

THE NEWSPAPER FOR  
THE HOBBYIST OF VINTAGE  
ELECTRONICS AND SOUND

# THE HORN SPEAKER

## Radio Broadcasting

SATURDAY, MARCH 28, 1925.



KIUTUS  
TECUMSEH,  
INDIAN  
TENOR  
W.E.A.F.  
MONDAY



ROBERT  
E. CLARK,  
TROMBONIST  
W.J.Z.,  
TONIGHT  
© T.S. HESS



MAYO  
WADLER,  
WEDNESDAY,  
W.E.A.F.

APEDA  
PHOTO



MARIA  
IVOGUN,  
W.J.Z.  
FRIDAY

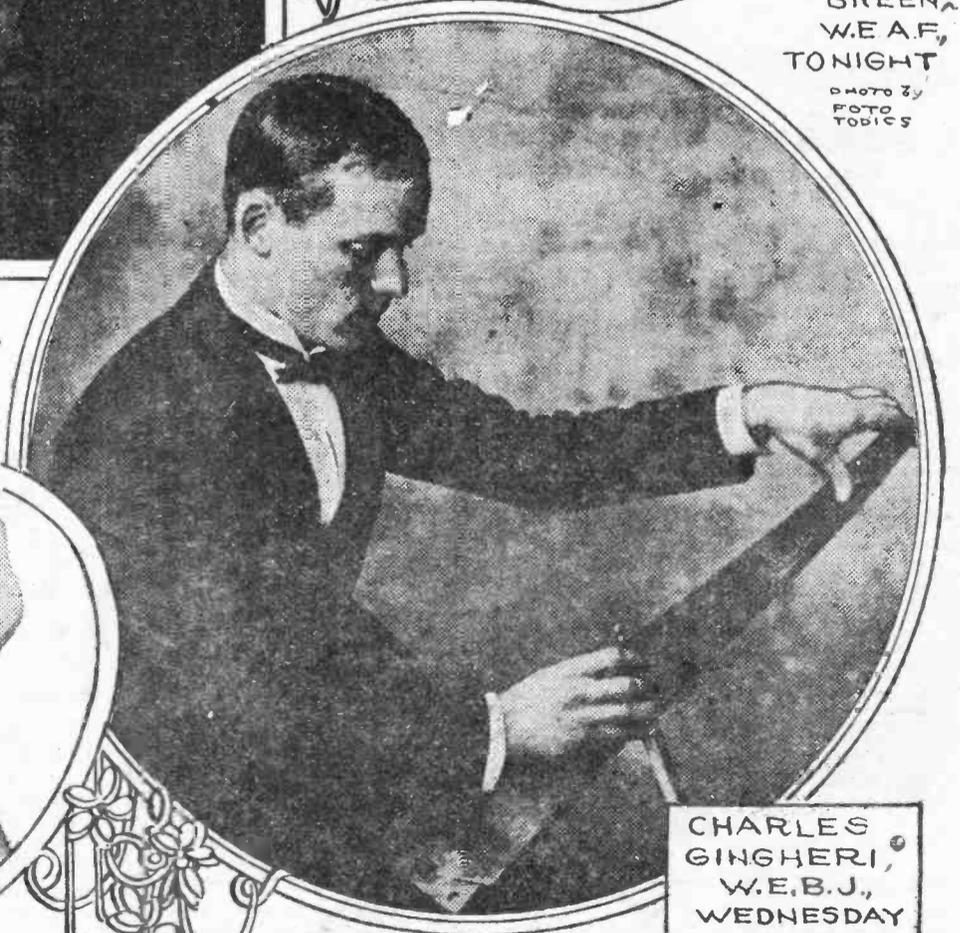


MAY  
SINGHI  
BREEN,  
W.E.A.F.,  
TONIGHT

PHOTO BY  
FOTO  
TOPICS



PATRICIA,  
RYAN,  
SOPRANO,  
W.O.R., WEDNESDAY  
PHOTO BY NISHIYAMA



CHARLES  
GINGHERI,  
W.E.B.J.,  
WEDNESDAY  
UNITY PHOTO  
CO.

# LETTERS

Dear Jim:

Enclosed is my check for this years subscription to THE HORN SPEAKER, a great publication. Could one of the Senior collectors perhaps help me with my Scott Philharmonic.

