

The newspaper for the hobbyist of vintage sound and electronics

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THE HORN SPEAKER

Mutual Broadcasting System Fades Out

by Wayne Gilbert

The Mutual Broadcasting System has become only a part of broadcast radio history, signing off the air for the last time on Sunday, April 18, 1999. It is now just another memory for those of us striving to preserve the golden age of radio of our memories. In reality it was a small loss to most of us in the Denver area since the closest remaining radio affiliate of MBS was KFKA in Greeley, Colorado.

Mutual Broadcasting System began as one of the smallest of the nonspecific networks, starting business in 1929 under the name of The Quality Network, consisting of three regularly participating stations: WOR in New York, WLS in Chicago, WLW in Cincinnati, and optionally WXYZ in Detroit. In October 1934, the Quality Network became the Mutual Broadcasting System with WGN replacing WLS and WXYZ becoming a full-fledged member.

The networking of programs was not a new idea; Marconi had spoken from a station in Arlington Virginia, which had relayed his speech through several stations to a station in California as early as 1922. While this may be a stretch in concept of a radio network, it is almost universally acknowledged that the 1924 political rally in Madison Square Garden was a true coast to coast network

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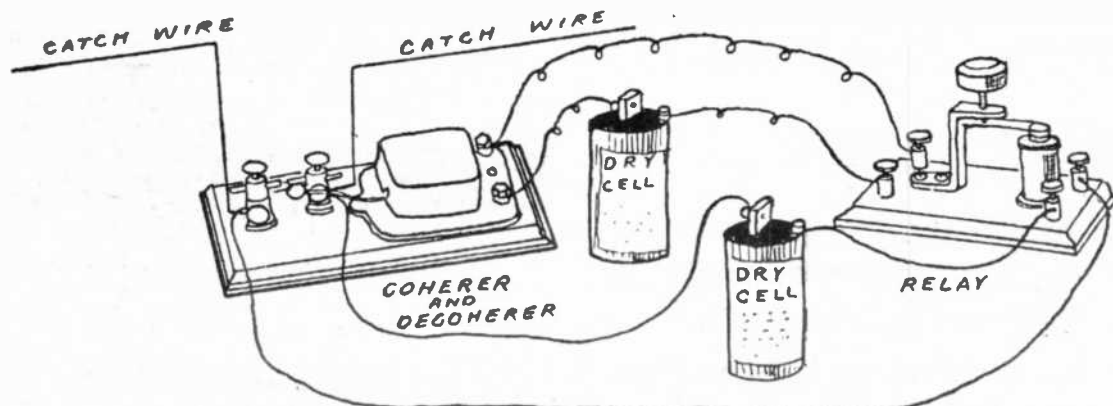
NBC (the National Broadcasting Company) was the first to capitalize on the value in producing programs that could be used by various stations across the country and began their network in 1926, with 26 participating stations. The idea of producing a program that could be used by multiple stations drastically reduced the cost of filling air time for the small stations and became such an instant success that in 1927 NBC divided its network into two companies, known as the NBC Red and Blue networks. (There was also a NBC Orange network that was restricted to the California area.)

The Columbia Broadcasting System (CBS) entered the competition in February 1927, with a network of 16 stations. It, too, had a very humble beginning with its first control room reportedly being in the men's restroom of the parent station, although this story sounds amazingly similar to the one about station WJZ, the original station for NBC, having its first station in a factory cloakroom.

In 1929 Mutual's parent network, the Quality Network, was formed by radio stations WOR, WLS, and WLW. They struggled to exist until they came up with the idea that put them in a



Fulton Lewis, Jr.



Article on building this radio receiver, a coherer outfit, inside pages.

broadcast. This relaying of programs was practiced by other stations in the early 1920s, but radio broadcasting was generally a medium where every station primarily looked out for itself, ever installing larger and more efficient transmitting equipment striving to capture a larger audience for themselves. Their broadcasts usually consisted of locally produced programs, news, sports and usually the most popular, the weather forecasts. Their

position to compete with the other two major networks, and they changed their name to the Mutual Broadcasting System in 1934 to reflect their new concept. While its big competitors NBC (Red and Blue) and CBS had studios and large staffs, Mutual Broadcasting had neither, but rather acted as the heart of a co-op, providing a means for its affiliates to share their own locally produced programs with each other. It was an experimental concept intended to unite some of the smaller stations and inde-

pendent networks, and its success was due in a large part to WOR's programming contributions to the network.

Mutual Broadcasting struggled along mostly with its original stations until 1936. At this point their policy of allowing smaller networks to join as affiliates started to pay off, and they added 13 stations in the New England region and another 10 in California. They continued to grow and in 1938 had added a network in Texas as well as other scattered independents, bringing their station count to 107 stations. Their business concept was flexible enough to allow many CBS and NBC stations to also be affiliates of MBS. Their growth continued until they had criss-crossed the country with a network of more than 500 stations, at one point being the largest network in the world.

During this time the company had had to change its policies somewhat and produced some news and sports programs, but the majority of the programming still originated in either WOR or WXYZ. Two of the popular programs produced by WXYZ and WOR were *The Lone Ranger* and *The Shadow*. Their most notable and memorable newsmen during this period were Gabriel Heatter, H.V. Kaltenborn, and Raymond Swing.

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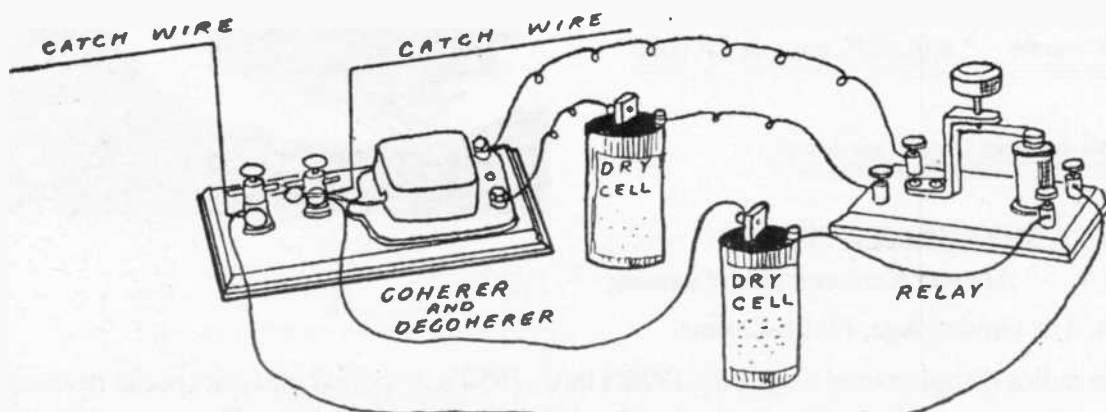
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Raymond Swing, an American broadcaster for the BBC, referred to as the 'best known voice in the world' in the late 1930s and early 1940s became Mutual's inter-

national news correspondent reporting on Germany's activities in Europe. While reporters like Edward R. Murrow and Eric Sevareid reported on the what and how aspects of the world for the other networks, Swing presented commentaries on the why of events for MBS. His broadcasts established him as one of the leading news voices in America and helped establish Mutual's place as a largest broadcasting network of the era; but since it was a co-op of many small stations, it never had had many large affiliate stations, and thus never achieved the prestige of NBC or CBS.

The late 1940s and 1950s brought a number of changes, including television which quickly converted radio's listening audiences to a television watching audience. The networks all suffered and Mutual especially, with its dependence upon member station produced programs. Listener audiences waned and radio stations found that they had to become, or at least join with, television or FM stations if they were to survive. It hadn't cost much too produce several radio programs, but few of MBS's affiliates could afford to produce many quality television programs, and they saw CBS's and NBC's network produced programs as a way to enter the television era. Mutual's concept of how a network should be run was just not well suited to the changing times and they couldn't seem to make the transition, ignoring television, and, as least for the most part, FM stations, with the inevitable result.

Mutual was sold and resold several times during the 1950s, once to the General Tire Company, then to Hal Roach Studios, and then to the 3M company. While with the Roach Studios, Mutual's owners requested and got \$750,000 from the dictator of the Dominican Republic (Rafael Trujillo) in return for agreeing to broadcast "noth-

ing contrary to Dominican interests" on MBS's news, and guaranteeing to broadcast at least 425 minutes per month showing the Dictator and the Dominican Republic in a positive light. To illustrate how Mutual could be used in this agreement, a totally false story about a pending motion picture that Roach Studios was preparing to make in the Dominican Republic was sent to Mutual's news service and broadcast across the nation by Walter Winchell. This total fabrication clinched the deal, but tarnished Mutual's reputation forever. Fortunately MBS's president, the instigator of this deal was removed in 1959, but it was too late to salvage MBS's dignity and credibility.

The final episode of Mutual's career began to play out during the 1980s. They were first purchased by the Amway corporation in 1984, then fairly quickly resold to an organization named Westwood One Entertainment. Westwood One Entertainment also acquired the radio news portion of the CBS, NBC, FOX, and CNN networks, and it was their corporate decision to finally close down MBS, giving its remaining affiliates the option to join one of their other networks or try their luck with one of the other big conglomerates that control radio network programming today.

KFEL was one of the several early stations in Colorado to be affiliated with MBS and several others including KFKA, in Greeley, joined over the years. As late as 1999, eight Colorado stations were still listed in the Working Press of the Nation reference books including KHOW, KMXA, and KFKA. A check of these stations revealed that in truth only KFKA had stuck with Mutual until the end.

Although not all of Denver's stations were contacted, a reliable source indicated that Westwood One Entertain-

ment network is not currently affiliated with any Denver radio station, leaving the market open to four other conglomerates, whose identities and owners are generally also as unfamiliar to listeners. The only positively known Mutual station in Colorado that was on the air on April 18th, 1999, was KFKA in Greeley (KFKA chose to stay with Westwood One and switch its CBS news network), so the demise of the Mutual Broadcasting System will cause scarcely a ripple in the sea of Colorado radio waves, except to those of us who remember them when they were one of the big fish in the vast pool of the airways.

Sources:

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by Wayne Gilbert of Denver Colorado

The above article is scheduled for the Colorado Radio Collectors Antique Radio Club's *Flash* publication.

radio necessities

OLDE TYME RADIO COMPANY, COLLECTOR'S CHOICE

Need hard to find Olde Tyme Radio parts, such as?

* antique twisted, black, 2-wire cloth cover cord * vintage tubes * headphones

* Olde Tyme hookup wire * brown silk type power cord * gold silk type power cord

* audio, interstage and output transformers * speaker cords * ant., RF, osc., & IF coils

* speaker grill cloth * pilot lamps * olde tyme ball handle toggle switches

REPRINTS OF THE FOLLOWING OLDE TYME RADIO PUBLICATIONS:

- Atwater Kent instruction manuals, Volumes 1,2,3 & 4
- Atwater Kent equipment catalog
- Radiola III/IIIA manual
- Radios, The Golden Age, Philip Collins

and much, much more. Data packages for American radios manufactured during the 1920's thru 1950's period plus our special research service for unknown model numbers are available. For free flyer, send 2- stamp LSASE to: **Olde Tyme Radio Company, 2445 Lyttonville Road, Silver Spring, Maryland 20910. Suite 317**

Wish to reach us by phone? Phone or fax: (301) 587-5280. Please call between 10:00 a.m. and 10:00 p.m., local time.

OLDE TYME RADIO COMPANY



A Coherer Outfit

A Coherer outfit is usually capable of only receiving messages coming from a distance of under one mile. In spite of this fact, however, it is an exceedingly interesting apparatus, being the first method to receive radio signals, to construct and experiment with, and for this reason is found fully described below.

A coherer set will ring a bell or work a sounder for short distances and therefore is the best sort of an arrangement for demonstrating the workings of your wireless apparatus to your friends. It is a must for a demonstration of the progress of radio.

The first thing that you need for a coherer is a pair of double binding-posts. Mount these about an inch and three-quarters apart on a wooden base, six inches long and four inches wide as shown in illustration.

Get a piece of glass tubing about an inch and one-half long and about one-eighth of an inch inside diameter. You will also need some brass rod which will just slide into the tube tightly. Cut off two pieces of the brass rod each one and three-quarters inches long and slip these through the upper holes in the binding-posts and into the glass tube as shown.

