Last Minute Schedules of Football and World's Series Play-by-Play Broadcasts; Bringing Your Old Set Up-to-Date; WCAH, Columbus, a Strictly Home Station

Vol. XIV

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SATURDAY, OCTOBER 3, 1925

No. 13

HOOVER MAY LIMIT RADIO

WBAP NOW TO ENTER HIGH-POWER GROUP

FT. WORTH STATION GOES ON 5,000 WATTS OCT. 5

Has Large Reserve Power Also; Tests Show Reception in Every State, Canada and Mexico

Canada and Mexico

FORT WORTH, Texas,—WBAP, the
Star-felegram station here and the latest
to make the change to superpower, announces the opening of their new 5,000watt plant Monday night, October 5, with
a program beginning at 7:30 p. m. and
running until 6 o'clock in the morningAlready test programs broadcast with
the new equipment have been heard in
every state in the Union, Canada and
South America. The apparatus used represents the last word in Radio and is a
radical departure from anything hithertoused. The entire transmitter was designed and built under the supervision of
Engineer W. E. Branch of WBAP's staff.
The total power available is 10,000 watts.

(Continued on page 2)

(Continued on page 2)



WILL DEBATE RESTRICTION **OF STATIONS**

Ether Confab to Decide

Secretary Sees Way to Relieve Congestion—Asks Opinion of All Concerned

WASHINGTON, D. C.—One of the outstanding features of the forthcoming Radio conference to be held in this city under the auspices of the department of commerce will be the development of ideas as to the number of broadcasting stations which should be licensed, according to Secretary Herbert Hoover. Mr. Hoover is anxious to get the reaction of (Continued on page 2)



HOT SPRINGS, Ark—A "Receiving Studio," complete to the last refinement of luxury is the latest addition of Station KTHS, the New Arlington hotel here, for the comfort and convenience of its Radio listener guests, Director G. C. Arnoux has announced.

b road cast from the Eif-fel tower sta-tion. She has appeared a t various



GAY PAREE RADIO IS NOT QUITE SO GOOD

SMITH FINDS 4 STATIONS JEALOUS OF ONE ANOTHER

Lack of Funds Makes Broadcasting System Only Objectionable Feature in City

Article VIII by Fred Smith, WLW Director
THE broadcasting situation in Paris is a strainge one. There are four stations, each operating under a very different plan from all others. The Eiffel tower is really a military post, but it is rented for broadcasting to M. Privat who operates it.



easting to M. Privat who operates it with a dally pro-gram of music and news for one hour each evening. He obtains funds from a group of Radio listeners, called "Friends of the Tower," who each pay ten francs a year.

pay ten france a year.

Radio-Paris is a commercial station in the sense that it is owned and operated by a company representative of the French Radio industry. Third, there is a newspaper station owned finally, the station of the State, L'Ecole Superieure, generally known as PTT.

Obstacles Impede Progress

With regard to the entire situation in

finally, the station of the State, L'Ecole Superleure, generally known as PTT.

Obstacles Impede Progress

With regard to the entire situation in France one becomes immediately conscious of the tremendous obstacles which impede the natural progress of the art of broadcasting. The government has taken no definite stand about taxing the listeners. Theoretically, users of receiving sets are supposed to pay one franc a year for licenses. But nobody pays. Therefore, there is no definite income. An astonishing amount of fealousy exists between stations.

The PTT of the Post, Telephone and Telegraph, is operated by government employees. M. Lucien Chanton, at the head of PTT broadcasting in Paris, is ambitious to perform a beautiful and worthy service which would demand about a million francs a year. But the government will make no provision for funds, and so the director does not know how, in the world he will obtain the money.

Commercial broadcasting as we know it in America is not permitted in France. Chanton cannot get his money in that manner. Taxation, such as exists in England, Germany and Switzerland, is not favored, so he has no hope in that direction. For the present he must be content with programs furnished by l'Association Generale des Anditeurs. This organization, a national club of Radio listeners, pays the PTT four thousand francs a month for the use of the station A committee of the club prepares the programs, submits them to M. Chanton who, reviews, cuts and completes the entire arrangement for performances. As a result of this method, the work of the programs, submits them to M. Chanton who, reviews, cuts and completes the entire arrangement for performances. As a result of this method, the work of the programs, submits them to M. Chanton who, reviews, cuts and completes the entire arrangement for performances. As a result of this method, the work of the programs is gratile and they are practically all amateurs.

The PTT is endeavoring to build up a system of stations throughout the country. Already

PTT Controls Telephone Lines

PTT Controls Telephone Lines
One of the chief causes of the existing
unfriendliness between stations in Paris
is the monopoly of telephone lines by the
PTT. Radio-Paris cannot obtain lines for
remote control work. As a result, this
station does a great deal of retransmission, picking up programs from other
stations.

sion, picking up programs from other stations.

Radio-Paris is managed by a group of energetic and intelligent business men. Secretary General Tabouis represents France at the international conference at Geneva. The director, M. Vinot, who does much of the planning of the programs, introduced me to his friends, Pierre Cusy and Gabriel Germinet, who have written a book which is just ready for publication, called "Theatre Radiophonique." These gentiemen have ambitious plans to develop the Radario, and thematic performances for Radio. Already they have staged several. Their ideal of the Radioprogram, already known and certain of growth in America, is the performance written both in speech and music expressly for the Radio stage.

It is with regret that one must point

out this unfortunate condition of Radio broadcasing in Paris. For where in Europe is there so delightful a place to live? Oh, you may travel with high hopes to other cities on the continent, believing that you will encounter a more pleasing life. But not so. You come back to Paris eventually with the thrill of the wanderer returning to his native land. Paris with its boulevards, its cafes, parks, cathedrals, great avenues and twisting streets its theaters, cabarets, art galleries, shops and hotels, its trams, busses; river bots and honking taxis; Paris with its good food, freedom and historic atmosphere; Paris the city of eternal charm and fascination.

And when the noble steamer "America" pulls away from Cherbourg and your memory flee back over all the the result of his own experience and that the way station of the Lowett Paris her westering the part way of the Paris when the self work and announcer of the Paris they of the Nighth to a part of the Nighth to the Night to a part of the Nighth to a part of the Nighth to the Night to a part of the Nighth to the Night to

cination.

And when the noble steamer "America" pulls away from Cherbourg and your memory flies back over all the scenes of the continental tour, it is Paris that calls you to come back. When the land is lost to sight and you wander about the decks in search of something to do, you enter by chance the reading room, and find upon the shelves the works of Balzac. Eagerly you take down two or three volumes and then spend the spare hours of the days that follow reading his graphic descriptions of his beloved city—Paris.

In the meanwhile you have obtained from that excellent captain, W. Rind, permission to visit the Radio room of the "America." You go there evening after evening with Chief Operator Cohen. In the beginning you hear English and continental music. And then the Journey nears completion. American stations roll in, full of pep and variety. There comes a morning when you are awakened very early because—because Miss Liberty is waiting there with her torch to welcome you home. You go on deck, and the big thrill comes—home at last!

(CONCLUSION)

out such as has been in effect during the past two or three years.

At the present time there are close to 600 Radio broadcasting stations in this country and more than 100 are in prospect. Secretary Hoover, following the recent high-power tests of WGY, has expressed himself as feeling that there was a great improvement in the broadcasting and that no harm had been done. He gave this as the result of his own experience and that of many who have sent letters to his department about the tests.

Radio experts reported to the secretary that there was no great improvement in the fading. Mr. Hoover said that the majority of the communications received by the department showed that the increased power allowed a wider range of distribution and no reports of interference were made.

The charged attitude of the department.

distribution and no reports of interference were made.

The changed attitude of the department of commerce is reflected in the fact that several applications have been received and granted recently for the material increasing of broadcasting power to from 3,500 to 5,000 watts.

A year or so ago officials of the department were not at all anxious to grant applications for high-powered stations. In light, however of the experiments which have been carried on during the past few

In light, nowever of the experiments which have been carried on during the past few months and that fact that little if any local interference resulted, has made the officials realize that the high-powered stations will be beneficial in the long run to the listener.

CONTENTS

Radio Digest, Tinastrated, Volume XIV, Number 13, published Chicago, Illinois, October 3, 1925, Published Scheman, Volume 1, 1925, Published Chicago, Illinois, Sebestiplion rates, searly Five Dollars; Foreira Postago One Dollar additional; single conies Ten Cents, Entered as second class matter at the Control of the Con

An Evening at Home with the Listener In, a chart in Central and Pacific time, showing when to listen in for your favorite stations.

Editorials, Indi-Gest and Condensed by Dielectric. Bringing Your Radio Frequency Amplification Up-to-Date, How to Modernize Your Old Set, by P. E. Edelman.

A. B. C. Course in Radio Fundamentals, Chapter XXVIII—Electron Tube Oscillator Circuits, by David Penn Moreton.

Hints on Antenna Construction, Part I-Aerial Insulation, by William Fenwick

NOW AT WJR 'MIKE

NIGHTHAWK FOUNDER TO GO TO DETROIT PLANT

Fitzer Succeeds Fitzpatrick as Head of Kansas City Star Radio Department

KANSAS CITY, Mo.—Leo Fitzpatrick, the "Merry Old Chief" of the Nighthawks has left WDAF to accept a position as program director and announcer of the new station of the Jewett Radio and

Phonograph, com-pany, WJR, at De-troit.

pany, Wilk, at Detroit.

The Jewett station is a 5,000-watt transmitter with studio and offices in the Book-Cadillac hotel and is operated in conjunction with WCX, the Detroit Free Press, who share WJR's new transmitter.

Mr. Pitzpatrick was a ploneer broadcaster and has

Mr. Fitzpatrick was a pioneer broadcaster and has been identified with WDAF, the broadcasting station of the Kansas City Star since early in 1922.



Star since early in

1922.

Previous to that
he was a feature writer for The Star.
He was given the position of Radio editor
and announcer when The Star first broadcast through the small transmitter of
the Western Radio company. December
5, 1922, he established the Nighthawks,
now one of the largest and most popular Radio fan organizations in the country. It is estimated that there are now
250,000 persons who have received membership cards bearing his signature.

It is informality in conducting the
Nighthawk frolics attracted thousands
who tuned in nightly at midnight to be
entertained by the "chief." He has a
rendy wit which serves him in good stead
at all times and his humorous and timely
comments upon messages of application
are so entertaining that many have expressed the opinion that they would rather
listen to his bantering than to the popular dance music of the Nighthawk orchestra.

Dean Fitzer Succeeds "Chief"

The "Merry Old Chief" is a singer of
popular songs and many are the songs

17

23

Dean Fitzer Succeeds "Chief"
The "Merry Old Chief" is a singer of popular songs and many are the songs which he has popularized by broadcasting them each night on the Nighthawk frolies.

Mr. Fitzpatrick has expressed regret at leaving The Star, an institution with which he has been connected for many years, but the opportunities open to him in Detroit were sufficient to induce him to change location. Mr. Dean Fitzer will take Mr. Fitzpatrick's place as Radio editor of The Star and chief announcer of WDAF. WDAF.

WDAF. Mr. Fitzpatrick was a runner-up in the Radio Digest 1925 Gold Cup Award con-test and was fourth in the first award conducted by Radio Digest in 1924.

Looking Ahead

Switch Doubles Condenser's Range; Other Kinks...

Directory of Radiophone Broadcasting Stations, Part I.

Advance Programs for the Week.... ollowing Sports through Mike.

Questions and Answers......

All the Latest News in Sports broadcasting will be found on the sporting page next week and every week following. Baseball will soon be over but there will be plenty of other events miked to keep the fans close to the loud speaker all winter long.

Away Up at the Top of the Dials is KSD, the station of the St. Louis Post Dispatch broadcasting from the "Show Me!" state. You can't miss it if you turn up in the high nineties and you must not miss the description of it on the feature page in next week's Radio Digest.

The Traveler," a Five Tube Tuned Radio Frequency Receiver will be described in e traveler, a rive lube luned kadio frequency receiver will be described in full constructional detail beginning in the next issue. A new style of presentation which will, we are sure, make it easier for Radio Digest readers to follow instructions, is to be used by John G. Ryan, author of the articles. There have been articles on four tube sets and super-heterodynes but we preferred to wait until we had a five tube set of unusual merit before presenting one of this type.

Erection of Outdoor Antennas which is the second chapter of the series by William Fenwick on antenna construction, is most timely in next week's issue, as those who have just purchased a receiver with the coming of better weather for Radio reception, can learn of the various types of antenna possible and how they are put up.

Uses of Oscillators in Radio Receivers is the subject of the next article by Prof. D. P. Moreton in his A. B. C. series for beginners. While most of us are trying to prevent continuous oscillation in our five tube outfits, there are many places in Radio where a tube generating continuous oscillation is essential. The experimenter will do well to follow this subject closely.

Newsstands Don't Always Have One Left

WHEN YOU WANT

BE SURE OF YOUR WEEKLY COPY BY SUBSCRIBING NOW

SEND IN THE BLANK TODAY

Please find enclosed check M. O. far Five Dellar (Six, Fersign) for One Year's Subscription to Radio Digest, Illustrated. Name Address City State	510 N.	her Radio Digest, . Dearborn St., o, Illineis.		
Address	(Six.	Fereign) for One	M. O. for Year's Sul	Five Dollars ascription to
				artinop _e ,
	1 1	is	State	

WBAP IS SUPERSTATION

(Continued from page 1)

(Continued from page 1)
However, this great surplus of power will
not be used on the opening night.
The Star-Telegram entered the ranks
of the broadcasters early, being one of
the first newspapers in the field. The first
transmitter was a small. 10-watt affair
which was put on the air in March, 1922.
During September of the same year
WEAP took the air with a new set of the
then powerful 500-watt type.
Wish Better Reception of WEAP
It is in line with the advancement of

It is in line with the advancement of the art and the desire to reach the Radio audience with programs that are as nearly free from interference as possible that this last increase in power has been

made.

The artists and organizations to be presented on the opening night are those who have been identified with WBAP from the first and are well known to fans.

'The program follows (Central time): 7:30-8:30 p. m., Wagner Hawaiian trie; 8:30-9:30 p. m., Holy Roller service; 9:30-10:30 p. m., Ward's "Trail Blazers": 10:30-11:30 p. m., Geo. Orum's Palace theater orchestra; 11:30-12:30 a. m., San S. Losh and assisting artists; 1:30-2:30 a. m., Sun S. Losh and assisting artists; 1:30-2:30 a. m., Panther Hawaiian trie; 4-6 a. m., Bluebonnet Serenaders.

To stuare up the edge of a panel or any other similar piece, use a common wood plane that has been set for fine cutting.

NEWS BRIEFS FROM THE BROADCASTERS

OA TO GIVE ANOTHER BILL OF 1-ACT PLAYLETS

Alaskan Steamers Get KFOA News Service; Wisconsin University Plant Is on Schedule Again

Another program devoted exclusively to dramatics will be heard Wednesday evening, October 7, over KOA, General Electric broadcasting station at Denver. Presentations include "The Rector," a cue-act comedy, the scene of which is laid in a country parsonage; a dramatic scene from "Romeo and Juliet," and a one-act Tantasy, "Nevertheless." These plays will be criven by the KOA players under direct from "Romeo and Juliet," and a one-act fantasy, "Nevertheless," These plays will be given by the KOA players under direction of Iris Ruth Pavey. Instrumental numbers by the KOA orchestra will be featured between plays.

The steamers running to Alaska have as their principal source of news Station KFOA at Seattle. A news bulletin published on board the S.S. Alaska every morning contains news items obtained by the Radio operator.

the Radio operator.

Station WHA. University of Wisconsin. which has been silent since the close of the summer session during the first week in August, broadcast its first autumn program recently, on a wave length of \$53.4 meters. The Monday, Wednesday and Friday evening programs will be continued throughout the year.

In the future, the Thursday night concert of band music will be furnished by the United States army band, playing in Washington and brought to New York by land wire and broadcast by WJ2 at \$130, Eastern time. The first of this new series of concerts was given on Thursday, September 24, and will continue indefinitely.

* *

The WGES News is the name of a monthly four-page paper now being distributed free of charge to members of the audience of WGES, Coyne Delectrical school station, Oak Park, Ill. The paper contains interesting articles pertaining to the WGES artists and staff.

Song biographies have been inaugurated as a special weekly feature of the "Little Brown Church in the Vale" over WLS, the Sears-Roebuck Agricultural Foundation station, Sunday evenings. These are in charge of Harry W. Bundy, Canadian lyric tenor and exclusive WLS artist. He illustrates his stories by lyric interpretations of the various hymns.

Charlie Garland, song writer, baritone and pianist, has been made both program and studio director of Station WBBM,

The statement is made locally in Rome, The statement is made rocary in kone, Italy, that listeners in outnumber householders ten to one. While this statement bears marks of exaggeration, Consul Remillard at Rome advises that favorable progress in broadcasting has been evident in Rome since early in 1924.

The Burroughs Adding Machine company of Detroit has entered the field of Radio broadcasting and is giving programs every Wednesday evening from 9 to 10 o'clock, Eastern time, from WJR.

A hirthday party was held at Westinghouse Station KYW on a recent Thursday when Father Claude J. Pernin, S.J., the man behind KYW's regular Thursday evening feature, "Twenty Minutes of Good Reading," completed his third year of Radio reading.

Eight singers and Vinton La Ferrera and his concert orchestra will present "The Chimes of Normandy," by Robert Planquette, over KGO, October 3, from San Francisco.

The first Pacific coast program to be broadcast by a Chicago Radio station was given recently by Station WOK, broadcasting on 217.3 meters. Hereafter this program will be a regular weekly feature of WOK.

The noonday organ recitals presented daily by WRC, Washington, from the First Congregational church constitute one of the most popular features added to the programs of the Radio corporation station this summer, and arrangements have been made to continue these recitals through the cooler months.

One of the most unique and widely popular Radio organizations in the country is the Pat Barnes Your Hour league, an association formed by Pat Barnes at WHT, Chicago, to spread happiness and cheer into the homes of the nation.

MANY WOULD SAW TUNE ON WOOD SAW

HICAGO.—The musical saw made known to the world by Radio has developed a following and a desire for instruction. Harlan Merrill, perhaps the best known exponent of the musical saw, whose gift on this unique instrument is being made known to the Radio audience over WHT every Friday night, reports that a manufacturer in Wisconsin has gone into the business of manufacturing musical saws and that the demand is sufficient to keep his small factory operating continually.

WOMEN EQUAL MEN IN RADIO TEST VOTE

DENVER.—Women as Radio entertainers held their own in a recent competition waged with their male contenders during a pretentious broadcasting meet at KOA. Denver. This was the popular expression from broadcast listeners, based upon early returns fom twenty-three states and three Canadian protinces. For every 100 letters and post cards sent to Denver in response to the unique Radio presentation, thirty were "strictly neutral," and the remaining seventy votes were split evenly, for and against.

KNOWN TO ALL THE FANS IN DIXIE



Zenith Plant Reaches Greenland on Try-out

WJAZ Heard by McDonald in Far North

MOUNT PROSPECT, III.—WJAZ, the new superpower broadcasting station here of the Zenith Radio corporation, was heard on its first test program near (dedthabab Harbor, Greenland, by E. F. McDonald, Jr., president of the Zenith company, who is now returning from the arctic. The new broadcaster was only transmitting with 1,750 watts power when the record was established.

J. Elliot Jenkins, Chicago Radio engineer who designed and built the equipment for WJAZ, was pleased to learn of the splendid initial performance of the plant. Godthab Harbor is on the middle portion of the south coast of Greenland at about 46 degrees latitude and 50 degrees longitude.

grees longitude.

grees longitude.

The new Zenith station transmits on a wave length of 322.6 meters, dividing time with KOA, at Denver. Announcement of the official opening program has not been made.

When space is to be conserved when constructing a multi-tube receiver, use a gang socket.

New Stations

The Fort Sill, Okla., army station, KFRM, has not gone off the air after all. This station has renewed its license and is now using a wave of 242 meters and 50 watts power. Chicago boasts another portable station in WBBZ. This 50-watt outfit, operating on 215.7 meters, will broadcast from various of the smaller theaters of the middle west.

KFAE the State College of Washing-ton's call for over two years, has given place to KWSC. Many of the familiar calls have been changed this summer in accordance with the popular plan of us-ing the initials of the broadcasting or-ganization.

Station WOK has just received authority from the government to increase its power to 5,000 watts. There are only eight 5,000-watt stations licensed in the country, and the Chicago group now includes three of the eight.

The department of commerce has granted the application of three more stations to increase their power. This raises the Willard Storage Battery company at Cleveland, Ohio, WTAM, from 2,500 to 3,500 watts; Nebraska Buick Auto-

CKY ANNOUNCER TO RECEIVE SILVER CUP

D. R. P. COATS HEADS CANA-DIAN GROUP IN AWARD

e Rouse Congratulates McNamee and Field—Contest This Year Larger than Last

The Gold Cup Award of 1925 has one more announcement to make. D. R. P. Coats, chief announcer for CKY, Manitoba Telephone System station at Winnipes, Canada, is to be presented with a silver token cup in honor of his leading all other Canadian announcers in the final standing.

The precedent thus established by Radio Digest will be continued annually. The order in which the placing Canadian announcers finished is as follows: PLACE AND NAME STATION YOTHS

ACE AND NAME	STATION	VOTES
1. D. R. P. Coats	CKY	4,815
2. J. H. Cartier	CKAC	2,437
3. H. W. Grant	CFCN	2,236
4. R. H. Combs	CHNC	857
5. G. A. Wright	CNRA	856
6. Walter Darling	CFCF	844
7. A. W. Ryan	CNRO	518
S. D. J. Powers	CFCA	511
9. Rud Weese	CHIC	197
10. Fred Carlton	CFAC	88
11. A. L. Hooper	CKCK	87

Rouse Congratulates Winner

Rouse Congratulates Winner
Gene Rouse, announcer for Woodmen
of the World Station WOAW at Omaha,
upon learning the final results of the
fold Cup Award for 1925 in which he
placed third, was quick to congratulate
Graham McNamee of WEAF as winner,
and Henry Field of KFNF as runner-up.
His telegram to Mr. McNamee read:
"I congratulate you upon the meritorious decision of the readers of Radio
Digest in proclaiming you the world's
greatest Radio announcer. It is my hope
that this distinction of which you are
most deserving, will continue to be
your."
Study of Past Two Years' Standings

most deserving, will continue to be your "

Study of Past Two Years' Standings
The count shows \$17.990 more votes were cast in the 1925 Gold Cup Award than in 1924. The winner last year, George D. Hay, polled 129.661 votes this year to the 189.470 credited to Graham McNamee who topped the list in the 1925 contest. Last year McNamee had but 14,678 counters to his credit when he finished seventh. Sen Kaney who was last among those awarded certificates of merit last year had 7,329 votes, while Norman Brokenshire holder of the sixteenth position in the recent contest had 10,543. Henry Field this year's runner-up was forty-second in the 1924 finals. Frank S. Lane is a newcomer to Radio and was not in last year's contest. N. Dean Cole finished thirty-second last year. Jerry Sullivan was twenty-second. Robert Einery held the thirty-third billet just below Charles Erbstein who was in thirty. Norman Brokenshire was pot entered in the 1924 race. The others not mentioned were in the list of leaders last year as they are now.

Original Ether College Opens for Second Year

Iowa State Will Again Give Radio Credits for Courses

IOWA CITY, Ia.—The world's first college of the air will open its second year at the University of Iowa October 5, according to Edward H. Lauer, director of the extension division and ex-officio dean of the college. An enlarged faculty and a more complete course than that offered last spring has been provided. Courses will be broadcast Monday and Wednesday evenings for twelve weeks from WSUI on 484 meters.

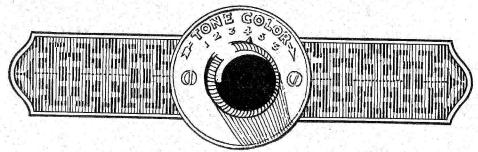
Registration for the new courses will commence immediately and should be completed by the opening lecture in order, that students may be provided with the syllabus which outlines the work in each courses.

Synaous which outlines the work in each course.

The following courses will be offered: "Early lowa History," "American Literature," "Towa Flora," "Problems of Population," "The Teaching of English." Prof. Kirk H. Porter, "Political Parties in the United States," and Prof. Christian A. Ruckmick. "Dlementary Psychology." An enrollment fee of \$2 is charged and \$4 thereafter per semester hour of credit granted. Thus the entire course would entail a charge of but \$66 and the student given university credit which costs the average college attendant from \$200 to \$600.

mobile company. Lincoln Neb., KFAB, from 500 to 1,000, and the General Electric company Schenectady, N. Y., WGY, from 3,000 to 3,500.

ONE OF THE GREATEST OF RADIO DEVELOPMENTS



Grebe "Colortone

HIS tone control is, perhaps, the greatest of recent Grebe Tinventions.

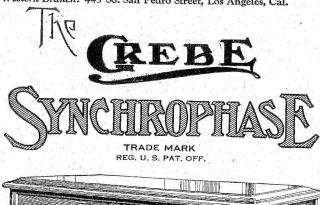
Grebe "Colortone" enables you to alter to your taste, the quality of speech or music from high, thin pitch to deep, round tones with all the variations between. The Synchrophase is independent of the loud speaker's influence.

