Details for Making Revolutionary New
Graham McNamee Tops George D. Hay

Radio

EVERY WEEK PROGI INVEST

REG. U. S. PAT. OFF. &

Vol. XIII Copyright 1925
By Radio Digest Publishing Co. SATURDAY, J

U. S. TO RELAY GERMANY

RADIO MOVIE GREAT SUCCESS IN TRYOUT

GOVERNMENT EXPERTS AT TEST SHOW APPROVAL

Pictures Received by Radio Are Thrown on Miniature Screen in Washington

WASHINGTON, D. C.—A number of government officials recently saw for the first time in the laboratory of C. Francis Jenkins, Radio inventor of this city, motion pictures received over the Radio and thrown on a miniature screen. The broadcasting was done from NOF, the old Naval Radio Station, at Anacostia, D. C., which was turned over to Mr. Jenkins, for experimental purposes when the department erected a larger one. It was from Station NOF that Mr. Jenkins in 1923, first Radiocast still photographs to Philadelphia, Boston and other cities. The motion pictures were sent over a wave length of 546 meters.

Among the government officials who witnessed the sending of the moving pictures were Secretary of the Navy Wilbur, Dr. G. K. Burgess, director of the bureau of standards, Stephen B. Davis, acting secretary of commerce, W. D. Terrell, chief or the Radio section of the department of commerce, and others.

Has "Still" Machine

An amateur machine for the sending and receiving of "still" photographs by Radio is also being put on the market by Mr. Jenkins. This machine is being put out, it is understood, not with the idea of making any money, but of urging young men and others interested to make suggestions as to possible improvements.

Mr. Jenkins is offering three cash prizes a month for the best suggestions which he receives for improvements. He states that although only a few machines have been sold, some very valuable suggestions have already been made. No special license is required by the Department of commerce for the sending of these pictures.

WOR Station Director Announces Engagement

NEWARK, N. J.—Joe Barnett, WOR's station director, is a very versatile young man. He sings and also helps out when it comes to announcing. Recently he made his hardest announcement—he has become engaged to a charming young lady who has appeared many times on the WOR programs. At the present time she is known as Miss Miller, but will soon be Mrs. Barnett.

The young lady with the powdered wig is Miss Gladys Loftus, one of the beauties of Ziegfeld's Follies, now playing in New York. She is a frequent entertainer at WGCP.

EXCHANGES TO START DURING EARLY WINTER

Will Use A Special Wave

Agreement with Germany Is Concluded—Expect to Complete Special Plants Soon

By Jack Forrest

BERLIN.—It was announced here that the Radio Corporation of America has concluded an agreement with the German government for the exchange of broadcasting programs. This agreement was consumated by Gen. James G. Harbord of the Radio corporation.

Authorization has been received by the leading broadcasting station here from the German government, to increase its equipment so that the interchange of American and German programs will in all probability begin early next winter. The German station will either be located at Nauen or at Koenigswusterhausen, in the outskirts of Berlin, while the American station will be located in New Jersey.

Date Unsettled

The date of operation depends upon the speed of German broadcasting plants perfecting their equipment. It is expected that American fans will be able to pick up the German Christmas carols in December.

The exchange agreement was concluded by General Harbord and Thomas N. Perkins, chairman of the commercial Radio international committee, which has been in session lately in this city, and the German Minister of Posts and Telegraph.

Both Mr. Perkins and Gen. Harbord expressed satisfaction at the manner in which the negotiations were handled by the German government. They are thoroughly convinced that broadcasting through the German and American stations will be handled without any difficulty upon the part of either nation.

German Advance Rapid

"In view of her restricted population and limited resources," said General Harbord, "Germany has probably made greater advances in the exploitation of Radio science since the war than any other country, and we were particularly impressed with the measure of support and encouragement given private enterprises in Germany by the government."

With the arrival of cold weather and

(Continued on page 2)

CONSENSUS OF OPINION VOTE

Send to Radio Digest, 510 N. Dearborn Street, Chicago

To be forwarded by Radio Digest to the Department of Commerce for the attention of members of Congress.

Scratch off whichever does not apply.

1. Do you want less class B (500 watts or more power) stations?.....Yes No
2. Shall B stations be reduced to 94 in number, so that they can be accommodated satisfactorily in the "ether roadways" now available for the use of broadcasting stations?.....Yes No
3. How far away, approximately, is the nearest class B station?.....mi.
4. Are you troubled by B stations heterodyning and interfering with one another?.....Yes No
5. Have you read a description of the Kintner plan?.....Yes No
6. Are you in favor of it or some similar plan which will help clear the air of the present "traffic" congestion?.....Yes No
7. Do you favor the appointment of an unbiased, non-partisan broadcasting control board for the settlement of all differences pertaining to broadcasting and the interpretation of present or future Radio legislation?.....Yes No
8. Include separately a list of five stations you like most and five you dislike most.

How many members in your family?.....

Are all of the same mind as yourself?.....

Name .....

Address .....

City, County, State.....

(Check here if more blanks are desired) 7-4-25

McNAMEE TOPS HAY AGAIN FOR GOLD CUP

FIFTEENTH WEEK OF 1925 ANNOUNCER RACE FAST

Radio Digest Contest Gives New Thrills —Leo Fitzpatrick Makes Jump to Seventh

With a flood of ballots pouring in from all sections of the country as the 1925 Gold Cup Award nears its close, Graham McNamee, idol of eastern Radio fans, surmounted the mountain of votes piled up by George D. Hay of WLS, and for the second time this year went to the top of the weekly standing of the hundreds of contestants with a small margin.

McNamee has 18,896 votes; Hay, 17,665.

More shakeups occurred during the past week than for many weeks before. The Radio Digest second annual contest for the world's most popular Radio announcer is seething with intense competition. Although the top sixteen candidates remain the same, but four of these hold the positions occupied a week previously.

Field Fourth; Fitzpatrick Seventh

While Gene Rouse stayed third, Henry Field displaced The Hired Hand for fourth, putting the famous WBAP character, fifth. H. W. Arlin, KDKA's announcer, remained in sixth place, while Leo Fitzpatrick made a spectacular climb from fourteenth place and landed number seven.

W. G. "Bill" Hay, formerly of KFKX, Hastings, Nebr., dropped from seventh to eighth, polling but few votes. Mr. W. G. Hay is off the air for the present, having severed business connections in Hastings and moved to Chicago to inaugurate his own business.

He never was dependent on Radio for his living, receiving no pay for his services, but despite this fact, put his heart and soul into KFKX and made it one of the world's best. Perhaps he will go on the air under new colors before the 1925 contest is over.

Many Others Change Places

Lambdin Kay, of WSB, who is soon to have a new superpower station, slipped from eighth to ninth. Frank S. Lane, who made the feature climb last week from oblivion to tenth, again holds this place.

N. Dean Cole, of WHO, dropped from ninth to eleventh, while Stanley W. Barnett, WOC, likewise went down from eleventh to twelfth.

Charles Erbstein, holder of sixteenth position last week, came up to thirteenth this week, trading places with Jerry Sullivan, who skidded to the bottom. O. E. Becker dropped two places to fourteenth, while "Bob" Emery, WEEI's Big Brother, holds doggedly to fifteenth place.

Standing of Sixteen Leaders

The standing of the sixteen leaders, with the total number of votes accredited to date, at the close of the week is as follows:

Position	Name and Station	Votes
1.	Graham McNamee, WEAF	18,896
2.	George D. Hay, WLS	17,665
3.	Gene Rouse, WOAW	10,804
4.	Henry Field, KFNF	10,010
5.	The Hired Hand, WBAP	9,863
6.	H. W. Arlin, KDKA	6,209
7.	Leo Fitzpatrick, WDAF	4,446
8.	W. G. "Bill" Hay, KFKX	4,187
9.	Lambdin Kay, WSB	3,962
10.	Frank S. Lane, KFRU	3,868
11.	N. Dean Cole, WHO	3,475
12.	Stanley W. Barnett, WOC	3,148
13.	Charles Erbstein, WTAS	3,061
14.	O. E. Becker, WGR	2,994
15.	Robert Emery, WEEI	2,749
16.	Jerry Sullivan, WQJ	2,487

Incidentally, although no new nominations have been received, the candidacy of C. A. Entrekin, WBAV, Columbus, Ohio, was overlooked through error and hitherto unreported.

Who will win the second solid, 14-carat gold cup is far from decided, though the fifteenth ballot appears this week. Only seven more ballots will appear.

The final tabulation on account of the bonus votes will have much to do in deciding the contest. Perhaps none of the leaders at this time will be at the top, but experience from the first annual Radio Digest Gold Cup Award last year, dictates that one of the consistent members of the top sixteen will probably win the honor.

How to Vote and Get Bonus

Don't miss a single ballot, for when these are turned into Radio Digest in a group of CONSECUTIVE numbers, extra bonus votes are allowed the announcer for whom you are voting.

The ballots, top of page two, numbered consecutively, will appear in each issue of the Radio Digest until the close of the contest, with the August 22 number.

Each of these ballots will count for one vote when sent in separately. You can hold these ballots until you have 4 that are consecutively numbered, and when they are sent in a bonus of 8 votes will be allowed for your favorite announcer.

For each 8 consecutively numbered ballots your candidates will receive a bonus of 20 votes. For each 12 consecutively numbered ballots, 30 votes. For each 16 consecutively numbered ballots, 40 votes. For each 20 consecutively numbered ballots, 50 votes, and for each 22 consecutively numbered ballots, 60 votes bonus will be allowed.

Send nominations or ballots to the GOLD CUP AWARD EDITOR, Radio Digest, 510 N. Dearborn St., Chicago.

Give the battery a regular charge. Never wait until the tubes refuse to work before charging the battery.

CONTENTS

Radio Digest, Illustrated, Volume XIII, Number 13, published Chicago, Illinois, July 4, 1925. Published weekly by Radio Digest Publishing Company, 510 N. Dearborn Street, Chicago, Illinois. Subscription rates, yearly, Five Dollars; Foreign Postage One Dollar additional; single copies Ten Cents. Entered as second class matter at the post office at Chicago, Illinois, under the Act of March 3, 1879.

All the Live News of Radio.....1 to 7
"Goodyear Tires, WEAR, Cleveland".....5
Advance Programs for the Week.....8 to 14
An Evening at Home with the Listener In, a chart in Eastern, Central and Pacific Time, showing when to listen in for your favorite stations.....14 and 15
Editorials, Indi-Gest, and Condensed by Dielectric.....16
Recent Advances in Tuned Radio Frequency Amplification, Part VI—The Construction of a Bridge Circuit; by Milo Gurney.....17
A Portable Super in a 22-inch Week-end Bag, Conclusion, by Harry A. Nickerson.....18
A. B. C. Course in Radio Fundamentals, Chapter XV—Charging Storage Batteries, by David Penn Moreton.....19
Front Panel Gear for Spider Webs.....21
Questions and Answers.....22
Directory of Radiophone Broadcasting Stations, Part III.....23

Looking Ahead

KDKA, "World's Pioneer Broadcasting Station," will be the next one described and pictured on page five. The voice of KDKA is old and mighty. It has friends in every land. Learn more about the staff and see behind the scenes of this famous broadcaster in next week's issue.

Adjusting a Wheatstone Bridge Set and operating these structures will be taken up next week by Milo Gurney in the seventh of his remarkable articles. There will be two more discussions by Mr. Gurney to be followed by detailed instructions on the making of an advanced model with panel and baseboard layouts.

A Portable and Phonograph Super, designed by John G. Ryan, whose "Simplest Possible Super" was described last fall, begins in next week's issue. A large kit was chosen intentionally so that no matter what parts you use, they will fit in without trouble. Rugged enough for vacation use, it is also attractive for use in the phonograph.

Graham McNamee Did Pass George Hay, as predicted last week, in the Radio Digest Gold Cup Award for the world's most popular announcer for 1925. Will McNamee hold his ground? Will some dark horse spring a surprise? Watch next week's standing.

The Propagation of Wave Motion is next considered by Professor Moreton in in ABC series. No matter how much apparatus is set up at each end, it is this wave motion which forms the essential basis of Radio communication.

Newsstands Don't Always Have One Left

WHEN YOU WANT

Radio Digest

YOU WANT IT!

BE SURE OF YOUR WEEKLY COPY BY SUBSCRIBING NOW

SEND IN THE BLANK TODAY

Publisher Radio Digest,
510 N. Dearborn St.,
Chicago, Illinois.

Please find enclosed check M. O. for Five Dollars (Six, Foreign) for One Year's Subscription to Radio Digest, Illustrated.

Name .....

Address .....

City .....State .....

REFORM RUM BOAT TO ENTERTAIN FANS

LAW VIOLATOR TURNING TO PEACEFUL PURSUITS

Kodel Purchases High Power Smuggler —Will Broadcast Sweet Music Instead of Bad Liquor

CINCINNATI.—A rum runner confiscated off the Atlantic coast has been purchased by C. E. Ogden, president of the Kodel Radio corporation here, to be used on the Ohio river for broadcasting concerts, boat races and other features from towns between New Orleans and Pittsburgh.

The rum yacht, formerly the Betty Marie, was shipped to Cincinnati this week by train. The boat is a 37-foot cabin cruiser, equipped with a galley, sleeping accommodations for twelve persons, and carries a powerful engine. When captured, the yacht was laden with liquor.

Try Short Wave Tests

To experiment with short wave lengths, Ogden will apply for a license to operate a 20 to 30-watt transmitter on a wave length of from 40 to 80 meters. The boat will carry storage batteries sufficient to give 700 volts, and four 10-watt tubes will enable the relay broadcasting of voice or music over a range of 500 miles.

Relay broadcasting to WKRC will be the "Betty Marie's" main feature. The concert sent from the boat or a river town will be picked up at Cincinnati and amplified into the transmitter of WKRC, which will rebroadcast with 1,000 watts power on a longer wave length.

PLAN GERMAN RELAYS

(Continued from page 1)

long nights, it is believed the scheme will work out well, not only to the satisfaction of this country, but also to fans in Germany.

Erect Huge Plant

The construction of several powerful broadcasters there is now almost complete. The biggest is located at Herzogstand in Bavaria. The power plant is located in the Tyrol mountains and will have a capacity of 400 kilowatts. As yet it is not known whether it will be possible to modulate the human voice with this colossal energy.

The antenna of the station is stretched between two mountain peaks and the plant is located in the valley, hundreds of feet below. This station will be easily heard by American fans this winter, as several stations of only 5,000-watt power here have been picked up regularly there.

It is planned to link up KDKA for the rebroadcasting of the German entertainments.

Use Radio Commercially Between Piraeus-Athens

ATHENS.—One of the first applications of the wireless telephone to everyday commercial use is being made by the American Express company for communication between its offices at Athens and Piraeus, in Greece. Piraeus, the seaport and business district of Athens, with which it used to be connected by the famous "Long Walls," is about seven miles distant from the parent city, and the American Express uses the wireless telephone to supplement the regular telephone system for quick communication, especially on exchange quotations, between the two offices.

NEWS BRIEFS FROM THE BROADCASTERS

ATWATER KENT PROGRAM FOR JULY 9 ANNOUNCED

KGO Tries New Feature—WLW Gives Music with News—WPG and WIP Tieup

Atwater Kent Radio artists are to continue their popular concerts throughout the summer months. The artists, who have become a weekly feature at WEAF, WEEI, WSAI, WGR, WWJ, WFI, WEAR, WCAE, WJAR, WCCO and WOC, will be heard from 8-9 p. m. Eastern time, Thursday, July 9, in a program of the type that has established their reputation. An orchestral rendition of Meyerbeer's "Coronation March" opens, and is followed by the overture from the "Bohemian Girl." Burleigh's "Little Mother of Mine" will be sung by the tenor of the group and the well-known "Spanish Dance" by Moskowski will be played by the orchestra. A baritone solo, the "Allegretto" from Beethoven's "Eighth Symphony" and a soprano solo with flute obligato will be heard. "Espana Waltz" completes the hour.

* *

A new program form, created especially for Radio, is the feature of the KGO Little Symphony orchestra concert on the air Tuesday evening, July 7. Each number on the program has been selected because of its particular musical meaning. No two pieces in the same key will appear in succession.

* *

"Current Events Told in Music" is the latest feature to be offered from the Crosley WLW studio. This unique idea originated when members of the broadcasting staff were reading the headlines of newspapers. Newspapers carried headlines about the recent Russian and Chinese troubles. This afforded the studio director the opportunity to have the orchestra play selections typical of those lands, with a brief explanation of the news item.

* *

WHT, in the Wrigley building, Chicago, has obtained the services of "Johnnie" Bowles, president of Bowles Live Stock Commission company, to broadcast the last minute live stock reports from 11:30 to 12 p. m., Central time, each day direct from the Union Stock Yards in Chicago. Mr. Bowles is known and respected by every cattle breeder and feeder in the United States.

* *

KFI, Los Angeles, claims that the San Diego Elks' chanters and Cliff Webster's Mission Beach orchestra hold the record for long distance traveling to give a Radio program. The two groups, 100 in all, came to Los Angeles from San Diego in large motor busses, covering nearly 300 miles to give but one hour's program.

* *

The Robert E. Bently Post of the American Legion will broadcast throughout the month of July over WKRC, Kodel Radio corporation in Cincinnati. The Bently Post jazz orchestra is composed entirely of world war veterans who belonged to various A. E. F. musical organizations.

* *

Jack Nelson, director of WJJD, Mooseheart, Ill., and noted song writer, is on tour of the eastern broadcasting stations for one month. He will entertain at the visited studios. Included are WWJ, WCX, WEAR, WTAM, WCAE, KDKA, WRC, WCAP, WHAR, WPG, WEEI, WNAC, WBZ, CKAC and New York stations.

* *

WPG, Atlantic City, and WIP, Philadelphia, have effected a wire tieup so that the principal features of either station can be used simultaneously by the other. WPG's ten remote controls and the many of WIP will thus be available for use of both stations. WIP's pickup on the Steel Pier at Atlantic City will be turned over to the WPG management.

* *

Probably for the first time in history a piece of land was presented to a state by Radio when on a recent evening Bishop Charles E. Woodcock, of Louisville, presented from Station WHAS a tract of land in Harrodsburg, Kentucky, to the State of Kentucky for a state park. State Geologist W. R. Jillson accepted the tract.

* *

Art Linnick, "Mrs. Schlagenhauer's" creator and KYW star, has succumbed to Cupid's dart and taken up the study of kitchen lore. On Saturday, June 13, he was married to Miss Iza Winternitz, of Chicago. Honeymooning is now occupying their attention.

* *

Goldman band concerts may be heard Sunday and several other nights during the week on WEAF and linked stations as the result of a recent arrangement. The entire summer concert series will be made available.

WEST TIES ALPS IN ACOUSTIC ABILITIES

MONARCH, Mont.—The acoustic properties of the Alps have nothing on the Little Belt Mountains of Montana when it comes to carrying Radio music through the hills at nightfall. Bob Day, of here, places an ordinary loud speaker on a five tube set in an open window and ranchers throughout the neighborhood and for two miles away can sit on their back fences, whittle, and enjoy the programs of KOA at Denver.

KDKA GETS THANKS FROM PEN INMATES

PITTSBURGH.—In a recent letter, Fred W. Edel, operator of the Radio set at the great penitentiary at Dannemora, N. Y., thanked KDKA for the broadcasting of band and orchestra music. He said that the men in the prison, who numbered more than 1,400, prefer it to anything else. He stated that Radio is furnishing the men with several hours of relaxation each day and that they greatly appreciate it.

THEY'RE BRIGHT LIGHTS AT WMCA

BRINGING the listener face to face with Broadway is the aim of WMCA, Hotel McAlpin, New York, in presenting "Bright Lights of Broadway," under the direction of Leo Friedman. Every Wednesday evening from 12 midnight to 1 a. m., Eastern time, is the schedule of this feature, and many prominent stage celebrities will be on the air at WMCA during this hour. Regina Dalthy, above, and Luce Rolly, at right, are regular stars heard on the "Bright Lights" weekly program.

New Stations

Nashville, Tenn., is planning to erect a large station in the near future. The National Life and Accident Insurance company is backing the movement.

WJAZ, superpower station of the Zenith Radio corporation at Chicago, will be on the air within one month, it is planned. What will be the most artistic and luxurious studios in the world are being built.

Stations newly licensed during the week include KWWG, City of Brownsville, Texas, 500 watts, 278 meters; WRNY, Experimenter Pub. Co., New York, N. Y., 500 watts, 258 meters; KFVY, Radio Supply Co., Albuquerque, N. M., 10 watts, 250 meters.

Bodenhoff to Direct Show

PHILADELPHIA.—G. B. Bodenhoff of Cleveland, who directed the successful Radio expositions at Buffalo and Cincinnati last season is to be manager of the Radio show which is to be held here at the Arena, 46th and Market streets, October 3 to 10, inclusive. The show is being given by Radio manufacturers and dealers of Philadelphia.

BIG 'VOICE OF SOUTH' SOON READY FOR AIR

BUILD ELABORATE STUDIO IN ATLANTA BILTMORE

Superstation WSB to Open Latter Part of July—All Equipment Now on Hand

ATLANTA, Ga.—Enthusiasm is reaching a high pitch in Dixie as the new superstation, WSB, of the Atlanta Journal nears completion. It will be the most powerful broadcaster in the South with the exception of Texas, and one of the finest stations in the country.

For the past several months workmen have been busy putting the finishing touches on the palatial new plant, located on the tenth floor of the picturesque Atlanta Biltmore hotel. It is here that the entire station,, from the transmitter to the reception rooms, will be located. Everything that will be added to the efficiency and beauty of the station, to the smallest detail, has been worked out and will be completed, according to present plans, near the end of July.

New "Voice of South" Ready

The antenna of the station will be supported on two 125-foot steel towers atop the hotel roof. Accoustic experts have just completed treatment of the spacious studio, which will be one of the finest and most efficient in the country. The entire equipment for the transmitter is at hand and ready to be installed.

The task of remodeling an entire section of the tenth floor of the famous hotel was handled by local contractors after a survey of conditions had been made by Engineer D. F. Newman of the Western Electric company. Outside of the operating rooms and studio, the station will have an artists' reception room, a public reception room, auxiliary studio, business office and rest rooms.

A huge reception and remarkable program is planned for the opening of the new "Voice of the South."

West Likes East; East Lauds West

If Premise of Applause Tabulation Is True, Managers Build Programs for DX Fans

LOS ANGELES.—What state sends the most applause cards and letters to KFI, Los Angeles? You can step into the office of KFI and ask that, or a similar question, and receive an almost immediate answer, for the Anthony station has one of the most complete indexing and filing systems made to take care of its fan mail.

Many will be surprised to find that the California station receives more letters from New York than any other state in the Union. New Jersey runs a close second, Illinois is third and Pennsylvania fourth. The states have maintained their relative positions in quantity of mail received for over two years although since the inception of KFI's 5,000-watt transmitter the number of letters received from all has greatly increased.

This seems to bear out the assertion that listeners do not write to comment upon programs, but rather to confirm long distance reception. If this is the case, and program managers build their programs according to the mail they receive, do not the California stations try to please the eastern listeners and those in the Middle West strive always to please the extreme West and East?

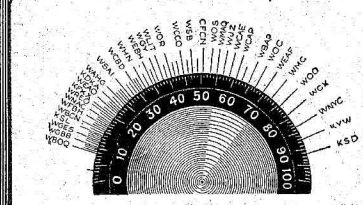
WHT AD KNOCKED BY THEATER MEN

Superstation Advertises Sunday Program in Five Papers; Theatrical Interests Complain

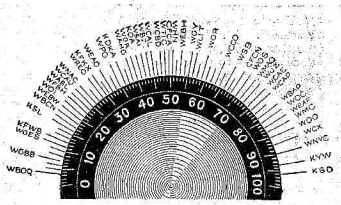
CHICAGO.—Vigorous complaint was recently registered by theatrical men here against Superstation WHT, when the latter used the paid advertising space, under the heading of amusements, to announce their programs.

The advertisement concerned two Sunday sermons delivered by Paul Rader, noted evangelist, and occupied about 50 lines of space in each of five Chicago daily papers. The protest of the theater men maintained that too great inroads had already been made into their patronage by Radio and that advertising programs in the same columns used by them would cause even more harm.

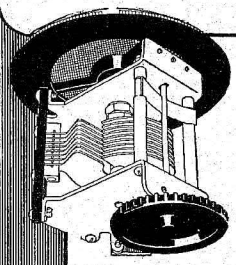
The use of phone-tip jacks on the battery terminal board instead of binding posts will make it more difficult to blow a tube by crossing battery leads.



Usual Dial
Low-wave stations crowded together.



Grebe Dial
All stations have equal spacing.



GREBE
S-L-F
CONDENSER

Give Every Station a Chance to be Heard

WHEN short-wave stations are crowded on to the lower dial numbers (as is the case with the usual condenser), it is often difficult to separate them.

On the Grebe S-L-F Condensers this trouble has been overcome by having the plates follow a special type of hyperbolic spiral series of curves. This spreads the stations out over the whole dial range, giving each station practically equal spacing. The diagrams show this very plainly.

This is an exclusive Grebe feature and forms one of the many that make the Synchrophase not only distinctive in design but outstandingly superior in performance.

Ask your dealer to demonstrate this feature as well as the effectiveness of the Grebe Binocular Coils and Volume Control

A. H. Grebe & Co., Inc., Van Wyck Blvd., Richmond Hill, N. Y.
Western Branch: 443 So. San Pedro Street, Los Angeles, Cal.

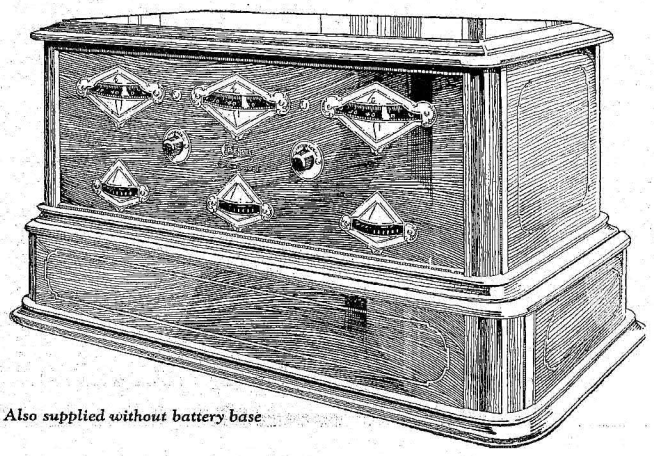
The GREBE SYNCHROPHASE
TRADE MARK

This Company owns and operates stations WAHG and WBOQ; also mobile and marine low-wave re-broadcasting stations.

It is written:
"The cure of ignorance is study."
The wise man who carefully studies all types of receivers, usually buys a Synchrophase.

Doctor Thy

GREBE RADIO
TRADE MARK
Reg. U. S. Pat. Off.
All Grebe apparatus is covered by patents granted and pending.



Also supplied without battery base

Goodyear Tires, WEAR, at Cleveland

Above is Mildred Johnston, widely known pianist and assistant director of programs at the Goodyear station.

A general view of the reception room at WEAR. The broadcasting studio can be seen in rear.

Above is G. F. Houston, director of publicity. He is the man who invented the unique and catchy slogan, "Goodyear Tires, WEAR."

"GOODYEAR Tires, WEAR!" It is a clever slogan and if the company's product does wear as well as their station's offerings it is a slogan that is eminently justified. The Goodyear Tire & Rubber company of Akron, Ohio, embarked on the ether waves with no flourish of trumpets, no preliminary broadcasting of their intent or purpose, but quietly, unostentiously and unobtrusively they came on the air at Cleveland through the medium of the existing station of the Union Trust company, at that time operated under the call letters WJAX.

WJAX enjoyed a most enviable reputation and had a host of friends from coast to coast. WEAR took up the good work and has made new friends while retaining those who took delight in listening in on the 389.4 meter wave of the former station. With the taking over of the station by the Goodyear Tire & Rubber company, the suite on the twentieth floor of the magnificent Union Trust company building was greatly enlarged, an immense and luxuriously furnished reception room was established, executive offices were opened, clerks and stenographers were provided and the studio itself remodeled to provide room for the augmented programs that have and will be broadcast from this station.

Mr. G. F. Houston, long connected with the advertising department of the company, at Akron, was called to preside as publicity director at the Cleveland station and it is due largely to his efforts that the station and its personnel has expanded to its present size. Mr. Houston made the slogan of the station a vital pronouncement of the worth of his company's product. "Goodyear Tires, WEAR," is probably unexcelled in the simple directness of its appeal.

Immediately associated with Mr. Houston is Mr. H. K. Carpenter, station manager of WEAR. Formerly manager of Goodyear's Industrial university and the Goodyear hall activities in Akron; a director of the Friars and Three Arts club, he came wonderfully well qualified for his work as program director. Mr. Carpenter and Mr. Houston share in the duty of announcing the programs from this station.

With appreciation of the requirements for a trained musician to assist in the direction of programs, the post of assistant director was offered to Miss Mildred Johnston. Of a musical family, her father being director of Johnston's society orchestra and herself formerly pianist with Ivan Francisci's Hotel Cleveland orchestra, Miss Johnston delights in taking an active part in the programs that she assists in arranging, and she is heard every Friday evening, either accompanying a soloist or entertaining with a piano solo. But it is not alone as a pianist that Miss Johnston takes part, for her Friday evening bedtime stories have become a feature that appeals to the children of her audience.

The engineer in charge of the apparatus at a broadcasting station has more responsibilities than the public may be aware of. It was, therefore, the wise choice of the company to retain James M. Thorburn in charge of the operation of their station. Thorburn is more than an operator; he is a close student of the development of Radio transmission, tireless in his efforts to maintain his station at its maximum efficiency and constantly introducing new features to that end.

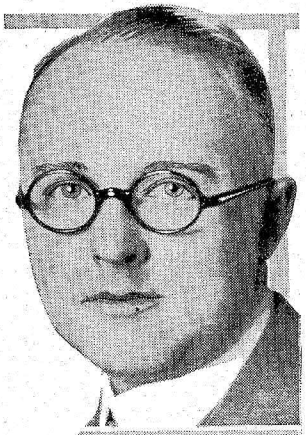
Directly associated with Mr. Thorburn is Ross J. Plaisted, operator at WEAR. A former "brass pounder" on the Great Lakes, a student of Radio engineering and active in following the trend of Radio development, Mr. Plaisted gained favorable notice while operator at Station WTAM.

WEAR calls upon the best talent available in Cleveland. It's programs are replete with the offerings of artists known far and wide, and a roster of those who contribute would perforce include almost the entire list of Cleveland musicians. It is, therefore, impossible to introduce all those who contribute on the programs, but there are special feature programs broadcast on regular schedules in which the artists taking part come to be almost known by the audience.

Of such nature is the Sunday afternoon concert broadcast by Ivan Francisci and his Hotel Cleveland orchestra. Probably no other orchestra of its class in the United States is more popular with its audience than that directed by Ivan Francisci. The Hotel Cleveland orchestra offers no entertainment of this kind; it does not, taboo the lighter and more tune-

(Continued on page 6)

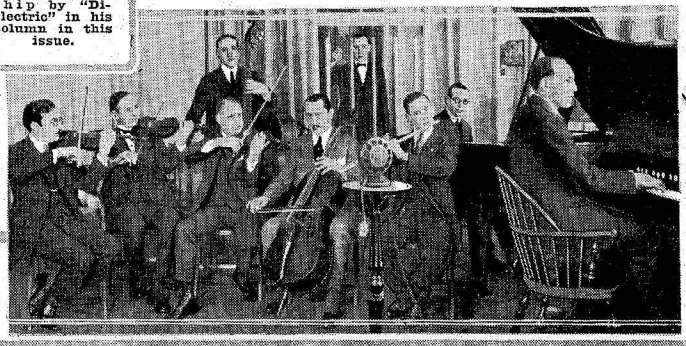
The man speaking into the microphone is H. K. Carpenter, station manager at WEAR. Perhaps he's telling a funny story.



The man who counts the waves as they go out. He is James M. Thorburn, engineer in charge of the operating room.

Above is Vincent H. Percy, organist at WEAR, seated at his instrument. Mr. Percy is one of the best known Radio organists in the East. He is mentioned for his musicianship by "Dielectric" in his column in this issue.

Above is Ivan Francisci, director of the Hotel Cleveland orchestra. To right: The Hotel Cleveland orchestra—a regular feature.



Above: "The Evening Hour Quartette," among the most popular features at WEAR. Below: Angelo Vitale, director of the Loew's Park theater orchestra.

"FEELS" SPEECH BY AID OF HEAD PHONES

DEAF AND BLIND WOMAN IS HEARD AT STATION KGO

Helen Kellar Talks to Fans While Listening to Herself by Means of Sensitive Diaphragms

SAN FRANCISCO.—With the tips of her fingers pressed against the diaphragms of a pair of head phones so she could "feel" what she was saying, Helen Kellar, remarkable deaf and blind woman, recently broadcast from KGO here.

Practice before KGO microphones showed that Helen Kellar's voice over Radio was even more distinct than when coming through the air direct from her mouth. While speaking she touched the vibrating discs of headphones and felt the rhythmic pulsations of her own voice. Her sensitive fingers even detected the difference between speech and music.

When her name was pronounced three times over the air she recognized it twice —saying with the KGO announcer, "Helen Kellar, Hellen Kellar." With her face beaming she declared: "It will help me to speak!" Sounds like "d," "e," "b," she said, "felt" much alike to her. But with practice it was said she believed a difference might be detected.

Several years ago, at the suggestion of Thomas A. Edison, Helen Kellar, began practicing talking into a small cedar box, feeling the vibrating wood, in her struggle to form mental pictures of different sounds and then make the sounds herself. Just the small practice in the KGO studios, it was declared, improved her voice, giving it more natural rhythmic qualities.

Radio Calls 100,000 to Big Merry-Making

Acts as Town Crier for "Big Brother" Celebration

BOSTON.—Radio played the part of town crier with great success recently when it was announced from Station WEEI, the Boston Electric Light plant here, that the Boston Edison Big Brother club would hold a gala day at Auburndale park on July 1 and asked those children who could attend to reply.

More than 35,000 responded. A like number of adults signified that they would be on hand. It is estimated that nearly 100,000 gathered on the big green for the celebration.

The governor of the state, the mayor of Boston and a number of other well-known persons addressed the multitude.

GOODYEAR TIRES, WEAR

(Continued from page 5)

ful melodies of the day nor does it draw wholly upon classic scores, an appreciation of which is reserved for the elect.

From 7 to 8 o'clock on Sunday evening the hour is given over to the artists and orchestra of Loew's Park theater. Angelo Vitale, the orchestra director, arranges these programs and this to the people of Cleveland is a guarantee of their musical excellence.

Organ music broadcasts well and is universally enjoyed, especially when rendered by a true artist, as is Mr. Percy, organist at the Euclid Avenue Congregational church, where the Metcalfe organ is installed.

On Monday evening, between 7 and 8 o'clock, a merry melange of mirth and melody is broadcast from Loew's State theater. Tuesday evening a wealth of entertainment is broadcast from 7 to 11 from Station WEAR.

The hour between 7 and 8 Thursday evening, is given over to discussion of matters that affect us all, and the speakers are carefully chosen.

Between 8 and 10 on Thursday evening, WEAR provides a special out-of-town program; that is, the artists taking part are called from neighboring cities of Ohio.

It is the children's hour from 7 to 8 o'clock on Friday evening and the little folks can thank Miss Mildred Johnston for the delightful stories with which they are entertained.

At 8 o'clock on Friday evening the strains of dance music crowd the aerial of WEAR. Marjorie Moore and her Melody Maids help provide the evening entertainment.

Nobody wants to miss the Wingfoot Goblins. That is the name of the group that on the third Saturday of each month start their high jinks promptly at midnight and continue until the well-known wee sma' hours of the morning.

There is a great deal more that could be said of the Goodyear Tire & Rubber company's broadcasting station, WEAR. There are some interesting possibilities that may be realized, certain it is that under the present personnel, "Goodyear Tires, WEAR," has become a nation-wide pronouncement that should not fail in its effectiveness and cannot fail to impress.

Star Artist on Saw

Charles Schemmel, WCK, St. Louis, artist, is an enjoyable comedy entertainer, who plays the violin and piano simultaneously, gives bird imitations on the violin, and is a star player on the hand saw. He depicts an old country party.

TELLS YOUNGSTERS ABOUT "MIKE ROBE"

Chambers Studio Photo

HARRIET MICHAEL

CHICAGO.—Mrs. Harriet Michael, national secretary of the Junior First Aid Legion, says that she can tell a bedtime story over the air at eleven o'clock in the morning, four in the afternoon or seven in the evning, with the same happy result; the youngsters seem eager to know more about the Junior First Aid Legion, and ask for more stories about "Young Mike Robe and His Sister Mamie Germ."

Now the adventures of "The Germ Family" are exciting and varied. There is Ma Germ who is forever bewailing the fact that since the Legion has come into existence some three hundred thousand strong, poor Pa Germ cannot keep a job. Then there is Grandfather Germ who has lost his knack of teaching his progny how to make children "It," which in Germ language means "Ill" when Germs play tag. Of course, there are more serious first aid talks to young people on how to take care of their own minor injuries, when father and mother are not at hand.

For the more mature listeners, there are talks on "Being as Careful as Your Doctor," "First Aid in the Home," "First Aid on the Farm," "Is Farming a Non-Hazardous Occupation?" and talks of like nature.

Mrs. Michael was heard over WQJ, June 6 and 13 and WMAQ on June 5. Her last appearance at WQJ was on June 24.

Mrs. Michael conducted the Filmland department of Child Life magazine for over two years, and contributes regularly to "Social Progress," the national organ for the Child Conservation League of America.

Coming!

Factories of this Company are in quantity production of the new Jewett Receiver. Deliveries have begun.

These facts are supremely significant. For this new Jewett constitutes beyond question, *the longest recent forward step toward perfect Radio Reception.*

In fundamentals, and in details, the Jewett is emphatically *new.*

Its tuning element is *new.*

Its method of audio amplification is *new.*

Its beauty of line and finish is *new* and distinctive.

Originality that can come only from genius—young, untrammeled, triumphant—such will be your confident verdict.

Make no Radio investment until you have seen this new Jewett and listened to the marvel of its performance!

The Jewett will be marketed in a beautiful cabinet of the new Clairmount Mahogany, at a price far below any receiver of comparable performance.

"THERE IS NO SUBSTITUTE FOR THE BEST"

JEWETT RADIO & PHONOGRAPH COMPANY
5670 TWELFTH STREET PONTIAC, MICHIGAN

Factories: Allegan, Michigan Pontiac, Michigan

In Canada
Jewett Radio-Phonographs, Ltd.
Walkerville, Ontario

Export Sales Office:
116 Broad Street, New York City

Jewett Quality Products

WJR WILL ELEVATE TASTE OF LISTENER

E. H. JEWETT TELLS POLICY OF WELCOME ADS

Superpower Station at Pontiac, Mich., to Be Expression of Beliefs of Industrial Chief

DETROIT.—With the delayed opening August 1, of WJR, in Pontiac, Michigan, by the Jewett Radio and Phonograph company, Edward H. Jewett will put in effect a policy advocated by him ever since he became identified with Radio.

His conviction is that broadcasting is a duty that devolves upon Radio manufacturers. The opening of the station at Pontiac is the first step of the discharge of what he conceives to be his share of a general responsibility which rests upon manufacturers.

It is only a first step, because the station, in itself, means little in Mr. Jewett's opinion. The programs are everything. For a long time he has fought against the idea that the public must be catered to.

Must Elevate Public Taste

He believes the exact opposite; that the public taste must be lived up to. He has never had any confidence in the rather general belief that the average of programs must be held down to attract a big audience. He always has hammered away on the idea that the higher quality the programs, the bigger the listening audience will be. The average desire is for the best, he believes, and the more good things that are broadcast, the more good things will be desired. WJR will proceed on this basis.

Mr. Jewett came out long ago as a proponent in favor of paid advertising. He said then, "It is the only logical method of insuring programs that deserve to be broadcast. The advertising never need be obnoxious or annoying in any way. If it is handled deftly, it is simply information that pleases the listener, rewards the advertiser and helps the station financially."

Ads Will Be Kept Welcome

WJR hopes to at least partially finance itself by the sale of its studio time; but the assurance is given that the advertising will be kept within the limits of welcome to the listeners. The audience will simply be informed by whose courtesy the act or unit is being presented.

Mr. Jewett's ideas are radical departures from usually accepted thoughts in Radio.

Howard Campbell, well-known engineer, is technical director of WJR. Corley W. Kirby, who did much to make WWJ famous, is program director. Gene Goldkette, internationally famous musician, is in complete charge of the musical activities. A. W. Dahlberg is first of a group of announcers.

The station is equipped for 5,000 watts. While the studios are in Detroit, the transmission will be in Pontiac, 20 miles away from any other broadcasting station, and the intentions are to use full power.

MUCH TRAVELED SET MEETS FINAL DEFEAT

Eric H. Palmer's Receiver Is Smashed in Accident

WINNIPEG, Man.—After 10,000 miles of travel by rail and auto the Radio set used in the transcontinental test of summer broadcast reception by Eric H. Palmer, of Freed-Eisemann Radio corporation, was knocked "Hors de Combat," when the Brooklyn chamber of commerce special train on which it was located, struck an automobile at Brandon, Manitoba. The impact and the jamming of the brakes aroused all passengers and sent the Radio crashing to the floor, adding another to the interesting series of adventures Mr. Palmer has had in his long tour.

ANNOUNCER G. F. IS HEART AID SUCCESS

LOS ANGELES.—Further proof of the present day announcer's versatility comes from Station KFI here. For several weeks an unknown young woman called announcer "G. F." almost daily and asked his advice on matters pertaining to the heart. G. F. obligingly advised. A short while later he was invited to dinner by a young man who announced that due to his good advice the young lady who had done the calling had consented to be his wife.

WHT MAKES SCOOP; GETS JEAN SARGENT

CHICAGO — Jean Sargent, the "mother" of broadcasting, has joined the staff of WHT, Wrigley building here. For the past six years Miss Sargent has been connected with the Shepard Stores in Boston, and during the past four, she has had full charge of the woman's program of WNAC, the Shepard Stores station.

Jean Sargent

In securing Miss Sargent the officials of WHT feel that they have obtained the foremost figure in woman's Radio. To chronicle the achievements of this prominent personality would take reams of paper, but it will suffice to say that Miss Sargent was the first woman Radio announcer, the first person to ever 'sign off' using her full name, the first person to report a millinery show, 'blow-by-blow,' the first to ever report a fashion and style show by Radio, the first woman to ever take complete charge of a Radio program running from early morning 'till late at night, the one that discovered the music for "Yes, we have no Bananas" was 'lifted' bodily from Handels' "Messiah" and from "I Dreamt I Dwelt in Marble Halls" from Balfe's famous opera "The Bohemian Girl."

Prior to entering the Radio business, Miss Sargent was a nationally known woman's club lecturer and was prominent in the advertising business. While lecturing for the various woman's clubs throughout the country, she staged style and fashion shows in most of the large cities. She is one of the most popular authors of children's stories and for a long time was a special feature writer for woman's pages of eastern newspapers and a member of the Troy Times staff.

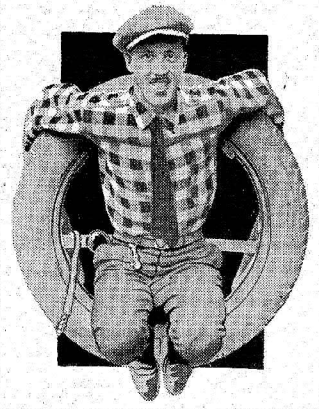
When the Shepard Stores in Boston, made a nationwide search for a woman to occupy the position of Service Secretary in their large department store they selected Miss Sargent, because of her vast experience and capabilities in woman's work. Two years later, when they opened Station WNAC, they selected Miss Sargent to the position of studio secretary and gave her full charge of the woman's and children's programs.

The listening public has been invited to meet the keystone of woman's Radio at the WHT studio in the North Wrigley building, Chicago.

Religious School Will Install New Transmitter

KANSAS CITY.—Plans for the construction of a 1,000-watt transmitter to replace old WOQ of the Unity School of Christianity here are almost completed and it is expected that installation will be complete by September 1. It will be one of the latest type Western Electric outfits and will broadcast regular services of the religious school.

WEATHER PROPHET TO TAKE IN EUROPE



Yes, Sub! The "Red Headed Music Maker" and "The Little Girl from Chicago" are to tour Europe, beginning August 1. The above was snapped just prior to the recent tour which he concluded by celebrating his first wedding anniversary at WEAF.

Mysterious Crosley Artist Is Mary Barbara of Dayton

CINCINNATI.—The mystery of the owner of the marvelous WLW voice of mysterious age has been solved. It belongs to Mary Barbara of Dayton, Ohio. She is an exclusive Crosley WLW artist and has been giving delightful readings of children with the voice of a child. Several listeners have referred to her as the "sweetheart of Radio." WLW forgot to ask her age. Perhaps she will reveal that through the microphone.

Burma Wireless Club

WASHINGTON, D. C. — The Burma (India) Wireless club, which has a membership of 100, has just moved into headquarters of its own according to advices received here.

POPULAR OPERA TO BE HEARD AT WEAF

"BOHEMIAN GIRL" WILL BE BROADCAST ON JULY 7

Ceasre Sodero to Direct Balfe's Famous Work—Will Be Given in Tabloid

NEW YORK.—The WEAF Grand Opera company will present the "Bohemian Girl" in tabloid form at ten o'clock Tuesday evening, July 7, for the benefit of the audiences of WEAF and seven other stations. As in the past, Ceasre Sodero, will direct.

This is another of the series of productions by the WEAF Grand Opera company which has aroused an unprecedented response from the Radio audience. It will be broadcast through WEAF, New York; WEEI, Boston; WFI, Philadelphia; WCAE, Pittsburgh; WEAR, Cleveland; WGR, Buffalo; WWJ, Detroit, and WCCO, St. Paul-Minneapolis.

