New Call Book and Log; AC-7-Tube Set

Radio Digest

PROGRAMS
Illustrated

DECEMBER, 1927

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Radio Digest Publishing Co.

TWENTY-FIVE CENTS

Official
Call Book
and Log

Complete This Issue

Milton J. Cross and Grand Opera; Radio Log of Glory; M-G-M on the Air; Sam Pickard's Rise; New Circuit; How of Broadcasting; International Conference; Phantom Orchestra
For the radio set owner's Christmas—Balkite

If it's the owner of a radio set to whom you want to make a gift, that simplifies the problem of what to give. For there's one thing the radio set owner is sure to need—up-to-date power equipment. Give him Balkite.

When you give Balkite you give the best radio has to offer. Noiseless battery charging, successful light socket "B" power, trickle charging, and now—most important of all—Balkite AB, a complete unit containing no battery in any form, and supplying radio power from the light socket. The great advances in radio power have been made by Balkite.

When you give Balkite you give permanent equipment. The first Balkite "B," after five years of service, is now a little battered in appearance, but in performance is as good as new and will probably be so for years to come.

When you give Balkite you give equipment that has stood the test of time. The Balkite principle of electrolytic rectification today is standard on the signal systems of most American as well as European and Oriental railroads. Over 2,000,000 Balkite Power Units now in use in radio and in a score of industries are based upon it. Increasing recognition of its worth is seen in the fact that Balkite now has three licensees in the radio field alone—Gould, Vesta and USL.

Whatever the type of set, whatever type of power equipment is wanted (with batteries or without), Balkite has it. Let your dealer advise you. He will tell you what Balkite equipment any set owner should have.

FANSTEEL PRODUCTS COMPANY, INC., NORTH CHICAGO, ILLINOIS

Balkite Radio Power Units

Chicago Civic Opera Balkite Hour
Every Thursday Evening
Now Balkite brings you an entire season of one of the world's great escopera companies, Balkite Hour, Thursday Evenings, ten o'clock Eastern Standard time. Over stations WJR, WSB, WEN, KDKA, KFRA, WGN, WMAG, WBBM, WHAM, WJR, WLW, KSTP, WOC, WOW, WCCO, WHO, WDAR.

Licenses for Germany:
Siemens & Halske, A. G., Wernerwerk M
Siemensstadt, Berlin

Sale licensees in the United Kingdom:
Willesden, London, N.W. 10
Success and Big Money Were for Others, Not Me

Believe It or Not, That Was What I Thought of Myself—Just Twelve Short Months Ago

I'm telling you, just one year ago I'd never seen a hundred dollar bill in my life outside of a bank. You'd think I'm kidding you if you saw the fine radio business I own now. But it's gospel truth. Just twelve months ago I was only a poorly paid clerk, and I thought success had passed me by.

All my crowd in those days—the fellows I met in the pool hall and at the bowling-alleys—said a fellow had to have money to make money. They claimed there was no chance for a fellow whose family didn't have money or some business to start him out in. And I'd decided they must be right. I guess at that time I had just about given up hope. I thought there must be some kind of a mystery about making a lot of money. I figured I just didn't have an even chance to grab off success and big money. But I was due for a big awakening.

Did I get it? Oh, boy! Read my story and judge for yourself.

It all started one day last summer, when Helen, the girl I wanted to marry, was leaving for the seashore. Of course I went to the station to see her off.

As I stepped onto the station platform Bob Oakes and Wilmer Pratt had just rolled up in their cars. They climbed out with their arms full of bundles—books, expensive candy, flowers, all sorts of things. Well sir, I wished I could have swallowed in one gulp the little box of drugstore candy I had bought for Helen—it certainly looked pitiful beside all that stuff.

We three stood there talking to Helen until train-time, while Helen's mother looked me up and down. Like any young girl's mother would, she had my financial standing already set up within thirty-four cents. Cheap suit, cheap hat, she took it all in.

And you could see on her face all the time what a lot of nerve she thought I had to give Bob and Wilmer a run for Helen.

Well, to make a long story short, Helen was nice, but her mother stood there looking scornful whenever she glanced my way, and she hardly spoke to me at all. I felt about as welcome as the measles, and at unceremonious as the itch.

And Bob and Wilmer were exchanging sly grins behind my back—I caught them once or twice. They didn't take any trouble to spare my feelings—I guess it just suited them to see me sweat. I began to wish that I and my cheap suit and cheap hat could sink through the floor, but I stayed there and stuck it out.

When Helen's train finally left, I slunk home, ashamed and humiliated. I walked down quiet side streets so nobody would see me. I went upstairs to my room and sat there with a lump in my throat, getting hotter and hotter and more ashamed of myself. Then I began to see red and redden.

Finally I jumped up and banged the table. "I'll show 'em," I growled through clenched teeth. "There must be some way for a man to make real money!" An idea suddenly flashed through my head.

Hardly I began thumbing the pages of a magazine on the table, searching for an advertisement that I'd seen many times, but passed up without thinking, an advertisement telling of big opportunities for trained men to succeed in the great new Radio field. With the advertisement was a coupon offering a big free book full of information. I sent the coupon in, and in a few days received a handsome 64-page book, printed in two colors, telling all about the opportunities in the Radio field and how a man can prepare quickly and easily at home to take advantage of these opportunities. I read the book carefully and when I finished it I made my decision.

What's happened in the twelve months since that day, as I've already told you, seems almost like a dream to me now. For to both of those twelve months, I've had a Radio business of my own! At first, of course, I started it as a little proposition on the side, under the guidance of the National Radio Institute, the outfit that gave me my Radio training. It wasn't long before I was getting so much to do in the Radio line that I quit my customary little clerical job, and devoted my full time to my Radio business.

Since that time I've gone right on up, always under the watchful guidance of my friends at the National Radio Institute. They would have given me just as much help, too, if I had wanted to follow some other line of Radio besides building my own retail business—such as broadcasting, manufacturing, experimenting, selling, or any of the score of lines they prepare you for. And to think that until that day I sent for their eye-opening book, I'd been whiling "I never had a chance!"

Now I'm making real money, own a good car, stand high in my town, can borrow money at the bank any time I might want it. I'm getting some real fun and enjoyment out of life, not just climbing from pay-day to pay-day.

And—just listen to this! Bob was in my place only the other day, and asked me for a job! Wilmer is still getting along pretty well on his father's money, but he'll trade places with me any day.

And Helen? Well—the honey moon will be spent in Honolulu, starting two months from tomorrow! Here's a real tip. Think it over—are you satisfied? Are you making enough money, at work that you like?

This new Radio game is a live-wire field of golden rewards. The work in any of the 20 different lines of Radio, is fascinating, absorbing, well paid. The National Radio Institute—oldest and largest Radio home-study school in the world—will train you inexpensively in your own home to know Radio from A to Z and to increase your earnings in the Radio field.

Take another tip—No matter what your plans are, no matter how much or how little you know about Radio—clip the coupon below and look their free book over. It is filled with interesting facts, figures, and photos, and the information it will give you is worth a few minutes of anybody's time. You will pay yourself under no obligation—the book is free, and is gladly sent to anyone who wants to know about Radio.

Just Address

J. E. SMITH, President
National Radio Institute
Dept. P-96, Washington, D. C.
For These Four Reasons

Arcturize Your Present Radio Set

Enjoy all the Benefits of A-C Power from Your Light Socket with--

Arcturus A-C Tubes

DETECTOR :: AMPLIFIER :: POWER

Arcturus A-C Tubes Have 4 Outstanding Features:

1. Exceptional tone quality,
2. Readily adaptable to all circuits using standard sockets.
3. Perfect operation under all normal line voltage variations.
4. Free from hum.

If you have been awaiting the perfection of A-C Tubes before modernizing your present set, send at once for detailed information on the operating characteristics of Arcturus A-C Tubes.

Ask Your Dealer

It doesn't take long or cost much to install Arcturus A-C Tubes in your present set. Your dealer's service man can get engineering instructions for the few simple changes in wiring that are necessary. Always remember that in changing over your set for A-C operation, Arcturus A-C Tubes require the least changes in wiring.

For the Technical Man--

The unique advantages which we claim for Arcturus A-C Tubes are directly traceable to unique features of construction and exceptional operating characteristics.

The exceptional long life of Arcturus Tubes is due to the enormous electron supply resulting from the heater operating at a low temperature.

The highly efficient cathode is responsible for the unusual sensitivity of Arcturus A-C Tubes, and for the exceptional volume and tone quality which their use insures. This cathode produces: 1. A high amplification factor ($10.5$).
2. A low plate impedance (9,000 ohms).
3. A high mutual conductance (1100 micromhos).

Since the base of the Arcturus A-C Tube is of the standard four prong type, no additional terminals are required, making Arcturus Tubes adaptable to existing circuits with all the simplicity of D-C tubes. No center taps or balancing are required. A common toy transformer may be used. Filament voltage is the same (15 volts) for all types—detector, amplifier and power.

The freedom from hum which is one of the most important features of Arcturus A-C Tubes is due to the use of low A-C current, only 0.35 ampere. (Disturbing electro-magnetic fields are proportional to alternating current—not voltage.) Arcturus Tubes in all stages are four element tubes with indirectly heated cathodes.

Normal variations in line voltage do not affect the operation of Arcturus A-C Tubes. The amplification factor is practically constant over a wide range of filament voltages—13.0 to 18.0 volts.

The use of a heavy carbon filament enables Arcturus A-C Tubes to withstand even an unusual overload.

ARCTURUS RADIO COMPANY, INC.
259 Sherman Avenue, Newark, N. J.
Dear Mrs. "A. A." of Montreal: This is Mr. Cross, and I do hope that you are not disappointed. I can imagine your surprise at this fulsome answer to your rather bashful note to me of a few days ago. I love the naive way in which you say, "Judging from his unusual manner of announcing, one would imagine him to be a man of more refinement, culture and education than the majority of announcers."

You have said it better than I dare, for I should risk my soul for all time to come to make comparisons that other announcers might consider odious. But here he is—full page of him—and, bless your dear heart, he needs it for to tell the truth he has ceased to make a bowing acquaintance with the seals at 204, quite some time ago, I am told.

Of course you hear him every Thursday night. I do, and I'll admit I'd as soon hear Milton Cross as Tito Schipa. Isn't that a terrible confession for a professed lover of the opera! But Mr. Cross is such a gentleman! His language is so well chosen, his voice so perfectly modulated, and he seems so sympathetic with the characters he describes. Don't you simply adore him!

You know, Mrs. A., it is perfectly wonderful the way he commutes between Chicago and New York. Imagine having to travel almost 2,000 miles every week just to announce one program over the Radio! It is simply tremendous.

Mr. Stone of the National Broadcasting company, sent me several pictures of Mr. Cross and this, he said, he liked the best of all. No, dear, I'm so sorry to disappoint you but really I never have met Mr. Cross in person. We all cherish such splendid illusions about our beloved announcers, and I dare say, it is almost easy to actually meet them, I have had one or two experiences and prefer to admire them from a distance.

Mr. Stone doesn't like this picture, I think it is marvelous, don't you? And there's just the way he sits at the opera when you hear him tell the story of what has transpired, and what we are to expect at this picture next Thursday night and fancy him sitting there just like that while you hear him tell.

 Doesn't he look mischievous? Yes, he has blue eyes and brown hair. Oh, and a darling of a wife and baby girl! He is a graduate of the Damrosch Institute of Musical Art and has quite a reputation as a singer, as you may know. He was born in New York, and I believe he is of the Presbyterian faith.

Faithfully yours,

Marcella
SHEPHERDS HEAR “ANGELIC VOICES”

Buddies in the Wyoming Ranch write KOA Joy of Hearing Music From the Sky

“We got fed up with scenery heeding sheep in the Wyoming hills. So a letter to the director of Station KOA, Denver, recently. We generally mean the herder, his dog and his pony. But I've got a bunch of heaving sheep and we get along fine now that we can hear you by radio.

'Sheep' has always been going alone tending sheep just about the same as Adam and Eve and kicked out of Eden. And nobody ever did anything to make it right until radio was discovered. All we used to hear was lala blathering, damn answering, wool and sometimes a dog barking or a pony whinnying.

'So wonder shepherds always were kind of plagued when they came into a village and couldn't seem to make friends with folks. We ain't queer but being along with yourself makes it hard to act like other folks when you meet up with them at the stores and post office.

'Lucile has must be invested for shepherds. We look up at the stars where the sheep have settled down for the night and we hear거든, we hear we have the best thing that seems to us. It is true,-thanks to the Radio. Oh, you never could see how interested we are hearing the lady who tells how the saute is cooking. We get a whole lot of swell names to the new belly, Hap, but we're beginning to be surprised what a difference it makes."

CONTENTS

Radio Digest—Illustrated

616 Radio Calls

Newfound Meigs County, GA. Mr. Rutledge writes:

PAGING CUPID—Lucky Brokers only Interested; Two New Broadcasters from Toronto Awaits St. Valentine's Day Forced to Disappoint Bachelor.

CAGY YOU imagine a whole staff of any Radio station taking a letter from anything that since KOFR sent that letter challenging any new bearer to a proposal for single-"blessedness" homes, little lads and lasses, has equaled to the most business a broker has seen in print. She entire staff of six lucky—Wee-Wee brokers and a very pretty bear girl, named Peggy O'Neal, will have doubled and tripled the business in KOFR. It's just impossible to keep attractive announcements away from a territory—Charles. I think you have a rival for Caggy World's affections. Listen to the enthusiastic way Caggy writes about her. And when her annual with us at St. Valentine's since we've been in business—

The listing above is roughly correlated to the radio station's call letters as shown on the cover:

Received: 1927-11-04

(Continued on page 24)
SHERMAN'S WLS ORCHESTRA LEADS

COMMISSION MIGHT TURN HARD BOILED
SAM PICKARD HINTS FORCE FOR DISTURBERS

Tells R. M. A. Wishes of Majority
Will Prevail—Law Must
Be Obeyed by All

By Sam Pickard
Member of Federal Radio Commission

THIS month broadcasting faces the test of weather. Summer allocations have worked well. Listeners have been satisfied with local reception. Summer allocations indicate the desire to deliver to many of the local stations to this end, the commission strength ready to apply fully the interest, convenience or necessity clause of the Radio Act. In the minds of the Radio commissioners it is a question of whether or not the majority of listeners actually want any local service stations to sacrifice power, time privileges or favorable wave lengths in the interest of better reception.

The harsh, stiff-armed tactics are necessary to reduce this interference and listeners indicate the desire to sacrifice of many of the local stations to this end, the commission stands ready to apply fully the interest, convenience or necessity clause of the Radio Act. In the minds of the Radio commissioners it is a question of whether or not the majority of listeners actually want any local service stations to sacrifice power, time privileges or favorable wave lengths in the interest of better reception.

If hard-locked, stiff-armed tactics are necessary to reduce this interference and listeners indicate the desire to sacrifice of many of the local stations to this end, the commission stands ready to apply fully the interest, convenience or necessity clause of the Radio Act. In the minds of the Radio commissioners it is a question of whether or not the majority of listeners actually want any local service stations to sacrifice power, time privileges or favorable wave lengths in the interest of better reception.

Silent Night Abandoned by Chicago Broadcasters to Prevent Time Loss

Commission Assigns WHT Wave to WHAZ for Monday Night—Awakes Other Stations to Act Against Further Encroachment

A SOLUTION of Chicago's silent night has been brought about by the gradual elimination of silent nights throughout the United States. WRAI, Baltimore, WHAS, Louisville, WHO, Des Moines, WJWD, Cincinnati, and WOW, Omaha, are only a few of the stations which have eliminated their service to include a seven day broadcasting week. Among the Chicago broadcasters KXV has stood alone for three years in serving Chicago broadcasters to a way with the silent night. They have always pointed out that the Radio Department in Winter would assign Chicago wave lengths to other stations on Monday nights. Chicago stations were startled into action when they learned that the Radio Commission had assigned the WIBO-WHT-WORD wave to WHAZ on Monday nights and was planning to release other Chicago wave lengths for that night. The broadcasters association immediately agreed to discontinue Chicago's silent night.

The more important points of the Chicago Broadcasters' statement follow:

"Chicago's silent night is a survivor of an era when Radio broadcasting was in its experimental stage and Radio receivers were deficient in selectivity."

"Chicago broadcasters have reached the conclusion that the tight agreement herebefore observed by Chicago broadcasters should be terminated. They are forced to continue this conclusion by many reasons:

1. The federal Radio commission has actually begun to assign Chicago wave lengths to other stations for use on Monday night.

2. According to information received from the Federal Radio commission, great pressure is being brought to bear by outside stations for such assignments and the rights of Chicago stations to continued use of their wave lengths are thus being placed in jeopardy.

3. Chicago's important as a Radio center is being diminished by virtue of the fact (Continued on page 29)

NOMINATE THESE TWO FOR TROPHY

ALL set for the big contest. Both of these organizations are heard over the National Broadcasting company. There should be a full quota of entries in the First National outfit shown at the top. Somewhere along the way it appears the photographer lost four members. Perhaps they are delayed by anxious friends offering them bollies and good wishes.

Below we have that justly distinguished group, the Chicago Symphony Orchestra, with Arno Arrigo, the conductor, in the center. There are some members missing, too. Perhaps they are similarly delayed. We shall see. At any rate do not forget to clip every ballot and make each one count.

WE DO love our Radio orchestra. As we say it with bollies, Radio Digest was all but weeped as a result of the recent public demand for the popularity contest by which beautiful and costly plaques are to be awarded to orchestras receiving the greatest number of votes in six districts divided among the United States.

Announcement was made in the November issue which appeared in some places on October 31. About November and the first votes began to come in. They came special bags from the post office.

In two weeks it raked a valuable whist-
PICTURING BROADCAST ACTIVITIES

"COME on you castanets," Captain Wm. J. Stannard, director of the U. S. A. band, seems to say, as the government musicians play Spanish airs for our Southern neighbors.

"WILDFLOWER," in Cadman's opera, "Sunset Trail," but her real name is Miss Lucile Fowler. She blazed in the KOA studio, Denver; yes, contralto, of course.

"HAIL! Hail! The gang's all here!" There they are! Those irrepressible twins, the Rayovac (for short)! Now they're hitting it up with Sir William Demarest (center), the new funny fellow of the Warner brothers films at KFWB, Hollywood.

Baltimore to Bergen, Norway, by Air! That's the hope of Miss Helene Bremer who expects her cello notes will reach that destination over the WBAL international program.

