

Advance Programs with Special Tables; Low Loss Radio Frequency Receiver; A. B. C. Course in Radio Fundamentals; Station WBZ, Feature with Photos

# Radio Digest

EVERY WEEK

## Illustrated PROGRAMS

TEN CENTS

REG. U. S. PAT. OFF. & DOM. OF CANADA

Vol. XIII Copyright 1925 By Radio Digest Publishing Co. SATURDAY, MAY 2, 1925 No. 4

# WORLD PEACE BY RADIO



Left, Winifred Hanlon, soprano soloist, on the Sunday afternoon program, broadcast by KGO, regularly from their studio at Oakland, Calif.

### STATION WGBS HOLDS BIG RECORDING TESTS

Any Non-Recording Artist Eligible for Pathe Competition

NEW YORK.—Every Tuesday evening from 8 to 9 Station WGBS will hold a Pathe recording competition, during which the Radio audience will be the judges of the artists competing. Any artist who has never recorded before for a phonograph is eligible for entrance.

## NEW STATION TO TRANSMIT PROPAGANDA

Located Near Geneva

Combine of Internationally Famous Engineers to Design Gigantic Structure in Near Future

(By A. C. Blackall)

LONDON, Eng.—What price peace? For centuries sages have been endeavoring to solve this question. Down through the ages the problem has passed from hand to hand until the present time. Still no visible means have been found to fulfill the ever-present needs.

At last a new angle has been found to work upon. Is Radio the much-sought factor that can secure the peace of the world? Many people believe it is. Working along these same lines it has been proposed that the League of Nations install their own broadcasting station for the dissemination of peace propaganda.

#### Propose Giant \$10,000,000 Station

This station would not be of the ordinary high power affair in use at the present day, but a giant super power station such as few people have ever dreamed of—a station so mighty that it will be impossible for another station to jam it out, and a real international station. It would be designed by the best of broadcasting engineers, recruited from every country in the world.

(Continued on page 2)



Above, Gilda Gray, high priestess of jazz, recently was in Atlanta and sang some of her blues songs. She also gave an interesting talk from station WSB. Right, Jean Frances Small, brilliant young pianist of the Cincinnati conservatory of music who plays frequently from WLW.



## SECRETARY HOOVER STUDIES CHEAP SET

MAKES HOME TESTS SO AS TO SERVE FANS BETTER

Department of Commerce Head Gets First Hand Information on Difficulties of Average Listener

WASHINGTON, D. C.—Radio receiving tests are being made at his home by Secretary of Commerce Hoover on all kinds of cheap tube and crystal sets.

The secretary is making these tests, he has stated, in the interest of the listeners of the country. Thus he hopes to be better able to understand some of the difficulties which they are confronted with in the use of cheaper Radio sets.

## BROKEN BONE WON'T STOP BEDTIME TALE

DAVENPORT, Iowa.—Despite great pain occasioned by the fracture of a small bone in her hand, Val McLaughlin, WOC Sandman, did not fall the kiddies recently, but stifled her sobs and postponed medical attention while she made her usual broadcast. After signing off, her hand was X-rayed and the broken bone was set.

## Harmonica Players to Meet in Match at Station WBAP

FORT WORTH, Texas.—After listening to a mouth harmonica program from Station WBAP, C. H. Wright of Madill, Okla., sent a challenge to W. W. McBeth, the artist who was playing before the microphone. The challenge was accepted and it will be up to the listeners to decide who is the better of the two. Communications from Radio fans will be used as votes.

# No. 6 OFFICIAL BALLOT Announcers' Contest

## RADIO DIGEST SECOND ANNUAL GOLD CUP AWARD

Gold Cup Award Editor, Radio Digest,  
510 North Dearborn St., Chicago, Ill.

Please credit this ballot as one vote for:

.....of Station.....  
(Announcer's name) (Call letters)

Signed.....

Address .....

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

If you desire, tell below in five or less words what you most like about the announcer for whom you have cast this ballot:

5-2-25

# NOMINATION CERTIFICATE Announcers' Contest

Radio Digest Second Annual GOLD CUP AWARD

GOLD CUP AWARD Editor, Radio Digest,  
510 N. Dearborn St., Chicago, Ill.

Dear Sir:

I nominate.....

Station .....  
Broadcasting Station

Signed .....

Address .....

Town..... State.....

## Station Changes

Station WENR, owned and operated by the All-American Radio corporation, is now on the air. This station is located in Chicago and operates on 100 watts.

In honor of the memory of his father, Boeitus H. Sullivan of Chicago has given 5,000-watt broadcasting stations as a gift to both the University of Notre Dame and the University of Illinois.

KQV, the Doubleday-Hill Electric company station at Pittsburgh, is discontinuing evening broadcasting. Their efforts will be concentrated on the trade request programs.

WBBM, the Atlas Investment company station in Chicago, has under construction to replace their present equipment one of the most modern transmitters in the country.

Two stations have been transferred from class C to class A. They are KZM, Oakland, Calif., and KFAD, Phoenix, Ariz.

# HEARST WILL OPEN FOUR BIG STATIONS

## FORMS PARTNERSHIP WITH JOSEPH M. SCHENCK

Stations to Be Located in New York,  
Chicago and Los Angeles—  
Open Soon

NEW YORK.—Dissatisfied with the type of Radio programs now being broadcast in this country, William Randolph Hearst, noted newspaper publisher, and Joseph M. Schenck, motion picture producer, have formed a partnership to erect four powerful broadcasting stations. These stations are going to be so arranged as to blanket the entire country, and will disseminate news and entertainment.

Three of the cities in which broadcasting stations are to be located have already been selected. They are New York, Chicago and Los Angeles.

The fourth will be located so that it may cover that territory not covered by the other three stations. This will enable anyone in the country to hear the Hearst-Schenck programs with any simple form of receiving set.

### Will Also Transmit Photographs

It is understood that the four broadcasting stations when constructed will be used for the operation of the high speed automatic Radio printer system, developed by W. G. H. Finch, which makes secret Radio transmission possible. This device was recently exhibited before a large gathering of newspaper men in the Waldorf Astoria hotel in this city.

While many other newspapers have broadcasting stations of their own, they are all of local range. The contemplated stations will mark the first time that a publisher has attempted broadcasting on a nation-wide scale.

The Hearst newspaper organization has assembled a large force of writers and editors of national note. They will be called upon to participate in the Radio programs, it is said.

When any big news story breaks, it is possible that microphones will carry a running account of the event to all parts of the country, using the four station tie-up.

News, entertainment, discussion of current topics, everything that will appeal to the people on the farms as well as their brothers in the city, will be sent out from these stations. This will be one of the main features of the new stations.

## PLAN PEACE STATION

(Continued from page 1)

The proposal is to erect the station from 8,000 to 10,000 feet above sea level, near Geneva, Switzerland. Compared with such a station, the present-day stations would appear as a toy. The suggested station would have an effective reception range of 14,000 miles—making it possible for everyone with a set in the world to hear the reports broadcast. The cost of erecting and equipping this mammoth station would be about \$10,000,000.

The idea has been put forward by an Italian society and has received influential support from German and Austrian organizations, and from individual Frenchmen.

### Would Counteract Propaganda

One of the main effects of such an international broadcasting station would be to counteract propaganda talks transmitted from individual countries. These talks, which have lately become a serious menace, are soon to be the subject of investigation by the new International Radio Bureau. At present, officials of the British Broadcasting company are at a loss to carry out the orders of the British government to stop the reception by British fans of German propaganda programs transmitted in English.

The problem of what languages should be used may not prove easy to solve. Internationally there may be other pitfalls to the idea, but purely as a Radio feat, to be able to tune in to the largest broadcasting station in the world, is certainly an interesting proposition.

# GOLD CUP STANDING SHOWS WHO LEADS

## DIVULGE NAMES OF SIXTEEN NEAR TOP

### Interest High in 1925 Radio Digest Gold Cup Award—Fourteen New Candidates

Surprise for you! Here it is—the first hint at the relative standings in the Radio Digest second annual Gold Cup Award for the world's most popular Radio announcer. Just what you—and a lot of anxious candidates—have been waiting for.

The votes cast, however, are still too few in number to say that the standings given this week will be indicative of the finish. The reason for this is that most Radio fans are saving their ballots for the bonus votes granted when a group is turned in at one time.

Now to the business. The suspense has been great, so there's no reason to keep it up.

The sixteen leaders have been arranged in four groups. Each group has been arranged alphabetically so that you won't be influenced necessarily to vote for the leader. Here they are:

First group: Henry Field, George D. Hay, Bill (W. G.) Hay, Graham McNamee.

Second group: N. Dean Cole, Gene Rouse, Bernard Strang, E. W. Tyson.

Third group: Stanley W. Barnett, Leo Fitzpatrick, The Hired Hand, Jerry Sullivan.

Fourth group: Phillip Carlin, Bob (C. R.) Emery, Charles Erbstein, Lambdin Kay.

### See Standings Next Week

Now the suspense is over for a week. Wonder who will be in the first four groups next week? Wonder if some announcers in the above groups will be absent next issue? You never can tell. Wait patiently and watch.

Last issue the names of 107 candidates, contending for the cup, was given in full. That's a pretty large number of cup aspirants, but the mail during the past week shows that the number is bound to increase. Admirers of fourteen more announcers got behind their favorites and nominated them in the past seven days.

The fourteen new candidates, whose nomination has brought the total number of contestants to 121, are as follows:

CNRT, Eddie Jackson WBBM, Chas. Hughey  
KFOA, W. K. Bert WBBM, Clyde Hager  
KFOA, C. E. Haymond WBZ, A. G. S.  
KOA, R. K. Clark WCAE, Jerry Wyman  
KOA, Ralph Freese WHK, Art Cook  
KPO, Claire Morrison WJAS, Bryan McDonald  
WAAM, J. B. Bailey WOS, Arthur Nelson

Is your most admired announcer in this list, or was his name in the complete list given last issue? If not, make use of the nomination blank printed at the top of this page. Send the nomination to the GOLD CUP AWARD EDITOR, Radio Digest, 510 North Dearborn street, Chicago.

Then, just to help him to win the beautiful solid, 14-carat gold cup, shaped like a microphone, it would be a wise plan to save the voting ballots also printed each issue at the top of this page.

### How 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 Radio Digest until the close of the contest, with the August 22 number.

Each of these ballots will count for one

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

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

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

# CONTENTS

Radio Digest, Illustrated, Volume XIII, Number 4, published Chicago, Illinois, May 2, 1925. Published weekly by Radio Digest Publishing Company, 510 N. Dearborn Street, Chicago, Illinois. Subscription rates, yearly, Five Dollars; Foreign Postage One Dollar additional; single copies Ten Cents. Entered as second class matter at the post office at Chicago, Illinois, under the Act of March 3, 1879.

All the Live News of Radio.....	1 to 6
WBZ—Boston and Springfield, Mass.....	5
Operating and Trouble Shooting, for the Owner of a Freshman Masterpiece.....	7
Advance Programs for the Week at All the Larger Stations.....	8 to 13
An Evening at Home with the Listener In, a chart in Eastern, Central and Pacific time, showing when to listen in for your favorite stations.....	14-15
Editorials; Indigest; Condensed by Dielectric.....	16
Low Loss Radio Frequency Receiver, Part II—Assembly of Panel and Sub Base, by George Walters.....	17
A. B. C. Course in Radio Fundamentals, Chapter VI—the Alternating Current Circuit—Continued, by David Penn Moreton.....	19
One Control Regenerative Reflex Set, by William D. Cape.....	21
Questions and Answers.....	22
Directory of Radiophone Broadcasting Stations, Part IV.....	23

# Looking Ahead

Wiring the Walters Low Loss Set is the subject for the third article, which completes the construction of this very sharp tuning outfit. Picture diagrams enable beginners to proceed with confidence and without the need of referring to a schematic diagram.

Station KOA will be Featured in Our Next Issue. The story of this station explaining all the novel and unique points will be presented. A large number of photographs will accompany the article showing different views of the station, so that fans can see what the Denver, Colo., station looks like.

Operating and Trouble Shooting for the Marvodyne Receiver will be the next article of this popular series. A five tube tuned radio frequency set, it has several unique features that readers will find most interesting.

The Use of Capacities, Construction of Condensers and discussion of their characteristics will be taken up by Professor Moreton as the next installment of his A.B.C. Radio Course. With a knowledge of inductance and capacity, the student finds the handling of tuned circuits easy.

## Newsstands Don't Always Have One Left

WHEN YOU WANT

# Radio Digest

YOU WANT IT!

BE SURE OF YOUR WEEKLY COPY  
BY SUBSCRIBING NOW

## SEND IN THE BLANK TODAY

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

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

Name .....

Address .....

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

# STATION GLEANINGS AND NEWSY BRIEFS

## KOA TO BROADCAST MUSIC WEEK IN DENVER

Shriner's Band to Play Every Tuesday From WLS—CKAC Boosts Montreal and Quebec

KOA's international Radio audience will have first opportunity to hear Denver's far-famed music week celebration and annual spring festival May 3 to 10. More than fifty daylight and evening attractions have been billed especially for Radio listeners.

Medinah Temple's military band of 110 pieces, said to be the largest amateur musical organization in the country, will broadcast every Tuesday evening between 9:45 and 10:10 from WLS, Chicago. It is known as the "Million Dollar Band," and is composed entirely of Shriners.

With a view to boom Canada's oldest province, the Montreal Press club has inaugurated a series of broadcast programs through Station CKAC, Montreal, every Tuesday evening. They will boost both the city of Montreal and Quebec, and encourage tourists to visit both these wonderful places.

S. L. Rothafel, better known as "Roxy," announcer at the Capitol theater, broadcasting through WEA, New York, on Sundays, will stage a monster entertainment program to be broadcast at the Radio show to be held in Grand Central palace in September.

A ten-minute period of morning devotion—spiritual beginning for the day's work, after the setting-up exercises, is now broadcast from station WEEL, Boston. It will be called the "Morning Watch," and WEEL is the first station in the country to have this spiritual program.

Lovers of sports throughout the country were given a treat recently when Station WIP, Philadelphia, broadcast the Penn relays. Every detail was described to the listening fans, from the beginning to the end.

If a banquet is good, broadcast it regardless of the time at which it is held. That is the motto of Station WJY, who recently broadcast a banquet held at noon in the Waldorf-Astoria hotel in New York. Many notables were among the speakers.

Station WEW, St. Louis university, recently held the fourth anniversary of the station's existence. A special program was broadcast and thousands of letters and telegrams arrived complimenting the station on its birthday.

Another special farm schedule has been added to the program of WOC, Davenport, Iowa. This feature is on Friday evening from 6:50 to 7:10, and will prove profitable to the farmer.

George Bernard Shaw's comedy, "You Never and Tell," will be broadcast by KGO, Oakland, Calif., Thursday evening, May 7. In the cast will be heard familiar voices of KGO players.

"China Rose," was recently broadcast from Station WHN, New York. This is a musical comedy which is now running at the Knickerbocker theater in New York.

The first anniversary of the opening of the Kimball Hall studio of Station WBZ was celebrated recently. This studio is known as the "perfect" studio, and is lined with celotex lumber.

Some of the best musical talent procurable was drafted recently by the Albany Chamber of Commerce, when they put on a special "Albany Night," through Station WHAZ, Troy, N. Y.

## World's Largest Carillons to Broadcast from Canada

OTTAWA, Ont.—Ottawa is to share with New York the distinction of possessing the world's largest carillons, as the Dominion government has just placed the contract in London, England, for a carillon of fifty-three bells, to be identical with that for the Park Avenue Baptist church, New York.

The second carillon is to be installed in the Viceroy tower of the new Houses of Parliament at Ottawa. The biggest, or bass bell, will weigh nine tons, and its note in the musical scale will be low "E," the semi-tone immediately above being omitted. The notes of the remaining bells will rise by semi-tones through the chromatic scale four and one-half octaves.

## PLANTATION OWNER ASKS WMC FOR HELP

MEMPHIS, Tenn.—Since the days of Simon Legree, the auction block has become known as a suitable place for the disposal of goods or chattels. Now comes the broadcast station. A Louisiana plantation owner recently requested Station WMC in this city to sell the land for him, offering as a reward a fee of \$1,000 when the sale was completed. The letter was turned over to the Memphis real estate board for action.

## COST OF STATION IS NOT PUBLIC WORRY

WASHINGTON, D. C.—The Public Utilities commission, in revaluing the property of the Chesapeake and Potomac Telephone company in this city, which operates WCAP, has disallowed \$125,000 spent by the company in equipping the station. It is understood that while the commission was appreciative of the broadcasting, it did not feel that the cost of the station should come under the basis of fixing telephone rates.

## HELPS MAKE WEAR PROGRAMS



Miss Ruth King, to whom the audience of WEAR is indebted for the delightful program rendered during "The Fireside Hour" on Sunday evenings from this station. She is a composer with a wide knowledge of music and an extensive acquaintance among Cleveland's musical circles.

## MEXICAN STATION TO GIVE UNIQUE STAMPS

CYL to Acknowledge Letters by Sending a Zarape

MEXICO CITY. — Someone said that there is nothing new under the sun. That someone was never in this city, for there is something new here in the line of broadcasting. Station CYL, located here, instead of giving the usual confirmation stamps for hearing the station, are sending out a miniature genuine Mexican zarape.

When you hear CYL, send them a dollar and a description of the program that you have heard, and they will send one of the zarapes to you. This unusual confirmation of a program is unique, to say the least.

The zarapes are made by the Mexican Indians in a combination of many colors, beautifully designed. It takes the Indians sometimes two or three days to make one. They are hand made and will suit those of the most exacting tastes.

## New Director of KFVB Once KYW and KHJ Singer

HOLLYWOOD, Calif.—Charlie Wellman, prince of jazz, well known for his singing from KYW and KHJ, went over to the movie station, KFVB, when that station took to the air early in March. Upon the resignation of Edward Murphy as studio director, Mr. Wellman took the position. Harry Seymour, known widely on the vaudeville stage and in pictures, arranges the programs for the new station and conducts the "Joy hour" from 10 to 11, Pacific time, nightly.

## Agree on New Radio Policy

WASHINGTON, D. C.—The interdepartmental Radio advisory committee has practically agreed on the new government Radio policy and it is expected that when final approval has been given that a proclamation will be issued by the President. Among other things, the policy will make permanent the interdepartmental committee.

# WSB GETS PALATIAL STUDIO AND BIG SET

## NEW STATION OF VOICE OF SOUTH FIRST OF KIND

Atlanta Journal to Move to \$7,000,000 Atlanta Biltmore Hotel—Lambdin Kay, Director

By Bonnie Barnhardt

ATLANTA, Ga.—The Atlanta Journal, operators of WSB, one of America's pioneer broadcasting stations, announce the purchase of a new type of high-power Western Electric transmitter for installation this summer on the topmost floor of the Atlanta Biltmore hotel, a \$7,000,000 show place of Dixie.

The new broadcasting unit for "The Voice of the South" will be one of the first two produced by the Western Electric factories and represents the most advanced engineering achievements in improved modulation, power and efficiency. The station has no prototype on the air today.

While rated at 1,000 watts, the actual power attained when voice or music are in the air will reach a peak of 2,500 watts. Use of a new type of 4,000-watt, water-cooled amplifying tube and a capacitively coupled circuit will insure elimination of harmonics and will sharpen the station wave at its prescribed frequency.

### Palatial New Studio

The new location on the roof of the Biltmore hotel, a building ten stories high and 400 feet long, will provide WSB with palatial studio appointments and with a modern antenna system 325 feet long. Steel towers will support an aerial spanning virtually the entire sweep of the roof.

The Biltmore is isolated from any buildings of comparable size. It stands on one of Atlanta's loftiest eminences and was chosen by New York engineers as the ideal location for The Journal's new station.

Lambdin, Kay, former feature writer and department editor on The Journal staff and now director and announcer at WSB, states there will be no change in the station's program policy, other than an expansion and elaboration of service. The title of "The Little Colonel" was recently given Mr. Kay by his fellow announcers at the Kansas City Radio exposition.

"The Voice of the South" is expected to be on the air under its new power before midsummer.

### History of WSB

More than three years ago The Journal built its own 100-watt transmitter as the first newspaper broadcasting in the South. A few months later the original set gave way to one of the first two 500-watt Western Electric units in the country and did its share of trail-blazing through the ether.

Veteran listeners will remember that Radio's first slogan, "The Voice of the South," the first station signal, the three-note chimes; Radio's first listener fraternity, the Radiowls; the first belated nightly concerts of 10:45, and numerous other traditions and present-day practices were born under WSB's antenna.

## LODGE ADVANCES THEORY OF ETHER

Sir Oliver Sees Medium as Link Between the Material and Spiritual Worlds

LONDON, Eng.—Sir Oliver Lodge, the world-renowned savant, has just given his seventh and last broadcast lecture from Station 2LO here. His talk was on the use which life and mind probably make of the ether.

"The ether or continuum," declared Sir Oliver, "has perfect properties, while matter is liable to deterioration and dissipates energy. The coherence of all bodies is affected by the etheric connecting medium, and the question arises: Can that ether body be animated, too? We usually ignore the ether body because it is outside the ken of our senses; but knowing what we know of matter and its fields of force, it is reasonable to suppose that we act more directly on ether than on the discontinuous particles of matter. All force is exerted through the ether, and it is thus that matter has become indirectly and apparently amenable to life and mind and memory and affection.

"The ether is the link between the material and spiritual worlds."

## Nate Caldwell WBBM Announcer

CHICAGO. — Nate Caldwell, known widely by fans as the "Joy Digger," has been named chief announcer for WBBM, Atlas Investment company station on the Broadmoor hotel. His special songs and whisper singing have distinguished him.

**Music Master**  
*Resonant Wood*  
*Insures*  
*Natural*  
*Tone*  
*Quality*



*Yes*  
*you can almost*  
*see the artist*

**MUSIC MASTER'S** outstanding eminence of true, natural, vivid Radio re-creation is achieved by perfect balance of three essential elements

- precision reproducing instrument of unequalled delicacy, accuracy and refinement.
- heavy cast aluminum tone chamber eliminating over-vibration and developing sound waves without distortion.
- wood bell—for only wood gives vibrant resonance, imparts tonal brilliance and assures re-creation of natural quality and life-like characteristics of music, song and speech.

MUSIC MASTER is tested for musical quality, by musicians, through every stage of amplification, and is the supreme re-creating

*Musical Instrument of Radio*  
*There IS no Substitute*

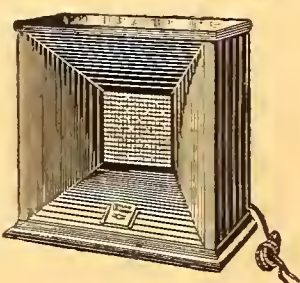
Mere assertion? No! Statement of fact! We leave it to you—after the demonstration any radio dealer will gladly give you.

**Music Master Corporation**

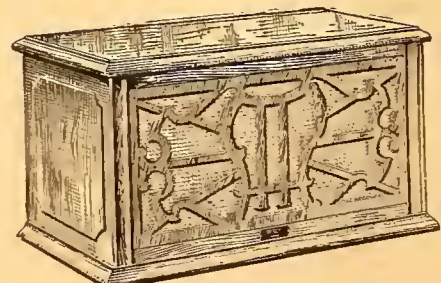
Makers and Distributors of High-Grade Radio Apparatus  
 10th and Cherry Streets  
 Chicago PHILADELPHIA Pittsburgh  
 Canadian Factory: Kitchener, Ontario

Model VI, \$30  
 14" Wood Bell

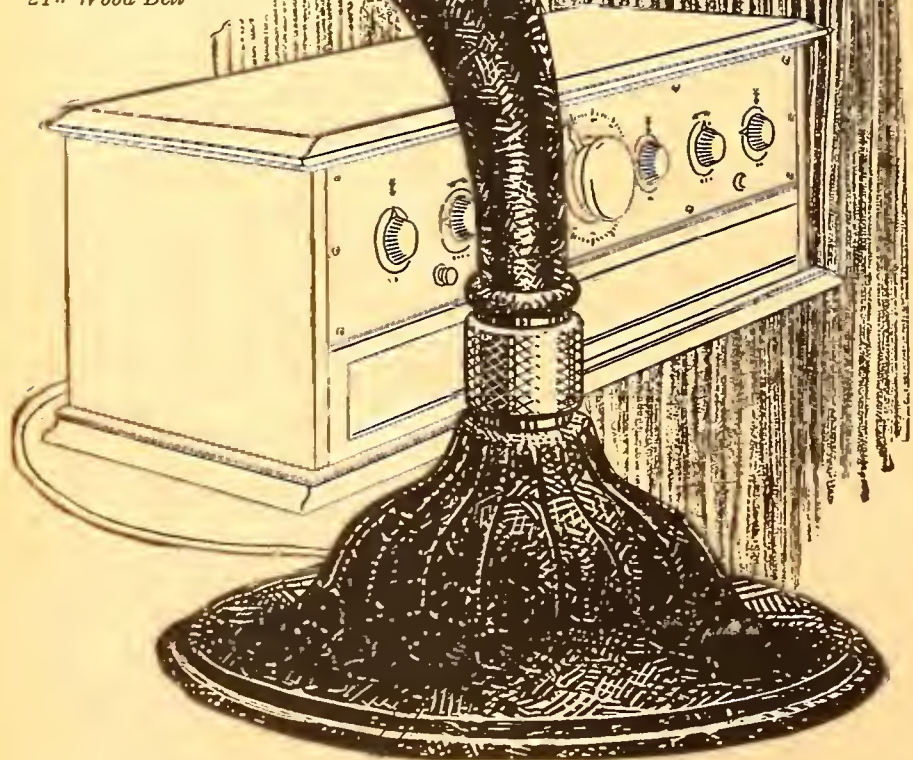
Model VII, \$35  
 21" Wood Bell



Model V, Metal Cabinet, Mahogany Finish, Wood \$18  
 Bell . . . . . 18



Model VIII, Mahogany Cabinet with "full-floating" Wood \$35  
 Bell . . . . . 35



Connect Music Master in place of headphones.  
 No batteries. No adjustments.

Prices of all models slightly higher in Canada

# MUSIC MASTER

RADIO REPRODUCER

# WBZ—Boston and Springfield, Mass.



Anne Louise Lawless, hostess at the Boston studio of Station WBZ, who extends WBZ hospitality to all the artists and visitors who come to the station.



Estey organ studio of WBZ, from which many of the delightful Sunday evening recitals are transmitted.



**"STAND** by for further program from our Springfield studio." And within two seconds the Radio listeners are greeted with the pleasing words, "This is Westinghouse Station WBZ broadcasting from its Springfield studio."

Speed and promptness—when one considers that it is more than a 100-mile hop between Boston and Springfield, in which cities are located the broadcasting studios of WBZ. Speed demons may shoot at this mark forever and with slight danger of eclipsing it. Yet this record is equalled nightly during the transmissions from this station.

This station, which forms the eastern link in the chain of four broadcasting stations operated by the Westinghouse Electric and Manufacturing company, is one of the pioneer broadcasting stations in the world. It was introduced to the Radio world, relatively small at that time, in the fall of 1920, not long after KDKA, another Westinghouse station, made its initial appearance as the first public Radio broadcasting station in the world.

In the course of its development, Station WBZ has moved through a condition in which the subjects for broadcasting were controlled directly, to the present condition, where the concerts now being broadcast are remotely controlled. Instead of the studio and operating room being so located as to permit direct control, one studio is located in one of Springfield's downtown hotels and the other in

Boston. Private lines are used to carry the music or speeches from the studio to the transmitter, while a telephone line 100 miles in length is used to carry the subjects being broadcast from Boston to the Springfield transmitter.

The operating room, with full equipment, is located in the Westinghouse company's manufacturing plant at East Springfield, Mass. The antenna is stretched between two 150-foot steel towers which are built into the framework of the building itself.

The transmitting apparatus represents the most modern equipment affixed in any broadcasting station in the United States. The rectifier, modulator, and oscillator are built into separate panels and can be reached very conveniently for adjustment purposes. Each panel stands six feet high and the apparatus presents coherence and practicability of assembly. The panels are covered with meters and dials to register how the set is functioning. The system is water-cooled and all three panels have a direct tie-in with the water system with automatic controls and shutoffs located in each panel.

The broadcasting studio at Springfield has been acclaimed acoustically perfect. No drapes are used in this studio for acoustical effects. Sound-absorbing and sound-deadening materials are built into the walls, ceilings, floors,



Westinghouse Philharmonic Trio, who entertain regularly from the Springfield studio.

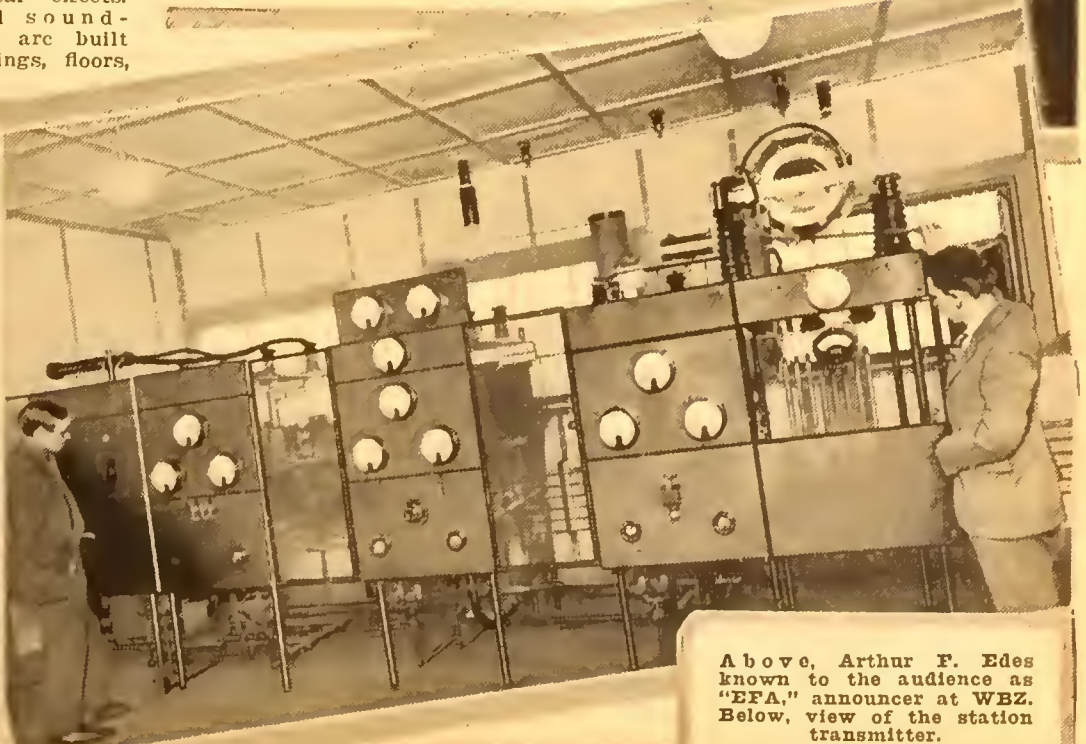
window shutters and window seats. It is handsomely fitted up and answers to all the necessary requisites and qualifications of the perfect studio.

Leading off from the studio room and entirely separate is a reception room for the comfort of the waiting artists. A receiving set with loud speaker is installed in this room so that the waiting artists may enjoy the concerts of their predecessors.

On February 25, 1925, the first anniversary of the opening of the Boston studio, located on the roof of the Hotel Brunswick, was celebrated. This studio is very similar in many respects to the Springfield studio, and also has an adjoining reception room with a loud (Continued on page 6)



Boston studio of WBZ, located in the Hotel Brunswick, Boston, Mass. Two condenser microphones are used.



Above, Arthur F. Edes known to the audience as "EFA," announcer at WBZ. Below, view of the station transmitter.

### CONCENSUS OF OPINION VOTE

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

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

Scratch off whichever does not apply.

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

How many members Name .....  
in your family?.....  
Address .....  
Are all of the same City, County, State.....  
mind as yourself?.....  
(Write to Radio Digest if more blanks are desired) 5-2-25

## FIGHT CROWDED AIR IS WAR CRY OF FANS

### LISTENERS RALLY TO SUPPORT OF CAMPAIGN

Radio Digest Voting Blanks Sent in by Thousands—Still More Stations Planned

CHICAGO.—Congestion of the air still reigns supreme! But not for long, if the public opinion supporting Radio Digest's campaign for better Radio counts for much.

Last week a voting blank was published in this magazine. It was met with great acclaim by listeners far and near. Thousands of blanks are being received by every mail. Listeners demand better Radio, and better Radio they shall have.

This week the voting blank is reprinted. It appears above. Every Radio listener should fill one of these blanks and help the cause to a successful end. Those who are in accord with the movement can help by urging their friends to send in blanks.

Haste is necessary. Already too many stations are on the air, but still more giant stations are clamoring for wave lengths.

#### Still More Stations Planned

The news dispatches tell of a chain of four \$1,000,000 broadcasting stations planned by William Randolph Hearst, owner of a chain of daily newspapers and magazines. Where will these fit in? What new jamming will they create?

Warner Brothers, motion picture producers and owners of Station KFWE, Hollywood, recommend building two mammoth broadcasting stations to boost the motion picture industry. Where will these fit in?

Entirely too many firms are entering the broadcasting field for the wave lengths available. In fact, too many stations are now on the air to allow decent separation.

Consolidations and a workable plan to govern the broadcasting field are the great need of the moment.

Help Radio Digest in its campaign for better broadcasting by filling in the voting blank today.

## WBZ—IN NEW ENGLAND

(Continued from page 5)

speaker receiving set for the entertainment and comfort of the artists waiting their turn before the microphone.

The Boston studio enables WBZ to draw from the talent of the cultural center of New England. Tied in by means of land wire with the studio are twenty-eight pick-up stations, located in the theaters, music halls, hotels, educational and other entertainment centers of Boston. In this way any public function or other entertainment of merit can be picked up and sent out through the air by WBZ.

Springfield is also encompassed by a similar system of pick-up stations located in the important entertainment and educational centers of that city connected directly with the studio so that any event of interest is available at practically a moment's notice.

George Jaspert is the director of WBZ. He has been acquainted with broadcasting since its beginning, assisting in the early days of KDKA and later acting as director of Station KYW in Chicago.

With his experience he combines the qualities of correct judgement, broad vision and initiative so essential to suc-

## MARJORIE BEELER'S SONGS HIT AT WJAG



Marjorie Beeler

NORFOLK, Neb.—Miss Marjorie Beeler is a favorite among members of the Radio family of WJAG. Miss Beeler has a voice which shows many years' training and which has been heard from a number of Radio stations including WOAOW at Omaha.

Miss Beeler made a decisive hit with Radio listeners during the past few years by singing request programs which brought spontaneous co-operation from listeners all over Nebraska,

Iowa, Kansas and the Dakotas. Among Miss Beeler's greatest features have been programs sung especially to shut-ins who have recently been made members of the Radio family which meets every day at 12:15 p. m., Central Standard time, and over which the "printer's devil" at WJAG, the Norfolk Daily News station, presides.

cessfully direct and interpret the policy of WBZ.

Arthur F. Edes, the pioneer of the Boston studio, is known to all the listeners and admirers of WBZ throughout the United States and Canada. Through his clear enunciation and proper pronunciation of titles of selections and particularly the names of foreign artists broadcasting, EFA, as Arthur is known to the vast Radio audience, has become one of the most popular Radio announcers in the country.

In charge of Radio operations at WBZ is James B. Coleman, and to his efforts is attributed a great deal of the success of this station's transmissions. At the Springfield studio the corps of announcers includes William S. Tilton, Allyn E. W. Bach and Thomas H. McNally.

Since its inception, WBZ has always been an enthusiastic supporter of educational broadcasting and it numbers in its transmission such features of educational value as guessing contests for the kiddies, courses in Radio, household management, short story writing, French, English literature, musical appreciation, business psychology and others under the auspices of the Massachusetts department of education.

