard Time

8:30 P. M. Music program by Winifred S. McGaw, contralto; Madeline McGaw, accompanist; Eva Ray, soprano; Alice L. Sturges, accompanist; I. R. Sturges, baritone; Clarence Gibbried, violinist director; The Orientale Syncopaters: Phil Beck, saxophone; Henry Benz, piano; Ernie Weiss, drums; Earl Freeze, cornet.

Program: (a) "Eleanor," (b) "Homesick," Orientale Syncopaters; (a) "Thank God For a Garden," Del Riego, (b) "Break O' Day," Sandersen, Eva Ray; (a) "I Wish I Knew," (b) "The Trail To Long Ago," Orientale Syncopaters; (a) "The Pilot," Protheroe, (b) "Three For Jack," Squire, I. R. Sturges; (a) "Love Days," (b) "Teenie Boodle Dum," Orientale Syncopaters; (a) "Underneath the Trees," Newton, (b) "Hank, Hank My Soul!" Shelley, Eva Ray and Winfred S. McGaw; (a) "When The Leaves Come Tumbling Down," (b) "Early In The Morning," Orientale Syncopaters; (a) "Corisande," Sandersen, (b) "Pickin' I'm Granny Snuggle Song," Smith, I. R. Sturges; (a) "The Bitterness of Love," Dunn; (b) "In Praise of Ilay," Kreiser, Winifred S. McGaw; (a) "Where The Volga Flows," (b) "Soothing," Orientale Syncopaters.

WGY—400 Meters, General Electric Company, Schenectady, N. Y.
11:55 A. M. U. S. Naval Observatory time signals.
12:30 P. M. Noon stock market quotations.
12:45 P. M. Weather report on 485 meter wavelength.
2:00 P. M. Music and subjects of interest to women.
6:00 P. M. Produce and stock market quotations; news bulletins.

Mention Radio Broadcasting News when writing to Advertisers
Thursday Programs

Thursday, December 28, 1922

7:00 P. M. News. - U. S. Public Health Bulletin.
7:30 P. M. Bed Time Story for the Children.
8:00 P. M. Practical Hints for Modern Home-furnishing, prepared by The Joseph Horne Company, Pittsburgh, Pa.
Timely Topics of interest to the Farmer, prepared by THE NATIONAL STOCKMAN AND FARMER, Pittsburgh, Pa.
8:30 P. M. Concert by Adele Eggers Furniss, soprano; Fred Felgenbaum, violin; Grace Schaney, accompanist; Flora Steiner, pianist and accompanist; J. Alvin Little, baritone.

WJZ—360 Meters, Radio Corporation, Westinghouse, Newark, N. J.
5:30 P. M. Closing prices on stocks, bonds, grain, coffee and sugar.
5:45 P. M. Resumé of sporting events, etc.
6:00 P. M. Musical program.
7:00 P. M. "Jack Rabbit Stories" by David Cory, New York Evening Mail.
8:30 P. M. Concert by the Metro String Quartet of New York City.
9:15 P. M. "Bank Loans and Discounts" by R. Keisler, President of the New Jersey Bankers Association, Newark.
9:30 P. M. Ampico Series of Distinguished Artists' Concerts, furnished by courtesy of William Knabe and Company.
Internationally known pianists will participate in this series, together with equally famous violinists, and Metropolitan Opera House vocalists. Though it is as yet impossible to give the full list of those soloists who will definitely perform, attention can already be called to a partial one which includes such names as Leo Ornstein, Erno Dohnanyi, Arthur Schnabel, Misce- slaw Munz, Hans Barth, Henry Souvaine, Phillip Gordon, John Duke, Alexander Gunn and Milton Suskind. Daisy Jean, the Belgian cellist, is also definitely promised. Others of equal importance in the music world will be added to this list, contingent upon the dates of their arrival in America.
9:55-10:00 P. M. Arlington Time Signals, weather forecast.
10:01 P. M. Continuation of program by the Ampico artists.

KYW—400 Meters, Westinghouse, Chicago, Illinois
Central Standard Time
8:30 P. M. Program Courtesy of Lyon & Healy Concert and Artists Department, to be announced by radiophone.

WGY—400 Meters, General Electric Company, Schenectady, N. Y.
11:55 A. M. U. S. Naval Observatory time signals.
12:30 P. M. Noon stock market quotations.
12:45 P. M. Weather report on 485 meters wavelength.
2:00 P. M. Music and subjects of interest to women.
6:00 P. M. Produce and stock market quotations; news bulletins.
7:45 P. M. Musical program as follows:

Get an Elgin Condenser Now!