"THEY'RE off! Straight down the water course they cleave the blue, like blazing arrows and throw high a shower of frothing silver!" Probably something like that is being said by John F. Daniel, broadcasting the President's Cup regatta on the Potomac.

When Lynn Feal, WDAI, Nashville, sings "Cow Bells" the Holsteins and Jerseys give the farmers an extra quart if they are permitted to listen in.

There they are! Those irrepressible twins, the Rayovac (for short)! Now they're hitting it up with Sir William Demarest (center), the new funny fellow of the Warner brothers films at KFWB, Hollywood.

This is the way Wheeler Banner of the KGA Harmony Girls looks while scooping into the microphone at Spokane. Tune, look and listen! Can't you almost see the light money?
C. Giuseppe Di Benedetto, lyric tenor of NBC grand opera, and one of the organizers of this famous radio troupe.

Miss Johanna Cross, WLW organist, feels perfectly at home in this Hungarian costume because she was born in Hungary. Her name then was Naja Janka.

Wendell F. Loveless, director of WMBI, Moody Bible Institute station, is broadcasting cheer to foreign shut-ins in their own languages.

These dainty mountain warblers were discovered in a Tennessee wilderness, and brought to New York by a famous artist. They are Miss Mary Huntzinger (left) and Miss Marjorie Carpenter. They have been heard from several leading radio stations.

If you take a little milk," said A. D. Burke, professor in dairying at A. & M. college, Stillwater, Okla., "and beat up a few eggs," added E. E. Scholl ("KVOO," announced Dr. T. Martin) "and that makes ice cream," concluded J. C. Kositzky.

Mary Alice Cheney composes and sings her own songs for the Children's Hour at WSAI, Cincinnati. Children thank her with love letters.

Secretary Hoover found he couldn't get away for a recent speaking engagement, so employed a microphone to take his voice for him.

Now they are broadcasting billiard championship games for sports fans. Walter Cushen, 18-2 laundry world champion, in a game with Eric Hagenlecher, Ben Garrettson announcing progress over WCFL, Chicago.
Belated Ballots in Mail Robbery

However, They Were for Barnes and Pat Won Trophy Anyway—
Ward Takes Canadian Cup

PAT BARNESS has an additional set of ballots to his credit for the 1927 Gold Cup. They arrived in a sealed and rainproofed envelope, postmarked August 31 from Atchison, Kan. The name of the sender was Mrs. P. B. Pierce, 257 Division St., a letter explaining the delay, signed by the postmaster, reads as follows:

Pat Barnes, WHT, with his Gold Cup popularity vote, fourth annual award for most popular announcer.

"The accompanying first class matter was turned into this office by postoffice inspectors with a report that it was found by a section foreman along the railroad between Kearney and Neponset, Ill., evidently a depredation." Mail robbers tried to steal Pat Barnes' votes, but he won anyway!

The Final Tally
The total number of votes received by the leaders in the 1927 contest were as follows:

Pat Barnes, WHT... 374,505
Uncle Joe Frasern, KSO... 314,922
Henry Field, KXV... 193,786
Don Col, WHO... 82,389
Bill Day, WGN... 71,227
Billy Ward, announcer at CJIM Minneapolis, stole the silver cup for most popular Canadian announcer. His vote was 11,395.

Presentation ceremonies were conducted at the broadcasting booth in the Chicago Radio show, Oct. 14, and were broadcast by WHT. E. C. Bayser, publisher of Radio Digest, presented the gold cup to Pat Barnes and the silver cup to Uncle Joe Frasen. A moving picture of the event was made by International Newsreel, and shown throughout the country.

RADIO WAVES BORE MOUNTAIN DEPTHS
COLD rock to a depth of a half mile 3 feet is an obstacle to a forward rushing Radio wave, according to Dr. A. S. Eve, of Utah State University. A recent experiment in the Colorado Rockies, working through the bureau of mines, a test was made at that depth at Caribou, Co. "A musical contest at Denver came through somewhat muted," said Dr. Eve. "But not potential of its, Benson K. Pratt." Tests are being made to locate ore bodies by the Radio waves.

"Uncle Joe" Frasen, KSO, and his Silver Cup.

Teaches Radio Art

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"Uncle Joe" Frasen, KSO, and his Silver Cup.

Teaches Radio Art

Lumberjack Vums Road to Fortune

Learn's Ukulele in Canadian Forest—
Plays in London—Millionaire Makes Him Rich Offer

ROMANTIC case of good fortune resulting from broadcasting has just come to light in London. Some time ago a young Scots Canadian, Sydney Nesbitt, arrived in London from the Canadian backwoods with a toothbrush and a ukulele. Nesbitt was born in Edinburgh, but left for Canada as a boy and had been tinsmithing for several years. Coming back to London to perfect his craft Nesbitt landed an engagement at the Café de Paris, celebrated for its encores and Teddy Brown dance orchestra. Teddy Brown is an expert ukulele player and is patterned after Paul Whitehead build, turning the scales at well over 300 pounds. His hands are a popular feature of London Radio programs, and it was while engaged with him that Nesbitt was heard over the Radio by a Canadian millionaire. As a result he was engaged to return to Canada as a private entertainer, and to broadcast throughout Canada and the United States. If he desires, he may also become a partner in the millionaire's business.

"I reckon I'm the luckiest man in England today," said Mr. Nesbitt in an interview. "It will mean big money for me, and I owe it all to the Radio, and especially to one song, 'Scarborough,' which I broadended for the first time the night the millionaire heard it. The very next morning I had a letter from him, saying he liked my ukulele playing and asked me to go home with him as his private 'uke' player.

"I never dreamt that when I learned the 'uke' in the Canadian lumber camp round the camp fire that it would bring me such marvelous luck as this.

"The millionaire has requested that his name be disclosed, as he only wants one musical.

Recent reports from the patent records at Washington show that 4500 patents have been awarded for Radio devices.

Ladies Write Windjammer, WAMD

Originality, Plan of WGES Director

Originality, Plan of WGES Director

IN the interests of Radio transmission, Prof. John E. Peters, Director of the Engineering Department of WEAB, Berrien Springs, Mich., is conducting a class in the technique of Radio transmission.

"New and something different," as Roxy says, has been mailed to the membership of one of the most popular Chicago stations, WGES, as the slogan of the newly appointed director, Benson K. Pratt.

"Tune in and you tune in all," is something more than an intercession," said Mr. Pratt, "because most of the stations are now probing practically the same kind of a program, same kind of music, same kind of features. There is a woeful lack of originality. It will be my aim to steer the Louis Guyon station along a new course, through new vistas for Radio listeners."

Mr. Pratt is a veteran newspaper man, having entered the Radio field from a rewrite and feature desk at the Chicago Herald and Examiner. His first popular enlistment was in charge of publicity for the former Stewart-Warner station, WBMP, The new things that he is in preparation for the Guyon's Paradise Ballroom station are largely in preparation for the "Hills Before There's Hits," is one enterprise already introduced.

Ben Pratt Directs WGES Mike, Chicago

Originality, Plan of WGES Director

NOW that Sarge the Windjammer is back at his old stand in front of the WAMD offices in Minneapolis the five listeners of the Northwest are using their favorite receiver again. Every male enter-

MENT in Minneapolis admits Sarge gets the base of the United and smoked mail. But wait until the girls see the Windjammer shown in the lower right hand corner, Sarge calls it his "broken face." He is heard weekly and the fans still call for more.

LADIES WRITE WINDJAMMER, WAMD
Simple Explanation of Broadcasting

Part 1—When the Genie Electricity Takes Hold the Word "Audience" Comes to Mean 50,000,000 People

By Marvin W. Thompson

DEEP in the heart of a teeming city, a great orchestraassuming majestically through the score of a world famous operatic selection, that rendition completed with the mighty roll of the kettle drums, the soft plucking of harp, heavy background of bottomographs and the high singing of singer, in a hand of master virtuosity. Perhaps two thousand well-dressed numbered in the thousands fortunate enough to secure admittances to the seemingly huge auditorium and the artists before them command their right, spell-bound attention.

Out from the city in all directions go a dozen pairs of wires like the web of a gigantic spider, to hundreds and even thousands of miles away, distances that not so long ago were regarded as awe, as representing a journey of many weary long days and nights. Now, in an instant, almost too short to be measurable, each beautiful string wags its way over the wires to be caught up by a fluctuating, compact piece of machinery and hurled through space more miles than an audience of a size never yet gathered together in one place. An audience many times greater than all the millions of men in all the armies in the great war, a multitude impossible to conceive as within sight of the eye, and greater by far than many a country in Europe regarded as exceedingly powerful in that continent's ever-changing, mysterious affairs.

Almost Beyond Comprehension

Consider the energy of the following accomplished, the vastness of the territory covered, and the effect upon the Myers which millions would never hear, and fancy to see. It is for this new creation of scientific and commercial enterprise—Radio.

A month, two modern gladiators trained under the energy of the following accomplished, the vastness of the territory covered, and the effect upon the Myers which millions would never hear, and fancy to see. It is for this new creation of scientific and commercial enterprise—Radio. It must sometimes give you a tingle along the spine to be able to control one of the most complex mechanisms yet devised by science, a mechanism that sets out the complete music of an orchestra from the wondrous Radio wave and gives it to you with every delicate touch of the original rendition.

GATE WHICH CAN BE RAISED AND LOWERED.

And, to repeat, you must have wondered how it all was done. If you only understood electricity, Radio waves and sound! They seem so difficult to grapple with when the engineer endeavors to explain him so as to get into a language as foreign as Russian or Chinese. The task of the translator is not easy, especially the demands of operations, and the many forms into which energy is changed, must be presented with a parallel fashion of everyday life with which the average household American is familiar.

By Marvin W. Thompson

If you are a manufacturer of machine tools, have you ever tried to explain to your doctor just how your automatic turning lathe works—without a machine to demonstrate? Or, if you happen to be a seasoned manufacturer in Wall or Joliet streets, would you care to explain such things as margins, selling short, class A and class II, call money and the technicalities of a courier to a professor of chemistry or biology? Nowadays, nearly every one is a specialist in some phase of life and we do not have much time to grasp even the rudiments of other phases.

In this series of articles it is hoped that your doctor can better understand the world of radio or that your turner can better understand the world of science.
NBC Crooning Lady Works Hard
Long and toAchieve Radio Fame

INTERVIEWER THINKS VAUGHN LEAH BUSIEST WOMAN ALONG "BIG STREET"—SINGS FOR RECORDS—COLLECTS AND MAKES EARINGS FOR HER PET HOBBY.

By Donald Morgan

WHEN those Totem Pole Blues, lady with the banjo, announce the coming of Betty, this is a no-nonsense, attractive woman, this charming lady of the air. One immediately becomes impressed by the quiet dignity of her. The speaking personality that lurks behind an ever-present "watch-your-step" expression in the two long brown eyes seems to be trying to hold itself in check. She looks temperamental, but she is an individual, an artist, hard-working. One would expect her to be a bit of a virgin, with languorous voice and mobile words. In the contrary, she is matter-of-fact and direct. Miss De Leath is a born, sensible brain behind those brown, black-rimmed eyes; a brain that has guided her avuncular and surely to glory and success, without the least quality that normally accompanies this achievement—seduction. She has a distinct distance for the word and all that it implies.

Vaughn De Leath is properly the busiest young woman, professionally, in the "big street." She knows, indeed, that we have often wondered when, and how, she ever found time to sleep. Always on the go, rushing hither and thither, either recording for one of several phonograph companies, keeping appointments with music publishers concerning her musical compositions, or fulfilling engagements in the home of friends, she stretches her work-day far into the night.

Thus she was the first to return to the studio of the WSM after playing a concert in New York, attended several of the concerts of Mr. Baird.

VAUGHN LEATH

Walter Damschour started something when he introduced vivid word interpretations with his broadcast of classics. By visualizing the thought and mood of the composer he aroused a new interest in the hearts and minds of millions, who had hitherto regarded the recital as a bore, or at least beyond their ken.

This method of revealing the secrets of the sublime by radio has been followed by others with marked success.


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Elsie Miller Wood, whose portrait is shown here, has found this method of expression for a large radio audience.

Thus she developed her own style, a style which was so well received by her return to the studio of WSM that she was prepared to introduce something much more than the ordinary to her listeners. Her recitals attracted the attention of many artists who had previously withheld full approval of what could be accomplished by Radio. Director George D. May believes that these recordings have brought a new prestige to WSM.

"I believe that the season of 1926 will advance a long step forward in the appreciation of good music," declared Mr. May. "We are beginning to understand and appreciate the technique of presenting our more refined music. We have to continue the process of convincing the conductor of the excellence of the pianist and thus improve the ensemble of the orchestra.

Buddy Baker is one of the old-time stars of WKN, pioneer station of Chicago. When he unloads his reverse double-action, rotary shift banjo, after it has been fed by his banjo that spins and starts picking the antennas some of the finest it's sure to oscillate. Buddy Baker has established a very definite and very delectable following from this West-toronto station. He not only manipulates the banjo but he sings in a way that in all likelihood is entirely his own.

When Buddy Agitates Antenna on His Old Banjo Air Waves Skip

Television Adapted to Phonograph by Baird

THIR PROSPER of the production of phonograph records which give visual reproductions of the performances as well as audible reproductions of their contents is held out by J. L. Baird, inventor of instantaneous television. Mr. Baird has invented an instrument which he says marks out the first stage in the process, a phonograph adapted to reproduce the "image sounds" of facsimile. He is hopeful that some day phonograph records would have two spindles as the one that appears on these today—one reproducing the "image sounds" of the performer and the other the ordinary sounds. When everybody has a phonograph he will have a television attachment, Mr. Baird claims it will be possible to reproduce pictures of the performers from the extra spiral of the phonograph record on the television. He believes it will also offer an alternative to the present phonograph in cinematography.

WHAZ Gets New Talent

A BUMPET cry of musical talent surprised the faculty of Huntingdon Polytechnic Institute at Penn, and a call went forth for replacements from the incoming class to fill out musical organizations depleted by the late graduates. WHAZ now has a record staff...
BARBARA COX, IA., WINS $1,000 CHECK

HAWKEYE WOMAN SUBMITS MOST ORIGINAL SET

Replica of Station WOC With Artists in Lighted Studio Takes Last Big Prize of Contest

Out of the great array of many ingenious and intimately contrived designs submitted in the Radio Digest Great WOC contest the most original and skilfully prepared set of pictures were submitted by Mrs. Barbara M. Cox, Washington, Iowan. The final decision was made by Miss Ethel Fox of Moody Bible Institute, who has made a very con-textenous study of every exhibit in her capacity as a WOC judge.

Mrs. Cox will receive a check for $1,000 in time to do her Christmas shopping.

In describing the $1,000 prize winning set, Mrs. Fox gave the following description:

"Designed as Theatre".
The most original set was selected from the 207 entries for Station WOC. It is a unique design of a theatre beautifully decorated in gold bronze with the WOC design arranged on a miniature stage. The stage is brought to view by opening two doors, which are elaborately painted green and bronze. The entire green velvet curtain, tied with golden cord, is pulled to each side of the stage, bringing into view the decorated curtains, each containing two hand-painted Whistians. On the top of the theatre is a small replica of the studio, towers and towers of Station WOC. The towers are made of wire, painted with gold bronze, each tower having 100 soldered joints. The studio, which contains 175 small windows, is also lighted with electricity. This studio has one of the finest and most original woodwork of the most original WOC sets.

Many Sets Submitted

There were great many sets submitted designated as receivers, but some detail and fine workmanship as the design worked out by Mrs. Cox. This is the second and final $1,000 cash prize in this contest that interested listeners throughout the United States and Canada.

"JUST A COUPLE OF SINGING KIDS"

SOME of these days you will be saying, "Why, I remember when Jessie and Arthur Lang were just a couple of kids being juvenile features over the Blue network from New York. Now look at 'em!"

By that you will mean, "how famous they are as leading entertainers of the day." Their voices have been heard far over the country. Isn't Jeanie the limp in this picture?

THREE SPARKLING MEMBERS OF NBC CHAIN OPERETAS

They came to you in chains—that is in chains, which may be something else again.

This bright looking threesome consists of three stars in the National Broadcast ing Company's world wide network. At the time Miss Antal Fodor, a modern nightingale of the air and a conspicuous member of the National opera team. On the right we have Miss Devere Slayden, contralto member of the troupe. Miss Slayden's designation in the soloist who seems to have sung herself into the hearts of the nation during the last few years. Miss Brugennette first scored for the only voice in the nation-wide series, "The Miracle." She scored again in Radio production of "Radio Hood."
BET TIME STORY ABOUT NAUGHTY PAPA AND AN INQUIRING MAMMA

No wonder! Why, Oh why does everybody stay up half the night trying to get KFI?

THIE Papa site hopped over at his Super-Sonogram. Under the lightly stained head phoned a happy smile from his features. The clock struck One. A door crevices in the dark upper regions. Voices of the Mamma descended the stairs.

"Papa?"

"No answer.

"Papa! Still no answer. The clock ticks noisily. "Papa! Darius Xavier Hawes—will you answer me?"

Fourse classes happy smile from the Papa's face. Starting mumbles sounds emanate distinctively from between his teeth. Pleading expression of innocence.

"Yes, Mamma, what is it? Can't you see I'm trying to listen for distances?"

You listen this way once, and come straight up to bed or you'll never get down to work in the morning. . . . it's morning NOW!"

"I'm going—I mean bash—just a minute —I got KFI—she's comingfast!"

"Brutal! She's coming fast, is she? So that's why I'm 'tung up—and WHERE is she that you are so much interested in than your wife?"

More audible mutterings. "Oh, He! What?"

"Oh, Helen, you know it's just the fact I'm listening for 2,000 miles. That's silly to be talking about a woman—"

"Well, it must be a woman. Some little has queen, I suppose. No man would sit up all night just to hear another MAN rave over the Radio. Let me hear, too. Put 'HEE' on the loud speaker."

The Papa's face is full of static as he hears the slamming pattering stairs.

"But I can't do that, Helen. You see, I'm not used to the sounds."

"Well, you can hear the music, you can hear the music."

"But listen, just what I intend doing. Give me that, that ear-bracelet, PLEASE!

"Can't you just wait a minute?—"

"NO! I want to listen right now. Give me these—those ear-bracelets, or whatever you call 'em. There's something funny about this. You're kidding—"

He hands her the head phones, the needle peaks over the dial. The Mamma gasps, her eyes roll around and brown hoots with pinched expression.

