

Signal Corps, U. S. Army

Airplane Interphone Sets, as illustrated. A typical bargain from our "Ham" Catalog — easily worth \$25.00..... **\$1.95**

Signal Corps Aviation Helmet and Phones.....\$8.95

Western Electric Army Microphone.....\$1.45

British Vacuum Tubes.....\$1.45

Bunnell Decade Resistance Box.....\$12.50

Phantom Antenna.....\$4.75

W. E. Induction Coil..45c

Weston, General Electric, Roller-Smith Voltmeters, Ammeters and Wattmeters at less than half regular price!

“HAMS!” Rare Bargains in Transmitting Apparatus

For You in Our FREE Catalog!

A 96-page book chock full of amazing bargains in receiving and transmitting apparatus. A few typical bargains are shown above. All apparatus brand new and guaranteed in perfect working condition. Send for your free copy!



509 S. STATE ST. Dept. ARL CHICAGO, U. S. A.

American Radio Relay League

1925

NATIONAL CONVENTION



Edgewater Beach Hotel Headquarters

CHICAGO

Under the Administration of

The CHICAGO RADIO TRAFFIC ASSOCIATION

WELCOME A.R.R.L.

Details for Making Revolutionary New Tune
Graham McNamee Tops George D. Hay in Gold Cup Conte

Radio Digest

EVERY WEEK
PROGRAMS
Illustrated
TEN CENTS

SAURDAY, JULY 4, 1925

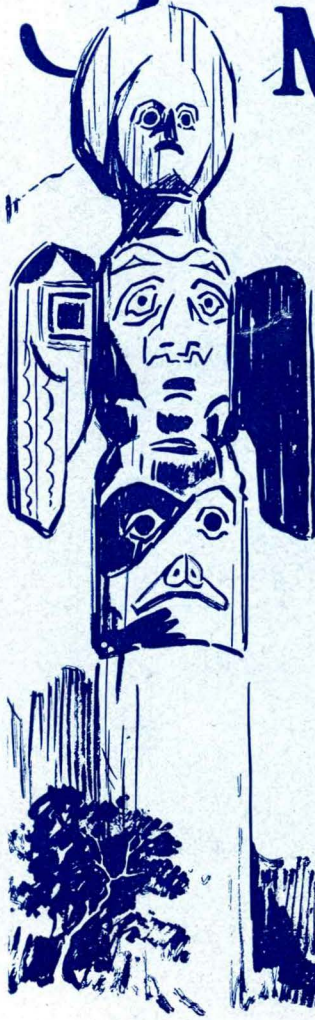
S. TO RELAY GERMA

A MOVIE GREAT
EXCERPTS IN FRONT



The
Latchstring
is
Out

Follow Mac Millan



IN that vast unexplored region north of Alaska MacMillan and his party are making radiotests of outstanding importance. At the same time in great Navy planes they are studying and charting a million square miles of land and water—the last remaining “blind spot” on the face of the globe.

Follow MacMillan's adventures and achievements in the Arctic—as transmitted to the civilized world by Zenith Radio.

Follow his experiments in radio communication—as conducted exclusively by Zenith Radio.

Only one reason can explain MacMillan's choice of Zenith over all other radio sets on the market—**complete supremacy**. In distance range—clarity of tone—selectivity—consistent performance.

Zenith Radio Corporation
Straus Building, Chicago, Illinois

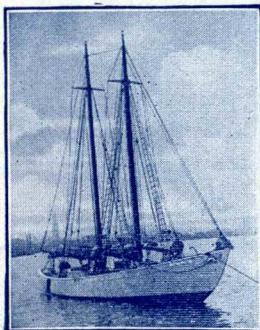


\$5.50

Trimm Professional Headset Goes to the North Pole Again!

Dr. Donald B. MacMillan has again chosen the Trimm Professional Headset and his 1925 Arctic Expedition will be equipped with 20 of them. Like the Professional

Headset, all other Trimm Reproducers are highest grade in every respect and give you more performance for your money. A booklet telling of the complete line, giving professional data on our products will be sent you on request.



Schooner Bowdoin Trimm
Equipped

The Dependable Headset is wound to 2400 Ohms resistance, the Professional to 3000. Forged tungsten steel magnet insures a lifetime of satisfaction. These headsets set the standard of quality for all others in radio. Be sure to get the genuine, bearing the name TRIMM.



Dependable
\$4.40

TRIMM
RADIO MANUFACTURING
COMPANY
24 So. Clinton St.
CHICAGO
U.S.A.

Use Quality Apparatus For Better Results

Radio equipment now on display
in our show rooms at 114 So.
Wells St., represent the latest
development of the industry.

*Your Inspection Is Cordially
Invited*

Ask for latest catalog featuring
the entire line.

MANHATTAN
ELECTRICAL SUPPLY CO., INC.
114 SO. WELLS STREET
CHICAGO, ILL.

*Manufacturers of the famous Red Seal Batteries and Manhattan and
Red Seal Radio Products*



Pattern No. 67.
Current Squared
Galvanometer

July 2, 1925.

To Members
of the A. R. R. L.:

While you are in Chicago in attendance at your 1925 National Convention, August 18, 19, 20 and 21, we would like to have you plan to visit our factory. We are sure that you would find that a trip through our plant would be instructive as well as interesting to you.

If you have any problems involving the use of instruments, you will find it to your advantage to let our Engineering Department help you. Have you a copy of our 15-B radio catalog?

Jewell Electrical Instrument Co.

1650 Walnut Street
CHICAGO

The 1000 Cycle Transformer Is Here — *Developed Especially for the Transmitting Amateur*

Recently O.S.T. asked manufacturers to perfect a 1000 cycle audio transformer for use in amateur work. Many tests and experiments were necessary before it reached the present point of Erla perfection. Now you may have them in your set. They cost only \$6.50.

