# SUPPORT NEW WAVE PLAN

# STATIONS READY TO **BROADCAST SPORTS**

BASEBALL ON AIR FROM WEAF APRIL 22

Auto, Yacht and Horse Races Are Scheduled to Entertain Fans Throughout Country

NEW YORK.— It's going to be an active summer for the followers of Radio. Numerous stations will broadcast various sporting events, covering everything from baseball to yacht racing. No longer will it be necessary for the boys to look for knot-holes in fences to watch the ball game. All they'll have to do will be to tune in to one of the large stations, and they can follow the game without fear of having a cop chase them away.

fear of having a cop chase them away.

Ghants-Braves Games on Air

On April 22 the game between the New
York Glants and the Boston Braves will
be broadcast direct from the Polo grounds
by Graham McNamee, well-known sports
announcer, through WEAR.

Two of the most important sporting
events of the year—the Kentucky Derby
and the Indianapolis Speedway races—
are to be broadcast by WGN, Chicago, Ill.
Saturday, May 16, is the date of the
Derby and Saturday, May 30, Memorial
Day, is the date of the auto races.

WANG Has Portable Broadcast Sets

Day, is the date of the auto races.

WAHG Has Portable Broadcast Sets
Station WAHG, Richmond Hill, is having three cars equipped with low wave
transmitters for rebroadcast work, also
one sixty-foot yacht. By this means any
sporting event can be followed and broadcast. It will be picked up and rebroadcast by WAHG.

Roat races on Long Island Sound will

cast by WAHG.

Boat races on Long Island Sound will be broadcast from the yacht. College hoat races are also in negotiation. At least one important tennis tournament is included in the summer sports schedule of WAHG.



# **CONGESTION** OF "B" CLASS **UNBEARABLE**

Want No New Stations

Kintner Plan Proposed Anew as Remedy for "Traffic Jam" of Ether Roadways

CHICAGO.—The broadcasting chaos which Chicago and New York have already reached, and other communities are fast approaching, has caused leaders in the broadcasting, manufacturing and administrative branches of the Radio industry to look to the listeners for relief. Important questions must be decided. No laws are available. The public must rule.

No laws are avanable. And prule.
Foremost among the suggested remedies is the Kintner plan, outlined in Radio Digest in its March 14 issue, for the control of ether congestion. Many adherents are boosting this plan, which is reprinted this week for the consideration of listeners who have not had it called to their attention.

their attention.

Crowded "Roadways" Today

Why the cry of congestion? There are but 96 wave bands, or ether "roadways." available for the use of approximately 580 stations. Of these 580 stations, nearly 100 are class B, and transmit 500 watts or more power into the crowded roadways. But class B stations have but 48 roadways

(Continued on page 2)



Left, Alice Warren Sachse, program director of Station WPG. She is a renowned pianist and has a host of followers. Above, Mary Mellish, star of the "Natja" company, interviewed recently from Station WGBS by Edmander whose directors a concert conducted entirely discussion as concert conducted entirely discussion as concert conducted entirely discussion and cast from WOG. Fallmer school, at Davenport.



### FANS RUSH TO NAME **FAVORITES FOR CUP**

FIFTY NEW NOMINATIONS MADE DURING WEEK

Second Annual Radio Digest Gold Cup Award Develops Spirited Interest of Announcer Admirers

Fifty new nominations for the most popular announcer for 1925 were received last week by the Radio Digest GOLD CUP AWARD editor. Among them were included many of the more popular and well-known announcers throughout the

From all indications, this contest will be From all indications, this contest will be eagerly watched by fans, more so than the last award. Many who are writing in have told why they think their favorite announcer should get the cup. And some of the reasons offered are exceptionally good. But just who will win it, is the big question. It will take some time to do this, but the effort will be well worth the reward.

reward.

Show Great Enthusiasm

Never before have fans shown so much enthusiasm in any sort of contest as they have in this. They feel that the announcer is part of them, and they are willing to work to see that he gets all the votes that is humanly possible. Many are working toward this end by forming clubs, so that the votes can be collected systematically and thereby gain the advantage of getting a large number of bonus votes.

Get out among your friends and decide

bonus votes.

Get out among your friends and decide which announcer you favor. Collect all the votes possible, then sort them out so that you can take the advantage of tho bonus votes. Then send them in. By doing this, the votes can be tabulated immediately, thereby showing the standing of your favorite announcer in the following week's Direct

week's Digest.

Now, work for your favorite and see that he wins the Radio Digest Second Annual Gold Cup. When he gets the cup you can say that you did your best to belp him along. It will take plenty of work to win this year's cup, for competition is very keen. Others are doing it, why not you?

Fifty New Names for Cup
Here is the list of fifty new names
nominated by fans during the past week!
CFCA. E. J. Bowers
CHNC. R. H. Combs
CKAC, J. N. Cartier
CKY, D. R. P. Coats
CNRA, F. W. Hartee
CNRA, G. A. Wright
CNRO, A. W. Ryan
CNRO, R. H. Robetts.

lin WEBH, Robert Boniol WEEI, Bob Emery WEMC, John E. Fet-

CNRW, R. H. Moberts.
KFI, Earle Anthony
KPI, — Hastings
KFI, Paul Reese.
KFRU, Okla. Pepper
Bird
KGO, Howard Milholland
KLDS, Arthur
Church retts.

KFI, Earle Anthony
KFI, — Hastings
KFI, Paul Reese.
KFRI, Okla. Pepper
Bird
KGO, Howard MilLOBS, Arrthur
KDDS, Arrthur
KDS, A

in the last two issues? If not, you had better remove the "nomination eertificate" from the top of this page, fill it with the necessary information, and send it to the GOLD CUP AWARD EDITOR, care of this magazine. But you don't need to nominate anyone whose name has ap-

peared.
After nominating, don't forget to save
your ballots for your favorite.

\*\*Bow to Win Cup for your Choice
Don't miss a single bailot, for when
these are turned in to Radio Digest in a
group of CONSECUTIVE numbers, extra
bonus votes are allowed the announcer

your ballots for your favorite.

\*\*Row to Win Cup for your Choice\*\*
Don't miss a single ballot, for when these are turned in to Radio Digest in a group of CONSECUTIVE numbers, extra bonus votes are allowed the announcer for whom you are voting.

The ballots, top of page two, numbered consecutively, will appear in each issue of the consecutively, will appear in each issue of the consecutively.

\*\*WLW Broadcasts Market Keports\*\*
CINCINNATI, Obio. — Market reports dealing with fresh fruits, vegetables and crops, are now broadcast through the crops are now broadcast. The construction of the crops are now broadcast through the crops are now broadcast market Keports.

numbered ballots, 30 votes. For each 16 stations, that the B roadways are threatconsecutively numbered ballots, 40 votes.
For each 20 consecutively numbered ballots, 50 votes, and for each 22 consecutively numbered ballots, 60 votes bonus
will he allowed.

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

WLW Broadcasts Market Reports
CINCINNATI, Oblo. — Market reports
CINCINNATI, Oblo. — Market reports
ference.

Hence the cry of congestion.

Hence the cry of congestion.

Big Centers Hopeless
In Chicago and New York the above conditions are so unbearable that the Radio section of the department of commerce will not promise a license to any firm contemplating a station within sixty miles of either city until some of the existing stations cease to broadcast. Supervisor E. A. Beane of the Ninth District, of which Chicago is a part, has stated that he absolutely will not and cannot give a class B license to any further stations in this district.
What can the listeners do? What is the next step?

Secretary of Commerce Hoover is powerless to do more than he has already

Secretary of Commerce Hoover is power-less to do more than he has already done. The antique Radio laws are still the same as those passed in 1912, before broadcasting was dreamed of, and give him no weapons with which to handle the problems of today. He has therefore suggested that Radio listeners express there wishes in some organized form so that he can rule for the good of the ma-fortiv.

Kintner Plan Is Proposed Anew

Rintner Plan Is Proposed Anew
Radio Digost therefore presents the
Kintner plan again. This, it is believed,
if adopted would be a permanent cure for
the broadcasting congestion now so detrimental to the welfare of Radio.
The plan of S. M. Kintner, research engineer for the Westinghouse Electric and
Mannifacturing company, is to have four
classes of stations. Promotion from a
minor class to a major class would be in
order of precedent, together with the ability to servo the public as a prime consideration.

sideration.

Class I would be for super ge luxe stations, with from 5 to 50 kilowatts (thousands of watts) of power. Fifteen 20-kilocycle roadways ranging from 300 to 416.6 meters would be allowed. These fifteen roadways would be occupied by fifteen broadcasters which would not divide time with anyone.

Olass II for 500-Watt Stations
Class II would be for 500-watt stations.
Schember 10-kilocycle roadways ranging
from 428.5 to 555 meters would he allowed. These seventeen roadways would
each be shared by four stations, dividing
time two ways. Thus room would be time two ways. Thus room would be made for sixty-eight stations in this

class.
Class III would be for 100-watt stations.
Forty-five roadways of ten kilocycles each
would be provided, ranging from 205.5
to 294 meters. These forty-five roadways
would cach be shared by twelve stations,
dividing time three ways. Thus room
would be made for 540 stations in this

Class IV Is Waiting List

Class IV is Waiting list. No station in this class could have a power more than 100 watts. Four 10-kilocycle roadways would be provided, ranging from 200 to 204 meters. The number of station on each roadway, dividing time, and the number of time divisions necessive would be accompanied.

sary, would be as required.

That, in brief, is the Kintner plao. It may be improved, but it is at least a definite proposal which would stop the present congestion.

What Is the concensus of Radio fan olnlon? Do listeners want better Radio conditions?

Secretary Hoover waits for the answer.

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	All the Live News of Radio1 to	
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ı	An Evening at Home with the Listener in, a chart showing when to listen in for your favorite station	
ı	Advance Programs for the Week at All the Larger Stations 9 to	
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# Looking Ahead

Extra Added Treat for "Evening at Home" Fans. This week the users of this popular table, which appears corrected every week in Radio Digest, will find it given in both Central and Eastern Standard Time. Next week the table will be given in three different standard times! It will be in Eastern, Central and Pacific Time. In addition, larger and more readable type will be employed.

Readers Who Have Enjoyed the Feature Pages Devoted to Stations whose "voices have become familiar to them, will be glad to learn that among the very next broadcasters to be described by word and camera will be KFI, Anthony's, Los Angeles; WBZ, Westinghouse, Springhed; WCCO, Gold Medal station, Min-neapolis-St. Paul, and KOA, General Electric, Denver.

The Operation of Super-Zenith VII will be explained in the next issue. How variable coupling is applied to tuned R. F., and the controlling of two condensers from a single knob, will be clearly shown. Both the man who owns one and the home constructor will find much information of value in this

B. C. Radio Course Takes up Alternating Current next week with detailed attention to its effect with inductance. Radio currents are alternating currents, and data presented by Professor Moreton in this next article is to be studied carefully. Later articles will be written on the assumption that these elementary chapters have been thoroughly assimilated by the reader.

Newsstands Don't Always Have One Left

WHEN YOU WANT

# Radio Digest

BE SURE OF YOUR WEEKLY COPY BY SUBSCRIBING NOW

510 N.	ber Radio Dearbern e, Illasia.	Digest, St.,		
Piesse (Six, Radia	find enclos Foreign) Digest, III	od shook for Ome ustrated.	M. O. Year's	for Five Deliar Subseription t
Name				
Addres	4			
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SEND IN THE BLANK TODAY

WENDELL HALL IS

Absent from Ether Due to Death of His Father-Broadcast

from WLS

### STATION GLEANINGS AND NEWSY BRIEFS

WBZ WILL TRANSMIT PAUL REVERE PROGRAM

"Cappy Ricks" on the Air at KGO WOAW Celebrates Second Anniversary by Special Program

Saturday, April 18, is the 150th anniversary of that famous ride of Paul Revere. WEZ will broadcast by remote control the special services from the Old North church, Boston. The speakers will include Vice-president Charles G. Dawes, Mrs. Nathaniel Thayer, Bishop Lawrence, Bishop Babcock, Dr. William H. Dewart, the rector of Old North church, and Paul Revere, the great-great-grandson of the famous man. Station WHAZ, Troy, N. Y., broadcast a program along these same lines last Monday night.

"Passe," a one-act tragedy, and "Ro-salie," a one-act comedy, featuring the KOA players, under the direction of Iris Ruth Pavey, will be the headilners for Friday evening, April 24, from the station

"Cappy Ricks," dramatized from Peter B. Kyne's novel, by Edward Rose, playwright, will be presented by the audio players before the KGO microphone Thursday evening, April 23.

Station WOAW, Omaha, Nebr., recently celebrated their second anniversary on the air hy giving a special program for the fars.

Verdi's celebrated "Il Trovatore" was sung recently from Station WGBS. This was the fifth opera in the series which they are broadcasting under the direction of Maestro Cesare Sodero.

The famous Paulist choir of Chicago was heard on Easter Sunday from WGN, the Chicago Tribune station on the Drake hotel. The entire musical service during the high mass at St. Mary's church, starting at noon, was put on the air.

"Twenty Minutes of Good Reading" every Thursday, from 8 to 8:20 p. m., Central time, given by Rev. Claude J. Pernin, S. J., over Westinghouse Station KYW, has become one of the most outstanding features of that station.

Another talented artist has been added to the regular staff of Fairbanks-Morse and company, broadcasting talent who are on the air every Tuesday evening from 8 until 9:30. Central standard time. The latest addition is Clarence Peterson, plano accordion virtuoso. accordion virtuoso.

Music from the new \$26,500 Wurlitzer organ and orchestra unit is soon to be heard by the WLW Radio audience. Its installation and tuning is nearing completion in the new studio. The instrument is built especially for Radio broadcasting.

Nathaniel Finston, musical director of Balaban and Katz' Chicago theater, has conducted an overture for Radlo audiences once a week for nearly two years. The regular Chicago theater Radio revue is broadcast over Station WMAQ every Saturday night from 3 to 10 o'clock, Central time. Every other Sunday noon a symphony concert, ander the conductorship of Mr. Finston, is presented in the Chicago theater and broadcast by Station WGN.

### LONG LIVE THE KING SAY HAREM QUEENS

PARIS. France.—King Sisowath of Kambodja, only \$2 years old, has hit upon a solution for the divorce problem. He has had all the problems of a harem on his hands for many years, and now he is growing old and finds himself a little too weary to keep all his spouses happy. So he has installed a fine multi-tube set in the harem. All's well in Kambodja!



Both professional and amateur musicians at Station WMC, cooperated and gave a concert April 14. This coucert was broadcast from WMC, Memphis, Tenn.

WJZ and WGY, will broadcast the cir-cus from Madison Square garden, New York, All members of the animal tribe will make their appearance hefore the microphone.

"A dollar Value for a Dollar Spent,"
was the subject of an address given by National railways for the broadcasting
William P. Green, associate director of from moving trains.

### the National Vigilauce committee, from Station KDKA recently. Announcer to Publish Book of Poems in Near Future of Poems in Near Future

NEW YORK.—Largely as a result of his reading his original poems from Station WHN, NTG, announcer and director of the N.H.N. N.TG, announcer and director of the station, has accepted a proposition to pub-lish a book of poems, which will include several by himself, also poems by Dorts Kenyon, the famous movie star, Lew Brown, the well-known song writer, and Marjorie Leet, one of the famous Ziegfeld girls

girls. N. T. Granlund's poems will comprise verses about Broadway and several sea poems, some of which have already been nublished.

# NOW ON AIR AGAIN LOS ANGELES HEARS **EARTH-ANTENNA SET**

CONTINENT CROSSED WITH UNDERGROUND AERIAL

James H. Rogers Uses Three 50-Watt Tubes in Set—Claims Earth Crust Transmission Best

WASHINGTON, D. C. — The Pacific crossing has been reached by an underground assial Radio transmitting set, according to Jaines H. Rogers, well-known local inventor. He claims that signals from his set were recently received at Los Angeles. Mr. Rogers states that he has before successfully transmitted as far as 2,500 miles and he intends very shortly to try the underground methods for crossing the ocean.

ocean.
The Rogers underground system has been in use for some time by the signal corps of the Army, but it is understood that the Army's experiments have covered short distances only. The set employed by Mr. Rogers in his latest experiment which reached the Pacific coast used three 50-watt tubes with a wave length of 180 meters.

Believes Underground Radio Best
Discussing his theory of underground
Radio transmission, Mr. Rogers says:
"Radio energy is propagated, in my
opinion, through the medium of the crust
of the earth. It is possible to send electrostatic waves through the air, but they
follow light, waves in a perfectly horizontal direction; and are not bent down
to the earth. to the earth.

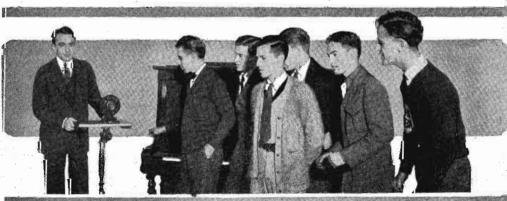
to the earth.
"The greater portion of the energy used in the present form of transmitting thus goes in a tangent from the earth, misses the receiving aerials and is dissipated in the air."

### HOBO TUNES TO WREO; TELLS OF ENJOYMENT

Hasn't Dime to Send for Verification Stamp

LANSING, Mich.—Words of praise of the programs broadcast from Station WREO, the Reo Motor Car company here, have been received from hundreds of cities and by people in every walk of life, but the most nnique "applause" card has just been received at the station from New Rochelle, N. X., by one who signs himself "Weary Willie."
"Excuse pencil and paper please," he writes. "You see, it's the best I can do. I am what is so apily termed a hobo. But I am also a Radio hound and have a little set I carry in my pack to use whenever the occasion presents itself. I have listened in on several occawions to your excellent early Friday morning orchestra programs and have always enjoyed them. "Thaven't the dime to spare for a verification stamp, but would appreciate hearing from you. I have 23 cents left after buying the stamp for this letter, but I know a place to sleep and have never yet begged a nickel or a meal, and I've been in fortry-three states and eleven countries."

Unless abbreviations or nicknames are permitted, it is thought that the new Slovak Radio broadcasting stations will have to carry a couple of spare anhave to carry nouncers.



Georgia School of Technology is now on the air with a 500-watt broadcasting station. The call is WGST. Above is shown a group of students giving the college yell. Bight, Johnny Porsons, announcer. He is a junior in the electrical engineering course, and was elected announcer through a unique contest, in which sixteen candidates competed.





best out of any hookup - you want to fit it with genuine Radiotrons.

No matter what type of set you have—or what type of circuit you are buying tubes for—ask for Radiotrons by name—and make sure you get the genuine by looking on the tube for the word Radiotron and the RCA mark. Quality counts!

> Radio Corporation of America Sales Offices: Suite 314

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28 Geary Street San Francisco, Cal.



WD-12 WD-11 UV-200 UV-199 UV-201A

Radiotrons with these model numbers are only genuine when they bear the name Radiotron and the RCA mark,



# Radiotron REG. U.S. PAT. OFF.

# KTHS-New Arlington Hotel, Hot Springs



### "KUM TO HOT SPRINGS"

(Continued from page 5)

nearly two carats, mined in the diamond mines of Murfreesboro, Ark., the oaly diamond mine on the North American continent. The business men of Nashville, Ark., offered the diamond through KTHS and it was awarded to Miss Louise Givens of Malvern, Ark.

thent. The business men of Nashville, Ark., offered the diamond through KTHS and it was awarded to Miss Louise Givens of Malvern, Ark.

The programs are given from two studios in the New Arlington hotel, one known as the "Tower Studio," located in the top of one of the twin towers of the New Arlington; the other known as the "Mezzanine Studio." In addition to this, private lines operated by KTHS bring music from the Eastman ball room; and sermons from the two Radio churches—the First Presbyterian, Chauncey Hickok, pastor, and the Central Avenue Methodist, Rev. Dr. J. J. Stowe, pastor. These two divines divide the month on alternate Sunday mornings.

Station KTHS is manned by two old friends of the Radio fraternity, both having been in the broadcasting game almost from the start. G. C. Arnoux, who is known to Radioland as "G.C.A.," bis announcing initials, is director-announcer, and handles all announcing. He was for nearly three years program director and chief announcer of Station WBAP at Fort Worth. G. C. A. possesses a voice which seems to give an impression to Radioland of a man weighing about 200 pounds, 45 and bald-headed, but his photo, as shown with this story, will furnish an alibi for him on this count.

E. L. Olds, technician for KTHS, holds sway over the operating room, which is one of the most modern and best arranged in the United States. He also is well known to fanland, having acted as operator, announcer and later as Radio editor of Station WBAP. These two experts compose the active staff of KTHS.

A de luxe musical staff is also a part of Station KTHS, the Meyer Davis orchestra, under the direction of Jack Renard, violinist, dance planist, appears in solo at frequent intervals; as do Jack Renard, violinist jazz and concert programs. Phil Wall, dance planist, appears in solo at frequent intervals; as do Jack Renard, violinist of the Imperial Symphony at Petrograd; Louis Culp, concert programs. Phil Wall, dance planist, appears in solo at frequent intervals; as do Jack Renard, violinist five the

### FIRST LAUNCHING CEREMONY ON AIR

Great Airplane Carrier Christening Brought to Fans by Stations WGY, WJZ and WRC

NEW YORK.—The recent ceremony attending the launching of the U. S. Saratoga, first line alreplane carrier, shippyards at Camden, N. J., was broadcast by three of the stations, WGY, Schnectady; WJZ, New York, and WRC, Washington.
This was the first time that such an

This was the first time that such an event has heen broadcast.

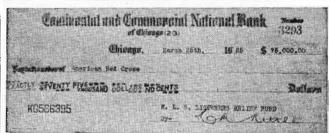
Since this was the largest vessel ever launched on the western henrisphere, and will be the most powerful ship in the United States Navy when commissioned, there was widespread interest in the affeir

United States Navy when commissioned, there was widespread interest in the affair.

Mrs. Curtis D. Wilbur, wife of the secretary of the Navy, christened the boat and there was a microphone at the bow to pick up her words and the noise of the crash of the bottle as the "Queen of the Seas" started on her way down the side into the water. Kolln D. Hager, studio manager and chief announcer of WOY, described the scene incident to the launching and gave a word picture of the unusual looking vessel, told of its wonderful equipment and other interesting facts concerning the sbip.

Find Where "Sally" Went
EDMONTON, Alta.—CJCA. Edmonton
Journal station on the outskirts of the
great Northwest wilderness recently located "Sally," when it held a prize compotition seeking the answer to the mnchplayed popular song, "I Wonder What's
Become of Sally," Egged on by Big Chief
Polar Bear R. M. Stevens of the "Igloo
Hut Eskimos," CJCA's club, 354 listeners
wrote in satisfactory explanations of
"Sally's" whereabouts.

### WHEN THE HEART TUNED IN TO WLS



Here's \$75,000—less than half the fund Hay, "the Solemn Old Judge," assisted —contributed to WLS, the Sears-Roebuck by Ford and Glenn, Remington Welch and Agricultural foundation station by its listeners in response to an almost three-day 000 from the pockets of generous-hearted continuous program appeal for the victims Radio fans. WTAS raised approximately of the tornado which recently devasted \$80,000, while WBCN listeners helped the southern Illinois and Indiana. George eause with \$20,000.

### Brunswick's Tuesday Recital to Continue

Close Music Memory Contest with March, However

NEW YORK.—Through arrangoments with the Brunswick-Balke-Collender company, Stations WJZ, New York; WRC, Washington; WGY, Schenectady; WBZ, Springfield; KDKA, Pittsburgh, and KYW, Chicago, will broadcast two more "Brunswick Hour of Music" programs during the month of April.

month of April.

The programs are on the air every Tuesday evening botween 9 and 10 o'clock, Eastern time. All broadcasting will be done direct from the Brunswick recording laboratories in New York. Leading recording artists and organizations of the Brunswick company will be heard in the Brunswick programs.

The series of Brunswick Music Memory contest closed for the spring season with the fifth and final contest program broad-cast on Tuesday evening, March 31.



# Ask the Belden dealer about loops

Are you planning to make a loop for your radio receiver? Then go to the nearest Belden Radio Dealer and examine a spool of Belden Loop Wire. Notice its construction for efficiency. It is made of 60 strands of bare copper twisted with 5 strands of half hard phosphor bronze. The phosphor bronze wires provide strength and make Belden Loop Wire non-sagging and non-stretching. It is just the wire you need for folding loops. The insulation matches the loop frame in color. Get ready for summer radio by making your loop aerial, now! Send for our booklet, "Helpful Hints for Radio Fans." Use the coupon.



spools, packed five spools in one Belden orange and black striped carton Leading dealers and job-bers carry Belden Radio Products.

Manufacturing Company

2310A So. Western Ave. CHICAGO, U. S. A. Manufacturers of Electrical Wire Products Since 1902

Belden Manufacturing Company, 2310A So. Western Ave., Chicago
Please send me by return mail your booklet, "Help ful Hints for Radio Fans."
Name
Address

### **NAVY WILL CONDUCT** SHORT WAVE TESTS

F. H. SCHNELL LEAVES FOR ASIATIC FLEET

Hold Conference in Chicago — Mac-Millan to Try and Keep in Touch with Schnell

CHICAGO, IR.—Scientists were startled by statements made by John L. Reinartz of South Manchester, Connecticut, at a meeting held here recently on the advisability of short wave transmission experiments. He described the phenomena encountered by him in reaching down to almost unheard of low wave lengths.

To put it in more simple language, wave lengths below one meter, and closely approaching the frequency of light, when applied to the plates of the tubes, become transparent without apparent heat. This result is instantaneous as the current is applied and before heat could possibly be developed.