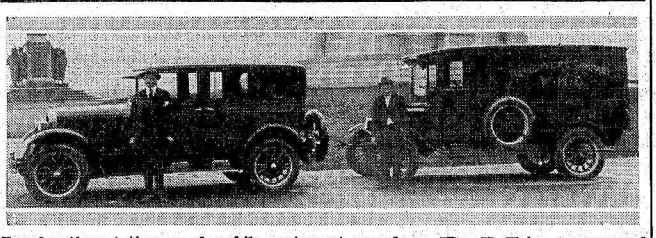
Opera Well Known

The melodic charm of the "Bohemian Girl" by Michael W. Balfe, Celtic composer, never fails to please the operagoer. Some of the famous arias which the company will render are "I Dreamt I Dwelt in Marble Halls," "Heart Bow'd Down" and "Then You'll Remember Me." These familiar pieces have been included in almost every anthology of home songs.

A story of a light vein runs through the "Bohemian Girl." It tells of the kidnapping of Arline, daughter of the Count Arnheim, by Devilshoof, a gypsy chief. Thaddeus, a young noble banished from his country, joins the gypsy band and falls in love with Arline. While the gypsies are attending an affair at Presburg, Arline, now a beautiful maiden of seventeen, incurring the displeasure of the Gypsy Queen, is accused of stealing and is taken before Count Arnheim, who recognizes his daughter by a scar on her arm.

She is restored to her rank, but continues to meet Thaddeus secretly, until the lovers are denounced to the Count by the jealous Queen. The Count is at first indignant, but the pleading of his daughter and the knowledge that Thaddeus is of noble birth, reconcile him to their union.

PUTTING THE "MIKE" ON WHEELS



Broadcasting stations need mobile equipment nowadays. Wm. H. Heinz, manager of WHO, Des Moines, stands beside the WHO sedan, and H. M. Bennet, operator, beside the WHO remote control truck. Automotive equipment is of great importance to the modern station which must obtain programs from many scattered places.

The Result

of 28 years' experience is built into this *New* Kellogg Reproducer

Through an exclusive newly applied principle of diaphragm control—clearer, more musical tone can be had from YOUR radio receiving set.

THE science of sound transmission cannot be learned in a short time. It is a subject which requires years of scientific research and practical experiment.

For more than 28 years, long before the advent of radio, we have been manufacturing telephone receivers and transmitters. We are pioneers in this field.

Our engineers are experts in sound transmission. Their business is and has been that of clarifying transmitted sound.

Now they have perfected a new instrument known as the Kellogg Symphony Reproducer. Its wonderful tone is due to our latest discovery, **Magnetic Diaphragm Control.**

No Outside Noises

Practically the entire auditory range can be reproduced without loss of a single note, enabling the listener to hear with equal pleasure a soprano's high "C" or the organist, who plays the bottom of the scale.

The horn of this new reproducer is made of a neutral or "dead" material which does not vibrate and spoil the clear notes of reproducer. In shape it is so designed to make all notes round and full, working in harmony with the unit.

Hear It Today

Your local dealer will gladly demonstrate the Kellogg Symphony Reproducer in your home—today. Note the remarkable difference it will make.

KELLOGG SWITCHBOARD & SUPPLY CO., CHICAGO, ILL.

Kellogg *Symphony* Reproducer

With every Kellogg radio part, Use—Is The Test

WEAF LINKS UP STATIONS FOR FOURTH

Saturday, July 4

Saturday, silent night for: CNRT, KFAE, KFDM, KFUO, KFWA, KLDS, KLX, WBAP, WBAV, WBZ, WCAU, WCBD, WCX, WDWF, WEAO, WEBJ, WEEI, WFI, WHAD, WHAZ, WHN, WHO, WJY, WKAQ, WLIT, WMAK, WOAN, WOO, WSUI, WTIC, WWJ.

Atlantic or Eastern Daylight Saving Time Stations

WAHG, Richmond Hill, N. Y. (315.6), 12-2 a. m., dance music.

WBBR, New York, N. Y. (272.6), 8 p. m., Dr. Hans Haag, violinist; 8:15, Fred Twaroschk, tenor; 8:20, Bible questions and answers; Judge Rutherford; 8:45, Fred Twaroschk; 9:50, Dr. Hans Haag.

WCAE, Pittsburgh, Pa. (461.3), 2:30 p. m., tea-dansant, Nixon restaurant; 4, La Paradise orchestra; 6:30, dinner concert, William Penn hotel; 8, address, Current Motor topics; 8:15, Prof. Otto Kaltels; 8:30, Sanders Inn orchestra.

WEAF, New York, N. Y. (491.5), 4-5 p. m., Gene Ingraham's Great Notch Inn orchestra; 6-7, dinner music, Waldorf-Astoria; 7-7:20, joint recital, Mabelanna Corby, pianist; Janet Bush-Hecht, contralto; Doctor Howard Applegate, baritone; 7:30-7:35, Effin Rosanoff, cellist; 7:30-7:50, Vera Webster, pianist; 7:50-8, Effin Rosanoff; 8-8:15, Mabelanna Corby and group of artists; 8:15-8:45, Huyler's Foremost Four; 8:45-9, Westell Gordon, tenor; 9-10, Harry Denny's Notre Dame Collegians; 10-11:30, special Defense Day program; 11:30-12, Vincent Lopez' Hotel Pennsylvania orchestra.

WGBS, New York, N. Y. (315.6), 8:30-10 p. m., Independence Day musical program; reading of Declaration of Independence, W. Warner Miller.

WGR, Buffalo, N. Y. (319), 3:30-4:30 p. m., WGR's afternoon program; 8:45-10:15, jointly with WEAF, United States Marine band, Washington, D. C.

WHAR, Atlantic City, N. J. (275), 7:30 p. m., Seaside hotel trio; 8, patriotic address; 9, Shelburne hotel concert orchestra.

WIP, Philadelphia, Pa. (508.2), 3 p. m., "Song of the Surf"; 3:30, Comfort's Philharmonic orchestra; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime stories; 8, Comfort's Philharmonic orchestra; 8:45, "Song of the Surf"; 8:50, Veselli's band; 10:05, Howard Lanin's dance orchestra.

WJAR, Providence, R. I. (305.9), 7:05 p. m., studio program.

WJZ, New York, N. Y. (454.3), 1-2 p. m., Irwin Abrahams' Knickerbocker Grill orchestra; 2-4, Fourth of July program from Independence Hall; 4-4:02, baseball scores; 8:02-8:10, "Our Declaration of Independence," C. Lee Cook; 10:30-11:30, Joseph Knecht's Waldorf-Astoria roof orchestra.

WMCA, New York, N. Y. (341), 8:15-8:25 p. m., health talk; 9:15-10:15, Gene Cirina's orchestra; 11-12, Ernie Golden and his Hotel McAlpin orchestra.

WNYC, New York, N. Y. (526), 8:15-10:15 p. m., band concert.

WOR, Newark, N. J. (405), 7:15-7:30 p. m., sports talk, Bill Wadley; 7:30-8, the Commanders; 11-12, Ciro's orchestra.

WPG, Atlantic City, N. J. (299.8), 6:40 p. m., baseball; 6:45, Arthur Scott Brook, organist; 7, Knickerbocker hotel dinner dance music; 8, baseball scores; 8:30, special program, Vernon room, Chalfonte-Haddon hall; 10, Hotel Ambassador dance orchestra; 11, Knickerbocker hotel dance orchestra.

Eastern Standard or Central Daylight Saving Time Stations

KOKA, Pittsburgh, Pa. (309.1), 8:45 p. m., concert.

KYW, Chicago, Ill. (535.4), 1:25-3 p. m., Saturday frolic; 5-6:30, Congress hotel dinner concert; 7-8, Helen Gordon, soprano; 8:35-10:30, Congress classic.

WBBM, Chicago, Ill. (226), 8-12 midnight, Maridean Berresen, Albert Hall, concertina soloist; Crillon orchestra; Charlie Garland, pianist; Ned Sautry; Sunset male quartet; Cort Banks, ukulele soloist; Dave Nudelman; Leo Matise, Hawaiian guitarist; Samovar orchestra.

WCEE, Elgin, Ill. (275), 10:30-12 midnight, Charlene dance program, Joe Rudolph and the Boss' Own orchestra; Frank Morris, Polly Willis, John Poat, Eddie Cavanaugh.

WCX, Detroit, Mich. (516.9), 2:30 p. m., band concert, Belle Isle; 7:30 p. m., band concert, Belle Isle.

WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., Oriole orchestra; Athaline Unger, soprano; Radio Sunday school lesson, Dr. Herbert W. Virgin; 9:30-10:30, Oriole orchestra; Marie Kelly, reader; Langdon Brothers; Spanish Troubadors; 11:30-1 a. m., Oriole orchestra; Marie Kelly, reader; Frances Morrison, contralto; Goise Brothers; Wayne Myers; Banks Kennedy.

WGES, Oak Park, Ill. (250), 5-7 p. m., Lucille Matthews, violinist; Edwin Kemp, tenor; Bryce Talbot, baritone; 10:30-12, A. Cavallo and his 11 master musicians; Fred Workman, baritone; Ralph Olson, pianist; Coyne Electrical school serenaders.

WGN, Chicago, Ill. (370.2), 2 p. m., races, Hawthorne Jockey club; 6:30-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, studio program; 10:30-11:30, Drake hotel Terrace Garden program.

WGY, Schenectady, N. Y. (379.5), 8:30 p. m., Hotel Van Curler dance orchestra.

WHT, Deerfield, Ill. (399.8), 7 p. m., Al Carney, organist; 7:30, Jelke patriotic specialties; John Clark, tenor; 8, Borden specialty artists; 8:45, Gala Independence Day concert; Elmer Kaiser's Riverview Park Radio orchestra; 10:30, program; 12, Al Carney, organist; Husk O'Hare's Red Dragon orchestra; Dean Remmick, pianist; Pat Barnes, tenor; 1 a. m., Al Carney, organist.

WIBO, Chicago, Ill. (226), 2-4 p. m., patriotic program; 6-8, Jack Sprat concert trio; Phyllis Feingold, violinist; Carl Linner, pianist; Otto Moore, baritone; Mrs. Ressie Mayerhofer, soprano.

WJJD, Mooseheart, Ill. (302.8), 4:30-5:30 p. m., music, Mooseheart children; Mooseheart assembly; 6:45-7:15, Belmont hotel trio; 7:15-8, Garod studio, Charley Straight's orchestra; 10:30-1 a. m., concert; Charley Straight and his orchestra; Albert F. Brown, organist.

WKRC, Cincinnati, Ohio (326), 10 p. m., patriotic musical program; 11, military music.

WLS, Chicago, Ill. (344.6), 7:45 p. m., lullaby time; 8-10, patriotic program, Rex's Cornhuskers; male quartet; brass quartet; Ralph Emerson, organist; Anthony Wons, reader.

WMBB, Chicago, Ill. (250), 7-8:30 p. m., Trianon ensemble; Rebecca Agulnick, pianist; Hazel O'Neil, soprano; Lindsay McPhail; Woodlawn theater orchestra; 8:30-10:30, special patriotic program; Dell Lampe and the Trianon orchestra; Cecil, Esther Ward, guitarists; Jimmy Eggert; Walter Duffy; Harold Stokes, accordionist; Little Orphan Annie presentation; Armin F. Hand and the Woodlawn theater orchestra; Florence Tenney; Fisher and Sachs.

WMBF, Miami Beach, Fla. (384.4), 6:30-7 p. m., Fleetwood Radio orchestra; 7-7:30, Fleetwood Radio orchestra; 10-12, dance music, Fleetwood Radio orchestra, specialties.

WORD, Batavia, Ill. (275), 8 p. m., Webster hotel orchestra, Fritz Renk, violinist; Otto Beyer, pianist.

WQJ, Chicago, Ill. (447.3), 7-8 p. m., dinner concert, Ralph Williams and his Rainbo Gardens orchestra; Helen Leon, violinist; Otto Wolf, pianist; V. S. Vryah, baritone; 10-3 a. m., Ralph Williams and his Rainbo Garden Skylarks; Jerry Sullivan; Rose Vanderbosch, soprano; Melodians, Laurie, Eddie and Bennie; Williamson Brothers and Phil; Everett George Opie, reader; Clarence Theders, tenor; Rick, Whalen and Gardner.

WREO, Lansing, Mich. (285.5), 10-12 midnight, special musical program; baseball reports.

WSAI, Cincinnati, Ohio (326), 7:40 p. m., children's stories, Mrs. Ethel Knapp Behrman; 8, chimes; 8:15, Bicycle Playing Card sextet; 9, U. S. Playing Card weekly news review; 9:15, Bicycle Playing Card sextet; 12, Buck Kleemeyer, Merrell Schwartz.

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Joe Rudolph and the Boss' Own orchestra; Herbie Mintz; Bee Lehman, Phil Wilcox.

Central Standard Time Stations

KFAB, Lincoln, Neb. (240), 11-12:30 a. m., midnight rounders.

KFVE, University City, Mo. (240), 6-7 p. m., "Radiocast Review of Theaters," Romaine Fielding; 10, jazz and comedy night, Orchestra Romaine.

KSD, St. Louis, Mo. (545.1), 7 p. m., Grand Central theater; 8:30, dance music, City club.

KTHS, Hot Springs National Park, Ark. (374.8), 9:25 p. m., dance program, New Arlington hotel orchestra.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 9 p. m., baseball, music; 10, dance program.

WDAF, Kansas City, Mo. (365.6), 6-7 p. m., piano tuning-in number on the Duo-Art; address, Roger W. Babson; Tell-Me-a-Story lady; Plantation players; 11:45-1 a. m., Merry Old Chief; Plantation players; Johnnie Campbell's Kansas City club orchestra; Charles Dornberger's Kansas City Athletic club orchestra.

WFAA, Dallas, Texas (475.9), 6:30-7:30 p. m., Henry Adler and his orchestra; 8:30-9:30, Johnny Davis, pianist; 11-12, Adolphus hotel orchestra.

WHAS, Louisville, Ky. (399.8), 7:30-9 p. m., concert, auspices Arthur Finding, baritone.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Holiday program.

WOAW, Omaha, Nebr. (526), 6 p. m., George Haupt, organist; 6:20, baseball; Rialto orchestra; 7, Gilbert Jaffy and his orchestra; 7:30, speakers' hour; 9, Fourth of July program; 11, Art Hays and his organ jubilee.

WOC, Davenport, Iowa (483.6), 9-10 p. m., patriotic program, G. A. R., American Legion; 11-12, Louis Connor and his LeClaire hotel orchestra; Peter MacArthur, baritone.

WSB, Atlanta, Ga. (428.3), 6 p. m. Sunday school lesson, Dr. Marion McHull; 8-9, concert; 10:45, Criterion Harmony four; Journal Hired Help Skylark.

WSMB, New Orleans, La. (319), 6:30-7:30 p. m., dinner musical; 8:30-10:30, Saturday night frolic.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4), 8 p. m., patriotic program.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467), 5:30-6 p. m., Examiner's matinee musicale; 6, McDaniels' nightly doings; 6:45, radiotorial talk; 7-7:30, half hour of dance music; 7:30-8, community sing, bookshelf chat, Miss Nancy; 8-9, Examiner program, D. A. R.; 9-10, Variety hour, Pop-Question game and Radio novelties; 10-11, Packard Radio club, Way Watts, Dorothy Cleveland, Ruth and Lilah Carlson, Jack Kirks and others; 11-3 a. m., KFI midnight frolic, direction Don Meany.

KFOA, Seattle, Wash. (454.3), 6-6:45 p. m., baseball results; Olympic hotel concert orchestra; 6:45-8:15, Rhodes Department store program; 8:30-10, Times dance music; 10:05-11, Olympic hotel dance music.

KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour, Big Brother of KFWB; 8-9, sports results, program, Monte Mar Vista Subdividers, Miller's International Hawaiian trio, Great Western male quartet; 9-10, Warner Bros. Syncopators, Hawaiian trio, popular songs, Kitty Barlow, Paul Zeh and John Herring; 10-11, Warner Bros. frolic, direction Charlie Welman.

KGO, Oakland, Calif. (361.2), 8 p. m., sports review, Al Santoro; 8:10, Independence Day program; Vinton La Ferrera's Hotel St. Francis concert orchestra; Glen Chamberlain, tenor; "Americanism," James G. Espey; Homer Henley, baritone; Ramon Oden and his Spanish and Hawaiian players; Helen Dupuich, soprano; Vinton La Ferrera, violinist; Fred Gloy, zither soloist; Hotel St. Francis trio; Aileta Scott, coloratura soprano; 10-1 a. m., Henry Halstead's orchestra.

KGW, Portland, Ore. (491.5), 6-8 p. m., Jackie Souders' orchestra; 10-12, Jackie Souders' orchestra.

KHJ, Los Angeles, Calif. (405.2), 5:30-6 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog; Helene Pirie, Geo. Ezra Crane, screen starlets; Henrietta Poland, readings; Uncle John; 8-10, program, Los Angles Soap company, arranged by J. Howard Johnson, an all American program; 10-11:30, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader; 11:30-2 a. m., Lost Angels of KHJ, Majestic Six orchestra.

KNX, Hollywood, Calif. (336.9), 5:30-6 p. m., Wurlitzer pipe organ studio; Sid Ziff's sports talk; 6:15, travel talk, W. E. Alder; 6:30, dinner hour music; 7:30-8, Wurlitzer pipe organ studio; 8-10, KNX feature program; 10-11, Abe Lyman's Cocoanut Grove dance orchestra from Ambassador hotel; 11-2 a. m., Hollywood night, presenting film celebrities of Hollywood.

KPO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 3:30-5:30, Palace hotel; 5:30-8:15, Loew's Warfield theater; 6:35-7:30, Waldemar Lind, States restaurant orchestra; 8-12, Johnny Buick's Cabirians.

Headliners of the Week

WEAF is making elaborate plans for an unusual Defense Day Demonstration program Saturday. By means of a comprehensive line up of stations WEAF hopes to prove the possibilities in Radio for summoning men and resources in time of emergency. The American Telephone and Telegraph company and the war department will cooperate. Harry Denny's Notre Dame Collegians will be one of the unique features broadcast.

Sunday the Herald Traveler is putting on an anniversary program at WBZ. All sorts of surprises in the way of special artists and features are hinted. The musical program at Loew's theater this week is especially recommended. This may be heard Monday through WEAR, Cleveland. The Melodique trio very popular with Philadelphia fans will be this evening's feature at WLIT. Henrietta Horle, James K. Sevartz and J. Baxter will assist.

Margaret Anglin, appearing in the tremendous Greek drama "Electra," by Sophocles, may be heard over the microphone of KSD, Tuesday. This will be the first time that a Greek tragedy has been broadcast. As the Greek playwright used only a conventional setting and did not depend upon the facial expression or costume to produce effects, the words of this ancient piece of art should be well adapted to the Radio. This same evening WJZ, WGY and WRC will give the vacationing fan a real treat with the first New York Philharmonic orchestra concert. William Van Hoogstraten is again the director.

Two audiences, one visible and the other invisible, will be the guests Wednesday of KOA, the Rocky Mountain broadcasting station. The complete program will be given in the Rialto theater. The KOA players in "Moonshine" will be the headliner. Many of the regular entertainers of the station will be present.

Mrs. J. E. Harmon has directed many fine programs given by the artists of New Albany, Indiana. Thursday she will again take charge of the program at WHAS, Louisville.

The Tennessee Evolution trial may be heard by any one owning a Radio set. WGN, anticipating a nation-wide interest in this unusual case, has made arrangements to broadcast the entire trial which begins Friday at 9 a. m. Eastern standard time. This trial which takes place at Dayton, Tenn., is the first to be made public in this way.

WCX will broadcast the band concerts from Belle Isle every night this week.

Sunday, July 5

Sunday, silent night for: CNRT, KFAB, KFAE, KFDA, KSD, KYW, PWX, WAHG, WBAV, WCAE, WCAU, WCEE, WCX, WDAF, WDWF, WEAO, WEBJ, WFI, WGBS, WGR, WHAD, WHAS, WHAZ, WLIT, WMAK, WMAQ, WMC, WOO, WOR, WRC, WREO, WSAI, WSMB, WTAM.

Atlantic or Eastern Daylight Saving Time Stations

WBBR, New York, N. Y. (272.6), 9 p. m., instrumental selections; 9:10, choral singers; 9:20, vocal duets; 9:30, Bible lecture, Judge Rutherford; 10, choral singers; 10:10, instrumental selections; 10:20, choral singers.

WBZ, Springfield, Mass. (333.3), 8 p. m., "Starlore and Religion," George L. Patterson; organ music; 8:30, Herald Traveler anniversary program.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., People's Radio church services; 6:30, William Penn hotel; 7:20, Roxy and his gang; 9:15, organ recital from New York.

WCAU, Philadelphia, Pa. (278), 5:15 p. m., undenominational church services, Rev. John Stockwell, pastor; Maude Hanson Pettit, musical director; 6, Hotel Pennsylvania concert orchestra.

WDWF, Providence, R. I. (440.9), 10 a. m., chimes; 5 p. m., Venetian serenaders; pipe organ recital.

WEAF, New York, N. Y. (491.5), 3-5 p. m., "Sunday Hymn Sing," Federation of Churches; 7:20-9:15, Roxy and his Gang, Capitol theater; 9:15-10:15, organ recital.

WEEI, Boston, Mass. (476), 7:20 p. m., Roxy and his gang; 9:20, organ recital, Skinner organ studio New York.

WFI, Philadelphia, Pa. (394.5), 7:30 p. m., services, Arch Street Presbyterian church.

WGR, Buffalo, N. Y. (319), 10:30 a. m., Central Presbyterian church service, William Wall Whiddit, organist, and Dr. Robert J. MacAlpine, speaker; 3-4, vesper services.

WHAR, Atlantic City, N. J. (275), 2:30 p. m., Seaside hotel trio; 3:45, sermon, Rev. Harold G. Gaunt; 9, Seaside hotel trio; 11, Strand theater.

WHN, New York, N. Y. (360), 1-1:30 p. m., organ recital, Loew's Lexington theater; 3-4, Queens County Christian Endeavor program; 5-5:30, Roseland dance orchestra; 5:30-6, Olcott Vail's string trio; 10-10:45, Gem Razor entertainers; 10:45-11:15, Janssen's Hofbrau orchestra.

WIP, Philadelphia, Pa. (508.2), 7:45 p. m., services, Holy Trinity church.

WJAR, Providence, R. I. (305.9), 7:20-9:15 p. m., Roxy and his Gang; 9:15-10:15, piano recital.

WJZ, New York, N. Y. (405.2), 9:30-9:45 p. m., "Reminiscences of a Reporter," William H. Crawford.

WJZ, New York, N. Y. (454.3), 8-8:30 p. m., joint recital, George O'Brien, tenor; Raymond Randall, pianist.

WKAQ, San Juan, P. R. (340.7), 8-10 p. m., Municipal band concert.

WMCA, New York, N. Y. (341), 11-12 a. m., services, First Church of Christ Scientist; 7-7:35 p. m., Ernie Golden and his Hotel McAlpin orchestra; 7:35-7:40, health talk.

WNYC, New York, N. Y. (526), 9-11 p. m., Brooklyn Mark Strand theater program.

WOO, Philadelphia, Pa. (508.2), 10:30 a. m., services, Bethany temple; 2:30, Sunday school exercises; 6:05, organ recital, Clarence K. Bawden.

Eastern Standard or Central Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 9:45 a. m., 6:45 p. m., church services.

KYW, Chicago, Ill. (536), 11 a. m., Second Presbyterian church; 3-4 p. m. studio concert.

WBBM, Chicago, Ill. (226), 4-6 p. m., tea dance program; Dave Nudelman; Rose Gray Wysacker; Charlie Garland, pianist; 8-10, William Molnaire, tenor; Marlene Galatin, soprano; Maridean Berresen, baritone; Shepherd Levine, tenor; Emma Lola de Szathmary, pianist; Maurice Silverman, tenor; Charlie Garland, pianist; Samovar orchestra; 12-1 a. m., Sunday midnight nut club frolic; Ralph Atlass; Dave Nudelman; Charlie Garland; Samovar orchestra.

WCX, Detroit, Mich. (516.9), 10:30 a. m., services of the Central Methodist Episcopal church; 2:30 p. m., band concert broadcast from Belle Isle; 7:30 p. m., band concert broadcast from Belle Isle.

WEAR, Cleveland, Ohio (389.4), 3:30-5 p. m., Hotel Cleveland orchestra; 7-8, Park theater orchestra; 9-10, evening hour.

WEBH, Chicago, Ill. (370.2), 7-9 p. m., artists program.

WGES, Oak Park, Ill. (250), 5-7 p. m., Lucille Matthews, violinist; Edwin Kemp, tenor; Bryce Talbot, baritone; 10:30-12, A. Cavallo and his 11 master musicians; Fred Workman, baritone; Ralph Olson, pianist; Coyne Electrical school serenaders.

WGN, Chicago, Ill. (370.2), 11 a. m., comics, Uncle Walt; 11:45, program, Chicago theater; 3:30, faculty, Chicago Musical college; 9-10, Drake concert ensemble.

WGY, Schenectady, N. Y. (379.5), 9:30 a. m., First Reformed church, Rev. Clayton J. Potter; 7 p. m., musical program; 7:45, Lakewood Farm ensemble; 9, Godfrey Ludlow, violinist.

(Continued on page 9)

When mellow strains reminiscent of Waikiki moonlight come straying in over your loud speaker you are listening to the American-Hawaiian quartet often on the air at WGR. They will be featured again July 10 from 10-11 p. m. From left to right they are Joseph, Howard, Elmer and Victor Atkinson. Photo, Colegrove studio.

MELODIQUE TRIO FEATURE AT WLIT

Sunday, July 5

(Continued from page 8)

WHT, Deerfield, Ill. (399.8), 10 a. m.,-10:30 p. m., Paul Rader.

WIBO, Chicago, Ill. (226), 10:15 p. m., Edgewater Presbyterian church; 2-4 p. m., Dorothy Davie Dillow, soprano; Dan Russo, violinist; Ted Fiorito, pianist; Otto Moore, baritone; 6-8, Carl Linner, pianist; Jack Sprat concert trio; Bessie Odel Mark, soprano; Fern Denicke, accompanist; 10-12, Dan Russo, Ted Fiorito, Harry Geise, Joe Allabough.

WJJD, Mooseheart, Ill. (302.8), 8:45-9:45 a. m., Catholic services; 10:45-11:30, Protestant services; 12, concert, Charley Straight's orchestra.

WLS, Chicago, Ill. (344.6), 7:30 p. m., Ralph Emerson, organist; 8-8:55, WLS Little Brown church; WLS Little Brown church choir.

WLW, Cincinnati, Ohio (422.3), 9:30 a. m., school, editorial staff of Sundal school publications of the Methodist Book concern; 11, services, Church of the Covenant, Dr. Frank Stevenson, minister; 8:30, concert, Walter Esberger's WLW orchestra.

WMBB, Chicago, Ill. (250), 3-5 p. m., popular concert program; Dell Lampe and Trianon orchestra; Florence "Baby Blues" Tenny; Fisher and Smith, harmony clowns; Cecil and Esther Ward, Hawaiian guitarists; Geraldine Doyle, soprano; John S. Everett, baritone; 7-8:30, semi-classical program, J. Bodewalt Lampe, director; Trianon ensemble; Barnard Senescu,, violinist; J. Everett, baritone; Hazel O'Neil, soprano; Charles Agne, trumpet soloist; 8:30-10:30, popular program; Dell Lampe and Trianon orchestra; Fisher and Smith, harmony clowns; Florence Tenny; Morey Alswang, banjoist; Clyde Hager, delineator; Harold Stokes, accordionist.

Harry Pomar (left), besides having a fine baritone voice, is a violinist, composer, and director of the Bohemians, a popular Atlanta dance orchestra. Mr. Pomar is thus heard in various roles from WSB. Marion Lewis, violinist, is entertaining during the afternoon programs this week at WGR. Charley Straight (right) and his orchestra may be heard every night at WJJD, Mooseheart. Lewis photo, Colegrove.

WMBF, Miami Beach, Fla. (384.4), 6:30-7 p. m., Fleetwood Radio orchestra; 7-7:30, Fleetwood Radio orchestra; 10-12, dance music, Fleetwood Radio orchestra, specialties.

WORD, Batavia, Ill. (275), 10-11 a. m., services; hymns and sacred songs, Mr. and Mrs. B. F. Hollister, B. M. Rice; Bible lecture, W. H. Woodley; 6:45-8 p. m., services; John Read, bass; I. B. S. A. trio; choral singers; Bible lecture, Calvin H. Swingle.

WQJ, Chicago, Ill. (447.5), 3-4 p. m., afternoon concert, Jerry Sullivan, director; 8-10, Ralph Williams and his Rainbo Gardens orchestra; Frederick Mueller, German tenor; Catherine Diepenbrock, pianist; Reuben Markus, violinist; Clarence Kelly, flutist.

WREO, Lansing, Mich. (285.5), 10 a. m., chimes, Belfry Plymouth Congregational church; 10:30, First Presbyterian church.

WSAI, Cincinnati, Ohio (326), 3 p. m., chimes.

WTAS, Elgin, Ill. (302.8), 2-5 p. m., Sunday afternoon popular concert; 8-12, Joe Rudolph and the Boss' Own orchestra; Herbie Mintz, Ned Becker, Gail Bandell.

WWJ, Detroit, Mich. (352.7), 11 a. m., St. Paul's Episcopal cathedral; 2 p. m., Detroit News orchestra; 6:20, Roxy and his gang.

Central Standard Time Stations

CKY, Winnipeg, Can. (384.4), 7 p. m., services, Broadway Methodist church.

KFAB, Lincoln, Nebr. (240), 5-6 p. m., Dr. F. F. Travis, Grace M. E. church.

KFDM, Beaumont, Texas (315.6), 11-12 m., 8-9 p. m., sacred programs.

KFNF, Shenandoah, Iowa (266), 10:45 a. m., First M. E. church; 2:30 p. m., Rev. and Mrs. C. S. Hanley; 3, religious services, James Pearson, director; 6:30, Golden Rule circle; 8, Christian church.

KFUO, St. Louis, Mo. (545.1), 8:15 p. m., address, "I Believe in God the Father Almighty."

KFVE, University City, Mo. (240), 6-7 p. m., "Radiocast Review of Theaters," Romaine Fielding; 10, Lighthouse quartet; W. Glenn Gross, baritone.

KLDS, Independence, Mo. (441), 11 a. m., services; Bernice Griffiths, soprano; D. Bauer, contralto; Roy Cato, tenor; Omar Cato, bass; sermon, E. D. Moore; 6:30 p. m., vesper services; Lilly Allen, soprano; Alma Kearns, tenor; O. K. Fry, bass; vesper talk, Ammon White; 9:15, Robert Miller, organist; Emma Snead, violinist; I. A. Smith, soprano; 9:45, sermon, Ralph Farrell.

KTHS, Hot Springs National Park, Ark. (374.8), 11 a. m.-12:30 p. m., First Presbyterian church services; Rev. Chauncey Hickok, pastor; Frances Hardin, organist; 9:15, baseball results; 9:25-10, classical concert, New Arlington hotel-Meyer Davis orchestra; Lon Chassy, director.

WCBD, Zion, Ill. (344.6), 8 p. m., mixed quartet; Fred Faassen, organist; Wiedman Sisters; Mr. and Mrs. Sparrow; Mary Sweeney, soprano; Mrs. G. R. Sparrow, tenor.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 11 a. m., services, Westminster Presbyterian church, Rev. John E. Bushnell, pastor; 4:10 p. m., House of Hope Presbyterian church, Rev. H. C. Swearingen, pastor; 7:20, Second Church of Christ Scientist; 9:15, classical concert.

WDAF, Kansas City, Mo. (365.6), 4-5 p. m., classical music; 5-5:30, International Sunday school lesson.

WFAA, Dallas, Texas (475.9), 6:30-7:30 p. m., Radio Bible class, Dr. William M. Anderson; 8-9, First Baptist church; 9:30-11, Dr. Claude E. Watson and his Gully-Low orchestra.

WHAS, Louisville, Ky. (399.8), 9:57 a. m., organ music; 10, Fourth Avenue Presbyterian church.

WHO, Des Moines, Iowa (526), 11 a. m., University church service; 7:30-9, musical program.

WMC, Memphis, Tenn. (499.7), 11 a. m., First Baptist church services.

WOAN, Lawrenceburg, Tenn. (282.8), 9 p. m., Vaughan Radio orchestra.

WOAW, Omaha, Nebr. (526), 9 a. m., chapel service, Rev. R. R. Brown; 9, chapel service, Benson Methodist church.

WOC, Davenport, Iowa (483.6), 8-8:30 p. m., services, Rev. C. Girtley Gillum, First Christian church; 9:30-11:30, Palmer Little Symphony, Erwin Swindell, conductor.

WSB, Atlanta, Ga. (428.3), 5-6 p. m., sacred program; 8, services.

Mountain Standard Time Stations

KFWA, Ogden, Utah (261), 8-11 p. m., musical program, Chamber of Commerce.

KOA, Denver, Colo. (322.4), 11 a. m., First Congregational church; 4 p. m., First Congregational church; 7:50, First Church of Christ Scientist.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467), 6:30 p. m., McDaniels' nightly doings; 6:45, musical appreciation talk; 7-8, from stage and studio of Metropolitan theater; 8-9, Sunday classic hour; 9-10, Examiner program presenting a dance orchestra; 10-11, Packard Six orchestra, Bill Hennessy, leader.

KFWB, Hollywood, Calif. (252), 9-11 p. m., baseball scores, Warner Bros. movie frolic, presenting stars of stage and screen.

KGO, Oakland, Calif. (361.2), 11 a. m., First Church of Christ Scientist; 3:30 p. m., Clift hotel concert orchestra; 8, First Church of Christ Scientist.

KGW, Portland, Ore. (491.5), 10:30-12 m., First Presbyterian church services; 7:45-9 p. m., First Presbyterian church services.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 7-7:30, organ recital, Arthur Blakely, organist; 8-10, program, Sunland Laboratories, arranged by J. Howard Johnson.

KNX, Hollywood, Calif. (336.9), 7-8 p. m., First Presbyterian church of Hollywood, Rev. Stewart P. MacLennan, pastor; 8-9, Ambassador hotel concert orchestra, Josef Rosenfeld, director; 9-11, program, Beverly Hills Nurseries, the Luboviski trio.

KPO, San Francisco, Calif. (428.3), 2-3 p. m., Theodore J. Irwin, organist; 3-3:30, funnies from the Chronicle, Big Brother; 6:35, Palace hotel concert orchestra; 8-8:30, Palace hotel concert orchestra; 8:30-10, Rudy Seiger's Fairmont hotel orchestra.

Monday, July 6

Monday, silent night for: CNRT, KFAE, KFDM, KGW, KHJ, KLDS, KYW, PWX, WBAV, WBBM, WBCN, WCAU, WDWF, WEAO, WEBH, WEBJ, WFI, WGN, WGBS, WGES, WHAS, WIBO, WJY, WKAQ, WLS, WMAQ, WMBB, WOC, WOAI, WQJ, WRC, WREO.

Atlantic or Eastern Daylight Saving Time Stations

WAHG, Richmond Hill, N. Y. (315.6), 7:30-7:45 p. m., sports talk, Thornton Fisher; 7:45-8, popular songs, Barney Graham; 8-8:15, Horace J. Taylor, reader; 8:15-8:30, "Ukulele Bailey"; 8:30-9, Synchrophase string trio; 9-9:15, Barney Graham; 9:15-9:30, "Ukulele Bailey"; 9:30-10, Synchrophase string trio; 10-10:55, dance orchestra; 11:05-11:30, dance music.

WBBR, New York, N. Y. (272.6), 8 p. m., Irene Kleinpeter, soprano; 8:10, vocal duets, Irene Kleinpeter and Fred Twaroschk; 8:20, World News; 8:30, Fred Twaroschk, tenor; 8:40, "The Harp of God"; vocal duets, Irene Kleinpeter, Fred Twaroschk.

WBZ, Springfield, Mass. (333.3), 6 p. m., Capitol theater orchestra; Frederick A. Pullen, director; 6:30, baseball scores; 8, Aleppo drum corps; Shriners' band; 8:30, saxophone solos, Julia Cullinane; 8:45, A. Redmond, baritone; 9, Helen Lilley, contralto; Sue Blackner, accompanist; 9:15, tenor recital, Leslie B. Stoaras; 9:40, book review, Bennett B. Schneider; 9:30, baseball scores.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Aldine theater; 6:30, William Penn hotel; 8:30, concert; 9, Sander's Inn; 10, dance music, Sander's Inn.

WEAF, New York, N. Y. (491.5), 4-4:10 p. m., David Dunning, soprano; 4:10-4:20, Dorothy Chancellor Currey, pianist; 4:20-4:30, Sonia Essin, contralto; 4:30-4:35, Dorothy Chancellor Currey; 4:35-4:40, Sonia Essin, contralto; 4:40-5, lecture, "Good Speech," Columbia university; 6-7, dinner music, Waldorf-Astoria; 7-7:15, talk, Parks Conservation association; 7:15-8:30, program from Mark Strand theater and studio, direction of Joseph Plunkett; 8:30-8:45, Adele Rosenthal, pianist; 8:45-9, health talk, Metropolitan Life Insurance company; 9-10, De Luxe string quartet; 10-10:30, Irving mixed quartet; 10:30-11:30, Ben Bernie's hotel Roosevelt orchestra.

WEEI, Boston, Mass. (370.2), 7:15 p. m., baseball scores; 7:30, Jimmie McManus, pianist; 7:45, musical; 8:30, WEAF program, health talk; 9, Ed Andrews and his Nautical Garden orchestra.

WFI, Philadelphia, Pa. (394.5), 1 p. m., Bellevue Stratford roof garden trio; 3, Loretta Kerk, pianist; 6:45, Bellevue Stratford roof garden trio.

WGBS, New York, N. Y. (315.6), 2-2:30 p. m., Mabel Bernkessel, soprano; 3-3:10, talk, Harold Fields; 3:10-3:20, Inez Keene, soprano; 3:20-3:30, opera talk, J. Walker McSpadden; 3:30-3:40, Inez Keene; 3:40-3:50, talk, Ruth Nasen Rice; 3:50-4, Inez Keene; 6-6:30, Uncle Geebee; 6:30-7:30, Peter Ward, tenor; Stella Williams, soprano; Florence Williams, pianist.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, the Olympic dance orchestra; 9-10, Buescher's concert saxophone band; 10-11, recital, Grace Winifred Bell; 11-1 a. m., supper-dance music, Vincent Lopez' Hotel Statler dance orchestra, Harold Gieser, director.

WHAR, Atlantic City, N. J. (275), 8 p. m., Seaside hotel trio; 9, Shelburne hotel concert orchestra.

WHN, New York, N. Y. (360), 7-7:30 p. m., Alja and his WHN orchestra; 7:30-7:45, Matty Levine, pianist; 8-8:05, "Storage Batteries," H. B. Shontz; 8:05-8:35, Roseland dance orchestra; 8:35-8:40, talk, H. W. Carlough, Terminal Barber Shops; 11-11:30, organ recital, Loew's Lexington theater; 11:30-12, Silver Slipper revue; 12-12:30 a. m., Harry Richman and his Club Richman entertainers.

WIP, Philadelphia, Pa. (508.2), 3 p. m., "Song of the Surf"; 3:30, Comfort's Philharmonic orchestra; 6, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime stories.

WJAR, Providence, R. I. (305.9), 8 p. m., Berry Spring dance team; 9, A. & P. Gypsy string ensemble.

WJZ, New York, N. Y. (454.3), 4:30-5:30 p. m., Fred Hall's Royal Terrace orchestra; 5:30-6, daily reports; 6-7, U. S. Navy band from WRC; 7-8, Bernhard Levitow's Hotel Commodore orchestra; 8-8:10, Wall Street Journal review; 8:10-8:25, N. Y. U. Air college; 8:25-10, concert, Lewisohn Stadium; 10:45-11:45, Jacques Green and his Club Deauville orchestra.

WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., Stanley theater organ recital; daily almanac; 12:30, Jimmy Jones' Elks club orchestra; 2, Arcadia cafe concert orchestra; 2:30, Luigi Fucai, tenor; 4:30, Henry L. Wilson, baritone; 7:30, Dream Daddy's bedtime stories; **8, Melodique trio assisted by Henrietta Horle, soprano;** James K. Sevartz, tenor; J. Baxter, tenor; 9:30, concert from Stanley theater; 10, Arcadia cafe dance orchestra.

WMCA, New York, N. Y. (341), 6:30-7:30 p. m., Ernie Golden and his Hotel McAlpin orchestra; 8-8:20, lecture, First Church of Christ Scientist; 9-9:15, Sunlite serenaders; 9:15-9:20, health talk; 9:20-10, Sunlite serenaders; 10-10:30, McAlpin Radio Forum; 10:30-11:30, B. S. Moss Colony theater program; 11:30-12, Manhattan serenaders.

WNYC, New York, N. Y. (526), 6:40-6:50 p. m., "Home Economics," Mrs. Louis Reed Welzmiller; 7-7:25, dance music, Original Charleston Five; 7:25-7:30, baseball results; 7:30-7:35, police alarms; 7:35-7:50, talk; 7:50-8, Original Charleston Five; 8-8:15, "Knotty Baseball Problems," John B. Foster; 8:15-10:15, band concert, the Mall, Central Park; 10:15-10:30, "Trend of the Times," F. P. Bent.

WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Golden's crystal tea room orchestra; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's roof garden orchestra; 8, Mark Strand theater concert; 8:30, organ recital, Mary E. Vogt; 9, recital from WEAF; 10:30, Hotel Adelphia roof garden orchestra.

WOR, Newark, N. J. (405), 6:15-7:15 p. m., Ernie Krickett's Cinderella orchestra; 7:15-7:30, sports talk; 8-9, Newark Philharmonic band; 9-10, Al Reid's hour; 11-11:30, Perry and Russell.

Eastern Standard or Central Daylight Saving Time Stations

WBBM, Chicago, Ill. (226), 6-7 p. m., Marldean Borresen, baritone; Marie Winters, accompanist; Crillon orchestra; Shepherd Levine, tenor; Dave Nudelman; Charlie Garland, pianist.

WCEE, Elgin, Ill., (275), 10:30-12 midnight, Joe Rudolph and the Boss' Own orchestra; Frank Morris, Polly Willis, John Poat, Eddie and Fannie Cavanaugh.

WCX, Detroit, Mich. (516.9), 2 p. m., News and markets; 6, dinner concert; 7:30, band concert, Belle Isle; 8:30, musical program.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Loew's State theater.

WGES, Oak Park, Ill. (250), 5-6:30 p. m., Mrs. Bernard McDevitt, lecturer; Loretta Clusman, soprano; McDevitt Sisters; Blue Devil's orchestra; Rudolph Hess, pianist; Coyne Electrical school; 6:30-7, Cornelia Dungan.

WGY, Schenectady, N. Y. (379.5), 5:30 p. m., John Fink, Jr.'s orchestra; 6:35, Stanley Hummel, pianist; Earl Hummel, violinist; 7:25, New York Philharmonic orchestra.

WHAZ, Troy, N. Y. (380), 8:15 p. m., vocal and instrumental concert; 9:30, Blue Diamond orchestra.

WHT, Deerfield, Ill. (399.8), 1-2 p. m., Grayling's string trio; 7, Al Carney, organist; Kitchen Klenzer Klassics; Lillian Knowles, contralto; Northland trio; 7:30, Leola Aikaan, soprano; John Clark, baritone; Loftis half hour of music; 8:45, Riverview Park ballroom orchestra; 10:30, Chicago Boosters; Al Carney, organist; David Boyd, whistler; Geisie Brothers; 11, harmony, Walter Donovan, tenor; Carl Stockenberg, harmonica soloist; 11:30, Milton Grossman, saxophonist; Husk O'Hare's Red Dragons orchestra; 12, Irish melodies, Pat Barnes; Chicago Specialties; Johnny Black; 12:30 a. m., Al Carney, organist.

WJJD, Mooseheart, Ill. (302.8), 6:45-7:15 p. m., dinner concert; 7:15-8, Mooseheart Novelty orchestra; Belmont hotel trio; 10:30-1 a. m., Charley Straight and his orchestra; Albert F. Brown, organist.

WLW, Cincinnati, Ohio (422.3), 7 p. m., dinner hour concert, Hotel Gibson; Robert Visconti, director; 8, popular program and entertainment, the Doherty Melody boys; 8:45, organ recitals, Cyril Buschle; 9:30, half hour program, courtesy of the Davis Reflectograph company; Famous Lyric male quartet; program concluding with announcement of important prize contest.

WMAK, Lockport, N. Y. (265.5), 8:30-10:15 p. m., musicale, Max Freedman.

WMBF, Miami Beach, Fla. (384.4), 6:30-7 p. m., Fleetwood Radio orchestra; 7-7:30, Fleetwood Radio orchestra; 10-12, dance music, Fleetwood Radio orchestra, specialties.

WORD, Batavia, Ill. (275), 8:30 p. m., Bible questions and answers; 9, musical program, Irving Ginrich.

(Continued on page 10)

GREEK DRAMA MAKES DEBUT AT KSD

Monday, July 6

(Continued from page 9)

WSAI, Cincinnati, Ohio (326), 10 p. m., soprano and tenor duets, Elizabeth Shipley, Harry Nolte; program, Lillian Aldrich Thayer Settlement school.
WTAM, Cleveland, Ohio (389.4), 6-7 p. m., Golden Pheasant studio dinner dance music, Austin Wylie and his Golden Pheasant orchestra; 8-9, Willard Symphony, Walter Logan, director; 9-11, concert; 11-12, Euclid Beach dance program.

Robert Armbruster is the distinguished young American pianist who has been giving the piano recitals Wednesday evenings at WJZ. Mr. Armbruster, already well known in New York city through the aid of broadcasting is becoming better known throughout the United States.