"So you were listening to KFI, were you? Well, I just heard the announcer say it was WJAC. I thought there was something funny-deceiving me—why—"

"Well, they're on the same wave. And you gotta tune to a hair line. The dots must have gotten geknock—"

"It must have. Accidently Hub!"

Lights out. Voices fade away into the upper darkness. Tuck-tuck, tuck-tuck.

"Alright, Mamma, he can't fool you. No! And when they get television, you bet better go to the basement and get the furnace stoker before you go near on him, because just look at the picture there, what he would be seeing? Bathing beauties! And, Oh, Christmas, what are you so eul—"

But think of Leslie Adams, the KFI announcer, looking down so sturdily from above. Must think of his terrible responsibilities, one, too, three. —eight of 'em.

URGES ONE TO NINETY-SIX FOR RADIO CALLS

Engineers Consider Numbers in Lieu of Waves and Frequencies

HIGHER mathematics used to designate wave lengths and frequencies in the may be reduced to plain United States and simple digits as one of the radical improvements for listeners in the 1920's.

The idea, advanced by R. H. Langley of Cincinnati, means that all of the ninety-six channels available for broadcasting shall be numbered from one to ninety-six. That's all, there aren't any more. All of the stations in the United States are now and will be broadcasting within the range of those ninety-six assignments.

When WJAC takes the air it will announce that it is broadcasting on Channel 14 instead of wave length, 515.27 kilocycles.

The proposition has been readily accepted by the various sections of Manufacturers Association for recommendation to be made to the Radio commission.

Would Simplify Schedules

"Personally I feel that the plan has many obvious advantages. We are anxious to take the matter up with a large number of broadcasting stations, and in the various sections of Manufacturers Association for recommendation to be made to the Radio commission."

Gladys Johnson, and Gladys Johnson, KGW

Two Charming Misses of Same Name, Sing at Same Station

THERE certainly are more Johnsons than Gladys, but it is rare that one meets two Gladys Johnsons in a lifetime. Portland, Ore., is favored with a very young and especially charming woman, both named Gladys Johnson.

"I certainly like to get away from the back yard and meet my many friends in the other metropolis," emulated Mr. McNamee, shaking hands here and there as he came through the door. "Give me the Flats, and Mayor. Victor Miller, heartily. "We sure admire for you to come to St. Louis. You'll always find a welcome here when you come to this town. Meet Miss St. Louis!"

"Miss St. Louis in person. I'm charmed. It was the tender, flexible voice so well known to those who listen ardently to the Radio. "I know now that I'm going to St. Louis—er, may I, St. Louis."

Miss St. Louis blushed slightly and gave him her hand. Soon they were chattering gaily and swirling down the aisle. Suddenly a figure darted out from Mr. Miller's booth and halted them.

"May I take your picture?" he begged. "Oh, I'm no afraid of flashlights," shouted Miss St. Louis.

"I'll connect you," laughed Mr. McNamee.

He did. "Every time I hear 'St. Louis Blues' I'll be thinking of you and your wonderful city," said the urbane New Yorker to Miss St. Louis. "I love St. Louis before I left. There was a merry twinkle in his eye. "And I want you to come and see me when you come to New York."

Miss Gladys Johnson, cellist, left, and Miss Gladys Johnson, violinist, below. Both staff artists at KGW, but are not related.

MURIEL MCCORMICK ANNOUNCES AT WJBT

1PF for Miss Muriel McCormick at WJBT waves has meant a struggle to be just herself. People are forever referring to her as the daughter of the McCormicks and Rockefeller millions. Her friends are as rich between a very modest income, try to do worthwhile things, and indulge in no false and arrogant notions that sometimes turn the heads of others who have less cause to be pretentious.

So have we a picture of Miss Muriel McCormick at the WJBT microphone. There was no blare of trumpets or great shout about the matter. She simply acted in her capacity as publicity director for the Good News Annual Roll Call on Armistice Day. There was a special program under her supervision over WJBT, Chicago. She did not only arranged the program, but she accompanied the speakers, among whom were James B. Furgan, Jr., chairman of the Chicago chapter of the American Red Cross, William Wrigley, Jr., and other well known figures.

Miss McCormick has rendered valuable service to the Red Cross and as a member of the Chicago Junior League has taken a leading part in activities for poor and crippled children.

More than that, they are musicians and are heard regularly over station KGW.

They are not related, although both are blondes and their features bear a slight resemblance. But there's a stoppage for when it comes to music the Miss Lala Gibson in the blust, has been fumed as a cellist, while the Miss Gladys Johnson with the wavy hair and white fox fur is distinguished as a violinist.

Miss McCormick, in good character, and never tire of the predicaments that sometimes when strangers became confused as to which is which.

McNamee Meets "Miss St. Louis"

Glad Hand Welcome in Missouri Town for New York Announcer Who Dares Deadly Flashlight

Mr. Graham McNamee, the well known Radio announcer of New York, was a guest at the St. Louis Radio show, where he met the folks and had a great time.

Miss Muriel McCormick, takes charge of WJBT for special Red Cross program on Armistice day. Backers and other big business men assisted her.
Radio Rendezvous with KMOX above the Clouds Recorded in Book of "Do or Die" by Sky Explorer

By Harold P. Brown

A few minutes before the balloon lifted Captain Gray appeared, an above, while phoning a direct broadcast from Scott Field.

It is Friday afternoon, November 4, 1927, with a bound of excitement on the hangars and the big balloon drome on the Army Base field at Belleville. The huge 60-241, filled with 8,000 cubic feet of pure hydrogen, struts in a mad mastiff at its leash. It is the great-southern spherical balloon in the world. It rises for the heavens and tuans impatiently as a hundred armed soldiers hold the rope end and guide it skillfully toward the opening of the north at the huge 60-241. A 23-gallon whip's a challenge to the big bag as it accepts past the opening at sharp right angles.

At 3:21 p.m. November 4, 1927, the special program was Lieutenant Riel Atwater, speaking to the men as his call a "Hall that the captain thinks you don't rip the curtain, for the wind is a little too strong, and they are a rush until you clear of all obstruc- tions. 

Capt. Gray, tall, a stock of sil- ver showing at the tempos he-who the edge of his helmet, smiles down into the phones and the sight of Scott Field, Field fast fading, Captain Gray is looking over the side of the balloon. Above, a great deal of paraphernalia—tanks, etc., comes with clock dials, a canvas roof and a fewVEL. Airman Kent fields receiver with loud phoners, batteries and a motolizer of gasoline.

There come the escort planes—three. They are just catching up in the dace, four to all. They make a great gas as they come rasping across the sky. The captain has already dropped con- tinued: "I am going to ask my name and the value and the temperature in the outside air and last time when he command from the exertion.

"It's now one the first entry on the Scott Field at 3:23 at 52 degrees temperature.

2:55 p.m. 15,000 feet, 24 degrees. We seine the thought of Captain Gray, compared with broadcast studio schedues, is still further impressed. The captain's voice, a survey of the sky. He expands the parachute and turns the dial. Already some one has climbed up the antenna and registered a signal in the captain's ears. He listens, writes and at the same time lets out another balloon. We read the entry—too small characters:

KMOX—With compressed oxygen, 32,000 feet. You lips are blue, Captain. No doubt you are feeling the atmosphere getting thin and it's a little hard to continue thinking as long and colorless. Now, if you are 17,000 feet still to go to reach your goal, and the oxygen is less than two hours. Eave out some more sand and, indeed, after hours. Let us listen and write down the log-

KMOX—0:00—0:00—0:00—0:00—0:00.

EHigh Time of Thinking of You.

Release another balloon. The large, brave and large balloon drome is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station. It is a Radio station.

I hope to be in touch with you in the near future.

The following announcement were then broadcast to Captain Gray:

"Captain Gray is now reported to be out of sight beyond the clouds, trying for an altitude record and KMOX is keeping in touch with him continually. We assure you, Captain, we are thinking of you.

A few minutes after the balloon lifted Captain Gray appeared, an above, while phoning a direct broadcast from Scott Field.

By George Junkin, Director KMOX

CAPTION KMOX broadcast a continu- ous commentary for Captain Gray November 4, starting at the moment he took to the air in a special program. Captain Gray phoned this message:

"The sight for the next six hours was an air temperature altitude record was made on May 6, 1927, and I obtained the altitude information that it is a record for the northern part of the United States. It is over Scott Field. The temperature altitude was..."

"I am surprised that you

erects, listeners in St. Louis, Illinois, and Northern Kentucky. We report your final entry in the book of Captain Gray's balloon. At 12 o'clock we broadcast the latest Hindle's Long Range Balloon broadcast the Associated Press dispatch that the body of Captain Gray had been found.

"The body of Captain Gray had been..."

S. N. Brown, who is very much inter-ested in aviation, furnished Captain Gray with an Altair Kent set, speaker, tubes and batteries on his death. This equipment was broken up into small pieces and turned over to a parachute to be thrown overboard in case of emergency.
BULLARD SUGGESTS
RADIO RUN TRAINS

"WOULD GET IN ON GAME IF BIG ROAD HEAD"

Believes Wireless Control for Lines Now Equally Available; Nine
Development of Uses

UTSC of Radio in the operation of trains is a perfectly feasible proposition and should be developed, Admiral W. H. G. Bullard, chairman of the Federal Radio
Commission, told the last annual meeting of the American Railway Association.
Admiral Bullard said in part as follows:

"The question of trains operating by wireless is not a new one by any means.
I can readily understand the desirability of central control and communication between moving
train and different parts of the same
train, for instance—the locomotive
and the caboose of a long freight train.
There ought to be some more re-
liable means of communication between the
front and the rear end of these trains.

Twelve years ago I was approached by
one of the big Western railroads and asked to develop a scheme by which they
might use Radio for controlling their
trains. They had the idea of controlling
their dispatching, and communication be-
tween their long freight trains, by means of
Radio.

Advised Against Radio

"After a long study of the subject, I
drew the conclusion that it was an impractical proposition and recom-
manded strongly against it. Fifteen
months later a gentleman representing that organization—Admiral Bullard said—I thought my thoughts and recommendations at that
time had saved them thousands of dol-
ars. Now, however, the state of the art renders it a perfectly feasible proposition to install and maintain radio for
such purposes. You must remember,
however, that every time the line is
lengthened, it is necessary to extend the
area of control and communication.

The question of operating trains by
radio is now a matter of very serious
consideration by railroads of every
size and every degree of wealth.

(Continued on page 13)

KENNETH'S BIG BUG
TICKLES FUNNY BONE

They Make Northwest Listeners
Laugh Over WDAY, Fargo

KENNETH and the Bug are the disin-
clined lifters of WDAY, Fargo, N. D. They are shown below and brand them in the act of disturbing the stiffness of Northwest listeners. Kenneth is the
name of Kenneth M. Hance, general manager of the WDAY-Fargo Station, and the Bug is a
perpetual mystery, being one kind of a
derelict with a taste for the high life.
They have a live wire advertising man
otherwise, but no one appears to know
who also is the announcer for the
station which is owned by his company.

There is a pensive, exasperating kind of
ways to keep this North Dakota station on
the Radio map of America.

KENNETH'S BIG BUG
TICKLES FUNNY BONE

FISHIN' HOLES NOT SAME AS USTER BE!

This is fishing time for those DX
operators.

Don't expect to find the same old fish
in the same old hole every time you
get down by the old set to pull
on. The Radio communique has
been making 'em pop around consider-
able. There in October, over there in
November and some place else again
in December. Only DX furnishers
of DXs can depend on in the Official
Call Book compiled in each Radio
Digest, and revised to date.

Eleanor Boardman

M-G-M SCREEN ARTISTS BECOME WHN AIR ARTISTS

WIDE

(Continued from page 6)

POPULAR ORCHESTRAS

(Continued from page 6)

They have a chance to win or not. If the orches-
tra has not already been nominated the
nomination blank is published again this
month on page 4 just below the second
of the area chart and is to decide the
great question of the world's most popular
orchestra.

Be sure your orchestra is nominated, and then
be sure to utilize every letter, tele-
graph, phone, and ounce of print which
will sell your favorite. Here are the orches-
tras already named and the ballots received for
each.

DISTRIBUTION NO. 1—EAST

Comprising: Maine, New Hampshire,
Vermont, Massachusetts, Rhode Island,
Connecticut, New York, New Jersey.
Pennsylvania, Delaware, Maryland
District of Columbia.

Pompeo Lopez orchestra, WENR 15
Benny's symphony, WILR 49
A and P. symphony, WFP 11
Palais D'O orch., WOR 76
KDKA little symphony, KDKA 26
Club Worthy Hille orchestra, WTP 10
Pulman Bergers dance orchestra, WPG 15
Goodrich Simon orchestra, WED 11
La Penna orchestra, WEP 26
Clyent Club Bokites, WEP 65
Stalier's Pennsylvania, WEP 26
Carlen's Missouri Art orchestra, WEP 55
Jamaica's Hofbrau orchestra, WAC 41
Hotel Ten Eyck Transit, WAG 27
Ed. Carpenter's Hotel Statler orchestra,
WAG 27
Piccadilly orchestra, WCAU 19
Royal American Orchestra, WBY 19
Royal Pecosco orchestra, WBD 17
Puroy Club orchestra, WOR 15
Mountaineer's orchestra, WJS 15
WAG little symphony, WAC 12
Nomi Andrew's troubadours, WGD 12
New York symphony orchestra, WZ 25
Hotel Bond orchestra, WZ 25
Dek newcomar orchestra, WZ 25
Meyer Davis W. symphony orchestra
WBC 12
Savoy Plaza concert orchestra, WAG 12
Whitlatt's Anglo-Franco, WAT 3
Hotel Van Cortier orchestra, WGY 1
Sylvian Foresters, WZ 1
Virginia Vetter's entertainers, WHS 1
Jack Alling, WED 2

DISTRIBUTION NO. 2—SOUTH

Comprising: Virginia, West Virginia,
North and South Carolina, Georgia, Flor-
da, Louisiana, Mississippi, Alabama,
Tennessee, Arkansas, Kentucky,
Florida, Texas, South Carolina,
Chas. Durnberger's orchestra, KTHS 47
Andrew Jackson Hotel orchestra, WJ 47
Hotel Richmond orchestra, 8WFO 91
Joe Clark's涮alort orchestra, WGR 91
Municipal Pizarro casino, WPI 7
Florida, Memphis, Arkansas,
Teasman Saloon orchestra, WDG 2

DISTRIBUTION NO. 3—MIDDLE WEST

Comprising: Illinois, Michigan, Wis-
consin, Minnesota, Iowa and
Missouri.

Maurice Sherman orchestra, WLS 121
Fred Hanson's concert orchestra, WLD 121
Paul Christiansen's orchestra, WHS 121
WIXU Studio orchestra, WENH 121
Sweeney syncopators, WDR 117
Doby Mosier's orchestra, WIB 117
Pan Russian orchestra, WILB 117
Kentucky's comedians, KYW 95
McKeehan's Cotton Club, WILB 95
Perry's Mad Huland Gang, WGD 42

(Continued on page 10)
LOBEST OR TOAST AFFECT ANNOUNCER
CARLIN DESCRIBES SENSATIONS OVER RADIO

FEELS SAME SPEAKING TO ONE OR FORTY PROVIDED DIGEST IS OKEH AND CRITICS DON’T ANNOY

By Phillips Carlin
Director of WEA

How does one feel when addressing a national network? That’s a really momentous question! One might also ask what different effects it has on you as an on-air personality. Of course, the answer may be different for each person. It’s a question that has been asked by many who have been involved in broadcasting over the years. However, there is one aspect of national broadcasting that has remained constant: the importance of good preparation and clear communication.

1177

TALKING HORN "ANGERS" TURKISH STORY TELLERS

OLD retailers in Turkish households are calling down the curse of Allah on those who speak with a voice that makes them sound like a man whose voice has been distorted by a machine. They have sworn an oath to secede from the family circle gathered about the evening hook.

The new broadcasting station at Istanbul now presents the story-teller’s home and the family story-teller becomes a disgruntled listener.

RUSSIAN PEASANTS HEED VOICES OF RED LORDS HEARD FROM KREMLIN

OLD ambassadors of the Kremlin are calling down the curse of Allah on those who speak with a voice that makes them sound like a machine.

This unusual photograph was brought to America and Radio Digest in 1927 by Mr. Herbert Bellows of Buenos Aires.

Radio Trick Explains "Ghost Music" That Mystifies Restaurant Patrons

Radio veteran at Winnipeg makes radio hook-up with concealed phonograph—connects three cafes by "remote control"—achieves "full orchestra" effect

PHANTOM noise in three Winnipeg restaurants has caused a great deal of excitement among the public in that city. There is no visible source of the music, not even a phonograph being played. An explanation of the mystery has just been made.

The noise is produced by three complete phonographs, each with a record sleeve. The three machines are connected by wires to a central control point.

That was discovered by the correspondent of Radio Digest as follows:

Friction Causes Current

This current is created by the friction of the needle over the record, and it is transformed into electric current in the wire loop of the electrical pick-up. It is amplified and transmitted to the amplifiers and recorders. The amplifiers are then sent to the electrical distributors, which distribute the current to the various parts of the restaurant.

This system is now being used extensively by restaurants throughout the country.

UNCLE JAY OF WJAY WRITES OWN MUSIC

radio broadcast from the University of North Carolina in the 1920s.

 entrened in the art of broadcasting, he quickly gained a reputation as a popular speaker and entertainer.

He was one of the first to use radio to reach a national audience. His programs were broadcast from New York City to the West coast, and he became known as "Uncle Jay".

Besides being a song writer, he was also a talented actor and delivered many monologues and comedies on the air.

His shows were popular with both adults and children, and he was known for his quick wit and humorous observations.

1178

Intense New Life in Radio Bureau

Carl Butman becomes secretary on Sam Pickard's promotion to commission chair.

Radio is the voice of youth. Old men are given way to younger men. New faces are appearing above the horizon with new viewpoints, new momentums, new blood, new life for the industry.

This trend is not only confined to the field of broadcasting, but is also evident in other areas of the entertainment industry. As technology continues to advance, new forms of media will emerge, offering even greater opportunities for growth and development.
Betty Lamborn Conducts Woman's Hour at WGHF

"Hard work, hard study and devotion to the job at hand in my motto always," said Betty Lamborn, the pretty and capable director of women's programs at WGHF, when interviewed the other day. And it is this devotion to her work that has made it possible for Miss Lamborn to fulfill her dream of becoming a member of the staff of a big radio station. With the persistence that made it possible for her to earn her way through college, she made her first appearance with the station, joining an overlap program with her ability to sing and play brought her the full time position of hostess and studio assistant. Her tact and her attractive Radio personality made her the logical person to direct the women's programs when this position became vacant. This is now, perhaps, the part of Miss Lamborn's work she likes best, because she enjoys her contacts with her women listeners.