Leaves on Asiatic Cruise

### Leaves on Asiatic Cruise

Leaves on Asiatic Cruise

In order to experiment further on the short waves, the Navy department is sending F. H. Schnell, former traffic manager of the A. R. R. L., on the Asiatic cruise with the fleet to try out these new waves. He has been commissioned as lleutenant for this purpose. The MacMillan expedition to the North Pole, which leave this country in June, will also be equipped with short wave apparatus. The expedicion will endeaver to keep in touch with the fleet when they are off the coast of Tasmania.

Full credit should be given to Captain

Tasmania. Full credit should be given to Captain Ridley McLean, director of naval communications for commissioning and assigning Schnell to active duty. Mr. Schnell will take three transmitters with him. He will work on wave lengths of 20 meters and less, 27.2 meters, 40 meters, 54.4 meters, and 80 to 100 meters. He expects to be off the coast of Tasmania during the middle of our summer here. It will be winter in Tasmania when he arrives there.

there.

Short Waves Best at Distance

One of the queer things about the short waves is the fact that stations operating on short waves canuot be heard nine miles away, but it is possible to hear them easily over 500 miles distant. The call letters to be used by Sehnell will be NERL.

NRRL.

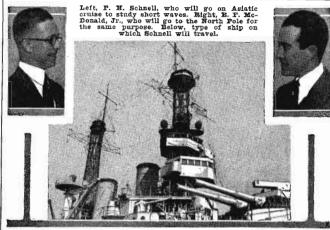
Up to the present time, there are only about twenty amateurs in the United States who are working with real short waves, that is, around 20 meters.

In the near future these columns will contain a description of a short wave receiver eapable of picking up both NRRL and the MeMillan expedition this summer. Both will use the Continental code. There are no manufacturers at the present time making sets for receiving such short waves.

### America Leads Field

America Leads Field
The American annateurs are the first in
the world to experiment of such short
waves. The only foreigner to try experiments along the same lines is Leon Deloy
of France. Up to the present time, however, he has only reached down to 40
meter's.

### PLAN TO STUDY SHORT WAVES



heading in the naval reserve. Members operator which he wants to go on the trip of this class do not have to go on crulse with him this summer. In this selection, unless they want to, but will experiment commander MacMillan stated that perashore on the new waves.

From this group band of amateurs and physique, although the two latter are most important.

### Station Changes

WMCA, Hotel McAlpin, New York, has nally been assigned a wave length of 341 WMCA, Hotel McAlpin, New 1018, nee-finally been assigned a wave length of 341, meters. It is hoped that the new station will be able to use this new wave length without heterodyning other class B sta-tion waves. The WMCA schedule calls for daily broadcasting from 3 to 5 and 9 to 12 p. m., Eastern time.

WHT, toll statiun planned for Chicago, with studios in the Wrigley building and transmitter at Deerfield, Ill., has postponed its opening again. It is rumored that the station's organization is not complete, and that funds for the purchase of its 5,000-watt transmitter are lacking.

WBCN, Southtown Economist station, Chicago, announces division of time with WENR, All-American Radio corporation statioo, now working with but 100 watts power, but which in the fall will be increased to 1,000 watts.

The Trianon ballroom, Chicago, world's largest public dance hall, will soon go on the air with a 500-watt station. The aerial towers have been erected.

Plans for the St. Paul studio of Sta-tion WCCO, to be erected in the St. Paul Union depot, are nearing completion. It is expected that construction will start in time to complete the studios shortly after May 1.

of France. Up to the present time, however, he has only reached down to 40 meters.

Seven new stations have been granted licenses during the past week, they are as follows: WHBU, B. L. Bing's Sons, bands, the Navy is now taking lessons Anderson, ind.; WIBA, The Capital Times, from amateurs to learn what they can do. Madison, Wis; WTHS, Flint Senior high Amateurs enlisted by the Navy for this school, Flint, Mich.; WHBW, D. R. Klenpurpose will be listed under the class 6

# Simmons, Akron, Ohio; WHBT, Thomas W. Tizzard, Jr., Downers Grove, Ill., and KPVH, Whan Radio shop, Manhattan, Kan.

Station KSL, Formerly KDPT, owned by the Radio Service corporation of Utah, located in Salt Lake City, Utah, has been transferred from class A to class B.

Three small stations have increased their power to 500 watts. KDYL, the Newhouse hotel broadcasting station in Sait Lake City, Utah, has increased its power from 50 to 500 watts. The MacArthur Erothers Mercantile eompany (KFAD) have changed their power from 100 to 500. WFAV, the University of Nebraska station, have doubled their power. KFMQ, the University of Arkansas, now operates on 1,000 watts. sas, now operates on 1,000 watts.

## LONDON, FAR EAST, PARIS SOON FOR FAN

INTERNATIONAL FEATURES LOOM WITH R.C.A. TESTS

Experiments Prove Feasibility of Bring-ing World to Listeners by Means of Relay Broadcasts

NEW YORK.—The series of concerts from London successfully broadcast recently to millions of Radio listeners in the United States marks the inauguration of a series of great public experiments that may bring London, Paris and even Euenos Afres and the Far East to millions of Radio-equipped homes in America, it is announced by the Radio Corporation of America. America.

Remarkable progress, it is declared, has been made of recent weeks towards the technical solution of the problems in-

technical solution of the problems involved.

"Riig Ben" and the Hotely Savoy orchestra in London have been relayed by WJZ, WGY and WRC.
"For some time," it is explained in the statement issued, "private tests have been conducted by the Radio Corporation, in cooperation with leading Radio engineers of the Marconi company and the British Broadcasting company, to determine the practicability of broadcasting a regular musical and entertainment program to the American public across the 3,000 miles of Atlantic ocean.

Era of International Programs Dawns "So striking were the results atlained

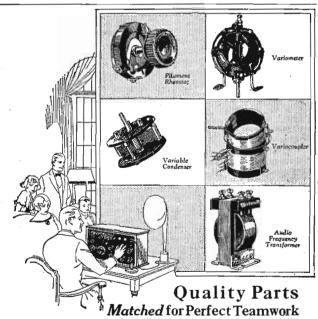
the 3,000 miles of Atlantic ocean.

Era of International Frograms Dawns

"So striking were the results attained in such favorably situated receiving points as Belfast, Me., and in other experimental receiving stations of the Radio corporation, that it was determined to open these experiments to the American public, so that results might be noted under varying conditions of reception and within the widest possible range.

"It may be that from time to time experiments will have to cease entirely because of interruptions that will not permit the demonstrations to be made.

"This much can be said, however, upon the basis of the present demonstrations: Enough progress has been made to warrant the statement that we are now entering upon an era of international broadcasting which, eventually, will bring the entertainment, music and speech of other continents to every home in America."



Your pet "hook-up" needs first quality parts-perfectly matched—to give you real radio.

Every Federal Standard Radio Part is designed, made, matched and guaranteed by Federal. That is why you find Federal parts in all the better hook-ups—that is why you should insist on Federal parts when purchasing.

FEDERAL TELEPHONE MANUFACTURING CORP. Standard RADI () Products

### WCK FEATURES ORGAN RECITAL



Tom Terry, master organist, who is well known throughout the United States for his organ playing. He is seen playing from Station WCE. In spite of the demands for his services, he gives a half-hour daily broadcasting for the benefit of the shut-ins.

# An Evening at Home with the Listener In

### ANNOUNCEMENT

Confirmed users of the "Evening at Home" table will be glad to know that, beginning next issue, this feature will appear in three standard times: Eastern, Central and Pacific. It is believed by the editors of Radio Digest that the publication of these three tables will help fans greatly in using the valuable information contained herein. Larger type will also be used in the improved tables which will appear next week. The latter change has long been contemplated, but was postponed because space limitations would not permit. Space, however, will now be sacrificed in order that readers can be given a more easily read table. Remember, the "Evening at Home" table is thoroughly corrected every week.

### STATIONS IN ORDER OF WAVE LENGTHS USED

| Meters Call |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 226 WBBM    | 275 WORD    | 315.6 WGBS  | 365.6 WDAF  | 406 WBAR    | 468.5 WRC   |
| 233 WEBJ    | 275.2 KQV   | 319 WGR     | 365.6 WHB   | 410.7 CKAC  | 475.9 WBAP  |
| 240 KFAB    | 275.3 WJAS  | 322.4 KOA   | 370 CYB     | 41.6.4 WCCO | 475.9 WEEI  |
| 240 WOAX    | 278 WCAU    | 325.9 WSAI  | 370.2 WEBH  | 421 KIAF    | 475.9 WFAA  |
| 244 WABN    | 278 WLBL    | 330 CYX     |             | 422.3 WMH   | 480 CYL     |
| 248 WBBG    | 278 WRBC    | 333.3 WBZ   | 374.8 KTHS  | 422.3 WLW   |             |
| 250 WTAY    | 280.2 WNAC  | 336.9 KFMX  |             | 428.3 WSB   | 483.6 WOC   |
| 261 KSL     | 285.5 WEMC  | 336.9 WCAL  | 879.5 WHAZ  | 429.5 KPO   | 483.6 WSUI  |
| 265.5 WMAK  | 285.5 WKAR  | 336.9 WSAC  |             | 434.5 CNRO  | 491.5 KGW   |
| 266 KFNF    | 285.5 WREO  | 336.9 KNX   |             | 434.5 NAA   | 491.5 WEAF  |
| 266 WBCN    | 288.3 KFKX  | 340.7 KSAC  | 384.4 WMBF  | 435 AT9     | 499.7 WMC   |
| 268 WEBW    | 293.9 KJS   | 340.7 WKAQ  | 389.4 WEAR  | 435.5 CFCN  | 508.2 KLX   |
| 270 WGST    | 293.9 WBAV  | 344.6 WCBD  | 389.4 WTAM  | 440.9 WDWF  | 508.2 WIP   |
| 270 WOI     | 293.9 WEAO  | 344.6 WLS   | 394.5 KFRU  | 440.9 WOS   | 508.2 WOO   |
| 272.6 WBBR  | 299.8 KFMQ  | 348.6 KFAE  | 394.5 WF1   | 447.5 WMAQ  | 516.9 WCX   |
| 272.6 WFBH  | 299.8 WPG   | 348.6 KOB   | 394.5 WL1T  | 447.5 WQJ   | 526 WHO     |
| 273 WHK     | 302.8 WJJD  | 348.6 WTIC  | 394.5 WOA1  | 454.3 KFOA  | 526 WNYC    |
| 273 WRW     | 302.8 WTAS  | 352.7 WWJ   | 399.8 WHAS  | 453.3 WJZ   | 526 WOAW    |
| 275 KFAU    | 305.9 WJAR  | 356.9 CFCA  | 400 PWX     | 455 KTW     | 535.4 KYW   |
| 275 KFKU    | 309.1 KDKA  | 356.9 CHNC  | 405.2 KHJ   | 461.3 WCAE  | 535.4 WHA   |
| 275 WABL    | 315.6 KFDM  | 361.2 KGO   | 405.2 WJY   | 468.5 KFI   | 545.1 KFUO  |
| 275 WHAD    | 315.6 WAHG  | 361.2 WHN   | 405.2 WOR   | 468.5 WCAP  | 545.1 KSD   |
|             |             |             |             |             |             |

### INSTRUCTIONS

The "Evening at Home" table is this week given in two standard times, Eastern and Central, so Radio fans living in either of these two time bands will not need to worry about transposing from one time to another. All these fans need do will be to use the particular table which applies. On the other hand, listeners using Mountain time should mentally subtract one hour from every figure given in the Central time table. Listeners whose watches are set with Pacific time, will need to use the Central time table likewise, but will need to mentally subtract two hours from every figure given. Remember that only the evening sign-on and sign-off hours, and on Sunday, the late afternoon programs are given.

Part	(FOR CENTRAL TIME BAND)			(FOR EASTERN TIME BAND)									
Column			Monday Tuesday	Wednesday Thursday	y Friday	Station and City	Met. Satu	rday Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Part	CFCA, Toronto, Ont 356.9	Silent 6:00-7:00			15 Silent	CFCA, Toronto, Ont	358.9 81	ent 7:00-8:0	Silent	8:15- 9:15	8:15- 9:15	8:15- 9:15	Silent
Part	CKAC, Montreal, Que 410.1	6:30 - 9:80 3:80 - 4:30 811ant 7:00 - 8:00	7:30-8:30 Silent Silent 6:30-9:3	Silent Silent 30 Silent 6:38-9:	30 Silent	CKAC, Montreal, Que	356.9 Sil	ent Silent	8:30 - 9:30 Silent	Silent 7:30-11:30	Silent	Silent 8:30- 9:30	Silent
The content will be content	CYB, Mexico City, Mex 370	6:30-11:30 Silent 8:30-9:00 Silent	Silent Silent	6:30-11:30 Silent	Silent Silent	CNRO, Ottawa, Ont	370 9:30	-12:00 Silent	Slient Slient	9:30-10:00	7:30-12:30 Silent	Silent 10:00-12:00	Silent Silent
Part	CYX. Mexico City. Mex., 380	Silent Sijent 6:00-8:55 5:30-7:48	9:00-12:00 Stlent 6:15-8:55 6:30-11:0	Silent Silent	8:00-10:00	KDKA. Pittsburgh Pa	330 811	ent Silent - 9:55 4:00- 8:45	10:00- 1:00 6:15- 9:55	Silent 6:15-12:00	Silent	Silent	9:00-11:00
Fig.   Property of the prope		Silent Silent	9:39-10:30 Silent 9:00-10:00 Silent	9:30-10:30 Silent Silent Silent	7:30 - 8:30 9:30-10:30	KFAB, Lincoln, Nebr KFAE, Pullman, Wash KFAU, Boise, Idaho	348.6 811	ent Stlent	10:30-11:30	Silent	10:30-11:30	Silent Silent	8:30- 9:30 10:30-11:30
Part	KEKU Lantence Kan. 275	Silent 9:00-10:00 8:45- 1:00 6:00- 1:00	9 Silent, 7:00-10:3 0 8:45-1:00 8:45-1:0 6:50-9:45 Silent	30 Silent Silent	7:00-10:30	KFUM, Beaumont, Tex	315.6 SH 468.5 9:45	ent Silent	Silent 9:45- 2:00	9:00-12:30 9:45- 2:00	81lent 9:45- 3:00 Stlent	Silent	9:00-12:30 9:45- 3:09
Column	KFMQ, Fayetteville, Ark 299.8 KFMX, Northfield. Minn. 336.9	Silent Silent	9:30-11:00 Silent Silent 9:00-10:0	00 Silent 7:30-8:	30 Silent		288.3 SII 299.8 10:00	ent Silent	10:30-12:00 10:00-11:00	Silent 10:00-11:00	Silent	8:30-12:06	Stient
The column	KFNF, Shenandoah, Ia 268 KFOA, Seattle, Wash 454.5 KFRU, Bristow, Okla 394.6	8:30 - 9:00 6:30 - 8:00 8:45 - 1:00 Stlept	6:30-9:00 Silent	8:30- 9:00 6:30c 9:	90 6:30- 9:00	KFNF, Shenandoah, Ia KFOA, Seatille, Wash	266 7:30	-10:00 7:30- 9:0	7:30- 9:00	Sillant	7:30-10:00	7:30-10:00 Silent	7 - 20 - 10 - 00
Part	KFUO, St. Louis, Mo 545.1	Silent 9:15-10:18				KFUO. St. Louis Mo	545.1 Sil	ent 10:15-11:3	Silent 11:00- 3:00	Silent 11:00- 3:00	10:15-11:15 Silent	Silent 1:08- 3:00	Silent
Second Column   Second Colum	KIAF, Sihtipok, Minn 421 KIR, Seattle, Wash 384.4	10:00 - 2:00 10:00 - 12:00 Stlent 4:00 - 5:00	Silent 10:00-1:0 0 0:00-10:00 Silent	00 10:00-12:00 10:00-1: 9:00-10:00 Silent	00 9:45-1:00 9:00-10:00	KHJ, Los Angeles, Calif KIAF, Sihtipok, Minn	405.2 11:00 421 Sil	- 3:00 11:00 - 1:00 ent 3:00 - 4:00	Silent 8:00-9:00	11:00- 2:00	11:00- 1:00	11:00- 2:00	8:00- 9:00
Column   C	K18, Los Angeles, Calif 293.9	Silent 9:15-11:30	8:00-1:00 Silent	8:00-1:30 Silent	:00 Silent	KJS, Los Angeles, Cant	293.9 Sil	ent 10:15-12:30	Silent	11:00-12:00	Silent	11:00-12:00	Silent
September 1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965   1965			9:00-10:00 Silent 8:30 - 9:30 Silent	9:00- 1:00 Silent 8:30- 9:30 Silent	9:00-10:00 8:30- 9:30	KOA, Denver, Colo	335.9 9:15	- 4:00 10:00- 2:00 - 2:00 6:00-11:4	9:15-3:00	9:30- 3:00 Silent	9:15- 3:00 10:00- 2:00 9:30-10:30	9:30- 2:00 Silent	9:30-3:00
THE CALLEY WITH CALLEY STATES AND ALL STATES AND AL	KQV, Pittsburgh, Pa	10:00- 2:00   10:30-12:00   Silent   Silent   Silent   Silent	7:00 - 9:00 Stlent	9:00- 1:00 9:00- 1: 7:00- 9:00 Silent 00 7:20- 8:00 7:20- 8:	7:00~ 9:00 7:20- 8:00	KPO, San Francisco, Cal KQV, Pittsburgh, Pa KSAC, Manhattan, Kan	129.5 11:00 175.2 Sil	- 3:90 11:30- 1:00 ent Silent ent 9:00-10:00	8:00-10:00	Silent	8:00:10:00	Silent	1:00- 3:00 8:00:10:00
Column   C	KSL, Salt Lake City, Utah. 281	9:00-11:00 10:00-11:00	9:00-10:00 10:00-11:0	00 9:00-10:00 9:00-10:	00 10:00-11:00		261 10:00	-11:00 Silent -12:00 11:00-12:00	9:00-12:00	7:00-12:00 10:00-11:00	7:00-8:00 10:00-11:00	811ent 10:00-11:00	9:00:12:00 1:00:12:00
WARF SCHOOL N.T. 129, 100-170 Niles   100-170	KTW, Seattle, Wash	7:00- 2:00 7:00- 9:00	Silent Silent 7:90 - 2:3	Silent Silent	Silent 7:00- 2:30	KTW, Seattle, Wash	455 SII 535.4 8:00	ent 10:00-12:30 - 3:00 8:00-10:00	Silent Silent	Silent 8:00- 3:30	Silent 8:00- 3:30	Silent	Silent
WAR PART NEW WAR P	WABL, Storrs, Conn	7:30-10:00 Silent Silent Silent	Silent 6:00-8:00 Silent 9:00-12:00 Silent	7:30-10:00 Silent 6:00- 8:00 Silent	Silent 6:00: 8:00		400 8:30 275 811	-11:00 Silent	l Silent	Silent	8:30-11:00 7:00-9:00	Silent	7:00- 9:00
## 15   Part   P	WBAP, Fort Worth, Tex. 475.9	7:00-8:00 11:00-12:00	6:30- 1:00 Silent 7:30- 1:00 7:38-10:4	7:00-10:30 Silent 7:30-10:45 7:30-10:	45 7:30-10:15	WAHG, Richmond, N. Y.	315.6 12:00 475.9 8:00	2:00 Silent 9:00 12:00- 1:00	8:00- 2:00 8:30-11:45	Silent 8:30-11:45	8:00-11:30 8:30-11:45	Silent 8:30-11:45	8:00-11:30 8:30-11:45
## Claser, Ni	WBBG, Mattapoisett, Mass 248	Silent Silent	7:00- 9:00 Silant	7:00- 8:00 Silent	6:00-1:00	WBAV, Columbus, O	293.7 248 Sile	ent Silent	8:00-8:00	Silent	8:00- 9:00	Silent	8:00- 9:00 7:00- 2:00
WELF STRUCK, N. 1987, 1988, 1988, 1988, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 1989, 19	WBBR, Staten Island, N. Y. 272.6 WBCN, Chicago, Ill 266 WBZ, Springfield, Mass 333.3	6:00- 1:00 4:00-10:00	6:00- 7:00 Silent 6:00- 7:00 6:00- 1:0	Silent 7:00-7:	50 Silent 00 6:00- 1:00	WRSR, Staten Island, N. Y.	272.6 8:00 266 7:00	9:45 9:00-10:20 2:00 5:00-1:00	1 Silent	Silent 7:00- 2:30	Silent 7:00-11:15	8:00 - 8:50 7:00 - 2:00	SDent
WALL PLANS AND ALL AND	WCAP, Washington, D. C., 468 5	6:30- 8:30 5:39- 9:15	8:30-11:00 6:29-10:0	Silent   9:00-10:	00 6:30 9:30 00 8:30 9:00	WCAE, Pittsburgh, Pa	461.3 6:30- 336.9 1:00-	9:30 4:00 7:30 2:00 9:30-11:00	6:30-12:00	6:30-12:00 Silent	6:30-10:00	6:30-11:00	6:30~10:00
WEX. P. COLLANDON, N. 1, 1963, 9 and 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964, 1964,	WCBD, Zion, 111	Silent 2:34- 3:00	8:00-10:30 Silent	7:00-10:10 6:30-10: Silent 8:60-10:	00 7:00-10:10 30 Silent	WCAU, Philadelphia, Pa.	278 811	ent 5:30-9:30 ent 3:30-10:60	S!lent 9:00-11:30	7:30-9:30	8:00-11:10	Silent 7:30-11:00	7:00-10:00
W.E.F. G. Cherko, N.L. 1912 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 999-110 99	WCX, Detroit, Mich 516.9 WDAF, Kansas City, Mo. 365.6	Silent Silent 6:00- 1:00 4:00- 5:30	5:00 - 8:30 5:00 - 10:0	0 5:00- 8:30 Silent	5:00-10:00	WCX, I grott, Mich	516.9 6:00	7:00 Silent	6:00- 9:30	6:00:11:00	6:00- 9:30	6:00 - 7:00	7:30-1:00 6:00-11:00
***PA Dellay, Name 1975***  ***PA Dellay, Name 1975***  ***PA Dellay, Name 1975***  ***PA Dellay, Name 1975**  ***PA Dellay, Name	WEAF, New York, N. Y. 491.5 WEAO, Columbus, Obio. 293.9 WEAR, Cleveland, O. 389.4	5:00-11:30 6:26- 9:35	5:00-10:00 5:00- 9:0	7:00-8:00 7:00-8:0	00 5:00-11:00 00 Silent	WEAF, New York, N. Y.	491.5 6:00- 293.9 8:00-	12:30 8:15-10:15 9:00 Silent	Silent 6:00-11:30 Silent	9:00-10:30 6:00-10:00 Silent	Silent 6:00-12:00 9:00-10:20	Silent 6:00-12:00 Silent	6:00-12:00
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	WIP, Philadelphia, Pa 508.2 WJAR, Providence, R. I. 305.9	6:10- 7:10 6:20- 9:15	5:05- 6:30 5:00-11:0 7:00- 8:00 7:00- 8:0	0 6:30-11:00 7:30-12:0 0 5:05- 6:05 5:05-11: 0 7:00-12:00 8:10:1	00 5:05-6:30	WIF, Pattagetphia, Famore	526   811	ent   5.00 - 9.36	8:30- 1:00 6:05- 7:30	Silent 6:09-12:00	7:30-12:00   1 6:05- 7:05	2:00-1:00 6:05-12:00	8:30-10:00 6:05- 7:30
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## 178, Cierwingol, U. 389,4   500-11:00   Silient   5-00-11:00   Silient   5-00-11:00   Silient   Silient	WSB, Atlanta, Ga		10:00-12:00 7:00-10:0 8:00-12:00 8:00-12:0 8:1)ent 8:00-0	0 10:00-12:00 7:00-9: 0 10:45-12:00 8:00-12:	00 Silent 00 8:00-12:00	WSAI, Christianti, O	25.9 9:00 128.3 9:00	2:00 4:00-5:00 1:00 8:30-10:15	7:00- 1:00 9:00- 1:00	Silent 8:00-11:10	8:00- 9:00 II 00- 1-00	8:00-10:00 9:00-1:00	Silent Silent 9:00- 1:00
WW, Detroit, Mich. Silent Silent   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.00   5.00-10.0	WTAS, Elgin, III	5:00-11:00 Silent 6:00-12:30 6:00-12:30 6:15-10:00 Silent	5:00-11:00 5:00-6:0 6:00-12:30 6:00-12:3 8llept 6:15-7:3	0 5:00-12:00 5:00- 6: 0 6:00-12:30 6:00- 1: 0 6:30- 1:00 6:15- 7	00 5:00-6:00 30 6:00-12:30 30 6:30-8:00	WTAM, Cleveland, O	89.4 6:00 102.8 7:00	12:00 8:00-10:30 12:00 Silent 1:30 7:00-1:80	8:30-10:00 6:00-12:00 7:00-1:30	Silent 6:00- 7:00 7:00- 1:30	8:30-10:00 6:00- 1:00 7:00- 1:30	Silent 6:00- 7:00	Silent 6:00- 7:00
	WW1, Detroit, Mich	Silent Silent Silent 6:20-9:13	81lent 7:00-10:0 5:00-0:00 5:00-8:0	0 Silent Silent 0 5:00-10:00 5:00-11:	30 5:00- 9:00	WIIC, Hartford Conn	348.6 811 352.7 8:80	9:30 7:20-10:00	Silent 8:00-9:30	8:00- 9:09 6:00- 9:30	8:00-11:00 6:00-11:00	5itent 6:00-12:30	7:10-8:30 8:00-9:00 6:00-9:30

# EV JONES AT WTAM SATURDAY NIGHT

### Saturday, April 18

### Eastern Time Stations

The following schedules of programs are given in Eastern time. To change to Central time, subtract one hour; Mountain time, subtract two hours; Pacific time, subtract three hours.