Thank you,  
John E. Kennedy  
7331 Capps Ave.  
Reseda CA 91335

Dear Jim:

Harold passed away 10-29-77. I am selling everything to settle his estate.

For information call 717 238-5544 or write to Harold's address: 2305 Hoffer St., Harrisburg PA 17103.

Harold has over 7,000 old and new tubes, some A-K's #40, 36, 7200, 2700 and other radio and TV parts.

Any help is appreciated.

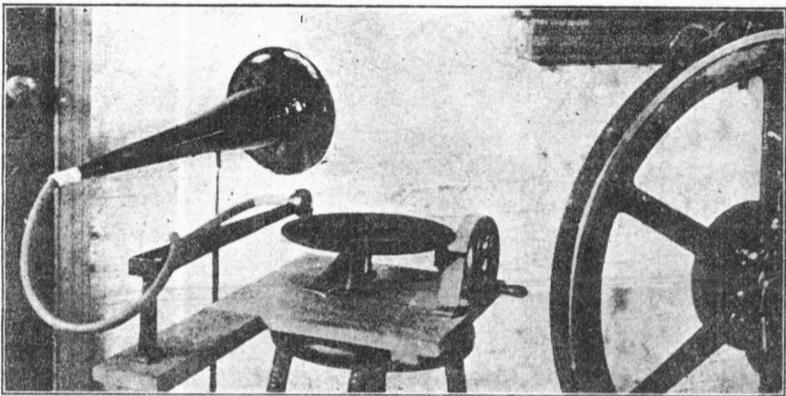
Harold's Son,  
Woody Zeitlen  
2305 Hoffer St.  
Harrisburg PA 17103.

Jim - In case you feel you could, it would be fine with me if you would run a little notice in the next issue of THE HORN SPEAKER--.

I'm selling at an auction sale a large portion of my radio collection, (May 13 and my tag collection May 14) at the Gene Harris Antique Center, 203 South, 18th Ave. 294, Marshalltown, Iowa 50158.

More information as to a list of radios may be obtained by writing to: David T. McKenzie, 1200 W. Euclid, Indianola, Iowa or calling 1-515 752-0600.

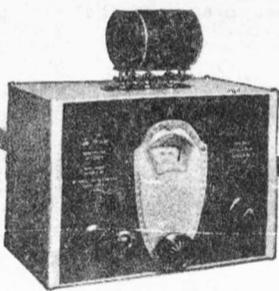
Best Regards,  
Dave



FIRST PUBLICLY EXHIBITED GRAMOPHONE OF EMILE BERLINER.

The original was first exhibited in the Franklin Institute, May 16, 1888.

1930



Type CS5

## The DE FOREST SHORT WAVE RECEIVER

### TRANSMITTING AUDIONS

- 510 - 15 Watt Oscillator. \$ 9.00
- 503A - 50 Watt Oscillator and R. F. Power Amplifier. . . . . 40.00
- 511 - 50 Watt Oscillator, R. F. Amplifier, Modulator or R. F. Power Amplifier. . . 40.00
- 548 - 50 Watt A. F. Amplifier and Modulator. 48.00
- 558 - 75 Watt Oscillator and R. F. Amplifier 52.50
- 504A - 250 Watt Oscillator, Modulator or R. F. Power Amplifier. . . 140.00
- 500 - 500 Watt Special Oscillator. . . . . 150.00
- 580B - 5000 Watt Oscillator and R. F. Power Amplifier—water cooled. . . . . 250.00
- 565 - 7 1/2 Watt Screen Grid R. F. Amplifier. . . . 22.00
- 580 - 75 Watt Screen Grid R. F. Amplifier. . . . 50.00
- 561 - 500 Watt Screen Grid R. F. Amplifier. 300.00
- 568 - A half-wave hot cathode, mercury vapor rectifier Medium Current. . 12.50
- 578 - A half-wave cathode, mercury vapor rectifier, Heavy Current 30.00

The new De Forest Radiophone Receiver, Type CS5 illustrated above, is designed to receive both telephone and telegraph signals on all frequencies between 1,500 and 15,000 kilocycles (20 to 200 meters). Being small and light it is excellent for portable work. Its enormous amplification giving loud speaker signals on a 10 ft. antenna.