Broadcasting of Interest to Home Makers

Christmas Cookies Packed Daintily
Make Welcome Christmas Presents

By Winfred Carter—WLW Cooking Expert

For a Christmas gift to the friend who flies away from home and must depend on a boarding house table or a restaurant for food, nothing is daintier than a box of Christmas cookies. Candies may be purchased anywhere at any time, but little things that are really good are hard to find. For that reason, you must make your own little forties into making them, a box of cookies sent as a Christmas gift to a friend who would appreciate your work more than anything on this earth, if you are really good about it.

Tins boxes in all sorts of shapes and sizes can be bought quite inexpensively and can be decorated, wrapped into a nice package. In packing a box of Christmas cookies, wrap some of the cookies in oiled paper and add them with Christmas seals or tie them with any ribbons to make the box look more festive when the cover is lifted.

Christmas Cookies
2 egg yolks (hard cooked),
1/4 cup chopped blanched almonds,
1/4 teaspoon baking powder,
6 tablespoons Crisco,
1/2 cup sugar,
2 cups flour (grated),
1 teaspoon salt,
1/2 teaspoon baking soda.

For Top
1 egg white,
1 tablespoon sugar.

Cream Crisco and sugar and force egg white through a sifter and add with orange juice to mixture. Soft dry ingredients and cut into direct mixture. Add chopped almonds and mix well. Shape into little balls of hilly tops of hilly buns; brush over with melted butter egg white and dredge with sugar. Bake in moderate oven (350 degrees F) for 20 minutes. (These cookies improve on keeping in a covered container.)

Iced: Dribble the tops of the cookies with a cindered fruit. For a change from the three conventional cindered cookies, try this recipe for cindered cranberries.

Candied Cranberries
1 cup from brilliant red cranberries.
1 cup sugar.
1 cup water.
Wash and dry the cranberries and prick each in several places with a needle. Boil 1 cup water until a spoon spills a thread; or cook to 230 degrees F. Put in the cranberries and cook over a low fire until the water will jell when dropped from the tip of the spoon. Remove berries and place on wax paper to cool and dry. Roll in granulated sugar and use in place of candied cherries. This cooking must be done slowly to avoid breaking the berries.

Fudge Squares
4 cup Crisco.
1 cup sugar.
2 eggs (beaten).
2 squares unsweetened chocolate.
1 teaspoon salt.
1 cup pastry flour.
1 teaspoon vanilla.
1 cup chopped nuts.
Cream Crisco and sugar together thoroughly. Then add the chocolate which has been melted. Stir in rest of ingredients. Mix well. Line a square pan, about 3 inches, with paper-grease and spread mixture about 1/4 inch deep in pan. Bake at 325 degrees F. for 30 minutes. Cut into squares immediately after removing from pan.

To fill in the spaces between your cookies you may want to use this recipe. If you can make with this recipe.

Glacé Nuts
1 cup sugar.
1/2 cup water.
1 pinch of cream of tartar.

Cook to hard crack stage (300 degrees F.). Heap mixture into a syrup at a time (or several together for clusters) and make into piles, on the experimental stage. While still warm and use with cooled mixture, set in some pan of hot water while dipping in done there will be no danger of the syrup hardening too quickly.

Judith C. Waller, WMAQ-WQJ.

Pioneer Chicago Station
Owes Success to Woman

COPFANNYS may have created a bad name for women in the broadcasting world, but Judith C. Waller has more than redeemed that name by her intelligent supervision of the twin stations WMAQ-WQJ, Chicago. She was made director of WMAQ five years ago when broadcasting was in the experimental stage. While other stations concentrated on popular programs and neglected the listening public with continuous jams, Miss Waller interpreted her program with classical music and interesting features by well known authors and women. Today other stations are following her example.

MISS Waller, besides directing her station, is the National Radio Chairman of the General Federation of Women's Clubs, as Secretary-Treasurer of the Chicago Broadcasters' association, she has also taken an active part in the Radio affairs of this city.

WOMAN'S PROGRAM INDEX

(Daily Unless Indicated)

Eastern Central Mountain Pacific

Fashions and Sewing

Eastern Central Mountain Pacific

News

Health and Beauty

Interior Decoration

Gardening

Eastern Central Mountain Pacific

Etc.

Eastern Central Mountain Pacific

Gardening

Eastern Central Mountain Pacific

www.americanradiohistory.com
Shake Hands with WEAF Eskimo Chief

Girl Reporter Meets Harry Reser at Broadway Igloo and Marvels at His Busy Fingers, Energy, Pep

By Dorothy Brister Stafford

At first it seemed that the hour should go to the intrepid individual, who at the moment was engaged in doing something to the hallowed into the Portman theatre building—that beehive of streams where the microphones are housed and thatigeltime—where, suspended perilously three-deep one above another, he was giving an ambidextrous exhibition of juggling and a little impromptu sermon that should have put the proverbial papercutter to shame. But at a certain Thursday night down at WEAF we happened upon another socialist, whose diversified activities made the up-town contender seem a drone in the hive of Manhattan industry.

We were wondering about the minute listening to some blue harmony by a new newcomer, talking to various interested people, you know the National Broadcasting Company is a sort of a crossroads of the world, where all you hang around long enough you are likely to meet almost anyone who came to anything of moment, or has anything worth to do—when virginal Kathleen Stewart passed in her hurry round of seeing that everyone was being taken care of, and said:

"Oh, wouldn't you like to meet a nice Hawaiian?"

Meeting the "Hawaiian"

Nice people have all appeal, regardles of breed, and we said we'd be delighted and then the "nice Hawaiian" turned out to be none other than the very American Norman Clark, otherwise the "South Sea Island Tender," whose voice alone made as much savor and attitude toward those of the masculine sex who sing in the upper registers before the microphone.

I had his memo delivered face-first against the headed-glass door of the larger studio, where Harry Reser and the Chimpang Eskimos were removing their coats and tucking up their sleeves preparatory to their hour's broadcast, and he didn't seem at all a bit put-out. I introduced Mr. Clark. We wanted to ask him how he came to be among others made such powerful work of it, but he chumminly bescusied us to a peep-hole beside him.

"Come over here where you can watch Harry's fingers," he said. "They move faster than anything you ever saw."

And then we remembered that the salient reason for leaving the deserted canyon of lower Broadway on this particular night was to see and hear the newly augmented Eskimo orchestra in action.

"Come inside and meet him," urged the hand and a string of sleigh-bells in the other, which he dropped to shake hands courteously with a winning grin, and a whisper, "Won't you wait until the hour's over? We're just going on the air."

Bottling the Mike

They invited us to stay inside, but since a live microphone has always had the same effect upon us that golden-rod had for Mrs. Rinehart's famous "Aggie," and we were already stifling a desire to sooner, we slipped outside and secured a desirable place alongside our South Sea Island friend, and several other going and coming entertainers lined up with violins and clarinets and violas. The old fellow that a haddle-net is supposed to be unusually good when the other performers do it the honor to wait in the unique "catch it" was recalled by the gathering of professionals and we marveled that the Eskimo's reputation is not all in the air while observing the interested mother when the drummer does his stuff. And for the first time—and we've heard many orchestras, both "mirred and prone,"—as someone classified them after hearing "My Heart at Thy Sweet Voice" jumbled in a confused arrangement—we watched a group of men who seemed to play with every ounce of energy they had in them. One supposed that a director is the happiest when conducting an opus of his own composition, and you know the Chimpang's "Stir" is Harry Reser's and evidently his set, but we have never seen anyone as earnestly as earnestly to get all possible out of his organization as this leader does with the opening of his radio tour. Bitten right through with satisfaction, he is all over the place, dropping both to come in with a few bars on the famous bands, which reposes on a man before the microphone, his little frame a veritable dynamo of bouncing mineral energy.

Reser here, there and everywhere, playing, directing, laughing and everyone apparently having such a good time that it was difficult to realize that was a highly paid organization of very efficient persons engaged in a successful hour's work. And one wonders if the dominating, cheerful personality of the hard-working leader, which makes for harmony in his capable gang, is the secret of the success of one of the most popular of the commercial features on the air. For the orchestra has doubled in size, two planes standing where there was but one before, violin and alto saxophones, marimbas, accordions—the whole galaxy of instruments that make up the complicated harmony of the modern dance orchestra. For that is all they pretend to be.

They play popular feet-tapping music, stirring marches and popular arrangements—classics for that great portion of the studio public that likes their kind of music. Harry Reser does not call himself a "master," nor his arrangements "symphonic syncopations." They are out to entertain Americans mopped, dirty-haired, and that they are firmly established as one of the most successful features of the New York radio business. They play popular feet-tapping music, stirring marches and popular arrangements—classics for that great portion of the studio public that likes their kind of music. Harry Reser does not call himself a "master," nor his arrangements "symphonic syncopations." They are out to entertain Americans mopped, dirty-haired, and that they are firmly established as one of the most successful features of the New York radio business.

Busy Harry Reser

And we were hearing a string of sleigh-bells the hour was over, and youngsters were allowed to stay up until the Eskimos finish. It was uncomfortably to bed, Harry Reser emerged, tried, but still with the infectious smile he has for everyone—not to go home, but to dash back up town where from the opening of the orchestra was appearing in person at the Broadway cafe. He apologized for the lack of a shave,—"I was up till three this morning arranging, and out at Brunswick all day recording,—but come (Continued on page 13)
It is characteristic of a wave to travel, to continue in the same direction forever. It is the distance between two successive points of equal vibration that is characteristic of a wave. The distance between two points of equal vibration is always equal to the total length of the wave. This distance is called the wavelength. The wavelength of a wave is the number of wavelengths that can fit into a given distance. The wavelength determines the frequency and amplitude of the wave. For example, a long wavelength means a low frequency and a low amplitude, while a short wavelength means a high frequency and a high amplitude.

The speed of a wave is the distance it travels in a given period of time. The speed of a wave is the product of its wavelength and its frequency. For example, a wave with a long wavelength and a low frequency will travel slowly, while a wave with a short wavelength and a high frequency will travel quickly. The speed of a wave is also determined by the medium through which it is traveling. For example, a sound wave will travel faster through air than through water, because air is less dense than water.

The characteristics of waves are important in many areas of science. For example, the speed of light is determined by the wavelength and frequency of light waves. The speed of sound is determined by the wavelength and frequency of sound waves. The speed of waves in water is determined by the wavelength and frequency of the waves and the depth of the water. The speed of waves in the ocean is determined by the wavelength and frequency of the waves and the depth of the ocean. The speed of waves in the atmosphere is determined by the wavelength and frequency of the waves and the density of the atmosphere.


electricity

early A\'s

60Hz

by James McDonald

the three supplies.

the battery, and that is why it must be suppressed and rendered harmless by using a filter. The filter is shown in Figure 2. This is a simple arrangement of condensers, choke coils, and a power relay in series with the charging circuit.

The Warren "B" Power Using Raytheon Tube

Analysis of Power Units

Before we go into the developments of the A-B-C, let us see what is being done now available to the millions of sets of Raytheon and other radio batteries, let us study this matter of power units. The current in the A-B-C is composed of two parts: a steady direct current and one fluctuating in the form of a current with short periods.

A rectifier which blocks its value by suppressing the alternating current and which makes the alternating current flow in only one direction is called a unidirectional rectifier. This rectifier is made up of two diodes, a power relay in series with the second diode, and an alternating current.

Filtering

Hunting the rectified current to a series of condensers, the current is filtered. In a 120-volt set, depending on the rectifier, it must be 60-cycle current. The smoothing over process consists of holding back the voltage of the current and reducing it to 120 volts. In a 120-volt set, the current is filtered. In a 120-volt set, the current is filtered. In a 120-volt set, the current is filtered.

This modern unit has the advantage of being very attractive, with nothing to impair nothing to 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POWER SUPPLIES

(Continued from page 19)

Sioux City, Iowa to supply "A" power is now new, interesting and useful. Its makers have combined the rectifying properties of the well-known "Tungar for Reels" tube with the A-Box type of filter condenser to make a strong, substantial unit which will supply 3½ amperes free from hum. Of course there are some other items in it, such as transformer, choke and adjustment to regulate this unit to the number of tubes put on it.

White "A" Uses Tungar Bulb

It is thus truly an "A" eliminator, as there is no choke and it has the full rectifying and filtering prop-
erties. It is never "discharged" and never "charged"; it can only have one condition—always ready for use. No details need to be given here about this condition, as it is well known. There is a nice unit, using a tube which is well distributed by Tungar, which is always surrounded with caustic solution which acts as a perfect preservative. In the event of one of the tubes failing, the resistance that will create 60 volts "A" bias for the 111 is provided at the 1.0 volt center tap.

Webster A-C Tube Power Unit

The new A-C units, types 226 and 227, have been developed for net supply of direct and alternating currents. It is designed to supply all three sources which this writer has seen. The "A" part consists of a high grade storage battery, relay and a trickle charger of which the rectifier is a-tube type.

The B-C half of the tube is operated as a filter tube. This is a full wave recti-

dor with the A-Box principle applied. There is a 4½ volt storage battery, which has a capacity of 4½ ampere hours and 5 volts for use on the UX-12 tubular and there-are tubes for 22½, 9½ and 4½ volts. This unit is supplied complete with tube and transformer at a very reasonable price.

The Baltek AB

In one handsome metal cabinet, the Tungar Products Co., Inc. of North Chi-

cago have combined their proven depend-

bility and efficiency as the Baltek AB. It is the unit which we find in the condenser-eliminator which is the Abot type, and from which the "A" output is clean and free from hum.

Webster Unit for AC Tubes

On the "B" side, one uses a 125 mil., type DH Raytheon and the same size as the "A" units. This is a tube that can be used in all sorts of circuits and it is one of the most reliable tubes in the world. It is used in the broadcast spectrum and it has been used in the broadcasting spectrum for many, many years.

Crossley Power Unit

The Crossley AC Power Converter, which is designed to operate with the AC hand-

box, is a marvel of engineering ingenuity and is adequately smooth and is the interfering hum in the alternating current line. It is in a unit, using the same 125 mil. tube for both "A" and "B" voltages. Only 9 inches high and weighs 13 pounds, it is about the size of a small set of tubes and is made for 40 and 25 cycles. It can accommodate as many as 50 tubes to the set. Switch snap on the box for direct current and on the other side for alternating current. The tube-unit absolutely dead, when not in use.

Power for Crosley Handbox

A novel feature of the Power Converter in the Crosley condenser unit in this A-Box is used is known as the "elect-

trolytic" type. A current flowing through the condenser builds up a thin insulating film on the plate by electrolytic action. This film is so thin that the condenser has a high capacity (over 100 times) and is capable of carrying a substantial current even when the condenser is charged to a high voltage. It is this unique property of the electrolytic film that gives the A-Box filter the ability to operate on alternating current or direct current without having to be adjusted for either.

The transformer of a "B" elimina-
tor supplies a voltage which is in a positive manner proportional to the voltage output of the rectifier and the rectifying action of the condenser. In other words, the rectifier will have a built-in transformer which will rectify the alternating current to direct current and supply the proper voltage to the condenser, thus eliminating the need for a separate transformer.

The "A" eliminator is a direct current output unit which delivers power directly to a storage battery.

Exterior of Abot

The exterior of the A-Box unit contains the required ampere and voltage and the electrolytic action which is satisfactory for use in small broadcast sets. The A-Box unit, which is connected to the rectifier, can operate with the same solution as used in the filter circuit.

Webster Company of Chicago has never had a superior success in the manufacture of any power unit, and when it comes to the A-Box, it is a great improvement over the old type. The A-Box is a direct current output unit which delivers power directly to a storage battery.

Exterior of A-Box

The exterior of the A-Box unit contains the required ampere and voltage and the electrolytic action which is satisfactory for use in small broadcast sets. The A-Box unit, which is connected to the rectifier, can operate with the same solution as used in the filter circuit.

SILENT NIGHT ENDS

(Continued from page 2)

that the local stations are not on the air capacity but they have been heard from the broadcasting spectrum of the Chicago station.

"The congested condition of broadcast-

ing in the Chicago area has not yet been re-

duced to any extent. A new clear channel has been opened up for the broadcasting of the station.

Taking a "B" eliminator filter circuit as an example, we have approximately a 4 microfarad condenser of 18 volts. We use this condenser in an "A" eliminator because the power to be handled is so small that it is not possible to use the condenser in a "B" eliminator. The capacity of the condenser must also be increased one hundred times, generally about seven. For the other eliminator must be reduced in capacity.

Then we find that the condenser for an "A" eliminator filter must be one hundred and twenty-five times or at least 150,000 times greater than that of a "B" eliminator. With microfarads as the ob-

servational average for "B" filtration, it is found that the condenser must have the tremendous capacity of 80,000,000 microfarads or more. To obtain this the A-Box Company per-
formed an experiment to see if the condenser not only had the exceedingly large capacity required, but mostly to make sure that such condensers had been energy stored for more than 75,000 microfarads, or over one quarter of a farad, which is the capacity ever ob-

tained in a condenser anywhee nearly as large as an "A" battery eliminator.

The A-Box Condenser consists of a group of nickel and steel plates immersed in a cavity containing a solution of oxygen and hydrogen form on the surface of the plates. This is the standard type of the condenser. The plates form one side of the condenser and the other side.

The use of the A-Box di-electric has several outstanding advantages. First, as a condenser unit, the thickness of the "dielectric" decreases, this is achieved by the use of the A-Box as a condenser unit. Second, it has a much higher capacity with the A-Box, as the same capacity is always surrounded with caustic solution which acts as a perfect preservative.

In the case of the A-Box, it has an almost infinite capacity and it is always surrounded with caustic solution which acts as a perfect preservative.

