Improving the Super-Heterodyne's Selectivity; WTIC, Hartford, in Pictures; Winner of Gold Cup Best Announcer Contest; Variable Coupling for Tuned R.F.

Radio Digest

EVERY WEEK **Illustrated** PROGRAMS TEN CENTS

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Vol. XIV

SATURDAY, SEPTEMBER 12, 1925 No. 10

WHO WINS GOLD CUP?

SEE PAGE 3

SAVANTS DETERMINE TOP OF SKY CEILING

PROVE HEAVISIDE THEORY TO BE ABSOUTE FACT

"Skip Distance" of Short Waves Is Key to Solution—Means Lower Cost Communication

WASHINGTON, D. C.—Investigations conducted by the naval research laboratory, in association with the department of terrestial magnetism of the Carnegie Institution of Washington, have resulted in confirming the theory of the existence of an ionized region in the higher levels of the earth's atmosphere.

From observations made, it appears that the plane of maximum density, in popular language, the "ceiling" of the sky, lies at a varying distance above the surface of the earth, rislng and falling as weather conditions vary.

Dr. Heaviside Conceived Theory

This layer, the conception of which originated independently with the late Dr. Heaviside in England, is known, in the scientific world, as the Heaviside layer. It acts as a deflecting surface to electromagnetic waves under which they are guided around the world in a very similar way to that in which whispered sound waves run under the domes of the Capitol at Washington and of Saint Paul's Cathedral in London.

The results attained are based upon an analysis of the phenomenon known as

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Dark hair has its charm whether bobbed or not as evidenced by the trio of Radio artists herewith. The smiling lady at the left is Harriet Murphy, prominent Washington actress in the cast of the Arts Club players in their WRC debut. The raven tresses in the center belong to Joan Ruth, heard from WEAF. The waves of the Pacific are no more entrancing than those of the crowning beauty of Elfrieda Steindorff, right, soprano soloist on the KGO Little Symphony orchestra Sunday programs.

KDKA LEADS WAY TO LESS INTERFERENCE

ADOPTS PIEZO CRYSTAL AS WAVE SLIP PREVENTER

May End Ninety Per Cent of Interstation Interference—Crystal Small in Size

By W. W. Rodgers

EAST PITTSBURGH, Pa.—Interference caused by a station being off its assigned wave length, now the principal source of Radio interference, is doomed.

It is estimated that by eliminating the variation from assigned wave lengths, ninety per cent of present day interference will be avoided.

A device that automatically holds a station constantly to a certain fixed frequency or wave length, much the same as the balance wheel dictates the speed of a watch, or a governor regulates the speed of a steam engine, has been put in use by Westinghouse Station KDKA.

Prove Worth on KDKA Short Wave

This device consists of a "piezo" crystal, ground to a certain size and general form, and placed in a specially designed transmitting circuit. The size and shape of the crystal governs the frequency or wave length of the transmitter and holds it constant. The only way to change it is to replace the crystal, or grind it to another size.

Such crystals have been in experimental use for months on the KDKA short-wave

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KDKA LEADS WAY TO LESS INTERFERENCE

(Continued from page 1)

set, a type of transmitter on which constant frequencies are difficult to maintain. After tests demonstrated that the crystal would control the wave length, and that normal power could be used with it, H. P. Davis, vice-president of the Westinghouse Electric and Manufacturing company, announced that the regular KDKA 309-meter set and the other Westinghouse stations, WBZ, Springfield, Mass; KYW, Chicago, and KFKX, Hastings, Nebr., would be equipped with the device. Tests of the crystal control already have been run by WBZ and the KDKA 309-meter transmitting set. The crystals can be ground for use on any wave length no matter how low or high.

Slipping Waves Greatest Trouble

Although with the simple, broadly tuned receiving sets a shift in the wave length is scarcely noticeable, with the sharply tuned receivers now being sold the greatest source of interference is the station that slips off its assigned frequency.

Since the station wave lengths each are separated only by ten kilocycles, it is a serious matter when a transmitter changes its wave lengths even as little as two kilocycles, which in the case of a station operating on 309 meters, would be but 0.2 of one per cent.

If a shift greater than two kilocycles occurs, there is a whistling sound beat note, or other distortion heard in the receiving set, and the signals from two stations are jumbled together so that neither can be heard clearly.

Hard to End Variation

This shifting of wave length has been difficult to prevent, as it may be caused by such seemingly trivial things as a sagging of the antenna or a variation of the current used in the transmitter.

It has been known to scientists that certain crystals have the power of vibrating at frequencies in the Radio range. These are called piezo crystals. It was learned that the frequency at which the crystal vibrated was governed by its size and shape. It was also learned that by using the crystal in a specially constructed circuit, and building the crystal's oscillation on up through the high power transmitting set, the wave length emitted is exactly the same as that of the crystal. No ordinary change in the adjustment of the transmitting set can cause any appreciable change in the wave length. The use of the crystal also improves the quality of the transmission by reducing the amount of distortion.

The crystal used by KDKA is about the size of a half dollar.

MEASURES SKY ROOF

(Continued from page 1)

the "skip distance" which was checked by a simple mechanical device by means of which the effective distance of the deflecting layer may be actually measured.

In the pioneer work of short-wave transmission, it was the experience that signals could be picked up at distances 40 or 50 miles. Then they disappeared.

They were again picked up at points several hundreds of miles distant. The intervening dead space of non-reception became known as the "skip distance."

In seeking to account for this a theory was developed at the research laboratory that there was a relation between the earth's magnetic field, the frequency of the waves used, skip distances observed and the height of the Heaviside layer.

This relation could be, and was, worked out mathematically using data contributed by the members of the American Radio Relay league amateurs and their coworkers in foreign countries.

Will Bring Cheaper Communication

The joint experiments with the Carnegie institution approached the solution of the problem from a different angle, demonstrating definitely the existence of two waves, one of them arriving by way of the earth and the other by way of the layer. From these experiments estimates of effective height of the layer were made, and these estimates were essentially in agreement with the estimates derived from observations on the skip distance.

The knowledge now gained will play an important part in further advancing the Radio art.

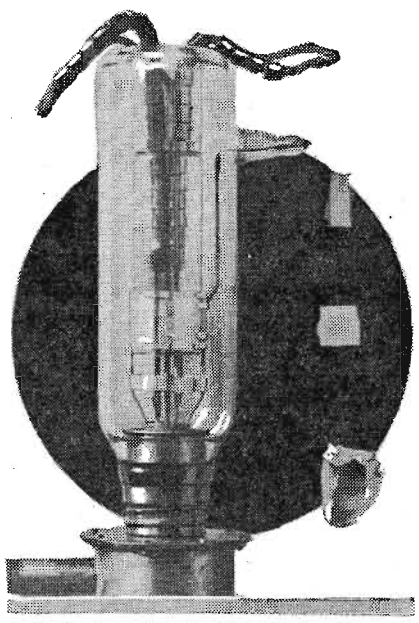
The naval research laboratory is now in communication with practically every country in the world using short waves.

Understanding of the principles involved has progressed to the point where it can be definitely stated that a high frequency transmitting station can be built at a cost of $60,000 that will give better service and longer range than the present high-power stations costing $2,000,000 each, and the cost of operation will be correspondingly reduced.

KFNF Radio Operator Weds

SHENANDOAH.—Cupid has again invaded the ranks of the Henry Field Seed company and this time has fired his dart into the heart of KFNF's operator Eugene Whitaker and the lucky young woman is Miss Cora Cartright of Eagle Iowa.

WEE CRYSTAL BOSS OF GIGANTIC TUBES



Ten-kilowatt transmitting tubes, one of which is shown above, now look askance upon small piezo crystals such as those pictured at the right of the tube, since KDKA has found the wee crystals capable of holding transmitters on their exact assigned wave lengths. The two top crystals have been ground for use, while the one at the bottom is the rough product. The size and shape of a piezo crystal governs the wave length or frequency at which it will oscillate.

Best Invention to Get Medal

LONDON.—Sir Arthur Stanley, president of the newly-formed Radio league, which is already said to have the largest membership of any Radio club in the world, has offered a gold medal for the best Radio invention produced during the next six months. This award, which will be known as the Stanley medal, will only be open to members of the league.

HOOVER HINTS AT NEW RADIO LAWS

Believes Fourth Conference Will Settle Much—Judge Davis Is Busy on Legislation

WASHINGTON, D. C.—Judge Davis, solicitor of the department of commerce, has given must thought to the question of new Radio legislation, Secretary of Commerce Hoover recently stated, but the secretary himself has not yet taken the matter up. He is of the opinion that considerable will be brought out along these lines at the forthcoming Radio conference.

Questioned the other day on the subject, Mr. Hoover stated that he has not yet decided on the date for the Radio conference but he said that he would make announcement of the date at least thirty days before the conference is to convene.

Five Continental Stations Change Wave Lengths

PARIS. — Among changes in wave lengths intimated by prominent foreign stations within the last week or two are the following:

Koenigswusterhausen, Germany: New uniform length, 1,300 meters.

Radio-Catalana, Barcelona, Spain: New length, 460 meters.

Dortmund, Germany: New length, 265 meters.

Cointrin, Geneva: Experimental length, 1,100 meters.

Nottingham, England: New length, 325 meters.

Russian Workers Become Fans

MOSCOW.—The amazing progress of Radio in Russia within the past few months is strikingly shown in the official figures just published that over 6,000 workers' clubs and nearly 12,000 public reading rooms in Russia have been fitted with receiving sets.

Madrid Broadcasts Till 1 A. M.

MADRID.—The recently opened Madrid station is trying an experiment in late broadcasting of concert programs. These start daily at 11 p. m. Madrid time and go on till 1 a. m.

CONTENTS

Radio Digest, Illustrated, Volume XIV, Number 10, published Chicago, Illinois, September 12, 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.

Looking Ahead

There Were Many Other Announcers in the race besides the winner, so next week's issue will contain the final standing of every man entered in the 1925 Gold Cup Best Announcer Contest.

Radio Fans Have Scrap Books wherein they paste photos of their favorites just as do the movie fans, so next week we will publish pictures of the winner and the fifteen who finished right below him that will be worthy of places of honor in your own Radio Who's Who.

Belgium and Its Radio-Belgique will be the next topic of Fred Smith, America's first Radio Ambassador. Mr. Smith has forwarded some pictures of the artists of that station and also gives a few sidelights on beggars and rough railroad trips.

Part Two of the Storage B Battery series will complete the instructions for you to follow in cutting down the high cost of high voltage.

Professor Moreton Next Discusses the use of a tube as a regenerative detector and as an oscillator in his A. B. C. Radio Fundamentals series.

KILOCYCLES REPLACE WAVE LENGTH DIALS

BUREAU OF STANDARDS TO TELL HOW TO CHANGE

Rapidity of Waves Rather Than Length Designation Will Aid in Logging Stations

By L. M. Lamm

WASHINGTON, D. C.—In Radio, the term "kilocycle" is gradually taking the place of "wave length" says the bureau of standards.

All listeners and users of sets will want to know and understand the new rating which increasingly governs their tuning in. The making or logging of dials is found to have certain advantages when in the newer terms. Already one of the oldest stations is announcing its broadcasts on the "kilocycle" or frequency rating. It is really quite simple, for frequency (waves per second) replaces wave length (in meters).

Just as a musician can vary the number of "oscillations" or vibrations of his vocal cords but cannot control the length of the sound waves, which vary with the medium, so a Radio station can vary the number of oscillations per second, and let the wave lengths be what they will. A high tenor "C" gives sound waves two feet in length, but the standard rating is frequency, or pitch, which is in this case 512 vibrations per second.

What Frequency Is

Frequency is the number of waves produced per second, or the number on the air after one second of transmission. "Kilocycle" means a thousand cycles. Hence a broadcast on a 500-kilocycle frequency gives out 500,000 Radio waves per second.

To aid Radio amateurs and experts, the bureau of standards is about to issue a table so that all, at a glance, can translate from the old rating by "wave lengths" (in meters) to the new rating by frequency (in kilocylces), and vice versa.

Radio waves travel with the speed of light, about 300,000 kilometers per second. (A kilometer is 1,000 meters or 0.62137 mile.) This is the sum of all the waves emitted in one second. Dividing this by the wave length in meters gives the frequency in kilocycles; dividing by the frequency in kilocycles gives the wave length.

Bureau Gives Example

The bureau gives this simple rule to obtain the frequency when the wave length (in meters) is known:

Divide 300,000 by the wave length in meters. The answer is in kilocycles.

Likewise the other way around: divide 300,000 by the number of kilocycles to get meters.

As the new system proposed by the international and national Radio conference is taken up by the broadcasting stations and placed into effect by the government in assigning station frequencies, it will become increasingly important to translate from wave length to frequency in order to tune in at all.

World's Series Games Over KTHS Is Plan

"Wonder State" Fans Will Hear Dixie Series Also

HOT SPRINGS NATIONAL PARK, Ark.—Residents of the "Wonder State" will be able to follow the progress of the World's Series and the Dixie Series battles this year for the first time play-by-play by Radio from their own home state broadcasting station through KTHS the 750-watt transmitter of the New Arlington hotel here, it has been announced by Director G. C. Arnoux.

A play-by-play account will be received by KTHS by direct wires to the ball grounds where the two series are played and each day, including balls and strikes, will be given out.

Light Opera Company Is Popular with Radio Fans

CHICAGO. — Opera of that variety known as "light" is fast becoming one of the most popular broadcast features on the station calendar of WEBH located here at the Edgewater Beach hotel. Already six of these selections of music of the popular, but good variety, have been received with much pleasure by the station's audience. Howard Neumiller, musical director of WEBH, is in charge of the presentations which are given by a company made up of several of the best known and qualified artists of the Chicago territory. The light opera programs will continue to be Radioed on every Friday night from 9:30 until 10:30, central daylight saving time.

The microphone used for broadcasting the chimes of Big Ben is wrapped round with cotton batting and enclosed in a football bladder against the weather.

GRAHAM McNAMEE WINS GOLD CUP

WEAF CHIEF FINISHES FIRST IN HIGHLY CONTESTED RACE

Winner Has Been Heard by More People Than Any Other Man—Prize Becomes His at Radio World's Fair

Graham McNamee, the man whose voice has been heard by more persons than that of any other man in history, due to his position as chief announcer of Station WEAF, the American Telephone and Telegraph company's New York plant, crossed the finish line first in the Radio Digest 1925 Annual Gold Cup Award and thereby earned the title of the World's Best Radio Announcer. The fight was hot until the very end and the votes that poured in during the last few hours of the contest made the victory for the "Eastern Sage" a certainty.

Mr. McNamee, former choir singer and a Radio announcer only since 1923, will be presented with the solid 14-karat gold cup on Saturday, September 19, at the Second Radio World's Fair, 258th Field Artillery armory, New York city, where the prize, insured for $5,000, will be on exhibit at the Radio Digest booth.

Complete Standing Next Week

Complete final standings of all the other announcers entered in the contest, together with photographs of the fifteen runners-up, who will be awarded certificates of honorable mention, will be made public in the next issue of Radio Digest. Final tabulations and rechecks are now being made by the Gold Cup Editor and a corps of busy assistants.

Unlike the 1924 Gold Cup Award race, the contest of 1925 developed quite a bit of competition for the lead position right from the start, which continued through to the very last minute. In 1924, George D. Hay, WLS, jumped into the lead at the very first and retained the top position until the end. George was never off the top. This year's contest started with the leading sixteen contestants grouped in fours. Hay and McNamee were in the first group at the start and continued there throughout. However, when the first standings were published, Hay was first with McNamee 522 votes behind.

McNamee Gains Lead

In the next list the WLS man led by 811, which was cut to 441 the next week. In the standings published in the June 6 issue of Radio Digest, McNamee passed Hay and led by 464. The next week the Chicago man came back and the New Yorker went into second position. When Hay reached the ten thousand mark, McNamee was 1,631 votes behind. The two leaders stayed in this one-two order until the publishing of the fifteenth ballot, when McNamee went into the lead by a 1,231 majority. From there on the WEAF chieftain held the lead, increasing the safety margin by hundreds of votes every week.

Millions Have Heard Him

Through his colorful descriptions of the republican and democratic conventions, the two presidential nominees' acceptance ceremonies, and the Coolidge inaugural, Graham McNamee's resonant voice has become familiar to millions of Radio listeners in all parts of the country—not that his laurels have been earned alone during the conventions or acceptance speeches, for Mr. McNamee has figured prominently in many important broadcasts involving the connection of numerous stations by telephone lines. His assignments, however, have sent his voice over so wide an area—no less than thirty stations, a record number—that he has won many new friends.

Mr. McNamee's abilities, however, are not limited to handling political events. He is a baritone of no little distinction, having won the encomium of such renowned critics as Richard Aldrich, W. J. Henderson, Henry T. Fink, and others. In spite of the demands of Station WEAF's microphone, Mr. McNamee still appears as soloist in some of New York's most famous churches. His vocal training and the clarity of enunciation which it has developed stands him in good stead when speaking to his millions of listeners.

Knows Sports as Well a Music

His earnest study of music also accounts for his lucid description of classic music, such as his extensive and interesting introductions to the Philharmonic concerts, broadcast by WEAF and the link stations.

But Mr. McNamee is far more versatile than most men who have attained such a thorough knowledge of music. He is an active follower of sports. It was he who gave those bright word pictures of the last World's Series and the opening game of the present season. His eye is quick enough to follow a rapid fire prize fight, as he demonstrated when handling the Wilson-Greb go. Many important football games have been vividly described by Mr. McNamee.

Summarized Coolidge Speech

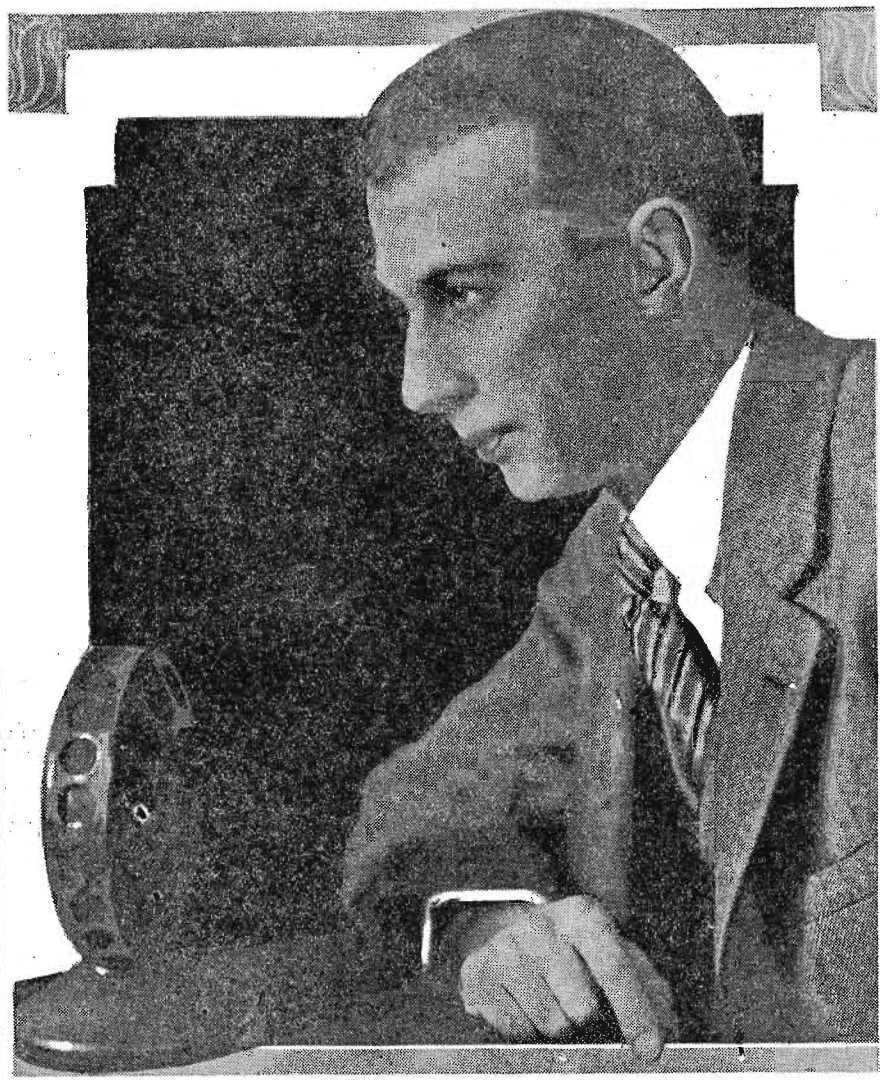
On the occasion of the broadcasting last spring of the President's annual message to congress, Graham McNamee performed a feat which won the praise of hundreds of newspaper men. He listened to the President's long address through a loud speaker and immediately upon its conclusion, delivered a clear, concise and well balanced summary of the address for the benefit of his listeners. No copies of the speech were available in advance. McNamee delivered his summary—a ten-minute speech—without opportunity to edit or revise, or to consult the text of the address in a manner which would do credit to a trained reporter and an experienced political speaker.

Mr. McNamee was born in Washington, D. C., and began his musical studies in Minneapolis. He continued his studies in New York and from 1912 to 1923 did nothing but concert and church work. In May, 1923, while serving on a jury, McNamee dropped into WEAF to kill time between court sessions. He became interested and a few days later became a substitute announcer. From then on his rise in the Radio world was rapid.

CUP AWARD PROVES BETTER THAN ELIXIR

NEW YORK.—Nurses at the hospital where Graham NcNamee, WEAF announcer, is convalescing from a serious operation, state that the news of his victory in the Radio Digest Gold Cup Award for the world's most popular announcer did more good for their patient than did all the medicines and dieting the doctors could prescribe. Mr. McNamee will be back on the air soon.

WORLD'S BEST RADIO ANNOUNCER



Graham McNamee, who by reason of his winning the Radio Digest 1925 Gold Cup Award, is entitled to the distinction of being known as the world's most popular Radio announcer. Entries and ballots for the contest were received from all over the United States and many foreign lands. The winner received votes from fans all over this country and the world.

Victory Pleases Wife of Popular Announcer

Mrs. McNamee Tells Things Her Husband Modestly Forgets

NEW YORK.—Josephine Garrett McNamee, wife of four years of the world's most popular Radio announcer, seems more pleased over Graham's victory than he does himself.

"Graham is modest about his announcing and one has to pump him a great deal to get him to tell of his experiences in helping make Radio history," explained Mrs. McNamee. "Why, he received 25,000 fan letters last year and many, many presents of all sorts! Winning the Radio Digest contest is the crowning event in his broadcasting career. I feel that the readers of that publication are the most representative of all the Radio listeners and that the title Graham has won is undisputed."

Mrs. McNamee is helping her husband prepare a book of his Radio reminiscences, "Before the Microphone," for early publication. She is a singer herself and before Mr. McNamee took up Radio work they appeared together in several concerts. Mrs. McNamee is a lyric soprano.

TWO SURRENDER TO AIR STRIKE DEMAND

SILENT NIGHT BIT NEARER IN CHICAGO TERRITORY

WCBD and WWAE Indicate They Will Shut Down on Monday Nights Hereafter

CHICAGO.—Although Frank H. McDonald, president of the Broadcast Listeners of America, reports that things look favorable for the fans in the Chicago territory strike for a silent night, this much desired Radio feature does not seem very much closer this week than it did last. It is true two stations, to which many fans have refused to listen, have signified their intention to go off the air on Monday nights in the near future, but these stations, WCBD, Zion, Illinois, and WWAE, Plainfield, while on the unfair list of the strikers, were not the biggest offenders against the quietude of the Monday night ether in these parts.

It was through the cooperation of Station WLS, and Edgar L. Bill, its director, that the Zion plant was led to make its move. WLS was a party to the original gentlemen's agreement made by Chicago stations when silent Mondays were first instituted here. This plant has always been in favor of giving the fans one night a week to search for the elusive DX. WCBD shares the wave length of WLS and is thereby limited in air time, Monday night being the only evening they have the band to themselves between the hours of seven and midnight. In order to compensate Director Voliva of the Zion station for his sacrifice on Monday, Mr. Bill has offered him an additional cut into the WLS non-silent night periods.

Strikers Write Hot Notes

Letters condemning the stations that prevent Chicago fans from DXing are continuing to pour into the offices of the B. L. of A. Many of the irate fans are writing scathing notes attacking everything from the unfair stations' boards of directors right through the plants to the insulators on the antennas.

Mr. McDonald in answering a letter from U. J. Herrmann, a member of the board of directors of WHT, the station against which the fans are most bitter said in part:

"Regarding the loss of revenue by not broadcasting on Monday nights, allow us to call your attention to the fact that, if the public will not listen to a station, that is the cause of the loss, not the non-broadcasting. Without a listening audience the advertiser will withdraw his patronage. The Radio strike is in full swing and going strong, and we are sorry to say, that, the comments on the strike cards received, indicate WHT as the worst offender, with WTAS a close second. This is not in Chicago alone, but throughout the country.

No Use for Radio Without Fans

"The listeners' investment in Radio exceeds that of the broadcasting stations by millions of dollars; they are the mainstay and backbone of the industry and science. Without them there would be no use for broadcasting stations.

"Understand, Mr. Hermann, there is absolutely no animosity toward any station, it is simply a fight for the right, for the betterment of Radio. We are as anxious to cooperate with the stations as we are with the listeners or any other angle of Radio."

The fight still wages hot and in the meantime there are spots on the dials where, WHT, WJJD, WORD, and WOK, used to be logged that are no-man's land to the strikers.

Invites Forty-Two Lands to Send Men to Radio Meet

WASHINGTON, D. C.—The United States government has invited forty-two nations to send representatives to Washington next spring to attend an international Radiotelegraph conference, according to an announcement made by the state department. This conference, for which congress appropriated almost $100,000, was to have been held this autumn but it was postponed because of the Paris conference.

Missouri Solons Vote to Make Ether Legal Force

JEFFERSON CITY, Mo.—The new marketing bureau law of the Missouri legislature of 1925, effective recently, contains at least one new feature in the history of legislation by state governments—the section legalizing broadcasting by Radio the news of markets, weather, agricultural information, lectures, lessons on agriculture and home economics, educational and entertainment programs.

NEWS BRIEFS FROM THE BROADCASTERS

HERBERT HOOVER ON KOA; 'EFA' GOES FROM WBZ

Bible Class at Denver Station; KYW Gets Jane Burr; News of Other Stations

Herbert Hoover, secretary of commerce, is to be heard by an international audience of Radio listeners over KOA, Denver broadcasting station of the General Electric company, Wednesday evening, September 16. His address will be broadcast, by means of outside pickups, from Glenwood Springs, Colo., where he will speak before a convention of Colorado, Wyoming and New Mexico public utility representatives and the Rocky Mountain division of the National Electric Light association. Introductory music marks the opening of the convention program at 8 o'clock, mountain time, followed by Mr. Hoover at 8:30.

* *

Arthur F. Edes, known to the Radio audience as "EFA," pioneer announcer of the Hotel Brunswick studio of Westinghouse, Station WBZ, has announced his farewell program to listeners of the Westinghouse transmitting station and assumed the role of official announcer and studio manager at Station WEEI of Boston.

* *

Organization of an international Radio Bible class is announced by KOA, Denver, following recent inauguration of weekly previews of the International Sunday school lesson, the latest feature to be placed on the air by the Denver broadcasting station of the General Electric company. Friday evenings the reviews are broadcast.

* *

A new feature comes to Radio, by way of Westinghouse Station KYW, Chicago, whereby the housewife finds another henchman in Jane Burr, poet, lecturer, world traveler and novelist, who is giving a series of Saturday afternoon talks from the KYW studios of the Chicago Evening American, embracing "Housekeeping in Many Lands."

* *

Two Winnipeg theaters have combiued with CKY to entertain Canadian fans during the coming season. On Friday evening the Capitol theater will present a forty-minute program. The Tuesday midnight frolic from the Metropolitan theater will include many of the leading vaudeville acts.

* *

A unique Radio novelty of a highly educational and cultural flavor is presented weekly over WHT, the Wrigley building, Chicago, by Rudolph Magnus, noted tenor and vocal coach, who takes his audience from the origin of music through its development and illustrates in song the defined music periods in the worlds history. This feature is presented every Tuesday morning from WHT on 400 meters.

* *

Art Linick will be at the KYW microphone from the studio of the Chicago Evening American regularly, and will tell home brewers, pancake jugglers and soda-jerkers just how 'tis done in the Schlagenhauer family. "Looie" is one of the Radio characters brought to life by art, and this time he will give to Radio listeners in during afternoon and evening performances the ways and means of manufacture, in his latest Radio success, "Dot's Vot Looie Uses."

* *

During the remainder of the baseball season while the Washington world champions are playing their final series of games at home, WRC, by special arrangement with the Washington Times, will keep listeners informed of the progress of the games being played in Philadelphia by the Athletics, the only outstanding contenders for the championship crown.

Stations Trade Wave Lengths for Tryout

New England Stations Seek to Improve Service

HARTFORD, Conn.—WTIC, the Travelers Insurance company's broadcasting service here, and WEEI at Boston tried an interesting experiment beginning August 27, when they exchanged wave lengths. The experiment will probably be continued regularly for two or three weeks to ascertain whether local conditions have an appreciable effect on one wave length which does not exist in the other.

Particularly as respects topography and surrounding structures, WTIC, with the consent of the department of commerce, made arrangements for this experimental change and broadcasts on 476 meters until further notice. Both stations are very anxious to have reports from Radio fans respecting the resultant reception.

BANKER SPEAKS OF MANHATTAN'S SIZE

NEW YORK.—Continuing the Broadway series being given weekly over Station WMCA, Hotel McAlpin here, F. V. Baldwin, director and vice-president of Empire Trust company, spoke recently on "Midtown Manhattan." Mr. Baldwin's talk contained many interesting statistical facts about Gotham on the Hudson, some of which are given in the paragraphs following.

F. V. Baldwin

"When Benjamin Franklin became postmaster general of the United States 170 years ago, the first thing he did was to speed up the postal service between New York and Philadelphia from once a week in the summer and twice a month in the winter, to three times a week in the summer to once a week in the winter.

"Today he would find thousands of bags of mail leaving New York every minute. The total receipts of the postoffice now exceed $65,000,000 a year.

GOV. AL SMITH WILL CROWN RADIO QUEEN

HALF MILLION EXPECTED TO ATTEND WORLD'S FAIR

Fans Will See Broadcast Favorites in Person Every Day in Specially Constructed Studios

NEW YORK.—Half a million visitors will do homage to King Radio at the second great Radio World's Fair, which opens September 14, in the 258th Field Artillery Armory.

But for the first time in the history of Radio expositions, the king must share his throne with a queen, who will be America's Miss Radio, the Diana of the air, fair huntress of DX and narrator of thrilling stories of her career as a broadcast listener.

In honoring Miss Radio, the second Radio World's Fair pays testimony and tribute to the interest now displayed by the women of the country, in fact, in all lands, with respect to Radio. The winner will come to New York to be presented with a silver cup by Gov. A. E. Smith, who will open the exposition.

Governor Smith to Speak

Governor Smith will deliver a talk on Radio's role in developing public opinion and securing the cooperation of an enlightened constituency in the problems of government, it is announced by Clay Irwin, general manager of the exposition. Governor Smith's talk will be broadcast by a chain of stations when he officially opens the fair. More than any other state executive and even President Coolidge, Governor Smith has used Radio for presenting statements of importance to the public and secured popular reaction on controversial questions.

The second Radio World's Fair will be notable for the broadcasting of special features. The metropolitan stations will participate in this. The immense size of the armory permits each station to have a studio and reception room where well-known announcers and artists will meet their hitherto invisible friends. There will be interchange of greetings from fan and artist. In the center of the armory will be a glass-inclosed broadcasting studio, that everyone may see as well as hear the artists and speakers.

Major White in Charge

How this broadcasting will be done forms an interesting technical story. The broadcasting—involving the use of amplifiers and other special apparatus at the armory, use of land lines to call the stations, and entailing the steady observation and care of 100 men—will be a costly feature, several thousand dollars being spent before a single musical note is sent to listening ears perhaps a thousand miles away. At all times the listening public will be in touch with the armory events. Major J. Andrew White will be in charge of broadcasting.

The usual set-building contests, code competitions and other regular Radio show features are on the program.

WTIC, in Hartford, "The Insurance City"

Above is pictured the feature act of WTIC, the Travelers Jongleurs, all dressed up in early French costume and ready to put one of the numbers that has made them New England favorites on the air. To the right is Hanford S. Billings, the assistant manager and chief announcer.

All they told us about this young man was that he is known as the Leader of the Travelers own Jongleurs. That fame means more to the Radio public than his own name. Below, the man fans seldom, if ever, hear, but still one of the most important staff members. He is Chief Operator Taylor, pictured at the speech amplifier rack.

This petite lady is Laura Gaudet, staff pianist, heard on every program from the WTIC studios.

WTIC, the station of The Travelers Insurance company, The Travelers Indemnity company and The Travelers Fire Insurance company at Hartford, Connecticut, is the home of that mysterious quintet known as the Travelers Jongleurs. This organization plays the latest numbers, revives old folk songs, and brings back the many alluring melodies of our ancestors. It has attracted considerable comment from the press throughout the East.

Up to the time of the arrival of the Travelers Jongleurs, WTIC had combed Connecticut for its best music. "The Insurance City" station has a portable amplifier mounted on a truck which has become a familiar sight, parked alongside of buildings where it is picking up its entertainment. The amplifying equipment on this truck is able to send music over a wire to the station as far as forty miles.

The station, with this equipment, has been able to broadcast organ recitals from the Austin Organ company, concerts given by large choirs at Foot Guard armory, programs of the popular university glee clubs and orchestras from the Hartford club and Bond hotel, and dinner and dance music from the hotel and Colt park.

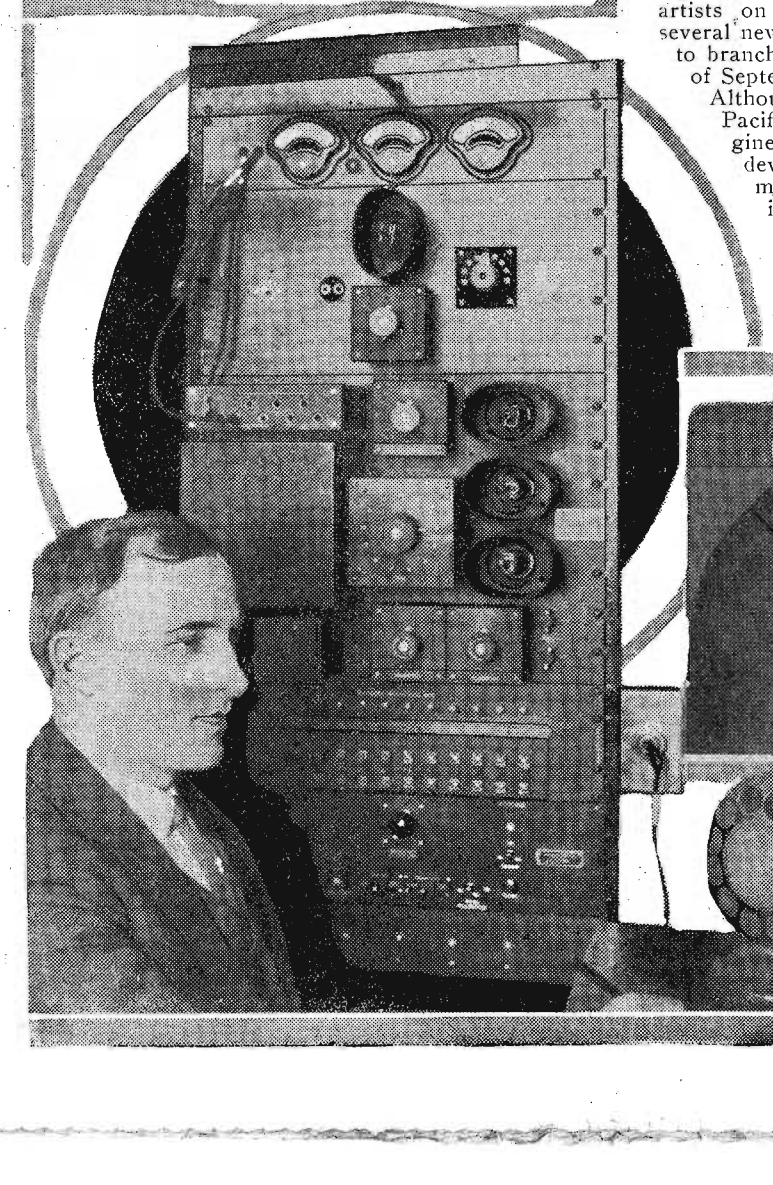
The remote control system has been one of the big features of the station since its opening in February, as the station has had few artists on its staff. The management has several new hook-ups in mind and is planning to branch out considerably with the coming of September. It will also enlarge its staff.

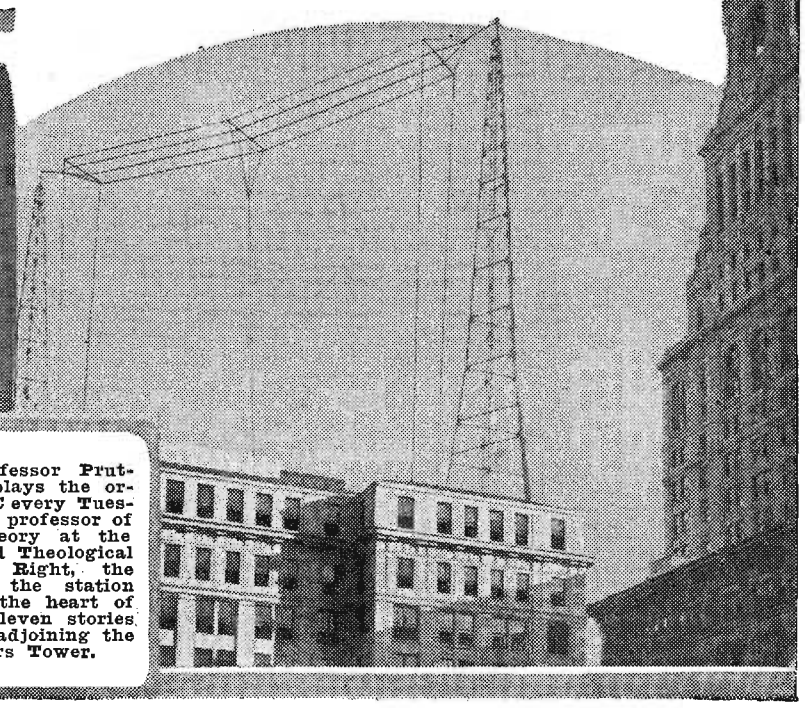
Although WTIC has been heard on the Pacific coast on several occasions, engineers have been at work, and are still developing and improving its transmitting system, but not with distance in mind as much as quality. WTIC believes that the most pronounced trend in the development of Radio today is toward better quality of transmission. This will increase the ease with which programs can be heard, and will tend to make receiving sets musical instruments rather than tricky mechanical and electrical devices. Connecticut's only Class B station has found that the public is more desirous of getting good music from a nearby station than receiving a program that is distorted and indistinct from some far-off station.

The studio of WTIC, one of the largest in the country, consists of four rooms, all of which are as nearly sound-proof as science can make them. There are thick carpets on the floor of each room. The ceilings have been built over with false work consisting of a thick layer of loosely woven canvas, covered with a non-reverberatory plaster. The walls have been treated with a sound-proof mixture, and in addition there are long portieres which can be drawn to cover every inch of wall space, including the windows and doors.

The first room as one enters the studio is the reception room where the artists assemble and await their turn. It is furnished with comfortable sofas and chairs and has a receiving set of its own so that the people can hear what is going on in the chambers beyond. Then there is the big studio, so-called, which is capable of holding a hundred or more persons.