Saturday, allost nibbt for: ATD, CFAC, CFCA, OMIC, OMNC, CKY, KFAB, KFAE, KFDM, KFKU, KFKX, KFMQ, KJF, KLX, KOB, MSAC, WBAF, WBAY, WCAU, WCBD, WOWF, WEAO, WEAF, WBAY, WCAU, WCBD, WOWF, WEAO, WEAF, WBAY, WGAU, WGBD, WOWF, WEAO, WGAT, WHAT, WHAZ, WHS, WHO, WJR, WSST, WHA, WHAD, WHAZ, WHS, WHO, WJR, WSST, WHA, WHAZ, WHS, WHO, WJR, WJF, WKAG, WGA, Chore, WGAT, W

special program, Gien C. Smith's Paramount orchestra.

William Work, N. (272,6), S. Dm. Carl Park,

William S. 19, Mrs. L. M. Brown, soprano; S. 20,

Bible questions and answers; S. 24, Mrs. L. M. Brown,

soprano; S. 30, Carl Park, violinat.

WEL, Springheld, Mass. (333,3), 6, p. m., Leo Redmark,

WEL, Springheld, Mass. (333,3), 6, p. m., Leo Redmark,

Setetches from U. S. naval batony, E. S. R. Brooti;

7, 30, Gendyno, Isabelle Havens, soprano; Mrs. Juse

Momo, plasmis; S. Old North church, 150th anniversary

of Paul Enervier Tides, opposites, Vice-Pres. Charle of

H. Dewart; Paul Revere; 10,95, Ben Rosenberg, bast
tone.

tone.

WCAE, Pittsburgh, Pa. (481.3), 6:30 p. m., dinner concert. William Penn botel; S. Current Motor topics; S.30, Slivier Harmon; four; Mary Flaher, soprange, WCX, Detreit, Mich. (516.9), 4:15 p. m., masical pro-

gram.

WEAF, New York, N. Y. (491.5), 6:45-7:45 a. m.,

Metropolitan tower health drill; 4-4:15 p. m., Aline

### Headliners of the Week

Ev JONES and his WTAM dance orchestra are always popular with fans on Saturday nights. Besides, playing irresistible dance music, they give the faus many unique

music, they give the raus many unique surprises.

WBZ celebrates all the important events of our early history. This Sunday is the 150th anuiversary of the start of the American Revolutionary war. Many famous speakers will take part in the program held in Boston and breadcast by this station. Among the guests of honor will be General Pershins.

All the fun and frivolity wished for may be had Monday at IKFWB, Hollywood. Harry Seymour is in charge of the 10 p. m., Pacific time, program. All fans with a wish for serious music and solemn talks must tune elsewhers.

whers.

Tuesday is an important day in New York. The speakers of the Associated Press luncheon may be heard over the microphone of WJZ. Frank B. Noyes, president of the Associated Press, and General Charles G. Dawes, vice-president of the United States, are the chief speakers. WGBS

Hurrell, septano: 4:15-5. Adolph Snyder's Spring Lake orchestra; 5-7. dinner music, Waldorf-Astoria hotel; 7-7.50. Services, United Synagorgu of America; 7:30-7. dinner music, Waldorf-Astoria hotel; 7-7.50. Services, United Synagorgu of America; 7:30-7. dinner; 7:30-7. dinner; 7:30-7. dinner; 7:30-7. dinner; 7:30-7. dinner; 8-8-15. Was available; 18-16-8-16. Huyler's Foremast Fun; 8-8-5. degree male quartet; 9:20-9:20, Bergee male quartet; 9:

announces the beginning of the Pathe recording competition Tuesday eve-ning. All non-recording artists may compete and thus become recording

oropete and thus become recording artists.

The Shakespeare readings scheduled at KFAE Wednesday will be well worth tuning in for. Dr. H. Spencer will read scenes from "The Taming of the Shrew," "Romeo and Juliet," and "Macbeth." This same evening WFI is featuring the Geneva College Glee club and the usual college preram of peppy songs and yells.

"Pershing Night" under the auspices of the Pan-American union will be broadcast by WRC, WJZ and WGY Thursday. General John J. Pershing will be the guest speaker. Latin-American music will be played by the United States Army band. Leopoldo Gutleirez, celebrated Chilean bariton, will sing. will sing.

Newspaper reporters and editors Newspaper reporters and editors will enjoy the lecture to be given Friday at WHA by Professor W. G. Bleyer, director of the course in journalism at the University of Wisconslu. He will talk on "The First American Newspaper."

Bob Emmerren, popular preserve, and Switz, Markette Markette, Mark

gram; address, Aine LeBland; 9:39, Beunand's or-chestra. WHN, New York. N. Y. (381.2), 4:45-5:39 p. m., dance music. Broadway Melody boys; 6:39-7, violit unifs, Olocit Vall; 7:77:39, Hotel Alamac dance orchestra 7:30-7:36, lesthit talk. Dr. Landit; 7:35-8:59, Burlat Carlton Terrace orchestra; 5:39-8, Strand root orchestra; 2:18-3:53, Jinney Clark and its White Way enter-

2:18-3:45. Jimoy Clark and his White Way entertainers.

VPP, Philadelphia, Pe. (508.2), 7 a. m., settling-up
exercises; 10. daily menu taik; np. m., Karl Bonsexercises; 10. daily menu taik; np. m., Karl Bonstaily McKee; 13.5. Clarence Seamon's concert ordertra; 7. Uncle Wip's bedding stories; 8. "Practical
Distraction" talk by Least Gernbenfeld, B. S., 8:15.

Billy McKee; 21.5. Clarence Seamon's concert ordertra; 7. Uncle Wip's bedding stories; 8. "Practical
Distraction" talk by Least Gernbenfeld, B. S., 8:15.

Home, 'talk by Joseph R. Wilson; 9. National Convention of Workers Education bureau; 19:05. Howard,
Larini's dance orchestra; 11:05. Karl Bonswitz, organist,
My New York, N. Y. (46-3), 1-2 b. nn. Erdody's
7-3. Freddle Bien and Hotel Astor concert acressira;
8-8-30. Wurlbarer's musicale; 2:30-8:45. Silvi's Mold,
bartione; 10:30-11:30, Joseph Knecht's Weldorf-Astoria
dance Orchestra;
8-8-30. Clarence and Molecular and States of the State

barilos: 10:30-11130, Joseph Knecht: Weison: Annova dance orchestala, Pa. (394.5), 12:02 p. n., dally albanes: Scalley bases organ trebal: Arradi calc blance: Scalley bases organ trebal: Arradi calc Winder, tenor: 4:30, dance orchestra: 7:30, Arradia calc connect orchestra. WNYO, New York, M. (529), 6-6-30 p. m., Club Albana orchestra: 7:30-8, Clattee Four: S-3:10, talk.

city official; 8:15-8:45, Instrumental novelties; 2, politoc quartet; 9:30-10, music; 10:10-10:20, cract WOO. Philadelphia, Pa. (508.2), 11 a. m., organ recital. Mary E. Vogt; 12:20 p. m. Golden's ten room orchestra; 4:45, orsan recital. Mary E. Vogt. WRC, Washington, D. C. (488.5), 4:20-5:30 p. m., ten music, Mayer Davis, Le Paridia band; 6:35, children's betel ornester; 7:45, Bible talk; 8, Wurlfers musicale with W72; 8:30, to be announced; 10, Vincent Lopez Hotel Markets; 7:45, Bible talk; 8, Wurlfers musicale with W72; 8:30, to be announced; 10, Vincent Lopez Hotel Markets; 12:30, Christian and WRCO. Lamien, Mich. Gara, 10:30, Christian and WRCO. Lamien, Mich. Gara, 10:30, 10:12 midnight, Frank Uram, 10:10 midnight, Frank Logen and bis orchestra. 8:30, Carl Rupp und his Hollenden oncert orchestra; 8:30, Carl Rupp und his Hollenden his WTAM dance orchestra; 10:30 Feric, bartiono: Catherine Townley, plantet.

### Central Time Stations

Central lime Stations
The following schedules of programs are given in Central time. To change to Eastern time, add one hour; Mountain time, subtract one hour; Paofile time, subtract two hours.

Eastern time, add one hour; Mountain time, subtract two hours.

KFNF, Shenandsh, Isia (280), 6:30 p. m., Soutch pregram, E. S. Dodds, director; 0, concert from Papillers, and the state of the state of



Mabel Stacy (above), dramatic artist, will give a series of readings on the afternoon programs between 2:30-4:30 p. m., at WGR, Buffalo. Miss Stary's readings are obveys amoning and these programs will be a rare treat for the Radio fan who is able to tune in during the day.



Nora Yoder (left) is one of the charming coeds of the Kansas State college who entertains at ESAC, the college station at Manbattan. Rosemary Ellerbrock (above) is the pianist with the Milnor trio which plays weekly at WLW.

the same street is

# PATHE RECORDING CONTEST AT WGBS

### Saturday, April 18

### (Continued from page 9)

ert; Lafafone, E. D. Leonard; 7, Morton High school cert; Lefafone, E. D. Leenard; 7, Motton High school band.
WMC, MSD, Pierrani, (499.7), 7:39 p. m., news reWMC, MSD, Pierrani, (529), 6 p. m., Oramatic heart.
Davis Studio of Expression; 6:30, to be announced; 6:45, Williard Robison and his orchestra; 7:30, weekly address, Ognaba Chamber of Commerce; 9, snogram, amspices Omaha Chamber of Commerce; 9, snogram, amspices Omaha Principa company; 11, Frank W., Arthur Haya, organia Nightimadle orchestra; 11:30, Arthur Haya, organia, 6:30, 6:30 p. m., sandman's visit; 9:10, program, Citisens Trust & Sardags bank; 11:21, Louis Commer and his LeClatre bootle orchestra; 11:22, Louis Commer and his LeClatre bootle orchestra; 11:23, Louis Commer and his LeClatre bootle orchestra; 11:24, Louis Commer and his LeClatre bootle orchestra; 11:24, Louis Commer and his LeClatre bootle orchestra; 11:25, Louis Commer and his LeClatre bootle orchestra; 11:26, Louis Commer and his commerce of the louis Commerce of

WSAI, Gineimati, Ohlo (25.9), 7:15 p. m., children;
WSAI, Gineimati, Ohlo (25.9), 7:15 p. m., children;
story, Mrs. Ethel Knapp Behrman; S. chimes; 8:15,
Bleycle sextet; O, new review, Allison F. Manie;
8:15, Bleycle male quartet, Bleycle mixed quartet; 12,
WSAI, Children (15.8), 3.1 c. p. m., Sunday school
leven, Dr. Marion, McKhill; 8-9, excepts from "OrpRower: U-0.45, Journal Bired Help Stylark,
WTAS, Etsin, Ill. (302.8), 8-10-39 p.m., WTAS orchestra.

### Mountain Time Stations

The following schedules of programs are given in Mountain time. To change to Eastern time, add two hours; Central



Walter Cohen, although only officer years officer years of the stream of

time, add one hour; Pacific time, subtract

KOA, Denver, Colo. (322.4), 12:26-12:50 p. m., Rishto organ recital; 2-12, Joe Mann and bis Rainbow-Lane orchestra.

### Pacific Time Stations

offen recital; 9-12, Joe Final Stations

The following schedules of programs are given in Pacific time. To change to Eastern time, add three hours; Central time, and three hours; Central time, and two hours; Mountain time, and KFI, Los Angeles, Calif. (688-5), 5:20-6 p. m., Examinar's musical half hour; 6:45-7. Raditorial talk; 7:15, Loke Arrowhead lance ordestra. Carroll Hurley, 17:15, Loke Arrowhead lance ordestra. Carroll Hurley, 18:16, Lower of Commerce presented by the Lot Angeles Etamine; 9-10, Sunshine girls trib, Den W. Egath, 19:10; 1 seen-classical Barney, Weber, Packard melong girls, Derothy Cleveland and others. Republished the Commerce presented by the Lot Angeles Etamine; 9-10, Sunshine girls trib, Den M. Egath, 19:10; 1 seen-classical Barney, Weber, Packard melong girls, Derothy Cleveland and others. Ref. 145-43, 12-20-1:30 p. m., monetalists; 6-5:45, Olympic hole connect states of Commerce; 45-5:15. Olympic hole etametrs; 6-5:45, Olympic hole connect states of Commerce; 10-20-1:30 p. m., monetalists; 6-5:45, Olympic hole connect states of Commerce; 10-20-1:30 p. m., monetalists; 6-5:45, Olympic hole connect states of Commerce; 10-20-1:30 p. m., monetalists; 6-5:45, Olympic hole connects; 6-5:45, Olympic h

/, Portland, Ore. (491.5), 10 p. m., Mulinomab

chestes.

KH.J. Strollers.

KH.J. Les Angeles, Calif. (495.2), 6-5:30 p. m., Art Holsons KH.J. Les Angeles, Calif. (495.2), 6-5:30 p. m., Art Holsons-1 Bilmore host concet orchestre, Edward Pitapatrick, director; 6:30-7:30, little stories American 7: years; Betty Beames, 6 years; readings; Beatrice March, sween juvenile; Francis White, soprano; Uncle John; 7:30-8, program by the Y. M. C. A. Colombia theory Electric corporation arranged by J. Howyrd Johnson; 10-11, Art Holkowars Elithore botel dame or cheetrs, Earl Buttnett, Seader; 11-2 a. m., Lost Angelo KIR, Scattic, Wash. (394.4), 1-1:30 p. m., Post-Intelligencer musicale; 1:30-2, sports review, Hoyal Brougham; 6:6:30, "What Is Doing at the Theatre, p. m., With It Calif. (35:50), 6:35-6:7; p. m. Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Post-Intelligencer musicale; 1:30-2, sports review, Hoyal Brougham; 6:6:30, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m., Vertical (6:5:50, "What Is Doing at the Theatre, p. m

### Sunday, April 19

Sunday, silent night for: AT9, CFAC, CFCA, CKAC, CHIG. CHNC. KFAB, KFAE, KFDM, KFKU, KFKX, KFMQ, KFGA, KXX, KOB, KSAC, KSD, WDAF, WOW, WEAO, WEBJ, WGSW, WGEF, WGST, WAA, WHAD, WHAS, WHAZ, WIP, WJAD, WJY, WLBL, WLIT, WMAK, WMC, WOI, WRG, WSAC, WSAI.

### Eastern Time Stations

KDKA, Pittsburgh, Pa. (309.1), 11 a. m., First Uni-tarian church; address, Dr. Kiropp Lake; 2:30 p. n., Welthphouse Symphony ordesia: 2. Dr. Charles Helling and Charles and Charles and Charles church; 6:30, Pittsburgh Albielle association orches-tra; 7:30, Calrary Episcopal church. WBBR, New York, N. Y. (272.6), 10 a. m., Watch-lower orchestra; 10:10, Mrs. L. M. Brown, soprano; "With What Body Do They Come?" E. J. Coward; J. Miss. L. M. Erown, soprano; 11:10, Watchlower

orchestra; 9 p. m., instrumental trio; 9:15, I. B. S. A. chocal singers; "Coming Back from Hell," Normac Woodworth; 10, I. B. S. A. choral singers; 10:05. H. Griggs, cellist; 10:15, instrumental trio; 10:25, choral

Woodworth; 10, 15, 8, 8, A moral angers; 10.35, 8, 16-125, cloral, 16-125, clo

5-5-35 p. m., veresses sections.

organ.

WEAF, New Yerk, N. Y. (491.5), 3-5 p. m., "Sunday

Hymn Slug," Federation of churches; 7:20-0:15, Rosy

and his Gang, Capitol theater; 9:15-10:15, organ re-

with the state of the state of

Wall Waltar Presourcia (Control Service, William Wall Waltar) or Bobert J. MacApine, speaker, speaker, with the MacApine of Ma

W.A.R., Froeldence, R. I. (305.9), 7.20-9.15 D. m., Bowand his Gong; 915-10-15, organ rectial from New
York,
W.Z. New York, M. Y. (404.3), 9-10 a. m., children's
hour; 13-13, disents servicen; 2.30-3 p. m., Radio,
with the servicent servicent servicent servicents
hour; 13-13, disents servicent servicents,
hours, 13-13, 200-20, m., Radio,
hours, 13-13, 200-20, m., Radio,
heaper services. St. George's church; 7-8, Nathan
Almes Hotel Penneylvania orchestrs; 8-8-15, Viola K.
Netert, sopron; 8-15-8-30, program, American OrchesNetert, sopron; 8-15-8-30, program, American Orchesheater, 19-10-10, program, 19-10-10, program, 19-10-10,
with a servicent servicent servicent servicents,
with a servicent servicent

MacLennon. With. (285.5), 10 s. m., himes, Dolfyw WEED, Laraling, Mich. (285.5), 10 s. m., himes, Dolfyr Pbromuth Congregational church; services, St. Paul's Epistopate futurch, Rev. Virgil Boyer; Bruce E. Hartington, engradist; 7:30, Pirat Baptist church, Dr. Ralph W. Hobbs, postor; Mrs. Henry Chamber, organist. WWJ. Debreit, Mich. (352.7), 11 a. m., seerices, St. Paul's Epistopati alchhedizi 2 p. m., Deitroit News or chester; Chacles A. Fayno, speaker; 7:20, Hony and the gauge; 9:15, organ receital.

WCCO, Minnsapolis-St. Paul, Minn. (416.4), 10-20 a. m., Pymouth Congregational church, Rev. H. P. Dewey, pastor; 3:30 pt. a. surprise program; 7:43, Hennephi Avenue M. E. church; 9:15, Ereliyn Hanson, planist: Insecore Guoda, pisanist; Paul Davin, tenor; Mix. WDAF, Kansas City, Mo. (355.6), 4-5 p. m., Kensas City, Symphony corcleatin; 5-5-30, interactional Sunday school leason, Dr. Waiter L. Witson. WEBH, Chiesapo, III. (370.2), 2-6 p. m., twillight muskets; 7-9, artists program.

we Bell, Chicago, Ill. (370.2), 5-0 m., twilight musicate; 7-9, artists program.

we Bell, Chicago, Ill. (370.2), 5-0 m., twilight musicate; 7-9, artists program.

we Bell, Bell, Wis. (289.8), 4:25 p. m., vespers, Beloit we Bell, Wis. (289.8), 4:25 p. m., vespers, Beloit service, Ocal Hoover, exacphonds; Mary Lamion, reader; 8:13. chapel service, Ernest Hurd, tenor; WFAA, Dallas, Texas (275.9), 6-7 p. m., Radio Bible class, Dr. William M. Anderson, paster; 7:30-8:39. First Methodis Episcopal church; 9:39-11, Jack Gard-WRN, Chicago, Ill. (370.2), 11:45 a. m., Chicago theater; 2: p. m., organ Lyon & Healty 2: 30. Tribour theater; 2: p. m., organ Lyon & Healty 2: 30. Tribour master artist concent; 3:30. Chicago Musical college, Gabriel, Jr.; Ethel Walkeneld, sopraine; Druty Leningston, tenor.

WRN, Chicago, Ill. (370.2), 11:45 a. m., Chicago (19.1), 12: Ethel Walkeneld, sopraine; Druty Leningston, tenor.

WRA, S. Lesisville, Ky. (289.8), 5-57 a. m., organ musical college, the control of the college of the college

### Mountain Time Stations

CFCA, Calgary, Gan. (435), 7 p. m., Seventh Day Adventists church. Elder H. Woods.
KOA, Denver, Cele. (32.24), 11 a. m., Trinity Methodist Ebleopal church; 4 p. m., Trinity orchestrs; Shad J. Tinsley; 7:30, Trinity Methodist Epleopal church.

### Pacific Time Stations

KF1, Lns Angeles, Callf. (468.5), 6:45-7 p. m., Radio-torial talk; 7-8, program, Metropolitae theater, Adel



Here are Guy Lombardo's Royal Canadians. They are from left to right, Carmen, Guy and Herbert Lombardo and may be heard on the Monday and Friday dinner concerts of WTAM.

### Central Time Stations

Winnipeg, Can. (384.4), 7 p. m., Westminster syterian church; 8:45, Winnineg Grenadier Guards

UXY. Winnipeg. Can. (284.4). 7 p. m., Wesiminster Probycerian clourch; 8:45, Winnineg Grenader Guarde Freshyterian clourch; 8:45, Winnineg Grenader Guarde KFAB. Linealn, Nebr. (240). 4 p. m., church service, KFNF, Shenandaah, Iowa (266), 10:45 a. m., First M. E. church; 2:30 p. m., services, Rev. and Mrs. Hanley; Golden, Rule etrele; 8. Christian church (1907), 10:30. Golden, Rule etrele; 8. Spinon, 10:30. Sule of creating church (1907), 10:30. Golden, 10:30. G

Targiter's 45-piece concert orchestra; 3-3. Virginis Flohni, somano, Marsuvelle LeCtronic cascert planiste; 5-16. Examiner, Clinderalla ballione concert planiste; 9-16. Examiner, Clinderalla ballione concept planiste; 20-16. Examiner, Clinderalla ballione corchestra, Bill Hennessoy, leader.

[KFWB, Hollywood, Callf. (252), 9-11 p. m., morie might in monishmir, state of screen do their sluff, KFWB, Hollywood, Callf. (252), 9-11 p. m., morie might in monishmir, state of screen do their sluff, KGO, Oakhand, Callf. (381.2), 11 a. m., St. Latke's Episcopal church.

KGO, Oakhand, Callf. (381.2), 11 a. m., St. Latke's Episcopal church.

KGW, Pertland, Ore. (491.5), 10-30 a. m., Preshyterian church: 8 p. m., Pertland Council of churches; 7. Colburt concert orchestra.

KHJ. Las Angeles, Called Concert orchestra, Kowata Pilipatrick, director: 7:7-30-8-315, program, International Bible Students associations, St. 16-11, program, Hardel J., Arnold, Inc., Arnold, Inc., Marthy, State C., Arnold, Conc., N. (19. Sattle, 283a, S36-4), 135 m., First Metho-Nath, 183b, 185b, 185c, 185c, 195c, 195

arranged by A. Roward Johnson.

KR. Shittle, Wash. (284-4), 11:30 a. m., First Methodist Episcopal church, J. Reiph Magee, pastor; 7 p. m., First Methodist Episcopal church, 1. Reiph Magee, pastor; 7 p. m., First Methodist Episcopal church, KNX, Hellywood, Calif. (438-9), 5-6-15 p. m., Radio suncet aercice, Ambassadon holed church - sooducted by Rev. Chas. F. Akod and Rev. Frank Diver; 7-8, pm-tram. First Preshylerian church of Hollywood; 8-9, Ambassadon holed concert archestra, Josef Rosenfeld, directing 2-12, program, R. C. Cultif. Durana.

urector; 9-21, program, R. C. "Cliff" Durant, KPO, San Francisco, Calif. (429.5), 6-7,30 p. m., States restaurant, orchestra; 8:30-10, Rudy, Seiger's Fatranni botel orchestra.

### Monday, April 20

Monday, silent night for: ATS, CHIC, CKAC, CKY, KFDM, KFMQ, KGW, KYW, PWX, WBCN, WGAU, WDWF, WEAO, WEBH, WEBJ, WGBS, WHAS, WIY, WKAQ, WIBL, WLS, WMAQ, WGC, WOAI, WQJ, WRC, WREO, WSAG.

### Eastern Time Stations

Eastern Time Stations
CHNC, Toroato, Cam. (357), 8:39 p. m. CHNC, trio, Frank Bladisford violains; Leo Smith, cellist; Harvey Bobb, planks; Rigoletto, mixed quartet, Madeline Defoc, teory: Edgar Smith, bass.
DNRA, Manston, Can. (312.3), 8:30 p. m., special mustches are the forest week; address, Hon. Peter J. Veniot, save the forest week; address, Hon. Peter J. Veniot, Ch. M. G. M. A. J.L. B., LLD., Prime, Minister of Grost week, address, Hon, W. L. Mackenaje Ring, C. M. G. M. A. J.L. B., LLD., Prime, Minister of Canada.
Condestra; 6:15, KDRA, Little Symphoty orchestra; 6:15, address, University of Pittsburgh; 8:30, cett; 10:10, Rund Light Opera hour.
WAHG, Richard H. Schaller, Stationard Condestra; 6:15, Marguerite Behling, soprane, 8:15-8:30, Horses, J. Taylor, reader; 8:30-8, Synchrophase string (17), 8:20-13, Marguerite Behling, soprane, 8:15-8:30, Horses, 17, 18-18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18, 18-18

Waldine John-son, violinist, has been ap-pearing for some time on the programs of WSAI. Miss of WSAI. Miss Johnson is one of the pioneer Radio artists of Cincinnati and is well known to fans all over the country.



WBAV, Calumbus, Ohle (293.7), 8-10 p. m., WBAV critesita.

WBBR, New York, N. Y. (272.6), 8 p. m., Syrian music. Touthe Moubaid, Elizabeth Awad; 3:10. Ruth WBBR, New York, N. Y. (272.6), 8 p. m., Syrian music. Touthe Moubaid, Elizabeth Awad; 3:10. Ruth de Boar; 8:50. Syrian oriental off news; 5:40. Ruth de WEZ, Springfield, Mass. (333.3), 6 p. m., Westinghouse Phillistoneous The World to Day, 19 p. 19 p.

Marinoctiss: 6:308-6:35, last minute news. Chimber of Commerce; 6:35-7, Lew Kreuger's Alladid dance orchestra.

Weft, Bufflab, N. Y. (319), 2:30-4:30 p. m., affector; 6-6:30, with the control of the co

trs: 11:30-12. Jim Carr and his Silver Empper exchestra.