For BETTER RESULTS

New Low Prices

The Elgin Vernier Variable Condenser is one of the best condensers you ever worked with. Vernier plate controlled independently by small knob—permits most accurate adjustments. Gives wonderful results. If you have condenser trouble, try the Elgin. Also plain and variable condensers, rheostats and tube sockets.

Vernier Variable Condenser, 11 plate $4.00; 23 plate, $4.50; 43 plate, $5.00.
Variable Condenser, plain, 11 plate, $2.75; 23 plate, $3.25; 43 plate, $3.75.
Complete with screws for mounting. Add 65¢ for 3 in. diameter dial.
Tube Socket, $0.90. Rheostat $1.00.

Dealers write for Dealer Proposition

ELGIN TOOL WORKS
ELGIN, - - - ILLINOIS.
Friday, December 29, 1922

6:15 P. M. Special Dinner Concert by KDKA Little Symphony Orchestra Victor Saudak, Director. Program will be announced in the daily newspapers.
7:15 P. M. News. Letter from FARM AND HOME.
7:30 P. M. Bed Time Story for the Children.
8:00 P. M. "Watching the Old Year Out with the Poets", presented by Marjory S. Stewart.
Weekly Talk on Etiquette by Mrs. Chester B. Story. The subject this week is "Phrases Avoided in Good Society".
8:30 P. M. Handel's "Messiah" by the Mendelssohn Choir, will be broadcasted from Carnegie Music Hall, Pittsburgh, Pa.

WJZ—360 Meters, Radio Corporation, Westinghouse.

5:30 P. M. Closing prices on stocks, bonds, grain, coffee and sugar.
5:35 P. M. "A Story from The Youth's Companion", copyrighted stories; "At the End of the Winch Rope", an adventure outside of a castle in Normandy. Story by Joseph E. Olson.
5:45 P. M. Conditions of leading industries by R. D. Wychoff, Editor of the Magazine of Wall Street.
5:55 P. M. Resumé of Sporting Events, etc.
6:00 P. M. Musical program.
7:00 P. M. "Bedtime Stories" by Thornton Burgess.
7:15 P. M. "Pekinesse", by Frank F. Dole, noted authority.
7:30 P. M. Concert by Ethel Mae Nolds, Lyric Coloratura soprano of New York City formerly of Denver, Colo.

KEA—360 Meters, Westinghouse.

8:00 P. M. Concert by Tunde Brajjer, a young Hungarian pianist, who met with considerable success throughout Europe and was well received by New York music lovers.

Friday Programs

is a talented linguist, speaking five languages. Miss Brajjer will play "Twelfth Rhapsody," by Liszt and one or two small Chopin pieces.

8:15 P. M. Concert by Mary V. Potter, contralto, New York City.
8:20 P. M. Continuation of program by Tunde Brajjer, pianist.
8:30 P. M. Literary evening conducted by the Editorial staffs of the Outlook, Scientific American and Harper & Bros.
8:40 P. M. Joint Recital by Kathleen Pearson, soprano of Bloomfield, N. J. and Edouard Grobe, tenor of Harrison, N. J.
8:50 P. M. Continuation of program by "Literary Evening".
9:15 P. M. Continuation of program by Kathleen Pearson, soprano and Edouard Grobe, tenor.
9:55-10:00 P. M. Arlington time signals, weather forecast.
10:01 P. M. Continuation of program by Miss Pearson and Mr. Grobe.


As a new and progressive feature of Station KQV, programs for the remainder of the Radio season, a Program for Junior Radio Listeners, both Boys and Girls, will be broadcast each Friday afternoon at 4:30. Serial stories, some music, a good one-act play, occasionally, and each week an eight-minute talk to be given by a Radio Broadcasting Station Operator, on "How to Tune in; what not to do for accurate Radio Reception", will be of interest and much help to the Juniors. The first program will be broadcast this afternoon.

10:00 P. M. Program of Plantation Melodies and Negro Spirituals, presented in solo, duet and quartet. The artists will be: Mary Ablett Brennan, contralto, William Brennan, tenor, Margaret Brueyke, soprano and Alan B. Davis, baritone, under whose direction the program has been arranged. Mr. Davis is, without doubt, one of the best interpreters of the Negro Spiritual in the Pittsburgh field, having made special study of them with Oscar Sanger, of New York City, whose reputation in that field of native songs is without question. Neglected as they are, even by the Negro race, at the present time, the old plantation songs will ever be as nearly the original folk-song of the American nation as can be found. Their charm is universal and every music-lover hails a program of this nature with keen anticipation.