The doors of the studio are lined with felt on all edges and have an ingenious little device by which the moment they are opened the receiving set outside is cut off. There is really no reason for an intrusion, however, because when the door is shut and a program is going on a little red light like those one sees over the exit doors in a theater, shows the words "On the air." (*Turn to page 6*)





Above, Professor Prutting, who plays the organ at WTIC every Tuesday. He is professor of musical theory at the Hartford Theological seminary. Right, the towers of the station located in the heart of Hartford, eleven stories in the air adjoining the Travelers Tower.

SMITH VISITS SWISS AIR CLEARING HOUSE

INTERNATIONAL OFFICE HEAD TELLS OF WORK

Stations Numbering 120 Are Allotted Wave Lengths by Geneva Conference Body

Article V by Fred Smith, Director of WLW

ARTHUR BURROWS has the complicated task of directing the activities of the five-months-old "Office International de Radiophonie" located at Geneva, Switzerland. He was formerly comptroller of the British Broadcasting company. Fortunately he has had a long experience in Radio difficulties, for his present position requires a knowledge of all phases of broadcasting as well as extreme skill as a diplomat.

Mr. Burrow had answered my letter asking him when it would be most convenient to see him by saying that he would be free and happy to talk with me right after the international conference held at Geneva the second week in July. I therefore stopped my flight around Europe at Zurich, remaining there for five days to study broadcasting in Switzerland and to write as much as possible during the stay. This proved to be an excellent idea, because I found Mr. Burrows full of definite information concerning the past, present and hopes of the new office, information which did not really exist until this first important gathering of representatives from a score or so of nations.

Is International Clearing House

The new organization is to act as a sort of clearing house for all the constructive ideas and rational objections which will naturally come from the various broadcasters of different countries. Mr. Burrows said that Geneva had been chosen because it was "the center of gravity of the political world."

Certain controversial subjects cannot be touched. Behold the question of an international language! The Idists and the Esperantoists battle away as a handsome paradoxical example of the preachers of peace fighting among themselves. The bureau could no more step in and pacify the contender than a peace-maker could straighten out heated matrimonial difficulties.

But the bureau is working with clear vision toward a beautiful future for Radio in Europe, and probably the world entire. Mr. Burrows expressed to me most earnestly the hope that "the Office International de Radiophonie would before long, have the pleasure and privilege of freely exchanging views with an organized body representative of the great American movement."

May Trend Toward Understandings

The Radio bureau at Geneva does not have as one of its purposes the definite effort of human intelligence to bring about a closer understanding among the nations of the earth; it is purly and simply the expression of a practical need among the broadcasters of Europe to settle such questions as the allocation of wave lengths. Nevertheless, an examination of the work it has already accomplished and a study of its plans for the future will reveal at once the natural tendency of the influence of such an institution to be directly in line with a fulfillment of the idea to quicken the understanding among European nations, and bring them into more harmonious relationships.

Radio broadcasting with at least one international language already accepted—music—tears down boundary lines, or rather ignores and passes them over. The German programs feature the music of Puccini, Verdi, Saint-Saens and other Latins, while from Rome are heard echoes of Beethoven and Wagner, and from Spain comes a festival of Bohemian music.

Wire Linking of Europe One Aim

But the bureau at Geneva is planning to go much further than all this. It means to serve practically the artistic needs of its members. One of the definite jobs of the bureau is to go about finding ways and means to furnish a telephone service from one country to another, and from all countries to each other.

"For example," said Mr. Burrows, "if London wants a Bohemian program, the directors of programs in England do not have to try to arrange it and furnish it to their public—we simply hook up a line with Bohemia and give the English public a real Bohemian program with all native color direct."

"How soon," I asked him, "do you think you will be able to practice this international broadcasting?"

His answer was, "I cannot give you the exact time, but I should say within the next eight or nine months."

European Congestion Approaches America

Mr. Burrows told me that he had expected to find some seventy stations operating in Europe, but when the delegates gathered at Geneva in July, it was soon discovered that there were requests for wave lengths for 120 stations! So the European problem now begins to complicate itself in so far as interference is concerned.

The discussions at the conference concerning the new allocations of wave lengths went round and round, but finally two big points were made acceptable to everyone: first, that in the new arrangement of adjustment, the stations that had been in existence longest should suffer least change. Second, that each country should be allowed at least one station in a capital city—or a city named by the representatives of that country—within the wave band of 300 to 500 meters. To illustrate the condition within the second: the biggest city in Switzerland is not the capital, but is Zurich, which is already operating a 500-watt set. Zurich could remain with the favored band if the Swiss representatives chose.

New Waves Now Take Air

During the first few days and nights of this month the new office at Geneva was to make its first material effort to regulate affairs among the stations of Europe. Tests are being made on the new wave lengths assigned to European stations at the general meeting held in July.

Of course it is one thing for Geneva to decide and another to obtain the approval of the numerous governments involved. But at any rate, the experiments are being made on the wave lengths assigned by the delegates. During the first few nights the 120 European stations will spilt the ether, beginning at midnight. Complaints, comparisons and opinions will be received at Geneva by telegraph and letter. This experiment is called a "rehearsal." When the rehearsal is over, another meeting of representative engineers from the various European countries operating Radio stations will take place in Geneva to crystallize opinions. This meeting will take place the latter part of September.

(TO BE CONTINUED)

French President Gets New Set

PARIS.—President Doumergue of France, whose keen interest in Radio matters is well known, has had a new receiving set installed in the summer residence of the French chiefs of state.

WTIC, HARTFORD, CONN.

(Continued from page 5)

The second studio, somewhat smaller, is, however, alike in every detail. Having two studios from which to broadcast gives the manager a chance to put his numbers on the air in rapid succession. Also in the suite is the control room, and here the manager and announcer hold forth. It is a small room in the very center of things and it has two long horizontal double glass windows looking out into both studios. The double glass prevents even the manager or announcer from being heard in either studios.

Broadcasts from Auditorium

The station can and does also broadcast from the auditorium of the Travelers home office—an assembly room seating 900 and equipped to accommodate large choruses and other musical organizations whose volume in the studios might be so great that it would "blast" the microphone.

While in the course of broadcasting, WTIC uses two announcers. One in the control room who has full charge of everything going out on the air; and another usually stationed at the remote control. The one in the control room of the studio can keep in touch with the other announcer and artists by means of telephone connections.

Announces Initials Taboo Now at WOC, Palmer Plant

DAVENPORT, Iowa.—Regarding the use of initials indicating the identity of the announcer presiding over a broadcast program as a relic of the very early days of broadcasting, The Palmer School of Chiropractic, operating Station WOC here, has instructed its Radio announcers to discontinue giving their own initials when signing off at the conclusion of a program.

Some other of the larger stations have already discontinued the practice, considering it as obsolete.

RAILROADS IN FAVOR OF RADIO AUXILIARY

A. R. R. L. MEETING HEARS TRANSPORTATION NEED

St. Paul Inspector Thanks "Hams" for Aid Rendered to Roads During Past Emergencies

CHICAGO.—Past success of amateurs in handling emergency railroad business, prompted representatives of two big rail systems to advocate the forming of a special group of code set owners and operators to stand by to cooperate with the roads in time of need, at the recent annual convention of the American Radio Relay league, held recently in this city.

I. C. Forshee, telegraph and telephone engineer of the Pennsylvania railroad system told of instances when Radio has proved a great help when, because of storms or other disturbances, other communication has been impossible. He said that railroads all over the country were attempting to perfect a system of communication which could be relied upon under all circumstances.

The engineer also pointed out the need of better communication between engine and caboose on long freight trains, especially in storms or foggy weather.

Thanks Amateurs for Aid.

C. C. Dimock, inspector of transportation for the Chicago, Milwaukee and St. Paul railroad, another speaker at the meeting, thanked the Radio amateurs for the success his system had had in the use of Radio service in emergency. He cited several instances when the Milwaukee used the services of Radio amateurs in Chicago and Minneapolis to maintain necessary communications when storms had wrecked the regular telegraph service between the two towns.

HIGH POWER DOWNS STATIC, TEST SHOWS

TUNING OUT 50,000 WATTS IS NOT DIFFICULT JOB

Preliminary Report Analysis on WGY Superpower Tests Gives Much Interesting Data

SCHENECTADY, N. Y.—Preliminary analysis of reports on superpower tests of WGY, July 26, 29 and 31 when the 50-kilowatt transmitter was used for the first time in the history of Radio, show, according to Martin P. Rice, manager of broadcasting for the General Electric company, that there was a definite increase in signal strength, that high power helped to over-ride static, that it is questionable to what extent increased power assists in reducing fading and that no difficulty was experienced in tuning out WGY for distant stations.

This preliminary analysis, made by the General Electric company Radio engineers, is particularly interesting in view of the more recent tests held August 22, 24 and 25. These tests, however, were made during the regular broadcasting period. Analysis has not yet been made of these.

Report on Earlier Tests

The report of the engineers on the first tests follows:

"Letters were received from the West Coast, Cuba, British Columbia and England. These locations can normally receive WGY on 379.5 meters during the winter only. Superpower resulted in a very definite increase in signal strength. The increased power was of material assistance in over-riding static. It is questionable to just what extent increased power assists in reducing fading although it apparently is of some benefit.

"In no case did the higher power prevent reception of distant stations. In general, the reports indicate increased signal strength as follows:

Strength	Per Cent of Reports
Louder than WGY	75
Same strength as WGY	15.27
Weaker than WGY	9.73

"Of the 75 per cent, 42 per cent reported exceptionally loud signals.

"It is also of interest to note the effect of increased modulation as indicated by the reports received:

Transmission of	Per Cent Modulation	Per Cent of Strong Signal Reports
July 26	25	14.2
July 29	50	29.1
Aug. 2	75	42.7

Superpower Over-Rides Static

"Between 75 and 80 per cent of the reports on static indicate that the increased power over-rides the static to some extent. It should be noted that during the superpower transmissions the static was very severe.

"Of the reports received which give fading data, 30 per cent report bad fading, 45 per cent, moderate, and 25 per cent, no fading. One characteristic specifically mentioned is that, whereas WGY normally fades out the audibility, the superpower set does not.

"About 55 per cent reported, good to excellent quality; 40 per cent, fair to good, and 5 per cent, not as good as WGY on normal power.

"In no case did a report indicate that superpower prevented distant reception even from receiving points within a few miles of the transmitter."

'Warn Speeders Via Radio' Is Fine Given to Operator

WASHINGTON.—Officials of Station WRC here will see to it that the sentence imposed on George G. Adams, chief outside operator, in traffic court Saturday night by Judge George H. Macdonald, will be carried out to the letter. Mr. Adams, arrested for speeding, was released by Judge Macdonald without a fine, provided Adams use every opportunity on the air to warn other speeders in the district against violating the traffic laws.

SHE'S RADIO QUEEN OF FAIRYLAND

TUESDAY evening, September 15, will usher in the 104th consecutive Tuesday evening program that little Queen Titania and her Sandman have brought their Radio Fairies to the studio of KHJ, the Times, Los Angeles, California, rounding out two years of consecutive broadcast of a very distinct nature, whose listeners are found in almost every spot on the North American continent.

First presented to the lads and lassies of Radioland in September, 1923, nothing has ever been allowed to interfere with this Tuesday night hour when Uncle John takes his friends on a trip to the "Land of Ought-to-Be" with the Fairy Queen Titania to guide the way and the Sandman to scatter his sleepy-sand on the return trip.

First Continuity Program

The Radio Fairies broadcast can probably lay claim, without dispute, to being the original Radio continuity program as well as the oldest. Since inception it has been entirely original, the continuity being written in manuscript form each week by the Sandman, who, by the way, in real life is Queen Titania's father.

Each one is written around the basic idea that true happiness and all the good things of life come from right thoughts and right actions and without sermonizing there is a moral in each although every one is a complete story in itself with the general theme and the same from week to week.

Use Fairy Microphone

By means of the Fairy microphone, always carried by Uncle John of KHJ on these trips, Queen Titania and the Sandman take the earthly listeners to Fairyland where the sights and scenes of this wondrous country are described to the listening youngsters, ranging in ages, as the mail shows, from two to ninety-two years.

The inspiration for this unique Fairyland broadcast came from a desire by the Sandman to give the children a real fairy story; something far different from the ordinary, something to get away from our fairy tale heritage of the past where Fairyland is a place inhabited with wicked witches, goblins, dragons and child-eating giants. The Fairyland of Queen Titania and KHJ is a land where the love of all that is right holds full sway and the natural goodness of the child is symbolized in characters easily grasped through the spoken word.

To Be Shown in Films

In addition to being a finished Radio entertainer, Queen Titania is also an accomplished ballet dancer and as a result of her broadcasts has made quite a name for herself in pictures. She will soon be shown in two productions, one being a series of twenty-four short reel features entitled "Bedtime Stories in Fantasy," and the other, "Moonbeam Magic," wherein she will depict the Fairy Queen she made so popular over KHJ.

Her real name, and the name of the Sandman, her father? It does not matter for they are two of the few not looking for personal fame, believing:

"If you will try, you'll surely find
the greatest joy of living,
Is not in pleasures you may get,
but in pleasures you are giving."

WINTER BRINGS NEW CHAIN INNOVATIONS

OLD FAVORITES RETURN ALONG WITH NEW ONES

Aida Brass Quartet, Plunketeers, Eveready Artists Are Scheduled to Appear on WEAF Link

The week of September 13, definitely marks the end of the summer season at WEAF, New York, and the beginning of one of the most active schedules in the history of that pioneer station. Several new regular features will be added, and many favorites of the past season will return to the microphone after vacations.

The Aida brass quartet, and George Shackley, accompanist, will be heard again on Sunday, September 13.

Resume Continuity Programs

On Monday evening, the "Plunketeers" are expected to resume their broadcasting from the stage and studio of the Mark Strand theater in New York city. On the same night the familiar strains of the "Two Guitars," "Chardos" and other Hungarian and Russian melodies will again entertain the Radio audience, and the "A. and P. Gypsies" will start a new season of their weird and appealing music. A chain of stations consisting of WEAF, WEEI, WJAR, WOO, WCAP, WCAE, WWJ, and WOC, will guarantee that the Gypsies will be heard throughout the country.

Following the completion of a series of summer instrumental concerts, alternating between Max Jacobs' Chamber Symphony orchestra and Nathaniel Shilkret's Salon orchestra, sponsors of the Eveready hour, on Tuesday, will resume the popular continuity type of entertainment. The usual chain of ten stations will present a reunion hour at 9:00 P. M., in which the various Eveready artists will relate in story and song their experiences during the summer. A version of "The Western Isles" by John Masefield, said to be one of the most humorous sketches to be put on the air completes the hour.

Add Three Innovations

September 16, boasts of three innovations in regular features. Huyler's "Fourmost Four" will play at 8:00 P. M., every Wednesday instead of Saturday nights, as hithertofore. The audiences of WCAP and WEEI will be able to enjoy their instrumental music in addition to WEAF. At 8:30, a new half hour for WEAF, WOO, and WCAE will be inaugurated by the Pooley Cabinet company. The interesting feature of this period will be the Radio appearance each week of a different distinguished artist, each one an outstanding soloist. The third Wednesday event is the addition of WEEI, WCAP, WSAI, WOC, WWJ, and WCCO to the chain broadcasting the Ipana Troubadours, so that portions in other parts of the country may enjoy this dance orchestra.

Another feature for September 16, will be the broadcasting of the speeches of the Radio industries banquet direct from the Hotel Commodore, New York city, by WEAF, WEEI, WCTS, WTIC, WCAE, WOC, WCCO, WCAP and WWJ.

ARKANSAS BAREFOOT BOYS AT WMC

Saturday, September 12

Saturday, silent night for: CHNC, CNRC, CNRE, CNRM, CNRR, CNRT, CNRW, KFAB, KFAE, KFDM, KFKX, KFMQ, KLDS, WBAV, WBZ, WCAU, WCTS, WCX, WEBJ, WEEI, WGCP, WHAD, WHAZ, WHN, WHO, WJAR, WLIT, WOAN, WOS, WSMB, WSUI, WTIC, WWJ.

Atlantic or Eastern Daylight Saving Time Stations

CKAC, Montreal, Can. (410.7), 7 p. m., Emiliano Renaud, pianist; 7:30, Windsor hotel dinner hour; 8:30, talk, attractions of province of Quebec; 10:30, Windsor hotel grill room dance program.

CNRO, Ottawa, Can. (435), 8 p. m., Chateau Laurier orchestra; A. Rothwell, contralto; H. Gossage, euphonium soloist; Lloyd Mooney, bass; Hawaiian orchestra; Mrs. A. S. Ponting, soprano; Helen Cooch, reader; A. C. McGuirl, guitarist; Chateau Laurier dance orchestra.

WAHG, Richmond Hill, N. Y. (315.6), 12:30-12:55 p. m., musical program; 1:05-1:30, musical program; 12-2 a. m., dance orchestra.

WBBR, New Work, N. Y. (272.6), 8 p. m., Dr. Hans Haag, violinist; Fred Twaroschk, tenor; 8:20, Bible questions and answers; 8:40, Fred Twaroschk, tenor; 8:50, Dr. Hans Haag, violinist.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Aldine theater; 6:30, dinner concert, William Penn hotel; 8:30, John B. Thuring, baritone; David Evans, tenor.

WEAF, New York, N. Y. (491.5), 4-5 p. m., Elmer Grosso and his orchestra; 6-7, dinner music, Waldorf-Astoria; 7-7:15, Albert E. Miller, tenor; 7:15-7:35, Raul Paniagua, pianist; 7:35-7:50, Pasadena Warblers; 7:50-8:05, Raul Paniagua; 8:05-8:20, Pasadena Warblers; 8:20-8:35, Sadrian trio; 8:45-10:15, concert, United States Marine band; 10:15-10:30, Ethel and Dorothea Ponce, songs; 10:30-10:45, Sadrian trio; 10:45-11, Ethel and Dorothea Ponce; 11-12, Vincent Lopez and his Hotel Pennsylvania orchestra.

WFI, Philadelphia, Pa. (394.5), 3 p. m., dance orchestra; Loretta Kerk, pianist; 6:45, Bellevue Stratford Roof Garden orchestra; 8, Mildred Kemmerer, soprano; 8:10, talk, "Poets and Poetry of Pennsylvania," J. Chauncey Shortlidge; 8:30, vocal and instrumental recital.

WGBS, New York, N. Y. (315.6), 1:30-2 p. m., Leonard Garfunkle, pianist; 3-3:10, talk, Alice Clark Barnhill; 3:10-3:20, Bob Platz, pianist; 3:20-3:30, Spanish lessons, Professor Perez des Vegas; 3:30-3:40, Bob Platz; 3:40-3:50, lessons to motorists, L. L. Credner; 3:50-4, Bob Platz; 6-6:30, Uncle Geebee; 6:30-7, Rolly Fisher's Comus club orchestra; 7-7:10, "Know Thyself," Kenneth Williams; 7:10-7:30, Rolly Fisher's Comus club orchestra; 7:30-7:10, Alma Newman and Louis John Johnnen, duets; 7:40-7:50, Ralph Hersh, violinist; 7:50-8, Alma Newman, songs; 8-8:30, "And Cousin," Juan de Beaucaire; 8:30-9:30, Gaelic hour of minstrelsy; 9:30-10, Forstat string quartet; 10:30 11:30, Meyer Davis' orchestra.

WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Ralph Barnes, tenor; 3:15-3:18, Mirror race results; 3:30-3:45, Eve Rothenberg, pianist; 3:45-3:48, Mirror race results; 3:48-4, Jane; 4-4:15, Johanna Cohen, ukulele; 4:15-4:18, Mirror race results; 4:18-4:30, Jane; 4:30-4:45, Sarah Summers; 4:45-4:48, Mirror race results; 4:48-5:15, Indianans orchestra; 5:15-5:18, Mirror race results; 5:15-5:18, Mirror race results.

WGR, Buffalo, N. Y. (319), 2:30-4:30, p. m., WGR's afternoon program; 8:45-10:15, United States Marine band, Washington, D. C., through WEAF.

WHAR, Atlantic City, N. J. (278), 2 p. m., Seaside hotel trio; 7:30, lecture period; 8, Seaside hotel trio.

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; 8:15, Song of the Surf; 8:50, Veselli's band; 10:05, California Night Hawks.

WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Collegiate Boy Scouts in a musical jamboree; 4:30, Vincent Rizzo's dance orchestra.

WMCA, New York, N. Y. (340.7), 9-10 p. m., Asbury Park dance orchestra; 11-12, Ernie Golden and his Hotel McAlpin orchestra; 12-1 a. m., Berkley-Carteret dance orchestra.

WNYC, New York, N. Y. (526), 7-7:15 p. m., song recital; 7:30-7:35, police alarms; 7:35-7:45, violin recital; 8-8:05, baseball results; 8:05-8:15, piano recital; 8:15-10:15, concert from Mall, Central Park; 10:15-10:30, musical, Fred Ehrenberg.

WOO, Philadelphia, Pa. (508.2), 12:02 p. m., Golden's crystal tea room orchestra; 4:45, organ recital; 7:30, A. Candelori's concert orchestra.

WOR, Newark, N. J. (405.2), 6:15-7:15 p. m., Herman Rice and his Blue Hills orchestra; 7:15-7:30, sports talk, Pat Robinson; 7:30-8:30, Zit's Central Park Casino orchestra.

WPG, Atlantic City, N. J. (299.8), 6:45 p. m., Arthur Scott Brook, organist; 7, Hotel Traymore dinner music; 8:05, Chalfonte-Haddon hall evening concert; 9, Atlantic City beauty pageant; 11, Parodians.

Eastern Standard or Central Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 8:45 p. m., Westinghouse band; Elma Sulzner, contralto.

KYW, Chicago, Ill. (536), 6-6:30 p. m., Congress hotel dinner concert; 7-8, Martha Backes Pardill, soprano; Thomas B. Stephenson, tenor.

PWX, Havana, Cuba (400), 8:30 p. m., studio concert, vocal selections, guitar accompaniment, Mrs. Clara Romero.

WBBM, Chicago, Ill. (226), 8-11 p. m., Samovar orchestra; Dave and Charlie, Eddie Loftus, Nate Caldwell; 11-1 a. m., Stewart-Warner program, Alamo orchestra; Nick Probst, Eddie Loftus, Stewart-Warner artists, banjo trio; 1-2, pep hour, jazzmania artists; Samovar orchestra.

WCX, Detroit, Mich. (517), 4:15 p. m., concert; 6, dinner concert, Book-Cadillac hotel.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., novelty dinner concert.

WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., dinner concert; Howard Neumiller, pianist; 9:30-10:30, Oriole orchestra; Marie Kelly, reader; Kay Ronayne; 11:30-1 a. m., Oriole orchestra; Frank Grief, tenor; Blanche and Rudie Baie; Wayne Myers.

WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Blue Steele and his Fulford-by-the-Sea orchestra; 10-1 a. m., Miami Daily Tab.

WGES, Oak Park, Ill. (250), 5-7 p. m., Frank Greif, tenor; Franklin Horstmeier, bass; Bryce Talbot, baritone; 10:30-1, Kamous Kollegians orchestra; Phil Wilcox, Erwin Schmidt, Parrish and Ward, Phil Fleming, Lew Butler.

WGN, Chicago, Ill. (370.2), 12:40 p. m., Drake concert ensemble, Blackstone string quintet; 6:30-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, WGN string trio; 10:30-11:30, jazz scamper program, Drake hotel dance orchestra.

WGY, Schenoctady N. Y. (379.5), 9:30 p. m., Hotel Van Curler orchestra.

WHT, Chicago, Ill. (400), 1 p. m., Grayling's string trio, WHT Women's club program; 7, Eleanore Kaplin, violinist; Joan Carlson, soprano; Al Carney, organist; Dean Remick, pianist; 8:45, (238), Elmer Kaiser's Riverview Park Melody Masters; 10:30 (400), Walter Ford's Cheerio orchestra; Si Berg, ukulele soloist; Marie Wright, soprano; Oscar Heather, tenor; Pat Barnes; 12, Pat Barnes, Al Carney, Duke Rehl, Walter Ford.

WJJD, Mooseheart, Ill. (302.8), 10:30 p. m., Robert Duphiney, Robert M. DeWar, Angeline George, Emily Schneider, Marjorie Wellman, Claire Downs, artists.

WJR, Detroit, Mich. (517), 7 p. m., studio orchestra, Jean Goldkette; 9, Jean Goldkette's serenaders.

WLW, Cincinnati, Ohio (422.3), 7 p. m., Johanna Grosse, organist; 7:30, instrumental trio, violin, cello and piano.

WMAQ, Chicago, Ill. (447.5), 6 p. m., musical program; 6:30, Jack Chapman's orchestra; 8, Fred Daw, Russell Pratt; 8:30, "British Honduras," Roy J. Snell; 9, Chicago theater revue.

WMBB, Chicago, Ill. (250), 6-7 p. m., Trianon ensemble, Marie Caruso, Bernard Senescu, Charles Agne, Hazel O'Neil; 9-11, Trianon orchestra, Fisher & Wayne, Cecil & Esther Ward, Jimmy Eggert, Woodlawn theater orchestra.

WOK, Homewood, Ill. (217.3), 12-2 p. m., Fred Bethel, tenor; Ada Allen, soprano; LeRoy North, pianist; Gus C. Edwards orchestra; George Irish, organist; 6-7, Robert York, tenor; Beatrice Wood, soprano; LeRoy North, pianist; George Irish, organist; Gus C. Edwards orchestra; 10-1, Langdon Brothers; Ned Becker, comedian; Fred Witmer, pianist; Eddie and Fannie Cavanaugh; Harold Marava, tenor; H. Sinaiko, violinist; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra.

WORD, Batavia, Ill. (275), 8-10:30 p. m., Webster hotel concert.

WQJ, Chicago, Ill. (447.5), 3-4 p. m., Jerry Sullivan, Rose Vanderbosch; 7-8, Ralph Williams and his Rainbo Gardens orchestra; Blanche E. Robinson, pianist; Lillian Schoessling, soprano; Izora Logan Reynolds, reader; 10-3 a. m., Ralph Williams and his Rainbo Skylarks; Jerry Sullivan, Rose Vanderbosch, Melodians; Everett George Opie, reader; Bob Birdsong and Ben Burke; Clarence Theders, tenor; Sandy Meek, Scotch tenor; Harry Sosnick, pianist.

WREO, Lansing, Mich. (285.5), 10 p. m., WREO dance program, Speed-Wagon serenaders.

WTAM, Cleveland, Ohio (389.4), 12:15-1:15 p. m., Euclid music studio lunch hour; 6-7, Hotel Statler studio dinner music; 8-9, Euclid Beach dance music; 9-12, Ev Jones; Coo Coo club, Joe Ferte, tenor; Catherine Townley, pianist.

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Purple Grackle orchestra; Herbie Mintz, Maurine Marseilles, Phil Wilcox.

WWJ, Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7), 6-7 p. m., dinner program.

KFNF, Shenandoah, Ia. (266), 7:30 p. m., Jubilee singers.

KFVE, University City, Mo. (240), 6:30 p. m., amusement review, Romaine Fielding; 10, dance night, Jimmie Blackton and his ukulele; Orchestra Romaine.

KOIL, Council Bluffs, Ia. (278), 7:30-9 p. m., program, Mrs. Alice McMillan, director; First Christian church orchestra; vocal solo, Carmen Hendrickson; violin duets, Doris and Dorothy Yates; clarinet duets, Alice Davis McMillan, Calvin Negas; musical trio, Alice Davis McMillan, clarinetist, Grace Davis Henry, violinist, Katherine Mitchell, pianist; Orin W. Miller, clarinetist; Katherine Mitchell, reader; Calvin Negas, clarinetist; 8:45, Mary Thompson, banjoist; 11-12, Hotsy Totsy hour.

KSD, St. Louis, Mo. (545.1), 7 p. m., Grand Central theater.

KTHS, Hot Springs National Park, Ark. (374.8), 9:15 p. m., sport review; 9:25-10, Ray Mullins orchestra.

KWKH, Shreveport, La. (261), 9-12 midnight, Hotel Youree dance orchestra.

WAMD, Minneapolis, Minn. (243.8), 7 p. m., open house.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 6:15 p. m., Dick Long's Nankin cafe orchestra; 10, Dick Long's Nankin cafe orchestra.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's string trio; 6-7, address, Roger W. Babson; Tell-Me-a-Story Lady; Plantation players; 11:45-1, Merry Old Chief, Plantation players; Johnnie Campbell's Kansas City club orchestra; Charles Dornberger's Kansas City Athletic club orchestra; Earl Coleman's orchestra.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Mario H. Bolack, pianist; 6:30-7:30, Frank C. Davenport and his C-Sharp Six orchestra; 8:30-9:30, Emmett Peck, violinist; 11-12, Adolphus hotel orchestra.

WHAS, Louisville, Ky. (399.8), 4 p. m., musical selections, Harry S. Currie; Martha Pope Robinson, reader; 7:30-9, mixed concert, Madge Wright.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Arkansas Barefoot Boys of Wynne, Ark.

WOAW, Omaha, Nebr. (526), 6 p. m., Rialto orchestra; 7, Brandeis tea room orchestra; 9, classical program; 11, Arthur Hays and his organ jubilee.

WOC, Davenport, Ia. (483.6), 5:45 p. m., chimes; 9-10, Oscar Colberg, tenor; Olga Edlen, soprano; Louis Crowder, pianist; L. E. Wass, reader; 11-12, LeClaire hotel orchestra; Peter MacArthur, baritone.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4), 12:15 p. m., Clarence Reynolds, organist; 10, dance program.

Pacific Standard Time Stations

KFOA, Seattle, Wash. (454.3), 4-5:15 p. m., William F. Hoffman's Olympic hotel concert orchestra; 6-6:45, Pacific States Electric company; 9:30-11:30, Eddie Harkness and his orchestra.

KFWB, Hollywood, Calif. (252), 8-9 p. m., program, Paralta studios, the Paralta dance orchestra; 9-10, KFWB studio program, Frances St. George, jazzmania girl; Fred Bruley, saw soloist; Bill Hatch, Ray Kellogg, jazz twins; Charlie Wellman; 10-11, Warner Brothers frolic, direction Charlie Wellman.

KGO, Oakland, Calif. (361.2), 4-5:30 p. m., concert orchestra, Hotel St. Francis; 8:10, National Carbon company; Vinton LaFerrera and his concert orchestra; Virginia Fischer Griffiths, soprano; Mildred Randolph, pianist; Allan Wilson, tenor; Grace Raymond, pianist; Helene Reynolds, harpist; Vinton LaFerrera trio; Paul Poenitz, cellist; 10-12, Henry Halstead's orchestra.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 6-8, Prasp's Society Five.

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, Radio kiddies' hour with Henrietta Poland and Uncle John; 7:30, Mrs. T. MacSmith, mezzo-soprano, Mrs. Mary L. Maxwell, readings; 8-10, program, Pacific Ready Cut Homes, Inc., arranged by Walter W. Bliddick; 10-11, Los Angeles Third Annual Radio exposition; 11-12, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader; 12-2 a. m., Lost Angels of KHJ, Walter Biddick, Chief Harpist, Lost Angeles orchestra.

KJR, Seattle, Wash. (384.4), 1:15-2 p. m., organ recital, Columbia theater; 2-2:15, home help, Bernice Redington; 8:30-10, L. C. Warner company's studio program.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; 6:15, travel talk W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7, talk on insect life, Harry W. McSpadden; 7:10, Sunday church services, Los Angeles and Hollywood; 7:30-8, Wurlitzer pipe organ studio; 8-10, KNX feature program; 10-11, Ray West's Cocoanut Grove dance orchestra from Ambassador hotel; 11-2 a. m., Hollywood night, Town Crier of the Night Watch, host.

KPO, San Francisco, Calif. (428.3), 2:30 p. m., violin trio, Monroe Rubinstein, Johanna Quellmalz, Ernest Sadler; 3:30, Palace hotel dance and concert orchestras; 5:30, program, Loew's Warfield theater; 6:35, Waldemar Lind and the States Restaurant orchestra; 8-12, Jack Coakley's Cabirians.

KTCL, Seattle, Wash. (305.9), 6:40-7:15 p. m., Hermie King and his supersoloists; 9:10-9:30, Hermie King and his supersoloists; 9:30-12, Uncle Hal and his stars of Radio.

Headliners of the Week

THE ARKANSAS Barefoot Boys have wended their way from Wynne, Ark., to Memphis and may be heard Saturday from WMC. Elma Sulzner is the contralto soloist singing with the Westinghouse band this same evening at KDKA.

Dr. William Axt is the new piano soloist at the Capitol theater who is being heard Sunday evenings through WEAF and link stations. Dr. Axt has studied with the best teachers here and in Europe and is also well known as a conductor of light operas. An interesting talk will be given this same evening at WBZ by Dr. Tehyi Hsieh called the "Roosevelt of China." He will discuss "Thrilling Phases of Awakened China and What It Means to the World."

All the birthdays this week occur on Monday. WHAZ celebrates its third anniversary with music by the Domino orchestra. CHNC, Toronto, is only a year old but plans a fine classical program.

Tuesday is an ensemble night at WTIC. "A Night with Ethelbert Nevin" includes double, mixed, male and ladies quartets, Traveleurs Jongleurs and Travelers Troubadours. This interesting program will be well worth tuning for.

Waldene Johnston is a young violinist who has won fame for herself over the Radio. She has been broadcasting over various stations in Cincinnati, but has finally become a permanent feature at WSAI. She will play again Wednesday. Richard Gray, baritone, will also take part in the program.

California Grays Military band, an organization well known along the Pacific coast may be heard by eastern fans on the 9 p. m. Thursday program of KPO, San Francisco.

The best known songsters of the Rockies will appear before the microphone of KOA Friday, when Charles Brown Hutchins gives his bird songs. Songs of the British Isles are the feature of the evening at CNRT. English, Welsh, Irish and Scottish folk songs will be sung by artists who understand the dialect of these various sections. R. C. Reither and gang are back at WBAV again.

E. C. Reither and his gang make their first autumn Radio appearance at WBAV Friday evening. Manager Rither is seen sitting in the foreground. In the first row, left to right, are: Mae Bunce, violinist; Nason Oldham, tenor; Marguerite Cassidy, soprano, and Emma Held, pianist. In the rear row, left to right, are: Dr. Arthur Luckhart, accompanist; M. M. Carothers, dispatch announcer and Herman Amend, baritone.

Sunday, September 13

Sunday, silent night for: CHNC, CKAC, CNRC, CNRE, CNRM, CNRR, CNRT, CNRW, KFAB, KFAE, KFKX, KFMQ, KFOA, KSD, KYW, PWX, WAHG, WBAV, WCAU, WCEE, WCX, WDAF, WEBJ, WFI, WGR, WHAD, WHAS, WHAZ, WHN, WIP, WJR, WLIT, WMC, WOK, WOO, WOR, WRC, WSAI, WSMB, WTAM.

Atlantic or Eastern Daylight Saving Time Stations

WBBR, New York, N. Y. (272.6), 10 a. m., Watchtower orchestra; 10:15, Fred Twaroschk, tenor; 10:30, Bible lecture, Judge Rutherford; 11, Fred Twaroschk, tenor; 11:10, Watchtower orchestra; 9 p. m., I. B. S. A. choral singers; 9:10, Watchtower string quartet; 9:20, I. B. S. A. choral singers; 9:30, Bible lecture, Judge Rutherford; 10, I. B. S. A. choral singers; 10:10, Watchtower string quartet; 10:20, I. B. S. A. choral singers.

WCTS, Worcester, Mass. (268), 7:20-9:15 p. m., Capitol theater gang, Major Bowes, director; 9:15-10:15, program.

WEAF, New York, N. Y. (491.5), 3-5 p. m., "Sunday Hymn Sing," Federation of Churches; 7:20-8:15, "Capitol Gang," Capitol theater.

WEEI, Boston, Mass. (348.6), 7:20 p. m., Major Bowes and the Capitol theater gang; 9:15, program.

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

WGBS, New York, N. Y. (315.6), 3:30-4:30 p. m., Warner theater program; 8-9, program from steel pier, Atlantic City.

WGCP, New York, N. Y. (315.6), 8-8:15 p. m., Charlotte Trystman, pianist; 8:15-8:30, Sylvia Miller, soprano; 8:30-8:45, William Timmon, tenor; 8:45-9, Ralph Hersh, violinist; 9-9:15, Lillian Gordone, contralto; 9:15-9:30, O'Brien Brothers, Hawaiian guitars; 9:30-9:45, Francois Capouillez, baritone; 9:45-10, Bernstein trio.

WGR, Buffalo, N. Y. (319), 10:30 a. m., Central Presbyterian church service; 3-4 p. m., vesper service, Buffalo council of churches.

WHAR, Atlantic City, N. J. (278), 2:30 p. m., Seaside hotel trio; 3:45, Central M. E. church, Rev. George W. Yard; 7:50, Chelsea Baptist church; 9, Seaside hotel trio; 11:15, Strand theater organ.

WHN, New York, N. Y. (361.2), 5-5:30 p. m., Roseland dance orchestra.

WIP, Philadelphia, Pa. (508.2), 7:30 p. m., services; Holy Trinity church; 10, features in conjunction with WVG, WGBS and WMAF.

WMCA, New York, N. Y. (340.7), 11-12:15 p. m., services, Seventh Church of Christ; 6:15-7, Rudolf Roemer entertainers; 7-7:35, Ernie Golden and his Hotel McAlpin orchestra; 9-10, Asbury Park symphony orchestra.

WNYC, New York, N. Y. (526), 8:50-9 p. m., baseball results; 9-11, program, Brooklyn Mark Strand theater.

WOO, Philadelphia, Pa. (508.2), 10:30 a. m., services, Bethany Presbyterian church; 2:30, Sunday school exercises.

Eastern Standard or Central Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 9:45 a. m., church service; 7 p. m., interdenominational service.

KYW, Chicago, Ill. (535.4), 11-12:30 p. m., Second Presbyterian church; 4-5 p. m., KYW's Evening American studio.

WBBM, Chicago, Ill. (226), 4-6 p. m., Stewart-Warner program; tea dance program; Bergman's dance orchestra; Kephart Brothers; Nate Caldwell, Eddie Loftus, Charlie Garland, Lew Russell, Murray Smith, Earl Bergman; 8-10, Samovar orchestra; Marie Von Ritter, William Molnaire, Charlie Garland, Sunset male quartet; 12-2, Midnight nutty club feature, Samovar orchestra, Charlie Garland, Nate Caldwell, Eddie Loftus.

WBZ, Springfield, Mass. (333.1), 9:45 a. m., Church of the Unity, Rev. Charles A. Wing; 8 p. m., "Thrilling Phases of Awakened China," Dr. Tehyi Hsieh; 8:30, Hilton Howell Railey, organist; 9, church music, Pauline Hammond Clark.

WCX, Detroit, Mich. (517), 10:30 a. m., services, Central Methodist Episcopal church.

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

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

WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Blue Steele and his orchestra; 10-1, dance music.

WGES, Oak Park, Ill. (250), 5-7 p. m., John Stamford, tenor; Franklin Horstmeier, bass; Marguerite Ray, contralto; Frances Barge, violinist; Elsie Barge, pianist; 10:30-12, Eleanor Kaplan, violinist; John Rankel, baritone; Ruth Kalthoff, soprano.

WGN, Chicago, Ill. (370.2), 11 a. m., Uncle Walt reads comics; 11:45, organ recital, Chicago theater; 3 p. m., Lincoln Park band concert; 9-10, Drake concert ensemble.

WGY, Schenectady, N. Y. (379.5), 9:30 a. m., St. George's Episcopal church; 6:30 p. m., St. George's Episcopal church, Rev. George F. Bambach; 7:45, Lakewood Farm ensemble; 9, Godfrey Ludlow, violinist.

WHT, Deerfield, Ill. (400), 12 m., Paul Rader.

WJJD, Mooseheart, Ill. (302.8), 12 midnight, popular program: Romo Vincent, Fred Jeske, Babe Payne, George Givot.