WIP. Philadelphia, Pa. (508.2), 7 a. m., setting-up exercises, 20, daily neme talk; 1 p. m., Glubel tas main ordentra; 3, "Blow the Electrate Can Edy Brought Problems," talk by Mts. John D. Samuell, Brought Froblems, and they Mts. John D. Samuell, Brought Fremer, plants; 7, "Hints on Home Cartrude Erzeman, plants; Flowmen Modell, soprano; Gertrude Erzeman, plants; Flowmen Modell, soprano; Gertrude Erzeman, plants; 7, "Hints on Home Cardoning," talk by Charles K. Hallowell; 6:55, Clarence Scannor's concert corchestra; 7, Uncle Wip's bedding stories; dandeng lessons by Miller Conservatory of WIAR, Pravidence, R. I. (30.59, 10 a. m., Mrs. Wood; 1:05 p. m., studio program; 8, musical program; 9, A. & P. (Popsy string cameble.

WIZ, New York, N. Y. (454.3), 13-10:20 s. m., Honsewitzer, Lessons metal. Miss. Julian Heath; 10:20-10:30, "(Continued on page 11)

# PERSHING NIGHT AT WRC THURSDAY

### Monday, April 20

(Continued from page 10)

roug: reuna; x-so-rilb: nostrumental program; 10:1010:10, tella; Dr. Sidney N. Unsist;
WOO, Philadelphia, (508.2), 11 a. m. organ reclusi,
Mary E. Nogri 2:20 p. m., dolleni et er roum ori
Mary E. Nogri 2:20 p. m., dolleni et er roum ori
Mcary 1: Nogri 2:20 p. m., dolleni et er roum ori
A. Candelori's connecti orchestra; 8, concert from
WEAF; 1:003, exgan reclusi, Mary E. Vogt; 10:30,
Vincent Rizzo's dance orchestra.
McC. Washington, D. G. (68.5), 1-2 p. m., luncheon
nusic, Skinney Seldenman's Shoreham hotal orchestra:
Daris' New Willard hotel trip: 6, children's Radio
nusic club, Peggy Albion.
WWJ, Defroit, Mich. (352.7), 8 a. m., setting-up exercisea, R. J. Horton; 13:05 p. m., Jules Klein's
Hotel Skaler orchestra; 3, Detroit News orchestra; 8, concert
from WEAF.

### Central Time Stations

KFAB, Lincoln, Nebr. (240), 7:39-8:30 p. m., Lincoln Wholesale Credit Men's association; 8:30-10. Collegians orchestra; Verne E. Powell, saxophone witsard, Orville Andrews. Butch sing bird; Honolulu Royals Hawajian enteraliners. (KFKU, Lawrence, Kan. (25), 6:50 p. m., piane tunitser, and the condition. (East Scholessen); 7:30, 7:10 Night of the Performance, "Prof. Alien Crafton; 7:45, Spanish lesson.

of the Petformance, Arm. anter assession, program, Frof. Halley, Frof. Allen, Prof. Aller, Prof. Aller, Frof. Aller, Frof. Aller, Sandard, S. (260), 6:30 p. m. Henry Field Seed company, 8:30, Smith-Bedding Iris. KFRU, Gristow, Okla. (384.8), 7:3 p. m., Oklahoma educational hour; 5:410-30, entertainment.

WEBW. Beleit, Wis. (268), 8 p. m., A. Capella choir: tsik, Prof. R. B. Way.

WEMO, Berries Springs, Mich. (265.5), 8:15 p. m.,

WEMO, Berries Springs, Mich. (265.5), 8:15 p. m.,

WFAA, Oallas, fre. (475.9), 12:304 p. m., eaders,

Dr. J. D. Boon; 8:309-2:30, Young Women's manufact.

Loyon & Healy: 8:309-2:30, Young Women's manufact.

Loyon & Healy: 8:309-7, Drake concert ensemble. Blacks stone string quintet.

WGST, Atlanta, Ga. (270), 8:10 p. m., Georgia Tech glee clib orecontral.

WGST, Atlanta, Ga. (270), 8:10 p. m., Roergia Tech glee clib orecontral.

WHAD, Miswakeb, Wis. 2(25), 7:30 p. m., Marquette studio program, Racter orecus e.m., m., acheg! of massle program, chorst order.

WHAD, Miswakeb, Wis. (225), 5:30 p. m., Marquette studio program, Racter orecus e.m., m., Lostaville studio program, Racter orecus e.m., m., Lostaville studio program, Racter orecus e.m., m., Lostaville (MCS), 2:30 p. m., program, it. Encusan Arestmosts, arranged by Unde John.

WHAD, Miswakeb, Wis. (255.0), 5:31 p. m., Lostaville (MCS), 2:30 p. m., program, it. Encusan Arestmosts, arranged by Unde John.

WHA, Conservatory of Music.

WHA, Conservatory

WFI, Philadelphia, Pa. (394.5), 1.0 m., Meyer Davis Bellevue Stratford concert orchestra; 3, Philadelphia music cish; 4:39, American day program; 6. Pat Patterson's orchestra; 6:30, Mayer Davis Bellevue Patterson's orchestra; 6:30, Mayer Davis Bellevue Concert from WEAF; 8:30, Gold Dust Twins; 9, Concert from WEAF; 8:30, Gold Dust Twins; 9, Everseady hour.
WGBS, New Yerk, N. Y. (315.6), 10-10:10, 20, Helens Timely Twins; 90, Toursen, 10:10-10:20, Helens Gold, Patterson, 10:30-10:30, Helens Gold, Patterson, 10:30-10:30, Letterson, 10:30-10:30, Helens Shepard; 10:40-10:50, talk confedy prints, Florense Gardner; 10:50-11, Retard Shepard; 1:30-1:35, p. m., Scripture reading; 3-5:30, Drawing Reom Players with Generic Williams, propriate, 10:30-10:30, Letterson, 10:30-1

orshestra: 11-12, Joseph Strissof's Hotel Vandembils with Staffan, N. Y. (319), 2204-220, p. m., afternoon musical program, A. J. Eritman, director; 8-11, finishing with WEAF, including Gold Dust Twins and Everedy WCY, Schenettady, N. Y. (379.5), 2 p. m., "The Mouse Trap." Harry Bond players; 2:39, Stochen English of the String William of the Eastern States". Harry Enois Stevenson and the Staffan Staffan, Spanjan, S. Brunswick mour of music; 10. "Over the Steven Seas," 10.39, Mayer Davis orchestra. S. program; 5. Brunswick mour of music; 10. "Over the Steven Seas," 10.39, Mayer Davis orchestra recital from Lewis Lexifon, Mayer Davis orchestra recital from Lewis Lexifon thesetre; 21:5-3:15, m., organ recital from Lewis Lexifon thesetre; 21:5-3:16, program from Lewis Lexifon thesetre; 21:5-3:16, program from Lewis Lexifon the Steven Stafe theater; 6:30-7. Lexifon Lewis Lexifon the Craft of the Computer of the Compu

Ecercady hour; 10, Goodrich Silverrown Occo or-chestra. Vor. N. Y. (485.2), 2-3 pp., 2 Pennsylvacia, Society Juncheon; 3:30-8:45. Elemor Van Der Kar, soprano; 9:45-10;30, pragram, American Pen Women, NIZ. New York, N. Y. (484.5), 10-10:30 a. m., House-wires Lessye menn, Mr., Julian Roshi, 10:30-10:30, wires Lessye menn, Mr., Julian Roshi, 10:30-10:30, Dime, Grace P. Noxon; 10:50-11, fashion talk, Eleanor Gunn; 1-2 p. m., Nathan Abas Hoste Penn-sylvania orchestra; 2:10-3:10, Associated Press lunch-on; 44:15, Lloyd W. Johnston, battone; 4:16-4:30,



Emanuel Eaer (left), assistant conductor of the Rivoli orchestra and accompanist for the artists who broadcast regularly every night on the Riesenfeld programs at WNYC, New York, Mangaret Anderson will play the plane Sunday afternoon at KYW, Chicago. George Milton Lipschultz, conductor of the Warfield Music Masters, heard three nights a week at KPO, San Francisco.

Lipschultz, conductor of the Warfield Music Masters, heard three nights a week at EPO, San Francisco.

WHO, Des Meines, Ia. (528), 7:30-8 D. m., Stewart Waston, bartione; Relen Birmintham, accompanist; Relengen Contents; Relengen Francisco, Rele

Mountain Time Stations

KOA, Denver, Cele. (322.4), 8 p. m., ten minutes of music, Crad Schmitt and his Rialto Deater ordestra: Smith, contracts. Smith, contracts. K69, State Cellege, N. M. (348.6), 7:30-8:30 n. m., "First Aid, Medical and Surgical," Dr. T. C. Sexton.

### Pacific Time Stations

Eastern Timo Stations

CNRA, Menton, Can. (312.3), 3:39 p. m., program, St. John, N. B.; wized quarter; Charles Staeddouse, tenor; Ermine, soprano; Mrs. T. J. Gunn, violanist; Elenda S. Thousson, contraito; A. C. Sauth, tenor; St. John, A. C. Sauth, tenor; CRRA, declared, tenor; CRRA, declared, tenor; CRRA, crobestra, Crife, Diantis; A. C. Sauth, tenor; CRRA, crobestra, Crife, Diantis; C. Sauth, C. Sauth

Central Time Stations
CKY, Winsipes, Can. (384.4), 7:39 p. m., lecture, Prof.
W T. Allison; 8:15, French concert, Yvonne Thibault
and party. (Continued on page 12) .



theater; 8:308, purgram; 10, 8t. Marris chotf., Elimer H. F. Ruhe, director.

KTHS., Hot Springs National Park, Ark. (374.8), 8:30-9:15 p. m., connecti; Mir. Allie C. Hendinger; 9:15-10, shandest and popular selections, Meyer Davis-New Artimaton hotel orchesters; 10-11, done Lunes, Charles W. A. P. Control of the Contro

John Mehaffey, Dianist, Carance Dulmage, reader; WCCO, Minneapelis-St, Paul, Minn. (446.4), 2 p. m., "Window Treatments," M. Lola Reed; 215. My John Charles and Carachaman Cara

Dinnaugh, banjotat.
WCEE, Elion, HI. (275), 10:30-12 midnight, Charline star Monday program; WTAS orthesta.
WDAF, Kansse City, Mo. (365.6), 33-04:30 D. m., program, Newman and Royal theater; 6-7, Cerile barton, reader; Tatanon ensemble; 8-7-10, Franche limit, Watter & Brench, Gleester; 1 washer gives cibi; 11:36-1, https://doi.org/10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.10.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.pm.1016/j.

# WBZ CELEBRATES 150TH ANNIVER

### Index to Popular Concerts

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

### Eastern Time Stations

Eastern 1 ime Stations

Saturday, April 18: 6:30, WGBS;
7:10, WGBS; 8, WTAM: 8:05, WEAF;
10, WEAF; 10:15, WGBS; 10:30,
WRC: 10:46, WGBS; 11:15, WGBS;
11:30, WGBS.

511.00, WGBS.

5111day, April 19: 7:20, WEAF, WEEL, WJAR, WWJ; 8:30, WCAU; 10, WHN.

WEEL, WJAR, WWJ; 8:30, WGAU;
MONDAY, April 20: 6, WGR; 6:30,
WGY; 7:30, WEEL; 8, WWJ; 8:30,
WAHG; WCAE; 9, WEAF, WEEL;
9:30, WAHG; 10:15,
WAHG; 11:30, WMAK,
Tuesday, April 21, WEAF,
WEEL; 8, WF, WAH,
WEEL; 8, WCAE, WEAF,
WCAU; 9, WCAE, WEAF,
WF; 9:30, WGR; 10, WGR
Wednesday, April 22: 7:30, WAHG;
8, WWJ; 8:40, WHN; 8:45, WEE,
WG; 9, WGR; 10, WEEL; 10:30,
WGR.
Thursday, April 23: 7:10 WGRS

Thursday, April 23: 7:10, WGBS; 115, WEEL; 8, WEAF; 8:20, WBBR; 50, WBBR; 9, KDKA; 9:30, WHN; b, WEAR; II:15, WGBS; 11:30, WBZ.

10, WEAR; 11:15, WGBS; 11:30, WDA: Friday, April 24: 6:05, WTP; 6:15; WP; 6:35, WGBS; 7:10, WGBS; 8, WEAF, WGR; 8:30, WCAU; 9:15, WEAF, WUY; 9:30, WGR; 10, WLIT; 10:05, WAHG.

### Central Time Stations

Saturday, April 18: 6, WOAW; 7:20, WLS: 8, WGN: 9, WEBH: 9:15, KTHS; 9:45, WOAW: 10, WEBH. WQI: 11, WEBH. WOC, WQJ; 11:15, WLS: 11:45, WDAF: 12, KYW, WEBH, WLW, WQJ, WSUI; 1, KYW,

WOJ.
Sunday, April 19: 8, WBBM; 9:30,
WPAA; 10, KTHS, WBBM: 11,
WBAP, WBEM: 12, WJJD; 1, WJJD,
Monday, April 20: 8:45, WOAW,
MONDAY, MARTIN 11:45, WCCO;
9:30, WBAP; 10, WOI; 11:45, WDAF.

### Mountain Time Stations

Monday, April 20: 8, CFAC, KOA. Tuesday, April 21: 6, KOA. Wednesday, April 22: 8, KOA. Friday, April 24: 8, KOA; 8:30, CNRE.

Pacific Time Stations

Pacific Time Stations

Saturday, April 18: 7-45, KFWB;
8, KFWB, KNX; 9, KFI: 10, KFI,
8, KFWB, KNX; 9, KFI: 10, KFI,
8, KFWB, KNX; 9, KFI: 10, KFI,
6FWB; 9, KFWB, KNX; 10, KFWB;
7-45, KFWB; 9, KFI, KFWB; 10, KFWB, KIX.
7-10, KFWB; 10, KFI, KFWB; 10, KFWB; 10, KFI, KFWB; 10, KFI, KFWB; 10, KFWB; 10, KFI, KFWB; 10, KFWB; 10, KFI, KFWB; 10, KFWB



Frank Blachford, violinist of the faculty of the Toronto Conservatory of Music and member of the CHNC trio, will be heard at CHNC Monday, April 20, Gloria Swanson, the Marquise de la Falaise de la Coudray, will be interviewed Tuesday, April 21, at WGN. Beaders of Radio Diprest are invited to send question to WGN for this interview. Miss Swanson will answer fitty questions asked by Saddo fans during the half hour sine is on the air.

the half hour she is on the air.

the half hour she is on the air.

soprance 10-11, Johnny Bulet's Amphian D. A. Art.

Hickman's Biltumers hold concert orchestra, Edward Fitzantick, diecetor; 6:30-7-29. Hills buckes, American History, Prof. Walter Sylvester Herston; weekly Linds of the Concert orchestra, Edward Fitzantick, diecetor; 6:30-7-29. Hills buckes, American History, Prof. Walter Sylvester Herston; weekly Louis F. Evil Lamba and Radiants from Fatzland. Following F. Evil Lamba and Radiants from Fatzland. Floryane Thompson, centancy; 8-10, program, Pasific Electric Radiany, artisuaged by J. Howard Johnson, Lambard Lambard, and J. Art. Electron's Billimore hotel dance orchestra, Mark Hellywood, Calif. (330-9), 5:45-6:15, D.m., Wurlitzer pibe orzan studo, Sid Ziff's sports talk: 6:30-7:30, program, Globel See Cream company; 7:30, program, First National and Faddit-Southwest banks; 3-10, program, Independent Furniture Manuschassador, Albe Lyman's famous Coconant Grove dance orchestra.

# Wednesday, April 22

KOB. WBAV. WBBR. WGAL, WGAL, WWAZ, WWFAX, WGBS. WGY. WHAZ, WWFAX, WGBS. WGY. WHAZ, WBBW. WFAX, WGBS. WGY. WHAZ, WBWAY. WFAX, WGBS. WGY. WAY. WAZ, WGAW. WFAX, WGBS. WGY. WGAY. WGAY. WGAW. WGAW.

gles club; 6:30. Meyer Davis Bellevue Straiford concert erchestra: 7, bedtime stories. (GBS, New York, N. Y. (315.6), 10-10:10 z. m., "Timely Talke" by "Terese;" 10:10-10-20, Ivan Naughton, plants; 10:20-10-30, fashion talk, Charlotter Long, plants; 10:20-10-30, fashion talk, Charlotter Lescon, Georgia Heffort; 1:30-1:32, p. 20, Seriem Coding; 13:52, Juliet Straid, entertaine; 3-1:10, interview with Albert Howson by Torsee Roy Nagel; 3:10-3:20, Mildred Harley, contratio, 3:20-3:30, Mildred Harley, Contrations; 3:30-3:30, Mildred Har

ra. San Juen, P. R. (340.7), 7-9 p. m., municipal band.

VIT, Philadelphia, Pa. (394.5), 12.02 p. m., dally almanuc; Stanley thenter organ recital; Arcadia cafe concert orchestrit; 2.30, Emma M. Campbell, soprano; concert orchestrit; 2.30, Dream Daddy's bedtine stortes; 2.30 p. m. analey theater; 1.0, Arcadia cafe dance orchestra.

NHYG, New York, N. Y. (526), 77.33 p. m., dance protects, 3.30-9, course in aspreciation, 15, 1818, city 2.35-35, 3.36-9, course in aspreciation of music; 9.45-16, 283, 49-9, course in aspreciation of music; 9.45-16, 283, 49-9, course in aspreciation of music; 9.45-16, 283, 49-9, course in aspreciation of Trustic; 9.45-16, 283, 49-9, course in aspreciation of Trustic; 9.45-16, 283, 49-9, course in aspreciation of Trustic; 9.45-16, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 49-9, 4

official; 8:30-9, course in appreciation of music; 19:45-10:15, song recital; 10:15-10:30. Five Measure Brothern.

May E. Voet; 11:32 9. no. Goldens ice a roun or ceitat, Mary E. Voet; 12:30 n. Goldens ice a roun or chestra; 4:45. organ recital, Mary E. Voet; 17:30 h. Candoloris concert orchestra; 8. concert from WEAF; 10:30, Vincent Ritzo's decode orchesters; 10:03, conpert from WEAF; 10:30, Vincent Ritzo's decode orchestra; 10:04, song the second orchestra; 4. fashion developments, Eleanor Gunt; 1:10, plazo recital, George F. Ross; 4:20, talk, Outfook; 4:30, tas music, Meyer Davis' New Williard best time. darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:30, voen m. G. (388-9), 8 p. m., modern darring; 8:40, m. M. (388-9), 8 p. m., modern darring; 8. diuner concert; 8. Detroit News orchestra; 8. diuner concert; 8. Detroit News orchestra; 4. diuner concert; 8. Detroit News orchestra; 7. diuner concert; 8. Detroit News orchestra; 9. diuner concert; 8. diuner concert; 9. diuner concert;



### Tuesday, April 21

(Continued from page 11)

Lincoln, Neb. (240), 11-12:30 p. m., midnight Krais, Intellin, and Levil, 289, 8), 7:50 D. m., Delta Delta Delta surortty, "The Power Behind the Push Retion," W. B. Sgeller; "Objectives of the Secondary School," J. J. Weber.

Krais, "Delta State Control of the Secondary School, "J. J. Weber.

Krais, "Delta State Control of the Secondary School, "J. J. Weber.

Krais, "Delta State Control of the Secondary School, "A Belling Land State Control of the Secondary School," Delta State Control of the Secondary School, "Delta State Control of the Secondary School, "Delta State Control of the Secondary School, "Delta State Control of the Secondary School, "Secondary Sc

tag other Buildings into room.

Taylor.

St. Leuls, Mo. (545.1), 6 p. m., Benjamin Reder's

orchestra.
KTHS. Het Springs National Park, Ark. (374.8), 8:30-9:15 p. m., Charles L. Fischer Esstman hotel orchestra; 9:455-955, talks. Frapklin T. Griffith, J. F. Owens; 9:55-10:55, vocal soles, Mrs. George Darks; 10:05-10:30, Mayer Darks-New Arlington hotel or-

10:05-10:30, Mayer Davis-Acew Arington novel or chestra.

K W. Davis, J. L. (539), 0:35 p. m., Unale Rob; 7, 10 mel. Rob; 70 mel. 10 m

dance orchestra; 9:202-10:15, concert, Texas woman scalege, college, colleg

irallo: 3, programs from New York.

WTAS orchestra: 10:00-12; WTAS ORC

W.B.L. Skwans Point, Wis. (278), 8 p. m., musical programs amplices Stevens Point Chamber of Commerce, W.S. Chicarpo, III. (3443), 6:30 cm. Chamber of Commerce, W.S. Chicarpo, III. (3443), 6:30 cm. Chamber of Commerce, W.S. Chicarpo, III. (3443), 6:30 cm. Chamber of Commerce, W.S. Chicarpo, III. (3443), 6:30 cm. Chamber of Commerce, Chamber of Chambe

### Mountain Time Stations

CNRR, Regine, Can. (12.2), S. p. m., W. H. Buckley and pupils in plago recitat; "Save the Forest." Hon. Charles A. Dunning, "Fremer of Saskatchewan. (CAR, Deaver, Colo. (322.4), S. p. m., half hour matines for boursewires; 6-539, dimer music.

Pacific Time Stations

Pacific Time Stations

F.I. Les Angeles, Calif. (488.3), 8:30-5 p. m., Examber's mucical ball hour: 6:10-7, Radtocale period. 7-3, Acolian residence pipe organ studio, Dan Morariado, Carganist, 5-3 program by Betty of the Examiner; 9-10, Lyric vocal trio, Marjoric Teitsworth, Polly Hall, Dorothy Civerland, Packard melody girls, William Mayz, Barney Weber.

FOA, Seattle, Wash. (484.3), 12:30-1:30 p. m., Llear's College of the College of t

### DANCII

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Kfwb. Modesday, A 8, Wind. Web West 9, We Will. Wrabf. Will. Wrabf. Will. Wrabf. Wo 10, We War; 10:30, Wh 11, Kfwb, Ko 11:45, V Kf., Klx, Kn. Wild; 12:30, Kfwb. Thursday, At

### REVOLUTIONARY WAR RSARY OF



KFAB, Lincoln, Nebr. (240), 7:39-8:39 p. m., Crete high school chorus; 8:30-10, Olive Flotther, queen of the foorles; Harriet Crulse, orlole of the air; Ivan McCormick, tenor; Walkiki trio, Hawaiian entertainers.

annors.

KFNF, Sheandosh, lowa (266), 6:30 p. m., concert.

Henry Field Seed company; 8:30, Noupardi Newsboys

quartet, Barold Mattil, director

KFRU, Bristow, Okla. (394.5), 8-10:30 p. m., music,

entertalmencel.

enterpanent. Kans. (340.7). 7:30 p. m., instru-mental trio; 7:30, "Higher Types of Pavenent." C. H. Scholer; 7:40, instrumental trio; 7:50, "Belt Opera-tion for the Ferm Tractor," W. H. Sanders. KSD, St. Louis, Me. (345.1), 7 p. m., West End Lyric

rif 23:

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Vbz; 11,

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7, Khj,

foth

menus 110; 1:30, "Higher Types of Pavenent," C. H. Scholer; 7:40, instrumental trio; 7:50, "Beit Operation for the Perm Typector," W. H. Sanders. H. Scholer; 7:40, instrumental trio; 7:50, "Beit Operation for the Perm Typector," W. H. Sanders. Health, 1982, 1983, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984, 1984,

estra.
Chicage, III. (344.6), 6:30 p. m., Ralph Emerorganist; 8, R. F. D. program; 6, Glenn's Corn-

tertalment. WSUI, Iowa City, Ia. (483.6), 7:30 p. m., "American Constitutional System," F. E. Horack; 7:45, "Pg-thology of Iowardan," F. E. Malati, S. "Appreciation of Lileracure," F. L. Mott, 8:15, "A Few Interacting Plays in Rectacky," Russell T. Nevilla, WAS, Eight, III, 602.6), 8:10:39 pm., WAS, dance program, Frank Mottls, Fanny and Eddle Careanagh.

### Mountain Time Stations

(DA. Oenver, Colo. (322.4), 8 p. m., ten minutes of music, Fred Schmitt and his Riaito theater orches-tra; 8:10, Darrow Music company: Orpheus mule chorus; 10, Joe Mann and his Rainbow-Lane orchestra.

### Pacific Time Stations

tra: 5:10, Darrow Aussic company: Orpheus place chorus: 10, Joe Mann and his Rainhow-Lane orchestra.