It is the usual practice to design audio transformers so that they will amplify as nearly equally as possible at all audio frequencies. This is in order that all the tones of a musical rendition will be amplified to an equal degree.

In telegraphic work such as amateurs are interested in, however, it is not necessary or even desirable that all the audio frequencies should be amplified. The signals may all be heterodyned to one pitch or frequency and amplified at that frequency. This frequency is usually about 1000 cycles though it may be altered at will by the receiving operator.

Three Distinct Advantages

Erla 1000 cycle audio will do this with several advantages:

1. Only one frequency, the desired one is amplified appreciably. Consequently no static at any frequency except 1000 cycles is amplified to the same degree as the signal.
2. Harmonics from broadcasting stations picked up by the amateurs' short wave set are amplified only at one frequency causing suppression of this interference due to the voice and music becoming so greatly distorted.



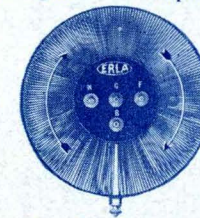
3. Enables differentiation between beat notes of different frequencies by radio tuning effect.

The 1000 cycle transformer is the same in external appearance as the present Erla audio transformer. It will be supplied with two brackets and a fixed condenser to be placed across the secondary terminals as a permanent installation. Or—this may be left off and the secondary shunted by a 1000 mfd. variable condenser. In the latter case it will be possible for the amateur to change the frequency of resonance of the transformer so that if he prefers to read the signals at a higher or lower frequency he may bring the amplification to its highest point at that frequency.

*You May Have Them
Immediately*

So that every amateur may have this phenomenal invention at once without waiting for distribution among dealers, orders will be filled from the factory direct. At present only a limited

supply have been completed so you should order without loss of time. Enclose the low introductory price with your order. Use coupon.



New Erla Balloon Circloid Coupler and Transformer,
\$4.00 Each.

The Electrical Research Laboratories,
2500 Cottage Grove Avenue,
Chicago, Illinois.

I enclose for Erla
1000 cycle transformers at \$6.50 each.

Name

Address

City State

A.R.R.L.

KEEPING PACE WITH PROGRESS

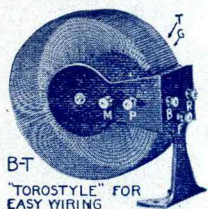
We have no greater pleasure than the opportunity of extending our annual greeting to another A. R. R. L. Convention.

Day by day throughout the year letters from League members have furnished inspiration and encouragement. **We know they come from men who know.**

The Short Wave Outfit shown strikes the key of present desire. Interchangeable coils cover 12½ to 200 meters.



You know the arguments for the Toroids, the trickiest type of inductance we've ever tried to handle.



B-T
"TOROSTYLE" FOR
EASY WIRING

If the B-T Torostyle doesn't satisfy you it's not because we haven't put into it just about everything we've learned in years of successful inductance design.

We're satisfied we've done the job right.

Something new in transformers is on the way—watch for it. In the meantime drop a line for late literature to

BREMER-TULLY MFG. CO.

WELCOME, MEMBERS OF THE LEAGUE

For the third time Chicago is the host of our National Convention and the delegates from all over the United States, Canada and foreign countries for the third time will go home with that "grand and glorious feeling," a sense of new friendships made, the renewal of old ties, the meeting of DX buddies with whom they have chewed the fat and swapped traffic, and a conviction, there can be only one answer to the question, "Is amateur radio worth while?"—YES!

Think how amateur radio has grown since the pre-war spark days of 1914 when DX meant 20 miles and our president, Mr. Maxim, conceived the idea of the Relay League, because he had to QSR through a mid-point station to reach Springfield, 30 miles from Hartford. There were only a few hundred of us then, mostly centering in and around the larger cities. We thought and acted as individuals. We had our little clubs, and sometimes met an amateur from another State to learn what the fellows were doing in other parts of the country. Our problems, legislative questions, friendships, community spirit and technical knowledge were in their infancy and no one dreamed we would some day be numbered by the tens of thousands or that time and space would become our playthings.

Do you fellows realize why amateur radio is a solid, healthy institution, recognized as a tangible asset by the governments and citizens of most countries? Do you know why we have weathered all manner of troubles and discouragements? Because we have grown of our own volition and our love of the game. No one has forced us into radio; a freely oscillating 50-watter is a glowing inducement to radio if not in financial returns. We were not looked upon as scientific giants when we blinked neighbors' lights and blew fuses, but we lived, ate and dreamed radio in spite of our trials and tribulations, and grew, until today the world is a great brotherhood of brasspounders and relayers, amateurs, all of them. Many who attend this Third National A. R. R.L. Convention may be broadcast listeners or newcomers in the transmitting game without the background of amateur tradition, but you may be sure that the objects which bring us together, amateur, B. C. L. or experimenter, are identical—a bona fide interest in radio and a desire to be mutually helpful toward a common cause.

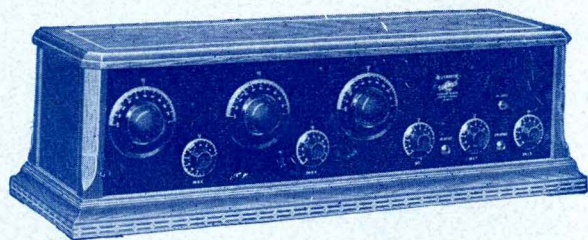
The American Radio Relay League welcomes every delegate to its Third National Convention with the hope the friendships formed, the ideas exchanged and the problems solved will bring us together more solidly than ever before. The League wishes also heartily to thank the Chicago Radio Traffic Association, its committees and individuals, for the untiring and willin gwork which makes our Conventon possible.