Before putting the second rod in place, however, you must put some nickel and silver filings in the tube, so that when the rods are pushed almost together, with only a distance of about one-sixteenth of an inch between them, the filings will about half fill the space.

The filings must be very carefully prepared, and in order to make them, first use a coarse-grained file on the edge of a five-cent piece. Do not use the fine dust and powder, but only the fairly coarse filings. Mix a few silver filings from a ten-cent piece with the nickel in such proportion that the mixture is 90% nickel and 10% silver.

You will have to experiment considerably to find out just the right amount of filings to place in the tube, and how far apart to place the brass rods or plugs. Remove the gong from an old electric bell, as was done in the past, and mount the bell on the base as shown. It should be in such a position that the bell hammer will touch the coherer very lightly when the bell is ringing. The two binding-posts, tube, rods, and filings constitute the coherer. The bell is the decoherer.

The next thing required in order to complete the apparatus is a relay. You may use an early type relay or build one according to the plan shown. This relay consists of a single electro-magnet mounted on a wooden base, two inches wide and four inches long. The armature is a piece of soft iron rod, one-quarter of an inch in diameter and one-eighth of an inch long, riveted to the end of a thin piece of spring brass, about No. 34 B. & S. gauge in thickness.

The other end of the spring is fitted to a bracket and provided with a thumb-screw to adjust the tension of the spring.

The under side of the armature and the upper side of the magnet core are both fitted with a small silver

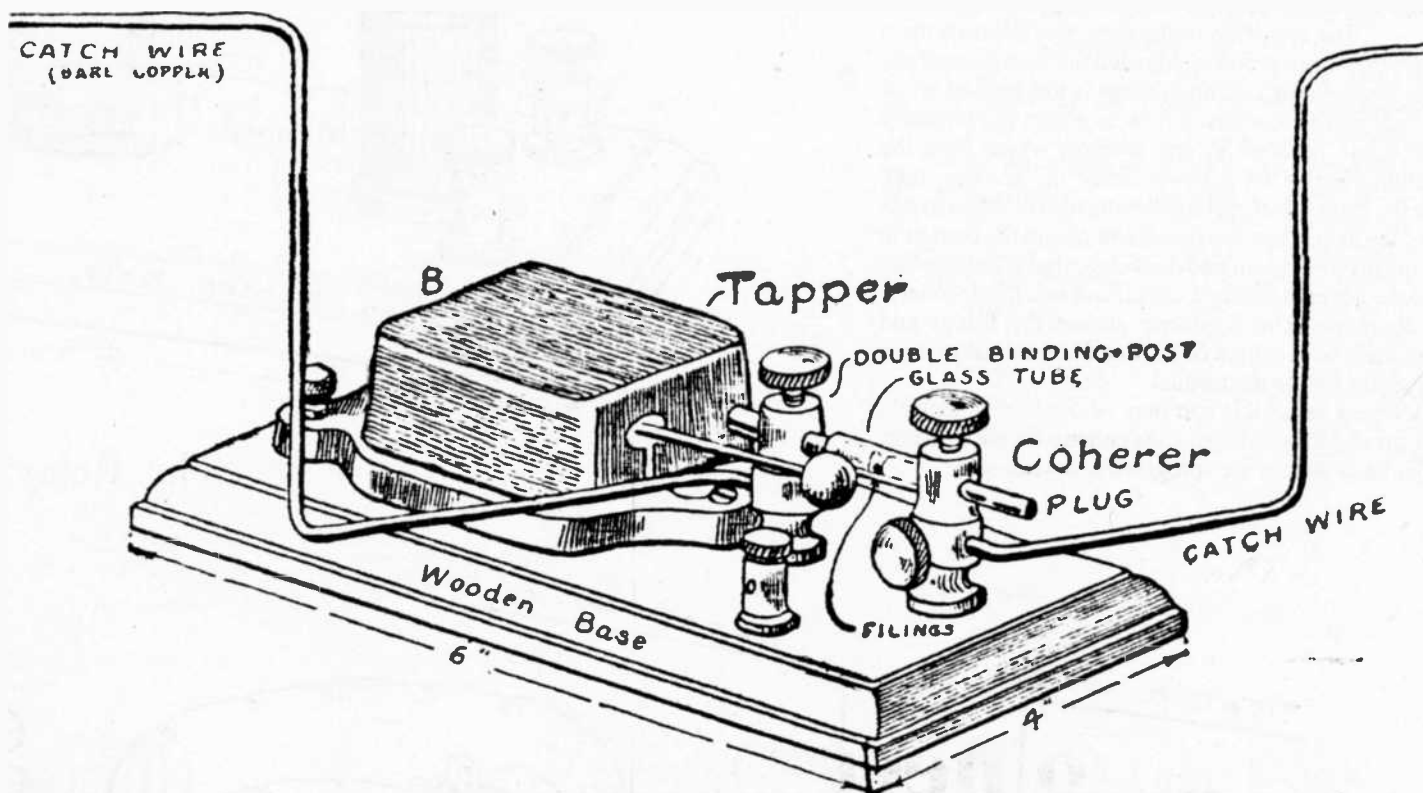
contact. The contacts should meet squarely when core by a current of magnet.

By turning the adjusting screw, the armature can be raised or lowered. It should be adjusted so that it almost touches the core and is only just far enough away to slip a piece of thick paper under.

The terminals of the magnet are connected to the two binding-posts on the base marked S and S. One of the binding-posts, P, is connected to the brass magnet, and the other is connected to the core of the magnet.

far away from the core. Then push the armature down against the contact on the core. The decoherer should then immediately operate and begin to tap the coherer. Then turn the thumbscrew until the armature is brought down to the core in such a position that it is as close as it is possible to get it without ringing the bell.

The transmitter should consist of a spark coil, battery, key, and a spark-gap. The gap should be connected to the secondary of the coil and adjusted so that the electrodes are only about one-eighth of an inch apart.



A Coherer and a Decoherer.

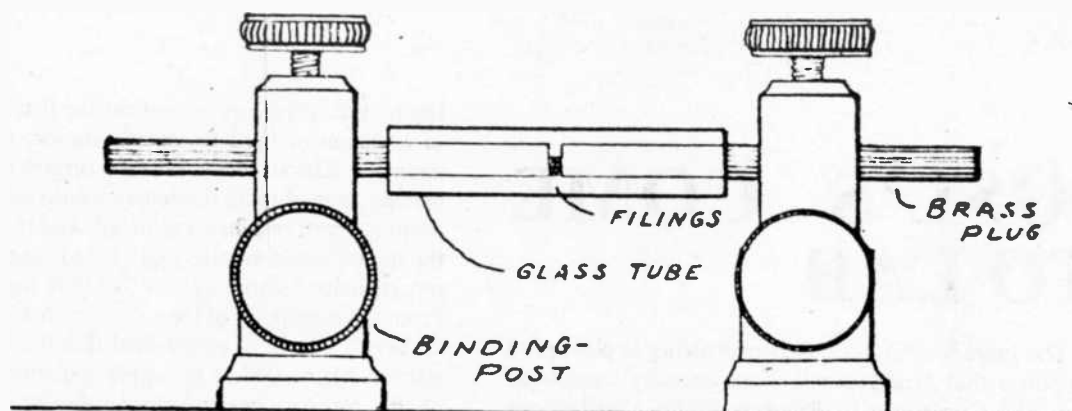
The illustration shows how to connect up the outfit. It will require some very nice adjusting before you will be able to get it to working properly.

If you wish to use the outfit for demonstration purposes or for sending messages for very short distances, as for instance across a room, you do not need an aerial and ground but merely a pair of "catch-wires to make an antenna." The "catch-wires" are two pieces of stiff copper wire, about two feet long, placed in the lower holes in the double binding-posts forming part of the coherer.

In order to set the apparatus for operation, raise the adjusting screw of the relay until the armature is quite

The key is placed in series with the primary of the coil and the battery, so that pressing the key will send a stream of sparks across the gap. Fit the spark-gap with two catch-wires similar to those on the coherer and place the transmitter about four or five feet away from the coherer outfit.

You are now likely to find that if you press the key of the transmitter, the decoherer will ring. It is possible that it will continue to ring after you have stopped pressing the key. If such is the case, it will be necessary to turn the adjusting screw on the relay so as to move the armature upward a short distance away from the core. If the decoherer will not operate each time when you press



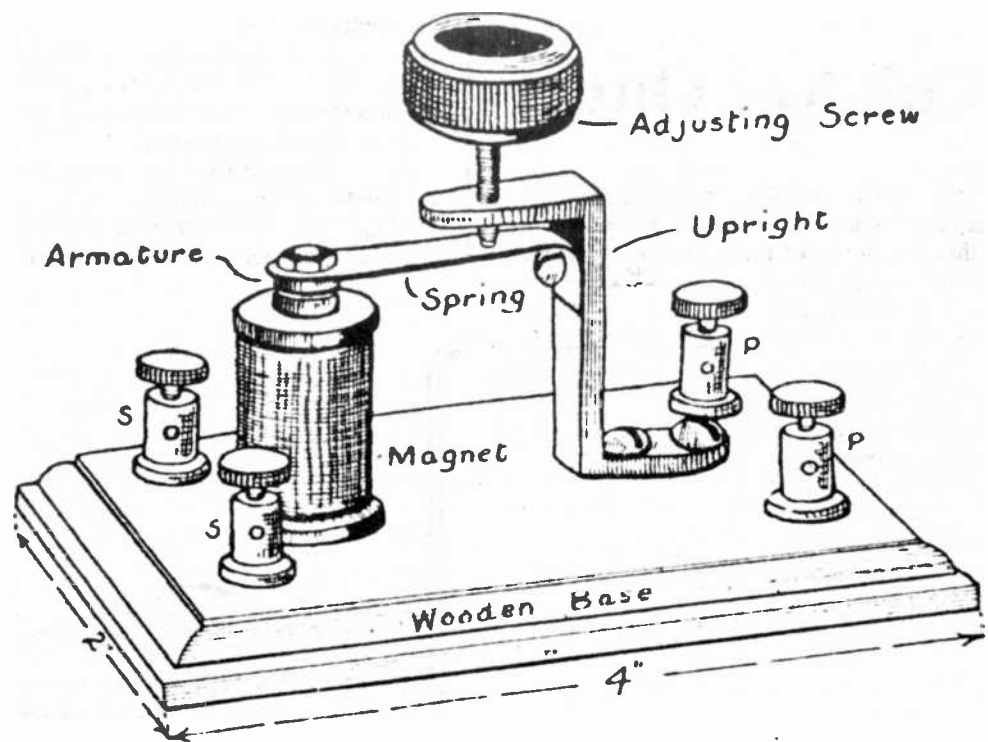
Details of the Coherer.

the key, the brass plugs in the coherer need adjusting. You must not be discouraged if you have some difficulty in making the apparatus work at first. After you learn how to adjust it properly, you will find that you can move the transmitter quite a distance away from the coherer and it will still operate very nicely.