Pacific Time Stations

KFAE, Pullana, Wash. (348.6), 7:30-9 p. m. seenes from Shalinsceare. Dr. H. Spenner: Lumin Barakian. soprang: 'Cardening.' Frof. Chester L. Vincent: 'Historical Stries of Domestic Architecture.' Frof. These of Longitudes of the Company of th

### Index to Classical Concerts

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

Eastern Time Stations

Eastern 1 ime Stations

Saturday, April 18: 6. KDKA,
WEAF; 6:15, WIP; 6:30, WCAE, WFI,
WHN: 7, WIZ, WRC; 7:30, CKAC,
WEZ, WGBS, WLIT; 7:50, WEAF;
6 WBER, WBZ, WLIT; 7:50, WEAF;
8 WBER, WBZ, WLIT; 7:50, WEAF;
8 WBER, WBZ, WLIT; 8:30, CKAC, FWX,
WCAE, 11:05, WIP; 8:30, CKAC, FWX,
WCAE, WEAF; 8:30, WCAE, FWX,
9:30, WEAF; 9:45, WGBS; 10:05,
WEZ, 11:05, WIP;
Sunday, April 19: 6. WCAU; 6:05,
WCO; 6:30, KDKA, WCAE; 7, WEZ,
WKAQ; 7:30, WERG; 8. WBZ, WJZ,
S15, WJZ; 8:45, WGT; 9. WBER,
WBZ, WEAR, WGY; 9:15, WEAF,
WJAR, WWJ; 9:20, WEET; 9:30,
WGBS, WJZ; 10, WEBR, WGY,
MONDAY, April 20: 6, WEAF, WWJ;
6:05, WIP; 6:15, KDKA; 6:30, WCAE,
WFI, WGR, WHN; 7; WEAR, WJZ,
WCO; 7:15, WEAF, WEET; 7:30,
WEJ, WGR, WHN; WEAK, WJZ,
WCEI, WGR, WHN; 7; WEAK, WJZ,
WCEI, WGR, JHG, WBER, WBZ,
CKINC, KDKA, WEAF, WUJT, 7:40,
WBER, WJZ; 9. WGR; 10, WEDI,
WHAZ; 10:30, WOG; 10:10, KDKA,
Thesday, April 20: 6, WFAF, WWJ;
6:15, KDKA, WU; 6:30, WCAE, WFI,
WGZ, WCAE, WEAF, WEBJ,
WEAF, WGR, WHAZ, WWJ;
8:16, WIP; 6:30, WCAE, WFI,
WGZ, WCAE, WEAF, WZ,
WCAE, WEAF, WWJ,
8:16, WIP; 6:30, WCAE, WFI,
WGS, WGY, WJAR, WWJ;
8:16, WIP; 8:30, WJY, WRC; 9,
KDKA, MI; 6:30, WCAE, WFI,
WGS, WGY, WJAR, WWJ;
8:16, WIP; 8:30, WJY, WCC;
9:45, WGBS, WJY; 10, WCAE, WGB;
WFI, WGS, WGY, WJAR, WWJ;
8:16, WIP; 8:30, KDKA, WGY,
WFI, WS, WGY, WJAR, WWJ;
8:16, WGB, WJY, 10, WCAL,
WEAF, WWJ, WJAR, WWJ,
8:16, WGB, WJY, 10, WCAL,
WEAF, WWJ, WJAR, WWJ,
8:16, WGB, WJY, WAAP,
WJAR, WOO; 7:40, WEAF, WEAF,
WJAR, WOO; 10:10, WEAF,
WGE, 115, WBZ, S:25, WJZ, S:30,
PWX, WCAE, WCAU, WEAF,
WJAR, WJC, WHN; 7, WEAR, WJI;
8:16, WGR, WIP, WJY, WZ, 38,
WEZ, WCAE, WCAE, WFI, WG,
WGE, WGZ, WHN, WJ, WJ,
WEAF, 7:45, WGY, WC; 8, KDKA,
WEBE, WJ, WJAR, WJ,
8:16, WGR, WHI, WGR,
WHN, Y, WHAR, WJ,
8:16, WGR, WGR, WHAR,
WJAR, WOO; 7:40, WEAF, WJ,
8:16, WGR, WHAR,
WJAR, WOO; 10:10, WEAF,
WGZ, WGAE, WFI, WGR,
WGE, WG, WGR, WHAR,
WJZ, WAAR, WJZ, WGC,
WG

### Central Time Stations

Central Time Stations
Saturday, April 18: 6, WCN, WLW,
WMAQ; 6:30, KFNF, WGN, WJD;
6:45, WJJD; 7, KYW, WEBH, WQJ,
WLW; 7:15, WJJD; 7:30, WHAS,
WSUI; 8, KYW, WOS, WSUI; 8:15,
WSUI; 8:30, KTHS, WCCO, WFAA,
WMC; 9, KFNF, KFRU, WOAW,
WOC; 9:35, KYW; 10:30, KYW,
WJAD, WJJD; 11, KFRU; 11:30,
WOAW; 12, WCAL,
Sunday, April 19: 6:30, WLS; 6:45,
WORD; 7, KYW, WEBH, WLS; 7:30,

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WHO: 8. WCBD, WQJ: 8:15, WEMC: 8:38 WCAL, WLW: 8:45. CKY: 9:30 WCAL, WCAL, WCAL, WCAL, ADDITION OF SITE, WCAL, WCAW, ADDITION OF SITE, WEMC: 10:50 KFNF, WGN, WJJD: 7. KSD; YI:5, WJJD: 7:30, WBAP, WHAD, WHO: 8. KFRU, WCBD, WEBW, WHO, WOOD: 8:15, WCAL, WJAD, WHO: 8. WGST, WCAL, WJAD, WHO: 8. WGST, WGST,

CFCA.
Tuesday, April 21: 7:45, CFAC.
Wednesday, April 22: 7:45, CFAC;
8:10, KOA.
Thursday, April 23: 9, CFAC.
Thursday, April 24: 7, CFAC; 8:10, KOA.

Tritagy, April 22: 9, GFAC. S110, KOA.

Friday, April 23: 7, GFAC, S110, KOA.

Saturday, April 18: 6:15, KNX; 6:45, KFOA; 7:30, KHJ, KNX; 8, KGO, KHJ; 8:30, KFOA

Sunday, April 19: 6:30, KHJ; 7, KFI, KGW, KHJ, KNX; 7:30, KHJ; 7, KFI, KGW, KHJ, KNX; 7:30, KHJ; 7, KFI, KGW, KHJ, KNX; 7:30, KHJ; 8:30, KFOA; 9, KHJ; 6:30, KFO 6:45, KFOA; 7:30, KFOA; 9, KJF, KKP, KHJ, KPO; 8:30, KFOA; 9, KJF, KKP, KHJ, KPO; 8:30, KFOA; 9, KJF, KNX; 6:45, KFOA; 7:30, KFOA; 8, KFI, KHJ, KPO; 8:30, KFOA; 9, KJF, KNX, Wednesday, April 22: 6, KGW, KHJ, KJR; 8, KFI, KFO; 8, KGW, KHJ, KJR; 9, KFWB, KFO, 8:30, KFOA, KHJ, KJR; 9, KFWB, KFO, 8:30, KHJ, KJK; 6:15, KNX; 6:45, KFOA, 7:45, KLX; 7:30, KFAE, KNX; 8, KFI, KHJ, KNX, KPO; 8:30, KFOA, KJR; 9, KFI; 8:30, KJR; 10, KFI.

### Thursday, April 23

Thursday, slient night for: CHNC, KFAB, KFAE, KFOM, KFOA, KLX, KOA, KOB, KSD, FWX, WAHG, WBAY, WCEE, WOWF, WEB), WEBW, WHA, WHAD, WHAZ, WJAO, WJJO, WLBL, WOO, WOB, WRC, WSAC, WSUI.

### Eastern Time Stations

Eastern Time Stations

CNRM, Mentreal, Can. (410.7), 8:30 p. m., band, La
Societae Philarmonique of St. Hyacithe. Prof. Leon
Rinkust. director. Pa. (399.4), 12:15 p. m. Sealro's
orchestra; 6:15. Brought's errheter; 8; peugram, National Stockman and Farmer stadie; 9, hour of
Clark's Techberry Gura enfertheres; 8; peugram, National Stockman and Farmer stadie; 9, hour of
Clark's Techberry Gura enfertheres; 11, Pittsburgh
Clark's Techberry Gura enfertheres; 12, Pittsburgh
Guinte; 8:10, Fred Franz, tenor; 8:20. Erte Rowbert
Hawaiian guitariat; 8:30, Sunday school: lesson, S. M.
Van Sipnis; 5:30, Hawaiian quintet.
Hawaiian guitariat; 8:30, Sunday school: lesson, S. M.
Van Sipnis; 5:30, Hawaiian
Philharmonie trio; 7:30, lecture on business psychology;
8, New England Association of Mannafecturers Representatives bannuis; 5, Newburyport music clubs; 10
Erunswick orchestra; 11:30, Dan Ramsay's Radio Fout
11:43, Hotel Brunswick orchestra.
WOAE, Pitthorph, Pa. (461.3), 6:30 p. m., dinner concent. (100.1) WEALT; 9, concert from WEALT; 10,
Goodrich Silvetown Cord orchestra.
WOAU, Philadelphia, Pa. (279), 7:30
Browit-Toller orchestra; 10, talk, Dr. John W. Stockman. N. Steller
orchestra; 10, talk, Dr. John W. Stockman.
Metropolium tower health drill: 11:11:11, Sara Goodmen. pianist; 11:10-11:39, talk on domestic problems.

Empire State Cas and Eigeric association; 11.20.1.32, talk to housewive; 4.4.15 p. m., Hermun Raien, bertone; 4.15-6.25, talk, Margaret Prendergant McLean; 6-7, dinner music from Waldorf-Attivit; 7-7.30. Green and the state of the control of churchs; 7.50-8, Churchis, 13.50-8, C

### Thursday, April 23

(Continued from page 13)

(Continued from page 13)

Rosserell; socakers, Cardinal Hayes and Goternor Alfred J. Smith; 11-11:15, Virginia Hardee, contraino; 11:15-11:15, playlet. The Complex.

War, Smith; 11-11:15, Virginia Hardee, contraino; 11:15-11:15, playlet. The Complex.

War, Suffais, N. V. (319), Estman, director; 8-11, pointly with WEAF, including Advater-Kent program and Goodrich Silvertown ord orchestra. Way, Schenectary, N. V. (379, 30), 20, no. Beatries, Way, Schenectary, N. V. (379, 30), 20, no. When to Hunter 2:30, Stephen E. Beiselait, organist; 6:30, Hotel Ten Eyek trio; 7:30, "A Few Moments with New Books," L. L. Hooking; 7:45, WGY orchestra; Card Ossendort, tenory, Silb, program from Wansmarker; S. S. Richard Card Ossendort, Silb, Silb,

\$330-9.39, Pran-American program from factor. D. C.; 10:30-11:30, Waldorf-Asteria dance include. D. C.; 10:30-11:30, Waldorf-Asteria dance WKAQ, Sinn Juan, P. R. (304.7), 7:30-9 p. m. musical concert. La Cafetera. WLIT, Philadelphia. Pa. (394.5), 12:02 p. m., daily allorance. Stanley theater organ resultal; Arcada cafe allorance and the stanley allorance of the stanley allorance organ resultal; Arcada cafe allorance of the stanley allorance organ resultal; Arcada cafe allorance organ resultal; Arcada cafe allorance organ resultal; Arcada cafe allorance organization of the stanley of t

Thornton Fisher; \$313-845. Municipal trio; \$383-845. concert.
W00, Philadelphia, Pa. (508.2), 11 a.m., orsan recital.
M37, E. Vogt; 12 0.9 p. m., Golden's test moon orM37, E. Vogt; 12 0.9 p. m., Golden's test moon orWRC, Washington, D. G. (468.5), 430-5.30 p. m., test
music, Meyer Daris' New Willard hotal ore-bast's 6:45.
children's hour, Peggy Albien; 7, Sidney Saddemann
Smithsminn institutions; 8, "Pershing, Right," Gen.
John J. Pershing; U. S. Army band; "A Tour of Latio
and South America." Senior Leopolds (ulterrez, Chilesth Darlinne; U. S. Army band; "Pred East, Darlinne;
planist; arente fasher, volunias; 10:30, Vincent Loose
Hotel MayBower ornestra; 11, dance music, Paul
Spechl and his Cafe landora ornestra.
Spechl and his Cafe landora ornestra.
Botal Carlon or Carlon or Carlon of the Carlon of the Carlon or Carlon of the Carlon of

ouartel.

WWJ. Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's
Holel Staller orchestra; 3, Detroit News orchestra; C,
dinner concert; 8, concert from WEAF.

Hotel Staller orchestra; 3, Detroil, News orchestra; 0, dinner consert, 8, concert from Wh2AT.

Central Time Stations

CKV, Winsipse, Can. (384.4), 8 p. m., St. George's day program. CNRW.

CRBW, Winsipse, Can. (384.4), 8:30 p. m., St. Ocorge's day program; Fort Garty hotel trio; Walluce Levis, barticuse; Dorubly Catins, contrastic, address, Bog. Laricuse; Dorubly Catins, contrastic, address, Bog. Country clob dance orchestra, 100, 7 Frank Weight's Country clob dance orchestra, 100, 3 p. m., Chilne Straphory orchestra, Jean Schafer, director, KFRJ, Lawrence, Kans. (225, 8:30 p. m., plane tunlagin number; 7, music; 7:15, "Minh aketdents and Erprofessional Social Workers." Frof. 8. A. Ouen; 7:36, educational psychology, Dean R. A. Schwegler, KFKX, Hastings, Nobr. (288.3), 9:38 p. m., popgram. KRZ, merketwille, Ark. (299.8), 7:30 p. m., polgram. KRZ, Hastings, Nobr. (289.8), 7:30 p. m., polgram.

Acting State results of the property of the pr

gram, Stangaro uni company of California; 3-16, program, Southern California Minic company; 10-11,
gram, Southern California Minic company; 10-11,
Femoustic California California; 10-11,
From Cali

KFMF. Shenandosh, lowa (266), 6:30 p. m., old-time unsit. Levi Drollingen, director; 5:30, community proKFRU, Bristow, Okla. (394.5), 10:30-11:30 p. m., pileo organ.
KSAC, Manttan, Kans. (304.5), 7:20 p. m., music.
KSAC, Manttan, Kans. (304.7), 7:20 p. m., music.
FROM, Manttan, Kans. (304.7), 7:20 p. m., music.
FROM, College Manttan, Cans. (304.7), 7:20 p. m., music.
FROM, Lucis for the Entine Game. Martin Kranot.
KSD. St. Louis, Ma. (545.1), 4 p. m., hone bour.
KSD. St. Louis, Ma. (545.1), 4 p. m., hone bour.
KSD. St. Louis, Ma. (545.1), 4 p. m., hone bour.
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KSD. St. Louis, Ma. (547.1), 4 p. m., hone bour.
KSD. St. Louis, Martin, Mart

tain.
WHAS, Leutsville, Ky. (368.8), 4-5 p. m., Louisville
Conservators of Music; Alamo theater organ; 7:30-9,
Western Kentucky State Normal school and Teachers
college, Prof. Strahm, director.

### Index to Talks, Lectures and Addresses

TABULATED below is a time table of the stations giving talks, lectures and addresses this week. These range from the instructive and serious to the humorous and frivolous. The stations listed are divided into the four different kinds of time 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

Eastern Time Stations
Saturday, April 18: 7, WGBS; 7:15,
WBZ; 7:30, WEAF, WHN: 7:45,
KDKA, WRC: 8: WBZ, WCAE, WIP: 9,
8:20, WBBR: 8:45, WIP: 9, WGBS;
9:30, WGBS.
9:30, WGBS.
Sunday, April 20: 7:05, WGF, 1:15,
WGA, 18, WHN, WJZ, 8:10, WJZ,
8:15, KDKA, WAHG: 8:20, WBBR;
8:45, WEAF, WEEL.
Tuesday, April 21: 6:05, WIP: 7,
8:46, WEAF, WEEL.
Tuesday, April 21: 6:05, WIP: 7,
8:40, WGBS; 8, WGAU, WEAF, WIP: 7,
8:40, WGAU, WGAU, WGAF, WIP: 10:15, WRC, 10, WGAU, WG

Central Time Stations

Central Time Stations
Saturday, April 18: 6, WDAF; 6:50,
WOC: 7:30, KFRU, WOAW; 8, WCCO;
S:30, WMAQ; 9:05, KYW.
Sunday, April 19: 6, WFAA, WOAW;
6:30, WORD; 8, WOC, WCCO; 8:30,
WCAL; 8:55, WEMC.
MOORD, April 20: 6:20, WMAQ; 15: KSAC;
7:30, CKY, TSRU, KSAC;
WSUI, 7:45, WSUI, 8, WCCO, WDAF;
8:16, WCCO; 9, WOS. 

Tuesday, April 21: 6, WCCO, WDAF, WOAW: 7, WHB: 7:30, KSAC, WMC: 8, WMAQ, WOS: 8:30, WMAQ, Wednesday, April 22: 6, WDAF: 6:50, WOC: 7:30, KSAC: 7:45, KYW, WSUI; 8, WMAQ: 8:15, WSUI; 8:30,

WSUI; 8, WMAQ; 8:15, WSUI; 8:30, KYW.

Thursday, April 23: 6, WDAF; 7, WGST, WHB: 7:15, KSAC; 7:30, KFKU, KFMQ, KSAC, WMC; 7:33, KYW; 7:45, KFKU, KSAC; 8, WMAQ; 8:50, WMAQ; 9:05, KYW.

Friday, April 24: 6, WDAF; 6:50, WOC; 7, WHB: 7:30, CKY, KSAC, WMC; 7:45, WCC, WHA; 8, WMAQ, WORD, WOS; 8:39, WCAL.

Mountain Time Stations onday, April 20: 7:30, KOB. ednesday, April 2: 7:30, KOB;

8:10, KOA. Friday, April 24: 6:40, KOA.

Pacific Time Stations Saturday, April 18: 6:30, KHJ, KPO; 6:45, KFI; 7:45, KFL, Sunday, April 19; 6:30, KPO; 6:45, KFL.

KFI.
Monday, April 20, 6:45, KFI; 8,
KGO, KLX; 8:30, KFAE.
Tuesday, April 21: 6:20, KPO; 6:30,
KHJ; 6:45, KFI; 7:30, KNX; 7:45,
KNX; 8, KGW.

KNX; 8, KGW.
Wednesday, April 22: 6:30, KHJ;
6:45, KFI; 7, KFI; 8, KHJ; 9:30, KJR,
Thursday, April 23: 6:30, KHJ,
KPO; 6:45, KFI; 7:15, KGO; 8, KHJ,
Friday, April 24: 6:30, KHJ, KPO;
6:45, KFI; 7:30, KHJ; 8, KGW; 8:15,
KFAE.

8.30, D. Matthews, mezzo-soprano; H. Barnes, violinist; A. F. Stillman, tenor; C. E. Simpson, clarinetist; address, Hon. G. H. Perguson, Premier of Optario; H. Stoit, planist; K. Schofeld, violinist; maje quartet; 10:30, Luizi Romanelli and his King Edward hotel

10:30, Luici Romaneill and his King Edward hotel danse drokesty. Pp. (399.1), 8:15 p. m., dinner con-language drokesty. Pp. (399.1), 8:15 p. m., dinner con-language drokesty. University of Pittsburgh studies 3:00, concert.
WAHG, Richmond Hill, N. Y. (315.6), 11:55-12:05 p. m., dr. (110.00 times of the constant control of the control o

Mod., springingin, mass. (335.3), 7.09 p. ii., pectitine story, work of the property of the story of the stor

10:00. Paul Specht's orchestra; 11:30. Cate Pandorn revue.

WCX. Detroit. Mich. (51e.9), 4:15 p. m., mustal program; 6 dinner concert. Book-Cadillate hotal; 5:30, mustal program; 10. dance must.

WEAF. 10. Sept. 10. dance must.

WEAF. New York, N. Y. (491.5), 6:45-7:45 s. m., faculty, Wilder, planist; 11:10-11:20, health talk; 4-4:15 p. m., Laidsiaw Soucek, tener; 4:15-4:25, better, American dorf-Autoria; 7:7:15, Gustar Language, clariteelist; 7:7:15, Gustar Language, clariteelist; 7:30-7:45, bildren's story. Blanche Blanketh Wades 8-8:45, Happiness Candy boys; 8:45-4, Happiness candy quartet; 9:9:15, Sterling plano dua; 9:14-8:30, the Gierlett attet: 11:19, Moyer Davis' Jado-Venice or-

4:10. pisno recital, Eleanor Glynn; 4:20. "Beauty and Personality," Elsie Pierce; 4:30, iea music, Meyer Davis' New Willard hotel tric; 8, children's hour, Peggy Albion. WREO, Lansing, Mich. (285.5), 1-3:30 a.m., coast prowitzu, Lassisa, Mich. (285.5), 1-39 a. m., coast no-WSAC, Clessison College, (33.5), 7 p. m., music memory contest, Prof. Bourland, (34.8), 8 p. m. studio pro-vidence of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-cept of the control of the control of the con-cept of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the con-trol of the control of the control of the control of the con-trol of the control of the control of the control of the con-trol of the control of the control of the control of the con-trol of the control of the control of the control of the con-trol of the control of the control of the control of the con-trol of the control of the control of the control of the con-trol of the control of the control of the control of the con-trol of the control of the control of the control of the con-trol of the control of the control

Central Time Stations

CKY, Winnipes, Can. (384.4), 8:15 p. m., concert, Sons of Bongland society. (400), 7:30-930 p. m., Cosmopolitan club: Serenadors orchestra. (400), 7:30-930 p. m., Cosmopolitan club: Serenadors orchestra. (470), 7:30-930 p. m., coocert from East River Pup. Ciarinda, Loraine Bughes, director: ENFR, Beristwo, Okla. (394.5), 11-14. a. D., Brown Derby club. (394.5), 11-4. a. D., Brown Derby club. (3

night revue. Faul Whitman's collectars.

MBAT. Ford Worth, Towas (475.9), 21.20 in Whitest's violin ensemble; 9:30-10.43, program. Chamber of Commerce.

WCOTO in the Commerce of Commerce.

WENT in the Commerce of Commerce.

Ruth Basel Been, accompaniat; 7:30, "Public Speaking." 6. V. Silmon: 290, George Obsort's Riberts basel of Commerce.

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Ruth Basel Been, accompaniation of Commerce.

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Ruth Basel Been, accompaniation of Commerce.

Ruth Commerce.

Ru

W. Cincinnati, Onio vascoji, orcheistra, William Stram, Ahau Brunswick Shop orcheistra, William Stram, Alexander Stram, Andrea Stram, Andrea Stram, Alexander Stram, Onio Carlo Stratistics, III. (447.5), 7-11 p. m., Women's ord stratistics, Stram, Carlo Stram, Carlo

What world exposition. Tenn. (992., Radio tau., House Pinne company; 7:30, Radio tau., House Pinne company; 7:30, Radio tau., Miller Novelty orchestra; 11, midnight frolt, Miller Wolaw, Omaha, Nebr. (\$25,6 6 p. m., story hour, Deria Claire Secord; 9, program, suspices Union Pacific Railmad company; 10:30, Willard Rebinson and his Railmad Rai

Hailmad company; 19:30, Willard Robinson and his orchestra. WOC. Davesport, lews (483.8), 7:15 p. m., Epworth military academy; 8, mixed chorus, M. L. Parker company; 9, old time dediers contest. WSB, Affanta, 6a. (483.3, 56 p. m., Virginia girt; 8, encertainment; 11:25, Graco Manadas church. WSB, et al. (19:25), 8-10:30 p. m. WTAS or chestral military, 8-10:30 p. m. WTAS or chestral military, 11:25, 11:35, 8-10:30 p. m. WTAS or chestral military and characteristics.

Mountain Time Stations

Mountain Time Stations
CNRE, Edmonton, Can, (61.69), 8:30 p. m., IV. H.
Freed and his 'Hawelian guitar and mandolin orthestar; rocal solos, E. J. Caseley, bass; address,
Hon, H. Greenfield, Premier of Alberta.
KOA, Donver, Cole. (322.4), 3 p. m., half hour mattnes
for housewires; S. ten minutes of music, Free Schmitt
and his Rishlor theater orientry; 8:10, "Passo," EOA
players; Spantih War Veterunis quartet.
Dopular actence course, Dr. D. S. Robbins; "Timber
Resources of New-Mexico," R. E. Marsh.

popular science course, Dr. D. & Robbitati, Titober Resources of New Mettol, "R. E. Martin." The Beaser of New Mettol, "R. E. Martin." Resources of New Mettol, "R. E. Martin." Resources of New Mettol, "R. E. Martin." Resources of New Mettol. Resources of New Mettol. Resources of New Mettol. Resources of New Mettol. Petroleum Industry," Prof. J. L. St. Johns; Edith Armand, reader; Ratiph Strought, violinist; "Pessent Day Stotes of Architecture," Prof. Jr. St. Johns; Edith Armand, reader; Ratiph Strought, violinist; "Pessent Day Stotes of Architecture," Prof. Fred G. Rounds; The Kitchen, "C. Bodd, Bl. Lindeay Webb. "Color in the Kitchen," Clady Methol. Editor, 1980, "Color in the Kitchen," Clady Methol. Sci. 76, ed. 1980, "Color in Kitchen," Clady Methol. 1980, "Color in Kitchen," Clady Methol. 1980, "Color in Kitchen," Clady Methol. 1980, "Color in Kitchen," Charles of Methol. 1980, "Color in Kitchen," Clady Methol. 1980, "Color in Kitchen," Charles of Methol. 1980, "Color in Kitchen," Charles of

moded by harry exyment, i.e., and the property of the holywood Montmarte cafe dance ordinestra. Med Holywood Montmarte cafe dance ordinestra. Med Holywood Montmarte cafe dance ordinestra. Med Keen, Ozkhane Calif. (381.2), 4.5:20 p. m., Hotel Keen, Ozkhane Calif. (381.2), 4.5:20 p. m., Rese City Irioto, Glimer concert George Weber and his ortical carrier of the concert ordinestra. Med Miller (301.2), 6.6:30 p. m., Art Hickman's Biltmore head concert ordestra, Edward Hickman's Biltmore head concert ordestra. Edward Hickman's Miller ordestra. Miscory, Frod. Walter Sylmster Herback, Richard Hitchman California, Name California Biltmore hotel dance orchestra. Barl Burnets, Jeader. Purap and California California Biltmore hotel dance orchestra. Barl Burnets, Jeader. Tradity California Californi

KNX, Hollywood, Callf. (336.9), 5:45.6-15 n. m., Wur-litzer pipe organ siudio; spect, calk by 81d Ztft; 6:15-7.30, daner hour mosie; [38-6, porgan, Eart-9-19, Boyal Order of the Daghnur. Davis Perfec-tion Bread company; [10-1], spulies sons program; 11:12, Abe Lyman Coccanut warer dance ordestin nighthawks.

from Ambassador note; 12-2 n. u., nighthawks.

KPO, San Francisco, Calif. (429.5), 8-10 p. m., standford university band.