Program Numbers: Spirituals, to be sung by Mr. Davis in solo form; "Bye and Bye," by Burleigh; "Go Down Moses," and "My Way is Cloudy," by Bur- leigh; "Git on Board Chiller," and "De Ol' Ark am a Moverin'," by Guyon.

Solo numbers by Mrs. Brennan: "Hoodoo, doo-doo Man," traditional; "Greatest Miracle of All," and "Little Pickaninny Kid," by Amy Strickland: Duet;

Mention Radio Broadcasting News when writing to Advertisers
Friday Programs

KQV Program—Continued

KYW—400 Meters, Westinghouse, Chicago, Illinois
Central Standard Time
8:30 P.M. Concert by Elks Prize Band, Chicago Lodge No. 4. Benjamin E. Sincere, manager; Albert Cook, director; William J. Sinek, exalted ruler.
Program: Military March, "Grandioso," Miller; Overture; "If I Were King," Adam; Coronet Duet, "Short and Sweet," Short; Messrs. Cook and Strait; Russian Fantasia; "Rozicka," Roberts; Violine Dance Number One, Scharwenka; Piccolo Solo, "The Air," Hamm; "Prelude in G Minor," Rachmaninoff; Finale, "National Airs," Keys.

WGY—400 Meters, General Electric Company, Schenectady, N. Y.
11:55 A. M. U. S. Naval Observatory time signals.
12:30 P. M. Noon stock market quotations.
12:45 P. M. Weather report on 485 meters wavelength.
2:00 P. M. Music and subjects of interest to women.
6:00 P. M. Produce and stock market quotations; news bulletins.
6:30 P. M. Health talk.
7:45 P. M. Musical program:
10:30 P. M. Late Musical Program:
Late program at 10:30 P. M., as follows:

Saturday, December 30, 1922
3:00 P. M. Popular concert. Name of orchestra and program to be announced later.
4:30 P. M. Play by play report of football game between Kiskiminetas Springs Preparatory School and Palo Alto High School at Palo Alto, California.
5:30 P. M. Report, play by play, of the football game between the University of Pittsburgh and Leland Stanford University, at Palo Alto, California.
7:00 P. M. News. "Under the Evening Lamp"—copyrighted stories furnished by THE YOUTH'S COMPANION.
Program: "Modern Ways in Ancient Times,"—a comparison of the conveniences of life in ancient time with those in modern America by William H. Holmes, director of the National Gallery of Art; "Begging the Question"—how the tailor ordered two flannels; "A Clearing House for Neighborhood Needs"—suggestions concerning a profitable business for boys; "Something Nice for Mrs. Graham"—the story of a white elephant with iridescent feathers; "The Magic Cap"—a stranger's singular experience in Petrograd.
7:30 P. M. Bed Time Story for the Children.
8:00 P. M. Another Radio Talk—"Broadcasting Conditions", by L. W. Chubb, Radio Engineer of the Westinghouse Company.
8:30 P. M. Lyda Mae Brusch, pianist; Beatrice Glomb, violinist from Margaret Horne Studio; Marie Sybert, concert soprano; Arion Quartet.

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WJZ—360 Meters, Radio Corporation, Westinghouse
Newark, N. J.

5:30 P. M. Closing prices on stocks, bonds, grains, coffee and sugar.

5:45 P. M. Resumé of sporting events, etc.

6:00 P. M. Musical program.

7:00 P. M. "Uncle Wiggily Stories" by Howard W. Garas, author.

8:30 P. M. "Fashions," by an Editor of Harper's Bazar.

8:45 P. M. A Whistling recital by L. G. Tolles, Southington, Conn. who without the aid of any mechanical device whistles a soprano and alto duet,—whistling up the scale with one side of his mouth and down the scale with the other simultaneously.

9:00 P. M. Dance music by the Community Club Dance Orchestra, of New York City.


9:40 P. M. Continuation of program by Mr. Tolles.

9:45 P. M. Continuation of program by the Community Club Dance Orchestra.

9:50 P. M. "Current Topics" by the Institute for Public Service.

9:55-10:00 P. M. Arlington Time Signals, weather forecast.

10:01 P. M. Continuation of musical program.

KYW—460 Meters, Westinghouse, Chicago, Illinos
Central Standard Time

8:30 P. M. Music Program by Betty Randall, soprano; Hilda Butler Farr, pianist; Ward H. Pound, tenor; Alice Mead Pound, accompanist; Evelyn Freedman, violinist; Mrs. Donald D. Selles, accompanist.