WLW, Cincinnati, Ohio (422.3), 9:30 a. m., school, Editorial staff of Sunday school publications, Methodist book concern; 11, services, Church of Covenant; Dr. Frank Stevenson, minister; 7:30, services, First Presbyterian Church of Walnut Hills; Dr. Frederick McMillan, minister; 8:30, H. & S. Pogue orchestra; Walter Esberger, director; violin soloist, Arthur Dondero.

WMBB, Chicago, Ill (250), 3-5 p m., Trianon orchestra; Woodlawn theater orchestra, Cecil & Esther Ward, Fisher & Wayne, Walter Fett; 7-8:30, Trianon ensemble, Clarence Jacobs, Hazel O'Neil, John Everett; 8:30-10:30, Trianon orchestra, Woodlawn theater orchestra, Harold Stokes, Babbi & Barr, Geraldine Doyle, Charles Agne.

WORD, Batavia, Ill. (275), 10 a. m., I. B. S. A. choral singers; 10:15, address, D. H. Morehouse; 6:45 p. m., I. B. S. A. choral singers; Arthur G. Skupa, violinist; Georgiano Gorsline, accompanist; 7:30, address, G. A. Hale.

WQJ, Chicago, Ill. (447.5), 3-4 p. m., program, Jerry Sullivan, director; Wilson School of Music, Alma Wilson McMahill, soprano; Ruth Wilson, accompanist; Mary W. Klooster, pianist; 8-10, Rainbo Gardens orchestra; Maude Shapton Couse, soprano; Marie Dneprova, soprano; Dr. C. B. Roe, baritone; Sheppard Lovine, tenor; Helen Reed, accompanist; Fontella trio.

WREO, Lansing, Mich. (285.5), 10 a. m., chimes, Belfry Plymouth Congregational church; 10:30, church services; 7:30 p. m., church services.

WSAI, Cincinnati, Ohio (326), 3 p. m., Radio sermonette, Dr. Eagleson; 3:10, Robert Badgley, chimes.

WTAS, Elgin, Ill. (302.8), 8-12 midnight, Purple Grackle orchestra; Herbie Mintz, Maurine Marseilles, Phil Wilcox, Evelyn Johnson, Art Stiller.

WWJ, Detroit, Mich. (352.7), 11 a. m., St. Paul's Episcopal cathedral; 6:20 p. m., Capitol theater gang.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7), 4-5 p. m., church service.

KFDM, Beaumont, Texas (315.6), 8-9 p. m., special program.

KFNF, Shenandoah, Ia. (266), 10:45 a. m., First M. E.

(Continued on page 9)

"ROOSEVELT OF CHINA" TALKS AT WBZ

Sunday, September 13

(Continued from page 8)

church; 2:30 p. m., Golden Rule song service; 3, religious services; 6:30, Golden Rule circle; 8, Union Church.

KFVE, University City, Mo. (240), 6:30 p. m., amusement review, Romaine Fielding; 10, "The Book Wonderful," Rev. C. W. Davis; Rev. Frank Morgan, baritone.

KLDS, Independence, Mo. (440.9), 11 a. m., Stone church services, Dr F. M. McDowell; 6:30 p. m., vesper service, Marion Campbell, soprano; Margaret Gard, contralto; Claud Smith, tenor; Kenneth Morford, bass; Minnie Scott Dobson, pianist; Apostle John F. Garver; 9, Paul N. Craig, baritone; Robert Miller, organist; Irene Burroughs, violinist; 9:30, sermon, Apostle Myron T. McConley.

KOIL, Council Bluffs, Ia. (278), 11 a. m., First Congregational church; 7:30-9, The Monarchs, Jerry McMillen; Mary Thompson, contralto.

KTHS, Hot Springs National Park, Ark. (374.8), 11 a. m., First Presbyterian church; 9:25-10 p. m., New Arlington-Meyer Davis orchestra; Lawson Reid, organist; 10, Ray Mullins and his Whittington Park orchestra.

WAMD, Minneapolis, Minn. (243.8), 6 p. m., Hotel Radisson ensemble; 7, University night; 9, Arthur H. Faust and Radio Stock company; 10, popular program.

WCBD, Zion, Ill. (344.6), 8 p. m., Treble Clef chorus; Celestial Bells; Rendall trio; Mrs. Thomas, soprano; M. P. Barton, tenor; J. L. Bishop, baritone; Mrs. J. D. Thomas, soprano; Eleanor Pihl, pianist; Wesley Carey, reader.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 11 a. m., Westminster Presbyterian church, Rev. John E. Bushnell; 4:10 p. m., House of Hope Presbyterian church; 7:30, Second Church of Christ Scientist; 9:15, classical concert.

WDAF, Kansas City, Mo. (365.6), 4-5 p. m., program, Newman, Royal, Pantages theaters; 5-5:30, Sunday school lesson, Dr. Walter L. Wilson.

WFAA, Dallas, Texas (475.9), 6:30-7:30 p. m., Radio Bible class, Dr. William M. Anderson; 8-9, City Temple service, Dr. B. F. Fullerton; Katherine Hammons, organist; 9:30-11, MacDowell sisters.

WHAD, Milwaukee, Wis. (275), 3:15 p. m., band concert.

WHAS, Louisville, Ky. (399.8), 9:57 a. m., organ prelude; 10, Broadway Baptist church; 4-5, vesper song service, Fourth Avenue Seventh Day Adventist church.

WHO, Des Moines, Ia. (526), 11 a. m., University church service, Dr. Charles S. Medbury; 7:30 p. m., Reese-Hughes orchestra.

WMC, Memphis, Tenn. (499.7), 11 a. m., St. Mary's Episcopal cathedral.

WOAI, San Antonio, Texas (394.5), 11 a. m., First Presbyterian church; 8 p. m., Central Christian church; 9:30-10:30, program, Penelope Borden director.

WOAW, Omaha, Nebr. (526), 9 a. m., chapel service, Rev. R. R. Brown; 9 p. m., evening chapel service.

WOC, Davenport, Ia. (484), 1-2 p. m., Palmer Little symphony; Paul J. Vipperman, tenor; 8-8:30, Rev. Gilbert O. Miller; 9:30-11:30, Palmer Little symphony.

WOS, Jefferson City, Mo. (440.9), 8 p. m., religious services, Presbyterian church, Rev. A. B. Jaekson, pastor.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4), 11 a. m., Trinity Methodist Episcopal church; 4 p. m., Trinity Methodist Episcopal church.

Pacific Standard Time Stations

KFWB, Hollywood, Calif. (252), 9-11 p. m., late news and Warner Brothers Sunday night movie frolic.

KGO, Oakland, Calif. (361.2), 11 a. m., St. Luke's Episcopal church; 3:30 p. m., KGO Little symphony orchestra; 8, St. Luke's Episcopal church.

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 de luxe, arranged and presented by J. Howard Johnson.

KJR, Seattle, Wash. (384.4), 11 a. m., First M. E. church; 7:15-7:30, Mrs. Montgomery Lynch, organist; 7:30-9, First M. E. church.

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; 9-10:30, program, Beverly Hills Nurseries, Lubovski strinsed trio.

KPO, San Francisco, Calif. (428.3), 11-12 m., church service, Rev. Loyal L. Wirt; Carrie Eulass, soprano; Theodore J. Irwin, organist; 2-3 p. m., Sunday concert; 3-4, Marshall Giselmann, organist; 6, Waldemar Lind and the States Restaurant orchestra; 6:35, concert; Palace hotel; 8-8:30, Palace hotel; 8:30-10, Rudy Seiger's Fairmont hotel orchestra.

KTAB, Oakland, Calif. (215), 10 a. m., Bible lecture, Prof. E. G. Linsley; 11, services, choir; 3 p. m., afternoon concert, organ recital; 7:15, church services.

KTCL, Seattle, Wash. (305.9), 1-2 p. m., Meves cafeteria concert orchestra; 7:30-9:30, First Church of Christ Scientist; 9:30-10:30, International Bible Students' association.

C. Bruce Myers, left, is the attractive baritone at WJR, Detroit. Grace Adams East, above, is a staff artist of KTAB, Oakland. Her especial task is to play cornet solos two or three times a week. Myrtle Wagner Whitt, right, known as "The Oklahoma Nightingale," sings Wednesday evenings at WAHG, New York.

Monday, September 14

Monday, silent night for: CKAC, CNRC, CNRE, CNRM, CNRR, CNRW, CNRT, KFDM, KFMQ, KLDS, KTCL, KYW, PWX, WBAV, WBBM, WCAU, WCBD, WEBH, WEBJ, WFI, WGBS, WGES, WGN, WHAS, WIP, WLS, WMAQ, WMBB, WOC, WOAI, WQJ, WRC, WREO.

Atlantic or Eastern Daylight Saving Time Stations

CHNC, Toronto, Can. (356.7), 8:30 p. m., CHNC Little symphony orchestra; CHNC conservatory trio; mixed quartet; Arthur Blight, baritone, special inaugural program.

CKAC, Montreal, Can. (410.7), 1:45 p. m., luncheon concert.

WAHG, Richmond Hill, N. Y. (315.6), 12:30-12:55 p. m., Bill Groen and Jack Perry, dulcimer and piano; 1:05-1:30, Groen and Perrys 7:30-7:45, sports talk, Thornton Fisher; 7:45-8, Harold Brandhorst, pianist; 8-8:15, the Shamrock Four; 8:15-8:30, C. C. Jones, baritone; 8:30-8:45, the Shamrock Four; 8:45-9, C. C. Jones; 9-10, Colonial Royal orchestra; 10-10:15, Synchrophase trio; 10:15-10:30, Evan Davies, baritone; 10:35-10:45, Emery Deutsch, violinist; 10:45, 10:55, Horace J. Taylor, reader; 12-2 a. m., musical program.

WBBR, New York, N. Y. (272.6), 8 p. m., Irene Kleinpeter, soprano; 8:10, "Application of Human Interest Touch to Public Safety Startles World," Clarence E. Spayd; 8:35, vocal duet, Irene Kleinpeter, Fred Franz; 8:40, Bible instruction; 8:50, Fred Franz, tenor.

WCTS, Worcester, Mass. (268), 12-2 p. m., WCTS trio; 4:15, "Canning Hints," William R. Cole; 8, program, Mrs. J. Fredrick Donnelly.

WEAF, New York, N. Y. (491.5), 4-4:15 p. m., Cameron Emslie, pianist; 4:15-4:30, Ellie Marion Ebeling, soprano; 4:30-4:45, Cameron Emslie; 4:45-5, "The Hoosier Poet," Charles S. Kremble; 6-7, dinner music, Waldorf-Astoria; 7-7:15, Walter Leary, baritone; 7:15-8:15, musical program, Mark Strand theater; 8:30-8:45, "Tower Health Talk;" 8:45-9, Marie Opfinger, soprano; Albert Miller, tenor; 9-10, "Music by the A. and P. Gypsies;" 10-10:15, Joseph Diskay, tenor; 10:15-10:30, Jeanne Kramer, pianist; 10:30-11:30, Hotel Bossert Marine Roof orchestra.

WEEI, Boston, Mass. (348.6), 6:30 p. m., Big Brother club; 7:30, Brockton night; 8:30, musicale; 9, musicale.

WFI, Philadelphia, Pa. (304.5), 1 p. m., Bellevue Stratford concert orchestra; 3, Arcadia Syncopators dance orchestra; 3:45, fashion talk, Eleanor Gunn; 6:45, Bellevue Stratford Roof Garden orchestra.

WGBS, New York, N. Y. (315.6), 1:30-1:45 p. m., Lillian Lorcher, soprano; 2:30-3, program from Radio World's Fair; Blossom Heath serenaders; 3-3:10, talk, League of Women Voters; 3:10-3:20, Rosalie Blanchard and Walter Croft, duets; 3:20-3:30, talk, Phoebe Cole; 3:30-3:40, Rosalie Blanchard and Walter Croft; 3:40-3:50, interview by Terese Rose Nagel with Blanche Yurke; 3:50-4, Rosalie Blanchard and Walter Croft.

WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Lew Pollack and Joe Sherman, songs; 3:15-3:18, Mirror race results; 3:30-3:45, Jane of WGCP and Phil Elliot; 3:45-3:48, Mirror race results; 3:48-4, Ethel Pineus, pianist; 4-4:15, Jack Palmer's Louisville jazz band; 4:15-4:18, Mirror race results; 5:15-5:30, Jane; 5:30-5:45, Harry Harrison, clown of the air; 5:45-5:48, Mirror race results; 5:48-6, Edyth Pollak, 8-8:15, Charles Von Thomee, pianist; 8:15-8:30, Lou Lefebvre, pianist; 8:30-8:45, Andy Ruzaf, melody man; 8:45-9, Francis May, violinist; 9-9:15, Kennedy Harmony quintet; 9:45-10, Raymond Maher, baritone; 10-10:30, Win Unger and Seaview orchestra.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, Olympic dance orchestra; 9-10, Montlcello club orchestra; 11-1 a. m., supper dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WHAR, Atlantic City, N. J. (278), 2 p. m., Seaside hotel trio; 7:30, stories for little folks, Mildred C. Hagan; 8, Seaside hotel trio.

WHN, New York, N. Y. (361.2), 8-8:30 p. m., Roseland dance orchestra; 11-11:30, organ recital, Lexington theater; 11:30-12, Sliver Slipper revue.

WIP, Philadelphia, Pa. (508.2), 3:30 p. m., Comfort's philharmonic orchestra; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime stories.

WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 4:30, Marcella North, pianist; 7:30, Dream Daddy's bedtime stories; 9, Stanley theater hour of music; moving picture review, Jos. Nassau; 10, Arcadia cafe dance orchestra.

WMCA, New York, N. Y. (340.7), 11-12 m., musical program; 3-3:30 p. m., Radio World's Fair; 6:30-7:30, Ernie Golden and his Hotel McAlpin orchestra; 9-10, Asbury Park symphony orchestra; 10-10:45, Five Messner Brothers orchestra; 11-12, Berkley-Carteret dance orchestra.

WNYC, New York, N. Y. (526), 7-7:10 p. m., market high spots; 7:10-7:30, Original Charleston Five; 7:35-8, Original Charleston Five; 8-8:15, baseball results; 8:15-10:15, concert from Mall, Central Park; 10:15-10:30, talk, Dr. Sydney N. Ussher.

WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital; 12:02 p. m., Golden's Crystal tea room orchestra; 4:45, organ recital; 7:30, A. Candelori's concert orchestra; 8:30, features from WEAF; 11, A. Candelori's dance orchestra.

WOR, Newark, N. J. (405.2), 6:15-7:15 p. m., Wallie Osborne and his Chateau Baltusrol orchestra; 7:15-7:30, sports talk, Pat Robinson; 8:30-9:30, Al Reid's hour.

Eastern Standard or Central Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 8:45 p. m., program, Spear company.

WBBM, Chicago, Ill (226), 5:30-6 p. m., kiddies' joy-digger club; 6-7, Stewart-Warner program, Charlie Garland, Nate Caldwell, Eddie Loftus, Alamo orchestra, Marie Margot, Lew Russell, Murray Smith, Earl Bergman.

WBZ, Springfield, Mass. (333.1), 6 p. m., Capitol theater orchestra; Rene Dagenais, organist; 8, Aleppo Drum Corps; 8:30, Charles G. Gilman, entertainer; 8:45, Max Zides, vocalist; 9, Edith M. Hemsworth, pianist; 9:15, Arthur Ballance, baritone; 9:40, "At the Theater," A. L. S. Wood.

WCX, Detroit, Mich. (517), 4:15 p. m., concert; 6, dinner concert, Book-Cadillac hotel; 8, musical program.

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

WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Blue Steele and his Fulford-by-the-Sea orchestra; 10-1, dance music.

WGES, Oak Park, Ill. (250), 5-7 p. m., John Stamford, tenor; Franklin Horstmeier, bass; Marguerite Ray, contralto; Frances Barge, violinist; Elsie Barge, pianist; 10:30-12, Eleanor Kaplan, violinist; John Rankel, baritone; Ruth Kulthoff, soprano.

WGN, Chicago, Ill. (370.2), 12:40 p. m., Drake concert ensemble; Blackstone string quintet; 6:30-7:30, Drake concert ensemble, Blackstone string quintet.

WGY, Schenectady, N. Y. (379.5), 1 p. m., "Tomatoes—Canned, Preserved and Pickled," Jessie B. Lane; 1:30, Asin club orchestra; 5:30, dinner program, Van Curler hotel; 6:15, "The Work of the State Agricultural Experiment Station," Dr. R. W. Thatcher; 6:35, Gertrude T. Hastings, contralto; Margaret Armour, soprano; Jack Kindlon, boy soprano; John Gaston, baritone; Dr. Ernest T. Winchester, accompanist; 7:15, WGY orchestra; "The Public's Duty Toward Safety," Charles E. Hill.

WHAZ, Troy, N. Y. (379.5), 8:15 p. m., WHAZ third anniversary, Domino orchestra.

WHT, Deerfield, Ill. (400), 1 p. m., Grayling's String trio; 7, Jule Reveitas, contralto; Hugh Aspinwall, tenor; Wilkens and Martens; Loftis concert de luxe; 8:30, Riverview Melody Masters; Langdon Brothers; Kitchen Klenzer Klassics; Giesie Brothers; Jelke musical moments; Fair Store band; 10:30, U. S. L. Battery entertainers; Walter Ford's Chanlo orchestra; Harland Merrill, musical saw soloist; Fred Witmer, pianist; 12, Pat Barnes, Al Carney, Duke Itchi, Walter Ford.

WJJD, Mooseheart, Ill. (302.8), 10:30 p. m., Jean St. Anne, French baritone; Christian A. Grimm, May Ward, William Horowitz, organ selections.

WLW, Cincinnati, Ohio (422.3), 12:15 p. m., noonday service, Rev. Geo. H. Kase; 4, talk, Rev. Ralph Schmidt; 7, dinner concert, Hotel Gibson orchestra, Robert Visconti, director; 8, Times-Star program; orchestra directed by Wm. Kopp; Instrumental soloists and Howard Hafford, tenor; program concluding with twenty minutes of "Farewell to Summer."

WOK, Homewood, Ill. (217.3), 12-2 p. m., Sandy Meek, tenor; Harry Sosnik, pianist; Jimmie Watson, baritone; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 6-7:30, ballad hour; Jimmie Watson, baritone; Ada Allen, soprano; 7:30-1, Paul Small, tenor; Spike and Danielson, accordionists; Marie Wright, soprano; Ada Allen, soprano; LeRoy North, pianist; Gus C. Edwards orchestra; Harlen Merrill, musical saw soloist; George Irish, organist; Buck Weaver, banjoist; Charles Bodzio, banjoist; Langdon Brothers; H. Sinatko, violinist; Sammy Williams, pianist.

WORD, Batavia, Ill. (275), 8:30 p. m., William Benson, tenor; Lou T. S. McArthur, soprano; Wallace Benson, guitarist; Edgar E. Halberg, reader; Cora V. Benson, accompanist; 9:30, questions and answers, B. M. Rlee.

WQJ, Chicago, Ill. (447.5), 11-12 m., baking talk, Cleve Carney; "Some Home Made Candies and How to Make Them," Mrs. Darms; 3-4 p. m., "Waffles for Breakfast," Helen Harrington Downing; book concert, Rev. Fred J. Harrison.

WSAI, Cincinnati, Ohio (326), 10 p. m., Margaret Moran, soprano; Mrs. Carolyn Ritter, contralto; 10:30, Hubbell and Collins, Hawaiian guitarists; 11, Carl Schuett, pianist; 11:30, popular songs, Merrill Schwartz.

WTAM, Cleveland, Ohio (389.4), 12:15-1:15 p. m., Euclid music studio; 6-7, Golden Pheasant orchestra; 8-11, grand opera program, Walter Logan, director; 11-12, Euclid Beach studio.

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Purple Grackle orchestra; Herbie Mintz, Tommy Dunlap, Tubby Garon, Maurine Marseilles, Art Stiller, Berger Wedberg.

WTIC, Hartford, Conn. (475.9), 5:30 p. m., Emil Heimberger's Hotel Bond trio; 6:45, talk, Ned Wayburn; 7, dinner music.

WWJ, Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, News orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7), 6-7 p. m., dinner program; 7:30-9:30, Mrs. George Jones, soprano; Leland Wood, violinist; Belshaw's orchestra; Mart Grauenhorst, banjoist; Clyde Davis, singing violinist.

(Continued on page 10)

WHAZ CELEBRATES THIRD BIRTHDAY

Monday, September 14

(Continued from page 9)

KFDM, Beaumont, Texas (315.6), 8-10 p. m., Magnolia Petroleum company's refinery band.
KFNF, Shenandoah, Ia. (266), 7:30 p. m., Smith-Belding trio.
KFVE, University City, Mo. (240), 10 p. m., popular music, Brunswick-Balke-Collender company, orchestra Romaine.
KOIL, Council Bluffs, Iowa (278), 7:30-9 p. m., Kiwanis club; 9, farm topics, "Results in Follow-up Work on Tuberculosis Test," William E. Oxley; 11-12, Hotsy-Totsy hour, Art Doty and his band.
KTHS, Hot Springs National Park, Ark. (374.8), 9:25 p. m., classical recital, New Arlington-Meyer Davis instrumental quartet; George Ryall, pianist; 10, dance concert, Como Roof Garden.
KWKH, Shreveport, La. (261), 10-10:30 p. m., all night frolic; Old Fiddlers club; Breakdown piano music; Hotel Youree dance frolic; Old Black Joe Pullman quartet.
WCCO, Minneapolis-St. Paul, Minn. (416.4), 2:30 p. m., afternoon concert; 4:05, readers' club, Edith M. Stevens; 5:30, children's hour; 6:45, F. & R. Family.
WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's string trio; 6-7, C. M. Ragon, reader; Tell-Me-a-Story Lady; Trianon ensemble; 8-9:30, around the town with WDAF; 11:45-1, Merry Old Chief; Carl Nordberg's Plantation players; Charles Dornberger's orchestra; Ted Meyn, organist.
WFAA, Dallas, Tex. (475.9), 12:30-1 p. m., farmers' hour; 6:30-7:30, Artie Collins and his orchestra; 8:30-9:30, Sears-Roebuck Agricultural Foundation program.
WHAD, Milwaukee, Wis. (275), 6-7 p. m., Arthur Richter, organist; 8-10, Marquette university studio program; Herman Lepgold, tenor.
WHAS, Louisville, Ky. (399.8), 4 p. m., musical selections, Harry S. Currie; children's stories, Eleanor Huber; fashion talk, Peggy True.
WHO, Des Moines, Ia. (526), 7:30-8 p. m., Kathryn Torey, pianist; Ione Denney Hoit, reader; 8-9, program, Dean Holmes Cowper, director; 11-12, Corn Sugar orchestra.
WMC, Memphis, Tenn. (499.7), 7:30 p. m., farm talk; 8:30, Mazda Grotto orchestra.
WOAI, San Antonio, Texas (394.5), 8:30 p. m., Menger hotel trio.
WOAW, Omaha, Nebr. (526), 6 p. m., Phyllis Griswold, organist; 6:30, McCrory's popular period, Lillian Hadsen, director; 6:45, orchestra; 9, concert.
WOS, Jefferson City, Mo. (440.9), 8 p. m., address, Hon. F. T. Stockard; old time fiddlers, Louie Barton, Bryan Williams.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4), 3 p. m., Rialto theater musicale; 6:30, Herbert White and his Silver State orchestra; 7:30, Sandman's hour; 8, scientific football, Tom McNamara; 8:10, Hilo Four; Antlers quartet; George Cartwright, fiddler; Mary Tudor, pianist; J. F. Gordon Miles, tenor; Grace June Freese, reader; address, Indian legends, Mrs. Harriet W. Bouck.

Pacific Standard Time Stations

KFAE, Pullman, Wash. (348.6), 7:30-9 p. m., Jerry Sotola, violinist; "Modern Draperies," Anita Kincaid; "Fall Management of Bees," B. A. Slocum; Mrs. Brewster, pianist.
KFOA, Seattle, Wash. (454.3), 6-6:45 p. m., Hoffman orchestra; 6:45-8:15, Sherman, Clay and company studio program; 8:30-10, Times program.
KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour; Big Brother of KWB; 7-7:45, Radio Doings question and answer period, K. G. Ormiston, technical editor; Van Sisters trio, J. Stanley Fulbright, tenor; 8-9, program, Star Motor Car company, Million Dollar dance orchestra, Frank Pierce and Vic Beall, comedy songs; 9-10, program, E. P. Janes, Bill Hatch's orchestra, Barbara Bunnell, blues singer; 10-11, Warner Bros., frolic, direction Charlie Wellman.
KGO, Oakland, Calif. (361.2), 6-7 p. m., dinner concert, Wiley B. Allen company; 9, "Lockjaw;" "Physical Culture for the Family," Hugh Barrett Dobbs; "How

Dainty Helen Smith is one Radio artist who looks as well as she sounds and she sounds very well indeed. Her interpretations of the latest songs may be heard this week from WAMD, Minneapolis. She is also not averse to singing request songs.

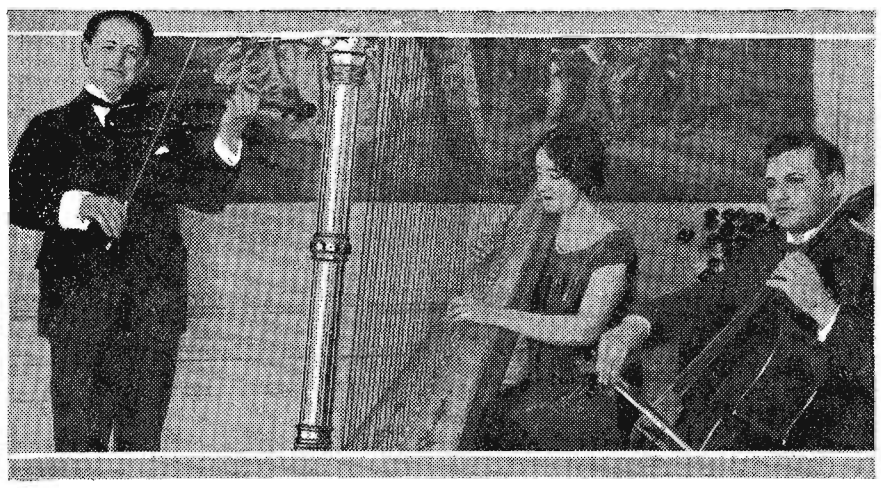
to Train and Develop the Voice," Kenneth Lloyd Williams; "Chats about New Books," Joseph Henry Jackson; "When Do Salesmen Get Old?" B. J. Williams; "Buying a Home," M. W. Dobrzensky; "Inside Dope on Curing Automobile Ills," Louis P. Signer; Arion trio.
KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 8-10, program by Auto Center.
KJR, Seattle, Wash. (384.4), 1:15-2 p. m., organ recital, Columbia theater; 2-2:15, Bernice Redington; 7-8:30, Sears Roebuck and company; 8:30-10, Post Intelligencer studio program; 10-11, Gordon Kilbourne and his orchestra.
KNX, Hollywood, Calif. (336.9), 5:30-6:15, p. m., Wurlitzer pipe organ studio; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-7:30, Mutual Motors mirth contest; 7:30-8, program, Columbia Outfitting company; 8-9, program, L. W. Stockwell company; 9-10, Goodrich Silvertown Cord dance orchestra, Lilyan May Challenger, contralto; 11-12, Ray West's Cocoanut Grove dance orchestra from Ambassador hotel.
KPO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2-3, Loew's Warfield theater; 3-4, Alice Ambrino, soprano; 6:35, Waldemar Lind and the States Restaurant orchestra; 8-9, program, Madame Erkeley, director; 9-10, Theodore J. Irwin, organist; Ben Birman, soloist; 10-11, Waldemar Lind and the States Restaurant orchestra.
KTAB, Oakland, Calif. (215), 8-10 p. m., varied musical program, studio artists.

Tuesday, September 15

Tuesday, silent night for: CHNC, CNRC, CNRE, CNRM, CNRW, CNRT, KFAE, KFKX, KOA, PWX, WAHG, WBAV, WBBR, WCBD, WCTS, WEAO, WGCP, WHAD, WHAZ, WKAQ, WLIT, WOR, WOS, WSMB, WTAM.

Atlantic or Eastern Daylight Saving Time Stations

CKAC, Montreal, Can. (410.7), 7 p. m., piano lessons, Emiliano Renaud; 7:30, classical program, Windsor hotel orchestra; 8:30, talk, concert, S. S. Minnedosa; 10:30, Harold Leonard's Red Jackets.
CNRA, Moncton, Can. (291), 9 p. m., Saint John evening program, A. C. Smith, director; CNRA dance orchestra.
WAHG, Richmond Hill, N. Y. (315.6), 12:30-12:55 p. m., Harry Dudley, songs and piano; 1:05-1:30, Harry Dudley.
WCAU, Philadelphia, Pa. (278), 7:25 p. m., scores; 7:30, N. Snellenburg male quartet; 8, Mae Smith, soprano; Mandell Cotton, tenor; 8:30, Jack and Harry Guth, guitar players; 9, Robert Frazer, blind gospel singer; Emma Becker, accompanist; 9:30, Harry Link, songs; 10:30, Cathay Tea Garden dance orchestra, Billy Hayes, director.
WCTS, Worcester, Mass. (268), 12-2 p. m., WCTS trio;



The New York Lyric trio is an internationally known combination of instrumental artists. Jacques Jacobs plays the violins; Flora Aldre, the harp, and Philipp Abbas, the cello. Fans have often had the pleasure of hearing this trio from WEAF.

New York; 8:30, Gold Dust Twins; 9, Eveready hour; 10, WEAF grand opera company.
WFI, Philadelphia, Pa. (394.5), 1 p. m., Bellevue Stratford concert orchestra; 3, Caroline Hoffman, pianist; 3:15, fashion talk, Eleanor Gunn; 6:45, Bellevue Stratford Roof Garden orchestra; 8, Ross Gorman and his Earl Carroll Vanities orchestra; 8:30, Gold Dust Twins; 9, Eveready hour; 10 grand opera, "Maritana"; 11, Bellevue Stratford Roof Garden orchestra.
WGBS, New York, N. Y. (315.6), 1:30-2:30 p. m., Landau's Blossom Heath serenaders; 2:30-3, program from Radio World's Fair; Crete Carton; Jack Cohen, pianist; 6-6:30, Uncle Gee Bee; 6:30-7, Vincent Sorey orchestra; 7-8, Meyer Davis' orchestra; 8-8:20, synthetic prize fight, Paul Gallico; 8:20-8:30, Anna Jute, soprano; 8:30-9:30, Polish program, direction of For-

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, September 12: 4:30, WJZ; 5:30, WCTS, WJZ; 6:40, WPG; 7:15, WOR; 7:25, WNYC; 8, WJZ.
Monday, September 14: 4, WJZ, 4:30, WJZ, WCAE; 5, 5:30, 6, WJZ; 7:15, WEEI, WOR; 7:25, WNYC; 8, WJZ.
Tuesday, September 15: 4, 4:30, 5, 5:30, 6, WJZ; 6:30, WEEI; 7:15, WOR; 7:25, WNYC; 8, WJZ.
Wednesday, September 16: 4, 4:30, 5, 5:30, 6, WJZ; 7:15, WOR; 7:25, WNYC; 7:45, WEEI; 8, WJZ.
Thursday, September 17: 4, 4:30, 5, 5:30, 6, WJZ; 6:30, WEEI; 7:15, WOR; 7:25, WNYC; 8, WJZ.
Friday, September 18: 4, 4:30, 5, 5:30, 6, WJZ; 7:15, WEEI, WOR; 7:25, WNYC; 8, WJZ.

Eastern Standard or Central Daylight Saving Time Stations

Saturday, September 12: 2, WGY; 2:30, KDKA; 2:45, KDKA, WMAQ; 3, KDKA, KYW; 3:15, KDKA; 3:30, KDKA, KYW; 3:55, WWJ; 4, WMAQ, KYW; 4:15, 4:30, KYW; 4:45, 5, KDKA, KYW; 5:55, WTIC; 6, WGN, WLS; 6:50, WTIC; 7, KDKA, WTIC; 7:30, WEBH, WLW; 9:55, KDKA.
Sunday, September 13: 6:30, WBZ; 6:55, WTIC; 9:50, WBZ.
Monday, September 14: 2, WRC; 2:45, WMAQ; 3:30, KDKA, KYW, WEAR; 3:45, WEAR; 3:55, WWJ; 4, KDKA, KYW, WMAQ; 4:30, KYW; 5, KDKA; 5:30, KYW; 5:55, WTIC; 6, WGN, WLS; 6:30, WBZ; 6:50, WTIC; 7:30, WEBH, WLW; 9:50, WBZ; 9:55, KDKA.
Tuesday, September 15: 2, WRC, 2:45, WMAQ; 3, KDKA; 3:30, KDKA, KYW, WEAR; 3:45, WEAR; 3:55, WWJ; 4, KYW, WMAQ; 4:30, KYW; 5, KDKA, KYW; 6, WGN, WLS; 6:30, WBZ; 7, KDKA; 7:30, WEBH, WLW; 9:50, WBZ; 9:55, KDKA.
Wednesday, September 16: 2, WRC; 2:45, WMAQ; 3:30, KDKA, KYW, WEAR, 3:45, WEAR; 3:55, WWJ; 4, KYW; 4:30, KYW; 5, KYW; 6, WGN, WLS; 6:30, WBZ; 6:50, WTIC; 7, KDKA; 7:30, WEBH, WLW; 9:50, WBZ; 9:55, KDKA.
Thursday, September 17: 2, WRC; 2:45, WMAQ; 3, KDKA, KYW, 3:30, KDKA, KYW, WEAR; 3:45, WEAR; 3:55, WWJ; 4, KYW; 4:30, KYW; 5, KDKA, KYW; 6, WGN, WLS; 6:30, WBZ; 6:50, WTIC; 7:30, WEBH, WLW; 9:50, WBZ; 9:55, KDKA.
Friday, September 18: 2:30, KDKA; 2:45, WMAQ; 3, KDKA, KYW; 3:30, KDKA, KYW, WEAR; 3:45, WEAR; 3:55, WWJ; 4, KYW, WMAQ; 4:30, KYW; 5, KDKA, KYW; 6, WGN, WLS; 6:30, WBZ; 6:50, WTIC; 7:30, WEBH, WLW; 9:50, WBZ; 9:55, KDKA.

Central Standard Time Stations

Saturday, September 12: 3:30, WDAF, WHAS; 4:30, WDAF, WFAA; 5, WDAF; 6, WCCO, WDAF, WOC; 6:20, WOAW; 6:30, WSMB; 9, WCCO; 9:15, KTHS.
Sunday, September 13: 3:30, 4, WDAF; 4:30, WFAA; 5, WDAF; 5:05, WOS; 6:45, WOC; 9, WCCO; 9:15, KTHS.
Monday, September 14: 3:30, WDAF, WHAS; 4, WCCO, WDAF; 4:30, WFAA; 5, WDAF; 5:05, WOS; 6, WCCO, WDAF, WOC; 6:30, WOAW, WSMB; 7, WHAD, WOAI; 9, WCCO.
Tuesday, September 15: 3, WOAI; 3:30, WDAF, WHAS; 4, WCCO, WDAF; 4:30, WFAA; 5, WDAF; 5:05, WOS; 6, WCCO, WDAF, WOC; 6:20, WOAW; 6:30, WSMB; 7, WHAD, WOAI; 8:45, WHAS; 9, KTHS, WCCO.
Wednesday, September 16: 3, WOAI; 3:30, WDAF, WHAS; 4, WCCO; 4:30, WDAF, WFAA; 5, WDAF; 5:05, WOS; 6, WCCO, WDAF, WOC; 6:30, WSMB; 7, WHAD, WOAI; 9:15, KTHS; 9, WCCO.
Thursday, September 17: 3, WDAF, WOAI; 3:30, WHAS; 4, WCCO, WDAF; 4:30, WFAA; 5, WDAF; 6, WCCO, WDAF, WOC; 6:20, WOAW; 6:30, WSMB; 7, WOAI; 9, WCCO; 9:15, KTHS.
Friday, September 18: 3, WDAF, WOAI; 3:30, WHAS; 4, WCCO, WDAF; 4:30, WFAA; 5, WDAF; 6, WCCO, WDAF, WOC; 6:20, WOAW; 6:30, WSMB; 8:45, WHAS; 9, WCCO; 9:15, KTHS.

Mountain Standard Time Stations

Monday, September 14: 6, KOA.
Tuesday, September 15: 6:30, KOA.
Wednesday, September 16, 6, KOA.
Thursday, September 17: 6:30, KOA.
Friday, September 18: 6, KOA.

Pacific Standard Time Stations

Saturday, September 12: 2:30-5, KNX; 6, KFOA; 6:15, KPO; 8, KFWB, KHJ.
Sunday, September 13: 6:30, KPO; 8, KHJ; 9, KFWB.
Monday, September 14: 6, KFOA; 6:15, KPO, 6:45, KGO; 7:30, KGW; 8, KFWB, KHJ.
Tuesday, September 15: 6, KFOA; 6:15, KPO; 6:45, KGO; 7:30, KGW; 8, KFWB, KHJ.
Wednesday, September 16: 2:30-5, KNX; 6, KFOA; 6:15, KPO; 6:45, KGO; 7:30, KGW; 8, KFWB, KHJ.
Thursday, September 17: 6:30, KFOA; 6:15, KPO; 6:45, KGO; 7:30, KGW; 8, KFWB, KHJ.
Friday, September 18: 2, 3, 4, KNX; 6, KFOA, KPO; 6:45, KGO; 7:30, KGW; 8, KFWB, KHJ.

8-8:30, Vanities orchestra; 9-10, Eveready hour; 10-11, opera, "Maritana," WEAF.
WEAF, New York, N. Y. (491.5), 4-4:30 p. m., musical program; 4:30-5, women's program; 6-7, dinner music, Waldorf-Astoria; 7-7:10, musical program; 7:10-7:30, lecture, Columbia university; 7:30-8, musical program; 8-8:30, Ross Gorman and his orchestra; 8:30-9, Gold Dust Twins; 9-10, "Eveready Hour"; 10-11, grand opera, "Maritana," WEAF grand opera company; 11-12, Vincent Lopez and his Hotel Pennsylvania orchestra.
WEBJ, New York, N. Y. (272.6), 7-7:15 p. m., Dan Barnetts orchestra; 7:30-8, Frank Cork's Luna Park orchestra; 8-8:10, railroad talk, G. T. Geer; 8:15-8:30, Isabel Henderson, soprano; 8:30-9, Arthur Pryor's concert band.
WEEI, Boston, Mass. (348.6), 6:30 p. m., Big Brothers club; 7:30, Philipper O. Bergernon; 8, musicale from

sign Language Information service; 9:30-10:30, Negro program, direction of Amsterdam News; 10:30-11:30, Meyer Davis' orchestra.
WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Ethel Pincus, pianist; 3:15-3:18, Mirror race results; 3:18-3:30, Billy Rhodes, tenor; 3:30-3:45, Jane of WGCP; 3:45-3:48, Mirror race results; 4-4:15, William J. Rietz; 4:15-4:18, Mirror race results; 4:18-4:30, Jane; 4:45-4:48, Mirror race results; 4:48-5, Billy Basquette, composer; 5-5:15, Eve Rothenberg, pianist; 5:15-5:18, Mirror race results; 5:18-5:30, Jimmy Flynn; 5:30-5:45, Della Riordan, baritone; 5:45-5:48, Mirror race results; 5:48-6, Marcel Doublier, saxophonist.
WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director; 8-11, jointly with WEAF including Ross Gorman and his "Vanities" orchestra direct from the Earl Carroll theater, New York; Gold Dust Twins, Eveready hour, and the grand opera, "Maritana."
WHAR, Atlantic City, N. J. (278), 2 p. m., Seaside hotel trio; 7:30, book review, Mrs. James Lord; 8, Seaside hotel trio; 11:15, Strand theater organ recital.
WHN, New York, N. Y. (361.2), 2:15-3:15 p. m., overture and vaudeville, Loew's State theater; 3:15-4:30, Lexington theater orchestra; 4:30-4:45, Uncle Robert's chat to children and grown folk; 9:30-10, Palisades Amusement Park 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, "Emo's Weekly Movie Talk"; 10:30, Traymore dance orchestra; 11, California Night Hawks.
WLIT, Philadelphia, Pa. (394.5), 11 a. m., organ recital, Stanley theater; 12:02 p. m., Arcadia cafe concert orchestra; daily almanac; Stanley theater organ recital; 2, Arcadia cafe concert orchestra; 4:30, "Magazine Corner," Mrs. B. F. Maschal; 7:30, Dream Daddy's bedtime stories.
WMCA, New York, N. Y. (340.7), 3-3:30 p. m., Radio World's Fair; 7-8, Jack Wilbur's Personalities; 8-8:15, Aage Hye Sorenson, baritone; 8:30-9, Sheppard-Knapp entertainers; 9-10, Asbury Park dance orchestra; 10-11, Chiropractic hour of music; 11-12, Ernie Golden and his Hotel McAlpin orchestra.
WNYC, New York, N. Y. (526), 6:30-6:40 p. m., "Home Economics," Mrs. Louis Reed Welzmiller; 6:45-7, song recital; 7:10-7:30, the Canadians; 7:30-7:35, police alarms; 7:35-8, the Canadians; 8-8:05, baseball results; 8:15-10:15, concert, WNYC artists.
WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital; 12:02 p. m., Golden's crystal tea room orchestra; 4:45, organ recital; 7:30, A. Candelori's concert orchestra.
WOR, Newark, N. J. (405.2), 6:15-6:30 p. m., sports talk, Pat Robinson; 6:30-7, Man in Moon; 7-7:30, Fred Koester and his Clifford Lodge orchestra.