### Friday, April 24

Mountain Time Stations

CNRC, Calgary, Can. (434.5), 9 p. m., C. N. R. Symphony orchestra. Pacific Time Stations FIGURE 1 THE STATUM.

[F], Les Angeles, Calif. (488.5), 5:30-6 p. m., Exanher's musical half hour; 6:45-7, Raditorisk talk; 7-8,
Mu Phi Explain strio, Raditorisk ellik; 1-7,
regram, Standard Oll company of California; 9-10, program, Southern California Missic company; 10-11,
Exzulner, Herary program by League of Américan
Personner.

Friday, silent night fer: AT9, CHIC, CHNC, CKAC, KFKU, KFKX, KFMQ, KGO, PWX, WBBR, WBZ, WCBD, WEAD, WEBW, WFI, WGBS, WOST, WHAZ, WIP, WKAQ, WUBL, WLW, WMAK, WOAI, WON, WOND, WSAI, WSUI. Eastern Time Stations

Eastern Time Stations
CNRA Meacton. Can. (312.3). 8:30 o. m. artists from
Sussay, Gratchen Mills. apprancy Mrs. G. S. Pierr.
Mrs. J. McD. Robers. G. S. Pierr. volinisty; H. W.
Pluck, tenor: H. W. Wallace, barticze; male quarter;
CNRT, Toreste, Can. (358.0), 0:30 p. m. Luigl Romanulli and his King Edward hotel concert orchestra;

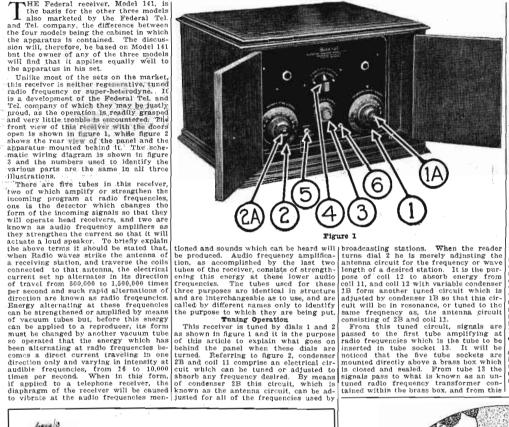
www.americanradiohistory.com

# Operating and Trouble Shooting

For the Owner of Federal Models 141, 142, 143 and 144

THE Federal receiver, Model 141, is the basis for the other three models also marketed by the Federal Tel. and Tel. company, the difference between the four models being the cabinet in which the apparatus is contained. The discussion will, therefore, be based on Model 141 but the owner of any of the three models will find that it applies equally well to the apparatus in his set.

Unlike most of the sets on the market,



transformer the signals pass to tube 14. Here they are again amplified or strengthened at radio frequency and passed into the second radio frequency transformer, also within the bass box, from which they are passed to the tube which, in the foregoing explanation, we have called the detector. This is tube 15 in the illustrations. When the signals have passed tube 15 they are in the form of a varying direct current whose impulses occur at the andio frequencies and this energy is passed into a transformer known as an audio frequency transformer within the brass box. From this transformer signals pass to tube 16 which is the first of the two audio frequency amplifiers and from this tube the signals pass to a second transformer and finally to a second audio frequency amplifying tube which is tube 17.

Separating Stations

frequency amplifying tube which is tube 17.

Separating Stations
Going back now to coils 11 and 12, it is known that the selectivity or ability to separate stations operating on very similar wave lengths is greatly increased by turning coil 11 at an angle to coil 12. When coil 11 is turned by means of lever 4 so that its axis is horizontal there will be greater volume but there will he some difficulty in separating the programs from two stations whose wave lengths are very nearly the same. By turning coil 11 so that it is at approximately a right angle to coil 12 there will be some loss in volume but the user will find that by adjusting 1B and 2B through dials 1 and 2, he will be able to completely separate the program and enjoy one or the dials I and 2, he will be able to completely separate the program and enjoy one or the other. Coil 11 can, of course, be set at various angles between horizontal and vertical depending on the amount of interference which exists. So, if the user finds that two powerful stations are spoiling each other's program when he tnnes in, be need only vary the relation between II and 12 by means of knob 4 to enjoy either program.

Knob 3 is attached to a device known as a potentiometer which is labeled 3B in figure 2. This piece of apparatus controls, to some extent, the sensitivity or range of the receiver and, in the case of nearby stations, it controls the volume.

(Continued on page 18)

(Continued on page 18)



A great baritone sang with un-common fervor to his enraptured

The melody seemed to string a golden chain of words for some responsive heart.

It reached ten times a million

For as the music faded into silence the singer said GOOD NIGHT MOTHER!

And then we knew that song had gone straight and true to some-one somewhere in that vast invisible audience.

Someone whose tear-dimmed eye saw not the wonderful singer but a little boy whose tousled head lay on her breast.

And in that spell of mother love which makes millions kin.

All those listening hearts "tuned in" to one heart.

A heart that must have felt the magic of ten million prayers uni-fied in one "God bless her!"

Our Bristol Loud Speaker had given us all the rich tonal quality of the singer's voice, it's natural sweetness, its pathos. It had been a wonderful

5 MODELS bluet shown here is of beautifully finished by, 17 x 10 x 10 x 10 4. It has a full floating born with long expansion chamber and a die electro-magnetic tone, reproducer. Price Euro types from \$12.50 to \$25.00.

Send for Bulletin AY-3022 Ask your dealer to demonstrate them on the Bristol Comparendon. THE BRISTOL COMPANY Waterbury, Conn.



AUDIOPHONE Loud Speaker



HE Improved MARV-O-DYNE is the kind of a set you I have always hoped to own some day, the ideal set of your dreams. Beauty of tone and of appearance, ability to get distance, well known units—all those features this MARV-O-DYNE has.

The Improved MARV-O-DYNE, model 612-C, has more really useful improvements than any other set on the market. Take the Fil-a-meter, for instance, and the Antenna Tuning Compensator, and the push switch for reading B battery voltage. Those are only a few.

The Improved MARV-O-DYNE will endear itself to you if you only give it half a chance. We would like to have you go to your dealer today for a demonstration. The price, by the way, is only \$110. West of the Rockies and Canada, \$120.

Amber Mfg. Corp., 115 W. Broadway, New York City



# Radio Digest

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vol. XIII

Saturday, April 18, 1925

### Four Time Districts

Four Time Districts

EVIDENTLY everybody tries to talk at once and it is time for the chairman to bring down his gavel heavily and call the house to order, then designate who has the floor for the time being. This sounds feasible! Perhaps a few suggestions would not be out of order. Ou this continent we have four changes of time, one hour each. Suppose rules be set that all stations in Eastern time begin to broadcast their programs at 8 o'clock and stop at 10 o'clock central time, the same hours, and so on. This would give an hour's difference from each time change. Those, in Central, Rocky Mountain and Pacific time would have an hour to listen on eastern stations without interference. Those in Eastern and Pacific time would have an hour at the end for Central and Rocky mountain station reception, and so on.

These hours will always be the best. Then most people will be listening in at their sets, Daylight hours and after 2 a. m. Eastern time, any broadcaster could have full swing to satisfy the all-night hound and "getting through" operator.

Such an arrangement would necessarily have to be worked out by the government and strict rules an-

"getting through" operator.
Such an arrangement would necessarily have to be worked out by the government and strict rules applied and enforced. Mutual cooperation is good as far as it goes, but it doesn't go far enough.

### Audience of the Church

Audience of the Church

MUCH of the objection to broadcasting church services are identical with those of the theater, and is only a speculation, not justification by sound conclusions. Radio is growing in popularity and usefulness and the church as well as the theater must fit themselves to the new mode of dissemination. Radio is not a plaything. It has invaded the homes of the nation and has brought cheer to many who are far removed from churches and the theater.

It is quite evident that Radio is keeping countless people at home. It is bringing delight to the shut-ins and to those in isolated places. It has stimulated scientific research, setting the grey matter of thousands of people to work along lines that never before appealed to the masses, and instead of being a detriment to the church or theater it is working in conjunction with the best there is in them for the good of humanity, and the time will come when Radio will be counted among the greatest of blessings that science has bestowed upon mankind. If it keeps a certain few away from church it brings the influence of that institution to thousands who have no made certain few away from church it brings the influence of that institution to thousands who have not made a practice of going to church. If dissension and difference of creed separate people and classes these differences are being bridged by the Radio, whereby those of different faiths may get the viewpoint of others, and while there may be a few more empty pews the audience will be very much larger.

### Miracles of Radio

Miracles of Radio

SOME people call Radio a miracle. The ones who know most about Radio are expecting most from it. While scientists agree that it is still in its infancy most of us would like to know when it is to have its youth. We know little of the miracles that are enacted before us every day. We may find that we have known such a little about Radio at this time that it will make us feel foolish in the years to come. Even at that we doubt that any one person will be able to fathom the entirety of this science and will be able to tell us exactly in terms understandable just what takes place when the voice is presumedly traveling through the air.

### "Let's Do It Again"

A FTER receiving a stack of mail in which the listeners penned their appreciation, Francis Mac-Millen famous American violinist, said, "Let's Do It Again." It stands to reason that MacMillen had MacMillen had made a listening audience that will respond readily whenever the chance comes to hear and see him in person. He has created a ticket buying public for future recitals wherever he may appear.

W. RUSSELL LEWIS.

It Paid for the Privilege

Dear Ind:—When the electricity failed at Maidstone, Eng. recently and the post office carried on by eandle light, a clerk in the semi-darkness accidentally issued a dog license in lieu of a Radio license. Ever since they say, the applicant's set has been howling configuration of the privilege and the provided of the privilege and the provided of the privilege and the part of the privilege and the provided of the privilege and the p

### RADIO INDI-GEST

### Tom-Tom's Sounded in Walla Walla



WALLA WALLA.—(via Radio.)—Long before daybreak this morning, the villagers in this town were awakened by the rythmic throbbing of the tom-toms in the hills. Messengers dispatched into the bush to find the cause of the drumming, reported that the hostile tribe on the opposite side of the Island were holding a big pow-pow to raise tunds for a broadcasting station. This will tend to show our readers some of the obstacles and obstructions that have been put in the path of Indi Hisself, to prevent the opening of Station Bl.AH. fl physical force is necessary to subdue the opposition. Chief Kokomo. that brave and dauntless leader of the Walla Walla tribe, will endeavor to carve his initials into the hides of some of the enemy. That is a favortic pastime of the chiefs. He's so playful!

A message has been received by the U. S. Steal Corp., to the effect that they will supply antenna towers if they are given free publicity from the station. Positively NOT! This station will not accept bribes—or brides—for such a thing. However, if we like you, you can get anything that you want for nothing—it will be worth just that.

Staggering evidence (not liquid) that the opening of Station BLAH, with their super-bum equipment will take place next week, has been reported. Shaka Little (we printed her picture last week) will be on the opposite end of the island.

Be sure to get your next week's copy of Radio Indi-

Be sure to get your next week's copy of Radio Indi-Gest, to follow the programs from this station.

### The Pipes of Pan (Brought Un-to-Date)

(Brought Up-to-Date)
I hear the Pipes of Pan in tune
The better 'neath a silvery moon—
Unless it's o'er a Radio
That belongs to a maid I know.
Together on her couch we sit
And hear the Pipes of Pan o'er IT.
The couch springs form an aerial
That seem to answer fairly well!
GEO. A. WRIGHT.

### Lodge's Prayerful Cat Annihilated

De-ah Indi: Sir Oliver Lodge, this country's fore-most living Radio scientist, says that "to the cat inew-ing at the door it may be a miracle in answer to prayer when it is let out."

when it is let out."

This is both to underestimate the cat's intelligence and to seek fantastic reasons for simple phenomena. If there is no one about the eat will not mew at the door. If there is anyone about it will not only mew—
it will look most appealingly at the person who, it has intelligence to know, can open the door; and some extra intelligent cats can open doors for themselves—and they don't waste time in mewing.

No. I don't think is followed the nor studied eats can well

No, I don't think Sir Oliver has studied cats as well as he has done Radio! LUN DUN KAT.

### It's Always the Way

I use a lot of gump and guff When next door neighbor does bis stuff, He's but a diamond in the ruff, I bluff.

I tell myself he doesn't mean By squeal and squawk to vent his spieen, His virtue's fat, his faults are lean,

But Oh my Lord! When I want peace, He's ALWAYS reaching out for Greece, Or demonstrating for his niece— "Soo loud lak dees."

I try, I say, I try but yet, I het some day, I bet, I het I get a super hetro-het, And then Oh Lord!

I'il vaccinate that neighbor's air, I'll make her rear n' rave n' tear, I'll make him elown and tear his hair, For fair.

Oh yes, I try, I say, I try, To see the virtuo in his eye, But, God forgive, I couldn't cry. If he should die!

W. RUSSELL LEWIS.

### Give Him Laws and Funds



### Condensed By DIELECTRIC

By DIELECTRIC

I have found out what I dislike about KFI. With superfine equipment and very wonderful programs the whole effect is spoiled by what I would term poor announcing. Instead of aunouucing the title of a selection and the person who will sing or play it the announcers at the Antbony station invariably go on and throw in a few couplimentary remarks about the artist. This no doubt sounds very nice to the artist but it does not help he or she to "go over" with the audience as this sort of bouquet throwing leaves a bad taste and really makes it harder for the artist. More sales resistance the psychologist would say. A number of aunouncers around the country cleverly pay tribute to an artist's offerings after the selections have been played and KFI should fall in line. It is better.

Our old friend at Jefferson City, Mo., Station-WOS, saw to it recently that piano selections from among the classics and played by competent musicians should continue a part of their programs. It is unnecessary to single out any one, in preference to any othor, composition for laudation but if it were done, then the Chopin nocturne would surely receive special mention. Such playing aids broadcasting.

I had my watch before me and pencil and pad ready to note the call letters and time between announcements of them—when I was called away from the set and missed a golden opportunity to present a culprit to you. For exactly forty-three minutes I listened to a program with no chance to identify the sending station. It was a low meter station and I'm going back to get 'em. Maybe they're not worth it. Let's sec!

While the programs prepared and transmitted from Station WMH, Cincinnati, are not exceptional to any degree they do meet the level of ordinary requirements and undoubtedly provide pleasure for large numbers of Radio listeners. Happening in on one of many calls I listened to "Rose Marie" and as the orchestra finished remarked the freshness of its presentation, differing in that respect from other renditions of it. that respect from other renditions of it.

One of the dependable stations for instrumental entertainment is WTAM, Cleveland, Ohio. There you may go most any time to listen to either dance music or more serious material. If the Statler concert orchestra is on the program you may well be assured of being pleased. Your reception of the station should be beyond criticism, in so far as the broadcasting is concerned, for this is a battery transmitter.

Other features besides the Marine Band are broad-cast from WCAP, Washington, D. C. Quite a preten-tious program was prepared for the Radio audience of this capitol station when the Catholic university glee club sang into Mike, with the possibility of many thousands of listeners noting the quality of the tenor choir.

Barber shop quartets are no more enjoyable when heard by Radio than from otherwise quiet and deserted streets. Some there be on the air at times, Tune them out, for there are provided good quartets such as that male quartet entertaining through Station WSAI, Cincinnati. Ensemble, tone coloring and regard for the meaning of songs cause these organizations to stand out above their fellows. Let me regard using that weldscript in entertainment is rapidly tosing casts in Radio circles.

### Filter Eight Tube Super-Heterodyne Four

Part VII—Testing and Trouble Shooting

By Jacques Fournier

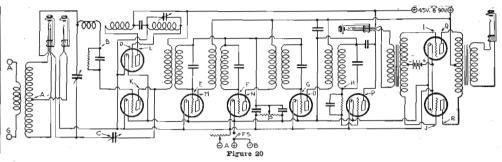
THERE is one more possibility of Improving results. The tubes should be shifted around in the sockets and it will be found that two of the tubes work better as detectors while three of the remaining six perform better as intermediate amplifiers than do the others. Of the other three tubes, one will be found to be a better oscillator, which leaves two for the audio frequency amplification. Practically all tubes will give fair results as audio frequency amplifiers but care should be taken first to get the best detectors, second to get the best intermediate amplifiers, third the best possible oscillator and last the audio frequency amplifier.

### Testing the Circuits

Testing the Circuits

If. after carefully checking the wiring and shifting tubes, there is no response at the loud speaker when tuning is tried, it will be necessary to test the various circuits of this receiver to determine whether there is a break either in one of the instruments or in the wiring. For this purpose, either a single dry cell or three cell C battery may be used with the head cell choice of the battery and a wire about two feet long should be connected to one side of the battery and a wire about two feet long should be connected to the other side of the battery. When testing, all batteries should be disconnected from the set, and the loud speaker also. Figure 20 is shown with this article, with letters identifying various points in the circuit, so that the writer can tell you where to connect the testing leads.

We will start at the input end of the



and shifting tubes, there is no response at the loud speaker when tuning is tried, it will be necessary to test the various circuits of this receiver to determine whether there is a break either in one of the instruments or in the wiring. For this purpose, either a single dry ceil or three cell C battery may be used with the head telephone receivers. One of the cord tips from the head phones should be connected to the tone side of the battery and a wire about two feet long should be connected to the other side of the battery and a wire about two feet long should be connected to the other side of the battery and a wire about two feet long should be disconnected from the set, and the loud speaker also. Figure 20 is shown with this article, with letters identifying various points in the circuit so that the writer can tell you where to connect the testing leads.

We will start at the input end of the receiver and check through to the output which will enable us to catch every circuit in the process. To determine whether the secondary of the antenna coupler and the two circuit jack are O. K., touch one of the leads from our testing equipment to point C, as shown in figure 20, which is the connection to the rotor plates of the leads from our testing equipment to point C, as shown in figure 20, which is the connection to the rotor plates of the midget condenser, and connect the other to point E, which is one side of the grid leak in the grid circuit of our first detector. This will also include the pick-up oil of our oscillator coupler. If there is

the test terminals, one to point E, which is the grid post on the first intermediate amplifier tube socket, and the other to the center binding post on the potentioneter P. The click on each of these tests should be clear and sharp, and almost as loud as the click produced when the terminals are connected together without any apparatus in the circuit. The grid circuits of the other two intermediate amplifiers may be tested by connecting one side of the test circuit to the center tap on the potentioneter and the other side of the test circuit to points F and G, as shown in figure 20. The second detector may be tested by turning the filament switch to the "On" position, connecting one side of the tost circuit to point H and the other side of the test circuit to the "On" position, connecting one side of the tost circuit to point H and the other side of the test circuit to the plus A binding post of the receiver. The plate circuit of the second detector, which will include the two circuit lack and the primary of the input pushpull transformers, nay be tested by connecting one page 20)

SOMETHING WORTH KNOWING! One reason that leading builders of fine set use more Thordarsons than all com-

SOMETHING WORTH KNOWING!

One reason that leading builders of fine sets use more Thordersons than all competitive transformers combined is because EVERY Thorderson amplifies evenly over the entire neusical scale. Thordersons run absolutely uniform; always "match up" perfectly. And why shouldn't they Taren't they made and unconditionally guaranteed by the world's oldest and largest exclusive transformer makers—transformer specialists for 20 gard 187 in finest mplifiestic to be had at any and think the lead of the lead of the product of the lead of the l

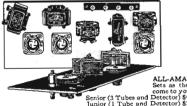


using your All-Amax Senior which will carry you farther and more rapidly than any airplane. All Amax Sets are mounted at the factory but not wired, saving you half the price. Wire your All Amax in one evening and take your first tour the same night.



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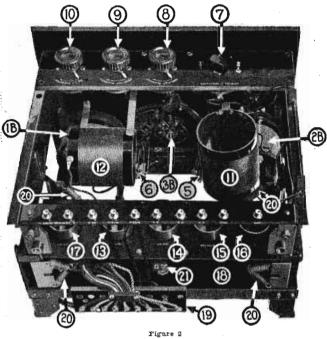


A CONTRACTOR OF THE PARTY OF TH

HOW TO OPERATE SET

(Continued from page 15)

It is desirable, for the sake of range, to operate the first tube in a condition known as "regenerative." at which point its efficiency as an amplifier is very high but, in the receiver has been provided with a which do not produce such sounds are delighted. A condition known as the provided with a which do not produce such sounds are delighted. The receiver has been provided with a which do not produce such sounds are delighted. A clear of the latter two. After tuning in a be heard. All the amplifying tubes when in the "First R. F." stage should be attributed to rotated. A thud or hissing sound should either of the latter two. After tuning in a be heard. All the amplifying tubes when it is altion, remove the antenna wire and no-tice if the volume of the received signal is produce such sounds when the "Amplification Control" 3 (potentiometer) is ceiver, then trouble can be attributed to rotated. A thud or hissing sound should either of the latter two. After tuning in a be heard. All the amplifying tubes when in the receiver cabinet and in the "First R. F." stage should it in Control" 3 (potentiometer) is ceiver, then trouble can be attributed to rotated. A thud or hissing sound should either of the latter two. After tuning in a be heard. All the amplifying tubes when it is of the Foreive two produces such sounds when the "Amplification, control" is rotated. The control is rotated. The produce such sounds are delighted to rotated. A thud or hissing sound should either of the latter two. After tuning in a station, remove the antenna wire and notice if the volume of the received signal is of the receiver cabinet and in the reary of the receiver cabinet and in the reary of the receiver cabinet and in the antenna is all the antenna wire and notice if the volume of the receiver cabinet and in the reary of t



if the means of controlling the regenera-tive condition is carried too far, a differ-ent condition is entered known as "oscil-lation" in which state the tube is useless for the purpose employed. By turning small dial 3 the efficiency of the first tube is increased more and more and regenera-tion is attained, and recognized by a hiss-ing sound which hecomes greater as the small dial is turned, until a click or thud

Volume, tone, selectivity, clarity,

Volume, tone, selectivity, clarity, these are the standards of radio operation of last year. They are universally duplicated, taken for granted in any five tube set and no longer are the vital point of excellence. Just as automobiles passed from stair climbing tests to simplicity of control, so the radio has progressed from the gymnastics of operation to that of simplicity of control.

Answering this demand, the Meco

Radio Receiver has only two dials, only one dial to log, making it easier of operation for the novice, more convenient for the radio

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TWO DIAL CONTROL

Five Tubes provide the range, sc

lectivity and clarity of tone that is to be expected from a superior set. Made in three models, cabinet and

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Write us for the name of our dealer nearest you

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control.

good antenna and a good ground connection, and the batteries have been con

nected properly, inspect the instatlation as Inspection

Insert the phone plug into the phone jack 5 at the bottom of the panel and listen in with the phones while the "Am-



### 'Europe with Lincoln Loop'' writes Radio Expert

W. W. Roberts — Manufacturer's Agent and Radio Expert—Norfolk, Va., wrote us March 17, 1925:

Gentlemen: Please send me by parcel post to P. O. Bux 660. Norfolk, Va. the following:

The dol, Nortolk, Va. the following:

Two (2) Lincoln 4 Point

Tapped Loop Aerisis.

Ship the above C. O. D. in view of the ct that 1 am not known to you.

It may interest you to know that I have ficted Radio Broadcoast confirmation of respean Trans-Atlantic Reception during the companies of the confirmation of the companies of the confirmation of the companies of the confirmation of the confirmation to the confirmation to the confirmation of the confirmation to the confirmation to the confirmation of the confirmation to the confirmation of the confirmation of the confirmation to the confirmation of the confirmation of

### Lincoln 4-Point Tapped Loop \$8.00

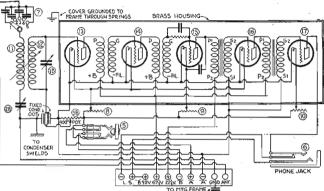
The only moderate priced Loop of this type on the market. Fine for all types of "Super-hets"—and neutrodyne and tuned radio fre-quency sets, where an outside Aerial is im-practical. For the requirements of any set where is is desired to rary the inductance of

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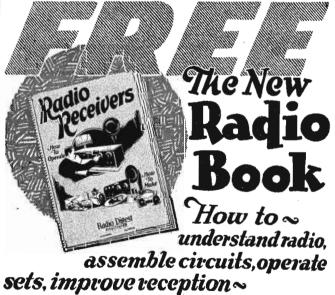


Tr Marchan Sign

fective and should be replaced. For the "First R F." and "Second R F." stages choose tubes which best conform to the above test. The 200 type tube (clear glass), for the "Detector" position only, should produce a distinct hissing sound when turned up brightly. If it does not produce any change in the volume, the ground connection is defective to the above test. The 200 type tube (clear glass), for the "Detector" position only, should produce a distinct hissing sound when turned up brightly. If it does not produce any change in the volume, and a better one should be provided. The same is true of the antenna and fit is removal roduced no change in volume.

Antenna Compensation

Having assurance that the receiver is in operating coudition, we may proceed to adapt the antenna to the receiver. This wire and turn the "Amplification Control" all the way on to the right. Now, no matter what the position of the Secondary Wave Length Dial 1, a click should be heard at some point if the Antenna Wave Length Dial 1, a click should be heard at some point if the Antenna Wave Length Dial 2 at 0 heard at some point if the Antenna Wave Length Dial 2 at 0 heard at some point if the Antenna Wave Length Dial 2 at 0 and rotate slowly toward the higher numbers and replace the antenna and ground wires. If the removal of this wire does not produce any change in the volume, the ground connection is defective under not produce any change in the volume, does not produce any change in the volume, the ground connection is deserted under he provided. The ground connected the same is true of the antenna of the receiver proceed to adapt the antenna to the receiver. This same same froud wires, I was a produced no change in the volume, does not produce any change in the volume, does not produce any change in the volume, does not produce any change in the volume, and a better o



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# Radio Digest

510 N. Dearborn Street

Chicago, Illinois



# A. B. C. Course in Radio Fundamentals

### Chapter IV—Operation of Direct-Current Generator and Motor

By David Penn Moreton

If AN electrical conductor be moved across a magnetic field, as shown in figure 18, there will be an electrical pressure induced in the conductor. This pressure is supposed to be due to the conductor cutting across the magnetic lines of force that are supposed to constitute the magnetic field. When the conductor is moved in such a manner that there is no cutting of the magnetic lines of the field, as shown in figure 19, there will be no electrical pressure induced in the conductor.

no electrical pressure induced in the conductor.