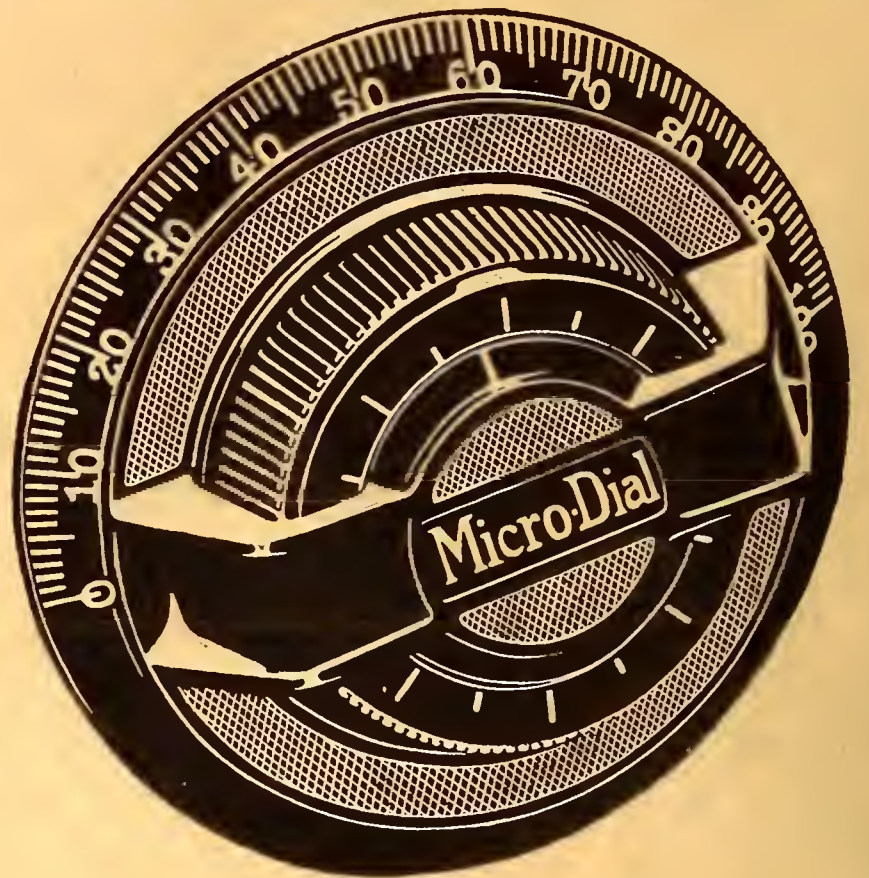
Realizing that no single broadcasting station can possibly please all the Radio listeners, WBZ has elected to specialize in musical and educational programs of the higher order and please those listeners who prefer the semi-classical and symphonic music to jazz. In keeping with this policy, internationally famous concert vocalists, instrumentalists and symphonic organizations are regularly featured over WBZ, as well as popular dance orchestras, current theatrical plays and specialty entertainers.

### License New Stations

The following stations have been issued class A licenses: KFWD, Arkadelphia, Arkansas; KFRC, San Francisco, Calif.; KFVE, St. Louis, Mo.; KFVG, Independence, Kansas; WODA, Paterson, N. J.; WBAK, Harrisburg, Pa., and WSKC, Bay City, Mich.

# The Jewett Micro-Dial

Trademark Registered



## More Stations!

THE better your Receiver, the more you'll appreciate Jewett Micro-Dials. For they get stations which, with ordinary dials, you may never find.

Let this typical Micro-Dial experience point the way for you!

"With my old dials, it was no trouble to pick up 20 or 30 stations in an evening between 12 and 17 degrees, on my superhet. Last night I put on your Micro-Dials. I found a station at 5 degrees about seven o'clock, and quit at 10.30 with 62 stations logged, and hadn't a dial reading above 37.

"My neatly finished log book must be discarded. It would be necessary to put in as many as five stations, in some places, between two of the old records."

"THERE IS NO SUBSTITUTE FOR THE BEST"

JEWETT RADIO & PHONOGRAPH COMPANY  
5670 TELEGRAPH ROAD PONTIAC, MICHIGAN

Factories:

Allegan, Mich.—Detroit, Mich.—Pontiac, Mich.

Canadian Sales Offices:  
Walkerville, Ontario

Export Sales Offices:  
116 Broad St., New York City

The Jewett Superspeaker—All that the name implies. Recommended by experts everywhere.

The Jewett Veruco Unit—Makes a loud speaker out of your phonograph. The Reproducer used in the Superspeaker.

The Jewett Micro-Dial—Makes tuning 50 times as accurate. Fits any set. Needs only a screwdriver to install. Price \$3.50 each.

The Jewett Parkay Cabinet—With parquetry top. Puts the amateur on a par with the most exclusive cabinet worker. All sizes, prices to correspond.

The Jewett Superspeaker High-boy—Houses Radio set and all batteries. Superspeaker built in. Takes Radio into the realm of fine furniture.

## Jewett Quality Products

# Operating and Trouble Shooting

For the Owner of a Freshman Masterpiece

**T**HE Freshman receiver is presented this week as the pioneer in the new field of low-priced tuned radio frequency receivers that are simple to operate and require no delicate adjusting or balancing for proper operation. Practically any type of antenna except a loop may be used with this receiver and excellent results have been secured with an antenna plug, a wire around the picture moulding and with outdoor aerials from 40 to 125 feet in length. Operation should not be attempted with tubes other than the six-volt type such as UV-201A or C-301A. While the set will function with the dry cell tubes, the efficiency will be somewhat below that which a five tube set should give.

A front view of this receiver is shown in figure 1 and it will be noted that there are three large dials which are the tuning controls, two small knobs that turn rheostats which regulate tube brilliancy, and a switch in the center which turns the tubes on and off. Two jacks are employed, one at the extreme right and another at the extreme left into which a plug, connected to the loud speaker, may be inserted. The rear of the panel is shown in figure 2 together with the various parts mounted on the sub base. The three condensers are numbered to correspond with the numbers given the dials in figure 1. The schematic wiring diagram is shown in figure 3 and here again the various parts are numbered to correspond with the same parts in the first two figures.

Now let us see what happens and where the energy goes when we have this set connected up in accordance with the instructions provided by the manufacturer, and are ready to tune. Each of the coils shown and numbered as 7, 8, and 9 consists in reality of two separate unconnected coils of wire, the center turns of which are known as the primary, and may be identified by the color of the insulation, while the turns on each side, which are the same color, are known as the secondary. When Radio waves strike the antenna and come in through the ground connection, they traverse the center turns of coil 7 which, as mentioned above, are known as the primary. Because of the proximity of the secondary coil, energy is passed into this secondary and condenser 1. These two units form a tunable circuit and this circuit must be adjusted, by variation of condenser 1, so that the wave length to which it responds best is the wave length of the station it is desired to receive.

Presuming that this condenser has been set at the correct point, the desired program will now pass into the first tube identified by the letter V and, after being strengthened, can go into the circuit consisting of the wires in the center of the coil 8. It is intended that this energy flowing in this primary will pass from it into the secondary turns of coil 8 but at this point the energy runs into an obstacle in the form of another tunable circuit. This circuit consists of the secondary of coil 8 and the variable condenser 2.

When this circuit is adjusted by varying condenser 2 so that its natural wave length is that of the desired program it is just as though one opened a gate, or removed the obstacle, and the desired signals can enter this circuit to the exclusion of all others. They now pass into tube W and are further strengthened, and from this tube they pass into the inner turns of the coil 9. These inner turns are, of course, the primary and currents are induced in the secondary, which secondary, with condenser 3, forms the third tunable circuit of this receiver. Until this circuit is adjusted to the desired wave length the signals cannot pass and enter tube X. Thus, you see, stations have to pass three gates each of which opens only when set at the proper point on the dial. Tube X is known as the detector tube because its function is to change the form of the program, from energy which changes its direction of flow several hundred thousand times a second, into direct current which flows in one direction only and varies in strength in accordance with the voice or music sent out from the broadcasting station.

A pair of head receivers could be connected into the output circuit of this tube and the programs could be heard clearly but provision has been made for loud speaker operation by the insertion of two tubes, and transformers to couple them, so that the program is strengthened or amplified at this voice frequency. A loud speaker connected into the set, after signals have passed through these last two tubes, will function with good volume and clearness. These last two tubes mentioned are tubes Y and Z in figures 2 and 3.

**Tuning**

The dials on the front of this set have been so adjusted that the three tuned circuits are at about the same wave length when the three dials read alike, and while there may be a slight variation of a de-

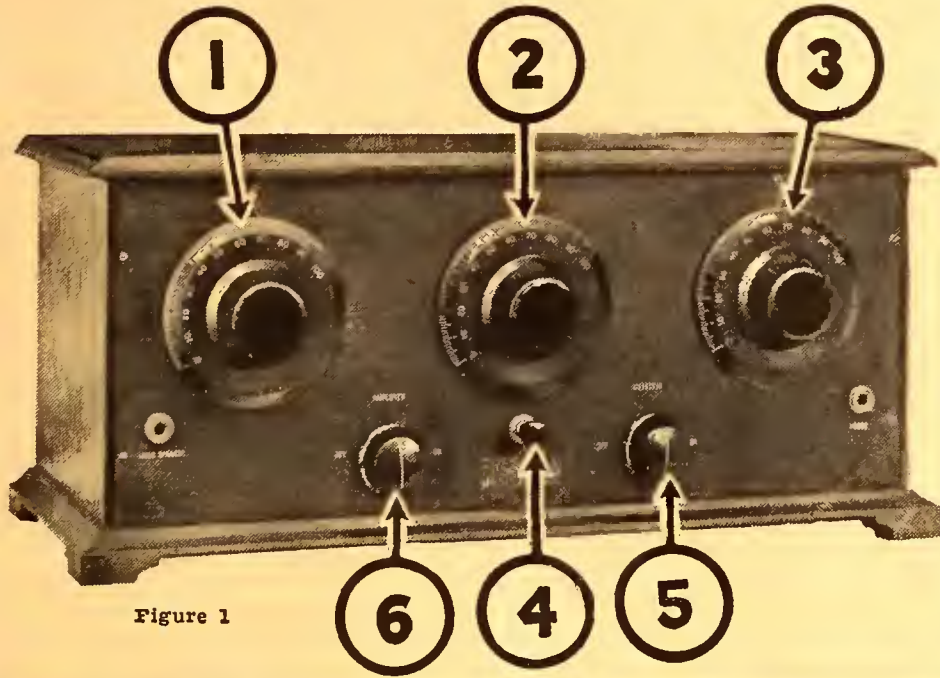


Figure 1

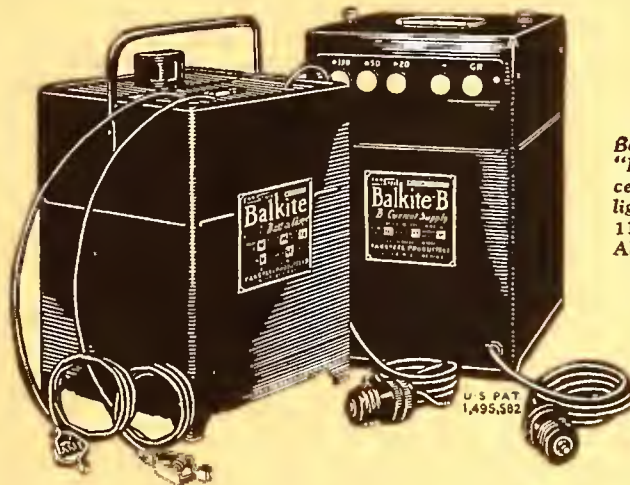
gree or two in these settings, they will be found to run pretty close together. Start in by setting dials two and three at 10 and then rotate dial 1 slowly between 5 and 15. If station is not heard set dials 2 and 3 at 12 and rotate dial 1 between 7 and 17. This procedure should be followed up the scale until a station is heard, then readjust each dial separately for greatest volume. Attention can now be directed to adjustment of knobs 5 and 6, which adjustments need be made but once each evening and will not have to be changed. Theoretically these need never be changed after the first setting, but since the voltage of the A battery drops a little as the storage battery discharges, and the voltage of the B batteries gets less and less each evening as the dry cells wear out, it is found in actual practice that nightly adjustment is desirable.

When you are looking for local stations, no great care in turning the dials is necessary as they will be heard several degrees on each side of the maximum setting but when looking for distant stations the dials should be turned very slowly and carefully keeping the relation between the dial settings about the same. Thus, if you find that dial 1 reads 68, dial 2 reads 70 and dial 3 reads 67, and farther down

(Continued on page 18)

**Balkite Battery Charger. Charges 6 volt "A" storage batteries.**

Price \$19.50  
West of Rockies \$20  
In Canada \$27.50



**Balkite "B"**—replaces "B" batteries and dry cells. Operates from light socket. 60 cycle 110-120 A. C. current. Also 50 cycle model.

Price \$55  
In Canada \$75

## A uniform, constant power supply for both "A" and "B" circuits

Here at last is a convenient and unfailing power supply for your radio set. Balkite Radio Power Units furnish constant uniform voltage to both circuits, and will give your radio set greater clarity, power and range. The Balkite Battery Charger keeps your "A" storage battery charged. Balkite "B" replaces "B" batteries entirely and supplies plate current from the light socket.

Based on the same principle, both the Balkite Battery Charger and Balkite "B" are entirely noiseless. They have no bulbs or moving parts, and nothing to break, adjust or get out of order. They have a very low current consumption, are simple and efficient in operation, and can be put in use at any time by merely connecting to a light socket. Both are guaranteed to give satisfaction.

Sold by leading radio dealers everywhere

**FANSTEEL**  
**Balkite** Radio Power Units

BALKITE BATTERY CHARGER—BALKITE "B" PLATE CURRENT SUPPLY

Manufactured by FANSTEEL PRODUCTS COMPANY, Inc., North Chicago, Illinois





# SPRING FESTIVAL MUSIC WEEK AT KOA

## Sunday, May 3

(Continued from page 8)

**WMAK, Lockport, N. Y. (265.6),** 10:25 a. m., First Presbyterian church.

**WORO, Batavia, Ill. (275),** 9:45-11 a. m., sacred hymns and songs; Bible lecture, W. E. Woodley; 6:45-8, I. B. S. A. choral singers; Mildred Hoeffer, soprano; Harry Rouse, Arthur Elliott; Bible lecture, Oscar A. Olson.

**WQJ, Chicago, Ill. (447.5),** 10:30 a. m., Peoples church. Dr. Preston Bradley; 3-4 p. m., Ambrose Wyrick; silver toned tenor; 8-10, Ralph Williams and his Rainbo Garden orchestra; Vincent Gullotta, violinist; Russell Daniels, tenor; Evelyn Nelson, pianist; Howard sextet; Apollo quartet, Omar Covert, tenor; W. F. Willard, second tenor; E. K. Anderson, baritone; A. H. Carpenter, bass.

**WREO, Lansing, Mich. (285.5),** 10-10:25 a. m., chimes, Belfry Plymouth Congregational church; 10:30, First Presbyterian church, Dr. Guy W. Simon, pastor; Dwight Steere, organist; 7:30, First Baptist church, Dr. Ralph W. Woods, pastor; Mrs. Helen Dodge Stack, choir director; Mrs. Henry Chamber, organist.

**WTAS, Elgin, Ill. (302.8),** 8-12 midnight, WTAS orchestra; Frank Morris, Fanny and Eddie Caranough.

**WWJ, Detroit, Mich. (352.7),** 11 a. m., St. Paul's Episcopal cathedral; 2 p. m., Detroit News orchestra; 7:20, Roxy and his gang; 9:15, organ recital.

### Central Standard Time Stations

**CKY, Winnipeg, Can. (384.4),** 7 p. m., service, Zion church.

**KTSH, Hot Springs National Park, Ark. (374.8),** 8:30-10 p. m., de luxe program, Meyer Davis orchestra, Jacques Renard, leader; 10-11:30, frolic, Phil Baxter and his singing orchestra.

**WCBO, Zion, Ill. (344.6),** 8 p. m., brass quartet; viola, harp, flute trio, Mrs. L. J. Hre, Mrs. Carl Huth, Miriam Hollingshead; vocal trio; Edith Carey, contralto; vocal duets, Carey Sisters; John L. Thomas, baritone; Alexander DePew, flutist; Carl Huth, harpist; Mrs. Cassie Mae Bedore, reader.

**WCO, Minneapolis-St. Paul, Minn. (416.4),** 11 a. m., Westminster Presbyterian church; 4:30 p. m., House of Hope Presbyterian church; 7:30, Second Church of Christ Scientists; 9:15, Beethoven string quartet; Mrs. Mildred Langtry Maland, contralto; Mrs. John Dahl, accompanist.

Ruth Hammond Ragatz (right), soprano, will illustrate the modern period in music Friday, May 8, at KOA.

### Mountain Standard Time Stations

**KOA, Coover, Colo. (322.4),** 11 a. m., First Baptist church, Dr. H. C. Morse, pastor; Willard B. Wagner, organist; 4 p. m., Civic Symphony orchestra; 7:45, First Baptist church, Dr. H. C. Morse; Willard B. Wagner, organist.

### Pacific Standard Time Stations

**KFI, Los Angeles, Calif. (468.5),** 6:45-7 p. m., musical appreciation talk; 7-8, from stage and studio of the Metropolitan theater; 8-9, classic vocal hour; 9-10, Examiner; Antio Lada's Louisiana Five dance orchestra; 10-11, Packard Eight dance orchestra, Bill Hennessy, leader.

**KFWB, Hollywood, Calif. (252),** 9-11 p. m., Warner Brothers' movie night with stars of stage and screen.

**KGO, Oakland, Calif. (361.2),** 11 a. m., First Presbyterian church; 3:30 p. m., KGO Little Symphony orchestra; 7:30, First Presbyterian church.

**KGW, Portland, Ore. (491.5),** 10:30 a. m., First Pres-

ty's orchestra; 6:15, KDKA Little Symphony orchestra; 8:15, address, University of Pittsburgh; 8:30, concert; 10:10, Bund light opera hour.

**WABG, Richmond Hill, N. Y. (315.6),** 8-8:15 p. m., Horace J. Taylor, reader; 8:15-8:30, Flushing mixed quartet; 8:30-9, Synchrophase string trio; 9-9:15, Stellerlo Caobrla, mandolinist; 9:15-9:30, Flushing mixed quartet; 9:30-9:45, musical saw, Fred Ehrenberg; 9:45-9:55, Synchrophase string trio; 10:05-10:15, Synchrophase string trio; 10:15-11:15, symphonic dance music, the Criterion; 12-2 a. m., special program of dance music.

**WBRR, New York, N. Y. (272.6),** 8 p. m., Syrian oriental music; 8:10, vocal selections; 8:20, World News Digest, editor of Golden Age magazine; 8:30, vocal selections; 8:50, Syrian oriental music.

**WCAE, Pittsburgh, Pa. (461.3),** 6:30 p. m., dinner concert, William Penn hotel; 8, address auspices Pittsburgh Personnel association; 8:30, William S. Carson, tenor; Helen Halam Wolfe, soprano; 9, A. & P. Gypsy

chorus; 9:30-10, Robert Gunthers orchestra; 10-10:20, "Trend of the Time," Dr. Sydoyer Usher.

**WOO, Philadelphia, Pa. (508.2),** 12:02 p. m., Crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's concert orchestra; 8:30, concert from WEAF; 10:03, organ recital, Mary E. Vogt; 10:30, Ben Bernie's dance orchestra; 11, Vincent Rizzo's dance orchestra.

**WOR, Newark, N. J. (405.2),** 2:45-2:55 p. m., talk, Y. M. C. A.; 3:45-3:55, talk, Charm magazine; 6:15-7:15, Cinderella Cottonpickers orchestra; 7:15-7:30, Radio-Caturing; 8-8:10, garden talk; 8:30-9:30, Bradford theater program; 9:45-10:45, Dr. Spaeth's hour; 10:45-11:30, Perry and Russell; 11:30-12, Commanders orchestra.

### Eastern Standard or Central Daylight Saving Time Stations

**CHNC, Toronto, Can. (356.9),** 8:30 p. m., CHNC instrumental trio, Frank Blackford, violinist; Leo Smith,



Mrs. Edith Kingsley Ringuest (left), as she will look when she takes part in the clavichord period of music May 4 at KOA. Mrs. Agnes Glaister (above), soprano, dressed for the classical period of the Denver music week, which takes place Tuesday noon, May 5.

Helen Teats (above) is in charge of the noonday period music concerts and the Monday, Tuesday and Thursday afternoon programs this week at KOA, the General Electric company station.

string ensemble; 11, Press-Koybec, Blackstone theater orchestra.

**WEAF, New York, N. Y. (491.5),** 2-4:15 p. m., Government club meeting; 4:15-4:30, Christine Wood Black, soprano; 4:30-4:45, elementary French lessons, William Doub-Kerr; 4:45-5, "Voces for Children," John Farrar; 8-7, dinner music, Woldemar-Astoria; 7-7:15, "Where Is Our Education Taking Us," Dr. Otis W. Caldwell; 7:15-8:30, program, Mark Strand theater, direction of Mr. Joseph Plunkett; 8:30-8:45, Chevalier Luigi Constantino, pianist; 8:45-9, health talk, Metropolitan Life Insurance company; 9-10, A. and P. Gypsies; 10-10:30, Blue Ribbon quartet; 10:30-11:30, Ben Bernie and his Hotel Roosevelt orchestra.

**WEEI, Boston, Mass. (475.9),** 3 p. m., Palm Garden Ramblers; 6:30, Big Brother club; 7:30, Dok-Eisenbourg and his Sinfolans; 8, dance selections; 8:15, health talk; 9, A. & P. Gypsies; 10, Blue Ribbon quartet.

**WFI, Philadelphia, Pa. (394.5),** 1 p. m., Meyer Davis Hellevue Stratford concert orchestra; 3, Florence Moffert, soprano; Freda Floyd-Smith, soprano; 6:30, Meyer Davis Hellevue Stratford concert orchestra; 7, bedtime stories.

**WGBS, New York, N. Y. (315.6),** 1:30-1:35 p. m., Scripture reading; 3-3:10, interview with Dr. Sigmund Spaeth by Teresa Rosa Noyel; 3:10-3:20, special music week program, auspices of general Federation of Women's clubs, Harry Milligan, director; Christine Thompson, pianist; 6-6:30, Uelco Goohee; 6:30-7, Lew Kreuger Alladin's dance orchestra.

**WGR, Buffalo, N. Y. (319),** 2:30-4:30 p. m., afternoon musical program, A. J. Erisman, director; 8:30-10, musical program, Buffalo State Normal school; 10-11, recital, Bradley Yaw, baritone; 11-11 o. m., supper-dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gleser, director.

**WLN, New York, N. Y. (361.2),** 3:55-4 p. m., Helen B. Carner, pianist; 4:25-4:30, "A Few Moments with the Poets," NTG; 4:35-5, Sulgrove program, auspices of Mrs. Alton Brooks Parks; 6:30-7, violin solos, Oleoff Vall; 7-7:30, Hotel Alamae dance orchestra; 7:30-7:35, health talk, Dr. Landis; 7:35-8, Hotel Carlton Terrace orchestra; 8-8:05, "Storaxo Batteries," H. B. Shontz; 8:05-8:35, Roeland dance orchestra; 8:50-9:20, Littmann's Employers orchestra; 9:30-10, Dan Gregory and his Crystal Palace orchestra; 11-11:30, organ recital from Loew's Lexington theater; 11:30-12, Silver Slipper revue with Jim Carr's orchestra.

**WIP, Philadelphia, Pa. (508.2),** 1 p. m., Glimb tea room orchestra; 1, "Hints on Home Gardening," Charles K. Hallowell; 6:05, Clarence Seamon's concert orchestra; 7, Inelo Wip's bedtime stories.

**WJAR, Providence, R. I. (305.0),** 1:05 p. m., vocal and instrumental selections; 8, studio program; 9, A. and P. Gypsy string ensemble.

**WJZ, New York, N. Y. (454.3),** 1-2 p. m., Henry Vanier Zanden's Hotel Ambassador trio; 4-4:15, Eberhardine Van Tongeren, soprano; 4:15-4:30, Elizabeth Marston, violinist; 1:30-5:30, Fred Hall's Royal Terrace orchestra; 7-8, Bernhard Levitow's Hotel Commodore dinner concert; 8-8:10, Wall Street Journal review; 8:10-8:25, Louis John Johnson, baritone; 8:25-9, Piedmont trio; 9-10, Imperial quartet; 10-10:15, Marguerite Manterre, soprano.

**WLIT, Philadelphia, Pa. (394.5),** 12:02 p. m., daily all-noon; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 7:30, Dream Daddy's bedtime stories; 8, Blue Anchor Inn concert; 9:30, Stanley theater concert; 10, Arcadia cafe dance orchestra; vaudeville features, Fay's Knick erbocker theater.

**WNYC, New York, N. Y. (526),** 7-7:25 p. m., Harry Ash's orchestra; 7:25-7:40, health talk; 8-8:10, talk; Philip Berolzheimer; 8:15-8:30, Poulina Rutenberg, pianist; 8:30-8:40, talk, Frances H. Slison; 8:45-9, Poulina Rutenberg; 9-9:30, Guaranty Trust company

cellist; Dr. Harvey Robb, pianist; Edith Hamilton, contralto; Hengretta Hamilton, soprano; Dr. Frank Garred, harpist; A. C. Hamilton, pianist.

**WBAY, Columbus, Ohio (293.7),** 12 m., music.

**WBBM, Chicago, Ill. (226),** 6-7 p. m., Broadmoor studio, Karl Linnar, pianist; Crillon orchestra.

**WCEE, Elgin, Ill. (275),** 10:30-12 midnight, Charlene Star, midnight dance program, Joe Rudolph directing WTAS orchestra.

**WCX, Detroit, Mich. (516.9),** 4:15 p. m., musical program; 6, dinner concert, Book-Cadillac hotel; 8:30, musical program.

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

**WGY, Schenectady, N. Y. (379.5),** 1 p. m., "Becoming Colors in Clothing," Dora Wetherbee; 5:30, Ten Eyck trio; 6, sport review, Harold Anson Bruce; 6:35, "Whom Does Advertising Pay?" Walter A. Rowe; piano recital, pupils, Albany Music Teachers' association.

**WHAZ, Troy, N. Y. (379.5),** 9 p. m., Martha Webb Golsor, soprano; Albert Golsor, baritone; 10, Checker orchestra.

**WJLO, Mooscheart, Ill. (302.8),** 6:30-7:15 p. m., Albert F. Brown, organist; John Cery's orchestra; 7:15-8, Mooscheart Novelty orchestra; "Child Care," M. P. Adams; 10:30-1, Garod studio.

**WLW, Cincinnati, Ohio (423),** 9 p. m., dinner hour concert; 8, national music week; 9, formal dedication of the new Wurlitzer Hope Jones organ.

**WMAK, Lockport, N. Y. (265.5),** 8-9:30 p. m., old home week committee; 10:15-11, Max Freedman; 11:30-1 a. m., Loew's State theater midnight frolic.

**WORO, Batavia, Ill. (275),** 7-8 p. m., wide-awake hour, Uncle Dan; 8-9:30, Aurora Gibson players; Harrison Blank, baritone; "Our Lord's Return," C. H. Swinick.

**WQJ, Chicago, Ill. (447.5),** 3-1 p. m., "Something New for the Spring Menu," Helen Harrington Downing; book review, Rev. Fred J. Harrison.

**WRC, Washington, O. C. (468.5),** 1-2 p. m., luncheon music, Sidney Slidenman's Shorham hotel orchestra; 4, book reviews, League American Women; 4:20, piano recital; 4:30, Meyer Davis' New Willard hotel trio; 6, children's Radio music club.

**WTAM, Cleveland, Ohio (389.4),** 6-7 p. m., Guy Lombardo and his Royal Palmilians; 8-11, Willard symphony, Bela Belog and his Hungarian Gypsy orchestra; 11-12, organ recital.

**WTAS, Elgin, Ill. (302.8),** 8-10:30 p. m., Villa Olivia Radio concert; WTAS orchestra; Cavanaugh, Frank Morris.

**WTIC, Hartford, Conn. (348.6),** 9 p. m., dinner music, Emil Helmberger's Hotel Bond trio.

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

### Central Standard Time Stations

**KFAB, Lincoln, Nebr. (240),** 7:30-9:30 p. m., national music week.

**KFKU, Lawrence, Kans. (275),** 6:50 p. m., piano tuning-in number; 7, music; 7:15, "The Story of the Oil Fields," Prof. R. S. Knappen; 7:30, "Shakespeare's London," Prof. L. E. Slison; 7:45, elementary Spanish.

**KFKK, Hastings, Nebr. (288.3),** 6:30-11:30 p. m., musical program, auspices of Deshler Commercial club.

**KNF, Shenandoah, Iowa (268),** 6:30 p. m., concert, Smith-Bolding orchestra.

**KSO, St. Louis, Mo. (545.1),** 9 p. m., Gardner Motor company eight-in-line entertainers; 10, program, Albert Maurer.

**KTSH, Hot Springs National Park, Ark. (374.8),** 8:30-9 concert, Phil Baxter's singing orchestra; 9-10, concert Meyer Davis orchestra, Jacques Renard, director.

**WCBO, Zion, Ill. (344.8),** 8 p. m., mixed quartet, cornet quartet; M. P. Barton, tenor; Arthur Rendall, clarinetist; P. H. Newcomer, cornetist; O. C. Miller, harmonica soloist; Mrs. S. H. DePew, reader; Richard P. Hre, pianist.

**WCO, Minneapolis-St. Paul, Minn. (416.4),** 6:15 p. m., "Federal Reserve Banks—How They Prevent Panics," J. F. Ebersole; 8, "The Editors' Short Course," W. P. Kirkwood; 8:15, "Annual Hog Pastures," H. O. Teller; 8:30, musical program; 10, dance program.

**WOAF, Kansas City, Mo. (365.6),** 3:30-1:30 p. m., Newman and Royal theaters; 5-5:30, weekly Hoy Scout program; 6-7, Eusebio Barton, reader; Trilanon ensemble;

(Continued on page 10)

## Monday, May 4

Monday, silent night for: CHIC, CKAC, CKY, CNRT, KFQM, KFMQ, KGW, KYW, WBAY, WBBM, WBCN, WCAU, WOWF, WEO, WEBB, WEBJ, WFI, WGN, WGBS, WHAS, WIP, WJY, WBLI, WLS, WMAQ, WOAI, WOC, WQJ, WRC, WREO, WSAC, WTAM.

### Atlantic or Eastern Daylight Saving Time Stations

**KOKA, Pittsburgh, Pa. (309.1),** 12:15 p. m., Daugh-

**WOAF, Kansas City, Mo. (365.6),** 4-5 p. m., oratorio "Stabat Mater," choir of Westport Avenue Presbyterian church; 5-5:30, Sunday school lesson, Dr. Walter L. Wilson.

**WEBW, Beloit, Wis. (268),** 4:25-5:30 p. m., vesper services.

**WHAS, Louisville, Ky. (309.8),** 9:57 a. m., organ music; 10, Fourth Avenue Presbyterian church; Esther Metz, soprano; Mrs. Virginia S. Herick, contralto; William Layne Vlek, tenor; William G. Meyer, baritone; 4 p. m., George Latimer, organist; 4:30, choral evening service, Christ church cathedral; Ernest Arthur Simon, organist.

**WHB, Kansas City, Mo. (365.6),** 8 p. m., church service; 11:45-1, organ recital, Mr. Moore; music makers.

**WHO, Des Moines, Iowa (526),** 11 a. m., University Church of Christ, sermon, Dr. Charles S. Medbury; 4 p. m., program, Dean Holmes Cowper, director; 7:30-9, Mason City glee club.

**WOAI, San Antonio, Texas (394.5),** 11 a. m., First Presbyterian church; 7:30 p. m., Central Christian church, Dr. Hugh McElallen, pastor; 9:30, "The Bohemian Girl," WOAI entertainers.

**WOAW, Omaha, Nebr. (526),** 9 a. m., Radio chapel service, Rev. R. K. Brown; 1:30 p. m., matinee program; 2:30, matinee program, Gresham; 3, Cross Lutheran church.

**WOC, Oavnpport, Iowa (483.6),** 8-8:30 p. m., First Presbyterian church; 9:30-11:30, Palmer Little Symphony.

**WOL, Ames, Iowa (270),** 10:45 a. m., chimes; 11, chapel services.

**WSB, Atlanta, Ga. (428.3),** 11 a. m., First Presbyterian church service; 5-8 p. m., sacred concert, Mrs. Gertrude L. Johnson, director; 7:30, North Avenue Presbyterian church.

**WSU, Iowa City, Iowa (483.6),** 3-4 p. m., "Manufactured Gods," Dean Shaffer Matthews; 7, children's hour; 9, familiar hymns, Celeste Fuhrman, soprano.

byterian church; 9, church services, Portland Council of Churches; 7, Colburn concert orchestra.

**KHJ, Los Angeles, Calif. (405.2),** 6:30-7 p. m., Art Heikman's Blinnro hotel concert orchestra, Edward Fitzpatrick, director; 7-7:30, organ recital, Arthur Blakely, organist; 7:30-8:15, program, International Bible Students association; 8-10, program, Silverwood's, arranged by J. Howard Johnson.

**KJR, Seattle, Wash. (384.4),** 11 a. m., First Methodist Episcopal church, J. Ralph Magee, pastor; 7 p. m., First Methodist Episcopal church.

**KNX, Hollywood, Calif. (336.9),** 7-8 p. m., program, First Presbyterian church of Hollywood; 8-9, Ambassador hotel concert orchestra, Josef Rosenfeld, leader; 9-11, classical program, courtesy of R. C. "Chiff" Durant.

**KPO, San Francisco, Calif. (429.5),** 11-12 m., church services, Dr. W. O. Fisher, pastor; Ada Robey Barton, organist; 6-6:30, States restaurant orchestra; 9:30-7:30, Palace hotel concert, theater announcements; 8-8:30, Palace hotel concert; 8:30-10, Rudy Selger's Fairmont hotel orchestra.

# WLW DEDICATES WURLITZER ORGAN

## Monday, May 4

(Continued from page 9)

8-10, Ivanhoe band; 11:15-1 a. m., Merry Old Chief, Plantation players.

WEBW, Beloit, Wis. (268), 8-9 p. m., concert, music faculty; short talk, Prof. G. C. Clancy.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., "The Beauty Spots of the Heavens Tonight," Dr. A. D. Laugencour; 6:30-7:30, Buddy's Blue Melody boys orchestra; 8:30-9:30, Magnolia Petroleum company's Dallas band.

WHA, Madison, Wis. (535.4), 7:45 p. m., "Insect Pests of the Orchard," Prof. C. L. Fluke; University School of music.

WHAD, Milwaukee, Wis. (275), 6-7 p. m., dinner music, Milwaukee Athletic club; 8-10, Marquette university studio program.

WHB, Kansas City, Mo. (365.6), 2-3 p. m., Sweeney Radio trio; 7-8, men's hour.

WHO, Des Moines, Iowa (526), 7:30-8 p. m., Myrtle Williams, soprano; Stewart Watson, baritone; Helen Birmingham, pianist; 8-9, program, Dean Holmes, director; 11:15-12, L. Carlos Meier, organist.

WMC, Memphis, Tenn. (499.7), 7:30 p. m., weekly farm talk, Dr. C. W. Watson; 8:30, Hotel Gayoso orchestra.

WOAW, Omaha, Neb. (526), 5:45 p. m., public news period, Eugene Knoeeky; 6, Arthur Hays, organist; 6:30, Bob Miller and his orchestra; 9, program, auspices Hannan-Van Brunt company.

WOI, Ames, Iowa (270), 12:30 p. m., "The Wedding Breakfast," Viola M. Bell; 10, program, popular music.

WSB, Atlanta, Ga. (428.3), 5-6 p. m., bedtime story, Bonnie Barnhardt; Georgians orchestra; 8-9, music; 10:45, Warner's Seven Aces.