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Joe Rudoph and the Boss' Own orchestra; Herbie Mintz; Bee Lehman; Phil Wilcox.
WTIC, Hartford, Conn. (348.6), 6 p. m., dinner music, Emil Heimberger's Hotel Bond trio; 6:50, baseball scores; 7, dinner music.
WWJ, Detroit, Mich. (352.7), 3 p. m., Detroit News orchestra; 6, dinner concert; 8, Detroit News orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (240), 7:30-9:30 p. m., Clyde Davis, violinist; Colonians orchestra; Arthur Rayfield, pianist; Ray Powell, pianist; Blue Moon orchestra; Charles Kokesch, pianist; Mrs. F. Graham Campbell, soprano.
KFNF, Shenandoah, Iowa (266), 7:30 p. m., Smith-Belding orchestra.
KFUO, St. Louis, Mo. (545.1), 8 p. m., "A Life of Prayer."
KFVE, University City, Mo. (240), 10 p. m., popular musical night, George Lenzin, director.
KSD, St. Louis, Mo. (545.1), 9 p. m., Metropolitan Police band.
KTHS, Hot Springs National Park, Ark. (374.8), 9:25-10:15 p. m., dance concert, Ray Mullins' Como hotel orchestra.
WCBD, Zion, Ill. (344.6), 8 p. m., male quartet; Dunn, Stewart, euphonium and cornet; Carl Newcomer, marimba soloist; L. J. Hire, violist; Esther Wiedman, soprano; Mrs. L. J. Hire, pianist.
WCCO, Minneapolis-St. Paul, Minn. (416.4), 4 p. m., baseball scores; 4:05, readers' club; 5:30, children's hour; 6, baseball scores; 6:05, sports talk; 6:45, F. and R. Family; 9, baseball scores.
WDAF, Kansas City, Mo. (365.6), 6-7 p. m., Cecile Burton, reader; Plantation players; 8-9:30, Around the Town with WDAF; 11:45-1 a. m., Merry Old Chief; Plantation players; Charles Dornberger's Kansas City Athletic club orchestra.
WFAA, Dallas, Texas (475.9), 6:30-7:30 p. m., Magnolia Petroleum company's Dallas orchestra; 8:30-9:30, Dr. Frederick F. Freeland, pianist.
WHAS, Louisville, Ky. (399.8), 4 p. m., organ recital; three-minute fashion talk, Peggy True.
WHO, Des Moines, Iowa (526), 7:30-8 p. m., Stewart Watson, baritone; Helen Birmingham, pianist; 8-9, artists, Dean Holmes Cowper, director; 11-12, organ recital.
WMC, Memphis, Tenn. (499.7), 8:30 p. m., Hotel Gayoso orchestra.
WOAN, Lawrenceburg, Tenn. (282.8), 9 p. m., Vaughan Radio orchestra.
WOAW, Omaha, Nebr. (526), 5:45 p. m., public news period, Eugene Konecky; 6, Phyllis Griswold, organist; 6:30, baseball; McCrory's popular period; 6:45, orchestra; 9, classical program; 10, Gilbert Jaffy, violinist; Herman Riley, saxophonist; Jess Sutton, pianist.
WSB, Atlanta, Ga. (428.3), 8-9 p. m., concert; 10:45, revue.
WSMB, New Orleans, La. (319), 6:30-7:30 p. m., dinner program; 8:30-10:30, Leslie George's Patio Royal orchestra; Fuzzy Wuzzy Twins.

Mountain Standard Time Stations

KFWA, Ogden, Utah (261), 9-11 p. m., studio program.
KOA, Denver, Colo. (322.4), 8 p. m., KOA orchestra; Colorado Mountain club talk; Chopin piano recital, pupils of La Veta Bertschy, Denver College of music; "The Rising of the Moon," KOA studio players.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467), 5:30-6 p. m., Examiner's matinee musicale; 6, McDaniels' nightly doings; 6:45, raditorial talk; 7-8, California serenaders dance orchestra, George Cronk, leader, Sigmund Sachs, violin soloist; 8-9, New England hour of music; 9-10, program, Walter M. Murphy Motors company; 10-11, Examiner: Ray West and his Alexandria hotel dance orchestra.
KFOA, Seattle, Wash. (454.3), 6-6:45 p. m., Olympic hotel concert orchestra; 6:45-8:15, Sherman, Clay and company program; 8:30-10, Times dance music.
KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour, Big Brother of KFWB; 8-9, sports results, program by Cheek-Neal Coffee company, Maxwell House coffee string quartet; Charles Beauchamp, tenor; Vic Beal and Frank Pierce, novelty singers; Peggy Mathews, blues singer; 9-10, program, E. P. Janes, builder of Altadena; Bill Hatch's orchestra; Sol Hoopii's Hawaiian trio; Ina Mitchell Butler, soprano; 10-11, Warner Bros. frolic, direction Charlie Wellman.
KGO, Oakland, Calif. (361.2), 3-4 p. m., program, Sherman, Clay & company studio; 4-5:30, Henry Halstead's dance orchestra; 5:30-6, Aunt Betty stories; 6-7, Sherman, Clay & company; 8, Amphion trio; "Prevent Deaths from Drowning," "Inside Dope on Curing Automobile Ills," Louis P. Singer; "The New Education," Dr. Frank Graves; "From a Composer's Workshop—Harmony," Arthur S. Garbett; "Collection Letters," W. J. Marra.
KGW, Portland, Ore. (491.5), 6-7 p. m., William Robinson Boone, organist.
KNX, Hollywood, Calif. (336.9), 5:30-6 p. m., Wurlitzer pipe organ studio; 6:15, travel talk, W. F. Alder; 6:30-7:30, dinner hour music; 7:30, program, Columbia Outfitting company; 8-9, program, L. W. Stockwell company; 9-10, program, M. Weinstein, dealer in precious stones; 10-11, Goodrich Silvertown Cord dance orchestra; Lilyan May Challenger, contra-contralto; 11-12, Abe Lyman's Cocoanut Grove orchestra from Ambassador hotel.
KPO, San Francisco, Calif. (428.3), 2-3 p. m., Loew's Warfield theater; 3:30-4, Reg. Code's dance orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:15, children's hour; 6:15, baseball; 6:30-6:40, Ye Towne Cryer and Amusement Information service; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-10, Choral union; 10-11, Waldemar Lind; States restaurant orchestra.

Tuesday, July 7

Tuesday, silent night for: CNRT, KFAE, KFNF, KFUO, KFWA, KOA, PWX, WAHG, WBAV, WBBR, WCBD, WEAO, WHAD, WHAZ, WKAQ, WLIT, WMAK, WSUI, WTAM.

Atlantic or Eastern Daylight Saving Time Stations

WBZ, Springfield, Mass. (333.3), 6 p. m., Leo Reisman's Hotel Lenox ensemble; 6:30, baseball results; 8, Glenn Robinson, pianist; 8:15, recital, Frederick W. Gardner; Katherine Gravelin, accompanist; 8:30, piano program, Lewis Harlow; 8:45, Charles Joyce, whistler; 9, Hotel Brunswick orchestra; 9:50, baseball results.
WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Aldine theater; 6:30, William Penn hotel; 8, program from New York; 8:30, Gold Dust Twins; 9, Eveready hour; 10, Grand opera.
WCAU, Philadelphia, Pa. (278), 7:30 p. m., Snellenburg's instrumental trio; 8, recital; 9, talk, Clara Zillessen; 9:10, recital; 10:30, Billy Hayes and his Cathay Tea Garden dance orchestra.
WDWF, Providence, R. I. (440.9), 8:30 p. m., Arcadia orchestra.
WEAF, New York, N. Y. (491.5), 4-4:10 p. m., Edna Josephs, pianist; 4:10-4:20, Clementine E. Woisard, contralto; 4:20-4:25, Edna Josephs; 4:25-4:30, Clementine E. Woisard; 4:30-5, women's program; 6-7, dinner music, Waldorf-Astoria; 7-7:10, Rudolph Joskowitz, violinist; 7:10-7:30, Columbia university lecture; 7:30-7:45, Rudolph Joskowitz; 7:45-8, Jack Nelson, entertainer; 8-8:10, talk, Bank of America; 8:10-8:30, Tollefsen trio; 8:30-9, Gold Dust Twins; 9-10, Eveready hour; 10-11, grand opera, "The Bohemian Girl" by WEAF grand opera company; 11-12, dance music.
WEBJ, New York, N. Y. (233), 7-7:45 p. m., Bert Roborn's society orchestra; 7:45-8, Edith Law, soprano, accompanied by Alice Law; 8-8:10, railroad talk, G. T. Geer; 8:15-8:45, Awyon Comedy Four; 8:45-9, Bernard Fromensen, tenor; Norman Hennefeld, pianist.
WEEI, Boston, Mass. (370.2), 7:45 p. m., musicale; 8, WEAF musical; 8:30, Gold Dust Twins; 9, Eveready hour; 10, WEAF grand opera company.
WFI, Philadelphia, Pa. (394.5), 1 p. m., Bellevue Stratford roof garden trio; 3, Caroline Hoffman, pianist; readings; 6:45, Bellevue Stratford roof garden trio, direction Harold Micklin; 8, concert from WEAF; 8:30, Gold Dust Twins; 9, Eveready hour.
WGBS, New York, N. Y. (315.6), 3-3:10 p. m., graphology talk, Louise Rice; 3:10-3:20, Ernest Scohfield, baritone; 3:20-3:30, "Household Economist," A. Louise Fillebrown; 3:30-3:40, Ernest Schofield; 3:40-3:50, piano lessons, Dr. Alfred G. Robyn; 3:50-4, Ernest Schofield; 6-6:30, Uncle Geebee; 7:30-7:40, Mario Alvarez, tenor; 7:45-8, Eleanor Van Der Car, soprano; 8-8:15, Julius Seebach, baritone; 8:15-8:30, Marguerite McCann, soprano; 8:30-9, dance instruction, Mikhail Mordekin; Rachael Bodenstein, pianist; 9-10, program, Sibyl Sammis MacDermid Studios; 10-10:30, Isadore Gorn, pianist; Anita Priest, contralto; 10:30-11, Jimmy Kemper and Leo Fletcher.
WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 8-11, jointly with WEAF, including Tolefsen trio, Gold Dust Twins, Eveready hour and the opera, "The Bohemian Girl."
WHAR, Atlantic City, N. J. (275), 8 p. m., Seaside hotel trio; 9, Shelburne hotel concert orchestra; 11, Strand theater.
WHN, New York, N. Y. (360), 12:30-1 p. m., organ recital, Loew's Lexington theater; 2:15-4, vaudeville and orchestra, Loew's State theater; 7:15-7:30, Colonial Aces; 7:30-8, Will Oakland's Chateau Shanley; 9:30-10, Palisades Amusement Park orchestra; 11:30-12, Club Alabam orchestra.
WIP, Philadelphia, Pa. (508.2), 3 p. m., "Song of the Surf;" 3:30, Comfort's Philharmonic orchestra; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime stories; Pearl Goodman, pianist; 8, Comfort's Philharmonic orchestra; 8:45, "Song of the Surf;" 8:50, Veselli's band; 10:05, moving picture talk, Eli M. Orowitzi; 11, Howard Lanin's dance orchestra.
WJAR, Providence, R. I. (305.9), 8:30 p. m. Gold Dust Twins; 9, Eveready hour.
WJY, New York, N. Y. (405.2), 8:15-8:30 p. m., "Camera Tales from the Zoological Park," Elwin R. Sanborn.
WJZ, New York, N. Y. (454.3), 1-2 p. m., Nathan Aba's Hotel Pennsylvania orchestra; 4:30-5:30, Bernhard Levitow's Hotel Commodore tea orchestra; 5:30-6, daily reports; 7-7:15, Frank Dole's talk on dogs; 7:15-8, Joseph Strissof's Hotel Vanderbilt orchestra; 8-8:10, Wall Street Journal review; 8:10-8:30, NYU Air college; 8:30-9:30, program from Landay hall.
WLIT, Philadelphia, Pa. (394.5), 11 a. m., organ recital, Stanley theater; 12:02, daily almanac, Stanley theater organ recital; 12:30, Jimmy Jones' Elks' club dance orchestra; 2, Arcadia cafe concert orchestra; 4:30, Marcella North, pianist.
WMCA, New York, N. Y. (341), 11-12 a. m., Ida Bailey Allen's home-making hour; 4:45-4:55 p. m., beauty talk, Madam Belle; 6:30-7, Carolinians' orchestra; 7-7:30, "Jack Wilbur's Personalities;" 10-11, Chiropractic hour of music; 11-12, Ernie Golden and his Hotel McAlpin orchestra.
WNYC, New York, N. Y. (526), 7-7:25 p. m., dance program; 7:25-7:30, baseball results; 7:35-7:50, talk, Mayor John F. Hylan; 7:50-10:15, concert program from studio.
WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Golden's crystal tea room orchestra; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's roof garden orchestra.
WOR, Newark, N. J. (405), 6:30-7 p. m., Man in Moon; 7:15-7:30, sports talk.

Eastern Standard or Central Daylight Saving Time Stations

KYW, Chicago, Ill. (536), 6-6:30 p. m., Congress hotel; 7-7:20, Chicago Musical college; 7:20-7:45, speeches, auspices American Farm Bureau Federation; 7:45-8:30, musical program; 9-10:30, evening at home.
WBBM, Chicago, Ill. (226), 8-12 midnight, Marldean Borresen, baritone; Sunset male quartet; Crillon orchestra; Samovar orchestra; Sandy Meek, Scotch tenor; Lester Kelsey; Harry Sosnik, pianist; Albert Blaha, concertina soloist; Crillon orchestra; Al Furry and Frank Johnson; Twesme's Honky Tonk Gloom Chasers; Dave Nudelman; Cort Banks, ukulele; Charlie Garland, pianist.
WCEE, Elgin, Ill. (275), 10:30-12 midnight, Charlene Star midnight dance program, Joe Rudolph and the Boss' Own orchestra.
WCX, Detroit, Mich. (516.9), 2:30 p. m., band concert, Belle Isle; 6, dinner concert; 7:30, band concert, Belle Isle; 8:30, musical program; 10, the Red Apple club.
WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Vincent H. Percy, organist; 8-11, music.
WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., Oriole concert orchestra; Lydia Lochner, contralto; Schubert trio; musical bits, Riviera theater; 9:30-10:30, Oriole dance orchestra; Frank Bordner, baritone; Jack Penewelt, twin guitarist; Lydia Lochner, contralto; 11:30-1 a. m., Oriole dance orchestra; Frank Bordner, baritone; Spanish troubadours; Sandy Meek, tenor; Jack Penewell, twin guitarist.
WGES, Oak Park, Ill. (250), 5-7 p. m., Katherine Forbes, soprano; John Stamford, tenor; Edna Wallace, soprano; 10:30-1, Sandy McTavish; Rudolph Hess, comedians; Coyne Electrical school serenaders; Paramount orchestra.
WGN, Chicago, Ill. (370.2), 2:30 p. m., artist series, Lyon & Healy; 6:30-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, studio program; 10:30-11:30, Drake hotel Terrace Garden program.
WGY, Schenectady, N. Y. (379.5), 5:30 p. m., Hotel Van Curler orchestra; 5:20, "Getting Larger Crops of Better Apples," Harold B. Tukey; 6:35, "The Mason Wasp," L. A. Huguemont; 6:55, travel talk, from WJZ; 7:25, Rice string quartet; Helen Ford, contralto; 9:20, Bertha Schulman, soprano; Helen Mont, pianist; 10, Meyer-Davis dance orchestra WRC.
WHT, Deerfield, Ill. (399.8), 7 p. m., Borden Birthday party; Al Carney, organist; Dorothy Herman Blum, soprano; Edwin Kemp, tenor; Wilkens and Martens; Agatha Karlen, reader; Jelke Musical moments; 8:45, Riverview park ballroom orchestra; 10:30, Chicago Boosters; Al Carney, organist; Husk O'Hare's Red Dragon orchestra; 11, Ned Becker, comedian; Eleanor Gilmour, soprano; Jane McConnell, contralto; 11:30, Chicago Specialties; Johnny Black, pianist; 12:30, Al Carney, organist.
WIBO, Chicago, Ill. (226), 6-8 p. m., Sheppard Levine, tenor; Yolanda Schaumberger, soprano; Anna Alban, pianist; Phyllis Feingold, violinist; Mildred Perlin, reader; Carl Linner, pianist; Jack Sprat concert trio; 12-3, Dan Russo, Ted Fiorito, Harry Geise, Lew Butler, Sandy Meek, Harry Sosnik, Joe Allabough, Jack Penewell, Paul Small.
WJJD, Mooseheart, Ill. (302.8), 6:45-7:15 p. m., Belmont hotel trio; 7:15-8, Mooseheart concert band; "Child Care," M. P. Adams; 10:30-1, Charley Straight and his orchestra; Albert F. Brown, organist.
WLS, Chicago, Ill. (344.6), 6:30 p. m., Ralph Emerson, organist; Martha Meier, contralto; 7:15, Rex's Cornhuskers; 7:45, lullaby time; 8, recital, Virginia Lane, mezzo-soprano; Leo Braverman, violinist; Alice Rochell, pianist; E. Warren K. Howe, director; 8:45, WLS theater, "Othello"; 9, R. F. D. program; music; 10, Williamson Brothers, string musicians; 10:10, Nubs Allan, contralto; 10:20, Rex's Cornhuskers; 10:30, WLS Harmony trio; 11:20, Solemn Old Judge's program; Joe Bren's minstrels; 12-1 a. m., revue.
WLW, Cincinnati, Ohio (422.3), 4 p. m., student recital, classes of Leo Stoffregen and William Kyle; 6:30, dinner concert, instrumental trio: violin, cello and piano;Gene Johnson, organ soloist; 8, special program, Hotel Gibson Roof Garden in honor of annual convention and banquet of distributors of Crosley Radios and Musicones: Hotel Gibson orchestra, Robert Visconti, director; two solos, Robert Alter, Vox-Ferro (hand saw) virtuoso; talk, Powel Crosley, Jr.; duet for soprano and contralto; pianologues, Tom Parker; The Formica Concert Orchestra, William Stoess, director; Mary Barbara, "The Sweetheart of Radio," Marimba artist, Alfred LeBrun; Formica orchestra; songs, Bruce Wright; Robert Alter trio; The Famous Lyric male quartet; the honorable Senator Schultz in "Discusting Tings;" Crosley instrumental trio; Charles Leroy Wells, imitator and whistler, musical accompaniment by Hodge and Todd of Sidney, Ohio; Hello Folks, distributors of Crosley Radios and Musicones.
WMAQ, Chicago, Ill. (447.5), 4 p. m., baseball scores; 6, Chicago theater organ; 6:30, Jack Chapman's orchestra; 8, Jack Chapman; 8:30, program, Grant Hadley; 9:30, Chapman's orchestra.
WMBB, Chicago, Ill. (250), 7-8:30 p. m., semi-classical program; Trianon ensemble; Andrew DuParry, tenor; Hazel O'Neil, soprano; Wayne King, saxophonist; Albert Caestaker, cellist; Lindsey McPhail, pianist; 8:30-10:30, popular program; Trianon orchestra; Fisher and Smith, Harmony clowns; Cecil and Esther Ward, Hawaiian guitarists; Clyde Hager delineator; Charles Agne, marimba soloist, Trianon syncopators.
WMBF, Miami Beach, Fla. (384.4), 6:30-7 p. m., Fleetwood Radio orchestra; 7-7:30, Fleetwood Radio orchestra; 10-12, dance music, Fleetwood Radio orchestra.
WORD, Batavia, Ill. (275), 8:30 p. m., International Sunday school lesson; 9, Elmer J. Jacobs, pianist; E. H. Berger, violinist; Walter Dieckman, baritone; C. L. Coombs, tenor.
WQJ, Chicago, Ill. (447.5), 7-8 p. m., dinner concert, Ralph Williams and his Rainbo Gardens orchestra; Otto A. Moore, baritone; La Verne Hanson, pianist; Edith Dady, soprano; 10-1, Ralph Williams and his Rainbo Gardens Skylarks; Frank Blasco, boy tenor; Will Rossiter; Ila Shanabrook, soprano; Mack Sisters; Everett George Opie; 1-2, Ginger hour.
WSAI, Cincinnati, Ohio (326), 6:45, chimes; 7, Hotel Sinton instrumental trio; 8, Eveready hour of music; 9, Joan Aymer, soprano; Mitchell Dane, violinist; Mabel Tatman, accompanist; Mrs. Grace Clauve Raine, pianist.
WTAM, Cleveland, Ohio (389.4), 6-7 p. m., Hotel Statler concert orchestra.
WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., WTAS orchestra; Brock Sisters; Herbie Mintz; Violet Eaton.
WTIC, Hartford, Conn. (348.6), 6:50 p. m., baseball scores; 7, organ recital, Austin Organ company; 7:30, talk; 7:45, Travelers' Tower quintet; 8:45, dance music, Colt Park Municipal orchestra.
WWJ, Detroit, Mich. (352.7), 3 p. m., Detroit News orchestra; 6, dinner concert; 7, concert from New York.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (240), 5-6 p. m., Schmoller and Mueller program; 11-12:30 a. m., midnight rounders.
KFDM, Beaumont, Tex. (315.6), 7-7:30 p. m., children's program; 8-10:30, musical program.
KFVE, University, City, Mo. (240), 10 p. m., dramatic readings, uplift talks, Romaine Fielding.
KLDS, Independence, Mo. (441), 8 p. m., orchestra; ladies' quartet.
KSD, St. Louis, Mo. (545.1), 8 p. m., broadcasting Sophocles "Electra," Margaret Anglin, director.
KTHS, Hot Springs National Park, Ark. (374.8), 9:15 p. m., baseball results; 9:25-10:15, Whittington Park dance orchestra.
WCCO, Minneapolis-St. Paul, Minn. (416.4), 4 p. m., baseball scores; 4:05, readers' club; 6, baseball scores; 6:05, Biley's concert orchestra; 7-9, WEAF program; 9, baseball scores.
WDAF, Kansas City, Mo. (365.6), 6-7 p. m., Tell-Me-a-Story Lady; Plantation players; 11:45-1, Merry Old Chief; Carl Nordberg's Plantation players; Charles Dornberger's Kansas City Athletic club orchestra; Johnnie Campbell's Kansas City club orchestra.
WFAA, Dallas, Texas (475.9), 6:30-7:30 p. m., Hauulea School of Hawaiian music; 8:30-9:30, Melodie club; 11-12, Satisfied Five orchestra.
WHAS, Louisville, Ky. (399.8), 4 p. m., organ recital; readings, Courier-Journal, Louisville Times; 7:30-9, Carl Zoeller's Melodists.
WHO, Des Moines, Iowa (526), 7:30-9 p. m., Bankers' Life Radio orchestra, James Fitz, director.
WMC, Memphis, Tenn. (499.7), 8:30 p. m., musical program, Leroy Johnson; 11, frolic, organ recital, Harry O. Nichols.
WOAN, Lawrenceburg, Tenn. (282.8), 9 p. m., Vaughan Radio orchestra.
WOAW, Omaha, Nebr. (526), 5:45 p. m., public news period; 6, advice to lovelorn; 6:20, baseball; 6:25, dinner program, May Seed and Nursery company; 9, orchestra; 10, Carl Sibbert, tenor; Will Hetherington, violinist; Harry Bravlroff, pianist; 10:30, Francis Potter's Banjo orchestra; 12, Rialto midnite alarm.
WOC, Davenport, Iowa (483.6), 5:45-6 p. m., chimes concert; 6, baseball scores; 6:30-7, WEAF program, Gold Dust Twins; 7-8, Eveready hour, WEAF; 8-9, Keithsburg community band.

George Seaberg, the young pianist who has attracted much attention through his renditions of classical music at WEBH and WHT, is a pupil of Howard Wells and shows unusual talent. He may be heard this Wednesday at WHT.

(Continued on page 11)

Baseball Scores

TABULATED below is a time table of the stations giving baseball scores this week. Stations are divided into the different standard times in use. The hours are given in the kind of time in use at each listed station:

Atlantic or Eastern Daylight Saving Time Stations

Saturday, July 4: 4:30, WJZ; 5:30, WJZ; 6:40, WPG; 8, WJZ.
Monday, July 6: 4:30, WCAE; 7:15, WEEI; 7:25, WNYC.
Tuesday, July 7: 7:25, WNYC; 7:45, WEEI.
Wednesday, July 8: 7:25, WNYC; 7:45, WEEI.
Thursday, July 9: 7:25, WNYC; 7:45, WEEI.
Friday, July 10: 7:15, WEEI.

Eastern Standard or Central Daylight Saving Time Stations

Saturday, July 4: 2, WGY; 2:30, KDKA; 2:45, KDKA, WMAQ; 2:30, KDKA; 3, KDKA; 3:15, KDKA; 3:30, KDKA; 3:55, WWJ; 4, WMAQ; 4:15, 4:30, KYW; 4:45, 5, KDKA; 5:55, WTIC; 6, WGN, WLS; 6:50, WTIC; 7, KDKA; WTIC; 9:55, KDKA; 10, WREO.
Sunday, July 5: 6:30, WBZ; 6:55, WTIC; 9:50, WBZ.
Monday, July 6: 2, WRC; 2:45, WMAQ; 3:30, KDKA; 3:45, WEAR; 3:55, WWJ; 4, KDKA, WMAQ; 4:30, KYW; 5, KDKA; 5:55, WTIC; 6, WGN, WLS; 6:30, WBZ; 6:50, WTIC; 9:50, WBZ; 9:55, KDKA; 10, WREO.
Tuesday, July 7: 2, WRC; 2:45, WMAQ; 3, 3:30, KDKA; 3:45, WEAR; 3:55, WWJ; 4, WMAQ; 4:30, KYW; 5, 7, KDKA; 6, WGN, WLS; 6:30, WBZ; 9:50, WBZ; 9:55, KDKA; 10, WREO.
Wednesday, July 8: 2, WRC; 2:45, WMAQ; 3, 3:30, KDKA; 3:45, WEAR; 3:55, WWJ; 4:30, KYW; 5, WWJ; 6, WGN, WLS; 6:30, WBZ; 6:50, WTIC; 7, KDKA; 9:50, WBZ; 9:55, KDKA; 10, WREO.
Thursday, July 9: 2, WRC; 2:45, WMAQ; 3, 3:30, KDKA; 3:45, WEAR; 3:55, WWJ; 4:30, KYW; 5, KDKA; 6, WGN, WLS; 6:30, WBZ; 6:50, WTIC; 9:50, WBZ; 9:55, KDKA; 10, WREO.
Friday, July 10: 2:30, KDKA; 2:45, WMAQ; 3, 3:30, KDKA; 3:45, WEAR; 3:55, WWJ; 4, WMAQ; 4:30, KYW; 5, KDKA; 6, WGN, WLS; 6:30, WBZ; 6:50, WTIC; 9:50, WBZ, 9:55, KDKA; 10, WREO.

Central Standard Time Stations

Saturday, July 4: 3:15, WHAS; 3:30, WDAF; 4:30, WDAF, WFAA; 5, WDAF; 6, WCCO, WDAF, WOC; 6:20, WOAW; 6:30, WSMB; 9, WCCO; 9:15, KTHS.
Sunday, July 5: 3:30, 4, WDAF; 4:30, WFAA; 5, WDAF; 5:05, WOS; 6:45, WOC; 9, WCCO; 9:15, KTHS.
Monday, July 6: 3:15, WHAS; 3:30, WDAF; 4, WCCO, WDAF; 4:30, WFAA; 5, WDAF; 5:05, WOS; 6, WCCO, WDAF, WOC; 6:30, WOAW, WSMB; 9:15, KTHS; 9, WCCO.
Tuesday, July 7: 3:15, WHAS; 3:30, WDAF; 4, WCCO, WDAF; 4:30, WFAA; 5, WDAF; 6, WCCO, WOC; 6:20, WOAW; 6:30, WSMB; 9:15, KTHS; 9, WCCO.
Wednesday, July 8: 3:15, WHAS; 3:30, WDAF; 4, WCCO; 4:30, WDAF, WFAA; 5, WDAF; 5:05, WOS; 6, WCCO, WDAF, WOC; 6:30, WSMB; 9:15, KTHS; 9, WCCO.
Thursday, July 9: 3, WDAF; 3:15, WHAS; 4, WCCO, WDAF; 4:30, WFAA; 5, WDAF; 6, WCCO, WDAF, WOC; 6:20, WOAW; 6:30, WSMB; 9, WCCO; 9:15, KTHS.
Friday, July 10: 3, WDAF; 3:15, WHAS; 4, WCCO, WDAF; 4:30, WFAA; 6, WCCO, WDAF, WOC; 6:20, WOAW; 6:30, WSMB; 9:15, KTHS; 9, WCCO.

Mountain Standard Time Stations

Monday, July 6: 6, KOA.
Tuesday, July 7: 6:30, KOA.
Wednesday, July 8: 6. KOA.
Thursday, July 9: 6:30, KOA.
Friday, July 10: 6, KOA.

Pacific Standard Time Stations

Saturday, July 4: 2-5, KNX; 6, KFOA; 6:15, KPO.
Sunday, July 5: 6:30, KPO.
Monday, July 6: 6, KFOA; 6:15, KPO; 6:45, KGO; 7:30, KGW.
Tuesday, July 7: 6, KFOA; 6:15, KPO; 6:45, KGO; 7:30, KGW.
Wednesday, July 8: 2, 3, 4, KNX; 6, KFOA; 6:15, KPO; 6:45, KGO; 7:30, KGW.
Thursday, July 9: 5:30; KFOA; 6:45, KGO; 7:30, KGW.
Friday, July 10: 2, 3, 4, KNX; 6, KFOA, KPO; 6:45, KGO; 7:30, KGW.

BELLE ISLE BAND CONCERTS AT WCX

Tuesday, July 7

(Continued from page 10)

WSB, Atlanta, Ga. (428.3), 8-9 p. m., Conklin's Harmonizers; 10:45, program.
WSMB, New Orleans, La. (319), 6:30-7:30 p. m., dinner musicale.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467), 5:30-6 p. m., Examiner's matinee musicale; 6, McDaniel's nightly doings; 6:45, radiotorial talk; 7-8, program, Hills Bros., with Hills Bros.' dinner dance orchestra, Starr Russell, the blue streak of Radio; 8-9, Examiner; Hugo Hamlin's Personality Kids; 9-10, variety program by KFI burlesquers; 10-11, Packard Ballad hour with Ashley sisters, Ethyl Talmadge, Bud Jamison and others.
KFOA, Seattle, Wash. (454.3), 6-6:45 p. m., Olympic hotel concert orchestra; 6:15-8:15, Rhodes Department store program; 8:30-10, Times studio program.
KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour, Big Brother of KFWB; 7-8, program, Westerns' Super-service garage; 8-9, program, Union Oil Company of California, Union Oil dance orchestra, Charles Beauchamp, tenor; 9-10, KFWB novelty program of musical oddities; 10-11, Warner Bros. frolic, direction Charlie Wellman.
KGO, Oakland, Calif. (361.2), 4-5:30 p. m., concert orchestra, Hotel St. Francis; 6-7, Sherman, Clay & company; 8, KGO Little Symphony orchestra; Arthur S. Garbett, musical interpretative writer; Virginia Treadwell, contralto; 10-1 a. m., Henry Halstead's orchestra.
KGW, Portland, Ore. (491.5), 9-10 p. m., concert, Woolach and Powell; 10-12, Herman Kenin's Multnomah hotel dance orchestra.
KHJ, Los Angeles, Calif. (405.2), 5:30-6 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog, weekly visit of Queen Titania and Sandman from Fairyland, Louis F. Klein, auto-harp and harmonica, Chas. Leslie Hill, readings, Uncle John; 8-10, program, Walker's Fifth Street Store, arranged by J. Howard Johnson; 10-11, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.
KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio, Sid Ziff's sports talk; 6:15, travel talk, W. F. Alder; 6:30-7:30, dinner hour music; 7:30, style talk, Myer Siegel, Jr., 8-10, KNX feature program; 10-12, movie night at the Ambassador, Abe Lyman's Cocoanut Grove dance orchestra.
KPO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30-3:30, matinee program; 3:30-4:30, Palace hotel concert orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:15, children's hour stories; 6:15, baseball; 6:30-6:40, Ye Towne Cryer, Amusement Information service; 6:40-7, States restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, program, Jack Thomas, director; 9-9:15, golf instructions, Harold Sampson; 9:15-10, Theodore J. Irwin, organist; 10-11, Johnny Buick's Cabirians.

Blackstone string quintet; 8:30-9:30, studio program; 10:30-11:30, Drake Hotel Terrace Garden program.
WGY, Schenectady, N. Y. (379.5), 5:30 p. m., children's story; 5:45, Albany Strand theater orchestra; Floyd Walters, organist; 6:30, half hour feature, Book of Knowledge.
WHT, Deerfield, Ill. (399.8), 7 p. m., Kitchen Klenzer Klassics; Oscar Heather, tenor; 7:30, Herman Bing, baritone; Pat Barnes, tenor; Jelke musical; 8, Pauline Sachs, soprano; 8:45, Elmer Kaiser's Riverview Park ballroom orchestra; 10, numbers from studio; 10:30, Al Carney, organist; banjo trio; 11, Husk O'Hare's Red Dragon orchestra; Myrtle Lansing, soprano; Fred Agard, tenor; Lydia Lockner, contralto; 12:30, Al Carney, organist.
WIBO, Chicago, Ill. (226), 6-8 p. m., L. F. Kustman, baritone; Dorothy Rae, soprano; Jack Sprat concert trio; Tony Corcoran, tenor; Margaret Garrity, pianist; 10-12, Harry Geise, Marie Lenters, Clarence Theders, Joe Allabough.
WJJD, Mooseheart, Ill. (302.8), 6:45-7:15 p. m., dinner hour concert, Belmont hotel trio; 7:15-8, Mooseheart Philharmonic orchestra; Mooseheart Junior band; "Child Care," M. P. Adams; 10:30-1 a. m., Charley Straight and his orchestra; Albert F. Brown, organist.
WLS, Chicago, Ill. (344.6), 6:30 p. m., Ralph Emerson, organist; Martha Meier, contralto; 7:15, Rex's Cornhuskers; 7:45, lullaby time, Aunt Martha and Uncle George; 8, request numbers, Rex's Cornhuskers; 8:15, Lone Scout program; 8:45, WLS theater; 9, farm program, music; 10, classical hour, Jean St. Anne, French baritone; Koby Sirinsky, Russian violinist; William Hoke, lyric tenor; 11-11:30, Rex's Cornhuskers in request program.
WLW, Cincinnati, Ohio (422.3), 4 p. m., "Shut In" program; 7, dinner hour concert, Hotel Gibson orchestra, directed by Robert Visconti; 7:20, National Farm Radio Council talk; 10, program of ensemble and solo, Orpheus Instrumental trio; the Cino male quartet; 11, Johanna Grosse.
WMAQ, Chicago, Ill. (447.5), 4 p. m., baseball scores; 6, Chicago theater organ recital; 6:30, Jack Chapman's orchestra; 8, Chapman's orchestra; 8:30, Northwestern university lecture; 8:45, WMAQ players.
WMBB, Chicago, Ill. (250), 7-8:30 p. m., operatic semi-classical program; Trianon ensemble; Hazel O'Neil, soprano; Rebecca Agulnick, pianist; Charles Agne, trumpet soloist; Barnard Senescu, violinist; 8:30-10:30, popular program; Trianon orchestra; Fisher and Smith, harmony clowns; Florence Tenny; Jack Murnane, baritone; Morey Alswang, banjoist; Geraldine Doyle, soprano; Harold Stokes, accordionist; "The Bandelero," presentation.
WMBF, Miami Beach, Fla. (384.4), 6:30-7 p. m., Fleetwood Radio orchestra; 7-7:30, Fleetwood Radio orchestra; 10-12, dance music, Fleetwood Radio orchestra.
WORD, Batavia, Ill. (275), 8:30 p. m., services; I. B. S. A. choral singers; Bible lecture, Calvin H. Swingle.
WQJ, Chicago, Ill. (447.5), 7-8 p. m., Ralph Williams and the Rainbo Gardens orchestra; Cecillia Arends, violinist; Johanna Arends, accompanist; Kenneth Sterling, tenor; Lavine Price, pianist; Mrs. Harriet Michael; 10-1 a. m., Ralph Williams and his Rainbo Garden Skylarks; melodians; Paul Small, tenor; Gail Bandell, contralto; Williamson Brothers and Phil; Fred A. Jacobsen; Carence Theders, tenor; Rick, Whalen and Gardner; 1-2, Ginger hour.
WSAI, Cincinnati, Ohio (326), 10 p. m., program from WSAI; Mary Stephan, soprano; Mrs. Emma Seebaum, contralto; 11, Congress Playing Card string quartet.
WTAM, Cleveland, Ohio (389.4), 6-7 p. m. Music Box orchestra; 8-10, public auditorium organ recital; 10-11, Hollenden hour, Carl Rupp and his Hotel Hollenden orchestra; 11-1, Euclid Beach studio dance music.
WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Joe Rudolph and the orchestra; Herbie Mintz; Gail Bandell; Phil Wilcox.
WTIC, Hartford, Conn. (348.6), 6:50 p. m., baseball scores.
WWJ, Detroit, Mich. (352.7), 3 p. m., Detroit News orchestra; 6, dinner concert; 8, Detroit News orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (240), 7:30-9:30 p. m., Waikiki trio; Colonians orchestra; Loren Mills, baritone; Richard Low, baritone.
KFNF, Shenandoah, Iowa (266), 7:30 p. m., concert, Council Bluffs, Mrs. J. F. Merrifield, director.
KFUO, St. Louis, Mo. (545.1), 9:15 p. m., address, "The Bible and Science."
KFVE, University City, Mo. (240), 10 p. m., classical song recital, Joan Arliss.
KSD, St. Louis, Mo. (545.1), 7:30 p. m., Silverman's orchestra.

(Continued on page 12)

Mrs. Frederick Crowe (above) has been appointed program director and hostess of KPO, San Francisco. Mrs. Crowe has just finished her second term as president of the Pacific Musical society. As she is a pianist of note, she will be heard often at this station. Leon Kristel (left), is the amusing entertainer heard often at WIP, Philadelphia. Wilfred Glenn, bass (right), is an Eveready artist and sings during their hour Tuesdays at WEAF.

Wednesday, July 8

Wednesday, silent night for: CNRT, KFDM, KGO, KLDS, WBAV, WBBR, WCBD, WDWF, WFAA, WFI, WGBS, WGY, WHAR, WHAZ, WMAK, WMC, WOAW, WORD, WPG, WRBC, WRC, WREO, WSUI, WTIC.

Atlantic or Eastern Daylight Saving Time Stations

WAHG, Richmond Hill, N. Y. (315.6), 7:30-7:45 p. m., sports talk, Thornton Fisher; 7:45-8, Queenie M. Goldman, pianist; 8-8:15, the Davison Sisters; 8:15-8:30, Stellario Cambria, mandolinist; 8:30-8:45, Arthur J. Henley, baritone; 8:45-9, Herrman string trio; 9-9:15, the Davison Sisters; 9:15-9:30, Queenie M. Goldman; 9:30-9:45, Stellario Cambria; 9:45-10, Herrman string trio; 10-10:15, Austin Boutin, reader; 10:15-10:55, dance music; 10:55-11:05, time signals and weather report; 11:05-11:30, dance music.
WBZ, Springfield, Mass. (333.3), 6 p. m., popular piano selections, Vincent Breglio; 6:15, Hotel Kimball trio concert; 6:30, baseball results; 7:30, nature story, Thornton N. Burgess; 8, program; 9, Troy P. Gorham, baritone; double male quartet; 9:40, Civil Service examination information; 9:50, baseball scores.
WCAE, Pittsburgh, Pa. (461.3), 6:30 p. m., dinner concert, William Penn hotel; 8:30, S. & W. double quartet; 11, Loew's Aldine theater.
WCAU, Philadelphia, Pa. (278), 6:30 p. m., Billy Hayes and his Cathay tea garden dance orchestra.
WEAF, New York, N. Y. (491.5), 4-4:45 p. m., Landau's Blossom Heath serenaders; 4:45-5, "Life Saving and Swimming," Captain Charles Scully; 6-7, dinner music, Waldorf-Astoria; 7-7:30, services, United Synagogue of America; 7:30-8, joint recital, David B. Croswell, baritone; Lawrence Bradham, pianist; 8-8:30, concert, U. S. Navy band, direction of Lieutenant Charles Benter; 8:30-9, "Hong Kong, Gateway to the Ancient," Walter W. Allerton; 9-10, Ipana Troubadours; 10-11, Royal Little symphony; 11-12, Ben Bernie's Hotel Roosevelt orchestra.
WEBJ, New York, N. Y. (233), 7-8 p. m., Veterans of Foreign Wars band; 8:45-9, novelty songs, Al Wilson and Trixie Hicks, accompanied by Joe Fisher; 9-9:15, Kay Macrae, soprano; 9:15-10, Walter Siebert's Midnight serenaders.
WEEI, Boston, Mass. (370.2), 5:30 p. m., orchestra; 7, Big Brother club; 7:45, baseball scores; 8, Traveler Shoe concert; 8:30, Radio equipment concert; 9, musicale.
WFI, Philadelphia, Pa. (394.5), 1 p. m., Bellevue Stratford roof garden trio; 3, Loretta Kerk, pianist; 6:45, Bellevue Stratford roof garden trio.
WGBS, New York, N. Y. (315.6), 2-2:30 p. m., Cecil R. Kennedy, baritone; 3-3:10, "How to Place a Manuscript," Hugh Herbert; 3:10-3:20, Mary and Victoria Regalbute, pianists; 3:20-3:30, talk, Lillian Regan; 3:30-3:40, Mary and Victoria Regalbute; 3:40-3:50, reducing talk, Georgia Heffner; 3:50-4, Mary and Victoria Regalbute; 6-6:30, Uncle Geebee; 6:30-7:20, Palisadians orchestra; 7:20-7:30, business talk, Charles Franklin Jones.
WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, the Century orchestra; 9-10, recital, Charles Duff, the blind musician of Niagara Falls, Ont.; 10-10:30, recital, Mary Louise Conover, contralto; 11-1 a. m., supper-dance music, Vincent Lopez' Hotel Statler dance orchestra, Harold Gieser, director.
WHN, New York, N. Y. (360), 2:15-2:45 p. m., Jimmy Clark and his White Way entertainers; 2:45-3:15, Carl White's serenaders; 7-7:30, Harry Richman and his Club Richman entertainers; 7:30-8, E. J. Dantzig's Versatile Society orchestra; 9:30-10, Palisades Amusement Park orchestra; 10:30-11, Roseland dance orchestra; 11:30-12, Silver Slipper revue.
WIP, Philadelphia, Pa. (508.2), 3 p. m., "Song of the Surf"; 3:30, Comfort's Philharmonic orchestra; 6, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime stories.
WJAR, Providence, R. I. (305.9), 7:30 p. m., program from New York.
WJZ, New York, N. Y. (454.3), 1-15-2 p. m., luncheon music; 4:30-5:30, Hotel Belmont tea music; 5:30-6, daily reports; 7-8, Cafe Boulevard orchestra; 8-8:10, Wall Street Journal review; 8:10-8:30, N. Y. U. Air college; 8:30-9:30, Edison hour; 10:30-11:30, Billy Wynne's Greenwich Village Inn orchestra.
WKAQ, San Juan, P. R. (340.7), 8-10 p. m., Municipal band concert.
WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; 12:30, Jimmy Jones' Elks club dance orchestra; 2, Arcadia cafe concert orchestra; 7:30, Dream Daddy's bedtime stories; 8, MacClellan quartet; 9, automobile talk; 10, Arcadia cafe dance orchestra.
WMCA, New York, N. Y. (341), 4-5 p. m., Original Indiana Five orchestra; 6:30-7:30, Ernie Golden and his Hotel McAlpin orchestra; 7:30-8, "Along Broadway with George D. Lottman"; 9:15-10:15, Low Krueger's Aladdin dance orchestra; 12-1 a. m., "Broadway Bright Lights" under direction of Leo Friedman.
WNYC, New York, N. Y. (526), 5-5:30 p. m., elementary lessons in Spanish, V. Harrison Berlitz; 5:30-6, advanced lessons in Spanish; 6:20-6:30, "Home Economics," Mrs. Louis Reed Welzmiller; 6:30-6:50, Uncle Dave Cory; 6:50-7, market high spots; 7-7:25, dance music; 7:35-7:50, talk, Mayor John F. Hylan; 8:15-10:15, band concert, the Mall, Central Park; 10:15-10:30, popular songs.
WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Golden's crystal tea room orchestra; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's roof garden orchestra; 8, concert from WEAF; 10:30, A. Candelori's roof garden dance orchestra.
WOR, Newark, N. J. (405), 6:15-7:15 p. m., Tivoli theater orchestra; 7:15-7:30, sports talk; 7:30-8, Vincent Lopez' orchestra; 8-8:10, "Topics of the Day," Spencer Armstrong; 10:15-11, Jascha Gurewich saxophone ensemble; 11:15-12, Ciro's orchestra.

Eastern Standard or Central Daylight Saving Time Stations

KYW, Chicago, Ill. (536), 6-6:30p. m., Congress hotel; 6:33-6:43, "Entertaining Plans," Vivette Gorman; 7-8, Frances Gordon, soprano; Robert Hene, baritone; Thomas B. Stephenson; 9-11:30, midnight revue.
WBBM, Chicago, Ill. (226), 8-10 p. m., Maurice Silverman, tenor; Crillon orchestra; Dave Nudelman; Albert Blaha, concertina soloist; Marie Winters, accompanist; Samovar orchestra.
WCEE, Elgin, Ill. (275), 10:30-12, midnight, Joe Rudolph and the Boss's Own orchestra; Frank Morris, Polly Willis, John Poat, Eddie Cavanaugh.
WCX, Detroit, Mich. (516.9), 2:30 p. m., band concert, Belle Isle; 6, dinner concert; 7:30, band concert, Belle Isle; 8:30, musical program.
WEAO, Columbus, Ohio (293.9), 8 p. m., Richwood, Ohio, entertainers.
WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Hotel Cleveland orchestra.
WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., Oriole concert orchestra; Florence Behrend, soprano; musical bits, Riviera theater; Lewellyn Jones, talk; 9:30-10:30, Oriole dance orchestra; Robert York, tenor; Spanish troubadours; Correll and Gosden, songsters; 11:30-1 a. m., Oriole dance orchestra; Robert York, tenor; Correll and Gosden, songsters; Spanish troubadours.
WGES, Oak Park, Ill. (250), 5-7 p. m., Margaret Hayes, soprano; Arlow Thorpe, pianist; Louise Wise, soprano; 10:30-1 a. m., Andrea Scarlatti, tenor; Ralph Olson; Cavaliers' orchestra; Coyne Electrical school serenaders; Moon light serenaders.
WGN, Chicago, Ill. (370.2), 2:30 p. m., artist series, Lyon & Healy; 6:30-7:30, Drake concert ensemble,

WGN TO BROADCAST TENNESSEE EVO

Index to Popular Concerts

TABULATED below is a time table of the stations giving popular concerts this week. Stations are divided into the four different standard times in use. The hours are given in the kind of time in use at each listed station. By using this table as an index and referring to the complete programs below, full information will be obtained.