The value of the electrical pressure induced in the conductor depends upon the rate at which the conductor cuts across the magnetic line. If one of the magnetic lines of force is cut in each second as the conductor is moved across the magnetic field there will be one absolute unit of electrical pressure induced in the conductor. The absolute unit of electrical pressure is a very small unit as it requires 100,000,000 of them to be equal to the practical unit of pressure, or one volt. The conductor must then cut the lines of force at an average rate of 100,000,000 during each second of time in order that an electrical pressure of one volt be induced.

The movement of a conductor in a magnetic field, as shown in figure 18, is the fundamental principle upon which all dyname electric machinery operates.

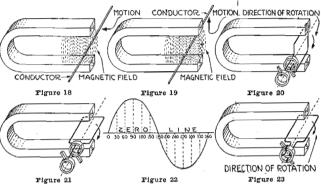
### Direction of Bleotromotive Force

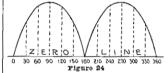
Direction of Bleotromotive Force
The direction of the induced electromotive force in the conductor will always have a definite relation to the direction in which the conductor is moving. A simple rule for determining the relation between these quantities, known, as the right-hand or generator rule, is to piace, the foreinger, middle finger and thumb of the right hand at right angles to each other and the hand in snch a position that the fore finger points in the direction of the magnetic field and the thumb in the direction of the hand in snch a position of this rule to figure 18, indicates that the direction of the induced electrical pressure will be along the conductor to loward the observer. If the direction of motion of the magnetic field remaining unchanged, there will be a reversal in the direction of induced electrical pressure.

The movement of the conductor back and forth acroes the magnetic field, as shown in figure 18, would restort of the induced electrical pressure.

The movement of the conductor back and forth acroes the magnetic field as shown in figure 18, would restort of the induced electrical pressure will be a reversal in the direction of the induced electrical pressure.

The movement of the conductor back and forth acroes the magnetic field as shown in figure 18, would restort of the induced electrical pressure being in one direction part of the time and in the reverse direction for the remainder of the time, assuming the conductor does not move entirely out of the magnetic field an alternating pressure because it alternates th direction position, and the current produced in a closed the world of the wertical position.





pressure is in one direction part of the lime and in the opposite direction part of the time. The markings along the zero line correspond to various positions of the loop measured in degrees from a position of zero induced electrical pressure or with its plane perpendicular to the magnetic field as shown in figure 21. Values below the zero line the commonly referred to as being negative and those above the zero line as being positive.

Positive and Warating Manager Positive and Negative Values

Positive and Negative Values

A complete set of positive and negative values, as shown in figure 22, constitute what is called a cycle. If sixty of these cycles are completed in one second, that is if the coil rotates sixty times in one second, the induced electromotive force is referred to as a sixty-cycle electromotive force.

An alternating - current electromotive force will produce an alternating current in a closed electrical circuit but the laws for an alternating-current circuit are quite different from those for the direct-current circuit already discussed.

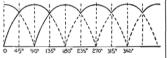
An alternating current is not suitable for a great many purposes such as electroplating, charging storage batteries, etc., so that the electrical pressure induced in the loop of wire must be changed to an undirectional or direct-current electrical pressure.

sides will be in opposite directions with reference to the front and back ends of the loop, that is the electrical pressure in one side will be toward the back end of the loop and in the other side toward the front end of the loop. These electrical pressures, however, act in the same direction around the loop and will assist each other. For the next half revolution of the loop the two sides of the loop will be moving in opposite directions across the magnetic field to what they were for the first half of the revolution and the first half of the revolution and the first half of the revolution and the first half of the revolution. The electrical pressures, however, both act together around the loop but in the opposite direction to what they did for the first one half revolution. If the electrical pressure is zero, there will be a unitdirectional or direction to what they did for the first one half revolution. If the electrical pressure is zero, there will be a unitdirectional or directions to what they did for the first one half revolution. If the electrical pressure is zero, there will be a unitdirectional or directions to what they did for the first one half revolution. If the electrical pressure is zero, there will be a unitdirectional or directions to what they were for successive positions, a curve could be drawn which would show the variation in electrical pressure for different positions of the loop that they were for the first one half revolution. The electrical pressure is zero, there will be a unitdirectional or direct-current pressure because it puisates in value at results of the brushes changing contact with the segments or parts of the commutator when the electrical pressure is zero, there will be a unitdirectional or directions to what they were for the first one half revolution. The electrical pressure will be the other part when the loop had the will be obtained when the loop is contact. The brushes are so placed on the slip pressures of the rome half revolution and the will be obtained when the

circuit by this pressure would be an alternating current.

Rotating the Loop in Magnetic Field

The conductor is usually bent into the form of a loop of wire and then rotated in the magnetic field as shown in figure 20. Continuous connection is made with the terminals of this loop of wire by means of two stationary brushes which rest on two metal slip rings connected to the terminals of the loop. When this loop is in the position shown in figure 20, the two sides of the loop. These electrical pressure in one side will be toward the back end of the loop is in the position shown in figure 20, the two sides of the loop are moving perpendicular to the direction of the magnetic files of force at the greatest possible rate and as a result the induced electrical pressure in the first half of the revolution and the first half of the revolution and the



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WITH TUDE OF CFYSTAI Try for yourself entirely at my risk the wooderful improvement this increas-sive little device will make in the resp-tion of your set. Sold on absolute guar-antee of satisfaction or more back and the greatest dollar's worth ever offered the radio public. Improves results on both the radio public. Improves results on both serial, outdoor sarial or light seeker; but will not help a set using loop antenna. Clears up reception wonderfully and partially absorbs static.



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The Kane Antenna eliminates all power noises and most all the squeals from regenerative sets. It filters the air hringing music to your set as it leaves the broadcast station. What more can you ask?

broadcast station. What more can you ask?

Enjoy your set the year 'round. No need to lay it up in the summer. The KANE ANTENNA TAKES CARE OF ALL DISAGREEABLE NOISES. You have invested a lot of money in your set. Why not give it a chance with a good aerial. Your car will run on distilate, but bow much better does it run on a high grade of gas? So with your radio set. It will operate on most any old set'al, even the clothes line or bed springs, but just hook it on to a KANE ANTENNA, and HEAR AS YOU HAVE NOVER HEARD BEFORE.

THE KANE ANTENNA makes all sets good sets, makes listening a pleasure and not a pain. If you are net troubled with power noises the KANE ANTENNA WILL GIVE YOU BETTER RECEPTION. Read the following letter from Dr. C. Hale Kimble of Spokane, Wash, then order your Kane Antenna and enjoy radio as he is doing.

Completed Hame Authors with installation according to your plans last evening. One hour office connecting to my set just plans the Lithburgh and many other statem stations never togged before, cleas and distinct. Could not see Eastern stations at all before, because of static and local interferences of the could get even the Coast stations seeming of this interference, but had them clear and without moles of any Aim—first time I have even behalf to do this interference, but had them clear and without moles of any Aim—first time I have even behalf to do this.

It makes machine very selective. Can shut out Two Super stations on nearly same wave length with one-half a degree dist adjustment. I am deligated with it and unreservedly recommend it to ell radio fans.

DR C. HALE KIGIBLE, Suite 406 Hutton Bidg., Spotane, Wash.

If you prefer to build your own antenna, or would like to look over the full working drawings of the Kane Antenna, just enclose a dollar bill and we will send you a complete set of working drawings and instructions for erecting. These drawings will be accepted back by us at full purchase price on an order for an

The Kane Antenna is now sold only from Factory to consumer. Only one small profit instead of three, the consumer getting the benefit of the price.

The Kane Antenna is made in two styles. The regular for all sets other than R. C. A. Super Hets.

Price, \$13.00

The Special for R. C. A. Super Hets only, \$6.50 Full working drawings (stamps not accepted) \$1.00 Malled to any part of the U. S. postpaid an recolot of price Sent C. O. D. when 23% accompanies order.

THE KANE ANTENNAE CO., Aberdeen, Wash. The Kane Antenna has linked the Atlantic and Pacific

### A. B. C. RADIO COURSE

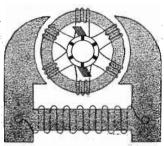
A. B. C. RADIO COURSE

(Continued from page 19)

value. The brushes are placed in such a position that they make contact with the segments connected to a particular loop while the loop is moving from a 45-degree position on one side of a plane parallel to the magnetic field to a 45-degree position on the other side of this plane. This results in the brushes changing from the segments connected to one loop to the segments connected to the other loop each 90 degrees that the loops rotate. The electrical pressure between the brushes will then have the form shown by the heavy line in figure 25. The variations in the pressure can be reduced by increasing the number of loops and segments in the commutator.

The loops of wire and commutator correspond to what is called the armature of a generator. The magnetic field is usually produced by an electric current rather than by a permanent inagnet.

An armature of the type described above is called an open-circuit armature because the loops are only useful when the commutator segments of that loop are in contact with the brushes. When



the loops of wire are all interconnected in such a manner that they are all useful in producing an electrical pressure the armature is called a closed-circuit armature. An armature of this kind with six loops or coils is shown in figure 26.

In figure 26 the loops are wound around an iron ring which provides a mechanical support for them, and also a better conductor for the magnetic lines. An armature of this kind is usually called a ring

ductor for the magnetic lines. An arma-ture of this kind is usually called a ring armature

armature.

Most of the armatures are of what is called the drum type, that is, the winding is placed around an iron core which has a drum shape and both sides of each turn are on the outside of the drum.

If a current be sent through an armature, like the one shown in figure 25, from an ontside source, such as a storage battery, the armature will rotate in the magnetic field and the machine will be a motor. The direction of rotation of the armature of the motor will be opposite to what it was for the generator if the magnetic field and armature current

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COON-SANDERS Original Kansas City Nighthawks

PAUL BIESE'S Champion Victor Recording Orchestra

=The =Radio Exposition Company 1030 N. E. Marshall St. Minneapolis, Minn

be easily understood by the beginner in Radio.—Editor's note.)

### HOW TO OPERATE SET

(Continued from page 18)
Antenna Compensator settings. The setting of the compensator which produces the highest reading on the Antenna Wave

Antenna Compensator settings. The setting of the compensator which produces the highest reading on the Antenna Wave Length dial is the correct compensator setting for the antenna being used and will not need to be changed unless the receiver is used on a different antenna. It will not he necessary to adjust the antenna is changed.

To tune the Federal 141 proceed as follows: First, set 4 so that pointer is at extreme right, 3 to the extreme left and 2 at about 10 on the dial. With 1 at any point between 5 and 30, rotate 3 to the right until a click is heard in the phones or loud speaker. Turn 1 slowly until a station's carrier wave is accurately located. Turn 2 slowly until the click is heard again. This time the click will be followed instantly by the music or voice. Improvement in quality and volume, if necessary, may be obtained by accurately adjusting 1 and 2 by means of the verniers. The arrier wave is represented by a trifle toward the right.

A carrier wave is represented by a whistle. This whistle is not loud, but is distinct and will, as 1 is rotated, var from a shrill note to a low weak too and then back to the shrill tone. The exact center of this low pitched tone is the correct position for 1.

If a powerful station is near by, greater selectivity may be had by moving 4

pitched tone is the correct position for 1. If a powerful station is near by, greater selectivity may be had by moving 4 toward the left and then tuning for the desired station. When operated as above, Federal Type 141 gives surprising results in distance, volume, selectivity and tone quality. By writing the settings of Dials 1 and 2 on the log card which is furnished with the receiver, the corresponding stations may be tuned in again by returning

Zenith receiver which, due to its variable coupling radio frequency transformers, is a distinct advance in the progress of radio frequency amplification.

### FOUR FILTER SUPER

FOUR FILTER SUPER

(Continued from page 17)
circuit jack, which is at the extreme right end of the panel.

Test for Pixed Condenser
Unfortunately, fixed condensers cannot well be tested while counected in the set, and to determine whether any of the condensers are detective it will be necessary to remove them from the receiver. To test fixed condensers after they are taken from the set it is only necessary to touch the two terminals from our battery and head phones to the two sides of the condenser and, if there is a "short" within the condenser, the same click, will be produced as is noted when the two terminals are connected directly together. If the condenser is good, there will be a very faint click, but it may be readily distinguished from the strong click produced when the condenser is omitted from the circuit. Grid condensers may be tested while still in place in the set by removing the grid leak cartridge and touching one side of the test system to the G terminal on the socket and the other side to the dosedenser connection-away from the socket. It is very easy to connect the oscillation conpler in such a way that oscillations are not produced, and one suggestion, if signals are not heard, is to carefully check the connections to this coupler to be very sure that the connection from the P terminal of the oscillator socket goes to the lower end of the center coil, the upper end of this center coil to go to the plus 45 B binding post. The lower end of the top coil should be connected to the rotor plates of the oscillator variable condenser and to the negative filament hus wire; the upper end of this top coil must be connected to the G terminal on the oscillator the socket and to the stator plates of the condenser. It is enceivable, but not likely, that none of the 8 tubes

site directions for the motor to what they were for the generator. The left hand or motor rule may be used in determining this relation. This rule is applied in the same way as the generator rule except you use the left hand. (The alternating current circuit in regular lar electric machinery is analogous to that of Eadio reception and its simple explanation relative to the electric dynamo will be easily understood by the beginner in Eadio.—Editor's note.) the dials to these positions. In this case 3 after all other tests fall, oscillations are rotated to the right until the desired void should be disconnected from the plus of circuit. This can best be done by onnecting to the wire which goes down through hole 30 from the intermediate areals indicates unusual interest in this case 3 after all other tests fall, oscillations are rotated to the right until the desired value accurate adjustments with verniers 1 And 2 A.

(The alternating current circuit in regular and photograph of the intermediate in the plus of circuit. This can best be done by rouncetting it to the wire which goes down through hole 30 from the intermediate amplifier unit, at the point where this comes out on the underside of the subtraction relative to the electric dynamo will be easily understood by the beginner in Eaditor's note.) coupler.

### Condenser Variations

the plus 90 circuit comes to the oscillator coupler.

Condenser Variations

Most of the loops on the market are designed to work with .0005 mfd. variable condensers, but it may be that either the loop used has too many turns or the condenser is of slightly greater (apacity than .0005. If either is the equage, it will be found that KSD and KYW come in at about 80 on the loop dial, and if this proves to be so in actual use, the inner turn of the loop should be removed. This will bring the two stations mentioned at a higher point on the dial and will probably put them about where they should be, at 92 or 96 on the dial. If, on the other hand, the condenser is a little "light," that is, does not come up to full .0005 mfd. capacity or, if the loop does not have quite enough turns, it will he found that with the condenser at 100 on the dial you are unable to get above stations at 485 or 500 meters. If this proves to be the case, another turn should he added at the lnner end of the loop, which will move stations down the dial and should bring in KYW and KSD. If one turn does not prove enough, a second turn should be wound at the center of the loop.

The same facts apply to the oscillator grid coil and the oscillator variable condenser; if the ligher wave length stations come in below 88 or 90 on the oscillator grid coil and the oscillator variable condenser; if the ligher wave length stations come in below 88 or 90 on the oscillator grid coil and the oscillator variable condenser; if the ligher wave length stations come in below 88 or 90 on the oscillator grid coil and the oscillator variable condenser; if the higher wave length stations come in below 88 or 90 on the oscillator grid coil and the oscillator variable condenser; had with the condenser at maximum setting, one or two turns should be removed from the grid coil of the oscillator coupler, which is topmost coil, while, if one js unable to get above 500 meters with the condenser at maximum setting, one or two turns should be removed from the grid coil of the os

# The "Goode" Two-o-One





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The "Goode" Two-o-One A Tube amplifies or detects. It is a quarter empere, five volts, standard base silvered cube. Send errores or postal money order-New York draft-or personal check to-

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### London, Madrid Newcastle, Aberdeen--

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AGAIN Elgin Super-Reinartz leads all others! Every trans-Atlantic report investigated was found to be ABSOLUTELY authentic! Many happy owners of Elgin sets again tuned in the European stations.

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Kentucky

# Change Regenerative Receiver to R. F.

### Rheostat, Socket and Tube Are Parts Needed

So many kicks have been voiced of late about regenerative detector circuits, and so many ways have been tried out to add Radio frequency to the sets, and all with

### 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 book-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 vory much interested in obtaining such material. Send them in with full details, including stamped cnvelope, so rejected copy may be returned. The work must be entirely original, not copied.

RADIO KINKS DEPARTMENT Radio Digest,

510 North Dearborn St., Chicago

an effort to simplicity, so that the sets the fans now have may be readily changed by the owners, that 'It' is impossible to follow them out and get any desired results. I had much hopes of seeing something that I could use easily, but failing to do so, I set about building something to fill the want. The first circuit shows how I accomplished what seemingly was a difficult job.

All the parts extra to change a receiver from an ordinary regenerator to a tuned Radio frequency set is a vacuum tube, a socket and a rheostat. In most cases these parts will find plenty of room in the set for them.

An old regenerative circuit with the

these parts will find plenty of room in the set for them.

An old regenerative circuit with the Radio frequency added is shown in the space outlined by the dashed lines. The wire that connects the rotor and audioransformer is disconnected and is connected direct to the 45 volts of the B battery, never more than 67 volts. The grid condenser and leak is removed and the grid aud coil are connected direct. The grid condenser and leak are now connected between the plate connection on the rotor and the grid connection on the socket that is added. The plate connection of the added socket is connected to the audio transformer where the rotor was connected, or the phones, if no audio was used. A rheostat is placed in the negative side of the A hattery.

The dial reading in all probability will now read backward, but if it does just reverse the connections to the rotor. The tuned Radio frequency circuit that you now have is what is known as the reverse feedback system.

feedback system.

feedback system.

For those who desire to build this simple system out and out use the second diagram shown. For extra sharpness of tuning a modified Haynes tuning system is used. Take an ordinary 90-degree variocoupler and on the stator tap tho antonna at 15 turns from the opposite end to the tapped one. On a standard variocoupler tapped one. On a standard variocoupler all stations on all wave lengths will come

## IF YOUR SET HAS A NONOISE

VARIABLE GRID-LEAK



its maker has used the best materials obtainable

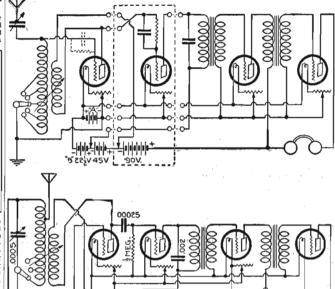
Here is a real variable Grid-Leak. The NONOISE is variable through a resistance range of ½ to 7 inegohms. It can be varied smoothly and silently without loss of the signal. No two sets are exactly alike, therefore the NONOISE that, can be adjusted to the performance of your set gives the best results. No matter how good your set may be, a NONOISE will improve it.

### Price 85 cents

If your dealer counct supply you we will be pleased to fill your order. Don't send any money. Just drop us a postcard and the NONOISE will be sent Parcel Post, collect. Pay the postman upon delivery.

RADIO FOUNDATION, INC. 150 East 53rd Street New York City

### EXTRA TUBE PLACED IN CIRCUIT



┤╒┆╗╽╗┞<mark>╅┈</mark>┦┇╏╒╎**╒╎**┇┈<mark>┤</mark>╗╽<mark>╗</mark>╏╒╏┱

A good pair of telephones is essential for successful operation of a crystal set. Every precaution should be taken to prolong the life of a good vacuum tube.

STAR DETECTORS SATISFY

Type G, Now \$1.00

Type K, Now \$1.25

SHIRE 

B-Metal Loud Talking Dear Sirs: Received from detector O. K. It's all you say and then the control of the control of

A. W. Gale, Gloversville, N. Y., 9 Spring Street

The above letter is typical of hundreds received during the past two years on our type G Fixt Cristal Detector, which has been much improved this year and sells at \$1.00; Friherly \$1.25.

THE TYPE K
STAR ADJUSTABLE
DETECTOR
Is a very satisfactory
crystal for Reflex and
Crystal sets.

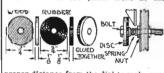
We make a complete line of crystals which In-cludes every standard ma-terial and are in position to quote attractive prices on quantity orders. We can match the field on quality and price. Let us quote you. State quantity.

STAR CRYSTAL CO.

in on the second and third tap. The rotor will tune only about 10 degrees from vertical for all wave lengths, and is not much used in tuning. It is used chiefly to bring in and control the volume. The rotor being at all times about at right angles to the stator.—A. J. Anderson, Greenville, Ky.

### Vernier Dial Attachment

This attachment is made up of a small rubber and wooden disc gived together and then mounted on a spring shaft which is attached to the panel front at the



proper distance from the dial to make con-tact with the dial edge. The illustration tact with the dial edge. The illustration is self explanatory.—Clement Pack, Menasha, Wisconsin.

Wire for the antenna should be a good conductor of electricity. Some good con-ductors are copper, phosphor bronze and sluminum.

# Send in Your

were made to operate as good as new.

C-301A, UV-199, C-299 and any other thoriated filament such as Atlas, Mag-natron, De Forest, etc.

### It Costs You Only \$1.00

if we can restore your tube so that it operates satisfactorily. If we are not successful, our charge is only 25e.

Why pay the price for new tubes when we can make yours as good as new for only \$1.00.

illustrated. Three binding posts are used for the aerial and ground instead of two and the connections are made as shown. and the connections are made as successful it is desired to have the condenser in series with the circuit the aerial is conseries with the circuit root and the

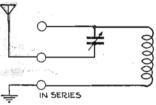
IN PARALLEL

Binding Posts Used in

Place of Aerial Switch

Instead of using a series parallel switch

to change the serial in series parallel in the primary circuit I use tho system as



ground to the bottom, but if it is wanted in parallel the aerial is connected to the top binding post and the ground to tho center and hottom binding posts.—Walter Carron, Los Angeles, Calif.



Save practically HALF on this 618 h

5-Tuba Receiver \$4850

5 Days' Free Trial

SPECIAL OFFER Ty the Detter Receiver and Hora 5 days. Your money refunded is full if you decide to return them.

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Phila., Pa. Radio Engineering Die teen M Established 1888

### Paralyzed Tubes to be Restored to Health in Our Laboratory

98% of your worn-out tubes can be put in first class condition. Better than that, out of the last 500 tubes received by us all but five

We can REACTIVATE UV-201A.

We cannot reactivate UV-200, C-300, WD-11 or WD-12 tubes, nor can we reactivate burned out tubes.

MAIL IN YOUR TUBES TO US FOR PROMPT RETURN, Parcel Post, C. O. D.

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you notice how clearly and powerfully these tubes bring the concerts to

MAGNATRONS are for sale by the better dealers everywhere. The type DC-201 A; the DC-199, and the DC-199 with large base each sell for only \$3.

CONNEWEY ELECTRIC LABORATORIES 309 5th Ave., N. Y. City Factories, Hoboken, N. J.

# **Ouestions and Answers**

Cive Tube Neutrodyne

(13219) EFC, Queensland, Australia.

Having received good results from the making of your five tube neutrodyne, unfortunately the wave length is low compared with the wave length of the stations here, which range from 200 to 1,800 meters. I am very anxious to construct one that will include the above wave length and would be thankful if you would supply a layout with instructions.

A—It would be quite difficult to get a neutrodyne that would cover the range you mention. We would suggest that you experiment with different ways of accomplishing this range. Try using condensers having a very high capacity, to be connected in parallel to the tuning ejudenser. This method may cover the range as desired. It would be a good plan to use variable neutrodons so that their settings may be marked. By using these variable neutrodons you can experiment with different neutroformers and mark the settings of the neutrodons. If you well need about three sets of coils to cover the range.

Adding Stage of Amplification

Adding Stage of Amplification
(13150) JEG, New Orleans, La.

Thave at present a three tube set using a detector and two stages of audio frequency amplification, but 1 would like to add another stage. Can this be done with a low ratio transformer, say 3 to 1? Would there be any distortion of the signals?

A.—With the new type of transformers you may add another stage to your present set. These new transformers are shielded and have features that will prevent distortion, one of which is a large core which tends in high ratio to eliminate distortion. inate distortion.

(13112) DM, Vancouver, B. C., Canada.

In looking over my back number of Radio Digest for a three circuit hook-up I found one in the September 27 issue and made it as described therein. With this hook-up I can get only up to 475 meters. Why is it that I cannot get a greater wave length? Is there anything I can add to increase the wave length?

A.—If you cannot get the upper waves we would advise you to add about twenty turns to the 40-tnrn coil, and if you should find that this goes too high so that you cannot get the lower wave lengths jeduce the turns about two at a time until the correct number is reached.

ZELLERS RADIO LOG BOOK, 25 Cents. Zellers Company, Hooper, Nebraska.

OCTAGON RADIO LOG lists EVERY 500-watt station in United States and Canada alphabetically by cities on ONE card. Spaces for 24 extra. Handler than log book. 15 Cents. F. Kern, Oswego, N. Y.

# Log for Your Radio



Send No Money Pay postman after for arrives, Post-punded if pay with order. MONEY RE-sunded it not DELIGHTED. Order today—NOW. Postal will do RADIO PRINTERS, Dept. 9914 Mendota, Illinois

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can hear programs from cities to 1,000 miles away on Lambert tal Sets and you won't need tubes

es. re of set and particulars free. LEON LAMBERT
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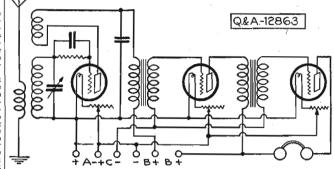
D-R-C RADIO CO.
327 S. LaSalle St. Chicago, 111.