Short Wavcs

(Continued from page 4)

You are certainly clever, Mrs. P. W. T., to know a tenor even when his name has not been made known to me from one station to another. You are right. In the course of my work, in connection with the Light Opera hour at KDKA, I know the tenor for the Chicago station. The KDKA station is a half-hour station and the Light Opera hour is a full-hour station. It is the hour of the National Broadcasting company. The condenser-eliminator in the station of this KDKA feature, sings over the station and has been known as the "diamond" if they are perfecting their chief aim in life and not to listen to music or to use the station as a means of expression. Mr. Munn is not the first man to bring music to the air, as there are bands playing on the air, and six bands in height. Mr. Martin, from Republic records, is one of the natural, effortless singers whose tone and quality make their talents ideal for broadcasting.

www.americanradiohistory.com
Build AC-7 Receiver for New AC Tubes

Uses Types 26 and 27 and Push-Pull Output

By William P. Lear

There is, of course, impossible to create any one radio receiver that will appeal to everyone who contemplates building a set, since we all have our own individual ideas of what a receiver or two should contain. On the other hand, it is possible to find out from a study of radio correspondence and magazines radio with those in Radio stores, what is a great many prospective set builders want at any one time.

The AC-7 receiver is the result of such a survey of the likes and dislikes of fandom in November, 1927, and early December, 1927, and their findings have been embodied practically all of the features seemingly wanted. First of all, there is simplicity of construction, although not variation of circuitry. It is practical, as it is meant to be, a single stage dual tuning. There are many who do not want the extra circuits or transistors, or transformers, but if these were embodied in the set, it is in a cathode that is the "filaments" for the various grids and plate circuits are considered. The raw filament is a little bit of a serious objection, but the same can be just like that in your curl or crimp type of a heater, or it is immediately warmed up the insulated cathode or filament. Cathode, by the way, material used in this set, emits the negative electron just as the filament of 20-watt type does when it is in the circuit. There is no electrical connection between the three power tubes, designed along the lines of 26s, have not as yet made their appearance, we have used 114 type tubes in the entire set. Among others, the 114 type of a 226, which are keeping up with the standards of a 210, can be tested by the tube to determine the selectivity of the receiver. If it is too good, the test tubes will return load so that the tube will be no "hum." We are attempting to be, and this is the feature that is most important, we are looking for tubes that have high selectivity.

AC Tubes Eliminate Eliminator

The most important development, however, is probably the use of the new AC tubes. Radio has waited a long time for these, with radio being everywhere that they have been used, and now, at last, they are actually here. True, it is possible to have an AC set without AC tubes, but it must be done through eliminators or power supply units, which are also bad. The use of AC tubes is always adapted to the set to which they are applied.

These AC tubes are of two types, the 226 and the 227, used as of 1927, and 1928. In both cases the alternating current of the house lighting supply was made to oversize in voltage from 120 volts to below 25 and applied as "raw AC" to the filament winding of the transformer. The 226, a hexagonal filament used on the AC and means must be applied on the outside of the box to find a point to which we can hitch grid and plate circuit return loads so there will be no "hum." You are attempting to do this, to bring out high selectivity for the receiver. If it is too good, the test tubes will return load so that the tube will be no "hum." The 227 detector, which is a new type of a 226, would be terrific in the speaker due to the rise in current and fall of voltage on each side of the filament with every alteration of the 40 cycle current.

The 227 detector tube, which has been used as an amplifier, is desired, incorporates a heater around which is a cathode that is the "filaments" for the various grids and plate circuits are concerned. The raw filament is a little bit of a serious objection, but the same can be just like that in your curl or crimp type of a heater, or it is immediately warmed up the insulated cathode or filament. Cathode, by the way, material used in this set, emits the negative electron just as the filament of 20-watt type does when it is in the circuit. There is no electrical connection between the three power tubes, designed along the lines of 26s, have not as yet made their appearance, we have used 114 type tubes in the entire set. Among others, the 114 type of a 226, which are keeping up with the standards of a 210, can be tested by the tube to determine the selectivity of the receiver. If it is too good, the test tubes will return load so that the tube will be no "hum." We are attempting to be, and this is the feature that is most important, we are looking for tubes that have high selectivity.

You can use either 115 or 117 type tubes in the push-pull kit, but we have used 117's in this original design, as we believe that type of 226, has the advantage of being a 1,000 volt tube, whereas the 117 is a 600 volt type. The 117 has a much higher plate voltage, which makes it a better tube for high fidelity work.

Camfield Coils Unique

The tuned r. f. transformers are Camfield coils. These come three in a kit, and one kit is needed for each stage. They have been chosen because, as it has been said, the coils have been sufficient to cause trouble. With a transformer type of r. f. coil it has been necessary to include an additional transformer, of either lowering the voltages in the circuit or eliminating the.removeAttribute capacitance. These coils have, in addition, a small female terminal and are built in two opposing sections for the pick-up of direct signals or the secondary. To the sensitivity of the receiver, adds capacity. These coils have, in addition, a small female terminal and are built in two opposing sections for the pick-up of direct signals or the secondary.

Figure 1

The hammerhead "Millivolt" variable condenser acts its name from the fact that its plates are so shaped that it would be impossible to fit them on the axis of a straight wire like a condenser and a straight wave line like condenser. The former had the disadvantage that, while it equally separated all frequencies, it brought the powerful and much desired higher wave stations too closely together, in the opinion of many. The second type bunched the lower wave stations still more closely, and spread the upper end of the scale. The hamerhead balancing of condensers have found the preferred medium in the "Millivolt" unit.

"Millivolt" Condensers Aid Design

Aside from these desirable tuning features, we find that this condenser is an aid in the adjustment of condensers to their relations to the rest of the units. The fact that means was provided for construction of the front panel, the condenser itself and the tuner are used here in the secondary coil. The condenser socket used here in the secondary coil is a unique one and is found in "Miller" condensers.

Like many another good thing, modern audio circuits would be of little value if they might be, but on past proved trouble, the two additional r.f. "amplifiers" on this setting. They are in five types, one for each stage of the receiver. The one is very desirable range and at the same time, the second stage, an output unit and a pair of push-pull units.

The 117 type of the AC-7 has been used the AC-7 for coupling the detector to the first audio stage and the push-pull team around the second stage. The points that make a good audio transformers these days are ample primary, plenty of core and correct winding of the secondary, and in modern units we find at these points just about perfectly developed. The result is even of the automatic principle of many musical notes, with automatic cutoff at the upper end of those that would do no good and might do harm.

Figure 2

Special Thordarson Transformer

There seems to be a difference of opinion between West and East on the most used picks or methods of reducing them into the circuits, but we are going to stick to the Western opinion of Thordarson and Carter in our application of these tubes. Circuits have appeared, using parts of Rotenol for this purpose, which connect into the AC tubes somewhat differently than we have here. You've never gone wrong on the systems brought out. With the two advantage of these, we applied our products in AC-7, and this is the system of Thordarson and Carter. Thordarson have produced the 2415 transformer to give 1.5 volts for the 226, 25 volts for the 227, and 5 volts for the 117's. Center taps are provided and Carter have used them, and this is the system of AC tubes somewhat differently than we have here. You've never gone wrong on the systems brought out. With the two advantage of these, we applied our products in AC-7, and this is the system of Thordarson and Carter. Thordarson have produced the 2415 transformer to give 1.5 volts for the 226,

Figure 3

Audio Quality

All conditions are drawn to hold back the voltages at several points because an exceptional grade of paper is used, a strong but very flexible thickness, and an insulating material of a very high melting point. They are, of course, wound to be inductance, and have an exceptional reputation in the Radio field. The smaller fixed condensers are made of both grade silver foil and combines, and the whole assembly, mounted within the per cent of rated value, is sealed in a protective bakelite case. They test below values 1.5 parts per million.

Figure 4

"7"-tubes today? Well, they've made it at St. Louis. In addition to, it is a beautifully equipped plant and company.
BUILDING AC-SEVEN

(Continued from page 21)

out consistently good. Tubes by this name are named fast, and have kept in the world devoted exclusively to the making of tubes. Type 3C-26, an amplifier for other Radio or audio use, needs 1.5 volts on its filament and 1.5 volts and 55 watts. It is designed for 125 volts and does not exceed 1100. The de- scriptions are not a large and good job. The heater and plate are given for the set, and 15 volts plate supply are given. As mentioned earlier, you can use it the way it is, it takes the same plate voltage.

Now proceeding to the construction of AC-7, consider first the front view photograph Figure 1. It will be noted that there are approximately five holes to be made in the front panel, seven small ones and the large rectangular one which cut out the light. The drilling layout for this is Figure 2, and between Figure 1 and Figure 2 the constructor should have no difficulty getting parts in their proper places. The variable resister on this panel is the 5,000-volt variable control. No dimensions are given for the placement of block holes, as these parts vary, but the exact side of sub-base is to be 1 inch from bottom edge of panel.

Since the sub-base carries practically all of the apparatus of the AC-7, it is naturally a complex in both drilling and wiring, but here again the pictures will help considerably. The top view, looking down on the sub-base, as shown in this view Figure 2, while the sub-base as viewed from the bottom is Figure 4. The drilling layout for this is presented in Figure 5.

Drilling Sub-Base

Holes shown in Figure 3 are entirely for mouting equipment, and wiring holes have been omitted for clarity. Wiring holes are marked with a star, in each of the metal rings on the Transformers and holes are the rear holes that are drilled by hand. A hole must be drilled bore in the sub-base for the wires to pass through leading to the variable resistor.

In the rear row of equipment wiring holes must be drilled before each of the condenser connections to the Modern transformers and three large holes below the sub-base to the Thordarson power transformer. The small strip of laskie number 49 is the casting of the power transformer and the last tube, number 24°°, is mounted with a screwdriver until its exact position is found. The 4R-100 is secured to sub-base by bolts and nuts. The MW-100 unit is for securing grid bias on the 224 tubes and will be secured until the exact position is secured. The 4R-100 should be secured over the filament line, so that but 1.5 volts is applied and more.

In mounting the units on the sub-base the following pattern are necessary:

- Socket 1, 2, 3 (red top) are placed where P and T's are found.
- Socket 1 (red bottom) is bolted in front right corner, is to have P and T to the front, while sockets 2 and 3 (black top) of the pitch-pull amplifier have P and T to front. In placing the Modern transformers the hole is at the extreme right corner with both P and T's to front, so that you first secure with both P and T's to the sub-base, with two 2 posts left and 2 right (that next to the rear only) with two 2 terminals to right. Camfield cells are set with T and P's to the right.

Adjusting Condenser

The condenser shaft is adjusted within the rotor by bringing the two screws in the thick rotor tube. That in the condenser is easily adjusted out the right end fits into the flexible coupler slots in the drum. Thus the right end of tube is slipped to left and the other flexible coupling. A coupling is then slipped onto the right end of drum and the shaft of the middle condenser of the three is then moved to left to engage this coupling. This performance is then repeated between the middle condenser and that to its right.

On the underside it will be noted that the bypass and filter wire condenser are held in place on the lower end of screws used to hold parts in place on the upper side. The wiring of this original model is, admittedly, hard to follow in the photos as it has been cabled, but the constructor can follow schematic wiring diagram Figure 6 and lay in wires according to his own system, cutting if he desires.

When one first begins the parts Figure 6 all seem strange, and it looks
BUILDING A-C-SEVEN

(Continued from page 22)

Eliminating Hum

Now turn off set and connect in the "B" power wires from either battery or "F" eliminator. If an eliminator is used, its 135-volt plug can be pushed into the socket provided on the rear of the set. The Thordarson transformer 2446 and set switch will then control it. If your set switch is again turned on there will be no noticeable hum. The first thing to do is set AP-10 with a screwdriver to find the electrical center, which should minimize the hum almost entirely.

Curt MW-1,000 on the strip is now moved until about half its resistance is in circuit and one turn for a signal. While doing this adjust the Hi-Ohm panel control back and forth, as we want plenty of signal strength for this first work and do not know the position of Hi-Ohm as yet to get it. Presuming we find a program, adjust Hi-Ohm for moderate strength and then adjust MW-1,000 until reproduction is both loud and clear, then leave it alone.

Now find a rather weak signal and we're ready to set the condensers. This writing of variable condensers should preferably be made on a rather low wave-length station. Get program as loud as possible and then, one at a time, bow out the screen in color of each condenser and delicately turn it with a short stick for maximum response, being sure that the other condensers do not turn while working on any one. Thus, when you turn through each of the three circuits condenser by condenser to right of dial will be at maximum resonant quality.

The condenser at the left does not need to be treated, since it opens up the condition to maximum, loosen screw holding it down but do not use other drums to numbers. Then tighten

LIST OF PARTS FOR AC-7

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Item, No.</th>
<th>Description</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammond Mfg. Co.</td>
<td>424 West</td>
<td>1-26 Condensers, Type M.1-17</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 H.500</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Insulated Flexible Conduits</td>
<td>$0.60</td>
</tr>
<tr>
<td>Camfield Radio Mfg. Co.</td>
<td>35 Wacker</td>
<td>Transformer, Type 35-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Push-Pull Dial, Type M.3</td>
<td>$0.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Transformers, Type 35-1</td>
<td>$0.60</td>
</tr>
<tr>
<td>Modern Electric Mfg. Co.</td>
<td>Toledo, Ohio</td>
<td>Transformer, Type M.3-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Push-Pull Dial, Type M.5</td>
<td>$0.60</td>
</tr>
<tr>
<td>Benjamin Elec. Co.</td>
<td>120 S. Sangamon St., Chicago</td>
<td>Transformer, Type 11-1</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>1 Push-Pull Dial, Type M.4</td>
<td>$0.60</td>
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<tr>
<td></td>
<td></td>
<td>1 Transformer, Type M.2-4</td>
<td>$0.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Transformers, Type 11-1</td>
<td>$0.60</td>
</tr>
<tr>
<td>Farnics Transmitting Co., 400 Spring St., Cincinnati</td>
<td>Transformer, Type 11-1</td>
<td>$0.60</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>1 Push-Pull Dial, Type M.1-1</td>
<td>$0.60</td>
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<tr>
<td></td>
<td></td>
<td>1 Transformer, Type M.3-1</td>
<td>$0.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Push-Pull Dial, Type M.5</td>
<td>$0.60</td>
</tr>
<tr>
<td>A. L. Eadie Wireless Corp., 79 Wash. St., Brooklyn, N.Y.</td>
<td>Transformer, Type M.2-4</td>
<td>$0.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Push-Pull Dial, Type M.2-1</td>
<td>$0.60</td>
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</table>

The Radio Digest Shopping Service will purchase all or any of the above specified parts, at the listed prices, for builders of the A-C-Seven Receiver who may be located in isolated communities or unable to obtain the parts from local dealers. Address: Shopping Service, Radio Digest, 510 N. Dearborn St., Chicago, and enclose express or postal money order covering total cost of parts ordered.

Choose Correct "B" Power Unit

If the grid bias voltage is desired from the plate only and when we have deducted 40 volts for the plate and subtracted 5 volts for the 121s' plate, if only 150 were available

60 for the plate. This is just about the right voltage for 112's when 10% voltage "B" units are used. It is not a bad idea, no matter what make in tubes is chosen, to use the 220 type around you so you can pick up the grid biasing out of the N. O. A. for actual use, with the other 10% in a separate power supply. Tubes have usually a little more make-up than the biasing voltage, and one gets the exception. The adjusting and setting of biasing voltage should be made when the correct tubes are used. It may seem a little arduous and a bother, but saving the set and gutting the tubes will be more of a bother. Month after month one merely steps in to the receiver, and the bias will do its job, and readjust your "B" unit, and the set will be just as good as ever. Tuning is easy and set will come out Agreeably sharp.

Away from the center of the earth is not particularly important, but in cities there are many power sources which do not get too long an aerial. This point is true ofx as there are many power sources far more powerful in particular fault of AC-7. Close to big stations where your antenna is not very strong, the biasing voltage circuit, including lead-in, or use an attic or piece of receiving aerial, should be as it is, and not the first-class ground. It is important to have the set well grounded to a plate to have the very best ground. A ground wire and water well north.

PICKARD LAYS WAYS

(Continued from page 5)

South and East and West and also some sections in which hardship is felt. Small towns and rural districts are the most thankful and enthusiastic listeners, number at least half of the Radio Digest readers. Square Deal for Farmer

The Federal Radio commission is of the opinion that there is no need for the FM station to drop the radio and, it is going out to see that there is no such thing, and this is now interference on each heterodyning channel will be asked by the commission in the public interest, convenience and necessity to take steps between this channel and one where that a program is instead of disarranging it, and what is available to farmers on their respective channels. This is the desired result, with time division or control of power or frequency will be their responsibility. Failure of the broadcasting bed-fellows occupying a given channel, which is not generally available to listeners throughout the country because of interference, to get together on a solution or that will result in arbitrary orders by the commission. Plans to clear at least 40 channels of interference are definitely under way, and broadcasting station having power in the country. The recent series of changes in assignments, effective November 1, have made a decided improvement in reception, according to reports from listeners, many of whom have been more content with good reception weather reveals heterodyning.

100 Stations Changed

An example of intruders' willingness to cooper with the commission is evidenced by the fact that the hundred or more stations involved in the changes are too many to mention, but the fact that these are sometimes as good or better than in the old, and a great many members of Congress seem to be less interested in the listener than the broadcasters, and are entirely sympathetic with the commission's endeavor to decide each case on its relative merit.

The feeling is becoming prevalent in certain areas of the country, that the present interference problems are cured to the extent that listeners can enjoy a variety of programs, that wired stations will be the answer to the problem. This is a challenge to broadcasters who will not likely go unheeded, and it is believed that there is also a great deal of reason to assume that a full share of responsibility being of the interference problem, which will be met with by the people in the industry. The blood of the radio industry is a large and, on their behalf, the fact that they have a right to the national and and around distant stations. This is all that would be the deciding factor. The question is, shall the listener, the "Radio fanatics" of the present, or the government of a few neighborhood fangling organizations, or will the present system be the deciding factor.

Chicago Has 72,530 Watts

CHICAGO—The combined power of the Chicago broadcasting stations is 72,530 watts, according to the last statistics of the Radio commission. There are 69 stations in the entire United States for his angling activities in 15 to 16,059 watts each.

www.americanradiohistory.com
RADIO DIGEST—Illustrated

December, 1927

Vol. XXII

No. 6

THE READER'S VIEW

Answering Major Mott

AFTER reading Major Mott's hurricane in the November DIGEST I wished to a mirror fairly in the
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the minor was on the air at the time of the "WAZ" decision.

Major's inquiry about what the action might have
the "KEW" stations in the program.