Eastern Standard or Central Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 8:45 p. m., concert; 10:15, concert from Willows.
KYW, Chicago, Ill. (535.4), 4 p. m., afternoon frolic, Evening American; 6:35-7 p. m., children's story, Uncle Bob; 8-8:20, musical program; 8:20-8:45, American Farm Bureau federation; 8:45-9:30, musicale; 10-11:30, evening at home.
WBBM, Chicago, Ill. (226), 8-10 p. m., Samovar orchestra, Charlie Garland, Eddie Loftos, Nate Caldwell; 10-12, Stewart-Warner program, Alamo orchestra, Kephart Brothers, Lew Russell, Murray Smith, Earl Bergman, Eddie Loftus, Marie Margot.
WBZ, Springfield, Mass. (333.1), 6 p. m., Leo Reisman Hotel Lenox ensemble; 8, popular songs and piano selections, Edward A. Morgan; 8:15, Mrs. Carrie E. Goodell, soprano; Mrs. Estella P. Chase, accompanist; 8:30, Carrie Gilman Edwards, pianist; Marie Clifford Bartlett, reader; Alice Wentworth MacGregor, soprano; 9, Hotel Brunswick orchestra.
WCX, Detroit, Mich. (517), 4:15 p. m., concert; 6, dinner concert, Book-Cadillac hotel; 8, musical program; 10, The Red Apple club.
WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Vincent H. Percy, organist; 8-9, musicale; 9-10, musical program, Loew's State theater; 10-11, studio program.
WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., Oriole orchestra; Lydia Lochner, contralto; Howard Neumiller, pianist; 9:30-10:30, Uptown theater; Oriole orchestra; 11:30-1 a. m., Sandy Meek, tenor; Jack Penewell, twin guitarist; Paul Small.
WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Blue Steele and his Fulford-by-the-Sea orchestra; 10-1, dance music.
WGES, Oak Park, Ill. (250), 5-7 p. m., Frank Ernest, pianist; Norman Kling, baritone; Harold Weaver, pianist; Christine Nisted, violinist; 10:30-1, Novelty Broadcasters' orchestra; Phil Wilcox, Clarence Parrish, Pat Ward, Harber trio, Sandy McTavish, Coyne Electrical school serenaders, Marie Wright.
WGN, Chicago, Ill. (370.2), 12:40 p. m., Drake concert ensemble, Blackstone string quintet; 6:30-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, WGN string trio; 10:30-11:30, jazz scamper program, Drake dance orchestra.
WGY, Schenectady, N. Y. (379.5), 1 p. m., "Fennel,"

Elizabeth Nelson is one of the promising young singers of Dallas, Texas. Her sweet soprano voice may be heard during the Northern Texas Traction company programs at WBAP. She directs these programs and picks out selections which she thinks will please the fans.

WGY matinee players; 5:30, Hotel Van Curler orchestra; 8:35, Mildred B. Hilton, pianist; 7, "Over the Seven Seas"; 7:30, Georgia Minstrel boys; 10, W. Spencer Tupman's Hotel Mayflower orchestra.
WHT, Deerfield, Ill. (400), 1 p. m., Grayling's string trio; 7, Jane McConnell, contralto; August Bredemeier, tenor; Eleanor Gilmour, soprano; Borden's selected vodvil; 8:45 (238), Riverview Park Melody masters; 10:30, (400), Walter Ford's Cheerio orchestra; Oscar Heather, tenor; Rita McFawn, soprano; 12, Pat Barnes, Al Carney, Duke Rehl, Walter Ford.
WJJD, Mooseheart, Ill. (302.8), 10:30 p. m., Edythe Whiteman, R. V. Thomas, Clarence Harper, Naomi Hamilton, Esther Huxhold, popular artists.
WLS, Chicago, Ill. (344.6), 1 p. m., farm program, Ford and Glenn; 6:30, Ralph Emerson, organist; 7:15, WLS trio, Tschaikowsky program, Rex Maupin; 7:45, lullaby time, Ford and Glenn; 8, Overton concert four, operatic quartet.
WLW, Cincinnati, Ohio (422.3), 12:15 p. m., Petrella Trimbur, organist; 4, Student recital, pupils of Leo Stoffregen and Wm. Kyle; 6:30, organ concert Gene Johnson; 7, WLW story lady; 8, WLW feature orchestra featuring musical picture "A Day in the Desert;" 8:20, Mary Barbara (the Sweetheart of Radio); 8:30, the Famous Lyric male quartet; Mrs. H. H. Nagle, musical saw artist, Gladys Hettrick Kruse, accompanist; 9, Formica concert orchestra.
WMAQ, Chicago, Ill. (447.5), 2:50 p. m., Chicago-Boston baseball game; 6, Chicago theater organ; 6:30, Hotel LaSalle orchestra; 8, Carl Broman, pianist; 8:30, travel talk, Clara Laughlin; 9, musical program.
WMBB, Chicago, Ill. (250), 6-7 p. m., Trianon ensemble, Lindsey McPhail, Desmond Sullivan, Bernard Senescu, Hazel O'Neil, John Everett, Wayne King; 9-11, Trianon orchestra, Geraldine Doyle, Jaek Murname, Woodlawn theater orchestra.
WOK, Homewood, Ill (217.3), 12-2 p. m., Marianne Powell Babcock, soprano; Thomas B. Stephenson, tenor; Fred Whitmer, pianist; Marie Dneprova, soprano; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 6-7, Genevieve Barry Burnham, soprano; Clement Laskowski, tenor; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 10-1, Gertrude Mugford, soprano; Kraft Harmony boys; Evelyn Johnson, soprano; Jacobson and Ray; J. Armstrong, violinist; Herman Sinaiko, violinist; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra.
WORD, Batavia, Ill. (275), 8:30 p. m., World News Digest; 8:45, Rend and Beyer; 9, Diana Stryker, so-

(Continued on page 11)

BIRD SONGS FRIDAY FEATURE OF KOA

Tuesday, September 15

(Continued from page 10)

prano; Zoe Edwards, alto; Estelle Barta, alto; instrumental trio, Mary Landon Bowen, Phylis Elleen Barry, Charlotte Erpeling; 10, address, C. P. Apgar.

WQJ, Chicago, Ill. (447.5), 1:45-2 p. m., "Does Your Child Eat Breakfast?" Helen Harrington Downing; "An Oriental Bazaar—2350 Years Ago," Prof. Alaf A. Toffteen; 7-8, Ralph Williams and his Raimbo Gardens orchestra; Sophie Lobel, pianist; Herman Essak, violinist; Elsie D. Hoffman, soprano; Edith Dady, whistler; 10-1, Ralph Williams and his Raimbo Skylarks; Jerry Sullivan; Rose Vanderbosch, pianist; Dr. Carl Bertschinger; pianist; Everett George Opie, reader; Frank Blasco, boy tenor; Will Rossiter, Daddy of Them All; Mack sisters; 1-2, Ginger hour.

WREO, Lansing, Mich. (285.5), 8:15 p. m., Reo Motor Car company band; Reo Motor Car company band glee club; 9:15, studio program.

WSAI, Cincinnati, Ohio (326), 7:45 p. m., Robert Badgley, chimes; 8, Eveready hour of music; 9, Margaret Lockwood, soprano; Henrietta Heinz, pianist; Mary Braun, vocal soloist; Melba Addison, violinist; 9:30, Charles Stokes, violinist; Ferd Raine, tenor.

WTAM, Cleveland, Ohio (389.4), 12:15-1:15 p. m., Euclid music studio; 6-7, Hotel Statler dinner music.

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Purple Grackle boys; Herbie Mintz, Flo Henrie, Lillian Bernard, Tony Corcoran, Violet Eaton, Phil Wilcox, Ruth Etting, Ned Miller, Brock Sisters.

WTIC, Hartford, Conn. (475.9), 5:30 p. m., Hub Restaurant trio; 6, Frances Nearing, contralto; 7, "A Night with Ethelbert Nevin," Travelers Jongleurs and Travelers Troubadours; 8:30, Austin Organ company.

WWJ, Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3 p. m., Detroit News orchestra; 6, dinner concert; 7, concert from WEAF.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7), 5:30-6:30 p. m., Buick Little symphony; Belshaw's orchestra; 8:30-9:30, Schmoller and Mueller company.

KFMQ, Fayetteville, Ark. (299.8), 9 p. m., musical program, Mrs. Don Parmelle, soprano.

KFNF, Shenandoah, Ia. (266), 7:30 p. m., pipe organ concert.

KFVE, University City, Mo. (240), 10 p. m., Hausman Brothers.

KLDS, Independence, Mo. (440.9), 8 p. m., KLDS ladies' quartet.

KOIL, Council Bluffs, Iowa (278), 7:30-9 p. m., program, Mabel Woodworth Jensen, director; Kathleen Shaw, Roberta Skipton, Mrs. William Hansen, sopranos; Helen Whitebrook, Virginia Randolph, Florence Ruth Keyes, pianists; Florence Senior Duerr, accompanist; 9, Creighton educational period, "The Mouth, the Teeth, and Their Care," Dean A. Hugh Hipple; 11-12, Hotsy Totsy hour, Owl orchestra.

KTHS, Hot Springs National Park, Ark. (374.8), 9:25 p. m., Fifty-five piece Rotary Boys' band; Tom Baker, cornetist; 10, Lawson Reid, organist; 10:15, concert, Whittington Park.

KWKH, Shreveport, La. (261), 9-12 midnight, Hotel Youree dance frolic.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 6:30 p. m., program from WEAF; 9:05, Roof Garden party, Railway Business Women's association.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's string trio; 6-7, address; Tell-Me-a-Story Lady; Trianon ensemble; 11:15-1, Merry Old Chief; Plantation players; Charles Dornberger's orchestra.

WFAA, Dallas, Tex. (475.9), 12:30-1 p. m., Beaumont band; 6:30-7:30, Frensley Moore and his Black and Gold serenaders; 8:30-9:30, Virginia Wiley, pianist; 11-12, Mrs. Alexander Keese, soloist; Dwight Brown, pianist.

WHAD, Milwaukee, Wis. (275), 6-7 p. m., Arthur Richter, organist.

WHAS, Louisville, Ky. (399.8), 4 p. m., musical selections, Harry S. Currie, director; 7:30-9, Carl Zoeller's Melodists.

WHO, Des Moines, Ia. (526), 7:30-9 p. m., Bankers Life trio; 11-12, Bankers Life Little symphonic, Leon A. Dashoff, director.

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

WOAI, San Antonio, Texas (394.5), 8:30-9:30 p. m., musical program, Miss Borden; 9:30-10:30, Jimmy's orchestra.

WOAW, Omaha, Nebr. (526), 6 p. m., popular program; 6:30, Ed Myers and his Peony Park orchestra; 7:10, Radio review, Neal Jones; 9, classical; 10, Francis Potter's banjo orchestra; 12, Rialto theater.

WOC, Davenport, Iowa (484), 5:45 p. m., chimes; 6:30-7, Gold Dust twins, WEAF; 7-8, Everoady hour, WEAF; 8-9, Mrs. John Malloy, soprano; John Naab, tenor; John Bishop, reader.

Mountain Standard Time Stations

CNRR, Regina, Can. (356), 8 p. m., Regina Rover Scout band.

KOA, Denver, Colo. (322.4), 6:30 p. m., Herbert White and his Silver State orchestra; 7:30, News-Times concert.

Pacific Standard Time Stations

KFOA, Seattle, Wash. (454.3), 6-6:45 p. m., Pacific States Electric company; 6:45-8:15, Taggart Motor company; 8:30-10, program, Eastern Outfitting company; 9:30-11:30, Eddie Harkness and his orchestra.

KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour with Big Brother of KFWB; 7, talk on golf, Howard Beall; 7:30-9, late news and program, Western's superservice garage, Hollywood trio, Sid Lippman, Ray Bailey and Scotty Denton, Margaret Lancaster, contralto; Ashley sisters, vocal duets; 9-10, program, H. L. Crockett Hudson-Essex company, Elite trio, Louise Sullivan, soprano; Crockett quartet and Way Watts and his ukulele; 10-11, Warner Brothers frolic direction Charlie Wellman.

Luetta Minnick Armstrong, left, sings old time melodies at KFNF, Shenandoah, Iowa. Her clear, sweet voice may be heard every day during the noonday concert. Johanna Grosse, above, is the organist who plays Wednesdays and Saturdays at WLW, Cincinnati.

Virginia Fischer Griffiths, soprano, will take part in the National Carbon company program Saturday night at KGO, Oakland.

KGO, Oakland, Calif. (361.2), 4-5:30 p. m., concert orchestra, Hotel St. Francis; 6-7, dinner concert, Wiley B. Allen company; 8, Frona Simon Sousa, soprano; Bernard O'Brien, baritone; Arion trio; Mrs. Leo B. Hanly, soprano; Leo B. Hanly, baritone; Henry Wadsworth, accompanist; Arion trio; 9:50, "Radio Breezes," K. C. B.

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, weekly visit of Queen Titania and Sandman from Fairyland celebrating their second anniversary program; Louis F. Klein, auto-harp and harmonica; Chas. Leslie Hill, readings; Uncle John; 7:30, H. M. Robertson on "Dogs;" 8-10, program, Broadway Department store, arranged by J. Howard Johnson; 10-11, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.

KJR, Seattle, Wash. (384.4), 1:15-2 p. m., Wurlitzer organ; 2-2:15, home helps, Bernice Redington; 8:30-10, Puget Sound Savings and Loan association concert orchestra, Henri Damski, director.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-8, Don Clark and his La Monica ballroom orchestra; 8-9, KNX feature program; 9-10, program, Beverly-Ridge company; 10-12, movie night at the Ambassador, Ray West and his Cocoanut Grove dance orchestra.

KPO, San Francisco, Calif. (428.3), 12:30 p. m., Theodore J. Irwin, organist; 1-2, Rudy Seiger's Fairmont hotel orchestra; 3:30-4:30, Cyrus Trebbe's Palace hotel concert orchestra; 6:35, Waldemar Lind and the States Restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, program, Edith Caubu, director; 9-10, program, Mona Motor Oil company; 10-11, Jack Coakley's Cabirians.

KTAB, Oakland, Calif. (215), 8-10 p. m., "Mutual Stores' night," quartet; Grace Adams East, cornetist; vocal and instrumental solos.

KTCL, Seattle, Wash. (305.9), 12:30-1:30 p. m., Meves cafeteria concert orchestra; 7-8, Simonds Saw and Steel company.

Wednesday, September 16

Wednesday, silent night for: CHNC, CKAC, CNRC, CNRE, CNRM, CNRR, CNRW, CNRT, KFDM, KFKX, KGO, KLDS, KTCL, WBAV, WBBR, WCAU, WCBD, WCTS, WFAA, WFI, WGCP, WGY, WHAR, WHAZ, WIP, WMC, WOAW, WORD, WPG, WRC, WREO.

Atlantic or Eastern Daylight Saving Time Stations

CKAC, Montreal, Can. (410.7), 1:45 p. m., luncheon concert.

CNRO, Ottawa, Can. (435), 8 p. m., Chateau Laurier concert orchestra; 9, Orville Johnston, pianist; Mrs. G. D. Pavely, soprano; Louis Durocher, clarinetist; Mrs. Alexander Fraser, reader; Madame Gauthier Lund, cellist; Harry Underwood, tenor; Chateau Laurier dance orchestra.

WAHG, Richmond Hill, N. Y. (315.6), 12:30-12:55 p. m., musical program; 1:05-1:30, musical program; 7:30-7:45, sports talk, Thornton Fisher; 7:45-8, Ferdinand Greenwald; 8-8:15, Marguerite Behling, mezzo; 8:15-8:30, Ferdinand Greenwald; 8:30-8:45, Marguerite Behling; 8:45-9:45, Southland dance orchestra; 10-10:15, Synchrophase trio; 10:20-10:45, Glen C. Smith's Paramount orchestra; 10:45-10:55, Stellario Cambria.

WCTS, Worcester, Mass. (268), 12-2 p. m., WCTS trio; 9-10:40, Radio industries banquet, WEAF.

WEAF, New York, N. Y. (491.5), 4-4:15 p. m., Sadrian string trio; 4:45-5, dramatic readings; 6-7, dinner music from Waldorf-Astoria; 7-7:30, services, United Synagogue of America; 7:30-7:45, Dorothy Hoyle, violinist; Westell Gordon, tenor; 8-8:30, Huyler's Foremost Four; 8:30-9, "Pooley Period"; 9-10, Radio Industries banquet, Hotel Commodore; 10:40-11:40, Ipana Troubadours.

WEBJ, New York, N. Y. (272.6), 8-8:30 p. m., Amphions orchestra; 8:15-9, Roth trio; 9:15-9:30, Thomas Prytherch, tenor; 9:30-10, Club Virginia orchestra.

WEEI, Boston, Mass. (348.6), 7:30 p. m., C. B. Collins, tenor; 7:45, talk, Beaudette and Graham company; 8, musicale, Huyler's Inc.; 8:30, Radio Equipment company's musicale; 9, Radio Industries program; 10:40, Ipana Troubadors.

WFI, Philadelphia, Pa. (394.5), 1 p. m., Bellevue Stratford concert orchestra; 3, Loretta Kerk, pianist; 3:45, fashion talk, Eleanor Gunn; 6:45, Bellevue Stratford Roof Garden orchestra.

WGBS, New York, N. Y. (315.6), 1:30-2:30 p. m., Roof orchestra; 2:30-3, program, Radio World's Fair; 6-6:30, Uncle Gee Bee; 6:30-7:30, Yerkes Flotilla orchestra; 7:30-8:30, Second Annual Radio Industries banquet, Hotel Commodore.

WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Dorothy Ross, pianist; 3:15-3:18, Mirror race results; 3:18-3:30, Frank Gallasi, composer; 3:30-3:45, Jane of WGCP; 3:45-3:48, Mirror race results; 4-4:15, Charlotte Trystman, pianist; 4:15-4:18, Mirror race results; 4:18-4:30, Jimmy Tucker, songs; 4:30-4:45, Jane; 445-4:48, Mirror race results; 5-5:15, Harold Glenn, whistler; 5:15-5:30, Jack Palmer and Harry Woods, pianists; 5:30-5:45, W. C. Handy's entertainers; 5:45-5:48, Mirrer race results; 6-6:15, Marie McCristall, soprano 8-8:15, Bernard and Pollack, songs; 8:15-8:30, Dick and Flo Bernard, songs; 8:30-8:45, Jack Smith, personality plus; 8:45-9, Lillian Gordone, contralto; 9-9:15, William J. Rietz, songs; 9:15-9:30, Bob Ward and his three little Wards; 9:30-9:45, Al Piantodosi entertainers; 9:45-10:45, Indianans.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 9-10, annual banquet, Statler ballroom, American Bakers' association, featuring an address by Secretary Hoover; 10-11, two piano recital by the Gospel Melodists; 11-1 a. m., super dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WHN, New York, N. Y. (361.2), 10-10:30 p. m., Roseland dance orchestra; 10:30-11, Palisades Amusement Park orchestra; 11-11:30, Silver Slipper revue.

WIP, Philadelphia, Pa. (508.2), 10 p. m., special exercises for women; 3, Song of the Surf; 3:30, Comfort's Philharmonic orchestra; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime stories.

WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 4:30, Marcella North, pianist; 7:30, Dream Daddy's bedtime stories; 10, Arcadia cafe dance orchestra.

WMCA, New York, N. Y. (340.7), 3-3:30 p. m., Radio World's Fair; 6:30-7:30, Ernie Golden and his Hotel McAlpin orchestra; 9-10, Asbury Park symphony orchestra; 11-12, Berkley-Carteret dance orchestra.

WNYC, New York, N. Y. (526), 6-6:30 p. m., Spanish lessons, V. Harrison Berlitz; 7:10-7:30, dance program; 7:35-8, dance program; 8-8:05, baseball results; 8:05-8:15, piano recital; 8:15-10:15, concert from Mall, Central Park; 10:15-10:30, songs.

WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital; 12:02 p. m., Golden's crystal tea room orchestra; 4:45, organ recital; 7:30, Dorothy Hoyle, violinist; Westall Gordon, tenor; 8:30, Pooley period; 10:30, A. Candelori's dance orchestra.

WOR, Newark, N. J. (405.2), 6:15-7:15 p. m., Ben Goldfard and his Bluebird orchestra; 7:15-7:30, sports talk, Pat Robinson; 7:30-8, Vincent Lopez orchestra; 8-8:10, Topics of the Day, Spencer Armstrong; 9:15-9:30, talk, Dr. Vizetelly; 11-12, Zit's Central Park Casino orchestra.

Eastern Standard or Central Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 8:45 p. m., Dry Slitz hour of music.

KYW, Chicago, Ill. (535.4) 6:35-7 p. m., children's bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 7:35-7:43, entertaining plans, Vivette Gorman; 7:43-7:53, talk, Chicago Motor club; 8-9, musical program, artists United Synagogue of America; 10-12:30 a. m., midnight revue, Albert Hay Malotte, organist.

PWX, Havana, Cuba (400), 8:30 p. m., band concert, Lieut. Armando Romeu, band leader.

WBBM, Chicago, Ill. (226), 8-10 p. m., Samovar orchestra, Nate Caldwell, Maurice Silverman, Sunset male quartet, Herbert Armbruster, Eddie Loftus; 12-2, Stewart-Warner program, Alamo orchestra, Nate Caldwell, Harold Anderson, Eddie Loftus, Harold Weil, Patsy O'Sullivan, harpist.

WBZ, Springfield, Mass. (333.1), 6 p. m., Hotel Kimball trio; 6:32, Radio nature story, Thornton W. Burgess; 8, Nora Gladden Winton, contralto; Mrs. Miriam Munyan Thomson; 8:30, half hour of Shakespeare, Henry Jewett; 9, Lenox orchestra; R. Barclay Brown, baritone.

WCX, Detroit, Mich. (517), 4:15 p. m., concert; 6, dinner concert, Book-Cadillac hotel; 8, musical program.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Hotel Cleveland orchestra.

WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., Oriole orchestra; Florence Behrend, soprano; 9:30-10:30, Oriole orchestra; Correll & Gosden; 11:30-1 a. m., Oriole orchestra; Correll & Gosden; Frank Bordner; Oriole orchestra.

WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Blue Steele and his Fulford-by-the-Sea orchestra; 10-1, dance music.

WGES, Oak Park, Ill. (250). 5-7 p. m., Richard Dale, baritone; Louise Wyse, soprano; John MacFarlane, bass; John Stamford, tenor; 10:30-1 a. m., Kampus Kollegians orchestra; Rose Sweeney, soprano; Frank Gallery, tenor; Lew Russell, Sue Olmstead, ukulele soloist; DeWitt & Owen; Evans Lloyd, baritone.

WGN, Chicago, Ill. (370.2), 12:40 p. m., Drake concert ensemble, Blackstone string quintet; 6:30-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, WGN string trio; 10:30-11:30, jazz seamper, Drake hotel dance orchestra.

WGY, Schenectady, N. Y. (379.5), 5:30 p. m., program for children; 5:45, Albany Strand theater orchestra; Floyd H. Walter, organist.

WHT, Deerfield, Ill. (400), 1 p. m., Grayling's string trio; 7, Al Carney, organist; Pauline Sachs, soprano; Oscar Heather, tenor; Kitchen Klenzer Klassics; Dean Remick, pianist; Jelke musical moments; 8:45, (238), Riverview Park Melody masters; 10:30, (400), Walter Ford's Cheerio orchestra; Carl Strodel, baritone; Hickey and Johnson; Manfred Gotteli, pianist; 12, Pat Barnes, Al Carney, Duke Rehl, Walter Ford.

WJJD, Mooseheart, Ill. (302.8), 10:30 p. m., popular program, Alois Bragagnola, Courtland Banks, Mario Winters, Romo Vincent.

WLS, Chicago, Ill. (344.6), 1 p. m., farm program, Marcus Smith, tenor; 6:30, Ralph Emerson, organist; 7:15, WLS string trio; Rex Maupin; 7:15, lullaby time, Ford and Glenn; 8, syncopation hour; 9, R. F. D. program; 10, WLS string trio; 10:15, Wabash Avenue Y. M. C. A. quartet; 10:45, Ford and Glenn time.

WLW, Cincinnati, Ohio (422.3), 12:15 p. m., Marjory Hebestreit and Irene Downing in novelty program, featuring duets for organ and piano; 4, "Shut-Ins" program; 7, dinner concert, Hotel Gibson orchestra, Robert Visconti, director; 10, joint concert, Ralph Thomas, celebrated lyric tenor; Charles Ridgway, pianist and accompanist; instrumental trio; 10:45, the Cino male quartet; Johanna Grosse, organist.

WMAQ, Chicago, Ill. (447.5), 2:30 p. m., Chicago-Boston baseball game; 6, Chicago theater organ recital; 6:30, Georgene Faulkner story lady; 8, musical program; 9, WMAQ players.

WMBB, Chicago, Ill. (250), 6-7 p. m., Trianon ensemble; Marie Caruso, Bernard Senescu, Rebecca Agulnick, Charles Agne; 9-11, Trianon orchestra; Woodlawn theater orchestra.

WOK, Homewood, Ill. (217.3), 12-2 p. m., Herald Morava, tenor; Jean Carlson, soprano; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 6-7, Robert York, tenor; Jean McConnell, contralto; Eleanor Gilmour, soprano; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 10-1, Ned Miller, tenor; Rita McFawn, soprano; Si Berg, ukulele soloist; Johnny Burns, bass; Dave Kapp and company; Herman Sinaiko, violinist; Herald Morava, tenor; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra.

WORD, Batavia, Ill. (275), 8:30 p. m., I. B. S. A. choral singers; 8:45, address, Calvin H. Swingle.

WQJ, Chicago, Ill. (447.5), 1:45-2:45 p. m., "Recipe Exchange," Helen Harrington Downing; "Cookie Jar Days," Martha Logan; 7-8, Ralph Williams and his Rainbo Gardens orchestra; Clement Laskowski, tenor; Everett George Opie, reader; Kenneth Sterling, baritone; 10-1 a. m., Rainbo Skylarks; Melodians; Esther Trostrud, soprano; Alice Hesner; Fontello trio; Gail Bandell, contralto; Fred A. Jacobson, reader; Clarence Theders, tenor; Sandy Meek, Scotch tenor; Harry Sosnick, pianist; J. Erwin Peterson, bass; 1-2, Ginger hour.

WSAI, Cincinnati, Ohio (326), 10 p. m., golf talk; 10:10, Congress playing card string quartet; Richard Gray, baritone; Waldene Johnston, violinist.

WTAM, Cleveland, Ohio (389.4), 12:15-1:15 p. m., Euclid music studio; 6-7, dinner hour music; 8-9, William Metcalf, organist; Edwin Arthur Kraft; 9-11, studio concert; 11-12, Euclid Beach studio; Euclid Beach dance orchestra.

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Purple Grackle boys; Herbie Mintz, Evelyn Johnson, Art Stiller, Herbert Schroeder.

WTIC, Hartford, Conn. (475.9), 5:30 p. m., Hotel Bond trio; 8, Radio Industries banquet, WEAF.

WWJ, Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3 p. m., Detroit News orchestra; 6, dinner concert; 8, News orchestra; 9, dance program.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7), 5:30-6:30 p. m., Buick Little symphony; 8:30-10:30, Belshaw's orchestra;

(Continued on page 12)

CALIFORNIA GRAYS MILITARY BAND A

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, September 12: 6:30, WGBS; 8:15, WEAF; 8:45, WIP; 10, WCAU; 10:15, WEAF, WNYC; 10:45, WEAF.

Sunday, September 13: 9, WNYC; 10, WNYC.

Monday, September 14: 7:30, WMCA; 7:45, WNYC; 8:30, WAHG, WOR; 8:45, WAHG; 9, WHAR, WOR; 9:30, WGR, WMCA; 12, WAHG.

Tuesday, September 15: 7, WMCA; 8, WHAR, WHN; 8:15, WEAF; 8:30, WCAU, WHN, WJAR; 8:45, WIP; 9:30, WCAU.

Wednesday, September 16: 8:15, WAHG; 9, WMCA; 10, WAHG; 10:15, WNYC; 11, WCAE; 11:30, WMCA.

Thursday, September 17: 7:30, WEAF; 8, WHN; 8:45, WIP; 9, WHN; 9:30, WCAU; 10:15, WHN.

Friday, September 18: 7, WEBJ, WGR; 7:45, WAHG; 8, WEAF, WHN; 8:15, WAHG; 8:45, WLIT; 8:50, WEEI; 9, WAHG; 9:30, WCAU; 10, WLIT; 10:15, WNYC; 10:35, WAHG; 10:45, WEAF; 11:30, WLIT.

Eastern Standard or Central Daylight Saving Time Stations

Saturday September 12: 6:20, WWJ; 8, WBBM, WHT, WLS, WMAQ, WTAS; 8:30, WMBB; 9, WBBM, WLS, WTAM; 9:30, WMBB, WTAS; 10, WBBM, WGBU, WKRC, WLS, WQJ; 10:30, WCEE, WGES, WHT, WJJD, WTAM; 11, WBBM, WGES, WLS, WQJ; 11:30, WCEE, WJJD; 12, WBBM, WHT, WLS, WQJ, WSAI; 1, WBBM, WQJ, WTAM; 2, WTAM.

Sunday, September 13: 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, WBBM, WJJD.

Monday, September 14: 6, WBBM; 8, WLW, WTAS; 9, WTAS; 9:30, WHAZ; 10, WLW; 10:15, WHT; 10:30, WCEE, WJJD; 11, WHT; 11:30, WCEE, WHT, WJJD; 12, WHT, WJJD.

Tuesday, September 15: 6, WBBM, WTAS; 8:30, WMBB; 9, WBBM, WHT, WTAS; 9:15, WREO; 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, WBBM, WIBO, WQJ; 2, WIBO.

Wednesday, September 16: 8, WEAO, WLS, WTAS; 8:30, WBBM, WMBB; 9, WBBM, WKRC, 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, September 17: 8, WBBM, WTAS; 8:15, WREO; 8:30, WMBB; 9, WBBM, WTAS; 9:30, WEBH, WMBB; 10, WBBM, WQJ, WTAS; 10:03, WLW; 10:30, KYW, WEBH, WGN, WHT; 11, WHT, WQJ, WTAS; 11:15, WLW; 11:30, WEBH; 12, WBBM, WIBO, WQJ; 12:30, WEBH; 1, WIBO, WQJ; 2, WIBO.

Friday, September 18: 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, September 12: 6:30, WFAA; 7, KSD; 8:30, WOAI, WSMB; 9, KFRU; 9:25, KTHS; 9:30, WSMB; 10, KFRU, KFVE; 10:45, WSB; 11, WBAP, KFRU, KFVE, WOAW.

Sunday, September 13: 9:30, WFAA, WOAI; 11, WBAP.

Monday, September 14: 6:30, WFAA, WOAW; 6:45, WCCO; 7:30, KFAB; 8, KFAB, KFRU; 8:30, KFAB, WMC, WOAI, WSMB; 9, KFRU; 9:30, WSMB; 10, KFVE, WOAW; 10:45, WSB.

Tuesday, September 15: 6:30, WOC; 8, WCCO, WSB; 8:30, WOAI; 10, KFVE; 10:30, KFRU, WOAW; 10:45, WSB; 11:30, KFRU; 12, WOAW.

Wednesday, September 16: 7:30, KFAB; 8, KFRU; 8:30, KFAB, WSMB; 9, KFRU; 9:30, WSMB; 10, KFRU, KFVE; 10:45, WSB; 11:45, WDAF.

Thursday, September 17: 6, WOAW; 8, WCCO; 8:30, WOAI, WSMB; 9, WOAW; 9:30, WSMB.

Friday, September 18: 8, KFAB, WDAF; 8:30, KFAB, WOAI; 9, WHAD; 10, KFVE; 10:45, WSB; 11, KFRU, WMC; 11:45, WDAF; 12, KFRU.

Mountain Standard Time Stations

Wednesday, September 16: 10, KFWA.

Friday, September 18: 10, KFWA.

Pacific Standard Time Stations

Saturday, September 12: 8, KFWB, KNX; 9, KNX, KPO; 10, KFWB, KFI; 11, KNX; 11:30, KHJ, KTCL; 12, KNX; 12:30, KHJ; 1, KNX; 1:30, KHJ.

Sunday, September 13: 8, KHJ; 9, KFWB; 10, KFWB.

Monday, September 14: 9, KNX; 10, KFWB; 11, KFWB; 12, KFWB.

Tuesday, September 15: 8, KFWB, KNX; 9, KNX, KPO; 10, KFWB, KNX; 11, KFWB.

Wednesday, September 16: 8, KGW, KPO; 9, KFWB, KNX; 10, KNX; 11, KFWB; 11, KNX.

Thursday, September 17: 8, KHJ; 9, KHJ, KTAB; 10, KFWB, KHJ; 11, KNX.

Friday, September 18: 8, KFWB; 9, KFWB, KHJ, KNX; 10, KFWB, KNX; 10:30, KGW; 11, KFWB, 11:30, KGW; 12, KFWB, KNX; 1, KNX.

Arthur Blight, a well-known baritone of Toronto, will take a prominent part in the first anniversary party of CHNC Monday night.

Correll, left, and Gosd regular artists at Edgewater Beach ho cago, are now taking behind the footlight are appearing the September 13, at M theater, Chicago, as the sketch called "R The song, "Kinky K ade" and their sketch, with the Mind Reader good applause ma

Wednesday, September 16

(Continued from page 11)

Ralph Hall, banjoist; Waikiki trio; Hazel Miller, Frank Carrell; C. Loren Jimmerson, marimba, xylophone soloist.

KFMQ, Fayetteville, Ark. (299.8), 7:30 p. m., farm filosofy, Cy Adams; "How Uncle Sam Cooperates with the Farmer," T. Roy Reid; "Picking Cotton to Keep Up the Grade," E. B. Whitaker; "Fall and Winter Clothing," Agnes Nelson.

KFNF, Shenandoah, Iowa (266), 7:30 p. m., Shenandoah Retailers association.

KFVE, University City, Mo. (240), 10 p. m., Leona Bloomer; Mrs. Elsa Herzog, accompanist; Orchestra Romaine.

KTHS, Hot Springs National Park, Ark. (374.8), 9:25-10 p. m., New Arlington hotel Meyer Davis orchestra; songs, Mrs. George Belding, contralto; 10-10:45, Ray Mullins orchestra.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 7 p. m., Radio Industries banquet; 8:40, Ipana Troubadours, WEAF; 10, Dick Long's Nankin Cafe orchestra; 11:30, Eddie Dunstedter, organist.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's string trio; 6-7, address: Tell-Me-a-Story Lady; Trianon ensemble; 8-9:15, Star's Radio string orchestra; 11:45-1, Merry Old Chief, Plantation players; Ted Meyn, organist.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Sears-Roebuck Agricultural Foundation program.

WHAD, Milwaukee, Wis. (275), 6-7 p. m., Arthur Richter, organist; 8, band concert; 11:30, Edmund Fitch, organist.

WHAS, Louisville, Ky. (399.8), 4 p. m., musical selections, Harry S. Currie; 7:30-9, Jake Seligman and his Kentucky Night Owls.

WHO, Des Moines, Iowa (526), 6:30-7:30 p. m., Reese-Hughes orchestra; 7:30-9, Smith Harmony Sisters; Great Western Silver string serenaders; 9-10:30, Corn Sugar orchestra; 10:30-12, dance program.

WOAI, San Antonio, Tex. (394.5), 8:30-9:30 p. m., army night.

WOC, Davenport, Ia. (484), 4-4:45 p. m., Mrs. E. John Richards, organist; Paul Vipperman, tenor; Louis Crowder, pianist; 7-8:40, Radio Industries banquet, WEAF; 8:40-9:40, Ipana Troubadours, WEAF; 9:40-10:40, Erwin Swindell, organist; Herbert Silberstein, violinist; Petit's orchestra.

WOS, Jefferson City, Mo. (440.9), 8 p. m., address, Hon. L. H. Breuer; Schell's orchestra.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4), 6:30 p. m., Herbert White and his Silver State orchestra; 7:30, Book of Knowledge; 8, joint convention program, public utility associations, Colorado, New Mexico, Wyoming, Rocky Mountain division; address, Herbert Hoover; 10, Kiutus Tecumseh, Indian tenor; Simeon Oliver, Eskimo pianist; 10:30, dance program.

Pacific Standard Time Stations

KFAE, Pullman, Wash. (348.6), 7:30-9 p. m., Alois Schroller, pianist; "Use of Whole Grain Cereals in the Diet," Mary Sutherland; Treadwell orchestra; Mrs. Brewster, pianist.

KFOA, Seattle, Wash. (454.3), 6-6:45 p. m., Pacific States Electric company; 6:45-8:15, Hepper Kelly company; 8:30-10, Times studio program.

KFWB, Hollywood, Calif. (252), 6-7 p. m., children's hour with Big Brother of KFWB; 7-7:30, Mutual Motors mirth contest; 7:30-8, program, Beverlyridge company; Louise Howatt, pianologues; Beverlyridge Hawaiians; 8-9, program, John Wright, Rogers' Hawaiian trio, John Wright's orchestra and Barbara Bunnell, blues singer; 9-10, program, Independent Furniture Manufacturing company, Mitchell's Darktown orchestra; 10-11, Warner Bros. frolic, direction Charlie Wellman.

KGO, Oakland, Calif. (361.2), 6-7 p. m., dinner concert, Baldwin Piano 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 Fitzpatriek, director; 6:30-7:30, Dick Winslow, juvenile reportor, Baby Muriel MacCormac and Mickey McBan, screen starlets; 8, Dr. Mars Baumgardt, scientific lecturer; 8:30-10:30, Mexican program by H. Jevne company, arranged by J. Howard Johnson; 10:30-11:30, Art Hickman's Biltmore hotel dance orchestra.

KJR, Seattle, Wash. (384.4), 1:15-2 p. m., Wurlitzer organ recital; 2-2:15, home helps, Bernice Redington; 7-8:30, Sears-Roebuck and company program; 8:30-10, Post Intelligencer studio program.