The special circuit uses four Audions; two Screen Grid Audions as radio frequency amplifier and space-charge-grid detector (power detector) and two Audions in a transformer-coupled audio amplifier. Housed in an aluminum case, 5" x 6" x 9", this receiver, although full-grown in strength and performance, makes an ideal short wave receiver for aircraft reception where light weight is a necessity. It is also adapted for general amateur use, small yachts, police cars and automobiles.

DE FOREST RADIO CO., PASSAIC, N. J.  
Branch Offices Located in  
Boston, New York, Philadelphia, Atlanta, Pittsburgh,  
Chicago, Minneapolis, St. Louis, Kansas City, Denver,  
Los Angeles, Seattle, Detroit, Dallas, Cleveland

# de Forest AUDIONS

### Specifications for De Forest Radiophone Receiver Type CS5

**Battery Requirements**  
Operates either from dry cells using Audions 422A and 489 or from 6 volt storage battery using Audions 422 and 401A. For loud speaker operation either Audions 420, 412A or 471B may be inserted in the last audio stage. Two 45 volt "B" batteries furnish the plate power.

**Features**  
Extremely compact and light in weight.  
Screen grid R. F. Amplifier.  
Space-charge-grid power detector.  
Two stages of audio amplification.  
Zero body capacity.  
Frequency calibration independent of antenna used.  
Moisture and climate proof.  
Negligible microphonics.



GENERAL VIEW OF MENLO PARK AND EDISON'S LABORATORY.

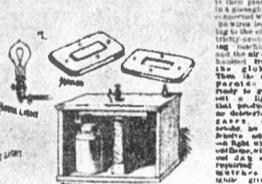
EDISON'S PERFECTED ELECTRIC LIGHT.

It has been definitely announced by Thomas A. Edison that the first public exhibition of his perfected electric light will be given at Menlo Park, N. J., on the 14th inst. The exhibition is expected to attract a large number of visitors, and the public have been invited to attend. The exhibition will be held in the laboratory, where the experiments were conducted, and the apparatus used in the experiments will be on hand for the inspection of the public. The exhibition will be held from 10 o'clock in the morning to 4 o'clock in the afternoon, and the admission is free.



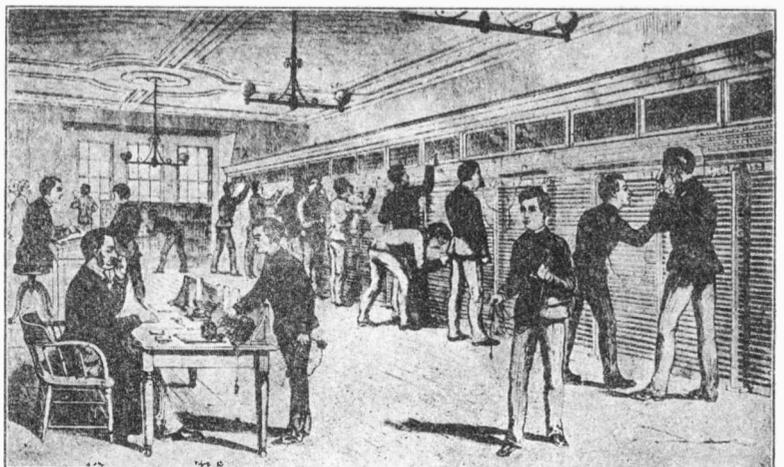
Edison's perfected electric light is a small globe of glass, containing an air and free from all dusting, and this globe is supported by a metal frame, and is protected by a glass globe. The globe is supported by a metal frame, and is protected by a glass globe. The globe is supported by a metal frame, and is protected by a glass globe.