"To quote the Major's own words: "It is BO easy to
yourself. Thus I found the former P.M.,
position calls for a big number—much bigger
the man. But if we are anxious to hear a certain program
on an important station you could readily turn to the
WEAF, you would dial to number 6 and get the

We should all be anxiously listening to the
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WEAF DIALING. By using the wave number, when you wanted KDKA at Pittsburgh you would turn to channel 46. The next coast station KDKA would again turn to the number 40 on your set. There would be numbers on the dial from 1 to 40, and you could dial in any number and you would soon remember the fact that your favorite broadcasting station was on that particular wave. And you would also be anxious to hear a certain program on an important station you could readily turn to the WEAF, you would dial to number 6 and get the

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SERIAL MELODRAMA THRILLS WLW LISTENERS

THURSDAY, DECEMBER 1

Headliners

Eastern

WGL, Washington, D.C. (1120 kc) 7 p.m., opera.
WJZ, Newark, N.J. (1170 kc) 7 p.m., opera.
KDKA, Pittsburgh, Pa. (1100 kc) 7 p.m., opera.

Central Standard Time Stations

WOC, Davenport, Iowa (590 kc) 7 p.m., opera.
WBT, Chicago, Ill. (1590 kc) 7 p.m., opera.
WLS, Chicago, Ill. (1290 kc) 7 p.m., opera.
WJZ, Newark, N.J. (1170 kc) 7 p.m., opera.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (1150 kc) 7 p.m., opera.
WABC, New York, N.Y. (1330 kc) 7 p.m., opera.

GRAYS WONDER CITY symphonists, Lincoln Center, New York, N.Y., Howard De Long, below, is the dramatic tenor at WOOG.

WGL is making Radio fans feel at home by having pretty housemaids like Miss Webber among them. Miss Webber is also an entertainer.

WOW makes listening a pleasure.

WOW makes listening a pleasure.

HIGH LIGHTS OF THE AIR

THURSDAY'S night is at its peak with the Chicago Civic Opera having June playing over the Blue Goose each Thursday night at 8 p.m. Central Time and the New York symphony on the same day each Saturday night at 4 p.m. Eastern Time. The Boston Symphony will also be on the air over WGBR every Saturday night during December.

The Aeolian Ken artists who will appear during the Sunday 9:15 p.m. Eastern Time programs of the Red Chain are: December 4, Reinald Werrenrath, tenor; December 13, Marcus Marth, baritone, and December 25, the Christmas quartet, composed of Harry Laun, tenor; Elise Baker, contralto; Arthur Hackett, tenor, and William Whimborne, baritone.

One of the monthly features from the Great Plains region is the fourth annual rehearsals of the Missouri school by the Independent Missouri clubs. This section which is composed of 227 clubs, will be directed by Paul N. Sainte and broadcast by KF6RS.

Inter-faith lunch club art being featured on the Thursday night program of WWJ.

Not only are the clubs popularizing their entertainment possible, but they are also trying to acquaint the Radio public with the civic creative ideas behind the various organizations, December 1, the Asheville Optimist club presents the programs; December 2, a show of Asheville American Legion club; and December 15, the Asheville Rotary club.

Two popular light operas are being featured this month by OCN, Toronto. On Thursday, December 10, the popular operetta, "The Merry Widow," will be on the air, and on Saturday, December 19, "The Gondoliers" will be produced.

If you have missed the first four sections of "Flying High," the thrilling melodramas now being played at WJ, will not be too late to enjoy a front row head quarters seat for each Monday night at 9:15 p.m. Eastern Time during December. Not only is the play about aviators, but the airfield is actually one of the airports. Martha Coninger, the heroine, in one of the first griefs in Cincinnati to learn to fly. Even the author, Mrs. Susan H. Elyer is an aviator and owns her own plane; consequently the play is full of thrills. A race, a fight in the air, and a romance will more than draw a crowd of interest.

Of course, all the stations will assist the boy out on box seats as gracefully as WJ, with Claude Parker, Ralph Roseman, and Maurice Sherman's College Inn orchestra providing.

WGL, Washington, D.C. (1120 kc) 7 p.m., opera.
WJZ, Newark, N.J. (1170 kc) 7 p.m., opera.
KDKA, Pittsburgh, Pa. (1100 kc) 7 p.m., opera.

WOC, Davenport, Iowa (590 kc) 7 p.m., opera.
WBT, Chicago, Ill. (1590 kc) 7 p.m., opera.
WLS, Chicago, Ill. (1290 kc) 7 p.m., opera.
WJZ, Newark, N.J. (1170 kc) 7 p.m., opera.

Central Standard Time Stations

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## ANNUAL MESSIAH PROGRAM OVER KLDS

**Central Time Stations**

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<thead>
<tr>
<th>Station</th>
<th>Time</th>
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<tbody>
<tr>
<td>WMJY</td>
<td>8:30</td>
<td>Messiah performance</td>
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<tr>
<td>WMCY</td>
<td>9:00</td>
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**Eastern Mountain Time Stations**

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<thead>
<tr>
<th>Station</th>
<th>Time</th>
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<tbody>
<tr>
<td>WOR</td>
<td>8:15</td>
<td>Messiah performance</td>
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<tr>
<td>WJB</td>
<td>9:00</td>
<td>Messiah performance</td>
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<tbody>
<tr>
<td>KKNX</td>
<td>9:00</td>
<td>Messiah performance</td>
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<tr>
<td>KFTR</td>
<td>10:00</td>
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**Pacific Standard Time Stations**

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<thead>
<tr>
<th>Station</th>
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<tbody>
<tr>
<td>KRLD</td>
<td>8:30</td>
<td>Messiah performance</td>
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<td>KFI</td>
<td>9:00</td>
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## Regular Saturday Features

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<thead>
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## Regular Sunday Features

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**SUNDAY, DECEMBER 4 Headlines**

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<th>Station</th>
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<tbody>
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**Walog News, 26 December, 1927**

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**SATURDAY, DECEMBER 3 Headlines**

### Eastern Time Stations

<table>
<thead>
<tr>
<th>Station</th>
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<th>Program</th>
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**PACIFIC STANDARD TIMES**

- **KFI** (Los Angeles, Calif.)
- **KXL** (Portland, Ore.)
- **KROK** (Denver, Colo.)
- **KBIA** (Columbia, Mo.)
- **KSTP** (St. Paul, Minn.)
- **KFWB** (Los Angeles, Calif.)
- **KSL** (Salt Lake City, Utah)
- **KSLR** (Los Angeles, Calif.)
- **KWAM** (Memphis, Tenn.)
- **KDOO** (Oakland, Calif.)
- **KGO** (San Francisco, Calif.)
- **KQED** (San Francisco, Calif.)

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<td>Messiah performance</td>
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- **KROK** (Denver, Colo.)
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**Regular Sunday Features**

- **KDKA** (Pittsburgh, Pa.)
- **WABC** (New York, N.Y.)
- **WJZ** (Baltimore, Md.)
- **WIP** (Philadelphia, Pa.)
- **WOR** (New York, N.Y.)
- **KXOD** (Dallas, Tex.)
- **KFWB** (Los Angeles, Calif.)
- **KSL** (Salt Lake City, Utah)
- **KSLR** (Los Angeles, Calif.)
- **KWAM** (Memphis, Tenn.)
- **KDOO** (Oakland, Calif.)
- **KGO** (San Francisco, Calif.)
- **KQED** (San Francisco, Calif.)
It isn't by mere chance that Farrand Speakers are heard each night by more than a million radio listeners. It isn't by mere chance that Farrand Speakers command their full price at all times, while other cones are repeatedly “cut” in order to further their sale. Radio listeners throughout the world have bought Farrand Speakers on the unfailing, unbiased judgment of their own ears. And now, this season, comes an even better Farrand Speaker—the Farrand Oval—to set an even higher standard for Farrand tonal quality. You'll be thrilled anew by its matchless performance, its ability to accept volume, its artistry of appearance. More than ever before, “The Ear Says Buy!” to a Farrand demonstration. At all dealers.

Farrand NEW Oval

Four models—The Oval SENIOR (Model 24), at $32.50—The Oval JUNIOR (Model 20), at $16.50—The Oval WALL (Model 30), at $45—The Oval PEDESTAL (Model 30-P), at $60.00. Slightly higher in Far West and Canada.

Farrand Manufacturing Co., Inc., Long Island City, N.Y.
When the big parades of talent entertain the nation—

"You're there when the big parades of talent entertain the nation—"

This new Crosley Bandbox is an achievement almost as great as radio itself.

Battery or automatic socket power unit operated $55. A C type taking power direct from house lighting current $110.

Battery or automatic socket power unit operated $55. A C type taking power direct from house lighting current $110.

On every hand manufacturers, retailers, radio fans and prospective owners exclaim—"how does Crosley do it for the price." After 5 years' experience in production on a most gigantic scale, Crosley invested over half a million dollars this past summer in manufacturing equipment for this wonder set which amazes the radio engineer and stagers the imagination of the layman.

Expert radio purchasers check the most costly radios made for features Crosley builds in the Bandbox for $55. Absolute balance! Total Shielding! Genuine Neutrodyne! Latest refinements in fittings and operation! Adaptability to any type of installation!

From an engineering standpoint nothing greater in radio is available to the public for Crosley is licensed to make full use of the patents, research and developments of the world's greatest electrical and radio industries—The Radio Corporation of America, The General Electric Co., The Westinghouse Co., The American Telephone & Telegraph Co., The Otis Engines and The Hazeltine Corporations.

Coils are copper shielded! Condensers cadmium-plated steel shielded! Wiring totally shielded from all other elements! Genuine Neutrodyne balance! To these Crosley adds an exclusive feature in the Acuminators, sub-controls designed solely to make the one dial Bandbox radio's most selective and sensitive receiver as well as radio's easiest operated set.

The Acuminators sharpen the tuning of the Bandbox so acutely that far distant, weak signals never heard on ordinary single dial receivers are comparable with local and nearby stations for volume and clarity. Not content with such full measure of value, Crosley incorporates a volume control enabling operators of the set to cut the music of local stations to a mere whisper with out detuning the set. Dwellers in cities where many stations are located will appreciate this as detuning for soft volume is impossible. The single control has an illuminated dial. The Bandbox is equipped with a long cable containing all power and outside leads in one brown fabric covered lead.

The flexibility of the Bandbox is perhaps one of its greatest features. It can be installed anywhere for it

The Crosley Radio Corp.
Powel Crosley Jr.
President
Cincinnati, Ohio.

CROSLEY

Montana, Wyoming, Colorado, New Mex
meets all conditions. It is small—only 20 inches long and 7 inches high. The outside case is easily removed for cabinet installation. The ingenious assembly of all controls in one spot makes it possible to adapt the Bandbox to any cabinet.

Operation of the A C Bandbox receiver from house current is possible with the new amazing R. C. A. alternating current tubes UX226 and UY227. These tubes utilize for their filaments and heating regular alternating current from the houselighting circuit. The current is stepped down by means of a transformer without need of rectifiers to supply the heat necessary for the functioning of the tubes. The converter box, which is included with the Crosley AC Bandbox can be tucked away out of sight. It is connected to the Bandbox by a cable and also supplies the current for the plate voltages on the tubes replacing B batteries.

The Crosley AC Bandbox functions entirely from the regular houselighting current without need of batteries, battery chargers, or any of the other usual paraphernalia which requires attention, care and early replacement. The Crosley AC Bandbox with the new alternating current tubes is truly revolutionary, and brings to the radio user an entirely new conception of care-free radio entertainment of the highest standard of performance, $110. These new Bandbox receivers are now on display at over 16,000 Authorized Crosley dealers. Their faultless reception of the many wonderful events constantly on the air is proving such a startling demonstration that a national enthusiasm sweeps the country in the natural exclamation—"You're there with a Crosley!"

If you cannot locate the nearest dealer write Dept. 49, for his name and literature.

Crosley is licensed only for Radio Amateur Experimental and Broadcast Reception.
PREFERENCE among buyers of taste and discrimination has marked the career of Zenith Radio from the beginning. Refusal of Zenith to deal in radio mediocrity and half-quality has won for Zenith Radio a following in the better homes of America. Today, Zenith is the world’s largest manufacturer of high grade radio.

Zenith leadership in radio is exemplified by the development of the ALL ELECTRIC receiver. Zenith was the first to perfect and market the ten tube ALL ELECTRIC receiver—now it is the first to equip this revolutionary instrument with a power speaker. So fine is the performance of this instrument, that all who hear it proclaim the Zenith ten tube ALL ELECTRIC as radio’s supreme achievement. You, too, will agree when you hear a Zenith demonstration. Visit a Zenith dealer.

ZENITH

ZENITH RADIO CORPORATION, 3620 IRON STREET, CHICAGO, ILL.
FARMERS' PROGRAM INDEX

Special Farm Features

Weather

Local Time

KDAE 10:30 p.m.
KFI 8:30 p.m.
KVLY 6:15 p.m., 6:30, 7:15, 7:30, 8:15, 8:30
KVRE 11:45 p.m.
KFGS 8:00 p.m.
KCIY 9:15 p.m.
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KFGS 8:00 p.m.
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KFGS 8:00 p.m.
KCIY 9:15 p.m.
KFGS 8:00 p.m.
Turn Your Phonograph into a Loud Speaker with a Fulton Speaker System

Big Price Reduction Now Only $200

By Mail Supply Limited Order Today

Fultone Speaker System, 401 Lincoln Ave., Chicago, Illinois
Please send me Fulton Loud speaker unit for which I enclose Two Dollars and... 200 for.... adapter.

Name
Address
City State
Radio is better with Battery Power

WHEN you give the great gift of a radio set, remember that you are giving not merely a handsome, intricate and sensitive instrument, but you are also giving radio reception, radio enjoyment, radio itself. So give a receiver that can best source of radio power—batteries, for batteries perfect the performance of a radio receiver. The power they provide is pure D.C., Direct Current, which is entirely silent. Battery Power will insure the enjoyment of the listener, for battery-run sets produce exactly the tone their designers built into them.

All Eveready “B” Batteries will give you the vital qualities of Battery Power. Behind Eveready Radio Batteries are 33 years of dry battery manufacture, of pioneering, invention, discovery, continual leadership. Buy Eveready Radio Batteries and ahead of you are hours, days, weeks and months of daily use, of solid enjoyment of radio at its best.

For modern receivers, choose the Eveready Layerbuilt “B” Battery No. 486, built according to a radically new design that gives it ample and even excess capacity to meet the demands of powerful sets. This battery is the longest lasting of all Evereadies. Its unique, patented construction packs the maximum possible quantity of active materials within a given space, and also makes those materials more efficient producers of current.

EVEREADY Battery Company

US & CAN units

电台的礼物

当你给予一个伟大的礼物，记住你不仅仅是赠送一个精美的，复杂的和敏感的仪器，但你也在赠送无线电接收，无线电欣赏，无线电本身。所以赠送一个可以最好地提供无线电电源—电池，因为电池完美了无线电接收器的性能。它们提供的电力是纯净的直流电，单相交流，这是完全寂静的。电池电力将保证听者的欣赏，因为电池驱动的设备能够产生精确的音质，研究员设计师们早就设计出来的。

所有Eveready “B”电池将给你这种电池的最重要的品质—电池电力。Eveready无线电电池背后有33年的干电池生产历史，包括开拓，发明，发现，持续的领导。购买Eveready无线电电池，你将获得数小时，数天，数周和数月的日常使用，以及电池独有的无线电欣赏。

对于现代接收器，选择Eveready层叠的“B”电池No. 486，根据一个全新的设计制造的，它拥有充足的并且甚至更多的性能以满足强大接收器的需求。这种电池是所有Eveready电池中最持久的。它独特的，专利的构造方式使得在给定的空间内最大可能地装入活性材料，同时，它也让这些材料更有效地产生电流。

EVEREADY Battery Company

US & CAN单位
We Challenge anyone to EQUAL our VALUE at our PRICE

ONLY

$21

Complete with RAYTHEON BH 125 m.a. TUBE

Unsurpassed by 8 supplies costing twice the price much. Extra quality built into RAYTHEON. Will operate" eye higher than desires wife. Station. Raytheon gives better quality at low price. Unrivalled for the complete" production and direct selling where you need dollars.

Ample Power for 10 Tubes including power tube

You can adjust the three variable controls, connected to the detector, intermediate, and amplifier tubes, to suit the most critical and sensitive requirements of any set. You get exactly the correct voltage with the necessary, and compare to assure full B power at all times. The Warren also has a power tap for high voltage tubes, as well as reserve capacity in the filter to carry smoothly the long sustained notes. Furnishes constant, noise-free, low- and no acids with tunes to worry about. Neat, unvarying B power to any output. Compact—51x6x5 inches can be used flat, as shown, or vertical. Finished in attractive old gold bronze.

GUARANTEED—OR MONEY BACK

Shipped complete with BH, 125 m.a. Raytheon tube. All ready to plug into light. Nationally advertised (see December radio magazines) and sold regularly at $30.00 retail. Now, direct to you at $21.00. (22 West of Rockfels.) Subject to return if not satisfactory, and money refunded at such time your satisfaction. Shipped C.O.D., or express prepaid (in U. S.) when money order or bank draft accompanies order. Immediate delivery. We guarantee opportunity to make a big saving. Mail coupon, send money order, T.O.T.

TO DEALERS—No discount from $21 price. Quality "B" power. See the WARRIES, can not be made to sell for less than $21 even in wisdom quantities.

WARREN ELECTRIC CO.

December, 1927

Put Your Set in Beautiful Radio Furniture

29 Models—Positively the Finest

Table Cabinets, Desks. Speaker Con. 5. Directly Campbell to Item 9. 7:30. pine, 9:30, 11:30. Choral. 10. 12:00. Dr. Mays Mandolin musicians. 3. 10. 11:00. speech. 10. 11:00. night. 12. 1:30. open house; 9:45, dance program. 4. 9. 11:30, dance program; 11:00 p.m. orches-

THURSDAY, DECEMBER 8

Eastern Central Mountain Pacific

WBBM Chicago, Ill. (1380-550k1) 7 p.m. dinner concert: E. J. Kane, tenor; H. S. Harkness, organ. WCOO Minneapolis-St. Paul, Minn. (620-740k1) 7:30 p.m. B.A.S. concert; Harton, organ. WCBS New York, N. Y. (880-550k1) 8:30 p.m. dinner music; 10:30 p.m. dance. WOR New York, N. Y. (640-550k1) 9:30 p.m. social hour; 10:30 p.m. dance. WMCA New York, N. Y. (580-550k1) 10:30 p.m. dinner music; 11:30 p.m. dance. WJZ Newark, N. J. (1230-550k1) 11:00 p.m. social hour; 11:30 p.m. dance. WABD St. Louis, Mo. (1560-550k1) 11:00 p.m. social hour; 11:30 p.m. dance. KSD St. Louis, Mo. (1240-450k1) 11:00 p.m. social hour; 11:30 p.m. dance.