Program: (a) "Dawn," Curran; (b) "Pale Moon," Logan, Betty Randall; (a) "Gypsy Serenade," Valdez; (b) "Mazurka," Zarycki, Evelyn Freedman; (a) "Celeste Aida," Verdi; (b) Serenade from "La Corsicana," Brownell, Ward H. Pound; "Kamennoi Ostrow" Rubenstein, Hilda Butler Farr; (a) "My Rose," Taylor; (b) "Skylark's Song," Birek, Betty Randall; (a) "Hindoo Chant," Rimsky-Korsakoff; (b) "Polish Dance," Severn, Evelyn Freedman; (a) "Smilin', Through," Penn, (b) Raccontidi Rodolfe from "Bohemian" Puccini, Ward H. Pound; (a) "Country Garden," Grainger, (b) "Romance," La Forge, Hilda Butler Farr.

WJZ—360 Meters, Radio Corporation, Westinghouse
Newark, N. J.

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9:00 P. M. Dance music by the Community Club Dance Orchestra, of New York City.

9:15 P. M. "Southern Fashions", by an editor of Good Housekeeping.

9:40 P. M. Continuation of program by Mr. Tolles.

9:45 P. M. Continuation of program by the Community Club Dance Orchestra.

9:50 P. M. "Current Topics" by the Institute for Public Service.

9:55-10:00 P. M. Arlington Time Signals, weather forecast.

10:01 P. M. Continuation of musical program.

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Sunday Programs

Sunday, December 31, 1922


10:45 A.M. Services of Emory Methodist Episcopal Church, North Highland Avenue at Rippey Street, Pittsburgh, Pa. Rev. W. Wofford T. Duncan, Minister.

2:45 P. M. Children’s Bible Story by Rev. W. A. Logan, Pastor of the Alpha Lutheran Church, Turtle Creek, Pa.

3:00 P. M. Organ recital by Fred Lotz, organist and choir director of Emory Episcopal Church, North Highland Ave., Pittsburgh, Pa.


4:45 P. M. Vesper Services of the Shadyside Presbyterian Church, Amberson Avenue near Fifth Avenue, Pittsburgh, Pa. Rev. Hugh Thompson, Kerr, Pastor.

7:30 P. M. Services of the First Presbyterian Church, Sixth Avenue, Pittsburgh, Pa. Rev. Maitland Alexander, D.D., pastor.

Midnight A special program, to be announced in the December 30 issue of RADIO BROADCASTING NEWS, will be arranged for the New Year.

WJZ—360 Meters, Radio Corporation, Westinghouse

Newark, N. J.

10:30 A.M. Musical program.

11:00 A.M. Morning services and sermon at Saint Thomas’ Church, Fifth Avenue, New York City. Rev. Ernest M. Stires, D.D., Rector and Reverend Floyd S. Leach, Ph. D. assistant, officiating. T. Tertius Noble, M. A. organist will direct the choir of 60 voices.

3:00 P. M. City Symphony Concert at the Century Theater, will be conveyed to WJZ by a special Western Union wire. The City Symphony Orchestra, composed of 32 players selected for their musical talent and symphonic experience, under the baton of Dirk Foch, is maintained by the Musical Society of the City of New York. Young soloists of real talent will be heard at each performance of a series of concerts. The arrangements for broadcasting these concerts were made with the assistance of Popular Radio.


6:30 P. M. Readings and Records from the “Bubble Books that Sing”, by Ralph Hayhew, Harper & Bros.


December 23, 1922

7:00 P. M. “Musical Stories” by Mary Plowden Kernan, lecturer for the New York City Board of Education.

8:00 P. M. Estey Organ Recital from the Estey Auditorium New York City. The Estey Organ Recital several weeks ago was the first broadcast of WJZ to be heard in the British Isles.


9:05 P. M. Talk by Shur Maude.

9:15 P. M. Recital by Marion Armstrong, a Scotch-Canadian soprano who had the distinction of being the first soloist to be heard at the Eastman Theater of the University of Rochester.

The program includes “The World is Waiting for the Sunrise,” which made a decided impression in Rochester. The radio audience also requests Miss Armstrong to sing “Joy Love Song,” Mary Turner Salter, which she sang so delightfully in her recital in the Aeolian Hall. Radio recital arranged by the Betty Tilston Concert Bureau.

9:30 P. M. Concert by Oscar Ziegler, pianist of New York.


9:50 P. M. Concert by Devora Nadworne, contralto, 1921 winner of the Gold Medal, of the National Federation of Musical Clubs.


11:00 P. M. Watch Night Services at Saint Thomas’ Church, Fifth Avenue, New York City. Rev. Ernest M. Stires, D.D., Rector and Rev. Floyd S. Leach, Ph. D. assistant, officiating. T. Tertius Noble, M. A. organist will direct the choir of 60 voices.