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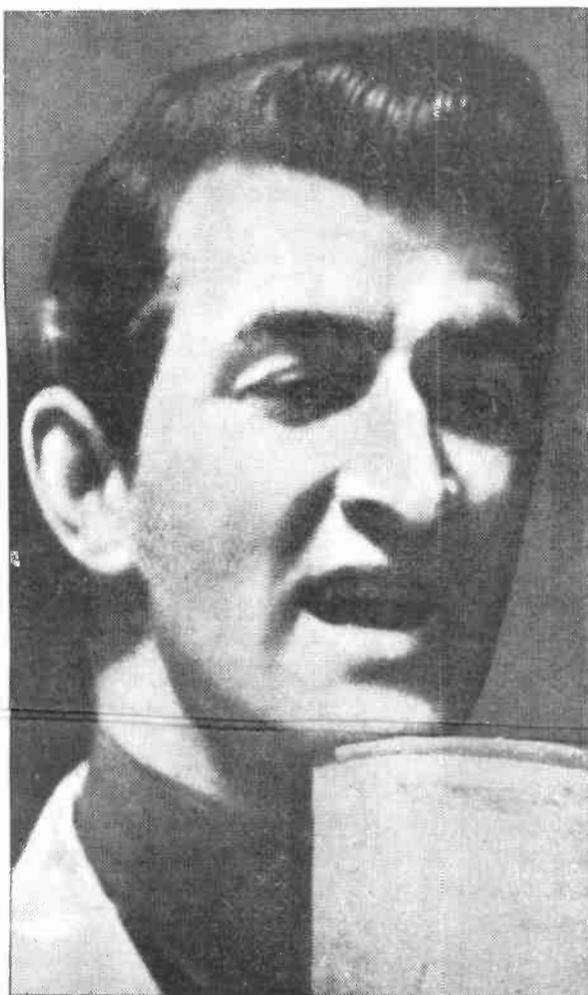


Edison's generating machine is a large mechanical device, consisting of a flywheel and a motor, which is used to generate electricity. The machine is supported by a metal frame, and is protected by a glass globe.

From "Harper's Weekly" (1882), by courtesy of New York Edison Company. THE BIRTHPLACE OF THE INCANDESCENT LAMP. Scenes in Edison's Menlo Park laboratory, where the first experiments in electric incandescent illumination were made between 1879 and 1885.



BOYS, NOT GIRLS, MANNED THE EARLY CENTRALS. 1879



**JAY JOSTYN** takes the role of "Jackie," a grizzled product of America's western mining region. He loves "Sunday" as much as any man could a real daughter, and never fails to keep a weather eye cocked for her best interests. Short on temper and quick on the trigger, "Jackie" quite often gets into trouble



—Nelson Howard

**"LIVELY"** (Robert Strauss) is a querulous but kindly old prospector who, with his mining partner "Jackie," has played the role of foster father to "Sunday" ever since she was abandoned and left as a tiny baby on the step of their cabin, some twenty-odd years before. "Lively" is extremely proud of his "Sunday"



**LORD HENRY BRINTHROPE** is a wealthy Englishman who comes to Silver Creek to look after his family's mining interests there. He gets interested in "Sunday" and, after a stormy courtship, fraught with the many exciting adventures the West always holds for the tenderfoot, proposes. It's Karl Swenson's part



**VAN HEFLIN** plays the role of Slim Delaney, foreman of "The Klondike" ranch, which is owned by Lord Henry Brinthrope. An old friend of "Sunday's," he secured the job through her recommendation. Although his friendship with her is unwittingly the cause for some jealousy on the part of Lord Henry, Slim is really devoted to them both. He proves his loyalty when the ranch is overrun by a gang of rustlers

**EVEN** though Lord Brinthrope and "Sunday" are very much in love with each other, their happiness proves to be short-lived. A blackmailer appears on the scene almost immediately after the wedding ceremony and declares that Lord Henry is the father of her child. Heartbroken, "Sunday" flees from England, and months pass before Lord Brinthrope catches up with her and explains that the accusation was a fraud. With that question settled, their happiness is again assailed by an impostor who claims that he is "Sunday's" father, and who also frames "Lively" on a criminal charge. Shot and fatally wounded, the impostor confesses that his charges and claim on "Sunday" were faked. Back in the West with her husband, "Jackie" and "Lively," "Sunday's" marriage is again menaced by an adventuress who gets interested in Lord Henry and a young matron who mistakes her husband's interest in "Sunday" for love and threatens to divorce him. For a short time after these blow over, things are peaceful when the pair settle down at "The Klondike," Lord Brinthrope's ritzy dude ranch in Colorado. But that doesn't last long. Just now a gang of marauding cattle-rustlers are in the midst of operations on the place. The rustlers kidnap "Sunday" and excitement reaches a fever pitch for Lord Henry, "Lively" and "Jackie" until Slim, ranch foreman, succeeds in rounding up the outlaws and rescuing "Sunday," risking his life to do it.