FRIDAY, DECEMBER 9

Eastern Central Mountain Pacific

WTRY New York, N. Y. (1560-550k1) 7:30 p.m. concert; 9:30 p.m. dance program. WEAF New York, N. Y. (1130-550k1) 9:00 p.m. dinner music; 10:30 p.m. dance. WOR New York, N. Y. (1220-550k1) 10:30 p.m. social hour; 11:30 p.m. dance. WNBC New York, N. Y. (1080-550k1) 11:00 p.m. social hour; 11:30 p.m. dance. WABC New York, N. Y. (1340-550k1) 11:00 p.m. social hour; 11:30 p.m. dance. WNYC New York, N. Y. (1580-550k1) 11:00 p.m. social hour; 11:30 p.m. dance.

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Training gets men ahead in AVIATION

At home, in your spare time, you can learn to become a flying example of aviation—and start yourself on the way to large earnings.

Lee, of Minneapolis, M. Min., and his staff of experts will guide your instruction. They are the best. There are many positions open as mail pilot, commercial pilot, instrument pilot, well paid jobs as inspectors, navigators and meteorologist; and in the different factories.

The training Institute course teaches you everything you need to know, right up to the point of flight instruction on the flying field and in the air.

For free information, write to the Institute, flying instructions are given all over the United States.

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The training Institute course teaches you everything you need to know, right up to the point of flight instruction on the flying field and in the air.

For free information, write to the Institute, flying instructions are given all over the United States.
Better Tone Quality with Greater Volume from ANY station

Centralab Tone Amplifier

Every owner of a set with two stages of amplification can work wonders with a Centralab Tone Amplifier.

It adds a power stage of amplification, which gives any set better tone and greater volume, without distortion, from ANY station tuned in. Using the UX 171 power tube, it immediately increases the volume on all stations and gives the full-rounded tones that seem to move the radio artists right into your own home.

Power amplification is essential to clear, true radio reproduction, because plenty of power is required to amplify all tones equally. Reception vastly improves over simply substituting a power tube for the lost stage of any set. While power tubes improve tone quality, they amplify less than standard tubes. Centralab Tone Amplifier adds the needed stage to produce a well-rounded tone in full harmonic balance.

Centralab Modu-Plug

Gives add rectifiers the improved volume systems needed in best sets. Reduces present market plug. Type in with this. Then modulate to any degree on Modu-Plug alone (between speaker and set). No connecting volume plug. Also connects directly to speaker. Reduces interchanging colors,datums without tools. Nothing size is like a C. O. D. Modu-Plug or Jack Type. 2.50. Easy Tone Type with 70 feet of cord. $3.00. Mailed C. O. D.

Centralab Tone Amplifier says: "...It is the next step.

Centralab Radio Laboratories

12 Keefe Avenue

Milwaukee, Wis.

Radio Since 1921

Write for complete list of Centralab Products and CIRCUIT literature.
Eastern Central Mountain Pacific
KBOO (134.4m-900kc) Portland, Oregon
12:00 11:00 10:00 9:00
KWHC (127.6m-995kc) West Hobart, Indiana
12:45 11:45 10:45 9:45
WLBC (164.6m-875kc)Chicago, Illinois
12:30 11:30 10:30 9:30
\'SCI (277.6m-1080kc) WLAC / COIL (277.6m-1080kc)
12:15 11:15 10:15 9:15
KMA (394.5m-850kc) 11:00 10:00 9:00
For Regular Features see Wednesday, December 7.

THURSDAY, DECEMBER 22
Headliners
Eastern Central Mountain Pacific
11:00 10:00 9:00
WVTM 13125.6m-6190kc) Current po
12:00 11:00 10:00 9:00
WTCF (189.0m-650kc) Mid-week religious seren
12:15 11:15 10:15 9:15
KJL (109.5m-690kc) Bryant, Ohio
12:45 11:45 10:45 9:45
KLS (270.1m-1110kc) Great Falls, Montana
13:15 12:15 11:15 10:15
KTS (184.4m-780kc) Rose Grinnin, Iowa
13:45 12:45 11:45 10:45
For Regular Features see Friday, December 1.

SUNDAY, DECEMBER 25
Headliners
Eastern Central Mountain Pacific
11:00 10:00 9:00
KBOO (134.4m-900kc) Portland, Oregon
12:00 11:00 10:00 9:00
KWHC (127.6m-995kc) West Hobart, Indiana
12:45 11:45 10:45 9:45
WLBC (164.6m-875kc) Chicago, Illinois
12:30 11:30 10:30 9:30
\'SCI (277.6m-1080kc) WLAC / COIL (277.6m-1080kc)
12:15 11:15 10:15 9:15
KMA (394.5m-850kc) 11:00 10:00 9:00
For Regular Features see Friday, December 1.

FRIDAY, DECEMBER 23
Headliners
Eastern Central Mountain Pacific
11:00 10:00 9:00
WVTM 13125.6m-6190kc) Current po
12:00 11:00 10:00 9:00
WTCF (189.0m-650kc) Mid-week religious seren
12:15 11:15 10:15 9:15
KJL (109.5m-690kc) Bryant, Ohio
12:45 11:45 10:45 9:45
KLS (270.1m-1110kc) Great Falls, Montana
13:15 12:15 11:15 10:15
KTS (184.4m-780kc) Rose Grinnin, Iowa
13:45 12:45 11:45 10:45
For Regular Features see Friday, December 1.

SATURDAY, DECEMBER 24
Headliners
Eastern Central Mountain Pacific
11:00 10:00 9:00
KBOO (134.4m-900kc) Portland, Oregon
12:00 11:00 10:00 9:00
KWHC (127.6m-995kc) West Hobart, Indiana
12:45 11:45 10:45 9:45
WLBC (164.6m-875kc) Chicago, Illinois
12:30 11:30 10:30 9:30
\'SCI (277.6m-1080kc) WLAC / COIL (277.6m-1080kc)
12:15 11:15 10:15 9:15
KMA (394.5m-850kc) 11:00 10:00 9:00
For Regular Features see Friday, December 1.
**Utah Drum Type Speaker**

**New for Your Radio**

**$100 Down**

**Brings it on Free Trial**

Yes, only $10.00 with coupon below brings the famous "Utah" drum type speaker to your home or 30 days free trial. This is a combination cone speaker with a metal chamber—the latest and finest type of loud speaker. And at a price much lower than is usually charged. No time is too late to order. A desirable improvement in reception over your old speaker. No blasting, thumping or pulsations. Volume at any volume, ever so delicate tone shading faithfully reproduced—a new era in music.

**Total price only $16.00**

On easy Payments

**Send Coupon Now!**


**FREE CATALOG**

Catalog for those interested. Send coupon to: Strauss & Schram Dept. R519 Chicago, Illinois

**Spectacles**

**ON 10 DAY TRIAL**

**Best Spectacle Offer Ever Made**

All Zylor frame. Very comfortable and economical. No metal to tarnish; practically unbreakable. Value worth $15.00. Wear them 10 days FREE. Then send only $2.50 for return. You are the sole judge.

**Send No Money**

We will send you a pair of extra large, round eye, Zylor Shell, sight-improving spectacles absolutely free of charge. Try them for 10 days, at our expense, free.

You will be delighted, as will you be enabled to inspect the frame;—should the glasses not improve your vision—return the glasses to their owner and receive a full credit against your spectacles. You know you want to be able to read and see with ease and comfort.

**The spectacle you have always wanted**

You can put them on in the morning and wear them all day long for far or near, at your work, hunting, driving—everywhere, and when you stop to talk or smoke, they are always there. The pictures below these wonderful night—sight improving Zylor Shell spectacles.

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**Radio Digest—Illustrated**

December, 1927

**MONDAY, DECEMBER 26**

**Headliners**

- Eastern
- Central Mountain
- Pacific

**2:30 a.m.**

- KLDS

**3:30 a.m.**

- KLDS

**4:30 a.m.**

- KLDS

**5:30 a.m.**

- KLDS

**6:30 a.m.**

- KLDS

**7:30 a.m.**

- KLDS

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**THURSDAY, DECEMBER 29**

**Headliners**

- Eastern
- Central Mountain
- Pacific

**2:30 a.m.**

- KLDS

**3:30 a.m.**

- KLDS

**4:30 a.m.**

- KLDS

**5:30 a.m.**

- KLDS

**6:30 a.m.**

- KLDS

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**FRIDAY, DECEMBER 30**

**Headliners**

- Eastern
- Central Mountain
- Pacific

**2:30 a.m.**

- KLDS

**3:30 a.m.**

- KLDS

**4:30 a.m.**

- KLDS

**5:30 a.m.**

- KLDS

**6:30 a.m.**

- KLDS

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**TUESDAY, DECEMBER 27**

**Headliners**

- Eastern
- Central Mountain
- Pacific

**2:30 a.m.**

- KLDS

**3:30 a.m.**

- KLDS

**4:30 a.m.**

- KLDS

**5:30 a.m.**

- KLDS

**6:30 a.m.**

- KLDS

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**WEDNESDAY, DECEMBER 28**

**Headliners**

- Eastern
- Central Mountain
- Pacific

**2:30 a.m.**

- KLDS

**3:30 a.m.**

- KLDS

**4:30 a.m.**

- KLDS

**5:30 a.m.**

- KLDS

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**SEND ORDER TODAY**

Send no money. We will send you a pair of extra large, round eye, Zylor Shell, sight-improving spectacles absolutely free of charge. Try them for 10 days, at our expense, free. You will be delighted, as will you be enabled to inspect the frame—should the glasses not improve your vision—return the glasses to their owner and receive a full credit against your spectacles. You know you want to be able to read and see with ease and comfort.
Improve Haiti Broadcasting
PO Box 1783, Haiti
Haiti broadcasting has now been made practical with regular Friday night and Saturday morning programs. Haitian airwaves have been a serious disturber here. There are being made with bird wire to certain provincial towns to an effort to improve reception in these places.

Most Amazing INVENTION in 25 years
$90 WEEKLY IN SPARE TIME!
Men, here is a wonder—the most sensational invention of all time! If you're looking for a few dollars extra there is none better. You can earn at least $30 weekly in spare time. All you need is $2.95 initial investment. Have a lookett with an array of demonstrations-You're in a Ve-Pa Ad. and can bank on cold hard cash!

Sells for $2.95—You Make $1.65

Get Your MACHINE FREE

The easy pocket size Ve-Pa comes complete with KIT and battery charger. The LAW says Ve-Pa can be sold as a service and if you're keen to do your own thing it is up to you. Unit is ready to roll. Cost is not necessary.

With ABOX on the job your "A" power will never fail when it is needed. There is no battery—no change—no receptacle for charging. No parts to wear out, no change. No cases for service or worry.

ABOX keeps right on delivering peak power direct from the light socket to your radio—night after night, year after year. Its strength does not ebb. ABOX assures reliable operation, possible with no other source of "A" power.

Regardless of what receiver you have, using eight tubes or less, all you need is "A BOX" power—a ABOX and a light socket. Two simple connections, which you can easily make yourself, is all there is to do.

Radio dealers everywhere highly recommend ABOX. The ABOX FILTER can be used to filter the noise of your receiver if you have a switch. ABOX is used for special conditions. Price $10.00. Send for free illustrated booklet.

End "B" Current Troubles with a

MODERN "B" Compact

Proven dependable in daily use through two strenuous sessions, the Modern "B" Compact is the B power unit that was your dream of the successful. Ample capacity for seven and eight tube sets. Four L1 connections, two variable controls. Designed for use with Ray-then tube which is not included.

Price $28.50

The Modern Electric Mfg. Co.
Toledo, Ohio

MODERN Type M Transformers

Modern Type M Transformers, approved by every modern laboratory to which they have been submitted, have been selected for use in the AC-7 described in this issue. Results alone justify this approval and use by these engineers, and these audio transformers will give you the finest results in either the AC-7 look-up or in your own set.

Modern Type M Transformers represent a new goal in the design of audio amplifying units. Large cores, large wire sizes and perfect proportioning result in splendid volume with the finest of tone quality throughout the entire audible range.

They are guaranteed to perform satisfactorily, if your dealer cannot supply you order direct.

Types M-1 and M-2, $8.50 Each
Types M-3 Output, $8.00
Types M-4 and M-5, Push-Pull, $10.00 Each
Puccini’s “B” Unites the Leader for Past Two Years

LATEST Complete Power Unit for NEW A-C TUBE SETS

Just What’s Needed to rebuild battery sets to A-C tube operated.

Write for particulars.

THE WEBSTER COMPANY, 855 Blackhawk St., Chicago.

Rules and Conditions

1. The contest starts with this issue of Radio Digest, November 1, 1927, and ends at midnight, April 16, 1928. All mail entering this contest must be postmarked on or before midnight, April 16, 1928.

2. Balloting will be by means of two coupons appearing in each monthly issue of the Radio Digest and by special ballots issued only when requested at the time of receipt of paid in advance mail subscriptions to Radio Digest when received direct and not through subscription agencies according to the schedule given in paragraph 4.

3. When sent singly, each coupon clipped from the regular monthly issue of Radio Digest counts for one vote. HONORS votes given in accordance with the complete series of the six (6) month time a bonus of fifty votes will be allowed.

4. For each three consecutively numbered coupons sent in at one time a bonus of five votes will be allowed.

5. For each five consecutively numbered coupons a bonus of thirty-five votes will be allowed.

6. For the complete series of the six (6) month time a bonus of fifty votes will be allowed.

7. Coupons must be sent in at least five consecutive numbered.

8. Special ballots will be issued only when requested at the time of receipt of paid in advance mail subscriptions, old or new, to the Radio Digest when received direct and not through subscription agencies according to the following voting schedule.

- 1 year paid in advance mail subscription...
- 3 year paid in advance mail subscription...
- 2 year paid in advance mail subscription...
- 1 year paid in advance mail subscription...
- 3 year paid in advance mail subscription...
- 2 year paid in advance mail subscription...
- 1 year paid in advance mail subscription...
paid in advance mail subscriptions direct. 12.00  75 cents
5-year; one five; one two-year and one three-year; two two-year and one year; one four-year and one two-year; two five-year; and one two-year.

5. For the purpose of the contest the United States will be divided into five districts. Canada will comprise the sixth district. The number one, known as the "KANT," will include the states of Maine, New Hampshire, New York, Vermont, and Massachusetts.

6. The orchestra polling the highest number of votes in one of the five districts will be declared the winner. The name of the orchestra and the person named will be notified to the manager of the orchestra polling the highest number of votes, and the orchestra and the person named will be declared the winners.

7. In the event of a tie for any of the prizes offered, prizes of identical value will be given to each of the contestants.

8. Any prize that may arise during the contest will be decided by the Contest Editor, and his decision will be final.

No "A" Batteries with these TELEVCOLAS

The new Televoal A.C. 202 and 212 Televoals are direct from A.C. current and require no "A" Batteries. Televoal C. 112A and 171A Power Transformers are available with oxide-coated filament holders, but half the current cost. Three amperes hereafter.

For best results use on Televoal Quality Tubes for all purposes. All standard types of tubes furnished by exclusive Televoal Support—fully guaranteed.

Lafount Appointed

This radio commission is expected to receive a fresh point of view with the advent of Harold A. Lafount, the new Pacific coast commissioner. Although Mr. Lafount has been interested in radio for the last five years, he has never been connected professionally with the business. This should enable him to give the commission the unbiased attitude of the listener.

A native of Logan, Utah, Mr. Lafount came to Salt Lake City fifteen years ago. From here he developed the direction of irrigation projects in his home state. It is particularly interesting in the commission of such projects.

Commissioner Lafount will fill the place left vacant by the recent death of John P. Dillin.

Joe is Experienced

Little Joe Whirlwind, of Chi.

LITTLE JOE WHIRLWIND, of Chicago, sings his theme song the children in every district know to the tune of "A-100," radio directed "De-

neighborhoods generally. This in a recent description of his bit, before the mike. Now, Joe, to be always in-
nounced by Maurice White as the "WGF.,

that in which he will be officially billed of that word. Little Joe may be seen here.

I am in the studio at bed time," he said, "and nobody has a chance to see

ting to them as I would do if I were at home. Who understands them like me? They are much alike in their tastes. We do not take the time to discuss our differences.

They see through our pious and silent efforts not in time the scene is going on.

We learn a great deal, perhaps, from the record of our experiences. When I sing, I sing in the studio, where I can be heard to the best advantage.

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**OFFICIAL BOOK AND LOG**

**CHALLENGE!**

One dollar will be paid to the Radio fan submitting the most correct listing in this Official Book and Log. Loggers must submit their listing of stations coming on the air not later than a month from date of broadcast. Listings must be submitted to the stations themselves, and NOT by correspondence to other broadcasting offices or directories. Readers also must write in name of station correctly located. Station verifications must accompany corrections, and in case of duplicate awards will be paid. That's just how sure Radio Digest is that this Official Book and Log will be correct! To make the challenge fair for everyone, broadcasting stations that cannot be reached by employees are barred from participating.

In this issue is a complete alphabetical arrangement according to waves in four bands, within each of which is a state, city index of stations. Information contained in our station data listing is given in the following order: Call letters, city, state, waves, antenna input, owner, station slogan, and if possible, composer. If any name of listener in "Club" schedule of operating hours, and kind of program listed, as "Central," "Mountain," etc.

**KDFQ**

- City: Phoenix, Ariz.
- Waves: 11:30 pm, Sun. 1:15 am, Mon.
- Format: Gospel, AM.
- Owner: Alex. E. B. Watkins.
- Year Founded: Jan. 1922.

**KDLR**

- City: Los Angeles, Calif.
- Waves: 11:30 pm, Sun.
- Format: Ditton, AM.
- Owner: Alex. E. B. Watkins.
- Year Founded: Jan. 1922.

**KDLR**

- City: Salt Lake City, Utah.
- Waves: 12:30-1:30 pm, Mon.
- Format: Opera, AM.
- Owner: Alex. E. B. Watkins.
- Year Founded: Jan. 1922.

**KDFQ**

- City: Los Angeles, Calif.
- Waves: 11:30 pm, Sun.
- Format: Ditton, AM.
- Owner: Alex. E. B. Watkins.
- Year Founded: Jan. 1922.