Popular

Atlantic or Eastern Daylight Saving Time Stations

Saturday, July 4: 7:30, WHAR; 8:15, WEAF; 8:45, WIP.
Sunday, July 5: 7:20, WCAE, WEAF, WEEI; 9, WNYC; 10, WHN, WNYC.
Monday, July 6: 6:45, WFI; 7:30, WEEI, WHN; 7:45, WAHG; 8:15, WAHG, 9, WEAF, WMCA, WOR; 9:15, WAHG, 10, WMCA; 10:30, WMCA; 11, WOR; 12, WHN.
Tuesday, July 7: 6:45, WFI; 7:15, WHN; 7:30, WCAU, WHN; 7:45, WEAF; 8, WHAR; 8:10, WEAF; 8:15, WEBJ; 8:30, WCAE, WEEI, WFI; 8:45, WIP; 9, WGBS; 10, WGBS; 10:30, WGBS.
Wednesday, July 8: 6:45, WFI; 7, WHN; 8, WAHG; 8:45, WEBJ; 9:15, WEBJ; 10:15, WNYC; 11, WCAE; 12, WMCA.
Thursday, July 9: 6:30, WHN; 6:45, WFI; 7:30, WEAF, WHAR; 8, WHAR, WHN; 8:45, WIP; 10:15, WHN; 10:30, WJZ.
Friday, July 10: 6:30, WGBS; 6:45, WFI; 7, WGR; 7:45, WAHG; 8, WEAF, WEEI, WLIT; 8:30, WEBJ; 8:45, WAHG, WLIT; 9, WOO; 9:30, WHN; 10, WLIT; 10:30, WEAF.

Eastern Standard or Central Daylight Saving Time Stations

Saturday, July 4: 8, WBBM, WHT, WLS, WTAS; 8:30, WMBB; 9, WBBM, WLS; 9:30, WMBB, WTAS; 10, WBBM WKRC, WQJ; 10:30, WCEE, WGES, WHT, WJJD; 11, WBBM, WGES, WQJ; 11:30, WCEE, WJJD; 12, WHT, WQJ, WREO, WSAI; 1, WQJ.
Sunday, July 5: 6:20, WWJ; 8, WBBM, WTAS; 8:30, WBZ, WMBB; 9, WBBM, WTAS; 9:15, WHT; 9:30, WMBB; 10, WTAS; 10:30, WGES; 11, WGES, WTAS; 12, WBBM, WJJD; 1, WJJD.
Monday, July 6: 6, WBBM; 8, WLW, WTAS; 9, WTAS; 9:30, WHAZ; 10:15, WHT; 10:30, WCEE, WJJD; 11, WHT; 11:30, WCEE, WHT, WJJD; 12, WHT, WJJD.
Tuesday, July 7: 8, WBBM, WTAS; 8:30, WMBB; 9, WBBM, WHT, WTAS; 9:30, WEBH, WMBB; 10, WBBM, WLS, WQJ, WTAS; 10:30, WCEE, WEBH, WGES, WGN, WHT, WJJD, WLS, WQJ; 11, WBBM, WHT, WLS; 11:30, WCEE, WEBH, WGES, WHT, WJJD, WQJ; 12, WIBO, ,WLS; 12:30, WEBH, WJJD; 1, WIBO, WQJ; 2, WIBO.
Wednesday, July 8: 8, WEAO, WLS, WTAS; 8:30, WBBM, WMBB; 9, WBBM, WTAS; 9:30, WEBH, WMBB; 10, KYW, WHT, WIBO, WQJ, WSAI; 10:30, WCEE, WEBH, WGN, WHT, WJJD; 11, KYW, WGES, WHT, WIBO, WLS, WQJ, WSAI; 11:30, WCEE, WEBH, WJJD; 12, WGES, WQJ; 12:30, WEBH, WJJD; 1, WQJ.
Thursday, July 9: 8, WBBM, WTAS; 8:30, WMBB; 9, WBBM, WTAS; 9:30, WEBH, WMBB; 10, WQJ, WTAS; 10:30, KYW, WEBH, WGN, WHT; 11, WHT, WQJ, WTAS; 11:15, WLW; 11:30, WEBH; 12, WIBO, WQJ; 12:30, WEBH; 1, WIBO, WQJ; 2, WIBO.
Friday, July 10: 8, WBBM, WTAS; 8:30, WBZ, WEBH, WMBB; 9, WBBM WTAS; 9:30, WMBB; 10, KYW, WEBH, WIBO, WLS, WMBB, WTAS; 10:15, WHT; 10:30, WCEE, WGN, WJJD, WQJ; 11, KYW, WEBH, WHT, WIBO, WLS; 11:30, WCEE, WJJD, WQJ; 12, WEBH, WIBO, WQJ; 12:30, WJJD; 1, WQJ.

Central Standard Time Stations

Saturday, July 4: 7, KSD; 8:30, WSWB; 9, KFRU, WOAW; 9:30, WSMB; 10, KFRU, KFVE; 10:45, WSB; 11, KFAB, KFRU, KFVE, WOAW; 11:45, WDAF.
Sunday, July 5: 9:30, WFAA.
Monday, July 6: 6:45, WCCO; 7:30, KFAB; 8, KFRU; 8:30, KFAB, WSMB; 9, KFRU; 9:30, WSMB; 10, WOAW; 10:45, WSB; 11:45, WDAF.
Tuesday, July 7: 6:30, WFAA, WOC; 8, WCCO, WSB; 10:30, KFRU, WOAW; 10:45, WSB; 11, KFAB, WFAA; 11:30, KFRU; 11:45, WDAF.
Wednesday, July 8: 7:30, KFAB, WHO; 8, KFRU; 8:30, KFAB, WSMB; 9, KFRU, WOAW; 9:30, WSMB; 10, KFRU; 10:45, WSB; 11:45, WDAF.
Thursday, July 9: 8, WCCO; 9, WFAA; 11:45, WDAF.
Friday, July 10: 6:30, WFAA; 7:30, KFAB; 8, WDAF; 8:30, KFAB; 9, WOAW; 10:45 WSB; 11, KFRU; 11:45, WDAF; 12, KFRU.

Mountain Standard Time Stations

Saturday, July 4: 8, KOA.
Sunday, July 5: 8-11, KFWA.
Monday, July 6: 8, KOA; 9, KFWA.
Tuesday, July 7: 6, KOA; 8, CNRR; 9, CNRR.
Wednesday, July 8: 8, KOA; 9, KFWA.
Thursday, July 9: 9, CNRC; 10, CNRC.
Friday, July 10: 8, KOA; 8:30, CNRC.

Pacific Standard Time Stations

Saturday, July 4: 6, KFOA, KHJ; 6:30, KNX; 6:45, KFOA; 7, KFI; 7:30, KFI, KHJ, KNX; 8, KFI, KGO; 8:15, KHJ; 9, KFI.
Sunday, July 5: 6:30, KHJ; 6:35, KPO; 7, KFI, KHJ, KNX; 8, KFI, KNX, KPO; 9, KFI, KGW, KNX.
Monday, July 6: 6, KFOA, KGW; 6:45, KFOA; 7:30, KFAE, KNX; 8, KFI; 8:30, KFAE; 9, KFI, KPO.
Tuesday, July 7: 6, KFOA, KHJ; 6:30, KNX; 6:40, KPO; 6:45, KFOA; 7, KFI; 7:45, KFWB; 8, KGO, KPO; 8:30, KFOA; 9, KGW; 9:15, KPO; 10, KGW.
Wednesday, July 8: 6, KFOA, KHJ; 6:45, KFOA; 7, KNX; 7:30, KFAE; 8, KFI, KNX, KPO; 8:30, KFAE, KFOA, KHJ; 9, KNX, KPO.
Thursday, July 9: 6, KFOA, KHJ; 6:30, KNX; 7, KFI; 8, KFI, KGW, KPO; 9, KFI, KNX, KPO.
Friday, July 10: 6, KFOA, KHJ; 6:15, KPO; 6:45, KFOA; 7, KFI; 7:30, KFAE, KNX; 8, KFI, KHJ, KNX; 8:30, KFAE; 9, KGW, KNX; 10, KFI.

Marvin Hankins is the saxo[phonist of the] famous Meyer-Davis New A[...] orchestra, which may be hea[rd] Friday nights from KTHS. [...] Westbrook is the organist of [...] theater orchestra, broadcasti[ng] through WMBB. Florine Pi[...] the staff pianist of the nev[...] Texas, station, KWWG, a[...] put Brownsville on the [...]

Wednesday, July 8

(Continued from page 11)

KTHS, Hot Springs National Park, Ark. (374.8), 9:15 p. m., baseball results; 9:25-10, New Arlington hotel orchestra, classical and ballad seections.
WCCO, Minneapolis-St. Paul, Minn. (416.4), 4 p. m., baseball scores; 6, baseball scores; 7, church services; 8, musical program; 9, baseball scores; 10, Dick Long's Nankin cafe dance orchestra; 11:30, organ recital, Eddie Dunstedter.
WDAF, Kansas City, Mo. (365.6), 6-7 p. m., Tell-Me-a-Story lady; Plantation players; 8-9:15, Star's Radio orchestra; 11:45-1 a. m., Merry Old Chief; Carl Nordberg's Plantation players; Charles Dornberger's Kansas City Athletic club orchestra.
WHAS, Louisville, Ky. (399.8), 3:15 p. m., baseball; 4, organ recital; 7:30-9, String division of the K. & I. Terminal Railroad orchestra; Sylvian trio.
WHO, Des Moines, Iowa (526), 6:30-7 p. m., orchestra; 7:30-9, Eleanor and Parmeley Daniels, marimba artists; Dodd-Peterson entertainers; 10:20-12, dance orchestra.
WOAN, Lawrenceburg, Tenn. (282.8), 9 p. m., Vaughan Radio orchestra; Vaughan male quartet.
WOC, Davenport, Iowa (483.6), 5:45-6 p. m., chimes concert; 6, baseball scores; 6:30-6:50, Sandman's visit, Val McLaughlin; 9-10, Erwin Swindell, organist; John McGreevy, baritone.
WSB, Atlanta, Ga. (428.3), 10:45 p. m., entertainment.
WSMB, New Orleans, La. (319), 6:30-7:30 p. m., dinner musicale; Oriole male quartet; 8-10:30, talks, entertainment.

Mountain Standard Time Stations

KFWA, Ogden, Utah (261), 9-11 p. m., old time music, KFWA trio; 11-12, Whoopus club.
KOA, Denver, Colo. (322.4), 8 p. m., Colorado Mountain club talk; Rialto theater, KOA players; Marjorie Nash, organist; Ralph Freese, tenor; Fred Schmitt and his Rialto theater orchestra; Ina Rains, soprano; Iris Ruth Pavey, reader; G. Ralph Crowder, pianist; Fred Schmitt, violinist.

Pacific Standard Time Stations

KFAE, Pullman, Wash. (348.6), 7:30-9 p. m., vocal duets, Aileen McQuire, Ruth Parr; Vernon Willie, saxophonist; Helen Russum, reader; Dorothy Hutchison, cellist; "Treating of Wounds of Animals," Dean E. E. Wegner; book talk, Alice Lindsey Webb; "July and the Farm Markets," R. M. Turner.
KFI, Los Angeles, Calif. (467), 5:30-6 p. m., Examiner's matinee musicale; 6, McDaniel's nightly doings; 6:45, radiotorial talk; 7, Nick Harris's detective story; 7:20, talk; 7:30, half hour dance music; 8-9, program, Ventura Refining company; 9-10, Examiner: Wampas movie program, Wampas club dance orchestra; 10-11, Patrick-Marsh dance orchestra, Betty Patrick, soloist.
KFOA, Seattle, Wash. (454.3), 6-6:45 p. m., Olympic hotel concert orchestra; 6:45-8:15, Hopper-Kelly company studio program; 8:30-10, Times studio program.
KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour, Big Brother of KFWB; 7-8, program, Beverlyridge company, Beverlyridge Collegians dance orchestra; 8-9, Miller's International Hawaiian string trio, Ray Kellogg and Bill Hatch, the Jazz twins; 9-10, KFWB popular song hour, Frances St. George, the jazzmania girl, and others; 10-11, Warner Bros. frolic, direction Charlie Wellman.
KGO, Oakland, Calif. (361.2), 3-4 p. m., musical program, speaker, Cora L. Williams institute; 4-5:30, corcert orchestra, Hotel St. Francis; 6-7, Ben Black's orchestra.
KGW, Portland, Ore. (491.5), 6-7 p. m., Jackie Souder's orchestra; 8-9, Oddfellows program; 9-10, Who's Your Hoosier concert, Charles F. Berg; 10-11, Sherman, Clay and company.
KHJ, Los Angeles, Calif. (405.2), 5:30-6 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog, Dick Winslow, juvenile reporter, Bettiemae Pfefferkson, eight-year-old singer, Baby Muriel MacCormac, Mickey McBan, screen starlets; 8, Dr. Mars Bumgardt, scientific lecturer; 8:30-10:30, program, Model Grocery company of Pasadena, Naomi Sweeney Brown, California mocking bird; 10:30-11:30, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.
KNX, Hollywood, Calif. (336.9), 5:30-6 p. m., Wurlitzer pipe organ studio, Sid Ziff's sports talk; 6:15, travel talk, W. F. Alder; 6:30, talk on insect life, Harry W. McSpadden; 7-8, Ambassador hotel concert orchestra, Josef Rosenfeld, director; 8-10, KNX feature program; 10-11, program, Hercules Oil company.
KPO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30-3:30, matinee program; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:15, children's hour stories; 6:40-7, Waldemar Lind and the States restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, program, May Clark Burns, director; 9 10, Goodrich Silvertown Cord orchestra; 10-11, Waldemar Lind, States restaurant orchestra.

Thursday, July 9

Thursday, silent night for: CNRT, KFAB, KFAE, KFDM, KFOA, KFUO, KFVE, KFWA, KOA, KSD, PWX, WAHG, WBAV, WCEE, WEAO, WEBJ, WHAD, WHAZ, WJJD, WKRC, WLIT, WOR, WRBC, WSUI, WTAM.

Atlantic or Eastern Daylight Saving Time Stations

WBBR, New York, N. Y. (272.6), 8 p. m., instrumental selections; 8:10, Camille Schmidt, soprano; 8:20, International Sunday school lenson for July 12, S. M. Van Sipma; 8:40, Camille Schmidt, soprano; 8:50, instrumental selections.
WBZ, Springfield, Mass. (333.3), 6 p. m., Leo Reisman's Hotel Lenox ensemble; 6:30, baseball results; 7:30, Marine band concert; 9, Henry Miller, popular pianist; 9:15, Clarence Jones, xylophonist; 9:50, baseball results.
WCAE, Pittsburgh, Pa. (461.3), 3 p. m., program, Loew's Aldine theater; 6:30, William Penn hotel; 8, recital; 9, Atwater Kent Radio artists; 10, Goodrich Silvertown Cord orchestra.
WCAU, Philadelphia, Pa. (278), 6:30 p. m., Billy Hayes and his Cathay Tea Garden dance orchestra; 7:30, N. Snellenburg & Co. symphony orchestra; 8, recital; 10:30, Billy Hayes and his Cathay Tea Garden dance orchestra.
WDWF, Providence, R. I. (440.9), 6:30-8 p. m., Narragansett Hotel orchestra.
WEAF, New York, N. Y. (491.5), 4-4:15 p. m., Leila Troland Gardner, contralto; 4:15-4:25, Edward E. Steele, pianist; 4:25-4:40, Marian Jean Gard, reader; 4:40-4:45, Edward E. Steele; 4:45-5, garden talk, Leonard Barron; 6-7, dinner music, Waldorf-Astoria; 7-7:30, services, Greater New York Federation of Churches; 7:30-8, Cushman's serenaders; 8-9, Mozart Instrumental ensemble; 9-10, Atwater Kent Radio artists; 10-11, Silvertown Cord orchestra; 11-12, Vincent Lopez Hotel Pennsylvania orchestra.
WEEI, Boston, Mass. (370.2), 7:45 p. m., baseball scores; 8, WEAF musicale; 9, Atwater Kent artists; 10, Silvertown Cord orchestra.
WFI, Philadelphia, Pa. (394.5), 1 p. m., Bellevue Stratford roof garden trio; readings, Walter Gray; 6:45, Bellevue Stratford roof garden trio; 8, concert from WEAF; 9, Atwater Kent Radio artists; 10, Goodrich Silvertown Cord orchestra.
WGBS, New York, N. Y. (315.6), 2-2:30 p. m., Herman Gehlhausen, baritone; 3-3:10, operatic talk, J. Walker McSpadden; 3:10-3:20, Mary Schultz, soprano; 3:20-3:30, beauty talk, Maybelle A. Burbridge; 3:30-3:40, Mary Schultz; 3:40-3:50, talk on "Correct Choosing of Furniture," Arthur Wilcox; 3:50-4, Mary Schultz; 6-6:30, Uncle Geebe; 6:30-7:30, Hebrew Orphan Asyfum Harmonica band; 7:30-8, duets, Alma Newman, soprano, and Herman Gehlhausen, baritone; 8:30-9, Joshua Wach, tenor; 9-9:30, negro spirituals, Leila Troland Gardner.
WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, two piano recital, Gospel Melodists; 8-11, jointly with WEAF, including Atwater Kent Goodrich Silvertown Cord orchestra and the Mozart Instrumental Ensemble assisted by Nadina mixed quartet.
WHAR, Atlantic City, N. J. (275), 7:30 p. m., Seaside hotel trio; 8, vocal and instrumental program; 9, Shelburne hotel concert orchestra.
WHN, New York, N. Y. (360), 12:30-1 p. m., organ recital, Loew's Lexington theater; 6:30-7, Olcott Vail's string trio; 7-7:30, Silver Slipper revue; 8-8:30, Will Oakland's Chatheau Shanley; 8:30-8:45, Ethel West, soprano; 9:30-10, Palisades Amusement Park orchestra; 10-10:15, Mario Alvarez, tenor; 10:15-10:30, Loew's vaudeville headliner.
WIP, Philadelphia, Pa. (508.2), 3 p. m., "Song of the Surf"; 3:30, Comfort's Philharmonic orchestra; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime stories; Grace Greenberg, 12-year-old pianist; 8, Comfort's Philharmonic orchestra; 8:45, "Song of the Surf"; 8:50, Veselli's band; 11, Howard Lanin's dance orchestra.
WJAR, Providence, R. I. (305.9), 8 p. m., program from New York studio; 9, Victor presentation; 10, Goodrich Silvertown Cord orchestra.
WJY, New York, N. Y. (405.2), 10-11 p. m., Harold Stern's Hotel Belleclaire Tower orchestra.
WJZ, New York, N. Y. (454.3), 1-2 p. m., Nathan Abas' Hotel Pennsylvania orchestra; 4:30-5:30, Bernhard Levitow's Hotel Commodore orchestra; 5:30-6, daily reports; 7-7:55, "The Origin of the American Indian," Dr. Clark Wissler; 7:55-8, "Baseball Etiquette," John B. Kennedy; 10:30-11, popular songs, Radio Franks, Wright and Bessinger.
WKAQ, San Juan, P. R. (340.7), 8:30-10 p. m., concert, La Cafetera.
WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; 12:30, Jimmy Jones' Elks' club dance orchestra; 2, Arcadia cafe concert orchestra; 4:30, Marcella North, pianist.
WMCA, New York, N. Y. (341), 7:45-8 p. m., McAlpin Legal Forum; 8-8:15, George Kohlmeier's orchestra; 8:15-8:20, health talk; 8:20-9, Kohlmeier's orchestra; 9:30-9:45, Snedden Weir, baritone; 11-12, Ernie Golden and his Hotel McAlpin orchestra.
WNYC, New York, N. Y. (526), 7-7:25 p. m., dance program; 7:35-8, dance program; 8-8:15, "Big League Baseball," Fred G. Lieb; 8:15-9, song recitals; 9-9:15, "Timely Topics," F. P. Bent; 9:15-10:30, studio concert program.
WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Golden's crystal tea 7:30, A. Candelori's roof garden concert orchestra.
WOR, Newark, N. J. (405), 6:15-7:15 p. m., Halsey Miller's orchestra; 7:15-7:30, sports talk.

Eastern Standard or Central Daylight Saving Time Stations

KYW, Chicago, Ill. (536), 6-6:30 p. m., Congress hotel; 6:33-6:53, speeches, American Farm Bureau Federation; 7-7:20, "Twenty Minutes of Good Reading," Rev. C. J. Pernin; 7:20-8:20, Martha B. Bardill, soprano; Katherine Johnson, soprano; 8:20, "The Intimate Diary of a Steak," John C. Cutting; 9-10:30, evening at home.
WBBM, Chicago, Ill. (226), 8-10 p. m., Crillon orchestra; Sunset male quartet; Samovar orchestra; Sandy Meek, Scotch tenor; Lester Kelsey; Harry Sosnik, pianist; Dave Nudelman; Cort Banks, ukulele soloist; Twesme's Honky Tonk Gloom Chasers; Charlie Garland, pianist.
WCX, Detroit, Mich. (516.9), 2:30 p. m., band concert, Belle Isle; 6, dinner concert, Book-Cadillac hotel; 7:30, band concert, Belle Isle; 8:30, musial program.
WEAR, Cleveland, Ohio (389.4), 7-7:30 p. m., talks; 7:30-8, lecture; 8-10, studio program; 10-11, Vincent H. Percy, organist.
WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., Oriole concert orchestra; Edwin Kemp, tenor; musical bits, Riviera theater; 9:30-10:30, Oriole dance orchestra; Kathryn Forbes, soprano; Beulah Ladon, violinist; 11:30-1 a. m., Oriole dance orchestra; songs, Paul Small; Kathryn Forbes, soprano; Wayne Myers, stories.
WGES, Oak Park, Ill. (250), 5-7 p. m., Edgar Scott, tenor; Ann Williams, soprano; Elsie Barge, pianist; Lucille Matthews, violinist; 10:30-1, Coyne Electrical school orchestra; Erwin Plecity; Sandy McTavish; Clarence Parrish; Pat Ward.
WGN, Chicago, Ill. (370.2), 2 p. m., Jockey races, Hawthorne; 6:30-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, studio program; 10:30-11:30, Drake Hotel Terrace Garden program.
WGY, Schenectady, N. Y. (379.5), 5:30 p. m., dinner music, John Fink, Jr., orchestra; 6:35, "Black Bass Fishing," H. H. Mapelsden; 6:45, WGY orchestra; Matilda Bigelow Russ, soprano; 7:30, U. S. Marine band from WRC; 9, WGY orchestra; Esther Fiber Weisberg, reader.
WHT, Deerfield, Ill. (399.8), 7 p. m., Tony Corcoran, tenor; Borden Varieties; Margaret Garrity; 7:30, Wilkens and Martens; Marilla Walsworth, soprano; Pat Barnes, tenor; Al Carney, organist; Jelke musical moments; 8:45, Riverview Park ballroom orchestra; Al Carney, organist; 10:30, Pat Barnes' Pals; Al Carney, organist; Sandy Meek, tenor; Agatha Karlen, reader; 11, Husk O'Hare's Red Dragon orchestra; Ned Becker, comedian; Si Berg, ukulele soloist; 11:30, Walter Donovan, tenor; Jule Reveltas, contralto; Harry Sosnick, pianist; 12:30, Al Carney, organist.
WIBO, Chicago, Ill. (226), 6-8 p. m., Robert Metzler, Parisian pianist; Margaret Cade, soprano; Madeline Ruff, accompanist; Phyllis Feingold, violinist; Jack Sprat concert trio; 12-3, Victor Young, violinist; piano duets, Helen and Rita Young; Dan Russo, violinist; Ted Fiorito, pianist; Jules Stein, pianist; Harry Geise; Joe Allabough, Lucas Sisters; Marie Wright, Sandy Meek, Harry Sosnik.
WLS, Chicago, Ill. (344.6) 6:30 p. m., Ralph Emerson, organist; 7:15, Rex's Cornhuskers; 7:45, lullaby time, Aunt Martha and Uncle George; 8-8:55, E. Warren K. Howe's classical program, Laura Turner, soprano; William Hayden, tenor; Grace Hansen, violinist.
WLW, Cincinnati, Ohio (422.3), 4 p. m., piano recital, Adelaide Apfel; 7, dinner hour concert, Hotel Gibson; orchestra directed by Robert Fiscontl; 10, three-minute message from the Civil Service Department of United States Government; 10:03, orchestra concert; 11:15, popular program, Irene Downing and Marjory Hebestreit, assisted by Esther Manner, violinist; Mrs. Theodore Hahn, soprano.
WMAK, Lockport, N. Y. (265.5), 11 p. m., Murray Whiteman, Buffalo, N. Y.
WMAQ, Chicago, Ill. (447.5), 4 p. m., baseball scores; 6, Chicago theater organ recital; 6:30, Jack Chapman's orchestra; 8, Chapman's orchestra; 8:30, Jessie

DANCING

(Central Time)
(Central Standard Time)

Saturday, July 4: 8, Kgw, Wmbb, Wpg, Wtas; 8:05, Wip; 8:30, Ksd, Webh, Whaz, Wjz; 9, Wmbf Wmca, Wor, Wpg, Wqj, Wtas; 9:25, Kths; 9:30, Wcee, Weaf, Wges, Wgn, Wjjd; 10, Kpo, Wahg, Wcco; 10:30, Webh, Wges; 11, Kfab, Wcee, Wfaa, Wjjd, Wmbf, Woc; 11:30, Wges; 12, Kgo, Kgw, Khj, Knx; 11:45, Wdaf; 1, Kgo; 1:30, Khj.
Monday, July 6: 8, Wahg, Weae, Wlit, Wmbb, Wtas; 8:30, Weaf, Woo, Wsmb; 8:45, Wjz; 9, Kfi, Wgr, Wmbf, Wtas; 9:05, Wahg; 9:30, Wcee, Whn, Wjjd, Wmca; 9:35, Kths; 10, Wgr, Whn, Wmbf; 10:30, Wcee, Wjjd; 11:45, Wdaf; 12, Kfi, Knx, Kpo; 1, Knx.
Tuesday, July 7: 8, Wmbb, Wtas; 8:30, Wcau, Webh; 9, Kfi, Wcx, Weaf, Wip, Wmbf, Wmca, Wqj, Wtas; 9:25, Kths; 9:30, Wcee, Wges, Wgn, Whn, Wjjd; 10, Wmbf; 10:30, Wcee, Webh, Wges, Wjjd; 11, Kfab, Wfaa; 11:30, Wjjd; 11:45, Wdaf; 12, Kgo, Kgw, Khj, Knx, Kpo, Wqj; 1, Kgo.
Wednesday, July 8: 8, Wlit, Wmbb, Wtas; 8:15, Wjz; 8:30, Kyw, Webh, Whn, Wjz, Woo; 9, Kfwb, Kyw, Weaf, Wgr, Wmbf, Wqj; 9:05, Wjz; 9:15, Wor; 9:30, Kfi, Wcee, Webh, Wges, Wgn, Whn, Wjjd, Wtas; 10, Kyw, Wcco, Wgr; 10:20, Who; 10:30, Wcee, Wges; 11, Who, Wjjd, Wmbf; 11:30, Wges; 11:45, Wdaf; 12, Kfi, Kpo, Wqj; 12:30, Khj.
Thursday, July 9: 8, Wjar, Wjy, Wmbb, Wtas; 8:30, Wcau, Webh, Wsmb; 9, Kfi, Weaf, Wmbf, Wmca, Wqj, Wtas; 9:30, Wgn; 10:30, Webh; 11, Kfwb, Who; 11:45, Wdaf; 12, Kfi, Kgo, Kgw, Khj, Knx, Kpo, Wqj; 1, Kgo.
Friday, July 10: 8, Kyw, Wcae, Wear, Whn, Wlit, Wmbb, Wtas, Wwj; 8:15, Wahg; 8:30, Kyw, Wcau, Webh, Whn, Wjz, Woo; 9, Kyw, Wcx, Weaf, Wear, Wgr, Wip, Wmbf, Wqj; 9:05, Wahg; 9:30, Wcee, Wgn, Whn, Wjjd, Wtas; 10, Kfwb, Kpo, Wgr; 10:30, Wcee, Webh, Wjjd; 11, Kfw, Who; 11:30, Wjjd; 11:45, Wdaf; 12, Khj, Wqj; 1, Knx.

EVOLUTION TRIAL OPENING FRIDAY

Iankins is the saxophonist of the Meyer-Davis New Arlington hotel , which may be heard Sunday and ights from **KTHS**. Helen Searles k is the organist of the Woodlawn rchestra, broadcasting every night **WMBB**. Florine Pierce (right) is pianist of the new Brownsville, tation, **KWWG**, and is helping Brownsville on the Radio map.

Index to Classical Concerts

TABULATED below is a time table of the stations giving classical concerts this week. Stations are divided into the four different standard times in use. The hours are given in the kind of time in use at each listed station. By using this table as an index and referring to the complete programs below, full information will be obtained.

Classical

Atlantic or Eastern Daylight Saving Time Stations

Saturday, July 4: 6, WEAF; 6:05, WIP; 6:45, WJG; 7, WEAF; 7:30, WEAF; 8, WBBR, WEAF, WIP; 8:15, WCAE, WNYC; 8:30, WCAE, WGBS WPG; 8:45, WBBR, WGR; 8:50, WIP; 9, WGBS, WHAR; 10, WEAF.

Sunday, July 5: 6, WCAU; 6:30, WCAE; 8, WJZ; 9, WBBR, WHAR; 9:15, WCAE, WEAF; 9:20, WEEI; 10, WBBR; 11, WHAR.

Monday, July 6: 6, WEAF, WIP, WJZ; 6:30, WCAE, WGBS; 7:15, WEAF; 7:45, WEEI; 8, WBBR, WHAR, WLIT, WOO, WOR; 8:15, WNYC; 8:25, WJZ; 8:30, WBBR, WCAE, WEAF, WOO; 8:50, WBBR; 9, WCAE, WGR, WHAR, WOO; 9:30, WLIT; 10, WEAF, WGR; 11, WHN.

Tuesday, July 7: 6, WEAF; 6:05, WIP; 6:30, WCAE; 7, WEAF; 7:30, WGBS; 7:45, WEBJ, WEEI; 7:50, WNYC; 8, WCAE, WCAU, WEEI, WFI, WGBS, WGR, WIP; 8:30, WJZ; 8:45, WEBJ; 8:50, WIP; 9, WCAE, WEAF, WEEI, WFI, WHAR; 9:10, WCAU; 9:30, WGR; 10, WCAE, WEAF, WEEI, WGR, WMCA; 11, WHAR.

Wednesday, June 8: 6, WEAF, WIP; 6:30, WCAE; 7, WEBJ; 7:30, WEAF; 7:45, WAHG; 8, WEAF, WEEI, WLIT, WOO; 8:15, WNYC; 8:30, WAHG, WCAE, WEEI, WJZ; 9, WEAF, WEBJ, WEEI, WGR; 9:30, WAHG; 10, WEAF, WGR; 10:15, WOR.

Thursday, July 9: 6, WEAF; 6:05, WIP; 6:30, WCAE, WGBS, WGR; 7:30, WCAU, WGBS; 8, WBBR, WCAE, WCAU, WEAF, WEEI, WFI, WGR, WIP; 8:15, WNYC; 8:30, WHN; 8:40, WBBR; 8:50, WIP; 9, WEEI, WFI, WGBS, WGR, WHAR; 9:15, WNYC; 9:30, WMCA; 10, WCAE, WEEI, WGR, WHN.

Friday, July 10: 6, WEAF; 6:05, WIP; 6:30, WCAE; 7, WEEI, WJY; 7:45, WEAF, WEBJ; 8, WAHG, WCAU, WHAR, WHN, WOO; 8:15, WNYC; 8:25, WJZ, WCAE, WEAF, WHN; 9, WEAF, WGR, WHAR, WMCA; 9:15, WAHG, WHN, WJY, WNYC; 10, WGR, WJY, WMCA, WOO; 10:15, WEAF, WMCA, WNYC; 10:40, WEAF; 10:45, WMCA; 11, WHAR.

Eastern Standard or Central Daylight Saving Time Stations

Saturday, July 4: 6, KYW, WIBO; 6:30, WGN; 6:45, WJJD; 7, WHT, WIBO, WMBB, WQJ; 7:15, WJJD; 7:30, WCX; 7:35, KYW; 8, WORD, WSAI; 8:15 WSAI; 8:30, KYW, WGN; 8:45, KDKA; 9:15, WSAI; 11, WKRC; 1, WHT.

Sunday, July 5: 6:30, WHT; 6:45, WORD; 7, WEAR, WEBH, WMBB; 7:30, WCX, WLS; 8, WLS, WQJ; 8:30, WEBH, WLW; 9, WEAR, WGN, WQJ.

Monday, July 6: 6, WBZ, WCX, WMAQ, WWJ; 6:30, WGN; 7, WEAR, WHT, WLW; 7:15, WJJD; 7:30, WCX, WHT; 8, WBZ, WWJ; 8:15, WHAZ; 8:30, WCX; 8:45, WBZ, WLW; 9, WBZ, WORD; 9:15, WBZ; 9:30, WLW; 10, WSAI; 12:30, WHT.

Tuesday, July 7: 6, WBZ, WCX, WIBO, WMAQ, WWJ; 6:30, WGN, WLS, WLW; 6:45, WJJD, WSAI; 7, KYW, WEAR, WHT, WIBO, WMBB, WQJ, WSAI, WWJ; 7:15, WJJD; 7:30, WCX, WEBH; 8, KYW, WBZ, WEAR, WLW, WSAI; 8:30, WBZ, WCX, WGN, WMAQ; 8:45, KYW, WBZ; 9, WLW, WORD, WSAI; 10, KYW, WLW; 10:30, WHT.

Wednesday, July 8: 6, WBZ, WCX, WIBO, WMAQ, WWJ; 6:15, WJJD; 6:30, WGN, WLS; 7, KYW, WEAR, WHT, WIBO, WLW, WMBB, WQJ; 7:15, WJJD; 7:30, WCX, WEBH, WHT; 8, KYW, WBZ, WLS, WWJ; 8:30, WBZ, WCX, WGN, WORD; 8:45, WLS; 9, WBZ; 10, WLS, WLW; 11, WLW; 12:30, WHT.

Thursday, July 9: 6, WBZ, WCX, WIBO, WMAQ, WWJ; 6:30, WGN, WLS, WSAI; 7, KYW, WHT, WIBO, WLW, WMBB, WQJ, WSAI, WWJ; 7:30, WBZ, WCX, WBZ, WEBH, WHT; 8, WEAR, WLS, WSAI; 8:20, KYW; 8:30, WCX, WGN, WMAQ; 9, WORD; 9:15, WBZ; 10, KYW, WEAR; 10:03, WLW; 12:30, WHT.

Friday, July 10: 6, WBZ, WCX, WIBO, WLS, WWJ; 6:30, WGN; 6:45, WJJD; 7, KYW, WEAR, WHT, WIBO, WMBB, WQJ; 7:15, WJJD; 7:30, WCX, WEBH; 8, KYW, WBAV, WBZ, WLS, WWJ; 8:30, CNRT, WCX, WGN; 8:45, WMAQ; 9, WBAV, WBZ, WORD; 10:15, WLS; 10:30, WHT; 12:30, WHT.

Central Standard Time Stations

Saturday, July 4: 6, WOAW; 6:30, WFAA, WSMB; 7:30, KFNF, WHAS; 8, WSB; 8:30, WFAA, WHAS; 8:35, KYW; 9, WCCO, WOC.

Sunday, July 5: 6:30, KLDS; 7:30, WHO; 8, KFDM, WCBD; 9, WOAN; 9:15, KLDS, WCCO; 9:25, KTHS; 9:30, WOC.

Monday, July 6: 6, WOAW; 6:30, WFAA, WSMB; 7:30, KFNF, WHO; 8, WCBD, WHO, WSB; 8:30, WFAA; 9, KSD, WOAN, WOAW; 11:15, WHO.

Tuesday, July 7: 6:05, WCCO; 6:25, WOAW; 6:30, WSMB; 7, WCCO, WOC; 7:30, WHAS, WHO; 8, KFDM, KLDS, KSD, WOC; 8:30, WFAA, WHAS, 9, WOAN, WOAW.

Wednesday, July 8: 6:30, WHO, WOAW, WSMB; 7:30, KFNF, KSD, WHAS; 8, WCCO, WDAF; 8:30, WHAS; 9, WOAN, WOC; 9:25, KTHS; 11:30, WCCO.

Thursday, July 9: 6:30, WFAA, WSMB; 7, WCCO, WOC; 7:30, KFNF, WHAS, WHO; 8, KLDS, WCBD, WOC; 8:30, WFAA, WHAS; 9, WOAN; 9:25, KTHS; 10:30, KFRU; 10:45, WSB.

Friday, July 10: 6:15, WCCO, 6:30, WSMB; 7, KSD; 7:30, KFNF, WHAS, WHO; 8, KFDM, WCCO, WOC, WSB; 8:30, WFAA, WHAS, WHO; 9, KFDM, WOAN; 9:25, KTHS.

Mountain Standard Time Stations

Monday, July 6: 8, KOA.
Wednesday, July 8: 8, KOA.
Friday, July 10: 8, KOA.

Pacific Standard Time Stations

Saturday, July 4: 8, KFWB, KNX; 9, KFWB, KNX; 10, KFI, KFWB; 11, KFI, KNX; 11:30, KHJ; 12, KFI, KNX; 12:30, KHJ; 1, KFI, KNX; 2, KFI.

Sunday, July 5: 8, KHJ; 9, KFWB, 10, KFWB.

Monday, July 6: 8, KFWB, KNX; 9, KNX; 10, KFI, KFWB, KNX.

Tuesday, July 7: 8, KFI, KHJ, KNX; 9, KFI, KFWB, KHJ, KNX, KPO; 10, KFWB, KNX; 11, KGW, KNX.

Wednesday, July 8: 7:30, KFI; 8, KFWB, KGW; 9, KFI, KFWB; 10, KFWB, KHJ; 11, KNX.

Thursday, July 9: 8, KGO, KHJ, KNX; 9, KFMB, KHJ; 10, KFI, KFWB, KHJ; 11, KNX.

Friday, July 10: 8, KFWB; 9, KFI, KFWB, KHJ; 10, KFWB, KNX; 10:30, KGW; 11:30, KGW.

DANCING

(Central Time)
Central Standard Time)

Saturday, July 4: 8, Kgw, Wmbb, Wpg, Wtas; :05, Wip; 8:30, Ksd, Vebh, Whaz, Wjz; 9, Vmbf Wmca, Wor, Wpg, Vqj, Wtas; 9:25, Kths; :30, Wcee, Weaf, Wges, Vgn, Wjjd; 10, Kpo, Vahg, Wcco; 10:30, Vebh, Wges; 11, Kfab, Vcee, Wfaa, Wjjd, Vmbf, Woc; 11:30, Wges; 2, Kgo, Kgw, Khj, Knx; 11:45, Wdaf; 1, Kgo; 1:30, Khj.

Monday, July 6: 8, Wahg, Wcae, Wlit, Wmbb, Wtas; 8:30, Weaf, Woo, Wsmb; 8:45, Wjz; 9, Kfi, Wgr, Wmbf, Wtas; 9:05, Wahg; 9:30, Wcee, Whn, Wjjd, Wmca; 9:35, Kths, 10, Wgr, Whn, Wmbf; 10:30, Wcee, Wjjd; 11:45, Wdaf; 12, Kfi, Knx, Kpo; 1, Knx.

Tuesday, July 7: 8, Wmbb, Wtas; 8:30, Wcau, Webh; 9, Kfi, Wcx, Weaf, Wip, Wmbf, Wmca, Wqj, Wtas; 9:25, Kths; 9:30, Wcee, Wges, Wgn, Whn, Wjjd; 10, Wmbf; 10:30, Wcee, Webh, Wges, Wjjd; 11, Kfab, Wfaa; 11:30, Wjjd; 11:45, Wdaf; 12, Kgo, Kgw, Khj, Knx, Kpo, Wqj; 1, Kgo.

Wednesday, July 8: 8, Wlit, Wmbb, Wtas; 8:15, Wjz; 8:30, Kyw, Webh, Whn, Wjz, Woo; 9, Kfwb, Kyw, Weaf, Wgr, Wmbf, Wqj; 9:05, Wjz; 9:15, Wor; 9:30, Kfi, Wcee, Webh, Wges, Wgn, Whn, Wjjd, Wtas; 10, Kyw, Wcco, Wgr; 10:20, Who; 10:30, Wcee, Wges; 11, Who, Wjjd, Wmbf; 11:30, Wges; 11:45, Wdaf; 12, Kfi, Kpo, Wqj; 12:30, Khj.

Thursday, July 9: 8, Wjar, Wjy, Wmbb, Wtas; 8:30, Wcau, Webh, Wsmb; 9, Kfi, Weaf, Wmbf, Wmca, Wqj, Wtas; 9:30, Wgn; 10:30, Webh; 11, Kfwb, Who; 11:45, Wdaf; 12, Kfi, Kgo, Kgw, Khj, Knx, Kpo, Wqj; 1, Kgo.

Friday, July 10: 8, Kyw, Wcae, Wear, Whn, Wlit, Wmbb, Wtas, Wwj; 8:15, Wahg; 8:30, Kyw, Wcau, Webh, Whn, Wjz, Woo; 9, Kyw, Wcx, Weaf, Wear, Wgr, Wip, Wmbf, Wqj; 9:05, Wahg; 9:30, Wcee, Wgn, Whn, Wjjd, Wtas; 10, Kfwb, Kpo, Wgr; 10:30, Wcee, Webh, Wjjd; 11, Kfw, Who; 11:30, Wjjd; 11:45, Wdaf; 12, Khj, Wqj; 1, Knx.

Mandeville, soprano; Glenn Drake, tenor; 9:30, Jack Chapman's orchestra.

WMBB, Chicago, Ill. (250), 7-8:30 p. m., semi-classical program; Trianon ensemble; Andrew DuParry, tenor; Hazel O'Neil, soprano; C. Jacobs, pianist; Wayne King, saxophonist; 8:30-10:30, popular program; Dell Lampe and Trianon orchestra; Florence Tenny; Fisher and Smith, Harmony clowns; Cecil and Esther Ward, Hawaiian guitarists; Charles Agne, marimba soloist.

WMBF, Miami Beach, Fla. (384.4), 6:30-7 p. m., Fleetwood Radio orchestra; 7-7:30, Fleetwood Radio orchestra; 10-12, dance music, Fleetwood Radio orchestra.

WORD, Batavia, Ill. (275), 8:30 p. m., World News Digest; 9, musical program, Earl Wagner.

WQJ, Chicago, Ill. (447.5), 7-8 p. m., Ralph Williams and his Rainbo Gardens Skylarks; Ralph Keim, pianist; Anne Keim, mezzo-soprano; Marie Wright, soprano; Lew Butler, Giant of Radio; Mary Jane; 1-2, Ginger hour.

WSAI, Cincinnati, Ohio (326), 6:30 p. m., Hotel Sinton instrumental trio; 7, program from New York; Mozart instrumental ensemble; Nadina mixed quartet; 8, Atwater Kent Radio artists; 9, Silvertown Cord orchestra, Joseph Knecht, director.

WTAM, Cleveland, Ohio (389.4), 6-7 p. m., Hotel Statler concert orchestra.

WTAS, Elgin, Ill. (302.8), 8-12, midnight, Joe Rudolph and his Boss's Own orchestra; Herbie Mintz; Violet Eaton; Brock Sisters.

WTIC, Hartford, Conn. (348.6), 6 p. m., dinner music, Emil Heimberger's Hotel Bond trio; Doris Griffin, soprano; 6:50, baseball scores; 7, dinner music.

WWJ, Detroit, Mich. (352.7), 3 p. m., Detroit News orchestra; 6, dinner concert; 7, concert from New York.

Central Standard Time Stations

KFNF, Shenandoah, Iowa (266), 7:30 p. m., concert from Ravenwood, Mabel M. Cobb, director.

KLDS, Independence, Mo. (441), 8 p. m., Charlotte Kaufman, soprano; Amy E. Winning, pianist; Elma Eaton Karr, violinist; Mrs. A. Erickson, pianist; Mrs. Otto Graffe, contralto.

KTHS, Hot Springs National Park, Ark. (374.8), 9:15 p. m., baseball results; 9:25-10, organ recital, Lawson Reid.

WCBD, Zion, Ill. (344.6), 8 p. m., string quartet; Studebaker, Klawonn, clarinet duet; Thomas and Barton, tenor and baritone; Mrs. Bird, Miss Donovan, soprano and contralto; Mrs. R. M. Steel, soprano; E. B. Paxton, baritone; M. P. Barton, tenor; Alexander DePew, flutist; Mrs. E. B. Paxton, reader.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 4 p. m., baseball scores; 4:05, readers' club; 5:30, children's hour; 6, baseball scores; 7-9, WEAF program; 9, baseball scores.

WDAF, Kansas City, Mo. (365.6), 6-7 p. m., book talk, Louis Mecker; Tell-Me-a-Story Lady; Plantation players; 11:45-1, Merry Old Chief; Plantation players; Ted Meyn, organist; Pantages theater organ.

WFAA, Dallas, Tex. (475.9), 6:30-7:30 p. m., J. J. Sandel; E. G. Council, "The Music Man"; 8:30-9:30, Aikin Brothers; 11-12, Earle D. Behrends.

WHAS, Louisville, Ky. (399.8), 4 p. m., organ recital; readings, Courier-Journal, Louisville Times; 7:30-9, concert, auspices Mrs. J. E. Harmon, Jr.; four-minute digest of International Sunday school lesson; four-minute Radio forum talk.

WHO, Des Moines, Iowa (526), 7:30-9 p. m., musical program; 11-12, dance program.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., O. K. Houck Piano company program.

WOAN, Lawrenceburg, Tenn. (282.8), 9 p. m., Vaughan Radio orchestra; male quartet.

WOAW, Omaha, Nebr. (526), 5:45 p. m., public news period, Eugene Konecky; 6, Every Child's hour, Grace Sorenson; 6:20, baseball; 6:30, to be announced; 6:45, Randall's Royal Fontenelle orchestra; 9, Sunshine program, auspices Loose-Wiles Biscuit company.