—Bert Lawson

**JOHN REED KING**, announcer for "Our Gal Sunday," joined the CBS staff in New York in the fall of 1935, after graduating from Princeton University. He is one announcer who didn't start out in radio the usual way. At sixteen, while still in high school in Atlantic City, King wrote a play in which he satirized prominent radio stars. The local station heard about the play from King's teacher, decided to produce it

Recently, a number of our readers suggested that we burlesque some of our well-known radio set manufacturers' advertisements. The idea of burlesquing national advertisers seems to have taken the

1931 AD

# CROSLEY

## SUPERHETERODYNE New Pentode Output Variable Mu



**\$36<sup>36</sup>**  
Complete with Tubes

The Crosley LITTFELLA

See the NEW CROSLEY LITTFELLA—a 5-tube table model SUPERHETERODYNE radio receiver. Incorporating big set features yet housed in an exquisite cabinet of choice walnut veneer. 17 inches high. Pentode output, variable Mu tube, full floating moving coil dynamic speaker, continuous (stepless) static and tone control, combined volume control and on-off switch, illuminated dial with vernier drive—such features as these make The Crosley LITTFELLA the greatest of all radio values. Only \$36.36 complete. Also the LITLBOY, a 35" lowboy model with same type chassis selling for only **\$48.00** Complete with tubes

## Push-Pull Pentode Output SUPERHETERODYNE

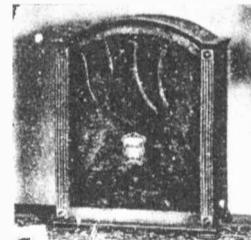


The Crosley PLAYBOY  
8 TUBES

**\$49<sup>75</sup>**  
with 8 Tubes Complete

An exquisitely designed all wood compact table model, 17 inches high, housing the new Crosley Superheterodyne chassis with latest type Crosley full floating moving coil dynamic speaker. Two five-element Pentode output tubes connected in push-pull; two variable Mu tubes; continuous (stepless) variable static and tone control; illuminated dial with vernier drive; combined volume control and on-off switch; full floating moving coil dynamic speaker. Priced amazingly low. Also console models. The CHEERIO at \$75.00. The MERRY MAKER at \$75.00, the ANNOUNCER at \$85.00, the PLAYTIME (Electric Clock Model) at \$95.00, incorporating the same type SUPERHETERODYNE chassis, complete with tubes. Never before such radio values!

## Push-Pull Pentode Output SUPERHETERODYNE with METER TUNING AND Automatic Volume Control



The Crosley TENSTRIKE

**\$69<sup>50</sup>**  
Complete with 10 Tubes

An unusually attractive and powerful table model radio receiver incorporating the 10-tube push-pull Pentode Output, variable Mu, SUPERHETERODYNE chassis with METER TUNING and Audiorium Size Crosley full floating moving coil dynamic speaker. Stump walnut veneer front panel with hurl maple overlay. Top, sides and pilasters of walnut finish. Dimensions: 20 1/2" high, 16" wide, 10" deep. Also a magnificent 18-legged console model with same type chassis. Complete with tubes. **\$99.50** Complete with 19 Tubes

(Western Prices Slightly Higher)

THE CROSLEY RADIO CORPORATION  
POWEL CROSLEY, JR., President  
Home of "the Nation's Station"—WLW Cincinnati

YOU'RE THERE WITH A CROSLEY  
**CROSLEY  
RADIO**



# Horrible superiority ZEN-ITCH Tone Tee-Totality

the rare quality that leaves  
NO (s)tone unheard

### ZEN-ITCH MODEL 939 3/8

Ten-Tube Supper-Heteroecious with genuine Autocratic Tuning and Tone Tee-Totality. A sickly designed tomboy of rare hardwoods... complete with Zen-itch Quality tubers, \$1.95... Other new Zen-itch Receivers from 13 cents to two bits.