With the "Colortone" a complete range of tone characteristics is thus available and the best qualities of any loud speaker are brought out.

The "Colortone" makes it possible to suppress considerably the high pitch frequencies caused by heterodyne interference of one station with another and also to reduce, to a great degree, disturbances due to static.

> Ask your dealer to demonstrate this as well as the many other exclusive Grebe features; then compare with other sets

A. H. Grebe & Co., Inc., Steinway Hall, 109 West 57th St., New York Factory: Van Wyck Boulevard, Richmond Hill, N. Y. Western Branch: 443 So. San Pedro Street, Los Angeles, Cal.





-Confucius

The constant seeking for truth has created the 'Colortone" and other Grebe advances in radio reception.

The Synchrophase is also supplied with base for batteries and in a de luxe Console model.



This company owns and operates stations WAHG and WBOQ; also low-wave rebroadcasting stations, mobile WGMU and marine WRMU.

WCAH, at "Columbus, The Heart of Ohio"

William Steinhauer, violinist, and Bessie Speasmaker Parkins, accompanist, playing in the Entrekin residence studio, are shown below.

scores each evening, as a part of this news service, was relished by those baseball fans who, up to then had waited for the morning paper to learn the results of the previous

day's contests.



By Alton D. Spencer

NE, two, three, four. One, two, three, four. This is the Entrekin Electric company station, 321 West Tenth avenue, Columbus, Ohio,

three, four. This is the Entrekin Electric company station, 321 West Tenth avenue, Columbus, Ohio, testing."

Thus was a small group of Columbus' early Radio fans introduced to what a few days later became WCAH, the first regular broadcasting station in the Buckeye capital. I happened to be one of the few listening in that afternoon. It was at about 4:30 o'clock, April 27, 1922. It was indeed a thrill to hear such loud signals on my little one-tube blooper. The testing amouncement was followed by several phonograph selections and others agreed with me the next morning that the selections sounded far better than ever issued from a phonograph horn. Announcements and records were alternated for an hour or so, then came a brief silence. This was broken by a woman's woice, saying: "This is the Entrekin Electric company, 321 West Tenth avenue, Columbus, Ohio, signing off!"

Although I never was bold enough to ask, I always have suspected that the feminine voice was that of Mrs. Entrekin; that dinner was ready, and the only way she could get "C-A," as Mr. Entrekin; is called by his friends, to leave his new plaything was to sign. off and thus end the entertainment.

The original transmitter at WCAH had a power rated at only 15 watts, but local listeners considered it a whale of a station. Up to this time they had been limited to hearing half a dozen or so distant stations, such as KDKA, WWJ, WBZ, KYW and WJZ, then located at Newark, N. J.

The first regular program was presented the evening of May 9, 1922, including talks by prominent citizens, classical selections by local musicians and the reading of several news bulletins. Soon afterward, WCAH established a twice-a-day news service, at noon and at 7 p. m. The broadcasting of baseball Operating room on the second floor of the shape in the reading of the house. At the immediate right of Mrs.

Operating room on the second floor of the shop in rear of the house. At the imme-diate right of Mr. Entrekin is the original 15-watt transmitter.



The task confronting Mrs. Entrekin is more difficult than a similar task in (Continued on page 7)



This is the Entrekin residence, 321 West Tenth avenue, where the plant of Station WCAH is located in "Columbus, the Heart of Onio."

mittently on 500 watts, but will be on a regular schedule very soon again.

The unique feature of WCAH is the fact that only two persons are included in the staff—Mr. and Mrs. C. A. Entrekin. They are the owners of the station. Mr. Entrekin is the manager, engineer, operator and announcer, in addition to being a licensed code operator. Margaret C. Entrekin, his wife, is the program director, studio manager and hostess.

Entrekin.







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not else, to get some degree of motoring satisfaction!

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And now-there is no need of "trying out" experimental radio combinations, for MUSIC MASTER Receivers assure radio reception equal in power and efficiency to the supreme quality of reproduction made internationally famous by MUSIC MASTER

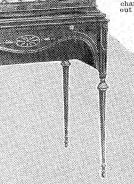
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MORE PAID ARTISTS BRING BETTER BILLS

WEEI ADDS PROFESSIONALS TO IMPROVE PROGRAMS

Boston Station Maps Out Excellent Schedule of Acts for Winter's Entertainment

BOSTON.—Better broadcast programs assured through the addition of more paid artists is the plan for the coming season at WEEI, The Edison Electric Illuminating company's station of Boston. WEEI will continue through the ,season featuring regular and special programs from WEAF in New York. 'By securing more paid professional talent, this station is certain to become even more popular during the coming year.

Already, contracts have been signed for broadcasting music by the Vannini ensemble of the Boston Symphony orchestra and the 18th Century Candlelight orchestra under the direction of Rafaele Martino.

Organize Dance Orchestra

Organize Dance Orchestra

Organize Dance Orchestra
Arrangements are also being made by
Professor Martine to organize a real
symphony dance orchestra of fifteen
nusicians. This dance orchestra, composed of symphony musicians, will be
heard early in October in their first program.

neard early in October in their first program.

Another group added for the season is the Boston Orchestral Players, under the direction of Joseph Boetje. Working with this orchestra will be artists well-known to Radio fans, including Miss Helen Barr, who possesses one of the most charming soprano Radio voices on the air; Howard Rennig, tenor, whose voice blends wonderfully with that of Miss Barr in duet numbers; Miss Marjorie Posselt youthful violinist who has studied both here and abroad, and Mrs. Nina G. Del Castillio accompanist and solo pianist. The local jazz dance programs from this station will be supplied for the most part by Dok-Eisenbourg's Sinfonians and Ed Andrews' Nautical Garden orchestra.

No Local Opera

No Local Opera

No Local Opera

Operas will not be stressed locally. The tabloid opera presented by WEAF Grand Opera company, which is broadcast from this station, seems to fill the bill for opera music.

Dinner speeches are not received any too favorably in New England. Lectures on important subjects will be heard occasionally however.

The World's series baseball games and the important college football games of the Big Four, and play by play description of the Davis cup tennis matches are to be featured during the fall.

Punkinville Program Unique

WEEI has not experimented to any extent with the average Radio drama but they have originated a Punkinville program that seems to have gone the Radio dramatists one better. In creating this broadcast, a program has been developed that is a combination of the old time rural comedy and the hick burlesque vaudewille act. The action is not only speedy but simple, uninvolved, and easy to follow. The characters in these programs, which have become so popular, are well known to the listeners as the voices are distinctive.

Every Radio listener in New England knows Punkinville.

WCAH, COLUMBUS, OHIO

(Continued from page 5)

(Continued from page 5)
the ordinary Radio studio, since the
WCAH studio is located in the Entrekin
residence. This means that on broadcast
flights, she must entertain the artists
just as if she were giving a party. Any
woman would shrink from the task of
giving from one to three parties a week
in her home, but that's what broadcasting
means in the Entrekin home.

On the other hand, the congenial atmosphere of the home is attractive to
the artists and it never is difficult to
obtain talent at WCAH.

Mr. Entrekin answers every communication to the studio whether it be postcard, letter, or telegram with a personal
note.

when the slogan fever hit the broad-casters, Mr. Entrekin was among those who climbed onto the band wagon early. "Tm going to announce like this," he told his wife: "WCAH, broadcasting from Columbus, the Heart of Ohio."
"They'll kid you to death," she told him.

"They'll kin you to death, she total him.
"Let them kid," he replied, "I'm going to try it." And he's still broadcasting from "Columbus, the Heart of Ohio."

KTHS to Give Dixie Series

HOT SPRINGS, Ark.—The New Arlington hotel station here, KTHS, has announced that it will breadcast the Dixie nounced that it will broadcast the baseball league series play-by-play.

WORLD'S SERIES GAMES TAKE AIR

Thirteen Stations Sure to Carry Play-by-Play Results-WEAF Chain May

CHICACO.—World's series broadcasts re the order of the day. During the past week eight more stations have announced their intention of carrying the baseball classic play-by-play, in addition to the five announced in these columns last

casters will give play-by-play descriptions of the national game's wind-up. One of the most important groups of stations which may carry the games is the WEAF chain. It is understood that Graham McNamee will announce the games direct from the field as was done last year. This chain includes WEAF, WCAE, WCAP, WOO, WJAR, WEEI, WWJ, WOC, WSAI. WCCO, WCTS, WTIC, WFI and WGF.

Honor Great Composers on Birthdays at Station WLW

classic play-by-play, in addition to the five announced in these columns last week.

The eight are: KDKA Pittsburgh; KDA, Seattle: KTHS, Hot Springs National Park; KYW. Chicago; WEZ. Springs Field and Boston; WEAR, Cleveland; WGY, Schenectady, and WMAQ, Chicago. WGY, Schenectady, and WMAQ, Chicago. The five stations announced last week as to carry the games are: KOA, WDAG, WZ. WRC and WSB.

Although no further stations had made their plans public at the time of going to press, undoubtedly many more broad-

Old Timers Assist at WBZ's Fourth Birthday

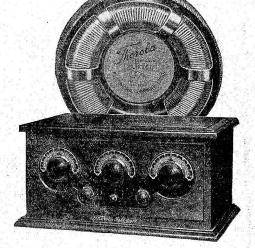
Westinghouse Station Celebrates with Four Hour Program

BOSTON.—Westinghouse Station WBZ, which went on the air along with the first broadcasters in the country on September 18, 1921 to be exact, celebrated its fourth anniversary Monday, September 21, with a program lasting four hours.

An all-star program of well-known Radio artists and orchestras were heard during the evening. Nearly every regular entertainer or group of entertainers that had broadcast from WBZ during the past year, was microphoned asain during the

had broadcast from WBZ during the past year, was microphoned again during the four-hour celebration: George H. Jaspert, incidentally, who is director of WBZ, is one of the first per-sons to act in this capacity. At the time of the opening of KYW in Chicago, four years ago, he was director of the ploneer Chicago station and was later transferred to his present nost.

Something Easy to **Understand**



The radio show season is on. You can go to the show without hopelessly bewildering yourself. Just keep certain basic things in mind:

You don't want any set of a passing type. You can tell very largely by the coils. Most coils "spray" energy all over a set, almost like short-circuiting the wiring! Such coils are also like little aerials in themselves, picking up signals uncontrollably.

There you have the chief causes of intercoupling, scrambling, broad tuning, and loss of power, now defeated by Thorola Low-Loss Doughnut Coils. They are of a shape which literally "turns in upon itself." So there is no indiscriminate "spray. So there is no indiscriminate "spraying;" no stray pick-up of signals. Selectivity is at last a positive thing, even in the most congested centers. Losses are overcome, increasing range and volume.

The coils that assure these results are to be found only in the 5-tube Thorola Islodyne receiver. It is one radio instrument at the show whose selectivity, range, volume, clearness, and uniformity of results have definite reasons behind them. You see the reasons when you see Thorola Low-Loss Doughnut Coils in this set. Here is superiority you can identify, understand and hear. For Thorola Islodyne tone is the tone which established Thorola as one of the permanently great names of radio.

At the show, or at your dealer's, keep straight on the modern radio you want. Seek out the set with Thorola Low-Loss Doughnut Coils-Thorola Islodyne. Its entire construction and its appearance are promise of performance which cannot be measured by price.

REICHMANN COMPANY, 1725-39 West 74th Street . CHICAGO



THOROLA SPEAKERS

With vital technical refinements including the self-harmonizing feature, Thorola Loud Speakers increase their margin of leadership. The new Bakelite bell is the largest Bakelite form ever produced. The ingenious throat construction and identifying gold throat-band lend inspiring grace and rugged strength.

Thorola Loud Speaker \$25 Thorola Jr. Loud Speaker \$15 Thorola Loud Speaker \$15 Walnut Cabinet 115 Thoroca Islodyne (5-tube) \$85

SUNDAY EVENING CLUB OPENS AT KYW

Saturday, October 3

Saturday, silent night for: CFCA, CHNC, DNRC, ONRC, ONRC, ONRC, ONRC, CHNC, ONRC, ON

Eastern Time Stations

Eastern Time Stations

CHIG, Toronto, Can. (357), 8 p. m., CRIG Symphony orchestrix. Norma Wilnork, sourcase, Grace Stewards, Can. (357), 8 p. m., CRIG Symphony orchestrix. Norma Wilnork, sourcase, Grace Stewards, Chicago Station, Chicago Station, Control Stati

Sand, Dible questions and answers, Judge attruerror; ment. Martino Brown, soprano; S.50, Matoon Tora; ment. WGAE, Pittsburgh, Pa. (461.3), 6:30 p. m., dinner concert. William Penn hotel; S.30, studie concert.

WGAE, Derrort, Mich. (617), 4:15 p. m., The Dutroft WEAF, New York.

WEAF, New York.

N

11-12. Yinsent Long, and his orchestra.

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

WEBS, New York, N. Y. (315.6), a6.33 p. m., Uncle of the concert.

WEBS, New York, Dulcimerland orchestra; \$2.30-8.45.

"Web, Bardan, Dulcimerland orchestra; \$2.30-8.45.

"Web, Bardalo, N. Y. (319.5), 25.30-13.9 p. m., WGR's Bardalo, N. Y. (319), 25.30-13.9 p. m., WGR's WGK, Bardalo, N. Y. (319), 25.30-13.9 p. m., WGR's WGK, Schenetady, N. Y. (379.5), 0.30 p. m., lecture Yan Curter orchestra.

WHAR, Attantic City, N. J. (275), 7:30 p. m., lecture WHAR, Attantic City, N. J. (275), 7:30 p. m., locure WHAR, Attantic City, N. J. (275), 7:30 p. m., locure while the concentration of the concentr

WWJ, Defrait, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statter orchestra; 2:30, U of M-Michigan State football game.

Central Time Stations

KFAB, Lincoln, Nebr. (340.7), 5:30-6:30 p. m., Bel-shaw's orchestra: 8:30-9:30, Schmoller and Mueller

shaw's orthestra: 8:30-9:30, Schmoller and Mueller Phano compandent, Iowa (266), 7 p. m., Mrs. Paul Laderunits; 8. Peters-Levelin family.

KFNF: Shenandoni, Iowa (266), 6:30 p. m., ammed-Green Witsdew's orthester.

KFVE, University City, Mo. (240), 6:30 p. m., ammed-Green Witsdew's orthester.

KOIL, Council Bluffs, Iewa (278), 7:30-9 p. m., American Legion Rainbo Post No. 2. Tree-Convention Program, "A Dark Secret," 11-12, Hotay Totay hour.

KPRC. Houten, Texas (28-9), 7 p. m., Uncle Jadd's Raidlew hour; 7:30, Edille rhass, Hev. Claud L. Jones; Admin. Regozio-sprano, white Legions, 18:30, Edna Admin. Regozio-sprano, white Legions, 19:30,

Headliners of the Week

RANDALL'S Saturday Nighters, the only troupe of broadcasting artists in the United States capital, will take over the microphone of WRC this Saturday night to present an unusual program in an original way. Nelson Bell, the impressario of the group noted for his wit and humor, will direct the group. The surprise of the evening will be a talk by a popular New York screen star.

a talk by a popular New York screen star.

The Chicago Sunday Evening club opens October 4. Dr. Henry Howard, noted Australian evangelist, will be the principal speaker. Dr. Howard was discovered last summer when he delivered a series of lectures in Central Hall, London. Sunday also marks the return of Rev. S. Parker Cadman to the microphone of WEAF. Dr. Cadman has been abroad attending international church conferences and will have many interesting experiences to relate. This service will also be broadcast by the link stations. Monday is a gala night for WBAP, Fort Worth. The twenty-four hour program, presided over by the Hired Hand himself, celebrates the opening of the new 5,000-watt equipment. This is also an important night for Nashville, Tenn. WSM, the new station directed by Bonnie Barnhardt, long famous at WSB, also opens this same evening with a special program dedicating the entering of Nashville into the broadcasting field.

The Veiled Prophet parade again

mystifies the Radio fan as he looks at the programs for Tuesday. The only way to find out what it is all about is to tune in for KSD and let the sounds of revelry float in over the loud speaker. KDEA begins an interesting feature this evening. The "Round-the-World" could be seen a fine of the rest of 1925 will take the listener to many queer and unusual places. Ross H. Skinner, cruise director for Cooks Tours, will give the talks and the KDEA symphony, music from many lands.

Radio has revealed the fact that America is producing many promising composers. Rubert H. Whitcomb, who composes both for the voice and the plane, will present some of his compositions Wednesday night at WBZ, Springfield. Susan Heywood, soprano, will assist him.

soprano, will assist him.

October is a month when skies are clear and autumn stars may be studied carefully. Thursday WTIC will take fans into realms as yet not penetrated by Radio waves when Dr. Frederick Sloeum, director of Van Vicek observatory talks on "The Heavens in October."

Friday night is a night when broadcast listeners come into their own. Radio stations should tune in for WLS and listen to the model program being put on by the Broadcast Listeners' association. Frank H. McDonald, the president of the association, is directing the production.

WEBH. Chicago. III. (270.2), 7:30-8:30 n. m.. Oriole orchestra: Bowant Scauling, plants: 9:30-10:30, Oriole orchestra: Marie Mich., plants: 9:30-10:30, Oriole orchestra: Marie Mich., plants: 9:30-10:30, Oriole orchestra: Frank Graft, tener; Slanche and Rudd Baie; Wayne Myers, reader.

Blanche and Rudd Baie; Wayne Myers, reader.

WENN, Chicago. III. (265), 6-7 n. m. Rautand Byrie Livense Mich., Marie Mari

Arthur Emigring, Durstone.
WIBO, Chicago, Ill. (22b), 2-4 p. m., Dan Russo, Ted
Fiorito, Harry Geise, Joe Allabough, Jack Sprat: 6-8,
Langdon brothers, Carl Linner, Joe Allabough,
Catherine Madden.

WKRC, Gincinati, Ohio (326), 8 p. m., Marlon McKay and his orehestra; 9, vocal and instrumental classic music.

ist. WSB, Atlanta, Ga. (428.3), 8 p. m., irregular session of Ernest Rogers red head club; 10:45, Radiowl

of Ernest Rogers red head club; 19:30, Raulowi entertainment.

WSMB, New Orleans, La. (319), 6:30-7:30 p. m., dinstand hour protecturity orzan concent, twillinkt faller; 8:30
WTAS, Elgin, III, (302.2), 8-10:30 p. m., Fred Harnm
and the Boss own orchestra; Herbic Mintz, Edna
Adams, Phil Wilcox, Tell Taylor, Phil Fleming.

Mountain Time Stations

KOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musicale; 9, dance program.

Pacific Time Stations

Fig. 1. Company 1. Supposed Schmoller and Muchair Plano community. Supposed Schmoller Schmol

Sunday, October 4

Eastern Time Stations

Eastern 1 ime Stations

KOKA, Pittsburch, Pa. (2001), 10:15 a. m., diurch
sarvices; 3:45 b. m., resper services, Shadywide Prosbyterian church, Rer. Hugh Thomson Francis,
we will be supported by the services of the servi

Muthertore; 10, 1, 15, S. A., Gueral samers; colors whether violen choir; 10:20, L. B. S. A. chors was considered with the constraint of t

9.13. "Capitol Cang," Capitol themer; n.apan....
WEAR. Cleveland. Ohio (389.4), 250 p. m. Gondrear
camera cristofart; 7. Stillman thaster orrhestra; 8.
WEEL, Boston, Mass. (476,methol instrumental quartetand his Capitol theater, garage 9.13. mustled proposed
WGES, New York, N. V. (315.6), 8-3 p. m. Hadio
WGS, New York, N. V. (315.6), 8-3 p. m. Ratio

WEEL, Boston, Mass. (470), 7:10 p. n., Maller Bressen Sun Bills Capital Beater Rang, 2:15, musical program. William Bressen Rev York, N. Y. (315.6), 8-9 p. ms. Radio William Bressen Rev York, N. Y. (315.6), 8-9 p. ms. Radio William Rev York, N. Y. (315.6), 8-9 p. ms. Radio Rev York, N. Y. (315.6), 8-9 p. ms. Radio Rev York, N. Y. (315.6), 8-8.15 p. ms. Claniford Control of the Program of the P

Central Time Stations



VEILED PROPHET PARADE FROM KSD

Sunday, October 4

(Continued from page 8)

Fort Worth, Texas (475.9), 11 a. m., First dist church; 12:30 p. m., kiddles hour, Unck

WBBM, Chiego, III. (226), 4-6 p. m., Schward-Warrier WBBM, Chiego, III. (226), 4-6 p. m., Stewart-Warrier studio, ten dance program. Kephart brothers, Earl Bergman's orchestra. Charlie Garland, Nate Callowell, Eddie Lottis, Hondy Toult Gloom clusters: Corline Jordon's 8-19, Hazal MacPoon, contraited, Jordon's 8-19, Hazal MacPoon, contraited, Brillivan, Jue Kronenderg; 12-2, Nutty club request foature.

feature.

WGBD, Zion, III. (344.6), S. p. m., mixed quartet, Gerald and Daniel Mason, cornet and trombonist; A. G. McKeller, R. F. Reid, vozal duet; John Thomas, bartone; H. E. Mayfield, sopramo; Gerald Mason, cornetist; Alice Peters, vichnist; Daniel Mason, trombonist; Lillian Edwards, pianist; reading, Hester Robbinson

tolitis; Illian Edwards, positise; certain (416.4), 10:20 a. ni., Plymouth Compregational church; 4:10 p. m., House of Hope Presbyterian church; 7:45, Central Lutheran church; 9:15, classical concert. WOAF, Kansas Gity, Mo. (365.6), 4:5 p. m., program, Mrs. B. N. Brinkman; 5:5:30, International Sunday school lessop, Dr. Walter L. Wilson. WEBH, Chicago, Ill. (370.2), 7:4 p. m., artist program.

WENR, Chicago, III. (266), 2-1 p. m., Rauland lyric

WTAS. Elsin, 4th. (302.5), \$-12 midnight, Fred Hamm and the Boss' own orchestra; Herbie Mintz, Bahe Payme, Frill Wilson, Evelyn Johnson, Art Stiller, Bonue Vincent, Roland Hinckel.

KOA. Downtain Time Stations

KFWB, Hollyweed, Calif. (252), 9-11 p. m., late news

KFWB, Hollyweed, Calif. (252), 9-11 p. m., late news

Often Minnenuncel." 6:17., 166el Shelton ensemble? 7:18-7:30, south tall, Bill Wathery 8:30-0:30,
All Reliks hour; 8:30-9:35, infe. L. Wathery 8:30-0:30,
All Reliks hour; 8:30-9:35, infe. L. Wathery 8:30-0:30,
W. Titconh; S. tilmer music.
W. C. Central Tilme Stations
K. FAR. Linesin, Nehr. (340.7), 5:30-5:30 p. m. Bulck
Little symploxy. Johnson, S. chebert; S. 23-0-10:30, Belslaw's orchestra; Mart. Grunenhorst, banjoist; Clyde
Davis, violitist; Mart. Grune

maine.

KMA, Shenandoah, Jowa (282), 6-7 p. m., dinner programs, May's Flower orchestrs; 9-11, familiar songs and music; chines, William Huwte, boy plantst.

KOIL, Gouncil Bluffs, lowa (278), 7:30 p. m., Hugo Heyn and his New Happy Hollow club orchestra; 9, Willbur E. Oxtey, agent; 11-12, Hoky Totay hour, Ray Winn and his orchestra. WFRG, Houston, Fexas (206.9), 5:30 p. m., Uncle Jund & Ridder hour; 7:30, Records Tamblers dunce the control of the contr

recital, Mrs. Mark Wescott.

KSD, St. Louis, Ma. (45-1), 9 p. m., program.

KTHS, Hot Springs National Park, Ark. (37-4), 9-5-30 p. m., Meyer Darks orchestar; 9:30-9-5. W. C.

Better Plate, Plate Plat, recompanial: 9:45-10:39, pm. Plate, program Plate, P



Marjory Weber Bebestreit, left, is the pianist and organist who is entertaining during the noon hour Wednesdays at WLW, Cincinnati. Dorothy Talbot, above, is the coloratura soprano who has recently joined the staff of the new Oakland station, KTAB. She is well known to fans because of her former appearances at KPO. Elmer Grosso, right, and his versatile orchestra broadcast dance music from WEAF every other Saturday atternoon.

trie; A. T. Norum, tener; 9:39-11:39, Frank Westphal; All-American Planers; James Beamont.
WFAA, Dalias, Texas (475-9), 6:30-7:30 p. m., Radio Bibbe class, De. William M. Anderson; 8-0. First Bantts church; 9:30-11, Ligon Smith's orchestra.
WGES, Orchestra, WGES, Charley, State of Contest of Franklin Hordander, base; Margnerite Ray, contraite; Pranner Barze, tollulat; Piste Barze, planis; 11-2 a. m., Elemec Raplan, viol-dist; Jehn Rankel, bartions; Ruth Kathlort, soprano, WGR, Chicage, III. (370-2), 12 m., coules, Unele Walt; 1 p. m., program, Chicago theater; 9-10, Drake em-WHAD, Millwaukee, Wis. (275), 3:15 p. m., band consect.

with a minimizer with the control of the control of

organist; 7-7:55. Little Drown content, when chemical chairs the folia (22-3), 9-30 a. m., school, W.W. Cincincut; Ohio (22-3), 9-30 a. m., school, Staff of Sunsay School Publications, Mothodits Book concern; 11, services, Church of the Curemant; 'Dr. Frank Stevenson; 7:30 p. m., services, Pijrst Precleyterian church of Wahmit Hills, Dr. Preclerick McMillan, minister; 5:30, concert, but H. & S. J. Staff Church Chair Chair

S. Pogue erriestra, Watter Baberger, director violin-celoist, Arthur Dundern, WMBB, Chicago, III. (250), 3-5 h. m., Trianen er-WMBB, Chicago, III. (250), 3-5 h. m., Trianen Loydo, Clurice, and Harold Trianen Havallanis; Charles Fucrisch; 7-8. Trianen ensemble: Wayne King, Des-med Selftran; 9-11. Trianen ordestar; Lekoy Tyler, W. Stokes, Babbi and Karr., W. Stokes, Babbi and Karr., W. Stokes, Babbi and Karr., M. m., Pirst Baptist Church.

churth.