WSUI, Iowa City, Iowa (483.6), 12:30 p. m., "Schiller's Message," Bonnon Tapper; 7:30, "Modern English," Thomas A. Knott; 7:30, "Current Social and Economic Problems," Dale Yoder; 8, readings.

### Mountain Standard Time Stations

KDA, Denver, Colo. (322.4), 12-1 p. m., clavichord period; 1-2, mid-day dance music, Harmony Peerless

Prof. Flora Rose, director of the New York State College of Home Economics, is giving a series of talks on home economics Monday and Thursday afternoons from WGY, Schenectady



orchestra; 2, Denver municipal auditorium; 7-8, open-air twilight concert, Colorado School of Mines band; 8, studio program, Florence, Colo.; mixed chorus; Mrs. U. M. Howells, director; Conservatory of music, Colorado State Teachers' college; 10-11, Harmony Peerless orchestra.

KOB, State College, N. M. (348.6), 7:30-8:30 p. m., numbers, Las Cruces, New Mexico musical talent, Mrs. L. A. Broadus, director.

### Pacific Standard Time Stations

KFAE, Pullman, Wash. (348.6), 7:30-9 p. m., students of Mrs. LaVerna Kimbrough, Dean Herbert Kimbrough; Harvey Wilson, tenor; Dorothy Hutchinson, soprano; Lillian Pettibone, pianist; Paul Christen, baritone; Ruth Williams, soprano; Vivian Baker, pianist; Vay Kerns, contralto; Pauline Williams, pianist; "Weeds," Prof. E. G. Schafer; "Designing the Interior of Your New Home," Prof. Fred G. Rounds; "What Is Worth Seeing in Florence," Prof. Carl M. Brewster; "Forestry," Prof. E. H. Steffen; "Making and Keeping a Good Lawn," M. D. Armstrong.

KFI, Los Angeles, Calif. (468.5), 5:30-6 p. m., Examiner's musical half hour; 6:15-6:30, McDaniel's nightly doings; 6:45-7, musical appreciation talk; 7-8, Evening Herald Radlohans dance orchestra; 8-9, Sunshine Guild; instrumental trio; 9-10, program, Walter M. Murphy Motors company; 10-11, Examiner: Ray West and his Alexandria hotel dance orchestra.

KFDA, Seattle, Wash. (454.3), 4-5:15 p. m., Times program; 6:45-8:15, Sherman, Clay & company program; 8:30-10, Times program.

KFWB, Hollywood, Calif. (252), 6:30-8 p. m., program, John A. Evans corporation, Haclenda Park orchestra; Gamut male quartet; 8-9, program, Check-Neal Coffee company, Maxwell House coffee quartet; Miller's International trio; Marguerite Le Grand, concert pianist; 9-10, Hi Moulton and his Hollywood Revelers dance orchestra; Leonard Van Berg, tenor; 10-11, Warner Brothers' hour of fun under direction of Harry Seymour; 11-1 a. m., Brandstatter's Hollywood Montmartre cafe dance orchestra, Mel Pedesky, leader.

KGO, Oakland, Calif. (361.2), 4-5:30 p. m., Henry Halstead's dance orchestra; 8, Arion trio; "Present Status of Fruit Beverage Industry," J. H. Irish; "The Influence of Music Mentally," Virginia White Lockhart; "Non-Metallic Industrial Minerals of Western States," C. M. Redfern; "Chats About New Books," Joseph Henry Jackson; 10-1 a. m., Henry Halstead's orchestra.

KGW, Portland, Ore. (491.5), 12:30 p. m., Rose City trio; 5, children's program; 6, William Robinson Boone, organist.

KHJ, Los Angeles, Calif. (405.2), 8-10 p. m., program, Inain Water Crystals company, arranged by G. Allison Phelps.

KLX, Oakland, Calif. (508.2), 6-7 p. m., organ concert, American theater; 8-9:15, studio program; 9:15-

9:45, American theater orchestra; 9:45-11, Protective Order, Lake Merritt Ducks.

KNX, Hollywood, Calif. (336.9), 5:45-6:15 p. m., Wurlitzer studio program; sports talk, Sid Ziff; 6:15-7:30, dinner hour music; story of Santa Fe trail; 8-9, program, Listenwaller and Gough, Zenith trio; Rola entertainers; 9-10, program, Stockwell Manufacturing company; 10-11, Goodrich Silvertown Cord dance orchestra; Lilyan May Challenger, contra-contralto; 11-12, Abe Lyman's Coconut Grove dance orchestra from Ambassador hotel.

KPD, San Francisco, Calif. (429.5), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30-3:30, Loew's Warfield theater; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 6:30-7, States restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, Theodore J. Irwin, organist; 9-10, program, San Francisco Conservatory of Music, Rena Lazel, director; 10-11, Johnny Buick's Cabriarians.

## Tuesday, May 5

Tuesday, silent night for: CFA, CHNC, CHIC, CNRT, KFAE, KFKU, KFKX, KFNF, KJR, KLX, KDB, WAHG, WBAY, WBBR, WCAL, WGBD, WEAD, WEBJ, WEMC, WFI, WGST, WHA, WHAD, WHAZ, WIO, WIAD, WKAQ, WMAK, WOI, WDO, WDS, WSA, WSUI.

### Atlantic or Eastern Daylight Saving Time Stations

KDKA, Pittsburgh, Pa. (309.1), 12:15 p. m., Scalzo's orchestra; 6:15, Pittsburgh Athletic association orchestra; 9, Brunswick hour of music; 11, Pittsburgh Post studio; 11:30, Grand theater concert.

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

WCAU, Philadelphia, Pa. (278), 6 p. m., Meyer Davis Hotel Pennsylvania concert orchestra; 7:30, recital, N. Snellenburg and company; 8, household, fashion and financial talks; 10:30, Charles Verne's dance orchestra.

WDWF, Providence, R. I. (440.9), 8:30-9:30 p. m., Vincent Lopez Arcadia dance orchestra.

WEAF, New York, N. Y. (491.5), 4-4:15 p. m., Harriet Ochs, soprano; 4:15-4:30, Milton Gershenson, pianist; 4:30-5, women's program; 6-7, dinner music, Waldorf-Astoria; 7-7:15, Myrtle Wagner Whit, soprano; 7:15-7:30, art talk; 7:30-8, Eagle Neutrodyne trio; 8-8:10, talk, Bank of America; 8:10-8:30, Fred Ruzka, violinist; 8:30-9, Gold Dust Twins; 9-10, Eveready hour; 10-11, grand opera, "Aida"; 11-12, Meyer Davis' Lido Venice orchestra.

WEEL, Boston, Mass. (475.9), 6:30 p. m., Big Brother club; 7:15, "Carbonated Beverage Day," Hugh J. McMaekin; 7:30, Dok-Eisenbourg and his Sinfonians; 8, musicale from New York; 8:30, Gold Dust Twins; 9, Eveready hour; 10, American opera ensemble.

WFI, Philadelphia, Pa. (394.5), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3, Irene Harriet Edwards, contralto; Caroline Hoffman, pianist; 6, Pat Patterson's orchestra; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, bedtime stories; 8, concert from WEAF; 8:30, Gold Dust Twins; 9, Eveready hour.

WGBS, New York, N. Y. (315.6), 1:30-1:35 p. m., Scripture reading; 3-5, program, auspices of New York Music Week association; 3-3:10, interview with Isahel Lowden, head of New York Music Week association; 6-6:30, Uncle Goebbe; 6:30-6:35, last minute news; 6:30-7, Jersey Collegians; 8-9, Pathé Recording hour; 9-9:15, Nikita Balieff and his Chausse Souris company; 9:30-9:45, Sophie Loopo, soprano; 10-10:30, Franz Schubert recital; Leon Kristel, baritone; Elsa Tanner Brigham, pianist; 11-12, Hotel Vanderbilt orchestra.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., afternoon musical program, A. J. Erisman, director; 8-11, joint broadcasting with WEAF, including Gold Dust Twins and Eveready hour.

WHN, New York, N. Y. (361.2), 12:30-1 p. m., organ recital, Lexington theater; 2:15-3:15, overture and vaudeville, Loew's State theater; 6:30-7, violin solos, Olcott Yall; 7-7:30, Hotel Alamac dance orchestra; 7:30-7:35, health talk, Dr. Landis; 7:35-8, Will Oakland's Chateau Shanley; 10-10:30, Mel Craig and his Hotel St. George orchestra; 11:30-12, Club Alabama orchestra; 12-12:30 a. m., Parody club revue, orchestra.

WIP, Philadelphia, Pa. (508.2), 1 p. m., Karl Bonawitz, organist; 3, Mayflower dance orchestra; 6:05, baseball talk, Monte Cross; 6:15, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime stories; 10:05, The Angelus hour; 11, Benjamin Franklin dance orchestra.

WIAR, Providence, R. I. (305.0), 1:05 p. m., Baltimore hotel orchestra; 8, studio program; 9, Eveready hour; 10, Goodrich Silvertown Cord orchestra.

WIY, New York, N. Y. (405.2), 8:15-8:30 p. m., Zoological society series; 8:30-8:45, Kenneth Burdick, baritone; 8:45-9, Marvin Green, pianist; 9:15-10, Church club dinner, Very Reverend William R. Inge, Dean of St. Paul's London.

WIZ, New York, N. Y. (454.3), 1-2 p. m., Nathan Abas' Hotel Pennsylvania orchestra; 4-4:15, Adolph Baumhaach, pianist; 4:15-4:30, Edith Marion, soprano; 4:30-5:30, Bernhard Levittow's Hotel Commodore tea orchestra; 7-7:15, Frank Dole's dog talk; 7:15-8, Joseph Strissor's Hotel Vanderbilt orchestra; 8-8:10, Wall Street Journal review; 8:10-8:20, N. Y. U. Air college; 10-10:20, "Over the Seven Seas."

WLIT, Philadelphia, Pa. (394.5), 12:02 p. m., daily almanac; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 4:30, Marcella North, pianist; 7:30, Dream Daddy's bedtime stories; 7:50, play review, Allyn C. Sauer.

WNYC, New York, N. Y. (526), 7:20-7:30, sports analysis, Thornton Fisher; 7:35-7:50, talk, Mayor John F. Hylan; 9-9:15, Mario Alvarez, baritone; 9:30-10, instrumental trio; 9:10-10:20, lecture.

WOD, Philadelphia, Pa. (508.2), 12:02 p. m., Crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt.

WDR, Newark, N. J. (405.2), 6:15-6:30 p. m., Hotel Lorraine orchestra; 6:30-7, man in moon stories; 7-7:30, Hotel Lorraine orchestra.

### Eastern Standard or Central Daylight Saving Time Stations

KYW, Chicago, Ill. (536), 3:30 p. m., afternoon frolic, Evening American studio; 4, "Bringing the World

to America," editors of Our World; 6:35-7, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 7:22-7:53, speeches, American Farm Bureau federation; 8-9, Brunswick hour; 9-10, Suburban hand of La Grange, C. J. Grabel, director; 10-11:30, evening at home.

WBAV, Columbus, Ohio (293.2), 12 m., Mrs. Lillian Bangert's musical program.

WBBM, Chicago, Ill. (226), 8-10, 10-12, Paradise studio, Ned Santry, tenor; Marie Winters, pianist; Crillon orchestra.

WCEE, Elgin, Ill. (275), 10:30-12 midnight, Charlene's Star midnight dance program, Blackstone theater.

WEX, Detroit, Mich. (516.9), 4:15 p. m., musical program; 6, dinner concert, Book-Caddillac hotel; 8:30, musical program; 10, the Red Apple club.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Vincent H. Percy, organist; 8-11, program from WEAF.

WEBH, Chicago, Ill. (370), 7:30-8:30 p. m., dinner concert, Oriole orchestra; 9:30-10:30, dance selections, Oriole orchestra; songs, Frank Magini; Ted Florito; piano novelty, songs, Dennis Sisters; 11:30-12:30, twin guitar, Jack Pennell; dance selections, Oriole orchestra; songs, Banks Kennedy; songs, Dennis Sisters; feature acts, Riviera theater.

WGN, Chicago, Ill. (370.2), 6:30-7 p. m., Edwin Stanley Seder, organist; 7-7:30, dinner music, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, classic hour; 10:30-11:30, jazz scampers.

WGY, Schenectady, N. Y. (379.5), 1 p. m., "The Bishop's Candlesticks," WGY matinee players; 1:30, Stephen E. Boisclair, organist; 5:30, dinner program; "The Value of Bees in Orcharding," "Developing Local Markets in the East," Harold B. Tuckey; 6:30, "Interpretation Through Public Speaking," Prof. Horace Grant McKean; 6:45, songs of the sea, WGY studio personnel; 9, "Over the Seven Seas;" 10:30, Stephen E. Boisclair, organist.

WIJD, Mooshearts, Ill. (302.8), 6:30-7:15 p. m., Albert F. Brown, organist; 7:15-8, Mooshearts concert band; "Child Care," M. P. Adams; 10:30-1 a. m., Garod studio; Charley Straight and his orchestra.

WLS, Chicago, Ill. (344.6), 9 p. m., "The Pirates of Penzance," WLS company; 9:45, Glenn's Cornhuskers; 10, R. F. D. program, Kenneth Clark, Ford and Glenn; 10:45, Medinah Temple band; 11, Grace Wilson, contralto; WLS Harmony trio; 11:15, WLS theater presentation; Anthony Wons; 11:35, saxophone quintet, Prof. Glenn; 12, Ford and Glenn time; 12:15, Solemn Old Judge's program; 1, midnite revue, Ralph Emerson, Ford and Glenn.

WLW, Cincinnati, Ohio (423), 4, Talk, "Auction Bridge," Lucy Blackburn; musical program; 6, dinner hour concert; 6:30, baseball scores; 8, The Famous Lyric Male quartet; 8:15, entertainment, J. B. Showers; 8:45, special feature: "Ballade et Poponaise," soloist, William Stoess; 9, Formica concert orchestra; harp soloists, Marie Spaeth.

WMAQ, Chicago, Ill. (447.5), 4:30 p. m., Gunn School of Music; 5, lullaby lady, Mrs. Gene Burton; 6, Chicago theater organ; 6:25, Hotel LaSalle orchestra; 8, Harry Hansen, literary editor; 8:50, lecture, University of Chicago; weekly talk, Association of Commerce; 9:15, Elks' club.

WORD, Batavia, Ill. (275), 8-10 p. m., St. Cecilia music club; world news items, G. A. Hall.

WQJ, Chicago, Ill. (447.5), 3-4 p. m., "When Desserts Are Tonic," Josephine Naylor; "Why Folks Are Thin," Dr. Lena K. Sadler; 7-8, Ralph Williams and his Rainbo Garden orchestra; Robert Metzler, Parisian pianist; Kenneth Sterling, baritone; 10-1 a. m., Ralph Williams and his Rainbo Skylarks; Ned and Ches; Tommy Janosek, harmonica players; Mack Sisters; Will Rossiter; 1-2, Hotsy Totsy hour.

WRC, Washington, D. C. (468.5), 4:30-5:30 p. m., Vincent Lopez Hotel Mayflower orchestra; 6:45, children's hour, Peggy Albion; 7, Meyer Davis New Willard hotel orchestra; 8, "Show Shopping," Leonard Hall; 9, "Over the Seven Seas;" 10, Vincent Lopez Hotel Mayflower orchestra.

WRED, Lansing, Mich. (285.5), 8:15-9:45 p. m., Reo Broadcasting band; Mrs. Marie Steele Van Keuren, pianist; Reo male glee club; Raymond Lyon Bowers, tenor; special.

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

WTAS, Elgin, Ill. (302.8), 8-10:30 p. m., WTAS orchestra; Cavanaugh.

WTIC, Hartford, Conn. (348.6), 7 p. m., organ recital Robert H. Prutting; 7:40, studio of WTIC, D. J. Greer, reader; 7:50, violin solos, duets, Mildred Sage and pupils; 8:50, talk; 9, dance music, Jursek's orchestra of New Haven.

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

### Central Standard Time Stations

CKY, Winnipeg, Can. (384.4), 8:15 p. m., concert, Winnipeg Piano company.

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

KFDM, Beaumont, Texas (315.6), 7-7:30 p. m., children's program; 8, musicale.

KFMQ, Fayetteville, Ark. (232.3), 5 p. m., Little orchestra, H. D. Tovey, director.

KFRF, Shenandoan, Iowa (266), 6:30 p. m., surprise concert.

KSD, St. Louis, Mo. (545.1), 6 p. m., Benjamin Rader's orchestra.

KTHS, Hot Springs National Park, Ark. (374.8), 8:30-9 p. m., Al A. Reynolds, negro dialect songs and stories; 9-10, Meyer Davis orchestra.

WBAP, Fort Worth, Texas (475.6), 7:30 p. m., band concerts, Mineral Wells.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 6:15 p. m., Biley's St. Paul hotel concert orchestra; 8, program from New York; 9, Community Amusement association program.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's Radio trio; 5-5:30, weekly child talent program; 6-7, Tell-Me-a-Story lady; Maudeen Littlefield, pianist; Trianon ensemble; 11:45-1 a. m., Newman Night-hawk night.

WEBW, Beloit, Wis. (268), 8:30-9:45 p. m., Fairbanks Morse band; flute and French horn duet, Otto Myshik, John Pleva; Fairbanks Morse male quartet; Marion Churchill, violinist; Betty Karstadt, pianist.

Radio trio; 8, Knights of Pythias, Gov. Baker of Missouri.

WHD, Des Moines, Iowa (526), 7:30-9 p. m., musical program.

WMC, Memphis, Tenn. (499.7), 7:30 p. m., weekly health talk, Dr. E. E. Francis; 8:30, program, Harry Kohn; 11, Harry O. Nichols, organist.

WOAI, San Antonio, Texas (394.5), 8:30 p. m., "Faust," WOAJ entertainers; 9:30, Jimmie Joy's orchestra.

WDAW, Omaha, Nebr. (526), 12:30 p. m., Art Landry and his Victor Recording orchestra; 6, advice to lovers, Cynthia Grey; 6:25, dinner program, May Seed and Nursery company; 9, program, auspices, Auto Electric & Radio corporation; 10:30, Frank W. Hodek, Jr., and his Nightingale orchestra.

WOC, Davenport, Iowa (483.6), 7:30-9 p. m., program from WEAF.

WSB, Atlanta, Ga. (428.3), 5-6 p. m., Rainbow quartet; 8-9, Vick Myers Melody artists; 10:45, Kimo Kalobis Moonlight Five.

WSUI, Iowa City, Iowa (483.6), 12:30 p. m., "Trench Colonies," J. C. F. Ward.

### Mountain Standard Time Stations

KOA, Denver, Colo. (322.4), 12-1 p. m., classical period; 1-2 tea room, Daniels and Fisher stores; 2, students of music, Denver municipal auditorium; 3:30, Denver Junior high schools; John C. Kendel; 6-6:30, dinner music, News-Times; 7-8, open-air twilight concert, Military band.

### Pacific Standard Time Stations

KFI, Los Angeles, Calif. (468.5), 5:30-6 p. m., Examiner's musical half hour; 6-6:15, McDaniel's nightly doings; 6:45-7, Radlatorial talk; 7-8, Acolan residence pipe organ studio, Dan McFarland, organist; 8-9, popular song program presented by the Examiner, Madelyn Hardy, pianist; 9-10, KFI feature hour; 10-11, Packard Ballad hour, Ashley Sisters, Barney Weber, Bill and Polly Hall and others.

KFDA, Seattle, Wash. (454.3), 4-5:15 p. m., Olympic hotel concert orchestra; 6:45-8:15, Rhodes' Department store program; 8:30-10, Times program; 10-11, Eddie Harkness and his orchestra.

KFWB, Hollywood, Calif. (252), 7:45-9 p. m., Henry Jackson string quartet, Blanche and Evelyn Watt, harmony singers; Newton Hall, tenor; 9-10, Joe Martin's studio six dance orchestra; Ray Kellogg, jazz

fiddler, Bill Hatch, rag-time piano man, and Charlie Wellman, the prince of jazz; 10-11, Warner Brothers' hour of fun, under direction of Harry Seymour; 11-1 a. m., Brandstatter's Hollywood Montmartre cafe dance orchestra, Mel Pedesky, leader.

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

KGW, Portland, Ore. (491.5), 12:30 p. m., Rose City trio; 5, children's program; 8, Oregon Agricultural college extension service lecture; 8:30, concert, Woolach & Powell; 10, Multnomah Hotel Strollers.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog; weekly visit of Queen Titania and the Sandman from Fairyland; Louis F. Klein, auto-barp and harmonica; Floryane Thompson, soprano; Chas. Leslie Hill, four, readings; 7:30, "Hawaii," Fred L. Goddard; 8-10, program, Desmond's G. Allison Phelps; 10-11, Art Hickman's Biltmore hotel dance orchestra, Earl Burnett, leader.

KNX, Hollywood, Calif. (336.9), 5:45-6:15 p. m., Wurlitzer pipe organ studio, sports talk, Sid Ziff; 6:30-7:30, program, Glohe Ice Cream company; 7:30, slye talk, Myer Siegel, Jr., of Myer Siegel & company; 7:45, "Health," Dr. Robert T. Williams; 8-9, KNX feature program; 9-10, program, Independent Furniture Manufacturing company; 10-12, movie night at the Ambassador, Abe Lyman's Coconut Grove dance orchestra.

KPO, San Francisco, Calif. (429.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 3:30-4:30, Palace hotel concert; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 6:35-7, States restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-10, U. S. Army band; 10-11, Johnny Buick's Cabriarians.

KSD, St. Louis, Mo. (545.1), 6 p. m., Benjamin Rader's orchestra.

KTHS, Hot Springs National Park, Ark. (374.8), 8:30-9 p. m., Al A. Reynolds, negro dialect songs and stories; 9-10, Meyer Davis orchestra.

WBAP, Fort Worth, Texas (475.6), 7:30 p. m., band concerts, Mineral Wells.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 6:15 p. m., Biley's St. Paul hotel concert orchestra; 8, program from New York; 9, Community Amusement association program.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's Radio trio; 5-5:30, weekly child talent program; 6-7, Tell-Me-a-Story lady; Maudeen Littlefield, pianist; Trianon ensemble; 11:45-1 a. m., Newman Night-hawk night.

WEBW, Beloit, Wis. (268), 8:30-9:45 p. m., Fairbanks Morse band; flute and French horn duet, Otto Myshik, John Pleva; Fairbanks Morse male quartet; Marion Churchill, violinist; Betty Karstadt, pianist.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., address, health talk, Charles E. Osborne; 6:30-7:30, Southern Methodist university; 8:30-9:30, Tell Me This club; 11-12, program, Cincque de Mio, Palace theater, Mexican orchestra, Mexican consul; Dwight Brown, organist.

WHAD, Milwaukee, Wis. (275), 6-7 p. m., dinner music, Milwaukee Athletic club.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., Louisville Conservatory of Music; Alamo theater organ; 7:30-9, Carl Zoeller's Melodists.

WHB, Kansas City, Mo. (365.6), 2-3 p. m., Sweeney

Radio trio; 8, Knights of Pythias, Gov. Baker of Missouri.

WHD, Des Moines, Iowa (526), 7:30-9 p. m., musical program.

WMC, Memphis, Tenn. (499.7), 7:30 p. m., weekly health talk, Dr. E. E. Francis; 8:30, program, Harry Kohn; 11, Harry O. Nichols, organist.

WOAI, San Antonio, Texas (394.5), 8:30 p. m., "Faust," WOAJ entertainers; 9:30, Jimmie Joy's orchestra.

WDAW, Omaha, Nebr. (526), 12:30 p. m., Art Landry and his Victor Recording orchestra; 6, advice to lovers, Cynthia Grey; 6:25, dinner program, May Seed and Nursery company; 9, program, auspices, Auto Electric & Radio corporation; 10:30, Frank W. Hodek, Jr., and his Nightingale orchestra.

WOC, Davenport, Iowa (4

# MYSTERY MAN THURSDAYS AT WEAF

## Wednesday, May 6

(Continued from page 10)

orechestra; 8:15, address, University of Pittsburgh studio; 9, Dry Slit; hour of music.

**WAHG**, Richmond Hill, N. Y. (315.6), 8-8:15 p. m., William Bellham, reader; 8:15-8:30, songs and duets; the Davidson Sisters; 8:30-8:45, Adolph Hollander, violinist; 8:45-9, James M. Savell, baritone; 9-9:15, Davidson Sisters; 9:15-9:30, Adolph Hollander; 9:30-9:45, Joseph Wohl, pianist; 9:45-9:55, James M. Savell; 10:05-10:15, William Bellham; 10:15-11:45, Glen C. Smith's Paramount orchestra.

**WCAE**, Pittsburgh, Pa. (461.3), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Sunshine girl; 8:30, George Bob Wick, tenor; 10:30, Nixon restaurant orchestra.

**WCAU**, Philadelphia, Pa. (278), 6 p. m., Meyer Davis Hotel Pennsylvania concert orchestra; 8:30, the LaPalina boy; 8:45, N. B. T. boys' concert; 9, furniture talk; 9:10, Sunny serenaders; 10:15, Radio talk; 10:30, Musical Architects' dance orchestra.

**WEAF**, New York, N. Y. (491.5), 4-4:10 p. m., Loraine Osborne, soprano; 4:10-4:25, Frances Greenberg, pianist; 4:25-4:40, Louis John John, baritone; 4:40-4:50, "Children's Stories," Mary Cimino; 6-7, dinner music, Waldorf-Astoria; 7-7:30, services, United Synagogue of America; 7:30-8:30, U. S. Navy band, direction of Lieutenant Charles Benter; 9-10, Ipana Troubadours; 10-11, Royal Little symphony; 11-12, Ben Bernie's Hotel Roosevelt orchestra.

**WEEL**, Boston, Mass. (475.9), 6:30 p. m., Big Brother club; 7:15, Joseph Eccleston, tenor; 7:30, program, Mrs. G. Y. Keils; 8, Traveler Shoe orchestra; 8:30, M. E. Cohen's half hour musicals; 9, Gillette Safety Razor band concert; 10, Dek-Eisenbourg and his Sinfolians.

**WFI**, Philadelphia, Pa. (394.5), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3, Viola Jackel Burns, soprano; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, bedtime stories.

**WGBS**, New York, N. Y. (315.6), 1:30-1:35 p. m., Scripture reading; 1:35-2, Raymond A. Malsee, hariton; 3-3:10, interview with Harold Levy, composer, by Terese Rose Nagel; 3:10-3:20, Margaret Dreyer, pianist; Elizabeth Derr, soprano; 3:20-3:30, interview; Zella Sears, author; Betty Ross and Terese Rose Nagel; 3:30-3:40, Margaret Dreyer and Elizabeth Derr; 6-6:30, Uncle Geehee; 6:30-6:35, last minute news; 6:35-7, Jimmy Leaf's orchestra.

**WGR**, Buffalo, N. Y. (319), 2:30-4:30 p. m., afternoon musical program, A. J. Erlsman, director; 8-8:30, commencement exercises, the Gold Medal cooking school of

### Eastern Standard or Central Daylight Saving Time Stations

**KYW**, Chicago, Ill. (536), 3:30 p. m., frolic; 7, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 7:35, "Entertaining Plans," Vivette Gorman; 8-9, Martha Backes Bardill, soprano; Galen Briggs, tenor; Cyril Allen, cellist; Louis Bartlett, pianist; 9:45-1:30 a. m., midnight revue; Paul Whiteman's "Collegians," A. Vincent Gauthier, director.

**WBAY**, Columbus, Ohio (293.7), 12 m., Aunt Zell, pianist.

**WBBM**, Chicago, Ill. (226), 8-10 p. m., Broadmoor studio, Sandy Meek, Scotch tenor; Jerry Cronack, tenor; Marie Wilters, pianist; Crillon orchestra.

**WCEE**, Elgin, Ill. (275), 10:30-12 midnight, Charlene Star midnight dance program, Blackstone theater.

**WCX**, Detroit, Mich. (516.9), 4:15 p. m., musical program; 6, dinner concert, Book-Cadillae hotel; 8:30, musical program.

Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 5, Detroit News orchestra; Anne Campbell, poet; 10, Jean Goldkette's Victor Recording orchestra.

### Central Standard Time Stations

**KFAB**, Lincoln, Nebr. (240), 7:30-9:30 p. m., national music week.

**KBNF**, Shenandoah, Iowa (266), 6:30 p. m., concert, C. M. Amick, director; 8:30, concert, Nebraska City band, M. L. Crandell, director.

**KSD**, St. Louis, Mo. (545.1), 4 p. m., home hour.

**KTHS**, Hot Springs National Park, Ark. (374.8), 8:30-9 p. m., W. C. Brown, baritone; Arthur Platz, accompanist; 9-10, variety concert, Meyer Davis orchestra.

**WBAP**, Fort Worth, Texas (475.6), 7:30 p. m., band concert, Mineral Wells.

**WCCO**, Minneapolis-St. Paul, Minn. (416.4), 2:30 p. m., matinee musicole; 4, playlet, MacPhail Little theater company; 7, mid-week church service; 8, lecture; 8:30, University of Minnesota prpgram; 10:30, dance program.

Ferguson, pianist; "Effect of Sulphur on Protein Content of Legumes," J. R. Neller; "The Living Room," Ogden F. Beeman; "Beo Diseases and Their Treatment," B. A. Sloucum.

**KFI**, Los Angeles, Calif. (468.5), 5:30-6 p. m., Examiner's musical half hour; 6-6:15, McDaniel's nightly doings; 6:45-7, Radlitorial talk; 7-7:30, Nick Harris, detective stories; 7:30-8, program, Goodwin, Klingner and MacKay Insurance company; 8-9, four fifteen minute vocal recitals, soprano, contralto, baritone and tenor; 9-10, Examiner's literary program; 10-11, Patrick-March dance orchestra, Betty Patrick, soloist.

**KFOA**, Seattle, Wash. (454.3), 4-5:15 p. m., William F. Hoffman's Olympic hotel concert orchestra; 6:45-8:15, Hopper Kelly company program; 8:30-10, Times program.

**KFWB**, Hollywood, Calif. (252), 7:45-9 p. m., program, Arrowhead Lake company, Arrowhead Springs string orchestra; Virginia Ainsworth, soprano; Earl Yates, baritone; Newton Hall, tenor; 9-10, Dorothy Dodd and Melba Melsing, popular songs; Hawaiian nightbirds; 10-11, Warner Brothers' hour of joy, under direction of Harry Seymour himself; 11-1 a. m., Brandstatter's Hollywood Montmartre cafe dance orchestra, Mel Pedesky, leader.

**KGO**, Oakland, Calif. (361.2), 3 p. m., musical program, Cora L. Williams institute; 4-5:30, concert orchestra, Hotel St. Francis.

**KGW**, Portland, Ore. (491.5), 12:30 p. m., Rose City trio; 5, children's program; 6, Hotel Portland dinner concert; 8, concert, Western Auto Supply company; 10, Sherman, Clay & company studio.

**KHJ**, Los Angeles, Calif. (405.2), 6-6:30 p. m., Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog; Dick Winslow, juvenile reporter; Baby Muriel McCormack and Mickey McBan, screen juveniles; Uncle John; 8-8:30, astronomical lecture, Dr. Mars Bumgardt; 8:30-10, program, Ray F. Chesley, Ford dealer; 10-11, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.

**KLX**, Oakland, Calif. (508.2), 6-7 p. m., organ concert; 8-9, entertainment; 9-9:15, American theater orchestra; 9:15-10, program; 10-11:45, Tom Gerunovich's ballroom entertainers.

**KNX**, Hollywood, Calif. (336.9), 5:45-6:15 p. m., Wur-llitzer pipe organ studio, sports talk, Sid Ziff; 6:15-7, dinner hour music; 7-8, Ambassador hotel concert orchestra, Josef Rosenfeld, leader; 8-9, program, Security Trust and Savings bank; 9-10, program by Wrightwood; 10-12, Hollywoodland community dance orchestra.

**KPO**, San Francisco, Calif. (429.5), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 6:30-7, States restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, Atwater Kent artist program; 9-10, program, George Hildreth, tenor; 10-11, Johnny Buick's Cabrians.



Lilyan May Foster (left) is one of the favorites at the Hollywood station, KNX. Lee De Forest hails her voice as perfect for Radio work. Dorothy Blackwell, one of the Big Brother assistants of WEEL, is Big Sister to over 1,500 members. Charlie D. Tillman, Georgia gospel song writer, gives noonday programs at WSB.

Washburn-Crosby company; 9-10, dramatic program, Two-In-One players; 10-11, musical program, Buffalo Association of the Blind (all blind musicians); 11-1 a. m., supper-dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Glezer, director.

**WHN**, New York, N. Y. (361.2), 6:30-7 p. m., violin solos, Olcott Vall; 7-7:30, Hotel Alamae dance orchestra; 7:30-7:35, health talk, Dr. Landis; 9-10, Consolidated Dairy orchestra; 10-10:30, Holston dance orchestra; 11:30-12, Silver Slipper revue with Jim Carr's orchestra; 12-12:30 a. m., Strand Roof orchestra.

**WIP**, Philadelphia, Pa. (508.2), 1 p. m., Glimel tea room orchestra; 8:05, Benjamin Franklin concert orchestra; 7, bedtime stories.

**WJAR**, Providence, R. I. (305.9), 1:05 p. m., orchestra; 7:30, WEAf program.

**WJZ**, New York, N. Y. (454.3), 1:15-2:15 p. m., luncheon music; 4-4:15, Ruth Gallen, contralto; 4:15-4:30, Jeanne Metz, pianist; 4:30-5:30, Hotel Belmont tea music; 7-8, Cafe Boulevard orchestra; 8-8:10, Wolf Street Journal review; 8:10-8:25, Mande Alysia Horling, soprano; 8:25-8:40, "Summing Up May Day," Dr. George T. Palmer; 9:15-10, Gas and Electric Choral society concert; 10-10:20, joint recital, Rosamond Eastle Corcoran, pianist; Josef Ward, violinist; 10:30-11:30, Billy Wynne's Greenwich Village Inn orchestra.

**WKAQ**, San Juan, P. R. (349.7), 8-10 p. m., municipal band.

**WLIT**, Philadelphia, Pa. (394.5), 12:02 p. m., daily ailments; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 2:30, Arthur Embry, baritone; 7:30, Dream Daddy's bedtime stories; 10, Arcadia cafe dance orchestra.

**WNYC**, New York, N. Y. (526), 7:35-7:50, talk, Mayor John F. Hylan; 7:50-8, talk, Cylie Fisher; 8:30-9, "Appreciation of Music"; 9:45-10:55, Messner Brothers orchestra.

**WDD**, Philadelphia, Pa. (508.2), 12:02 p. m., Crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt; 7:30, U. S. Army school band from WCAP; 8:30, concert from WEAF; 10:03, recital, Mary E. Vogt; 10:30, Vincent Blizzo's dance orchestra.

**WOR**, Newark, N. J. (405.2), 3-4 p. m., Tivoli theater orchestra, direction of Dante Carozzini; 8:15-8:45, Harry Cox's orchestra; 7:30-8, Vincent Lopez U. S. School of Music; 11-12, Citro orchestra.

**WEAR**, Cleveland, Ohio (389.4), 6:45-7:45 p. m., Ivan Franciel and his Hotel Cleveland orchestra.

**WEBH**, Chicago, Ill. (370), 7:30-8:30 p. m., dinner concert, Orlo orchestra; "Books of the Day," Lewellyn Jones; musical bits, Riviera theater; 9:30-10:30, talk, M. S. Szymczak; Frederick Agard, tenor; brass quartet, special numbers; 11:30-12:30, dance selections, Orlo orchestra; songs, Loos Brothers; Ted Florito, cello and violin; Frederick Agard, tenor.

**WGN**, Chicago, Ill. (370.2), 6:30-7 p. m., Lyon & Hooley program; 7-7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, classic hour; 10:30-11:30, jazz scamper.