SONGS WANTED

The delegates are urged to write radio parodies to popular songs. They must reach the convention committee by August 16th. The writer of each song printed in the banquet menu will receive a prize. If you cannot attend the convention, write a parody anyway and if it is accepted your prize will be shipped to you.

To build the ultimate in radio receivers, regardless of cost, has been the aim of Howard engineers ever since the Howard Neutrodyne was first designed.

Gradually it has won the confidence of the American public—the test of time has given it the stamp of approval and it is with a sense of pardonable pride that Howard owners speak of their sets.



You will understand the reason when you have seen and heard the Howard and made comparisons. Any Howard dealer will be glad to give you a demonstration.

Howard Radio Co.

Inc.

451-469 East Ohio St.

Chicago

THE CHICAGO RADIO TRAFFIC ASSOCIATION

The Chicago Radio Traffic Association welcomes you to Chicago and the Third National Convention of the American Radio Relay League. We want you to be our guests and hope your visit will be the pleasant one we have tried to make it.

The Chicago Radio Traffic Association is composed of the Amateurs of Chicago and vicinity. It is affiliated with the American Radio Relay League and its objects are to promote Amateur Radio, uphold the Government Regulations and provide the means of furthering the best interests in the Radio Fraternity.

The meetings of the Amateurs are held on the first and third Thursdays in each month at the County Building. It has been the aim of the Association to conduct strictly technical meetings and many instructive topics have been presented to the membership.

The Association, even with its large membership, has never been unwieldy. Rather the large meetings have been a source by which better material could be secured to give to the members. By referring detailed work to committees, the meetings have never been cluttered up to where two meetings a month were too few to conduct the business and still have time for the speeches of the evening. The one central strong organization has proved far superior to the Council Idea as was attempted by the Chicago Executive Radio Council of 1921 with its small, weak affiliated clubs. With the present arrangement, all the amateurs can meet at one time, become better acquainted and receive the topics of interest.

The present officers are W. E. Schweitzer, Pres., Paul H. Davis, Vice Pres., R. C. Schweitzer, Sec.-Treas., and Orlando Nichols, Sgt.-at-Arms. The office of the Secretary is 4264 Hazel Avenue, Chicago, Illinois.

CONVENTION COMMITTEE

- W. E. SCHWEITZER (9 A A W-9 Z W) Chairman.
- F. J. HINDS (9 A P Y) Advertising Manager.
- O. NICHOLS (9 A W J) Transportation.
- R. WOOLSEY (9 A B F) Athletic Events.
- R. C. SCHWEITZER (9 A A W-9 Z W) Treasurer.
- R. H. G. MATHEWS (9Z N) League Representative.
- L. M. E. CLAUSING (W E B H) Entertainment.
- PAUL H. DAVIS — Director.
- M. H. ROMBERG (9 B E) Arrangement.

Simplify and improve radio reception with **Balkite** Radio Power Units



U. S. Patent
May 27,
1924

Balkite Trickle Charger

Charges both 4 and 6 volt radio "A" batteries at about .5 amperes. Usable in 3 ways: (1) As a regular charger with a low capacity storage battery for sets now using dry cells. (2) With storage battery sets of few tubes. (3) As a "trickle" or continuous charger for storage battery sets of as many as 8 tubes. Size 5 1/2 in. long, 2 1/4 in. wide, 5 in. high. Operates from 110-120 AC 60 cycle current.

Manufacturers are offering switches which turn on Balkite "B" and turn off the charger when you turn on your set. This makes the current supply for both circuits automatic.

Price \$10—West of Rockies, \$10.50
Slightly higher in Canada



U. S. Patent
May 27,
1924

Balkite Battery Charger

The most popular battery charger on the market. It can be used while the radio set is in operation. Charging rate 2.5 amperes. Operates from 110-120 AC 60 cycle current. Special model for 50 cycles.

Price \$19.50—West of Rockies, \$20
Slightly higher in Canada



U. S. Patent
May 27,
1924

Balkite "B"

Eliminates "B" batteries. Supplies plate current from the light socket. Operates with either storage battery or dry cell tubes. Keeps "B" circuit always operating at maximum efficiency. Requires no attention other than adding water about once a year.

Will serve any set of 5 tubes or less. Occupies about same space as 45 volt dry "B" battery. Operates from 110-120 AC 60 cycle current.

Price \$35

Slightly higher in Canada



U. S. Patent
May 27,
1924

Balkite "B" II

Same as the new Balkite "B" but will fit any set including those of 10 tubes or more. Operates from 110-120 AC 60 cycle current. Special model for 50 cycles.

Price \$55

Slightly higher in Canada

The Gould Unipower is equipped with a special Balkite Radio Power Unit

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

FANSTEEL **Balkite** Radio Power Units

BALKITE BATTERY CHARGER · BALKITE TRICKLE CHARGER · BALKITE "B" · BALKITE "B" II

GENERAL INFORMATION

When coming to Chicago buy only a one-way ticket and get a certificate showing that you are attending the A. R. R. L. Convention. This certificate entitles one to half fare on the return trip. Be sure to leave it at the registration desk to be validated. No matter from where you come get a certificate as it will help fill our quota.

After you arrive in the Convention City, come directly to the Grand Ball Room in the Edgewater Beach Hotel, 5349 Sheridan Road, and register. The Hotel is conveniently located for the North Side Motor Bus, the Evanston Elevated and the Broadway Surface Line; or if one prefers, he may take a taxi. The price for all activities will be Ten Dollars.

After registering arrange for your room at the Hotel Desk. Special rates good for the entire week have been procured for the delegates. They are—

Single rooms	\$5.00 per day.
Two in a room	\$3.50 each per day.
Three in a room	\$3.00 each per day.
Four in a room	\$2.50 each per day.
Six in a room	\$2.00 each per day.