KNX, Hollywood, Calif. (336.9), 5:30-6:15, p. m., Wurlitzer pipe organ studio; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-8, Ambassador hotel concert orchestra, Josef Rosenfeld, director; 8-9, KNX feature program; 9-10, program with a kick, Hercules Gasoline company; 10-11, hour of dance music.

KPO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30-3:30, studio program; 6:35, Waldemar Lind and his States Restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, Atwater Kent artists; 9-10, Goodrich Silvertown Cord orchestra; 10-11, Waldemar Lind and the States Restaurant orchestra.

KTAB, Oakland, Calif. (215), 9-11 p. m., studio program, contralto, baritone, pianist.

Thursday, September 17

Thursday, silent night for: CNRE, CNRR, CNRT, KFAB, KFAE, KFDM, KFKX, KFMQ, KFOA, KFVE, KOA, KSD, KTCL, PWX, WAHG, WBAV, WCEE, WEBJ, WHAD, WHAZ, WJJD, WLIT, WOR, WOS, WTAM.

Atlantic or Eastern Daylight Saving Time Stations

CKAC, Montreal, Can. (410.7), 7 p. m., piano lessons, Emiliano Renaud; 9, CNRM.

CNRM, Montreal, Can. (411), 9 p. m., orchestra, R. M. S. Megantic.

WAHG, Richmond Hill, N. Y. (315.6), 12:30-12:55 p. m., Joe Zimmerman, pianist; 1:05-1:30, Joe Zimmerman.

WBBR, New York, N. Y. (272.6), 8 p. m., instrumental trio, Carl Park, George Twaroschk, John Yankee; 8:10, Mrs. Benjamin Brown, soprano; 8:20, Sunday school lesson; 8:40, Mrs. Benjamin Brown, soprano; 8:50, instrumental trio.

WCAU, Philadelphia, Pa. (278), 6:25 p. m., baseball scores; 6:30, Billy Hayes Cathay Tea Garden dance orchestra; 7:30, N. Snellenburg recital; Willard F. Corman, baritone, Virginia Klien, accompanist; 9, Barry O'Moore, Irish tenor; 9:30, Frank Cook, songs; 10:30, Eddie Malle and Danny Dougherty, the Radio Romeos.

WCTS, Worcester, Mass. (268), 12-2 p. m., WCTS trio; 10-11, Silvertown Cord orchestra, WEAF.

WEAF, New York, N. Y. (491.5), 4-4:15 p. m., musical program; 4:15-4:30, Ernest Lippman, violinist; 4:30-4:45, musical program; 4:45-5, "Book Review," John Farrar; 6-7, dinner music, Waldorf-Astoria; 7-7:30, services, Greater New York Federation of Churches; 7:30-8, Cushman's serenaders; 8-8:30, "Pop" concert; 8:30-9, talk, George Elliott Cooley; 9-10, Atwater Kent Radio artists; 10-11, Silvertown Cord orchestra; 11-12, Vincent Lopez and his Hotel Pennsylvania orchestra.

WEEI, Boston, Mass. (348.6), 7:30, p. m., musicale; 8, musicale from New York; 9, Atwater Kent Radio artists; 10, Goodrich Silvertown Cord orchestra.

WFI, Philadelphia, Pa. (394.5), 1 p. m., Bellevue Stratford concort orchestra; 3, Loretta Kerk, pianist; "Housewives' Radio Exchange," Mabel Swint Ewer; 6:45, Bellevue Stratford Roof Garden orchestra; 8, Pop concert; 9, Atwater Kent Radio artists; 10, Goodrich Silvertown Cord orchestra.

WGBS, New York, N. Y. (315.6), 1:30-1:45, Juliette Strahl, soprano; 2-2:15, William Mumbauerm, baritone; 2:30-3, Strand Roof orchestra from Radio World's Fair; 3-4, New York American Woman in the home program with Marion Ross, contralto; 6-6:30, Uncle Gee Bee; 7-7:10, weekly news review; 7:30-8:30, Voltaire house of music; 8:30-8:45, Oliver Sayler, Footlight and Lamplight; 9:30-10:30, Warner theater program.

WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Marguerite Austin; 3:15-3:18, Mirror race results; 3:18-3:30, Jack Cohen, jazzologue; 3:30-3:45, Jane; 3:45-3:48, Mirror race results; 3:48-4, Shirley Herman, child singer; 4-4:15, Paul Denniker and his orchestra; 4:15-4:18, Mirror race results; 4:18-4:30, Jane; 4:45-4:48, Mirror race results; 4:48-5, Win Unger; 5-5:15, Sylvia Miller; 5:15-5:18, Mirror race results; 5:30-5:45, Bob Schaefer and Fred Fisher with Jerry Antone's orchestra; 5:45-5:48, Mirror race results.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director; 8-11, jointly with WEAF, including Atwater Kent Radio artists and the Goodrich Silvertown Cord orchestra.

WHAR, Atlantic City, N. J. (278), 2 p. m., Seaside hotel trio; 7:30, lecture period; 8, Seaside hotel trio; 9, vocal and instrumental studio concert.

WHN, New York, N. Y. (361.2), 8-8:30 p. m., Will Oakland's Chatteau Shanley; 9:30-10, Palisades Amusement Park 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; 6:30, "Intimate Talks on Current Sports of the Day," William Recap; 7, Uncle Wip's bedtime stories; 8, Comfort's philharmonic orchestra; 8:45, Song of the Surf; 8:50, Veselli's band; 10, Gaylord and Young dance orchestra; 11, California Night Hawks.

WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 4:30, Marcella North, pianist; 7:30, Dream Daddy's bedtime stories.

WMCA, New York, N. Y. (340.7), 3-3:30 p. m., Radio World's Fair; 9-10, Asbury Park symphony orchestra; 10-10:30, Snedden Weir, baritone; 11-12, Ernie Golden and his Hotel McAlpin orchestra.

WNYC, New York, N. Y. (526), 6:30-6:40 p. m., "Home Economics," Mrs. Louis Reed Welzmiller; 6:45-7, song recital; 7:10-7:30, Club Arcady orchestra; 7:35-8, Club Arcady orchestra; 8-8:15, baseball results; 8:15-10:15, concert, WNYC studio.

WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital; 12:02 p. m., Golden's crystal tea room orchestra; 1:45, organ recital; 7:30, A. Candelori's concert orchestra.

WOR, Newark, N. J. (405.2), 6:15-7:15 p. m., Tom Cooper's Country club orchestra; 7:15-7:30, sports talk, Pat Robinson.

Eastern Standard or Central Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 8:45 p. m., Constitutional day, Fort Pitt hotel; 10:15, concert from Willows.

KYW, Chicago, Ill. (535.4), 2:35-4 p. m., afternoon frolic; 6:35-7, children's bedtime story; 7-7:30, dinner concert, Congress hotel; 7:35-7:53, American Farm Bureau federation; 8-8:20, twenty minutes of good reading, Rev. C. J. Petnin; 8:20-9:15, Katherine Johnson, soprano; Sallie Menkes, pianist; 9:15, talk, John C. Cutting; 10-11:30, evening at home; "Hollywood Headliners," Frank H. Clark; KYW's Aerial minstrels.

WBBM, Chicago, Ill. (226), 8-9 p. m., Samovar orchestra; Eddie Loftus, Nate Caldwell; 9-10, Stewart-warner program, Alamo orchestra; Nick Probst, Lew Russell, Murray Smith, Earl Bergman, Eddie Loftus, Marie Margot; 10-12, Samovar orchestra, Harold Anderson, Maurice Silverman, Eddie Loftus.

WBZ, Springfield, Mass, (333.1), 6 p. m., Leo Reisman Hotel Lenox ensemble; 6:15, Roger Gray, comedian; 6:35, Leo Reisman Hotel Lenox ensemble; 8, McBaneffy's singing orchestra; 8:30, Blanche Pickering, pianist; Viola Grant, soprano; 9, program, Chickering and company.

WCX, Detroit, Mich. (517), 4:15 p. m., concert; 6, dinner concert, Book-Cadillac hotel; 8, musical program.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Marjorie Moore and her Melody Maids; 8-9, R. T. L. program; 9-10, Chauncey Lee and his orchestra; 10-11, Vincent H. Percy, organist.

WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., Oriole orchestra; 9:30-10:30, Oriole orchestra; Katherine Forbes, soprano; Loos Brothers; 11:30-1, Oriole orchestra; Paul Small; Wayne Myers.

WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Blue Steele and his Fulford-by-the-Soa orchestra; 10-1, dance music.

WGES, Oak Park, Ill. (250), 5-7 p. m., Katherine O'Brien, reader; Eleanor Kaplan, violinist; Margaret Samuelson, pianist; Joy Small, whistler; Lucille Engel, violinist; 10:30-1 a. m., Sun Dodgers orchestra; Dorothy Knox; Reynertson Sisters; Phil Wilcox, Walter Kirsch, Ben Kanter, Lew Botler, Parris and Ward, Phil Fleming.

WGN, Chicago, Ill. (370.2), 12:40 p. m., Drake concert, Blackstone string quintet; 6:30-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, WGN string trio; 10:30-11:30, jazz scamper, Drake hotel dance orchestra.

WGY, Schenectady, N. Y. (379.5), 1 p. m., "Cooperation," Lola Gutmuh; 5:30, Ten Eyck hotel; 6:35, WGY book chat, L. L. Hopkins; 6:45, WGY orchestra; "Taking Pictures of Moose and Deer;" 7:30, U. S. Army band; 9, Royal hour; 10:30, Stephen E. Boisclair, organist.

WHT, Deerfield, Ill. (400), 1 p. m., Grayling's string trio; 7, Ruth Lyon, soprano; John Clark, baritone; Wilkens and Matters; Al Carney; 8:45, (238), Riverview Park Melody Masters; 10:30, (400), U. S. L. Battery of Engineers; Walter Ford's Cheerio orchestra; Howard Serehon, tenor; Gertrude Hugford, soprano; 12, Pat Barnes, Al Carney, Duke Rehl, Walter Ford.

WJJD, Mooseheart, Ill. (302.8), 10:30 p. m., Senator Harold Kessinger; Jean St. Anne, French baritone; Christian A. Grimm, J. E. Stevens, Emma Bevensee Butler; organ selections.

WLS, Chicago, Ill. (344.6), 1 p. m., farm program,

AT KPO; REITHER'S GANG AT WBAV

and Gosden, right, ists at WEBH, Beach hotel, Chi- w taking a week footlights. They ng the week of 13, at McVicker's ago, as a part of called "Red Hot." Kinky Kids' Par- r sketch, "A Night d Reader" are two plause makers.

Catherine Townley is the pianist who has recently joined the Coo Coo club at WTAM Saturday nights.

KWKH, Shreveport, La. (261), 8-9 p. m., Southern musical program.

WCBD, Zion, Ill. (344.6), 8 p. m., celestial bells, vocal trio; Fred Faassen, organist; Esther Wiedman, soprano; Mrs. P. M. LaRose, contralto; Herbert Hendricks, reader; Mary Ross, pianist.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 2:05 p. m., among the musicians, H. A. Bellows; 5:30, children's hour, Eleanor Poehler; 7-9, program, from WEAF, Atwater Kent Radio artists; Silvertown Cord orchestra.

WDAF, Kansas City, Mo. (365.6), 6-7 p. m., hook talk, Louis Mecker; Tell-Me-a-Story Lady; Trianon ensemble; 11:45-1, Merry Old Chief; Carl Nordberg's Plantation players; Charles Dornberger's Kansas City Athletic club orchestra; Earl Coleman's Ambassador hotel orchestra.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., DeWitt McMurray; 6:30-7:30, Lone Star Five's seven-piece orchestra; 8:30-9:30, farmers' hour, Vaughan male quartet; 11-12, Old Mill theater orchestra.

WHAD, Milwaukee, Wis. (275), 6-7 p. m., Arthur Richter, organist; 8-10, popular dance hits, Dexter's Wisconsin and Elger's Creole roof orchestra.

WHAS, Louisville, Ky. (399.8), 4 p. m., musical selections, Harry S. Currie; 7:30-9, Scottsburg, Ind., night, Frances Sellers, whistler, director.

WHO, Des Moines, Iowa (526), 7:30-9 p. m., Bankers Life trio; 11-12, Bankers Life Little symphonie.

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

WOAI, San Antonio, Tex. (394.5), 8:30-9:30 p. m., Menger hotel trio; 9:30-10:30, Jimmy's Joys dance music.

WOAW, Omaha, Nebr. (526), 6 p. m., popular program; 6:25, to be announced; 6:45, Randall's Royal Fontenelle orchestra; 9, orchestra.

WOC, Davenport, Ia. (484), 7-8 p. m., Atwater Kent artists, WEAF; 8-9, Silvertown Cord orchestra, WEAF; 11-12, LeClaire hotel orchestra; Peter MacArthur, baritone.

Mountain Standard Time Stations

CNRC, Calgary, Can. (435.8), 9 p. m., C. N. R. Little symphony orchestra.

KOA, Denver, Colo. (322.4), 3 p. m., Rialto theater musicale; 4, fashion review; 6:30, Herbert White and his Silver State orchestra; 7:30, farm question box.

Pacific Standard Time Stations

KFWB, Hollywood, Calif. (252), 7:30 p. m., talk on golf, Howard Beall; 7:40, Jack Boaz, fisbing scout; 7:45, Dr. T. Floyd Brown, plastic and facial surgery; 8-9, program, Starr Piano company presenting Hollywood Rythmn Kings in arrangements of Gennett records; 9-10, program, Don P. Smith, Inc., Diana-Moon dance orchestra, Decker's Hawaiian trio, Ina Mitchell Butler, soprano; 10-11, Warner Bros. frolic, direction Charlie Wellman.

KGO, Oakland, Calif. (361.2), 4-5:30 p. m., concert orchestra, Hotel St. Francis; 5:30-6:30, George W. Ludlow, "Friend to Boys;" 8, "The Fool," KGO players; Arion trio; 10-12, Ben Black's 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 dance orchestra, Edward Fitzpatrick, director; 6:30-7:30, Radio kiddies hour with Jack Searle and pupils of Winifred Pollard, Uncle John; 8-9, program, Fitzgerald Music company, Claire Mellonino, concert pianist; 9-10, program arranged by J. Howard Johnson; 10-11, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.

KJR, Seattle, Wash. (384.4), 1:15-2 p. m., organ recital, Columbia theater; 2-2:15, home helps, Bernice Redington; 8:30-10, Puget Sound Savings and Loan association concert orchestra; 10:30-12, "Keep Joy Radiating Order of Bats."

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-8, program, John A. Evans corporation; 8-9, program, Beverlyridge company; 9-10, KNX feature program; 10-11, Ray West's Ambassador hotel dance orchestra playing in Cocoanut Grove.

KPO, San Francisco, Calif. (428.3), 12:30 p. m., Theodore J. Irwin, organist; 1-2, Rudy Seiger's Fairmont hotel orchestra; 2:10, proper care of silverware, Alvin Silver company; 3:30-4:30, Palace hotel concert orchestra; 6:35, Waldemar Lind and the States Restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, program, Don, Lee Cadillac company; 9-10, California Grays Military band; 10-11, Jack Coakley's Cabirians.

KTAB, Oakland, Calif. (215), 9-11 p. m., musical program.

KTCL, Seattle, Wash. (305.9), 12:30-1:30 p. m., Meeves cafeteria concert orchestra.

(Continued on page 14)

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, September 12: 6, WEAF; 6:05, WIP; 6:30, WCAE; 6:45, WPG; 7, WEAF, WNYC; 7:30, CKAC, WEAF, WGBS; 7:35, WNYC; 7:45, WEAF; 8, WBBR, WEAF, WFI, WHAR, WIP, WMCA; 8:05, WEAF, WPG; 8:15, WNYC; 8:20, WEAF; 8:30, WCAE, WFI, WMCA; 8:40, WBBR; 8:45, WEAF, WGR; 8:50, WIP; 9, WMCA, WPG; 10:30, WEAF.

Sunday, September 13: 6, WOO; 6:30, WCAE; 7:20, WCAE, WCTS, WEAF, WEEI, WJAR; 8, WGBS, WGCP; 8:15, WEAF, WGCP, WLIT; 8:45, WJY; 9, WBBR, WHAR, WMCA; 9:15, WCTS, WEEI, WJAR; 9:30, WGCP; 10, WBBR, WIP; 11, WHAR.

Monday, September 14: 6, WEAF; 6:05, WIP; 6:30, WCAE; 7, WEAF, 7:30, WEEI, WOO; 7:45, WAHG, WEEI; 8, WAHG, WBBR, WCTS, WGCP, WHAR, WOO; 8:15, WEAF, WNYC; 8:30, CHNC, WAHG, WBBR, WEEI; 8:45, WEAF, WGCP, WOO; 9, WCAE, WEEI, WLIT, WMCA, WNYC, WOO; 9:15, WAHG; 9:30, WEAF; 9:40, WEAF, WOO; 10, WAHG, WEAF, WOO; 11, WHN.

Tuesday, September 15: 6, WEAF; 6:05, WIP; 6:30, WCAE, WGR; 7, CKAC, WEAF, WGR; 7:30, CKAC, WCAU, WEAF, WEEI, WJY; 8, WCAE, WCAU, WEEI, WGR, WIP, WJY; 8:15, WEBJ, WNYC; 8:30, WCAE, WEAF, WEBJ, WEEI, WFI, WGBS; 8:50, WIP; 9, WCAE, WCAU, WEAF, WEEI, WFI, WGBS, WGR, WJAR; 9:30, WGBS, WGR; 9:50, WIP; 10, WCAE, WEAF, WEEI, WFI, WGR, WMCA; 11, WHAR.

Wednesday, September 16, 6, WEAF, WGR; 6:05, WIP; 6:30, WCAE; 7:30, WEAF, WEEI, WOO; 7:45, WNYC; 8, WAHG, WCAU, WEAF, WEEI, WOO; 8:15, WAHG, WNYC; 8:30, WAHG, WEEI, WMCA; 8:45, WEBJ; 9, WCAE, WCTS, WEAF, WEEI, WGR, WMCA, WOO; 9:15, WEBJ; 9:45, WEBJ; 10, WGR, WOO; 10:40, WEAF, WEEI.

Thursday, September 17: 6, WEAF, WGCP; 6:05, WIP; 6:30, WCAE; 7, CKAC; 7:30, WCAU, WGBS, WEEI, WHAR, WOO; 8, WBBR, WCAU, WEAF, WEEI, WFI, WGR, WIP, WJAR; 8:15, WNYC; 8:30, WHAR; 8:40, WBBR; 8:50, WIP; 9, WCAE, WCAU, WEAF, WEEI, WFI, WGR, WMCA; 9:30, WGBS, WMCA; 10, WCAE, WCTS, WEAF, WGR, WEEI, WMCA.

Friday, September 18: 6, WEAF, 6:05, WIP; 6:30, CNRT, WCAE; 7:10, WNYC; 7:30, WCAU, WEBJ, WEEI; 7:45, WEAF, WNYC; 8, WEBJ, WEEI, WGCP, WGR, WHAR, WJAR, WOO; 8:15, WAHG, WNYC; 8:30, WAHG, WCAE, WEBJ, WEAF, WMCA, WOO; 9, WCAE, WEAF, WJAR, WMCA, WOO; 9:15, WEAF; 9:30, CNRT; 9:45, WGCP; 10, WEAF, WOO; 10:15, WNYC; 10:45, WHAR; 11, WHAR.

Eastern Standard or Central Daylight Saving Time Stations

Saturday, September 12: 6, KYW, WCX, WIBO, WGES, WMAQ, WTAM, 6:30, WGN; 6:45, WJJD; 7, KYW, WEAR, WHT, WIBO, WJR, WLW, WMBB, WQJ; 7:15, WJJD; 7:25, WGY; 7:30, WRC; 7:35, KYW, WLW; 7:45, WLS; 8, WJR, WORD, WSAI, WTAM; 8:15, WSAI; 8:30, PWX, WGN; 8:45, KDKA; 9, WMAQ; 9:15, WSAI.

Sunday, September 13: 6, WCX, WGES; 6:30, WHT; 6:45, WORD; 7, WEAR, WEBH, WGY, WMBB; 7:45, WGY; 8, WBZ, WCX, WLS, WLW, WQJ; 8:15, WREO, WWJ; 8:30, WEBH; 8:45, WBZ; 9, WGBU, WGN, WGY, WQJ; 10, WGBU, WKRC.

Monday, September 14: 6, WBZ, WCX, WGES, WMAQ, WTAM, WWJ; 6:30, WGN; 6:55, WTIC; 7, WEAR, WHT, WJR, WLW; 7:15, WJJD; 7:20, WWJ; 7:30, WCX, WHT; 7:40, WGY; 8, WBZ, WCX, WTAM; 8:15, WHAZ; 8:30, WBZ, WCX, WHAZ; 8:45, KDKA; 9, WBZ, WKRC, WORD, WTAM; 9:15, WBZ, WHAZ; 10, WSAI, WTAM; 11, WLW; 12:30, WHT.

Tuesday, September 15: 6, WBZ, WCX, WGES, WIBO, WMAQ, WTAM, WWJ; 6:30, WGN, WLW; 6:45, WGY, WJJD; 7, KYW, WEAR, WHT, WIBO, WJR, WMBB, WQJ, WWJ; 7:10, WTIC; 7:15, WJJD; 7:25, WGY; 7:30, WBZ, WCX, WEBH, WRC, WTIC; 7:45, KYW, WSAI; 8, KYW, WBZ, WCX, WEAR, WSAI; 8:10, WTIC, WREO; 8:30, WBZ, WCX, WGN, WMAQ; 8:45, KDKA, KYW; 9, WEAR, WORD, WSAI; 10, KYW, WEAR, WKRC; 10:30, KDKA; 12:30, WHT.

Wednesday, September 16: 6, WBZ, WCX, WGES, WIBO, WMAQ, WTAM, WWJ; 6:15, WJJD; 6:30, WGN; 7, KYW, WEAR, WHT, WIBO, WJR, WLW, WMBB, WQJ; 7:15, WJJD; 7:30, WCX, WEBH, WHT; 8, KYW, WBZ, WCX, WTAM; 8:15, WBZ; 8:30, PWX, WBZ, WCX, WGN, WORD; 8:45, KDKA; 8:50, WBZ; 8:55, WMAQ; 10, WLW, WTAM; 11, WLW.

Thursday, September 17: 6, WBZ, WCX, WGES, WIBO, WMAQ, WTAM, WWJ; 6:30, WGN; 6:45, WGY; 7, KYW, WEAR, WHT, WIBO, WJR, WLW, WMBB, WQJ, WSAI, WWJ; 7:30, WBZ, WCX, WEBH, WGY, WHT, WRC; 8, WCX, WEAR, WSAI; 8:15, WREO; 8:30, WCX, WGN; 8:45, KDKA; 9, WBZ, WGY, WORD, WSAI; 10, KYW, WEAR; 10:15, KDKA; 10:30, WGY; 12:30, WHT.

Friday, September 18: 6, WBZ, WCX, WGES, WIBO, WMAQ, WTAM, WWJ; 6:30, WGN; 6:45, WJJD; 7, KYW, WHT, WIBO, WJR, WMBB, WQJ, 7:10, WTIC; 7:15, WJJD; 7:20, WGY; 7:30, WCX, WEBH; 7:55, WTIC; 8, KYW, WBAV, WBZ, WCX, WWJ; 8:15, WBZ; 8:30, WBZ, WCX, WGN, WMAQ; 8:45, KDKA, WBZ; 10:30, WHT.

Central Standard Time Stations

Saturday, September 12: 6, KFAB, WOAW; 6:15, WCCO; 6:30, WFAA, WSMB; 7:30, KFNF, WHAS; 8, WCCO, WSB; 8:30, WFAA, WHAS, WMC; 9, WOAW, WOC.

Sunday, September 13: 6, WAMD; 7:30, WHO; 8, KFDM, WCBD, WOS; 9, WAMD; 9:15, WCCO; 9:25, KTHS; 9:30, WOC; 10, KFVE; 10:30, WOC.

Monday, September 14: 6, KFAB, WOAW.

Tuesday, September 15: 6, KFAB, WHAD, WOAW; 6:05, WCCO; 6:25, WOAW; 6:30, WSMB; 7, KSD, WCCO, WOC; 7:30, KFAB, KFNF, WHAS, WHO; 8, KFDM, WOC; 8:30, WFAA, WHAS, WMC; 9, KFMQ, WOAW; 9:25, KTHS; 10, WOAW; 11, WFAA, WMC.

Wednesday, September 16: 6, KFAB, WHAD; 6:30, WHO, WOAW, WSMB; 7, KSD; 7:30, KFNF, KSD, WHAS, WHO; 8, WCCO, WDAF, WOS; 8:30, WHAS, WOAI; 9, WOC; 9:25, KTHS; 11:30, WCCO, WHAD.

Thursday, September 17: 6, WHAD; 6:30, WFAA, WOAW, WSMB; 7, WCCO, WOC; 7:30, KFNF, WHAS, WHO; 8, WCBD, WOC; 8:30, WFAA, WHAS, WMC; 9:25, KTHS; 10:45, WSB.

Friday, September 18: 6, KFAB, WHAD; 6:15, WCCO; 6:30, WFAA, WOAW, WSMB; 7, KSD; 7:30, KFNF, KSD, WHAS, WHO; 8, KFDM, KSD, WCCO, WOS, WSB; 8:30, KFKX, WFAA, WHAS, WHO, WMC; 9, KFDM, KFKX, WOAW, WOC; 9:05, WCCO; 9:25, KTHS; 10, KFKX.

Mountain Standard Time Stations

Monday, September 14: 6:30, KOA; 8, KOA.

Tuesday, September 15: 6:30, KOA; 7:30, KOA.

Wednesday, September 16: 6:30, KOA; 8, KOA.

Thursday, September 17: 6:30, KOA; 9, CNRC.

Friday, September 18: 6:30, KOA; 8, KOA; 8:30-10:30, CNRE.

Pacific Standard Time Stations

Saturday, September 12: 6, KFOA, KHJ; 6:30, KNX; 6:45, KFOA; 7, KNX; 7:30, KNX; 8:10, KGO; 8:15, KHJ.

Sunday, September 13: 6:30, KHJ; 6:35, KPO; 7, KHJ, KNX; 8, KHJ, KNX, KPO; 9, KHJ, KNX; 10, KNX.

Monday, September 14: 6, KFOA, KGO; 6:30, KNX; 6:45, KFOA; 7, KPO; 7:30, KNX; 8, KHJ; 10, KHJ.

Tuesday, September 15: 6, KFOA, KGO, KHJ; 6:30, KNX; 6:45, KFOA; 7, KNX; 8, KGO, KHJ; 8:30, KFOA; 9, KPO.

Wednesday, September 16: 6, KFOA, 8:30, KNX; 7, KNX; 8, KGO, KPO; 9, KPO.

Thursday, September 17: 6, KHJ; 6:30, KNX; 7, KNX; 8, KGO, KPO; 9, KPO.

Friday, September 18: 6, KFOA, KGO, KHJ; 6:15, KPO; 6:45, KFOA; 7:30, KFAE, KNX; 8, KHJ, KNX, KPO; 8:30, KFAE, 9; KPO.

NCING

Standard Time

, September 12:
Wgy, Wmbb, as; 8:05, Wip; h, Wgy, Wsmb; Wmbf, Wmca, , Wreo, Wtas; e, Wges, Wgn, 7rc; 10, Kpo, Wahg, Wcco, bf, Wreo, Wpg; ebh, Wges; 11, a, Wahg, Wcee, id, Wkrc, Woe; Wdaf; 11:30, :45, Wdaf; 12, , Khj, Knx.

September 14:
Wmbb, Wtas; f, Wsmb; 8:45, Wcae, Wgr, Wtas; 9:05, 25, Kths; 9:30, jid; 10, Kpo, Wmbf, Woaw, 10:30, Wcee, Who, Wkre; d; 11:45, Wdaf.

September 15:
Wtas; 8:30, ebh, Wip; 9, f, Wip, Wmaq, Wmca, Wqj, 0, Weee, Wges, id, Woai; 10, Wmbf; 10:30, h, Wges, Wjjd, aw; 11, Kfwb; id; 12, Kgo.

ay, September
v, Whad, Whn; Wmbb, Wats; , Wcau, Webh, , Wmaq, Woo; Kyw, Weaf, d, Wmbf, Who, Wahg; 9:15, 30, Kfi, Wcee, es, Wgn, Wjjd, Kfve, Kfwb, , Weco, Who, Wtam; 10:30, es, Wsmb; 11; 1:30, Wges; daf; 12, Khj.

September
, Wip, Wjar, ce, Wtas; 8:30, Webh, Wmaq, Weaf, Wip, nca, Wqj, Wrc, 5, Kths; 9:30, d, Wsmb; 10, :30, Webh; 11, Wfaa, Who, go, Kgw, Khj, Wqj.

September 18:
Wcae, Wear, b, Wtas, 8:30, , Webh, Whn, oo; 9, Kyw, , Weaf, Wgr, aw, Wqj; 9:15, 0, Weee, Wgn, as; 10, Kfve, mbf; 10:30, b, Wjjd; 11, ; 11:45, Wdaf;

WLS string trio, Martha Meier, soloist; 6:30, Ralph Emerson, organist; 7:15, WLS string trio; 7:45, lullaby time, Ford and Glenn; 8, Salvation Army band; brass quartet; William Haydon, tenor.

WLW, Cincinnati, Ohio (422.3), 12:15 p. m., Mildred Prigge, organist; 4, piano recital, Adelaide Apfel and pupils; 7, dinner concert, Hotel Gibson; orchestra directed by Robert Visconti; 10, three-minute message, Civil Service department; 10:03, dance program and entertainment, Doherty Melody boys; 10:40, features from College of Music; 10:45, the WLW concert orchestra; violin solos with organ accompaniment.

WMAQ, Chicago, Ill. (447.5), 2:50 p. m., Chicago-Boston baseball game; 6, Chicago theater organ recital; 6:30, Hotel LaSalle orchestra; 8, lecture; 9, Mrs. Laura O'Sullivan, soprano; Constance Hafner, soprano; Dr. Frances Hennington, pianist; Prof. William B. Stein, cellist.

WMBB, Chicago, Ill. (250), 6-7 p. m., Trianon ensemble, Desmond Sullivan; Charles Fuertsch, Hazel O'Neil, John Everett, Clarence Jacobs; 9-11, Trianon orchestra; Harold Stokes.

WOK, Homewood, Ill. (217.3), 12-2 p. m., August Bredemeier, tenor; Edythe England, violinist; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 6-7, Helen Smith, soprano; William Balhatchet, tenor; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 10-1, Sandy Meek, tenor; Harry Sosnik, pianist; Bill Bourke and Sonny Brown; Ned Becker, comedian; John Burns, bass; Langdon Brothers; Hawaiian, guitarists; Herman Sinaiko, violinist; Gus C. Edwards orchestra; LeRoy North, pianist; George Irish, organist.

WORD, Batavia, Ill. (275), 8:30 p. m., Renk and Beyer; 8:45, International Sunday school lesson; 9, I. B. S. A. orchestra, E. A. Slack, director.

WQJ, Chicago, Ill. (447.5), 3-4 p. m., "Fall Marketing Days," Helen Harrington Downing; "The Influence of Corsets on Women's Health," Mrs. Bertha Bridge; "The Biggest Job in the World," Mrs. Guy W. Cornwell; 7-8, Rainbo Garden orchestra; Edwin Young, baritone; Tula Miller, soprano; Margaret Walbank, contralto; Kathryn Snyder, reader; 10-1 a. m., Rainbo Skylarks; Jerry Sullivan; Rose Vanderbosch; Bob Birdsong, Ben Burke; Ralph Keim, pianist; Anne Keim, soprano; Lew Butler; Marie Wright, soprano; 1-2, Ginger hour.

WREO, Lansing, Mich. (285.5), 6-7 p. m., dinner concert; 8:15, Reo Broadcasting orchestra; Reo male quartet; Thomas E. Metzger, flutist.

WSAI, Cincinnati, Ohio (326), 7 p. m., popular concert from New York; 8, Atwater Kent Radio artists; 9, Silvertown Cord orchestra.

WTAM, Cleveland, Ohio (389.4), 12:15-1:15 p. m., Euclid music studio hour; 6-7, Hotel Statler studio dinner music.

WTAS, Elgin, Ill. (302.8), 8-12 midnight, Purple Grackle boys; Herbie Mintz, Violet Eaton, Roland Hinekle, Flo Henrie, Lillian Bernard, Phil Wilcox, Brock Sisters.

WTIC, Hartford, Conn. (475.9), 5:30 p. m., Hub Restaurant trio; 6:30, talk; 8:30, Colt Park orchestra.

WWJ, Detroit, Mich. (352.7) 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 7, concert from WEAF.

Central Standard Time Stations

CNRW, Winnipeg, Can. (384.4), 9 p. m., dance music; 10, Fort Garry hotel trio; Wallace Lewis, baritone; Frank Redlich, cellist; Wallace Lewis, baritone; Emile Mignacca, violinist.

KFNF, Shenandoah, Iowa (266), 7:30 p. m., concert from Strahan, M. Guy Martin, director.

KLDS, Independence, Mo. (440.9), 8 p. m., Mildred Spencer, soprano; Mrs. Arvid Franck, violinist; George Arnold, tenor; Mabel Harris Lockwood, soprano; Amy E. Winning, pianist.

KTHS, Hot Springs National Park, Ark. (374.8), 9:25 p. m., Lawson Reid, organist.

Friday, September 18

Friday silent night for: CHNC, CKAC, CNRC, CNRM, CNRR, CNRW, KFMQ, KGO, KLDS, PWX, WBBR, WCBD, WFI, WGBS, WHAZ, WIP, WKRC, WLW, WOR, WRC, WREO, WSAI, WSMB, WTAM.

Atlantic or Eastern Daylight Saving Time Stations

CKAC, Montreal, Can. (410.7), 1:45 p. m., luncheon trio recital.

CNRA, Moncton, Can. (291), 9 p. m., Pictou artists, Prof. Selfe Fowles, director; Mrs. Nita Robertson, soprano; Isabel Grant, soprano; Frances Noonan, contralto; Mrs. D. A. Cameron, contralto; J. Adamson, tenor; T. Dalton, tenor; R. Robson, F. H. Heartz, H. Gravestock, W. Robertson, bass soloists; F. Gibson Davis, violinist; Prof. Selfe Fowles, pianist; male quintet; CNRA dance orchestra.

CNRT, Toronto, Can. (356.9), 6:30 p. m., Luigi Romanelli and his King Edward hotel concert orchestra; 9:30, songs of the British Isles, Alfred Heather, director; Margaret Curtis, violinist; Eva Goodman, pianist; John Wetwiler, baritone; Gladys Jones Morgan, soprano; Jessie Borthwick, contralto; 11:30, Luigi Romanelli and his King Edward hotel dance orchestra.

WAHG, Richmond Hill, N. Y. (315.6), 12:30-12:55 p. m., musical program; 1:05-1:30, musical program; 7:30-7:45, sports talk, Thornton Fisher; 7:45-8, Samuel Gray, baritone; 8-8:15, Arnold Koch, cellist; 8:15-8:30, Samuel Gray; 8:30-8:45, speech, Professor Richard E. Mayne; 8:45-9, Arnold Koch; 9-10, Frank Laurla and his orchestra; 10-10:15, Synchrophase trio; 10:15-10:30, Davison sisters; 10:35-10:45, Serenaders Plectrum quintette; 10:45-10:55, John Finnegan, tenor.

WCAU, Philadelphia, Pa. (278), 7:30 p. m., Junior choir of 25 voices; 9:30, Rennie Cormack, songs; 10:30, Jack Myers' Musical Architects dance orchestra.

WCTS, Worcester, Mass. (268), 12-2 p. m., WCTS trio; 8, concert.

WEAF, New York, N. Y. (491.5), 4-4:15 p. m., New York society trio; 4:45-6, "The Slippery Eel," Ida M. Mellen; 6-7, dinner music, Waldorf-Astoria; 7-7:30, Gene Ingraham's Great Notch Inn orchestra; 7:30-7:45, "Sir Hobgoblin's Japanese Mystery," Blanche Elizabeth Wade; 7:45-8, Sadie Eskin, pianist; 8-8:30, Happiness Candy boys; 8:30-9, Eagle Neutrodyne trio; 9-9:10, Bergen Male quartette; 9:10-9:25, Sadie Eskin, pianist; 9:25-9:35, Bergen male quartette; 9:35-10:05, musical program; 10:05-10:15, David Berend, banjoist; 10:15-10:30, Sissle and Blake, tenor and pianist; 10:30-10:45, David Berend; 10:45-11, Sissle and Blake; 11-12, Hotel Bossert Marine Roof orchestra.

WEBJ, New York, N. Y. (272.6), 7-7:15 p. m., Blenheim theater ensemble; 7:30-7:45, National Czecho-Slovakian band; 8-8:15, Philip Krumholtz, tenor; 8:15-8:30, Norman Hennefeld, pianist; 8:30-9, Arthur Pryor's concert band.

WEEI, Boston, Mass. (348.6), 7:30 p. m., Four Merry Milkmen; 8, Neapolitan Ice Cream company; 8:30, Breck's Garden talk; 8:50, string quartet.

WFI, Philadelphia, Pa. (394.5), 1 p. m., Bellevue Stratford concert orchestra; 3, Caroline Hoffman, pianist; 6:45, Bellevue Stratford Roof Garden orchestra.

WGBS, New York, N. Y. (315.6), 1:30-2, Scotch program, Jerone Tyrell; 2-2:15, Eleanor Van der Kar, soprano; 2:15-2:30, Radio World's Fair; Eleanor Schorer and her Evening World kiddie club; Le Roy Montesanto; 3:20-3:40, talk, Alice Clark Barnhill; 3:40-3:50, Mildred Dittman, soprano; 6-6:30, Uncle Gee Bee; 7-7:15, "What's Your Radio Problem," Herman Bernard.

WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Eve Rothenberg, pianist; 3:15-3:18, Mirror race results; 3:18-3:30, Dick and Flo Bernard, songs; 3:30-3:45, Jane; 3:45-3:48, Mirror race results; 4:15-4:18, Mirror race results; 4:30-4:45, Leslie MacLeod, ukulele; 4:45-4:48, Mirror race results; 4:48-5, Edyth Pullak, reader; 5-5:15, Francis May, violinist; 5:15-5:18, Mirror race results; 5:30-5:45, O'Brien Brothers, Hawaiian guitars; 5:45-5:48, Mirror race results; 8-8:15, Marie McCristall, soprano; 8:15-8:30, Steele and Heagney, composers; 8:30-8:45, Wm. J. Rietz, songs; 8:45-9, W. Shaw-Thomson, talk; 9-9:15, Coakley sisters, singers; 9:15-9:30, Sarah Summers, whistler; 9:30-9:45, Jack Smith, personality plus; 9:45-10, Lillian Gordone, contralto; 10-10:15, Theo Alban, songs.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, Clef trio; 9-9:30, Winger's Crescent Park entertainers; 9:30-10:30, popular program, direction of Stewart A. Pussault; 10:30-10:55, J. Blosek, pianist; 11-1 a. m., supper-dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WHAR, Atlantic City, N. J. (278), 2 p. m., Seaside hotel trio; 7:30, fashion review, Dot Kahn; 8, Seaside hotel trio; 11:15, Strand theater organ recital.

WHN, New York, N. Y. (361.2), 7:30-8 p. m., "The Jelly Philosopher," Burr McIntosh; 8-8:30, Colonial Aces; 10:30-11, Roseland dance orchestra; 11:30-12, Club Alabam' orchestra; 12-12:30, Silver Slipper revue.

WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 7:30, Dream Daddy's bedtime stories; 8, features from Atlantic city; 8:45, Welch's Minstrels; 9:30, Frey's Million Dollar Pier orchestra; 10, Morning Glory club concert; Arcadia cafe dance orchestra; Seattle Harmony Kings dance orchestra, songs by Rufus and Rastus.

WMCA, New York, N. Y. (340.7), 3-3:30 p. m., Radio World's Fair; 6:30-7:30, Ernie Golden and his Hotel McAlpin orchestra; 8-8:10, "Helps for Better Reception," Hudson C. Burr; 8:15-8:25, talk, F. V. Baldwin; 9-10, Hardman hour of music; 10-11, Asbury Park dance orchestra; 11:15-11:45, Donald Flamm, dramatic critic.

WNYC, New York, N. Y. (526), 6-7 p. m., French lessons, V. Harrison Berlitz; 7-7:10, market high spots; 7:10-7:30, dance program; 7:35-8, dance program; 8:15-10:15, concert from Mall, Central Park; 10:15-10:30, song recital.

WOO, Philadelphia, Pa. (508.2), 11 a. m., organ recital; 12:02 p. m., Golden's crystal tea room orchestra; 4:45, organ recital; 7:30, A. Candelori's concert orchestra; 8:30, recital; 9, WOO orchestra; 10, organ recital, Newell Robinson; 10:30, A. Candelori's dance orchestra.

WOR, Newark, N. J. (405.2), 6:15-6:30 p. m., sports talk, Pat Robinson; 6:30-7, man in moon; 7-7:30, Howard Oliver and his Log Cabin orchestra.

Eastern Standard or Central Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 8:45 p. m., Mandolin sextet; Ruth Elton Ros, soprano; Roy John, bass.

KYW, Chicago, Ill. (535.4), 3:30 p. m., Jane Burr, novelist; 6:35-7, children's bedtime story; 7-7:30, Congress hotel; 7:30-8:30, home lover's hour; 10-12:30 a. m., midnight revue, Paul Whiteman's Collegians; Albert Hay Malotte, organist.

WBAV, Columbus, Ohio (293.9), 8 p. m., R. C. Reither and his gang.

WBBM, Chicago, Ill. (226), 8-10 p. m., Stewart-Warner program, Alamo orchestra, William Molnafre, Lew Russell, Murray Smith, Earl Bergman, Eddie Loftus, Sunset male quartet, Charlie Garland.

WBZ, Springfield, Mass. (333.1), 6 p. m., Hotel Kimball trio; 8, Herbert Boardman, organist; Winonah D. Nay, soprano; 8:30, Copley Plaza orchestra; 9, Eastern States Exposition orchestra; "Livestock in the Eastern States," Prof. Harry L. Garrigus.

WCX, Detroit, Mich. (517), 4:15 p. m., concert; 6, dinner concert, Book-Cadillac hotel; 8, musical program; 10, blue room dance orchestra.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., children's hour; 8-8:30, talks, prominent Clevelanders; 8:30-11, dance music.

WEBH, Chicago, Ill. (370.2), 7:30-8:30 p. m., Oriole orchestra; Howard Neumiller, accompanist; Dan Russo, violinist; 9:30-10:30, WEBH Light Opera company; 11:30-1, Oriole orchestra; Correll and Gosden; Rita McFawn.

WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Blue Steele and his Fulford-by-the-Sea orchestra; 10-1, dance music.

WGES, Oak Park, Ill. (250), 5-6:45 p. m., John Rankel, baritone; Ruth Kalthoff, soprano; Emma Butler, contralto; Gladys Welgo, violinist; John Stamford, tenor; 6:45-7, lecture, E. L. Richards; 10:30-1, Novelty Broadcasters' orchestra; Marie Wright, Evans Lloyd, Coyne Banjo trio; Kenneth Nelson.

WGN, Chicago, Ill. (370.2), 12:40 p. m., Drake concert ensemble, Blackstone string quintet; 6:30-7:30, Drake concert ensemble; Blackstone string quintet; 8:30-9:30, WGN string trio; 10:30-11:30, jazz scamper, Drake dance orchestra.

WGY, Schenectady, N. Y. (379.5), 1 p. m., "The Footsteps of Autumn," Robert L. Smith; 6, Albany Strand theater orchestra; Floyd H. Walters, organist; 6:45, "Resuscitation," Sydney W. Ashe; 7, Temple Beth Emeth; 9:30, "Kindling," WGY players.

WHT, Deerfield, Ill. (490), 1 p. m., Graylin's string trio; 7, Bob York, tenor; Kitchen Klenzer Klassics; Genevieve Barry Dunham, soprano; Jelke musical moments; 8:45, (238) Riverview Park Melody Masters; 10:30, (160), Loftis Thirty Minutes of Melody; Walter Ford's Cheerio orchestra; Samuel G. Rowe, tenor; Isabel Simpson; Fred Witmer, pianist; 12, Pat Barnes, Al Carney, Duke Reid, Walter Ford.

WLS, Chicago, Ill. (344.6), 1 p. m., R. F. D. program, Ford and Glenn; 6:30, Ralph Emerson, organist; 7:15, WLS string trio; Edward Grieg program, Rex Maupin, director; 7:45, lullaby time, Ford and Glenn; 8, Ewart Williams, Welsh tenor; Goldie Gross, cellist; Florence K. White, soprano; 9, farm program; 10, WLS string trio; 10:15, Ethel Reeves Philip, Marcelona Domingo, flute, guitar, piano and voice soloists; 10:45, Ford and Glenn time.

WLW, Cincinnati, Ohio (422.3), 12:15 p. m., Gene Johnson, organist.

WMAQ, Chicago, Ill. (447.5), 2:30 p. m., Chicago-New York baseball game; 6, organ recital; 6:25, Hotel La-Salle orchestra; 6:50, Family Altar league; 8, Mr. and Mrs. Oberndorfer; 8:30, Whitney trio; 9:30, Elizabeth stokes, soprano.

WMBB, Chicago, Ill. (250), 6-7 p. m., Trianon ensemble, Wayne King, Lindsey McPhail, Marie Caruso; 9-11, Trianon orchestra; Woodlawn theater orchestra.

WOK, Homewood, Ill. (217.3), 12-2 p. m., Lydia Lochner, contralto; Thomas B. Stephenson, tenor; Marianne Powell Babcock, soprano; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 6-7, Herman Bing, tenor; Jean Carlson, soprano; Kenneth Dunn, pianist; George Irish, organist; LeRoy North, pianist; Gus C. Edwards orchestra; 10-1, Harry Davis, tenor; Haymakers trio; Berger Wedberg, tenor; Art Stiller, tenor; George Irish, organist; Herman Sinaiko, violinist; LeRoy North, pianist; Gus C. Edwards orchestra.

WORD, Batavia, Ill. (275), 8:30 p. m., half-hour, Uncle Dan; 9, S. O. Hermanson, tenor; Emil Heimrich, baritone.

WQJ, Chicago, Ill. (447.5), 1:45-2:45 p. m., "Birthday Cakes," Helen Harrington Downing; "Your Home," June Dunham; 7-8, Rainbo Garden orchestra; Vivien Purcell, reader; Otto A. Moore, baritone; La Verne Hanson, accompanist; Clough Ramar, pianist; 10-1 a. m., Rainbo Skylarks; William Richardson, baritone; Jack Lavin, tenor; Dr. H. Lucille Long, harmonica player; Eleanor Terry, Marie Pollette, Rainbo stars; Blues Destroyers' Larry Shay; Parish and Ward; 1-2, Ginger bour.

WTAM, Cleveland, Ohio (389.4), 12:15-1:15 p. m., Euclid music studio; 6-7, Golden Pheasant orchestra.

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., Purple Grackle orchestra; Herbie Mintz, Marie Wright, Tommy Dunlap, Brock Sisters, Art Stiller.

WTIC, Hartford, Conn. (475.9), 5:30 p. m., young people's half hour; 6, Emil Heimberger's Hotel Bond trio; 6:30, Margaretta Purves, soprano; Mrs. Gertrude McAuliffe, contralto; Benjamin M. Knox, baritone; 8:25, Clara M. Coe Byrne, reader; 9:05, Emil Heimberger's Hotel Bond orchestra; 10:30, Niglod Presentators.

WWJ, Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, News orchestra; 9, dance orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7), 5:30-6:30 p. m., Buick Little symphony; 8:30-10:30, Mrs. Wilson, soprano; Frank Wilson, xylophonist; Mrs. Frederick Rahe; Belshaw's orchestra; Margaret Mosher, violinist; Howard Pyle, baritone.

KFDM, Beaumont, Tex. (315.6), 8-10 p. m., Magnolia Petroleum company's refinery band.

KFNF, Shenandoah, Iowa (266), 7 p. m., Sunday school lesson; 7:30, Widney Sisters.

KFVE, University City, Mo. (240), 10 p. m., studio entertainers; "Radio Frequency," Edward Goodberlet.

KTHS, Hot Springs National Park, Ark. (374.8), 9:25 p. m., Lon Chassy, violinist; George Ryall, pianist; Senor Alex de Sio, cellist; 10, dance frolic, Southerners.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 6:15 p. m., George Osborn's Nicollet hotel orchestra; 8, musical program; 9:05, Hugo Philler Goodwin, organist.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's string trio; 6-7, address, speaker, Kansas City, Children's bureau; Tell-Me-a-Story Lady; Trianon ensemble; 8-9:30, Star's Radio orchestra; 11:45-1, Merry Old Chief; Plantation players; Earl Coleman's orchestra.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., address; Dr. Robert Stewart Hyer; 4:30-5, woman's hour, Mrs. Bessie M. Tribie; 6:30-7:30, Hauulea School of Hawaiian music; 8:30-9:30, Belcanto male quartet.

WHAD, Milwaukee, Wis. (275), 6-7 p. m., Arthur Richter, organist; 8:30-10, Wisconsin theater review.

WHAS, Louisville, Ky. (399.8), 4 p. m., musical selections, Harry S. Currie; 7:30-9, glee club, Grace Deppe, director.

WHO, Des Moines, Iowa (526), 7:30-9 p. m., Mary Louise Cramer, pianist; Gwendolyn Roderick, pianist; Iowa State Fair ladies' quartet; 11-12, Kirkwood hotel orchestra.

WMC, Memphis, Tenn. (499.7), 7-9 p. m., New Year's Eve services, Children of Israel's Temple.

WOC, Davenport, Ia. (484), 4-5 p. m., Crescent orchestra; 8-9, Melodie orchestra; E. John Richards, organist; Art Gillham, whispering pianist.

WOAW, Omaha, Nebr. (526), 6 p. m., music review, Hester Bronson Copper; 6:25, orchestra; 7:10, weekly sports talk, Ivan L. Gaddis; 9, band concert.

WOS, Jefferson City, Mo. (440.9), 8 p. m., program, Greater Missouri association; George Plekens, general secretary.

Mountain Standard Time Stations

CNRE, Edmonton, Can. (516.9), 8:30-10:30 p. m., Graydon Tipp and his orchestra.

KOA, Denver, Colo. (322.4), 12:15 p. m., luncheon program; 3, Rialto theater musicale; 3:30, matinee for housewives; 4, fashion review; 6:30, Herbert White and his Silver State orchestra; 8, scientific football, Tom McNamara; 8:10, nature program, Charles Bowman Hutchins, naturalist, bird artist; Helen Owen Hutchins, harpist, soprano; "Biological Types One Sees on Main Street," Mrs. Ida L. Gregory; Ina Rains, soprano; Lucile Fowler, contralto.

Pacific Standard Time Stations

KFAE, Pullman, Wash. (348.6), 7:30-9 p. m., William P. Hansen, cornetist; "Making and Keeping a Good Lawn," M. D. Armstrong; Frederic C. Butterfield, pianist; "Utilizing a Small Stream," A. B. Crane.

KFOA, Seattle, Wash. (454.3), 6-6:45, p. m., Pacific States Electric company; 6:45-8:15, Sherman, Clay and company program; 8:30-10, Times program; 10-11:30, Eddie Harkness and his orchestra.

KFWB, Hollywood, Calif. (252), 8-9 p. m., program, Monte Mar Vista Subdividers, Monte Mar Vista dance orchestra, Violet Preston, blues singer; 9-10, KFWB fun hour with Ashley sisters, Kathryn Martin, soprano, Charlie Wellman, tenor; Frank Pierce and Vic Beall, comedy songs; Billie Dunn, pianist; 10-11, Warner Bros. frolic, direction Charlie Wellman.

KGO, Oakland, Calif. (361.2), 6-7 p. m., dinner concert, Baldwin Piano 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, Radio kiddies hour with Vyola Von and Richard Headrick, screen juveniles, Uncle John; 8-10, program, Western Auto Supply company, arranged by J. Howard Johnson; 10-10:30, Piggly Wiggly girls stringed trio; 10:30-11:30, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.

KJR, Seattle, Wash. (384.4), 1:15-2 p. m., organ recital, Columbia theater; 2-2:15, home helps, Bernice Redington; 8:30-10, Post Intelligencer studio program; 10-11, dance program, Gordon Kilbourne and his orchestra.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; talk on golf, D. Scott Chisholm 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-7:30, program, Beverlyridge company; 7:30, musical gems half hour, Eastern Outfitting company; 8-9, West Coast theaters; 9-11, KNX feature program; 11-12, Ray West's Cocoanut Grove dance orchestra from Ambassador hotel.

KPO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 6:15, Loew's Warfield theater; 7-7:30, Palace hotel concert orchestra; 8-10, Palace hotel orchestra.

KTAB, Oakland, Calif. (215), 8-10 p. m., string trio, exclusive studio artists; Grace Adams East, cornetist.

KTCL, Seattle, Wash. (305.9), 7-8 p. m., Simonds Saw and Steel company; 9-10, Western Auto Supply company; 10:15-12, Jackie Souders' dance orchestra.

STATIONS IN ORDER OF WAVE LENGTHS USED

Meters	Call	Meters	Call	Meters	Call	Meters	Call	Meters	Call	Meters	Call
215	KTAB	275.3	WJAS	309.1	KDKA	361.2	WHN	405.2	WOR	468.5	WCAP
217.3	WOK	278	KOIL	315.6	KFDM	365.6	WDAF	406	WBAR	468.5	WRC
226	WBBM	278	WCAU	315.6	WAHG	365.6	WHB	410.7	CKAC	475.9	WBAP
226	WIBO	278	WLBL	315.6	WGBS	370	CYE	416.4	WCCO	475.9	WTIC
240	KFVE	278	WRBC	319	WGR	370.2	WEBH	421	KIAF	475.9	WFAA
243.8	WAMD	280.2	WNAC	319	WSMB	370.2	WGN	422.3	WLW	480	CYL
250	WGES	282.8	WOAN	322.4	KOA	374.8	KTHS	428.3	WSB	483.6	WOC
250	WMBB	285.5	WKAR	325.9	WSAI	379.5	WGY	428.3	KPO	483.6	WSUI
252	KFWB	285.5	WREO	326	WKRC	379.5	WHAZ	434.5	CNRO	491.5	KGW
252	WGCP	288.3	KFKX	330	CYX	384.4	CKY	434.5	NAA	491.5	WEAF
261	KFWA	293.9	KJS	333.1	WBZ	**384.4**	**KJR**	434.5	NAA	499.7	WMC
265.5	WMAK	293.9	KNX	336.9	KNX	384.4	WMBF	435	AT9	508.2	KLX
266	KFNF	293.9	WBAV	340.7	KFAB	389.4	WEAR	**434.5**	CFCN	508.2	WIP
266	WBCN	293.9	WEAO	340.7	WKAQ	389.4	WTAM	**440.9**	KLDS	508.2	WOO
268	WCTS	296.9	KPRC	340.7	WMCA	394.5	WFI	440.9	WDWF	516.9	CJCA
272.6	WBBR	299.8	KFMQ	344.6	WCBD	394.5	WLIT	440.9	WOS	516.9	WCX
272.6	WEBJ	**299.8**	**KSL**	344.6	WLS	447.5	WMAQ	447.5	WMAQ	516.9	WJR
272.6	WFBH	299.8	WPG	348.6	KFAE	394.5	WOAI	447.5	WQJ	526	WHO
273	KWKH	302.8	WJJD	348.6	WEEI	399.8	WHAS	454.3	KFOA	526	WNYC
273	WRW	302.8	WTAS	352.7	WWJ	399.8	WHT	454.3	WJZ	526	WOAW
275	WHAD	**305.9**	**KTCL**	356.9	CFCA	400	PWX	455	KTW	535.4	KYW
275	WHAR	305.9	WJAR	356.9	CHNC	405.2	KHJ	461.3	WCAE	545.1	KFUO
275	WORD	305.9	WJAR	361.2	KGO	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 in three different standard times; Eastern, Central and Pacific. Two of these are presented each week. 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.

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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The Reader's View

Chicago "Silent" Night Again.

For quite a while the Chicago "silent" night question has been hanging fire. Votes have been taken time after time and still we have stations broadcasting on Monday nights. Why can't the listeners decide the question for themselves by expressing their attitudes, or by offering plans which might help settle the question for all time.

Mr. MacDonald, of the Broadcast Listeners' association, expressed the attitude of the broadcasters when he said that stations invested much money in equipment and should not be asked to relinquish their rights to broadcast on the socalled silent night. But why not look at the question from a different angle. Haven't tens of thousands of Radio fans invested their money in costly sets for the purpose of getting distance? Should they be governed by the broadcasters in their selection of programs as is done when the Radio fan is forced to be content with local stations when they "hog" the air? Why not play the game fair? Let those who desire to get distance have at least one night in which to do it.

Here is my suggestion: As long as Chicago has daylight saving time, fix the time for signing off, Monday night, at 10 p. m., daylight saving, and when Central Standard time is again in effect fix the time for signing off at 9:00 p. m. This would be within reason and still gives the listener a chance to get distance.

We have a five-tube superselective set which has brought in as high as 31 stations on Monday night before the air was monopolized by remote-controlled local stations. Now we have considerable difficulty in getting four stations not far distant.

The sale of Radio sets has been affected seriously by the operation of local stations on Monday nights. In fact, a dealer experiences much difficulty in selling sets which will not bring in distance. The writer happens to be employed by a manufactory whose attitude seems to indicate that this foolish mockery on the parts of several local Chicago stations is costing them ten thousands of dollars every year.

The writer is a faithful reader of your organ, and he sincerely hopes you will take every means within your power to bring about a settlement of the question. Of course my wish is that all local stations remain silent to the fullest meaning of the word. May you be successful in arousing action and hoping to see favorable results, I am.—H. L., Oak Park, Illinois.

Enjoys Good Radio Critics

Here is just a little note to tell you how very much I enjoy the Digest each week. I always turn first to your editorials and to "Dielectric's" column.

I was particularly interested in your editorial which appeared a week or so ago and told about the opening for good "Radio critics" on newspaper staffs. Even before "Dielectric" started I had thought that a column or department in the newspapers commenting more or less informally on programs and Radio events, would be of interest to fans and would also tend to stimulate interest among others. It is a piece of work that would appeal to me very strongly.

I also wish to commend you for your attitude in keeping Radio up to the highest level.

I am greatly pleased with the superpower used by a number of stations this summer.—M. J. G., Westminster, Colo.

Asks Use of Announcers' Names

Am very fond of the Digest and read it every week as I get so much good news out of it. I would like to suggest that announcers tell their names when they announce. For instance say, "This is WEAF, Graham McNamee announcing." I think this would be an improvement if this were done generally. The programs in the Digest are wonderful and very helpful.

I have a six tube super-het and needless to say I am very fond of it and get excellent reception.

Well, here's best wishes for Radio Digest and Graham McNamee.—J. F. H., Atlanta, Ga.

Short Wave Experimenter in Serious High Volt Accident

PARIS.—Professor L. Lakowsky, who is well known for his therapeutic work with short wave lengths similar to those utilized in Radio work, attached to the famous Salpetriere hospital in Paris, was conducting some experiments with short wave lengths in his own private laboratory with his Radio set in order to study some point of resemblance between these and the ones used at the Salpetriere, when he accidentally came into contact with the current cables, which had a tension of 1,200 volts. The parts affected were the back and the arms; these latter were, on examination, found to be temporarily paralyzed. The professor, who received immediate treatment, will recover the use of his arms in a few months it is expected.

'Creighton University Voice' Is Slogan Applied to KOIL

COUNCIL BLUFFS, Iowa—Through arrangements just made, Station KOIL here, will be the official and exclusive voice of Creighton university of Omaha, one of the large institutions of the Middle West.

In commenting on this tie-up, Prof. P. H. Bogardus, director of the school of commerce, finance and journalism said:

"I am not a reformer and do not consider myself a Radio fan or a bug of any kind, but I do think that it is time that something else be given to listeners besides exclusive jazz programs. I believe that ten or fifteen minutes spent twice a week in broadcasting something of educational value would be appreciated."

An Evening at Home with the Listener In

(FOR EASTERN TIME Or Cities Using Central Daylight Saving Time) (Tabular form and listings copyrighted. Reproduction is forbidden.) (FOR CENTRAL TIME)

Call	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Call	Location	Met.	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Call
AT9	Silent	6:00- 7:00	Silent	Silent	Silent	8:00- 9:55	Silent	AT9	Fort Bragg, N. C.	435	Silent	5:00- 6:00	Silent	Silent	Silent	7:00- 8:55	Silent	AT9
CFCA	Silent	7:00- 8:00	Silent	8:15- 9:15	8:15- 9:15	8:15- 9:15	Silent	CFCA	Toronto, Ont.	356.9	Silent	6:00- 7:00	Silent	7:15- 8:15	7:15- 8:15	7:15- 8:15	Silent	CFCA
CFCN	12:00- 2:00	Silent	Silent	Silent	Silent	10:00-11:00	Silent	CFCN	Calgary, Alta.	434.5	11:00- 1:00	Silent	Silent	Silent	Silent	9:00-10:00	Silent	CFCN
CHNC	Silent	Silent	7:00- 8:00	Silent	Silent	8:00- 9:00	Silent	CHNC	Toronto, Ont.	356.9	Silent	Silent	6:00- 7:00	Silent	Silent	7:00- 8:00	Silent	CHCN
CJCA	11:00- 1:00	9:30-10:30	9:30-11:30	9:30-10:00	8:00-10:00	11:00- 1:00	10:00- 1:00	CJCA	Edmonton, Can.	516.9	10:00-12:00	8:30- 9:30	8:30-10:30	8:30- 9:00	7:00- 9:00	10:00-12:00	9:00-12:00	CJCA
CKAC	6:30-10:00	Silent	Silent	6:30-10:00	Silent	6:30-10:00	Silent	CKAC	Montreal, Que.	410.7	5:30- 9:00	Silent	Silent	5:30- 9:00	Silent	6:30- 9:00	Silent	CKAC
CKY	7:30- 9:15	8:00-10:45	Silent	9:30-11:45	Silent	9:00-10:00	9:30-10:45	CKY	Winnipeg, Man.	384.4	6:30- 8:15	7:00- 9:45	Silent	8:30-10:45	Silent	8:00- 9:00	8:30- 9:45	CKY
CNRO	7:30-12:30	Silent	Silent	Silent	7:30-12:30	Silent	Silent	CNRO	Ottawa, Ont.	434.5	6:30-11:30	Silent	Silent	Silent	6:30-11:30	Silent	Silent	CNRO
CYB	11:30-12:45	Silent	Silent	10:15-11:15	Silent	Silent	Silent	CYB	Mexico City, Mex.	370	10:30-11:45	Silent	Silent	9:15- 10:15	Silent	Silent	Silent	CYB
CYL	Silent	9:00-10:30	Silent	9:00-10:30	Silent	Silent	9:00-10:30	CYL	Mexico City, Mex.	480	Silent	8:00- 9:30	Silent	8:00- 9:30	Silent	Silent	8:00- 9:30	CYL
CYX	Silent	Silent	10:15-11:30	Silent	Silent	Silent	10:15-11:45	CYX	Mexico City, Mex.	330	Silent	Silent	9:15-10:30	Silent	Silent	Silent	9:15-10:45	CYX
KDKA	8:45- 9:55	7:00- 8:00	8:45- 9:55	8:45- 9:30	8:45- 9:55	8:00-11:30	8:45- 9:55	KDKA	Pittsburgh, Pa.	309.1	7:45- 8:55	6:00- 7:00	7:45- 8:55	7:45-10:30	7:45- 8:55	7:00-10:30	7:45- 8:55	KDKA
KFAB	6:30- 7:30	5:00- 6:00	6:30-11:30	6:30-10:30	6:30-11:30	Silent	6:30-11:30	KFAB	Lincoln, Nebr.	340.7	5:30- 6:30	4:00- 5:00	5:30-10:30	5:30- 9:30	5:30-10:30	Silent	5:30-10:30	KFAB
KFAE	Silent	Silent	10:30-12:00	Silent	10:30-12:00	Silent	10:30-12:00	KFAE	Pullman, Wash.	348.6	Silent	Silent	9:30-11:00	Silent	9:30-11:00	Silent	9:30-11:00	KFAE
KFDM	Silent	9:00-10:00	Silent	9:00-11:30	Silent	Silent	9:00-11:30	KFDM	Beaumont, Texas	315.6	Silent	8:00- 9:00	Silent	8:00-10:30	Silent	Silent	8:00-10:30	KFDM
KFI	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	Los Angeles, Calif.	467	8:45- 2:00	6:00- 1:00	8:15- 1:00	8:45- 1:00	8:45- 1:00	8:45- 1:00	8:45- 1:00	KFI
KFKX	Silent	Silent	10:00-12:00	Silent	Silent	Silent	10:00-12:00	KFKX	Hastings, Nebr.	288.3	Silent	Silent	9:00-11:00	Silent	Silent	Silent	9:00-11:00	KFKX
KFMQ	Silent	Silent	Silent	10:00-11:00	8:30- 9:30	Silent	Silent	KFMQ	Fayetteville, Ark.	299.8	Silent	Silent	Silent	9:00-10:00	7:30- 8:30	Silent	Silent	KFMQ
KFNF	8:30-10:30	7:30-10:15	8:30-10:30	8:30-10:30	8:30-10:30	8:30-10:30	8:30-10:30	KFNF	Shenandoah, Ia.	266	7:30- 9:30	6:30- 9:15	7:30- 9:30	7:30- 9:30	7:30- 9:30	7:30- 9:30	7:30- 9:30	KFNF
KFOA	9:00- 2:30	Silent	9:00- 1:00	9:00- 2:00	9:00- 1:00	Silent	9:00- 2:30	KFOA	Seattle, Wash.	454.3	8:00- 1:30	Silent	8:00-12:00	8:00- 1:00	8:00-12:00	Silent	8:00- 1:30	KFOA
KFUO	Silent	9:15-10:15	9:00-10:00	Silent	10:15-11:15	Silent	Silent	KFUO	St. Louis, Mo.	545.1	Silent	8:15- 9:15	8:00- 9:00	Silent	9:15-10:15	Silent	Silent	KFUO
KFVE	11:00- 1:00	Silent	11:00- 1:00	11:00- 1:00	11:00- 1:00	Silent	11:00- 1:00	KFVE	University City, Mo.	240	10:00-12:00	Silent	10:00-12:00	10:00-12:00	10:00-12:00	Silent	10:00-12:00	KFVE
KFWA	Silent	Silent	11:00- 1:00	Silent	11:00- 1:00	Silent	11:00- 1:00	KFWA	Ogden, Utah	261	Silent	Silent	10:00-12:00	Silent	10:00-12:00	Silent	10:00-12:00	KFWA
KFWB	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	Hollywood, Calif.	252	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
KGO	11:00- 3:00	6:30-12:00	11:00- 1:00	11:00- 1:00	9:00-10:00	11:00- 2:00	Silent	KGO	Oakland, Calif.	361.2	10:00- 2:00	5:30-11:00	10:00-12:00	10:00-12:00	8:00- 9:00	10:00- 2:00	Silent	KGO
KGW	9:00-11:00	10:45-12:00	9:00-10:00	11:00- 2:00	1:00- 2:00	1:00- 3:00	12:00- 1:30	KGW	Portland, Ore.	491.5	8:00-10:00	9:45-11:00	8:00- 9:00	10:00- 1:00	12:00- 1:00	12:00- 2:00	11:00-12:30	KGW
KHJ	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	Los Angeles, Calif.	405.2	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
KIAF	Silent	3:00- 4:00	8:00- 9:00	Silent	8:00- 9:00	Silent	8:00- 9:00	KIAF	Sihtipok, Minn.	421	Silent	4:00- 5:00	9:00-10:00	Silent	9:00-10:00	Silent	9:00-10:00	KIAF
KJR	Silent	10:00-11:00	10:00- 2:00	Silent	10:00- 1:00	11:30- 3:00	11:30- 2:00	KJR	Seattle, Wash.	384.4	Silent	9:00-10:00	9:00- 1:00	Silent	9:00-12:00	10:30- 2:00	10:30- 1:00	KJR
KJS	Silent	10:15-12:30	Silent	11:00-12:00	Silent	11:00-12:00	Silent	KJS	Los Angeles, Calif.	293.9	Silent	9:15-11:30	Silent	10:00-11:00	Silent	10:00-11:00	Silent	KJS
KLDS	Silent	7:30-11:00	Silent	9:00-10:00	Silent	9:00-10:00	Silent	KLDS	Independence, Mo.	440.9	Silent	6:30-10:00	Silent	8:00- 9:00	Silent	8:00- 9:00	Silent	KLDS
KLX	Silent	Silent	9:00- 2:00	Silent	9:00- 2:30	Silent	9:00- 1:30	KLX	Oakland, Calif.	508.2	Silent	Silent	8:00- 1:00	Silent	8:00- 1:30	Silent	8:00-12:30	KLX
KNX	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	Hollywood, Calif.	336.9	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
KOA	10:00- 1:00	6:00-11:00	8:30-11:00	9:30-10:30	8:30- 1:00	8:30- 9:30	8:30-11:00	KOA	Denver, Colo.	322.4	9:00-12:00	5:00-10:00	7:30-10:00	8:30- 9:30	7:30-12:00	7:30- 8:30	7:30-10:00	KOA
KOIL	8:30- 1:00	8:30-10:00	8:30- 1:00	8:30- 1:00	8:30- 1:00	8:30- 1:00	8:30- 1:00	KOIL	Council Bluffs, Ia.	278	7:30-12:00	7:30- 9:00	7:30-12:00	7:30-12:00	7:30-12:00	7:30-12:00	7:30-12:00	KOIL
KPO	9:35- 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	San Francisco, Calif.	428.3	8:35- 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
KPRC	8:30-11:00	9:00-10:00	8:30-11:00	8:30-11:00	8:30-11:00	8:30-11:00	Silent	KPRC	Houston, Texas	296.9	7:30-10:00	8:00- 9:00	7:30-10:00	7:30-10:00	7:30-10:00	7:30-10:00	Silent	KPRC
KSD	8:00- 9:00	Silent	10:00-11:00	8:00- 9:00	8:00- 9:00	Silent	8:00- 9:00	KSD	St. Louis, Mo.	545.1	7:00- 8:00	Silent	9:00-10:00	7:00- 8:00	7:00- 8:00	Silent	7:00- 8:00	KSD
KSL	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	Salt Lake City, Utah	299.8	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
KTAB	Silent	6:30-11:45	11:00-12:00	11:00- 1:00	12:00- 2:00	12:00- 2:00	11:00- 1:00	KTAB	Oakland, Calif.	215	Silent	5:30-10:45	10:00-11:00	10:00-12:00	11:00- 1:00	11:00- 1:00	10:00-12:00	KTAB
KTCL	9:50- 3:00	10:50- 1:10	10:00-12:00	10:00- 2:00	10:00- 2:00	Silent	10:00- 3:00	KTCL	Seattle, Wash.	305.9	8:50- 2:00	9:50-12:10	9:00-11:00	9:00- 1:00	9:00- 1:00	Silent	9:00- 2:00	KTCL
KTHS	10:00-12:00	10:00-12:00	10:00-12:00	10:00-12:00	10:00-12:00	10:00-12:00	10:00-12:00	KTHS	Hot Springs, Ark.	374.8	9:00-11:00	9:00-11:00	9:00-11:00	9:00-11:00	9:00-11:00	9:00-11:00	9:00-11:00	KTHS
KTW	9:30-10:30	Silent	Silent	9:30-10:30	Silent	9:30-10:30	Silent	KTW	Seattle, Wash.	455	Silent	9:00-11:30	Silent	Silent	Silent	Silent	Silent	KTW
KWKH	10:00- 1:00	Silent	9:00-10:00	10:00- 1:00	Silent	9:00-10:30	Silent	KWKH	Shreveport, La.	261	9:00-12:00	Silent	8:00- 9:00	9:00-12:00	Silent	8:00- 9:30	Silent	KWKH
KYW	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	Chicago, Ill.	535.4	6:00-12:30	3:00- 4:00	Silent	6:00-10:30	6:00-12:30	6:00-10:30	6:00-12:30	KYW
NAA	Silent	Silent	7:45- 8:00	7:45- 8:00	7:25- 8:40	7:45- 8:00	7:45- 8:00	NAA	Radio, Va.	434.5	Silent	Silent	6:45- 7:00	6:45- 7:00	6:25- 7:40	6:45- 7:00	6:45- 7:00	NAA
PWX	8:30-11:00	Silent	Silent	Silent	8:30-11:00	Silent	Silent	PWX	Havana, Cuba	400	7:30-10:00	Silent	Silent	Silent	7:30-10:00	Silent	Silent	PWX
WAHG	12:00- 2:00	Silent	7:00- 1:00	Silent	6:30-11:00	Silent	7:00-10:30	WAHG	Richmond, N. Y.	315.6	11:00- 1:00	Silent	6:00-12:00	Silent	5:30-10:00	Silent	6:00- 9:30	WAHG
WAMD	11:00-12:00	8:00-11:00	Silent	11:00-12:00	11:00-12:30	11:00-12:30	11:00-12:00	WAMD	Minneapolis, Minn.	243.8	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
WBAP	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	Fort Worth, Tex.	475.9	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
WBAR	Silent	11:00-12:00	10:00-11:00	Silent	9:00-10:00	8:30- 9:30	Silent	WBAR	Sisiht, Wis.	406	Silent	10:00-11:00	9:00-10:00	Silent	8:00- 9:00	7:30- 8:30	Silent	WBAR
WBAV	Silent	Silent	8:00-10:00	Silent	Silent	Silent	8:00- 9:00	WBAV	Columbus, O.	293.9	Silent	Silent	7:00- 9:00	Silent	Silent	Silent	7:00- 8:00	WBAV
WBBM	8:00- 1:00	4:00- 2:00	Silent	8:00-12:00	8:00- 2:00	8:00-12:00	8:00-10:00	WBBM	Chicago, Ill.	226	7:00-12:00	3:00- 1:00	Silent	7:00-11:00	7:00- 1:00	7:00-11:00	7:00- 9:00	WBBM
WBBR	7:00- 8:00	8:00- 9:30	Silent	Silent	Silent	Silent	Silent	WBBR	Staten Island, N. Y.	272.6	6:00- 7:00	6:00- 7:30	Silent	Silent	Silent	Silent	Silent	WBBR
WBCN	9:00- 1:00	5:00-12:00	Silent	9:00- 1:00	8:00-12:00	9:00- 2:00	9:00- 1:00	WBCN	Chicago, Ill.	266	8:00-12:00	4:00-11:00	Silent	8:00-12:00	7:00-11:00	8:00- 1:00	8:00-12:00	WBCN
WBZ	Silent	7:00- 9:45	6:00- 9:55	6:00- 9:55	6:00- 9:55	6:00- 9:55	6:00- 9:55	WBZ	Springfield, Mass.	333.1	Silent	6:00- 8:45	5:00- 8:55	5:00- 8:55	5:00- 8:55	5:00- 8:55	5:00- 8:55	WBZ
WCAE	7:30- 8:30	5:30- 6:30	7:30-11:00	7:00-10:00	7:30-11:00	7:00-10:00	7:00-10:00	WCAE	Pittsburgh, Pa.	461.3	6:30- 7:30	4:30- 5:30	6:30-10:00	6:00- 9:00	6:30-10:00	6:00- 9:00	6:00- 9:00	WCAE
WCAP	Silent	4:00- 9:15	7:00-10:30	Silent	7:00-10:30	Silent	7:00-10:00	WCAP	Washington, D. C.	468.5	Silent	3:00- 8:15	6:00- 9:30	Silent	6:00- 9:30	Silent	6:00- 9:00	WCAP
WCAU	Silent	Silent	Silent	6:30-10:30	Silent	5:30-10:30	7:00-10:30	WCAU	Philadelphia, Pa.	278	Silent	Silent	Silent	5:30- 9:30	Silent	4:30- 9:30	6:00- 9:30	WCAU
WCBD	Silent	2:30-10:00	Silent	Silent	Silent	8:00-10:30	Silent	WCBD	Zion, Ill.	344.6	Silent	1:30- 9:00	Silent	Silent	Silent	7:00- 9:30	Silent	WCBD
WCCO	7:05-12:00	5:20-11:15	7:00-12:00	7:00-10:00	7:00- 1:30	7:00-11:00	7:00-12:00	WCCO	Minn.-St. P., Minn.	416.4	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
WCTS	Silent	6:20- 9:15	7:00- 8:00	Silent	8:00- 9:40	9:00-10:00	7:00- 8:00	WCTS	Worcester, Mass.	268	Silent	5:20- 8:15	6:00- 7:00	Silent	7:00- 8:10	8:00- 9:00	6:00- 7:00	WCTS
WCX	6:00- 7:00	3:30- 9:00	6:00- 9:00	6:00-11:00	6:00- 9:00	6:00- 9:30	6:00- 9:00	WCX	Detroit, Mich.	516.9	5:00- 6:00	2:30- 8:00	5:00- 8:00	5:00-10:00	5:00- 8:00	5:00- 8:30	5:00- 8:00	WCX
WDAF	7:00- 1:00	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	Kansas City, Mo.	365.6	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
WDWF	Silent	Silent	Silent	7:30- 8:30	Silent	Silent	Silent	WDWF	Providence, R. I.	440.9	Silent	Silent	Silent	6:30- 7:30	Silent	Silent	Silent	WDWF
WEAF	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	New York, N. Y.	491.5	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
WEAO	Silent	Silent	Silent	Silent	8:00- 9:00	8:00- 9:00	Silent	WEAO	Columbus, Ohio	293.9	Silent	Silent	Silent	Silent	7:00- 8:00	7:00- 8:00	Silent	WEAO
WEAR	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	Cleveland, Ohio	389.4	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
WEBH	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	Chicago, Ill.	370.2	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
WEBJ	Silent	Silent	Silent	7:00- 8:00	6:00- 8:00	Silent	7:00- 8:00	WEBJ	New York, N. Y.	272.6	Silent	Silent	Silent	6:00- 7:00	5:00- 7:00	Silent	6:00- 7:00	WEBJ
WEEI	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	Boston, Mass.	348.6	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
WFAA	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	Dallas, Tex.	475.9	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
WFBH	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	New York, N. Y.	272.6	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
WFI	Silent	6:30- 9:15	Silent	7:00- 9:00	Silent	7:00-10:00	Silent	WFI	Philadelphia, Pa.	394.5	Silent	5:30- 8:15	Silent	6:00- 8:00	Silent	6:00- 9:00	Silent	WFI
WGBS	5:00-11:00	2:30- 9:30	Silent	5:00-11:00	Silent	5:00-12:00	Silent	WGBS	New York, N. Y.	252	4:00-10:00	1:30- 8:30	Silent	4:00-10:00	Silent	4:00-11:00	Silent	WGBS
WGCP	Silent	6:30-11:00	6:30-11:00	Silent	6:30-11:00	Silent	6:30-11:00	WGCP	New York, N. Y.	315.6	Silent	5:30-10:00	5:30-10:00	Silent	5:30-10:00	Silent	5:30-10:00	WGCP
WGES	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	Oak Park, Ill.	250	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
WGN	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	Chicago, Ill.	370.2	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
WGR	7:45- 9:15	2:00- 3:00	7:00-12:00	7:00-10:00	7:00-12:00	7:00-10:00	6:00-12:00	WGR	Buffalo, N. Y.	319	6:45- 8:15	1:00- 2:00	6:00-11:00	6:00- 9:00	6:00-11:00	6:00- 9:00	5:00-11:00	WGR
WGY	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	Schenectady, N. Y.	379.5	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
WHAD	7:00- 8:00	4:15- 5:15	7:00-11:00	7:00- 8:00	7:00- 1:30	7:00-11:00	7:00-11:00	WHAD	Milwaukee, Wis.	275	6:00- 7:00	3:15- 4:15	6:00-10:00	6:00- 7:00	6:00-12:30	6:00-10:00	6:00-10:00	WHAD
WHAR	6:30- 9:30	8:00-11:00	6:30- 8:00	6:30-12:00	Silent	6:30- 9:30	6:30-12:00	WHAR	Atlantic City, N. J.	275	5:30- 8:30	7:00-10:00	5:30- 7:00	5:30-11:00	Silent	5:30- 8:30	5:30-11:00	WHAR
WHAS	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	Louisville, Ky.	399.8	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
WHAZ	Silent	Silent	8:15-10:15	Silent	Silent	Silent	Silent	WHAZ	Troy, N. Y.	379.5	Silent	Silent	7:15- 9:15	Silent	Silent	Silent	Silent	WHAZ
WHB	Silent	9:00- 2:00	8:00- 9:00	Silent	8:00- 9:00	9:00-11:30	8:00- 9:00	WHB	Kansas City, Mo.	365.6	Silent	8:00- 1:00	7:00- 8:00	Silent	7:00- 8:00	8:00-10:30	7:00- 8:00	WHB
WHN	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	New York, N. Y.	361.2	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
WHO	Silent	8:30- 9:30	8:30- 1:00	8:30- 1:00	7:30- 1:00	8:30- 1:00	8:30- 1:00	WHO	Des Moines, Ia.	526	Silent	7:30- 8:30	7:30-12:00	7:30-12:00	6:30-12:00	7:30-12:00	7:30-12:00	WHO
WHT	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	Deerfield, Ill.	399.8	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
WIBO	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	Chicago, Ill.	226	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
WIP	7:00-11:05	Silent	Silent	7:00-12:00	Silent	7:00-12:00	Silent	WIP	Philadelphia, Pa.	508.2	6:00-10:05	Silent	Silent	6:00-11:00	Silent	6:00-11:00	Silent	WIP
WJAR	Silent	6:20- 9:15	6:45- 7:45	6:30- 9:00	6:30- 7:30	7:00-10:00	7:00-11:00	WJAR	Providence, R. I.	305.9	Silent	5:20- 8:15	5:45- 6:45	5:30- 8:30	5:30- 6:30	6:00- 9:00	6:00-10:00	WJAR
WJAS	6:00-11:00	Silent	6:00-11:00	6:00-11:00	6:00-11:00	6:00-11:00	6:00-11:00	WJAS	Pittsburgh, Pa.	275.3	5:00-10:00	Silent	5:00-10:00	5:00-10:00	5:00-10:00	5:00-10:00	5:00-10:00	WJAS
WJJD	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	Mooseheart, Ill.	302.8	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
WJR	7:00-11:00	Silent	7:00-11:00	7:00- 8:00	7:00-11:00	7:00-11:00	7:00-11:00	WJR	Detroit, Mich.	517	6:00-10:00	Silent	6:00-10:00	6:00- 7:00	6:00-10:00	6:00-10:00	6:00-10:00	WJR
WJY	Silent	7:15- 8:15	Silent	7:30-10:15	Silent	7:30- 9:00	7:45- 8:45	WJY	New York, N. Y.	405.2	Silent	6:15- 7:15	Silent	6:30- 9:15	Silent	6:30- 8:00	6:45- 7:45	WJY
WJZ	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	New York, N. Y.	454.3	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
WKAQ	Silent	7:00- 9:00	Silent	Silent	7:00- 9:00	Silent	Silent	WKAQ	San Juan, P. R.	340.7	Silent	6:00- 8:00	Silent	Silent	6:00- 8:00	Silent	Silent	WKAQ
WKAR	12:30- 2:00	Silent	7:00- 8:00	Silent	8:00- 9:15	Silent	7:00- 8:00	WKAR	Lansing, Mich.	285.5	11:30- 1:00	Silent	0:00- 7:00	Silent	7:00- 8:15	Silent	6:00- 7:00	WKAR
WKRC	10:00-12:00	6:45-12:00	8:00-12:00	10:00-12:00	8:00-10:45	10:00-12:00	Silent	WKRC	Cincinnati, O.	326	9:00-11:00	5:45-11:00	7:00-11:00	9:00-11:00	7:00- 9:45	9:00-11:00	Silent	WKRC
WLBL	Silent	Silent	Silent	9:00-10:00	Silent	9:00-10:00	Silent	WLBL	Stevens Point, Wis.	278	Silent	Silent	Silent	8:00- 9:00	Silent	8:00- 9:00	Silent	WLBL
WLIT	Silent	Silent	6:30-10:00	Silent	6:30-10:00	Silent	6:30-10:00	WLIT	Philadelphia, Pa.	394.5	Silent	Silent	5:30- 9:00	Silent	5:30- 9:00	Silent	5:30- 9:00	WLIT
WLS	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	Chicago, Ill.	344.6	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
WLW	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	Harrison, O.	422.3	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
WMAK	Silent	Silent	8:30-10:15	Silent	Silent	11:00-12:00	Silent	WMAK	Lockport, N. Y.	265.5	Silent	Silent	7:30- 9.15	Silent	Silent	10:00-11:00	Silent	WMAK
WMAQ	8:00-10:00	Silent	Silent	8:00-10:15	8:00- 9:45	8:00-10:15	8:00-10:15	WMAQ	Chicago, Ill.	447.5	7:00- 9:00	Silent	Silent	7:00- 9:15	7:00- 8:45	7:00- 9:15	7:00- 9:15	WMAQ
WMBB	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	Chicago, Ill.	250	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
WMBF	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	Miami Beach, Fla.	384.4	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
WMC	8:30-10:30	Silent	8:30-10:30	8:30- 1:00	Silent	8:30-10:30	8:30- 1:00	WMC	Memphis, Tenn.	499.7	7:30- 9:30	Silent	7:30- 9:30	7:30-12:00	Silent	7:30- 9:30	7:30-12:00	WMC
WMCA	5:30-11:00	6:00- 6:30	5:30-11:00	5:30-11:00	5:30-11:00	5:30-11:00	5:30-11:00	WMCA	New York, N. Y.	340.7	4:30-10:00	5:00- 5:30	4:30-10:00	4:30-10:00	4:30-10:00	4:30-10:00	4:30-10:00	WMCA
WNAC	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	Boston, Mass.	280.2	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
WNYC	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	New York, N. Y.	526	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
WOAI	9:30-10:30	9:00-11:30	9:30-10:30	9:30-11:30	9:30-10:30	10:30-11:30	Silent	WOAI	San Antonio, Texas	394.5	8:30- 9:30	8:00-10:30	8:30- 9:30	8:30-10:30	8:30- 9:30	9:30-10:30	Silent	WOAI
WOAN	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	Lawrenceburg, Tenn.	282.8	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
WOAW	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	Omaha, Nebr.	526	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
WOC	10:00- 1:00	9:00-12:30	Silent	7:30-10:00	10:00-11:00	8:00- 1:00	9:00-10:00	WOC	Davenport, Ia.	483.6	9:00-12:00	8:00-11:30	Silent	6:30- 9:00	9:00-10:00	7:00-12:00	8:00- 9:00	WOC
WOK	10:00- 1:00	7:00- 1:00	6:00- 1:00	10:00- 1:00	10:00- 1:00	10:00- 1:00	10:00- 1:00	WOK	Homewood, Ill.	217.3	9:00-12:00	6:00-12:00	5:00-12:00	9:00-12:00	9:00-12:00	9:00-12:00	9:00-12:00	WOK
WOO	Silent	6:30- 7:30	6:30-11:00	6:30- 7:30	6:30-11:00	6:30- 7:30	6:30-10:30	WOO	Philadelphia, Pa.	508.2	Silent	5:30- 6:30	5:30-10:00	5:30- 6:30	5:30-10:00	5:30- 6:30	5:30- 9:30	WOO
WOR	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	Newark, N. J.	405.2	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
WORD	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	Batavia, Ill.	275	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
WOS	Silent	9:00-10:00	9:00-11:00	Silent	9:00-11:00	Silent	9:00-11:00	WOS	Jefferson, City, Mo.	440.9	Silent	8:00- 9:00	8:00-10:00	Silent	8:00-10:00	Silent	8:00-10:00	WOS
WPG	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	Atlantic City, N. J.	299.8	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
WQJ	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	Chicago, Ill.	447.5	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
WRBC	Silent	8:30- 9:30	8:30- 9:30	Silent	Silent	Silent	Silent	WRBC	Valparaiso, Ind.	278	Silent	7:30- 8:30	7:30- 8:30	Silent	Silent	Silent	Silent	WRBC
WRC	7:00-11:30	Silent	Silent	7:00-12:00	Silent	7:00-11:00	Silent	WRC	Washington, D. C.	468.5	6:00-10:30	Silent	Silent	6:00-11:00	Silent	6:00-10:00	Silent	WRC
WREO	10:00-12:00	Silent	Silent	8:15- 9:45	Silent	8:15- 9:45	Silent	WREO	Lansing, Mich.	285.5	9:00-11:00	Silent	Silent	7:15- 8:45	Silent	7:15- 8:45	Silent	WREO
WRW	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	Tarrytown, N. Y.	273	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
WSAI	8:00- 1:30	3:00- 4:00	10:00-12:00	7:45-10:00	10:00-12:00	7:00-10:00	Silent	WSAI	Mason, O.	325.9	7:00-12:30	2:00- 3:00	9:00-11:00	6:45- 9:00	9:00-11:00	6:00- 9:00	Silent	WSAI
WSB	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	Atlanta, Ga.	428.3	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
WSMB	9:30-11:30	Silent	9:30-12:30	Silent	9:30-11:30	9:30-12:00	Silent	WSMB	New Orleans, La.	319	8:30-10:30	Silent	8:30-11:30	Silent	8:30-10:30	8:30-11:00	Silent	WSMB
WSUI	Silent	8:00-11:00	8:30-10:00	Silent	Silent	Silent	Silent	WSUI	Iowa City, Ia.	483.6	Silent	9:00-10:00	8:00- 9:00	Silent	Silent	Silent	Silent	WSUI
WTAM	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	Cleveland, O.	389.4	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
WTAS	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	Elgin, Ill.	302.8	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
WTIC	Silent	6:00- 7:55	6:00- 9:45	5:55- 8:45	Silent	6:00- 7:55	6:00- 9:30	WTIC	Hartford, Conn.	475.9	Silent	Silent	5:00- 6:55	5:00- 8:45	Silent	5:00- 6:55	5:00- 8:30	WTIC
WWJ	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	Detroit, Mich.	352.7	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