**WGY**, Schenectady, N. Y. (379.5), 5:30 p. m., children's story; 6:45, Albany Strand theater orchestra; Floyd H. Walters, organist.

**WJJO**, Meoschart, Ill. (302.8), 0:30-7:15 p. m., Albert F. Brown, organist; 7:15-8, Mooschart Philharmonic orchestra; Mooschart Junior band; "Child Care," M. P. Adams; 10:30-1 a. m., Garod studio; Charley Straight and his orchestra.

**WLS**, Chicago, Ill. (344.3), 8 p. m., Ralph Emerson, organist; 8:45, lullaby time, Ford and Glenn; 9, WLS tribe of Lano Scouts; 9:20, Glenn's Cornhuskers; 9:30, "Oplo Read, the Man," WLS theater; 9:50, Glenn's Cornhuskers; 10, R. F. D. program; 11, Lucas Sisters; 11:15, Glenn's Cornhuskers; 11:30, Thornton Township High School Glee club; 12, Ford and Glenn time.

**WLW**, Cincinnati, Ohio (423), 4 p. m., Shut In program; 9, WLW dinner hour concert; 10, malou chorus, directed by Lorry Hess; Elizabeth Hess, soloist; 10:15, dialogue, "How Estates Are Protected," organ concert.

**WMAQ**, Chicago, Ill. (447.5), 6 p. m., Chicago theater organ recital; 9:50, stories for children, Georgeno Paulkner; 8, weekly lecture, Northwestern university; 8:25, piano concert, Carl Broman; 9, WMAQ players.

**WORD**, Balavia, Ill. (275), 8-9 p. m., "In Quolutes and in Confidence Shall Be Your Strength," Oscar A. Olson.

**WQJ**, Chicago, Ill. (447.5), 3-1 p. m., domestic science course, Helen Harrington Downing; "Your Spring Cleaning," Martha Logan; 7-8, Ralph Williams and his Ralph Gardens orchestra; Elsie Orr, soprano; Dorothy Egan, accompanist; Jack Fisher, baritone; Herman Essak, violinist; 10-1 a. m., Ralph Williams and his Ralph Skylarks; Larry Brunnage, Harry Kraemer; Meludiana; Zetler Sisters; Alfred Tweed; Fred Johnson, reader; Hickey and Johnson; 1-2, Hotsy Totsy hour.

**WRC**, Washington, D. C. (468.5), 1 p. m., luncheon music, Hotel Washington orchestra; 4, fashion developments of the moment, Eleanor Gunn; 4:10, George E. Ross, pianist; 4:20, talk, Outlook; 4:30, Meyer Davis' New Willard hotel trio; 9, children's hour, Peggy Albion.

**WTAM**, Cleveland, Ohio (389.4), 6-7 p. m., Phillip Splintay and his Music Box restaurant orchestra; 8-11, Carl Rupp and his Hollenden entertainers; 11-1 a. m., Phillip Splintay and his Music Box restaurant orchestra.

**WTAS**, Elgin, Ill. (302.8), 8-10:30 p. m., Blackstone theater entertainment.

**WWJ**, Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's

**WDAF**, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's Radio trio; 6-7, address, speaker, Health Conservation association; address, speaker, Meat Council of Greater Kansas City; Tell-Me-a-Story lady; Trionan ensemble; 8-9:15, classical music, Star's Radio orchestra; 11:45-1 a. m., Merry Old Chief, Carl Nordberg's Plantation players.

**WFAA**, Dallas, Texas (475.9), 12:30-1 p. m., Alex Hughes, pianist.

**WHA**, Madison, Wis. (535.4), 9 p. m., Alice Winston, pianist; Harry Sisson, violinist.

**WHAD**, Milwaukee, Wis. (275), 4 p. m., Marquette university studio program; 8-10 Wisconsin theater roof garden; 11:30, Edmund Fitch, organist.

**WHAS**, Louisville, Ky. (399.8), 4-5 p. m., Louisville Conservatory of Music; Alamo theater organ; 7:30-9, Tropical Hawaiian sextet.

**WHB**, Kansas City, Mo. (365.6), 2-3 p. m., Sweeney Radio trio; 7-8, men's hour.

**WHO**, Oos Moines, Iowa (526), 0:30-7:30 p. m., Reese-Hughes orchestra; 7:30-9, L. W. Kranert, Dwight Thurned, pianists; Mrs. Robert Evans, soprano; Mrs. Stewart Whitmer, pianist; Hugh Beggs, pianist; 9-9:15, Dea Molnes theater symphonic orchestra; 9:45-11, Bankers Lifo Radio orchestra.

**WOC**, Davenport, Iowa (403.6), 4-4:45 p. m., Iowa Blue Devil's orchestra; 5-5:45, chimos; 9:30-9:50, sandwichman's visit; 9:50-7:05, "Where Do We Go from Here?" L. G. DeArmand; 9-10, Mrs. S. J. Burelh, organist; Mrs. H. E. Vedder, soprano; 10-10:15, "The Morning Coneth," Rev. N. C. Carpenter.

**WSB**, Allanta, Ga. (428.3), 5-6 p. m., Georglans orchestra; 10:45, Mrs. Lessie McMichael, soprano.

**WSUI**, Iowa City, Iowa (483.6), 9 a. m., violin solos, F. E. Kendrick; 7:30, "American Constitutional System," F. E. Herack; 7:45, "Psychology of Learning," F. H. Knight; 8, "Appreciation of Literature," F. L. Mott.

**KGO**, Oakland, Calif. (361.2), 3 p. m., musical program, Cora L. Williams institute; 4-5:30, concert orchestra, Hotel St. Francis.

**KGW**, Portland, Ore. (491.5), 12:30 p. m., Rose City trio; 5, children's program; 6, Hotel Portland dinner concert; 8, concert, Western Auto Supply company; 10, Sherman, Clay & company studio.

**KHJ**, Los Angeles, Calif. (405.2), 6-6:30 p. m., Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog; Dick Winslow, juvenile reporter; Baby Muriel McCormack and Mickey McBan, screen juveniles; Uncle John; 8-8:30, astronomical lecture, Dr. Mars Bumgardt; 8:30-10, program, Ray F. Chesley, Ford dealer; 10-11, Art Hickman's Biltmore hotel dance orchestra, Earl Burtnett, leader.

**KLX**, Oakland, Calif. (508.2), 6-7 p. m., organ concert; 8-9, entertainment; 9-9:15, American theater orchestra; 9:15-10, program; 10-11:45, Tom Gerunovich's ballroom entertainers.

**KNX**, Hollywood, Calif. (336.9), 5:45-6:15 p. m., Wur-llitzer pipe organ studio, sports talk, Sid Ziff; 6:15-7, dinner hour music; 7-8, Ambassador hotel concert orchestra, Josef Rosenfeld, leader; 8-9, program, Security Trust and Savings bank; 9-10, program by Wrightwood; 10-12, Hollywoodland community dance orchestra.

**KPO**, San Francisco, Calif. (429.5), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 6:30-7, States restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, Atwater Kent artist program; 9-10, program, George Hildreth, tenor; 10-11, Johnny Buick's Cabrians.

## Thursday, May 7

Thursday, silent night for: CNRT, KFAB, KFAE, KFDM, KFDA, KLX, KCB, WAHG, WBAY, WCEE, WDWI, WEAD, WEBJ, WEBW, WEMC, WHA, WHAD, WHAZ, WIAD, WIJD, WLBI, WDD, WDS, WSAC, WSUI, WTAM.

### Atlantic or Eastern Daylight Saving Time Stations

**KDKA**, Pittsburgh, Pa. (309.1), 12:15 p. m., Scalza's orchestra; 8:15, KDKA Little Symphony orchestra; 8:30, concert; 9, Teaherry time; 11, concert, Pittsburgh Post studio.

**WBRR**, New York, N. Y. (272.8), 8 p. m., Watchtower instrumental trio, George Twaroseh, Carl Park, M. Corment; 8:10, violin solos, Carl Park; 8:20, International Sunday school lesson for May 11, Mrs. S. M. Van Slippa; 8:40, clarinet solos, M. Corment; 8:50, Watchtower instrumental trio.

**WCAE**, Pittsburgh, Pa. (461.3), 0:30 p. m., dinner concert, William Penn hotel; 8, Moore's cafeteria Radio recital; 9, Atwater Kent Radio artists; 10, Goodrich Silvertown Cord orchestra.

**WCAU**, Philadelphia, Pa. (278), 6:30 p. m., Paul Speedit's dance orchestra; 7:30, N. Snelbenburg symphony orchestra; 8:55, "What Wo See and Hear in Music," Maude Hanson Pettit.

**WEAF**, New York, N. Y. (491.5), 4:30 p. m., Margarita Hozada, soprano; 4:15-4:25, "Newspaper Secrets," H. L. Gates; 4:25-5, music week program, auspices of General Federation of Women's clubs; 6-7, dinner music, Waldorf-Astoria; 7-7:30, services, New York Federation of churches; 7:30-7:40, Josiah B. Free, baritone; 7:40-8, Columbia university lecture course; 8-8:30, Cushman's serenaders; 8:30-9, "Touring in a Packard Eight," 9-10, Atwater Kent Radio artists; 10-11, the Silvertown Cord orchestra; 11-12, Vincent Lopez Hotel Pennsylvania orchestra.

**WEEL**, Boston, Mass. (475.9), 3:15 p. m., Noah's Arkadians, J. W. Wilnes, director; 6:30, Big Brother club; 7:15, Sager's half hour of hospitality; 8, musical program.

(Continued on page 12)

### Mountain Standard Time Stations

**KDA**, Denver, Colo. (322.4), 12-1 p. m., romantic period; 1-2, dance program, ten room, Daniels & Fisher Stores company; 3, "In Old Louisiana," musical comedy; 7-8, Union Pacific railroad band; 8, operatic night, Ian Hains, soprano; Harry J. Morton, tenor; Lamont male chorus; Abundant Lifo mixed chorus; 10-12, Joe Mann and his Raibabw-Lane orchestra.

**KOB**, Stato Callego, N. M. (348.6), 7:30-8:30 p. m., Indian songs, Mrs. Dan Kinss; piano ducta, Mrs. John Powell; Mrs. Fred Kuester; negro spirituals, Mrs. L. Allen Higley; "Hearing America First," Mrs. Marx E. Oberdorfer; English ballads, Mrs. R. W. Goddard; Dean A. P. Taylor, violinist; Mrs. A. P. Taylor, pianist; Mrs. O. C. Snow, whistler; "What Radio Meant to the American Home of Today," Judith C. Woller; McDowell number, Mrs. Fred Kuester.

### Pacific Standard Time Stations

**KFAE**, Pullman, Wash. (348.6), 7:30-9 p. m., Colfax Methodist choir, Mrs. L. A. Kirtland, director; Bess



# WHAT WHAD; STRING MUSIC AT WTIC

Betty Patrick (right) is the soloist with the Patrick-Marsh orchestra which appears regularly at KFI, Los Angeles on Wednesday evenings. Her catchy lifting way of singing popular songs is winning for her a large following. Dot Echols (left) is the pianist playing with the Palace theater orchestra every Monday night at WBAP, Fort Worth.



## Index to Classical Concerts

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

### Classical

#### Atlantic or Eastern Daylight Saving Time Stations

**Saturday, May 2:** 6, KDKA, WFAF; 6:15, WIP; 6:30, WCAE, WFI; 7, WFAF; 7:05, WJAR; 7:30, WBZ, WLIT; 8, WBBR, WBZ, WJZ; 8:30, KDKA, WCAE, WGBS; 8:45, WBBR, WBZ; 9, WFAF, WGBS; 9:30, WJZ; 10:15, WIP; 10:30, WGBS, WOR.

**Sunday, May 3:** 6, WOO; 6:05, WCAU; 6:30, WCAE; 6:40, WCAU; 7, WCAU; 8, WJZ; 8:15, WAHG, WJY; 8:30, WJZ; 9, WGBS, WBBR; 9:15, WFAF; 9:20, WBBR, WEEL; 10, WBBR, WJZ.

**Monday, May 4:** 6, WFAF; 6:05, WIP; 6:15, KDKA; 6:30, WCAE, WFI; 7, WJZ; 7:15, WFAF; 7:30, WGR, WOO; 8, WBBR, WLIT; 8:10, WJZ; 8:30, KDKA, WCAE, WFAF, WOO, WOR; 8:40, WBBR; 9, WCAE, WJZ, WNYC; 9:30, WLIT; 9:45, WOR; 10, WEEL, WJZ; 10:03, WOO; 10:10, KDKA; 11, WCAE.

**Tuesday, May 5:** 6, WCAU, WFAF; 6:15, KDKA, WIP; 6:30, WCAE, WFI; 7, WFAF, WGR; 7:30, WCAU; 7:35, WNYC; 8, WCAE, WEEL, WFI, WGBS; 8:10, WCAU, WFAF; 8:15, WNYC; 8:30, WJY; 8:45, WJY; 9, WGBS; 9:25, WCAU; 10, WCAE, WFAF, WEEL, WGBS; 10:05, WIP; 11, KDKA; 11:30, KDKA.

**Wednesday, May 6:** 6, WCAU, WFAF; 6:05, WIP; 6:15, KDKA; 6:30, WCAE, WFI; 7, WNYC; 7:15, WEEL; 7:30, WBBR, WOO, WOR; 8, WGR; 8:10, WJZ; 8:15, WNYC; 8:20, WCAU; 9:30, WAHG, WCAE, WCAU, WEEL, WOO; 9, KDKA, WFAF, WEEL; 9:15, WJZ; 9:45, WAHG; 10, WFAF, WJZ; 10:03, WOO; 10:30, WCAE.

**Thursday, May 7:** 6, WFAF; 6:05, WIP; 6:15, KDKA; 6:30, WCAE, WFI; 7:15, WEEL; 7:30, WCAU, WFAF; 8, WBBR, WFI, WGR; 8:30, KDKA, WEEL, WJZ; 8:40, WBBR; 9, WCAE, WFAF, WEEL, WFI, WNYC; 9:30, WGBS, WJZ; 10, WCAE, WJY; 10:05, WIP; 11, KDKA.

**Friday, May 8:** 6, WFAF; 6:15, KDKA; 6:30, WCAE, WFI, WHN; 7, WFAF, WJZ; 7:15, WEEL; 7:30, WOO; 7:45, WFAF; 8, WAHG, WEEL, WOO; 8:10, WJZ; 8:30, KDKA, WCAE, WEEL; 8:45, WAHG; 9, WAHG, WGR; 9:15, WAHG; 9:30, WEEL, WLIT; 10, WGR; 10:03, WOO; 10:30, WEEL.

#### Eastern Standard or Central Daylight Saving Time Stations

**Saturday, May 2:** 6, WLW, WMAQ; 6:45, WJJD; 7, KYW, WQJ, WRC; 7:30, WEBH, WGY; 8, KYW, WRC; 8:30, PWX, WRC; 9, WMAQ; 9:35, KYW; 11, KYW.

**Sunday, May 3:** 6, AT9, WTAM; 6:45, WORD; 7, KYW, WBCN, WKAQ; 7:30, WREO; 8, WQJ; 8:30, WLW; 9, WEAR, WGY, WQJ; 9:15, WJJ.

**Monday, May 4:** 6, WBBM, WLW, WMAQ, WWJ; 6:30, WJJD; 6:45, WGY; 6:50, WMAQ; 7, WEAR, WTIC; 7:15, WJJD; 8, WBAV, WLW, WORD, WTAM; 8:30, CHNC; 9, WLW, WWJ.

**Tuesday, May 5:** 6, WLW, WMAQ, WTAM, WWJ; 6:30, WJJD; 6:45, WGY; 7, WEAR, WLS, WQJ, WRC; 7:15, WJJD; 7:30, WGN; 8, WEAR, WLS, WLW, WORD, WWJ; 8:15, WLW, WREO; 8:30, WEBH; 8:45, WLS, WLW; 9, WLW; 9:15, WMAQ; 9:45, WLS; 10:30, WGY.

**Wednesday, May 6:** 6, WLW, WMAQ, WWJ; 6:30, WJJD; 6:45, WEAR; 7, WKAQ, WQJ; 7:15, WJJD;

7:30, WCBH; 8, WORD; 8:30, WMAQ; 9:15, WMAQ; 9:30, WLS; 10, WLW; 10:30, WLS.

**Thursday, May 7:** 6, WGY, WLW, WMAQ, WTAM, WWJ; 7, WEAR, WGY, WLS, WQJ, WRC; 7:30, WEBH, WGY, WQJ; 8, WEAR, WLS, WORD, WKAQ; 8:30, WGY; 9:15, WMAQ; 10:03, WLW.

**Friday, May 8:** 6, WGY, WMAQ, WWJ; 6:30, CNRT, WJJD; 6:40, WGY; 7, WLS, WQJ; 7:15, WJJD; 7:30, WEBH; 8, WBAV, WLS, WMAQ, WEAR; 8:30, CNRT; 9:30, WGY; 10, WLS.

#### Central Standard Time Stations

**Saturday, May 2:** 6, WCCO, 6:30, KFNF; 6:45, WOAW; 7, KSD, WOAW; 7:30, WHAS; 8:30, KTHS, WMC; 9, KFRU, WOC; 11:15, WOAW; 12, WCAE.

**Sunday, May 3:** 7:30, WHO; 8, WCBD; 8:30, KTHS, WCAE; 9, WOAW; 9:30, WOAI, WOC; 11:15, WHB.

**Monday, May 4:** 6, WHAD, WOAW; 6:30, KFNF, WFAA; 7:30, WBAP, WHO; 8, KFRU, WCBD, WHO; 8:30, KTHS, WCCO, WFAA, WMC; 9, KTHS, WOAW; 9:30, KFCK; 10, KSD; 11, WBAP, WCAE; 11:15, WHO.

**Tuesday, May 5:** 6, KSD, WHAD; 6:25, WOAW; 6:30, WFAA; 7:30, WBAP, WOC, WHAS, WHO; 8, WLBL; 8:15, CKY; 8:30, WHAS, WMC, WOAI; 9, KFQK; 9:30, WBAP; 11, WFAA, WMC.

**Wednesday, May 6:** 6, WHA; 6:15, WCCO; 6:30, KFNF, WHO; 7, KSD, WHB; 7:30, WBAP, WHAS, WHO; 8, WCCO, WDAF; 8:30, KTHS; 9, KTHS, WHO, WOC; 9:45, WHO.

**Thursday, May 7:** 6, WHAD; 6:30, KFNF, WFAA, WOAW; 7, WCCO, WHIO, WOC; 7:30, WHAS, WHO; 8, CKY, WCBD; 8:30, KTHS, WFAA, WMC; 9, WOAW; 9:15, WOI; 9:30, KFCK; 10:30, KFRU; 11, WFAA.

**Friday, May 8:** 6:15, WCCO; 6:30, KFNF, WFAA; 7:30, KFAB, KSD, WHAS; 8, WCCO, WOC, WSB; 8:15, CKY, KSD; 8:30, WFAA, WHAS, WMC; 9, KSD, KTHS, WCCO; 10:45, WSB.

#### Mountain Standard Time Stations

**Monday, May 4:** 7, KOA; 7:30, KOB; 8, KOA.

**Tuesday, May 5:** 6, KOA; 7, KOA.

**Wednesday, May 6:** 7, KOA; 7:30, KOB; 8, KOA.

**Thursday, May 7:** 7, KOA.

**Friday, May 8:** 7:30, KOB; 8:10, KOA.

#### Pacific Standard Time Stations

**Saturday, May 2:** 6, KGW; 6:15, KNX; 6:45, KFOA; 7:30, KNX; 8, KGO, KNX.

**Sunday, May 3:** 6:30, KHJ; 7, KGW, KHJ, KNX; 7:30, KHJ; 8, KFI, KHI, KNX; 9, KNX; 10, KNX.

**Monday, May 4:** 6, KGW, KLX; 6:15, KNX; 6:45, KFOA; 8, KHJ, KNX; 9, KFI, KNX.

**Tuesday, May 5:** 6, KHJ; 6:30, KNX; 6:45, KFI, KFOA; 8, KGO, KNX; 8:30, KFOA, KGW; 9, KNX.

**Wednesday, May 6:** 6, KGW, KHJ, KLX; 6:15, KNX; 6:45, KFOA; 7, KNX; 7:30, KFI, KPO; 8, KFI, KGW, KLX; 8:30, KFOA; 10, KGW.

**Thursday, May 7:** 6, KFOA, KHJ; 6:30, KNX; 8, KGW, KHJ; 9, KGW.

**Friday, May 8:** 6, KGW, KHJ, KLX; 6:30, KNX; 6:45, KFOA; 7:30, KNX; 7:45, KLX; 8, KGO, KNX; 8:30, KFOA; 9, KGW, KNX.

versity musicians; 8, Dispatch string quartet; musicians from Mt. Gilead.

**WBBM, Chicago, Ill. (226).** 8-10 p. m., Paradise studio; W. L. Lewis, tenor; Mauritz Silverman, tenor; Cort Banks, ukulele; Marie Winters pianist; Crillon orchestra.

**WCEE, Elgin, Ill. (275).** 10:30-12 midnight, Charlene Star midnight dance program.

**WCX, Detroit, Mich. (516.9).** 4:15 p. m., musical program; 6, dinner concert, Book-Cadillac hotel; 8:30, musical program; 10, dance music.

**WEAR, Cleveland, Ohio (389.4).** 8-11 p. m., program from Youngstown and Amherst.

**WEBH, Chicago, Ill. (370).** 7:30-8:30 p. m., Oriole orchestra concert; musical bits, Riviera theater; 9:30-10:30, Oriole dance orchestra; Jack Penowell, twin guitarist; musical lectures, Henry Purmort, Eames; Frederick Agard, tenor; 11:30-12:30, Oriole dance orchestra; Jack Penowell, twin guitarist; Frederick Agard, tenor; Frank Pappie, accordion solo; Sandy Meek, tenor.

**WGN, Chicago, Ill. (370.2).** 6:30-7 p. m., organ recital; 7:30, Drake concert ensemble, Blackstone string quintet; 8:30-9:30, classic hour; 10:30-11:30, jazz seampier.

**WGY, Schenectady, N. Y. (379.5).** 1 p. m., health hints, Dr. C. W. Woodall; 5:30, Sunday school lesson; 6, Albany Strand theater orchestra; Floyd H. Walter, organist; 6:30, health talk; 6:46, "The Spirit of Ann Rutledge," WGY players; 9:30, Y. M. C. A. orchestra.

**WLS, Chicago, Ill. (344.6).** 8 p. m., Ralph Emerson, organist; 8:15, lullaby time; 9, LaGrango string trio; 9:15, Glenn's Cornhuskers; 10, R. F. D. program, Olsen and Caran, cornet duets; 11, Welsh program; 12, Ford and Glenn time.

**WMAQ, Chicago, Ill. (447.5).** 6 p. m., organ recital, Chicago theater; 6:30, Hotel LaSalle orchestra; 8, weekly wide-awake club; 8:30, musical geography, Mr. and Mrs. Marx E. Oberdorfer; 9, Thelma Cook, violinist; Loreto Scanlon, soprano; W. A. Gorman, tenor.

**WORD, Balavia, Ill. (275).** 8-9:30 p. m., Naomi Alfredo Ryburn, violinist; Ruth Congdon, pianist; B. M. Rice, baritone.

**WQJ, Chicago, Ill. (447.5).** 3-4 p. m., "Bridge Lessons," Wynne Ferguson; travoluxo, Mrs. Harry T. Sanger; 7-8, Ralph Williams and his Rainbow Garden orchestra; Adelaito Steeg, contralto; Madama Clough Ramar, pianist; Kane McDuffee, whistler; 10-11 a. m., Ralph Williams and his Rainbow Skylarks; Zeigler Sisters; West Brothers; Joe McManus, baritone; Loretta Gilles, soprano; 1-2, Hotsy Totsy hour.

**WRC, Washington, D. C. (468.5).** 1-2 p. m., Vincent Lopez Mayflower orchestra; 4, fashion developments of the moment, Eleanor Gunn; 4:10, Eleanor Glynn, pianist; 4:20, "Beauty and Personality," Elsie Pierce; 4:30, Meyer Davis' New Willard hotel trio; 6, children's hour, Peggy Hibdon.

**WTAM, Cleveland, Ohio (389.4).** 6-7 p. m., Guy Lombardo and his Royal Canadian.

**WTAS, Elgin, Ill. (302.8).** 8-10:30 p. m., Blackstone theater entertainment.

**WTIC, Hartford, Conn. (348.6).** 7 p. m., Hartford Piertral club, sixty mandolins, buxidos, guitars; 9, dance music, Emil Heilmberger's Hotel Bond orchestra.

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

**Central Standard Time Stations**

**CKY, Winnipeg, Can. (304.4).** 8:15 p. m., J. J. H. McLean Music company.

**KFAA, Lincoln, Nebr. (240).** 7:30-9:30 p. m., national music week.

**KFDN, Beaumont, Texas (315.6).** 8 p. m., Refinery band concert.

**KFNF, Sheppard, Iowa (260).** 6:30 p. m., band concert, Dr. W. C. Meyers; 8:30, quartet; Julia Lundeen—pioneer, pianist; Archer Payne, director.

**KSD, St. Louis, Mo. (545.1).** 7:30 p. m., program, National Bank of Commerce; 8:15, James L. Spencer, baritone; 9, to be announced.

**KTHS, Hot Springs National Park, Ark. (374.8).** 8:30-9:10 p. m., Phil Wall, popular pianist; 9:10-10, concert, Meyer Davis orchestra.

**WBAP, Fort Worth, Texas (475.6).** 7:30 p. m., orchestra; 9:30, band concert, Municipal Wells; Miss West Texas grand hall.

**WCCO, Minneapolis-St. Paul, Minn. (410.4).** 6:15 p. m., dinner concert; 7:30, "Alicia and the People," R. W. Bruce; 7:45, "The Third Flight," R. Hugo Phillips Goodwin, organist; 9, Winning Chorus club; Sarah Terada, pianist.

**WDAF, Kansas City, Mo. (365.6).** 3:30-4:30 p. m., Star's Radio trio; 6-7, speaker, Kansas City Children's Bureau; Tell-Me-a-Story lady; Trianon ensemble; 8:10, popular program; 11:45-1 a. m., Merry Old Chief, Plantation players.

**WFAA, Dallas, Texas (475.9).** 12:30-1 p. m., address, Dr. Robert Stewart Hyer; 1:30-5, woman's hour; 6:30-7:30, Frank Davenport's orchestra; 8:30-9:30, Sweet water violin choir, Mrs. O. L. Lighthirth, director.

**WHA, Madison, Wis. (535.4).** 7:15 p. m., "Parley Wendell from When We Were Very Young," Carroll McMillan, organist.

**WHAD, Milwaukee, Wis. (275).** 8:30-10 p. m., WI-C on li theater series program.

**WHAS, Louisville, Ky. (399.8).** 4-5 p. m., Louisville Conservatory of Music; Union theater organ; 7:30-9, concert, Erin Parley solo.

**WHE, Kansas City, Mo. (365.6).** 2-3 p. m., Sweeney Radio trio; 7-8, men's hour.

**WHQ, Des Moines, Iowa (245).** 7:20-9 p. m., Capitol

Radio exchange, Mabel Swint Ewer; Carolino Hoffman, pianist; 6:30, Meyer Davis concert orchestra; 7, bedtime stories.

**WGBS, New York, N. Y. (315.6).** 10-10:10 a. m., "Timely Talks," by "Terese"; 10:20-10:30, Jefferson memorial contest, talk by Rita Klissen; 10:40-10:50, fashion talk, Lillian Hegan; 1:30-1:35 p. m., Scripture reading; 1:35-2, Garlands of Giovanni, tenor; Phyllis de Rosa, soprano; 3-5, music week program under direction of Y. M. C. A.; 3-3:10, interview with Leonard Leibling, music critics, by Terese Rose Nagel; 3:10-3:20, Madeline Holzheiser, soprano; 3:20-3:30, music week talk, Dr. Alfred G. Rohyn; 3:30-3:40, Ellen Rodney, soprano; 3:40-3:50, Norman Curtis, pianist; 3:50-4, Madeline Holzheiser.

**WGR, Buffalo, N. Y. (319).** 2:30-4:30 p. m., afternoon musical program; A. J. Erlsman, director; 8:45-9, John Dodsford, reader; 9-10, musical program by St. Andrew's Scottish society; 10-11, Orchard Park high school orchestra; 11-1 a. m., supper-dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gleaser, director.

**WHN, New York, N. Y. (361.2).** 8:30-7 p. m., violin solos, Orest Valli; 7:30, Hotel Alamae dance orchestra; 7:30-7:35, health talk, Dr. Landis; 9:30-10, Dan Gregory and his Crystal Palace orchestra; 10:25-10:30, "Storage Batteries," H. H. Shontz; 10:30-11, Roseland dance orchestra; 11:30-12, Club Alaham orchestra; 12-12:30 a. m., Parody club revue and orchestra.

**WIP, Philadelphia, Pa. (508.2).** 1 p. m., Gimbel tea room orchestra; 3, recital, students Frank Olesley School of Music; 6:05, songs, Joe Burke; 6:15, Harold Knight's singing orchestra; 7, Uncle Wip's bedtime stories.

**WIAR, Piquette, R. I. (305.9).** 1:05 p. m., Woodstock orchestra; 8, studio program; 9, Malno Creamery hour; 11, Hillmore hotel orchestra.

**WJY, New York, N. Y. (405.2).** 8:30 p. m., Warner Hawkins, pianist; 9:15-9:55, Field and Stream sports talk.

**WJZ, New York, N. Y. (454.3).** 1-2 p. m., Henry Vander Zantzen's Hotel Ambassador trio; 4-1:15, Irma Uledo, soprano; 4:15-4:30, popular songs, Mack and Jerome; 7-7:30, Savalet ensemble; 8:10-8:20, Frank Anderson, baritone; 8:20-8:10, "A Life Time with Mark Twain," Mary Lawton; 10:30-11:30, Duke Yollman and his Irena Eastie orchestra.

**WLIT, Philadelphia, Pa. (394.5).** 12:02 p. m., daily album; Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 4:30, Arcadia North, pianist; 7:30, Dream Buddy's bedtime stories; 8, book review, Allylu' L. Sauer; 8:15, "Fifteen Minutes of Humor," Sam Windfield; 9:30, concert from Stanley theater; 10, Arcadia cafe dance orchestra; Morning Glory club concert; 12, Johnny Jones, Elk club dance orchestra.

**WNYC, New York, N. Y. (526).** 6:30-6:50, children's story; 7:50-8, violin recital; 8-8:30, talk, Paul James Churelward; 8:30-9:30, concert; 10-10:30, talk, Prof. J. G. Parler Trapp.

**WDD, Philadelphia, Pa. (508.2).** 12:02 p. m., Crystal tea room orchestra; Robert E. Golden, director; 4:45, organ recital; Mary H. Vnet; 7:30, A. Bundelari's concert orchestra; 8, recital, Harriette H. Ridley, pianist; 9, WOO orchestra, Robert E. Golden, director; 10:03, organ recital, Mary E. Vogt; 10:30, Vincent Rizzo's dance orchestra.

**WDR, Newark, N. J. (405.2).** 6:15-6:30 p. m., Hotel Lorraine orchestra; 6:30-7, man in the moon stories; 7-7:30, Hotel Lorraine orchestra.

#### Eastern Standard or Central Daylight Saving Time Stations

**CNRT, Tereno, Cnn. (356.9).** 8:30 p. m., Lutz Remmelt and his King Edward hotel concert orchestra; Mabel P. Downing, harpist; Edgar Dowell, violinist; Mrs. Russell Marshall, soprano; Ansin Douglas, bass; 10:30, Lutz Remmelt and his King Edward hotel dance orchestra.

**KYW, Chienao, Ill. (536).** 8:20 p. m., "Experiences of the Girl Vagabond," Hal Kulu Clements; 6:35-7, Lurde Boh; 7:30, dinner concert, Congress hotel, 2-1:30 a. m., midnight revue; Paul Whiteman's "Tol-legiana."

**WRAV, Columbus, Ohio (293.7).** 19 m., Capitol

City Commercial college girls glee club, Cyril Kaudree, director; Arthur Cohen, violinist; Williamson Brothers; 11-12, Reese-Hughes orchestra.

**WMC, Memphis, Tenn. (499.7).** 7:30 p. m., weekly Radin talk; 8:30, Britling's caferia orchestra; 11, midnight frolic, Bob Miller.

**WDAW, Omaha, Nebr. (526).** 12:30 p. m., Art Landry and his Victor recording orchestra; 1, Sunshine program; 5:15, public news period, Eugene Kosovsky; 6, Frick Ross stories, Doris Claire Secord; 6:25, dance orchestra; 7:10, sports events, Ivan L. Duddie; 8, program, auspices Union Pacific Railroad company; 12, midnight frolic, Frank W. Hodek and his Nightingale orchestra.

**WOC, Davenport, Iowa (483.8).** 4-5 p. m., The Crescent orchestra; 8:30-7:10, "From Livestock to Meat," William H. Gehrmann; 8-9, Plow City quartet; White and Gold orchestra.

**WOL, Ames, Iowa (270).** 12:30 p. m., "Household Liens for the Bride," Mary Glaberson.

**WSB, Atlanta, Ga. (328.3).** 8-9 p. m., classic concert, Andrew Jenkins' family.

**WSUL, Iowa City, Iowa (483.6).** 12:30 p. m., "Horder Troubles in 1891," Bruce Mahan.

#### Mountain Standard Time Stations

**KOA, Denver, Colo. (322.4).** 12-1 p. m., modern period; 1-2, tea room, Daniels & Fisher; 2, state contests; 7-8, municipal band, Lloyd B. Curtis, director; 8, folk songs.

**KOB, State College, N. M. (348.6).** 7:30-8:30 p. m., Miss Hollins, Miss Danplere.

#### Pacific Standard Time Stations

**KFAE, Pullman, Wash. (348.6).** 7:30-9 p. m., music week, American music, Marguerite Miller, director; "Frolimsus Source Waters of Minnelonka," Frances Lockwood, Marguerite Miller, soprano; negro spirituals,

Vuy Keens, contralto; pioneer, sheep and goats, cowboy music; Thelma Johnson, pianist; Phil War period, Francis Fremo, pianist; MacDowell's music, Jean Secret, pianist; modern American composers, Lillian Pettibone; American women composers, Marguerite Miller; Bayou songs, Frances Lockwood, soprano; "Comparing of Spring Seasons," Prof. Henry Holtz; "The Dining Room and Kitchen," Prof. Stanley A. Smith; "Ancient Plant Doctors," George L. Zundel; "New Books," Alice Lindsey Webb.

**KFI, Los Angeles, Calif. (408.5).** 5:30-6 p. m., Examiner's musical half hour; 6:30-7:15, McDaniel's nightly doings; 8:15-7, Auditorium talk; 7-8, Examiner; dance music; 8:15, Arthur, residence; the organ studio, Dan McFarland, organist; 9-10, program, Hollywood string quartet; 10-11, vocal recital, pupils of John Smallman.

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

**KFWB, Hollywood, Calif. (252).** 7:15-8 p. m., jazz hour, Bill Huleh, piano; Ray Kellogg, violin, and Charita Wellman, tenor; 9-10, Charles Henchump, tenor; "Titan trio; Dorothy Dodd, popular songs; 10-11, Warner Brothers' hour of fun and frivolity, under direction of Harry Seymour; 11-1 a. m., Grandfather's Hollywood Madrigal cafe dance orchestra, Mel Felesky, leader.

**KGD, Oakland, Calif. (361.2).** 4-5:30 p. m., Hotel St. Francis concert orchestra; 5:30-6, girls' half hour; 8, annual dinner, Mills college.

**KGW, Portland, Ore. (491.5).** 12:30 p. m., Ross City trio; 5, children's program; 6, St. Francis choir, Catherine Couchak Friedrich; 8, Sherman, Clay and company; 10:30, Hood bells.