ZEN-ITCH and science have at last developed the great Tee-totaller Radio. This titanic prohibition radio is ten years ahead over all others. At last you have a set that gives you what you want, when you want it. Dispensing anything from best shellac varnish down to near-beer.

Fully equipped with a static suppressing cocktail shaker, noiseless cuspidor, chromium plated shock absorbing foot rail, free lunch attachment with anti-fading control, variable mu seltzer, automatic electric bottle selector, cocktail shaker equipped with screen grids, autocratic volume control which also dispenses sawdust on 10 kilocycle selectivity. Special long distance liquor tester built right into the set; tests all hard liquor aromatically on short wave lengths. Automatic volume control of set locks up all liquor as soon as guests become too noisy.

### NEW 1942 SUPPER-HETEROEOCIOUS



ZEN-ITCH RADIO CORPORATION, CHICAGO, ILL (very much so) World's Largest Bakers of High Trade Radio



Hollow music! Something missing! There are notes and tonal beauties you NEVER hear with an ordinary radio. Why cheat yourself of FULL radio enjoyment, when ZEN-ITCH TONE-TOTALITY leaves NOTHING unheard.

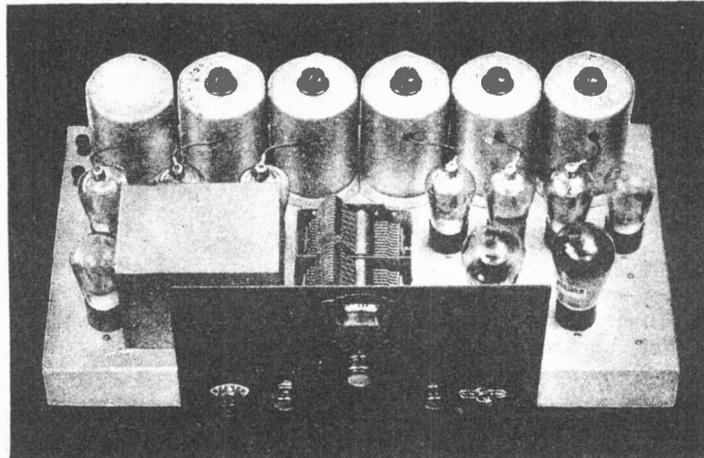
This advertisement not paid for. Wish it were, though!

MEET OTHER  
COLLECTORS,  
ADVERTISE  
IN THE HORN  
SPEAKER  
SOON

### The Famous Lincoln Chassis

Both the Lincoln DeLuxe SW-32 and DeLuxe DC-SW-10 are identical in design, both utilizing the high power of ten tubes. The DC-SW-10 has a very low drain and operates on dry "B" batteries and any two (2) volt "A" supply.

Elimination of AC line interference makes the DC-SW-10 desirable in city communities.



Illustrated, the Lincoln DeLuxe SW-32, an AC model. This same chassis may be had in the DC model, the Lincoln DeLuxe DC-SW-10.



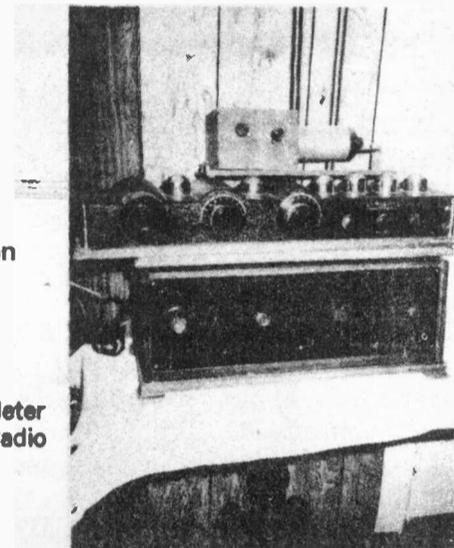


# OLD RADIO & COLLECTABLES AUCTION

Albrecht Auction Service  
A COMPLETE AUCTION SERVICE

## SATURDAY, APRIL 29, 1978 - 11:00 A.M.

Selling the contents of Old Radio Shop & other Collectables at Public Auction Located in the Huron County Farm Bureau Building at 711 North Van Dyke Road (or M-53 & M-142) Bad Axe, Mich. (1/2 mile North of the Light).