Figure up the number of points for your Club and turn it in to the Contest Manager, thereby entering your Club in the contest for The Michigan Attendance Cup (See Aug. QST).

A large number of valuable prizes have been donated. These will be on display in a show-case in the Convention Room.

Prize awards for the various contests will be made in the following manner. The winners of all events will be given cards entitling them to a "place in line" for the selection of prizes by groups from the apparatus on exhibit in the Hotel. All the apparatus exhibited will be awarded during the course of the Convention. All awards will be by selection, thus eliminating the difficulty ordinarily experienced where definite apparatus is given for each event, which frequently may duplicate equipment already in possession of the prize winner.

All prize awards will be made Friday afternoon, in the Grand Ball Room of the Hotel. Bring your card which entitles you to a fixed place "in line," thus determining which of the many valuable pieces of radio apparatus you may select. Your presence is imperative! If you are not present, all winners' numbers will be advanced and your place will be left out.

Every winner of any prize whatsoever will be required to fill out a postal card to the manufacturer or distributor who donated it, thus forming a complete record and insuring proper credit to him.

On the cover of your registration book will be a number. Keep this as a chance on the drawing on the Grand Finale Night. The winner must be present or subsequent drawings will be made.

A list of all contests will be given you upon registering.

A member of the Convention Committee will be on hand at all times. Don't fail to call on him if there is anything you want to know.

Bring your wives and friends as we are arranging for their entertainment.

Leonard Lynn Radio Company

(Incorporated)

Radio Distributors

General Radio Parts
Cunningham Tubes
Fada Neutrodyne Kits
Burgess Batteries
Weston Instruments

IMMEDIATE DELIVERY

For "Speed" Service just phone
HARRISON 7293

220 South State Street

SEEING CHICAGO

Now that we are in Chicago, we may as well look the place over and get acquainted with the "Windy City".

Chicago, a great summer resort, is located on the western edge of Lake Michigan whose shore is lined with fine parks and bathing beaches intercombed with a wonderful boulevard system.

Going South from the Edgewater Beach Hotel, one has the choice of a great many attractions among which are the Big League Baseball at the Sox Park, the Big Roundup in Grant Park, the Famous Convict Ship "Success" anchored at State Street and the River, scores of fine Theatres, several Amusement Parks, the Stock Yards, Lincoln Park Zoo and Aquarium or possibly, if the Ladies are present, a trip to the Art Institute, Field Museum or a large Department Store in the "Loop" may be of interest. Other amusements for the more daring are Swimming, Golf, Tennis, Boating, Dancing or a ride in an Aeroplane all of which are available to the delegates. If some information is desired on how traffic should be handled, stand on the corner of State and Madison Streets (The Busiest Corner in the World) and watch the crowds for a while.

The big Lake Passenger and Freight Boats anchor at the Municipal Pier and at points near the mouth of the Chicago River. Go down and take a look at them.

The large buildings are in the "Loop" and on Michigan Boulevard while most of the larger factories and steel mills are to the south of the City.

This is just a start so go to it and in case you get lost, just ask the nearest cop to direct you.

LICENSE EXAMINATIONS

Examinations for both Commercial and Amateur licenses may be taken at 9:00 A. M. Wednesday morning August 19th at the Convention Headquarters.

For those not desiring to take the examination at this time, the Commercial examinations will be given at office of the Supervisor of Radio in the Federal Building on Thursday morning August 20th and the Amateur examinations may be taken at 9:00 A. M. Saturday August 22nd at the same address.

A GOOD TEAM FOR THE LONG PULL

Tune in the McMillan North Pole Expedition. Both ships, the Bowdoin and the Peary, are equipped with Thordarson Transmission Equipment.

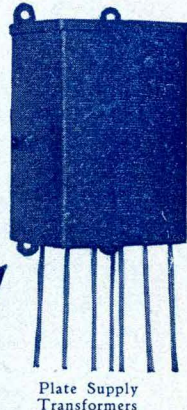


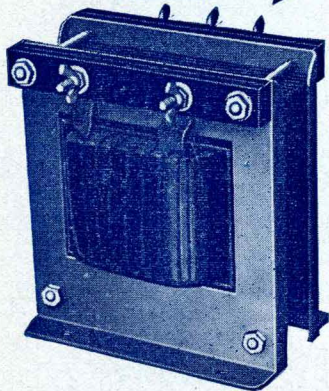
Plate Supply Transformers

THORDARSON

FOR

GREATER RANGE

Filament Heating Transformers

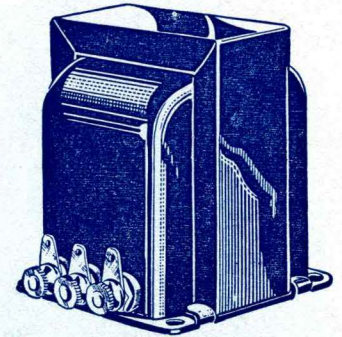


Many of the better privately constructed broadcasting stations are equipped with Thordarson transformers, —an irrefutable proof of Thordarson superiority.

Write for circulars.

THORDARSON ELECTRIC MANUFACTURING CO.
Transformer specialists since 1895
WORLD'S OLDEST AND LARGEST EXCLUSIVE TRANSFORMER MAKERS
Chicago, U.S.A.

AMPLIFY THOSE BASS NOTES



All Frequency Amplification

1. Full Amplification of Bass Notes.
2. Greater clarity on all signals.
3. Improved reception of weaker programs.
4. Better volume control.

THORDARSON

Autoformer

Trade-Mark Registered

All Frequency Amplifier

NOTE—Only Thordarson makes the Autoformer.