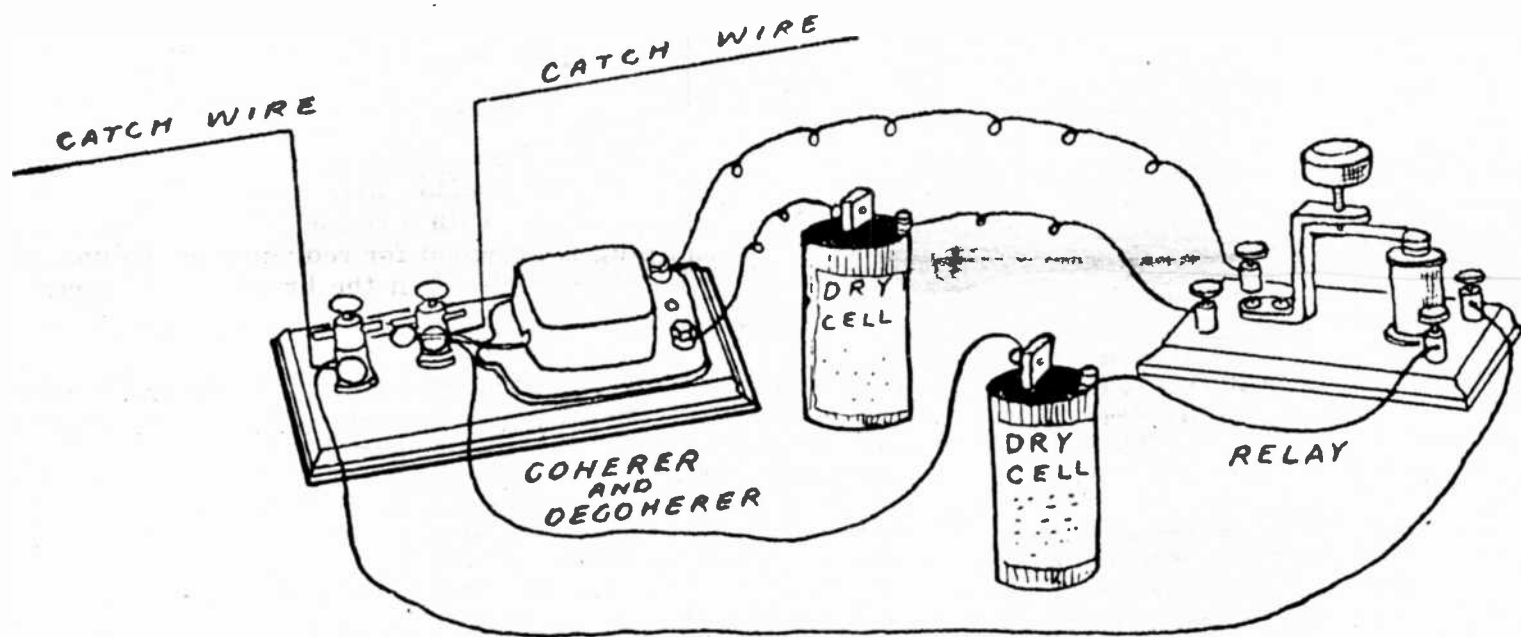
After you manage that, you can place the apparatus in separate rooms and find it possible to work it just the same, because ordinary walls will not make any difference to wireless waves. Bear in mind that the nearer the coherer plugs are to each other, the more sensitive the coherer will be, but that if too close, the decoherer will not be able to shake the filings properly and will not stop when you stop pressing the key.

The operation of the apparatus depends upon the fact that when properly adjusted the resistance of the filings between the two brass plugs is too great to allow sufficient battery current to flow to attract the armature of the relay. As soon as any wireless waves from the transmitter strike the catch-wires of the coherer, they cause the filings to cling together or cohere. When in this state, they have a low resistance and permit the current to flow in the relay circuit and draw down the armature. The armature closes the second circuit and sets the decoherer into operation. The decoherer shakes the filings and causes them to decohere or fall apart and so makes them ready again for the next signal.

A coherer set of this sort may be used on an antenna and a ground by substituting the coherer for the detector, such as used later in the "progressive crystal sets."



The Relay.



The Complete Coherer Outfit.

QSL'S COME TO LAB

The Library of American Broadcasting is pleased to announce that arrangements were recently completed with The Committee to Preserve Radio Verifications (CPRV) for the Library to serve as the repository for that organization's collection of over 30,000 radio verifications.

These verifications, or "QSL's," as they are called (from the Morse code symbol "Q-S-L" for "I acknowledge receipt"), are cards and letters sent to radio hobby-

ists by radio stations to confirm the listener's reception of a distant or hard to receive station. QSL's are still issued by stations today, but their origins date back to the earliest days of radio. Listeners would send the station a written report of what was heard, and if it checked out, the station would send its QSL. In radio's early days these reports helped stations know that they were being heard. From the standpoint of long-distance listeners (known as "DXers"), the QSL established that they had heard the station. Many QSL's are quite attractive, and include photos, station logos and other graphics, as well as technical information and other descriptive material about the station.

The collection spans the globe and includes cards from the early 1920's to the present. It focuses on regular AM stations and shortwave broadcasting stations, but also includes ships, planes and other "utility" stations, as

well as some amateur radio QSL's. The files and database have been set up so that a particular station's QSL's, which often span a number of years, can be quickly located and examined. The CPRV Collection contains QSL's from almost 150 individuals, many of whom "listened in" (as radio listening was first called) during the 1920s and 1930s.

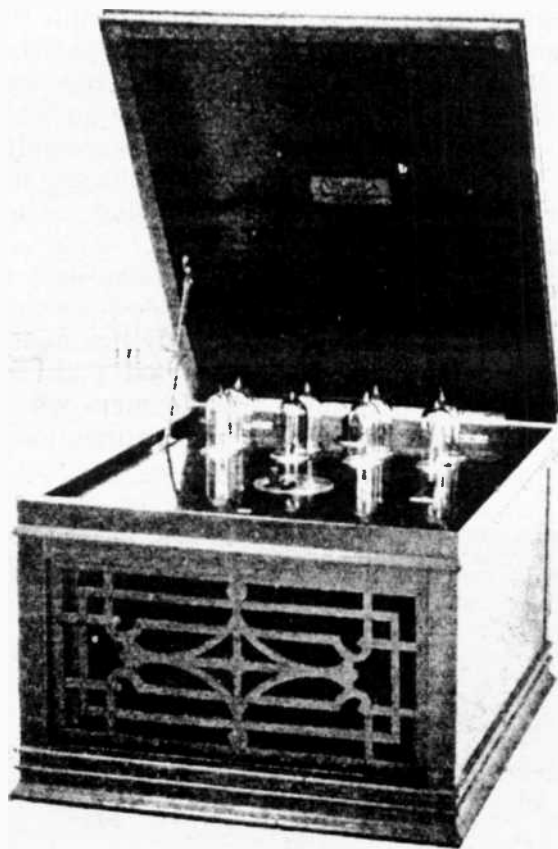
The CPRV is an active organization and functions as a committee of the Association of North American Radio Clubs. It will continue in operation, tracking down "new-old" QSL's to ensure that The CPRV Collection at the LAB, documenting this little known but important part of radio history, will continue to grow.

For more information, contact LAB Curator Chuck Howell at the Library, or write CPRV Chair Jerry Berg at: 38 Eastern Avenue, Lexington, MA 02421.

Aeriola Grand Broadcasting Receiver, Model RG

Introducing a De Luxe Design in Broadcasting Receivers

Here indeed is the ideal radiophone receiver for home entertainment. For simplicity of operation and compactness, it is unequalled and holds a leading position in the field of radio broadcast reception. Any man, woman or child can easily operate it without the slightest technical knowledge. A simple snap switch starts or stops it and a single tuning lever controls the wave length range. This high grade instrument is a product of the Westinghouse Electric and Mfg. Co.



Aeriola Grand

Anyone Can Install Aeriola Grand

Suitable stands are furnished for Aeriola Grand if desired. These stands are richly finished and harmonize in every way with the Aeriola Grand.

The Aeriola Grand is a complete radio receiver and loud speaker combined, in a high grade mahogany cabinet. It is designed for use in homes near high power broadcasting stations operating on wave lengths below 500 meters. The distance from such a station, under average conditions, should not exceed 50 miles.

The instrument is well adapted for use by the

novice. A push button switch, for turning the current on and off the vacuum tube filaments, and a single tuning lever completes the control. The method of amplifying has been developed to a degree where practically no distortion exists. The reproduction of clear speech and music is one of the outstanding features of the Aeriola Grand.

Combines All Radio Essentials

The Aeriola Grand has been especially designed to receive broadcasting stations operating on the standard wave of 360 meters, but provision is made for an additional range up to 550 meters.

All the essentials of radio detection, amplification and loud speaking are embodied in this popular instrument. By means of the loud speaking chamber the entire family may hear broadcasted music and other entertainments. In fact, the complete outfit is arranged in a cabinet very similar to that of the conventional phonograph cabinet.

With Aeriola Grand it is only necessary to connect the antenna and ground wires, turn the current on by means of a small snap switch and tune in the desired signals with a single control handle. A special plug is provided for reducing the volume of the incoming signals when the broadcasted concerts are too loud.

Automatic and uniform heating of the filament of the detector and three amplifier vacuum tubes used for reception in the Aeriola Grand is obtained by means of four ballast tubes.

The workmanship of the Aeriola Grand is unsurpassed. Its parts are housed in a highly polished mahogany cabinet, artistically constructed. Indeed, the instrument forms a valuable addition to the furnishings of any home.

Aeriola Grand is shipped complete with one detector tube, three amplifier tubes, four ballast tubes and the necessary "B" battery. To complete the installation, a 6 volt, 80 ampere-hour storage battery and a Model AD Antenna Outfit are required.

Aeriola Grand Broadcasting Receiver, as above
less Stand, Storage Battery, Charger and
Receiving Antenna Equipment.....\$325.00

With Stand\$350.00

Mahogany Stand Only..... \$35.00

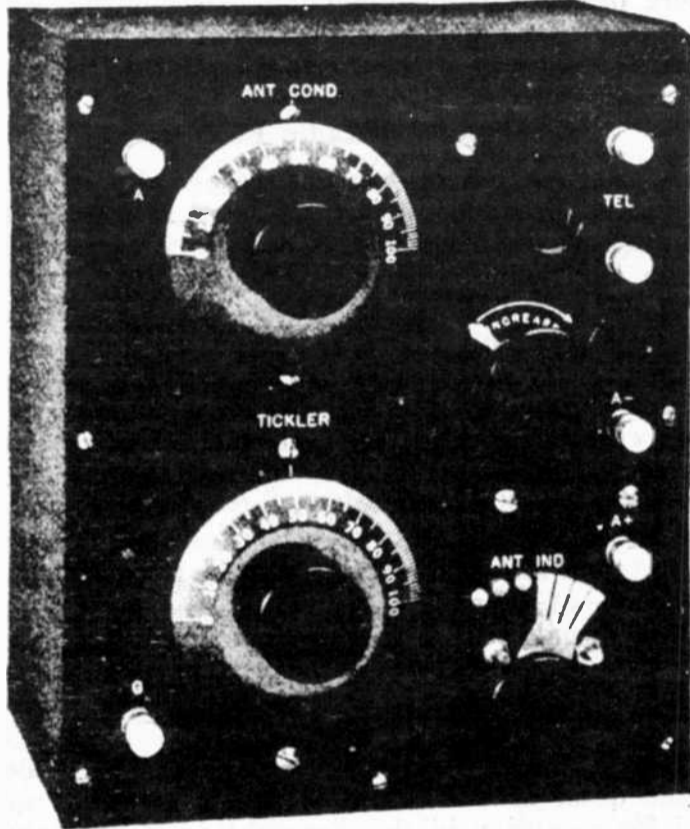
Dimensions: Receiver Cabinet, 21 in. x 17½ in. x 14½ in.; Stand, 31¾ in. high x 22¾ in. x 19¾ in.

Weights: Net, 50 lbs.; Shipping, 70 lbs.; with Stand, 140 lbs.

Clapp-Eastham Receiving Sets

Type HR Regenerative Receiver Special Features

Wave length, 180 to 825 meters. Antenna condenser built as a vernier. Compartment inside cabinet for "B" battery, or external "B" battery may be used. The control is wonderfully simple—the easiest you have ever used. Notwithstanding its low cost, we guarantee this set to give results equal or superior to any on the market, regardless of price.



Type HR Specifications

The following specifications will bear the closest inspection by the experienced radio man:

Panel—Condensite, rubbed to a dull finish and machine engraved. Engraving filled with permanent white.

Cabinet—Solid mahogany, highly finished, hinged cover and compartment for "B" Battery, 7 $\frac{3}{4}$ inches wide, 9 $\frac{3}{8}$ inches high, 6 $\frac{3}{4}$ inches deep over all.

Condenser—Balanced type, two rotary and three stationary plates.

Dials—Type 800 H dials of indestructible metal with black finish and white numerals are used.

Antenna Inductance—Wound on Formica Tube.

Plate Inductance—Wound on moulded ball.

Binding Posts—Rubber composition covered posts are used throughout.

Switch—No. 19 Switch with fan blade.

Rheostat—H400 Rheostat.

Circuit—Single circuit regenerative, licensed under Armstrong United States Patent 1113149.