### RADIOS [Mostly Battery Type]

Majestic Cabinet model; Airline Table model - Also electric Airline model; Brunswick Cabinet model; Wave Master Table model; Pearson 5 tube Table model; Very old Cabinet model #40 (No name plate); Splendid Sr. Receiver # 4786, 1 tube, W. F. Radiophone Co., Cedar Rapids, Iowa; Brunswick Table model pat. 1926; Crosley # 51 - 2 tube; Nutrowound Super Six; Pearson 5 tube model; Navy model; Atwater Kent model 40; Atwater Kent model 55; Atwater Kent metal cabinet; Brass Base 1 tube Console Model w/headphones; RCA model 16; RCA Radiola 17 cabinet model; Magnavox; Crystal set; Deamon Moore 2 tube model; Harkness 3 tube Counterflex w/headphones; Detector 1 tube type 50-D Telca Co., Detroit, Mich; Westinghouse Style 307190 - Ser. 11464 Detector Set w/brass controls, pat. 4-17-06; Old Electric portable G.E. Set; Electric Delco Super Heterodyne Receiver, model R-1129#5; Electric Philco Metal Cabinet model 511; Old Electric Philco Set; Electric Zenith portable model; Airplane type S.C.R. 57 Interphone; Repro. Telephone Radio; 12 Old electric Radios; 12 old Car Radios; Some good old Radio Cabinets; Plus Other Radios not listed.

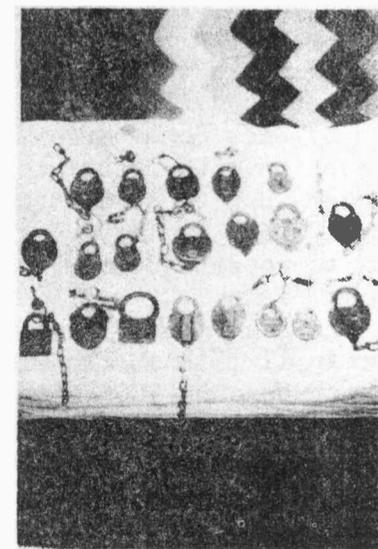
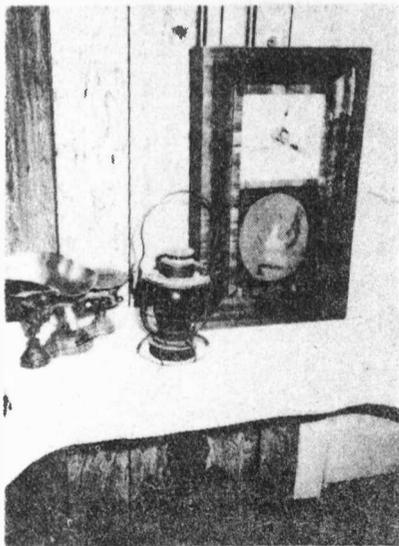
Philco Signal Generator; Eico Ohms Meter Model 555; 1924 Battery Charger; Misc. Radio Testing Equipment.

### BOOKS, PAPERS & MAGAZINES

Book of U.S. Broadcast Stations; Sears, Roebuck Parts Catalog; The 1932 Super-heterodyne Book; 1924 Popular Radio; Radio Stars - Aug. 1934; 1929 Radio Design; Radio News - Oct. 1924; 1922 Radio Frequency Amplifiers; 1924 The Neturodyne Book (All about it); How to Build Radio Receivers; Meissner Anolist Mod. 10-1154 Oper. instructions; Radio Guide - Jan. & May 1935; 1934 Thordarson Catalog; Radio & Model Engineering - Sept. 1921; 1927 Radio Construction & Repairing; 1942 Radio Manual; 1942 Radio Code Manual; 1931 Radio Receiving Tubes; 1917 Practical Wireless Telegraph; 1940 Understanding Radio; 1929 Principles of Radio; 1922 Wireless Telegraph; 1942 Practical Radio; 1943 Radio Engineers Handbook; 1937 Fundamentals of Vacuum Tubes; 1937 Radio Dramatics; 100 Old Service Manuals.