WOC, Davenport, Ia. (483.6), 5:45-6 p. m., chimes concert; 6, baseball scores; 6:30-6:50, Sandman's Visit, Val McLaughlin; 7-8, Atwater Kent artists; 8-9, WEAF Silvertown Cord orchestra; 11-12, Louis Connor and his LeClaire hotel orchestra; Peter MacArthur, baritone.

WSB, Atlanta, Ga. (428.3), 8-9 p. m., concert; 10:45, Dr. Charles A. Sheldon, organ recital.

WSMB, New Orleans, La. (319), 6:30-7:30 p. m., twilight tales; 8:30-10:30, Johnny Tobin's serenaders; orchestra.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4), 12:15 p. m., Clarence Reynolds, organist; 3, matinee; 6, dinner music, Rialto theater.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467), 5:30-6 p. m., Examiner's matinee musicale; 6, McDanields' nightly doings; 6:45, radiotorial talk; 7-8, California Serenaders' dance orchestra, George Cronk, leader; Sigmund Sachs, violin soloist; 8-9, KFI feature program; 9-10, by remote control from Chickering Hall, Southern California music company; 10-11, Examiner, dance orchestra of the S. S. Ruth Alexander.

KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour, Big Brother of KFWB; 7:45, talk, Jack Boaz, fishing scout; 8-9, sports results, program Starr Piano company, presenting Genett record artists; 9-10, program, Don P. Smith company, Moon Six dance orchestra, Sol Hoopii's Hawaiian trio, Kathryn Martin, pianist; 10-11, Warner Bros. frolic, direction Charlie Wellman.

KGO, Oakland, Calif. (361.2), 4-5:30 p. m., concert orchestra, Hotel St. Francis; 8, "The Witching Hour," KGO players; 10-1 a. m., Henry Halstead's orchestra.

KGW, Portland, Ore. (491.5), 8-9 p. m., Yale Laundry company; 10-12, Herman Kenin's Multnomah hotel orchestra.

KHJ, Los Angeles, Calif. (405.2), 5:30-6 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog; Dickie Brandon, screen juvenile; Espy Hall, six-year-old reader; Piggly Wiggly girls' stringed trio; Uncle John; 8-10, program, John Wright, the right tailor, arranged by Uncle John; 10-11, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio, Sid Ziff's sports talk; 6:15, travel talk, W. F. Alder; 6:30-7:30, dinner hour music; 7:30-8, one act play, KNX players, Edward Murphey, director; 8-10, KNX feature program; 10-11, Abe Lyman's Cocoanut Grove dance orchestra from Ambassador hotel; 11-12, campus night, students University of California, Southern Branch.

KPO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 3:30-4:30, Palace hotel concert orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 6:40-7, Waldemar Lind, States restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, program, George W. Caswell Coffee company; 9-10, Theodore J. Irwin, organist; 10-11, Johnny Buick's Cabirians.

Friday, July 10

Friday, silent night for: KFAE, KFUO, KGO, KLDS, PWX, WBBR, WCBD, WEAO, WFI, WGBS, WHAZ, WKAQ, WKRC, WLW, WMAK, WOR, WRC, WREO, WSAI, WSUI, WTAM.

Atlantic or Eastern Daylight Saving Time Stations

WAHG, Richmond Hill, N. Y. (315.6), 7:30-7:45 p. m., sports talk, Thornton Fisher; 7:45-8, popular songs, Jack Joel and Fred Burton; 8-8:15, Joseph Calleia, tenor; 8:15-8:30, M. Lamberti, cellist; 8:30-8:45, talk on English, Prof. Richard E. Mayne; 8:45-9, Jack Joel and Fred Burton; 9-9:15, M. Lamberti; 9:15-9:30, Mischa Tulin, pianist; 9:30-9:45, Joseph Calleia; 9:45-10, Mischa Tulin; 10-10:15, Radio question box, William F. Diehl; 10:15-10:55, dance orchestra; 10:55-11:05, time signals and weather report; 11:05-11:30, dance music.

WBZ, Springfield, Mass. (333.3), 6 p. m., Hotel Kimball trio; Jan Geerts, director; 6:30, baseball scores; 7:45, "Poultry Flock Management"; 8, Thomas Cotton, baritone; Sue Kerr, contralto; 8:30, Bill Boyle's entertainers; 9, Madame Almanzoe Gosselin, soprano; 9:15, to be announced; 9:50, baseball scores.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Aldine theater; 6:30, William Penn hotel; 8, Current Motor topics; 8:30, studio concert; 10, Sander's Inn.

WEAF, New York, N. Y., (491.5), 4-4:15 p. m., Mrs. Irma de Baun, soprano; 4:15-4:30, Norman S. Plotkin, pianist; 4:30-4:45, Edgar M. Gruen, baritone; 4:45-5, "Character Sketches," Hattie Morse Hamburger; 6-7, dinner music, Waldorf-Astoria; 7-7:15, Marie Opfinger, soprano, accompanied by James Haupt; 7:15-7:30, Emanuel Moses, violinist; 7:30-7:45, children's story, Blanche Elizabeth Wade; 7:45-8, Mario Alvarez, tenor; 8-8:30, Happiness Candy Boys; 8:30-9, Eagle Neutrodyne trio; 9-10:15, Schubert program, Goldman band concert; Edwin Franko Goldman, conductor; Waino Kauppi, cornetist; 10:15-10:30, Knights of Columbus glee club; 10:30-10:40, saxophones and banjos, David Berend and twenty students; 10:40-11, Knights of Columbus glee club; 11-12, dance music.

WEBJ, New York, N. Y. (233), 7-7:30 p. m., Blenheim theater ensemble, direction of Sol Klein; 7:45-8, Isabel Henderson, accompanied by Betty Duffy; 8:15-8:30, Sara V. Turits, soprano; 8:30-9, May Singhi Breen and Peter De Rose.

WEEI, Boston, Mass. (370.2), 7:15 p. m., baseball scores; 7:30, Whiting's program; 8, program; 9, Ed Andrew's and his Nautical Garden orchestra.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 7-7:30, Winger's Crescent Park entertainers; 9-10, program by the City of Niagara Falls, Ont., featuring the "Kiltie Band"; 10-11, American-Hawaiian quartet; 11-1 a. m., supper-dance music; Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WHAR, Atlantic Ctiy, N. J. (275), 8 p. m., Seaside hotel trio; 9, Shelburne hotel concert orchestra; 11, Strand theater.

WJY, New York, N. Y. (405.2), 7:30-8:30 p. m., "Ancestors," WGY players from WGY; 9:15-10:15, U. S. Army program.

WJZ, New York, N. Y. (454.3), 1-2 p. m., Henry Vander Zanden's Hotel Ambassador trio; 4:30-5:30, Landau's Blossom Heath serenaders; 5:30-6, daily reports; 7-8, Hotel Lafayette dinner orchestra; 8:25-10, concert, Lewisohn Stadium; 10:30-11:30, Duke Yellman and his Irene Castle orchestra.

WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; 12:30, Jimmy Jones' Elks' club orchestra; 2, Arcadia cafe concert orchestra; playlet, students National School of Oratory and Elocution; 7:30, Dream Daddy's bedtime stories; 8, Delco piano quintet; 8:45, Emmett Welch's minstrels from Atlantic City; Charles Frey's Million Dollar Pier dance orchestra; 10, Morning Glory club; Arcadia cafe dance orchestra; Charles Frey's dance orchestra.

WMCA, New York, N. Y. (341), 6:30-7:30 p. m., Ernie Golden and his Hotel McAlpin orchestra; 8:30-8:45, Elsa Taunert Brigham pianist; 8:50-9, talk, Broadway association; 9-10, Hardman hour of music; 10-10:15, Frederick Seifer, baritone; 10:15-10:30, Czecho-Slovakia program; Emeline Bosse, soprano; 10:45-11, Emeline Bosse.

WNYC, New York, N. Y. (526), 5-5:30 p. m., elementary lessons in French, V. Harrison Berlitz; 5:30-6, advanced lessons in French, V. Harrison Berlitz; 7-7:25, dance music; 7:25-7:30, baseball results; 7:35-7:50, resume of meeting of Board of Estimate; 7:50-8:15, dance music; 8:15-10:15, band concert from the Mall, Central Park; 10:15-10:30, piano recital.

WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Golden's crystal tea room orchestra; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's roof garden orchestra; 8, recital; 9, WOO orchestra; 10, organ recital, Mary E. Vogt; 10:30, Hotel Adelphia roof garden dance orchestra.

Eastern Standard or Central Daylight Saving Time Stations

CNRT, Toronto, Can. (357), 5:30 p. m., Luigi Romanelli and his King Edward hotel concert orchestra; 8:30, Thomas J. Crawford, organist; Alfred Heather, tenor; 10:30, Luigi Romanelli and his King Edward hotel dance orchestra.

KYW, Chicago, Ill. (536), 5:30-6:30 p. m., Congress hotel; 7-7:30, special program; 9-10:30, midnight revue.

WBAV, Columbus, Ohio (293.9), 8 p. m., artist program, Mrs. Harvard Vallance, director.

WBBM, Chicago, Ill. (226), 8-10 p. m., Shepherd Levine, tenor; Harold Anderson, pianist; Dave Nudelman; Charlie Garland, pianist; Samovar orchestra.

WCX, Detroit, Mich. (516.9), 2:30 p. m., band concert, Belle Isle; 6, dinner concert; 7:30, band concert; Belle Isle; 8:30, musical program; 10, dance music.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., children's hour; Alice McCullough; Norma Harrison Thrower; 8-11, dance music, Ed Day and his Bedford Glens orchestra.

WEBH, Chicago, Ill. (370.2), 7:30-8:30, Oriole concert orchestra; Mrs. Aronson, soprano; musical bits, Riviera theater; 9:30-10:30, Oriole dance orchestra;

(Continued on page 14)

An Evening at Home with the Listener In

STATIONS IN ORDER OF WAVE LENGTHS USED

Meters	Call	Meters	Call	Meters	Call	Meters	Call	Meters	Call	Meters	Call
226	WBBM	275	WORD	315.6	KFDM	365.6	WDAF	405.2	WOR	468.5	WCAP
226	WIBO	275.3	WJAS	315.6	WAHG	365.6	WHB	406	WBAR	468.5	WRC
233	WEBJ	278	KWWG	315.6	WGBS	370	CYB	410.7	CKAC	475.9	WBAP
240	KFAB	278	WCAU	319	WGR	370.2	WEBH	416.4	WCCO	475.9	WEEI
240	KFVE	278	WLBL	319	WSMB	370.2	WGN	421	KIAF	475.9	WFAA
243.8	WAMD	278	WRBC	322.4	KOA	374.8	KTHS	422.3	WLW	480	CYL
250	WGES	280.2	WNAC	325.9	WSAI	379.5	WGY	428.3	WSB	483.6	WOC
250	WMBB	282.8	WOAN	330	CYX	379.5	WHAZ	428.3	KPO	483.6	WSUI
252	KFWB	285.5	WKAR	333.3	WBZ	384.4	CKY	434.5	CNRO	491.5	KGW
252	WGCP	285.5	WREO	336.9	KNX	384.4	KJR	434.5	NAA	491.5	WEAF
261	KFWA	293.9	KJS	340.7	WKAQ	384.4	WMBF	435	AT9	499.7	WMC
261	KSL	293.9	WBAV	340.7	WMCA	389.4	WEAR	434.5	CFCN	508.2	KLX
265.5	WMAK	293.9	WEAO	344.6	WCBD	389.4	WTAM	440.9	KLDS	508.2	WIP
266	KFNF	296.9	KPRC	344.6	WLS	394.5	KFRU	440.9	WDWF	508.2	WOO
266	WBCN	299.8	KFMQ	348.6	KFAE	394.5	WFI	440.9	WOS	516.9	CJCA
272.6	WBBR	299.8	WPG	348.6	WTIC	394.5	WLIT	447.5	WMAQ	516.9	WCX
272.6	WFBH	302.8	WJJD	352.7	WWJ	394.5	WOAI	447.5	WQJ	526	WHO
273	WRW	302.8	WTAS	356.9	CFCA	399.8	WHAS	454.3	KFOA	526	WNYC
275	KFAU	305.9	KTCL	356.9	CHNC	399.8	WHT	454.3	WJZ	526	WOAW
275	WABL	305.9	WJAR	360	WHN	400	PWX	455	KTW	535.4	KYW
275	WHAD	309.1	KDKA	361.2	KGO	405.2	KHJ	461.3	WCAE	545.1	KFUO
275	WHAR	313	CNRA			405.2	WJY	467	KFI	545.1	KSD

INSTRUCTIONS FOR USE OF TABLES

THE "Evening at Home with the Listener In" table is not difficult to understand and use. It is this fact that makes it so popular with the readers of Radio Digest. It is presented here in three different standard times; Eastern, Central and Pacific. Listeners using one of the three kinds of time named, should utilize the table printed in that time and so designated by its headline.

For listeners whose standard of time is not shown here, the following instructions should be remembered:

Listeners using **Mountain time:** Use table for Pacific time but add one hour to every figure given. Can also use Central time table by subtracting one hour from every figure given.

Listeners using **Eastern daylight saving, or Atlantic time:** Use Eastern time table by adding one hour to every figure given.

Listeners using **Central daylight saving time:** Use Eastern time table. No changes are necessary.

The periods given in the "Evening at Home" tables are only representative of each station's evening sign-on and sign-off hours, and on Sunday, the late afternoon sign-on and sign-off. If a station has an intermittent rather than continuous program, the table cannot show this.

Above is given a list of all stations in the "Evening at Home" tables, arranged in order of the wave lengths used (or supposed to be used) by the stations. This arrangement provides a handy index for the other tables.

The "Evening at Home" tables are **corrected every week.** The number of changes often run as high as thirty per cent of the whole. Keep the "Evening at Home" tables **from the current issue** at the side of your receiver.

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(FOR PACIFIC TIME)

Call	Met.	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Met.	Call
AT9	435	Silent	3:00- 4:00	Silent	Silent	Silent	5:00- 7:55	Silent	435	AT9
CFCA	356.9	Silent	4:00- 5:00	Silent	5:15- 6:15	5:15- 6:15	5:15- 6:15	Silent	356.9	CFCA
CFCN	434.5	9:00-11:00	Silent	Silent	Silent	Silent	7:00- 8:00	Silent	434.5	CFCN
CHNC	356.9	Silent	Silent	4:30- 5:30	Silent	Silent	Silent	Silent	356.9	CHCN
CJCA	516.9	8:00-10:00	6:30- 7:30	6:30- 8:30	6:30- 7:00	5:00- 7:00	8:00-10:00	7:00-11:00	516.9	CJCA
CKAC	410.7	4:30- 9:30	1:30- 2:30	Silent	4:30- 9:30	Silent	4:30- 9:30	Silent	410.7	CKAC
CKY	384.4	Silent	5:00- 7:45	Silent	6:30- 8:45	Silent	6:00- 7:00	6:30- 7:45	384.4	CKY
CNRA	313	Silent	Silent	Silent	4:30- 5:30	Silent	Silent	4:30- 5:30	313	CNRA
CNRO	434.5	4:30- 9:30	Silent	Silent	Silent	4:30- 9:30	Silent	Silent	434.5	CNRO
CYB	370	8:15- 9:45	Silent	Silent	7:15- 8:15	Silent	Silent	Silent	370	CYB
CYL	480	Silent	Silent	Silent	8:00- 9:30	Silent	Silent	8:00- 9:30	480	CYL
CYX	330	Silent	Silent	7:15- 8:30	Silent	Silent	Silent	7:15- 8:45	330	CYX
KDKA	309.1	5:45- 6:55	12:00- 4:30	5:45- 6:55	5:45- 8:30	5:45- 6:55	5:00- 8:30	5:45- 6:55	309.1	KDKA
KFAB	240	9:00-10:30	2:00- 3:00	5:30- 8:00	Silent	5:30- 8:00	Silent	5:30- 8:00	240	KFAB
KFAE	348.6	Silent	Silent	Silent	Silent	7:30- 9:00	Silent	Silent	348.6	KFAE
KFAU	275	Silent	Silent	7:00- 8:00	Silent	Silent	Silent	7:00- 8:00	275	KFAU
KFDM	315.6	Silent	6:00- 7:00	Silent	6:00- 8:30	Silent	Silent	6:00- 8:30	315.6	KFDM
KFI	467	6:45-12:00	4:00-11:00	6:45-11:00	6:45-11:00	6:45-11:00	6:45-11:00	6:45-11:00	467	KFI
KFMQ	299.8	Silent	Silent	Silent	7:00- 8:00	Silent	Silent	Silent	299.8	KFMQ
KFNF	266	5:30- 6:30	4:30- 8:00	5:30- 6:30	Silent	5:30- 6:30	5:30- 6:30	5:30- 6:30	266	KFNF
KFOA	454.3	6:00-11:30	Silent	6:00-10:00	6:00-11:30	6:00-10:00	Silent	6:00-11:30	454.3	KFOA
KFRU	394.5	5:30-10:00	3:00- 5:00	5:00- 8:30	8:30-10:00	6:00- 8:30	8:30- 9:30	9:00-11:00	394.5	KFRU
KFUO	545.1	Silent	6:15- 7:15	6:00- 7:00	Silent	7:15- 8:15	Silent	Silent	545.1	KFUO
KFVE	240	8:00-10:00	Silent	8:00-10:00	8:00-10:00	8:00-10:00	Silent	8:00-10:00	240	KFVE
KFWA	261	Silent	7:00-10:00	8:00-10:00	8:00- 9:00	8:00-11:00	Silent	8:00-10:00	261	KFWA
KFWB	252	7:00-11:00	9:00-11:00	6:30-11:00	7:45-11:00	7:00-11:00	7:00-11:00	7:00-11:00	252	KFWB
KGO	361.2	8:00- 1:00	3:30- 9:00	8:00- 1:00	8:00- 1:00	Silent	8:00- 1:00	Silent	361.2	KGO
KGW	491.5	6:00-12:00	7:30-10:00	6:00- 7:00	9:00-12:00	8:00-11:00	8:00-12:00	9:00-12:00	491.5	KGW
KHJ	405.2	5:30-11:00	6:00-11:00	7:00- 1:30	5:30-11:00	5:30-11:00	5:30-11:00	5:30-11:00	405.2	KHJ
KIAF	421	Silent	2:00- 3:00	7:00- 8:00	Silent	7:00- 8:00	Silent	7:00- 8:00	421	KIAF
KJR	384.4	Silent	7:00- 8:00	6:00-10:00	Silent	8:30-10:00	10:30-12:00	8:30-10:00	384.4	KJR
KJS	293.9	Silent	7:15- 9:30	Silent	8:00- 9:00	Silent	8:00- 9:00	Silent	293.9	KJS
KLDS	440.9	Silent	4:30- 8:00	Silent	6:00- 7:00	Silent	6:00- 7:00	Silent	440.9	KLDS
KLX	508.2	Silent	Silent	6:00-11:00	Silent	6:00-11:30	Silent	6:00-10:30	508.2	KLX
KNX	336.9	8:00- 2:00	5:00-11:00	6:30-12:00	6:30-12:00	7:00-10:00	6:30-12:00	6:30-12:00	336.9	KNX
KOA	322.4	8:00-11:00	3:30- 7:30	7:00- 8:00	Silent	7:00-11:00	Silent	7:00- 8:00	322.4	KOA
KPO	428.3	6:25-12:00	6:30-10:00	6:30-11:00	6:30-11:00	6:30-11:00	6:30-11:00	7:00-11:00	428.3	KPO
KPRC	269.9	6:30- 7:30	6:00- 7:00	6:30- 7:30	6:30- 7:30	6:30- 7:30	6:30- 7:30	Silent	269.9	KPRC
KSD	545.1	5:00- 7:30	Silent	7:00- 9:00	4:30- 6:30	5:30- 6:30	Silent	5:30- 7:00	545.1	KSD
KSL	261	7:00-10:00	8:00-10:00	7:00-10:00	8:00-10:00	7:00-10:00	7:00-10:00	8:00-10:00	261	KSL
KTCL	305.9	Silent	7:50- 9:15	8:00-10:00	7:00- 8:00	7:00-10:00	6:30- 7:30	7:00-12:00	305.9	KTCL
KTHS	374.8	6:30- 8:00	6:30- 9:30	6:30- 8:00	6:30- 8:00	6:30- 8:00	6:30- 8:00	6:30- 8:15	374.8	KTHS
KTW	455	Silent	7:00- 9:30	Silent	Silent	Silent	Silent	Silent	455	KTW
KWWG	278	6:30- 7:30	Silent	Silent	6:30- 7:30	Silent	6:30- 7:30	Silent	278	KWWG
KYW	535.4	4:00-10:30	1:00- 5:00	Silent	4:00- 8:30	4:00-10:30	4:00- 8:30	4:00-10:30	535.4	KYW
NAA	434.5	Silent	Silent	4:45- 5:00	4:45- 5:00	4:25- 5:40	4:45- 5:00	4:45- 5:00	434.5	NAA
PWX	400	5:30- 8:00	Silent	Silent	Silent	5:30- 8:00	Silent	Silent	400	PWX
WABL	275	Silent	Silent	4:00- 6:00	Silent	4:00- 6:00	Silent	4:00- 6:00	275	WABL
WAHG	315.6	9:00-11:00	Silent	4:00-10:00	Silent	3:30- 8:00	Silent	4:00- 7:30	315.6	WAHG
WAMD	243.8	8:00- 9:00	12:00- 8:00	Silent	8:00- 9:00	8:00- 9:30	8:00- 9:30	8:00- 9:00	243.8	WAMD
WBAP	475.9	5:00- 6:00	9:00-10:00	5:30-10:00	5:30- 8:45	5:30- 8:45	5:30- 8:45	5:30- 8:45	475.9	WBAP
WBAR	406	Silent	8:00- 9:00	7:00- 8:00	Silent	6:00- 7:00	5:30- 6:30	Silent	406	WBAR
WBAV	293.9	Silent	Silent	5:00- 7:00	Silent	Silent	Silent	5:00- 6:00	293.9	WBAV
WBBM	226	5:00- 9:00	1:00- 7:00	Silent	5:00- 9:00	5:00- 7:00	5:00- 9:00	5:00- 7:00	226	WBBM
WBBR	272.6	4:00- 5:00	4:00- 5:30	4:00- 5:00	Silent	Silent	4:00- 5:00	Silent	272.6	WBBR
WBCN	266	6:00-10:00	2:00- 9:00	Silent	6:00-12:00	5:00- 9:00	6:00-11:00	6:00-10:00	266	WBCN
WBZ	333.3	3:30- 5:55	4:00- 5:30	4:00- 5:55	5:15- 5:55	4:00- 5:55	3:30- 5:55	3:45- 5:55	333.3	WBZ
WCAE	461.3	4:00- 5:30	12:00- 4:30	4:00- 8:00	4:00- 7:00	4:30- 7:00	4:00- 7:00	4:30- 5:30	461.3	WCAE
WCAP	468.5	Silent	1:00- 6:15	4:20- 7:00	Silent	3:45- 7:00	Silent	4:20- 5:20	468.5	WCAP
WCAU	278	Silent	1:00- 4:00	Silent	2:30- 8:00	2:30- 7:45	2:30- 7:30	2:30- 7:30	278	WCAU
WCBD	344.6	Silent	6:00- 7:00	5:00- 7:30	Silent	Silent	5:00- 7:30	Silent	344.6	WCBD
WCCO	416.4	4:05- 9:00	5:20- 8:15	4:00- 7:00	4:00- 7:00	4:00-10:30	4:00- 7:00	4:00-11:00	416.4	WCCO
WCX	516.9	3:00- 4:00	4:15- 5:15	3:00- 6:30	3:00- 8:00	3:00- 5:00	3:00- 5:00	3:00- 8:00	516.9	WCX
WDAF	365.6	4:00-11:00	2:00- 3:30	4:00-11:00	4:00-11:00	4:00-11:00	4:00-11:00	4:00-11:00	365.6	WDAF
WDWF	440.9	Silent	1:00- 2:45	Silent	4:30- 5:30	Silent	Silent	2:00- 8:30	440.9	WDWF
WEAF	491.5	2:00- 8:00	3:20- 6:15	2:00- 7:30	2:00- 8:00	2:00- 8:00	2:00- 8:00	2:00- 8:00	491.5	WEAF
WEAO	293.9	Silent	Silent	Silent	Silent	5:00- 6:00	5:00- 6:00	Silent	293.9	WEAO
WEAR	389.4	4:00- 5:00	12:30- 7:00	4:00- 5:00	4:00- 8:00	4:00- 5:00	4:00- 8:00	4:00- 8:00	389.4	WEAR
WEBH	370.2	4:30- 9:30	4:00- 6:00	Silent	4:30- 9:30	4:30- 9:30	4:30- 9:30	4:30- 9:30	370.2	WEBH
WEBJ	233	Silent	Silent	Silent	4:00- 5:00	3:00- 5:00	Silent	4:00- 5:00	233	WEBJ
WEEI	475.9	Silent	3:20- 6:20	4:00- 7:00	4:00- 7:00	4:00- 7:00	4:00- 7:00	4:00- 7:00	475.9	WEEI
WFAA	475.9	6:30-10:00	4:30- 9:00	4:30- 7:30	4:30-10:00	Silent	4:30-10:00	4:30- 7:30	475.9	WFAA
WFBH	272.6	7:30-10:00	1:00- 4:00	7:30-10:00	7:30-10:00	7:30-10:00	7:30-10:00	7:30-10:00	272.6	WFBH
WFI	394.5	2:00- 3:45	12:30- 4:30	Silent	4:00- 6:00	2:45- 3:45	3:45- 7:00	2:45- 3:45	394.5	WFI
WGCP	252	Silent	3:30- 8:00	3:30- 8:00	Silent	3:30- 8:00	Silent	3:30- 8:00	252	WGCP
WGBS	315.6	2:00- 8:00	5:30- 6:30	Silent	2:00- 8:00	Silent	2:00- 9:00	Silent	315.6	WGBS
WGES	250	7:30-11:00	7:30-11:00	Silent	7:30-11:00	7:30-11:00	7:30-11:00	7:30-11:00	250	WGES
WGN	370.2	3:30- 8:30	6:00- 7:00	Silent	3:30- 8:30	3:30- 8:30	3:30- 8:30	3:30- 8:30	370.2	WGN
WGR	319	Silent	2:45- 3:45	3:00- 8:00	3:00- 6:00	3:00- 6:00	3:00- 6:00	2:00- 8:00	319	WGR
WGY	379.5	6:00- 9:00	3:30- 8:00	3:30- 5:30	4:10- 8:00	Silent	3:45- 8:30	4:15- 7:30	379.5	WGY
WHAD	275	4:00- 5:00	Silent	4:00- 8:00	4:00- 5:00	4:00-10:30	4:00- 5:00	4:00- 6:30	275	WHAD
WHAR	275	3:30- 6:00	5:00- 8:00	3:30- 6:30	3:30- 8:00	Silent	3:30-6:00	3:30- 8:00	275	WHAR
WHAS	399.8	5:30- 7:00	2:00- 3:00	Silent	5:30- 7:30	5:30- 7:00	5:30- 7:00	5:30- 7:00	399.8	WHAS
WHAZ	379.5	Silent	Silent	6:00- 8:00	Silent	Silent	Silent	Silent	379.5	WHAZ
WHB	365.6	Silent	6:00-11:00	5:00- 6:00	Silent	5:00- 6:00	6:00- 8:30	5:00- 6:00	365.6	WHB
WHN	360	3:30- 6:00	3:30- 8:00	3:30- 8:00	3:30- 8:00	3:30- 7:00	3:30- 8:00	3:30- 8:00	360	WHN
WHO	526	Silent	5:30- 6:30	5:30-10:00	5:30- 7:00	4:30- 9:20	5:30-10:00	5:30-10:00	526	WHO
WHT	399.4	4:00-10:00	9:00- 7:30	4:00-10:00	4:00-10:00	4:00-10:00	4:00-10:00	4:00-10:00	399.4	WHT
WIBO	226	3:00- 5:00	3:00- 9:00	Silent	3:00-12:00	3:00- 9:00	3:00-12:00	3:00-11:00	226	WIBO
WIP	508.2	4:00- 8:05	Silent	Silent	4:00- 9:00	Silent	4:00- 9:00	Silent	508.2	WIP
WJAR	305.9	Silent	3:20- 6:15	4:00- 6:00	4:30- 7:00	3:30- 4:30	4:00- 7:00	4:00- 8:00	305.9	WJAR
WJAS	275.3	Silent	Silent	5:30- 8:00	5:30- 8:00	5:30- 8:00	4:30- 7:00	4:30- 7:00	275.3	WJAS
WJJD	302.8	3:45-10:00	5:45- 7:00	3:45-10:00	3:45-10:00	3:45- 7:00	Silent	3:30- 7:00	302.8	WJJD
WJY	405.2	Silent	4:15- 5:15	Silent	4:30- 7:15	Silent	4:30- 6:00	4:45- 5:45	405.2	WJY
WJZ	454.3	3:00- 7:30	4:00- 7:00	4:15- 5:15	4:10- 7:30	5:30- 7:30	4:30- 7:30	4:15- 6:45	454.3	WJZ
WKAQ	340.7	Silent	4:00- 6:00	Silent	Silent	4:00- 6:00	4:30- 6:00	Silent	340.7	WKAQ
WKAR	285.5	9:30-11:00	Silent	Silent	Silent	5:00- 6:15	Silent	Silent	285.5	WKAR
WKRC	422.3	7:00- 9:00	3:45- 8:00	7:00- 9:00	7:00-10:00	5:00- 9:00	Silent	Silent	422.3	WKRC
WLBL	278	9:59-10:59	Silent	Silent	6:00- 7:00	Silent	6:00- 7:00	Silent	278	WLBL
WLIT	394.5	3:30- 4:30	Silent	3:30- 7:00	Silent	3:30- 7:00	Silent	3:30- 7:00	394.5	WLIT
WLS	344.6	4:45-10:00	4:30- 5:55	Silent	4:00-10:00	4:00- 8:30	4:00- 5:55	4:00- 8:30	344.6	WLS
WLW	422.3	3:00- 5:00	3:30- 5:30	6:00- 7:30	4:00- 7:00	4:00- 8:00	4:00- 9:15	Silent	422.3	WLW
WMAK	265.5	Silent	Silent	5:30- 7:15	Silent	Silent	8:00- 9:00	Silent	265.5	WMAK
WMAQ	447.5	5:00- 7:00	Silent	Silent	5:00- 7:15	5:00- 6:45	5:00- 7:15	5:00- 7:15	447.5	WMAQ
WMBB	250	4:00- 7:30	4:00- 7:30	Silent	4:00- 7:30	4:00- 7:30	4:00- 7:30	4:00- 7:30	250	WMBB
WMBF	384.4	3:30- 9:00	3:30- 9:00	3:30- 9:00	3:30- 9:00	3:30- 9:00	3:30- 9:00	3:30- 9:00	384.4	WMBF
WMC	499.7	5:30- 7:30	Silent	5:30- 7:30	5:30-10:00	Silent	5:30- 7:30	5:30-10:00	499.7	WMC
WMCA	340.7	5:00- 8:00	2:30- 4:00	6:30- 7:30	5:00- 8:00	5:00- 8:00	5:00- 8:00	5:00- 8:00	340.7	WMCA
WNAC	280.2	4:00- 6:00	11:00- 5:30	4:00- 6:00	4:00- 6:00	4:00- 6:00	4:00- 6:00	4:00- 6:00	280.2	WNAC
WNYC	526	2:30- 6:20	5:00- 7:00	3:00- 7:00	3:20- 6:20	3:30- 6:30	Silent	3:30- 6:20	526	WNYC
WOAI	394.5	Silent	5:30- 8:30	3:00- 6:20	6:30- 8:30	Silent	7:30- 8:30	Silent	394.5	WOAI
WOAN	282.8	Silent	7:00- 8:00	7:00- 8:00	7:00- 8:00	7:00- 8:00	7:00- 8:00	7:00- 8:00	282.8	WOAN
WOAW	526	4:00-10:00	7:00- 8:00	4:00- 9:00	4:00-11:00	Silent	4:00- 8:00	4:00- 8:00	526	WOAW
WOC	483.6	4:30-10:00	6:00- 9:30	Silent	4:30- 6:00	4:30- 8:00	4:30-10:00	4:30- 8:00	483.6	WOC
WOO	508.2	3:30- 4:30	12:45- 3:00	3:30- 7:30	3:30- 4:30	3:30- 7:30	3:30- 4:30	3:30- 7:30	508.2	WOO
WOR	405.2	2:15- 8:00	Silent	2:15- 8:00	2:15- 3:30	2:15- 8:00	2:15- 3:30	2:15- 3:30	405.2	WOR
WORD	275	5:30- 7:30	3:45- 5:00	5:30- 6:45	5:30- 7:00	5:30- 7:00	5:30- 7:00	5:30- 7:30	275	WORD
WOS	440.9	Silent	5:30- 6:30	6:00- 8:00	Silent	6:00- 8:00	Silent	6:00- 8:00	440.9	WOS
WPG	299.8	3:00- 8:00	5:00- 7:00	3:00- 7:30	4:00- 7:00	Silent	3:00- 8:15	3:00- 7:00	299.8	WPG
WQJ	447.5	4:00-12:00	4:00- 7:00	Silent	4:00-11:00	4:00-11:00	4:00-11:00	4:00-11:00	447.5	WQJ
WRBC	278	Silent	5:30- 6:30	5:30- 6:30	Silent	Silent	Silent	Silent	278	WRBC
WRC	468.5	4:00- 8:30	Silent	Silent	4:00- 9:00	Silent	4:00- 8:00	Silent	468.5	WRC
WREO	285.5	7:00- 8:00	4:30- 5:30	Silent	5:15- 6:45	Silent	5:15- 6:45	Silent	285.5	WREO
WRW	273	6:00- 8:30	5:00- 8:30	6:00- 8:30	6:00- 8:30	6:00- 8:30	6:00- 8:30	6:00- 8:30	273	WRW
WSAI	325.9	5:00-10:30	Silent	7:00- 9:00	4:00- 7:00	4:00- 9:00	4:00- 7:00	Silent	325.9	WSAI
WSB	428.3	6:00-10:00	5:30- 7:15	6:00-10:00	6:00-10:00	8:45-10:00	6:00-10:00	6:00-10:00	428.3	WSB
WSMB	319	4:30- 8:30	Silent	4:30- 8:30	4:30- 5:30	4:30- 8:30	4:30- 8:30	4:30- 5:30	319	WSMB
WSUI	483.6	Silent	7:00- 8:00	6:00- 7:00	Silent	Silent	Silent	Silent	483.6	WSUI
WTAM	389.4	3:00- 9:00	Silent	3:00- 9:00	Silent	3:00-10:00	Silent	Silent	389.4	WTAM
WTAS	302.8	5:00- 7:30	5:00- 9:00	5:00- 7:30	5:00- 7:30	5:00- 7:30	5:00-10:00	5:00- 7:30	302.8	WTAS
WTIC	348.6	Silent	Silent	3:00- 4:00	3:30- 6:30	Silent	Silent	3:50- 6:30	348.6	WTIC
WWJ	352.7	Silent	3:20- 7:00	3:00- 6:00	3:00- 8:00	Silent	3:00- 9:30	3:00- 7:00	352.7	WWJ

Friday, July 10

(Continued from page 13)

Correll and Gosden, congsters; Jack Penewell, twin guitarist; 11:30-1 a. m., Oriole dance orchestra; songs, Three Musketeers; Jack Penewell, twin guitarist; songs, Correll and Gosden.

WGN, Chicago, Ill. (370.2), 2:30 p. m., artist series, Lyon & Healy; 6:30-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, studio program; 10:30-11:30, Drake Hotel Terrace Garden program.

WGY, Schenectady, N. Y. (379.5), 5:30 p. m., International Sunday school lesson; 6, Albany Strand theater orchestra; Floyd Walter, organist; 6:35, "Ancestors," WGY players; 8:15, New York Philharmonic orchestra; 9:30, WGY orchestra; zither duets, Rosa and Anna Frolick.

WHT, Deerfield, Ill. (399.8), 7 p. m., Bryce Talbot, baritone; Genevieve Barry Burnham, soprano; Dean Remick, pianist; Kitchen Klassics; Al Carney, organist; 8, Jelke Musicale moments; 8:45, Riverview ballroom orchestra; 10:30, Loftis half hour of music; 11, Syncopation review; 12:30, Al Carney, organist.

WLS, Chicago, Ill. (344.6), 6:30 p. m., Ralph Emerson, organist; 7:15, Rex's Cornhuskers; 7:45, lullaby time, Aunt Martha and Uncle George; 8, concert, Harvard orchestra; W. P. Robbins, conductor; 8:45, WLS theater, "Richlieu"; 9, farm program, Williamson Brothers, string music; Cornhuskers' brass quartet; 10, Rex's Cornhuskers; 10:15, classical concert; Carl Craven, tenor; Charles Hutzler, bass; 11-11:30, Rex's Cornhuskers.

WLW, Cincinnati, Ohio (422.3), 12:15, organ selections, Gene Johnson.

WMAQ, Chicago, Ill. (447.5), 4 p. m., baseball scores; 6, organ recital, Chicago theater; 6:25, Family Altar league; 6:35, Jack Chapman's orchestra; 8, Chapman's orchestra; 8:30, announced; 8:45, Bryce Talbot, baritone; 9, Christian Endeavor topics; 9:30, Jack Chapman's orchestra.

WMBB, Chicago, Ill. (250), 7-8:30 p. m., home songs; Trianon ensemble; J. Everett, baritone; Hazel O'Neil, soprano; Barnard Senescu, violinist; Charles Agne, trumpet soloist; Lindsay McPhail, pianist; 8:30-10:30, popular program; Dell Lampe and Trianon orchestra; Armin F. Hand and Woodlawn theater orchestra; Jack Murnane, baritone; Fisher and Smith, Harmony clowns; Geraldine Doule, soprano; Morey Alswang, banjoist; Clyde Hager, delineator; Harold Stokes, accordionist.

WQJ, Chicago, Ill. (447.5), 7-8, p. m., Ralph Williams and his Rainbo Gardens orchestra; Maria Dnaprova, Russian soprano; Fayette Miller, baritone; Rose Quinn, contralto; 10-1, Ralph Williams and his Rainbo Gardens Skylarks; West Brothers; William Richardson, baritone; Paul Small, tenor; Jack Lavin, tenor; Irene Finucan, soprano; 1-2, Ralph Williams.

WTAM, Cleveland, Ohio (389.4), 6-7 p. m., Golden Pheasant studio dinner concert, Austin Wylie and his Golden Pheasant orchestra.

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Joe Rudolph and the Boss's own orchestra; Herbie Mintz; Brock Sisters.

WTIC, Hartford, Conn. (348.6), 6:50 p. m., baseball scores; 7, talk; 7:15, studio program; 9, dance music, Emil Heimberger's Hotel Bond orchestra.

WWJ, Detroit Mich. (352.7), 3 p. m., Detroit News orchestra; 6, dinner concert; 8, Detroit News orchestra; 9, Orange Blossoms orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (240), 7:30-9:30 p. m., program, Elmwood, Nebr.; C. W. Raymond, versatile entertainer; Colonians orchestra.

KFDM, Beaumont, Tex. (315.6), 8-10:30 p. m., Refinery band.

KFNF, Shenandoah, Iowa (266), 7:30 p. m., concert Oregon, Mo., James H. Pettijohn, director.

KFVE, University City, Mo. (240), 10 p. m., George McGrail, Irish tenor.

KSD, St. Louis, Mo. (545.1), 7 p. m., Hotel Statler concert orchestra, Arne Arnesen, director.

KTHS, Hot Springs National Park, Ark. (374.8), 9:15 p. m., baseball results; 9:25-10, Meyer Davis instrumental quartet; Lon Chassy, director.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 4 p. m., baseball scores; 6:15, dinner concert, Osborn's Nicollet hotel orchestra; 8, Gordon Cooke ensemble; 9, baseball scores.

WDAF, Kansas City, Mo. (365.6), 6-7 p. m., literary talk, H. Clay Harvey; address, Speaker, Kansas City Children's bureau; Tell-Me-a-Story Lady; Plantation players; 8-9:30, musical program; 11:45-1, Merry Old Chief; Plantation players; Charles Dornberger's Kansas City Athletic club orchestra.

WFAA, Dallas, Tex. (475.9), 6:30-7:30 p. m., Frank Davenport's orchestra, C-Sharp Six syncopaters; 8:30-9:30, Mrs. Floyd Ellison, Dallas musicians.

WHAS, Louisville, Ky. (309.8), 4 p. m., organ recital; readings, Courier-Journal. Louisville Times; 7:30-9, concert, auspices Louisville Music and Radio company.

WHO, Des Moines, Iowa (526), 7:30-9 p. m., Marion Jacobsen, Leona Combs, pianists; La Boheme trio; Leonard Kirkwood, pianist; 11-12, dance program.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Britling's Novelty orchestra; 11, frolic.

WOAN, Lawrenceburg, Tenn. (282.8), 9 p. m., Vaughan Radio orchestra; male quartets.

WOAW, Omaha, Nebr. (526), 6 p. m., music review, Hester Bronson Copper; 6:20, baseball; 6:30, orchestra; 7:10, current sport events, Ivan L. Gaddis; 9, program, auspices Chicago, Burlington and Quincy Railroad company.

WOC, Davenport, Ia. (483.6), 5:45-6 p. m., chimes concert; 6, baseball scores; 6:30-6:50, Sandman's Visit; 8-9, Ruth Ives, violinist; Maria Burns, reader.

WSB, Atlanta, Ga. (428.3), 8-9 p. m., concert; 10:45, orchestra.

WSMB, New Orleans, La. (319), 6:30-7:30 p. m., dinner program, baseball.

Mountain Standard Time Stations

KFWA, Ogden, Utah (261), 9-11 p. m., KFWA Radio Boys' dance orchestra.

KOA, Denver, Colo. (322.4), 12:15 p. m., Clarence Reynolds, organist; 3, matinee; 8, Colorado Mountain club talk; minstrel show, KOA players, interlocutor, Freeman H. Talbot; "Sambo," Stewart A. Housman; "Bones," H. Gerald Sherman; KOA orchestra; Blue Bell trio.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467), 5:30-6 p. m., Examiner's matinee musicale; 6, McDanields' nightly doings; 6:45, radiotorial talk; 7-8, Examiner, Sonny Clay's Rythm Demons, Bill Seemann, banjoist; 8-9, Aeolian residence pipe organ recital, Dan McFarland, organist; 9-10, Irish and Scotch poems and songs, arranged by George Frenger; 10-11, pupils of John Smallmann in vocal recital.

KFOA, Seattle, Wash. (454.3), 6-6:45 p. m., Olympic hotel concert orchestra; 6:45-8:15, Sherman, Clay and company program; 8:30-10, Times studio program; 10:05-11, Olympic hotel dance music.

KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour, big brother of KFWB; 8-9, program, Frazier Mountain Park and Fisheries company, Frazier Mountain Park orchestra, Columbia trio, Babe Brown, blues singer; 9-10, Warner Bros. syncopators, Charles Beauchamp, tenor; Carol Crawford, Vic Beal and Frank Pierce in popular song numbers; 10-11, Warner Bros. movie frolic, direction Charlie Wellman.

KGO, Oakland, Calif. (361.2), 3-4 p. m., Norman Woodside's Metropolitan orchestra; Olga Yaffe, violinist; Abraham Weiss, Mary Yaffe, Herbert Yaffe, accompanists; 4-5:30, concert orchestra, Hotel St. Francis; 6-7, Ben Black's orchestra.

KGW, Portland, Ore. (491.5), 9-10:30 p. m., concert, Sherman, Clay and company; 10:30-12, Hoot Owls.

KHJ, Los Angeles, Calif. (405.2), 5:30-6 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog, Uncle John and the Radio kiddies; 8-10, program, Western Auto Supply company, arranged by J. Howard Johnson; 10-11, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.

KNX, Hollywood Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio, Sid Ziff's sports talk; 6:15, travel talk, W. F. Alder; 6:30-7:30, program, Beverlyridge company; 7:30-8, musical gems program, Eastern Outfitting company; 8-9, West Coast theaters by remote control; 9-10, program, Beverly Hills nurseries, 10-11, June Pursell, the KNX girl, singing popular songs; 11-12, Abe Lyman's Cocoanut Grove dance orchestra from Ambassador hotel.

KPO, San Francisco, Calif. (428.3), 1:30-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-5:50, Big Brother's entertainment; 6:15-7, Loew's Warfield theater; 7-7:30, Palace hotel concert orchestra; 8-11, Palace hotel dance orchestra.

An Evening at Home with the Listener In

(FOR CENTRAL TIME)

(Tabular form and listings copyrighted. Reproduction is forbidden.)