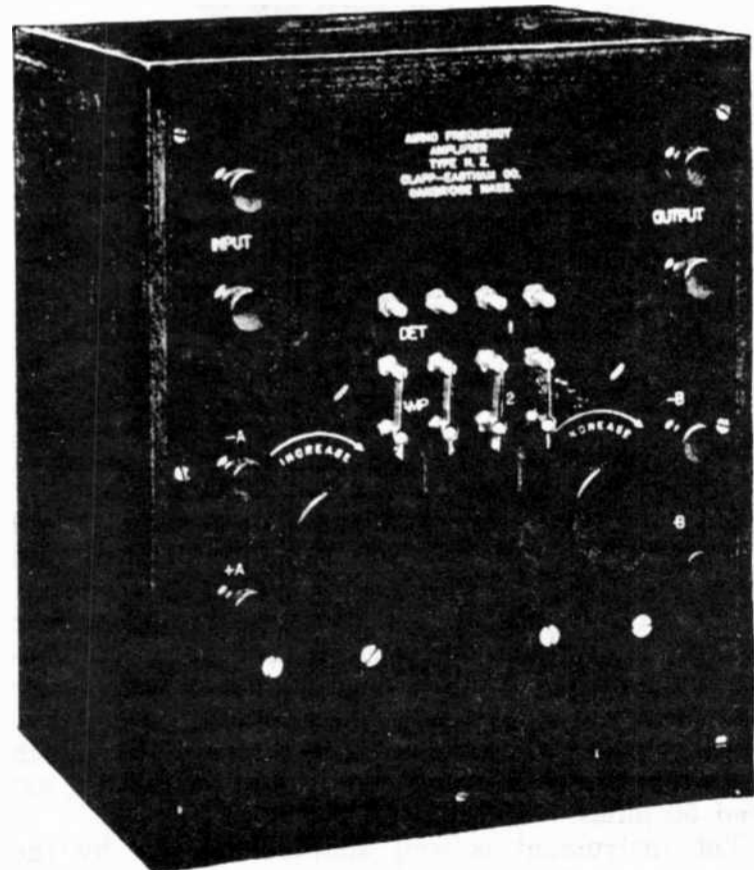
Type HR Receiver, complete as illustrated, but without accessories\$40.00

Type HZ Two-Stage Amplifier Special Features

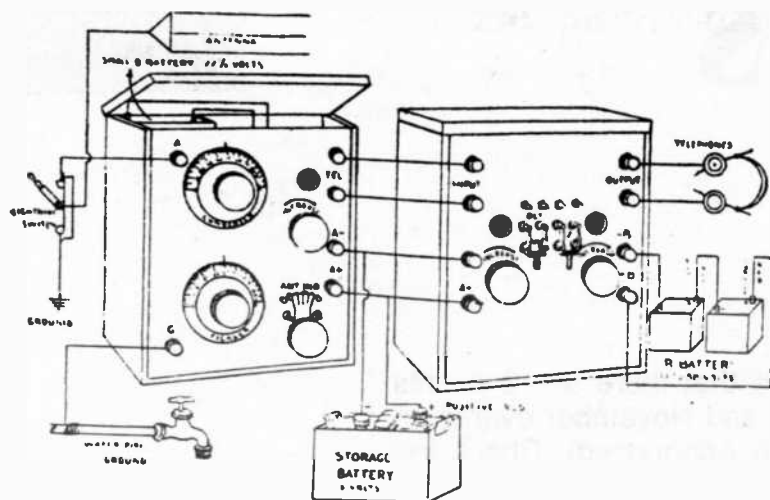
This amplifier is a companion piece to our HR Regenerative Set. It is equipped with the new "Maximus" amplifying transformers, the last word in amplification. The switches permit the use of detectors only, one stage of amplification or two stages of amplification, and only those tubes actually in use need be lighted.

Signals from any receiving set can often be increased to several hundred times their original intensity, by the use of this two-stage amplifier. This means that faint or distant signals, either telephone or telegraph, almost inaudible, can be made sufficiently loud for clear reception and that near-by or strong signals can be so increased in intensity as to make them audible over an entire room to a large audience. Where it is desired to dispense with the usual telephone head set and employ a loud speaker with horn for the reproduction of music or other radio signals, a two-stage amplifier must be used for satisfactory results. When so used, entertainment may be provided for the entire household or even to an audience in a large hall. This amplifier, while especially designed for use with our HR Regenerative Set, may be equally well employed with any receiving set of any type or manufacture.

It matches exactly the HR set in size and finish, and the binding posts exactly correspond, so that one may be connected to the other without any loose wires. This amplifier is also equipped with the recently perfected "Maximus" transformers which are a new step in advance in the art of amplification. The



Type HZ



same storage battery (A Battery) used for lighting the filament of the receiving set detector may also be used to light the filaments of the amplifying tubes, and the only adjustment required by the amplifier is the small rheostat controlling the brilliancy of filament in the tubes. A "B" battery of 44 volts is required for this instrument, and higher voltages up to 100 may be used with corresponding increase in signal strength.

Specifications

Panel—Condensite, rubbed to a dull finish and machine-engraved. Engraving filled with permanent white.

Cabinet—Solid mahogany, highly finished, hinged cover. External "B" Battery to binding posts. Size 7¾ inches wide, 9¾ inches high, 6¾ inches deep over all.

Transformers—New Clapp-Eastham Company "Maximus" type. A little better than the best.

Rheostats—New Clapp-Eastham Company Type 400.

Switches—New Clapp-Eastham Company ZRS6.

Binding Posts—Rubber Composition covered.

Type HZ Two-Stage Amplifier complete as illustrated, but without accessories.....\$40.00

The Ideal Receiver Type RZ

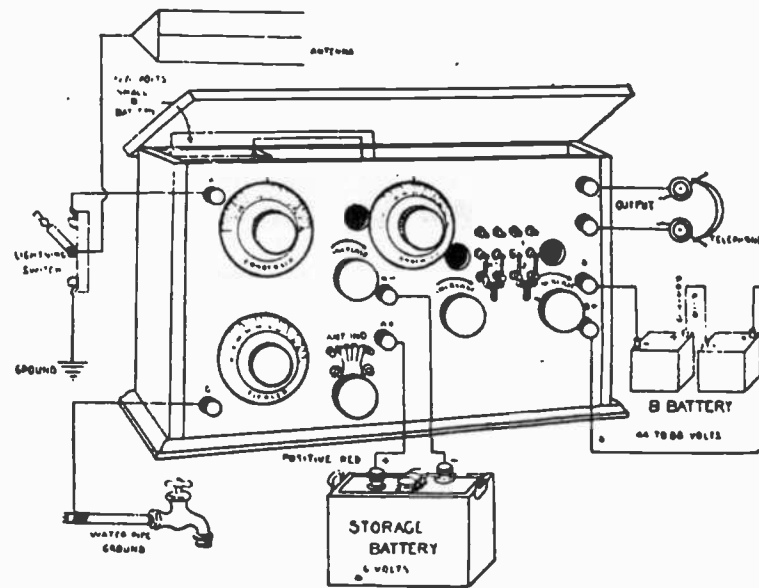
A most efficient home set. Licensed under Armstrong United States patent 1113149. The RZ is our ideal receiver. In order to satisfy your ideal the perfect receiver must be something more than a mere combination of wood, metal and bakelite, although it must be of the best materials. It must not be clumsy, but at the same time, rugged and strong. It must be capable of receiving wave lengths such as are in common use by broadcasting stations, also commercial and government stations, but should not run up to excessive wave lengths as this will cut down the strength of signals on shorter wave lengths. All adjustments should be accessible with the least effort

and it should be pleasing in appearance. Above all it should produce results, not the ordinary results obtainable with the ordinary set, but the unusual kind of results which have been beyond your reach before.



Type RZ

The RZ is the ideal receiving set for the home as it not only combines in one cabinet all of the many good features of both the HR regenerative receiver and HZ two-stage amplifier, but in addition will respond to



wave lengths up to three thousand meters, enabling the owner of the RZ regenerative receiver to listen to Navy and Army stations and even receive time signals from the Great Arlington station.

The RZ like the HR is guaranteed to give results equal to any set on the market regardless of price. It is supplied in solid mahogany cabinets with attractive condensite panels and hard rubber composition binding posts. Without question this is the most attractive addition you could possibly add to your home, because of its beauty and its service in entertaining the entire family.

Type RZ complete as illustrated, but without accessories\$100.00

Club News

All events must be verified to prevent any disappointment about time, place, etc.

CHRS 1999 SCHEDULE - Here is this year's schedule. Note that there are 2 events planned for April and June. We will try to confirm the May, August and November events as soon as possible. Note some locations and times are TBA, (To Be Announced). Check the **CHRS HOTLINE, 415-821-9800** for the best and latest information.

June 19th, Saturday, 9AM - Merced. Cliff's Radio Warehouse. Corner of 13th and "X". From the North, take Hiway 99 South, exit at V St. turn right and right again onto 13th St. Make the first right past the AM/PM mini-market. Sellers fee applies. It's a lot of fun to be in a warehouse full of radios. Thanks to **Cliff Berthelsen**.

July 3rd, Saturday, 8AM - San Francisco. St. Annes Church. of the Sunset. Corner of Funston, (13th Ave.) and Irving. Funston is 6 blocks east of 19th Ave. (Hiway 1). Sellers fee applies. Thanks to **John Wentzel**.

August 7th, Saturday, 8AM - Location TBA

September 4th, Saturday, 9AM - Fairfield. Western Railway Museum. St. Rt. 12. Meet and Picnic. No sellers fee. Everyone pays reduced park admission. Details to follow. Thanks to **Paul Bourbin**.

October 2nd, Saturday, 9AM - Pismo Beach - Oceano Airfield. Joint meet with SCARS. Campgrounds available. Working on reduced hotel rates. See www.aircamp.com (events) for map and details. Our meet will be live on the Web! Thanks to **Dan Steels**.

November 6th, Saturday, 8AM - Location TBA.

December - Nothing yet. How about a Holiday party and mini-swap? Who will organize it? Please let us know.

Sacramento Chapter - Meets the 3rd Tuesday of every month, 7pm at the SMUD building, corner of Elkhorn and Don Julio in Sacramento. All members are invited to attend.

OKLAHOMA VINTAGE RADIO COLLECTORS (OKVRC)

Jul. 8-11 MARC Extravaganza '99, Lansing, Michigan (517) 349-7187
 Aug. 4-7 ARCI Radiofest XVIII, Elgin, Illinois Call Lori (847) 695-5000
 Aug. 21 VRPS Swap Meet, Senter East Bldg., Irving, TX. 8:00 AM
 Oct 23-24 Texoma Hamarama, Lake Texoma Lodge, for info contact Herb Sleeper, e-mail retmarine@cst.net or <http://qsl.net/kc5sig/hamarama/reg.html>

Looking Ahead

Jun 19 Sat HVRA Swap Meet & Bar B Q, Bellville TX, John & Alleen Schmitt's Ranch 9 AM

Aug 20-21 HVRA MEGA Auction, Lai Lai Restaurant, Tides II Hotel

HVRA Web Site

<http://www.clarc.org/HVRA>

HVRA Web space provide by the Clear Lake Amateur Radio Club

Jun 27 Sun TARC meeting, VFW Hall, Schertz TX 2:30 PM
 Jul 17 Sat VRPS general meeting, Senter East Bldg. Irving TX 3 PM **
 Jul 24 Sat TARC Railroad Bar B Q, Kyle TX 10 AM
 Aug 15 Sun TARC VFW Hall, Schertz TX 2:30PM
 Aug 21 Sat VRPS Swap meet, 8 AM, Senter East Bldg, Irving TX

July 8-11 Extravaganza 99, Lansing Michigan, info 517-349-7187
 Aug 4-7 ARCI Radiofest 18, Elgin IL (Chicago area) Lori (847) 695-5000
 Sept 1-4 Antique Wireless Association, Rochester NY (716) 389-8300
 Sept 10-11 HVRA Mega Auction, Lai Lai Restaurant, Tides II Hotel, Holcombe at Main
 Oct ? VRPS Convention, Dallas FL Worth

London Vintage Radio Club
Dedicated to the collection, preservation, and restoration of antique radios and related items.