Amplifies, with even magnitude, all notes within range of the human ear. Thus, with the Autoformer, the deepest notes of the grand organ, bass viol, tuba, etc., receive the same attention as the high C of the soprano.

Autoformer amplification is not to be confused with transformer coupled amplification. It is an adaptation of capacities, resistances, and impedances—the same in principle as the line amplifiers used by the more recent high-powered broadcasting stations.

THORDARSON ELECTRIC MANUFACTURING CO.
Transformer specialists since 1895
WORLD'S OLDEST AND LARGEST EXCLUSIVE TRANSFORMER MAKERS
Chicago, U.S.A.

MAIL THIS COUPON.

THORDARSON ELECT. MFG. CO., CHICAGO.

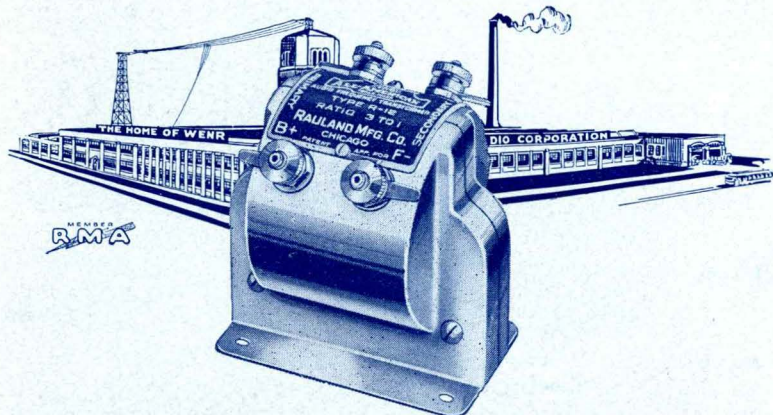
Please send me circulars and your instruction booklet on Autoformer amplification.

Name..... Call letter.....

Street No.....

City..... State..... R-A.

BACK OF EACH INSTRUMENT



To the Pioneers

of the short-wave key who have made possible by years of experimenting the wonders of the modern broadcast—



A Hearty Welcome

is extended by a pioneer in the manufacture of reliable radio parts. A particular and individual invitation is extended to each "ham" to visit our new plant and Station WENR—one of the most completely appointed establishments in the world devoted exclusively to radio.

Take Belmont Avenue car to Keeler Ave. Just say A. R. R. L. and you'll be glad you came!

ALL-AMERICAN RADIO CORPORATION

E. N. RAULAND, President

4201 W. Belmont Avenue,

Chicago.

ALL-AMERICAN

Largest Selling Transformers in the World

CONDENSED PROGRAM FOR THE AMERICAN RADIO RELAY LEAGUE CONVENTION AUGUST 18-21, 1925

August 18 — Tuesday —

Registration.

3:00 P.M. Opening Session.

7:00 P. M. Banquet.

August 19 — Wednesday —

9:00 A. M. Government Radio License Examinations.

10:00 A. M. "QST" Meeting.

12:00 NOON Auto Tour.

7:30 P. M. Technical Meeting on Receiving.

August 20 — Thursday —

10:00 A. M. Traffic Meeting.

12:00 NOON Convention Picture.

1:30 P. M. Emergency Service Meeting.

3:00 P. M. Technical Meeting on Receiving.

7:30 P. M. Technical Meeting on Transmitting.

August 21 — Friday —

10:00 A. M. Athletic Events.

12:00 NOON Publicity Staff Luncheon.

2:30 P. M. Technical Meeting on Transmitting.

5:30 P. M. Awarding of Prizes.

8:00 P. M. The Grand Finale.

AN ACKNOWLEDGMENT

The Third National American Radio Relay League Convention wishes to thank the following manufacturers and distributors of radio apparatus for their contributions and assistance in making the competitive events successful by providing valuable, worthwhile prizes, and the advertisers who made possible the publishing and distribution of this program.

All-American Radio Corporation.
Ballard, R. C. 9 F Z (The Radio Call Pin Man).
Bremer-Tully Manufacturing Company.
Burgess Battery Company.
Crosley Radio Corporation.
Duplex Condenser Company.
Hinds & Edgerton.
Jewell Electrical Instrument Company.
Manhattan Electrical Supply Company.
Marlo Electric Company.
National Condenser Company.
Pyrex (Corning Glass Works).
Seattle Radio Laboratories.
Thordarson Electric Manufacturing Company.
Trimm Radio Manufacturing Company.



Brings the artists into your very room, so realistic is its reproduction.

The Kellogg Symphony Reproducer is a revelation in Tone—Volume—Clarity.

Piano music, the most difficult to reproduce, sounds so natural that you are carried away by its beauty.

Vocal selections retain all of the colorings of the artist.

Orchestra music is a treat, every instrument can be heard, clear and full.

Magnetic diaphragm control—used exclusively in the Kellogg unit—is the new principle that performs these wonders in radio reception.

No excess vibration, no chattering, every tone true.

The Kellogg Unit is available for use with a phonograph, and will reproduce voice or music with a full, sweet, clear tone.

A Popular Instrument.

At your dealers for \$20.00—Hear one today.

Kellogg Switchboard & Supply Co.
 Chicago, Ill.

Tuesday, August 18th

The morning and early afternoon are open for registration of the delegates. This is the time to turn in your ticket receipts and railroad certificates and receive the regular convention ticket. The convention ticket will be in booklet form and contain a page for each of the convention activities.

3:00 P. M.—At this time the opening session of the Convention will be held in the Ballroom of the Edgewater Beach Hotel with W. E. Schweitzer chairman.

7:30 P. M.—Convention Banquet. Ladies are invited to attend and extra guest tickets may be secured at the convention desk. Toast master R. H. G. Mathews.