**KHI, Los Angeles, Calif. (405.2).** 6-6:30 p. m., Art Heikman's Hillmore hotel concert orchestra, Edward Fitzgerald, director; 6:30-7:30, Hillmore stories American history; Prof. Walter Sykes-Herzog; Howard Hendrick, screen juvenile; Uncle John; 8:30, Atwater

(Continued on page 14)



# An Evening at Home with the Listener In

## STATIONS IN ORDER OF WAVE LENGTHS USED

Meters	Call	Meters	Call	Meters	Call	Meters	Call	Meters	Call	Meters	Call
226	WBBM	275	WHD	315.6	WGBS	365.6	WDAF	406	WBAR	468.5	WRC
233	WEBJ	275	WORD	319	WGR	365.6	WHB	410.7	CKAC	475.9	WBAP
240	KFAB	275.3	WJAS	322.4	KOA	370	CYB	416.4	WCCO	475.9	WEEI
244	WOAX	278	WCAU	325.9	WSAI	370.2	WEBB	421	KIAF	475.9	WFAA
244	WABN	278	WLBL	330	CYX	370.2	WGN	422.3	WLW	480	CYL
248	WBBG	278	WRBC	330	CYX	370.2	WGN	422.3	WLW	480	CYL
250	WGES	280.2	WVAC	333.3	WBZ	374.8	KTHS	428.3	WSB	483.6	WOC
252	KFWB	285.5	WEMC	336.9	KFMX	379.5	WGY	429.5	KPO	483.6	WSUI
261	KSL	285.5	WJAR	336.9	WCAJ	379.5	WHAZ	434.5	CNRO	491.5	KGW
265.5	WMAK	285.5	WREX	336.9	WSAC	384.4	CKY	434.5	NAA	491.5	WEAF
266	KPNF	288.3	KFKX	336.9	KNX	384.4	KJR	435	AT9	499.7	WMC
266	WBCN	293.9	KJS	340.7	WKAQ	389.4	WEAR	435.5	CFCN	508.2	KLX
268	WEBW	293.9	WBAV	344.6	WCBF	389.4	WTAM	440.9	WDWF	508.2	WIP
270	WGST	293.9	WEOA	344.6	WLS	394.5	KFRU	440.9	WOS	508.2	WOO
270	WOI	299.8	KFMQ	348.6	KFAE	394.5	WFI	447.5	WMAQ	516.9	WCX
272.6	WBBR	299.8	WPG	348.6	KOB	394.5	WLIT	447.5	WQJ	526	WHO
272.6	WFBH	302.8	WJJD	348.6	WTIC	394.5	WOAI	454.3	KFOA	526	WNYC
273	WHK	302.8	WTAS	352.7	WWJ	399.8	WHAZ	454.3	WJZ	526	WOAW
273	WRW	305.9	WJAR	356.9	CFCN	400	PWX	455	KTW	535.4	KYW
275	KFAU	309.1	KDKA	356.9	CHNC	405.2	KHJ	461.3	WCAE	535.4	WHA
275	KFKU	315.6	KFDM	361.2	KGO	405.2	WJY	468.5	KFI	545.1	KFUO
275	WABL	315.6	WAHG	361.2	WHN	405.2	WOR	468.5	WCAP	545.1	KSD

(FOR PACIFIC TIME)

Call	Met.	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Met.	Call
AT9	435	Silent	3:00-4:00	Silent	Silent	Silent	5:00-7:55	Silent	435	AT9
CFCN	356.9	Silent	4:00-5:00	Silent	Silent	5:15-6:15	5:15-6:15	5:15-6:15	356.9	CFCN
CFCN	434.5	9:00-11:00	Silent	Silent	Silent	5:15-6:15	5:15-6:15	5:15-6:15	434.5	CFCN
CHNC	356.9	Silent	Silent	5:30-6:30	Silent	Silent	Silent	Silent	356.9	CHNC
CKAC	410.7	4:30-9:30	1:30-2:30	Silent	4:30-9:30	Silent	4:30-9:30	Silent	410.7	CKAC
CKY	384.4	Silent	5:00-6:45	Silent	5:30-8:00	Silent	6:00-7:00	5:30-8:00	384.4	CKY
CNRO	434.5	4:30-9:30	Silent	Silent	Silent	4:30-9:30	Silent	Silent	434.5	CNRO
CYB	370	6:30-7:00	Silent	Silent	6:30-7:00	Silent	7:00-9:00	Silent	370	CYB
CYL	480	Silent	Silent	Silent	8:00-9:30	Silent	Silent	8:00-9:30	480	CYL
CYX	330	Silent	Silent	7:00-10:00	Silent	Silent	Silent	6:00-8:00	330	CYX
KOKA	309.1	4:00-5:55	2:30-4:30	4:00-7:10	5:00-8:30	4:15-5:55	4:00-8:00	4:15-5:55	309.1	KOKA
KFAB	240	9:00-10:30	2:00-3:00	5:30-8:00	Silent	5:30-8:00	Silent	5:30-8:00	240	KFAB
KFAE	348.6	Silent	Silent	7:30-8:30	Silent	7:30-8:30	Silent	7:30-8:30	348.6	KFAE
KFAU	275	Silent	Silent	7:00-8:00	Silent	Silent	Silent	7:00-8:00	275	KFAU
KFOM	315.6	Silent	Silent	Silent	6:00-7:00	Silent	Silent	6:00-7:00	315.6	KFOM
KFI	468.5	6:45-11:00	4:00-11:00	6:45-12:00	6:15-12:00	6:45-12:00	6:45-12:00	6:45-12:00	468.5	KFI
KFKU	275	Silent	Silent	4:50-6:45	Silent	Silent	4:50-6:45	Silent	275	KFKU
KFKX	288.3	Silent	Silent	7:30-9:00	Silent	Silent	7:30-9:00	Silent	288.3	KFKX
KFMQ	299.8	Silent	Silent	Silent	7:00-8:00	Silent	5:30-6:30	Silent	299.8	KFMQ
KFMX	336.9	Silent	5:00-6:00	Silent	8:00-9:00	7:00-8:00	Silent	Silent	336.9	KFMX
KFNF	266	4:30-7:00	4:30-6:00	4:30-7:00	Silent	4:30-7:00	4:30-7:00	4:30-7:00	266	KFNF
KFOA	454.3	6:45-11:00	Silent	6:45-10:00	6:45-10:00	6:45-10:00	Silent	6:45-10:00	454.3	KFOA
KFRU	394.5	5:30-10:00	3:00-5:00	5:00-8:30	8:30-10:00	6:00-8:00	8:30-9:30	9:00-11:00	394.5	KFRU
KFUO	545.1	Silent	7:15-8:15	Silent	Silent	7:15-8:15	Silent	Silent	545.1	KFUO
KFWB	252	7:45-1:00	9:00-11:00	7:45-1:00	7:45-1:00	7:45-1:00	7:45-1:00	7:45-1:00	252	KFWB
KGO	361.2	8:00-1:00	3:30-9:00	8:00-1:00	8:00-1:00	Silent	Silent	Silent	361.2	KGO
KGW	491.5	10:00-12:00	6:00-8:00	Silent	8:00-12:00	8:00-12:00	8:00-12:00	8:00-12:00	491.5	KGW
KHJ	405.2	6:00-2:00	6:30-11:00	6:00-11:00	6:30-11:00	6:00-11:00	6:30-11:00	6:00-11:00	405.2	KHJ
KIAF	421	Silent	2:00-3:00	7:00-8:00	Silent	Silent	7:00-8:00	Silent	421	KIAF
KJR	384.4	Silent	7:00-8:00	6:00-10:00	Silent	8:30-10:00	10:30-12:00	8:30-10:00	384.4	KJR
KJS	293.9	Silent	7:15-9:30	Silent	8:00-9:00	Silent	8:00-9:00	Silent	293.9	KJS
KLX	508.2	Silent	Silent	6:00-11:00	Silent	6:00-11:30	Silent	6:00-10:30	508.2	KLX
KNX	336.9	5:45-2:00	5:00-11:00	5:45-12:00	6:30-12:00	5:45-12:00	5:45-12:00	5:45-12:00	336.9	KNX
KOA	322.4	8:00-11:00	3:30-7:30	7:00-8:00	Silent	7:00-11:00	Silent	7:00-8:00	322.4	KOA
KOB	348.6	Silent	Silent	6:30-7:30	Silent	Silent	Silent	6:30-7:30	348.6	KOB
KPO	429.5	6:25-12:00	6:30-10:00	6:30-11:00	6:30-11:00	7:00-11:00	7:00-11:00	8:00-10:00	429.5	KPO
KSO	545.1	6:00-9:30	Silent	5:00-9:00	4:00-9:00	5:00-6:00	Silent	6:30-9:30	545.1	KSO
KSL	261	7:00-9:00	8:00-9:00	7:00-8:00	8:00-9:00	7:00-8:00	8:00-9:00	6:30-9:00	261	KSL
KTHS	374.8	6:30-7:15	6:30-9:30	6:30-9:00	6:30-8:45	6:30-8:45	6:30-8:45	6:30-8:45	374.8	KTHS
KTW	455	Silent	7:00-9:30	Silent	Silent	Silent	Silent	Silent	455	KTW
KYW	535.4	4:00-10:30	1:00-5:00	Silent	4:00-8:30	4:00-10:30	4:00-8:30	4:00-10:30	535.4	KYW
NAA	434.5	Silent	Silent	4:45-5:00	4:15-5:00	4:25-5:40	4:45-5:00	4:45-5:00	434.5	NAA
PWX	400	5:30-8:00	Silent	Silent	Silent	5:30-8:00	Silent	Silent	400	PWX
WABL	275	Silent	Silent	4:00-6:00	Silent	4:00-6:00	Silent	4:00-6:00	275	WABL
WABN	244	Silent	Silent	7:00-10:00	Silent	7:00-10:00	Silent	7:00-10:00	244	WABN
WAHG	315.6	9:00-11:00	Silent	4:00-10:00	Silent	3:30-8:00	Silent	4:00-7:30	315.6	WAHG
WBAP	475.9	5:00-6:00	9:00-10:00	5:30-11:00	5:30-8:45	5:30-8:45	5:30-8:45	5:30-8:45	475.9	WBAP
WBAR	406	Silent	8:00-9:00	7:00-8:00	Silent	6:00-7:00	Silent	5:30-6:30	406	WBAR
WBAV	293.9	Silent	Silent	5:00-7:00	Silent	Silent	Silent	5:00-6:00	293.9	WBAV
WBBG	248	Silent	Silent	5:00-7:00	Silent	5:00-6:00	Silent	4:00-11:00	248	WBBG
WBBM	226	Silent	5:00-6:00	Silent	5:00-6:00	Silent	5:00-6:00	Silent	226	WBBM
WBRR	272.6	4:00-4:45	5:00-6:05	4:00-4:50	Silent	Silent	4:00-4:50	Silent	272.6	WBRR
WBCN	266	6:00-10:00	2:00-9:00	Silent	6:00-12:00	5:00-9:00	6:00-10:00	6:00-10:00	266	WBCN
WBZ	333.3	3:30-5:55	3:00-6:00	3:30-5:55	3:30-5:55	3:30-7:05	3:30-8:45	3:30-8:45	333.3	WBZ
WCAE	461.3	4:00-5:30	4:30-8:00	4:30-8:00	4:30-8:00	4:00-7:30	4:00-7:30	4:30-5:30	461.3	WCAE
WCAL	336.9	10:00-11:00	6:30-8:00	9:00-10:00	Silent	Silent	7:00-8:00	6:30-7:00	336.9	WCAL
WCAP	468.5	Silent	1:00-7:00	4:00-8:30	Silent	3:00-9:00	Silent	4:30-9:00	468.5	WCAP
WCAU	278	Silent	2:00-5:30	Silent	4:00-7:30	4:00-7:15	4:35-7:00	4:30-8:30	278	WCAU
WCOB	344.6	Silent	6:00-7:00	5:00-7:30	Silent	Silent	5:00-7:30	Silent	344.6	WCOB
WCCO	416.4	6:00-9:00	5:45-8:15	4:00-9:00	4:00-7:00	4:00-9:30	4:00-8:00	4:00-8:00	416.4	WCCO
WCX	516.9	Silent	Silent	3:00-6:30	3:00-8:00	3:00-6:30	Silent	3:00	516.9	WCX
WOAF	365.6	4:00-11:00	2:00-3:30	4:00-11:00	4:00-11:00	4:00-11:00	4:00-11:00	4:00-11:00	365.6	WOAF
WOVF	440.9	Silent	1:00-2:45	Silent	4:30-5:30	Silent	Silent	2:00-8:30	440.9	WOVF
WEAF	491.5	4:00-8:00	3:20-6:15	4:30-7:30	4:00-6:30	5:00-8:00	4:00-8:00	4:00-8:00	491.5	WEAF
WEAO	293.9	Silent	Silent	Silent	Silent	5:00-6:00	5:00-6:00	Silent	293.9	WEAO
WEAR	369.4	Silent	6:00-7:00	4:00-5:00	4:00-8:00	3:15-4:45	4:00-8:00	4:00-8:00	369.4	WEAR
WEBB	370.2	4:00-9:00	4:00-6:00	4:00-9:00	4:00-9:00	4:00-9:00	4:00-9:00	4:00-9:00	370.2	WEBB
WEBJ	233	Silent	Silent	Silent	4:00-5:00	3:00-5:00	Silent	4:00-5:00	233	WEBJ
WEBW	268	Silent	2:25-3:30	6:00-9:00	6:30-7:45	Silent	Silent	Silent	268	WEBW
WEEI	475.9	Silent	3:20-6:20	4:00-7:00	4:00-7:00	4:00-7:00	4:00-7:00	4:00-7:00	475.9	WEEI
WEMC	285.5	Silent	6:15-7:15	6:15-7:15	Silent	6:15-7:15	Silent	7:00-8:00	285.5	WEMC
WFAA	475.9	6:30-10:00	4:00-9:00	4:30-7:30	4:30-10:00	Silent	4:30-10:00	4:30-7:30	475.9	WFAA
WFBH	272.6	3:00-8:30	3:30-9:30	7:30-9:15	7:30-9:30	3:30-9:30	3:00-9:15	3:30-9:15	272.6	WFBH
WFI	394.5	4:00-7:00	Silent	Silent	4:00-6:00	Silent	4:00-7:00	Silent	394.5	WFI
WGBS	315.6	4:30-8:00	Silent	Silent	5:00-8:00	Silent	5:00-7:45	Silent	315.6	WGBS
WGES	250	3:15-7:00	Silent	Silent	Silent	3:30-11:00	Silent	Silent	250	WGES
WGN	370.2	3:00-8:00	6:00-7:00	Silent	3:00-8:00	3:00-8:00	3:00-8:00	3:00-8:00	370.2	WGN
WGR	319	Silent	5:15-6:15	4:30-9:00	4:00-7:00	4:00-9:00	4:00-7:00	4:45-9:00	319	WGR
WGST	270	Silent	Silent	7:00-8:00	Silent	Silent	5:00-6:00	Silent	270	WGST
WGY	379.5	6:30-9:00	5:30-8:00	3:30-5:30	4:30-9:30	Silent	4:30-9:30	4:30-8:30	379.5	WGY
WHA	535.4	Silent	Silent	5:45-6:45	Silent	7:00-8:00	Silent	5:45-6:45	535.4	WHA
WHAO	275	Silent	Silent	4:00-7:30	Silent	6:00-8:00	Silent	6:30-8:00	275	WHAO
WHAS	399.8	5:30-7:00	2:00-3:00	Silent	5:30-7:30	5:30-7:00	5:30-7:00	5:30-7:00	399.8	WHAS
WHAZ	379.5	Silent	Silent	6:00-8:00	Silent	Silent	S			

# An Evening at Home with the Listener In

(FOR CENTRAL TIME)

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

Call	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Call	Location	Mot.	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Call	
AT9	Silent	5:00-6:00	Silent	Silent	Silent	7:00-8:55	Silent	AT9	Fort Bragg, N. C.	435	Silent	6:00-7:00	Silent	Silent	Silent	8:00-9:55	Silent	AT9	
CFCA	Silent	6:00-7:00	Silent	Silent	7:15-8:15	7:15-8:15	Silent	CFCA	Toronto, Ont.	356.9	Silent	7:00-8:00	Silent	8:15-9:15	8:15-9:15	8:15-9:15	Silent	CFCA	
CFNC	11:00-1:00	Silent	Silent	Silent	Silent	9:00-10:00	Silent	CFNC	Calgary, Alta.	434.5	12:00-2:00	Silent	Silent	Silent	Silent	10:00-11:00	Silent	CFNC	
CHNC	Silent	Silent	7:30-8:30	Silent	Silent	Silent	Silent	CHNC	Toronto, Ont.	356.9	Silent	Silent	8:30-9:30	Silent	Silent	Silent	Silent	CHNC	
CKAC	6:30-11:30	3:30-4:30	Silent	6:30-11:30	Silent	6:30-11:30	Silent	CKAC	Montreal, Que.	410.7	7:30-12:30	4:30-5:30	Silent	7:30-12:30	Silent	7:30-12:30	Silent	CKAC	
CKY	Silent	7:00-8:45	Silent	7:30-10:00	Silent	8:00-9:00	7:30-10:00	CKY	Winnipeg, Man.	384.4	Silent	8:00-9:45	Silent	8:30-11:00	Silent	9:00-10:00	8:30-11:00	CKY	
CNRO	6:30-11:30	Silent	Silent	Silent	6:30-11:30	Silent	Silent	CNRO	Ottawa, Ont.	434.5	7:30-12:30	Silent	Silent	Silent	7:30-12:30	Silent	Silent	CNRO	
CYB	Silent	Silent	Silent	8:30-9:00	Silent	9:00-11:00	Silent	CYB	Mexico City, Mex.	370	9:30-10:00	Silent	Silent	9:30-10:00	Silent	10:00-12:00	Silent	CYB	
CYL	Silent	Silent	Silent	10:00-11:30	Silent	Silent	10:00-11:30	CYL	Mexico City, Mex.	480	Silent	Silent	Silent	11:00-12:30	Silent	Silent	11:00-12:30	CYL	
CYX	Silent	Silent	9:00-12:00	Silent	Silent	Silent	Silent	CYX	Mexico City, Mex.	330	Silent	Silent	10:00-1:00	Silent	Silent	Silent	9:00-11:00	CYX	
KOKA	6:00-7:55	2:00-6:30	6:00-9:10	7:00-10:30	6:15-7:55	6:00-10:00	6:15-7:55	KOKA	Pittsburgh, Pa.	309.1	7:00-8:55	3:00-7:30	7:00-10:10	8:00-11:30	7:15-8:55	7:00-11:00	7:15-8:55	KOKA	
KFAB	11:00-12:30	4:00-5:00	7:30-10:00	Silent	7:30-10:00	Silent	7:30-9:30	KFAB	Lincoln, Neb.	240	12:00-1:30	5:00-6:30	8:30-11:00	Silent	8:30-11:00	Silent	9:30-10:30	KFAB	
KFAE	Silent	Silent	9:30-10:30	Silent	9:30-10:30	Silent	Silent	KFAE	Pullman, Wash.	348.6	Silent	Silent	10:30-11:30	Silent	10:30-11:30	Silent	10:30-11:30	KFAE	
KFAU	Silent	Silent	9:00-10:00	Silent	Silent	Silent	Silent	KFAU	Boise, Idaho	275	Silent	Silent	10:00-11:00	Silent	Silent	Silent	10:00-11:00	KFAU	
KFDM	Silent	Silent	Silent	8:00-9:00	Silent	Silent	Silent	KFDM	Beaumont, Texas	315.6	Silent	Silent	Silent	9:00-10:00	Silent	Silent	9:00-10:00	KFDM	
KFI	8:45-1:00	6:00-1:00	8:45-2:00	8:45-2:00	8:45-2:00	8:45-1:00	8:45-2:00	KFI	Los Angeles, Calif.	468.5	9:45-2:00	7:00-2:00	9:45-3:00	9:45-3:00	9:45-3:00	9:45-2:00	9:45-3:00	KFI	
KFKU	Silent	Silent	6:50-8:45	Silent	Silent	6:50-8:45	Silent	KFKU	Lawrence, Kan.	275	Silent	Silent	7:50-9:45	Silent	Silent	7:50-9:45	Silent	KFKU	
KFKX	Silent	Silent	8:30-11:00	Silent	Silent	9:30-11:00	Silent	KFKX	Hastings, Neb.	288.3	Silent	Silent	10:30-12:00	Silent	Silent	10:30-12:00	Silent	KFKX	
KFMQ	Silent	Silent	Silent	9:00-10:00	Silent	7:30-8:30	Silent	KFMQ	Fayetteville, Ark.	298.8	Silent	Silent	Silent	10:00-11:00	Silent	8:30-9:30	Silent	KFMQ	
KFMX	Silent	7:00-8:00	Silent	10:00-11:00	9:00-10:00	Silent	Silent	KFMX	Northfield, Minn.	336.9	Silent	8:00-9:00	Silent	11:00-12:00	10:00-11:00	Silent	Silent	KFMX	
KFNF	6:30-9:00	6:30-8:00	6:30-9:00	Silent	6:30-9:00	6:30-9:00	6:30-9:00	KFNF	Shenandoah, Ia.	266	7:30-10:00	7:30-9:00	7:30-10:00	Silent	7:30-10:00	7:30-10:00	7:30-10:00	KFNF	
KFOA	8:45-1:00	Silent	8:45-12:00	8:45-1:00	8:45-12:00	Silent	8:45-1:00	KFOA	Seattle, Wash.	454.3	9:45-2:00	Silent	9:45-1:00	9:45-2:00	9:45-1:00	Silent	9:45-2:00	KFOA	
KFRU	7:30-12:00	5:00-7:00	7:00-10:30	10:30-12:00	8:00-10:30	10:30-11:30	11:00-1:00	KFRU	Bristow, Okla.	394.5	8:30-1:00	6:00-8:00	8:00-11:30	11:30-1:00	9:00-11:30	11:30-12:30	12:00-2:00	KFRU	
KFUO	Silent	9:15-10:15	Silent	Silent	9:15-10:15	Silent	Silent	KFUO	St. Louis, Mo.	545.1	Silent	10:15-11:15	Silent	Silent	10:15-11:15	Silent	Silent	KFUO	
KFWB	9:45-3:00	11:00-1:00	9:45-3:00	8:45-3:00	9:45-3:00	9:45-3:00	9:45-3:00	KFWB	Hollywood, Calif.	252	10:45-4:00	12:00-2:00	10:45-4:00	10:45-4:00	10:45-4:00	10:45-4:00	10:45-4:00	KFWB	
KGO	10:00-3:00	5:30-11:00	10:00-3:00	10:00-3:00	10:00-2:00	10:00-2:00	10:00-2:00	KGO	Oakland, Calif.	361.2	11:00-4:00	6:30-12:00	11:00-4:00	11:00-4:00	11:00-4:00	11:00-4:00	Silent	KGO	
KGW	12:00-2:00	8:00-10:00	Silent	10:00-2:00	10:00-2:00	10:00-2:00	10:00-2:00	KGW	Portland, Ore.	491.5	1:00-3:00	9:00-11:00	Silent	11:00-3:00	11:00-3:00	11:00-3:00	11:00-3:00	KGW	
KHJ	8:00-4:00	8:30-1:00	10:00-12:00	8:00-1:00	8:30-1:00	8:00-1:00	8:00-1:00	KHJ	Los Angeles, Calif.	405.2	9:00-5:00	9:30-2:00	11:00-1:00	9:00-2:00	9:30-2:00	9:00-2:00	9:00-2:00	9:00-2:00	KHJ
KIAF	Silent	4:00-5:00	10:00-10:00	Silent	9:00-10:00	Silent	9:00-10:00	KIAF	Sihtipok, Minn.	421	Silent	3:00-4:00	8:00-9:00	Silent	8:00-9:00	Silent	8:00-9:00	KIAF	
KJRB	Silent	9:00-10:00	8:00-12:00	Silent	10:30-12:00	12:30-2:00	10:30-12:00	KJRB	Seattle, Wash.	384.4	Silent	10:00-11:00	9:00-1:00	Silent	11:30-1:00	1:30-3:00	11:30-1:00	KJRB	
KJS	Silent	9:15-11:30	Silent	10:00-11:00	Silent	10:00-11:00	Silent	KJS	Los Angeles, Calif.	293.9	Silent	10:15-12:30	Silent	11:00-12:00	Silent	11:00-12:00	Silent	KJS	
KLX	Silent	Silent	8:00-1:00	Silent	8:00-1:30	Silent	8:00-1:30	KLX	Oakland, Calif.	508.2	Silent	Silent	9:00-2:00	Silent	9:00-2:00	9:00-1:30	9:00-1:30	KLX	
KNX	7:45-4:00	7:00-1:00	7:45-2:00	8:30-2:00	7:45-2:00	7:45-2:00	7:45-2:00	KNX	Hollywood, Calif.	336.9	8:45-5:00	8:00-2:00	8:45-3:00	9:30-3:00	8:45-3:00	8:45-3:00	8:45-5:00	KNX	
KOA	10:00-1:00	5:30-9:30	9:00-10:00	Silent	9:00-1:00	Silent	Silent	KOA	Oenver, Colo.	322.4	11:00-2:00	6:30-10:30	10:00-11:00	Silent	10:00-2:00	Silent	10:00-11:00	KOA	
KOB	Silent	Silent	8:30-8:30	Silent	Silent	Silent	Silent	KOB	State College, N. Cal.	348.6	Silent	Silent	9:30-10:30	Silent	Silent	Silent	9:30-10:30	KOB	
KPO	8:25-2:00	8:30-12:00	8:30-1:00	8:30-1:00	9:00-1:00	9:00-1:00	9:00-1:00	KPO	San Francisco, Calif.	429.5	9:25-3:00	9:30-1:00	9:30-2:00	9:30-2:00	10:00-2:00	10:00-2:00	11:00-1:00	KPO	
KSO	8:00-11:30	Silent	7:00-11:00	6:00-11:00	7:00-8:00	Silent	Silent	KSO	St. Louis, Mo.	545.1	9:00-12:30	Silent	9:00-12:00	7:00-12:00	8:00-9:00	Silent	9:30-12:30	KSO	
KSL	9:00-11:00	10:00-11:00	9:00-10:00	10:00-11:00	9:00-10:00	9:00-10:00	10:00-11:00	KSL	Salt Lake City, Utah	261	10:00-12:00	11:00-12:00	10:00-11:00	11:00-12:00	10:00-11:00	10:00-11:00	11:00-12:00	KSL	
KTHS	8:30-9:45	8:30-11:30	9:30-11:00	8:30-10:45	8:30-10:45	8:30-10:45	8:30-10:45	KTHS	Hot Springs, Ark.	374.8	9:30-10:45	9:30-12:30	9:30-12:00	9:30-11:45	9:30-11:45	9:30-11:45	9:30-11:45	KTHS	
KTW	Silent	9:00-11:30	Silent	Silent	Silent	Silent	Silent	KTW	Seattle, Wash.	455	Silent	10:00-12:30	Silent	Silent	Silent	Silent	Silent	KTW	
KYW	6:00-12:30	3:00-7:00	Silent	6:00-10:30	6:00-12:30	6:00-10:30	6:00-12:30	KYW	Chicago, Ill.	535.4	7:00-1:30	4:00-8:00	Silent	7:00-1:30	7:00-1:30	7:00-1:30	7:00-1:30	KYW	
NAA	Silent	Silent	6:45-7:00	6:45-7:00	6:25-7:40	6:45-7:00	6:45-7:00	NAA	Radio, Va.	434.5	Silent	Silent	7:45-8:00	7:45-8:00	7:25-8:40	7:45-8:00	7:45-8:00	NAA	
PWX	7:30-10:00	Silent	Silent	Silent	7:30-10:00	Silent	Silent	PWX	Havana, Cuba	400	8:30-11:00	Silent	Silent	Silent	8:30-11:00	Silent	Silent	PWX	
WABL	Silent	Silent	6:00-8:00	Silent	6:00-8:00	Silent	6:00-8:00	WABL	Storrs, Conn.	275	6:00-8:00	Silent	7:00-9:00	Silent	7:00-9:00	Silent	7:00-9:00	WABL	
WABN	Silent	Silent	9:00-12:00	Silent	Silent	Silent	Silent	WABN	La Crosse, Wis.	244	Silent	Silent	10:00-1:00	Silent	Silent	10:00-1:00	Silent	WABN	
WAHG	11:00-1:00	Silent	6:00-12:00	Silent	5:30-10:00	6:00-9:30	6:00-9:30	WAHG	Richmond, N. Y.	315.6	12:00-2:00	Silent	7:00-1:00	Silent	6:30-11:00	Silent	7:00-10:30	WAHG	
WBAP	7:00-8:00	11:00-12:00	7:30-1:00	7:30-10:45	7:30-10:45	7:30-10:45	7:30-10:45	WBAP	Fort Worth, Tex.	475.9	8:00-9:00	12:00-1:00	8:30-2:00	8:30-11:45	8:30-11:45	8:30-11:45	8:30-11:45	8:30-11:45	WBAP
WBAR	Silent	10:00-11:00	9:00-10:00	Silent	8:00-9:00	7:30-8:30	Silent	WBAR	Sisith, W. Va.	406	Silent	11:00-12:00	10:00-11:00	Silent	9:00-10:00	Silent	Silent	WBAR	
WBAV	Silent	Silent	7:00-9:00	Silent	Silent	Silent	7:00-8:00	WBAV	Columbus, O.	293.9	Silent	Silent	8:00-10:00	Silent	Silent	Silent	8:00-9:00	WBAV	
WBBG	Silent	Silent	7:00-9:00	Silent	7:00-8:00	Silent	6:00-1:00	WBBG	Mattapoisett, Mass.	248	Silent	Silent	8:00-10:00	Silent	8:00-9:00	Silent	7:00-2:00	WBBG	
WBBM	Silent	7:00-8:00	Silent	7:00-8:00	Silent	7:00-8:00	Silent	WBBM	Chicago, Ill.	226	Silent	8:00-9:00	Silent	8:00-9:00	Silent	8:00-9:00	Silent	Silent	WBBM
WBBR	8:00-8:45	7:00-8:05	8:00-8:50	Silent	Silent	6:00-6:50	Silent	WBBR	Staten Island, N. Y.	272.6	7:00-7:45	5:00-9:05	7:00-7:50	Silent	7:00-7:50	7:00-7:50	Silent	Silent	WBBR
WBCN	8:00-12:00	4:00-11:00	Silent	8:00-2:00	7:00-11:00	8:00-1:00	8:00-12:00	WBCN	Chicago, Ill.	266	9:00-1:00	5:00-12:00	Silent	9:00-3:00	8:00-12:00	9:00-2:00	9:00-1:00	9:00-1:00	WBCN
WBZ	5:30-7:55	5:00-8:00	5:30-7:55	5:30-7:55	5:30-9:05	5:30-10:45	Silent	WBZ	Springfield, Mass.	333.3	6:30-8:55	6:00-9:00	6:30-8:55	6:30-8:55	6:30-10:05	6:30-11:45	Silent	Silent	WBZ
WCAE	6:00-7:30	2:00-5:30	6:30-10:00	6:30-9:00	6:00-9:														



# Radio Digest

PROGRAMS  
Illustrated

Published by the Radio Digest Publishing Company, Inc.  
510 North Dearborn Street  
Chicago, Illinois  
Telephones: State 4372, 4373, 4374, 4375

E. C. RAYNER, Publisher

Eastern Office, Park-Lexington Building, 247 Park Ave.,  
New York. Telephones: Ashland 8144, 8145, 8146

Member of the Audit Bureau of Circulations

241  
PUBLISHED WEEKLY

#### SUBSCRIPTION RATES

Yearly in U. S. and Possessions and Canada, \$5.00  
Foreign postage, \$1.00 additional Single copies, 10 cents.

Vol. XIII Saturday, May 2, 1925 No. 4

## Help Us to Untangle the Air

THREE weeks ago we ventured boldly forth and asserted a few things about the congested air. We said that we did not want more powerful stations to be licensed. They were not welcome. They still are unwelcome—and will remain so until some intelligent plan, backed by authority, is devised to clarify the air of its present chaos.

There is not room for all the stations on the wave bands, or ether roadways, available. This being the case, there is but one conclusion to draw. Prevent more than a certain number of stations from being on the air at a given time. Make those that are on the air live up to the best of standards. Cancel licenses of stations that fail to keep within close limits of their assigned wave length. Cancel licenses of stations that prove themselves undesirable in the ears of the listeners in.

Let us have a Radio referendum. Radio Digest has started a campaign with that end in view and will see it to a finish—a rather successful finish it will be, too, if the letters from listeners are a true indication of public opinion. Express your opinion on a Radio Digest blank, page six, and help the cause along.

Public opinion makes the laws. It made the Constitution of the United States of America, and it has made all the amendments thereto. If public opinion commands, legislators act. Let us show congress what we want, and speedily. We must have better Radio laws, and those laws must be backed by a sufficient and ample appropriation of funds to see that they are properly enforced.

The department of commerce is doing all that it can. The Radio supervisors are doing all that they can. The law won't let them do more. The funds congress has appropriated for the use of the department of commerce and its Radio supervisors are insufficient even to enforce the existing, weak and miserable, old decrepit laws which were passed in 1912, long before broadcasting on its present scale had even been dreamed of.

Help Radio Digest to make Radio worth the price of your set to you.

## Radio Troubles

AN automobile will not run if the tires are flat or the gasoline tank is empty. The same truth applies to the Radio set. The public has many erroneous conceptions relative to its intricacies. Radio troubles have been greatly exaggerated. It is time that the facts concerning the proper care of sets should be made better known.

Of all the fallacies that ever existed about this great invention, the greatest is that expert technical knowledge is required for the care of Radio receivers.

In the opinion of experienced service men, it is not too much to say that 95 per cent of most Radio troubles can be traced to conditions that have nothing to do with the Radio receiver itself. It is well to remember that the most important adjunct in locating trouble is common sense.

## Thrill of Radio Lasts

RADIO broadcasting is in its fourth year, and it still contains a thrill for everyone, including those who have listened in for three years. The thrill is in tuning the distant stations on a loop and loud speaker so that a whole roomful of people can understand.

During the last year the average number of tubes per set increased from about one and a half to three, showing that amplification is what is wanted so that greater distance, as well as clearness, can be obtained.

How many people do you know who say, "I want a Radio, but I only want to listen to local stations," but when you meet them again tell you how many stations they get and how far away? Distance reception is still the thrill in Radio.

But there is also a universal cry for amplification without distortion. People want to hear the distant stations, yes, but they want to hear them clearly. The day of putting one's head in the loud speaker horn and hearing stations sign off three thousand miles away has passed.

## RADIO INDI-GEST

### Opening of Station BLAH Postponed

WALLA WALLA (via Radio, of course).—The opening of the Walla Walla super-bum station, BLAH, has been postponed owing to the Radio Digest complaining about the congested condition of the air. The natives are on the verge of an uprising, and threaten to behead the managing editor of the Digest if he continues his persecution of good stations. (This is a good one.)



To show our contempt for the managing editor of the Digest, you notice that we are setting his title in small letters. That's what we think of him. However, far be it from us to kick about a small thing like that. We are going right ahead with the finishing touches on the station—also natives, while awaiting word from the department of commerce. That's us! The station will POSITIVELY open next week, so be on the air listening for our programs. We will broadcast on a wave length of 365 2/3 meters. The slogan of the station is "Trade in Walla Walla and You're Stuck." This slogan was picked from thousands submitted by the 300 natives on the island. It looked as if someone was stuffing the ballot box, but—we got the slogan.

Someone wants to know where the island got its name. Well, years ago, Chief Kokomo landed on the island, which was then called Walla. He liked it so well that he decided to name it twice—hence Walla Walla.

### My Radio

Like some soul that's lost—  
Like a demon tossed  
About in some boiling sea;  
Like a ghost astray  
That has lost its way,  
My Radio sounds to me.