Meetings are held at the Jaycees premises, 317 Adelaide St South in London Ont. Doors open at 12:00pm for silent Auction setup. The meeting commences at 1:00pm

May 29th's Contest category is: - The Ugly Radio Contest

*This does not apply to the condition of the radio but to the artistic (or not) appeal of the radio and colour. Basically a designer's bad taste in your opinion. Open to all types of cabinets
1st, 2nd and third rosettes awarded*

Treasurer and Membership
Dave Noon 519 453-2292
19 Honeysuckle Cr. London, ON,
N5Y 4P3 VA3 DN
david.noon@odyssey.on.ca
1999 Membership is \$15.00 (in your currency)

Upcoming VRPS Events:

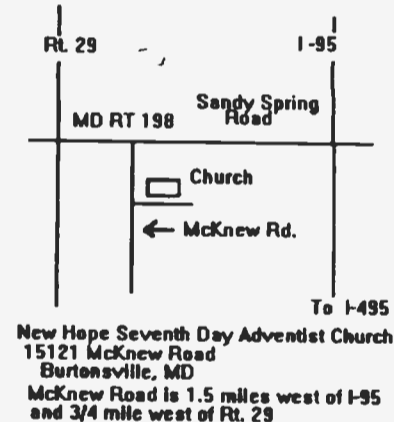
DATE	EVENT	LOCATION	TIME
06-19-99	Monthly Meeting	Senter East Bld., Irving, TX	3:00 pm
07-17-99	Monthly Meeting	Senter East Bld., Irving, TX	3:00 pm
08-21-99	Swap Meet	Senter East Bld., Irving, TX	8:00 am

Note: All Monthly Meetings are preceded by a swapfest from 1:00 pm till 2:45 pm.



Charles Rhodes
10105 Howell Drive
Upper Marlboro, MD 20772
(301) 574-0214
Fax: (301) 574-1978
email: charleswrhodes@worldnet.att.net

MEETINGS: Unless otherwise noted, MAARC monthly meetings are held at the Seventh Day Adventist Church in Burtonsville, MD. Consult the calendar section for dates and times and the map below for directions. There is a traffic signal at the intersection of MD 198 and McKnew Road. Park in the lot behind the church or on McKnew Rd. Do not block the fireline to the rear parking lot. Entrance to the meeting is via the door to the gymnasium.



- Thu.-Sat., Jun. 17-19** MAARC's annual convention and radio meet, Radioactivity - 99; starts 6 p.m. Thursday; seminars, fleamarket, banquet, museum tour, huge auction; at the Holiday Inn (new venue) at Exit 29 of I-95, Beltsville, MD.
- Sun., June 20** Annual Father's Day Hamfest, Frederick Fairgrounds, MD
- Sun., Jul. 18** MAARC monthly meeting at New Hope Seventh-Day Adventist Church gymnasium, Burtonsville, MD.; 2:00 p.m.
- Sun., July 25** Balto. RA TV Society (BRATS) Hamfest, Timonium Fairgrounds, MD

OTR Convention-Seattle, June 25-26, 1999

THE PEMCO/REPS RADIO SHOWCASE VII

"Mystery at the Mike"



Radio Showcase VII will return to the Seattle Center, home of the famous Space Needle. Hosted by The Radio Enthusiasts of Puget Sound (REPS) and PEMCO Financial Services -welcomed back as the corporate sponsor.

The theme for 1999 is 'Mystery at the Mike' covering westerns/police/adventure/sci-fi and more. It will be broadly interpreted, allowing us to re-create shows as diverse as: Red Ryder Broadway Is My Beat Jack Armstrong, All American Boy The Adventures of Nero Wolfe Suspense (subject to change.) Heck, we might even do the Alan Young Show as a mystery. In all cases, we'll have actors who worked the original versions.

Frank Denton, 14654 8th Ave. SW, Seattle, WA 98166
Information...425-488-9518 or hrrmikes@aol.com

It is an effective price guide, keeps you up on the latest prices. It is only

\$12.95

Shipping, \$3.00,

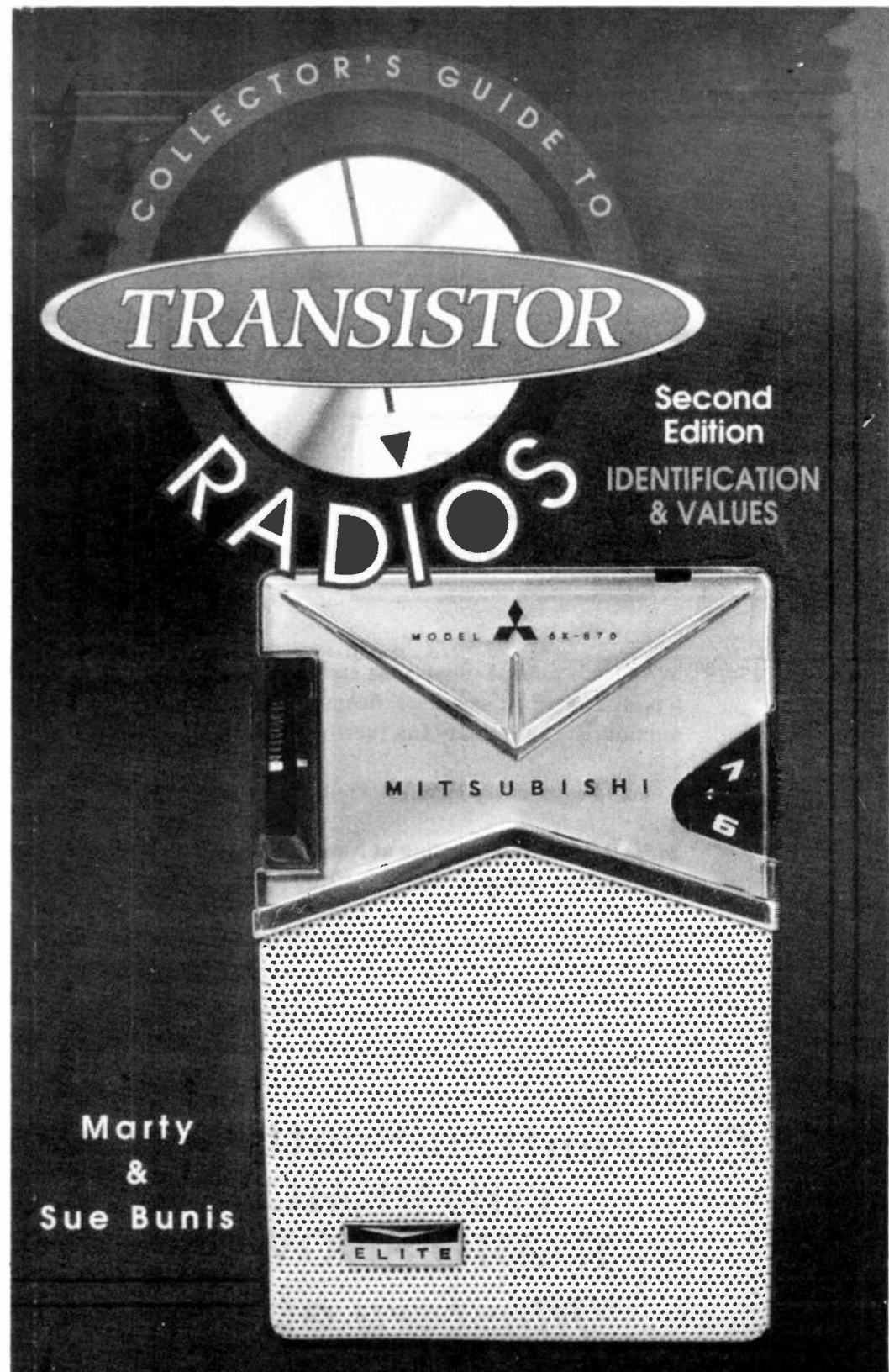
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voice (903) 848-0304**



The Horn Speaker Book Sales

June '99

Flea Market For Sale or Trade

ATWATER KENT

PERFECT REPLICA ATWATER KENT, type 2A twin crystal detector, \$95.00, includes certified mail, --- Roland Matson, P.O. Box 956, Lake Panasoffkee, FL 33538. [9812]

CRYSTAL RADIO

ANTIQUA CRYSTAL SETS and crystal detector stands. Too many to list. Tell me what you want. --- Dr. Turke, P. O. Box 2288, Hollywood, FL 33022. (954) 925-3670. [9805]

Crystal Set and one tube radio instructions and projects. Beautiful, high quality printing. Tested instructions and plans. Since 1932. Complete catalog \$2.00 postpaid. MODERN RADIO LABORATORIES, P. O. Box 14902-C, Minneapolis, MN 55414-0902. [9805]

FOR SALE: CRYSTAL SET INFORMATION on design, parts, materials, for restorers and experimenters. Send for free report abstracts and order form. --- Crys Tech, P. O. Box 6805, Kingman, AZ 86402. [9805]

GENERAL ELECTRIC

FOR SALE: GE RADIO model 202, brown with gold medal grill, no cracks, original back \$28.00. Phone or write (601) 922-2235. --- Thomas Burnside, 4838 S. Westhaven Drive, Jackson, MS 39209-4711. [9904]

GENERAL

For Sale: Radio collection by lot, or individually. S.A.S.E. for list. Wanted: Lid for TV-7A/U tube tester. Irv Sanders, 242 Hunter Lane, Harrisburg, PA 17112-8922 [9906n]

FOR SALE: HEATHKIT COLOR BAR GENERATOR, mint, untested \$25.00; BLC multiplay turntable \$40.00. WANTED: manual/ schematic, H.H. Scott 357 tuner amplifier. --- Onerio Sabetto, 1717 Burgess Road, Cleveland, OH 44112-1103 (216) 487-1036. [9906]

FOR SALE: WESTON, ac volts meter, model MR S3 w600 in leather case, looks good, \$20.00, plus shipping. Phone (601) 922-2235 or write: Thomas Burnside, 4838 S. Westhaven Drive, Jackson MS 39209-4711 [9906]

EUROPEAN RADIOS FOR SALE: 1. 1965 Columbia TR. W. Germany C-605 AM \$55.00 -- 2. 1947 English Vidor "lunch box" AC/DC 220V \$125.00 -- 3. 1956 Grundig 2065 AM/FM/SW wood \$150.00 -- 4. 1960 Grundig 85US AM/FM white plascon \$100.00 -- 5. 1961 Grundig TR 361 AM/FM / cassette \$65.00. -- 6. 1961 Grundig TR310 AM/FM wood/plastic \$65.00 -- 7. 1955 Grundig 100U AM/FM plastic \$85.00 -- 8. 1960 Grundig/DeJur tape recorders, 3 each: \$40.00 -- 9. 1961 Grundig reel to reel T/R TK61, mint \$100.00 -- 10. 1970 Norelco TR radio/ clock (Dutch) black \$55.00 -- 11. 1972 Nordmende "Luxus" TR AM/FM wood \$100.00 -- 12. 1945 Phillips "Philleta" AM/LW/SW bakel \$165.00 -- 13. 1961 Telefunken Alego AM/FM/SW wood \$175.00 --- RGB ENTERPRISES, P. O. Box 5367, Old Bridge, NJ 08857. U.S. telephone: (732) 607-0299, Fax (732) 679-8524. E-mail: rgcent@aol.com [9905]

ABOUT 450 COPIES OF QST \$450.00, also about a dozen old meters (Western Union, etc.) Must pickup. (903) 882-5019. Robert Elliot [9905-1]

FOR SALE: TRANSMITTING AIR CAPACITORS, all sizes, variable, fixed, list, SASE. --- Bill Riley, 863 W. 38th Avenue, Eugene, OR 97405-2375. [9905].