Wednesday, August 19th

9:30 A. M.—Supervisor of Radio Beane will give license examinations at the Convention Headquarters. If you want to get a license, have the old one renewed or qualify for a higher grade, this is your chance.

10:00 A. M.—"QST" Meeting with Mr. Beekley, chairman. Let us have all your ideas and hear how the old book is made from paper pulp to the finished magazine with its interesting volume of detail, and placed in your hands.

12:30 NOON—Auto Tour to interesting parts of the city. There will be three separate tours. One to inspect a new Superpower Broadcast Transmitter. Another a trip around the boulevards of Chicago and the third a visit to the Wild West Show, the "Rodeo," staged in Grant Park.

7:30 P. M.—Technical Meeting on Receiving with Mr. Paul H. Davis, chairman. Speakers for the evening are:

Mr. John C. Warner, General Electric Research Laboratories.

Topic—Vacuum Tubes (Illustrated Address).

Mr. K. E. Hassel, Zenith Radio Laboratories.

Topic—The Receiving Set and its Design.

Prof. W. J. Williams, Raenssalaer Polytechnic Institute.

Topic—Interference Phenomena.

Discussion will be limited to five minutes after each address and the discussion will be completed at the meeting of 3:30 P. M. Thursday, August 20th.

THE MICHIGAN ATTENDANCE CUP

The delegates attending the last two Michigan Conventions, Detroit, 1924 and Flint, 1925, donated a sum of money to purchase a trophy. The trophy to be given to the affiliated club of the League having the most delegates as man and man miles attendants at the Third National of the American Radio Relay League. A silver cup will be the trophy.

The rules for the contest are as follows:

All delegates belonging to any one club or organization shall count their points together. Each delegate attending from a distance of over 25 miles receive 20 points. For every mile a delegate travels, he will receive 1 point.

Example 1—50 delegates travel 70 miles. 50x20 equals 1000 points, 50x70 equals 3500 points. Total 4500 points.

Example 2—2 delegates travel 2500 miles. 2x20 equals 40 points. 2x2500 equals 5000 points. Total 5040 points.

The cup will be awarded to the club or organization having the greatest total of points.

A New Low-Wave Receiver

*made for amateurs by
a radio manufacturer*

THE GREBE CR-17 consists of a detector and one stage of audio utilizing 201-A tubes, without the necessity of removing the bases.

This receiver, using a regenerative circuit of the capacity coupled type, is arranged so that body capacity effects are entirely eliminated.

The circuit has smooth regeneration not critical with wave length changes. It will operate below ten meters without regeneration affecting wave length.

The receiver is supplied with six coils to cover the wave length range from 10 to 200 meters. These coils are self supporting air dielectric type and are arranged so that they can be interchanged instantly. Six wave length charts are supplied with each CR-17, showing the wave-length range of each coil.

Straight line frequency condensers, the type used exclusively in Grebe apparatus, are incorporated in this model. Standard Grebe verniers are also used.

Licensed under the Armstrong patent 1,113,149

A. H. GREBE & CO., Inc.

VAN WYCK BLVD., RICHMOND HILL, N. Y.

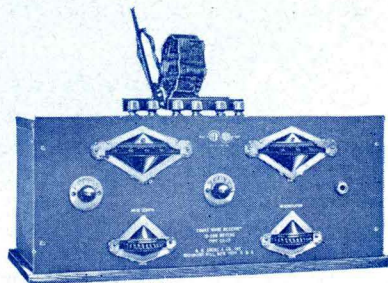
Western Branch: 443 So. San Pedro St., Los Angeles, Cal.

The **GREBE** CR-17 Receiver



All Grebe apparatus is covered by patents granted and pending.

This Company owns and operates stations WAHG and WBOQ; also marine and mobile low-wave re-broadcasting stations.



Thursday, August 20th

10:00 A. M.—Traffic Meeting. Chairman, Acting Traffic Manager Handy with an introduction by Division Manager R. H. G. Mathews. This will be a very important meeting and every station owner is urged to attend. Porter Quinby (9DXY) will give a short address on the meaning of the Official Relay Station.

12:00 NOON—Convention Picture.

1:30 P. M.—Meeting with the Railroad Representatives to discuss railroad emergency work. If you have ever helped put through any kind of emergency traffic you must attend this meeting. Others should attend for when your chance comes you will know what steps to take.

3:30 P. M.—Technical Meeting on Receiving. Chairman. Prof. Jansky. This will be the opportunity to discuss the topics of the meeting of 7:30 P. M., August 19th, and the speakers of that meeting will be present to answer questions. W. M. Bakewell, British 6UZ Receiving conditions in England.

7:30 P. M.—Technical Meeting on Transmitting. Paul H. Davis, chairman.

Dr. A. Hoyt Taylor, Bellevue Naval Research Laboratories.
Topic—High Frequency Transmission and the Crystal Controlled Transmitter.

Possibly C. Francis Jenkins, Jenkins Laboratories.
Transmission of Pictures by radio.

W. H. Hoffman, C. F. Burgess Laboratories.
Beam transmission. Illustrated address.

Friday, August 21st

10:00 A. M.—Athletic Events. There will be swimming, golfing, tug-of-war and many other events. Radio Prize Contests will be staged at this time as well as at odd times during the convention. All these events will be staged on the hotel grounds. (Be sure and bring your bathing suits).

12:30 NOON—The A. R. R. L. Publicity Department Luncheon.

2:30 P. M.—Technical Meeting on Transmitting. Chairman Mr. R. S. Kruse. At this time as at the afternoon meeting on Receiving, discussion will be encouraged on the topic of the previous evening. Speakers of the meeting:

Mr. John H. Miller of the Jewell Electrical Instrument Company.