5TUBE SET \$ Assembled Complete

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WHY SHIP WHEN YOU CAN BUY
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The Completely Assambled Worder Said-be
Crible Tuned India Resource Beetier that outperforms sets four these as ceitly—Disect from the
Pactory at the amazingly four write of 1845. There
everywhere secure count to coast condension coast—
"finet materials broughout—easily apprended. Seed
money order coday for the factory-built, famoury-tuned
and FULLY COARANTEED BASC WONNER.
SET as Write for complete list of Accessories.

Write for complete list of Accessories.

D-R-C 329 S. La Saile St. CHICAGO



Circuit Wanted
(12863) RCH, Rowan, Iowa.
Will you please send me a diagram
(plain) by which I may construct a 2 or
3-tube Radio set from the parts as listed
below? I want one that a novice may
easily follow and that which leaves
nothing to the imagination for I know
little ahout making one, but have the
following parts and would like to make
use of them.

1 .00025 variable condenser.
1 .00025 variable condenser.
1 .00025 fixed condenser.
2 3 to 1 Radio transformers.
1 10 to 1 audio transformers.
3 standard sockets.
3 6-obm rheostats.
Hook-up wire, also panel 7 by
12 ins., baseboard and cabinet.
I have not found any hook-up presented in Radio Digest that I can follow

I have not found any hock-up pre-sented in Radio Digest that I can follow with the materials I have on hand. A.—The accompanying hook-up can be used to take up most of the parts you mention in the list.

Meu to build radio sets in spare time Leon Lambert, 501-H Kaufman Bldg. Wichlta, Kansas.

### PATENTS

Time counts in applying for patents. Don't risk delay in protecting your ideas. Send sketch or model for instructions or write for FREE book. How to Obtain a Patent" and "Record of Invention" form. No charge for information on how to proceed. Communications strictly confidential. Frompt. Coloring the content service. Clarence A. Coloring the content service. Clarence A. Coloring and the content service of the coloring strictly confidential from Security Bank Bids. (directly across, 2006 Security Bank Bids. (directly across, 2006 from Patent office), Washington, D. C.

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ESTABLISHED OVER 60 YEARS

- PROTECT AGAINST LIGHTNING Install Now a Low Loss

KEYSTONE

Approved ARRESTER #150



Write for free copy of Premier Bulletin No. 34 giving full description of the many new features of this remarkable low loss condenser, as well as particulars of ail Fremier Quality Radio Parts. "CROFOOT" has lowest minimum capacity; only five minute phase angle loss; tuning ratio of 1 to 74. Made of brass and hard rnbber throughout, for low resistance. \$2.75 to \$3.75. Vernier complete with dial, 75 cents extra. Write for bulletin and FREE HOOK UPS.

Premier Electric Co., 3810 Ravenswood Ave., Chicago

PREMIER Quality

Reactivating Tubes

(13109) RLS, Snyder, Okla.

Is there any way to reactivate the UV-201A tube which burns good? Wo have about twenty which came in a shipment of about 125 tubes. We did not test them at the time and six weeks later we found this number to be inactive. They are new tubes and there should he some way to have them reactivated. Can you tell us a way to give them life?

A.—If the filament still lights the tube may be improved -by burning it at the stated voltage. 5 volts with the UV-201A, for a period of about ten hours. The plato

Thank Your Favorites. Individual applause cards, 100 for \$1, with your name and address. Press, Jamestown, Indiana.



### A REAL FIXED DETECTOR TAKES PLACE OF TUBE



as a crystal set in itself. Stanfa Refler Voltage, Installated and the standard set of caselysa ment feature and does away with botterame carbinate and many and the other one carbinate and and set of the standard of the standard set of the standa

# FREE RADIO

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Just pay postman after album and stamps arrive. I prepay postage if you prefer to pay with order. MoNEY REFUNDED if net UE-LIGHTED. Send order coday—NOW. Postsi will 36. Chicago P. M. Bift-AMT, Dopt. 9414, 566 Wrigey Bids, Chicago



You can purchase for \$3.50 a 12 cell 24 volt RABA SENIOR battery. Saving \$6.10 thru direct buying 24 cell 48 volt size \$7.00

Abust Souther flusheries are nest, powerful, noiseless, parate, clear days evels and natented rubber cork with away duty mans 3 / 16 x 1 x 2 1 / 2 with stagger fribed to form the highly one of this sturdy bettery. Shipped impletely changed ready to use. Order now, awe \$6.10

Rabat Super Charger \$3.00 c. o. d. occulty designed to multicherority recharge nay storage "B" bettery bisped complete ready to use, including lump socket, strachmoni pland cord. Too uses \$3.00 by ordering driver. Said No Money but order today. After evariating and approving these batteries pay Expresement the enself c. o. d. charges. KABATS are represented two years. THE RADIO RABAT COMPANY voltage should be turned off. There should be no other connections. You may have other troubles with these tubes which cannot be fixed by these simple methods.

Improving Two Tube Beflex

[13232] EGM, Georgetown, Conn.

I have a Harkness two tube reflex in which I use WD-12 tubes with 45-volt B battery. With this set 1 get good results us far as distance is coucerned, but the advertised loud speaker volume is conspicuous by its absence. I wish to know if 6-volt tubes will increase the volume? What is the proper B battery voltage? I have tried 90 volts and this cuts down the volume. Can a resistance-coupled amplifier be hooked up to this set, and, if so, will you please seud me a hook-inp for it?

A.—You should not expect to get much volume from this set with WD-12 tubes and 45 volts on the plate. If you use UV-201A tubes you will have no trouble with the lack of volume. It is advisable to use resistance-coupled amplifiers with the WD-12 tubes.

Saleemen calling on radio dealers wanted to handle Radio Tubes as a side line. The Thoria Tube Company, Dept. "D," Middletown, Ohio.

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The editor of TYCOS-Rochester, a meteorological journal published by Taylor Instrument Company, Rochester, N. Y., seeks to review manuscripts based on observations of atmospheric phe-nomena, its effect on radio reception, with a view to publication in above magazine. Prevailing space rates paid promptly on acceptance. All material reviewed promptly. Addressed to the personal attention of F. M. Herrick, Editor Tycos-Rochester, Taylor Instrument Companies, Rochester, N. Y

# Radiophone Broadcasting Stations

### Corrected Every Week-Part II

### FIND MISTAKES AND YOU'LL GET DOLLAR

NE DOLLAR will be paid to the Radiopban 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. Turn in corrections for as many stations as you can find—if you can find errors! Use separate sheet of paper for each station submitted and place name and address on each sheet. In case of tie, duplicate awards will be made.

### United States (Cont'd)

(Note—The second part of the schedule list appears below. The first appeared last week.)

Grown-Intersection part of the senedule list appears ledow. The Said appears class week, John Milk, Market Rd M. Gronolub, Hawall. 590 meters, 590 walks. Market Rd M. Gronolub, Hawall. 590 meters, 590 walks. Market Rd M. Grown M

n., church; 3 pm, concert; 6, church service; 7, concert. Pacific.
KGV, Lacey, Wash, 246 meters. 5 watts. 8t. Martins College. Announcer, Sebastian Ruth. Slogan, "Out. 83:09-30 pm, news, concert, lecture." Pacific. KHI, Jos Anaceles, Calif. 405.2 meters. 500 watts. Los Anaceles Times. Announcer, John S. Daggett. Slogan, "The College Times. Announcer, John S. Daggett. Slogan, 12:309-130 pm, 13:09-430 6-7:308 S-II-308 SUN, 10-12:30 pm, 6:30-7:308 S-II-308 SUN, 10-12:30-1308 SUN, 10-12:

Wed, Fri. 7-8 pm. Sun, 2-3 pm. Central.

Nel, Stockton, Calif. 25 meters. 5 watts. Gould.

Pacification of the control of the

Tacoma, Wash. 250 uieters, 18 watta. Asso-on Statlou. (Love Electric Co.) Mon, Wed, Frt, pm, popular program; 9-10, artist's program.

pm, popular program; 8-10, action of the file.

Hollywood, Calif. 336.9 moters, 500 waits, Los geles Evening Express. Aunouncer, "Town Crier," ity ex Sun, 7:30 am and every hour, thine; 5:15-12 dnight. Frt, Sat, 12-2:30 am. Sun, 10-1 pm, 2-3,

Pacific Billywood, Calif. 239.9 meters. 500 waits. Los Annelses Froming Express. Auronaucer. "Town Crier." Daily ex Sun, 7.30 au and every hour, 1hing; 5.45-12 widdingth. Frl. Sat, 12-2.39 am. Sun, 10-1 png. 2.5, 54. Pracific. Calo. 232.4 meters. 1500 waits. General Diec. Ca. Daily ex Sun, 12-20-12-50 pm, percant. 1 pm; 5. stocks. Daily ex Sun, 12-20-12-50 pm, percant. 1 pm; 2, stocks. Daily ex Sat, Sun, 6 pm, stocks. Tues, Thorn, Pri. 3 pm, mathew. Mon. Wed. Pri. 8 pm, percent. Son. 11 aug. 1-4 pm; 7:30 pm, secretics. Moortain. Sun, 11 aug. 1-4 pm; 7:30 pm, secretics. Moortain. CB. State College, N. M. 348.6 meters. 750 waits. OR. State College, N. M. 348.6 meters. 750 waits. OR. College Graft, N. M. 348.6 meters. 750 waits. No. College Graft, N. M. 348.6 meters. 750 waits. No. Wed. Fri. 7:30-330 pm, noncert. Mountain. Contral. College Calif. No. 326 meters. 50 waits. Contral. Vol. 11:35-12 m. 935-10 pm, time, reports. Mon. Wed. Fri. 7:30-330 pm, moorert. Mountain. Contral. College Calif. 12-35-12 m. 935-10 pm, time, reports. Mon. Wed. Fri. 7:30-330 pm. Services. State. 3-5 pm, order. Mon. 236 meters. 50 waits. Contral. OR. Daily Min. 238 meters. 500 waits. Contral. OR. Daily Min. 236 meters. 500 waits. States. 75 pm, order. Mon. 240-25 pm. Sat. 11-30-1 am, pine orazu. Central. OR. Daily Min. 236 meters. 500 waits. States. States. Mon. 240-25 pm. Sat. 11-20-1 am, 240-25 pm. Sat. 11-23-5-1 pm, cutain. Daily ex Sat. 300 pm. Sat. 11-22 pm. easily. Sat. 12-23-5-230 pm. sat. 12-23-5-230 pm. sat. 12-23-5-230 pm. sat. 12-23-5-230 pm. sat. 12-23-5-23 pm. sat. 12-23-5

Pacific.

(PPC Pasadena, Calif. 228.9 meters. 50 walts. Pasadena Presbyterian church. Announcer, G. Anton Phol-man. Wed. 7:45-9 pm. Sun, 10:30 sm, 7-9 pm.

dens Presbyterian church. Announcer, G. Anton rootman. Wed. 7:45-9 pm. Sin. 10:36 ap., 7-9 pm.
K. Belling. Sin. 10:36 ap., 7-9 pm.
K. Berling. Call. 288 meters. 10:36 watts.
K. Berling. Call. 288 meters. 10:36 watts.
K. Berling. Call. 288 meters. 10:36 watts.
Sin., 16-11 ap. 5:36-7:39 pm. 3-9 b-10. Petific.
KSAC, Manhattan, Kan. 340.7 meters. 500 watts. Kanas

State Agricultural College. Announcer, Sabr Pickard. Daily ex Sat. Sun. 9-14 am., 12:30 pm., 7:20-8.

KND. St. Louis, Mus. St. St. Lancer. 550 watts. St. Louis Post Dispatch. Daily ex Sun. 9:40 am. 10. 10:40, 11:40, 2:40, 3:46. Mon. 7 pm. 9. 10. Sun. 7 pm., 10. Tues. 6 pm. 9. 10. Thurs. 4 pm., 8:10. Sun. 7 pm., 10. Tues. 6 pm. 9. 10. Thurs. 4 pm., 8:10. Sun. 7 pm., 10. Tues. 6 pm. 9. 10. Thurs. 5 pm., 10. Sun. 7 pm., 10. Tues. 6 pm. 9. 10. Thurs. 5 pm., 10. Sun. 7 pm., 10. Tues. 6 pm. 9. 10. Thurs. 5 pm., 10. Sun. 11:40. Sun. 11:40. Sun. 12:40 pm., 10. Sun. 11:40. Sun. 12:40 pm., 10. Sun. 11:40. Sun. 12:40 pm., 10. Sun. 11:40. Sun. 12:40. Sun. 12

by high school students. Existers.

WABU. Camber. N. 3. 226 meters. 50 waits. Victor

WABU. Wooster. O. 206.8 meters. 50 waits. The College of Wooster. Dept of Physics. Amounteer, Frank

WABU. State of Physics. State of Physics.

WABY. Fhiladolphia, Pa. 242 meters. 50 waits. John

Magaidi, Jr. Slogan, "Guaker City Steep Dodgers'

Pub. music; 10:30. "Sleep Dodgers' Sesion." Exitor

WABZ. New Orleage, La. 175 meters. 50 waits. The

Coliseum Place Baptist church. Amouncer, V. W.

Bradour. Slogan, "The Station with a Mostace."

Pub. Magaidi, Jr. Borner, For Station with a Mostace.

7:15-5:35, organ. Central mate; Sun. 11-22:15 un.

7:15-5:35, organ. Central mate; Sun. 11-22:15 un.

WADC. Akron, Ohlo. 255 meters. 100 waits. Alon T.

Shimonom

Put Huron, Mith. 238 meters. 250 waits.

WADC. Merco of Magain amount of Magain amouncer.

A. B. Parfet Co. Slogan, "We Are Ford Orchers" Dulley

Sal. Sun. 6:11 pm. Sat. 9:12. Sun, 7:30-9 bn.

Tastern.

A. B. Grebe & Co. Blogan, "Wait and Hear Greber."

Mon. 7:30-2 am. Wed. Frt. 7:30-11:5 pm. Sat. 12-2

sin. Eastern.

WABC. Medford Hillside, Mass. 221 meters. 500 waits.

Marc. Medford Hillside, Mass. 221 meters. 500 waits.

American Radio & Research Corp.

WABA, W. Lalsystete, Ind. 272 meters. 250 waits.

Part. Wed. No. Monacopolis, Minu. 244 meters. 500 waits.

American Radio & Research Corp.

WABA, W. Lalsystete, Ind. 272 meters. 500 waits.

American Radio & Research Corp.

WABA, W. Lalsystete, Ind. 272 meters. 500 waits.

American Radio & Research Corp.

WABA, W. Lalsystete, Ind. 272 meters. 500 waits.

Marc. Medford Hillside, Mass. 261 meters. 500 waits.

WABA, W. Lalsystete, Ind. 272 meters. 500 waits.

Marc. State of the Marchaeler.

WABA, W. Marchaeler. Pa. 276 meters. 500 waits.

Part. Walle. School. Part. 1730-1112.

WABA, W. Marchaeler. Pa. 275 meters. 500 waits. Pen
WABA, Kurshibarr. Pa. 275 meters

Worth Star-Telegram. Announcer, "The Bired Hand" Club, "Radio Truth League." Daily et Sun, 10, 11, 12 m., 1 pm. 2, market reports, weather: 1, "Port of Missing Men." Mon. Toes, Wed. Thurs, Fr. 12:35-13. Mon. Toes, Wed. Thurs, Fr. 12:35-13. Mon. Thurs, Th

Baltern.

WBBZ. Indianapolis, Ind. 338 meters, 50 vaits. Noble Br. Natson. Robert Robbins. Mon. 8:30-10 pm. Centrol WBCN. October 1998.

WGCN. Chicago. II. 266 meters, 500 watts. Southlown Beconomist. Announcer. Win. Br. McDouncell. 810san. Stur. 6:45-7 pm. children's heur. Daily ex Sun. 6:45-7 pm. police bulletins. Taurs, 8st. 6-1. Wed. Fir., 6-30 m. Tues. 7-12, 12-12. De Pirtet with 15:16-15. Wespers; 7-8. classics; 8-10-30 pm. dance music. Centrol Br. 12, 12-12. De Pirtet with 15:16-6-15. Vespers; 7-8. classics; 8-10-30 pm. dance music. Centrol Br. 12, 12-12. De Pirtet with 15:16-6-15. Vespers; 7-8. classics; 8-10-30 pm. dance with 15-6-15. Vespers; 8-10-30 pm. dance with 15-6-15. Vespers; 8-10-30 pm. dance with 11-30-12. vespers; 8-10-30 pm. concert; 7. market coports. Luke, 7-10- bedting stories; 9-16-15. Vespers and 11-30-12. vespers; 8-10-30 pm. concert; 11-30-12. vespers and 11-30-12. vespers and 11-30-12. vespers and 15-30-16. Vespers and 15-3

11.39-12, dance. Sat. 11.39-12 pm, dauce program. Sun, 10:45 am, church services; 3:39-10 nm, courter. Eastern. Sun, 10:45 am, church services; 3:39-10 nm, courter. Eastern. Sun, 10:45 am, church services; 3:39-10 nm, courter. Eastern. Sun, 12:35 meters. 550 watts. St. Laverere utility. Announces, Ward C. P. Peters. Slogar, The Voice of the North Cuuntry. Dalty, I1 au, weather, reports, time. Wed. 8 pm, program. Eastern. WGAE. Pittsborgh. Pb. 361.3 meters. 550 watts. Kanthamark. Sundamer. Su

Tiurs. 9 pp., muylc. Fri, 8:300 pm. cass. Das. t.s. midnight, nujute. Sun, 8:300 pm, serion. muzle. Ceuuclado, Baltimore, Md. 275 meters. 50 watts. Sanders 
& Stayman Piano Co. Announcer, R. E. Brinner. 
Dally ex Sun, 11:55 au, time 12 m. weather; 13:05. 
Dally ex Sun, 11:55 au, time 12 m. weather; 13:05. 
Dally ex Sun, 11:55 au, time 12 m. weather; 13:05. 
Dally ex Sun, 11:55 au, time 12 m. weather; 13:05. 
Dally ex Sun, 11:55 au, time 12 m. weather; 13:05. 
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Dally ex Sun, 11:55 au, time 12 m. weather; 13:05. 
Dally ex Sun, 12:05 au, time 12 m. weather; 13:05. 
Dally ex Sun, 12:05 au, time 12 m. weather; 13:05. 
Dally ex Sun, 13:05 au, time 12 m. weather; 13:05 au, 13:05 au

WGAU, Milhadelphia, Pa. 278 meters, 500 watts. DurWGAU, Milhadelphia, Pa. 278 meters, 500 watts. Durpin, Eastern.

WGAX, Burliutou, Vt., 250 meters, 100 watts. University of Vermont. Fri, 7-8 pm. Eastern.

WGAY, Milwaukes, Wts. 268 meters, 250 watts. Milwaukue Civic Broadwating Station. Announcer, Hilly
pm. Thes, Thurs, 9-15 pm. frolic. Wcd. 6-30 pm.
Sun, 9-15 pm. Central.

WGAZ, Cartage, III. 248 meters, 50 watts. Carthage
College. Wcd. 9-10 pm. Central.

WGAZ, Cartage, III. 248 meters, 50 watts. Carthage
College. Wcd. 9-10 pm. Central.

WGAZ, Cartage, III. 248 meters, 50 watts. Carthage
College. Wcd. 9-10 pm. Central.

WGAZ, Cartage, III. 248 meters, 50 watts. Carthage
College. Wcd. 9-10 pm.

WGBQ, Zion, 111. 945 caters, 1500 watts. Wilbur Olean
sprice. Eastern.

WGBQ, Zion, III. 945 caters, 1500 watts. Wilbur Olean
College. Almouncer J. R. Delbow Sioran, Worde
College. Almouncer J. G. Delbow Sioran, Wilder
Delbow, Service, Sun, 9-10-15 am, Bible School; 2:30-4,
church services. Sun, 8-10-30 pm. Central.

WCBE, New Orleans, La. 103 meters. 5 watts. Unaif.
Rothers Radio Co. Announcer, Johnsto Wilson, Slogan:
"Second Pert U. S. A." Sat, 8 pps. dance. Sun.
12:36-2 pp. dinner concert; 9, dance music. Central.
WG W. Milliams. St. 228 meters. 10 watts. Howard:
WGBH, Orlord, Miss. 258 meters. 10 watts. Howard:
WGBH, Orlord, Miss. 252 meters. 10 watts. Howard:
WGBH, Difford, Miss. 242 meters. 150 watts. NicollyDuncan & Rush.
WGBI, Jannings, La. 244 meters. 150 watts. NicollyDuncan & Rush.
WGBI, Houlton, Ms. 258 meters. 100 watts. Northern
"Call of the North." WG, 7:56-10 pm. 5min, 10:590
am, 3-5 pm. 7. Eastern.
WGBM, Battimore, Mc. 229 meters. 50 watts. Hotologist.
10 pm. 1 am. Sat. 229 meters. 50 watts. Hotologist.
WGBM, Battimore, Mc. 229 meters. 50 watts. Hotologist.
WGBM, Battimore, Mc. 229 meters. 50 watts. Piret
Eastern.
WGBQ, Nathrille, Tann. 242 meters. 50 watts. Piret
Eastern.
WGBQ, Nathrille, Tann. 242 meters. 50 watts. Charles
WGBR, Providence. R. 1 305.5 meters. 5 watts. Charles
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WGBR, Providence. R. 1 305.5 meters. 5 watts. Charles
WGBR, Providence. R

WOEZ, Chicago Heights, Ill. 248 meters. 50 watts. Conpotell Brothers Music Bouse. Announcer, John King. Shagan. Where the Lineal and Dilta Ellchroman Control.

WCOO, Minnerpolis-St. Paul, Minn. 416.4 meters. 1,500 watts. Wamburn-Coppy to. Announcer, Paul John. 10:30, markets. 10:35, home service; 11:30, markets. 10:35, home service; 11:30, markets. 10:35, home service; 11:30, markets. 10:36, home service; 11:30, markets. 10:36, watts. Wed. 10:30, markets. 10:36, home service; 11:30, markets. 10:30, markets. 10:30, bond to the control of the

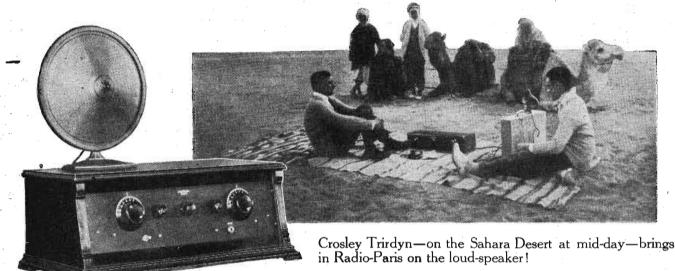
Tues, Thurs, 9-10-39 pen, nucle. Ceutral.

WOAH, El Paso, Tex. 285 meters. 50 waits. Trinity Methodist Church South. Annoqueer, Oscar Morton. Methodist Church South. Annoqueer, Oscar Morton. Morton. 19 pen. Sun, 11 anj. 7:30 pen, services. Moorton. Morton. 19 pen. Sun, 11 anj. 7:30 pen, services. Moorton. 19 pen. Sun, 10-30 pen. Pen. Sun Pen. Pen. Pen. Sun, 10-30 pen

"The Dimple of the Universe." Daily ex Son, I pm, markets. Tues, Thurs, Sat., 8-9 pm, mustic, Central, W. Thurs, Sat., 8-9 pm, mustic, Central, W. Thurs, Sat., 8-9 pm, mustic, Central, W. Thurs, Sat., 8-9 pm, Mon. Thurs, Sat., 8-9 pm, Decaration, Bardis Shop, Men. Thurs, Sat., 8-9 pm, Men. Thurs, Shore Consequential church, 7-30-9 pm, Waltz, Morth Shore Consequential church, 7-30-9 pm, Waltz, Morth Shore Consequential church, 7-30-9 pm, Men., 11: 230 pm; 3:10-5, 7-31-9-30. Central, 12:30 pm; 3:10-5, 7-31-9-30. Central, 12:30 pm; 3:10-5, 7-31-9-30. Central, Williams, Announces, G. Henry Nesslage. Wed. W. M. Washington, D. C. 270 maters, 50 waits, Church of the Corenant, Announcer, Thomas J. Williams, Sun, 11 sm, church service; 8 pm, clurds service. Eastera.

www.americanradiohistory.com

# What the Trirdyn gets where it's hotter than Summer.



Not only at mid-day, but in February—in Northern Africa and far hotter than any American summer.

The picture above, a post card snapshot sent from Tunis to Mr. Crosley, by D. F. Keith of Toronto, Ont., tells this story on the other side:—

Tunis, North Africa, March 3, 1925

Dear Mr. Crosley:

Fishing here is rotten but radio is fine. On the Sahara, using three tubes on the Trirdyn circuit, reception from Paris came through on the loud-speaker. Along the south coast of the Mediterranean, using this set, six or eight high power European stations came in with good volume by day-light and all of them after dark. Can usually get a few American after 1 a. m. Can you fish with us this year?

Cordially, (Signed) D. F. Keith

Further details on the margins of the picture:-

Sahara Desert, 250 miles south of Algiers, February, 1925. Receiving noon-day concert from "Radio-Paris", Paris, using aerial and counterpoise.

Who said summer in America is a poor time for radio—if the receiver is a Crosley Trirdyn?

Every radio fan—actual and aspiring—is invited to think this over and then act.

On the Trirdyn is the beautiful new Crosley Musicone, radio's most startling development. The Musicone's abilities and its beauty are so superior that we expect it to replace half a million loud-speakers this year. \$17.50.

The Crosley Radio Corporation, 4493 Sassafras St., Cincinnati



Better~Costs Less