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Requests Guaranteed

FLATTERED directors of broadcasting stations who are uninformed of a "request racket" commonly engaged in by certain members of the music publishing business, should take note of the food for thought contained herein. The invisible audience may also be interested to know of the tricks and unethical practices of "song pluggers," those persons with more or less melodious and powerful voices who introduce new songs via Radio, theater and dance hall.

Picture the reception room or office of a broadcasting station that is on the air. Telephones are ringing. Comes a sweet soprano or poorly disguised, bass voice over the wire, "Won't you please play that marvelous new number 'Dah-de-Dah?' I'd like to hear it again."

Perhaps a fake name and address are added. Sometime the latter "refinement" is omitted.

The request taker may be fooled and take down the name of the number requested. Thanks to the raw presentation of the "request," however, the request taker usually will reply with, "Thank you. We will," and then, hanging up the receiver, finishes the sentence, "not!"

We have every reason to know that this "request racket" is consistently practiced by song pluggers throughout the land.

Recently a mid-western station developed transmitter trouble shortly after going on the air for a period of popular entertainment. There was a new singer from a local song publisher's office scheduled to sing at a certain time but the station's trouble prevented her from broadcasting. However, ten minutes after the time originally alloted to the plugger had passed, the following telegram came in: "Please have Miss Blank sing 'Dah-de-Dah' again. Her voice and that song are the best things my set picked up tonight." Since receiving this wire the station is more than ever on the lookout for the scurvy tricks practiced by the music publishers who rigidly charge them for broadcasting their advertisements.

Many stations are wise enough to scent the genuine from the faked requests. Many are not. So, if you happen to request a new number and the station unceremoneously fails to play it, after promising so nicely to do so, just remember that it is because of "Requests guaranteed."

To the Amateurs

AMATEURS have just concluded another annual convention. The American Radio Relay league met at Chicago. The cry of "Down with the Amateur" is not so often heard nowadays. Public education to the causes of poor reception, misfunctioning receivers, inductive interference, atmospherics and the like, has relieved the misapplied pressure.

True, there was a bit of trouble from the old spark sets formerly used by code amateurs, but the spark set, like the Arab, has silently folded its tent and stolen away. Tube transmitters, properly connected so as to be of no interference value, are the present order.

Broadcast listeners have to thank the amateur and the relay league for accomplishing this transformation. Broadcast listeners likewise should thank the amateur for his past work and present in the perfection of Radio transmission and reception.

Amateurs are now exploring the short waves, the mysterious region which holds the secret to the solution of congestion and daylight Radio.

They are a bright bunch of lads and men, these amateurs, and deserve unstinted praise, not criticism.

Why We Want One

THEY'RE here—the new sets! Beautiful cabinets, artistic panels, enticing accessories—enough to make a beggar part with his last cent in order to feel the pride and exultancy of possession.

Radical? Revolutionary? No. No one said they would be, but the fall set designs show remarkable mechanical and electrical design improvements.

Yes, the old set will still work fine—but still, we'd like to have one of the new ones, just so we can feel that warm flush of pride when the neighbors call and admire our new Radio. That's all.

RADIO INDI-GEST

Mizz Partington Says

Dear Indi: Mizz Partington reports progress on her Super 8 set which she says was a knock down type with mor'n 100 holes to drill in the basement panel which she has done.

She states that her dealer was rather unscrewpulous in fittings, sending a box of "economy" bolts and screws that was sure the strictist economy on his part and about same rate as a savings bank 4% of amount needed. Then the frosted sockets come with their hind legs missin as well as their bolts. She writ the the socket shop & they kindly sent the missing legs and jest as kindly said to feel free to get the bolts wherein and whereas she pleased. The localized Radio shops mostly had their doors locked up whilst the owners was enjoying a cooler resort some place and them that was open said they had plenty of bolts that was all too short, but they hadn't any nut as some of the folks must have been using 2 nuts to a bolt or else they must have lost some, so anyhow they wasn't going to order no more nuts until they sold what bolts they had in stock.

However, we don't need no stoves now in this climate so a hard wear man let her have some stove bolts to hook up with which now looks like she may git to receiving some time in the near future mebby.

SIGNING OFF.

Ye Olden Days

And now we have the listeners strike against unfair stations. Too many on the air on certain nights they complain. Gee, do you remember away back when broadcasting first started and you were glad to get anything they offered from any station. The next morning you went down to the office and made statements such as these:

"Well, they are going to have rain in Wisconsin today."

"I see the price of tiddle-wink ivory has gone up."

"Do you know there is a lot of interesting philosophy in the kids' bedtime stories?"

"Gee, I never realized how simple cake baking was until last night."

You Win the Bet

Dear Indi: Havin' heard that this here now thing that we calls a tube, is got the name "Valve" over 'ome in England, am I causin' a whole lotta heterodynin' when I asks if all them there English oysters and clams is two tube receivin' sets? The bally things is called bi-valves, don't you know! CON DENSER.

Add Radio Safety Hints

A man in Louisville was recently arrested for shouting the short and ugly word during a speech by Dr. Stratton, fundamentalist extraordinary. We listened to the same anti-monkey business talk over the Radio and did not get arrested. Everytime the speaker hit a point where we felt moved to say things like those said by the Louisville man we switched over on another station which was broadcasting the several verses of "You Can't Fool an Old Horsefly."

News Bulletins from Milwaukee

Furnished in cooperation with the Milwaukee Daily Beverage

(Beer up, my friend, beer up)

The age of Miracles is not past. Otherwise how could Station WHT get Deerfield on top of the Wrigley building, Chicago, every Monday night? Nobody knows because they are keeping silent about it.

* * *

T'other day WHT received a request for "Silent Night, Holy Night." They layed it over 'til Monday.

* * *

Fridrich Suchentrunk reported hearing a Chicago station actually broadcasting from Chicago. He is being held for mental observation.

* * *

Think of the humor of it! A silent night in Chicago!

* * *

That's as funny as prohibition in Milwaukee.

* * *

How can any station keep silent when the United Milk Can Company's orchestra is about to render "Contended Cows" from the opera "D'Airy" under auspices of Hydro Milk Company.

* * *

With plenty of regards,
THE THIRD TROMBONE PLAYER.

It Hardly Seems Enough

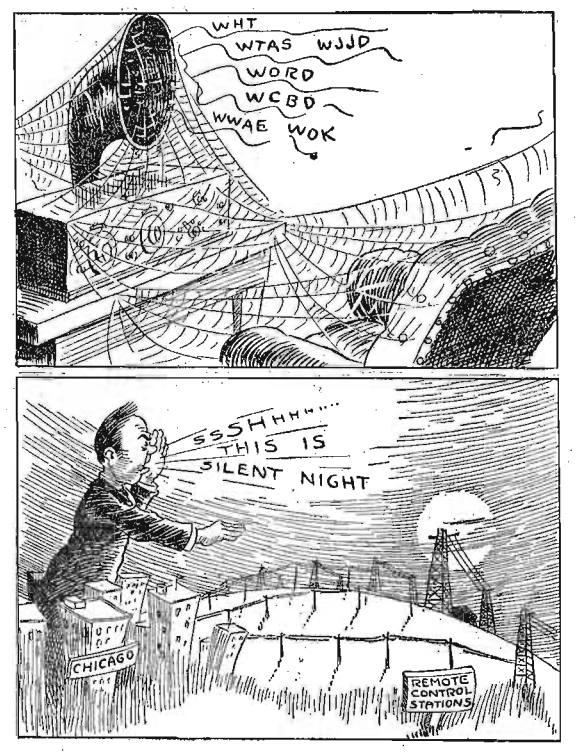
Dear Indi: Ay bane write you this letter to tell you ay find out why so many what-you-call 'em, Ray-dayo fans, bane crazy about golluff. Yost when Ray-dayo get started goot, yost den somebody start dot vary-fick-ashun business. In golluff nobody vary-fick-ates nothing. Ay know! Das golluffers yost say, "Yumpin yimminy, you yost should see me lam dot ball. Und ay know! They bane don' hit it at all. Ay know!

OSCAR.

Old Home Week

It sort of looks like old home week in Indi-ville, with both Signing Off and The Third Trombone player back in our ranks. The famous Radio Indi-Gest Silver Cornet band met both at the station and escorted them to the Digest building in a coach and four. The mayor gave them the key to the city and then changed the combination on the locks.

Monday Night in Chicago



Condensed

BY DIELECTRIC

The Radio Corporation of America Station WJZ, New York, has enjoyed the distinction of having Edison hour concerts transmitted from its studio. These have been of a high class throughout and very little adverse comment could justly follow the presentation of any of them. During one of the more recent concerts was included a feature of folk melodies of Scotland; charming in themselves and capably rendered by intelligent musicians. It is of unquestionable interest and value to have presented to the Radio public these folk songs from many lands. No truer insight into the temperamental idiosyncrasies of various races could be gained than their folk songs present.

Among the newer broadcast stations to come on the air, WJR, Jewett Radio and Phonograph company, Detroit, deserves special mention. This station has the advantage of high power and added to that, access to artists of ability. Since the opening night, when, the governor of Michigan addressed thousands through the mike of this station preceded and followed by vocalists and instrumentalists of much merit, there has been no reason for regretting its coming among us. The transmission is of the best quality and so far, programs have measured up to expectations of those familiar with the intentions of the owners.

Whenever broadcast listeners have occasion to tune in WTAS, Elgin, on nights other than Monday when Chicago fans suffer annoyance, it is rather certain to be a satisfactory experience. Many stations have at least one regular feature for which the fans plan their listening periods; the Toadstool Inn orchestra, from WKRC, Cincinnati; Happiness Boys hour, WEAF, New York; Sunday morning church service hour, from studios all over the land. Probably no other feature from WTAS so generally pleases as the Purple Grackle orchestra concerts. If you have never listened to this musical organization, do so.

And now for another mention of a station providing organ recitals for those with a liking for this majestic instrument. Among the 300-meter class you may find KTHS, Hot Springs National Park, Ark., a station from the studio of which is transmitted at certain times organ recitals sure to call for applause. Lawson Reid has little difficulty in impressing his auditors with the possibilities of his instrument and his own musicianship.

Touring by auto carries far less apprehensions for the driver than formerly for the simple reason that a number of broadcasting stations make a practice of announcing road conditions and location and character of detours to be encountered over certain highways. WNAC, Boston, is one of the stations to offer this service to its listeners. Where the auto of a tourist is equipped with a portable receiver, the very latest news respecting road conditions is available almost nightly. The possibilities of Radio service have far surpassed the most sanguine prophecies, with room for expansion.

One of the customarily good programs from WEBH was heard not long ago. A fan living close to the Atlantic coast chose this particular station to listen to on the identic evening your reviewer heard them and favored me with his impressions of each number as well as the program as a whole. The popular songs presented were just exactly suited to the tastes of my correspondent and indeed they were selections calculated to please most listeners. It is a pleasure to remark here the excellent diction of the baritone, whose name, unfortunately, escaped me. Some noted artists need lessons in diction.

Easy Methods of Making Receivers Selective

Part III—The Super-Heterodyne

By John G. Ryan

THE super-heterodyne is, inherently, an extremely selective receiver and, properly constructed of well-designed parts, it should separate stations to a fine degree or go through locals at will. Unfortunately commercial production on some of the parts which must go into a super does not seem to permit of the best possible design and there is, in most of the kits on the market, much to be criticized and condemned.

For some reason, most of the kit manufacturers seem to feel that because of the super's inherent sensitivity and selectivity they can disregard all of the basic rules on low loss and careful design and the set will work anyway. This being the case, and the average builder not being in a position to differentiate between good and bad, it is necessary to take extra care, with respect to the parts that can be controlled as to their efficiency, to make up for weakness elsewhere.

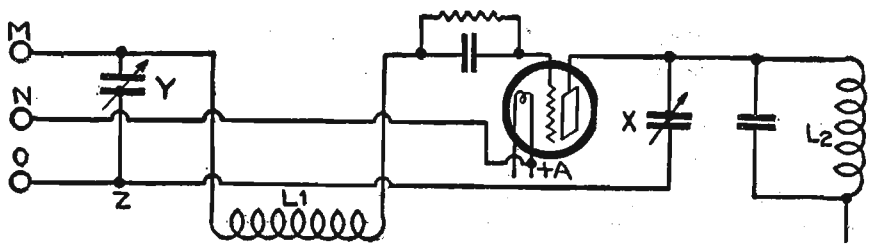


Figure 8

Get Best Variable Condensers

First of all, when choosing variable condensers, get the very best you can. The super is going to cost plenty anyway and its final efficiency should not be ruined to save a half dollar in condensers. They should either be equipped with vernier in their construction or be provided with vernier dials, as a correctly built super is very sharp and stations will otherwise be missed. If a wooden baseboard is used, keep all wiring up at least one-half inch from it and it will be found also of advantage to mount sockets on short pillars made of battery nuts or tubing to keep the springs on the bottoms away from the wood. It would be far better practice to use a bakelite or hard rubber baseboard, mounted about 1½ inch from bottom edge of panel on brackets, which will give not only far lower losses but permit of sub panel wiring of filaments and B return leads, preferably cabled, a la Milo Gurney.

The oscillator coupler, whether open or enclosed, is composed of air-core coils with a wide spreading field; keep any large bodies of metal away from this unit, such as condensers, brackets, transformers or metal sockets. If an antenna coupler is used, the same suggestions apply; the primary and secondary have large fields which should not be distorted or weakened by eddy currents caused by metal bodies.

Regeneration Cuts Input Resistance

Losses, in the form of resistance, cause broad tuning. Resistance (effective) can be cut down in the initial input circuit, where signals are weakest, by the addition of regeneration. Some sets have considerable regeneration present in this circuit due to feedback caused by wiring or placement of apparatus. The addition of intentional regeneration is not therefore necessary. There is no dependable way of knowing this, however, so it is not a bad idea to add it as shown in figure 8 and try it out.

This was the method suggested by the writer in connection with the "Simplest Super" last fall. It makes necessary a split, center-tapped loop, but most of those available on the market these days are made with this tap. The two ends are connected at points M and O while the tap goes to N. The condenser indicated as X may be any of the small three-plate units or 11 to 13-plate midget condensers available. The inductance L_1 is the pick-up coil of the oscillator coupler. Inductance L_2 is the primary, tuned, of the first intermediate stage. In other words, the tube shown is the first detector of the average super.

Tuned Filter Design

It has always seemed to the writer that the practice of putting a fixed condenser across only the primary of the first intermediate transformer and calling this unit a filter, was unfair to the word itself. In tuned radio frequency sets, we tune three circuits to get selectivity and yet, in the super, many tune only the one primary and expect this to eliminate undesired wave lengths.

There is such a thing as going to extremes in the other direction, and tuning everything, as did Jacques Fournier in his four filter set. Properly adjusted, this did filter beautifully and the tuning was knifelike.

However, there is a happy medium which should do for most of us, as shown in figure 9. It will be noted that the primary and secondary of this filter, placed between the first detector and the first intermediate, are both tuned or made sharply resonant. Great care, and some knowledge of Radio principles, is necessary to put this in though, as the two circuits must be tuned exactly to each other and to the peak wave length of the intermediate transformers which follow. There is such a unit on the market so it can be done. The coupling between the coils can be varied also which is of advantage.

Shielding of Super-Het

Considerable study has been given of late by laboratories and experimenters to the ability of coils to pick up stations direct instead of receiving their energy through the aerial and ground, especially in tuned radio frequency sets. The oscillator coils of a super are no different in this respect and can pick up powerful local signals. So also can the secondary of an antenna coupler. These circuits are tuned to broadcast wave lengths, the latter exactly to the signal being received and the former to one but slightly different which may be the wave length of an undesired station. Shielding, although decried last year as something horrible is now being heralded as the salvation of selectivity by many well-known authorities.

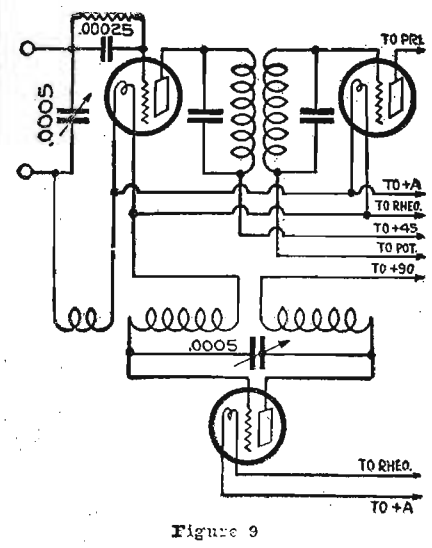


Figure 9

If, when designing a new super, one can keep the first detector tuning condenser and the antenna coupler close together, a shield, made preferably of thin gauge copper, can be placed entirely around these two units but kept at least

(Continued on page 18)

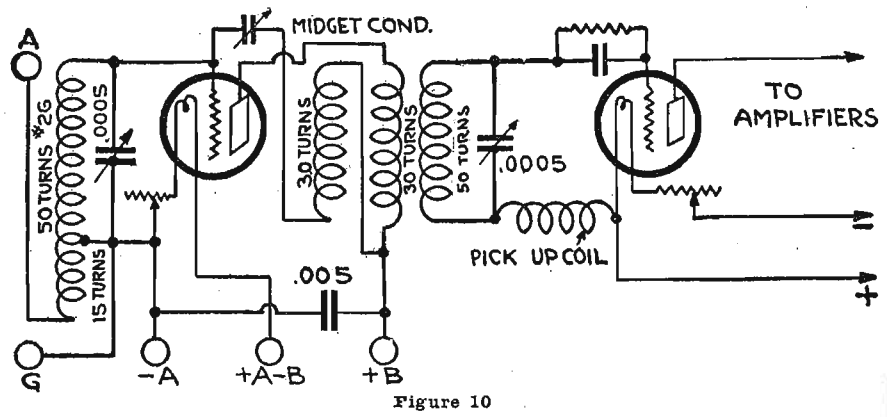


Figure 10

OBTAINING SELECTIVITY

(Continued from page 17)

two inches away from the coupler and condenser. This is, of course, impossible at the front of the condenser, as a shield behind the panel will come very close, but if the grounded rotor type of condenser is used this fact will not hurt. The oscillator coupler and condenser should be treated the same way and, if possible, the oscillator tube socket should be included in the copper box thus formed.

Stopping Reradiation

An excellent unit can be added in front of a super as shown by the diagram in figure 10. This will accomplish the two-fold use of increasing your own selectivity and range remarkably and preventing your super from radiating into the aerial and disturbing all the neighbors. A super is the most powerful receiving radiator known when not handled correctly.

The unit of figure 10 will give another control but it is not hard to use and its dial settings will run practically identical throughout the range of the input tuning condenser on the super, the condenser to the right in the drawing. Use number 26 dsc. wire for winding the coils. On a 3-inch tube 2¾ inches long, wind 65 turns with a tap at the 15th turn, starting the winding ½ inch from the end. On another 3-inch tube 5 inches long, wind 30 double turns by using two lengths of wire and winding both at the same time as a single wire. 30 turns of this double wire will make a coil of 60 turns with four ends. The beginning of one coil is connected to the end of the other, forming the B positive connection. Now wind ½ inch from the double coil, a grid coil for the first detector consisting of 50 turns.

The 65-turn coil is mounted horizontally and the double-turn coil vertically, both the same distance from the panel and as far apart as possible. The 65-turn coil is centered on the 30-turn double coil. The small neutralizing condenser is mounted on the baseboard, unless the builder prefers to have it on the panel, although there is no need for it there. The rheostat is in the A negative lead and the 15-turn tap is connected to the rotor plates of the .0005 mfd. variable condenser and to the A negative and ground binding posts. The aerial binding post is connected to the outside of the 15-turn coil with the other end of the 50-turn coil going to the stator plates of the condenser and to the grid. To adjust, darken the radio frequency tube with a piece of paper over one prong of the filament contacts in the socket. Tune in a moderately strong signal and adjust the neutralizing condenser until the signal disappears or becomes a minimum. This is Mr. Thatcher's unit for single circuit sets, revised for use on the super.

Another type of unit for this purpose is shown in figures 11 and 12. This is a comparatively little known method of compensation of the plate to grid capacity with a radio frequency amplifier tube but it is effective and easily controlled. The diagram of figure 11 shows it applied to the writer's simplest super after regeneration had been added to the first detector. The construction of the antenna coupling arrangement is shown in figure 12 but some suggestions on the coupler between radio frequency tube and detector may help. This can be a neutroformer of the usual type with about 56 turns on a 2¾-inch tube with a primary of 5 to 9 turns. It can be any of the low loss wound type couplers on the market. If one does not care for the type of regeneration shown, a three-circuit tuner can be used, with the tickler between plate of detector and the primary of the filter. In this case the center tap would be omitted and the rotor plates of grid tuning condenser would connect to filament. There would be no midget condenser, but a tickler control would become necessary.

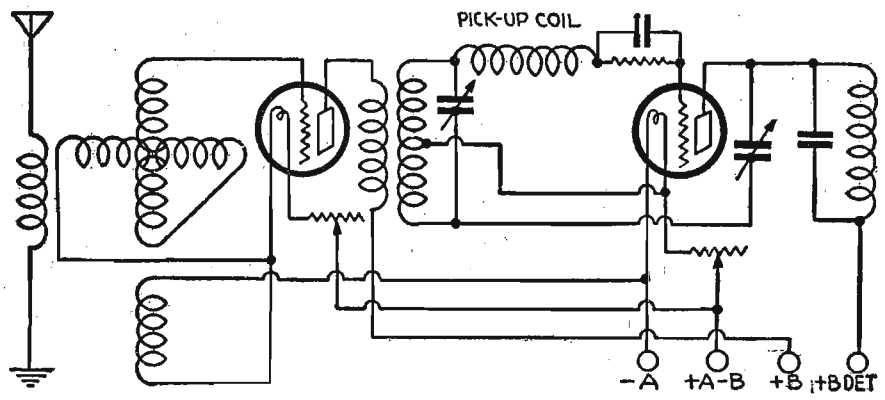


Figure 11

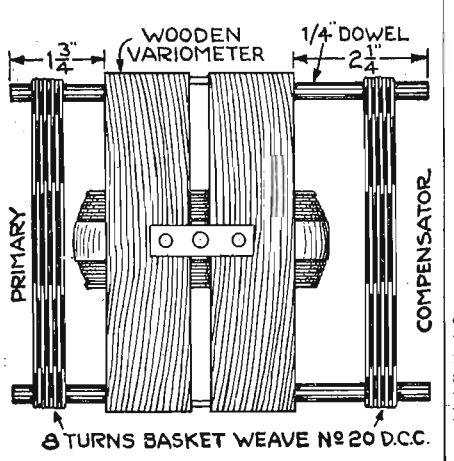
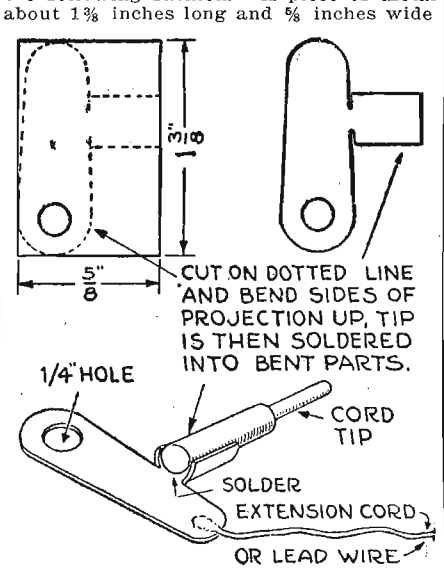


Figure 12

Tip and Lug Combined

A combination tip and binding post lug for use on loud speaker extension cords, battery wires, etc., can be easily made in the following fashion. A piece of metal about 1⅜ inches long and ⅝ inches wide



copper, tin or brass, is cut with a pair of tin shears as shown in the accompanying illustration. Cut on dotted line, fold sides together, and then solder to folded tin. — Arthur DeFrain, Harbor Beach, Mich.

It pays to have one or two more tubes than are needed. When the set is finished and you are trying it out, one "dead" or inefficient tube will cause the entire outfit to be inoperative or very weak. Having spares, one can switch tubes around and the poor one will be identified when replaced.

Construction of an Edison Storage B Battery

Part I—Rack, Panel and Elements

By John De Quedville Briggs

LIST OF PARTS

120 pairs Edison elements*	$ 4.80
60 ft. soft iron stovepipe wire**	.25
120 six inch test or culture tubes, ¾ inch	3.60
18 inches soft rubber ¼-inch tubing	.30
Bakelite or hard rubber panel 6 by 7 inches	1.00
6 binding posts	.60
2 baby switches DPDT	1.50
2 nine point switches	1.00
1 piece oak 8x24x½	
2 pieces oak 7½x7x½	
2 pieces oak 7½x24x½	
3 pieces oak 7x23x½	
4 pieces oak 1x1x4	
2 hinges, 2 drawer pulls, some 1-inch iron wood screws	
2 pounds c.p. potassium hydroxide	1.50
3 quarts distilled water	.30
8 ounces paraffin oil	.15
Cost, minus lumber and hardware	$15.00
*120 pairs of drilled Edison elements	6.00
*120 pairs of welded connected elements	9.60
** 60 feet of pure nickel wire	.60
PARTS FOR RECTIFIER	
1 Switch DPST	.25
3 Porcelain cleat lamp sockets	.45
2 Fuses 5 ampere	.10
1 Lamp 100 watt size	.75
1 Mason jar	.20
1 Aluminum rod	.25
1 Lead rod	.50
1 Package 20 Mule Team Borax	.25
	$2.55

WHEN a man's workshop is tenanted by some four or five inverse duplexes, a nine tube super-heterodyne and various other multi-tube monstrosities, the B battery supply is a serious problem. Dry cells are all right for one who possesses one set for drawing room use but when I figured out, a year ago, that they were costing me about

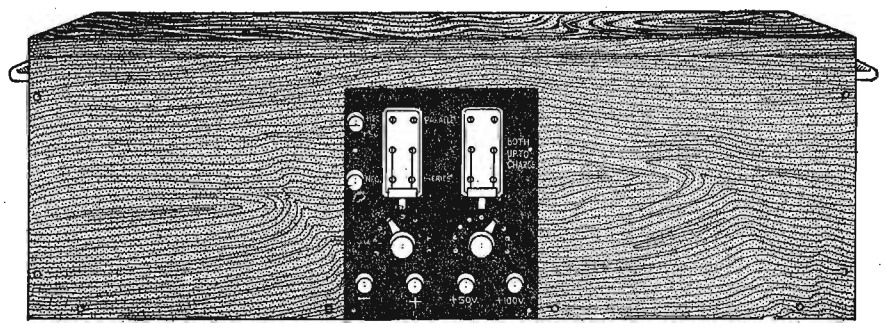


Figure 1

eighty dollars a year, I decided that they were no plaything for an impecunious schoolmaster.

The B eliminator I built worked perfectly with the super-heterodyne, but elicited the most horrible hum from my pet inverse duplex, so that was out of the question. I seriously considered pawning my Ford and buying a set of lead storage B units but 150 volts of this is pretty costly. I am away three months in the summer and never yet have I found a responsible person who would keep my lead cells charged as if they were his own. The new Edison B units looked good but I should have had to mortgage more than the Ford to get those. So, I solved the problem by building a 150-volt battery from salvaged Edison elements, 120 cells at 1.2 volts per cell.

Battery Not Radical or New

There is nothing new or spectacular about this battery. Amateurs have made them before. So have some dealers. All I claim for mine is that it is really good looking, delivers all the high voltage I want any time I want it at almost no cost, may be shorted, neglected or charged the wrong way around, and still, like Truth crushed to earth, will rise again. One night, when a thunderstorm put out every light in St. Paul, it ran a 25-watt, 110-volt lamp for four hours and I was the envy of all the neighbors. After a year of the hardest kind of constant service it is just as good as the day I built it.

The cabinet is oak, 24 inches long, and is about the size of a standard neutrodyne. The wiring diagram, to be shown next week with Part II, is drawn to scale and shows how one may get from 12 to 40.8 volts in steps of 1.2 volts for the detector, and 50, 100 or 150 volts for the amplifier; sufficient variety for any experimenter. It is quiet, does not give off objectionable fumes and will run anything up to and including the aforementioned super-heterodyne.

Now to assemble the affair. Take the two 7 x 23-inch pieces of wood and, on one of them, lay out, with pencil and ruler as shown in the diagram (figure 2), six rows of dots exactly one inch apart, twenty in a row. Note that at one end, there is a space of 1¾ inches from the last dots to the end of the board and, at the other, a space of 2¼ inches. The rows are 1 inch apart with an inch to the front edge and an inch to the back edge. Nail or clamp the boards together. Tap lightly with hammer and center punch at each of these dots to guide the drill. Do this carefully as the final assembly will be easier and the appearance better.