WOAW, Omaha, Nebr. (326), 9 n. m., chaped scrvice,
Rev. R. R. Bruon; 9, Zion English Lutteran church,
Neda Langtren, nator;
WOG, Davenport, Iowa (493,6), 8-8:30 n. m., church
errite; Rev. J. Seut. Carr; 9:30-11:30, Palmer Little

symmetons.

WORD, Batavia, Ill. (275), 10 a. m., hymns and sacred songs; 10:15. address, W. E. Page; 9 b. m., I. B. S. A. choral singer; 9:15. address, A. L. Secty, 9:45. Howard Hanks, planist; Phyllis Burton, violiust; Esther Armsoon, accompanist.

ist; Suher Armson, accompaniet.

WO, Ohengo, Ht. (447.5), 3-4 n. m., afterioon mustcal pringram, Romco Parls, Charlotte Borstin, Ethel Elmer, Derbeck brother, Elisabeth Green; Jerry Sullivan, director; 3-10, Raiph Williams and his Raimbo Gars, dens orchestre; Dr. Carl Betreldinger, planist; Dr. Carlotte, C. Boston, C. S. Maries Desports, Buestan so-WSA1, Cinciannati, Ohio (320, 2-435 n.m., address, Dr. S. Parlest Culmun; 7:30, WSA1 Radio-chimer; 7:35, sermosted, Dr. F. N. McMillan, WSB, Atlanta, Ga. (428.3), 8 p. ml. Wesley Memorial church corrice.

and Warner brothers movie frolic; Frank Stever, barltone; Howard Flynn, banjo; Peggy Mathews, blues singer; Frank Pierce and Vic Beall, comedy songs and bartlene; Howard Flynn, canog: reasoning: Frank Pierce and Vis Scall, coinedy songs and others; and reasoning the Real of the

Street Store company, arranged by J. Howard JohnM. Holywood, Calif. (33.60), 7-8 p. m., First Press,
M. Holywood, Calif. (33.60), 7-8 p. m., First Press,
M. Holywood, Rev. Stowart P. MaeLennan, pastur; 8-9, Anabassador hold ceneret orchestra, Josef Rosenfeld, director; 9-10-30, program,
Beverly Hills Norserles, Russian string trip; Calmon
Laboviski, violinist: Raquel Nieto, soprano.
KPO, San Francisco, Calif. (42.83), 3-4, p. m., Marshall
Giselman, organist; 6, Waldemar Lindt and the States
Rostauand orrelectur; 0.55, conect ordelectra, Pface
Seiger's Fafrmont hotel orchestra:

Monday, October 5

Monday, silent night for: CHIC, CNRC, CNRC, CNRM, CNRM, CNRW, CNRT, KFDM, KFMQ, KHI, KLDS, KTCL, KTW, WBBM, WCBD, WEBH, KFI, WGBS, WGE, WGB, WHAS, WHP WKAQ, WLS, WMAQ, WMBB, WGC, WQJ, WREO.

Eastern Time Stations
CHIC, Toronto, Can. (357), 8 n. m., CHIC Symphony
orchestra; George Miner, vocalist.
CHNC. Toronto, Can. (356.9), 10 p. m., CHNC Little
symphony orchestra; Allice Hodgetts, soprano; Sydney

CHNC, Teronto, Can. (358-9), 10 p. m., CHNO Little symphony ornelestra; Allen Hodgetts, soprano; Sydney Walsh, encor.

Walsh,

wick orchestra. WCAE, Pittsburgh, Pa. (461.3), 6:30 p. m., dinner

Symphony trio: 6, dinner concent, Book-Cadillac hotel; No. 1, 1987

for Hille tolks, Mildren D. Magan, J. W. W. New York, N. Y. (361.2), 7:30-8, p. m., Suance W. M. New York, N. Y. (361.2), 7:30-8, p. m., Suance club; 8:8:05, talk, H. B. Shoniz, 8:95-8:35, Bascland dance orchestra; 11-11:30, Marsh McCurle, orzanis; 11:30-12, Silver Slipper rerue; 12-12:30, Ted Lewis and his Faroit clin orchestra, 12-12:30, Ted Lewis and his Faroit clin orchestra, 8:10, Berry Sorhing time; 8:45, speaker, Fire Prevention; 9, A. and P. Gwedos.

WJAR, Providence, R. I. (305-9), S.p. m., Berry Spring time; Sci5, Speaker, Fire Prevention; J. A. and F. WLIT. Philadelphia, Pa. (394.5), 7:30 n. m., Dream Daddy's bedtine stories: S. routram from Philadelphia Raddo show; 10, Aradda evit dame orchestra. Valle string ensemble; 6:30-7:30; Ernis Golden and his Hotel McAlbin orchestra; 7:30-8, dullsby music; 9-10, lecture, Third Church of Christ Scientist; 10-10, setture, Tolder Church of Christ Scientist; 10-10, which was the control of the control

organist; 2:32-1. Panther Hawaiian trio; 4-8, Bluebonnit spanniars.

WBBM, Chicago, III. (226), 6-7 p. m., Stewart-Warner studio, Clem Dacy, Jinnay Jordon, Charlie Garland, Nate Caldwell, Eddie Lottle, Cerline Jordon, Patsy WCOO, Mineagoli St. Paul, Minn. (464-5), 645 p. m., F. & R. family; 9:15, Hamilin Hunt, organist.

WDAF, Ransas City, Mr. (365-5), 6-7 p. m., planotti, and the state of the control of the

the Wurlitzer Unit organ.

WMC, Membhis, Tenn. (499.7), 8:30 p. m., Dritting's Nowelty orchestra.

WMC, Membhis, Tenn. (499.7), 8:30 p. m., Dritting's Nowelty orchestra.

WOAW, Omaila, Nebr. (526), 6 p. m. m., Phyllis Grisswold, organist; 6:30, popular some period. Lillian American Legion programs Pouterelle Correlating to the Company of the Company

(Continued on page 10)

LISTENERS GIVE PROGRAM AT WLS

Monday, October 5

(Continued from page 9)

(SAI, Cincinnati Ohie (326), 8 p. m., A. and P. Gypsies; 9-9.15, news review, Allison Stanley; 9-15, Carl Schuett, planist, Richard Pavey, tenor; Waldens Johnston, violinist; Merrell Schwartz, hartone; SB, Atlanta, Ga. (428.3), 8 p. m., Mitz Harmony Boys orchestra; 19-45, Raddowt entertainment.

SW, Nashville, Tenn. (232.8), 7 p. m.-9 a. m., open-

WSM, Nashville, 1enn. (232.9), r p. m.-2 a. m., open-ing region of renari La. (31), 6:39-7:50 p. m., dinner hour mourtain; organ concert, twillight tales; 8:30-10:30, Dison Novelty offendari; popular program, WTAS, Elgin, III. (302.9), 8-10:30 p. m., Fred Hamm and the Boss' own oreiestra; studio talent, Herbie Mittz, Tommy Dunlap, Marie Weight, Art Stiller, Berger Welberg.



Danny Dougherty and his anusing song hits became so oppular with fans that WCAU made him a regular feature of the station. He station. He station from the station of the stage severything from the following to the blues.

Mountain Time Stations

KOA, Denver, Colo. (322.4), 6:30 p. m., Herbert White and his Sliver State orchestra; 7:36, sandman's hour; 8, scientific football, Tom McNamara; 8:10, Canon City music club.

Pacific Time Stations

KFOA, Seattle, Wash. (454.3), 6:45-8:15 p. m., Sher-man, Clay and company program; 8:30-10, Times

KFOA, Seattle, Wash. (454.3), 6:45-8:15 p. m., Sherman, Clay and company program; 8:30-10, Times studio program.

KFWM, Ridyand company program; 8:30-10, Times studio program.

KFWM, Ridyander of KFWB; 7:7-58. Studio Doings technical hour, K. G. Ormiston, technical ciditor; Yan sisters trio; 7:45, microphone brevities; 8-9, program, Star Motor Car company, Million Dollar dance, or-chestra, Perel Rogers' Hawkina trio, Frank Eleventhesia, Perel Rogers' Hawkina trio, Perel Rogers' Hawkina

12, Ray West's Coopenut Grore dance orchestur from Ambassador Intel. (No. 1997) (1997)

Tuesday, October 6

Tuesday, silent night for: CFCA, CHIC, CHNC, CNRC, CNRE, CNRM, CNRW, CNRT, KFKX, KOA, WAHG, WBBR, WCTS, WGCP, WHAD, WKAQ, WLIT, WOR, WSMB.

Eastern Time Stations

KDIKA, Pittsbriph, Pa. (309.1), 6:15 p. m., dinner concert; 7:30, children's period; 8:30, travel talk, Ross Skinner; KDIKA Little Symphony orderstra, Victor Wandek, director; 20:30, Grand bester concert; Wandek, director; 20:30, Grand bester concert; Wandek, director; 20:30, Grand bester concert; Wandek, director; Wandek, director; Wandek, director; Wandek, director; 20:30, Jusephine Shapson, Kora, suppose 5:30, Jusephine Shapson, Kora, suppose 5:30, Jusephine Shapson, Kora, suppose 5:30, Milkina Roven, plants; 19, Alberta M.

peano; 3:45, William Brown, pianist; 10, Alberta M. Richeler, violinist.

WCAE, Pittsburgh, Pa, (461.3), 6:30 p. m., dinner concert, William Penn hotel; 8, program from New York; 8:30, Gold Dust Wine; 9, Eversady hour; 10, grand

Word, Philadelphia, Pa. (277.6), 7:50 p. m., Stellenburg choral sately; Henry Thunder, conductor; S. Alberta Morris, suprano; Gertrude Schultz, contrallo, Kathryn O'tsoyle, pianist; y. "What Psycholosists Say Abant Time Prevention," Her. John W. Stockwell, entertalmond; 2:30, popular soon; W. Stockwell, entertalmond; 2:30, popular soon; J. Garden Ordenburg, Prince and this Cathay Ten Garden Ordenburg, and the Catha

chestra.
WCTS, Woreester, Mass. (268), 8-8:30 p. m., Ross Gorman and his Earl Carroll Vanities; 8:30-9, program 9-10. Eveready hour; 10-11 WEAF grand opera com-

wany. WCX, Detroit, Mich. (517), 2 p. m., news and markets; 1:15, The Detroit Symphony trio; 6, dinner concert, Book-Cadillac hotel; S, musical program; 10, the Red

Beok-Cadillae hotel; S. musical program; 16, the Bed Annie club.
WEAF, New York, N. Y. (191.5), 6-7 p. m., dinner music, Waldorf-Astoria; 7-7-10, Joseph A. Bier, Braitone; 7-10-7-30, lecture, Columbia university; 25-7-10, 19-7-1

Statler dance orchestra, Harold Gleser, director; 8-11. WEAF Gold Dust Twins, Errecady hour, grand operatoroncer's recognition of the control of the control

semble; 0:30-7, Man in Moon; 7-7:30, Hotel Skelten ensemble.

WRC, Washington, D. C. (468.5), 7 p. m., Shorcham hotel orchestric; S, Wurltiere musicate, W32; 9, "The Miller of the William Witter, 2010, musical program; 10, "Over the William Witter, 2010, musical program; 10, "Over the Seren Seas," WJZ; 10:330, W. Spencer Tummar's Hotel Mayflower orchestra. 265, 50, 47 p. m., dinner ensemble of the William Willi

Central Time Stations

KFAB, Linooln, Nebr. (346.7), 5:30-6:30 p. m., Buick Little symphony, Belshaw's orchestra; Buick stalledichle; 8:30-10:30, musicalo, University of Nebraska, KFDM, Beaumont, Texas (315.6), 8-3 p. m., DelMoly band and orchestra; Ruth McGowen, 12 year old Wicklist, Jamys McHaigh, Irving Altils, voad diek Grandschaft, 16 was (266), 7 p. m., pipe organical control of the control of t

New Jones States and Control of the Control of the

Den WELR, Gold Dest Twins, Eveready hour, Grand open.

WDAF, Kansas Gity, Me. (365.6), 6-7 p. m., piane tuning; in number on the Duo-Art; speaker to be amounced; Tell-Mes-Story; Trianon amsemble: 11:45-1. Merey Concentration of the Photettern Service o

WENR, Chicago, III. (266), 6-7 p. m., Rauland lyric trito; 3-10, Nubs Allien; all-American Piomeres; Phillip Molvillo.

M

WHAS, Louisville, Wy. (398.3), 7:30-9. Royal Peacock crelestra.

while Moines, lows (239), 7:30-9. B., Raleigh, and the state of the st

sieal production, "Old English Music," WLS trio; 7755, mignty night.

WLW, Ginelanti, Obio (422.3), 6:30 p. m. instrumental trio; Gene Johnson, organist; Music, "Market Medical Company of the Contestral novelly, WLW Feature or orbestra, the old masters in the new land of rythm; 8:39, the Famous Lyric maje quartet; 9; the Formica orbestra, he old masters in the new land of rythm; 8:39, the Famous Lyric maje quartet; 9; the Formica orbestra, beater organ recital; 6:39, Hotel La Salle ordestra; 8, "Literary Sidelights;" Harry Hansen; 8:49, travel talk, Clara E. Lauphilt; 9, opening lecture from University tenor; 9:61, Hotel La Salle davice orbestra, which is the contest of th

tener: Tolon Nurent, contraite; Charles Stokes, violinist, Sin Nurent, contraite; Charles Stokes, WSB, Atlante, Ga. (22.3.), S. p. m., Atwater Kent stars; 10.45, Raddowl entertainment. M. Fred Hamm and, the Boss' own orchestra; Herbie Mintz, Auriol Craven, Pill Wilcze, Gladys Bagwill, Tell Taylor, Brock Sisters, Rome Vincent, Earl Ricard, Edna Adams, Phil Plenning, Evris Smith, Mirth Mack.

Mountain Time Stations

CNRR, Regina, Can. (435). 8 p. m., studio program. Jack Bell, Mrs. Hartey Gries. KOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musicale; 6:30, Herbert. White and his Silver State orchestra; 7:30, News-Times concert.

KOA, Deswer, Colo. (322-4), 12:15 p. m., Bialto theaster intuiciatic 5:09. Herbort White and his Silver State orchestra; 7:50, News-Times concert.

KFOA, Scattle, Wash, (454.3), 6:56-9:15 p. m., Biodes Department stores; 8:39, programs; 9:30-11:30, Eddie Department stores; 8:39, programs; 9:30-11:30, Eddie News-Hour, Bitz Brother of KFWB; 7, Broward Beatl, soft Intuition of the State of Instructor; 7:45, microphone brevities; 8-9, programs, 10-11:40, Eddie Microphone Brevities; 8-9, programs, 11 Hatch, the sizz twins; 9-10, program, H. L. Crockett Hudone Essex dealer; R. D. Grockett and his quarter of the sizz twins; 9-10, program, H. L. Crockett Hudone Essex dealer; R. D. Grockett and his quarter of the sizz twins; 9-10, program, H. L. Crockett Hudone Essex dealer; R. D. Grockett and his quarter of the sizz twins; 9-10, program, H. L. Crockett Hudone Essex dealer; R. D. Grockett and his quarter of the sizz twins; 9-10, program, H. L. Crockett Hudone Essex dealer; R. D. Grockett and his quarter of the sizz twins; 9-10, program, H. L. Crockett Hudone Essex dealer; R. D. Grockett and his quarter of the sizz twins; 9-10, program, H. L. Crockett Hudone, 19-11, Warner Bros. frolle, direction Charlis Wellman, Call. (361), 6-7, p. m., dinner consensus, 19-11, Walleman Enderge, S. S. Go. Baillow, 19-11, Walleman Enderge, 25-30, Raillow, 19-11, Walleman Enderge, 25-30, Baillow, 19-11, Walleman Enderge, 25-30, and a style talk, Sage of Yamhill county; Rose City trio; 9-16, General Cord Cercitaria; 10-12, dance musia, Mulmonal leader; 6-4-30, Art Heckman's Biltmore tore on March Microphysics, 19-11, Art Hickman's Ellimore hotel dance orchestra, East (NM, 164) weed, 25-30, Art Heckman's Biltmore hotel, 19-11, Art Hickman's Ellimore hotel dance orchestra, 25-30, Raillow, 19-11, Art Hickman's Ellimore hotel dance orchestra, 25-30, Art Nather Kent Radio orchestera, 19-11, Art Hickman's Ellimore hotel dance orchestra, 25-30, Art Nather Kent Radio orchestera, 19-11, Art Hickman's Ellimore hotel dance orchestra, 25-30, Art Nathe

ehestra. (PO. San Francisco, Calif. (428.3), 6:40 p. m., Walde-mar Lind, and the States Restaurant orchestra; 7-7:50, Rudy Seiger's Fairmon hotel orchestra; 8-9, Penul Hassock Whitcomb; 9-10, Russian music, Mona Motor Oll company; 10-11, Juck Goakley's Cabirlans.

Wednesday, October 7

Wednesday, silent night for: CHIC, CHNC, CNRC, CNRE, CNRM, CNRR, CNRW, CNRT, KFDM, KFKX, KGO, KLDS, KTCL, WBBR, WGD, WCTS, WFX, WFX, WGC, WGY, WHAR, WIP, WMC, WOAW, WORD, WREO.

Eastern Time Stations

Eastern Time Stations
CNRO, Othewa. Can. (485.), 8, n. m., Chatesu Learner sensert orchestra; 9, Allan Carr., tenor; Mrs. F. J. Horsing, Cholinist; Horace Butler, baritone; 13, Cawthray, reader; Bertlin de Lamothe, contralic; A. C. McGutt, Hawaiian selections; Chatesu Laurier thane ernestra. (200, 1), 6-15 n. m., dinner concert; 7:30, 6-115 n. m., dinner Concert; 8-115 n. m.,

Haywood, soprano; \$2.30, to be announced; \$2.15, Ad-imfdle hour-pink, Pa. (461.3), 8.230, p. m., dinner cannert, William Penn hote); 7.30, Sunshine Girl; \$2.30, Pooley period; 9, Waternann hour; II, program, Leew's Aldine theater. (27.50, 7 p. m., Lee Chapter (27.50), p. m., p. m.,

Gobberd; 9:10, Edwyre Rorke, barttone; Eleanor Fields, pharlst, WCTS, Wercester, Mass. (268), 7:45, p. m., talk, Robert N. Shaw; concert, 2, p. m., pears and markers; 4:15, The Defroit Symphony trie; 6, dimner concert. Rook-Caellian robel; 8, musical program. WEAF, New York, N. Y. (1915), 4-5 p. m., Ray Nichols orchestra; 6-7, dinoner music, Waldorf-Astorit; 7:30, services, United Symagonu of America; 7:39-8, musical program; 8-8:30, Hurler's Permonet Pour; 8:30-9, Paricey Period; 9-10, "Waterman's Points of Progress—The Declaration of Independence," 10-11, Johns Troubstoners, 11-12, Ben Bernite and its Hood Rooccott orchesta.

WEAR, Cleveland, Ohie (330.4), 2 n. m., world's series;
7: Hotel Cleveland orchestra.
WEBJ, New York, N. Y. (272.6), 8-8:30 p. m., Aywan
Consedy Four: 8:29-9, Roth trits; 9-9:115, Carrie Cohen,
WEBL, Boston, Mass. (470), 6:20
WEEL, Boston, Weel, Mass. (470), 6:20
WEEL, Mass. (470), 6:2

dlanana' orchestra; 10-10-15, 'Sain Williams, and Al Plinatodasi; 10-10-11-13, Tstrickland's Civert Gardent Prinatodasi; 10-10-11-13, Strickland's Civert Gardent WGR. Buffalo, N. Y. (319), 2:30 n. in., wezid's series reports; 6:30-7;30, 'two niano rectial, Gossel Melodits; 2:45, address by Frances Haye, 'Trickfulnd's control of the series of the seri

Dream Daddy's bedtime stories; 10. Arcada eafo dance orclessor. N. Y. (348-7), 12-12:39 b. m., Official Vail's string ensemble; 66:39.0 Official Vail's MCA, New York, N. Y. (348-7), 12-12:39 b. m., Official Vail's string ensemble; 66:39.0 Official Vail's McAlpha orchestra; 8-3:15, Frieda Rochen, sonrano. WNYC, New York, N. Y. (326), 66:39.0 m., Spanish lessons, Y. Hartison Berlitz; 7-7:10, market high spots; 7:10-729, dames program; 7:20-7:35, police spots; 7:10-729, dames program; 7:20-7:35, police program; 9:39-9:43, song, recitals, 8-9, Instrumental program; 9:39-9:43, song, recitals, 9-9, m., "Words Often Mispronounced"; 6:17-7, Hotel Shelton en-semble; 7:15-7:39, sports talk, Bill Watthey; 7:30-8, Spence: Armstrong; K:50-9, Carmen string trio; A-2:15, Sam Slegel, mandolin virtuos; 9:45-10, talk, George W. Wadsworth; 11-12, Zit's Central Park Castino orchestra.

George W. McGisworth; 11-12, 2015 Central Auto-Casino Credevitation (479, 6:30 p. m., Hotel Bond trio; 10, Bill Tastilo's orclustru. WWI, Defroit, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statler orchestra; 2, world's series; 6, dinner concert; 8, News orchestra; 0, dance program.

Central Time Stations

CNRW, Winnipeg, Can. (384.4), 9 p. m., dance program; 10, Fort Garry hotel trie; Orean Hogan,

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jazz orchestra; kilks' quartet; 11, Łotsy-Lots) nous, Kantfolis, KPRC, Housbn, Texas (296,9), 5:30 p. m. Unels Judd's kiddles' hour; 7:500, studio concert; 8, Kath-erine Alten Lively, planist; 8:30, Eddic's syncopators; 11, vanded'lle revue. KSD, St. Leuis, Mo. (545.1), 8 p. m., Velted Prophet hall.

11. vaudeville revue.

Stoll B. Leuis, Mo. (645.1), 8 p. m., Velicd Prophet Krills, Hot Springs National Park, Ark. (374.8), 9.9-345 p. m., selections, Meyer Davis instrumental quarter; 9-45-10-15, fiddle tunes, Balley family.

Written Gurman: S-9. Adele Brandt, contraitor, Written Gurman: S-9. Adele Brandt, contraitor, Salik Menkes, pianist, Art Linick, humorist, Bobbie Brown and his wkc; 10-12-36, midnight revue. Charles WBAP, Fort Weth, Texas (475.9), 7-30-8-36 p. m., Panther Hawalian trie; 9-30-10-45, popular music, WBBM, Chicago, Ill. (220), 8-10 p. m., Suncet male Gille, Loftis. Samovar orchestra. Hazel Moinaire, Graine Growing State of the State of the

way Smith. WCCO, Minneapolis-St. Paul, Minn. (416.4), 7 p. m.,

Dr. Henry
Howard of
London III
Lo



Belew Jord., Jana Probaganger 19.35. Eddie Durscheller Collisium ordnestat 11.53. Eddie Durscheller.

WDAF, Kanas City, Mo. (365.6), 6-7 p. m., address, Health Conservation association; address, Mast Council: Teld-Me-a-Stary lady; Trianon ensemble: 11.45-1. Merry Old Chieft, Planataton players; 50die Kulmi Stery Old, Chieft, Planataton players; 50die Kulmi WEBH, Chiengo, Ill. (379.2), 7:309-8:30 p. m. Ordule orchestra: Florence Ushreyend, soprano: Huward Keymiller, planist; 9:30-10:30, Ordol orchestra: Correll and Gooden; Robert Tork, toor: 11.39-3], Ordol-orchestra: Robert Tork, toor: 11.39-3], Ordol-orchestra: WeBH, Chiengo, Ill. (266), 6-7 p. m., Rauland Dyric trie; S-10, Archie Rawis, barrione; All-American Plonorer; John Pana, somertina soliotis; Fleyd Faleh, potular singer; 12-2, All-American Plonorers; Frank Westphal, ichinist.