It shrills and moans,  
Then grunts and groans,  
Like a beast in awful pain;  
Whistles and yowls,  
Then barks and howls,  
As I twist and twist in vain.

But, ah! I think I have found the cause,  
It is simply some of my mother-in-laws;  
The last one, perhaps—or maybe the first—  
Both were bad, but she was the worst.  
And now again she has found a way  
And is giving me hell again today.  
At once, I am sure, you-all can bet,  
I'm going to bust this Radio set!

GEO. A. WRIGHT.

### Brainy Eckersley!

Dear Indi: One of those very "clever" people went to Chief Engineer Eckersley of the British Broadcasting company recently and put an ingenious question. He said that when a Radio wave is transmitted, as it travels it induces minute currents of air in certain objects that it encounters, and so loses some of its power. This is known as radiation loss. When, however, that wave encounters an aerial which is tuned to receive it, a comparatively large amount of energy is taken from the ether. Therefore it is reasonable to suppose that eventually there will be so many aeriels all receiving from 2LO that there will not be enough power to go round. What will happen?

"Simple," replied Captain Eckersley, "2LO will have to increase its power, that's all!"

The fan need have no fear of not getting the benefit of his license money!

CAM. M. BERT.

### Night

To be read over the Radio—requesting listeners to turn out all the lights and sit in the darkness—"The Mystery of Night," Denni, musical background.

Thrilled am I to thus speak out into the night,  
O Infinite silence . . . mysterious night!  
O'er ethereal paths of heavenly paradise  
Vibrating in a lovely unknown light;  
The dim light cast by nocturnal skies  
O'er a dreamy earth amidst the silence deep;  
Messages on the wings of thought flying,  
Piercing the darkness and the shades of sleep.

I am living over a century in this hour  
While slowly the wheels of silence turn,  
Where currents of life vibrate in the void;  
Thoughts terrestrial hold me, I turn  
And find myself in cosmic consciousness;  
Beyond the mortal edge of unknown lands,  
O Infinite silence . . . mysterious night!  
God watches over all, He understands.

RHEA SHELDON.

### Eliminate Schools; Use Radio

Dear Indi: Truly a Radio set can teach us to spell; witness this:

Little Mary, a very good friend of ours, tuned in on good ole WFAA, to hear only the market and stock reports. "Oh, Daddy," she exclaimed a few moments later, "I've learned how to spell 'Dallas.'"

"How, dear?" inquired doting papa.  
"F-O-B—Dallas," was little Mary's triumphant reply.

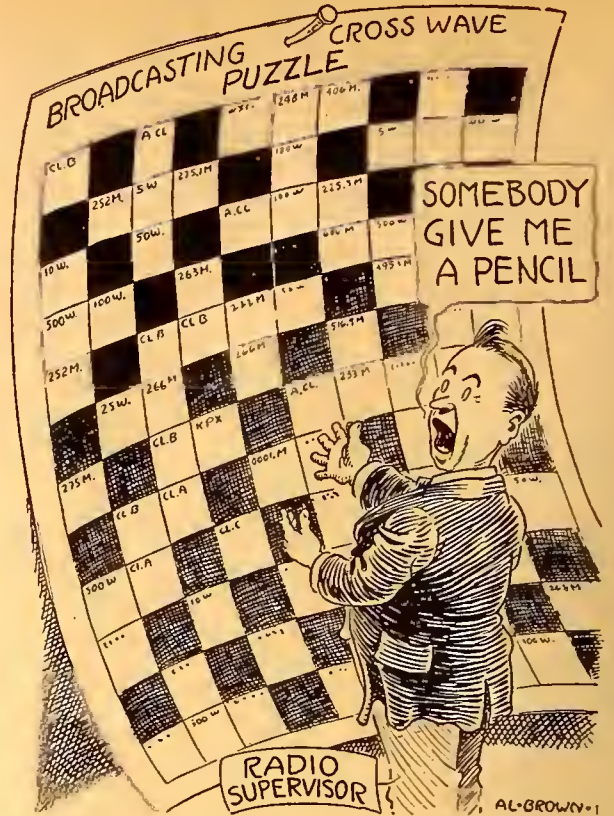
MAMA HAYMES.

### Oh! My Yes!

Dear Indi: Can you excuse the announcer at WOAW for forgetting his call letters (at least he kept them to himself for four numbers) when he had the "Harmonic Girls" to look at?

INS. U. LATION.

## The Call of the Wild



## Condensed

By DIELECTRIC

When any station puts out a feature so good as that recently presented through WIP, in Philadelphia, there is sure to be a host of pleased listeners. The Junger Maennerchor of that city has in its voices which have been thoroughly trained and which complement each other in a delightful manner. This choral carefully chose the songs rendered from a classical repertoire with excellent results.

Regardless of who have, or failed to, receive prizes in the Brunswick hour of music concerts there has been presented in this series music to carry on its appeal to the majority of Radio auditors. Probably as pleasing in voice and diction as any of the artists on these programs have been Miss Rethberg and Mr. Thomas. Aside from the intended increased demand for records, there has developed a musical education not at all undesirable and calculated to be lasting.

When the dials are all set for bringing in Station WGN, Chicago, one is ready for a pleasing program—usually getting it. From a list of instrumental and vocal numbers in one evening's entertainment I marked as outstanding the singing of James W. Wolf, whose ability to give expression to musical feeling is on a par with his pleasing voice.

It may not be fair to other stations to mention at such frequent intervals what transpires at the Crosley station, WLW, but when the object of DIELECTRIC is to direct listeners to worthy broadcasting stations, as well as critically review any station, there may be excuse for alluding to the notable ensemble in their orchestra concerts.

Once in a while the "Pioneer broadcasting station" arranges features having very little general attraction. More often it is found appealing to most everybody with music, reports, addresses and sermons carrying to Europe as well as America. Glee clubs are figuring more prominently in Radio concerts of late and KDKA, of Pittsburgh, let us listen to one recently when the balance of the program was colorless. We do wish, however, that the announcer would eliminate the extremely long waits between numbers.

Coupled with a good organ is a competent organist as one of the features from Gold Medal WCCO. Mr. Marshall knows his instrument thoroughly and is able to secure impressive effects through this mastery of the manuals and innate cultural motive. Let's hear more from this Minneapolis-St. Paul station.

KFI, the high-powered Los Angeles broadcaster, agreeably surprised us on Easter Sunday evening by announcing that they were celebrating the third birthday of the station by putting on a program lasting from 6 a. m., until midnight, a mere matter of 18 hours on the air without a shutdown. The remarkable part of such a performance is not the fact that our transmitters and tubes can stand up as they have done for twenty-four hours and more but that a station can get enough talent booked for the one day to keep the station satisfactorily on the air. The part we heard from KFI, however, was satisfactory but we doubt if many stations less fortunately located could keep a high standard throughout an eighteen-hour period.

When it is considered that the Detroit News orchestra is not a professional organization, devoting its energies to nothing else, it is easily deserving of commendation and no one will be disappointed who stops to listen. You may find other features of equal merit.

# Low Loss Tuned Radio Frequency Receiver

## Part II—Assembly of Panel and Sub Base

By George Walters

IN THE first article of this series which appeared in Radio Digest last week the writer analyzed the receiver under discussion for its good and bad points and went into the construction of the low loss coils used as radio frequency transformers. Presuming that the reader has all of the parts listed last week and has wound the coils as described, we are ready to place the various parts on the front panel and sub base. While many other arrangements of parts are possible, the reader is advised to follow the placing used by the writer unless one is very familiar with receiver design and the sometimes surprising habits of currents oscillating at radio frequencies. If symmetry is not desired, and the reader happens to have a 30-inch front panel with a sub base that is only 7 inches deep, the audio frequency part of this receiver can be placed to the right of the radio frequency circuits as is the usual custom with neurodyne and tuned radio frequency sets.

The drilling layout for this set is shown in figure 7 and, as is the usual practice

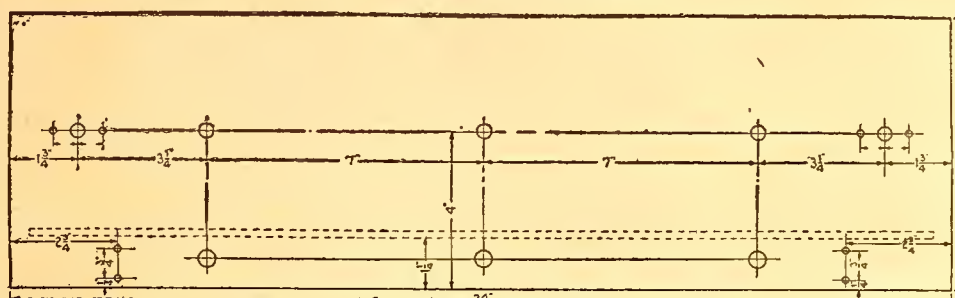


Figure 7

base. The rear edge of the sub base may be supported at the correct height by means of two pieces of threaded brass rod or two long machine screws as shown in figure 2 printed last week. By using two pieces of threaded brass rod and 4 nuts the height of the rear edge is adjustable and can be varied until it is the same as the front edge. From the analysis of the assembly which was part of last week's article the reader should have little difficulty identifying the various holes shown in figure 7. Dimensions have been given for the bracket holes but these need not be followed exactly if the reader already has strong substantial brackets the holes in which would not coincide with the holes provided for the brackets in figure 7.

The layout for the sub base is shown in figure 10, and here again dimensions are given only for the center points of the various pieces of apparatus. In this receiver there is no open space left between the front edge of the sub base and the front panel as the rheostats are mounted sufficiently above the sub base that such an arrangement is not necessary and the jacks and filament switch go below. The aerial and ground binding posts are best placed at the rear left hand corner of the sub base so that the two leads which go to them may be brought through one or two holes in the rear of the cabinet. The reader may vary the arrangement of the five binding posts at the rear right hand corner if this arrangement does not suit his ideas in this regard, but this arrangement has

been found convenient and very satisfactory, especially when a five-wire cable connects to the A and B batteries.

It will be noted that the audio transformers are at right angles to each other and it occurs to the writer that some explanation of the lettering P1, P2, S1 and S2 may be desirable. On some transformers these four terminals are marked P, B, G and F. The terminal in the drawing marked as S2 corresponds to G on

long, 1/8 inch wide and not less than 1/8 inch thick is bent as shown in figure 8. Two holes should be drilled on one leg of the right angle for mounting to the sub base while another hole is drilled close to the outer end of the other leg for attaching to the strip of bakelite or hard rubber which has been slipped through one of the corners of our star coils. A round head machine screw should be used at this point and tightened almost to maximum with just enough play left that the angle of the coil in relation to the sub base can be varied.

In mounting these coils they should be slipped over the bakelite or hard rubber strip with the 72-turn secondary downward and the 8-turn primary toward the top. This will permit of very short leads from the secondary winding to the variable condensers, which is desirable. A point of our coil should be chosen for the insertion of the mounting strip such that the point at which our secondary ends and our primary begins, comes to the left and, of course, near the top. This is shown clearly in figure 2.

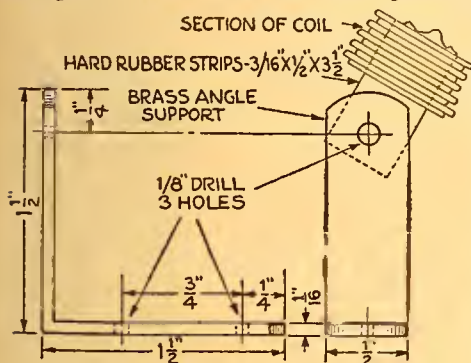


Figure 8

in Radio Digest, only center holes are shown with dimensions, as various makes of apparatus require different placing of the holes for mounting. It will be noted when looking at this diagram that the sub-panel is mounted, as shown by the dotted line, 1 1/4 inches from the lower edge of the front panel. This arrangement permits of a variable grid leak below the sub

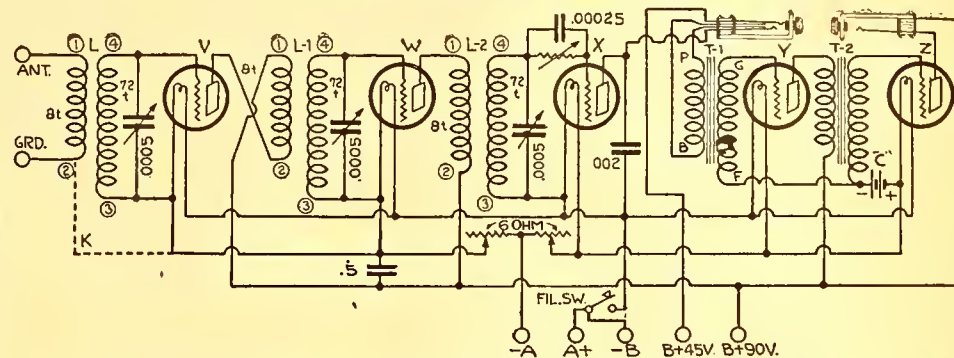


Figure 9

other transformers, while S1, of course, would be F on other makes. P1 corresponds to the P terminal on other makes and P2 is the B+ binding post.

The mounting of the low loss radio frequency transformers will not be clear until consideration is given to figure 8. A piece of brass strip measuring 3 inches

It will be found much easier in this case to wire this set after the panel and sub base have been fastened together by means of the brackets. The wiring will be started in this article that those readers who are thoroughly familiar with set construction may proceed at once,

(Continued on page 20)



## Enjoy Comfort

while "listening in" with this remarkable long distance head set

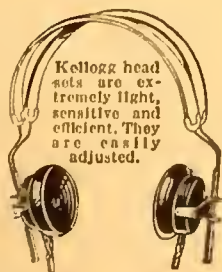
Here is a sensitive lightweight phone especially adaptable for portable radio receivers

WHAT is more pleasant than to be able to enjoy radio concerts for hours and not even realize that you are using a head set?

Kellogg head sets place you in the entertainers realm and keep you there as long as you desire without strain or the least discomfort.

We have made high-grade telephone equipment for 28 years—the result of these years of experience is built into this head phone.

Our Kellogg receiver is unusually sensitive, requiring little or no pressure against the ears, with maximum outside sound exclusion. It is the lightest receiver made.



Kellogg head sets are extremely light, sensitive and efficient. They are easily adjusted.

It is easily adjusted to fit the ears comfortably and once adjusted will stay in place. The adjustment permits an up and down as well as a side-way movement.

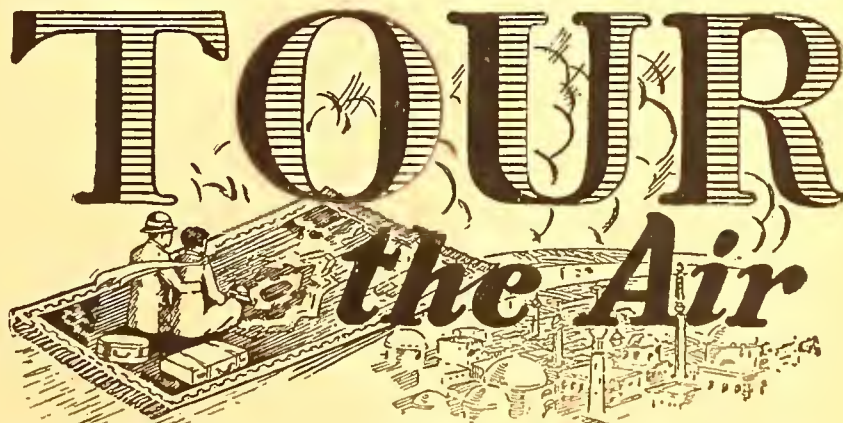
For one taking a portable radio on his vacation, this is the ideal headset, due to its light weight and extreme sensitiveness.

The shell of the receiver is of Kellogg Bakelite, unbreakable in ordinary service and will not discolor, warp or crack. The magnet is of special tested steel which is hardened by an exclusive process. It has concealed binding posts, which does away with tampering.

Today get this Kellogg DX head phone for your portable radio set.

For sale at all radio dealers

KELLOGG SWITCHBOARD & SUPPLY CO. CHICAGO, ILLINOIS

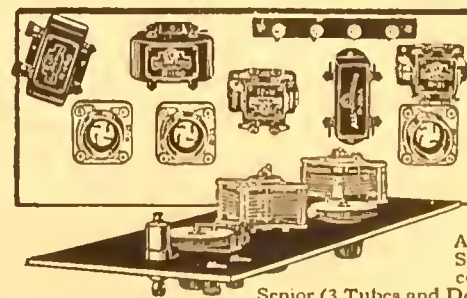


Farther and faster than the famous Carpet of Bagdad you can travel with your ALL-AMAX SENIOR. ALL-AMAX Sets are mounted at the factory but not wired, saving you half the price. Wire your ALL-AMAX in one evening and take your first tour the same night.



All - Amax Senior brings in the far distant stations on the loud speaker.

All - Amax Junior brings in the locals on the loud speaker or tunes them out and gets real distance.



ALL-AMAX Sets as they come to you: Senior (3 Tubes and Detector) \$42 Junior (1 Tube and Detector) \$22

A new edition of the Radio Key Book, just off the press, illustrates an eight-tube set which is the sensation of the year. It also shows many other approved hook-ups and contains practical information of value to every radio listener and experimenter. Send 10 cents for it now, coin or stamps.

ALL-AMERICAN RADIO CORPORATION

E. N. Rauland, President

2640 Coyne Street

Chicago

# ALL-AMERICAN

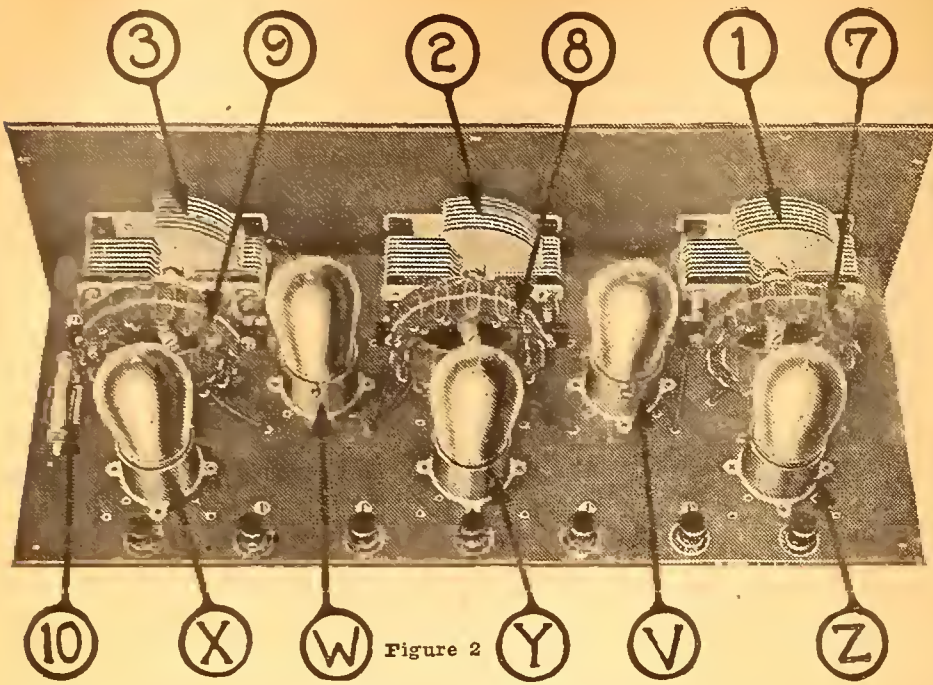


Figure 2

### HOW TO OPERATE SET

(Continued from page 7)

on the scale the readings are 34, 36 and 33, the settings should read about the same in relation to each other on any part of the scale. After some practice in tuning this set you will find that you can tell pretty nearly where a certain station should come in on the dials and, if you are looking for a station whose wave length you know will come in at about 55 on the dials, naturally you should set the dials at 54, 56 and 53. A little maneuvering around these points should bring in the station desired if it is within range and on the air.

#### Trouble Shooting

If the set fails to function, the following procedure may be followed in an attempt to find the difficulty. First, examine all connections at the batteries and at the set, also the connections of the aerial and ground to the set. The wires, where they are attached to binding posts, should be bright and shining, and binding post caps should be screwed down tightly on the wires. Next test the storage A battery with an instrument known as a hydrometer. This is used by inserting the small end into one of the cells and, by squeezing and then releasing the rubber

ball at the top, drawing some of the liquid up into the instrument itself. A small glass tube within the instrument will float and numbers on this float will indicate the condition of the battery. Fully charged, the battery liquid will give a reading of 1250 to 1300 and this reading will decrease as the charge in the battery grows less until down at 1150 the battery is so discharged that it should be connected to a charger for a fresh supply of energy.

Presuming that the battery reads 1200 or better, the next step is to test the B batteries with a voltmeter. B batteries come in two sizes, the smaller of which should produce 22½ volts when new, and the larger, 45 volts. If the batteries have become reduced in efficiency to the point where a smaller unit shows less than 17 volts they should be discarded and new ones supplied. The larger batteries are useful until the voltmeter reads below 34. If none of these tests have brought the difficulty to light, the batteries should be disconnected from the receiver, the tubes removed from the sockets and the springs in the bottom of the sockets pulled up to insure contact with the prongs at the bottom of each tube. This can be done either with a button hook, a screw driver or any other thin but

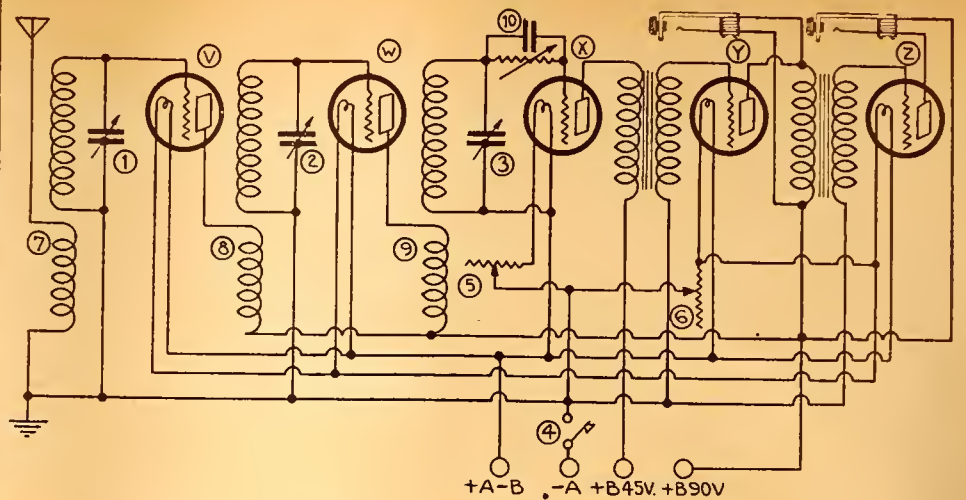


Figure 3

strong instrument that will enable you to bend up these springs slightly.

It will frequently be found that better results will be secured by switching the tubes around in the various sockets, since some tubes work better as tubes V or W than they do as tubes X, Y and Z. Supposedly, the tube X works best as a detector with 45 volts of B battery pressure, but frequently it will be found that none of the 5 tubes function very well with this voltage. It is a good idea therefore to try other voltages such as 55, 67, 85 and even 90 at these terminals.

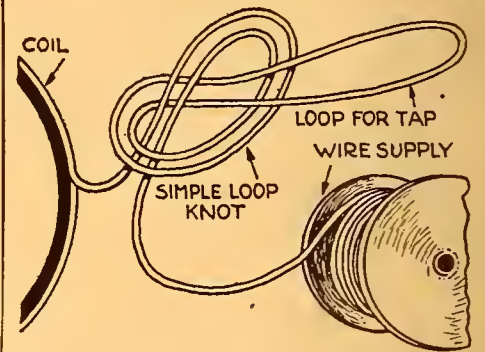
(This is the fourth of our new and improved series of Operating Articles, the Zenith, Federal and Crosley receivers having been described before. The next set to be taken up is the Marvodyne.—Editor's note.)

#### Grid Fixed Condensers

The fixed condenser in the grid circuit of a resistance coupled audio-amplifier is an important piece of apparatus, as it allows the radio frequency current on the plate of the previous tube to reach the grid of the next, but prevents the D. C. plate battery voltage from reaching grid.

#### Making Loops for Taps

One of the difficulties of winding your own coils is to make a good looking and efficient tap loop. Many of the schemes look good on paper but seldom work out



good in practice. The illustration shows a way that can be used on wire of small diameter, but it would not be efficient on large diameters.—Richard Anderson, Salt Lake City, Utah.

*“Last night we heard the sweetest voice!”*

**F**EW boast of having heard a powerful voice. Radio has grown up. It is now something to listen to, not to marvel at. We are now in the cycle of TONE!

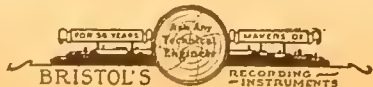
The other day a man said he was just realizing that he had a hundred dollars worth of set and a dollar's worth of horn! His next move is to balance up his set with a good speaker.

The BRISTOL has all the volume you will ever want, but its fine point is TONE. It is good to listen to. The notes come in in tune. You receive a wealth of music from which the cream of tone has not been skimmed.

For \$20, \$25 or \$30 you can get a Bristol Speaker, and there are others for less. Ask your dealer to send one out to the house. And let us send you folder No. AY-3022; it tells why the Bristol is the horn of tone.

**BRISTOL** AUDIOPHONE Loud Speaker

THE BRISTOL COMPANY, WATERBURY, CONN.



**pep up your set with good tubes**

**TUBES** make all the difference in the world. You'll agree with that statement the moment you switch to MAGNATRONS, the moment you notice how clearly and powerfully these tubes bring the concerts to you.

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.

# MAGNATRONS

## Good Radio All Summer with the Kane Antennae

**THE KANE ANTENNAE ELIMINATES ALL POWER NOISES AND CUTS STATIC AT LEAST IN TWO.**

Mr. F. E. Pugh of Sacramento, Calif., says the Kane Antennae does more than we claim for it. Here is his letter.

Dear Sirs:

The purpose of this letter is to praise you for your idea in a good aerial. I have tried all the aerials that have come out in the last ten years, but have found yours the best, and it has done all of your six reasons that you claim for it, and more, the way I figure.

I have a regenerative set, with detector and two of audio, or can put on three stages of R. F. I think I made a record for my set last night using detector and one stage audio by bringing in KDKA. I have no trouble bringing them in with R. F., but one tube and one stage audio is hard to beat. I can also bring in other stations with detector only, that I have never been able to get before.

This long distance with detector and one audio I do not consider a freak stunt, but will bet I can do it any time.

Yours for Good Aerials,  
(Signed) F. E. Pugh, R. F. D. No. 2, Box 1391, Sacramento, Calif.

March 28, 1925.

I have a regenerative set, with detector and two of audio, or can put on three stages of R. F. I think I made a record for my set last night using detector and one stage audio by bringing in KDKA. I have no trouble bringing them in with R. F., but one tube and one stage audio is hard to beat. I can also bring in other stations with detector only, that I have never been able to get before.

This long distance with detector and one audio I do not consider a freak stunt, but will bet I can do it any time.

**Why Continue to Suffer from Noisy Reception?**

Here are the six reasons why every radio receiving set should be hooked on to a Kane Antennae.

1. The strength of signals is increased because the Kane Antennae filters out all extraneous noises.
2. Weak signals can be heard which would never be received on any single-wire aerial.
3. All power noises are eliminated, making broadcast reception a pleasure and not a pain.
4. Static and re-radiating squeals are cut in two.
5. The worst possible locality is changed into the finest kind of locality for broadcast reception.
6. Last, but not least, any radio receiving set, no matter what the make, becomes a better receiving set when hooked on to a Kane Antennae.

**SEE FOR YOURSELF JUST WHAT THE KANE ANTENNAE IS.**

We will sell you the working drawing with instructions for erecting this wonderful Antennae for a dollar bill. If after looking over this drawing you decide you would rather have a factory built Antennae than build one yourself, we will take back the drawing and allow you full purchase price on an order for an Antennae.

The Special Kane Antennae for Radiola Super-Het's.....\$ 6.50  
The Regular Kane Antennae for all other sets, using a ground connection..... 13.00  
Working Drawing with instructions for erecting..... 1.00  
(Stamps Not Accepted)

Postpaid to any part of the United States or sent C. O. D. when 25% of price accompanies order.

**THE KANE ANTENNAE COMPANY, Aberdeen, Wash.**

# A. B. C. Course in Radio Fundamentals

## Chapter VI—The Alternating Current Circuit—Continued

By David Penn Moreton

THE two coils shown in figure 31, are said to have a mutual inductance with respect to each other because there is an electrical pressure induced in one of the coils when there is a change of current in the other. The magnetic field produced by the current in one coil passes through the turns of the other coil and when this magnetic field varies in strength due to a change in the value of the current, a part of the lines composing the field will cut the turns of the second coil and induce in it an electrical pressure. The mutual inductance, in henries, between two coils is given by the following expression:

$$M = \frac{4 \times \pi \times N_1 \times N_2 \times \mu \times A}{10^9 \times l}$$

in which  $N_1$  is the number of turns in one coil;  $N_2$  the number of turns in the other coil;  $\mu$  the permeability of the material composing the magnetic circuit;  $A$

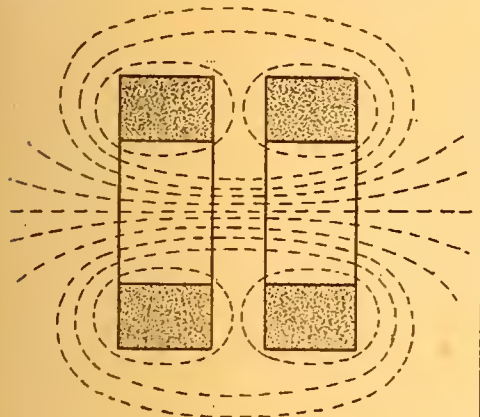


Figure 31

the cross-section of the magnetic circuit in the square centimeters,  $\pi$  is equal to 3.1416 and  $l$  the length of the coils. This expression is not exact and the reader is referred to bulletin number 74 of the U. S. bureau of standards, for expressions giv-

ing the mutual inductance between coils where greater accuracy is desired.

### Coupling Between Coils

In the above expression for the mutual

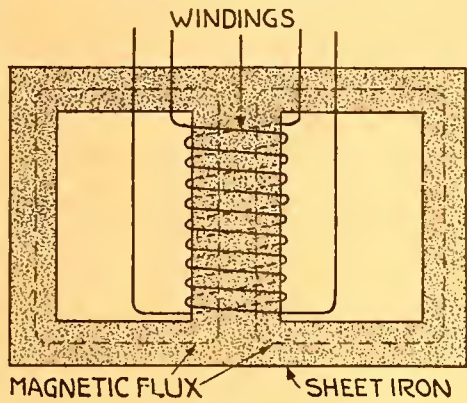


Figure 32

inductance between two coils, all of the magnetic flux produced by the current in coil one is supposed to pass through coil two and likewise all of the magnetic flux produced by the current in coil two is supposed to pass through coil one. In a case of this kind there is said to be no magnetic leakage between the coils and the magnetic coupling of the coils is perfect. A perfect coupling of coils is practically impossible and as a result the mutual inductance between them decreases in value as the degree of coupling decreases in value.

The interference of one coil or part of an electrical circuit with some other coil or part of a circuit may be due to a mutual inductive relation between the two parts of the circuits. This interference may be reduced in value by reducing the mutual inductance between the various parts of the circuit. In all audio frequency transformers the primary and secondary winding are usually wound on top of each other and assembled on an iron core as shown diagrammatically in figure 32. In a case of this kind practically all of the magnetic flux produced by

the current in the primary winding passes through the turns of the secondary winding and the magnetic coupling is practically one hundred per cent. If these

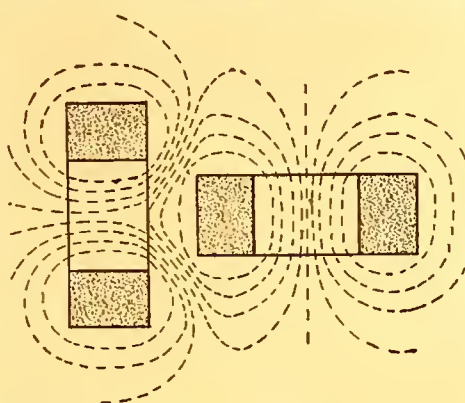


Figure 33

same coils had an air core instead of an iron core the coupling would be very much reduced. Two coils located with respect to each other as shown in figure 33 have practically zero coupling and hence practically zero mutual inductance. If the coils be placed parallel to each other as shown in figure 31, the coupling will be increased and hence there will be an increase in the mutual inductance between them.

Two conductors which run parallel to each other have a certain amount of mutual inductance and a varying current in one of them will produce an electrical pressure in the other which will produce a current if the conductor forms part of a closed circuit. The value of this mutual inductance increases as the conductors are brought nearer together and the greater the distance they run parallel with each other. When the conductors are placed at right angles to each other the mutual inductance between them is reduced to a minimum. The magnetic field surrounding a conductor carrying a current is shown in figure 34. This magnetic field, as it expands or contracts due to a

variation in the value of the current in the first conductor, cuts the second conductor and produces an electrical pressure in it.

### Mutual Inductance Between Coils

The mutual inductance between certain coils and other parts of an electrical circuit is quite frequently reduced by placing a magnetic shield about the coil or between the various parts of the circuit. For example, audio frequency transformers are commonly enclosed in an iron containing case, which materially reduces the strength of the magnetic field in the region surrounding the transformer. Remember that there is no insulator for magnetism and the magnetic shield merely reduces the mutual inductive effect that the transformer coils have on the surrounding circuits but does not reduce this effect to zero value.

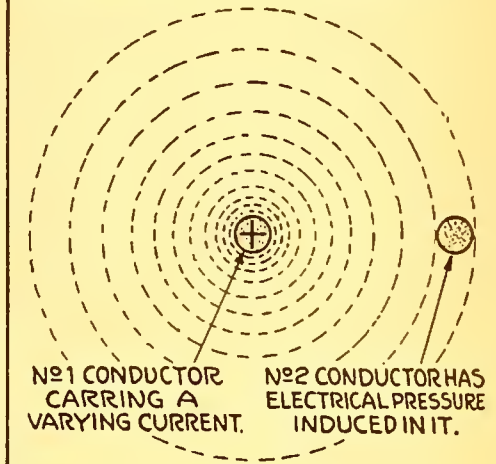


Figure 34

The effect of inductance is usually combined with the effect of a certain capacity to produce certain conditions in the Radio set and for this reason an understanding of the subject of capacity (Continued on page 20)

You will make it a real portable when you build it in a

# Karryadio

## Portable Case

This sturdy case has a collapsible horn and a pivoting cover containing a low loss loop—thus solving the problems of the portable set builder.

Price \$15.00



Dimensions are 18 1/2 inches long, 14 3/4 inches wide and 5 3/4 inches thick covered with black leatherette; just the size of a small weekend case.

NOW is the time to build that radio to take with you on your vacation. The KARRYADIO CASE makes portable set building a pleasure. To conserve space is the need in a portable set. The KARRYADIO collapsible horn therefore is a feature of great value supplied to you with this case. This collapsible horn occupies when closed only a space an inch thick and can rest on top of the batteries. When snapped open it reveals a horn six inches square, giving wonderful volume and tone. The horn has been designed to take nearly all the standard units on the market.

That loop is no longer an extra to annoy you. KARRYADIO CASE adds another feature to its remarkable portable equipment. Contained within the pivoting cover is a low loss loop which can be turned in any direction to pick up the different stations. This pivoting feature of the lid permits the finest directional adjustment without moving the case—thus increasing the selectivity of your set. There is ample room in the case for A and B batteries. The case takes the standard 18-inch panel.

Through these exclusive features of the KARRYADIO CASE you can now compactly house your portable hook-up, and when the cover is closed carry it anywhere with you—the radio set complete.