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- City: Salt Lake City, Utah.
- Waves: 12:30-1:30 pm, Mon.
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- Owner: Alex. E. B. Watkins.
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**KDFQ**

- City: Salt Lake City, Utah.
- Waves: 12:30-1:30 pm, Mon.
- Format: Opera, AM.
- Owner: Alex. E. B. Watkins.
- Year Founded: Jan. 1922.
WRAW
Reading, Pa. 210.140-160; 500 watts. Avenue Ha

WRSF
Service Corp., Ass'ees. 6:30-7:30 pm.

WRBC
Washington, D. C. 610.4-650; 500 watts. Ra
dio Broadcasting Co., Ass'ees. Started
March 8, 1924.

WSBC
Washington, D. C. 610.4-650; 500 watts. Bu
rhoff & Co., Ass'ees.

WRST
Northfield, Minn. 200.0-120; 500 watts. Radi
o Station Co., Ass'ees.

WRSC
Natchitoches, La. 270.1-350; 500 watts. Vi
er Radio Co., Ass'ees.

WRR
Chicago, Ill. 270.1-350; 500 watts. U. S. Ra

WRVA
South Bend, Ind. 238.7-1260; 500 watts.
June 17, 1922.

WSMU
Atlanta, Ga. 710.4-350; 100 watts. Radi
o Station Co., Ass'ees.

WRDC
Huntington, W. Va. 580.1-1260; 500 watts.

WSW
Chicago, Ill. 580.1-1260; 500 watts. Vi
ner Radio Co., Ass'ees.

WRRS
New York, N. Y. 200.140-160; 500 watts.

WRN
New York, N. Y. 200.140-160; 500 watts.

WRES
Los Angeles, Calif. 930.1-1260; 500 watts.

WRHF
Chesapeake, Va. 610.6-750; 500 watts.

WRHM
Washington, D. C. 610.6-750; 500 watts.

WRK
Huntington, W. Va. 580.1-1260; 500 watts.

WRM
Queens, N. Y. 327.0-350; 500 watts.

WRM
Queens, N. Y. 327.0-350; 500 watts.

WRP
Tampa, Fla. 610.6-750; 500 watts.

WRB
Baltimore, Md. 610.6-750; 500 watts.

WRSS
St. Louis, Mo. 327.0-350; 500 watts.

WROR
Atlantic City, N. J. 910.6-1260; 500 watts.

WSMY
Trenton, N. J. 270.1-350; 500 watts.

WSM
Trenton, N. J. 270.1-350; 500 watts.

WSMG
Trenton, N. J. 270.1-350; 500 watts.

WSR
Trenton, N. J. 270.1-350; 500 watts.

WSY
Trenton, N. J. 270.1-350; 500 watts.

WSX
Trenton, N. J. 270.1-350; 500 watts.

WSY
Trenton, N. J. 270.1-350; 500 watts.

WSZ
Trenton, N. J. 270.1-350; 500 watts.

WSW
Trenton, N. J. 270.1-350; 500 watts.

WSX
Trenton, N. J. 270.1-350; 500 watts.

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Trenton, N. J. 270.1-350; 500 watts.

WSZ
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Trenton, N. J. 270.1-350; 500 watts.

WSX
Trenton, N. J. 270.1-350; 500 watts.

WSW
Trenton, N. J. 270.1-350; 500 watts.

WSX
Trenton, N. J. 270.1-350; 500 watts.

WSW
Trenton, N. J. 270.1-350; 500 watts.

WSX
Trenton, N. J. 270.1-350; 500 watts.
### An Evening at Home With the Listener

#### IN CENTRAL TIME

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<td>WBAL</td>
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<td>Daily</td>
<td>12:00</td>
<td>300</td>
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<tr>
<td>WBAP</td>
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#### IN EASTERN TIME

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**Radio Digest—Illustrated**

December, 1927

www.americanradiohistory.com
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State and City Index Continued

**Canada (Continued)**

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<td>329.5m</td>
<td>910</td>
<td>250</td>
</tr>
<tr>
<td>Edmonton</td>
<td>CJGC</td>
<td>258.5m</td>
<td>1,160</td>
<td>50</td>
</tr>
<tr>
<td>Vancouver</td>
<td>CKAT</td>
<td>580m</td>
<td>1,600</td>
<td>2,000</td>
</tr>
<tr>
<td>Victoria</td>
<td>CHAT</td>
<td>580m</td>
<td>1,600</td>
<td>2,000</td>
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**Wyoming**

<table>
<thead>
<tr>
<th>City</th>
<th>Call Letters</th>
<th>Meters</th>
<th>Kc</th>
<th>Watts</th>
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</thead>
<tbody>
<tr>
<td>Cheyenne</td>
<td>KERO</td>
<td>261.1</td>
<td>1153</td>
<td>200</td>
</tr>
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</table>

<table>
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<th>City</th>
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</tr>
</thead>
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<tr>
<td>Mexico City</td>
<td>CKY</td>
<td>250</td>
<td>1153</td>
<td>500</td>
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<td>Mexico City</td>
<td>CY</td>
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<td>1153</td>
<td>500</td>
</tr>
</tbody>
</table>

**Tips for New York**

- **Reside where the New Yorkers reside**—at Beautiful Standish Hall

**When in New York**

- **T**his magnificent Apartment is just north of Central Park, facing the Museum of Modern Art, within walking distance of all New York points of interest. The rooms are uniquely fitted with all conveniences, and your host will provide a warm welcome.

**Standish Hall**

- **45 W. 61st St. New York**

- **Call Meters Kc. Watts**

<table>
<thead>
<tr>
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</table>

- **Send for Flammable Booklet and Rates**

**A & B Battery Charger Only $2**

- **Satisfaction Guaranteed**

<table>
<thead>
<tr>
<th>Rhetostats—Resistors Potentiometers, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>—— usual ——</td>
</tr>
<tr>
<td>—— chosen for long recognized dependability in ——</td>
</tr>
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</table>

- **A. C. Several**

- **Any dealer can supply**

- **In Canada: Radio Co., Ltd., Toronto**

**Canada (Continued)**

<table>
<thead>
<tr>
<th>City</th>
<th>Call Letters</th>
<th>Meters</th>
<th>Kc</th>
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<tr>
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<td>CKOC</td>
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<td>Winnipeg</td>
<td>CKOM</td>
<td>510m</td>
<td>1,300</td>
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<td>Calgary</td>
<td>CFRM</td>
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### Official Wave Lengths Table

<table>
<thead>
<tr>
<th>Wave Lengths (ft.)</th>
<th>Call Sign</th>
<th>Location</th>
<th>Wave Lengths (ft.)</th>
<th>Call Sign</th>
<th>Location</th>
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<tbody>
<tr>
<td>186.3 1,260</td>
<td>KCFX</td>
<td>Austin, Tex.</td>
<td>364.1 1,200</td>
<td>KFDX</td>
<td>Detroit, Mich.</td>
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<tr>
<td>251.7 1,350</td>
<td>KDZ</td>
<td>Miami, Fla.</td>
<td>254.2 1,260</td>
<td>KDOS</td>
<td>Los Angeles, Calif.</td>
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<tr>
<td>325.1 1,230</td>
<td>KFJZ</td>
<td>San Diego, Calif.</td>
<td>255.1 1,200</td>
<td>KEGA</td>
<td>New Orleans, La.</td>
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<tr>
<td>400.1 1,220</td>
<td>KGmc</td>
<td>Chicago, Ill.</td>
<td>257.1 1,200</td>
<td>KFOS</td>
<td>Los Angeles, Calif.</td>
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<tr>
<td>475.1 1,210</td>
<td>KFZB</td>
<td>Las Vegas, Nev.</td>
<td>259.1 1,200</td>
<td>KFFA</td>
<td>Dallas, Tex.</td>
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<tr>
<td>550 1,200</td>
<td>KDZ</td>
<td>Miami, Fla.</td>
<td>261.1 1,200</td>
<td>KFZI</td>
<td>Dallas, Tex.</td>
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<tr>
<td>625 1,190</td>
<td>KGmc</td>
<td>Chicago, Ill.</td>
<td>263.1 1,200</td>
<td>KFZI</td>
<td>Dallas, Tex.</td>
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<tr>
<td>700 1,180</td>
<td>KDZ</td>
<td>Miami, Fla.</td>
<td>265.1 1,200</td>
<td>KFZK</td>
<td>Dallas, Tex.</td>
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<tr>
<td>775 1,170</td>
<td>KFJZ</td>
<td>San Diego, Calif.</td>
<td>267.1 1,200</td>
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<td>Dallas, Tex.</td>
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<td>850 1,160</td>
<td>KFZB</td>
<td>Las Vegas, Nev.</td>
<td>269.1 1,200</td>
<td>KFZM</td>
<td>Dallas, Tex.</td>
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<tr>
<td>925 1,150</td>
<td>KGmc</td>
<td>Chicago, Ill.</td>
<td>271.1 1,200</td>
<td>KFZT</td>
<td>Dallas, Tex.</td>
</tr>
</tbody>
</table>

**December, 1927**

**Radio Digest—Illustrated**
### Classified Advertisements

#### Business Opportunities

**LAND FOR SALE**
- Seeking 80 acres in Illinois or Indiana. Contact [Details]

**Employment**
- **Agents**
- **Men Help**
- **Salesmen**
- **Stamps**

#### Motorcycles

**Money Back Guarantee.**
- 100% Guaranteed. Power Transformers. 
- 1/2 horsepower. Full transformers. 
- 50% power. Full transformers. 
- 100% power. Full transformers. 

#### Radio

**Radio Digest**
- Illustrated: December 1927

#### Music

**MUSIC composed to words. Lowest prices.**
- Art Moody Co., Art Tootlr Ragman. 

#### Patents

**INVENTIONS COMMERCIALIZED. Patents applied to by inventors.**
- [Details]

#### Stamps

**Radio Log**
- New 1929 Radio Atlas and Station Log ready. 
- 22 pages. Lists of nearly 1,000 stations by call letters and wave length. 

#### Motors

**Used Motorcycles.**
- All makes. Easy installments. 

#### Maps

**New Radio Maps.**
- We are now able to supply you with new radio maps, showing location of stations, list of call letters, wave length, 
- **Miscellaneous**

#### Press and public concede it to be the best book of its kind.**
- Radio Theory and Practice. 

#### Radio Books

**Radio Digest**
- Illustrated: December 1927

#### Guarantees

**90-Day Guarantee**
- Absolutely unsold within the first sixty days, you are entitled to a full return. 
- At your own expense, return the book postpaid in original condition. 

#### QUIT TOBACCO

**TOBACCO**
- No more smoke and dissolve. 

#### KEELEY TREATMENT

**TOBACCO HABIT**
- Quick. Natural. No smoking. 

#### The Belvedere

**The newest, most luxuriously furnished and conveniently situated hotel in Boston.**
- The town home of many distinguished authors, producers and stars. 

---

*www.americanradiohistory.com*
December, 1927

**FACTORY PRICES—SAVE 50%**

Choice of beautiful cabinets offered

3 Year Guarantee

---

**8 tube 8 ONE DIAL MIRACO**

TRADE MARK REGISTERED

MAGNIFICENT TONE—SUPER SELECTIVE—POWERFUL DISTANCE GETTER

---

**All Electric—Or Battery Set!**

America's big, old, reliable Radio Corporation* (8th successful year) guarantees in its big, powerful, latest 6, 7, and 8 tube Miraco sets the finest, most enjoyable performance obtainable in high grade radio. Unless 30 days' use in your home fully satisfies you a Miraco set is unbeatable at any price for beautiful, far, far above the line in selectivity, power, and performance. Your verdict final. Save or make a lot of money on sets and equipment for testimony of nearby users and Amazing Special Factory Offer.

Miraco's work equally fine on "AC" electric, house current or with batteries. Take your choice. Many thousands of Miraco users—who bought after thorough comparisons—enjoy programs Coast to Coast, Canada to Mexico, loud and clear—with the magnificent cathedral tone quality of costliest sets. Don't confuse Miraco's with cheap, "aquavox" radios. Miraco's have finest parts, latest approved shielding, metal chassis, etc., used in many $500 sets.

---

**Deal Direct with Big Factory**

Your Miraco reaches you completely assembled, rigidly tested, fully guaranteed. Easy to connect and operate. 30 days' trial free. 3 year guarantee if you buy. You take no risk; you insure satisfaction, you enjoy rock-bottom money-saving prices by dealing direct with one of radio's oldest, most successful builders of fine sets. 8th successful year in the radio manufacturing business.

---

**Big Discounts to User-Agents**

---

**Electrify Any Radio**

with MIDWEST NO-BATTERY A/C Light Socket Power Units

---

**Another Big Bargain!**

Famous powerful big Miraco Super 6, 1928 model—ultra selective! Thousands find it outperforms sets of much higher price. 30 Days' Trial Free. Fully Guaranteed.

---

**MIDWEST RADIO CORPORATION**

Pioneer Builders of Sets

437-E Miraco Building, Cincinnati, Ohio.

Without obligation, send free catalog, AMAZING SPECIAL OFFER, testimony of nearby Miraco users.

Mail coupon right now!

---

**User-Agent**

NAME

ADDRESS
New Improved 1928 Model

NOW you may say good-bye to "B" battery troubles forever. This wonderful new Perfect "B" Eliminator makes them entirely unnecessary—just a needless expense and bother. The "Perfect" has rendered B batteries obsolete in thousands of homes and it will give you radio enjoyment such as you have never known before. The "Perfect" costs less than a set of cells and it ends plate current troubles completely. It's by far the lowest-priced Eliminator on the market, yet it does the work of similar devices costing two to five times as much.

Operates Perfectly on Any Set

This wonderful new invention, using a special filter circuit, developed after months of experimenting, gives a uniform and constant flow of power that you cannot get from batteries. Can be plugged into any lighting socket and is adapted for any kind of set up to seven tubes. Works perfectly on ordinary house current, either alternating or direct. Gives power up to 90 volts, using the full wave of the power supply.

Hooked Up in 60 Seconds

No mechanical knowledge necessary to connect the "Perfect" Eliminator. Hook it up just as your old batteries were connected. Then sit back and get the greatest radio thrill you've had in years. Nothing to do but enjoy the music. No "frying" noises caused by rundown cells. Sharper tuning—more power because of the steady, powerful flow of current through the tubes.

Needs No Attention

Once hooked up it works automatically. Just attach it and forget it. Millampere supply twice as great as any other Eliminator. Only our direct sale method, cutting out the retailers' and jobbers' proffits, makes possible the amazingly low price—$4.95, complete.

Don't put up with battery troubles another day. Send at once for YOUR "Perfect" Eliminator and realize the genuine pleasure that comes only through absence of battery bother. This new improved 1928 model "Perfect" Eliminator is one of the big sensations in the radio field.

Completely Equipped and Assembled—Nothing Else to Buy

No "extras" of any kind to buy. The amazingly low price—$4.95—covers everything. No "bulbs" to break or wear out. No moving parts. A solidly built, permanent addition to your set, all ready to plug in on any lighting socket.

You Take No Chances Must Delight You or Money Back

Thousands of enthusiastic users all over the country testify to the quality of "Perfect" Eliminators. And our absolute Money-Back Guarantee makes you the sole judge. If, for any reason, you are not satisfied, simply return your Eliminator in good condition within ten days after you receive it and we will refund your money.

10 DAYS TRIAL

Send Your Order Now!

Pin a dollar to the coupon and mail it to us today. The postman will deliver your "Perfect" Eliminator within a few days. Pay him the balance due ($3.95 plus a few cents postage). Plug in the Eliminator and use it for ten days. If not more than satisfied with results, return it and get your money back. Act NOW and get double enjoyment from your set.

SEND ONLY $1.00 NOW

| Perfect Eliminator Co. |  |
| N-24, National Theatre Bldg. | Cincinnati, Ohio |
|  |  |
| I enclose $1.00. Please send new improved 1928 model "Perfect" Eliminator in my C. D. B. for balance ($6.95 plus a few cents postage) on your Guarantee as stated above. |  |
| I enclose $1.00. Please send new model 125-volt "Perfect" Eliminator in my C. D. B. for balance ($6.95 plus a few cents postage). I will pay postage on delivery. |  |
| Name |  |
| Address |  |
| Town | State |
DISTANT stations come in PLAINLY over a SUBANTENNA

There are three prime factors in the equation of radio reception. The broadcasting station—the medium from which the broadcast wave is received—and the receiving set. Practically speaking, two of these factors are always constant. The broadcasting station sends out a uniformly strong wave night after night throughout the year. And your set is just as capable on Wednesday night as it is on Tuesday night. But, the air—the medium out of which you pick the broadcast wave—changes. It changes hourly. It is never the same. How then, can you expect, so long as you take your radio music and song out of the air—to be able to receive distant stations enjoyably? How then, can you avoid having to get right up close to the speaker in a vain effort to hear the fading, mushy call letters of the far-off broadcaster?

CLOVERLEAF "Lifetime" B-Eliminator

A new, letter, advanced type "B" unit at a new, lower price than any other unit of equal capability. 180 volt output. Supplies fixed voltages of 22.45-90-135 and 180 volts for power tube from permanent, non-adjustable taps. Absolutely no hum. No "motor beating." Will run any standard set. The true "lifetime" eliminator, because built of the finest quality materials that money can buy. Neatly enclosed in masonite finish case. Guaranteed for 2 years. Test it FREE. Prove its superiority. Mail coupons for full details, and for particulars of FREE TRIAL GUARANTEE OFFER.

CLOVERLEAF MFG. CO.
2713-M CANAL ST.
CHICAGO, ILL.
no

THE ELECTRIC RADIO

The cabinet of model G-5, illustrated here, is without a doubt one of the finest that ever housed a radio set. It is panelled entirely of the most carefully selected genuine burl Walnut. Contains a large cone-speaker of great volume and superb tone. Truly a masterpiece of the cabinet makers art.

Always Ready—Always Right

Your light socket supplies all the power.

$250 Complete Ready to Operate

Freshman EQUAPHASE

Sold on Convenient Terms by Authorized Freshman Dealers Only

CHAS. FRESHMAN CO., INC., FRESHMAN BUILDING, NEW YORK
CHICAGO
LOS ANGELES

This all electric Freshman Equaphase embodies many new features—
— four tuned circuits for selectivity.
— Equaphase system of stabilization prevents all oscillations.
— single drive — just one-control.
— drum type illuminated dial for beauty — calibrated in wavelengths for efficiency.

Always Reculy --- Always Right

*Complete Ready to Operate

www.americanradiohistory.com