**(Continued on page 11)

STAR GAZE THURSDAY WITH WTIC



Mrs. Refuge Raye Loving, soprano, is called upon to sing during special long distance programs at KFDM, Beaumont. Her renditions of Spanish songs appeal to the fans of Central and South America.

Wednesday, October 7

(Continued from page 10)

WGES, Oak Park, III. (250), 7-9 p. m., Richard Dale, bartione: Louisa Wyse, soprano; John MacFarlane, bass: John Stanford, tenor; 11-2 a. m., Kampus Kollegians archestra; Rose Sweeney, soprano; Frank Salley, neueri Lew Russell, Sue Olmanead, ukulele Salley, and John Stanford, Salley, neueri Lew Russell, Sue Olmanead, ukulele WGN, Chicago, III. (270.2), 12-10 p. m., Drake concert essemble, Blackstone string quintet; 6:307-303, UCA string from 10:301-301-130, Juzz (330-230, WGN, string from 10:301-301-130, Juzz (340-250), WGN, string from 10:301-301-301, Juzz (340-250), WGN, string from 10:301-301, Juzz (340-250), Juzz (340-250), WGN, string from 10:301-301, Juzz (340-250), WGN, string from 10:301-301, Juzz (340-250), Juzz (340-250), WGN, string from 10:301-301, Juzz (340-250), Juzz (340-250),

aussidees Building Trades bureaut atrs. Emory Noin Hendersen, contrain. (528), 6:23-7:30 p. m. Resse-Hughes orchestra: 7:30-9, ponular souss, Wendall Reed and Robert Kale; Harry Amigitol, Robert Rob-ertson, Smith Sisters, Percy Petter; 9-10:33, Corn Sugar orchestra: 10:30-12, midnisht dance program.

ward Hines.), Davenport, Iowa (483.6), 9:10 p. m., Ipana unbadours; 10-11, Erwin Swindell, organist; Mrs. P. Griggs, sourano.

Wilti. Daysenbert. www. (eds. 6), 2-10 ft. m., June A. R. Gritggs, soprano.

A. R. Gritggs, soprano.

Wolk, Chicage, III. (217.3), 6-7 p. m., Robert York, tenor: Jane Jahconsell, contralto; Elsenor Glimour, sorrano; Hanisa Kennedy, organisation, Martine Janes, Janes Janes, Janes,

WSMB, New Orleans, La. (319), 6:30-7:30 p. m., din-ner hour program, organ recital; 8:30-10:30, de luxe

program.

WTAS, Figin, III. (302.8), 8-10:30 p. m., Fred Hamm and the Boss's own orchestra; Herble Mintz. Evelyn Johnson, Art Stiller, Babe Payne, Herbert Schroeder, Roland Hluckel, Clarence Parisit, Pat Ward, Harry Davis, Si Berg, West Town Harnsony Boys.

Little Symphony orchestru, Vietor Saudek, director:
Alberta Beter, contraite; Brederick Rodgers, burstone;
WAHG, Richmond Hill, N. Y. (315.6), 12:38-12:55
n. in, inuitient program.
WEZ, Springfield, Mass. (333.1), 0:30 p. in., Loc Reisman's Hotel Lenox ensemble; 7:30, children's chorus;
S, to be amounced; S:30, Stanley Fletcher, plantist;

WJAR, Providence, R. I. (305.9), S p. m., Lardcintos; S:30, musical program: 9, Atwater Kent Radio artists; 10, Goodrich Silvertown Cord orchestra.

10, Goodrich Silvertown Cord orchestra.

WMCA, 10, Goodrich Silvertown Cord orchestra.

WMCA, New York, N. Y. (340.7), 12-12:39 p. 1.

cott Yall's string ensemble; 6-6-39, Oleott 's string ensemble; 7:30-8, Lanson's orchestral 's string ensemble; 17:30-8, Lanson's orchestral 'orchestra's result of the cord of th

Anita Vinograd, below, is the promising young violinist who is appearing regularly Moneay nights at WHAD, Milwaukee. Miss Vinograd won first place in Sie District Music contest at the Jilwaukee Normal school in Max and during the past season has been concert mistress of the all-oity orchestra.



Fitch, organist.

WHAS, Louisville, Ky. (399.8), 7:30-9 p. m., concert, auspices Building Trades bureau; Mrs. Emory Note

Sugar orchestra; 10:39-12, midnight dance program. W180, Chicago, III. (229), 6-8 p. m., James Luchansky, Austrianstenor; Chester Newman, haritone; Carl Lin-ner, plants; Joe Alabough, tenor; 10-12, Anne Wil-liams, Joe Verges, Harry Geise, Joe Allabough. WKRC, Gindanti, Ohte (4223), 8 p. n., book review. Alice B. Coy; Srib, Marton McKay and his orchestra; Supplemental Computation of the Computation of the Computational Journal Pile or Confession.

Seap, popular studio features; 9:19, Marion Mersay WLS, Chicago, III. (344.8), 6:30 n. m., Rabbi Emer-son, organist; 7, Iuliaby time, Ford, and Glenn; 7:20, WLS (fc); 7:35, May Bagley, controlic; 8, synconation hour, Chremes Jones, directory of College Ind. organists, Inn orchestra; 10, Young Mer's Council quartet; 10:30, College Inn orchestra; 10:45, Ford and Glenn time; 11, Raibh Emersor's concern.

11. Raiph Emerson's concerns, 19-29, pour and Glean line; II. Raiph Emerson's concert, 4 fact (Blisan orthesta, Robert Viscoult, diarrector, 7-20), educational talk, National Ferm Radio male quartet; 10-30, instrumental tria; 11-15, Johanna Grosse, W.J.W. feature organist. WMAG, Chicago, III. (447-35), 6 p. m., Chicago theater organ recital; 6:30, Georgene Fallone; story lady: 8, lecture, Northwestern university; 8:29, anusical posturani; 9, WMAG, Diarves, W.J.W. feature organist. WMBS, Ghreago, III. (427, 528, p. m., Trianon ensured the control of the co

card string quartet. WSB, Atlanta, Ga. (428.3), 10:45 p. m., Seven Aces

Mountain Time Stations

(OA, Denver, Cele. (322.4), 6:30 p. m., Berbert White and his Silver State orchestra; S. scientific football, Trom McNaman; S:10. "The Retor," even trom Rome and Juliet," KOA players; 10, dance program.

Romeo and Julket," KOA players; 10, dance program.

Pacific Time Stations

KFOA Seattle, Wash, (454-3), 6-35 s-15 n. m., Hopper Roman Station program from the control of t

Glay and company.

KH, Los Angeles, Calif. (405.2), 5:30-6 p. m., Leighton's Arcade cafetaria orchestra, Jack Croushuv, leader; 6:3-30, Art Hirkman's Billmore hotel concert orchestra, Edward Pringatrick, director; 6:30 2.00, noter; Mickey MeBan, soene staries; Lude John; 8, Dr. Mars Baumgardt, scientific lecturer; 8:30-10-30, program, F. B. Miller Medan besser commany, arman's Billmore hotel diance orchestra, Earl Buttnett, leader.

ranged by J. Howard Jonnson; 19.33 11:39. Art Hoftman's Bilmore hold done orchestra, Earli Butnett, KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurltzer plee prans studio, Jown Tattuer, 6:15. travel talk, W. P. Alder; 9:30-7, Arware Kent Rastho ortales, W. P. Alder; 9:30-7, Arware Kent Rastho ortale concert concerts, also Reveared, director, 8:0, program, security Trust and Savings Lenk; 9:30, program with a kick, Berutles Gasolule common, Ellier, 19. program, Security Trust and Savings Lenk; 9:30, program with a kick, Berutles Gasolule common, Ellier, KPO, Savings Lenk, 19. program with a kick, Berutles Gasolule common, Ellier, KPO, Land and the States Restaurant orderstra, 7-7:39, Rudy Seljer's Fairmont hotel orderings; 8:9, Atwater Kent artists; 9:10, Gondrich Silverium Condon, Artwater Kent artists; 9:10, Gondrich Silverium Condon, and Condon, 19. programs of the States Restaurant orderstra.

Thursday, October 8

Thursday, silent night for: CHIC, CHNC, CNRE, CNRR, CNRT, KFAB, KFGM, KFKX, KFMQ, KFOA, KFVE, KGW, KOA, KSD, KTCL, PWX, WAHG, WCEE, WEBI, WHAD, WJJD, WKAQ, WLIT, WOR.

Eastern Time Stations
CNRM, Montreal, Can. (411), 8:35 p. m., H. M. Canadian Grandator Guarda band.
KDKA, Pittshurgh. Pa. (399.1), 6:15 p. m., dinner concent; 7:30, children's puriou; 8:30, concert, KDKA.

8:45, evening of opera, Madame Vinelle-Johnson, di-

Fred East is one reason for the popularity of Contact the contact of the contact

S.45. evening of opera, Madame Vinello-Johnson, di-WEBR, New York, N. Y. (272.6), 8 n. m., Hawalian quartet; 8.10, voted selections; 8.20, Sunday school tesson, 8; M. Van Sipma; 8.30, votel selections; 9.50, Memorian mariet. Pa. (461.3), 6.30 p. m., dimer concert. William Penn botel; 8. Jarkin period; 9. Atwater Kwan Hadio artists; 10, Goodride Silvertown Cord orebestra.

Cord orebestra. Particular of the Cord of the Cord

Chasnesy Lee's orchestra; 10, Vincent Percy organ receital.

WECI, Besten, Mass (476); 2 p. m., program, dance orchestra. What We Think of 100° and curried or the strength of the strength of

Joyal nour; 19, veg orthestra; "Bird's Bye view of Distant Countries"; 11:30, organ recitals, Stephen E. WhAR, Atlantic Ciby, N. J. (275), 7:30 p. m., lecture period; S. Seaside hold: Into; 9, studio concert. WHN, New York, N. Y. (361.2), 7:30-7:45 p. m., Ceeil B. Kennedy, bartione; 8-8:50, WIII Oakland? Chatheau Shanley; 8:30-8:45, Ethel West, soprano; 9-4:30, Jimpy Clarke and his entertaines; 10-10:30, Loav's vaudeville headiners; 10:30-11, Club Kentady ordeloater and review; 11-11:30, Swanee chub ornelsty ordeloater and review; 11-11:30, Swanee chub ornelsty.

J. Alenancy, reader.
WCCO, Minneapolis-St. Paul, Minn. (416.4), 7 p. m.,
The Larkinites, WEAF, 8-10, program, WEAF, Atwater Kent Radio artists; 9-10, Silvertown Cord or-

WDAF, Kansas City, No. (365,6), 67, pp. m., book lalk, Louis Mecker; Tell-Me-a-Story lady; Trianon ensemble; 11:45-1, Merry Old Chief; Carl Nordberg's Plantation players; Earl Coleman's hord orchestra; Kansas City Athletic club orchestra; Ted Meyu, organist.

ganist.

WEBH, Chicago, III. (370.2), 7:30-8:30 p. m., Oriole orchestra; Uptown theater; 9:39-10:30, Oriole orchestra; Katherine Forbes, soprano; Beulah Ladon, (Continued on page 12)

WSM, OPENS MONDAY; WBAP ON

Index to Popular Concerts

That to Former Correct 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.

Eastern Time Stations

Saturday, October 3: 8:30, WGES; 8:45, WEAF; 9, WEAF, WGES, WNYC; 9:30, WGES; 10, WREO; 10:30, WEAF, WRC; 10:45, WEAF. 19:00, WEAF, WRC; 10:40, WEAF, WARF, WARF, WARF, S. T:30, WFN; 7:45, WARF, S. WGBS; S:30, WGR; S:45, WARF, S:40, WCAU, WEAF, WGR, WOO, 9:15, WARF, 9:30, WGR, WHAZ; 10, WGR, WRCA; 11, WLIF; 11:30, WHN; 12, WARF, 1, WARF,

WAHG.
Tuesday, October 6: 7, WMCA: 8, WEAR; 8:30, WMCA: 9, WBZ, WBAR; 11, WHN; 11:30, WHN.

October 7: 7:30,

Wednesday, October 7: 7:30, WAHG, WEDI, WHN: 17:45. WAHG; WEDI, WHN: 7:45. WAHG; S. WAHG, WEDI, WHO, WGCP: 8:30, WEBI, WGCP: 8. WEBI, WGCP: 9:30, WAHG, 9:45, WAHG, WGCP: 1, WHN: WGCP: WGCP: WGCP: 1, WHN: WGCP: WGC

Thursday, October 8: 7:20, WEAF; 8, WCAE, WCTS, WEAF, WFL, WMCA: 8:15, WEZ; 9:20, WCAU; 10, WHN, WNYC; 10:20, WBZ.

WHIN, WANC; 10:20, WBZ.

Priday, October 9: 7:30, WEEL,
7:45, WAHG, WGY: 8, WGCP, WIR:
8:30, WBEL, WGCP, WHN: 9, WGR,
9:15, WBZ, WGGP: 1:30, WAHG,
WHIN, 9:45, WGCP: 10, WHIN, The 30,
WHN, WLIT; 11:30, WHN, WTIC.

Central Time Stations

Central Time Stations
Saturday, October 3: 6:30, WPAA;
7:20, WMSE; 8. WEBM,
WESN, WIS, 7:30, WMSE; 8. WEBM,
WESN, WIS, WAAQ, WAS, 8:30,
WGM, WIS, WHAQ, WAS, 8:30,
WEBR; WO, WHEB, WTA,
WEBR, WGM, WABB, WTA,
WEBR, WGM, WABB, WTA,
WOK, WQJ, WTAS; 10:30, WEBH;
11, KOIL, WBBM, WLS, WOAW,
WOK, WQJ, WTAS; 10:30, WEBH;
11, KOIL, WBBM, WEBH, WEBM,
WOK, WQJ, WSAI; 12:30, WBBM,
WEBH, WDNR, WOK, WQJ, WSAI;
12:30, WDAF, WOK, WQJ, 1, WEBM,
WENR, WQJ,
Smaday, October 4: 7:30, KOIL;

WENR, WQJ.

Sunday, October 4: 7:30, KOIL:

\$WBBM, WTAS: 9, WBBM, WTAS:
10:15, KTHS, WTAS: 11, KTHS,
WTAS: 12, WBBM.

Monday, October 5: 6, WBBM:

"MWFAA WOAW, 6:45, WCCO,
S. W. WFAA WOAW, 6:45, WCCO,
KWABE, WOK, 9:25, KTHS: 9:30,
KPAB: 10, KIAB, KFVE, WMBB,
WOK, WTAS: 10:30, WHT: 11, KOIL,
WHO, WOK; 11:45, WDAF: 12, WHT.
WOK; 1-6 a, m., WBAP.

Tuesday, October 6: 6, WOAW:

Tuesday, October 6: 6, WOAW; 7:30, KPRC, WEAP; 8, WEBM, WSE, WTAS: 9, WEBM, WMEB, WTAS, WOAW; 9:30 WOAI; 10, KFVE,

Friday, October 9: 6:30, WFAA; 8, WBBM, WLS, WOC, WTAS; 9, WBBM, WDAF, WHAD, WOAW; 9:30, WTAS; 9:45, WLS: 10, KFVE, KYW, WOK, WQI, 10:30, KYW, WGN, WHT; 10:46, WSAT; 11, KOIL, WMC, WGK, WGY; 11:36, KYW; 11:45, WDAF; 12, WHT, WOK, WQJ; 1, WQJ; 1, WQJ; 1, WQJ;

Mountain Time Stations Wednesday, October 7, 10, KFWA. Friday, October 9: 10, KFWA.

Pacific Time Stations Saturday, October 3: 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, October 4: 8, KHJ; 9, KFWB; 10, KFWB.

Monday, October 5: 9, KNX; 10, KFWB; 11, KFWB; 12, KFWB.

Tuesday, October 6: 8, KFWB, KNX; 9, KNX, KPO; 10, KFWB, KNX; 11, KFWB.

Wednesday, October 7: 8, KGW, KPO; 9, KFWB, KNX; 10, KNX; 11, KFWB; 11, KNX.

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

Friday, October 9: 8, KFWB; 9, KFWB, KHJ. KNX; 10, KFWB, KNX; 12, KFWB, KNX; 1, KNX.



7.55, flahrg streams and field, Jack Bonz; 8.6, proposition, Shirty Hame automorphism, Shirty Hame automorphism, Shirty Hame automorphism, Shirty Hame automorphism, Shirty Hames and Hame

Burnett, harder.

(RWX, Hellywood, Calif. (335.6), 5:05.6.15 h. m., Wurlitzer Pilic organ studio, Town Tattler: 6:15, travel
tulk, W. P., Alder; 6:30.7., Autaire Knett Radio orchestra. Paul Pinstein, leader; 7:8, program, BeverlyHowatt, Palanojouru; 8:10, KXX feeting program;
10:11. Ray West's Coconnut Grore dance orrhettar
from Ambasade hotel.

(KPO, Saw Francisco, Calif. (422.3), 7:7, 90, n. R. Reit
George Caswell Coffee company; 9:10, orrelastra and
thee club, Glendale Eliks; 10:11, Juck Coakley's
Cabfrians.

Friday, October 9

Friday, silent night for: CHIC, CHNC, CNRC, CNRM, CNRR, CNRW, KFMQ, KGO, KLDS, KPRC, WBBR, WCBD, WFI, WGBS, WIP, WKAQ, WKRC, WLW, WGR, WRC, WRC, WSAI, WSMB.

Eastern Time Stations

CNRT, Toronto, Can. (356.9). 6:30 p. m., Luigi Ro-manuelli and his King Edward hotel concert orchestra: 9, "Yooman of the Guard." Regimal Steward, director; 11, Luigi Romanelli and his King Edward hotel dance orebestra.

oreuestra.

KDKA. Pittsburgh. Pa. (309.1), 6:15 p. m. dimer concert; 7:30, children's period; 8:30, KDKA string quartet; MacDowell quartet, Lyman Almy Perkins director.

omariei; MieDowell quartet, Leyman come director.

WAHG, Richmand Hill, N. Y. (315.6), 12-30-12-35 p. m., musical program; 7:30-10-30, musical program; WBZ, Sarimafald, Mass. (333.1), 6:30 p. m., Loo Refs-mans, Hold Lenox ensemblers, M. Lillan Winer, in-sured the Communication of the Communication of the Marshall Chark, lyric tenor; 9:15, Daniel J. Margan; 9:36, Std Reinlierz, plants; 9:15, Confey Thea or-thory of the Communication of the Communication of the Marshall Chark, lyric tenor; 9:15, Daniel J. Margan; 9:36, Std Reinlierz, plants; 9:15, Confey Thea or-thory of the Communication of the Communication of the Marshall Chark, lyric tenor; 9:15, Daniel J. Margan; 9:36, Std Reinlierz, plants; 9:36, Daniel J. Margan; 9:36, Std Reinlierz, plants; 9:36, Daniel

chestra; 20:20, accounting 8 Sanging Octobers.

WCAE, Pittsburgh, Pa. (461.3), 6:30 p. m., dinner concert, William Penn hotel; 8. address, current meter topics; 8:30, concert.

tor topies; 8:30, concert.

WCAU, Philadolphia, Pp. (277.6), 8 p. m., program,
Philadelphia Badio Exposition; 9, Ernestine Bacon,
asperano; Hazel Harman, Koehler, vialinist; Kalturu
O'Buyte, blanist; 10, popular songs, Rennic Cormack; 10:23, Locear's Danelms, Aradium o'rhesbra.

WCTS, Worcester, Mass. (268), 8 p. m., concert
program.

program.

CX. Detroit, Mich. (517), 2 p. m., news and markets; 4.15, The Detroit Symphony trio; 6, dinner concert. Book-Cadillac botel; 10, Bive room dance orchestres.

concert. Book-Cadillae holei; 10, Blue room dance orchestra.

WEAF, New York, N. Y. (491.5), 6-7 n. m., dinner misd., Waldorf-Astoria; 7-7.03. Gene Ingratum? The misd., Waldorf-Astoria; 7-7.03. Gene Ingratum? The second of the misd. The second of the second of the second of the misd. The second of the sec

Dand. WGBS. New York. N. Y. (315.8), 6-6:30 p. m., Uncle Gecbee; 6:30-7:30, orchestra. WGCP. New York: N. Y. (315.6), 8-8:15-p. m. Steele-sud, Hosgens: genuineere: 8:15-8:368. Simm Keller.

May, soprano; 8:39-8:45. Tob Wavd and the three little Wards; 8:45-9. Alimaic Picum; 9:9-15. Mon Mann, barlinne; 9:15-9:30, Shirley Herman, singery Mann, barlinne; 9:15-9:30, Shirley Herman, singery Galnes, S. Budler Bob McDenndd; 9:15-16. Arthur Galnes, S. Budler Bob McDenndd; 9:15-16. Arthur Galnes, S. Budler Bob McDenndd; 9:15-16. Arthur Galnes, 10:15-12. While Lou Hayer; 10:45-11. Strick-land's Clover Gardens orthestra. WoR. Buffalo, N. Y. (319), 2:30 p. m., world's series reports; 9:26-7:30, Cled Trice; 9:50-30, Gertrads Townsend, electronist; 9:30-10:30, puntar program features, and the series reports; 9:26-7:30, Cled Trice; 9:50-8, Gertrads Townsend, electronist; 9:30-10:30, puntar program features, and the series of the series

WGV, Schenectady, N. Y. (379,5), 8:50 p. m., International Sunday school learns; 7, program, A. Janus, Schanheater architecture; Julius, Bachourt, conductors, 11, Walters, ovenaids; 7:16, concedy, "The Rivals," Paralle Backers, Clay, director; 10:50, Air Paralle Backers; Ten Loye, Clay, director; 10:50, Air Carlotte, A. Reilly, barttone, 10:50, Air Carlotte, A. Reilly, barttone, 10:50, Air Carlotte, 10:50

WHAR, Atlantic City, N. J. (275), 7:30 p. m., fashion talk: 8. Scaside hotel trio; 11:15, Strand theater organ recital.

organ recital,

WHN, New York, N. Y. (361.2), 7:59-8 n. m., "Cheer-ni," Philosopher, "Burr Mchinosh; 16:30-11, Roseland dance orchestra; 11:30-12, Club Alabam orchestra; 12:31-12; Club Alabam orchestra; 12:12:30, Sirver Slipper revue.

WIAR, Providence, R. I. (305.9), 8 n. m. story teller, Elmowad Pupilic Library, S.15, musical program; 3, Maine Creamery entertatners; 11, Providence-Biltmore dance orchestra.

WLIT, Philadelphia, Pa. (394.5), 7:30 p. ni., Dream Daddy's hedrine stories; 9, program from Radio show, 10, Areadia cafe dance orchestra; Morning Glacy club concert.

concert.

WMOA, New York, N. Y. (340,7), 12-12-20 n. m., ol. out Vall's string ensemble; 6-8-19, Oleut Vall's ensemble; 6-9-7-39, Ernie Golden and his Hotel Me-Alvin orchestra; 7-44-8. "Helus for lietter Batteries," H. C. Burr; 3-10, Hardman hour of musis; 10-10-13, H. C. Burr; 3-10, Hardman hour of musis; 10-10-13, 11-13-11-15, Donald Planm, dramatte critic.

"Methods of Driving." Washington Anto school; 11:15-11:15, Donald Flaum, demantic critic.

WNYG, New York, N. V. (520), 6-0:50 p. m., French insons, Y. Hartzan Fentilitz, 7-7:16, market histon in the program of the property of the program of the

Central Time Stations

KFAB, Lincoln, Nehr, (304.77), 5:30-5:30 p. m., dinner hour center(; 8:30-10:30, Ruth Minnerman, surama). Belshaw's orchestra: H. F. McCulla, bartlone; Trinity crebestra.

KFDM, Secumoni, Texas (315.6), 8:10 p. m., Magnolia Butroleum company's refinery bard.

Botsoleum company's refinery band. In A. original Botsoleum company's refinery band. KFKX. Hastings. Nebr. (288.3), 8-11 p. m. Hastings. Camp Fire Girls. KFK. Shortandosh, Iswa (286) 7 p. m. Sunday school lesson; 7:38; concert. Tom Keenan, director. KFWE. University City. Mo. (246), 6:39; n. m. Annibes munt review, Romainte Fielding: 10, 10th Gibbon and Toury Mitthe, subtrainings, therefore, Managing.