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December 23, 1922

The man whose courage and foresight gave alternating current to America, and founded the Westinghouse Industries.

George Westinghouse

Thirty years ago the alternating current system was but an infant, for whose life those who believed in it were fighting daily and nightly battles; today this same system is a giant of almost inconceivable size, so capable of defending itself that no one seeks to attack it. For 95% of the electricity that is generated and transmitted today is alternating current.

The story of the development of alternating current is a story of courage and vision and faith; of misunderstanding and misrepresentation; of engineering failures and triumphs; of commercial ability and organization. It reads like a classic romance. In its chapters are credit and honor for all who have deserved it, but the central figure, the man whose motives and acts furnished the basis of the plot, was George Westinghouse, the founder of the Westinghouse Industries.

When, in 1886, he brought over from Europe the crude Gaulard and Gibbs system, even he, great as was his foresight, did not dream of the coming magnitude of the idea which he was fostering. The development work undertaken by the strong engineers whom he put to work led at first into many serious differences with those who favored direct current. Legislatures were even impor-
tuned to prevent the use of the "deadly Westinghouse Current", as many extremists described it.

That the little 50 horsepower generators of those days have grown to sizes two thousand times as large; that stations of a few horsepower have been succeeded by stations with a capacity of hundreds of thousands of horsepower, while at the same time, distribution voltages have grown from 1,000 to 220,000, is due largely to the vision and the courage of George Westinghouse, and to the qualities of the engineers whom he called, characteristically, to help him. By no means the least of the achievements of this man was his ability to organize the greatest aggregation of engineering intelligence ever known, men of analytical ability, consummate mathematicians, great inventors; and to promote in this great group the most harmonious and intelligent co-operation.

The same energy and courage and purpose that forced the acceptance of the air brake, the modern systems for the economic and safe distribution of natural gas, and later of the steam turbine, led and won the fight for alternating current, which has grown to be one of the world's greatest and most necessary commodities.
Additional Schedules

KHJ—broadcasting station of the Los Angeles Times, operating on 400 meter wave length, Pacific Standard Time, is being heard consistently throughout the country. Following is the schedule of this station:

Daily Except Sunday
12:30-1:15 P. M. News and concert.
7:00-7:30 P. M. "Children's Half Hour" consisting of songs for children and bedtime story by "Uncle John".
8:00-9:30 P. M. De Luxe program of instrumental and vocal music, news, and educational features.

Sunday
10:00-11:00 A. M. Sacred service, scripture reading, sermon, prayer and musical program.

WEAF—American Telephone and Telegraph Company, New York broadcasts hi class programs from 8:00 to 10:00 P. M. Mondays, Wednesdays, Thursdays and Saturdays. Also week-day programs from 4:30 to 5:30 P. M.

KDYL—is the broadcasting station of the Salt Lake Telegraph, Salt Lake City, Utah. A program is given every week-day evening from 7:00 to 8:00 P. M. Mountain Time, consisting of instrumental and vocal music, educational and humorous talks, clog dances, news, sports, and other features. No program is given on Sundays. Cedric E. Hart is concert manager.

WBS—D. W. May, Inc. of Newark, New Jersey broadcasts on the following schedule:
Week-day mornings from 10:30 to 11:00.
Afternoons 1:00 to 1:15, and 2:15 to 2:30.
Mondays, Thursdays and Saturdays from 7:30 to 8:30 P. M.
Sundays, 9:00 to 10:30 A. M. and 1:00 to 1:30 P. M.

WLAJ—broadcasting for the Waco Electrical Supply Company, Waco, Texas, gives sermonettes and sacred music on Sundays at 3:00 P. M. Central Standard Time.
Week-day programs include market and news reports daily at 9:30 A. M. and 2:30 P. M.
On Tuesdays and Thursdays, musical programs are given from 7:45 to 8:45 P. M.

WJAM—the broadcasting station of The Evening Gazette, Cedar Rapids, Iowa, gives concerts by select artists on Mondays, Wednesdays and Fridays at 7:00 P. M. Occasionally special features are given on Saturdays and church services on Sundays. This station broadcasts on 360 meters.

WJAS is the broadcasting station of Pittsburgh Radio Supply House, 963 Liberty Ave., Pittsburgh, Pa. who broadcast daily, except Sunday, on a wave length of 360 meters, from 11:30 A. M. to noon and from 2:30 P. M. to 3:00 P. M. and also from the Pittsburgh Leader Studio every Monday, Tuesday, and Friday Evenings from 7:00 to 8:00 P. M.