MAJESTIC AC electric power unit - 115V, for use with Majestic model 90, \$45.00 plus UPS. -- three speaker horns (no bases) two AK goosenecks and one nonmetal straight neck, \$35.00 ---- Kenneth Miller, 10027 Calvin Street, Pittsburgh, PA 15235 (412) 242-4701. [9905]

FOR SALE: SPRAGUE Tel Ohmike, model TO-4, manual, \$50.00. plus shipping. Wini Reauveau, P. O. 73032, Las Vegas, NV 89170-3032. Phone (702) 795-2613. [9905]

FOR SALE: RCA 68R3, Sparton 8W10, Heath GR-64, Silvertone 7054J, Vista 500. \$150.00 for all plus UPS. Irv Sanders, 242 Hunter Lane, Harrisburg, PA 17112, Ph 717-469-2185 Sanders irvk3iuy@juno.com [9904]

I have a nice Gilfillan Model 6U console radio/phone for sale, mid-late 1930's, 32"H X 29"W. Very good condition, but amp "motorboats" (I believe a filter capacitor in the power supply needs to be changed). The chassis itself is ULTRA-CLEAN, and cabinet wood is generally excellent (no veneer peeling, etc). I am asking \$175.00 plus shipping, which would probably need to be by truck. I have attached some photos of it. Thanks. Peter Simmons 127 Magnolia Avenue #7 Petaluma, CA 94952 petersimmons@home.com

FOR TRANSISTORS SPIKET SP600, red nib \$25.00; Sony 2R-31, chrome/white \$10.00, Motorola AP23DN, beige \$10.00, all excellent and working. plus S/H. --- Sam Mannino, P. O. Box 331, Villanova, PA 19085. (610) 353-6747. [9904]

PRECISION E-400, sweep signal generator, \$40.00; Heathkit 0-6 oscilloscope, 45.00; both have manuals. PM speakers 2" to 8". Also 2"x4", 4"x6", 5"x7", 6"x9", Heathkit color bar generator 1G62, mint, untested, \$25.00, plus UPS. WANTED: schematic, manual, H. H. Scott 357 AM FM tuner, copy OK. --- Onerio L. Sabetto, 1717 Burgess Road, Cleveland, OH 44112-1103. [9904]

TRADE: I have quite a few books on radio for trade, on ARRL Hand Books. For the years 1940, 43, 44, 45, 47, 48. Also 1951, 54, 55, 57, 59 and 1961, 62, 64, 65. Send for my list and tell me what you got. --- A. R. Terry, RR#3 - Box 19, Ellington, MO 63638. E-mail-- terry3@juno.com Phone (573) 663-7935. [9904]

SHORT WAVE SETS FOR SALE (all work) HALLICRAFTERS SX-100, works great, \$200 REALISTIC DX-160 w/SP-150 speaker \$125 NATIONAL NC-188 w/Heathkit QF-1 Q-multiplier and both manuals, \$250 Military Pan Adaptor, poor paint, \$100 Drake R-4C w/4NB noise blanker, & MS-4 speaker, mint condition, \$400 ECHOPHONE "COMMERCIAL", nice, \$150 HALLICRAFTERS S-210, brown woodtone, nice, \$125 MCMURDO SILVER 805 "100 KHZ IF AMPLIFIER" \$100 NATIONAL NC-98, nice but has x'tal filter problem, \$150 Patterson PR-15, classic set! \$750 All plus UPS. Charles Bray, 1322 Ivy RD, Bremerton WA, 98310 (360)373-1013 email cbray@krl.org [9903]

MAKE THE ANTIQUE RADIO STORE your source for tubes, parts, boos and other radio related items. We also provide expert audio and radio services at fair prices. We maintain a large inventory of radios, phonos and test equipment from the 1920's thru the 1950's. Let us know

your requirements. visit us on our web site..... www.oldradiosrus.com The Antique Radio Store, 7420 Clairemont Blvd. #103-531, San Diego, CA 92111. Phone or FAX (619) 268-4155. [9903]

SALE: RADIOLA 26, \$15.00, AR812 \$25.00. Many Rider Radio & TV manuals \$20.00 each. RCA VTR \$50.00. RCA bus band radios with Triplite model 35. Mae offer. R. to R. tape recorders. Sony, Ampex, Martel, 50 each. WANT: Day Fan, oem 7 radio cabinet for AK55. --- Robert De Haan, Julia De Haan, 2883 E. Beltline Avenue, NE, Grand Rapids, MI 49525 [9903]

For sale .. Five National Radio Manuals by Rider. Vols. 1, 2, 3, 4, 5, Good to avrg. condition. Vol. # 3 Binder is there but unattached, pages in good condx. Sold only as set. \$150.00 plus postage aprx \$20. Also .. Riders Vols. 6, 7, 8, 9, age 11, and 12 \$25.00 each plus \$ 4.00 shipping US Mail book rate. Also ARRL Handbooks and other old Ham Radio gear. SASE or email for list. WA7IHN PO Box 442 Aumsville, Oregon 97325 or e mail, wa7ihn@aol.com ph. 503-749-1149 [9903]

A.K. Model 75, Zenith Model Zenith Model 40A, Zenith R/P, Sparks Ensemble's, Model's 99-101-103-109. Victor Electrola's R/P Combos., Zenith Consoles With Robot Dials or high tube count ANTIQUE EDISON 301 MURRAY AVE. BRIDGEVILLE PA 15017 (USA) PHONE/FAX-412-257-8926 [9903]

NEW RELEASE: Lots of everything All items complete except where indicated. All items cosmetically good. For details send 2-STAMP LSASE FOR 20 PAGE FLYER, NO, 199 TO: OLDE TYME RADIO COMPANY, 2445 LYTTONSVILLE ROAD, SUITE 317, SILVER SPRING, MD 20910. Phone/fax (301) 587-5280. [9903]

HALLICRAFTERS

HALLICRAFTERS, model S-72r, cabinet in poor condition with 2 missing knobs, excellent potential for a good restorer. \$135.00 plus shipping. --- Jim Cranshaw, P. O. Box 1193, Mabank, TX 75147, (903) 848-0304 Fax (903) 848-0596. cranshaw@gte.net [9906]

LITERATURE

FOR SALE: AMATEUR RADIO TEXTS and handbooks, new condition. SASE for list. --- Bill Riley, W7EXB, 863 West 38th Avenue, Eugene, OR 97405-2375. [9906]

FOR SALE: LAFAYETTE RADIO CATALOG, 1974 in v/g condition, \$10.00 plus shipping. Phone or write. Thomas Burnside, 4838 S. Westhaven Drive, Jackson, MS 39209 [9905]

FOR SALE -- TERMAN'S ENGINEERING books \$6.00 each, Radio Operating Questions and answers, edition Hormang and McKenzie \$8.00, Amateur Handbook 44 edition 1967 like new. -- Robert R. Blevins, W3LGI, 48836 Havirland Road, Lexington Park, MD 20653-3037 (301) 863-8687. [9905]

For Sale: National Manuals (Riders) Volumes 1, 2, 3, 4 & 5 good condx. # 3 is fair, cover is loose. Sold only as a set of five. \$ 175.00 plus shipping. Also have Riders Volumes 6, 7, 8, 9, 11, & 12 ... good codx. \$30.00 each plus shipping. Bob Schafer PO Box 442 Aumsville, Oregon 97325 phone 503-749-1149, or email - wa7ihn@aol.com [9904]

FOR SALE: AMATEUR RADIO TEXTS and handbooks, new condition. SASE for list. --- Bill Riley,

W7GXB, 863 W. 38th Avenue, Eugene, OR 97405-2375. [9904]

Magazines, brochures and books 1938 Philco Brochure "NO SQUAT-NO STOOP-NO SQUINT" \$25 1925 ATWATER KENT brochure, form 141, \$50 Bing Crosby Album, 1977 DELL publication #04063, \$200 RADIO MIRROR, January 1937, \$50 RADIO STARS, January 1934, \$50 A Pictorial History of Radio, 1960, 1971 printing, exc. w/dust cover \$75 S. Gernsbacks RADIO ENCYCLOPEDIA, 1931, signed by Gernsback \$250 THE WIRELESS EXPERIMENTERS MANUEL by Elmer E Bugher, 1919-1920, great book, water damaged, \$100 Toonerville Trolley by Fontaine Fox, 1972, w/dust cover, \$25 OVER THE RANGE to the GOLDEN GATE, a 1905 Tourists Guide to--Colorado-- New Mexico--Utah--Nevada--California--Oregon--Puget Sound and the Great Northwest, excellent book with photos--\$100 Charles Bray, 1322 Ivy Rd, Bremerton, WA 98310 (360)373-1013 and email cbray@krl.org [9903]

SCHEMATICS for most radios from 1920's through 1940's, some 1950's. Send S.A.S.E. and \$3.00 for each schematic. If schematic is unavailable, money will be refunded. -- Antique Radio Schematic Service, 13911 Kensington Place, Houston, TX 77034.

FOR SALE: Copies: Hard To find Schematics for Radios, Also kit radios, 1922-1950. Manuals: test equipment, ham gear. Contact me for prices. availability -- Duane Ballew, 6813 152nd Street Ct. NW, Gig Harbor, WA 98332. (253) 851-4505.

PARTS

FOR SALE: CAPACITORS, METERS, ceramic tube sockets. SASE for lists. -- Bill Riley, 863 W. 38th Avenue, Eugene, OR 97405-2375. (541) 345-2165. [9903]

FOR SALE: E. F. JOHNSON ceramic sockets, octal to "50 watter" sizes, (new) \$3 to \$8. -- Bill Riley, 863 West 38th Avenue, Eugene, OR 97405-2375. (541) 345-2169. [9910]

PHILCO

FOR SALE: Complete Instructions For Adjusting All Philco Radio Receivers, a 1934 Philco Service Department Reproduction. \$3.50, postpaid. Pete Petersen, 5414 120th Ave., SE, Bellevue, WA 98006.

PHONOGRAPH

I have a collection of edison voicewriters and a shaver, carbon spools, that I am interested in selling. Do you know someone that might be interested? Tom ph 813-889-0988 [9905]

DISC RECORDER, BRENTWOOD "M". 16 1/2 - 33 - 45 - 78 RPM. Turntable runs, tubes (4) test O.K. but no sound out. May need mic and erasure, which I don't have to play. \$200 - Including pkg. and ship. -- J. E. Hurzeler, 2244 Via Acalones, Palos Verdes Estates, CA 90274. (310) 375-8594. [9903]

FOR SALE Astatic, Jensen and Pfansteihl needles send SASE or e-mail for list. Harry Pewowaruk 1535 No 8th Ave St Cloud Mn 56303 (320) 252-9910 e-mail HPewowaruk@aol.com [9903]

RADIO SHOWS

FOR SALE: MANY OF YOUR FAVORITE OLD TIME RADIO SHOWS ARE AVAILABLE ON TAPE CASSETTES. YOU SELECT THE SHOWS YOU

WANT AND PURCHASE THEM BY THE HOUR. FAST, FRIENDLY SERVICE. SEND FOR OUR CATALOG LISTING OVER 5,400 SHOWS ARRANGED BY CATEGORY AND TITLE. ONLY \$2.00 (P & H). SEND REQUEST TO: ERSTWHILE RADIO, P.O. BOX 2284, PEABODY, MA 01960.

LISTEN TO OLD TIME RADIO SHOWS AND VINTAGE MUSIC ON YOUR BACK YARD SATELLITE DISH or local cable TV system. This service is free and without commercials. For more information, call The Yesterday USA Satellite Superstation Network, 2001 Plymouth Rock, Richardson, TX 75081. (214) 690-3636, 24 hour FAX (214) 644-2473

SERVICES

I MAKE RECORDS AND PICTURE DISCS! I sell cutting needles and blank recording discs. Also some Wurlitzer jukebox parts. (612) 869-4963. [9905]

WE RECONE AND HAVE PARTS FOR ALL home, auto, pro. and vintage speakers. -- Tri-state Loudspeaker Reconing, (724) 375-9203, <http://www.nauticom.net/www/speakers> Dennis McNeil, 650 Franklin Avenue, Aliquippa, PA 15001. E-mail: speakers@nauticom.net [9806]

HORN SPEAKER REPAIRS. REPAIRS to most horn driver units -- world- wide service. Diaphragm repair/ replacement. Repairs to all antique speakers, including auto, home and professional. Recone kits available on many makes and models of speakers. Atwater kent, Zenith and many others. Also large selection of speaker drivers -- woofers, midrange and tweeters. Unfinished cabinets to match woofers, tweeters and crossovers available. Celebrating our 25th year with thousands of satisfied customers. SPECIAL OFFER! 2nd speaker half price on repair of three or more speakers in one shipment. World wide repair service. Speakerworld Technology, 2000 Warm Sps. Ct. #6, Fremont, CA 94539-6744. (510) 490-5842. Fax (800) 577-3253.

SHORT WAVE

HALLICRAFTERS; 540B, HR-40, S54, SX99, S76. Detrola 568-1. GE L630. Air Chief \$25.00. Echophone EK 102. -- Call Charlie, (541) 474-2596, Charles Seidel, Box 1500, Merlin, OR 97532 [9906]

10 BAND MINIATURE SHORT WAVE RADIOS! Listen to the entire world, (takes 2 AA batteries or 3 volt adapter, not included) Price break. \$35.00 postpaid. Richard Brill, P. O. Box 5367, Old Bridge, NJ 08857.