DANCING

Webb, Wges, Wgn, Wjol.
What; Jb, Kree, Kwe
What; Jb, Kree, Kree
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Whole; Wann; 10-30
West, Wann; 10-30
West, Wann; 10-30
West, Wann; 10-30
West, Web, West,
Kpp, Wol,
Thursday, October 8:
Webb, Wann; What,
Webb, Wann, Who,
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Thursday, October 8

(Continued from page 11)

(Continued from page 11)
violinist: 11:30-1, Oriole orchestra; stortes, Wayne Myers; Paul Small, Loss Brothers.
WENR, Chicago, III. (266), 6-7 p. m., Baulani Byrie-Ho; 8-10, Rose Kulta, Vio Fredericks, All-American Flaucets, Ward and Parish harmony singers.
Test Strangers and Parish harmony singers.
Tests Transletons. 845-39, 6:30-7-30, m. m., Pard's David Gretien and his bario quintet; 11-12, Dalhas bandl Cretien and his bario quintet; 11-12, Dalhas bandl Cretien and his bario quintet; 11-12, Dalhas bandle Cretien and his bario quintet; 11-12, m., Sun Dodges, ordicatr; David-tellinist; 11-2, m., Sun Dodges, ordicatr; David-tellinist; 11-2, m., Sun Dodges, ordicatr; David-tellinist; 11-2, m., Sun Dodges, ordicatr; David-tellinist; 11-12, m., Sun Dodges, ordicatr; 13-20, tellinist; 14-20, tellinist; 14

Life Little Symphonic orchestra.
WHSO, Chicago III. (223) 6-8 r. m., classical dinner concert: Elife D. Hoffman, supram; los Alfabough, lenor; Carl Chiner, cells, and the supram; los Alfabough, lenor; Carl Chiner, cells, and lenor; Carl Simon, midnight hamberes; Dan Remain, lenor, lenor,

Fuentés
WLW, Ginsimati, Ohio (422.3); 7 n. m., dinner concert. Hofel Gibson orchestra, Robert Vissonii, diredor; 16, three olimite message; Ctril Service Diepurtment of the United States government; 19:05,
popular program, the Doberty Melody Bows; 10:36,
Werren Foster, WEW's phonomenal boy sopraso;
19:45, the WLW orchestra, strings, and rends; conSity Terriors, festuring Chief Barker, Canonimeri,
Kay, Nyne, organist and plaints, and Rin Tin Kan

WMAG, Chicago, III, (447.3), 6 p. m., Chicago theater
organ reclair; 6:30, Hotel la Salle archestra; 8, par
gen talk, Jamas D, Berdett; 8:15, Loy Senst pro-

gram; S.20, musicale; S.20, financial talk; 9. University of Chicaco lecture, Dr. Will; 9:20, Central Trust company gloc cloid.

WMBR, Chicago, III. (250), 7-8 p. m., Trianon unacubite, Charles Fuetskin, Mildredt Maciela, Charmeo Jacobs, D. Sullivan; 9-11, Trianon crehestra; Woodlawn thearto ordestra, Charles Agne, Dave Williams, Elsic White, Harold Stokes, WMC, Memphis, Tenn. (498-7), 8:30 p. m., musical program, Tate Dawkin, (498-7), 8:30 p. m., musical WALW, Omega, Mahr. (200).

WMC. Mammbis. Tenn. (499.7), 8:20 p. in., nusleal workins. Wo.A.W. Omain. Mehr. (526), 6 p. m.. American Legion; 36:30, American Legion; 9, American Legion, 94:30, American Legion; 9, American Legion; 9, American Legion. Wo.C. Duvenport. Inva. (485.8), 7:7-52, Laxisinites. For a contraction of the structure of

theater backstage bunch.

WSMB, New Orleans, La. (219), 6:39-7:39 u. fm., dimer hour programs: organ cencert, twilight fales, 8:30-10:39, dance programs, sproopsfors, Euromoy Kings.

WTAS, Elgin, III. (302.8), 8-12, midnight, Fred Hamm and the Bosts own orderistm. Herbit Mintz, Edna and the Bosts own orderistm. Herbit Mintz, Edna Grows Marke Wright, Tell Taylor, Brock States, Full Fleening, Erreits Sattley.

Mountain Time Stations
CNRC Calgary, Can. (485.8), 9 n. m., George Boothmun, borticone: Jeanette Boney, soprano; G. N. R.
symphony ordestra,
Cob. Boney, Cob. Cob.
Mills Silver State orchestra; 7:30, 72nn question box.

Pacific Time Stations

KFWB, Hellywood, Calif. (252), 7:15 p. m., micro-

ON AIR WITH NEW SUPERSTATION



DANCING

entral Standard Time Saturday, October 2: Kgw, Wgy, Wmbb, 2c, Wtas; 8:05, Wip 0, Webb, Wgy, Wsmb K.w., Way, Washi, Washi, Washi, Washi, S. 195, Whys. San, Whys. Washi, S. 20, Wolf, Washi, Wa

12. Were, Winad, Wosf, Krw. Weaf, Sr. Winad, Wmbf, Win (1) 9195. White, 915. alig: 9-39. Krf. Weae, Edit. Wise, Krw. Krd. Weae, Krw. Weae, Winder, Williams, 10-10. with the work of the w

Dut: Classic State State

Muc, Kp0, Wq1.

Friday. October 9:

F. Kiw. Weas, Weas, Weas, Weet, Winth, Wlas, Si30, Weet, Winth, Wlas, Si30, Weat, Winth, Was, Si30, Weat, West, We

KMA, Shenandoah, Iowa (252), 6-7 p. m., dinner pressure, 6-15, domestic science topics, Leona Teset, June Case; 9-11, nusical concent. KOLL, Council Bluffs, Iowa (278), 7-30 p. m., Church of Jesus Christ of Latter Day Saints; 9, Greighton A. A. Wiesbecker; 11, Broadway tionether, 7-rad. A. A. Wiesbecker; 11, Broadway tionether, Formation, 1981, Louis, Mo. (545.1), 7-30 p. m., "Commerce Hour," John F. Kiburz, fludis; Mrs. J. F. Kiburz, KTHS. Hat Saint-Market Latter, 1981

planis.

KTHS. Hat Springs National Park, Ark. (374.8), 9-9:30 p. m., New Arlington botel orchestra; 9:30-10:15, band concert, Rolary Boys band.

KYW. Chicase, Ill. (\$35.4), 7-7:50 p. m., dinner concert, Congress botel; 7:30-3:30, hone lovers' hour; 10-12:30, midnight errue; thartes Domberger's orchestra; Albert Hay Malotte, organis.

WBAP, Fert Worth, Texas (475.0), 7:50-8:30 p. m., Jenior Datespean club; 9:30-10:45, musicale.

wBBM, Chiego, Hi. (226), 5-10 p.m., Stewart-Warner studio, Alaino orchestra, Lew Russell, Murray Smith, Earl Bergman, Patsy O'Sullivan, Stewart-Warner xylophane trio; Yent Harding, WCCO, Minneapolls-St. Paul, Minn. (416.4), 6:15 p. m., George Osborn's Nicolite thote orchestra; 10:95, dance

WDAF, Kanasa City, Mo. (365.b), 6-7 p. m., olano taming in number; address, Kanasa City Mo. (365.b), 6-7 p. m., olano taming in number; address, Kanasa City editheres; bureau; Tel-Mc-a-Story lady; Trianam ensemble; S-950, Star's Radio ortectar; 11:45-1. Merry Old China: Plantation players; Earl Obenant's orchestra; 1990, ed. (1991), ed. (19

Won, Chicago, Ill. (370.2), 12:40 p. m., Drake con-cert ensemble, Blackstone siring quintet; 4-4:30, ten thue, Marshall Field ten zoom ordestra 6:303-730, Drake ensert ensemble, Blackstone string quintet; 3:303-130, WGN string tric; 10:303-11:30, jazz scamper, Jack Chapman's dance orchestra.

WHAD, Mivaukee Wis. (275), 5-7 p. m., Arthur Richter; organist; S:30-10, Wisconsin theater review. WHAS, Louisville, Ky. (399.8), 7:30-9 p. m., cencert, Bible class orchestra.

WHO. De Merit Line (26.9), (26.0-9 n. m. ceneert, WHO. De Merit Line (26.9), (26.0-9 n. m. band concert, High School of Manson; II-12, Zola Palmer and her Kirkwood hold ordered mainst jude Allabough, Lenor-cancert; Carl Linner, planist; jude Allabough, Lenor-carlists; 10-2 a. m. West brothers, guitarist; Hellitici jed Verræs; Lenore Pfriedman, soprano; Parallicia; jed Verræs; Lenore Pfriedman, soprano; Parallicia; jed Verræs; Lenore Pfriedman, soprano; Parallicia; jed Verræs; Lenore Jedens, Harry Geles; Joe Allabough, Ted Borth Barry Heller, Harry Geles; Joe Allabough, Ted Borth Barry Heller, Harry Geles; Joe Allabough, Ted Borth Statemers association, Frank MacDonald, president.

WMAQ, Chicago, III. (447.5), 8 p. m. musical icclure, Mr. and Mrs. Mars E. Obudodrie: 28.30, Whitmoy trio; 9, University of Chicago George (19.29, 19.29), Stababeti Statemers

Dorothy Foster, left, is the leading woman of the Otis players, a popular group of dramatic artists, heard frequently at KOA. Denver, Charles E. Bodley, above, only directs three orchestras at CHNC. One of these playe nothing but classical music, the others appent to dancers.

Maindow orenestra.

WTAS, Flighi, III. (302.8), S-10:30 p. m., Fred Hamm and the Boss own erchestra: Herbie Mintz, Tommy Dundap, Hook sisters. Art. Stiller, Walter Donovan, Berger Wedberg, Roland Hinckel.

Mountain Time Stations
CNRE, Edmonton, Can. (316.9), 8:30-10:30 p. m., Albutta instrumental (17),
KOA, Deriver, Cole. (322.4), 6:30 p. m., Herbert White
and his Silver State occlesive; S. scientific foodball,
Tom McNamary 8:19, R. Preese, Ina Rains, Hulda
Helen Edwards, Lowiel H. Chernoff, Mayor Castle,
Frent Souley, Samuel Stein, Carrie Auslender Minner,
11:5 alun Fevere.

Pacific Time Stations

FOA, Seattle, Wash. (454.3), 6:45-8:15 p. m., Sherman, Clay and company studia program; 8:30-10 Times studio program; 10-11:30, Eddle Harkness and his orchestra.

his orderstra.

FWB, Hollywood, Calif. (252), 7:30 p. u. microplom.

brettlies; 5-9, program, Monte Mar Vista subdittiers

brettlies; 5-9, program, Monte Mar Vista subdittiers

Hollywood string trie; 9-10, Bill Theef's Southers

Five clauce orderstra, Alma Lou Barnes, popula

souga, Monty Collins, tenor; Svd Lippman, violinist;

wellow, Monty Collins, tenor; Svd Lippman, violinist;

wellow, Monty Collins, tenor; Toril, direction Charlet

wellow, Monty Collins and Collin

sougs, Monty Collins, tenor; Syd Lippman, violinist; 10-11. Warmer Brothers; fruite, direction Charlie Wellman.

KWM, Pordand, Ore. (491.5), 9-10:30 p. m., concert, Sherman, Clay and company; 10:30-12, Hoot Owls, Sherman, Clay and company; 10:30-12, Hoot Owls, Sherman, Clay and Collins, Charles, California, Californi

Buthett, boder.
KNX. Hellywood. Calif. (336.9), 5:30-6:15.9 m. Worfluxer pipe organ studio, Town Tattler; 6:15. travel
talk, W. F. Alder; 6:33-7. Awater Kent Radio or
chestra. Paul Finacin, leader; 7:7-39, dinner music
peny; 8-3, Went program, fastern outstiding compeny; 8-3, Yent program, fastern outstiding compeny; 8-3, Yent program, fastern outstiding compeny; 8-3, Yent program, fastern outstiding compensate fastern outstiding com
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compensate fastern outstiding com

Index to Classical Concerts

T ABULATED 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

Eastern Time Stations

Castern I Ime Stations

Saturday, October 3: 6, WCX,
WEAF, WMCA, WREO; 6:17, WOR;
6:30, WCAE; 7, WEAR, WNYC,
WRE; 7:15, WEAF; 7:35, WEAF; 8,
WBBR, WNYC; 8:15, WRC; 8:30,
WCAE; 8:40, WBBR; 9:30, WEAF;
10, WEAF.

10, WEAF:

Sunday, October 4: 6, WCAU; 6:30,

WCAE, WOR; 7, WEAR; 7:20, WCAE,

WCTS, WEAF, WEEI, WWJ; 8,

WBZ, WEAR, WGBS, WGCP; 9, WBZ,

WEAR, WGY, WHAR, WNYC; 9:15,

WCAE, WCTS, WJAF, WJEDT; 9:20,

WNYC; 9:45, WCTS, WGCP; 10,

WNYC; 11, WHN; 11:15, WHAR.

WNYC; 11, WHN; 11:15, WHAR.

Monday, October 5: 6, WCX, WEAF,
WMCA, WREO, WWJ; 6:06, WIP;
6:30, CFCA, WRZ, WCAE, WGY,
WTIC; 7, WEAF, WEAR, WIR,
WOO; 7:15, WEAF; 7:30, WEEI,
WGY, WMCA; 8, WBER, WTZ,
WCAU, WCX, WHAR, WTIC; 8:10,
WBZ, WHAZ, WNYC; 8:30, CHNC,
KDKA, WBBR, WFZ, WGCP; 8:45,
WEAF, WOO; 8:55, WBBR; 9, WBZ,
WCAE, WEEI; 9:10, WIJT; 9:12,
WGCP; 9:20, WRZ; 10, CHNC, WEAF,
WOO; 19:10, WEEI; 10:15, WOO;
10:30, KDKA; 10:40, WEEI; 11,
WHN.

10:30, KDKA; 10:40, WEER; 11.

Tuesday, October 6: 6, WEZ, WCX, WEAF, WMCA, WREO, WWJ; 6:95, WPT; 6:17, WOR, 6:30, WCAB, WGY, WTP; 6:17, WOR, 6:30, WCAB, WGY, WTP; 6:17, WOR, WTP, WHIC; 7. WEAT, WEEL, WGR, WTR, WOR, WTE, WGAF, WOO, WTC; 7:20, WCAU, WEAF, WGA, WCA, WEAF, WEEL, WGR, WTLG; 8:06, WNYG, S:15, WEBJ; 8:06, WNYG, WGA, WCA, WCA, WCA, WEAF, WEEL, WFL, WGR; 9; WCAF, WEAF, WEEL, WFL, WGR; 9; WGAF, WEAF, WEEL, WFL, WGR; 9; WGAF, WEAF, WEEL, WFL, WGR; 9; WGAF, WGS, WTC; 10, WGAF, WCTS, WGAF, WTG; 1:15, WHAR.

WEAP, WAR, WTG; 1:0, WGAF, WEAF, WEAF, WEAF, WEAF, WEAF, WEAF, WEAF, WTC; 6:45, WTC; 6:45, WTC; 6:30, WBZ, WGAF, WTC; 6:40, WTF; 6:30, WBZ, WGAF, WTC; 6:40, WTC; 7:30, WEAF, WEEL, WOO, WTC; 7:30, WEAF, WEEL, WOO, S, WEZ, WCAB, WDAF, WOO, WOT, 8:15, WGA, WDAF, WOO, WOR; 8:45, WGAU, WDR; 9:45, WGR; 10, WAF, WEEL, WGR; 9:15, WEZ, WCAU, WBEJ; 9, WBZ, WEAF, WGAU, WDR; 9:15, WGAF, WEAF, WGAF, WNYC; 9:45, WGR, WWAF, WEAF, WGAF, WNYC; 9:45, WGR, WWAF, WCAL, WWAF, WNYC, WOO; 11, WCAF, WCYN, WCAF, WCAF, WNYC, WOY, WWAF, WCAN, WCAF, WCAF, WCAF, WWAF, WWAF, WCAF, WCAF, WCAF, WWAF, WCAF, WCAF, WCAF, WCAF, WWAF, WCAF, WCAF, WWAF, WWAF, WWAF, WCAF, WWAF, WWAF, WWAF, WCAF, WWAF, WWAF, WCAF, WWAF, WWAF, WCAF, WWAF, WWAF, WCAF, WWAF, WWAF

WCAD.

Thursday, October 8: 6, WEZ.
WCX, WEAF, WMCA, WREO, WWJ.;
6:05, WIP; 6:17, WOR; 6:30, WCAE,
WGBS, WGY, WOR, WTIC; 7,
WEAF, WEAR, WGBS, WJR, WWJ.;
7:30, WCAU, WEEL, WHN, WOO,
WRC; 7:45, WGY, WTIC; 8, WBBR,
WBZ, WCAU, WCX, WEAR, WEE,
WGR, WGY, WHAR, WIP, WTIC;
\$:15, WNYC; \$:30, KDKA, WBZ,
WCTS, WEET, WHN, WMCA, WREO;
\$:40, WBBR; \$:45, WBZ; 9, WCAE,
WCAU, WCX, WEAR, WFI, WGR,
WCAU, WEAF, WEEI, WFI, WGR,
WCAU, WEAF, WEEI, WFI, WGR,
WHAR, WNYC, WREO;
10, WCAE, WCAU, WCTS, WEAF,
KDKA; 11:30, WGY.

Central Time Stations

Central Time Stations
Saturday, October 3: 6, KFAB,
WENR, WMAQ, WOAW, WOK; 6:15,
WCCO; 6:30, WGN; 7, KOIL, KSD,
KYW, WGN, WMBE, WQJ; 7:30,
WEBH, WHAS; 8, KFNF, KFRC,
KYW; 8:15, WCCO; 8:30, KYW,
KPRC, WFAA, WHAS, WMC; 9,
WKRC, WMAQ, WOAW, WOC; 9:15,
KPIRC; 9:30, WOC.
Sunday, October 4: 6:30, KLDS,
WHI: 6:45, WORD) 7, KYW, WLS,
WORD, 7:30, WHO; 8, KFDM, KFRC,
WCSD, WFAA, WGN, WQJ; 8:30,
WLW; 9, WQJ; 9:10, KTHS; 9:15,

KLDS, WCCO. WHT; 9:25, KTHS; 9:30, WFAA, WOC; 10, KFVE, KTHS, WOC; 10:30, WHT; 11, WOC.

WOC: 10:30, WHT; 11, WOC.

MOnday, October 5: 6, KFAB, KMA,
WHAID, WOAW, WOK: 6:30, WGN;
6:45, WOAW; YOK, KFRP, WHT, WLW,
WAIBB; 7:30, KOIL, KPRC, WBAP,
WHO; 8, KPRC, WHAID, WHO,
WLW, WORD, WOS; 8:30, KPRC,
WBAP, WFAA, WMC, WOAI; 9,
KPKX, KMA, KPRC, KSD, KTHS,
WHAD, WOAW; 9:30, KTHS; 9:46,
KTHS; 10, KFKX, KMA, KTHS,
WSAI; 11, WBAP, WSAI.

WSAI; 11, WEAP, WSAI.

THESSIAY, OCTOBE 6: 6, KIFAB, KMA, WIIAD, WMAQ, WOK; 6:05.
WCCO; 6:30, WFAA, WGN, WLW; 6:05.
WCCO; 8:30, WFAA, WGN, WLW; 6:45, KSB; 7, KFNF, KYW, WIIT, WLS, WMBB, WQJ; 7:30, KOIL, WCCO, WIAS, WHO, WOC; 7:45, WSAI; 8, KIFDM, KLDS, KYW, WEAP, WCCO, WWR, WLW, WMAQ, WOC, WORD; 8:30, KPRC, WGN, WLW, WMC, WOAI, WOID; 8:45, KYW; 5:50, WMAQ; 9, KFDM, KFMQ, KMA, KPRC, KTHS, WCCO, WHAS, WLW, WOC, WSAI; 9:25, KTHS; 9:30, WBAP; 10, KMC, KYW, WSAI; 11, WHO.

Thursday, October 8: 6, KMA, WHAD, WAAQ, WOAW, WOK; 6:30, WOAW, WOK; 6:30, WOAW, WOK; 6:30, WOAW, WOK; 6:30, KYNF, KYW, WHAT, WLS, WLW, WABB, WOAW, WO, WABC, KYW, WCCO, WHAD, WOAW, WOC, WSAI; 9:10, KYHS, 9:30, WBAP, 9:45, KTHS, 10, WBAP, 10:40, WLW, 11, WHO.

10, WBAP; 10:40, WLW; 11, WHO.
Priday, October 9: 6, WHAD,
WMAQ, WOAW, WOK: 6:15, WCCO.
6:30, WMN, 6:50, WMAQ; 7, KYW,
WEY, WLS, 5:00, WMAQ; 7, KYW,
WHO, WLS, 5:00, WMAQ; 7, KYW,
WHO: 8, KFDM, WCCO.
WHAP,
WHAD, WHAQ, WSAI, 8:30, KPAB,
WFAA, WGN, WHAD, WHO, WMAQ,
WMC, WRD: 9, KFDM, KPIKX,
WHAD, WMAQ; 9:05, WCCO: 9:10,
KTHS: 9:30, KFAB, KTHS, WBAP;
9:45, KTHS; 10, KFKX.

Mountain Time Stations Monday, October 5: 6:36, KOA; 8:10, KOA.

Tuesday, October 6: 6:30, KOA; 7:30, KOA;

Wednesday, October 7: 6:30, KOA; 8:10, KOA.

Thursday, October 8: 6:30, KOA; 9, CNRC.

Friday, October 9: 6:30, KOA; 8:10, KOA; 8:30-10:30, CNRE.

Pacific Time Stations
Saturday, October 3: 6, KFOA,
KHJ; 6:30, KNX; 6:45, KFOA; 7,
KNX; 7:30, KNX; 8:10, KGO; 8:15,
KHJ. Sunday, October 4: 6:30, KHJ; 6:35, KPO: 7, KHJ, KNX; 8, KHJ, KNX, KPO: 9, KHJ, KNX; 10, KNX.

Monday, October 5: 6, KFOA, KGO; 6:30, KNX; 6:45, KFOA; 7, KPO; 7:30, KNX; 8, KGW, KHJ; 9, KGW; 10, KHJ.

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

Wednesday, October 7: 6, KFOA, 8:30, KNX: 7, KNX: 8, KGO, KGW, KPO; 9, KGW, KPO.

Thursday, October 8: 6, KHJ; 6:30, KNX; 7, KNX; 8, KGO, KPO; 9, KGW, KPO.

Priday, October 9: 6, KFOA, KGO, KHJ; 6:15, KFO; 6:45, KFOA; 7:39, KFAE, KNX; 8, KHJ, KNX, KPO; 8:30, KFAE; 9, KPO.

FOLLOWING SPORTS THROUGH MIKE

DISTANT GAMES ARE ON WGN SCHEDULES

RYAN AND NEAL WILL MIKE BIG MIDWEST CONTESTS

Station Engineer Will Use Unique Microphone Arrangement in Broad-casting Big Ten Gridiron Tilts

casting Big Ten Gridiron Tilts

CHICAGO.—Preparations for broadcasting four of the most important Big Tenconference football games and a trio of unusual intersectional contests by WGN. The Chicago Tribune station on the Drake hotel, have been almost completed, Director Quin A. Ryan has just announced. The following list of games will be broadcast by WGN.

Cotober 17. Wisconsin at Michigan October 24, Michigan at Illinois

October 24, Michigan at Illinois

October 24, Michigan at Illinois

November 21, Minnesota at Michigan November 21, Minnesota at Michigan Thanksgiving, Notre Dame at Nebraska "The schedule outlined above is by no means a final one," said Director Ryan, "since it is the station's policy to present all the most important games of the season and to give the fans an opportunity to 'thear' the best midwest teams by action. There may be some mid-searce changes in the present list to inch as games of wider interest.

Game Every Saturday

"As will be noticed in the schedule, there are several open Saturdays on all of which games will be broadcast. The teams so far listed represent, according to the football sharps, probably the strong staggregations in the midwest.

"Notre Dame, last year's national champion, will of course be forced to build an entire new team owing to losses by graduation, but Coach Knute Rockne's success building elevens, makes the inclusion of at least one Notre Dame game

by graduation, but Coach Knute Rockne's success building elevens, makes the inclusion of at least one Notre Dame game imperative."

Distance makes no difference to WGN when there is an interesting game due. The Nebraska-Notre Dame game and the Illinois-Pennsylvania contest will be broadcast respectively direct from Lincoln (Continued on page 21).

Big Kick-Off Saturday in 1925 Radio Football

Harvard, Chicago, Cincinnati, and Holy Cross on Air

Holy Cross on Air

Most of the leading college football teams start their regular schedules on Saturday, October 3, and at the same time several broadcasting stations will start carrying the games over the air to those mable to attend. Among these stations are WEZ, WSAI, KYW and WMAQ.

The high spots on the WEZ schedule include the games of the "Big Three," Harvard, Yale, and Princeton, and other important thits in the East. Play-by-play accounts of these games will be miked direct from the field. Station WIZ, in New York, will have charge of the pick-up for games played in New York and in return WEZ will pick-up the Harvard-Yale game for them.

Besides the Harvard games, the Boston-station will fill out its schedule with games played by Holy Cross.

The complete WEZ schedule follows: October 2—Harvard vs. Renssahaer. October 10—Harvard vs. Middlebury. October 11—Harvard vs. Holy Cross. October 24—Harvard vs. Boston-tothell. November 7—Princeton vs. Harvard.

Sport Broadcasts

FOOTBALL

Saturday, October 3

Amherst-Princeton, WJZ (454.3).

Chicago-Kentucky, KYW (535.4) WMAQ (447.5).

Hanover-Cincinnati (8:00 p. m. Central time), WSAI (325.9). Harvard-Renssalaer, WBZ (333.1)

Michigan Aggies-U. of Michigan, WWJ

Nebraska-Illinois, WGN (370.2) North Dakota-Minnesota, WCCO (416.4) Dakota - Northwestern,

WORLD'S SERIES

Opening Date, October 7

KDKA, KFOA, KOA, KPRC, KTHS, YW, WBZ, WCAE, WCCO, WDAG, KYW, WEAL, WEAR, WGN, WGY, WGR, WJZ, WMAQ, WRC, WSB, WTIC, WWJ.