Drill a small pilot hole through both boards at each dot; then with a sharp 13/16 inch bit and brace, cut the 120 volts. Yes, it is an awful job; I admit it. However, I have made two of these batteries, so I know it can be done. Incidentally, this work is a great muscle developer. Sandpaper both boards and give them a coat of stain. Then, if you feel like it, dip them in melted paraffin, the kind they use to put over jellies. This is a good stunt which I should have done

(Continued on page 21)

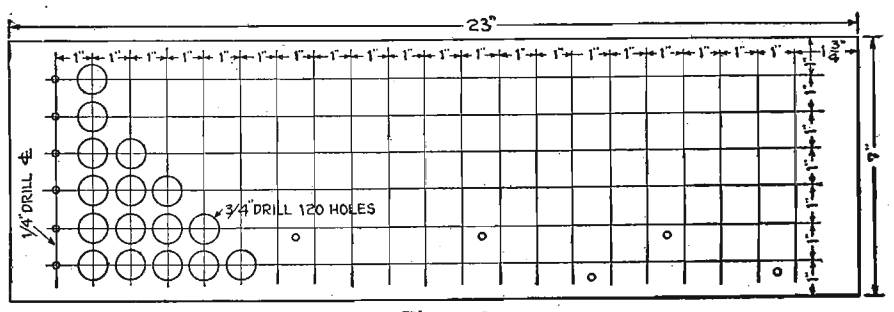


Figure 2

A. B. C. Course in Radio Fundamentals

Chapter XXV—Amplification Circuits Used in Radio (Continued)

By David Penn Moreton

THE arrangement of variable condensers and inductance coils shown in figure 105, give what is called tuned amplification, which greatly helps in eliminating, or reducing to a minimum, any interfering signals. The tuned amplification is used to amplify the received signal, which is of radio frequency, before detection rather than after. Any detector operates best when the signals are of comparatively large amplitude, and may even fail to function where the signal amplitude is very small. The amplifying action of the tube is made use of in amplifying the radio frequency signals until their amplitude is sufficient to produce the desired results in the detector tube.

The operation of the circuit shown in figure 105 is as follows: the Radio signals picked up by the antenna, set up oscillations in the antenna circuit, which may be tuned to the frequency of these particular oscillations by means of the inductance L_1 and the capacity C_1. A tuned oscillatory circuit composed of the inductance L_2 and the condenser C_2 is inductively coupled to the antenna circuit. The voltage between the terminals of the condenser C_2 is applied between the filament and grid of the three electrode tube I.

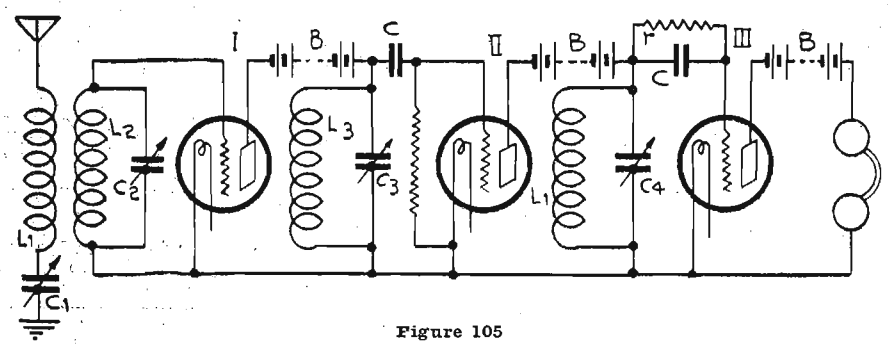


Figure 105

The plate circuit of the tube I is adjusted for maximum voltage amplification by connecting an inductance L_3 in circuit, with a variable condenser C_3 connected across the terminals of the inductance. The reactance of the external plate circuit of tube I may be made to approach an infinite value, by means of the condenser C_3 for the particular frequency of signal being amplified. When an alternating electrical pressure is applied to the grid of tube I an amplified alternating electrical pressure will appear between the terminals of the inductance L_3. The electrical pressure between the terminals of the inductance L_3 is applied to the grid of a second tube II through a condenser C. This second amplifier tube has its plate circuit adjusted for maximum voltage amplification by means of the inductance L_4 and condenser C_4, which are tuned to the frequency of the signal being amplified. The alternating electrical pressure between the terminals of the inductance L_4 may be impressed upon a third amplifying tube, and so on, or the third tube may be connected to operate as a detector as shown in figure 105. The operation of the grid condenser C and grid leak r have been explained in the previous chapters.

From the above brief description, it is seen that the function of the intermediate tuned circuits L_3, C_3 and L_4, C_4 is twofold; first, by means of them, a maximum voltage amplification is obtained, and second, they serve to eliminate signals of slightly different frequency.

The condensers C_3 and C_4 in figure 105 are not essential to the operation of the circuit provided the inductance L_3 and L_4 are large. The inductances should, of course, be air-core coils, as any magnetic material present would result in large iron losses at radio frequencies. There is a certain amount of capacity between the plate and the filament of the tube, and the coils themselves possess a certain amount of distributed capacity, which will result in the plate circuit being automatically tuned for certain frequencies and, as a result, there will be a greater amplification for these frequencies than there is for others.

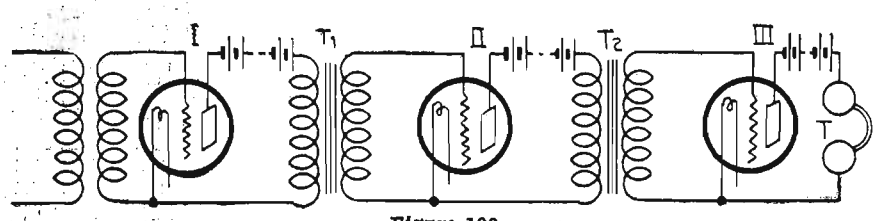


Figure 106

Transformer Coupled R.F.

Another type of cascade amplifier is shown diagrammatically in figure 106 and is known as the transformer coupled amplifier. The alternating electrical pressure which is to be amplified is impressed between the grid and filament of the tube I. As previously explained, this alternating electrical pressure on the grid of the tube will result in there being a pulsating current in the plate circuit of the tube. This pulsating current in the primary winding of the transformer T_1 will produce an alternating electrical pressure in the secondary winding. The electrical pressure produced in the secondary winding of the transformer is an amplified reproduction of the electrical pressure impressed upon the grid of the tube; the amount of the amplification depending upon the combined amplifications taking place in the tube and the transformer. The amplification taking place in the transformer is, of course, dependent upon the design of the transformer and its adaptability to the particular tube that it is being used with.

The second tube amplifies the alternating electrical pressure connected between its grid and filament and passes it on to the grid of a third tube III through a second transformer T_2. A telephone receiver T is connected in the plate circuit of the last tube.

This particular method of amplification is quite widely used, and is satisfactory for both radio and audio frequency amplification. For radio frequency amplification, the transformers used for coupling several tubes, as explained above, are built without iron cores, while for the amplification of audio frequencies the cores are built up from thin sheets of iron or in some cases small iron cores are used.

As stated above, the design of the transformer for best results, depends upon the characteristics of the tube being used. The plate circuit of each tube, which includes the primary winding of a transformer should be adjusted for maximum power amplification and at the same time the ratio of the transformer should be such that it will deliver a maximum potential variation to the grid of the second tube. The conditions are practically fulfilled when the transformer is given a step up ratio M, such that the impedance of the plate circuit Z_p and the grid filament impedance of the next tube Z_g will satisfy the following relation:

$$M \times M = Z_g \div Z_p$$

With properly designed transformers, used with the proper tubes, amplifiers may be constructed which will amplify signals that otherwise would be entirely inaudible.

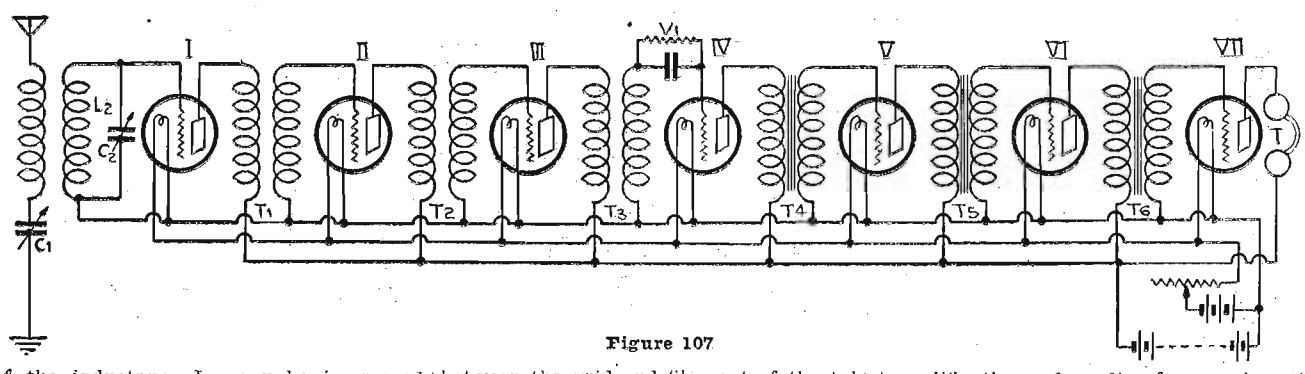


Figure 107

An All Transformer Set

A Radio receiving set using vacuum tubes and transformers for both radio and audio frequency amplification is shown diagrammatically in figure 107. The antenna circuit is tuned by means of the inductance L_1 and the capacity C_1.

(Continued on page 22)

Variable Coupling on Tuned R.F.

Rotor Primary Geared to Shaft of Condenser

The objection has often been raised that tuned radio frequency circuits do not afford a uniform amplification over the entire broadcast wave length range. Few manufactured receivers do give this uniform amplification. However, most receivers of the tuned radio frequency type are either very effective on the low wave lengths and weak on the high, or, if the process is reversed, they are very unstable on the low end of the scale.

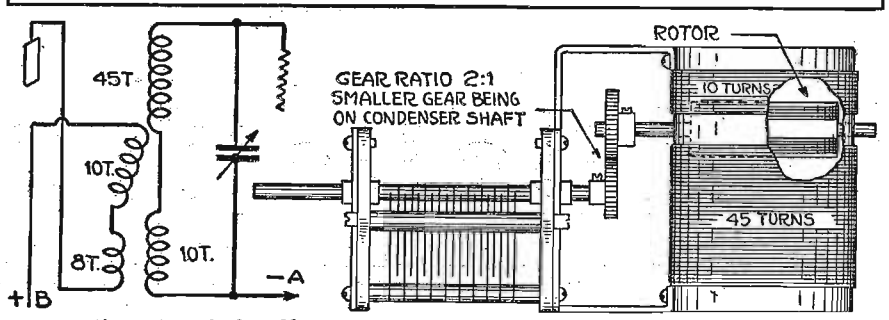
After I made a receiver of the tuned radio frequency type I did a considerable bit of experimenting. First I tried that method employing a variable coupling between primary and secondary in all three neutroformers. This worked very well but had this disadvantage, that there were now three more tuning controls, which were, however, not so critical.

The variable coupling by separate control was discarded in favor of the method illustrated herewith. The primary in the aerial circuit is varied by means of taps and switch. The primaries in the first and second step are equipped with the mechanism here shown. Part of the primary is wound on a short strip of tube which fits snugly in the filament end of the secondary coil (this is the way most neutroformers are made.) The fixed part of the primary of both units consists of eight turns each. One end of the fixed primary goes to the plate; the other end goes to one end of the wire wound on rotor; the other end of the wire wound on rotor goes to the B battery. The secondary winding is split to allow a passage for the rotor shaft; ten turns on one side, forty-five turns on the other.

As the dial which tunes the secondary circuit is turned, the rotor also turns but only half as fast due to the 2 to 1 gear arrangement; the gear on the condenser shaft having half as many teeth as the gear on the rotor shaft. The reason for this is that one-half turn of the condenser dial is required to tune the circuit from maximum to minimum whereas only a quarter turn is required of rotor to go from maximum to minimum coupling.

The rotor is so set that when the condenser reads zero, the coupling of the rotor is zero (i.e., at right angles to the secondary winding), and gradually the coupling is increased to maximum as the condenser dial is turned through 180 degrees. It is best to put about ten turns on the rotor and try it. If, upon trial, this is found to be too many, remove one turn and try again; repeat this until the correct number of turns is reached. I find that on the first stage 5 turns, and on the second stage 6 turns, work admirably.—George A. Zelzo, Worcester, Mass.

DETAILS OF CLEVER GEAR SCHEME



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

EDISON PLATE BATTERY

(Continued from page 19)

and didn't. Put the four 1 x 1 x 4-inch posts at the four corners of one of the pieces, set the other piece on top of these, and fasten together with 1-inch screws. Set this rack on top of the remaining 7 x 23-inch board and screw down. Then slip in a few test tubes and see how good looking it is going to be.

Laying Out Panel

The bakelite or hard rubber panel, measuring 6 x 7 inches, should be laid out according to figure 3. No dimensions for the location of many of the holes can be given as these will vary with the parts used. The radius of the circle on which the switch points are placed, for example, will depend upon the length of the switch blade used. It will be noticed that only alternate switch points are connected but this is so that cells cannot be shorted due to the blade resting on two "live" points at once. The baby switches will be about the proportion to the panel shown in the drawing which is drawn to scale. The locations of the holes in the bases of the switches will, of course, determine the locations of the holes in the panel through which wires pass to the cells behind.

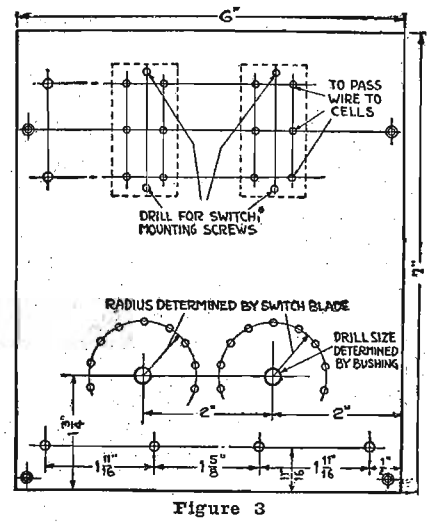


Figure 3

Fasten the panel, when laid out and assembled as shown, on the front of the rack, setting it out ½ inch so that the front of the cabinet may be slipped down behind it. Four 1½-inch screws and a few old dry cell binding post nuts will do this nicely.

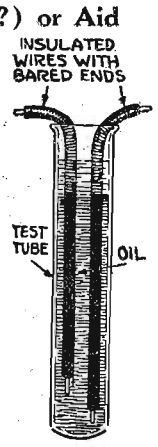
Assembly of Cells

Now for the battery proper, the parts that actually supply the "juice." You can get the Edison elements, wired in pairs, from any of the many dealers advertising them but you can get them a lot cheaper by scouting around a little. I got mine from a large size Edison cell I picked up for one dollar at an electric garage; it came out of some one's car and was supposed to be dead. This piece

(Continued on page 22)

Static Eliminator (?) or Aid

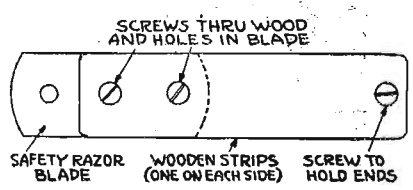
A static eliminator, or reducer, quite as efficient as the popular priced ones on the market, and far superior to some tried by the writer, may be made at a cost of from five to ten cents. In a small glass test tube put two separate pieces of rubber insulated wire such as the ordinary electric fixture wire. From each of these the cotton cover has been removed and each is long enough to reach the bottom of the tube and extend far enough from the top to be connected to the aerial and the set. Place wires on opposite sides of tube, having the lower end of each bared for ⅛ to ¼ inch, one slightly higher than the other at bottom so that they cannot possibly come in contact. Close top of tube with notched cork after adding enough liquid paraffin or other medium light oil to cover lower ends of wires; or the tube may be nearly filled if desired.



After placing cork in top, seal with wax. One terminal is connected to the aerial and the other to a wire leading to the aerial post of set. This accessory will cut down the volume slightly, but much less in proportion to the static, and is the best thing yet tried by the writer.—C. S. Culp, Salineville, Ohio.

Homemade Wire Scraper

The sketch shows how a handy wire scraper can be made from an old Gillette blade. The screws through the hole in blade should be as tight as possible so that the blade will be rigidly clamped between the two strips of wood. When one blade becomes dull, it can be easily replace by another.—C. W. Cannon, High Point, N. C.



The listener should always turn off the set's tubes when through listening.

Questions and Answers

Edelman's Heteroflex

(14303) DHS, Alda, Nebr.

A few question regarding the Heteroflex. Have built several of your sets among them being the Hetduogen, but about as soon as I get them going I dispose of same. Now I would like to make the Heteroflex.

With regard to coils 9 and 10, is 10 wound over 9 or simply side by side on a tube as it were? Does the tap on 10 come off at end next to 9 or at far end? What make is resistance number 5 and where do I get it? What make transformers 13, 14 and 15 and where can I secure them? What make crystal and where secured? Radio equipment is extremely hard to procure here, making it necessary to write to Kansas City or Chicago.

A.—The coils 9 and 10 may very well be flat of the spiderweb or Pfanstiehl types secured on a rod so they can be varied in their proximity. The tap comes off near the outside end. Resistance number 5 may be a CRL unit of about 1,800 ohms, or a Federal potentiometer of that resistance. Transformers 13, 14 and 15 may be the filter and two intermediates of any super kit. In the laboratory we used a Radio receptor with the filter as 14 and two intermediates as 13 and 15. Practically any good adjustable crystal detector may be employed. We happened to have a Freshman that worked well.

Bridges and Supers

(14299) WBW, Akron, Ohio.

Milo Gurney, in his articles on the balanced bridge for radio frequency, gives illustrations of two stages of radio frequency in figure 37 of his series of articles. Figure 37 shows only two variable condensers there being none shown across the third radio frequency transformer secondary. If this diagram is correct on that hook-up there would be only two controls for wave length on a two-stage radio frequency hook-up. This interests me because all other two-stage radio frequency hook-ups require three dials to control the wave length. Was that diagram correct?

I built a four-filter super-het by Fournier's instructions and would like to put radio frequency ahead of it but do not want any additional controls for wave length than I have at present; there being but two dials. I have read these articles with interest and thought I saw in figure 37, a chance to omit the second tube of that diagram and its units, thereby gaining a stage of radio frequency ahead of my super-het without additional variable controls for wave length.

I am using Rauland-Lyric transformers, two stages on my super-het. Everything is satisfactorily reproduced on the first stage but I must reduce my potentiometer by adding in the second stage. Is it at all practical to use two transformers and two tubes in parallel to handle the tremendous volume obtained from the second detector? I do not care for push-pull amplification and have thought that paralleling two transformers and two tubes might give the advantages claimed for push-pull.

The figure 36, of Mr. Gurney's articles shows a small variable condenser leading from the plate to the coil L2. Also a dotted fixed condenser marked, Ca. Is this dotted Ca an illustrated capacity of the condenser C7 or is it the additional small vernier condenser described by him in the following issue balancing the plate and grid of the tube? Or is the condenser C7 the one to be constructed and the only variable control between the plate and grid capacities?

A.—There was an omission in the drawing of figure 37 which we, of course, sincerely regret. There should have been three condensers. This has been reproduced correctly on page 19 of the September 5 issue. We have shown two types of radio frequency amplifier which can be added to a super, one in Mr. Thatcher's article in the August 15 issue and one on the Kinks page of the August 22 issue. The phenomena you notice of having to reduce the potentiometer on the second stage of a super is quite customary when all are in one cabinet. The transformers you have are among the very best made. It would help if the two audio stages were placed in a separate cabinet. The dotted line fixed capacity to which you refer in figure 36 of Gurney's articles is that between the plate and the grid in the tube, always present and that which we are trying to balance out.

Four Tube Dry Cell Receiver

(14188) VFF, Berger, Mo.

I am looking for a good hook-up using 199 tubes. I can not use a storage battery because I have no way to recharge it. You need not send a panel layout; all I need is the diagram (by symbols) and the constants such as number of turns, value of resistance, etc. If you have a diagram covering these requirements in a back issue let me know which one it is. Here are some important points; not more than three tuning dials, not more than four tubes, suitable for 199s, one stage of tuned radio frequency, tube detector with regeneration, two stages of audio amplification. I would like to reflex the stage of radio frequency if this can be done without impairing the efficiency.

A.—We wish to advise that the complete specifications for a receiver that perfectly meets your requirements were given in an article by Mr. Goodrich contained in our issue of May 23rd. Under separate cover we are sending you a copy of that issue and you will find that the receiver mentioned uses four 199 tubes with one stage of turned R.F. regenerative and two audio. Reflexing would impair the selectivity.

Charger Interference

(14318) RC, Racine, Wis.

Next door to me there lives a Radio fan who has a vibrating type of charger. He has storage B batteries, as well as the storage A. Consequently, he is charging batteries a greater part of the time. Four families are prevented from listening, even for locals, because of it. Is it possible for the owner to stop this noise? Or, if he refuses, can the other fans do anything on their own sets?

A.—We would suggest your reading the articles in Radio Digest August 1 and 8, furnished through the courtesy of the Radio branch of the Department of Marine and Fisheries of Ottawa, Can. This pair of articles contain information for remedying your trouble. If you cannot get satisfaction from your neighbor, write to E. A. Beane, Federal Radio supervisor, ninth district, Federal building, Chicago.

Journal Filter Coils

(14208) CCA, South Bend, Ind.

Will you kindly send me at once the specifications in full detail on the N. Y. Journal filter coils? I would appreciate an early reply.

A.—We must advise that we are unable to furnish you with the specifications for the N. Y. Journal filter coils. We suggest that you write to the Radio editor of the New York Journal, New York city, and he will probably be very glad to forward a copy of the issue of that paper containing this information.

A. B. C. RADIO COURSE

(Continued from page 20)

This antenna circuit is coupled to a tuned secondary circuit composed of the inductance L_2 and capacity C_2. The secondary circuit is connected between the filament and grid of tube I. The incoming signals are successively amplified by the three tubes I, II and III, coupled to each other by air-core transformers, or by means of special radio frequency iron core transformers. The amplified Radio signals are then impressed, through a transformer T_3, between the grid and filament of a tube IV which is made to operate as a detector by means of the grid condenser C_3 shunted by a high resistance r_1. The audio frequency pulsations in the plate current of tube IV are amplified in succession by tubes V, VI and VII, and are finally sent through the telephone receivers T.

Tubes I, II, III, V, VI and VII should be operated at the central part of their static characteristic curve so that symmetrical variations of grid potential will produce symmetrical variations in plate current. The detector tube should be operated at the upper or lower bend of its static characteristic curve in order to get the maximum amount of detector action.

(The three electrode vacuum tube is most flexible with respect to the uses to which it may be put. Professor Moreton, having discussed its use as detector and amplifier, will, next week, take it up as a regenerative amplifier and oscillator.—Editor's Note.)

EDISON PLATE BATTERY

(Continued from page 21)

of luck made it possible for me to build the complete outfit, including cabinet and rectifier, for somewhat less than $12.00. It will cost you closer to $18.00 if you get the elements from a dealer, but even at that it is a good bargain. If you get an old cell, completely discharge it, open it with a can opener, and pour out the electrolyte; with great caution. Potassium hydroxide is wicked stuff—quite as vicious as sulphuric acid. More on that subject later.

Take the plates apart, with due admiration for the beautiful workmanship, and wash them. The little rectangles are the negative elements and the long, pencil shaped things are the positive elements. You now have to bore a small hole through each element near the top, and it is easier to do this boring before you take the little individual elements from the frames in which they are clamped. Use a sharp blow with a prick punch to start each hole, and do not be surprised if you discover that the steel shells are horribly hard to bore through. I broke three drills in the process; charged to cost of battery. The holes should not be much larger than the iron wire, or you will lose much of the nickel and iron powder.

Now cut up the iron wire into pieces about 6 inches long and fasten the elements together in pairs, a negative and a positive. You can determine the exact length of the wire by figuring that neither element should touch the bottom of the glass tube, and the negative should be about half way up. The wire should go through the hole in one and be twisted tightly upon itself, should go over the edge of the tube, horizontally to the edge of the next tube and down to the other element of the pair. Thus both will be suspended in the solution and, even if the wires are not twisted absolutely tight, there will be no noise. Where a tap is to be taken off between cells, use a slightly longer wire and make a loop. Also make loops on the ends of the wires from the single elements at the beginning and end of each 50-volt block. To make connection with the copper wiring to the switchboard, solder a lug on the end of the copper wire, slip a short machine bolt through the lug, slip on a small washer, poke the bolt through the loop in the iron wire, put on the nut and tighten with a screw driver.

(The finishing touches on cell, assembly, the mixing of the electrolyte and the construction of the charger, together with a complete wiring diagram of the whole assembly ready for operation, will be given by Mr. Briggs in the second and concluding article next week.—Editor's Note).

The British Broadcasting company is to celebrate its third anniversary Friday, November 13 (hoodoo day) with a great Radio revel all over Great Britain. The chief event will be at the Royal Albert Hall, London, which accommodates over 10,000 people.

Radiophone Broadcasting Stations

Corrected Every Week—Part III

FIND MISTAKES AND YOU'LL GET DOLLAR

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. Asterisks have been placed in front of corrected listings and new stations in order to distinguish them.

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.

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. Central.

WEBD, Anderson, Indiana. 246 meters. 10 watts. Elec. *Equip. & Service Co. Announcer, F. R. Fulwider. Tues, Fri., 8:30 pm. Sun, 7:30 pm, service.

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, 272.6 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. 100 watts. Grand Rapids Radio Co. Announcer, Maurice Wetzel. Slogan, "The Furniture City." 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. 348.6 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. Dallas News and Dallas Journal. Announcer, Adams Colhoun. 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, Sat, 6:30-7:30 pm, vesper recital, sports. Tues, Thurs, Sat, 11-12 pm, music. Sun, 6:30-7:30 pm, Bible class; 8, church 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.

WFBC, Knoxville, Tenn. 250 meters. 50 watts. First *Baptist church. Announcer, St. John Reynolds. Sun, 10:45 am; 7:30 pm, services; 4 pm, sacred music. Central.

WFBD, Philadelphia, Pa. 234 meters. 5 watts. Gethsemane Baptist church. Off the air in the summer.

WFBE, Seymour, Ind. 226 meters. 10 watts. Van de Walle Music and Radio company. Announcer, John Van de Walle. Closed during the summer.

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. 233 meters. 250 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."

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 C. McPhee. Slogan, "The Convention City of America." Closed for the summer.

WFBR, Baltimore, Md. 254 meters. 100 watts. Fifth *Infantry, Maryland National Guard. Slogan, "Home of the Star Spangled Banner." Announcer, H. J. Lepper. Mon, Wed, Fr. matinee programs. Thurs, Thurs, Sat, evening programs. Sun, morning program. Eastern.

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

WFDF, Flint, Mich. 234 meters. 100 watts. Frank D. *Fallain. Slogan, "The Vehicle City." Daily ex Sun, 7 pm, police broadcasts, music. Mon, Wed, Fri, 7:30 pm. Eastern.

WFI, Philadelphia, Pa. 394.5 meters. 500 watts. Straw-*bridge & Clothier. Announcer, John Vandersloot. Daily ex Sun, 10:15 am, reports; 10:30, music; 10:40, home service; 1-1:50 pm, orchestra; 1:50, reports; 3-4:30, concert; 6:30-7, orchestra. Tues, Thurs, Sat, 8, concert. Sun, 10:30 am, 7:30 pm, church services alternating. Eastern daylight.

WFKB, Chicago, Ill. 217.3 meters. 200 watts. Francis K. Bridgman. Announcer, Horace Kehm. Daily ex Sun, Mon, 7-10 pm. Central.

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, Jack Doss. Daily ex Sun, 7:15 am; 12:10 pm, weather, markets, news; 5:20, 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.

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. Theodore 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, Floyd Neale. 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.

WGBU, Fulford By-the-Sea, Fla. 278 meters. 500 *watts. Florida Cities Finance Co. Chamber of Commerce. Announcer, Robert H. Nolan. Daily ex Sun, 12-1 pm, music; 6:30-7:30, 10-1 am. Sun, 9-11 pm. Eastern.

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.

WGCP, New York, N. Y. 252 meters. 500 watts. Grand *Central Palace. Announcer, Alfred Hall. Slogan, "Four Leaf Clover Station." Daily ex Sun, 3-6 pm. Mon, Wed, Fri, Sun, 8-11 pm. Eastern.

WGES, Oak Park, Ill. 250 meters. 500 watts. Coyne Elec. School. Announcer, John Stamford. 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. Sat, 8:15-10:45 pm, band. 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. Closed for the summer.

WHAD, Milwaukee, Wis. 275 meters. 500 watts. Marquette University. Milwaukee Journal. Announcer, Ed. Renft. Daily and 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. Sun, 3:15 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. Wil-*liam H. Taylor Finance Corp. Announcer H. Alvin Simmons. Slogan, "Forum of the Air." Daily ex Sun, 6-7:30 pm. Eastern daylight.

WHAR, Atlantic, City, N. J. 275 meters. 500 watts. *Seaside Hotel. Announcer, E. Dennisen. Daily ex Sun, Wed, 2 pm, 7:30, 7:45, 8. Sun, 2:45 pm, 3, 7:50, 9. Eastern daylight.

WHAS, Louisville, Ky. 399.8 meters. 500 watts. Courier-Journal and Louisville Times Co. Announcer, Credo Harris. Daily ex Sun, 3:15 pm, baseball; 4-5, 7:30-9. Sun, 9:57-10:45 am, 4-5 pm, church service. Mon night, silent. Central.

WHAT, Minneapolis, Minn. 263 meters 500 watts. *Twin City Business Men's Broadcasting station.

WHAV, Wilmington, Del. 266 meters. 100 watts. Wilmington Elec. Spec. Co. Slogan, "The First Broadcasting Station of the First City of the First State." Temporarily discontinued.

WHAZ, Troy, N. Y. 379.5 meters. 500 watts. Rensselaer Polytechnic Inst. Announcer, Rutherford Hayner. Slogan, "Transcontinental and International Broadasting 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, 8:30, 8:35, 9:25, 9:30, 10:25, 10:30, 10:40. Daily ex Sat, Sun, 11:20, 11:30, 11:40, 11:50, 12, 12:10 pm, 12:25, 1:25, 3, stocks, weather, news. at, 11:20 am, 12:10 pm, 1:25. Daily ex Sat, Sun, 2-3 pm, ladies' hour. Tues, Thurs, 7-7:30 pm, 8-10. Mon. Wed, Fri, 7-8 pm. Sun, 9:40 am, 11:15, 8 pm. 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. Beards-*ley Specialty company. Announcer, C. L. Beardsley. 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, Charles C. Mather. Mon, 8:30 pm. Sat, 7:30 pm. Central.

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. Carrell. (Portable).

WHBN, St. Petersburg, Fla. 238 meters. 10 watts. First Avenue Methodist church.

WHBP, Johnstown, Pa. 256 meters. 100 watts. Johnstown Automobile Co. Announcer, J. C. Tully. Slogan, "The Voice of the Friendly City." Wed, 9 pm. Sat, 10 pm. Eastern.

WHBQ, Memphis, Tenn. 323 meters. 50 watts. Men's Fellowship class. St. John's M. E. church. Announcer, Dr. George L. Powers. 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. Scientific 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.

WHBU, Anderson, Ind. 218.8 meters. 10 watts. Bing's Clothing-Riviora Theater. Announcer, O. B. Robey. Slogan, "The Home of Chief Anderson." Wed, 7-9 pm. First Sun of month, 7-9. Central.

WHBW, Philadelphia, Pa. 242 meters. 100 watts. D. B. Kienzle. Wed evening.

WHBY, West De Pere, Wis. 250 meters. 50 watts. St. Nobert'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. Central.

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. Mon, Tues, Thurs, Fri, 7:30-9 pm. Wed, 6:30-7:30 pm, 7:30-9, 9-10, 10-11:30. Fri, 11-12 mid. Sun, 11 am, 1 pm, 7:30-8:30. Central.

WHT, Deerfield, Ill. 238-400 meters. 1,500 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.

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. 10:30-11, organ. Sun, 10:30 am, church services. Central.

WIBA, Madison, Wis. 236 meters, 100 watts. The Capital 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. 202 meters. 50 watts. X-L Radio *Service. Tues, Thurs, Sun, 8-12 midnight. Central.

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. Frederick B. Zittell, Jr.

WIBJ, Chicago, Ill. 215.7 meters. 50 watts. C. L. Carroll. (Portable).

WIBK, Toledo, Ohio. 205.4 meters. 100 watts. University of the City of Toledo.

WIBM, Chicago, Ill. 215.7 meters. 10 watts. Billy Maine. (Portable).

WIBO, Chicago, Ill. 226 meters. 1,000 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.

WIBR, Weirton, W. Va. 246 meters. 50 watts. Tri-*State Radio Co. Announcer, W. D. Johnston. Slogan, "The Town Where Everybody Works." Fri, 8:30-11 pm. Sun, 2-3 pm. Eastern.

WIBS, Elizabeth, N. J. 202.6 meters. 20 watts. New Jersey National Guard.

WIBT, New York, N. Y. 211.1 meters. 100 watts. Orlando Edgar Miller.

WIBU, Poynette, Wis. 222 meters. 20 watts. The *Electric Farm.

WIBV, Henderson, N. C. 263 meters. 20 watts. Jewell *Radio Co.

WIBW, Logansport, Ind. 220 meters. 100 watts. Dr. *L. L. Dill.

WIBX, Utica, N. Y. 205.4 meters. 5 watts. Grid-*Leak, Inc.

WIBZ, Montgomery, Ala. 231 meters. 10 watts. Powell *Elec. Co.

WIL, St. Louis, Mo. 273 meters. 200 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, 7-7:30 am, 1-2 pm, 3-4:30, 6-6:45, music; 7-7:30, pm. Tues, Thurs, Sat, 8-12 pm, concert. Sun, 10:45-12 m, 4:15-5:30 pm, 7:15-9, 10-12. Eastern Daylight.

WJAD, Waco, Tex. 352.7 meters. 500 watts. Barton Dyanshire Station. Mon, Fri, 8:30-10 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 Devil." Daily ex Sun, 12:15 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. Thurs, 6:30 pm, music. Sat, 6:30 pm, Bible school lesson. 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 Studic. Announcer, Bryan McDonald. Slogan, "Worl 's Jolliest Aerial Station." Daily ex Sun, 7-8 pm, dinner concert; 8-11. Sun, 2 pm. Eastern daylight.

WJAZ, Chicago, Ill. 268 meters. 100 watts. Zenith Radio Corp. (Portable).

WJBA, Joliet, Ill. 206.8 meters. 50 watts. D. H. *Lentz, Jr. Tues, 8-11 pm. Central.

WJBB, St. Petersburg, Fla. 206.8 meters. 10 watts. L. W. McClung.

WJBC, La Salle, Ill. 234 meters. 100 watts. Hummer Furniture Co. Announcer, Emmerson Charles. Daily ex Sun, 12:30-2 pm. Mon, Thurs, 8-11 pm.

WJBD, Ashland, Wis. 233 meters. 100 watts. Ashland Broadcasting committee. Announcer, C. W. Pfefferkoln. Slogan, "The Voice of the Great North Woods." Mon, Tues. Irregularly. Central.

WJBI, Red Bank, N. J. 218.8 meters. 250 watts. *Robert S. Johnson.

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, Moosehcart, Ill. 302.8 meters. 500 watts. Loyal Order of Moose 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.

WJR, Pontiac, Mich. 516.9 meters. 5,000 watts. Jewett *Radio and Phonograph Co. Slogan, "Where Joy Reigns." Announcer, W. A. Dahlberg. Daily ex Sun, 7-8 pm. Eastern.

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. 500 watts. H. F. Parr, announcer. Mon, Wed, Fri, 4-5 pm; 8:30-10:30. Sun, 11 am, 5 pm, church service. Central.

WKAF, Milwaukee, Wis. 261 meters. 250 watts. *WKAF Broadcasting Co.

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; Sun, 8-10 pm, band. Intercolonial.

WKAR, East Lansing, Mic. 285.5 meters. 1,000 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. 100 watts. K. *& B. Electric Co. Tues, 8-12 midnight. Eastern daylight.

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. Mon, Tues, Sat, 10 pm, 11. Mon, 12 midnight. Wed, 8 pm. Sun, 6:15 pm, 10. Thurs, 8-10 pm. Central daylight.

WKY, Oklahoma City, Okla. 275 meters. 100 watts. *E. C. Hull, H. S. Richards. 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. 250 meters. 150 watts. First Christian church. Announcer, R. W. Burkhart. Slogan, "The Voice of the Church." Sat, 7:30 pm, Bible class. Wed, 9:30 pm. 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.

WLBL, Stevens Point, Wis. 278 meters. 500 watts. Wisconsin Dept. of Markets. Slogan, "Wisconsin, Land of Beautiful Lakes." Daily ex Sun, 8:45 am, 9:15, 10:45, 11:45, 12:30 pm, 1:45, markets. Tues, Thurs, 8 pm. Central.

WLIT, Philadelphia, Pa. 394.5 meters. 500 watts. Lit Bros. Announcer, Harry E. Ehrhart. Club, "Morning Glory." Daily ex Sun, 12:02 pm, music; 2, music. Mon, 4:30 pm, 7:30, 8, 10. Tues, 11 am. Wed, Thurs, 4:30 pm. Wed, 7:30 pm, 8, 10, 11. Fri, 7:30 pm, 8:45, 10. Eastern daylight.

WLS, Chicago, Ill. 344.6 meters. 500 watts. Sears, Roebuck & Co. Announcer, George D. Hay. Slogan, "World's Largest Store." Daily ex Sun, 9 am, 10, 11, 12, 1-2. Tues, 6:30-1 am. Wed, Fri, 6:30-11:30. Thurs, 6:30-8:55. Sat, 12-12:45 pm, Junior R. F. D. program; 7:45-1. Sun, 7:30-8:55. Central daylight.

WLTS, Chicago, Ill. 258 meters. 100 watts. Lane Technical High school.

WLW, Cincinnati, O. 422.3 meters. 5000 watts. The Crosley Radio Corp. Announcer, Fred Smith. Daily ex Sun, 10:45 am, 11:55, time, 1:30 pm. Daily ex Sun, Fri, 7, dinner hour; 7:30, baseball; 6:55, markets. Daily ex Sat, Sun, 12:15, program; 3, 4, reports. Mon, Tues, 8-10 pm. Wed, Thurs, 10-12 mid. Sun, 9:30 am, 11, 7:30 pm, 8:30. Central daylight.

WLWL, New York, N. Y. 288.3 meters. 1,000 watts. *Missionary Society of St. Paul the Apostle.

WMAC, Cazenovia, N. Y. 275 meters. 100 watts. C. B. Meredith. No definite schedule.

WMAF, South Dartmouth, Mass. 440.9 meters. 1,000 watts. Round Hills Radio Corp.

WMAK, Lockport, N. Y. 266 meters. 500 watts. Norton *Laboratories. Announcer I. R. Lounsberry. Thurs, 11 pm, midnight serenaders. Eastern.

WMAN, Columbus, Ohio. 278 meters. 50 watts. First Baptist church. Announcer, Dr. D. F. Rittenhouse. Sun, 10:30-12 m, 7:30-9 pm, church services. Eastern.

WMAQ, Chicago, Ill. 447.5 meters. 500 watts. The Chicago Daily News. Announcer, Roberty Whitney. Daily ex Sun, Mon, 1-7 pm. Daily ex Sun, Mon, 8-10 pm. Central Daylight.

WMAY, St. Louis, Mo. 248 meters. 100 watts. Kings-*highway Presbyterian church. Slogan, "May Every By-Way Hear Kingshighway." Sun, 11 am, 8 pm. Central.

WMAZ, Macon, Ga. 261 meters. 500 watts. Mercer university. Announcer, Carey O. Pickard. Mon, Thurs, Fri, 10-11 pm. Mon, Fri, 9-10 pm. Tues, Thurs, 8-9 pm. Wed. 11-12. Eastern.

(Note—The fourth part of the directory will appear next week.)

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