Order a Karryadio case today and learn how easy it is to build a portable

At your dealers or mail coupon direct



This Armley receiver is designed to fit the Karryadio case for those who want a factory built set. The dimensions are 7 1/2 inches wide by 18 inches long by 5 inches high. This powerful 6-tube set using dry cell tubes has two stages of tuned radio frequency amplification, tube detector and three stages of audio frequency amplification thus producing the volume required in portables. It is a good distance getter—another important portable requirement. It is very efficient on a loop and is also equipped for aerial and ground operation.

Price \$60.00

ARMLEY RADIO CORPORATION  
68-70 Fleet Street Jersey City, N. J.

ARMLEY RADIO CORPORATION,  
68-70 Fleet Street, Jersey City, N. J.

Gentlemen:  
I am enclosing \$15 for which send me without further charge one Karryadio Case with pivoting loop cover and collapsible horn.

Name .....

Address .....

My dealers name is .....


## Quality Parts Matched for Perfect Teamwork

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.  
Buffalo, N. Y.



# Federal

## Standard RADIO Products

### SUB-BASE LAYOUT OF WALTERS TUNED R. F. RECEIVER

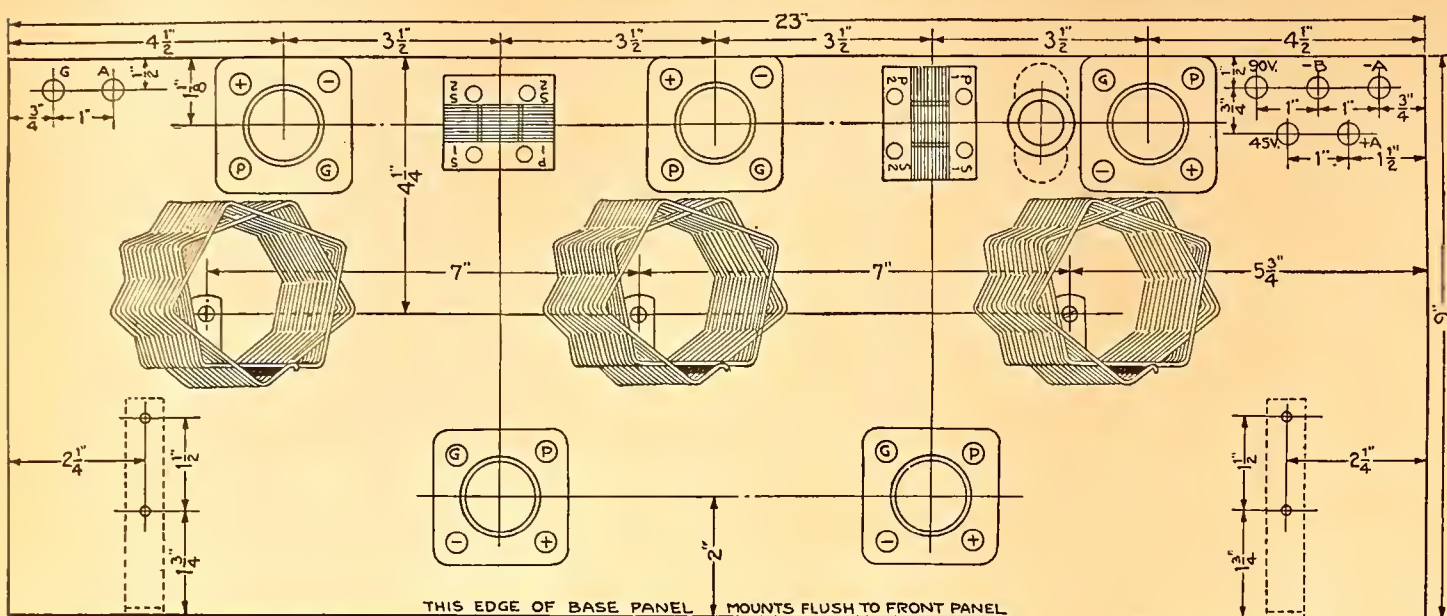


Figure 10

### LOW LOSS TUNED R. F.

(Continued from page 17)

while more detailed instruction in the wiring, with simplex diagrams, will be presented in the third installment. The schematic wiring diagram is given as figure 9 and, as mentioned above, many can proceed from this to wire their receivers. The numbers used in the small circles in connection with the three inductances will be found to coincide with the numbers used on the photo of the coil shown as figure 5 last week. It is intended that the C battery be placed within the cabinet either upright just in front of the second audio frequency transformer, or flat on its side between the first and second radio frequency transformers with its terminals toward the rear. There is plenty of room for it either way.

The by-pass condenser of .5 mfd. capacity is to be mounted just below the front edge of the center socket in the rear row, that is, just below the P and G terminals when looking at figure 10. It is, of course, on the under side of the sub base. Since all of the filament wiring and most of the

plate leads are below the sub base, connection to this condenser will be found very easy. The grid condenser of the detector tube is connected directly to the grid lead below the sub base and the .002 mfd. fixed condenser used as a by-pass in the detector plate circuit is connected across the wires at a point just in front of the 5 battery binding posts, thus, none of the condensers show when looking down into the set. It will be found advisable to put in all filament circuit wires first and then proceed with the radio frequency wiring.

(In the next issue Mr. Walters will show an above sub base illustration with all of the wires pictured in place, and another which shows all wires below the sub base. This will make wiring easy for the beginner.—Editor's note.)

### A. B. C. RADIO COURSE

(Continued from page 19)

is as essential as an understanding of the subject of inductance.

If two metal plates, that are insulated

from each other be connected to the terminal of a source of electrical pressure as shown in figure 35 there will be a momentary current in the circuit. This current is very different from the current that would be produced in a conductor. The presence of such a current, however, can be determined by placing a sensitive galvanometer or current detecting device in the circuit and observing the behavior of the device when the circuit is closed.

The two plates, an insulator between them, constitute a condenser and its action may be compared to a chamber with a diaphragm stretched across it as shown in figure 36. This chamber is connected to a pump whose piston moves causing the liquid in the circuit to move. When the piston is in the position shown by the full lines, or to the right, the diaphragm is in the position shown in full lines or what might be termed the zero position. The diaphragm produces no directive effort on the liquid when it is in the zero

position. As the liquid moves toward the right the diaphragm will be stretched and it will oppose the motion of the liquid until there is sufficient stress set up in the diaphragm to equal the pressure produced by the piston and then there will be no further movement of the liquids.

If the piston be moved to the right and the pressure it is exerting on the liquid be relieved, the diaphragm will cause the liquid to move to the left and the strain in the diaphragm will be reduced in value and finally reach a zero value when the diaphragm reaches its

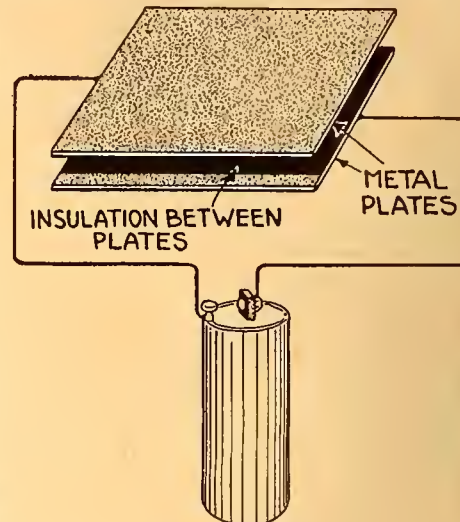


Figure 35

vertical or zero position. The pressure produced by the piston in the above case corresponds to the electrical pressure produced by the battery in figure 35 and the movement of water in the hydraulic circuit corresponds to the movement of electricity in the electrical circuit.

### Dielectric of a Condenser

There is a strain set up in the insulating material separating the plates of the condenser, called the dielectric, which opposes the movement of electricity through the condenser just as there is a strain set up in the diaphragm, which opposes the movement of the liquid when the diaphragm is displaced. If the valves in figure 36 be close the chamber containing the

(Continued on page 22)

## The New Radio Book



**How to understand radio, assemble circuits, operate sets, and improve reception,**

The New Radio Book is given free with a year's subscription to Radio Digest.

RADIO DIGEST  
510 N. Dearborn St., Chicago, Ill. 5-2-25

Enclosed find five dollars for one year's subscription to Radio Digest including FREE the New 121 Page Radio Book called "Radio Receivers—How to Operate and How to Make." This offer good on subscriptions sent directly to this office, not through agents or agencies.

NAME .....  
ADDRESS .....  
CITY ..... STATE .....

## The "Goode" Two-o-One

# A

Le Ton d'argent

Guaranteed



BY MAIL ONLY  
**\$1.89**

Postpaid

## QUARTER AMPERE AMPLIFIER-DETECTOR RADIO TUBE

GUARANTEED SATISFACTORY

All "GOODE" Tubes Sold Direct to the Consumer—No Dealer Profits

ONE—"Goode" Detector-Amplifier..... **\$1.89**  
THREE—"Goode" Detector-Amplifiers..... **5.00**  
(All postage prepaid)

The "Goode" Two-o-One A Tube amplifier or detector. It is a quarter ampere, five volts, standard base silvered tube.

Send express or postal money order—New York draft—or personal check to—

**The Goode Tube Corporation**  
Incorporated  
Owensboro (Dept. A) Kentucky

# One Control Regenerative Reflex Set

## Small Panel Required to Accommodate Parts

The Radio receiving set that is described in this article embodies tuning and regeneration with only one control. Also reflex action by using one tube to

### WORKSHOP KINKS EARN A DOLLAR—

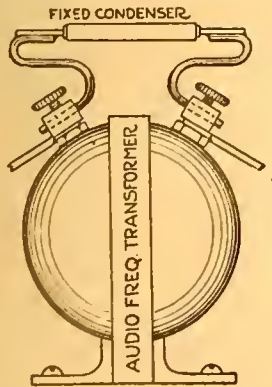
**T**HERE are many little kinks worked out at home that would aid your fellow Radio worker if only he knew about them. There are new hook-ups, new ways of making parts and various unique ways of operating sets that are discovered every day. Radio Digest is very much interested in obtaining such material.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

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

give results of three. A fixed coupler and a variable 23-plate condenser comprises the tuning unit of this set. The fixed coupler consists of a primary of 20 turns, and the secondary of 50 turns of size 22 d.c. wire. The coils must be wound in the same direction, with a 1/4-inch space between them, and they should be wound on a 3-inch bakelite or cardboard tube. Regeneration is controlled by the amount of B battery voltage passing into the filament, and capacity of the fixed condenser between the primary and secondary of the coupler. Better results will be had by using a variable B battery. This set will give excellent results and is economical. The whole outfit may be assembled on a 7 by 12-inch panel.—William D. Cape, Los Angeles, Calif.

### Condenser on Transformer

Replace the nuts of the transformer with binding post bodies, or bases, as shown. Screw the base down tightly against the transformer leads so that



they will not be loosened when the thumb-nut is turned. Solder wires to the condenser for inserting in the holes of the binding posts.—C. M. Middleton, Midvale, Utah.

## Send in Your 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 were made to operate as good as new.

We can REACTIVATE UV-201A, C-301A, UV-199, C-299 and any other thoriated filament such as Atlas, Magnatron, De Forest, etc.

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

**It Costs You Only \$1.00**

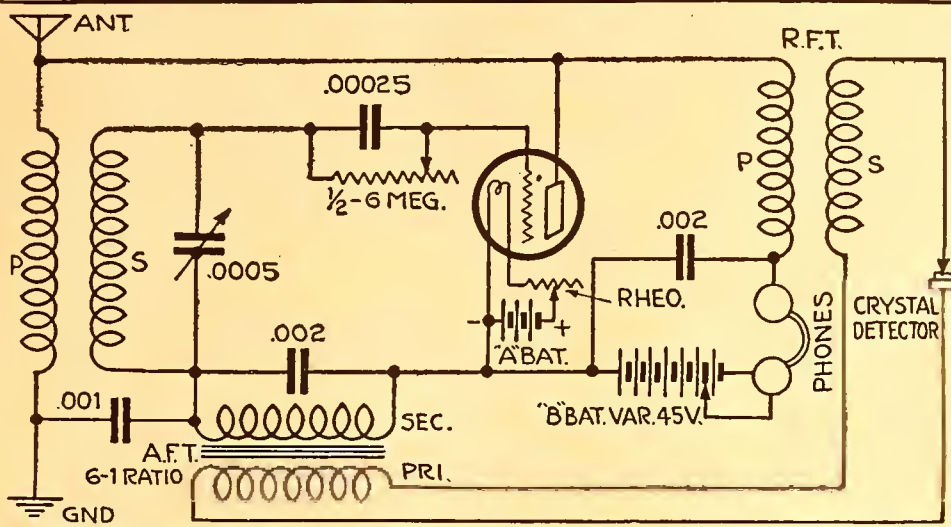
If we can restore your tube so that it operates satisfactorily. If we are not successful, our charge is only 25c.

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

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

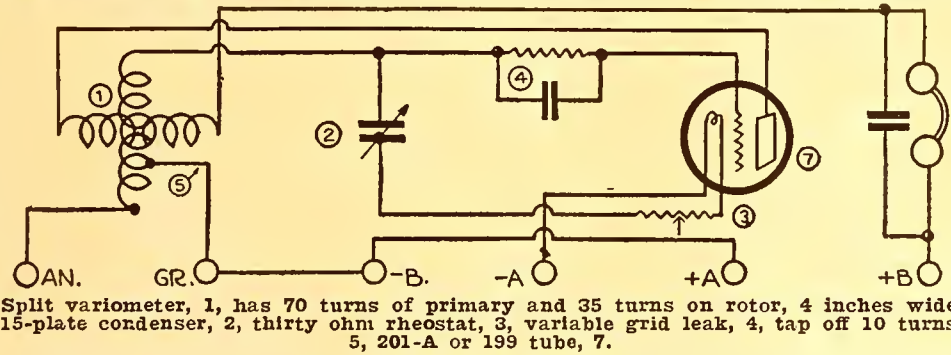
**A. O'CONNOR & COMPANY**  
9716 Euclid Ave. Cleveland, Ohio

## CIRCUIT DIAGRAM FOR RECEIVER



### Split Variometer Set

I have been a steady reader of Radio Digest for over three years and have been trying different hook-ups from one to five tubes, and I am herewith showing a circuit which I find is great on volume



Split variometer, 1, has 70 turns of primary and 35 turns on rotor, 4 inches wide, 15-plate condenser, 2, thirty ohm rheostat, 3, variable grid leak, 4, tap off 10 turns, 5, 201-A or 199 tube, 7.

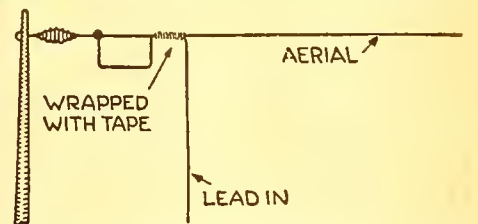
as well as selectivity and distance. With the set I have picked up Porto Rico, Dallas, Texas; St. Louis, Missouri; Montreal, Canada, and nearby stations with one tube only. When you first try it you

will find unless you pay attention to the rotor of the variometer that the nearest station will come in all over the condenser, but by setting the condenser to the station you want and bring rotor of variometer up until almost a click is heard you find that the nearby station

will disappear entirely. If this set is made up of best parts it cannot be beat for a one-tube outfit.—Clarence M. Hook, Niverville, N. Y.

## Avoiding Crystallization at Aerial Lead-In Joint

After lead-in wires are soldered and pulled tight to keep from swaying, the lead-in near the soldered joint often crystallizes and breaks off. I have been using a simple method to avoid this trouble by wrapping securely the lead-in with tape after bending it in the form of a handle, as illustrated. This method relieves the soldered joint of a strain which may avoid many inconveniences caused by a strained lead-in connection. I have been doing this



for over three years and the many antennas I have erected proves its worth as they are all taut and near and they never cause trouble.—Ollie B. Kramer, Cincinnati, Ohio.

### Safeguarding Tubes in a Set

From some one cause or another I have wrecked several sets of tubes, and but recently I made a safety device which guards against any future mishap. Usually some one of the tubes will become broken internally and have a loose filament that can be jolted over against the grid. Hook up the A battery to the filament and grid posts and then jolt the filament over against the grid. This will cause the filament to light and weld fast. Connect this tube in series with the negative end of the B battery.

The tube may be mounted in a standard socket, the wire being connected to the right filament post and the grid post, or they may be soldered direct to the prongs on the tube. This safety tube has saved me many sets of tubes. A tube that has passed its usefulness will do nicely.—E. M. Cook, Des Moines, Iowa.

**Lincoln**  
RADIO PRODUCTS  
Collapsible LOOP AERIALS

**"Recommend It" SAYS R. W. COTTON**  
Designer of Cotton "Super-Het"

R. W. Cotton, famed designer of the Cotton Superheterodyne, wrote us March 10, 1925, as follows:

Gentlemen:  
I had the pleasure last night of trying out one of your Center Tap Loops in conjunction with the "Cotton" Super. The results obtained were very satisfactory and for the amount of money represented by your Loop I do not know where in today's market the public can obtain equal value. Your Loop functions properly with my set and you may recommend it for that purpose with my sanction.  
Sincerely yours,  
R. W. COTTON.

**Lincoln Center-Tapped Loop \$6.50**  
For any set employing radio frequency amplification. Particularly adapted for "Super-hets" requiring a center tap.

**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 frequency sets, where an outside Aerial is impractical. For the requirements of any set where it is desired to vary the inductance of the loop.

**BUY A LINCOLN LOOP**  
Sold by good dealers everywhere. If yours cannot supply you order direct giving your dealer's name.

**Lincoln Radio Corporation**  
224 North Wells St. CHICAGO

**CROSLLEY**  
1 TUBE-50

**\$14.50**

The Little Giant of Radio  
Coast to Coast Reception  
with phones frequently reported.

**Distance**  
on the phones—with certainty and regularity—on the Crosley one-tube 50. The radio which told the world that the MacMillan North Pole expedition was safe and sound. The radio that kept communication open to Leonard Weeks at Minot, N. D., when all other receivers failed.

There is nothing better than the Crosley 50 for the radio beginner.

There is nothing to excel it in value; unless it be the larger Crosley sets.

Stations always come in at the same place.

For sale by good dealers everywhere. Other models priced from the two tube 51, at \$18.50, to the Tridyn Special with sloping panel, at \$65. All Crosley Radios are licensed under Armstrong Regenerative U. S. Patent 1,113,149. Prices quoted are without accessories.

Prices West of Rockies—Add 10%  
Write for Complete Catalog

**The Crosley Radio Corporation**  
Powel Crosley, Jr., President  
5491 Sasfras St. Cincinnati, Ohio  
Crosley owns and operates Broadcasting Station WLIV

**London, Madrid  
Newcastle,  
Aberdeen--**  
*that's just a few of them*

**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.

**ELGIN**  
Super-Reinartz  
"The Ford of Radio"

will give you the selectivity and distance it has given others. And you can save \$50.00. Let us tell you how—

**FREE**

Mail the coupon TODAY for the complete working drawings of the famous Elgin Super-Reinartz, the set that gets the distant stations. They are free—no obligations, just a stamp for postage, please!

**tear out this coupon—**

ELGIN RADIO SUPPLY CO.,  
Dept. A, 207 E. Chicago St.,  
Elgin, Illinois.

Send the FREE drawings of the Elgin Super-Reinartz at once. Also tell me how I save \$50.00 on this set. I enclose a stamp for postage.

Name .....

Address .....

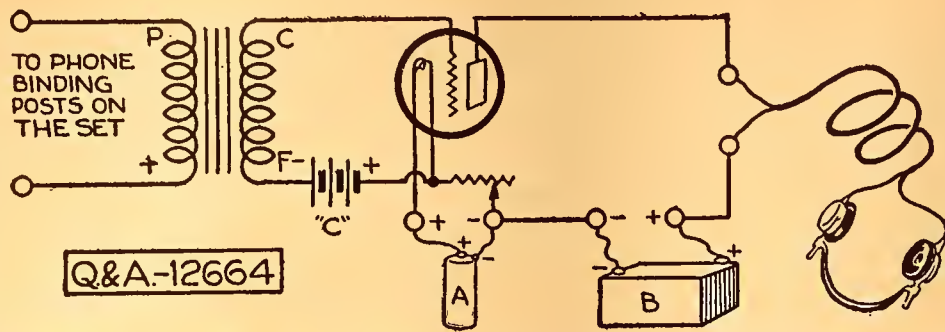
(Please PRINT in pencil)

# Questions and Answers

## Low Wave Length Reception (13149) JHG, El Paso, Ill.

I have a receiver consisting of a variometer, coupler, variometer, unit with detector and one audio frequency amplifier and unit with two amplifiers in the order named, making a total of detector and three stages of audio frequency but I am unable to tune in stations below 260 meters and I desire to get down to about 200 meters. The aerial is about 130 feet, including the lead-in. Can you advise a method of reducing the wave length of this set? Would it be practicable with this outfit to add two stages of Radio frequency?

A.—If you find that you cannot get below the wave length you mention you may reduce the number of turns on the secondary windings, or you can substitute a smaller condenser for the one you now have in the set. Reducing the turns will give best results. If you will remove from three to four turns from the secondary you will find the set responds to the desired wave.



## Adding One Stage to Light House Keeper's Receiving Set

(12664) RVW, Blair, Nebr.  
Last spring I built the Light House Keeper's set which was described in Radio Digest and I will say that it is a real set. I am located almost in the central part of the U. S. and I have received both coasts, not just once, but regular when the weather was real cold. Several stations in Canada were also heard.

I would like to add one stage of audio amplification to this circuit. Is this advisable? If so how should it be connected to the set?

I have tried a good many one tube sets but none of them can come up to this set for reception.

A.—We are presenting herewith a circuit for use with your Light House Keeper's set for adding one stage of amplification.

## Windings on Tuner

(13428) AHK, Graf, Nebr.

Please advise me as near as possible how many turns and what size wire should be used on the rotor, stator and primary of the tuner where a .00025 condenser is used? In using a .0005 condenser would it be necessary to alter the tuner? If so what size wire and how many turns are to be placed on the rotor, stator and primary of the tuner?

A.—With a .00025 condenser, you can put on 74 turns of number 24 wire on a 3-inch tube, or 67 turns on a 3 1/2-inch tube for the secondary if dsc. wire is used or 82 turns and 71 turns if dcc. wire is used. The primary in either case to consist of 12 turns wound about 1/2 inch from the secondary on the same tube. If the tickler coil is a ball rotor, put 20 turns of either 24 or 26 wire on either side of the shaft while if it is a smaller tube revolving at the secondary end of the large tube, put on 32 turns.

If a .0005 condenser is used, 51 turns of dcc. can be put on a 3-inch tube or 43 turns on a 3 1/2-inch tube for the secondary.

## A. B. C. RADIO COURSE

(Continued from page 20)

diaphragm may be disconnected from the piston and the diaphragm will still be in the strained condition. Likewise if the condenser in figure 36 be disconnected from the battery terminals the dielectric of the condenser will be in a strained condition.

A condenser is said to be charged when its dielectric is strained, as explained above, and this strain in the dielectric represents a certain amount of stored energy or ability to do work. For example, the diaphragm in figure 36 after it is strained by the piston, may be made to do work on some other device when the diaphragm returns to its zero position.

When the diaphragm returns to its zero position there is a displacement of the liquid in the chamber, just as much enters the right side as leaves the left side, and there is, of course, a current of liquid in the hydraulic circuit.

The same condition exists in the case of an electrical condenser when the strain in the dielectric is relieved by connecting the condenser in a closed electrical pressure other than that in the condenser. Just as much electricity enters the condenser on one side as leaves it and there is simply a displacement of the electricity in the circuit which results in there being a current in the circuit while this displacement is taking place. The same amount of liquid is in the chamber containing the diaphragm, shown in figure 36, at all times regardless of whether the

diaphragm is strained or not, neglecting any compressing of the liquid due to the pressure on it. The same quantities of electricity exists in the electrical condenser at all times regardless of whether

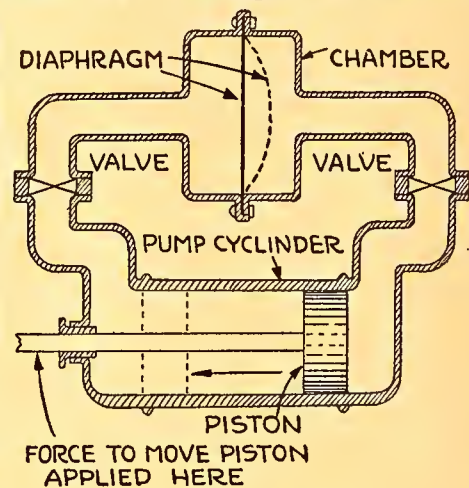


Figure 36

its dielectric is strained or not. One usually gets the impression that electricity is stored in the condenser, which is not correct. What is actually stored in the condenser is energy or the ability to

do work, just as energy or the ability to do work is stored in a clock spring after a certain amount of work is done upon the spring when you wind it up.

The energy stored in the condenser will cause a momentary current in an electrical circuit which multiplied by the time this current lasts gives a certain quantity of electricity. Thus in the case of the hydraulic condenser shown in figure 36 the quantity of liquid which will be displaced around the circuit when the diaphragm returns to its normal position, will be equal to the volume of the liquid contained in the space between the diaphragm when it is in its normal position and the diaphragm when it is in its charged or strained position. This same quantity of liquid was moved in the circuit by the piston when the diaphragm was strained, but the movement will, of course, be in the opposite direction while charging the condenser, to what it is when the condenser is being discharged.

## Capacity of a Condenser

The capacity of a condenser is defined in terms of the quantity of electricity displaced in the circuit and the electrical strain which this quantity produces in the dielectric. Thus a condenser is said to have one unit of capacity when a displacement of one unit of quantity of electricity will produce an electrical strain on the dielectric of one volt. The name given to this unit of capacity is the farad.

When a unit quantity of electricity, or one coulomb, is displaced through a discharged condenser and there is an electrical pressure of one volt produced between its terminals, the capacity of the condenser is one farad. The relation between these quantities may be written in the following forms, in which C stands for the capacity in farads, Q for the quantity in coulombs, and E for the electrical pressure in volts.

$$C = \frac{Q}{E}$$

$$\text{or, } E = \frac{Q}{C}$$

$$\text{or, } Q = C \times E$$

The farad is a very large unit of capacity and in Radio work a unit of capacity called the micromicrofarad, abbreviated mmfd. is used.

The capacity of a condenser may be calculated quite accurately if the dimensions of its plates, the distance between the plates, and the kind of material separating the plates are all known.

(Calculation of the capacity of condensers and their characteristics will be the subject for the next article in the A. B. C. series.—Editor's note.)

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

Synthetic Diamond, new open crystal. Fine sales. A miracle compared with natural crystals. Salesmen wanted. Hearwell Electric, 53 Devonshire, Boston, Mass.

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

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

**\$10.00 IS ENOUGH**  
You can hear programs from cities 400 to 1,000 miles away on Lambert Crystal Sets and you won't need tubes or batteries.  
Picture of set and particulars free.  
**LEON LAMBERT**  
501 Kaufman Bldg. Wichita, Kansas  
Dealers write for discounts.

**Burns**  
**PERFECT REPRODUCER**  
Tone loud and pleasing. Handsome material and design.  
**Black—\$22.50 Shell—\$25.00**  
AMERICAN ELECTRIC CO.  
State and 64th Sts. Chicago

**5 TUBE SET \$45**  
**NOT A KIT** Assembled Complete  
**WHY BUILD WHEN YOU CAN BUY**  
the D-R-C Completely Assembled Wonder Set—the 5-Tube Tuned Radio Frequency Receiver that outperforms sets four times as costly—Direct from the Factory at the amazingly low price of \$45. Users everywhere secure coast to coast loudspeaker reception. Beautiful Cabinet—Bakelite Dials and Panels—finest materials throughout—easily operated. Send money order today for the factory-built, factory-tested and FULLY GUARANTEED D-R-C WONDER SET at the rock bottom price of \$45 f. o. b. Factory. Write for complete list of Accessories.  
**D-R-C RADIO CO., CHICAGO**  
329 S. La Salle St.

**DURHAM Grid Leaks**  
Used by Eagle, Howard, Thompson, Zenith and others. Fit all sets. Sold on guarantee.  
**50c** Metallized Fixed Leaks 18 sizes; under 1/4 meg., 75c; over 1/4 meg., 50c.  
**75c** Glass Sealed Variable Leaks 3 sizes fit all sets; 75c each for 1/10, 5 and 10 megs. . . . .  
At dealers or postpaid  
**DURHAM & COMPANY, Inc.**  
1936 Market Street • Philadelphia, Pa.

**MUTER**  
Approved LIGHTNING ARRESTERS Complete Protection

Buy right and make money. Standard lines, parts, sets, shipped now. Fast service—hard-to-get items—extra good discounts. Get our catalogue No. 8. It shows you!  
**W. E. FUETTERER RADIO SUPPLY CO.**  
2121 Locust St. St. Louis, Mo.

**HEGEHOG** The 100% Self Shielded Transformer  
has made a big hit with both set makers and set manufacturers because of its small size, its amazing volume and, most of all, because of its pure undistorted tone. It is half the size of other transformers, but its results are unsurpassed. Absolutely new and scientific design and construction. Ratios 1 to 3, 1 to 4, 1 to 5, \$3.50. Ratio 1 to 10, \$4.50.  
SEND FOR BULLETIN No. 94. Read all the exclusive features of this and other Premier Parts. Tells how to get free hook up diagrams, beautifully printed in two colors.  
**PREMIER ELECTRIC COMPANY**  
3810 Ravenswood Ave. CHICAGO  
**PREMIER Quality Radio Parts**

**NOW \$3.50**  
**THE RABAT SENIOR**  
1200 MIL. AMP. CAPACITY  
**For a Limited Time Only**  
You can purchase for \$3.50 a 12 cell 24 volt RABAT SENIOR battery. Saving \$6.10 thru direct buying. 24 cell 48 volt size \$7.00  
Rabat Senior batteries are neat, powerful, noiseless. Separate clear glass cells and patented rubber cork with heavy duty plates 3/16" x 1" x 2 1/2" with staggered ribbed grid form the backbone of this sturdy battery. Shipped completely charged ready to use. Order now, save \$6.10  
**Rabat Super Charger \$3.00 c. o. d.**  
Specially designed to satisfactorily recharge any storage "B" battery. Shipped complete ready to use, including lamp socket, attachment plug and cord. You save \$1.20 by ordering direct.  
Send No Money but order today. After examining and approving these batteries pay Expressman the small o. o. d. charges. RABATS are guaranteed two years.  
**THE RADIO RABAT COMPANY**  
1767 ST. CLAIR AVENUE CLEVELAND, OHIO

It isn't a genuine **WD-11** unless it's a Radiotron  
**WD-11 Radiotron**

Look for the name **WD-11 Radiotron**

# Radiophone Broadcasting Stations

## Corrected Every Week—Part IV

### FIND MISTAKES AND YOU'LL GET DOLLAR

ONE DOLLAR will be paid to the Radio fan reader of Radio Digest submitting the most errors in any one station's listing in the Directory of Radiophone Stations, which appears in five parts, serially continuing 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.

(Editor's Note.—Discrepancies because of daylight saving time cannot be counted as errors this week because at the time this issue goes to press many cities are undecided as to whether they will use it this year.)

NOTE.—The fourth part of the schedule list appears below. Part five appears next week.

**WNAO**, Norman, Okla. 254 meters. 250 watts. Univ. of Okla. Announcer, C. E. Bath. Slogans, "Oklahoma," "Voice of Sooner Land." Daily 9:15 pm, weather, news, Wed, 8:30-9:30 pm, music. Central.

**WNAW**, Butler, Mo. 231 meters. 20 watts. First Christian church. Announcer, Perry V. Riley. Sun, 11 am, 7:30 pm. Central.

**WNAT**, Philadelphia, Pa. 250 meters. 100 watts. Lenning Bros. Co. Announcer, Jess Brinton Young. Slogan, "The Little Broadcasting Station Around the Corner." Wed, 7:45 pm. Eastern Daylight.

**WNAX**, Yankton, S. D. 244 meters. 100 watts. Dakota Radio Apparatus Co. Daily ex Sun, 11:30-11:45 am, markets, weather; 5-8 pm, music. Central.

**WNI**, Newark, N. J. 233 meters. 100 watts. Radio Shop of Newark, Inc. Announcer, W. A. Blingehelmer. Slogan, "The Voice of Newark." Tues, Wed, Fri, 6-8:30 pm, 10:30-12:30 am, dance music. Eastern Daylight.

**WNYC**, New York, N. Y. 526 meters. 1000 watts. New York Municipal Radio Station. Slogan, "Municipal Broadcasting Station of the City of New York." Daily 2-5 pm; 7:30 pm, 10:30 pm, police; 7:35, entertainment; 10:30, weather. Sun, 9-11 pm, Mark Strand theater. Eastern Daylight.

**WOAC**, Lima, O. 261 meters. 50 watts. Paga Organ Co. (H. P. Maus).

**WOAF**, Tyler, Tex. 360 meters. 100 watts. The Tyler Commercial College. Daily ex Sat, Sun, 12 m, weather, markets; 12:40 pm, concert; 4:25, sports; 8 pm, weather, sports codes; 10:15, U. S. Navy press. Sun, 11 am, 7:30 pm, church services. Central.

**WOAL**, San Antonio, Tex. 304.5 meters. 500 watts. Southern Equip. Co. (Evening News-Express). Announcer, J. G. Cummins. Slogan, "The Winter Playground of America, Where the Sunshine Spends the Winter." Daily ex Sun, 10:30 am, 12:15 pm, 3 markets; 6:15, sports, markets. Tues, 8:30-10:30 pm. Thurs, 9:30-10:30 pm, music. Sun, 11 am, church service; 7:30 pm, church services; 9:30-10:30, music. Central.

**WOAN**, Lawrenceburg, Tenn. 282.8 meters. 500 watts. James D. Vance.

**WOAW**, Omaha, Neb. 520 meters. 1000 watts. Woodmen of the World. Announcer, "GR." Gene Rousa. Slogan, "The City Surrounded by the United States." Daily ex Sun, Wed, 12:30-2 pm; 5:7-30, 9-11. Sat, 11-12 midnight, dance. Sun, 9-10:45 am; 1:30-4 pm; 9-11. Central.

**WOAX**, Trenton, N. J. 240 meters. 500 watts. F. J. Wolf. Slogan, "The voice from Trenton." Tues, 8:15-11 pm, orchestra. Fri, 9-11 pm, classic music. Daily, 11:15 am, 12:15 pm, weather, mid-weekly crop report. Eastern.

**WOC**, Davenport, Ia. 483.6 meters. 1500 watts. Palmer School of Chiropractic. Announcer, Stanley W. Barnett. Slogan, "Where the West Begins and in the State Where the Tall Corn Grows." Daily ex Sun, 12:57 pm, time; 1 weather; 2 (ex Sat), closing markets; 3 (ex Sat), home hour; 5:45 pm, music; 6, bulletin; 6:30, sandman. Wed, Fri, 4 pm, Wed, Sat, 6:50 pm, lecture. Tues, 7:30 pm, music. Wed, Sat, 9 pm, Thurs, 7 pm. Fri, 8 pm, Thurs, Sat, 11 pm, dance music. Sun, 1 pm, orchestra; 8 pm, service; 9:30, music. Central.

**WOCL**, Jamestown, N. Y. 275.2 meters. 15 watts. Hotel Jamestown, Inc. Announcer, Ernest H. Klosser. Slogan, "We're on Chautauqua Lake." Wed, 8 pm. Sat, 3 pm, Sun, 10:30 am, 7:30-9:30. Eastern.

**WODA**, Boston, N. J. 292.6 meters. 10 watts. James K. Den Radio & Victor Shop.

**WOI**, Ames, Ia. 270 meters. 500 watts. Iowa State College. Announcer, H. B. Deal. Daily ex Sun, 9:30 am, weather reports; 12:30 pm, chimes, market, weather, educational talks; 3:30, weather. Mon, 10 pm, hormonal program. Thurs, 8:15 pm, musical. Sun, 10:45 am, chimes; 11, chapel. Central.