(Ser page 15 for wave lengths.)

November 14—Yale vs. Princeton. November 21—Harvard vs. Yale. November 26—Cornell vs. Pennsylvania. November 28.—Boston college vs. Holy

Mikes Night Games

Mikes Night Games

Mikes Night Games

Station WSAI opened the 1925 football season over the mike last Saturday with a rather unique game to describe to the fans. The game was played at night between the University of Cincinnati and Transylvania. A special eradiant fluid was placed in the ball and it appeared silver-like under the rays of the powerful arc lights illuminating the field. The next game, that on October 3, when "Cincy" clashes with Hanover, will also be played under the same night conditions.

The remainder of the games will be played in the afternoon, and they like the first will be brought to the homes of the listeners by Eugene Mittendorf, play-by-play. Mr. Mittendorf is now manager of WKRC, but he will be back at the WSAI mike for the games as he was last year. The other Cincinnati home games to be miked are: October 10, Georgetown: October 11, Otterbien: October 24, Dennison; October 31: Deyton; November 14, Ohio; and November 26, Miami.

Totten Back at WMAQ

After having successfuly broadcast
most every home game played by the
Chicago Cubs baseball team, Hal Totten Chicago Chos baseban team, Aar Jotel will commence another season of football announcing over WMAQ, the Chicago Daily News station, on October 3, when the University of Chicago tackles the University of Kentucky at Stagg field, Chicago. H. M. Beardsley will cooperate with Totten this time as he will subsequently of Stage field.

Totten this time as he will subsequently at Stags field.

KYW, Chicago Westinghouse station, will also broadcast the Chicago U home games. The KYW microphones will be in charge of Harold "Shorty" Fall, assistant director.

The dates of the games are: October 10, Ohio State, October 17, Northwestern; October 31, Purdue; November 14, Dartmouth; and November 21, Wisconsin.

Washington U. Games Over KFOA

SEATTLE, Wash.—All University of Washington football games will be broadcast direct from the university stadium through Station KFOA, Rhodes Department store here. The first game will be on Saturday, October 10.

ADDITIONAL SPORTS REFER TO PAGE 7

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FREED-EISEMANN

Mastery in Radio

STATIONS IN ORDER OF WAVE LENGTHS USED

Meters Call	Meter	s Call	Meter	s Call	Meter	s Call	Meter	s Call	Meter	
215 KTAB	275.3	WJAS	309.1	KDKA	365.6	WDAF	406	WBAR	468.5	WCAP
217.3 WOK		KOIL	315.6	KFDM	365.6	WHB	410.7	CKAC	468.5	WRC
226 WBBM	278	WCAU	315.6	WAHG	370	CYB	416.4	WCCO	475.9 475.9	WBAP
226 WIBO	278	MUBL	315.6	WGBS	370.2	WEBH	421	KIAF	475.9	WFAA
240 KFVE	278	WRBC	319	WGR	370.2 374.8	KTHS	422.3	WLW	480	CYL
243.8 WAMD	280.2	WNAC	319	KOA	379.5	WGY	422.3	WKRC	483.6	WOC
250 WGES	282.8	WOAN	325.9	WSAL	379.5	WHAZ	428.3	WSB	483.6	WSUI
250 WMBB	285.5	WKAR	330	CY.X	384.4	CKY	428.3	KPO	491.5	KGW
252 KFWB 252 WGCP	285.5	WREO	333.1	WBZ	384.4	KJR	434.5	CNRO	491.5	WEAF
252 WGCP 261 KFWA	288.3	KFKX	336.9	KNX	384.4	WMBF	434.5	NAA	499.7	WMC
265.5 WMAK	293.9	KJS	340.7	KFAB.	389.4	WEAR	435	AT9	508.2	KLX
266 KFNF	293.9	WBAV	340.7	WKAQ	389.4		434.5	CFCN	508.2	WIP
266 WBCN	293.9	WEAO	340.7	WMCA.	394.5	WFI	440.9	WDWF	508.2 516.9	CJCA
268 WCTS	296.9	KPRC	344.6	WCBD	394.5	WLIT	440.9	WOS	516.9	WCX
272.6 WBBR	299.8	KFMQ	344.6	WLS	394.5	WOAL	447.5	WMAQ	516.9	WJR
272.6 WEBJ	299.8	KSL	348.6	EWSC VEEL	399.8	WHAS	447.5	WOJ	526	WHO
272.6 WFBH		WPG	352.7	WWJ	399.8	WHT	454.3	KFOA	526	WNYC
273 KWKH		WJJD	356.9	CA	400	PWX	454.3	WJZ	526	WOAW
273 WRW 275 WHAT		WILAS	356.9	CHNC	205.2		455	KTW	535.4	
275 WHAD		KICL	361.2	KGO.	405.2		461.3		545.1	KFUO
275 WORL		WJAR	361.2	WHN	405.2	WOR	467	KFI	1 545.1	KSD

A STATE OF THE STA

An Evening at Home with the Listener In

(FOR CENTRAL TIME)

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

(FOR PACIFIC TIME)

Call	Saturday	Sunday	Menday	Tuesday	Wednesday	Thursday	Friday	Call	Location	Met.	Saturday -	Sunday	Monday	Tuesday	Wednesday	Thursday .	Friday	Call
AT9	Silent	5:90- 6:00 7:00- 8:00	Silent Silent	Silent Silent	Silent 7:15-10:45	7:00- 8:55 8:06-10:45			Fort Bragg, N. C Toronto, Ont	435 356.9	Silent	3:00- 4:00 5:00- 6:00	Silent Silent	Silent Silent	Silent 5:15- 8:45	5:00- 7:55 6:00- 8:45	Silent Silent	GFCA
CFCA CFCN CHNC	Silent 11:00- 1:00 Silent	Silent Silent	Silent 7:00- 8:00	Silent	Silent	9:00-10:00 8:00- 9:00	Silent	CFCN	Calgary, Alta Terente, Ont	434.5 356.9	9:00-11:00 Silent	Silent	Silent 5:00- 6:00 6:30- 8:30	Silent Silent 6:30-7:00	Silent Silent 5:00- 7:00	7:00- 8:00 6:00- 7:00 8:00- 10:00	Silent Silent 7:00-11:00	CFCN CHCN CJCA
CICA	10:00-12:00 0:00-10:00	8:30- 9:30 Silent	8:30-10:30 Silent	8:30-9:00 6:30-10:00	Silent	7:30-10:00	Silent	CKAC CKY	Edmonton, Can Montreal, Que Winnipeg, Man	516.9 410.7 384.4	8:00-10:00 4:30- 8:00 4:30- 6:15	6:30- 7:30 Silent 5:00- 7:45	Silent Silent	4:30- 8:00 6:30- 8:45	Silent Silent	4:00- 8:00 6:00- 7:00	Silent 6:30-7:45	CKAC
CKY GNRO CYB	6:30-8:15 7:30-12:30 10:30-11:45	7:00- 9:45 Silent Silent	Silent Silent Silent	8:80-10:45 Silent 9:15- 10:15	7:30-12:30 Silent	8:00- 9:00 Silent Silent	Silent		Ottawa, Ont	434.5 370	5:30-10:30 8:30- 9:45	Silent Silent	Silent Silent	Silent 7:15-8:15	5:30-10:30 Silent	Silent Silent	Silent Silent	CN RO CYB
CYL	Silent	8:00- 9:30 Silent	Silent 9:15-19:30	8:00- 9:30 Silent	Silent	Silent	8:00-9:30	CYL	Mexico City, Mex Mexico City, Mex	480	Silent	6:00- 7:30 Silent	Silent 7:15-8:30	6:00- 7:30 Silent	Silent Silent	Silent Silent	6:00- 7:30 7:15- 8:45	CY'L CYX
KDKA KFAB	Silent 7:45- 8:55 5:30- 6:30	6:00- 7:00 4:00- 5:00	7:45- 8:55 5:30-10:30	7:45-10:39 5:30-10:30	7:45-8:55 5:30-10:30	7:00-10:30 Silent	7:45- 8:55 5:30-10:30	KDKA KFAB	Pittsburgh, Pa Lincoln, Nebr	309.1	5:45- 6:55 3:30- 4:30	4:00- 5:00 2:00- 3:00	5:45- 6:55 3:30- 8:30	5:45- 8:30 3:30- 8:30	5:45- 6:55 3:30- 8:30	5:00- 8:30 Silent Silent	5:45- 6:55 3:30- 8:30 6:00- 8:30	KDKA KFAB KFDM
KFDM KFI	Silent 8:45- 2:00	8:00- 9:00 -6:00- 1:00	Silent 8:45- 1:00	8:00-10:30 8:45- 1:00	Sllent 8:45- 1:00	8:45- 1:00	8:45- 1:00	KFI	Beaumont, Texas Los Angeles, Calif	315.6 467 288.3	Silent 6:45-12:00 Silent	6:00- 7:00 4:00-11:00 Silent	Silent 6:45-11:00 7:00- 9:00	6:00- 8:30 6:45-11:00 Silent	Silent 6:45-11:00 Silent	6:45-11:00 Silent	6:45-11:00 7:00- 9:00	KFKX
KFKX	Silent Silent	Silent Silent	9:00-11:00 Silent	Silent 9:00-10:00	Silent 7:30- 8:30	Silent	Silent	KFMQ	Hastings, Nebr Fayetteville, Ark	299.8	Silent 5:30-7:30	Silent 4:30- 7:15	Silent 5:30- 7:30	7:00- 8:00 5:30- 7:30	5:30- 6:30 5:38- 7:39	Silent 5:30- 7:30	5:89- 7:30	KFMQ
KFNF KFOA KFUO	7:30- 9:30 8:00- 1:30	6:30-9:15 Silent 8:15-9:15	7:30-9:30 8:00-12:00 8:00-9:00	7:30- 9:30 8:00- 1:00	7:30- 9:30 8:00-12:00	7:30- 9:30 Silent Silent	8:00-1:30	KFOA	Shenandoah, la Seattle, Wash St. Louis, Mo	454.3 545.1	6:00-11:30 Silent	Silent 6:15- 7:15	6:00-10:00 6:00-7:00	6:00-11:00 Silent	6:00-10:00 7:15- 8:15	Silent Silent	6:00-11:30 Silent	KFOA KFUO
KFVE	Silent 10:00-12:00 Silent	10:00-11:00 Silent	10:00-12:00 10:00-11:00		9:15-10:15 10:00-12:00 10:00-12:00	Silent	10:00-12:00 10:00-12:00	KFVE	University City, Me Ogden, Utah	240 261	8:00-10:00 Silent	8:00- 9:00 Stlent	8:00-10:00 8:00- 9:00	8:00-10:00 Silent	8:00-10:00 8:00-10:00	Silent Silent 7:39-11:00	8:00-10:00 8:00-10:00 8:00-11:00	KFWA KFWA
KFWB KGO	10:00- 1:00 10:00- 2:00	11:00- 1:00 5:30-11:00	9:00-1:00 10:00-12:00	9:00-1:00 10:00-12:00	9:00- 1:00 8:00- 9:00	9:30- 1:00 1	8:00- 9:00	KEWB KGO KGW	Hollywood, Calif Oakland, Calif	252 361.2 491.5	8:00-11:00 8:00-12:00 10:00-12:00	9:00-11:00 3:30- 9:00 7:45- 9:00	7:00-11:00 8:00-10:00 6:00- 7:00	7:00-11:00 8:00-10:00 7:45-12:00	7:00-11:00 6:00- 7:00 9:00-11:00	8:00-12:00 7:45-12:00	6:00- 7:00 9:00-10:30	KG0 KGW
KHI	7:30- 4:00	9:45-11:00 8:00-12:00	8:00- 9:00 8:00-12:00	9:45- 2:00 7:30- 1:00	11:00- 1:00 7:30- 1:30	7:30- 1:00	7:30-1:30	KHI	Portland, Orc Los Angeles, Calif Sibtipok, Minn	405.2	5:30- 2:00 Silent	6:00-10:00	6:00-10:00 7:00-8:00	5:30-11:00 Silent	5:30-11:30 7:00- 8:00	5:30-11:00 Silent	5:80-11:30 7:00- 8:00	KIAF
KIAF KJR	Silent 10:30-12:00	4:00-5:00 9:15-11:00	9:00-10:00 9:00- 1:00 Silent	Silent 10:30-12:00	9:00-10:00 9:00-12:00		10:30- 1:00	KIAF KJR KJS	Seattle, Wash Los Angeles, Calif	384.4 293.9	Silent	7:00- 8:00 7:15- 9:30	7:00-3:00 7:00-11:00 Silent	Silent 8:00- 9:00	7:00-10:00 Silent	8:30-12:00 8:00- 9:00	8:30-11:00 SHent	KJR KJS
KLDS KLX	Silent Silent Silent	9:15-11;30 6:30-10:00 Silent	Silent 8:00- 1:00	10:00-11:00 8:00- 9:00 Silent	Silent Silent 8:00- 1:30	10:00-11:00 8:00- 9:00 Silent	Silent 8:00-12:30	KLDS	Independence, Mo Oakland, Calif	440.9 508.2	Silent Silent	4:30- 8:00 Silent	Silent 6:00-11:00	6:00- 7:00 Silent	Silent 6:00-11:30	6:00- 7:00 Silent	Silent 6:00-10:30 5:30-12:00	KLDS KLX KNX
KNX	7:30-4:00 9:00-12:00	9:00-12:30 5:00-10:00	8:30- 2:00 7:30-10:00	8:30 - 2:00 7:30 - 9:30	7:30- 1:00 7:30-12:00	7:30- 1:00 7:30- 8:30	7:30-2:00	KNX	Hellywood, Calif Denver, Colo Council Bluffs, Ia.	336.9 322.4 278	5:30- 2:00 7:00-10:00 5:30-11:00	7:00-10:30 3:00- 8:00	5:30-12:00 5:30-8:00 5:30-11:00	6:30-12:00 5:30-7:30	5:30-11:00 5:30-10:00 5:30-11:00	5:30-11:00 5:30-6:30 5:30-11:00	5:30-12:00 5:30-8:00 5:30-11:00	KOA
KOIL KPO	7:30-12:00 8:35-2:00	7:30-9:00 8:30-12:00	7:30-12:00 8:30-1:00 7:30-10:00	7:30-12:00 8:30- 1:00	7:30-12:00 8:30-1:00	7:30-12:00 8:30- 1:00	9:00- 1:00	KOIL KPO KPRC	San Francisco, Calif Houston, Texas	428.3 296.9	6:35-12:00 5:30- 8:00	5:30-7:00 6:30-10:00 6:00-7:00	6:30-11:00 5:30-11:00 5:308:00	5:30-11:00 6:30-11:00 5:30- 8:00	6:30-11:00 5:30- 8:00	6:30-11:00 5:30- 8:00	7:00-11:00 Silent	KP0 KPRC
KPRG KSD KSL	7:30-10:00 7:008:00 9:00-12:00	8:00-9:00 Silent 10:00-12:00	9:00-10:00	7:30-10:00 7:00- 8:00 10:00-12:00	7:30-10:00 7:00-8:00 9:00-12:00	7:30-10:00 Silent 9:00-12:00	7:00- 9:00	KSD	St. Louis, Mo Salt Lake City, Utah	545.1 299.8	5:00-6:00 7:00-10:00	Silent 8:00-10:00	7:00-8:00 7:00-10:00	5:00 - 6:00 8:00-10:00	5:00-6:00 7:00-10:00	Silent 7:00-10:00	5:00-7:00 8:00-10:00	KSD
KTAB	Silent 8:50- 2:00	5:00-10:45 9:50-12:10	10:00-11:00 Silent	10:00-12:00 9:00-10:00	11:00- 1:00 Silent	11:00- 1:00 Silent	9:00-12:00	KTAB KTCL KTHS	Oakland, Calif Seattle, Wash Hot Springs, Ark	215 305.9 374.8	Silent 6:50-12:00 7:25-9:00	3:30- 8:45 7:50-10:10 7:25-9:00	8:00- 9:00 Silent 7:25- 8:45	8:00-10:00 7:00- 8:00 7:25- 8:45	9:00-10:00 Silent 7:25- 8:45	9:00-11:00 Silent 7:25- 8:45	8:00-10:00 7:00-12:00 7:25-9:00	KTAB
KTHS	9:25-11:00 Silent	9:25-11:00 9:00-11:30	9:25-10:45 Silent	9:25-10:45 Stlent	9:25-10:45 Silent	9:25-10:45 Silent	9:25-11:00 Silent	KTW	Seattle, Wash	455	Silent	7:00- 9:30	Silent	Silent	Silent	Silent 6:00- 7:00	Silent	KWKH
KWKH KWSC KYW	9:00-12:00 Silent 7:00-10:00	Silent Silent	10:00- 3:00 9:39-11:00 Silent	9:00-12:00 Silent	Silent' 9:30-11:00	8:00- 9:00 Silent	Silent 9:30-11:00 7:00-12:30	KWKH KWSC KYW	Pullman, Wash Chicago, III	348.6 535.4	7:00-10:00 Silent 5:00- 8:00	Silent Silent 2:00-6:00	8:00- 1:00 7:30- 9:00 Silent	7:00-10:00 Silent 5:00-10:30	Silent 7:30- 9:00 5:00-11:30	Silent 5:00- 9:30	7:30-9:00 5:00-10:30	KWSC
NAA PWX	7:00-10:00 Silent 7:30-10:00	4:00- 8:00 Silent Silent	6:45- 7:00 Silent	7:00-12:30 6:45- 7:00 Silent	7:00- 1:30 6:25- 7:40 7:30-10:00	7:00-11:30 6:45- 7:00 Silent	6:45- 7:00 Silent	NAA	Radle, Va Havana, Cuba Richmend, N. Y	434.5 400 315.6	Silent 5:30- 8:00	Silent	4:45- 5:00 Silent	4:45 - 5:00 Silent	4:25-5:40 5:30-8:00	4:45- 5:00 Silent	4:45- 5:00 Silent 5:00- 8:00	PW2
WAHG	11:00- 1:00 10:00-11:00	Silent 2:00-10:00	6:30- 1:00 Silent 7:30-12:00	Silent 10:00-11:00	6:30-11:00 10:00-11:30	Silent 10:00-11:30	7:00-10:00 10:00-11:00 7:30-10:45	WAMD	Minneapolis, Minn	243.8 475.9	9:00-11:00 8:00- 9:00 5:00- 6:00	Silent 12:00- 8:00 9:00-10:00	4:00-11:00 Silent 5:30-10:00	Silent 8:00- 9:00 5:30- 8:45	8:00- 9:30 5:30- 8:45	Silent 8:00- 9:30 5:30- 8:45	8:00- 9:00 5:80- 8:45	WAME
WBAP WBAR WBAV	7:00- 8:00 Silent Silent	11:00-12:00 10:00-11:00 Silent	9:00-10:00	7:30-10:45 Silent Silent	7:80-10:45 8:00- 9:00 Silent	7:30-10:45 7:30- 8:30 Silent	7:30-10:45 Silent 7:00- 8:00	WBAR	Sisiht, WisColumbus, O	406 293.9	Silent Silent	8:00- 9:00 Silent	7:00- 8:00 5:00- 7:00	Silent Silent	6:00- 7:00 Silent	5:30 - 6:30 Silent	Silent 5:00- 6:08	WBAY
WBBM	8:00- 2:00 7:00- 9:00	4:00- 2:00 8:00- 9:15	Silent 7:00- 8:00	8:00-12:00 Silent	8:00- 2:00 Silent	8:00-12:00 7:00- 8:00	8:00-10:00 Silent	WBBM WBBR	Chicago, III	226 272.6	6:00-12:00 5:00-6:00	2:00-12:00 5:00- 6:30	Silent Silent	6:00-10:00 Silent	6:00-12:00 Silent	6:00-10:00 Silent	6:00- 8:00 Stlent	WBBI
WBCN	9:00- 1:00 Silent	5:00-12:00 6:00- 8:45	Silent 5:00- 8:55	9:00- 1:00 5:00- 8:55	8:00-12:00 5:00- 8:55	9:00- 2:00 5:00- 8:55	9:00- 1:00 5:00- 8:55	WBCN	Chicage, III	266 333.1	7:00-11:00 Silent 5:30- 6:30	3:00-10:00 4:00- 6:45 -3:30- 5:20	Silent 3:00- 6:55	7:00-11:00 3:00-6:55	6:00-10:00 3:00- 6:55 5:30- 9:00	7:00-12:00 3:00-6:55 6:00-8:00	7:00-11:00 3:00- 6:55 5:00- 6:30	WBCN WB:
WCAP	7:30-8:30 Silent	5:307:20 3:00- 8:15	7:30-11:00 6:00- 9:30 7:00- 9:00	7:00-10:00 Silent	7:30-11:00 6:00- 9:30	8:00-10:00 Silent	7:00 - 8:30 6:00 - 9:00	WCAE WCAP WCAU	Washington, D. C	461.3 468.5 278	Silent	1:00- 6:15 2:00- 3:15	5:30- 9:00 4:00- 7:30 5:00- 7:00	5:00- 8:00 SHent 4:20- 8:30	4:00- 7:30 5:00- 7:00	Silent 3:30- 8:30	4:00 - 7:00 5:00 - 8:30	WCAL
WCBD	Silent Silent	4:00- 5:15 8:00- 9:00	Silent	6:20-10:30 8:00- 9:00	7:00-9:00 Silent	5:30-10:30 8:00- 9:00	7:00 -10:30 Silent	WCBD	Zien, III MinnSt. P., Minn	344.6	Silent 4:05- 9:00	6:00- 7:00 3:20- 8:15	Silent 4:80- 9:00	6:00- 7:00 4:30- 8:00	5:00-10:30	5:00- 7:00	Silent 4:15- 8:00	MCG
WCCO- WCTS WCX	6:05-11:00 Silent 5:00- 6:00	4:10-10:15 6:20- 9:15 Silent	6:00-11:00 7:00- 8:00 5:00- 8:00	6:30-10:00 7:00-10:00 5:00-10:00	7:00-12:30 0:45-8:00 5:00-8:00	7:00-9:00 7:00-10:00 5:00-8:00	6:15-10:00 7:00- 8:00 5:00-10:00	WCTS	Wercester, Mass Detroit, Mich	268 516.9	Silent 3:00- 4:00	4:20- 7:15 Silent	5:00- 6:00 3:00- 6:00	5:00- 8:00 3:00- 8:00	4:45 - 6:00 3:00 - 6:00	5:00- 8:00 3:00- 6:00	5:00- 6:00 3:00- 8:00	WO
WDAF WDWF	6:00- 1:00 Silent		6:00- 1:00 Silent	6:00- 1:00 7:30- 8:30	6:00- 1:00 Silent	6:00- 1:00 Silent	6:00- 1:00 Silent	WDWF	Providence, R. I	365.6 440.9 491.5	4:00-11:00 Silent 3:009:00	Silent	4:00-11:00 Silent 3:00- 8:30	4:00-11:00 5:30- 6:30 3:00- 9:00	4:00-11:00 Silent 3:00- 9:00	4:00-11:00 Silent 3:00- 9:00	4:00-11:00 Silent 3:00- 9:00	WDW
WEAF WEAR WEAR	5:00-11:00 Silent	6:20- 8:15 Silent 2:30- 9:00	5:00-10:30 Silent 6:00- 7:00	5:00-11:00 Silent 6:00-10:00	5:00-11:00 7:00- 8:00 6:00- 7:00	5:00-11:00 7:00- 8:00	5:00-11:00 Silent 6:00-10:00	WEAF WEAD WEAR	New York, N. Y Columbus, Ohio Cleveland, Ohio	293.9	Silent 4:00- 5:00	Silent 11:30- 4:00	Silent 4:00- 5:00	Silent 4:00- 7:00	5:00- 6:00 4:00- 5:00	5:00- 6:00 4:00- 8:00	Silent 4:00- 8:00	WEA
WEBH	6:00-7:00 7:30-12:30 Silent	7:00- 9:00 Silent	Silent	7:30-12:30 7:00- 9:00	7:30-12:30 7:00- 9:00	6:00-10:00 7:30-12:30 Silent	7:30-12:30 6:00- 8:00	WEB1 WEBH	Chicago, III New York, N. Y	370.2 272.6	5:30-10:30 Silent	Silent	Silent Silent	5:30-10:30 5:00- 6:00	5:30-10:30 5:00-7:00	5:30-10:30 Silent	5:30-10:38 4:00- 6:00	MER
WEEL	Silent 8:30-12:90	6:20- 9:20 6:30-11:00	7:30- 9:00 6:30- 9:30	7:00-10:00 6:30-12:00	7:00-10:00 Silent	7:00-10:00 6:30-12:00	7:00- 8:00 6:30- 9:30	WEEL	Boston, Mass Dallas, Tex	348.6 475.9	Silent 6:30-10:00	4:20 - 7:20 4:30 - 9:00		4:30-8:00 4:30-10:00	5:00 - 8:00 Silent	5:00- 8:00 4:30-10:00 8:30-11:00	5:00- 6:00 4:30- 7:30	WFA
WFBH	10:30- 1:00 7:00- 8:30	4:00- 7:00 6:30- 7:30	10:30- 1:00 Silent	10:30- 1:00 7:00-11:00	10:30- 1:00 Silent	10:30-1:00 7:00-10:00	10:30- 1:00 Silent	WEBH	New York, N. Y Philadelphia, Pa	272.6 394.5 315.6	8:30-11:00 5:00- 6:80 3:00- 8:80	4.30- 5:30	8:30-11:00 Silent 4:00- 4:15	8:30-11:00 5:00-9:00 3:00-8:30	Silent	5:00- S:00 3:00- 5:45	S:30-I1:00 Silent Silent	WF
WGBS WGCP WGES	5:00-10:30 Silent 10:30- 2:00	7:00-8:00 7:00-10:15 10:30- 2:00	6:00-6:15 7:00-10:00	5:00-10:30 Silent 10:30- 2:00	5:00-7:30 7:00-10:15	5:00- 7:45 Silent 10:30- 2:00	Silent 7:00-10:00 10:30 2:00	WGCP	New York, N. Y New York, N. Y Oak Park, Ill	315.6	Silent 8:30-12:00	5:00- 8:15 8:30-12:00	5:00- 8:00 Silent	Silent 8:30-12:00	5:00- 8:15 8:30-12:00	Silent 8:30-12:00	5:00- 8:00	WGE
WGN	6:30-11:30 6:45- 8:15	2:30-10:00 Silent	Silent Silent 7:00-11:00	6:30-11:30 6:00- 9:00	10:30 - 2:00 6:30-11:30 7:00-11:00		6:30-11:30 7:00-11:00	WGN	Chicago, III	370.2	4:30 - 9:80 4:45 - 6:15 6:00 - 9:00	Silent	5:009:00	4:30- 9:30 4:00- 7:00 4:00- 8:00	5:00- 9:00	4:30- 9:30 4:00- 7:00 3:45- 8:30	4:30- 9:30 5:00- 9:00 4:15- 7:30	0 WG
WGY	8:00-11:00	5:30- 9:00 3:15- 4:15	5:30 - 7:30 6:00-10:00	6:00-10:00	Silent 6:00-12:86	5:45-10:30 6:00-10:00	6:15- 9:30	WHAD	Schenectady, N. Y Milwaukee, Wis	275 275	4:005:00	1:15- 2:17		4:00- 5:00	4:00-10:30	4:00- 8:00	4:00- 8:00	WHA
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Vol. XIV

Saturday, October 3, 1925

Limitation of Broadcasters

Limitation of Broadcasters

SECRETARY HERBERT HOOVER, of the department of commerce, under whose administration Radio falls, has expressed himself as desirous of the consideration of a plan for the limitation of broadcasting stations. Note: Mr. Hoover does not necessarily recommend the limitation of stations. He only announces that this is a subject he would like to have discussed at the forthcoming Radio conference. He asks the opinions of dealers, manufacturers, broadcasters and the general public.