Topic—Efficiency in Transmission.

(The Jewell Electrical Instrument Company is giving a prize for the amateur whose transmitter makes the most miles per watt. Mr. Miller will tell you of this contest at this time).

Mr. D. C. Wallace, 9ZT-9XAX.

Topic—Operation of Power Tubes on 20 and 40 meters.

5:30 P. M.—Award of the Prizes to Winners of Athletic and Prize Contests.

8:00 P. M.—The Grand Finale. This will be similar to the "Mystery Night" of the Second National Convention. It will be held in one of Chicago's Popular Cafes. For the delegates bringing their wives, sweethearts, mothers and aunts, a theatre party will be arranged on this evening. Please notify the Convention Committee when registering so that the proper arrangements can be made at the theatre.

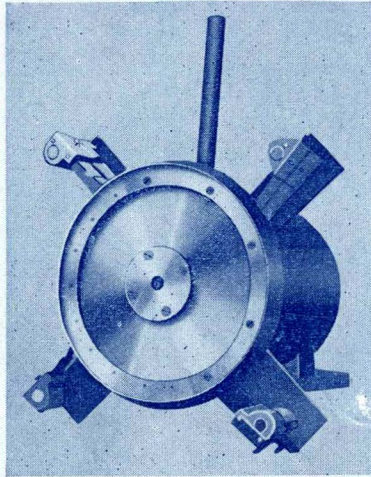
THE SUPER-SYNC

The Synchronous Rectifier That Can Be Filtered

The Super by reason of its large commutator and brush rig is particularly suitable for rectification at short waves. At the high frequencies the Super with its excellent insulating materials and sturdy construction easily handles the highest powered sets.

The main advantage of the Super however is that it can be filtered. Therefore results which equal those of the most expensive Motor Generator are obtained, but without the expense.

Why cause interference to your B.C.L. neighbor? A 250 Watter with



a real input when rectified by a Super will cause him no interference. When once adjusted the Super stays put. No need for constantly changing materia as is the case with the usual Chem. Rect. Another very desirable feature of the Super is its Rectification without Voltage Drop. You can rest assured that the voltage of your Transformer secondary is the voltage your tubes are getting IF you are using a SUPER.

Price complete with 1/4 H.P. 1800 R.P.M. Motor \$75.00 F. O. B. St. Louis, Mo.

MARLO ELECTRIC CO., 5241 Botanical Ave., St. Louis, Mo.

Tell 'em you saw
it in the 1925 National
A. R. R. L.
Convention Program.



If it is built to order or special
equipment, Amateur Radio
Exclusively can serve!

A. R. R. L.
Ensall Radio
Laboratory

1208 Grandview Ave.
WARREN, OHIO

Designers and Builders of High Grade
Amateur Equipment

8AEH

8AEH

GREETINGS GANG

A real wave meter for short waves is now available. Extremely accurate, compact and priced reasonably. Send for literature. A complete ham catalog will be ready soon. Send 25c for your copy.

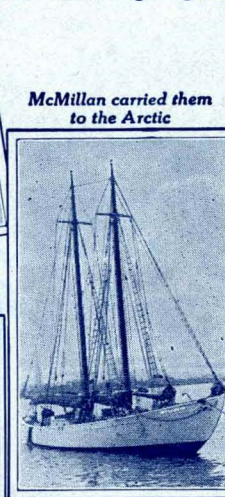
THE WIRELESS
MFG. CO.

CANTON, OHIO

Some Adventures of the Batteries you use



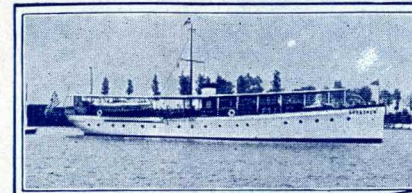
They're in the Wireless
Room of the Leviathan



McMillan carried them
to the Arctic



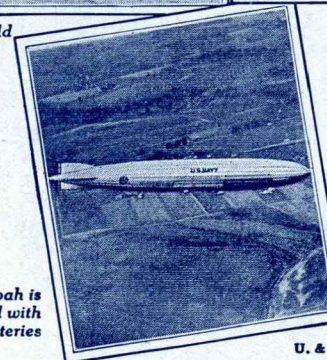
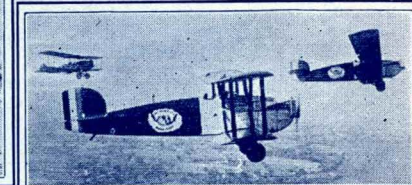
Standard Equipment of
United States Submarines



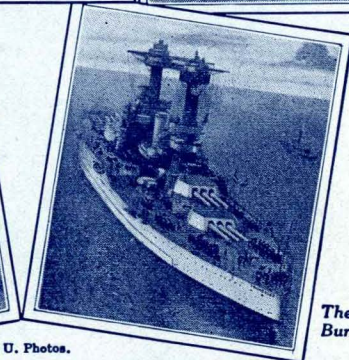
They Roamed the World
in the Speejack's
Radio Room



The World Flyers
Carried Burgess



The Shenandoah is
Equipped with
Burgess Batteries



The U.S. Navy Uses
Burgess Radio Batteries

U. & U. Photos.

BURGESS BATTERIES are never A-W-O-L when you need them

BURGESS BATTERY COMPANY

Engineers DRY BATTERIES Manufacturers
Flashlight - Radio - Ignition - Telephone

General Sales Office: Harris Trust Bldg., Chicago
Laboratories and Works: Madison, Wisconsin
In Canada: Niagara Falls and Winnipeg





GENERAL RADIO CONDENSERS

have good interplate
conductivity through
solder-sealed contacts.
Type 247-H, .0005 M. F.
with Geared Vernier

Price, \$5.00

Chicago Radio
Apparatus Co.