**WOO**, Philadelphia, Pa. 508.2 meters. 500 watts. John Wanamaker. Announcer, Jos. N. Nassau. Daily ex Sun, 11 am, organ recital; weather; 11:55, time; 12-1 pm, concert; 9:55, time; 10:30, weather. Mon, Wed, Fri, 7:30-11 pm, music, concert. Sun, 2:30 pm, Sunday school; 6, organ; alternate am and pm services. Eastern Daylight.

**WOK**, Kansas City, Mo. 278 meters. 500 watts. Unity School of Christianity.

**WOR**, Newark, N. J. 405.2 meters. 500 watts. L. Bamberg & Co. Announcer, J. M. Burnett. Daily ex Sun, 7 am, 2:30-4 pm; 6:15-7:30. Mon, Wed, Sat, 8-12 midnight. Wed, 6:15-7 pm. Eastern Daylight.

**WORD**, Batavia, Ill. 275 meters. 1500 watts. Peoples Pulpit association. Announcer, H. M. Rice. Slogan, "Watchtower Station WORD." Mon, 7-10 pm, Tues, Thurs, Fri, 8-10 pm. Sun, 8:30-8 pm. Central.

**WOS**, Jefferson City, Mo. 440.0 meters. 500 watts. Missouri State Marketing Bureau. Slogan, "Watch Our State." Daily ex Sun, first 15 min. of every hour from 9 am-2 pm, markets; 3, N. Y. stocks and markets. Daily ex Sat, Sun, 5 pm, markets. Mon, Wed, Fri, 8-10 pm, concert. Sun, 7:30-8:30 pm, church service. Tues, Fri, 5 pm, children's story hour. Central.

**WOWL**, New Orleans, La. 270 meters. 100 watts. Owl Battery company.

**WPAK**, Fargo, N. D. 275 meters. 100 watts. N. D. Agricultural College. Announcer, Gordon Laing. Dolly 1 pm, weather. Mon, Wed, Fri, 7:30 pm, talks. Central.

**WPAZ**, Charleston, W. Va. 268 meters. 20 watts. West Virginia Radio Sales Corp. Tues, Fri, 7:30-8:30 pm. Eastern.

**WPG**, Atlantic City, N. J. 299.8 meters. 500 watts. Municipality of Atlantic City. Slogan, "World's Playgrounds." Mon, Tues, Fri, 7 pm, Tues, Thurs, Fri, Sat, 9 pm; 10, classics. Mon, 8 pm, Thurs, 11 pm, Sat, 8:30 pm, concert; 10, Sun, 3:15 pm, organ; 4:15, service; 10, service. Eastern.

**WPSO**, Stato Colloge, Pa. 201 meters. 500 watts. Pa. Stato Colloge. Slogan, "The Voice of the Nitany Lion."

**WQA**, Parkersburg, Pa. 220 meters. 500 watts. Horace A. Reado, Jr. Temporarily discontinued.

**WQAC**, Amarillo, Tex. 234 meters. 100 watts. Oish Radio Service. Irregular schedule.

**WQAE**, Springfield, Vt. 246 meters. 50 watts. Moore Radio News Station. Announcer, Ernest S. Newell. Slogan, "Among the Green Hills of Vermont." Sat, 11-1 am. Sun, 10:30 am, church service; 7 pm, service. Eastern.

**WQAM**, Miami, Fla. 268 meters. 100 watts. Electrical Equip. Co. Announcer, Frederick W. Mizer. Slogan, "It is Always June in Miami." The Most Southern Radiocasting Station in U. S. Tues, Thurs, Sat, 10-12 midnight, music. Sun, 7:30-9 pm. Eastern.

**WQAN**, Scranton, Pa. 250 meters. 100 watts. Scranton Times. Announcer, T. V. Nealon. Slogan, "The Voice of the Anthracite." Daily ex Sun, 12:30-1 pm, 4:15-4:45, news, reports, music. Tues, Fri, 8 pm, entertainment. Eastern.

**WQAO**, New York City, N. Y. 360 meters. 100 watts. Calvary Baptist Church. Announcer, R. E. Bogardus. Slogan, "The First Church Owned and Operated Broadcasting Station in the World." Sun, 11:30 am, 7:30 pm, church services. Eastern daylight.

**WQAS**, Lowell, Mass. 252 meters. 100 watts. Prince-Walter Co.

**WQJ**, Chicago, Ill. 447.5 meters. 500 watts. Calumet Baking Powder Company—Rolinbo Gardens. Announcer, Jerry Sullivan. Daily ex Sun, 11-12 m, 3-4 pm, woman's hour. Daily ex Sun, Mon, 7-8 pm, 10-11, 1-2, Hotsy Totsy hour. Sat, 10-3 am. Sun, 10:30 am, church service; 3-4 pm; 8-10 pm, music. Central Daylight.

**WRAA**, Houston, Tex. 256 meters. 100 watts. The Rice Institute.

**WRAF**, La Porte, Ind. 224 meters. 100 watts. Radio Club, Inc. Announcer, Charles Middleton. Slogan, "The Voice of the Maple City." Mon, Thurs, Sun, 8:30 pm. Central.

**WRAC**, Escanaba, Mich. 256 meters. 100 watts. Economy Light Company.

**WRAL**, St. Croix Falls, Wis. 248 meters. 100 watts. Northern States Power Co. Announcer, D. H. Hiebert. Slogan, "On the Dellys of the St. Croix."

**WRAM**, Galesburg, Ill. 244 meters. 100 watts. Lombard College. Tues, Fri, 8-9 pm. Central.

**WRAY**, Yellow Springs, O. 263 meters. 100 watts. Antioch College. Announcer, Charles Hoffman. Wed, 8 pm, music; 9, educational. Sun, 7 pm. Central.

**WRAW**, Reading, Pa. 238 meters. 100 watts. Avenue Radio & Elec Shop. Slogan, "The Schuylkill Valley Echo." Announcer, C. M. Chafey. Thurs, 10-11:30 pm. Eastern.

**WRAX**, Gloucester City, N. J. 268 meters. 500 watts. Flexon's Garage. Announcer, Anna D. Flexon. Mon, Wed, Fri, evenings, program. Eastern.

**WRBC**, Valparaiso, Ind. 278 meters. 500 watts. Immanuel Lutheran church. Announcer, Forrest Jones. Slogan, "World Redeemed by Christ." Mon, 7:30 pm, Sun, 7:30, church service. Central.

**WRD**, Washington, D. C. 468.5 meters. 500 watts. Radio Corp'n of America. Announcer, George F. Ross. Slogan, "The Voice of the Capitol." Mon, Wed, Fri, 4-6:30 pm. Tues, Thurs, Sat, 6:45-11:30 pm. Eastern.

**WREO**, Lansing, Mich. 285.5 meters. 500 watts. Reo Motor Car Co. Announcer, Roy E. Davis. Slogan, "Watch Reo." Daily ex Sun, 10 pm, weather. Tues, Thurs, 8:15 pm, music. Fri, 1-3 am, coast program; 8 pm, 10:30. Sat, 10-12 midnight, orchestra. Sun, 10 am, 7 pm, services. Eastern.

**WRRF**, Washington, D. C. 256 meters, 50 watts. Washington Radio Hospital.

**WRK**, Hamilton, O. 270 meters. 200 watts. Doron Bros. Elec. Co. Slogan, "The Oldest Station in Existence." Fri, 8:15 pm, music, lectures. Sun, 10:15 am, 7:30 pm, church services. Central.

**WRM**, Urbana, Ill. 273 meters. 500 watts. Univ. of Ill. Irregular schedule. Broadcasts sports.

**WRR**, Dallas, Tex. 276 meters. 350 watts. City of Dallas. Announcer, C. H. Garrett. Daily ex Sun, 11:30-12:30 pm, weather, music; 2:45-3:30, sports, markets, news; 7:30, police bulletins; 7:30-8:30 pm, music. Tues, 8:30-9:30 am. Sat, 12-2 am, organ. Sun, 10 am, church service. Central.

**WRW**, Tarrytown, N. Y. 272.6 meters. 500 watts. Tarrytown Radio Research Laboratory. Announcer, Frederick Koenig. Slogan, "Everything in Radio." Daily ex Sun, Wed, 9-11:30 pm. Mon, 7-8 pm. Wed, 10-11:30 pm. Sun, 8-9 pm, 10:30-11:30. Eastern.

**WSAB**, Cape Girardeau, Mo. 275 meters. 100 watts. Southeast Mo. State Teachers College. Mon, Wed, 3:30 pm, lecture; 9, concerts. Central.

**WSAC**, Clemson College, S. C. 336.9 meters. 500 watts. Clemson Agril. Colloge. Announcer, H. E. Gaffney. Wed, 8 pm. Eastern.

**WSAD**, Providence, R. I. 256 meters. 100 watts. Fosters-Jewelers. Daily ex Sun, 2:30-4 pm. Mon, Wed, Fri, Sat, 6-8 pm. Tues, 6-6:30 pm. Thurs, 8:30-11 pm. Eastern.

**WSAG**, St. Petersburg, Fla. 266 meters. 500 watts. Gospel Tabernacle.

**WSAI**, Cincinnati, O. 325.9 meters. 500 watts. United States Playing Card Co. Announcer, P. A. Greene. Mon, 10-12 m, Tues, 7-10 pm, Wed, 10-12 midnight, Thurs, 8-10 pm. Sat, 8-10; 12-1:45 am. Sun, 3-4 pm, 8-10. Central.

**WSAJ**, Grove City, Pa. 229 meters. 250 watts. Grove City College. Announcer, Wm. L. Harmon. Colloge activities. Wed, 7:30-9 pm, music. Fri, 8:15-9:30 pm, sports. Eastern.

**WSAN**, Allentown, Pa. 229 meters. 500 watts. Allentown Call Pub. Co. Announcer, C. Fred Ritter. Tues, Thurs, Sat, 8 pm. Eastern.

**WSAP**, New York, N. Y. 203 meters. 250 watts. City Temple. Thurs, 8-9:30 pm, Sat, 10:45-12 m. Sun, 7:30-9:30 pm. Eastern daylight.

**WSAR**, Fall River, Mass. 254 meters. 100 watts. Doughty & Welch Elec. Co., Inc. Announcer, Charles McCarthy. Daily ex Sun, 12-1 pm. Wed, 8-10 pm. Sun, 10:30-12 m, 4:30-6 pm. Eastern.

**WSAU**, Chesham, N. H. 229 meters. 100 watts. Camp Marlfield.

**WSAX**, Chicago, Ill. 268 meters. 20 watts. Chicago Radio Lab.

**WSAZ**, Pomeroy, Ohio. 244 meters. 50 watts. Chaso Elec. Shop. Announcer, Glenn E. Chaso. Wed, 6:30 pm, music. Sun, 2:30 pm. Central.

**WSB**, Atlanta, Ga. 428.3 meters. 750 watts. Atlanta Journal. Announcer, Lambdin Kay. Slogan, "The Voice of the South." Daily ex Sun, 12-1 pm, music, weather; 2:30, reports; 5, orchestra, time story; 8, concert (ex Wed) 10:45-12, concert. Sun, 5-6, 7:30-9:15, church services. Central.

**WSKC**, Bay City, Mich. 261 meters. 50 watts. World's Star Knitting Co.

**WSL**, Utica, N. Y. 242 meters. 100 watts. J. & M. Elec. Co. Daily ex Sat, Sun, 11-11:30 am, 5-6 pm, music, news. Mon, Wed, Sat, 8-9 pm. Sun, 10:30-12 m, 7:30-9 pm. Church services. Eastern.

**WSMB**, New Orleans, La. 319 meters. 500 watts. Saenger Amusement company. Tues, Wed, Fri, Sat, 12:30-1:30 pm; 8:30-10. Central.

**WSMH**, Owosso, Mich. 210 meters. 10 watts. Shattuck Music House.

**WSOE**, Milwaukee, Wis. 246 meters. 100 watts. School of Emancipating of Milwaukee. Announcer, O. W. Mellesner. Slogan, "In the Land of the Sky-High Waters." Daily ex Sat, Sun, 9-10 am, lecture; 1-3 pm, talk; 5-6:30, concert; 6-6:30, markets. Mon, Fri, 6-12 mid, music. Tues, Thurs, Sat, 7:30-9 pm, music. Sun, 9:30 am, service; 10:30-11:30; 1-3 pm; 7:30-8:30, service. Central.

**WSRF**, Broadlands, Ill. 233 meters. 10 watts. Dick's and Harden Radio Station. Announcer, "Red" Harden.

**WSRO**, Hamilton, Ohio. 272 meters. 100 watts. Radio Co. Announcer, Hurry W. Fahlander. Tues, Fri, 8-10 pm, orchestra. Sun, 2-4 pm, orchestra. Central.

**WSUI**, Iowa City, Ia. 483.0 meters. 300 watts. Univ. of Iowa. Announcer, Carl Menzer. Mon, Tues, Wed, Thurs, Fri, 12:30-1 pm. Wed, 6-7:30 pm. Mon, Wed, 7:30 pm, course; 7:45, lecture; 8, lecture. Sun, 7 pm, children's hour; 9-9:30, music. Central.

**WSY**, Auburn, Ala. 250 meters. 500 watts. Alabama Polytechnic Institute.

**WTAB**, Fall River, Mass. 200 meters. 100 watts. Fall River Daily Herald. Tues, Thurs, 8-10 pm. Wed, Sat, 5 pm. Eastern.

**WTAC**, Johnstown, Pa. 207.8 meters. 100 watts. Penn. Traffic Co. Announcer, D. B. Cole. Mon, Fri, 7:30-10 pm. Eastern.

**WTAF**, New Orleans, La. 275.8 meters. 10 watts. Louis J. Gollo. Announcer, E. E. Sadler. Daily ex Sun, 5:45-6 pm, police reports. weather. Tues, Fri, 9-10:30 pm. Central.

**WTAL**, Toledo, Ohio. 252 meters. 10 watts. Toledo Radio & Elec. Co. Announcer, E. R. Frank. Slogan, "The Gateway to the Sea." Daily ex Sun, 8:30 pm. Eastern.

**WTAM**, Cleveland, Ohio. 389.4 meters. 1,500 watts. Willard Storage Battery Co. Announcer, A. R. Herske. Slogan, "The Voice from the Storage Battery." Daily ex Sun, 6-7 pm, dinner program. Mon, 8-12 pm, concert. Wed, 8-1 am. Sat, 9-12 midnight, dance. Eastern.

**WTAP**, Cambridge, Ill. 242 meters. 100 watts. Cambridge Radio & Elec. Co. Announcer, A. McIntosh.

**WTAQ**, Osceola, Wis. 254 meters. 200 watts. S. H. Van Gorden & Son. Announcer, Mrs. C. S. Van Gorden. Slogan, "The Voice of the Wilderness." Daily ex Sun, 10:30 am, 12:15 pm, 0:15, weather, markets; 6:30, code. Fri, Sun, 7:30 pm. Central.

**WTAR**, Norfolk, Va. 261 meters. 100 watts. Reliance Electric Co. Announcer, J. K. Bohannon. Slogan, "Down in Old Virginia." Daily ex Sun, 5:55 pm, weather, tide reports. Tues, 7:30 pm, weekly review; 8-9, musical program. Eastern.

**WTAS**, Elgin, Ill. 302.8 meters. 1,000 watts. Charles E. Erhstein. Slogan, "Willie, Tommie, Annie and Sammie." Daily ex Sun, Thurs, 8-11 pm. Thurs, Sun, 7-12, music. Central daylight.

**WTAT**, Boston, Mass. 244 meters. 100 watts. Edison Elec. Illuminating Co. (portable). Announcer, Leon B. Bentz.

**WTAU**, Tecumseh, Neb. 242 meters. 10 watts. Ruegg Battery & Elec. Co. Tues, 8:30 pm. Central.

**WTAW**, College Station, Tex. 270 meters. 250 watts. Agricultural and Mechanical College of Texas. Announcer, J. F. Longley. Wed, Fri, 8 pm. Sun, 11 am, special baseball games. Central.

**WTAX**, Streator, Ill. 231 meters. 50 watts. Williams Hardware Co., Radio Division. Announcer, N. B. Williams. Slogan, "Tappa Kegga Nalls." Mon, 9-12 midnight. Central.

**WTBZ**, Lambertville, N. J. 261 meters. 15 watts. Thomas J. McGuffee. Mon, 8-10 pm, music. Eastern.

**WTG**, Manhattan, Kan. 273 meters. 50 watts. Kan. State Agril. Colloge. Daily, 9:55 am, 4 pm, weather. Central.

**WTHS**, Flint, Mich. 218.8 meters. 250 watts. Flint Senior H. S.

**WTC**, Hartford, Conn. 348.6 meters. 500 watts. The Travelers Insurance Company. Slogan, "The Insurance City." Tues, Fri, 8-10:30. Eastern daylight.

**WWAQ**, Philadelphia, Pa. 250 meters. 100 watts. Wright & Wright, Inc. Announcer, H. W. Feuhl. Slogan, "Penn City Station." Mon, 7:45 pm. Thurs, 7:45 pm. Eastern.

**WWAE**, Joliet, Ill. 242 meters. 500 watts. Lawrence J. Crowley. Alamo Ball Room. Announcer, James J. Crowley.

**WWAO**, Houghton, Mich. 263 meters. 250 watts. Michigan College of Mines. Announcer, M. G. Sateren. Daily ex Sun, 12-12:45 pm, music, news, weather, markets. Tues, Thurs, 8-10 pm, concert. Central.

**WWI**, Dearborn, Mich. 366 meters. 500 watts. Ford Motor Co. Wed, 8-10 pm, music, lectures. Eastern.

**WWJ**, Detroit, Mich. 352.7 meters. 500 watts. The Detroit News. Announcers, E. L. Tyson, C. W. Kirby. Daily ex Sun, 8-8:30 am, setting-up exercises; 9:30-9:45, household hints; 10:25-10:30, weather; 11:55-12, time; 12:05-12:45 pm, music; 3-3:55, music; 3:55-4-6, baseball scores, markets. Daily ex Sat, Sun, 6-7, dinner concert; 8, music. Mon, Wed, Fri, 9 pm, orchestra. Wed, 10 pm, orchestra. Sun, 11 am, church service; 2-3 pm, concert; 7:20, Rosy and his Gang; 9:15, organ. Eastern.

**WWL**, New Orleans, La. 275 meters. 100 watts. Loyola Univ. Announcer, O. L. Abell. Sat, 8-9 pm. Central.

### Argentina

**B-1**, Buenos Aires, Argentina. Francisco J. Brusa.

**LOR**, Buenos Aires, Argentina. 350-410 meters. 500 watts. Cia Radio Argentina.

**LOV**, Buenos Aires, Argentina. 350 meters. 1,000 watts. Francisco J. Brusa.

**LOW**, Buenos Aires, Argentina. 325 meters. 500 watts. Grand Splendid Theater. Announcer, Luis Diaz.

**LX**, Buenos Aires, Argentina. 375 meters. Radio C. Gutra.

**LOY**, Buenos Aires, Argentina. Radio Nacional. Announcer, Osvaldo P. Valla.

**TCR**, Buenos Aires, Argentina. 325-300 meters. 100 watts. Francisco J. Brusa.

### Australia

**2AB**, Melbourne, Australia. 480 meters. 250 watts. Associated Radio Co., Ltd.

**2BL**, Sydney, Australia. 380 meters. 500 watts. Broadcasters Limited.

**2FC**, Sydney, Australia. 1,100 meters. 5,000 watts. Farmer & Co., Ltd.

**6WF**, Perth, Australia. 1,250 meters. 500 watts. West Australian Farmers, Ltd.

### Brazil

**SPE**, Rio de Janeiro, Brazil. 250 meters. 500 watts. Dept. of National Telegraphs.

**Bahia**, Brazil. Radio Sociedade do Bahia.

**Bollo Horizonte**, Brazil. 500 watts. National Telegraph Service.

**Rio de Janeiro**, Brazil. 6,000 watts. Marconi (Radio Sociedade do Rio de Janeiro).

**Sao Paulo**, Brazil. 10,000 watts. Radio Bondelrantes.

### Canada

(The power ratings of the following Canadian stations are given in "input" watts, rather than watts output—the method in which American stations are rated. A 2000-watt Canadian station is thus approximately equivalent to a 500-watt American station.)

**CFAC**, Calgary, Alta., Can. 434.5 meters. 2,000 watts. Calgary Herald. Announcer, Fred Carleton. Daily ex Sun, 1-11 pm, news, markets, music. Daily ex Sat, Sun, 3:30-4:30 pm, music. Tues, 7:45-8:15 pm, music. Wed, 7:45-8:15 pm, music. Thurs, 8-11 pm, music. (CNRC). Fridays, 7-8 pm, organ; 11-12, test. Sun, 11 am, 2:30 pm, church services. Mountain.

**CFCA**, Toronto, Ont., Can. 358.0 meters. 2,000 watts. Toronto Star. Announcer, E. J. Bowers. Daily ex Sun, 12 m, weather, news, stocks; 5:30-6 pm, news, bedtime story. Daily ex Sun, Fri, 8-9 pm, Thurs, 10-11:30 pm, popular program. Fri, 8-9 pm, (CNHT) Sun, 11 am, 7 pm, church services. Eastern.

**CFCE**, Montreal, P. Q., Can. 410.7 meters. 2,000 watts. Marconi Wireless Telg. Co., Ltd. Announcer, C. Waller Darling. Daily ex Sun, 1-1:30 pm, stocks, music. Mon, Fri, 7:30-8 pm, 8-9, reports, music. Eastern.

**CFCH**, Iroquois Falls, Ont., Can. 439.7 meters. 250 watts. Albith Power & Paper Co., Ltd. Slogan, "The Call of the North." Experimental station for forest fire.

**CFCK**, Edmonton, Alta., Can. 510.9 meters. 250 watts. Radio Supply Co., Ltd. Daily ex Sun, 4-5 pm. Wed, 9-10:30 pm. Sun, 4-5:30 pm. Mountain.

**CFCL**, Victoria, B. C., Can. 320.5 meters. 500 watts. Centennial Methodist church.

**CFCN**, Calgary, Alta., Can. 331.5 meters. 1,000 watts. W. W. Grant. Slogan, "Voice of the Prairies." Thurs, 8 pm. Sat, 10-12 pm, dance music. Sun, 11 am, church service. Test program, Sat alter midnight. Mountain.

**CFCO**, Vancouver, B. C., Can. 410.7 meters. 40 watts. Balle Specialties, Ltd.

**CFCR**, Sudbury, Ont., Can. 410 meters. 200 watts. Lauriat's Air Service, Ltd. Off the air.

**CFCT**, Victoria, B. C., Can. 329.5 meters. 500 watts. Victoria Holy Temple. Slogan, "Follow the Bliss to Victoria." "Canada's First." Tues, Thurs, 7-8 pm, music. Wed, Fri, 8-9:30 pm, concert. Sun, 11 am, 7:30 pm, church services. Pacific.

**CFCU**, Hamilton, Ont., Can. 316.7 meters. 500 watts. Jack V. Elliot, Ltd.

**CFCV**, London, Ont., Can. 320.5 meters. 600 watts. London Radio Co. Irregular schedule.

**CFCW**, Toronto, Ont., Can. 320.5 meters. 600 watts. London Radio Co. Irregular schedule.

**CFCA**, Toronto, Ont., Can. 358.0 meters. 2,000 watts. Toronto Star. Announcer, E. J. Bowers. Daily ex Sun, 12 m, weather, news, stocks; 5:30-6 pm, news, bedtime story. Daily ex Sun, Fri, 8-9 pm, Thurs, 10-11:30 pm, popular program. Fri, 8-9 pm, (CNHT) Sun, 11 am, 7 pm, church services. Eastern.

**CFCE**, Montreal, P. Q., Can. 410.7 meters. 2,000 watts. Marconi Wireless Telg. Co., Ltd. Announcer, C. Waller Darling. Daily ex Sun, 1-1:30 pm, stocks, music. Mon, Fri, 7:30-8 pm, 8-9, reports, music. Eastern.

**CFCH**, Iroquois Falls, Ont., Can. 439.7 meters. 250 watts. Albith Power & Paper Co., Ltd. Slogan, "The Call of the North." Experimental station for forest fire.

**CFCK**, Edmonton, Alta., Can. 510.9 meters. 250 watts. Radio Supply Co., Ltd. Daily ex Sun, 4-5 pm. Wed, 9-10:30 pm. Sun, 4-5:30 pm. Mountain.

**CFCL**, Victoria, B. C., Can. 320.5 meters. 500 watts. Centennial Methodist church.

**CFCN**, Calgary, Alta., Can. 331.5 meters. 1,000 watts. W. W. Grant. Slogan, "Voice of the Prairies." Thurs, 8 pm. Sat, 10-12 pm, dance music. Sun, 11 am, church service. Test program, Sat alter midnight. Mountain.

**CFCO**, Vancouver, B. C., Can. 410.7 meters. 40 watts. Balle Specialties, Ltd.

**CFCR**, Sudbury, Ont., Can. 410 meters. 200 watts. Lauriat's Air Service, Ltd. Off the air.

**CFCT**, Victoria, B. C., Can. 329.5 meters. 500 watts. Victoria Holy Temple. Slogan, "Follow the Bliss to Victoria." "Canada's First." Tues, Thurs, 7-8 pm, music. Wed, Fri, 8-9:30 pm, concert. Sun, 11 am, 7:30 pm, church services. Pacific.

**CFCU**, Hamilton, Ont., Can. 316.7 meters. 500 watts. Jack V. Elliot, Ltd.

**CFCV**, London, Ont., Can. 320.5 meters. 600 watts. London Radio Co. Irregular schedule.

**CFCW**, Toronto, Ont., Can. 320.5 meters. 600 watts. London Radio Co. Irregular schedule.

**CFCA**, Toronto, Ont., Can. 358.0 meters. 2,000 watts. Toronto Star. Announcer, E. J. Bowers. Daily ex Sun, 12 m, weather, news, stocks; 5:30-6 pm, news, bedtime story. Daily ex Sun, Fri, 8-9 pm, Thurs, 10-11:30 pm, popular program. Fri, 8-9 pm, (CNHT) Sun, 11 am, 7 pm, church services. Eastern.

**CFCE**, Montreal, P. Q., Can. 410.7 meters. 2,000 watts. Marconi Wireless Telg. Co., Ltd. Announcer, C. Waller Darling. Daily ex Sun, 1-1:30 pm, stocks, music. Mon, Fri, 7:30-8 pm, 8-9, reports, music. Eastern.

**CFCH**, Iroquois Falls, Ont., Can. 439.7 meters. 250 watts. Albith Power & Paper Co., Ltd. Slogan, "The Call of the North." Experimental station for forest fire.

**CFCK**, Edmonton, Alta., Can. 510.9 meters. 250 watts. Radio Supply Co., Ltd. Daily ex Sun, 4-5 pm. Wed, 9-10:30 pm. Sun, 4-5:30 pm. Mountain.

**CFCL**, Victoria, B. C., Can. 320.5 meters. 500 watts. Centennial Methodist church.

**CFCN**, Calgary, Alta., Can. 331.5 meters. 1,000 watts. W. W. Grant. Slogan, "Voice of the Prairies." Thurs, 8 pm. Sat, 10-12 pm, dance music. Sun, 11 am, church service. Test program, Sat alter midnight. Mountain.

**CFCO**, Vancouver, B. C., Can. 410.7 meters. 40 watts. Balle Specialties, Ltd.

**CFCR**, Sudbury, Ont., Can. 410 meters. 200 watts. Lauriat's Air Service, Ltd. Off the air.

**CFCT**, Victoria, B. C., Can. 329.5 meters. 500 watts. Victoria Holy Temple. Slogan, "Follow the Bliss to Victoria." "Canada's First." Tues, Thurs, 7-8 pm, music. Wed, Fri, 8-9:30 pm, concert. Sun, 11 am, 7:30 pm, church services. Pacific.

**CFCU**, Hamilton, Ont., Can. 316.7 meters. 500 watts. Jack V. Elliot, Ltd.

**CFCV**, London, Ont., Can. 320.5 meters. 600 watts. London Radio Co. Irregular schedule.

**CFCW**, Toronto, Ont., Can. 320.5 meters. 600 watts. London Radio Co. Irregular schedule.

**CFCA**, Toronto, Ont., Can. 358.0 meters. 2,000 watts. Toronto Star. Announcer, E. J. Bowers. Daily ex Sun, 12 m, weather, news, stocks; 5:30-6 pm, news, bedtime story. Daily ex Sun, Fri, 8-9 pm, Thurs, 10-11:30 pm, popular program. Fri, 8-9 pm, (CNHT) Sun, 11 am, 7 pm, church services. Eastern.

**CFCE**, Montreal, P. Q., Can. 410.7 meters. 2,000 watts. Marconi Wireless Telg. Co., Ltd. Announcer, C. Waller Darling. Daily ex Sun, 1-1:30 pm, stocks, music. Mon, Fri, 7:30-8 pm, 8-9, reports, music. Eastern.

**CFCH**, Iroquois Falls, Ont., Can. 439.7 meters. 250 watts. Albith Power & Paper Co., Ltd. Slogan, "The Call of the North." Experimental station for forest fire.

**CFCK**, Edmonton, Alta., Can. 510.9 meters. 250 watts. Radio Supply Co., Ltd. Daily ex Sun, 4-5 pm. Wed, 9-10:30 pm. Sun, 4-5:30 pm. Mountain.

**CFCL**, Victoria, B. C., Can. 320.5 meters. 500 watts. Centennial Methodist church.

**CFCN**, Calgary, Alta., Can. 331.5 meters. 1,000 watts. W. W. Grant. Slogan, "Voice of the Prairies." Thurs, 8 pm. Sat, 10-12 pm, dance music. Sun, 11 am, church service. Test program, Sat alter midnight. Mountain.

**CFCO**, Vancouver, B. C., Can. 410.7 meters. 40 watts. Balle Specialties, Ltd.

**CFCR**, Sudbury, Ont., Can. 410 meters. 200 watts. Lauriat's Air Service, Ltd. Off the air.

**CFCT**, Victoria, B. C., Can. 329.5 meters. 500 watts. Victoria Holy Temple. Slogan, "Follow the Bliss to Victoria." "Canada's First." Tues, Thurs, 7-8 pm, music. Wed, Fri, 8-9:30 pm, concert. Sun, 11 am, 7:30 pm, church services. Pacific.

**CFCU**, Hamilton, Ont., Can. 316.7 meters. 500 watts. Jack V. Elliot, Ltd.

**CFCV**, London, Ont., Can. 320.5 meters. 600 watts. London Radio Co. Irregular schedule.

**CFCW**, Toronto, Ont., Can. 320.5 meters. 600 watts. London Radio Co. Irregular schedule.

**CFCA**, Toronto, Ont., Can. 358.0 meters. 2,000 watts. Toronto Star. Announcer, E. J. Bowers. Daily ex Sun, 12 m, weather, news, stocks; 5:30-6 pm, news, bedtime story. Daily ex Sun, Fri, 8-9 pm, Thurs, 10-11:30 pm, popular program. Fri, 8-9 pm, (CNHT) Sun, 11 am, 7 pm, church services



**Prest-O-Lite**

**RADIO CHART**

Voltage of Tubes	No. of Tubes	Type of Tubes (see foot-note)	Total Rated Amperes Drain	Recommended Prest-O-Lite "A" Batteries		Recommended Prest-O-Lite "B" Batteries	
				Order by following Types	Days between Charge	See Manufacturer's Specified Voltage	Order by following Types
5-Volt Tubes <small>C-300 and UV-200 are interchangeable C-301A, DV-2 and UV-201A are interchangeable</small>	1	UV-200	1	69 WHR OR 67 WHR	22 16	22½-24	One 24 XRR
	2	UV-201A	½	67 WHR	33		45-48
	2	1 UV-200 1 UV-201A	1¼	611 WHR OR 69 WHR	22 17	90-96	
	3	UV-201A	¾	69 WHR OR 67 WHR	29 22		45-48
	3	1 UV-200 2 UV-201A	1½	611 RHR OR 69 WHR	21 14	67-72	
	4	UV-201A	1	69 WHR OR 67 WHR	22 16		90-96
	4	1 UV-200 3 UV-201A	1¾	613 RHR OR 611 WHR	22 15	45-48	
	5	UV-201A	1¼	611 WHR OR 69 WHR	22 17		67-72
	5	1 UV-200 4 UV-201A	2	613 RHR OR 611 WHR	19 13	90-96	
	6	UV-201A	1½	611 RHR OR 69 WHR	21 14		45-48
	8	UV-201A	2	69 KPR OR 67 KPR	21 15	67-72 90-96	
	For sets using current at a rate higher than 2 amperes.			2¼	69 KRL OR 67 KPR		22 13
			2½	69 KRL OR 69 KPR	19 16		
3-Volt Tubes	1	UV-199 C-299 DV-1 DV-3	.06	One 43 MRR	100	22½-24 45-48 45-48 67-72 90-96	Use same XRR and LRR combinations as above for same voltage.
	2		.12		50		
	3		.18		33		
	4		.24		25		
	5		.30		40		
	6		.36		33		
1.1-Volt Tubes	1	WD-11 C-11 C-12 215A 215N	¼	One 23 MRR Twin	48	22½-24 45-48 45-48 67-72 90-96	Use same XRR and LRR combinations as above for same voltage.
	2		½		23		
	3		¾		32		
	4		1		23		
	5		1¼		29		
	6		1½		23		

Copyright, 1925  
The Prest-O-Lite Co., Inc.



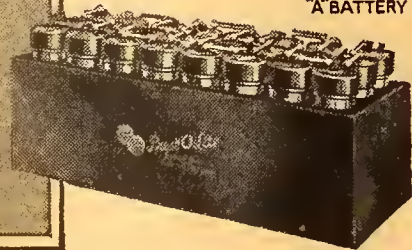
69 KPR "A" BATTERY



69 WHR "A" BATTERY



23 MRR TWIN "A" BATTERY



48 LRR "A" BATTERY



Write today for this free booklet

Whether you have a one-tube set or most advanced multi-tube outfit, you'll find a fund of interesting information in our booklet, "How to fit a storage battery to your set—and how to charge it."

This booklet gives you the complete Prest-O-Lite Radio Chart—technically accurate recommendations covering both "A" and "B" storage batteries for every type of set.

In addition, there is much vitally important data on battery care and upkeep—information that any radio fan will find of real value in keeping his set at its maximum efficiency. Write us at Indianapolis, Ind., for your copy right now.

## How often should you recharge radio storage batteries?

DON'T wait until you've bought batteries and then learn by bitter experience that they are running down every few days.

Before you buy, let the Prest-O-Lite Radio Chart help you select batteries that fit your set and guarantee ample current and convenient intervals between rechargings.

The master chart, illustrated above, shows you how to select "A" Batteries for all sets. Use either of the two sizes of Prest-O-Lite Batteries recommended for your set, depending on the days' service you want between rechargings (based on the average use of your set of three hours a day). You will find the larger capacity battery more desirable unless facilities for frequent and easy recharging are provided. Select "B" Batteries to

give the voltage recommended for your set. Prest-O-Lite "B" Batteries serve two to four months without recharging.

Prest-O-Lite Batteries are designed expressly to supply the unvarying current your set must have to develop maximum distance, clarity and volume. Special structure plates and high porosity separators are features that help these splendid batteries get the most out of your set.

Prest-O-Lite Batteries offer you truly remarkable savings. Though standard in every respect, they are priced as low as \$4.75 and up. They last for years and are all easily rechargeable. See them at your dealer's or write for our booklet, "How to fit a storage battery to your set—and how to charge it."

THE PREST-O-LITE CO., INC., INDIANAPOLIS, IND.  
New York San Francisco

In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto, Ont.

**Prest-O-Lite**