Radio Digest is in a splendid position to give much valuable information to the department of commerce on this very subject from the standpoint of the general public. Over fifty thousand "Consensus of Opinion" ballots, it will be remembered, were received by this publication from its readers and their friends when it was desired to learn what the public thought of the limitation of issuance of broadcasting licenses

by this publication from its readers and their friends when it was desired to learn what the public thought of the limitation of issuance of broadcasting licenses in accordance with the Kintner or some similar, perhaps improved, plan. These are still on file. Almost unaminous the vote stood in favor of limiting licenses according to some logical plan.

We do not ask that existing stations be forced to go off the air, but we do believe that it would be most desirable not to allow new stations to take the air until an exclusive wave is available for the period of operation of the station, either as a result of some older broadcaster closing down, or as a result of some older broadcaster closing down, or as a result of technical research which will open up new wave bands, the "ether roads."

Time and time again we have suggested that the United States senate and house of representatives study the problem a bit more carefully and provide sufficient funds with which the Radio section of the department of commerce might work. The "police force" of the air cannot keep the "traffic" regulated without "whistles" and "traffic semaphores." In Radio language, the Radio supervisors, limited in number as they are in the first place, cannot adjust broadcasting stations and keep them adjusted to the exact assigned wave lengths without possessing precision frequency meters and similar Radio measuring and observing apparatus.

These meters sometimes cost as much as would a

apparatus.

These meters sometimes cost as much as would a new and useless culvert for the tributary between the sovereign states of Wynken and Blynken—paid for, of course, from the famous pork barrel, or rivers and barbers appropriation bill

of course, from the famous pork barrel, or rivers and harbors appropriation bill.

Or a decimal, calibrated wavenieter has been known to cost all of a tenth of what it does to send a senator on a beautiful joy-ride on a U. S. Shipping Board vessel, the Leviathan for example (first-class \$2.000 stateroom), to the Zulu or Philippine Isles to investigate the proximity of vermin in the straws of the straw-thatched roofs of native huts.

However, we must not stoop, in these dignified columns, to criticize the actions of senators. We will leave that mission for Vice-President Dawes, a very capable gentleman, who knows the kind of language to use on such occasions.

use on such occasions.

What we started to say was, let's first of all provide sufficient funds for the Radio section. Congress allowed \$125,000 last year. That wasn't half enough. Give the supervisors what they need so that the listening public will get what they want—clear reception from properly adjusted and operated broadcasting stations.

ing stations.

Then, if it is still necessary to limit broadcasting stations, all right, we'll limit them!

Radio Beckons Youth

Radio Beckons Youth

IT WAS once, "Go West, young man, go West,"
but now has changed to, "Study Radio, young man,
study Radio." Opportunities in Radio, far beyond the
most vivid imaginations, await the youth of today.
Not long ago a Seattle boy—he is hardly more than
that—sent in a drawing of a cone type reproducer to
a large Radio manufacturer. That manufacturer is
now making nearly a thousand of these cone speakers
every day, and the youth is in the employ of the company at a splendid salary.

Do not discourage the lad who "messes up" the basement work room with wires and "that Radio junk!"

The second se

RADIO INDI-GEST

To Graham McNamee, Gold Cup Winner

Whether at home, or club, or seashore, Or mountain realms so rare, A treat is sure in store for you When Mae is on the air.

Just twist and turn the dials around Till New York comes in. You'll see That you have stumbled onto WEAF and McNamee.

He handles all the worth while stuff And takes you right along With him to mingle, see, or hear Be it sports, dance or song.

He makes you see just what he sees Tho' he's nowhere around For description, wit, his equal In Radio cannot be found. B. V. L

The foregoing are but four stanzas of a ten stanzas of mem written by B. V. L. in honor of McNamee's victory.

Useless Facts and Figures

Ed Squires, former announcer at many stations, is a Yale graduate, according to a newspaper clipping. So that's the reason we uneducated bozos can't comprehend him!

Earthquakes are said to clear the air of static, but who the—well, who cares to have pet earthquakes under his antenna?

Swear words are almost as handy as electric soldering irons when building one's own receiver.

Radio helped save seven tourists and four Swiss guides and porters during the past tourist season in the Swiss Alps. The number of Swiss cheeses so rescued has not yet been tabulated.

The Duke of York makes dictaphone records of his broadcast speeches from 2LO, London. He likes to hear his speeches repeated. The duke seems to be alone in this proposition.

Magnetized screw drivers will not pick up brass

Bachelors tune in the most distant stations on the loud speaker.

Unmarried women get a chance to listen in much more than their homemaker sisters. GOOFY GUS.

The Mystery of the Ether

Through walls of my humble cottage Comes the breath of the mountain air; And lo! the voices of angels And lo! the voices of angers
Seem to vibrate everywhere,
Over the waves in the ether
Such harmony divine—
It seems to come from another world
And enter this soul of mine.
RHEA SHELDON.

A Warning

Now that I have killed off all the slow announcers, abolished most sopranos, and put out of business all stations not observing silent nights, I will next train my guns on editors of Radio journals who throw my contributions in the W. B.

I am vindictive, revengeful, and remorseless when I go on the war path!

GEODECE

Listen here old bean, you should threaten Radio editors who live in Chicago! It is to laugh! Ha! Ha! Next time one of the overland limited trains whizzes through one of those tanks you make on your shoe string selling trips, wave at someone on the observation platform and maybe they will toss you and old Chicago paper containing some of our choice crime news. Besides that our desk overlooks the Cook county jail, or "Hotel de Druggan," where our best gunmen sleep off the effects of nocturnal carousing in the company of the guards.

And now to show you that we are not afraid of you we will publish one of your poems:

An Ambitious Egoist

I want to be a 'nouncer And in a studio stand; A microphone before me A program in my hand.

I want to be a 'nouncer, So folks may hear me speak; I know I'd be a dandy, My voice is soft and sleek.

I want to be a 'nouncer,
And next year's contest win;
I'll bet I'd have as many votes
As all the rest get in.
GEORGE, THE WANDERING MINSTREL.

Beware of Static!

Frantic Mistress: "Jane, Jane! Come quickly, and take the parrot away—the master's dropped his tube set."

Not long ago the Japanese government announced that they were going to erect a station on the island of Yap, and now R. H. C. whites in and says they are all wrong, that we have enough Yap stations now!

News of the Week



Condensed BY DIELECTRIC

There is a fascination to one station, among the hundreds of broadcasters, that doubtless assures it a very large nightly audience—WSB, Atlanta. It is not only the personality of their popular announcer which impels one to dial to four hundred and twenty-eight meters, but to an atmosphere of southern hospitality. "Atmosphere" is sometimes difficult to get across the footlights, yet a number of broadcasting studios are really successful in accomplishing that very thing. Who, for instance, fails to note it when the Melody orchestra is performing for us?

At least a portion of one of the programs presented through WEAR, Cleveland, recently was of a satisfying nature in more than one respect. A variety of vocal arrangements won first place, although the violin selections were not far behind and the orchestra's work left a favorable impression, if not especially impressive. The voices of a tenor and baritone blended to make their singing of well-known numbers quite the hit of the evening. Then followed a quartet singing of "Kentucky Babe", which deserves honorable mention, and viloin playing of no mean order.

Once in so often I manage to get around to WBZ at Springfield, Mass., to see how this old timer is coming on. The other evening was one of such occasions. The Hotel Brunswick orchestra should be classed among our leaders entertaining by Radio and usually has a program with a broad appeal. As I listened, however, the numbers selected appeared to have been chosen with less care than customarily, while their rendition was at times open to censure. That will soon be forgotten and forgiven.

Another station to be mentioned here for its variety program with capable execution is WSAI, the United States Playing Card company at Cincinnati. Here also we had violin playing which certainly brought pleasure to most in the Radio audience and soprano and contralto singing equally effective. In the course of the singing there was a contralto and soprano duet of "The Rosary". There is a song demanding intelligent treatment or it degenerates into a sad mess of meaningless phrases set to commonplace music—countless times it is so. Again, one may sit in awe and reverence, as we did when these two ladies used their voices to reveal its soul. to reveal its soul.

After the mutitudinous renditions of "The Sidewalks After the mutitudinous renditions of "The Sidewalks of New York" to which so many listeners were treated who sat in at the past Democratic convention in New York city, the song should be familiar in every state in the Union. Taking this as his text, an entertainer in the studio of WHT, Chicago, presented various ways in which the music might be given. The stunt was rather novel in that it included not only varying interpretations of the melody, but also as played on different instruments. The effect was out of the ordinary and discloses another means of varying features.

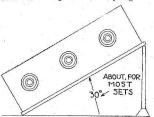
WEAF, New York, is no doubt rejoicing over the high honor paid to one of its announcers, Graham McNamee, the recipient of the gold cup award (which is simply another item in the list Radio Digest has sponsored for improving broadcasting). "Mac" has my sympathies, for every announcer and his friends will immediately prepare to wrest the honor from him another year. So much for that. My purpose in mentioning WEAF was to call attention to Jacob's symphony orchestra. They played two compositions recently, one composed by Sibelius and the other by Albanez which stood out in a splendidly arranged program. The former was especially graceful and well played. gram. played.

Bringing Your R.F. Amplification Up-To-Date

How to Modernize Your Old Set

By P. E. Edelman

Introducing refinements in radio frequency amplification, let us suppose, first of all, that you have a tuned radio frequency set that won't quite work through local broadcasters. Maybe you have one of the kind labelled neuturodyne or some other dyne. Or, instead of a diner variety you have a home built luncheon or breakfast type which is satisfying, except that you cannot just reach out through locals every night.



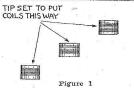
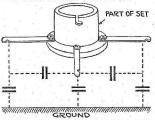


Figure 1

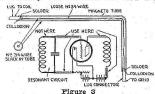
If you remove your aerial and ground wires you can still tune in the local stations nicely. This is because coils, acting as radio transformers, also act as miniature loop antennas. Now, as a simple experiment requiring no changes in wiring, tip your entire set up on one end, as illustrated by figure 1, so that the turns of the tube coils are in exact horizontal position. Work the set this way, and the coils no longer act as loop pickups. This is because the magnetic

component of the Radio wave front slides by the coils instead of cutting them to set up high frequency potentials (volt-ages). Only that energy coming by way of the aerial will now work the set.



CAPACITY EFFECT OF SUPERFLUOUS
BUS WIRING MAKES SET HAVE
CONDENSER PICKUP OF LOCAL STATIONS
Figure 2

Fine business, so far. But perhaps your set is weighed down with ounces and ounces of old style bus bar whring, pretty perhaps, yet forming a fairly good size condenser plate, as indicated by figure 2. The heavy bus connector does some good if actually used between the coils and



when properly applied as a connector in such parts of the circuit as are not measurably affected by the very small resistance offered by the smaller wire. Yet this change reduces capacity coupling, and is a real refinement. To get mechanical strength in small wire I have designed the combination shown in figure 3, which is easily made from magneto tubing, wire and collodion. Such conductors can be used from the resonant

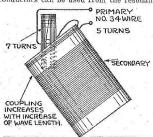


Figure 4

coil and condenser circuit (not in resonant circuit itself) to grid, to filament and to plate terminals. Minimize capacity effects in the set and you minimize capacity energy pickups.

A further improvement in this general refinement or overhauling of familiar R.F.

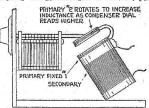


Figure 5

will now make the primary of the second transformer coil as shown by figure 4, as a variometer wound with number 34 dsc. wire, and turnable by a knob, you can throw away the stabilizers in the old set, potentiometers, neutralizing condensers, resistances, and what-nots. Besides, you will now begin to range those higher wave length stations which were but feebly beard with the old set. The reason is that most stabilizing methods to be effective on the lower range of broadcast wave lengths have to do this at the expense of full amplification efficiency at the higher wave lengths. This fault may be overcome by automatic or (Continued on page 18) will now make the primary of the second



Good Radio Requires Good Material

Veri-Chrome Panels

Acquires Good Indetenal

It Is just as impossible to build dependable radio
with poor material as it is to build a good automobile or a good locomotive that way.
Formica panels, base panels, winding tubes, insulating bushings and washers have the qualities
that make lasting durability possible.
They have electrical qualities that are more than
sufficient for any need—and they combine with them
equally essential mechanical strength, resistance to
warping, and cold flowing. They never distort in use
so that instruments are displaced.
The Formica finish is unequalled in richness and
gloss. And that finish is one of the most permanent
in the world. It does not discolor, grow duil, check
or craze. No ordinary varnish or lacquer can equal it.
These are all things that count. They make or
break the satisfaction a radio set will give. And
that is way for years the great majority of radio
manufacturers have used Formica.

DEALERS: Formica panels in individual envelopes furnish a line on which dealers make a very satisfactory profit.

THE FORMICA INSULATION COMPANY 4667 Spring Grove Avenue, Cincinnati, Ohio

SALZES O Church Street. New York, N. Y. 9 South Clinton Street. Chicago, III. 1516 Caxton Bildg. Cleveland, Ohio 227 Cutler Bildg. Rochester, N. Y. 422 First Avenue. Pittburgh, Pa. 6 Beaon Street. Boston, Mass. 55 Calle Oblispe. Habana, Cuba			
9 South Clinton Street			
516 Caxton Bldg	50 Church Street Now	York, N. Y.	
327 Cutler Bldg	9 South Clinton Street	Chicago, III.	
327 Cutler Bldg	516 Caxton Bldg. Cl	eveland. Ohio	
422 First AvenuePittsburgh, Pa.	327 Cutler Bldg	ester. N. Y.	
6 Beacon Street Boston, Mass. 55 Calle Obispo Habana, Cuba	422 First AvenuePi	ttsburgh. Pa.	
55 Calle Obispo	6 Beacon Street	Boston, Mass.	
	55 Calle Obispo	labana. Cuba	

- 1 Formica is used by nearly all the leading set makers—and has for years been used by more set makers than any other materials.

 2 Formica is unaffected by weather and time—it lasts forever.

 3 Formica in applicarance is the finest of all panel materials and always remains so.

 4 Formica years and always remains so.

 4 Formica years and always remains so.

 5 Formica years form heat or cold flow under pressure. It retains its dimensions. Everything you rate to the stays tight and precisely wherevap not it.

 7 Formica panels are sold in next erfd paper envelopes which assure you that you are gettling the genuine.

 8 Formica is maken the precisely wherevap not it.

 9 Formica is maken the precisely wherevap not it.

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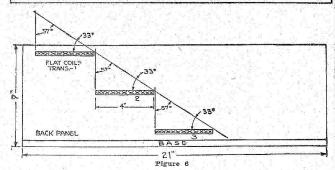
 9 Formica is not one to recise where not one precise where the precise where th

Minneapells, Minn.
Philadelphia, Pa.
Baltimore, Md.
San Francisco, Cal.
Toledo, Ohio
New Haven, Conn.
New Orleans, La.





MODERNIZING YOUR OLD R.F. SET

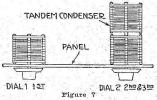


semi-automatic change in the primary to secondary coupling, or the effective number of primary turns of the transformer may be varied simultaneously with changes in the wave length range of dial settings on the condensers. Figure 5 indicates this.

Coming back to the tipped up set, arranged to get the coils horizontal; well, the old set doesn't look so handsome that way. Besides, to arrange the coils this way on a new panel, we may think, requires an unlikely tall panel. Not at all, Look at figure 6; use flat type coils, keep the old inter-coil angles, but leave the coils horizontally placed if you are not so anxious to hear the local stations when distant programs are on the air.

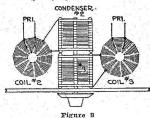
Combining Dials

Maybe by this time you are considering rebuilding the old diner set? Well, you are in for an interesting time, and perhaps several genuine silent nights while changes are in progress. Why not cut off one of those three dials? See figure 7, and get any of the better makes of tandem contents of the programs are not to fort forget to



keep the coils in proper arrangement, and the leads to the coils of nearly equal

length in each Radio stage, as indicate for example by figure 8.

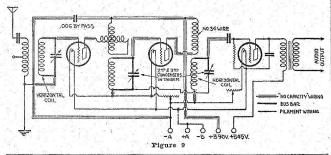


If you have really gone this far in redressing the old set, maybe you will go further and fix up the audio stages and speaker in latest 1925-26 style. But that is another subject, reserved, as the song says, for "Some Other Day."

Figure 9 shows about the way the revamped circuit on the old R.F. set should look when entirely changed, and you may be disappointed if you do not make at least some of the changes suggested, because local broadcast stations are being built closer and closer. Some morning you may find one going up right in your own city block.

Just as a final suggestion, if you have never had any experience before at rebuilding set, better study the whole thing carefully before touching a wire. Decide definitely just what changes you are going to make and have all new parts ready before starting.

Never drive a nail into hard rubber or composition. Drill a hole.





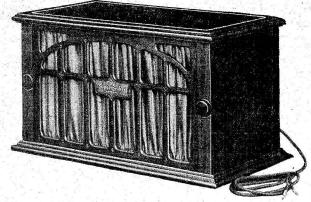
THIS latest Laboratory product will recondition any old, run-down, even worthless tubes, as long as the filament still lights. Makes them as good as new in a few minutes' time. Costs but few cents more than new tubes! Simple, efficient, practical, and a big money-saver. Operates on either A. C. or D. C.—110-120 Volts. Bound to do the work on our

Money-Back Guarantee

r refunded if desired results fail. But we are sure you will Reconditioner mays for itself in one evening. Many making oring friends and neighbors of the control of the con-position of the control of the control of the con-trol of the control of the control of the control of the receils of \$2.55. Be sure to state if for 109 type or 201 inter refund price protects you. Send now.

718 Cass St. MACK LABORATORIES Chicago, Il.





Two Superspeakers Now--Both by JEWETT

With the new Jewett Superspeaker Console, a Radio reproducing instrument enters the realm of fine furniture.

Yet there is no sacrifice of brilliancy, volume or tone.

For the console is, in every essential, a Superspeaker. Its design is by the same staff of young Radio Wizards. Its concealed horn has the same proved Superspeaker air column. Its reproducing unit is the same exclusive, adjustable Jewett Vemco.

See how harmoniously this Console blends into any setting you choosehow notably it graces the most perfectly appointed living room. rely on it always to give you Radio duplicated by but one other instrument we know-The Superspeaker itself.

Console cabinets are Jewett Built, of walnut or mahogany, as you select. Top is inlaid with Arlington Ivory. Grille is pressed leather. Drape is silk in a neutral brown.



A highly perfected product by a builder world-famous in the field of Quality Radio reproducers.

Your receiver deserves a Jewett reproducer.

"There Is No Substitute For the Best"

Jewett Radio & Phonograph Co. Michigan Pontiac,

Quality Broadcasting to Match Quality Products

A. B. C. Course in Radio Fundamentals

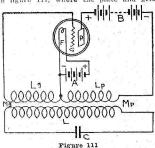
Chapter XXVIII—Electron Tube Oscillator Circuits

By David Penn Moreton

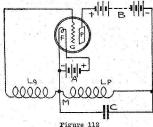
In the previous chapters it was pointed out that, in order that a vacuum tube may sustain undamped oscillations, it was simply necessary to couple the plate and grid circuits to a common oscillatory circuit, or some arrangement of coupled oscillatory circuit, or some arrangement of coupled oscillatory circuits in such a manner that the resulting grid to plate coupling will be negative. The number of circuits which will meet these requirements is very large, and the actual quantitative relations are special in practically every case. In spite of their many differences, all of these vacuum tube oscillator circuits may be shown to be derived from one of a comparatively small number of, so to speak, fundamental or elementary circuits. These fundamental circuits will be briefly described in the following paragraphs.

Inductive Coupling

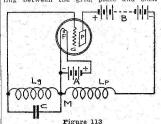
Tinductive Coupling
The first fundamental circuit is shown
in figure 111, where the plate and grid



circuits of the tube are independently and inductively coupled to the coil L by means of the coils L₀ and L₀. The coil L forms part of an oscillatory circuit. If an oscillation is in some manner started in the circuit composed of L and C, the resulting oscillatory current induces, through the mutual inductance M₀, an alternating electrical pressure in the grid coil L₀, which, in time, sets up a corresponding pulsating current in the plate circuit. This pulsating plate current, flowing in the plate coil L₀, induces, through the mutual inductance M₀, an alternating electrical pressure in coll L, which, for suitable coupling and coils, is



in synchronism with the electrical pressure operating in the oscillatory circuit LC, and just of the required amplitude to compensate for the energy losses in that circuit.



latory circuits, are used for different pur-

sses.

Another modification of the circuit
town in figure 111, is given in figure
4. In this circuit the oscillating cur-

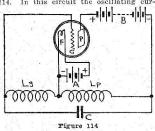


Figure 114
rent flows in the grid and plate coils connected in series and no mutual inductance is required between these coils. The voltage drop across the two coils due to the common alternating current flowing in them, determines the alternating plate and grid electrical pressures.

A special form of the circuit shown in

+1111-2-4111-

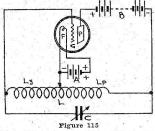
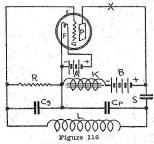


figure 114, is shown in figure 115. In this case the filament is connected to the grid and plate through a sliding contact, the coils L₂ and L₃ being actually parts of a single coil wound on a straight cylindrical form. The coupling between the grid and plate circuits is then adjusted by means of the filament sliding contact, while the frequency of the generated oscillations may be varied by means of the variable condenser C. This arrangement has the

the coupling and frequency of oscillation are practically independent.

Capacity Coupling
Electrostatic or capacity coupling of the circuits may be used instead of the inductive coupling. For example, the circuit shown in figure 116, has been used quite extensively as the basis of a number of circuits using capacity coupling. In this circuit it would not be possible to connect the plate battery at X as was done in the previous circuits, since the direct current plate-to-filament circuit would then be unable to convey the direct current plate current, the plate being insulated from the filament by the condensers C_p and C_g. It is necessary to connect the plate battery B as shown, directly between the filament and plate. The choke coil K is required to prevent the high frequency oscillations from passing through the battery and thus the coil prevents the



battery from short circuiting the condenser C_i . The grid is insulated from the filament and a high resistance R is connected as, shown in the figure to provide a leakage path for the negative charge which would otherwise accumulate on it, and which, after a short time, would stop the flow of current in the plate circuit and block the tube. A choke coil is some-

decided advantage that the adjustment of the coupling and frequency of oscillation are practically independent.