Phone Harrison 2276

415 South Dearborn St.
Chicago, Ill.



FAMOUS TRAINS

Providing Complete Service to Chicago

The Omaha-Chicago Limited Omaha-Des Moines- Chicago	The Olympian Tacoma-Seattle-Spokane Chicago.
The Pacific Limited San Francisco-Omaha- Chicago	The Day Express Minneapolis-St. Paul- Chicago
The Southwest Limited Kansas City-Excelsior Springs- Chicago	The Copper Country Limited Calumet-Hancock-Houghton Chicago

THE PIONEER LIMITED

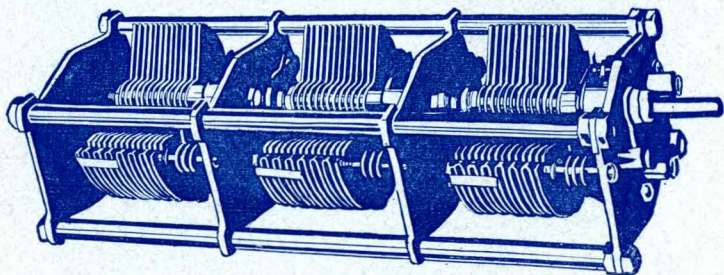
with thirteen other high class daily trains provides excellent service at hours to suit your convenience over the only double-track line between Minneapolis, St. Paul and Chicago.

On all of these trains you will find an atmosphere of cheerful service—of interested personal attention—made possible by the fact that all of the equipment, including the sleeping cars, is owned and operated by this Company and that every attendant with whom the passenger comes in contact is its own picked employee, eager to please and interested in the comfort of its patrons.

GEORGE B. HAYNES
GENERAL PASSENGER AGENT, CHICAGO

Chicago Milwaukee & St. Paul Railway
TO PUGET SOUND - ELECTRIFIED

1790



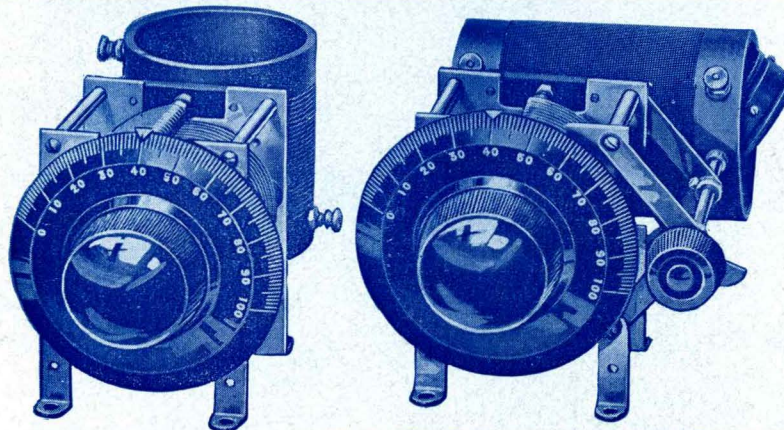
BUILD A ONE-DIAL RECEIVER with U. S. TOOL MULTIPLE CONDENSER

The one-dial set, the aim of all radio engineers, is now possible for the amateur to construct. The Multiple Condenser (made under Hogan Patent No. 1,014,002, January 9, 1912) has rotors arranged to operate from a single dial. It is thus possible for even the most inexperienced to tune in station after station, and log them, by simply turning the one dial.

Ask to see the U. S. Tool Multiple Condenser at your dealer's.

U. S. TOOL CO., INC.

AMPERE,
NEW JERSEY



THE GENUINE BROWNING DRAKE KIT \$22.00
Equipped with National Velvet Vernier Dials.
Perfect Vernier Control. Dials only \$2.50.

DISTRIBUTED BY
CHICAGO RADIO APPARATUS CO.
415 South Dearborn St.

Dear OM's

We welcome you to the greatest hamfest ever staged. Make yourselves at home and get acquainted with us—

3WE (A new 9)	9AWJ	9BZ	9EGC
9AAN	9AZK	9CBI	9FJ
9AAW (9ZW)	9BBA	9CNC	9GE
9ABF	9BIU	9CSL	9JQ
9AE	9BL (also 3HJ)	9DBF	9MP
9AFF	9BR	9DOX	9QD
9ALJ	9BTD	9DPC	9SN (Ex 1AUB)
9APY	9BVQ	9DU	9VJ
9ARB	9BYA	9DXG	9WD

HAMS! HAMS! HAMS!
Wear your call letters next to your emblem!



(Exact Size) \$2.50 Cash or C.O.D.

RADIO CALL PINS

HAVE YOU GOT YOURS?
ORDER NOW—Mail or Radio
Pins delivered at Convention if requested

R. C. BALLARD, 9 FZ
"The Radio Call Pin Man"
1725 Wilson Ave. Chicago, Ill.

Station Shingles!

Your call letters engraved above
Emblem (and O. R. S. below if desired).
Perfectly machine-engraved on 3x5
inch formica, filled with brilliant white.
Prices: Walnut, \$1.25; Black, \$1.00
each, postpaid to League members.

A. L. WOODY (20 So. Wells
St., Chicago
during
HOMEWOOD, ILL. Convention)

CALL CARDS

FOR PARTICULAR "HAMS"

Send for our samples and prices on call cards printed as
YOU want them. You may have ANY reading matter and
ANY color design at stated prices. References on request.

"Ask the Hams Who Use 'Em"
(All Work Under Personal Supervision of 9APY)

RADIOGRAMS, 25c Per 100

HINDS & EDGARTON

PRINTERS OF THIS PROGRAM

19 S. Wells St.,

CHICAGO, ILL.