Call	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Call	Location	Met.
AT9	Silent	5:00- 6:00	Silent	Silent	Silent	7:00- 8:55	Silent	AT9	Fort Bragg, N. C.	435
CFCA	Silent	6:00- 7:00	Silent	7:15- 8:15	7:15- 8:15	7:15- 8:15	Silent	CFCA	Toronto, Ont.	356.9
CFCN	11:00- 1:00	Silent	Silent	Silent	Silent	9:00-10:00	Silent	CFCN	Calgary, Alta.	434.5
CHNC	Silent	Silent	6:30- 7:30	Silent	Silent	Silent	Silent	CHNC	Toronto, Ont.	356.9
CJCA	10:00-12:00	8:30- 9:30	8:30-10:30	8:30- 9:00	7:00- 9:00	10:00-12:00	9:30-12:00	CJCA	Edmonton, Can.	516.9
CKAC	5:30- 9:30	Silent	Silent	5:30- 9:30	Silent	6:30- 7:30	Silent	CKAC	Montreal, Que.	410.7
CKY	Silent	7:00- 9:45	Silent	8:30-10:45	Silent	8:00- 9:00	8:30- 9:45	CKY	Winnipeg, Man.	384.4
CNRA	Silent	Silent	Silent	6:30- 7:30	Silent	Silent	6:30- 7:30	CNRA	Moncton, Can.	313
CNRO	6:30-11:30	Silent	Silent	Silent	6:30-11:30	Silent	Silent	CNRO	Ottawa, Ont.	434.5
CYB	10:30-11:45	Silent	Silent	9:15- 10:15	Silent	Silent	Silent	CYB	Mexico City, Mex.	370
CYL	Silent	Silent	Silent	10:00-11:30	Silent	Silent	10:00-11:30	CYL	Mexico City, Mex.	480
CYX	Silent	Silent	9:15-10:30	Silent	Silent	Silent	9:15-10:45	CYX	Mexico City, Mex.	330
KDKA	7:45- 8:55	2:00- 6:30	7:45- 8:55	7:45-10:30	7:45- 8:55	7:00-10:30	7:45- 8:55	KDKA	Pittsburgh, Pa.	309.1
KFAB	11:00-12:30	4:00- 5:00	7:30-10:00	Silent	7:30-10:00	Silent	7:30- 9:30	KFAB	Lincoln, Nebr.	240
KFAE	Silent	Silent	Silent	Silent	9:30-11:00	Silent	Silent	KFAE	Pullman, Wash.	348.6
KFAU	Silent	Silent	9:00-10:00	Silent	Silent	Silent	9:00-10:00	KFAU	Boise, Idaho	275
KFDM	Silent	8:00- 9:00	Silent	8:00-10:30	Silent	Silent	8:00-10:30	KFDM	Beaumont, Texas	315.6
KFI	8:45- 2:00	6:00- 1:00	8:45- 1:00	8:45- 1:00	8:45- 1:00	8:45- 1:00	8:45- 1:00	KFI	Los Angeles, Calif.	467
KFMQ	Silent	Silent	Silent	9:00-10:00	Silent	Silent	Silent	KFMQ	Fayetteville, Ark.	299.8
KFNF	7:30- 8:30	6:30-10:00	7:30- 8:30	Silent	7:30- 8:30	7:30- 8:30	7:30- 8:30	KFNF	Shenandoah, Ia.	266
KFOA	8:00- 1:30	Silent	8:00-12:00	8:00- 1:30	8:00-12:00	Silent	8:30- 1:30	KFOA	Seattle, Wash.	454.3
KFRU	7:30-12:00	5:00- 7:00	7:00-10:30	10:30-12:00	8:00-10:30	10:30-11:30	11:00- 1:00	KFRU	Bristow, Okla.	394.5
KFUO	Silent	8:15- 9:15	8:00- 9:00	Silent	9:15-10:15	Silent	Silent	KFUO	St. Louis, Mo.	545.1
KFVE	10:00-12:00	Silent	10:00-12:00	10:00-12:00	10:00-12:00	Silent	10:00-12:00	KFVE	University City, Mo.	240
KFWA	Silent	9:00-12:00	10:00-12:00	10:00-11:00	10:00- 1:00	Silent	10:00-12:00	KFWA	Ogden, Utah	261
KFWB	9:00- 1:00	11:00- 1:00	8:30- 1:00	9:45- 1:00	9:00- 1:00	9:00- 1:00	9:00- 1:00	KFWB	Hollywood, Calif.	252
KGO	10:00- 3:00	5:30-11:00	10:00- 3:00	10:00- 3:00	Silent	10:00- 3:00	Silent	KGO	Oakland, Calif.	361.2
KGW	8:00- 2:00	9:30-12:00	8:00- 9:00	11:00- 2:00	10:00- 1:00	10:00- 2:00	11:00- 2:00	KGW	Portland, Ore.	491.5
KHJ	7:30- 1:00	8:00- 1:00	9:00- 3:30	7:30- 1:00	7:30- 1:00	7:30- 1:00	7:30- 1:00	KHJ	Los Angeles, Calif.	405.2
KIAF	Silent	4:00- 5:00	9:00-10:00	Silent	9:00-10:00	Silent	9:00-10:00	KIAF	Sihtipok, Minn.	421
KJR	Silent	9:00-10:00	8:00-12:00	Silent	10:30-12:00	12:30- 2:00	10:30-12:00	KJR	Seattle, Wash.	384.4
KJS	Silent	9:15-11:30	Silent	10:00-11:00	Silent	10:00-11:00	Silent	KJS	Los Angeles, Calif.	293.9
KLDS	Silent	6:30-10:00	Silent	8:00- 9:00	Silent	8:00- 9:00	Silent	KLDS	Independence, Mo.	440.9
KLX	Silent	Silent	8:00- 1:00	Silent	8:00- 1:30	Silent	8:00-12:30	KLX	Oakland, Calif.	508.2
KNX	10:00- 4:00	7:00- 1:00	8:30- 2:00	8:30- 2:00	9:00-12:00	8:30- 2:00	8:30- 2:00	KNX	Hollywood, Calif.	336.9
KOA	10:00- 1:00	5:30- 9:30	9:00-10:00	Silent	9:00- 1:00	Silent	9:00-10:00	KOA	Denver, Colo.	322.4
KPO	8:25- 2:00	8:30-12:00	8:30- 1:00	8:30- 1:00	8:30- 1:00	8:30- 1:00	9:00- 1:00	KPO	San Francisco, Calif.	428.3
KPRC	8:30- 9:30	8:00- 9:00	8:30- 9:30	8:30- 9:30	8:30- 9:30	8:30- 9:30	Silent	KPRC	Houston, Texas	296.9
KSD	7:00- 9:30	Silent	9:00-11:00	6:30- 8:30	7:30- 8:30	Silent	7:30- 9:00	KSD	St. Louis, Mo.	545.1
KSL	9:00-12:00	10:00-12:00	9:00-12:00	10:00-12:00	9:00-12:00	9:00-12:00	10:00-12:00	KSL	Salt Lake City, Utah	261
KTCL	Silent	9:50-11:15	10:00-12:00	9:00-10:00	9:00-12:00	8:30- 9:30	9:00- 2:00	KTCL	Seattle, Wash.	305.9
KTHS	8:30-10:00	8:30-11:30	8:30-10:00	8:30-10:00	8:30-10:00	8:30-10:00	8:30-10:15	KTHS	Hot Springs, Ark.	374.8
KWWG	8:30- 9:30	Silent	Silent	8:30- 9:30	Silent	8:30- 9:30	Silent	KWWG	Brownsville, Texas	278
KTW	Silent	9:00-11:30	Silent	Silent	Silent	Silent	Silent	KTW	Seattle, Wash.	455
KYW	6:00-12:30	3:00- 7:00	Silent	6:00-10:30	6:00-12:30	6:00-10:30	6:00-12:30	KYW	Chicago, Ill.	535.4
NAA	Silent	Silent	6:45- 7:00	6:45- 7:00	6:25- 7:40	6:45- 7:00	6:45- 7:00	NAA	Radio, Va.	434.5
PWX	7:30-10:00	Silent	Silent	Silent	7:30-10:00	Silent	Silent	PWX	Havana, Cuba	400
WABL	Silent	Silent	6:00- 8:00	Silent	6:00- 8:00	Silent	6:00- 8:00	WABL	Storrs, Conn.	275
WAHG	11:00- 1:00	Silent	6:00-12:00	Silent	5:30-10:00	Silent	6:00- 9:30	WAHG	Richmond, N. Y.	315.6
WAMD	10:00-11:00	2:00-10:00	Silent	10:00-11:00	10:00-11:30	10:00-11:30	10:00-11:00	WAMD	Minneapolis, Minn.	243.8
WBAP	7:00- 8:00	11:00-12:00	7:30-12:00	7:30-10:45	7:30-10:45	7:30-10:45	7:30-10:45	WBAP	Fort Worth, Tex.	475.9
WBAR	Silent	10:00-11:00	9:00-10:00	Silent	8:00- 9:00	7:30- 8:30	Silent	WBAR	Sisiht, Wis.	406
WBAV	Silent	Silent	7:00- 9:00	Silent	Silent	Silent	7:00- 8:00	WBAV	Columbus, O.	293.9
WBBM	7:00-11:00	3:00- 9:00	Silent	7:00-11:00	7:00- 9:00	7:00-11:00	7:00- 9:00	WBBM	Chicago, Ill.	226
WBBR	6:00- 7:00	6:00- 7:30	6:00- 7:00	Silent	Silent	6:00- 7:00	Silent	WBBR	Staten Island, N. Y.	272.6
WBCN	8:00-12:00	4:00-11:00	Silent	8:00- 2:00	7:00-11:00	8:00- 1:00	8:00-12:00	WBCN	Chicago, Ill.	266
WBZ	5:30- 7:55	6:00- 7:30	6:00- 7:55	7:15- 7:55	6:00- 7:55	5:30- 7:55	5:45- 7:55	WBZ	Springfield, Mass.	333.3
WCAE	6:00- 7:30	2:00- 6:30	6:00-10:00	6:00- 9:00	6:30- 9:00	6:00- 9:00	6:30- 7:30	WCAE	Pittsburgh, Pa.	461.3
WCAP	Silent	3:00- 8:15	6:20- 9:00	Silent	5:45- 9:00	Silent	6:20- 7:20	WCAP	Washington, D. C.	468.5
WCAU	Silent	3:00- 6:00	Silent	4:30-10:00	4:30- 9:45	4:30- 9:30	4:30- 9:30	WCAU	Philadelphia, Pa.	278
WCBD	Silent	1:30- 9:00	7:00- 9:30	Silent	Silent	7:00- 9:30	Silent	WCBD	Zion, Ill.	344.6
WCCO	6:05-11:00	4:10-10:15	6:00-11:00	6:00- 9:00	6:00-12:30	6:00-10:00	6:00-11:00	WCCO	Minn.-St. P., Minn.	416.4
WCX	5:00- 6:00	6:15- 7:15	5:00- 8:30	5:00-10:00	5:00- 7:00	5:00- 7:00	5:00-10:00	WCX	Detroit, Mich.	516.9
WDAF	6:00- 1:00	4:00- 5:30	6:00- 1:00	6:00- 1:00	6:00- 1:00	6:00- 1:00	6:00- 1:00	WDAF	Kansas City, Mo.	365.6
WDWF	Silent	3:00- 4:45	Silent	6:30- 7:30	Silent	Silent	4:00-10:30	WDWF	Providence, R. I.	440.9
WEAF	4:00-10:00	5:20- 8:15	4:00- 9:30	4:00-10:00	4:00-10:00	4:00-10:00	4:00-10:00	WEAF	New York, N. Y.	491.5
WEAO	Silent	Silent	Silent	Silent	7:00- 8:00	7:00- 8:00	Silent	WEAO	Columbus, Ohio	293.9
WEAR	6:00- 7:00	2:30- 9:00	6:00- 7:00	6:00-10:00	6:00- 7:00	6:00-10:00	6:00-10:00	WEAR	Cleveland, Ohio	389.4
WEBH	6:30-11:30	6:00- 8:00	Silent	6:30-11:30	6:30-11:30	6:30-11:30	6:30-11:30	WEBH	Chicago, Ill.	370.2
WEBJ	Silent	Silent	Silent	6:00- 7:00	5:00- 7:00	Silent	6:00- 7:00	WEBJ	New York, N. Y.	233
WEEI	Silent	5:20- 8:20	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00	WEEI	Boston, Mass.	475.9
WFAA	8:30-12:00	6:30-11:00	6:30- 9:30	6:30-12:00	Silent	6:30-12:00	6:30- 9:30	WFAA	Dallas, Tex.	475.9
WFBH	9:30-12:00	3:00- 6:00	9:30-12:00	9:30-12:00	9:30-12:00	9:30-12:00	9:30-12:00	WFBH	New York, N. Y.	272.6
WFI	4:00- 5:45	2:30- 6:30	Silent	6:00- 8:00	4:45- 5:45	5:45- 9:00	4:45- 5:45	WFI	Philadelphia, Pa.	394.5
WGBS	4:00-10:00	1:30- 8:30	Silent	4:00-10:00	Silent	4:00-11:00	Silent	WGBS	New York, N. Y.	315.6
WGCP	Silent	5:30-10:00	5:30-10:00	Silent	5:30-10:00	Silent	5:30-10:00	WGCP	New York, N. Y.	252
WGES	9:30- 1:00	9:30- 1:00	Silent	9:30- 1:00	9:30- 1:00	9:30- 1:00	9:30- 1:00	WGES	Oak Park, Ill.	250
WGN	5:30-10:30	1:30- 9:00	Silent	5:30-10:30	5:30-10:30	5:30-10:30	5:30-10:30	WGN	Chicago, Ill.	370.2
WGR	Silent	4:45- 5:45	5:00-10:00	5:00- 8:00	5:00- 8:00	5:00- 8:00	4:00-10:00	WGR	Buffalo, N. Y.	319
WGY	8:00-11:00	5:30-10:00	5:30- 7:30	6:10-10:00	Silent	5:45-10:30	6:15- 9:30	WGY	Schenectady, N. Y.	379.5
WHAD	6:00- 7:00	Silent	6:00-10:00	6:00- 7:00	6:00-12:30	6:00- 7:00	6:00- 9:30	WHAD	Milwaukee, Wis.	275
WHAR	5:30- 8:00	7:00-10:00	5:30- 8:00	5:30-10:00	Silent	5:30- 8:00	5:30-10:00	WHAR	Atlantic City, N. J.	275
WHAS	7:30- 9:00	4:00- 5:00	Silent	7:30- 9:30	7:30- 9:00	7:30- 9:00	7:30- 9:00	WHAS	Louisville, Ky.	399.8
WHAZ	Silent	Silent	8:00-10:00	Silent	Silent	Silent	Silent	WHAZ	Troy, N. Y.	379.5
WHB	Silent	8:00- 1:00	7:00- 8:00	Silent	7:00- 8:00	8:00-10:30	7:00- 8:00	WHB	Kansas City, Mo.	365.6
WHN	5:30- 8:00	5:30-10:00	5:30-10:00	5:30-10:00	5:30- 9:00	5:30-10:00	5:30-10:00	WHN	New York, N. Y.	360
WHO	Silent	7:30- 8:30	7:30-12:00	7:30- 9:00	6:30-11:20	7:30-12:00	7:30-12:00	WHO	Des Moines, Ia.	526
WHT	6:00-12:00	11:00- 9:30	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00	WHT	Deerfield, Ill.	399.8
WIBO	5:00- 7:00	5:00-11:00	Silent	5:00- 2:00	5:00-11:00	5:00- 2:00	5:00- 1:00	WIBO	Chicago, Ill.	226
WIP	6:00-10:05	2:15- 3:15	Silent	6:00-11:00	Silent	6:00-11:00	Silent	WIP	Philadelphia, Pa.	508.2
WJAR	Silent	5:20- 8:15	6:00- 8:00	6:30- 9:00	5:30- 6:30	6:00- 9:00	6:00-10:00	WJAR	Providence, R. I.	305.9
WJAS	Silent	Silent	7:30-10:00	7:30-10:00	7:30-10:00	6:30- 9:00	6:30- 9:00	WJAS	Pittsburgh, Pa.	275.3
WJJD	5:45-12:00	7:45- 9:00	5:45-12:00	5:45-12:00	5:45-12:00	Silent	5:45-12:00	WJJD	Mooseheart, Ill.	302.8
WJY	Silent	6:15- 7:15	Silent	6:30- 9:15	Silent	6:30- 8:00	6:45- 7:45	WJY	New York, N. Y.	405.2
WJZ	5:00- 9:30	6:00- 9:00	6:15- 7:15	6:10- 9:30	7:30- 9:30	6:30- 9:30	6:15- 8:45	WJZ	New York, N. Y.	454.3
WKAQ	Silent	6:00- 8:00	Silent	Silent	6:00- 8:00	6:30- 8:00	Silent	WKAQ	San Juan, P. R.	340.7
WKAR	11:30- 1:00	Silent	6:00- 7:00	Silent	7:00- 8:15	Silent	6:00- 7:00	WKAR	Lansing, Mich.	285.5
WKRC	9:00-11:00	5:45-10:00	9:00-11:00	9:00-12:00	7:00-11:00	Silent	Silent	WKRC	Cincinnati, O.	422.3
WLBL	11:59-12:59	Silent	Silent	8:00- 9:00	Silent	8:00- 9:00	Silent	WLBL	Stevens Point, Wis.	278
WLIT	5:30- 6:30	Silent	5:30- 9:00	Silent	5:30- 9:00	Silent	5:30- 9:00	WLIT	Philadelphia, Pa.	394.5
WLS	6:45-12:00	6:30- 7:55	Silent	6:00-12:00	6:00-10:30	6:00- 7:55	6:00-10:30	WLS	Chicago, Ill.	344.6
WLW	5:00- 7:00	5:30- 7:30	7:15- 9:30	6:00- 9:00	6:00-10:00	6:00-11:15	Silent	WLW	Harrison, O.	422.3
WMAK	Silent	Silent	7:30- 9:15	Silent	Silent	10:00-11:00	Silent	WMAK	Lockport, N. Y.	265.5
WMAQ	7:00- 9:00	Silent	Silent	7:00- 9:15	7:00- 8:45	7:00- 9:15	7:00- 9:15	WMAQ	Chicago, Ill.	447.5
WMBB	6:00- 9:30	6:00- 9:30	Silent	6:00- 9:30	6:00- 9:30	6:00- 9:30	6:00- 9:30	WMBB	Chicago, Ill.	250
WMBF	5:30-11:00	5:30-11:00	5:30-11:00	5:30-11:00	5:30-11:00	5:30-11:00	5:30-11:00	WMBF	Miami Beach, Fla.	384.4
WMC	7:30- 9:30	Silent	7:30- 9:30	7:30-12:00	Silent	7:30- 9:30	7:30-12:00	WMC	Memphis, Tenn.	499.7
WMCA	7:00-10:00	1:00- 5:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00	WMCA	New York, N. Y.	340.7
WNAC	6:00- 8:00	1:00- 7:30	6:00- 8:00	6:00- 8:00	6:00- 8:00	6:00- 8:00	6:00- 8:00	WNAC	Boston, Mass.	280.2
WNYC	4:30- 8:20	7:00- 9:00	5:00- 8:20	5:20- 8:20	5:30- 8:30	5:20- 7:30	5:30- 8:20	WNYC	New York, N. Y.	526
WOAI	Silent	7:30-10:30	Silent	8:30-10:30	Silent	9:30-10:30	Silent	WOAI	San Antonio, Texas	394.5
WOAN	Silent	9:00-10:00	9:00-10:00	9:00-10:00	9:00-10:00	9:00-10:00	9:00-10:00	WOAN	Lawrenceburg, Tenn.	282.8
WOAW	6:00-12:00	9:00-10:00	6:00-11:00	6:00- 1:00	Silent	6:00-10:00	6:00-10:00	WOAW	Omaha, Nebr.	526
WOC	6:30-12:00	8:00-11:30	Silent	6:30- 8:00	6:30-10:00	6:30-12:00	6:30-10:00	WOC	Davenport, Ia.	483.6
WOO	5:30- 6:30	2:45- 5:00	5:30- 9:30	5:30- 6:30	5:30- 9:30	5:30- 6:30	5:30- 9:30	WOO	Philadelphia, Pa.	508.2
WOR	4:15-10:00	Silent	4:15-10:00	4:15- 5:30	4:15-10:00	4:15- 5:30	4:15- 5:30	WOR	Newark, N. J.	405.2
WORD	7:30- 9:30	5:45- 7:00	7:30- 8:45	7:30- 9:00	7:30- 9:00	7:30- 9:00	7:30- 9:30	WORD	Batavia, Ill.	275
WOS	Silent	7:30- 8:30	8:00-10:00	Silent	8:00-10:00	Silent	8:00-10:00	WOS	Jefferson, City, Mo.	440.9
WPG	5:00-10:00	1:15- 9:00	5:00- 9:30	6:00- 9:00	Silent	5:00-10:15	5:00- 9:00	WPG	Atlantic City, N. J.	299.8
WQJ	6:00- 2:00	6:00- 9:00	Silent	6:00- 1:00	6:00- 1:00	6:00- 1:00	6:00- 1:00	WQJ	Chicago, Ill.	447.5
WRBC	Silent	7:30- 8:30	7:30- 8:30	Silent	Silent	Silent	Silent	WRBC	Valparaiso, Ind.	278
WRC	6:00-10:30	Silent	Silent	6:00-11:00	Silent	6:00-10:00	Silent	WRC	Washington, D. C.	468.5
WREO	9:00-10:00	6:30- 7:30	Silent	7:15- 8:45	Silent	7:15- 8:45	Silent	WREO	Lansing, Mich.	285.5
WRW	8:00-10:30	7:00-10:30	8:00-10:30	8:00-10:30	8:00-10:30	8:00-10:30	8:00-10:30	WRW	Tarrytown, N. Y.	273
WSAI	7:00-12:30	2:00- 3:00	9:00-11:00	6:00- 9:00	6:00-11:00	6:00- 9:00	Silent	WSAI	Mason, O.	325.9
WSB	8:00-12:00	7:30- 9:15	8:00-12:00	8:00-12:00	10:45-12:00	8:00-12:00	8:00-12:00	WSB	Atlanta, Ga.	428.3
WSMB	6:30-10:30	Silent	6:30-10:30	6:30- 7:30	6:30-10:30	6:30-10:30	6:30- 7:30	WSMB	New Orleans, La.	319
WSUI	Silent	9:00-10:00	8:00- 9:00	Silent	Silent	Silent	Silent	WSUI	Iowa City, Ia.	483.6
WTAM	5:00-11:00	Silent	5:00-11:00	5:00- 6:00	5:00-12:00	5:00- 6:00	5:00- 6:00	WTAM	Cleveland, O.	389.4
WTAS	7:00- 9:30	7:00-11:00	7:00- 9:30	7:00- 9:30	7:00- 9:30	7:00-11:00	7:00- 9:30	WTAS	Elgin, Ill.	302.8
WTIC	Silent	Silent	5:00- 6:00	5:50- 8:30	Silent	5:00- 6:00	5:50- 8:30	WTIC	Hartford, Conn.	348.6
WWJ	Silent	5:20- 9:00	5:00- 8:00	5:00- 8:00	5:00-10:00	5:00-11:30	5:00- 9:00	WWJ	Detroit, Mich.	352.7

(FOR EASTERN TIME Or Cities Using Central Daylight Saving Time)

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Call
Silent	6:00- 7:00	Silent	Silent	Silent	8:00- 9:55	Silent	AT9
Silent	7:00- 8:00	Silent	8:15- 9:15	8:15- 9:15	8:15- 9:15	Silent	CFCA
12:00- 2:00	Silent	Silent	Silent	Silent	10:00-11:00	Silent	CFCN
Silent	Silent	7:30- 8:30	Silent	Silent	Silent	Silent	CHNC
11:00- 1:00	9:30-10:30	9:30-11:30	9:30-10:00	8:00-10:00	11:00- 1:00	10:30- 1:00	CJCA
6:30-10:30	Silent	Silent	6:30-10:30	Silent	7:30- 8:30	Silent	CKAC
Silent	8:00-10:45	Silent	9:30-11:45	Silent	9:00-10:00	9:30-10:45	CKY
Silent	Silent	Silent	7:30- 8:30	Silent	Silent	7:30- 8:30	CNRA
7:30-12:30	Silent	Silent	Silent	7:30-12:30	Silent	Silent	CNRO
11:30-12:45	Silent	Silent	10:15-11:15	Silent	Silent	Silent	CYB
Silent	Silent	Silent	11:00-12:30	Silent	Silent	11:00-12:30	CYL
Silent	Silent	10:15-11:30	Silent	Silent	Silent	10:15-11:45	CYX
8:45- 9:55	3:00- 7:30	8:45- 9:55	8:45- 9:30	8:45- 9:55	8:00-11:30	8:45- 9:55	KDKA
12:00- 1:30	5:00- 6:00	8:30-11:00	Silent	8:30-11:00	Silent	8:30-10:30	KFAB
Silent	Silent	Silent	Silent	10:30-12:00	Silent	Silent	KFAE
Silent	Silent	10:00-11:00	Silent	Silent	Silent	10:00-11:00	KFAU
Silent	9:00-10:00	Silent	9:00-11:30	Silent	Silent	9:00-11:30	KFDM
9:45- 3:00	7:00- 2:00	9:45- 2:00	9:45- 2:00	9:45- 2:00	9:45- 2:00	9:45- 2:00	KFI
Silent	Silent	Silent	10:00-11:00	Silent	Silent	Silent	KFMQ
8:30- 9:30	7:30-11:00	8:30- 9:30	Silent	8:30- 9:30	8:30- 9:30	8:30- 9:30	KFNF
9:00- 2:30	Silent	9:00- 2:00	9:00- 2:30	9:00- 2:00	Silent	9:00- 2:30	KFOA
8:30- 1:00	6:00- 8:00	8:00-11:30	11:30-1:00	9:00-11:30	11:30-12:30	12:00- 2:00	KFRU
Silent	9:15-10:15	9:00-10:00	Silent	10:15-11:15	Silent	Silent	KFUO
11:00- 1:00	Silent	11:00- 1:00	11:00- 1:00	11:00- 1:00	Silent	11:00- 1:00	KFVE
Silent	10:00- 1:00	11:00- 1:00	11:00-12:00	11:00- 2:00	Silent	11:00- 1:00	KFWA
10:00- 2:00	12:00- 2:00	9:30- 2:00	10:45- 2:00	10:00- 2:00	10:00- 2:00	10:00- 2:00	KFWB
11:00- 4:00	6:30-12:00	11:00- 4:00	11:00- 4:00	Silent	11:00- 4:00	Silent	KGO
9:00- 3:00	10:30- 1:00	9:00-10:00	12:00- 3:00	11:00- 2:00	11:00- 3:00	12:00- 3:00	KGW
8:30- 2:00	9:00- 2:00	10:00- 4:30	8:30- 2:00	8:30- 2:00	8:30- 2:00	8:30- 2:00	KHJ
Silent	3:00- 4:00	8:00- 9:00	Silent	8:00- 9:00	Silent	8:00- 9:00	KIAF
Silent	10:00-11:00	9:00- 1:00	Silent	11:30- 1:00	1:30- 3:00	11:30- 1:00	KJR
Silent	10:15-12:30	Silent	11:00-12:00	Silent	11:00-12:00	Silent	KJS
Silent	7:30-11:00	Silent	9:00-10:00	Silent	9:00-10:00	Silent	KLDS
Silent	Silent	9:00- 2:00	Silent	9:00- 2:30	Silent	9:00- 1:30	KLX
11:00- 5:00	8:00- 2:00	9:30- 3:00	9:30- 3:00	10:00- 1:00	9:30- 3:00	9:30- 3:00	KNX
11:00- 2:00	6:30-10:30	10:00-11:00	Silent	10:00- 2:00	Silent	10:00-11:00	KOA
9:25- 3:00	9:30- 1:00	9:30- 2:00	9:30- 2:00	9:30- 2:00	9:30- 2:00	10:00- 2:00	KPO
9:30-10:30	9:00-10:00	9:30-10:30	9:30-10:30	9:30-10:30	9:30-10:30	Silent	KPRC
8:00-10:30	Silent	10:00-12:00	7:30- 9:30	8:30- 9:30	Silent	8:30-10:00	KSD
10:00- 1:00	11:00- 1:00	10:00- 1:00	11:00- 1:00	10:00- 1:00	10:00- 1:00	11:00- 1:00	KSL
Silent	10:50-12:15	11:00- 1:00	10:00-11:00	10:00- 1:00	9:30-10:30	10:00- 3:00	KTCL
9:30-11:00	9:30-12:30	9:30-11:00	9:30-11:00	9:30-11:00	9:30-11:00	9:30-11:15	KTHS
9:30-10:30	Silent	Silent	9:30-10:30	Silent	9:30-10:30	Silent	KWWG
Silent	10:00-12:30	Silent	Silent	Silent	Silent	Silent	KTW
7:00- 1:30	4:00- 8:00	Silent	7:00- 11:30	7:00- 1:30	7:00- 11:30	7:00- 1:30	KYW
Silent	Silent	7:45- 8:00	7:45- 8:00	7:25- 8:40	7:45- 8:00	7:45- 8:00	NAA
8:30-11:00	Silent	Silent	Silent	8:30-11:00	Silent	Silent	PWX
Silent	Silent	7:00- 9:00	Silent	7:00- 9:00	Silent	7:00- 9:00	WABL
12:00- 2:00	Silent	7:00- 1:00	Silent	6:30-11:00	Silent	7:00-10:30	WAHG
11:00-12:00	3:00-11:00	Silent	11:00-12:00	11:00-12:30	11:00-12:30	11:00-12:00	WAMD
8:00- 9:00	12:00- 1:00	8:30- 2:00	8:30-11:45	8:30-11:45	8:30-11:45	8:30-11:45	WBAP
Silent	11:00-12:00	10:00-11:00	Silent	9:00-10:00	8:30- 9:30	Silent	WBAR
Silent	Silent	8:00-10:00	Silent	Silent	Silent	8:00- 9:00	WBAV
8:00-12:00	4:00-10:00	Silent	8:00-12:00	8:00-10:00	8:00-12:00	8:00-10:00	WBBM
7:00- 8:00	8:00- 9:30	7:00- 8:00	Silent	Silent	7:00- 8:00	Silent	WBBR
9:00- 1:00	5:00-12:00	Silent	9:00- 3:00	8:00-12:00	9:00- 2:00	9:00- 1:00	WBCN
6:30- 8:55	7:00- 8:30	7:00- 8:55	8:15- 8:55	7:00- 8:55	6:30- 8:55	6:45- 8:55	WBZ
7:00- 8:30	3:00- 7:30	7:00-11:00	7:00-10:00	7:30-10:00	7:00-10:00	7:30- 8:30	WCAE
Silent	4:00- 9:15	7:20-10:00	Silent	6:45-10:00	Silent	7:20- 8:20	WCAP
Silent	4:00- 7:00	Silent	5:30-11:00	5:30-10:45	5:30-10:30	5:30-10:30	WCAU
Silent	2:30-10:00	8:00- 10:30	Silent	Silent	8:00-10:30	Silent	WCBD
7:05-12:00	5:10-11:15	7:00-12:00	7:00-10:00	7:00- 1:30	7:00-11:00	7:00-12:00	WCCO
6:00- 7:00	7:15- 8:15	6:00- 9:30	6:00-11:00	6:00- 8:00	6:00- 7:00	6:00-11:00	WCX
7:00- 2:00	5:00- 6:30	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00	WDAF
Silent	4:00- 5:45	Silent	7:30- 8:30	Silent	Silent	5:00-11:30	WDWF
5:00-11:00	6:20- 9:15	5:00-10:30	5:00-11:00	5:00-11:00	5:00-11:00	5:00-11:00	WEAF
Silent	Silent	Silent	Silent	8:00- 9:00	8:00- 9:00	Silent	WEAO
7:00- 8:00	3:30-10:00	7:00- 8:00	7:00-11:00	7:00- 8:00	7:00-11:00	7:00-11:00	WEAR
7:30-12:30	7:00- 9:00	Silent	7:30-12:30	7:30-12:30	7:30-12:30	7:30-12:30	WEBH
Silent	Silent	Silent	7:00- 8:00	6:00- 8:00	Silent	7:00- 8:00	WEBJ
Silent	6:20- 9:20	7:30-10:00	6:30-10:00	7:00- 9:00	7:00-10:00	7:30-10:00	WEEI
9:30- 1:00	7:30-12:00	7:30-10:30	7:30- 1:00	Silent	7:30- 1:00	7:30-10:30	WFAA
10:30- 1:00	4:00- 7:00	10:30- 1:00	10:30- 1:00	10:30- 1:00	10:30- 1:00	10:30- 1:00	WFBH
5:00- 6:45	3:30- 7:30	Silent	7:00- 9:00	5:45- 6:45	5:45-10:00	5:45- 6:45	WFI
5:00-11:00	2:30- 9:30	Silent	5:00-11:00	Silent	5:00-12:00	Silent	WGBS
Silent	6:30-11:00	6:30-11:00	Silent	6:30-11:00	Silent	6:30-11:00	WGCP
10:30- 2:00	10:30- 2:00	Silent	10:30- 2:00	10:30- 2:00	10:30- 2:00	10:30- 2:00	WGES
6:30-11:30	2:30-10:00	Silent	6:30-11:30	6:30-11:30	6:30-11:30	6:30-11:30	WGN
Silent	5:45- 6:45	6:00-11:00	6:00- 9:00	7:00- 9:00	5:00- 9:00	5:00-11:00	WGR
9:00-12:00	6:30-11:00	6:30- 8:30	7:10-11:00	Silent	6:45-11:30	7:15-10:30	WGY
7:00- 8:00	Silent	7:00-11:00	7:00- 8:00	7:00- 1:30	7:00- 8:00	7:00-10:30	WHAD
6:30- 9:00	8:00-11:00	6:30- 9:00	6:30- 9:00	Silent	6:30- 9:00	6:30-11:00	WHAR
8:30-10:00	5:00- 6:00	Silent	8:30-10:30	8:30-10:00	8:30-10:00	8:30-10:00	WHAS
Silent	Silent	9:00-11:00	Silent	Silent	Silent	Silent	WHAZ
Silent	9:00- 2:00	8:00- 9:00	Silent	8:00- 9:00	9:00-11:30	8:00- 9:00	WHB
6:30- 9:00	6:30-11:00	6:30-11:00	6:30-11:00	6:30-10:00	6:30-11:00	6:30-11:00	WHN
Silent	8:30- 9:30	8:30- 1:00	8:30-10:00	7:30-12:20	8:30- 1:00	8:30- 1:00	WHO
7:00- 1:00	12:00-10:30	7:00- 1:00	7:00- 1:00	7:00- 1:00	7:00- 1:00	7:00- 1:00	WHT
6:00- 8:00	6:00-12:00	Silent	6:00- 3:00	6:00- 3:00	6:00- 3:00	6:00- 2:00	WIBO
7:00-11:05	3:15- 4:15	Silent	7:00-12:00	Silent	7:00-12:00	Silent	WIP
Silent	6:20- 9:15	7:00- 9:00	7:30-10:00	6:30- 7:30	7:00-10:00	7:00-11:00	WJAR
Silent	Silent	8:30-11:00	8:30-11:00	8:30-11:00	8:30-10:00	7:30-10:00	WJAS
6:45- 1:00	8:45-10:00	6:45- 1:00	6:45- 1:00	6:45- 1:00	Silent	6:45- 1:00	WJJD
Silent	7:15- 8:15	Silent	7:30-10:15	Silent	7:30- 9:00	7:45- 8:45	WJY
6:00-10:30	7:00-10:00	7:15- 8:15	7:10-10:30	8:30-10:30	7:30-10:00	7:15- 9:45	WJZ
Silent	7:00- 9:00	Silent	Silent	7:00- 9:00	7:30- 9:00	Silent	WKAQ
12:30- 2:00	Silent	7:00- 8:00	Silent	8:00- 9:15	Silent	7:00- 8:00	WKAR
10:00-12:00	6:45-11:00	10:00-12:00	10:00- 1:00	8:00-12:00	Silent	Silent	WKRC
12:59- 1:59	Silent	Silent	9:00-10:00	Silent	9:00-10:00	Silent	WLBL
6:30- 7:30	Silent	6:30-10:00	Silent	6:30-10:00	Silent	6:30-10:00	WLIT
7:45- 1:00	7:30- 8:55	Silent	7:00- 1:00	7:00-11:30	7:00- 8:55	7:00-11:30	WLS
6:00- 8:00	6:30- 8:30	8:15-10:30	7:00-10:00	7:00-11:00	7:00-12:15	Silent	WLW
Silent	Silent	8:30-10:15	Silent	Silent	11:00-12:00	Silent	WMAK
8:00-10:00	Silent	Silent	8:00-10:15	8:00- 9:45	8:00-10:15	8:00-10:15	WMAQ
7:00-10:30	7:00-10:30	Silent	7:00-10:30	7:00-10:30	7:00-10:30	7:00-10:30	WMBB
6:30-12:00	6:30-12:00	6:30-12:00	6:30-12:00	6:30-12:00	6:30-12:00	6:30-12:00	WMBF
8:30-10:30	Silent	8:30-10:30	8:30- 1:00	Silent	8:30-10:30	8:30- 1:00	WMC
8:00-11:00	2:00- 6:00	8:00-11:00	8:00-11:00	8:00-11:00	8:00-11:00	8:00-11:00	WMCA
7:00- 9:00	2:00- 8:30	7:00- 9:00	7:00- 9:00	7:00- 9:00	7:00- 9:00	7:00- 9:00	WNAC
5:30- 9:20	8:00-10:00	6:00- 9:20	6:20- 9:20	6:30- 9:30	6:20- 8:30	6:30- 9:20	WNYC
Silent	8:30-11:30	Silent	9:30-11:30	Silent	10:30-11:30	Silent	WOAI
Silent	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00	WOAN
7:00- 1:00	10:00-11:00	7:00-12:00	7:00- 2:00	Silent	7:00-11:00	7:00-11:00	WOAW
7:30- 1:00	9:00-12:30	Silent	7:30- 9:00	7:30-11:00	7:30- 1:00	7:30-11:00	WOC
6:30- 7:30	3:45- 6:00	6:30-10:30	6:30- 7:30	6:30-10:30	6:30- 7:30	6:30-10:30	WOO
5:15- 9:00	Silent	5:15- 9:00	5:15- 6:30	5:15- 9:00	5:15- 6:30	5:15- 6:30	WOR
8:30-10:30	6:45- 8:00	8:30- 9:45	8:30-10:00	8:30-10:00	8:30-10:00	8:30-10:30	WORD
Silent	8:30- 9:30	9:00-11:00	Silent	9:00-11:00	Silent	9:00-11:00	WOS
6:00-11:00	2:15-10:00	6:00-10:30	7:00-10:00	Silent	6:00-11:15	6:00-10:00	WPG
7:00- 3:00	7:00-10:00	Silent	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00	WQJ
Silent	8:30- 9:30	8:30- 9:30	Silent	Silent	Silent	Silent	WRBC
7:00-11:30	Silent	Silent	7:00-12:00	Silent	7:00-11:00	Silent	WRC
10:00-11:00	7:30- 8:30	Silent	8:15- 9:45	Silent	8:15- 9:45	Silent	WREO
9:00-11:30	8:00-11:30	9:00-11:30	9:00-11:30	9:00-11:30	9:00-11:30	9:00-11:30	WRW
8:00- 1:30	3:00- 4:00	10:00-12:00	7:00-10:00	7:00-12:00	7:00-10:00	Silent	WSAI
9:00- 1:00	8:30-10:15	9:00- 1:00	9:00- 1:00	11:45- 1:00	9:00- 1:00	9:00- 1:00	WSB
7:30-11:30	Silent	7:30-11:30	7:30- 8:30	7:30-11:30	7:30-11:30	7:30- 8:30	WSMB
Silent	8:00-11:00	8:30-10:00	Silent	Silent	Silent	Silent	WSUI
6:00-12:00	Silent	6:00-12:00	6:00- 7:00	6:00- 1:00	6:00- 7:00	6:00- 7:00	WTAM
8:00-10:30	8:00-12:00	8:00-10:30	8:00-10:30	8:00-10:30	8:00-12:00	8:00-10:30	WTAS
Silent	Silent	6:00- 7:00	6:50- 7:30	Silent	6:00- 7:00	6:50- 9:30	WTIC
Silent	6:20-10:00	6:00- 9:00	6:00- 9:00	6:00-11:00	6:00-12:30	6:00-10:00	WWJ

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We Celebrate the Fourth

AGAIN we celebrate the Fourth of July. We have been celebrating the Fourth every year since 1776 when our forefathers signed the Declaration of Independence.

But still congress has not seen fit to pass, or even seriously consider, the passage of broadcasting legislation.

It certainly does not take a lot of time for the representatives of the people to get together—or should we say get enthusiastic—on necessary legislation.

But then, why worry? In twenty or thirty years, or perhaps a century or so, broadcasting will be a thing of the past. Some new invention will have superseded Radio. So what good would laws be, anyway?

Let's celebrate the Fourth just like members of congress. We should worry about legislation.

Ouality Pays Any Station

HENRY BELLOWS, recently made director of Gold Medal Station WCCO, has announced the policy that his station to be one of quality first. He believes that quality pays, and is willing to run the risk of having the Gold Medal broadcaster thought too "highbrow" in order to give the public what they need, instead of only what they think they want.

We wish to recommend this policy to every station director.

An overwhelmingly great majority of the American people are blind to good literature, have no appreciation of good music, know not how to express themselves in the niceties of the English language, and wonder what art is all about.

The listeners therefore will not like a quality station first hand. But as the missionary work continues, the audience of the high class station will grow by leaps and bounds.

Quality will pay any station. Eventually—why not now?

Broadcasting Congress (?)

SAYS a newspaper writer, "The American political practice of saying much and meaning little is keeping the people from hearing congress by Radio."

Truer words have never been spoken or written.

General Dawes would find one hundred millions of people behind him if he put through an order requiring all sessions of congress to be broadcast. He would suddenly become possessed of an army of champions in his efforts to put the senate (and house) on a businesslike basis.

Such buncombe as is edited, revised and deleted from even the Congressional Record, such small repartee and asides, such improprieties as are indulged in by no small part of our two august bodies of federal legislators, would be caught and sent direct to the constituents in the home states. Suicidal for many congressmen and senators?

We should hope to "smoke a herring."

Many would be the causualties of our pseudo-oratorical spell-binders when the home folk tuned in. But pity the poor microphone, having to stand there quietly and absorb all the meaningless nothings from the long-winded worshipers of gab.

After all, in behalf of the Society for the Preservation of Cruelty to Microphones, we guess it is best that congress continue voting down proposals that it be broadcast.

WSAI Promotes Art

TWO weeks ago there appeared in this column an editorial commending "Radio Wien," the Austrian station, for broadcasting talks on the paintings and sculpture found in the Viencse art galleries and museums. As a result we are informed that WSAI, the U. S. Playing Card superstation at Cincinnati, has been presenting talks on art for the past several months under the auspices of the Cincinnati Art club.

This is good. We are delighted to know that at least one American broadcaster has foresight enough to give the better things to its audience. Let there be more to join with WSAI.

RADIO INDI-GEST

Radio Advertising

THE new station director of VEAF leaned back in his chair and lit a cigar. Yes, sir, the Fourth of July program had gone over big. The big stack of telegrams clearly showed that. The patriotic speeches, the stirring band music, the singing and the cheering of young and old had gone forth mightily from the microphone.

"Say, you," bellowed a voice, "vot's the pig idea?" It was the general manager, Mr. Asher Feilbaum. "Vot are ve runnink here? A free lunch counter maybe? Haf you made any charges for the program, I am eskink?"

"Why, Mr. Feilbaum—I thought today being Fourth of July—the great Independence Day—you know—"

"Nen schwarzen Tod sollste haben," roared Mr. Feilbaum, "Independence be hanged! Ven ve broadcast ve get money, understand? Send them fellers a bill!"

"But, Mr. Feilbaum—"

"Ach Gott, solch ein Dummkopf!" With this he took a statement and made up the following:

STATION VEAF
Broadcasting for the Trade—Try Us

To the 4th of July Committee.

Broadcasting of America, Columbia, Gem of Ocean, and other trade articles	$ 666.38
Press agent notices of G. Washington	333.96
Cherry tree material	34.23
Broadcasting of three cheers for the Red, White and Blue, @ $19.20 per cheer	57.60
Broadcasting of Star Spgld. Banner (drum solo $1.80 extra a/c strain on mike)	6.20
Specials and extras for Abraham Linkhorn (10% off list, he being one of God's chosen people)	309.20
Broadcasting of Decl. of Ind. and other Anti-British propaganda	36.54
Incidental cheers and applause	63.90
Total	$1,508.01
Add 10% a/c of holiday	150.80
Grand total	$1,658.81

"So," said Mr. Feilbaum, "dot's the vay to do business. Send him dot quick. Maybe ve get yet somedings out. Und another thing—I hear mention a lot of nasty cracks against dot fellow Benedict Arnold. Cud id oud, I tell you! I say maybe you should see us get troubles with a $10,000,000 libel suit!"

THE THIRD TROMBONE PLAYER.

Now a little further down the roped arena you will observe a beau-ti-ful po-em by L. G. Look closely!

The Fan

Daddy loves his family;
Loves his Radio, too;
I wonder which is stronger,
The old love or the new.

I will tell the story—
Nothing much to tell—
When Daddy hears the "birdies,"
All else can go—oh, well,

What's the use of telling—
He's a Radio fan!
And when the music's swelling,
All other sounds we ban.

It's "S-ssh, I'll get this station
If you will just be still!
Oh, Gosh and thunderation!
Now I know I never will!"

He's awfully absent-minded,
And when he deigns to speak,
It's always some new notion
For aerial or grid leak.

The Radio junk he gathers
Would fill a good-sized cart,
But every little bolt and screw
Has a niche within his heart.

So, be game, Radio widows,
And here's to the dear old man!
We'll always love him just the same,
If he is a Radio fan!

L. G.

Now that's two-thirds of a column done, and a little further along the roped arena we see a fascinating article on Education. Observe it well!

The Liberal Educator

WEAF's program for the morning opens with an interesting talk by Janet Read entitled "Your Child's Laundry Problem." Following this feature, Dr. Wm. Heard Kilpatrick, professor in the educational philosophy department will talk on "How to Build Character." At 12 noon the chapel services will be broadcast.

Talks will be given in the future on "Canary Bird Culture," "How to Write Love Letters" and "How I Got to Be So Good,"—a talk for ambitious young girls, by Glorius Wanson. In the evening a talk will be given by Prof. Percy Montgomery head of the ceramics department, on "How to Lay Bricks."

And now one all about Caution.

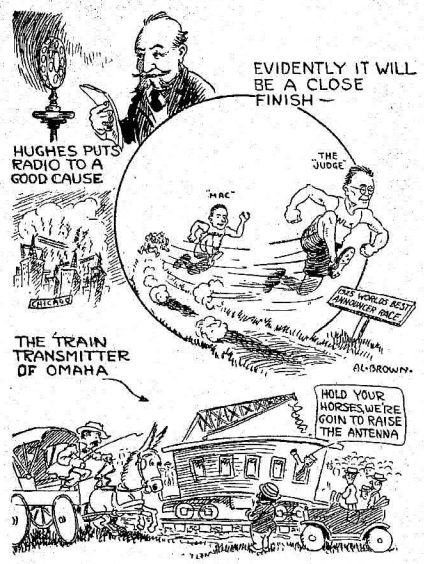
Caution

A gentleman, on calling upon a Hebrew friend who had just purchased a four tube set, found him listening in while his little son amused himself on the floor with a money box. Suddenly the father exclaimed in great excitement: "For the love of Moses, stop rattling that box, Ikey—Aberdeen's (Scotland) calling."

LONDON BOBBY.

And now we have seen the whole show, so we can step out into the open spaces and shoot our fire crackers.