Capacity Coupling

Capacity Coupling the choke coil is not required.

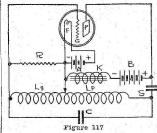
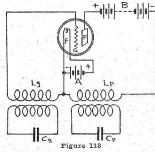


Figure 117

The same method may be used in supplying direct current energy to the plate circuit by electromagnetic coupling as shown in figure 117. These methods of





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-a Marvel of Transformers That Brought Real Musical Quality to Radio Reception

JUST one year ago the Karas Har-monik Audio Frequency Trans-former took the radio world by storm.

storm. Nothing like it had ever been known before. For the first time, scientific study had been devoted to perfecting an audio transformer for. Eigh, low and medium frequencies are amplified to equal degree. Bass notes pour from the speaker in full strength and rich too quality. Vital harmonics and rich overtones, formerly lost, come out in their full beauty.

Music critics approve the results

beauty.

Music critics approve the results of Karas Harmonik amplification with great enthusiasm. Prominent radio engineers pronounce it a technical masterpiece. Technical editors have specified Karas Harmoniks in their circuits. The triumph of the Karas Harmonik is complete!

But, for all of this, the enjoyment of the Karas Harmonik amplification has been tool greatly confined to one class of radio enthusiasts. Home set builders bought Karas Harmoniks by the tens of thousands.

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Today there are in use, hundreds
of thousands of sets—good sets—
which could be vastly improved in
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may be all you desire from the standpoint of selectivity, of range, and
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Audio Frequency Transformers, you
are NOT getting nearly the musical
quality you can just as well enjoy.
You can install Karas Harmoniks
I You can install Karas Harmoniks

quality you can just as well enjoy. You can install Karns Harmoniks yourself. Or, any radio repair man can do it for you. Make up your mind to do it now—at once. Get a pair of Karns Harmoniks TODAY!

In large cities, most good dealers carry Karas Harmoniks—and in many small towns. If your dealer is out of them, order direct from us. Send no nooky. Just noy the postman \$7.09 each upon delivery.

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For Over 30 Years, Makers of PRECISION Electrical Apparatus.

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Radio owners are buying the Crosley Musicone at the rate of 500,000 before January first for the very sensible reason that it reproduces the entire range of music and the human voice with uncanny

Two Models; \$14.75 and \$27.50

THE CROSLEY RADIO CORPORATION, Cincinnati, Ohio



Hints on Antenna Erection

Part I—Aerial Insulation

By William Fenwick

atchers."
In the writer's opinion at least, every broadcast-listener who has not had, or does not intend to have, an expert install their outfit, should obtain an elementary text-book on radio frequency alternating currents, several of which are on the market that sell for less then one dollar. The reason for this is so the beginner may acquire a knowledge of their peculiar behaviour, which is indeed, to put it mildly, amazing in the extreme in the mind of a layman. As this subject handled completely is not within the scope of this series, just a brief outline of it shall be given.

Losses at Radio Frequency

Losses at Radio Frequency

These high frequency oscillations—or alternating currents—which are set up in a receiving antenna by a passing Radio wave will creep along any surface which is moist, or which merely has a thin film of dirt upon it, as dust particles are fairly good high frequency conductors. For example, a few years ago the majority of "hams" utilized as a grid leak, a piece of cardboard with either a pencil or India ink line on it; thus, the graphite or carbon particles deposited, created a high resistance unit. Also, when these oscillating currents flow along a conductor—e. g., a wire—any mass which happens to be located within a few feet will absorb a certain amount of energy from it; i. e., an alternating electromotive force will be induced in the object in the same manner as when two colls are inductively coupled in a circuit, and energy is transferred from one to the other.

Obviously, when the aforementioned conductor is an aerial wire or the lead-in, and an object such as a building, a tree, etc., is near it, it means just one thing—losses. And when the small amount of

T is the purpose of the writer in the energy which is induced in the antenna present series to describe for the benefit of the Radioist the best procedure in the construction and installation of the many varieties of Radio antennae, or as some prefer to call them "wave-catchers." articles on antenna insulation, low loss apparatus, etc.

Insulation Very Important

articles on antenna insulation, low loss apparatus, etc.

Insulation Very Important
Undoubtedly the most important single thing in designing an aerial of any sort is insulation, for the difference between a goodly and a poorly insulated antenna is just that between reception of quality and of weak signals, frying noises, et cetera. Therefore, as has often been said, and which is evident from the foregoing, "a good antenna is half the battle." A poorly insulated aerial is one of the greatest menaces to long distance and quality reception, for most of the energy collected leaks away, and what actually does get to the receiver is often too weak to be reproduced.

For this reason, when you begin any sort of an installation be sure to buy the best insulation obtainable; it may cost a little more but the increase in efficiency soon compensates for it. The best types to use for the antenna are those made of Pyrex (glass), porcelain, or of a composition called Electrose, and having corrugated and highly polished or glazed surfaces, as they minimize the chances of surface leakage.

The foregoing paragraphs also refer to the lead-in's place of entry into the house. A good grade of insulating bushing should be provided here as the covering on the wire is not sufficient to prevent leakage at this point. The lead-in should be lething free in the air, entering the operating room directly from outside and being kept away from walls, etc., as much as possible for the reason explained above. The antenna, too, should have an ample clearance of all surrounding objects for the same reason. Five or ten feet above (Continued on page 22)

(Continued on page 22)

Better reception this season than last!

WOULD you like better radio reception this fall and winter than last? Better distance? Better volume? Better tone? You will enjoy better results in every way, this season, if you keep your tubes at full efficiency with the Jefferson Home Tube Rejuvenator.

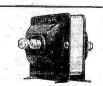
All tubes deteriorate rapidly with use. The Jefferson Tube Rejuvenator "brings them back" in 10 minutes! Use it once a month—keep your tubes like new. Completely restores paralyzed or exhausted tubes. Doubles and trebles tube life, quickly paying for itself through this great saving.

Takes large or small tubes—types 201-A,301-A, UV-199, C-299, 5-VA. Attach to any alternating current electric light socket in your home. The Jefferson Home Rejuvenator for tubes is as essential for satisfactory radio reception as a charger for storage batteries. Get one now; start the season with your tubes in perfect condition. Sold by leading dealers in radio supplies, and fully guaranteed.

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switch Doubles Condenser's Range

Wiring Scheme Permits 3 Scales on Condenser

I had a variable condenser with a maximum capacity of .00025 mfd. and a minimum of .000067 mfd. which I wished to use in a regenerative three circuit set. In

WORKSHOP KINKS EARN A DOLLAR-

THERE are many little kinks worked out at home that would ald 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 operparts 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.

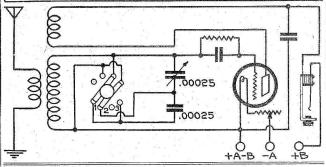
RADIO KINKS DEPARTMENT Radio Digest
510 North Dearborn St., Chicago

connection with the proposed lowering of the broadcast wave band from 200 to 150 meters, I inserted the scheme shown herewith, which is, I trust, self explanatory. In one position you will note that the two condensers are in parallel giving a maximum capacity of .0005 mfd. or 500 micromicrofarads, in the next position the variable condenser is used alone with a maximum of .00025 mfd. or 250 micromicrofarads, while in the third position the two condensers are in series giving a minimum of 6.4/5 micromicrofarads and a maximum of .000125 mfd. or 125 micromicrofarads.

With a coll that puts KSD at 99 on the condenser dial when the two capacities

condenser dial when the two capacities are in parallel, I can get well below 150 meters when the capacities are in series. This stunt can also be used on tuned radio frequency sets and super-heterodynes. L. R. Hennessy, Hudson, N. Y.

DIAGRAM FOR TRIPLING VARIATION



WGN GIVES FOOTBALL

(Continued from page 14) and Philadelphia, necessitating the use of over a thousand miles of leased telephone wire in each case to bring the story of each game to the transmitting set atop the Drake hotel. All of the other games will mean out-of-town lines for WGN, as well

will mean out-of-town lines for WGN, as well.

Ryan Has Style of His Own

Mr. Ryan, who made a name for himself last fall as a football announcer, will again handle the microphone for WGN, following the same methods that thrilled his hearers during the big games presented a year ago. In depicting a football game, Quin has left the stereotyped lanes of announcing in favor of a style distinctively his own—one that is deft, witty and sparkling—which does more than convey the mere mechanical details of the game in progress.

It takes no great mental effort on the part of the listener to imagine he is viewing the contest; in fact, through the medium of his loud speaker he becomes, under the stimulus of Ryan's vivid description, an attendent at the game—he is

one of the rabid, cheering fans, or in the next'instant he is circling the ends with a fleetfooted halfback—the urge and roar of it are omnipresent. The listener "feels" the game, and his excitement rises with each daring manoeuver of the elevens.

Unique Microphone Arrangement
When broadcasting a football game,
WGN goes on the air about half an hour
before the referee's whistle summons the
combating elevens, and Ryan's introductory announcement prepares the listener
for what is to follow.

for what is to follow.

The technical details are in the hands of Paul G. Neal, chief engineer of WGN. He evolved the idea last fall of paralleling five microphones and placing them at various points on the gridiron to catch the sounds of the game.

A "mike" is usually situated at each goal post to get the cheers, the college songs, and those spontaneous rears that greet every successful play. Other microphones occupy still other vantage points,

and one is at Quin Ryan's elbow where he identifies the different cheers and songs for the listeners.

It is this microphone arrangement

he identifies the difference encests and for the listeners.

It is this microphone arrangement coupled with Ryan's announcing that makes WGN football broadcasts what they are. Mr. Neal will be in charge of the mechanical arrangements at all the sames the fell.



Radio's Most Beautiful Speaker

WRITE today for illustrated description in colors of this beautiful instrument—"The Speaker with the Voice that Thrills." You will, be delighted with the artistic stippled finish and the porroons colors of the Town Crier models in Green and Goldan Felyelmont. Ask your Dealer to show you a Town Crier—you will recognize the surgesting excellence instantly.

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If you want distance and clear tone from your



The Tungar is a G-E product developed in the great Research Labora-tories of General Electric.

Two ampere size (East of the Rockies), \$18.00 60 cycles-110 volts

radio set, your storage battery must have its the Tungar Battery Charger.

Two clips and a plug to connect to the house current. That's all there is to it. Or you can make permanent connection and just throw a switch.

The Tungar charges while you sleep-it makes The new Tungar charges no disturbing noise—keeps your batteries at top 2,4 5 o'st 1, "betteries, notch. For power there is nothing like a good in series; and auto bats storage battery—with a Tungar to keep it good. techments needed. no disturbing noise-keeps your batteries at top



Tungar—a registered trademark—is found only on the genuine. Look for it on the name plate

Merchandise Division General Electric Company, Bridgeport, Conn.





Ouestions and Answers

Amplifier Voltage

(r4612) PS. Waite Park, Minn.

Why is it that I cannot use more than 45 volts of B current on my 4-tube regenerative set?

A.—Without more data on the construction of your receiver we cannot advise why the limit to the voltage you can apply is but 45 volts. Send on the circuit and some details as to make of parts etc., and we may be able to help you. Using audio transformers of any ratio, if three stages, or not more than 2 to 1 if three stages, you should be able to put 90 volts on the amplifiers: with any of the resistance coupling kits, this should be better.

Delco Plant as B Power Supply (14602) EB, Evansville, Ind.
I would like to have a hook-up for a B eliminator to use with a farm lighting plant supplying 32 volts D. C. Also, how I might cut down the voltage to six volts to get rid of the A battery?

A—The only possible way you could

to get rid of the A battery?

A.—The only possible way you could get B battery power from such a system would be in the purchase of a 32-volt to 150-volt dynamotor, and then carefully filter the output with condensers and chokes. Such units are for sale by many concerns, being army material purchased during the war from General Electric company.

concerns, being army material purchased during the war from General Electric company.

The other problem is easily solved as you need only connect a wire to the negative end of the 32-volt bank of batteries and tap in after the third cell for the plus 6-volt lead. If the set is some distance from these batteries it may be necessary to tap in after fourth cell to get 8 volts

Men Wanted to build radio sets in spare time. Leon Lambert, Wichita, Kansas.

Fresh C. E. - Very

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Think-You Station and Aphase Card
Station ards that get ATTEN. guestion and that get ATTENTION. Applaud your favorites. Send No Money

Send No Money
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(or more still with greater distance) to allow for voltage drop in the long lines to set.

A. B. C. RADIO COURSE

A. B. C. RADIO COURSE

(Continued from page 19)
inductance L_y in order to prevent the direct current plate circuit BKFPB being short circuited by the low resistance coil. The capacity of the condenser S is sufficiently large to offer a low impedance to the alternating current component of the plate current.

Another possible combination is given in figure 118, which shows the use of separate plate and grid oscillatory circuits.

(Having explained, in successive chapters, the principles of oscillating tube circuits and methods of combining inductance and capacity to form them, Professor Moreton next week shows a number of practical applications in Radio usage, of these hook-ups.—Editor's Note).

ANTENNA ERECTION

(Continued from page 20) a roof is considered about right, while much more separation then this is desirable from metal covered roofs, steel buildings, trees, and such.

Short vs. Long Aeria

When utilizing a tree as a support, always remember to insert the insulator

Telegraphy—Both Morse and Wireless taught thoroughly. Big salaries. Wonder-ful opportunities. Expenses low; chance to earn part. School established fifty years. Catalog free. Dodge's Institute, Sixth St., Valparaiso, Ind.

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unt less then ten feet from the nearest branch. Although this may shorten your aerial quite a bit, keep in mind that a short one away from all obstacles is infinitely more efficient then a long one whose energy is being almost completely lost by absorption, et cetera. A point worth noting here is, that a low, short aerial is more selective and will pick up much less interference then a long, high one. Therefore, the logical thing for those who are fortunate enough to possess such a location to do is, to erect a large antenna for winter use, when the ether is practically static free, and a small one for the summer when there is so much "noise flying around."

It might be worth noting here that the connections become corroded from the weather as time goes on, and that he is wise who attempts to combat it. An excellent aid in so doing is to wrap each joint in the antenna proper with waterproof tape and then give them a coat of varnish or shellac. Thus it can easily be seen that any soot or other substances.

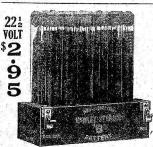
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which would tend to accummulate on the wires and eat away the connections—introducing high resistance—will effectively be prevented from doing so. Undoubtedly it is unnecessary to add that every joint in the aerial should be soldered, for no matter how good an unsoldered connection is made, each wire will acquire from weather conditions a thin film of dirt, thereby creating a separation between wires.

(Having shown the necessity of care in antenna construction, Mr. Penwick will next take up the various types of outdoor antenna and the construction of each. Portable types are also considered, as is the directional effect of most aerials.—Editor's Note.)

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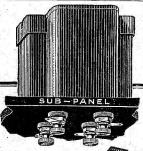
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Corrected Every Week-Part I

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NE 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

.06. Canton. O. 425 meters. Hotels. 135th Field Artillery O. N. G. 435 meters. 750 watts. U. S. Government. Announcer, Lieut. James Y. Loette. Slogan, "The Flower Drodessting Station of the Army." Tree. Thurs. State 155 pm, service. Eastern, datas James 24, 255 pm, service. Eastern, 477, St. Paul, Minn. 400 meters, 6th Inf. Minn. 477, Rev. Church, S. Paul Armery. Irregular schooling.

AV7. 18. G. Pelli, Milm. 400 meders, 6th. Ill., Milms. No. Central Lord. St. Pelli Amorr. Irresponder scheduler Central Lord. St. Pelli Amorr. Irresponder scheduler Central Lord. St. Pelli Central L

Methodose Hoods. Amendew. Market Son. 54-am. 6530-8. news, nuside, cheerfailment. Son. 11-1 am. Mountain.

KOZB, Baleersfield, Calif. 260, meiers. 10 waits. Frent. KOZB, Baleersfield, Calif. 260, meiers. 10 waits. Frent. 10 km s. 10 km s

25ill. Thurs, Sun, 8-9 pm, Hible lesson, sermonaciffe.

36, Tearlin church.

36, Tearlin church.

4 Announcer, Frank Torey. Sun,

4 Line. 73 e9-530.

726.

34. Everett, Wash.

324 meters. 100 watts. Lesse

os Dally, 715-8-15 pm. Pacific.

48, Strinidad, Colo. 238 meters. 100 watts. School

1814. No. On.

48. Honenty, Ariz. 239 meters. 100 watts. Nielsen.

48. Honenty, Ariz. 239 meters. 100 watts. Nielsen.

48. Honenty, Winterlino in Michigan. If 's Summer

Tiac win Here. Dally 7-7:30 pm, bedtime stories.

Alcond.

KFEQ, Oak, Nebr. 288 meters. 500 watts. J. L. Scros"kin. Announcer, Clarence Koch. Daily es Sun, 2-3
pm, orchestra. Sun, 4:30-6 pm. Control of Sun, 2-3
F. H. Kellogar, Ind. 2235 meters. 10 watts. Bunker
K. Kellogar, Ind. 2235 meters. 10 watts. Bunker
K. Kellogar, Ind. 2235 meters. 10 watts. Grandeners,
Walter C. Clark. Singan: "Voice of the Coeur
K. Coeur C. Clark. Singan: "Voice of the Coeur
K. K. Clark.

Normal Standard Junior University. No regular schedule.

KFGQ, Boone, Ja. 226 meters. 10 watts. Cfarp

Hardware Co. Announcer, Harold E. Willow. Slogan;

Contrall Boone Station. Wed, 8-9 pm. Sun, 3-4 pm.

Contrall Boone Station. Wed, 8-9 pm. Sun, 3-4 pm.

KFGX, Orange, Tex. 250 meters. 50 watts. First

Freshybrinin churchlop. 252 meters. 50 watts. West
ern State College of Colorado. Announcer, E. Ruis
sel Wightman. "Where the Sun Shines Every Day."

Tree, Pri. 6-20 pm. bedtime story; 8 pm. musicale;

KFHL, Otkahossa, Iowa. 249 meters. 10 watts. Penn

College.

KFILL OSEABOOR, 1994. 299 BREETS, 19 Wasis. Fenn KFI, Los Angeles, Calif. der fideres, 3000 watts, Earle "C. Anthony, inc. Announcer, Glen Rice, Stogan, The Radio Contral Super-Sation." Dully ox Sat, 3 am. Sunday, 10-10-245 am, 4-5 pm, 6-20-11, 11-12-30 pm, third Sun of month. Pacific. KFIF, Portland, 70c. 248 meters, 100 watts. Radio KFIO, Spokane, Wash, 26-33 meters, 100 watts. Radio KFIO, Spokane, Wash, 26-33 meters, 100 watts. Radio

Sun, 5:30-5:10 pm, 6:45-11. Sat, 5:30-6:10 pm, 6:45-13 am. Sunday, 10-10:54 am, 4-5 pm, 6:30-11. 11-3 am. Sunday, 10-10:54 am, 4-5 pm, 6:30-11. 11-3 am. Sunday, 10-10:54 am, 4-5 pm, 6:30-11. 11-3 am. Sunday, 10-10:54 am, 10-10 watts. Benson Feb. School, Wash, 9-6:35 meters. 100 watts. Benson Feb. School, Wash, 9-6:35 meters. 100 watts. Period Feb. School, Wash, 9-6:35 meters. 100 watts. First Methodist Church. Announcer. Dr. I. M. Miller, Methodist Church. Announcer. Dr. I. M. Miller, Wed, 7:30 pm, organ. Sat, 7 pm. Sun, 11 am, 7:30 pm. Facilis. Sat, 7 pm. Sun, 11 am, 7:30 pm. Facilis. Sat, 7 pm. Sun, 11 am, 7:30 pm. Facilis. Sat, 7 pm. Sun, 11 am, 7:30 pm. Facilis. Sat, 7 pm. Sun, 11 am, 7:30 pm. Facilis. Sat, 7 pm. Sat, 7 pm. Sun, 11 am, 7:30 pm. Facilis. Sat, 7 pm. Sat, 7 pm. Sun, 11 am, 7:30 pm. Facilis. Sat, 7 pm. Sat, 7 pm. Sun, 11 am, 7:30 pm. Facilis. Sat, 7 pm. Sat, 7 p

*State Teachers' Courge, Announces, Courge, tine, KFKQ, Conway, Ark, 250 meters, 160 watts. Conway Radio Lab.

KFKA, Greeley, Colo. 273 meters, 50 watts, Colorado State Teneters' College, Announcer, Charles F. Valer, Colorado Kate Valer, Colorado Kate Valer, Colorado Kate Valer, Colorado Krek G. Comway, Ark. 250 meters, 100 watts. Converging Ref. Valer, Colorado Krek G. Colorado, C. Colorado Krek G. Colorado, Colorado Krek G. Colorado, Colorado Krek G. Colorado, C. Colorado Krek G. Colorado, C. Colorado Krek G. Colorado, C. Colorado, C. Colorado Krek G. Colorado, C. Colorado, C

5-6-3:5 pin, orchestra, baschall; 8:30-10 pm. Tunes program. Mn. Tues. Web, Pit, 64-5-8:15 pm, studio masis. Thes, Pri, Sat, 10:15-11:30 pm. orchestra. KFOL, Marengo, Ia. 23 meters. 10 vasts. Lesile M. Schalbuch. Feech, Calif. 23 meters. 100 wasts. Bedophone, Radio Shop, Shean. "Where Your Shio Comes In." Daily ex Sun, 5:30-11 pm. Thurs, 5:30-620 pm. Sun, Sa pm. Per. 28:30 pm. 62-50. Pm. Sans. Sans. 20 pm. Per. 28:30 pm. 62-50. Pm. Sans. Letter Day Saints University. Announcer, Don C. McRue.

Krou, Saite Laue (19)
Latter Day Saints University. Amouncer, Don C. Latter Day Saints University. Amouncer, Don C. Latter Day Saints (Diversity.)
Kron, David City, Nebr. 228 meters, 100 watts. David City. The & Elice, Co. Siotan, "The Voice of David City." Amouncer, Howard A. Shuman, Temporarily off the all.
Kron, Wichita, Kunaz, 231 meters, 50 watts. ColKron, Wichita, Kunaz, 231 meters, 50 watts. ColSiotan, Mandioesting Church, "Sun, 11-12:30 pm; 7,30-2, church services, Mon, 9-10:30 pm, music.
Costral.
Krox, Omaha, Nobr. 248 meters, 100 watts, Board of

Rein Serries. Thure, 11-12 m. sun, 3:39-4:39 pn. Gentral.

Kern. A. Derroe Badio Corp.

K. M. Terroe Badio Corp.

K. P. M. Sokane, Wash. 266 meters. 100 walts. Norms Investment Co. Annothers, B. D. Crane, Duly ext.

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K. P. M. Terroe B

Upland, Calif. 211.1 meters, 50 watts. L. E.

of Education. Technical High. Announcer, Juno JohnFor. St. Paul, Mirm. 212 meters. 50, waits. Benom
Central.

KFWD, Arkadelphia, Ark. 266 meters. 500 waits. Arkanas Light & Power Company.

KFWH. Chief. Calif. 234 meters. 100 waits. The Central.

KFPG, Los Angeles, Calif. 238 meters. 100 waits. The Mrc. Paul Berger Company.

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KKPM, St. Louis, Miss. 222 meters. 10 waits. The New Furniture Co. Announcer, Dave Abbrovich Jr.

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KFPM, Greenville, Tex. 232 meters. 500 waits. St. Louis Time Contral.

KFPM, St. Louis, Mis. Contral.

KFPM, Chief. Calif. 231.1 meters. 250 waits. St. Contral.

KFPM, St. Louis, Mis. Contral.

KFPM, St.

RYAD, Jogan, Utah. 2054 meters. 10 watts. Electrical steescarch & Mg. Co. RYAF, Colorado Springs. Colo. 250 meters. 500 watts. Heetrical steescarch & Mg. Co. RYAF, Colorado Springs. Colo. 250 meters. 500 watts. Bledson (RYAF, Colorado Springs. Colo. 250 meters. 500 watts. Bledson (RYAF, Colorado Springs. Colorado). The stee Feath Broadcasting Company. 50 watts. Bledson (RYAF, Colorado). 215.7 meters. 10 watts. Bledson (RYAF). Colorado. 215.7 meters. 10 watts. Bledson (RYAF). Colorado. 215.7 meters. 10 watts. General Colorado. 215.7 meters. 20 watts. Bledson (RYAF). Colorado. 215.7 meters. 210 watts. Teconomological Colorado. 215.7 meters. 210 watts. Teconomological Colorado. 215.7 meters. 210 watts. Teconomological Colorado. 215.7 meters. 210 watts. 215.7 meters. 215.7 meters

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KNRC, Hollywood, Calif. 298.2 meters. 250 watts, Nicruiff & Rarenseroff. Co. Announcer, "Hastings."

KNRX, Hollywood, Calif. 336.9 meters. 500 watts, Los Announcer. Some property of the control of the contr



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