SPARTON

FOR SALE: SPARTON CONSOLE, E. B. Whitten, 700 VZ 3216, Wills Point, TX 75169. (903) 896-1815. [9903]

SPEAKERS

I hope you can help me out. I have had in my possession a very old speaker that someone (via the Internet) wants to buy. I have had it for some 30 years and it is in pretty good shape for its age. Here is what I know. I believe it is a Nathaniel Baldwin 'Madera' horn speaker. I bought it with an old A-K radio (knowing they didn't "go" together) when I was in high school many years ago. The horn still works, and I'd like to get an idea as to its history, rarity and value. I can be reached at 408-894-4278 Many thanks, Ron May [9905]

NEED A SPEAKER? We have them. Give size for price. -- Robert Haan, 2885 E. Beltline ne, Grand Rapids, MI 49525. (616) 364-5735 [9905]

FOR SALE: WESTERN ELECTRIC CONE 18" W/8 SIDED METAL BASE, DATED 1921, CONE NOT PERFECT - \$125.00; MAGNAVOX DUAL ELECTRO MAG. SPK 'RS. 12." One with matching transformer, 7 prong plug, cones not perfect - \$60.00 - AK Electro Dynamic 7," 150 ohms, field and output coils O.K., mounted in flat board, cone not perfect \$30.00; Radiola 110A, probably needs reconing, \$18.00; Emerson 12" permanent magnet 3.2, cone perfect, NOS, \$45.00 -- Maureen Martin, 1407 Memory Lane, Lutz, FL 33549; (813) 949-1835. [9809]

TEST EQUIPMENT

B & K model 1077B television analyst, \$125.00 plus shipping. --- Jim Cranshaw, P. O. Box 1193, Mabank, TX 75147. (903) 848-0304 Fax (903) 848-0596. cranshaw@gte.net [9906]

Early test equipment for sale Bell System 81-A, battery operated line tester/buzzer, works \$60 Fridigaire Oven Tester 5419858, 0' to 600' Far, untested, \$50 RF grid dip meter" Western Thermo-Galvonmeter #425. w/3 coils in nice oak case, untested, \$75 MUTER Company clear plexiglass test box w/4 #471-A 50Kohm potentiometers, works, \$60 Standco Megohmer, Herman H Sticht, 1926, untested, \$100 Syncro Tester Mk-2-3 on syncro motor Mk-8-3, untested, \$100 Century SS-1 Counter top tube tester, 48 sockets, no charts, good transformer, \$50 Crystal Rectifier Test Set TS-268/U, untested, \$40 GE AC ampmeter, 0 to 25 amps, black bakelite, hinged cover, leather handle, works, \$75 ABC "UNAMETER" tube tester, Apparatus Design Co., Little Rock, Arkansas with charts, very early, really different! works, \$250 Charles Bray, 1322 Ivy RD, Bremerton, WA 98310, 360-373-1013 email cbray@krl.org [9905]

Wooden case bridge Instrustrial Inst #RN-1 \$35.00 GR 1310A osc 2Hz-2Mhz \$60.00 plus shipping Harry Pewowaruk 1535 No 8th Ave St Cloud Mn 56303 (320) 252-9910 Hpewowaruk@aol.com

HICKOK #615 nice \$27.00. Jackson TVG2 \$19.00. Precision #E5500A \$12.00. Hickok VTVM #1605M \$49.00. Omite variac \$45.00. Precision 7" VTVM \$45.00 -- Charlie (541) 474-2596. Chuck Seidel P. O. Box 1500, Merlin OR 97532. [9905]

GENERAL RADIO 1396-B tone burst generator \$85.00. SLYVANIA tube case carrier looks unused, \$35.00 -- (612) 869-4163. [9905]

MEGA SWEEP GENERATOR made by Kay Electric \$40.00, Leeds Northrop Resistance Decade box type KS3001 \$45.00, Dumont Oscillograph record camera with manual type 296 \$25.00, Dumont type 304A oscilloscope \$60.00, Holtzer Cabot megameter insulation tester, AN-PSM-2 with manual \$30.00, HP 600 ohm attenuator set 350B \$25.00, RCA voltohmyst model WV77E \$30.00, Eico multimeter model 536 \$20.00, Cornell Dubilier decade capacitor box model CDB3 \$15.00. --- Philip Guinan, 106 Page Road, Litchfield, NH 03052. (603) 889-6213. [9904]

FOR SALE: RCA three inch oscilloscope, model WO-33B in original box with papers as removed from closed shop - \$35.00 plus shipping. Phone or write, (601) 922-2235. -- Thomas Burnside, 4838 S. Westhaven Drive, Jackson, MS 39209-4711. [9903]

TUBES

Hello, I am selling my vacuum tubes. Around 230 in all. Almost all new, still in boxes. Both radio and TV tubes. I will gladly furnish anyone interested with a list. Buy one or all! Thanks! Chris Arn Chrisarn@aol.com Chris Arn 352- 232 - 2486 [9906n]

FOR SALE: COLLECTOR TUBES. Send SASE or e-mail for list. George H. Fathauer, 688 W. first Street, Ste. 4, Tempe, AZ 85281. E-mail, fathauer@home.com. [9902]

Tubes for sale, new and used: 1) RCA Electron Tube new, original box (2) Sylvania 7F7 new, original boxes (1) CBS 6SN7GT new, original box (2) Raytheon 12AU7) new, original boxes (2) Sylvania 7F7 used, in metal shield (1) DELCO 7-26/188-5 50L6/GT used, (1) Sylvania VT-231 6SN7/GT, used, (1) Raytheon 6SN7GT, used, (1) CBS 6SN7, used, (1) KEN RAD KS R/188-5, used, (3) KEN RAD 6B4G, cant tell if new or used (3) TUNG SOL 6B4G, one new, two used, Make offer to Keven McDermott, P.O. Box 31872, Seattle, WA 98103 (206) 545-0853 [9811]

ZENITH

PORTHOLE ZENITH TELEVISION, space station dezinized Zenith radio. Zenith Royal #775, Zenith A625Y \$29.00, new Zenith headphones, Zenith tombstones, 85 zenith schematics, \$20.00 Charles Seidel, P. O. Box 1500, Merlin, OR 97532. (541) 474-2596. [9903]

WANT ADS

AUDIO EQUIPMENT

LIMITERS, PROCESSORS, amplifiers, Teletronix, Universal Audio, Urei, Fairchild, Pultec, McIntosh, Dynaco, etc. (612) 869-4963. [9903]

CROSLEY

Looking for knobs for a Crosley Mdl#E15 EB table radio, it is steering wheel style or any E15 series. Thank you Mark Simants 972-442-3600 marks@gwmail.plano.gov

DeFOREST

WANTED: DeFOREST DV3 tubes. Must have good emission. Have good DV5 for trade. --- J. C. Woychowski, 119 Laurelwood Drive, Niantic, CT 06357. (860) 739-3649. [9906]

GENERAL

WANTED: OLD LIGHT BULBS with tip and good filament, also colored glass tubes. Phone/fax (660) 726-3038, Charles Combs, 508 E. Daniel, Albany, MO 64402. [9906]

WANTED: TEN-TEC 315, RX-10, Mosley Cr-1, Heath AR-3 --- Herman Schnur, 3205 Brick Kiln Road, Greenville, NC 27858. (252) 752-2264. [9905]

If you can find this 1950 RCA Victor Victrola TA-169 Entertainment Center. This particular one has a 14 inch TV, radio, two phonographs, one for 45's and the other for 79's and LP's. There is another 1950 model without the TV, but I do not have the model number for it. Either one of these would be my first choice, but Admiral, Columbia, or Zenith would be satisfactory in case you can not get an RCA. Higinio Fernando Garza, 1606 West Gastel Circle, Mission, Texas 78572 956-584-2155 [9904]

"Wanted- One good WE217A tennis ball bulb, diode, Igor Golioto, 17 Addison Drive, Fairfield, NJ, 07004, 973-463-4973, golioto@gdats.com" [9904]

WANTED: ZENITH 8S661, Philco 39-17, American bosch 440T, Mosley CM-1, Heathkit AR(3), --- Herman Schnur, 3205 Brick Kiln Road, Greenville, NC 27858 (252) 752-2264. [9904]

WANTED: 4 TUBE, 3 knob chassis to fit Peter Pan, Jackson Bell. El Rey, horn, etc. Also want speaker for Philco #89, --- Byron Bernor, 33855 McEnnery Cyn., Acton, CA 93510. (661) 269-5459. E-mail, rajo@prodigy.net [9904]

WANTED: ZENITH 8S661, Philco 39-17, United American Bosch, 440T. State condition and price. --- Herman Schnur, 3205 Bric Kiln Road, Greenville, NC 27858. (252) 752-2264. [9903]

WANTED: GREBE M1 or M2. Need cabinet and speaker. junker OK. also looking for Silvertone#1967 console. --- Alan Kalivas, 7 Anderson Street, Peabody, MA 01960-3713. (978) 535-8175. [9903]

WANTED: TUBE HIFI, tube commercial amps. speakers and horns. Altec, Marantz, Jensen, RCA, Dynaco, Heath, EICO, Scott, Fisher, McIntosh, Pultec, JBL, Electrovoice, Craftsman and Tannoy. Some old guitar amps. also Fender, Gibson, Vox, Vallo, Supro, Magnatone, etc. Sonny Goldson, 1413 Magnolia Lane, Midwest City, OK 73110. Call (405) 737-3312.

GRIMES

WANTED: David Grimes radios models: M3XP and 4DL -- Mike Grimes, 3805 Appomattox Circle, Plano, Texas 75023. (214) 867-6373.

INFO WANTED

Wanted: Hopalong Cassidy Grill or Metal, aluminum front for the - Arvin Model 441 T (Red) Table-N Radio. I have the radio and was told that at one time several grills were available out there some were ??? Anyone have one or info about finding one? Thanks for your help. Bob Schafer PO Box 442 Aumsville, Oregon 97325 or email wa7ihh@aol.com [9904]

Wanted: A source for the itty bitty knobs that go on clock radios such as the GE 572 & 551 and others such as Motorola, Westinghouse, and Automatic. (Analog clocks, not flippy digits). AES no longer has them. Also would like to know how to make the Telechron movements run quietly. Thanks. David B. Skidmore 3731 Granger Road Akron, OH 44333-1542 (330)666-5543 wb8cbo@akron.infi.net [9904]

I have a friend who is an avid collector of antique radios and phonographs. He is currently interested in finding an Edison (cylinder or record) with a morning glory speaker horn. Would you be so kind as to send him some information on this, or connect him with the right people. His address is as follows: BILL CASEY 110 FURNACE HILL ROAD ERWIN, TN. 37650 [9903]

Does a 1935 Zenith Console shortwave set have any value as an antique. This one is disassembled and has been that way for many years. It is not in good shape but before disassembling it did work local and shortwave. Edward Tkacik, WW2 vet. 41 Audrey Ave. Plainview, NY 11803 emt41aud@sprintmail.com [9903]

HEADPHONES

WANTED: OLD HEADPHONES, -- any amount. Phone plugs, parts also -- Please send list or call. -- Dick Mackiewicz, 349 Walnut Trail, Coventry, CT 06238. (203) 742-8552.