News Events of the Week



Condensed

BY DIELECTRIC

If you find yourself in the neighborhood of Lansing, Mich., on your dials, bring in the Reo station, WREO. It is very seldom some features are missing from their programs which have general interest. Recently the Reo male glee club arranged a concert that was enjoyable throughout. Their singing of "Captain Kid" was genuinely piratical from voices well suited to a good ensemble. Tune them in.

We have Superstation WLW to thank for including on one of their programs so appealing an artist as Miss Conway, pianist. She rendered solo numbers in addition to accompanying her sister's violin playing. The tone of the piano was marked for its beauty, while the artist displayed her gifts to the best advantage. In the accompanying numbers the modulation of the piano was admirable, at no time drowning the softer notes of the violin—a fault all too common.

Grand opera performances increased in number as the warmer months came around, giving to those enjoying this style of music many opportunities for indulgence. Station WJY, New York city, transmitted from the Manhattan Opera house one of the most familiar operatic bills in the entire repertoire, the double bill of Pagliacci and Cavalleria Rusticana. Applause from those sittting in the opera house was justifiable and must have found an echo among the Radio audience.

Station WSAI, Mason, Ohio, provided one of their usual good programs when a variety of numbers were given in the form of vocal and violin solos. The music selected for these numbers was of a type to appeal to the greatest percentage of listeners in. No one feature calls for extended comment. It was equally good throughout.

A very pleasing program from KDKA, Pittsburgh, was that from Carnegie Library hall featuring skilled singers and the Sandek string quartet. Soloists and chorus sang portions of oratorios familiar to the majority of the Radio listeners as the quartet accompanied them. The acoustics of this hall are excellent, insuring good Radio reception.

When the studio of WGN, Chicago, was tuned in some nights ago we heard a potpouri of melodies dating back to a time when jazz was still unknown. It permitted of a comparison with the more modern popular music, as well as brought to one's attention once more the ephemeral nature of so-called "popular" music. The entire program was interesting, though perhaps it lacked a wide hearing.

Vincent H. Percy is a very capable organist whose recitals are to be heard through WEAR, Cleveland. It frequently happens that in classical programs the Pathetique symphony of Tchaikovsky is included with dire results at times. Mr. Percy thoroughly understands the traditional interpretation of this beautiful work as exemplified in his rendition of the second movement. You will enjoy his organ recitals.

One of the piano numbers played in the studio of WMCA, New York city, by Bernard Mann was the Liszt paraphrase of the famous sextet from the opera Lucia di Lammermor. This number is not easy to perform, as might readily be guessed from the fact of its being arranged by that marvelous technician, Franz Liszt. Mr. Mann was at all times master of his instrument and gave a splendid rendition of the piece.

Recent Advances in Tuned R.F. Amplification

Part VI —Construction of a Bridge Circuit

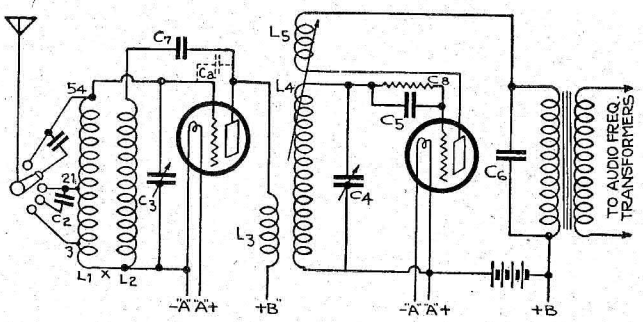
By Milo Gurney

IN THIS, the sixth of my articles upon tuned radio frequency circuits and the possibilities of circuits using tuned transformers in combination with Wheatstone bridge structures, it seems pertinent to the subject, in view of several letters received from manufacturers, to advise everyone that each circuit shown, or bridge structure indicated, represent either patented structures or those upon which applications have been filed and are therefore only for experimentation, as are also the special coils shown including tuning elements.

As a climax to the Wheatstone bridge circuits, the one about to be described, figure 36, represents possibly the easiest of all to construct, and offers not only reasonable assurance of success to those new to Radio but also a circuit thoroughly dependable in its compensation or neutralization over the total present broadcast wave band. In addition, it offers close to the ideal for those now using, or desirous of using, one stage of radio frequency ahead of their present circuit, as it is not critical to frequency once the amount of regenerative reaction or the value of compensation desired is determined. Then the settings of the inductance L_2 and variable condenser C_7 may be locked and forgotten, a feature not true with many compensating devices or neutralizing circuits. Of further interest is the fact that if those stages other than the input are well designed, then only the compensator in the first stage will be required, while one may add a second stage with regeneration, or nearly any form of cascade amplification his fancy desires.

The circuit, as shown with its auto transformer input tuner, will meet the selectivity requirements of 90 per cent of listeners, while in particularly congested areas like Chicago and New York the coupler shown in figure 12 of the June 13 issue of Radio Digest should be used.

Incidentally, the coil values given, together with features relative to capacities, hold good for all of the circuits published, thus not confusing to those who may desire to try some one of the others.



L1 to be 50 to 54 turns No. 22 dsc. on 3" diameter form.
L2 to be 50 to 54 turns No. 22 dcc. on 2¾" form inside L1.
L3 to be 35 turns No. 30 dsc. on 3¼" form.
L4 to be 40 to 54 turns No. 22 dcc. on 3" diameter form.
L5 to be 12 turns No. 30 dcc. on 2½" form.
C1 and C2 are .00025 mfd. fixed mica condensers.
C3 is a .0005 mfd. (23-plate) variable condenser.
C4 is a .0005 mfd. (23-plate) variable condenser.
C5 is a .00025 mfd. fixed mica condenser.
C6 is a .005 mfd. fixed mica condenser.
C7 is any small vernier variable condenser.
C8 to be 10 to 20 megohm grid leak.

Figure 36

The theory covering the compensation of this circuit is as follows, in that the back or reactance voltage from the plate, traveling through the capacity C_7 and the inductance L_2 and acting upon L_1, will equalize or exactly compensate the back or reactance voltage from the plate through the capacity Ca upon L_1 or, as we might designate it in a bridge—X is common to the alternating current potential and likewise common to L_1 and L_2. Then it follows that the inductance L_1 and capacity Ca are equal and common to the inductance L_2 and capacity C_7 when the variable capacity is adjusted, their phase angles being opposed. Note, in particular, that it is only essential to incorporate the inductance L_2 in the first or antenna input stage, its use not being required in any of the stages following. Also carefully note that the inductance L_2 is wound reverse from that in L_1. As .0005 mfd. variable condensers are in general use, and possibly the most readily obtainable, each inductance value in the diagram is compiled to use with this capacitance value, the variable turns being given as a minimum and maximum in order to cover the varying actual capacities in different makes of condensers. Such inductances with their capacities will cover the present broadcast wave bands.

Power Factor of Coils

A great deal of pro and con, mostly "con," discussion has consistently appeared, following the low loss condenser craze, relative to low loss coils, nearly all of it of the "fellow the leader" type. Yet, I have not seen, for some unaccountable reason, any discussion covering the answer to the problem. Each writer has left out of his discussion the backbone, the fundamental of any coil's efficiency, viz., its power factor. Both the selectivity and sensibility of an inductance is inversely proportional to its power factor, therefore coils of extremely low power factor are to be desired rather than those that look like marvelous attempts at not using any medium for coil support, while the fly in the ointment, the high power factor, cannot be seen and is altogether too often present.

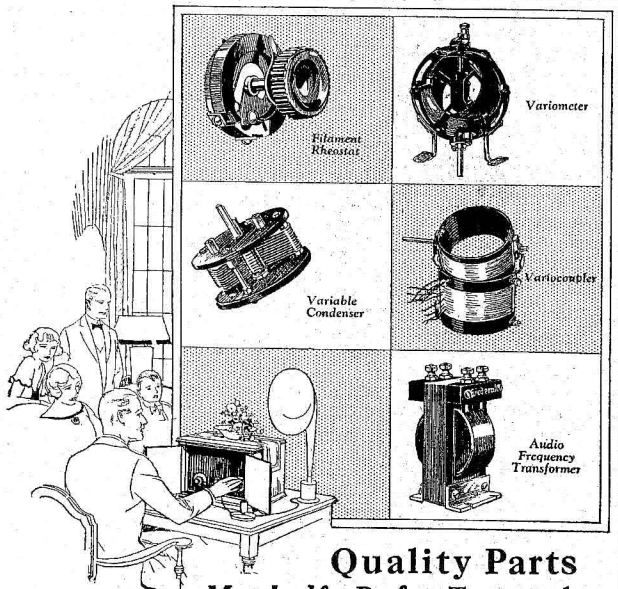
Hence, the coils both with and without primaries, which I am to describe for your building, will, I realize, appear as regards their secondaries, as about as old fashioned and devoid of modernism as milady's last year's hat, also so chuck full of inefficiency that only the rarest of tyros will build them. Suit yourself, I can only lead the thirsty horse to water, the drinking part is up to him. However, these coils do show a pleasingly low power factor and I believe they will please you.

Winding of Coils

The wire size used upon the secondaries is No. 22 double cotton covered and with a third covering of silk if you can secure it. Use any of the standard cylindrical insulated forms, such as bakelite, micarta or other phenalic compounds. Wind the wire evenly and without attempt to get each successive turn so close to its fellow that they will battle for air, though it is equally important that such turns also not be merely in loose contact.

And now, horror of horrors, bake it,

(Continued on page 20)



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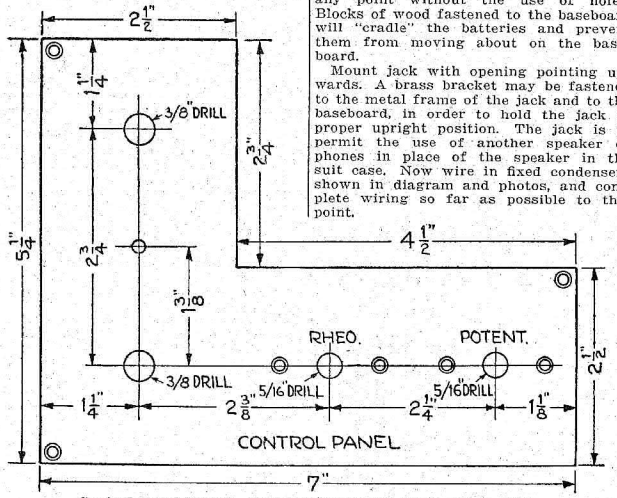
Part II—Wiring and Tuning

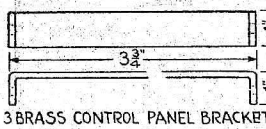
By Harry A. Nickerson

PREPARE a "Control Panel" and three brass brackets, as suggested by the illustrations. Note the position of the binding posts on the rheostat relative to the variable condensers. After the control panel has been properly bracketed to the baseboard, proceed to wire all instruments on the baseboard as far as possible.



Control panel layout—showing where and what size to drill.

Mount the two audio transformers at the right of the baseboard. The baseboard layout and the photos show a certain make of audio transformer. Since it is felt that each fan has individual preferences in audio transformers, of which there is such a plentiful crop, the following suggestions are given: Use transformers of approved merit only. While high ratio is not necessarily productive of distortion, ratios of 4-1 or lower are generally better. Set the transformers so their grid leads can be made short. If reasonably possible, set them so their cores are at right angles. Use shielded transformers in preference to unshielded ones. Keep in mind the space limitations.



Construction of control panel brackets.

Wire up audio transformers and C battery. One of the small flat flashlight batteries consisting of three cells (4½ volts) will be found satisfactory as a C battery. A small block of wood fastened to the mahogany baseboard will raise the C battery above the base part of the tube socket under one end of it, when the C battery is placed as shown in the photos. The C battery may be strapped down or wedged in place with pasteboard or wood between the transformers.

Mount the A batteries, two at the bottom and one above, as shown in the photos. Some sort of strap must be employed to hold them firmly in place. If a buckle is used, it should not be of the type with holes in the strap into which the tongue of the buckle is inserted, but rather the type which can be adjusted to any point without the use of holes. Blocks of wood fastened to the baseboard will "cradle" the batteries and prevent them from moving about on the baseboard.

Mount jack with opening pointing upwards. A brass bracket may be fastened to the metal frame of the jack and to the baseboard, in order to hold the jack in proper upright position. The jack is to permit the use of another speaker or phones in place of the speaker in the suit case. Now wire in fixed condensers shown in diagram and photos, and complete wiring so far as possible to this point.

Mount the four B batteries, as shown in the photos, with straps as convenience dictates. Mount them as near to the edge of the baseboard as possible. Do not wire in the plus B leads until directed later.

We are now ready to mount the loud speaker. For the speaker, several small manufactured types are available. The homemade speaker shown in the photos and figure of loud speaker, uses the "reflected tone" principle. It consists principally of a "phonograph loud speaker attachment," a tube of aluminum or pasteboard as the inner chamber of the speaker, and an outer chamber of spruce or mahogany closed below and open at the top. The quality and intensity of the tone is varied somewhat by the distance the inner tube opening is from the bottom of the outer chamber. About ¼" will probably be found right. The four sides of the outer chamber should be fastened together with glue and brads or screws, then a suitable bottom fastened in, after which the tube is placed on the phonograph unit, and this unit bracketed to the walls of the outer chamber.

It should be remembered that the effectiveness of a loud speaker depends in a measure on the "size" of the horn, so this small "homemade" horn cannot be expected to equal in volume the larger ones usually sold.

The loop is clearly shown in the photo of the complete set. It is of such inductance as to cover the broadcast band when shunted by a variable condenser with a maximum capacity of from .0005 to .0006 mfd. It is suggested that the loop winding be of low resistance wire, such as carefully prepared Litz, many-stranded flexible "special loop wire" or "fixture" wire. A good method of making the loop is shown in the photo, where four pieces of hardwood have been slotted, then secured to a board similar to the baseboard of the set, after which the windings of the loop were made. Enough wire should be left at both ends of the loop winding to reach to the nearby variable condenser terminals, which unit shunts the loop. In order to keep the loop leads well apart, the writer employed miniature spreaders of hard rubber with holes drilled near the ends of the spreaders to take the leads. (See photo of completed set in case.)

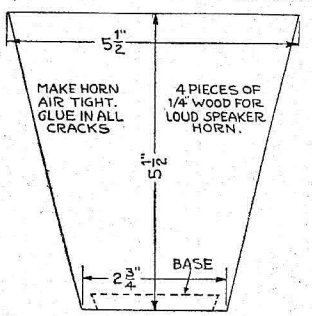
Complete all wiring, except plus B leads and check carefully. Then insert one tube first and turn rheostat to "On." If tube does not light, remedy the difficulty by going over the wiring for the break or mistake. Insert other tubes.

To Check Wiring

Connect about a three-volt battery in the circuit in place of the regular 90-volt B battery. If there be a change in the brilliancy of the tubes it is possible that an error has been made in the connections. If no change, connect in 90-volt B battery. The use of the small voltage substitute B may save burning out the tubes. Since the A battery source is approximately 4½ volts, and the UV-199 tubes consume approximately .06 amperes, with eight tubes in use a 6-ohm rheostat should be turned a little less than half way. 1½-volt (voltage drop) divided by .48 ampere (current in circuit with eight UV-199 tubes in parallel), equals 3⅛ ohms (resistance required). The rheostat should always be turned as low as possible, consistent with good results, to insure long life of tubes and to prolong the life of the A battery. The connection of the potentiometer in this set is such that no drain on the A battery exists when the rheostat is turned to "Off" position.

Tuning the Set

The tuning of this super-het is very simple. The rheostat is turned until 3 volts or slightly more is received by the filaments of the tubes; the potentiometer is turned pretty well to negative side; the oscillator coupler is turned to maximum, or thereabouts. The oscillator variable condenser is then rotated slowly until some sort of signal is heard, then loop condenser is turned tuning the loop circuit to resonance. When signals are first picked up, the potentiometer may be adjusted to maximum volume and needs,



Layout for sides of loud speaker horn.

as a rule, but slight adjustment thereafter.

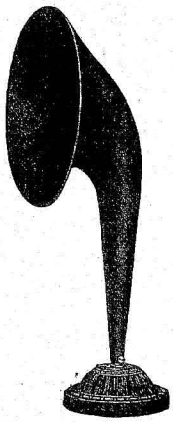
The preliminary adjustment of the filter coupler is important. A station is tuned in, then this semi-variable condenser is adjusted to maximum volume and smoothness, so that the set does not spill over unpleasantly when going into oscillation. Some changing about of tubes may be necessary for best results. A superheterodyne is no place for defective tubes, though poorer tubes will generally work, if at all, in the two audio stages.

Use of Larger Loop

A larger loop with consequent increase in volume may be employed in place of the smaller loop in the set. A ground connected to one or the other side of the A battery may be tried, often to advant-

(Continued on page 20)

That Very Natural Tone



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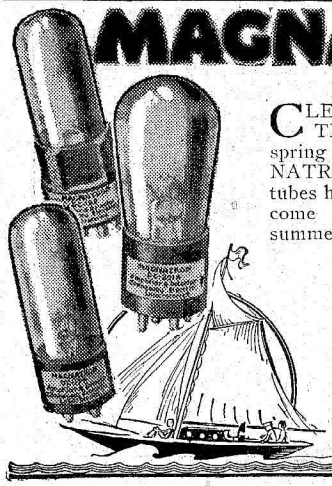

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A. B. C. Course in Radio Fundamentals

Chapter XV—Charging Storage Batteries

By David Penn Moreton

IN CHARGING a storage battery a current is sent through the cells in the reverse direction to the direction of the current in these cells when the battery is producing a current in an electrical circuit of which it is a part. This charging current must be a direct current, in order that the proper chemical action takes place on the surface of the plates.

If an alternating current be sent through the cells, a chemical action corresponding to a discharge of the cells would take place for one alternation and a chemical action corresponding to charge would take place for the next alternation, when the current would have a direction opposite to what it had for the first alternation. In order to produce a current through the battery in the reverse direction to its own electrical pressure, an electrical pressure must be available which exceeds in value the electrical pressure of the battery. If this electrical pressure be exactly equal to the electrical pressure of the battery and they are connected as shown

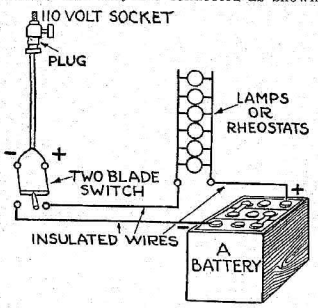


Figure 64

in figure 64, positive to positive and negative to negative, there will be no current flow in the circuit. When the charging pressure, which we will represent by Eg, exceeds the electrical pressure of the battery, which we will represent by Eb, there will be a current sent through the battery. The value of this current will depend upon the difference in the values of the two electrical pressures Eg and Eb and the resistance of the circuit; connecting leads, internal resistance of the battery, etc. Representing the total resistance of the circuit by R, we may write the following expression which will give the value of the current I.

$$I = \frac{Eg - Eb}{R}$$

In the majority of cases the charging current I is specified by the manufacturer of the battery. If the values of Eg and Eb are known approximately, the value of the resistance R, which must be in circuit to limit the charging current, may be approximated.

The above expression gives the value of the current, and the value of the resistance may be determined by interchanging I and R. The expression would then read as follows:

$$R = \frac{Eg - Eb}{I}$$

For example, let us suppose that you wish to charge your storage A battery which is composed of three lead storage cells connected in series, and that you have a 110-volt direct current circuit from which you can obtain the energy to charge. We will assume that the charging current is to be approximately 15 amperes at the start and 5 amperes at the end of the charge. The voltage of the three cells, when the battery is put on charge will be about 6 volts and this voltage will increase in value as the charging process continues until the cells are fully charged when it will have a value of about 2.5 volts per cell, or a total of 7.5 volts for the three cells. When the battery is connected for charging the positive terminal of the battery should be connected to the positive side of the source of charging current.

Polarity Determinations

The polarity of most batteries is usually marked; the positive terminal may be marked with the letter P or the plus sign "+," or it may be painted red. The negative terminal may be marked with the letter N or the negative sign "—." The polarity of the charging circuit may not be marked and the following simple test may be used to determine its polarity. Attach two wires to the circuit and then immerse the exposed ends of these two wires in a glass of water to which a little acid has been added, being extremely careful to keep the ends of the wires from coming into electrical contact with each other. See figure 65. Gas bubbles will appear about the ends of the wire but there will be a great many more appear at the end of the wire connected to the negative side of the circuit than appear at the end of the wire connected to the positive side of the circuit. The polarity of the circuits can now be marked.

If the 6-volt battery was connected directly to the 110-volt line and the circuit closed, there would be a large current produced because of the large difference in voltage of the battery and the charging circuit and the comparatively small resistance of the circuit. Additional resistance must be introduced in this circuit to such an extent that the current will be limited to 15 amperes. The total resistance of the circuit can be determined by substituting in the above expression for resistance which gives:

$$R = \frac{110 - 6}{15} = 6.93 \text{ ohms}$$

The resistance of the connecting leads, and the internal resistance of the battery, assuming that it is in good condition, will be small in comparison to this total resistance, so that a resistance of perhaps 7 ohms or a little less must be placed in series with the battery. This resistance may be a number of incandescent lamps connected in parallel as shown in figure 64 and it can be increased or decreased in value by disconnecting or connecting more lamps; or it may be some form of rheostat capable of carrying the current and whose resistance may be varied in value to meet the particular requirements.

Decreasing Rate of Charge

Now as the charging operation continues, the voltage of the battery will increase in value and, as a result, there will be a decrease in the value of the current. The current, however, can be adjusted from time to time by merely changing the value of the resistance in circuit. It is always preferable to use a lower rate of charging as the batteries become fully charged unless a low rate is used throughout the entire charge. Do not allow the temperature of the cell to exceed 110 degrees Fahrenheit if possible and do not charge at a rate that causes excessive gassing.

The specific gravity of the acid should be taken when the charging operation is started, and the gravity of the electrolyte will increase with charge until the

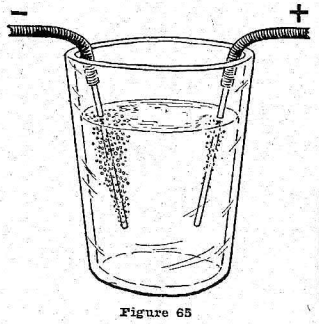


Figure 65

plates are fully charged, when there will be practically no further change in gravity. The gravity of the electrolyte when the battery is fully charged should be about 1,280 to 1,300. If your tests of the gravity show that it is above these limits then some of the electrolyte should be removed and replaced with water, while if the density is below these limits, some of the electrolyte should be removed and replaced with acid having a higher density. When the electrolyte is way off in density it is best to remove it from the cells and put in new electrolyte of the proper density.

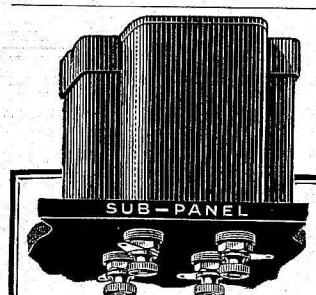
The cost of charging a storage battery may be determined as follows: Assume that a 6-volt battery is charged at a 10-ampere rate for 12 hours from a 110-volt circuit and that the energy costs 10 cents a kilowatt-hour. Now the power in a direct current electrical circuit, or a part of a circuit, is equal to the product of the current in amperes times the electrical pressure in volts between the terminals of the circuit in question, and the unit in which this power is measured is called the watt.

In the case of the storage battery the power is equal to current, 10 amperes, times the electrical pressure, 110 volts, which give 1,110 watts, or 1.1 kilowatts. The total energy drawn from the circuit will be equal to the time in hours, 12, times the power in kilowatts, 1.1, which gives 13.2 kilowatt-hours. This energy costs 10 cents a kilowatt-hour, so the cost of charging the battery will be equal to 10 times 13.2 or 132 cents or $1.32. These figures are high however, as power generally costs but 7 cents a kilowatt-hour, and then again, seldom is one required to charge at the rate of 10 amperes for as long as 12 hours.

A large part of the electrical energy used in charging this storage battery is dissipated in the resistance connected in the circuit. The actual power input to the battery is equal to the current times the voltage between the terminals of the battery. Assume the average voltage between the terminals of the battery is 7.5 during charge. Then the energy input will be equal to 7.5 times 10 amperes times 12 hours which is equal to 900 watt-hours or 0.9 kilowatt-hour. Now 0.9 kilowatt-hour at the rate of 10 cents a kilowatt-nour will cost 9 cents. This represents the actual cost of the energy that goes into the battery.

It is very obvious that the above charging process is not very efficient. If additional batteries be connected in series and the current maintained constant by reducing the resistance, the total energy

(Continued on page 20)



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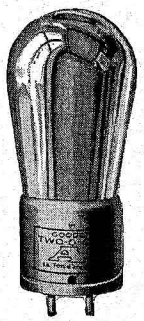

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A. B. C. RADIO COURSE

(Continued from page 19)

drawn from the charging source in the given time will not be increased but a larger part of this energy will be converted into chemical energy in the batteries. The maximum efficiency in charging will exist when the resistance in circuit is zero. Thus the total cost of charging 10 or 12 three-cell batteries in series from a 110-volt circuit will be no more than the cost of charging a single battery.

Alternating Current Charges

Direct current is not always available and it is then necessary to convert the alternating current into direct or unidirectional current. The following methods are the ones generally employed in making this conversion. First, an alternating current motor is operated from the alternating current circuit and this motor drives a direct current generator which delivers current for charging the battery. In a case of this kind the voltage of the generator can be varied and the charging current controlled without the use of so much resistance. Second, electrolytic rectifiers may be used which allow current to pass in one direction only. Third, there are the mercury arc rectifier, the tungar rectifier, electromechanical rectifiers (which in principal amount to a double pole double throw switch electrically operated) and rotary converters or double current generators. Space will not permit of a description of these various devices. Needless to say, all are very efficient in their way.

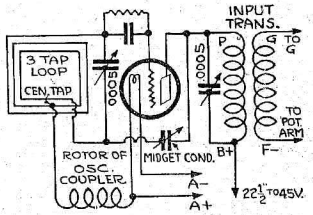
(The propagation of wave motion through the air, which is the basis of Radio communication and broadcasting, will be the subject of Professor Moreton's next chapter.—Editor's Note.)

PORTABLE SUPER-HET

(Continued from page 18)

age. The set, however, is designed to, and does, operate effectively on the small suit case loop.

After the set has been found to function satisfactorily, the baseboard can be firmly, and more or less permanently, fastened to the suit case. Wood screws of color to match case or machine screws with washers and nuts will do this. The loop board can be fastened in a similar manner to the cover of case.



Changes for regenerative first detector.

It is suggested that right angle bends be used for the sake of appearance, provided leads are not unduly lengthened thereby. Grid and plate leads should be kept short and away from each other and from the filament wiring. Filament wiring may be bunched and run parallel to advantage. Where bare wires run close together or may touch, spaghetti may be used to advantage but preferably do not use it to cover grid and plate leads.

A Little Cautioning

While wiring, keep in mind that tubes must eventually be inserted in tube sockets, and that there are various fixed condensers which have to be wired in. Now that most fixed condensers are made of copper foil and mica, soldering to metal parts on the condensers is less dangerous than formerly, but to make sure that no damage is done, it is better to attach bus bar to them by means of roundhead machine screws and nuts, passing the screws through the holes at the ends of the condensers and clamping down hard on loops made in the ends of the bus bar.

When in use, the suit case should be set on a piece of thick soft felt or cloth, so that slight jars wil not cause vibration of the tube elements, and consequent "ringing." Some tubes are more prone to this defect than others, and a tube known to be microphonic should be put in the Radio stages rather than elsewhere.

Another Arrangement

By a slight rearrangement of parts such as the variable condensers, rheostat, potentiometer and output jack, these may be mounted on a vertical instead of a horizontal panel, of say 7" x 21" size. In that case the oscillator coupler would be moved back somewhat on the baseboard, the loop tuning variable be mounted at the left, with oscillator variable condenser beside it to the right, while rheostat and potentiometer would be mounted between the two variables. The potentiometer would be placed above the rheostat. The output jack would then be mounted at the right hand side of the front panel.

If the set is to be used much, a 4-volt storage A battery is advised in place of dry cells. The storage battery, however, as usually constructed, considering the danger of spilling out its acid contents, and again its heavy weight, has no place in this set as a portable.

A user of this portable super-het reports reception of the following stations on the loud speaker in two evenings: WAHG, WBZ, WCAP, WCX, WEEI, WEAF, WGY, WGBS, WHN, WJZ, WLW, WLIT, WNAC, WOC, WREO, WSAI, WTAM, WOC, WEBH, WJAR.

Regenerative First Detector

One method for the use of a regenerative first detector is shown in the figure so labelled. The use of a special loop with center tap then becomes necessary. It is advised that the set first be built without the regenerative first detector. An approximation of the center point of the suit case loop can be found by winding on thread over the wire of the loop winding, then taking the length of half this thread as the center point. Or if a record is kept of the exact number of feet required to make up the suit case loop winding, a thread of half this length can be wound in the slots of the loop to determine the approximate mid point. The "factory built" loop with center tap, however, is often a better proposition for use with regenerative first detector since the mid point is determined with accuracy.

The advantages of additional selectivity, and a slight increase of signal strength may be expected with the first detector regenerative, but the additional control of the extra tuning condenser and the hand capacity which may be present should be taken into consideration.

By increasing the size of the control panel at the time it is first prepared, accomodation may be had for the placing thereon of the midget condenser.

(CONCLUSION)

TUNED R.F. ADVANCES

(Continued from page 17)

after spraying it with one of the many acetone liquid compounds now available. You may say this covering is poor practice. Frankly it is, yet moisture absorption upon the insulation is worse, hence why not use the lesser of the two evils. There is no short cut, unless one is in a position to trace grooves in the coil form and use bare wire, winding it in such grooves. Apparently the major trouble in inductances of the radio frequency transformer type, using air cores, condenser tuning and employing both primary and secondary windings, is the inherent capacity existent between the primary and secondary, also the turn to turn capacity of the separate windings. Of equal moment, though seldom given consideration by manufacturers, are the high flux densities accompanying inductances of this type.

Therefore our problem in the construction of a radio frequency transformer appears as one in which the capacity between primary turns be as small as possible, also the capacity between primary and secondary and, as the third factor, that the primary be removed so far as is practical out of flux density.

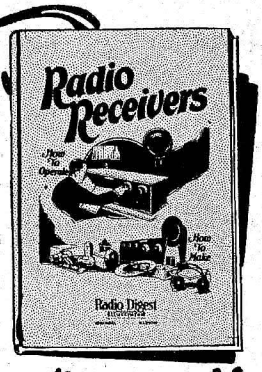
For several years, the primaries of audio frequency transformers for a definite reason, have been of a high impedance, but it has not been appreciated until lately that a much smaller gauge wire could be used as primary in radio frequency transformers, without incurring liability and that a sufficient number of turns in order to secure a desirable voltage transfer was likewise quite in order. The use of small wire primaries made it possible to localize the capacity effect upon the secondary, through confining it to a very narrow inductive area. This was accomplished by winding the primary in a groove or slot. However, its inherent capacitance was subject to increase owing to its added length and the additional turns comprising it, still this turn to turn bug-a-boo was readily overcome through random winding the primary which, in effect, very materially balances out such capacity.

Browning and Drake, student engineers at Harvard university, were, so far as the writer can learn, the first to publish the use of this novel means, and it is unfortunate that they did not also carry their research one step further through placing the primary in a position less influenced by the flux density of the coil or inductance. Obviously, there is only one best position for the primary and that is upon the outside of the secondary also directly over the secondary's starting winding, and with as much separation between it and the secondary as will not decrease its voltage transfer value. It is preferable that the secondary starting winding, over which the primary is placed, be considered as its low potential end (see figure 36). My suggestion is, then, that ⅛" be the minimum space factor between primary and secondary. Those familiar with the characteristic magnetic flux curves pertaining to air core windings will appreciate that the greatest density exists within the coil, thereby making a logical answer the suggested location of the primary upon the outside and out of this dense field.

Some discussion may arise relative to the tickler coil shown, being indicated as feeding back into the high potential or grid input end of the coil. The author

(Continued on page 21)

The new Radio Book



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Haven't you often wondered what all the spirals, wriggly lines and zig-zag lines were about on diagrams? A big chart shows you a picture of the part as you see it and, beside the picture, the symbol used in diagrams. Other articles show clearly just what happens within the mysterious little vacuum tubes that glow hour after hour within your set, apparently without change, yet pass every note of a jazz orchestra or soprano.

Antennas, for whose erection there are seemingly no rules, are covered fully; the reason for a long wire in some locations and a short one in others, is readily grasped by anyone. Crystal sets, one tubers, two tube reflexes, three tube regenerative and reflex outfits, four tube R. F. and neutrodynes, five tube assemblies—all types are presented up to the nine tube "super," king of the air.

For the Man That Bought His Set

For the non-technically inclined there is a two-color broadcast map of the country, operating schedules of all the leading stations, call letters and power rating of every station on the air, suggestions for the care of batteries and tubes.

No matter what type of receiver you own, there are dozens of valuable suggestions on tuning, trouble shooting and operating. Your head receivers, loud speaker, antenna and certain parts within the set, require frequent cleaning, adjusting and care. Interference and its remedies are factors you should understand even though you care nothing about "what makes it go."

Compiled by the technical staff of Radio Digest, it represents the high lights of the past twelve months in the Radio field. All this data is indexed for ready reference and logically arranged. Only a few thousand have been printed and this offer will stand for a limited time. The only book of its kind and is FREE with one year's subscription to Radio Digest. This offer good only on subscriptions sent directly to this office, not through agents or agencies.

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Address .....

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(Typewrite or Print Clearly)

Front Panel Gear for Spider Webs

Device Permits Close Coupling Adjustments

A convenient contrivance for adjustment of spider web coil coupling is shown in the accompanying drawing. Two pieces of bakelite 2⅞"x7" are spaced 2" apart by brass tubing and stove bolts.

WORKSHOP KINKS EARN A DOLLAR—

THERE are many little kinks worked out at home that would aid your fellow Radio worker if only he knew about them. There are new hook-ups, new ways of making parts and various unique ways of operating sets that are discovered every day. Radio Digest is very much interested in obtaining such material. Send them in with full details, including stamped envelope, so rejected copy may be returned. The work must be entirely original, not copied.

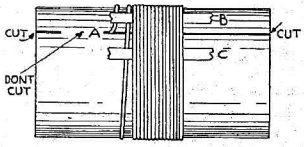
RADIO KINKS DEPARTMENT
Radio Digest,
510 North Dearborn St., Chicago

Short pieces of rubber hose such as is used on automobile pumps are driven on the brass shafts and make friction contact with the spider web support which is free to revolve, being supported on switch post.

The bearings at friction ends of shaft are drilled and filled out with a rat tail file to form slots, and the brass springs keep the contact uniform, regardless of whether the shaft runs perfectly true or not. One terminal of each movable coil is brought to the switch post collar and the other connections of these coils are made by using flexible leads. This instrument may be bolted to the panel.—F. E. Poister, Morrill, Kans.

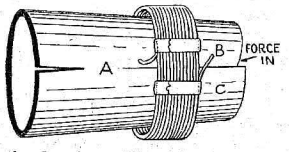
Coil Winding

I have worked out a kink for winding low loss coils of the plain efficient type. Instead of the usual bottle as a base for winding I employ a cardboard tube. When winding coils on a bottle there is always

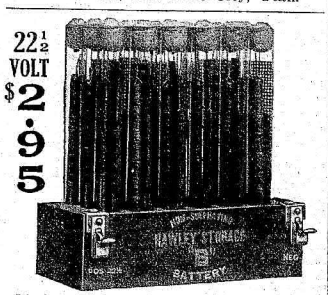


a bending of the coil when you try to remove it for use. My way preserves the coil's desired shape.

To begin, place the end of wire in cut at A and bend under, inside the tube. Make one or two turns around the tube then place pieces of paper tape as shown

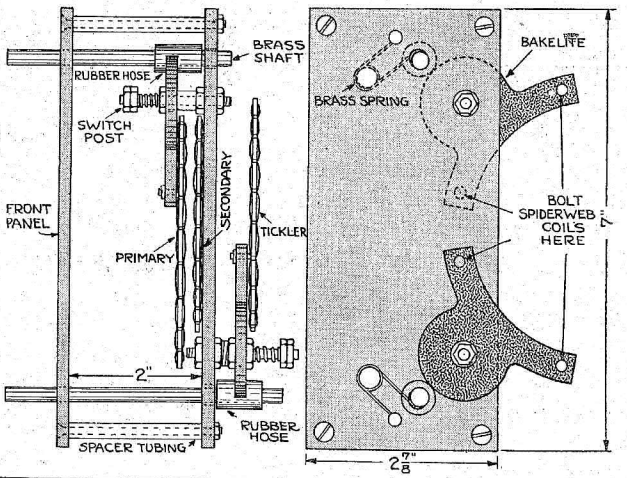


in the drawing. When the coil is completed seal it with the tape. Then press on B and the base of the coil becomes smaller and the coil is easily removed. The coil does not slip while winding it.—Richard Evans, Salt Lake City, Utah.



It's OUT—Complete everlasting ready to run non-acid, non-sulphating 22½-volt rechargeable "B" storage battery, $2.95. Includes chemical. Does not lose its charge standing idle. Special 2-22½ volts (45 volts) $5.25; 90 volts $10.00; 112½ volts $12.50; 135 volts $14.75; 157½ volts $16.80. Nearly 3 years sold on a non-red tape, 30-day trial offer, with complete refund if not thoroughly satisfied. Further guaranteed 2 years. Knock-down kits at still greater savings. Complete ready to run "B" battery charger $2.75. Sample cell 35c. Order direct—send no money—simply pay expressman its cost on delivery, or write for my free literature, testimonials and guarantee. Same day shipments. My large 36-page radio goods catalogue 10c. B. D. Smith, 31 Washington Ave., Danbury, Conn.

DETAILS OF SPIDER WEB MOUNTING



TUNED R.F. ADVANCES

(Continued from page 20)

recognizes that the more effective method would be to inductively couple it to the other end or low potential side of this inductance, however, it is not desirable in the circuit shown to do so as we desire not to influence the primary to any extent. In general practice it is, however, much better, to inductively couple it to the low potential side, thus avoiding possible hand capacity effects upon the grid. The reader should clearly understand that while this survey of balanced bridge circuits comprises the major portion of those prominently recognized as big advance steps in the design of Radio receptors, yet we may expect several others of equal merit, while we may also be certain that another year will bring forth added refinements to them.

Constructors must realize, however, that zero coupling, elimination of parasitic feed backs and all attendent complications which work havoc with so many receivers, must secure added attention in the construction of Wheatstone bridge circuits; shielding of the highest order, total and interstage, must be used. Obviously, some signal strength is thereby lost, yet the efficiency gain in each stage will more than compensate for this initial loss, therefore look for your spurs of accomplishment in the total thoroughness of your shielding. Letting well enough alone will spell failure; constantly improving your last effort will spell gratifying success.

A.F. Transformer Ratios

A further discussion of interest, in connection with circuits using tuned radio frequency transformers, is that upon the desirability of two as against one stage. Always use two; one may reach out on DX nearly as well as on two, but in no event will it be as selective nor will the signal ratio to the static level be as high, hence two stages are ever to be preferred.

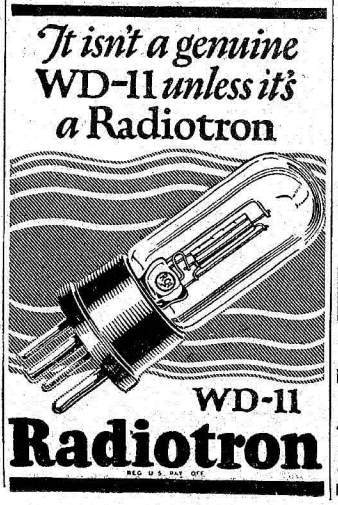
I believe that most, if not all of my readers, have by now gotten over the ratio habit as it applies to audio frequency transformers. Realize that ratios of themselves mean little; for illustration a winding ratio of 10 turns to 5 is a ratio of 2 to 1, while a winding of 4 to 2 is also 2 to 1. Which do you want? Generally speaking, quality of reproduction is the all important item, there being little satisfaction in inarticulate voice reproduction or raspy music.

Transformer manufacturers, in several instances, have done very commendable work in keeping abreast of the period in this particular line of development, but circuit pluggers of the "one-a-week" class seem to religiously stick to a 10 to 1 ratio for the first audio stage and a "suit yourself" ratio for the second. Their reason for doing this is, apparently—volume at any cost, California or bust; yet I dare believe engineers of reputation are in accord with the statement that a 201-A tube following a well designed transformer of low ratio has about all it can do to pass energy on to the next stage without heartbreaking distortion, while the second stage would behave very much better if, with this, or an even lower ratio transformer, we used a type 216-E.

About Antennas

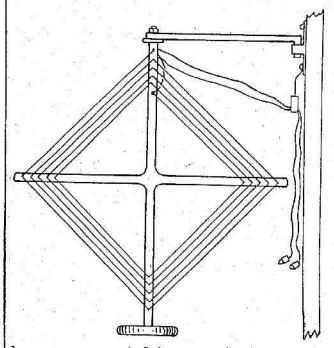
The Radio world seems to be quite contented when offered the latest in trick antennas, and yet are still wondering why the dyed-in-the-wool old timer still sticks to his single wire, and one of medium length preferred. Personally, while I prefer a semi-restricted single wire antenna, thus dodging a lot of static, yet I am more concerned regarding the quality of the ground used. No antenna is any better than its ground, yet no ground is as good as your antenna. Surely Radio is kind in its acceptance of most grounds, but a good ground in many localities is out of the question, hence the water pipes. Cold water pipes will have to serve many of us and I am hoping that some day

(Continued on page 22)



Loop Aerial Mounting Saves Space on Table

My set is of the type that requires a loop aerial, but I found when ready to connect up everything that I did not have room on the table for the loop. I fixed up as shown in the sketch herewith. The



loop was mounted base up to one end of a stick. I then obtained a bird cage swivel hanger and secured it to the other end of this stick. However, a strap hinge will work just as good if handy.

The swivel hanger or hinge is, of course, screwed to the wall or window frame. The loop, when out from the wall, can be tuned in the desired direction at will. When not in use it is turned parallel to the wall and then swung flat against it. The idea is to have it out of the way when not using the set; this idea should prove welcome to many loop aerial users. —Alvor E. Olson, Portland, Oregon.

Panel bushings for variometer and other shafts can be made with valve stems from old inner tubes of an auto tire. They are threaded and when cut the desired length lend themselves to this new use.

Questions and Answers

Superhet Transformers

(13768) FWM, Madison, Wis.

I would like to have the specifications regarding the construction of special tuned and intermediate frequency transformers for super-heterodynes in the 55,000 kilocycles. I have all the facilities and material to construct them and also the apparatus to test them here at the U. of Wis. My membership card number is 110.

A.—With reference to your letter of May 17th we wish to advise that under separate cover we are forwarding a copy of the issue of March 14th, which contains full data on the construction of tuned intermediate transformers as used by Jacques Fournier in his set. While you requested data on 55-kilocycle transformers which is a wave length of 5454 the transformers described pass a wave length of 5100. This is the closest to your requirement that we can come. On receipt of the copy being sent, will you please forward 10 cents to our circulation department advising what it is for.

Two Stage Amplifier

(13767) FCU, Quitman, Ga.

Please print a diagram of a two stage amplifier using one stage of radio and one stage of audio frequency amplification. I have a 5-tube Atwater Kent and also a one tube set that I made and want amplifier for this set.

A.—We have your letter of May 14th and must advise that you have not made your needs clear. A two stage amplifier must consist either of two stages amplifying at radio frequency or two stages amplifying at audio frequency. A two stage amplifier cannot be composed of both types since the detector must come between. If you will forward the circuit of the one tube outfit which you have, we will endeavor to complete this diagram so that one stage of radio frequency amplification comes before the detector and one stage of audio frequency amplification follows it.

Ice Cream Freezer Interference

(13782) ELP, Sherwood, N. D.

The Frigidaire ice cream cooling apparatus, using electric current, is, next to the Violet-ray, the worst static producer against radio reception that has made its debut in Sherwood. Stations that come in over speaker so as to be heard all over the house, are either torn up or reduced when the Frigidaire cuts in, making them not worth listening in on. Several Radio receivers in this block are rendered worthless half or more of the time since a local drug store installed one of above static spitters in his fountain. How can we overcome this intolerable interference?

A.—We have your letter of May 15th and wish to make the following suggestion. There is on the market a device known as the Antennella electric light socket antenna which we would suggest you use in this case. Connect your antenna as usual to the antenna binding post on the set then run the wire from the ground binding post on the set to the Antennella unit. There are two binding posts on this unit and each should be tried as the ground connection. The usual ground connection to a water pipe is omitted. You will also find it advisable to shield your receiver by placing thin sheet copper on the back of the panel and the inside of the cabinet which will prevent the coils in the set from picking up the interference themselves.

Length of Charge

(13746) DHP, Danville, Va.

Enclosed find stamps for ten cents; send the issue of November 22 mentioned in your letter of the 6th. My A battery is a 90-ampere hour 6-volt and it will not last over 5 days. Why?

A.—As requested in your letter of the 16th we are forwarding under separate cover the issue of November 22nd.

Since you do not advise what type of set you are using with your 90-ampere hour storage battery we cannot make any definite suggestions as to why it runs down in five days. With the average 5-tube set it is necessary to charge at 5 or 6-day intervals if the set is used frequently, while with 7 and 9-tube supers it is usually necessary to charge every three days.

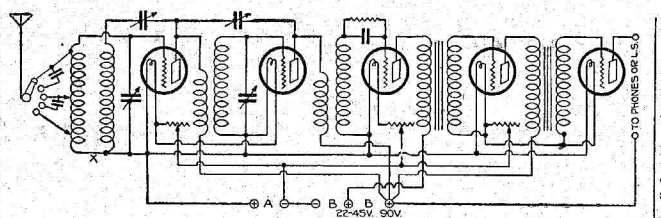


Figure 37

TUNED R.F. ADVANCES

(Continued from page 21)

they will let us either hook on at the street side of the meter or drill and tap with a water tight connection.

In conclusion, may I give a hint relative to the proper location of coil L_2 in figure 36? While it should be inserted within the coil L_1, its turns' relation will need to be varied through raising or lowering it (when in conjunction with the variable capacity setting one has determined the best value of total wave band compensation) after which it may remain fixed.

Figure 36 pictures regeneration of the inductive feed-back class and it may please many of you to also have a straight two stage diagram without mechanical regeneration, therefore figure 37 is given. The coil and capacity values remain constant, the only change being the addition of one capacity. Many will find this a circuit pleasing in performance though like the others, zero coil coupling must be maintained.

I will not say that any of the circuits shown in these articles are only for advanced experimenters. I was guilty of doing so with the King Miloplex circuit and immediately received about 800 letters from fans who couldn't make it work and 3000 who did. But Radio is nearly two years older now, Maggie the cook has no interest that is noticeable as to whether I eat or not; hence I do hope some one of the interesting bridges will please you and that the explanations given will bear fruit in the line of worth while development of Radio's latest in receptor structures.

My greatest concern is in being advised of improvements as you make them, not in answering possibilities of changes, but if you believe you have succeeded in developing a new bridge structure and are reasonably certain that you have a superior or even new method of compensation or neutralization, then write me the complete details. I will, without charge, then find its value in Radio Digest laboratory as an improvement. It is my desire to be helpful in any possible way to all who are interested in uncanny Radio, that something of happiness too marvelous in its possibilities for other than fools to recite its limitations, and I only fear that "like gossip—we shall never hear the end of it."

(This was to have been the concluding article by Mr. Gurney, but so widespread has the interest been in Wheatstone Bridge compensation that Mr. Gurney will take up next week the adjustment and operation of these sets—Editor's Note).

Browning-Drake Changes

(13918) RNA, Fitchburg, Mass.

I am greatly interested in the Goodrich four tube receiver. My receiver is similar except the regeneration on the first tube. I am enclosing hook-up of my receiver (Browning-Drake). I am getting excellent quality and volume using UV199 in R.F. and detector, and DV3 for amplifiers.

I wish to know how to put regeneration on my hook-up on the R.F. tube. Can it be done without changing the second coupler L2, L3 and L4. There is plenty of room in my cabinet to change the antenna coil to the two tube coupler of the Goodrich. Will my midget condenser be suitable?

A.—We would advise against your altering the Browning-Drake receiver in any way. If you try to add regeneration on the first tube you will upset the balance and results will not be so good. You have a very good set and one that should be fully the equal of the Goodrich.

QRM on Uncle Sam Set

(13916) MAP, Dallas, Texas

I made a glass cabinet and hooked up Uncle Sam circuit as per diagram. Have 100-foot aerial and ground combined running east and west, with lead-in taken from east end. I am within ten blocks of WFAA. When they are operating can get nothing else. Would like to know if possible how to eliminate WFAA.

A.—Your receiver, of the Uncle Sam regenerative type, while very good for anyone at least twenty-five miles from a broadcasting station, is not, in our opinion, sufficiently selective to eliminate a powerful broadcaster within five miles.

It would help considerably if this set were completely shielded by lining the inside of the cabinet and the back of the panel with thin sheet brass or aluminum, as your secondary coil is picking up the signals from WFAA, acting as a loop itself instead of getting them through the antenna and primary. As you are within ten blocks of this powerful station it will probably take a five tube tuned R.F. set carefully shielded or a super-heterodyne on a loop to completely eliminate the interference.

Set to Build in Victrola

(13963) WW, Detroit, Mich.

I am a steady reader of Radio Digest and have every confidence in the ability and fairness of its device. I have consulted "experts" who all differ and now I want your opinion.

I have an old Victrola which I can use to "build in" a set, the panel space is 19¾" by 15¾", what hook-up or kind of receiver can I build? The best kind, not merely a receiving set is desired, but the best that can be built into such a space.

I have a six tube Atwater Kent set with high antenna and storage A and B batteries and get fine results, but I wish to convert the Victrola into a receiving set and want to get the best hook-up.

A.—We have your letter and note your desire to incorporate a Radio receiver into a Victrola. You state that the panel space is 19¾" by 15¾" but you do not state which of these two dimensions is the height.

In our July 11 issue we will start a series on a portable super-heterodyne receiver on a panel measuring 18" by 14" and this panel is 14 inches high. The super-heterodyne is the finest circuit known at this time and you may find this series of articles adaptable to use in building a set for your Victrola.

If the space in your machine is 19 inches high and only 15 inches wide the articles mentioned will require considerable juggling around of parts. If on the other hand the 19 inches is the width, the receiver to be described in the series mentioned, will fit your needs perfectly. It is unfortunate that you cannot revamp your Atwater Kent to your needs as it is a very excellent receiver.

Motor QRM Remedy

(13983) AWE, Davenport, Iowa

My nearest neighbor has an oil heater with electric motor driven fan and I am unable to hear anything else when this is in motion.

Is there any way of remedying this?

A.—To remedy the interference caused by the motor on your neighbor's oil heater two devices will be necessary. A small cage should be constructed of angle iron and window screen to be set around the motor. Two fixed condensers of 1 or 2 mfd. capacity each should be connected in series across the line supplying power to the motor.

The center point where these condensers are connected together should be connected to the ground. The cage will prevent radiation at radio frequency from the motor itself while the condensers will prevent surges at radio frequency from backing into the power line and being radiated from it. The cage should also be connected to a good ground.

Don't run your aerial parallel to power lines, trolley lines, or other aerials.

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PATENTS. Booklet free. Highest references. Best results. WATSON E. COLEMAN, Patent Lawyer, 644 G Street, Washington, D. C.

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Simple plan to kill all objectionable noise in any set, including static, from leaky transformers, X-Ray machines, high tension lines, etc. Price $1 postpaid. If, after use, you are not perfectly satisfied, your dollar will be refunded at once on request.

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Make Your Set a Super-Het

The circuit described in Radio Broadcast for June and August changes five tube neutrodyne and tuned R.F. sets into super-heterodynes having characteristics superior to any super-heterodyne circuit heretofore devised. Stations come in at but one point on the oscillator dial. There is mathematically no possibility of harmonics. Full scale blue prints with reprints of magazine artices $1.00.

O'Connor oscillator coupler ..... $ 6.00
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Complete parts, including panel drilled and engraved, special formica bushings, screws and wire, blue prints and reprints of magazine artices 37.50

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ELIMINATE STATIC!

ENJOY winter reception all summer! The Static Eliminator—the newest and most startling thing in Radio—cuts out practically all static without loss of volume!

And in addition it will help increase selectivity, tune out local stations, sharpen signals, remove noises, lessen interference and prevent re-radiation!

Use it with any receiving set—simply hook up to your aerial lead-in—and enjoy perfect reception unmarred by static.

Satisfaction guaranteed. Money refunded at once, if returned within 5 days.

$1.00 Postpaid

STATIC ELIMINATOR COMPANY
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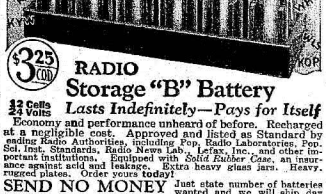

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SEND NO MONEY Just state number of batteries wanted and we will ship day order is received. **Extra Offer:** 4 batteries in series (96 volts), $12.75. Pay expressman after examining batteries. 5 per cent discount for cash with order. Mail your order **now!**

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Corrected Every Week—Part III

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ONE DOLLAR will be paid to the Radio fan reader of Radio Digest submitting the most errors in any one station's listing in the Directory of Radiophone Stations, which appears in five parts, serially continuously on the next to last page. Letters must reach Radio Digest's office not later than one week from date of issue corrected. Readers are not limited to correcting one station, but such corrections must be verified by the stations themselves, and NOT by comparison to other so-called accurate Radio directories or lists. Verifications must accompany corrections. Turn in corrections for as many stations as you can find—if you can find errors! Use separate sheet of paper for each station submitted and place name and address on each sheet. In case of tie, duplicate awards will be made.

United States (Cont'd)

NOTE.—The third part of the schedule list appears below. The fourth part which consists of the remainder of the list will appear next week.

WEAA, Flint, Mich. 234 meters. 100 watts. Frank D. Fallain. Slogan, "The Vehicle City." Daily ex Sun, 7 pm, police broadcasts, music. Eastern.

WEAF, New York, N. Y. 491.5 meters. 2500 watts. *A. T. & T. Co. Slogan, "The Voice to the Millions." Daily ex Sun, Sat, 6:45-7:45 am, 4-5 pm. Tues, Wed, Thurs, Fri, 11-12 m. Mon, 6-11:30 pm. Tues, Wed, Thurs, Fri, Sat, 6-12 m. Sun, 3-5 pm. 7:20-10:15. Eastern daylight.

WEAH, Wichita, Kan. 268 meters. 100 watts. Wichita Board of Trade. Announcer, Amos Dadisman. Slogan: "Kansas Grows the Best Wheat in the World." Daily ex Sun 10 am, 11, 12, 1 pm, markets. Daily ex Sat, Sun, 2, markets. Tues, Fri, 8-10 pm, music. Central.

WEAI, Ithaca, N. Y. 286 meters. 500 watts. Cornell Univ. Irregular.

WEAJ, Vermilion, S. D. 278 meters. 200 watts. *Univ. of S. D. Announcer, Sidney Lawton. Slogan, "South Dakota for South Dakotans." Closed for the summer.

WEAM, North Plainfield, N. J. 261 meters. 250 watts. Borough of N. Plainfield. Announcer, H. W. Blackford. Slogan, "America's Pioneer Municipal Broadcasting Station." Fri, 8-12 pm, concert, talks. Eastern.

WEAN, Providence, R. I. 270 meters. 250 watts. *The Shepard Stores. Announcer, Chester H. Miller. Daily ex Sun, 12-1 pm, 4-5, music, reports, weather, concert. Mon, Tues, Wed, Fri, 8-10, concert. Sat, 9-11 pm, dance music. Sun, 10:45-11:30 am, 7:30-8:45 pm, church service. Eastern Daylight.

WEAO, Columbus, O. 293.9 meters. 500 watts. Ohio *State Univ. Announcer, Ann Charles. Daily ex Sun, 9:45 am, 11-1 pm, markets, weather; talks to farmers, markets, music. Thurs, 4 pm, lectures, music. Wed, 8 pm, music, lectures. Eastern.

WEAR, Cleveland, Ohio. 389.4 meters. 1000 watts. *The Goodyear Tire & Rubber Co. Announcer, H. K. Carpenter. Slogan, "Goodyear Tires WEAR." Daily ex Sun, 11:30-12:10 pm. Daily ex Sat, Sun, 3:30-4:10 pm, markets, weather, baseball. Daily, 7-8 pm. Tues, Thurs, Fri, 8-11 pm, New York. Sun, 3:30-5 pm, 7-10. Eastern.

WEAU, Sioux City, Ia. 275 meters. 100 watts. Davidson Bros. Co. Announcer, B. M. Smith. Slogan, "The Heart of the Corn Belt." Daily ex Sun, 9 am, 10, 11, 12 m, 1 pm, 5, markets, weather, sports. Central.

WEAY, Houston, Texas. 270 meters. 500 watts. Iris Theater (Will Horwitz, Jr.). Slogan, "Where All the Oceans Meet All the Railroads." Daily ex Sun, 11 am, news; 12-1 pm, concert; 6, news, sports; 6:15-7:15, dinner concert; Tues, Wed, Fri, 8:30-10 pm. Sun, 11 am, 8 pm, church service. Central.

WEBA, New Brunswick, N. J. 233 meters. 15 watts. The Electric Shop, George N. DeLaplaine. Slogan, "Wonderful Evenings by Air WEBA." Mon, Thurs, 8-10 pm, music. Eastern.

WEBC, Superior, Wis. 242 meters. 100 watts. Walter *Cecil Bridges. Daily ex Sun, 6:15-8 pm. Mon, 8:30-9:30 pm. Wed, Sat, 9-11 pm. Sun, 10:45-11:45 am, 8-9 pm, church services. Central.

WEBD, Anderson, Indiana. 246 meters. 10 watts. Elec. Equip. & Service Co. Announcer, F. R. Fulwider. Mon, Fri, evening concert.

WEBE, Cambridge, Ohio. 234 meters. 10 watts. Roy W. Waller. Temporarily off the air.

WEBH, Chicago, Ill. 370.2 meters. 1000 watts. Announcer, Robert Boniel. Slogan: "The Voice of the Great Lakes." Edgewater Beach Hotel Co., Chicago Evening Post. Daily ex Sun, Mon, 7:30-8:30 pm; 9:30-10:30, 11:30-1 am. Sun, 5-6 pm, twilight musicale, 7-9. Central daylight.

WEBJ, New York, N. Y. 233 meters. 500 watts. Third *Avenue Railway company. Announcer, H. A. Bruno. Tues, Fri, 7-9 pm. Wed, 8-10 pm. Eastern Daylight.

WEBK, Grand Rapids, Mich. 242 meters. 50 watts. *Grand Rapids Radio Co. Daily ex Sun, 11-11:30 am; 6:30-7 pm; 8-9. Sun, 4:30-5 pm, 7:30-9. Central daylight.

WEBL, (Portable Station). 226 meters. 10 watts. Radio Corp. of America.

WEBM, Mobile, Ala. 226 meters. 100 watts. Radio Corp. of America. (Portable.)

WEBQ, Harrisburg, Ill. 226 meters. 10 watts. Tate Radio Co. Announcer, Joseph R. Tate. Slogan "Blue Bird Station." Daily ex Sun, 7:15 pm, news, weather. Central.

WEBR, Buffalo, N. Y. 244 meters. 100 watts. H. H. *Howell. Slogan, "We Extend Buffalo's Regards." Daily ex Sun, 7:45-8:30 pm, bedtime stories. Tues, Thurs, Sat, 8:30-11:30 pm. Sun, 12 m, 3 pm. Eastern.

WEBT, Dayton, Ohio. 256 meters. 5 watts. The Dayton Co-op. Industrial High School. Announcer, Irwin Snyder. Slogan, "Worthy Effort Brings Triumph."

WEBW, Beloit, Wis. 268 meters. 500 watts. Beloit *College. Announcers, W. E. Alderman, Col. Glenn Armstrong. Closed for the summer.

WEBZ, Savannah, Ga. 263 meters. 50 watts. Savannah Radio Corp. Mon, Wed, Fri, 8:30 pm. Eastern.

WEEI, Boston, Mass. 475.9 meters. 500 watts. Edison *Elec. Illuminating Co. Announcer, C. R. Emery. Slogan; "The Friendly Voice." Daily ex Sun, 6:45 am, exercises; 7:45, watch. Mon, 4 pm, 5:30, 6:30-10:30, 10:30. Tues, 3 pm, 4, 6:30-10, 10. Wed, 4 pm, 6:30-10, 10. Thurs, 4 pm, 6:30-10, 10. Fri, 4 pm, 6:30-10, 10. Sun, 7:20 pm, 9:20. Eastern daylight.

WEHS, Evanston, Ill. 205.4 meters. 20 watts. Robert *E. Hughes.

WEMC, Berrien Springs, Mich. 285.5 meters. 500 watts. *Emanuel Missionary College. Slogan, "The Radio Lighthouse." Off the air for the summer.

WENR, Chicago, Ill. 266 meters. 100 watts. All American Radio Corp. Announcer, Frank Westphall. Tues, Thurs, Fri, 7-8 pm; 9-10. Sat, 6-8 pm. Sun, 2:30-4. Central daylight.

WEW, St. Louis, Mo. 248 meters. 100 watts. St. Louis Univ. Announcer, R. J. Brown. Daily ex. Sun, 9 am, 10, 2, 5 pm, reports. Tues, Thurs, 7 pm, lectures, music. Sun, 7:30 pm. Central

WFAA, Dallas, Tex. 475.9 meters. 500 watts. Dal*las News and Dallas Journal. Announcer, Adams Calhoun. Slogan, "Working for All Alike." Daily, 10:30 a.m. reports; 12:30-1 p.m. address; 2:30-3, 3:30-4, 4:30-5, reports, news; 5:30, bedtime story; 8:30-9:30, concert, weather (silent Wed.). Mon, Tues, Thurs, Fri, 6:30-7:30 pm, vesper recital, sports. Sat, 6-7 pm, Tues, Thurs, Sat, 11-12 pm, music. Sun, 6-7 pm, Bible class; 7:30-8:30, service; 9:30-11, music. Central.

WFAM, St. Cloud, Minn. 273 meters. 10 watts. St. Cloud Daily Times. Slogan: "Granite City of the World." Announcer, Otto A. Rupp. Daily ex Sun, 4:45 pm, markets. Central.

WFAV, Lincoln, Nebr. 275 meters. 500 watts. Univ. of Nebr. Announcer, R. A. Cushman. Slogan, "The Home of the Cornhuskers." Daily ex Sun, 10 am, 12:15 pm, weather, news, road reports. Central.

WFBB, Eureka, Ill. 240 meters. 100 watts. Eureka college.

WFBC, Knoxville, Tenn. 250 meters. 50 watts. First Baptist church. Announcer, St. John Reynolds. Sun, 10:45 am; 7:30 pm, services; 3:30 pm, sacred music. Central.

WFBD, Philadelphia, Pa. 234 meters. 5 watts. Gethsemane Baptist church. Sun, 7:15 pm, Bible story, 7:45, service. Eastern daylight.

WFBE, Seymour, Ind. 226 meters. 10 watts. Van de *Walle Music and Radio company. Announcer, John Van de Walle. Mon, Wed, 9-10 pm. Fri, 9-10 pm. Central.

WFBG, Altoona, Pa. 278 meters. 100 watts. The Wm. F. Gable Co. Announcer, Roy F. Thompson. Slogan, "The Original Gateway to the West." Daily ex Sat, Sun, 11:45 am, music; 3:45 pm; 6:15. Mon, 7:15 pm, 7:30, 8, 9:15. Tues, 8:30 pm, 11:15. Thurs, 7:15 pm, 8:30, 10:30. Fri, 7:15 pm; 7:30, 8:30, 11:15. Sat, 7:30 pm. Eastern.

WFBH, New York, N. Y. 272.6 meters. 500 watts. Concourse Radio Corp. Announcer, Alvin E. Hauser. Slogan "Voice of Central Park." Mon, Wed, Fri, 2-7 pm. Tues, Thurs, Sat, 2-8 pm. Sun, 11:30 am; 5-8. Eastern Daylight.

WFBI, Camden, N. J. 236 meters. 1,000 watts. Galvin *Radio Supply Co.

WFBJ, Collegeville, Minn. 236 meters. 50 watts. St. John's university. Announcer, Hilary Doerfler. Slogan, "In the Heart of the Landscape Paradise."

WFBK, Hanover, New Hampshire. 256 meters. 100 *watts. Dartmouth College. Announcer, Frank Appleton.

WFBL, Syracuse, N. Y. 252 meters. 100 watts. Onondaga Hotel company. Announcer, Ernest E. Chappell. Daily ex Sun, 12-1 pm; 6:15-7:15. Tues, Thurs, Sat, 10-12 midnight. Fri, 9-9:45 pm. Sun, 5-6 pm; 6:15-7:15. Eastern.

WFBM, Indianapolis, Ind. 268 meters. 250 watts. Merchants Heat and Light company. Announcer, John Tribby. Slogan, "The Convention City of America." Daily ex Sat, Sun, 6:30-12:30 am. Sun, 10:45 am. 4:45-5:15, 7:45-9. Central.

WFBN, Bridgewater, Mass. 226 meters. 10 watts. Radio Sales & Service Company. Fri, 9-12 pm. Sun, 1-3 pm. Eastern.

WFBQ, Raleigh, N. C. 252 meters. 50 watts. Wynne Radio Co.

WFBR, Baltimore, Md. 254 meters. 100 watts. Fifth Infantry. Slogan, "Home of the Star Spangled Ban- Announcer, H. J. Lepper. Tues, Fri, Sat, evening programs. Sun, morning program. Eastern.

WFBY, Ft. Ben. Harrison, Ind. 258 meters. 100 watts. Signal Officer.

WFBZ, Galesburg, Ill. 254 meters. 20 watts. Knox college.

WFI, Philadelphia, Pa. 394.5 meters. 500 watts. Straw*bridge & Clothier. Announcer, John Vandersloot. Daily ex Sun, 10:15 am, reports; 1:50, reports; 3-4:30, concert; 6:30-7, orchestra. Tues, Thurs, 8, concert. Sat, 8 pm, concert. Sun, 10:30 am, 7:30 pm, church services alternating. Eastern daylight.

WFKB, Chicago, Ill. 217.3 meters. 100 watts. Francis *K. Bridgman. Announcer, Horace Kehm. Wed, Sat, 7-7:30 pm, 8:30-9:30, 9:30-11:30. Thurs, 8:30-9:30 pm, 9:30-11:30. Central daylight.

WGAL, Lancaster, Pa. 248 meters. 10 watts. Lancaster *Elec. Supply & Construction Co. Announcer, J. R. Gaintner. Slogan: "World's Gardens at Lancaster." Mon, Wed, Fri, 5:45-6:15 pm, dinner concert. Wed, 11:15-1 am, organ. Eastern.

WGAZ, South Bend, Ind. 275 meters. 250 watts. South Bend Tribune. Announcer, C. G. Livengood. Mon, Wed, Fri, 7-9:30 pm, concert. Central.

WGBA, Baltimore, Md. 254 meters. 100 watts. Jones Elec. & Radio Mfg. Co., Slogan, "Watch Greater Baltimore Advance." Announcer, Winters Jones. Club "Staying up with the Jones." Daily ex Sun, 12-1:30 pm. Mon, 7-8 pm, 9:30-12. Thurs, 7-12. Sun, 9:30-11:30 pm. Every other Sun, 2-4 pm. Eastern.

WGBB, Freeport, N. Y. 244 meters. 100 watts. Harry *H. Carman. Sun, 10:45 am, church. Eastern.

WGBC, Memphis, Tenn. 266 meters. 10 watts. First Baptist church. Announcer, M. L. Martin. Slogan, "Radio Bible Class." Sun, 9:55 am, 7:30 pm. Central.

WGBF, Evansville, Ind. 236 meters. 100 watts. The *Finke Furniture Co. Announcer, Harold Finke. Daily 12:10 pm, weather, markets, news; 5, baseball. Tues, Fri, 8-10 pm, music. Fri, 11-12:30 am, Midnight Air Raiders. Sun, 9-10:30 am, service; 7:30-9 pm, music. Central.

WGBG, Thrifton, Va. 226 meters. 10 watts. Breitenbach's Radio Shop.

WGBH, Fall River, Mass. 209.7 meters. 10 watts. Fall River Herald Publ. Co. (Portable.)

WGBI, Scranton, Pa. 240 meters. 10 watts. Frank S. Megargee.

WGBK, Johnstown, Pa. 248 meters. 5 watts. Lawrence W. Campbell. Daily ex Sun, 5-6:30 pm. Sat, 8:45-11:45 pm, dance music. Sun, 3:5 pm.

WGBL, Elyria, Ohio. 227 meters. 10 watts. Elyria Radio Assn.

WGBM, Providence, R. I. 234 meters. 100 watts. Theo*dore N. Saaty. Mon, 10 pm. Wed, Fri, 6:30 pm. Eastern daylight.

WGBQ, Menominee, Wis. 234 meters. 100 watts. Stout *Institute.

WGBR, Marshfield, Wis. 229 meters. 10 watts. George S. Ives. Sun, 2-4 pm, 7-9. Central.

WGBS, New York, N. Y. 315.6 meters. 500 watts. Gimbel Brothers. Announcer, A. V. Llufrio. Daily ex Sun, ex Sun, 10-2:30 pm, entertainment; 3-7:30. Tues, 8:30-12. Thurs, 8:30-1 am. Sat, 7:30-12. Sun, 3:30-4:30 pm; 9:30. Eastern Daylight.

WGBT, Greenville, S. C. 236 meters. 15 watts. Furman university.

WGBW, Spring Valley, Ill. 256 meters. 10 watts. *Hub Radio Shop-Valley Theater. Announcer, Verner Hicks. Thurs, 10-11:30 pm. Sun, 10:30-12 m. Central.

WGBX, Orono, Me. 252 meters. 100 watts. University of Maine.

WGBY, New Lebanon, Ohio. 250 meters. 30 watts. The Progress Sales company.

WGCP, New York, N. Y. 252 meters. 500 watts. Grand *Central Palace. Announcer, Alfred Hall. Slogan, "Four Leaf Clover Station." Mon, Wed, Fri, Sun, 6:30-11 pm. Eastern.

WGES, Oak Park, Ill. 250 meters. 500 watts. Coyne *Elec. School. Daily ex Sun, Mon, 5-7 pm, 10:30-1 am. Sun, 5-7 pm, 10:30-12. Central daylight.

WGHP, Detroit, Mich. 270 meters. 500 watts. George *Harrison Phelps, Inc.

WGMU, Richmond, Hill, N. Y. 236 meters. 100 watts. *A. H. Grebe & Co., Inc. (Portable).

WGN, Chicago, Ill. 370.2 meters. 1000 watts. Chicago *Tribune. Announcer, Quin A. Ryan. Daily ex Sun, 9:31 am, time; 9:35, 10, 10:30, 11, 11:30, markets; 11:56, time; 12:10 pm, markets; news; 12:40-2:30, concert; 3-3:30, rocking chair time; 5, markets; 5:30-5:57, Skeezix time; 5:57, time. Daily ex Sun, Sat, 12 m. 12:30, 1, 1:25, 2:30-3. Daily ex Sun, Mon, 6, markets; 6:30-7:30, concert, 8:30-9:30 pm, 10:30-11:30, program. Sun, 11-11:45 am, comics; 11:45-12:45 pm, concert; 3:30 pm, music; 9-10, music. Central daylight.

WGR, Buffalo, N. Y. 319 meters. 750 watts. Federal *Telephone Mfg. Corp. Announcer, Otto Becker. Slogan, "Key City of Industry." Daily 12 m, reports; 12:45, concert. Daily ex Sun, 2:30; 7:30, news. Tues, Thurs, Sat, 6-7 pm, music. Mon, Wed, Fri, 9-11 pm; 11. Mon, Wed, 8-8:55 pm. Tues, Thurs, 8-11 pm, from New York. Fri, 8:30-9 pm. Sun, 10:30 am, church; 3 pm, vesper services. Eastern daylight.

WGST, Atlanta, Ga. 270 meters. 500 watts. Georgia *School of Technology. Announcer, J. H. Persons. Slogan, "The Southern Technical School with a National Reputation." Closed for the summer.

WGY, Schenectady, N. Y. 379.5 meters. 2000 watts. *General Elec. Co. Announcer, Kolin Hager. Daily ex Sun, 10:55 am, time; 11:30 pm ,stocks, markets; 11:50, weather. Daily ex Sat, Sun, 11:40 pm, fruit, vegetable reports; 5, stocks; 5:10, markets; 5:15, sports, news. Mon, Tues, Thurs, Fri, 1 pm, woman's hour; 6:30 pm. Mon, 6 pm, sports. Tues, Thurs, 1:30 pm, organ. Mon, Tues, Thurs, 5:30-6 pm, dinner program. Thurs, 10:30 pm, organ. Fri, 6 pm. Wed, 5:30 pm, stories. Fri, 5:30 pm, Sunday school lesson; 9:30, late program. 2nd and last Mon, 6:15 pm, agricultural talk. Wed, Fri, 6 pm, orchestra. Sat, 8:30 pm, dance program. Sun, 9:30-11 am, service; 2:35 pm, orchestra; 6:30-7:45, service; 7:45, orchestra from WJZ. Eastern.

WHA, Madison, Wis. 535.4 meters. 750 watts. Univ. of Wis. Mon, Fri, 7:45 pm, music, talks. Wed, 9-10 pm. Central.

WHAD, Milwaukee, Wis. 275 meters. 500 watts. Mar*quette University. Milwaukee Journal. Daily ex Sun, 11 am, weather, news; 4-4:30 pm, news, markets, current topics, music; 6-7, organ; 7-7:30, sports, financial reports. Mon, Wed, 8-10 pm. Wed, 11:30-12:30. Fri, 8:30-10 pm. Central.

WHAG, Cincinnati, O. 233 meters. 100 watts. Univ. of Cincinnati. Dept. of Elec. Eng. Announcer, W. C. Osterbrock. No definite schedule.

WHAM, Rochester, N. Y. 278 meters. 100 watts. Univ. of Rochester. Rochester Times-Union, Democrat and chronicle. Daily ex Sun, 3:30-4 pm, 5-6, 7-7:30. Sun, 3:15, Radio Chapel. Eastern.

WHAP, Brooklyn, N. Y. 240 meters. 100 watts. H. Alvin *Simmons. Announcer, H. Alvin Simmons. Slogan, "Forum of the Air." Daily ex Sun, 6-7:30 pm, 7:30-8. Eastern daylight.

WHAR, Atlantic, City, N. J. 275 meters. 500 watts. *Seaside Hotel. Announcer, E. Dennisen. Daily ex Wed, 7:30 pm, 8, 9, 11. Sun, 2:30 pm, 3:10, 9. Eastern daylight.

WHAS, Louisville, Ky. 399.8 meters. 500 watts. Courier-Journal and Louisville Times Co. Announcer, Harold A. Salyer. Daily ex Sun, 4-5 pm, 7:30-9. Sun, 9:57-10:45 am, 4-5 pm, church service. Mon night, silent. Central.

WHAV, Wilmington, Del. 266 meters. 100 watts. Wilmington Elec. Spec. Co. Slogan, "The First Broadcasting Station of the First City of the First State." Wed, Sun, 9 pm. Eastern daylight.

WHAZ, Troy, N. Y. 379.5 meters. 500 watts. Rensselaer Polytechnic Inst. Announcer, Rutherford Hayner. Slogan, "Transcontinental and International Broadcasting Station Located at the Oldest College of Science and Engineering in America." Club, R. P. I. students. Mon, 8:15-10:15 pm, concert, educational talks, features. Second Monday of Month, 12-1:30 am. International test program. Eastern.

WHB, Kansas City, Mo. 365.6 meters. 500 watts. Sweeney Auto & Electric School. Announcer, John T. Schilling. Slogan, "Heart of America." Daily ex Sun, 8:25 am, 9:25, 10:25, 11:20-12, 12:15, 12:20, 12:35, 1:25, markets, weather, stocks. Daily ex Sat, Sun, 12 m, time; 2-3 pm, 3-3:05 pm, weather; 3:05-3:20, grain. Mon, Wed, Fri, 7-8 pm. Tues, Thurs, 7-7:30, 8-10 pm. Sun, 9:45 am, 2-3 pm, 8-12. Central.

WHBA, Oil City, Pa. 250 meters. 10 watts. Shaffer *Music House.

WHBB, Stevens Point, Wis. 240 meters. 50 watts. The Copps Co. Announcer, C. W. Copps. Slogan, "Deewood Coffee Co. Monday, 7:30-9 pm. Central.

WHBC, Canton, Ohio. 254 meters. 10 watts. Rev. E. P. Graham.

WHBD, Bellefontaine, Ohio. 222 meters. 20 watts. Charles W. Howard.

WHBF, Rock Island, Ill. 222 meters. 100 watts. Beardsley Specialty company. Announcer, G. J. Altfilisch. Mon, 8-11 pm. Wed, 7:30-10 pm. Sat, 2-4 pm; 7-9. Central.

WHBG, Harrisburg, Pa. 231 meters. 20 watts. John S. Skane.

WHBH, Culver, Ind. 222.1 meters. 100 watts. Culver Military Academy. Announcer, F. M. Schmidt. Mon, 8:30 pm. Sat, 7:15 pm Sun, 11 am. Central.

WHBI, Chesaning, Mich. 227 meters. 50 watts. Chesaning Electric company. Announcer, Arthur F. Walser.

WHBJ, Ft. Wayne, Ind. 234 meters. 10 watts. Lauer Auto company.

WHBK, Ellsworth, Maine. 231 meters. 10 watts. Franklin St. Garage, Inc.

WHBL, Logansport, Ind. 215.7 meters. 50 watts. James *H. Slusser. (Portable).

WHBM, Chicago, Ill. 233 meters. 20 watts. C. L. Carroll. *(Portable).

WHBN, St. Petersburg, Fla. 258 meters. 10 watts. First Avenue Methodist church.

WHBO, Pawtucket, R. I. 231 meters. 50 watts. Y. M. C. A.

WHBP, Johnstown, Pa. 256 meters. 100 watts. Johns*town Automobile Co. Announcer, J. C. Tully. Slogan, "The Voice of the Friendly City." Wed, 9 pm. Sat, 10 pm. Eastern.

WHBQ, Memphis, Tenn. 233 meters. 10 watts. Men's *Fellowship class. St. John's M. E. church. Announcer, Dr. George L. Power. Slogan, "We Have Best Quartet." Wed, 8-9 pm, music. Sun, 9:45-10:45 am, 11, 7:45 pm, services. Central.

WHBR, Cincinnati, Ohio. 215.7 meters. 20 watts. Scien*tific Elec. & Mfg. Co. Announcer, Louis S. Rouse. Slogan, "That's Us." Mon, 8 pm, 9, 10. Tues, 9 pm, 11:30-12. Thurs, 1-2:30 pm, 7-9. Sat, 10-12 midnight; 12-2. Central daylight.

WHBS, Mechanicsburg, Ohio. 208.2 meters. 10 watts. Edward Wm. Lock.

WHBT, Downers Grove, Ill. 206.8 meters. 10 watts. *Thomas W. Tizzard, Jr. Announcer, Thomas Tizzard. Slogan, "We Have Big Times." Mon, 8-10 pm. Thurs, 8-9 pm. Sat, 10:30-11:30 am, 8-10 pm. Sun, 2:30-3:15 pm. Central daylight.

WHBU, Anderson, Ind. 218.8 meters. 10 watts. Bing's *Clothing-Riviera Theater. Announcer, O. B. Robey. Slogan, "The Home of Chief Anderson." Wed, 7-9 pm. First Sun of month, 7-9. Central.

WHBV, Columbus, Ga. 244 meters. 20 watts. Fred *Ray's Radio Shop. Announcer, Jack Walton. Slogan, "Columbus, the City of 100 Factories." Mon, 8-9:30 pm. Wed, 8-9:30 pm. Fri, 10-12. Sun, 11-1 pm. Central.

WHBW, Philadelphia, Pa. 215.7 meters. 100 watts. D. R. Kienzle.

WHBX, Punxsutawney, Pa. 212.6 meters. 50 watts. *J. W. Bowser. Announcer, George Green. Special programs, Tues, Fri, 10-11 pm. Wed, 8:30-10:30 pm. Eastern.

WHBY, West De Pere, Wis. 250 meters. 50 watts. *St. Norbert's College.

WHDI, Minneapolis, Minn. 278 meters. 500 watts. Wm. *Hood Dunwoody Industrial Insitute. Announcer, Hal Marston. Mon, 8-9 pm. Wed, Fri, 9-10 pm.

WHEC, Rochester N. Y. 258 meters. 100 watts. Hickson Electric company, Inc. Announcer, J. F. Hitchcock. Slogan, "With Hickson Elec. Co." Daily ex Sun, 6:30-7:30 pm. Eastern.

WHK, Cleveland, Ohio. 273 meters. 250 watts. Radiovox *Company, Winton hotel. Announcer, Art Cook. Slogan, "Voice of the Fifth City." Daily ex Sun, 1-1:20 pm, farm school; 4-5:30, 6:30-7:30. Thurs, 9-12 mid. Karnival Klub. Fri, 10-12, dance music. Sat, 12-3 am. Sun, 10:30 am, church service; 9-11 pm. Eastern.

WHN, New York, N. Y. 360 meters. 500 watts. Loew's State Broadcasting Station. Announcer, N. T. Grandlund. Slogan, "The Voice of the Great White Way." Daily ex Sun, 12-1 pm, 2:15-3:15, 3:45-5:30, 6:30-12 midnight. Sun, 3-6 pm, 9:30-12. Eastern Daylight.

WHO, Des Moines, Ia. 526 meters. 500 watts. Bankers Life *Co. Announcer, N. Dean Cole. Daily ex Sun, 9:45-am, 12 m, 2 pm, markets, weather. Daily ex Sat, Sun, 7:30 pm. Mon, 8-9 pm, 11:15-12. Wed, 6:30-7:30 pm, 10:20-12. Thurs, Fri, 11-12. Sun, 11 am, 7:30-8:30 pm. Central.

WHT, Deerfield, Ill. 238-399.8 meters. 1500 watts. Wrig*ley Bldg. Announcer, Pat Henry Barnes. Daily ex Sun, Mon, (399.8), 11-2 pm, 7-8:30, 10:30 -1; (238), 8:45-10:15. Mon (399.8), 11-2 pm, 7-1 am. Sun, 12-10:30 pm, Paul Rader. Central daylight.

WIAD, Philadelphia, Pa. 250 meters. 100 watts. Howard R. Miller. Slogan, "The Voice from the Birthplace of Liberty." Tues, Fri, 9 pm. Eastern Daylight.

WIAK, Omaha, Neb. 278 meters. 250 watts. Daily Journal-Stockman. Announcer, Wm. Kotera. Daily ex Sun, 7:45 am, 9:10, 10:20, 12 m, 1:35 pm, 3:50, markets, weather. Central.

WIAS, Burlington, Ia. 254 meters. 100 watts. Home *Elec. Co. Announcer, Harry H. Waugh. Slogan, "Burlington, on the Mississippi." Tues, 8-9 pm, concert. Thurs, 7-8 pm, concert. Sat, 7:30 pm, dance music; 10:30-11, organ. Sun, 10:30 am, church services. Central.

WIBA, Madison, Wis. 236 meters, 100 watts. The Capi*tal Times. Announcer, Don Patterson. Slogan, "Four Lakes City." Mon, Wed, Fri, 8:45-10 pm. Sat, 12-1 am. Central.

WIBC, St. Petersburg, Fla. 222 meters. 100 watts. L. M. Tate Post No. 39, Veterans of Foreign Wars. Mon, Wed, 8-10:30 pm. Sat, 8-9 pm, 10:30-12. Eastern.

WIBD, Joliet, Ill. 200 meters. 50 watts. X-L Radio Service.

WIBE, Martinsburg, W. Va. 209.7 meters. 5 watts. Martinsburg Radio Broadcasting Co.

WIBF, Wheatland, Wis. 231 meters. 50 watts. S. P. Miller Dance Activities.

WIBG, Elkins Park, Pa. 222 meters. 50 watts. St. *Paul's Protestant Episcopal church. Announcer, Charles T. Asbury. One Monday a month Ogontz Forum speaks. Sun, 10:45 am, 3:45 pm. Eastern.

WIBH, New Bedford, Mass. 210 meters. 5 watts. *Elite Radio Stores. Announcer, J. T. Moriarty. Slogan, "The Voice of New Bedford." Morning and afternoon programs.

WIBI, Flushing, N. Y. 218.8 meters. 5 watts. Fred*erick B. Zittell, Jr.

WIBJ, Chicago, Ill. 215.7 meters. 50 watts. C. L. *Carroll. (Portable).

WIBK, Toledo, Ohio. 205.4 meters. 100 watts. Uni*versity of the City of Toledo.

WIBL, Chicago, Ill. 215.7 meters. 250 watts. Mc*Donald Radio Co. (Portable).

WIBM, Chicago, Ill. 215.7 meters. 10 watts. Billy *Maine. (Portable).

WIBO, Chicago, Ill. 226 meters. 500 watts. Nelson Brothers. Announcer, Harry Geise. Daily ex Sun, 2-4 pm. Daily ex Sun, Mon, 6-8 pm. Tues, Thurs, 12-3 am. Wed, 10-12 midnight. Fri, 10-2 am. Sun, 10:15 am, service; 2-4 pm, concert; 6-8, 10-12. Central daylight.

WIBP, Meridian, Miss. 209.7 meters. 5 watts. First *Presbyterian church.

WIL, St. Louis, Mo. 273 meters. 150 watts. St. Louis Star and Benson Radio Co. Announcer, Billy Knight. Slogan, "Watch It Lead." Mon, Wed, Sat, 10-12 midnight. Fri, 9-11 pm. Central.

WIP, Philadelphia, Pa. 508.2 meters. 500 watts. Gimbel Bros. Announcer, E. A. Davies. Slogan, "Watch Its Progress." Daily ex Sun, 1-2 pm, 3-4:30, 6-6:45, music; 6:45, markets, 7-7:30 pm, bedtime stories. Tues, Thurs, Sat, 8-12 pm, concert. Sun, 11 am, 1:30 pm, 4:30-6:30, 9:30-12 mid, church services, concert. Eastern Daylight.

WJAD, Waco, Tex. 352.7 meters. 500 watts. Jackson's Radio Engineering Lab. Mon, Fri, 8:30-9:30 pm. Sun, 11-12 m; 7:30-8:30 pm. Central.

WJAG, Norfolk, Nebr. 276 meters. 250 watts. Norfolk Daily News. Announcer, Karl Stefan. Slogan, "The World's Greatest Country Daily, and Home of Printer's Dev'l." Daily ex Sun, 12:15 pm; 1:45 pm. Sun, 3:30-6 pm, music. Central.

WJAK, Greentown, Ind. 254 meters. 100 watts. Clifford *L. White. Slogan, "The Radio Parson." Daily ex Sun, 12-1 pm, chapel. Central.

WJAM, Cedar Rapids, Ia. 268 meters. 100 watts. D. M. Perham. Daily ex Sun, 9 am, 10:30, 12:30 pm, markets reports. Tues, Thurs, Sat, 6-6:30 pm, children's hour. 6:30-10:30. Sun, 4 pm, vesper service. Central.

WJAR, Providence, R. I. 305.9 meters. 500 watts. The *Outlet Co. Announcer, J. A. Reilly. Slogan, "The Southern Gateway of New England." Daily ex Sun, 1:05-2:15 pm, weather, reports, music. Mon, Wed, Fri, 10 am, household hints. Mon, Tues, 7:30-10 pm. Wed, 7:30-10:30 pm. Thurs, 7:30-11 pm. Fri, 8-10 pm, 11-12. Sun, 7:20-10:15 pm. Eastern daylight.

WJAS, Pittsburgh, Pa. 275 meters. 500 watts. Pittsburgh Radio Supply House. Pickering's Studio. Announcer, Bryan McDonald. Slogan, "World's Jolliest Aerial Station." Daily ex Sun, 8-11, concert. Sun, 2 pm, service. Eastern Daylight.

WJAZ, Chicago, Ill. 268 meters. 100 watts. Zenith *Radio Corp. (Portable).

WJBC, La Salle, Ill. 234 meters. 100 watts. Hummer *Furniture Co. Announcer, Emmerson Charles. Daily ex Sun, 12:30-1 pm. Mon, Thurs, 8-11 pm.

WJBD, Ashland, Wis. 233 meters. 100 watts. Ashland *Broadcasting committee. Announcer, C. W. Pfefferkoin. Slogan, "The Voice of the Great North Woods." Mon, Tues, irregularly. Central.

WJBI, Joliet, Ill. 214.2 meters. 100 watts. H. M. *Couch.

WJD, Granville, O. 217.3 meters. 10 watts. Denison Univ. Announcer, Richard H. Howe. Fri, Sat, 5-6 pm, music, educational lectures. Athletics. Eastern.

WJJD, Mooseheart, Ill. 302.8 meters. 500 watts. Moose*heart Radio station. Announcer, Jack Nelson. Slogan, "The Call of the Moose." Daily ex Sun, Thurs, 3:30-4:30 pm, children's program; 6:45-8 pm, 10:30-1. Sun, 8:45-10 am, services; 10:45-12, services; 12-2. Central daylight.

WJY, New York City. 405.2 meters. 1000 watts. R.C.A. Announcer, J. Lewis Reid. Tues, Thurs, Fri, 7:30-11:30 pm, concert. Sun, 8:15-10:30 pm. Eastern Daylight.

WJZ, New York, N. Y. 454.3 meters. 500 watts. R. C. A. Announcer, Milton J. Cross. Daily ex Sun, 10-11 am, 1-2 pm, 4-6, entertainment; 7-11:30 pm, special program. Sun, 11 am-1 pm, church services; 2:30-5 pm, 7-10:30 pm. Eastern Daylight.

WKAA, Cedar Rapids, Ia. 278 meters. 50 watts. H. F. Parr, announcer. Mon, Wed, Fri, 4-5 pm; 8:30-10:30. Sun, 11 am, 5 pm, church service. Central.

WKAP, Cranston, R. I. 234 meters. 50 watts. Dutee Wilcox Flint, Inc.

WKAQ. San Juan, Porto Rico. 340.7 meters. 500 watts. Radio Corp. of Porto Rico. Announcer, Joaquin Agusty. Slogan, "The Island of Enchantment, Where the World's Best Coffee Grows." Wed, 8-10 pm, band; Thurs, 8:30-10 pm, music. Sun, 8-10 pm, band. Intercolonial.

WKAR, East Lansing, Mich. 285.5 meters. 750 watts. *Mich. State College. Announcer, J. B. Hasselman. Mon, 8-9 pm. Eastern.

WKAV, Laconia, N. H. 209.7 meters. 50 watts. Laconia Radio Club (Portable).

WKBE, Webster, Mass. 231 meters. 10 watts. K. & B. Electric Co.

WKBG, Chicago, Ill. 215.7 meters. 100 watts. C. L. *Carrell, (Portable).

WKRC, Cincinnati, Ohio. 422.3 and 325.9 meters, al*ternate months, 1,000 watts. Kodel Radio Corp. Announcer, Eugene S. Mittendorf. Slogan, "The Station on the Hill." Mon, Tues, Sat, 10 pm, 11. Mon, 12 midnight. Wed, 8 pm. Sun, 6:45 pm, 10. Central daylight.

WKY, Oklahoma City, Okla. 275 meters. 100 watts. WKY Radio Shop. Daily ex Sun, 3-4 pm, markets, weather, news. Daily ex Sun, 6:30-8:30 pm. Sun, 9:30-12:30 pm; 7:45-9:45. Central.

WLAL, Tulsa, Okla. 275 meters. 100 watts. First *Christian church. Announcer, W. P. Lear. Slogan, "The Voice of the Church." Sat, 7:30 pm, Bible class. Sun, 7:30 pm, church. Central.

WLAP, Louisville, Ky. 275 meters. 20 watts. W. V. Jordon. Tues, Fri, 9:20-10 pm. Central.

WLAX, Greencastle, Ind. 231 meters. 10 watts. Greencastle Community Broadcasting Station. Announcer, C. W. Otis. Tues, Thurs, 8 pm. Sun, 7:45 pm, church services. Central.

WLB, Minneapolis, Minn. 278 meters. 500 watts. U. of Minn., Dept of Elec. Eng.

(Note—The fourth part of the directory will appear next week.)

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