LITERATURE

Beitman RADIO DIAGRAMS volume #2 Rider's service manuals. All volumes Larry Smoot, Rt.1 Box 424, Fishersville, VA 22939 [9904]

WANTED: ORIGINAL MANUAL for Collins 32V-3 xmtr. --- Barney Wooters, W5KSO, 8303 E. Mansfield Avenue, Denver, CO 80237. (303) 770-5314. [9809]

MICROPHONES

Wanted-Microphones Wanted: All microphones, working or not, RCA, WE, Altec, Neumann, etc., also tube broadcast gear. Mike States, Box 81485, Fairbanks, AK. 99708 (907) 456-3419 ph/fax mstates@polarnet.com [9804]

MUSIC MASTER

WANTED: MUSIC MASTER 21" bell horn. Will purchase or trade for items of interest. Sev Dvorsky, 380 Morrison Drive, Pittsburgh, PA 15216. [9810]

PARTS

Correct wood knobs for Stromberg Carlson models 130/140, 4845 Iris Ter, Fremont, CA 94555, rick.botti@es-tamp.com Rick Botti Senior Technical Support Engineer E-Stamp Corporation 4009 Miranda Avenue Suite 225 Palo Alto, California 94304 *Rick.botti@es-tamp.com (650) 842-4608 [9905]

CABLES FOR radio type CIH-46-159-A rec 2-12 mc. navy unit of - TCS-13, 65F-13, 65F-7, 65F-10. --- Please call, leave message; (305)745-1801. Charles. [9904]

WANTED: SENSITIVITY knobs for Halicrafters, models S-76 or S76U. Contact, Joe Cunningham, 917 Lunt Avenue, Schaumburg, IL 60193. (847) 524-0640. [9903]

PHONOGRAPH

Wanted Chrysler Highway automatic record player, automotive underdash record players. Cute, mint condition portable suitcase phonographs large turntables such as Fairchild 740/750 and Technics SP-MK3, stereo cartridges, tonearms, etc. --- Kim Gutzke, 7134 15th Avenue, S., Minneapolis, MN 55423. (612) 869-4963. [9905]

Do you know anyone who does repair work on crank up phonographs? Need the spring assembly fixed and the reproducer redone? Thanks, Gary Noblett Pampa Texas gdnoblett@yahoo.com [9905]

RECORDS

RECORD CUTTING MACHINES -- Westrex, Scully, Hasco, Neumann, Fairchild, Ortofon, Presto, Rekokut, recording blanks, cutting needles, literature, etc. (612) 869-4963. Vogue oicture discs and uncommon '50/'60s 45 rpm records. Kim Gutzke, 7134 15th Avenue, S., Minneapolis, MN 55423. [9905]

SILVER MARSHALL

WANTED: INFO AND "PAPER" on Silver Marshall model 630-SG six tube shielded grid (UX222) receiver; also correct S-M knob for filament rheostat. --- Tod Prowell, 413 North York Road, Mechanicsburg, PA 17055-6016. (717) 697-5227. aeriola@epix.net [9906-3]

STAMPS

WANTED: RADIO RECEPTION VERIFICATION stamps including "EKKO" AND "BRYANT RADIO", individuals or albums. Phone/fax (660) 726-3038 — Charles Combs, 508 E. Daniel, Albany, MO 64402. [9905]

TEST EQUIPMENT

WANTED: Lid for military tube tester.model TV-7A/U, or a junker with complete case. Irv Sanders, 242 Hunter Lane, Harrisburg, PA 17112-8922 717-469-2185, irvk3iuy@juno.com [9906n]

WANTED: HICKOK 539C TUBE TESTER OR JUST NICE CASE. Tektronix 570 tube curve tracer,

audio analyzers Nakamichi T-100 or similar unit. (612) 869-4963. [9810]

TRANSISTOR RADIOS

SEND ME INFORMATION on your pre-1970 transistors for sale, description, condition and price to, Jeff Hoover, 347 Cherry, Grandy, MO 64844 [9811]

TUBES

WANTED: COLLECTOR TUBES. Particularly need UV-202, UX-852 and sonora types. Send list of early tubes you have. — George Fathauer, 688 West First Street, Ste. 4, Tempe, AZ 85281 [9902]

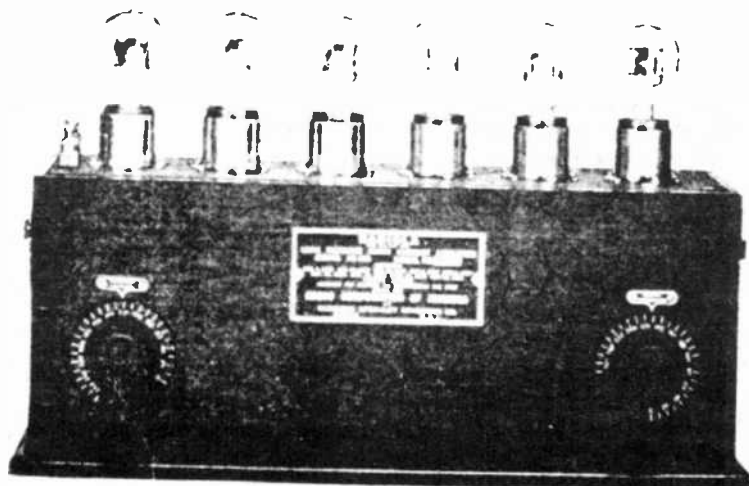
Deadline for ads is the 27th of the preceding month.

WESTERN ELECTRIC

WANTED — WESTERN ELECTRIC tubes, speakers, amplifiers, horns, radios, literature, — just about anything except telephones made by W.E. I will pay more than fair prices for these items. Call Larry Drago, (203) 272-2002 or fax (203) 272-2002 and e-mail theradioman@webtv.net [9905]

Model AA-485 Amplifier

This amplifier is one of the most sensitive devices that has been developed for the reception of broadcast signals. It comprises a 6-tube design which has five steps of radio frequency amplification, a vacuum tube detector and two steps of low frequency amplification making the amplifier the equivalent of an 8-tube amplifier. In addition to its sensitivity the amplifier is characterized by its simplicity and stability. The Model AA-485 Amplifier is suitable for use in connection with a loud speaker. It has a sensitivity that is adequate for long distance reception. The amplifier has a range of 200-500 meters. It may be connected to either a loop aerial tuned by a variable condenser or to the usual coupled circuit receiver. When connected to a two tuned circuit receiver, the coupling value between the secondary and antenna circuit should be fairly small and controllable.



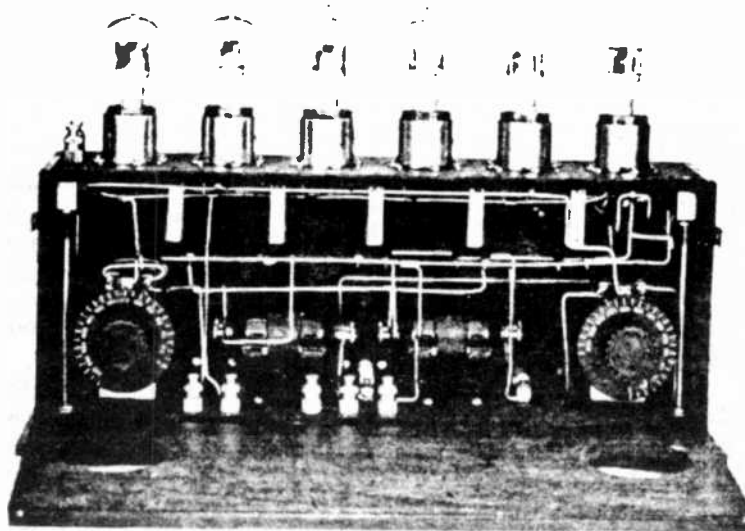
Model AA-485

The radio frequency stages are resonant open iron core transformers each having a different natural period in their tube circuit. The effect of this arrangement of periods serves to prevent the occurrence of adjacent grid and plate circuits of the same frequencies and the consequent initiation of a radio frequency oscillation. In addition to the feature of multi-periods in the radio frequency transformers, a distributed structural damping is provided in them by both a hysteresis loss and ohmic loss.

The grid circuit of the input tube is connected to a damping control which permits of a variation of the mean grid potential of the tube and thereby provides a controllable damping for this tube and a

means of stabilizing the amplifier to all conditions of tuning adjustments.

The output of the detector tube is connected to the primary of an audio frequency transformer and the secondary of this transformer is connected in series with the grid circuit of the radio frequency winding of the third tube in the amplifier train. The second audio frequency transformer is connected



Inside View Model AA-485

between the third and fourth tubes in the amplifier train and the output circuit is placed in the plate of the fourth tube.

This "reflex" circuit provides for the double use of the third and fourth tubes in the amplifier train without decreasing the sensitivity of the radio frequency amplification of the amplifier. The radio frequencies are bypassed about the audio frequency transformers and other high impedances by the distributed capacity of these windings, or by condensers placed in shunt of these windings.

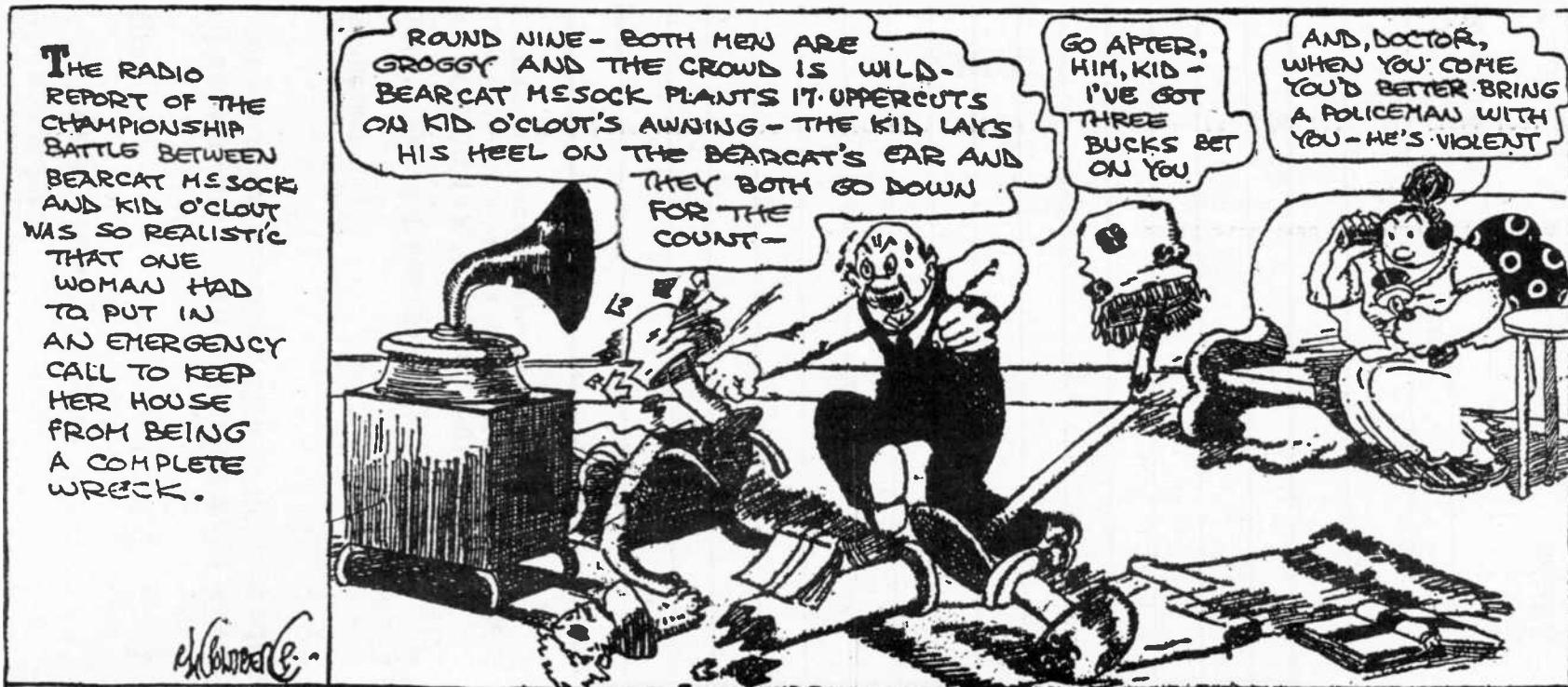
All the filaments of the amplifier are controlled by a single rheostat handle. The signal intensifier and filament controls are dependent and should be operated simultaneously to obtain the best results.

The first five tubes in the amplifier should be hard tubes, namely, the UV-201 and the sixth tube in this train should be a soft detector tube, namely, the UV-200. A separate binding post is provided for the plate of the detector tube to permit of the choice of plate potential about the value of 20 volts. The plates circuit of all the amplifier tubes are connected to the binding post marked "plus 80 volts."

Radio News for November, 1922

875

Radio Humor



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 8215 Stone Rd. Independence, Ohio 44131

SUNSHINE SOUNDS

WANTED:



Guitars and Amps
 Gibson, Fender, Gretsch,
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 McIntosh, Marantz, Ples,
 Fisher, Scott, Dynaco, Heath

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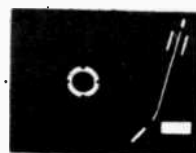
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