### MISC. COLLECTABLES

O.G. 2 wt. Shelf Clock; Store Counter Scales w/brass scoop; 1909 Winchester framed print; Old Winchester 2 bit Axe; 4 Old Desks w/ink wells; R.R. Switchman's Lantern; 88 Old Locks including R.R. & 6 levers; 12 B.B. Guns; Old Intercom w/3 speakers; Misc. Furniture & Other Items Unable To List



### SPEAKERS & MISC. EQUIPMENT

Mohawk Horn Speaker; Peerless Speaker; 4 Atwater Kent Speakers; 3 Kent model E Speakers plus many others; 1931 Radio Mike;

Lunch in Building - Motels in Area

Doors will open at 9 A.M. for inspection.

## MR. & MRS. WILLIAM PATTERSON, OWNERS

TERMS OF SALE: Cash or check with proper I.D. No goods removed until settled for. Sale principals not responsible for accidents or goods after sold. Clerks and Auctioneers acting as sales agents only and assume no liabilities. Any announcements made at sale take precedence over printed matter!



**HERB ALBRECHT, AUCTIONEER**  
ALBRECHT AUCTION SERVICE-CLERK

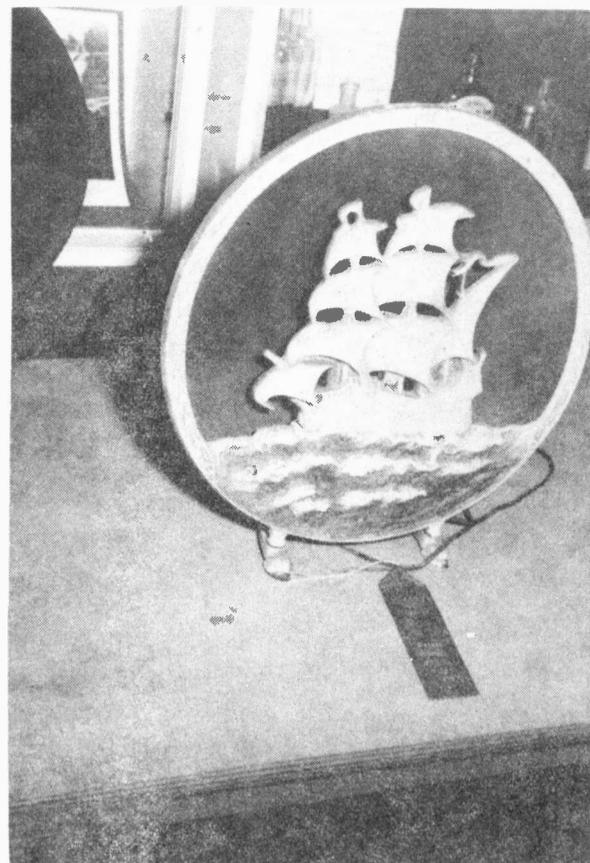


Phone Vassar 517/823-8835 For Your Auction

## Club News



#2. Floyd Engles (right) and Van Brooks making a trade.



#3. A ship speaker in the equipment contest.

### NIAGARA FRONTIER WIRELESS ASSOCIATION

The NFWA held its third meet last November. About 50 collectors found it worthwhile to ignore the first major snow storm of the season, the furthest was from Roanoke, Virginia. Members from Toronto were also present.

For anyone who wanted to learn about restoration and see some fine examples, this meet was really it. The meet was devoted to restoration and so was the equipment contest. Art Albion won the top prize with his pains-taking restoration of a Crosley 51 and Radiola UZ 1325 horn speaker. Second prize went to Larry Babcock for his Radiola, second harmonic, superhet. Dick Schamberger won the white ribbon with a Philco #90, not the oldest but a very nice restoration of a set which had been in early barn loft condition.

The talks of this meet covered the subjects of: Radio Cabinet Restoration by Dick Schamberger, Early Radio Operation with Transistors by Bud Fedker, How to Mold Knobs and Other Small Parts by Floyd Engles, and How to repair Audio Transformers by Chris Fandt.

The next meet of the NFWA is set for April 15th at the Old Amherst Colony Museum, 500 Smith Rd., East Amherst, N.Y. 14051. Further information can be had by dropping us a note at that address.

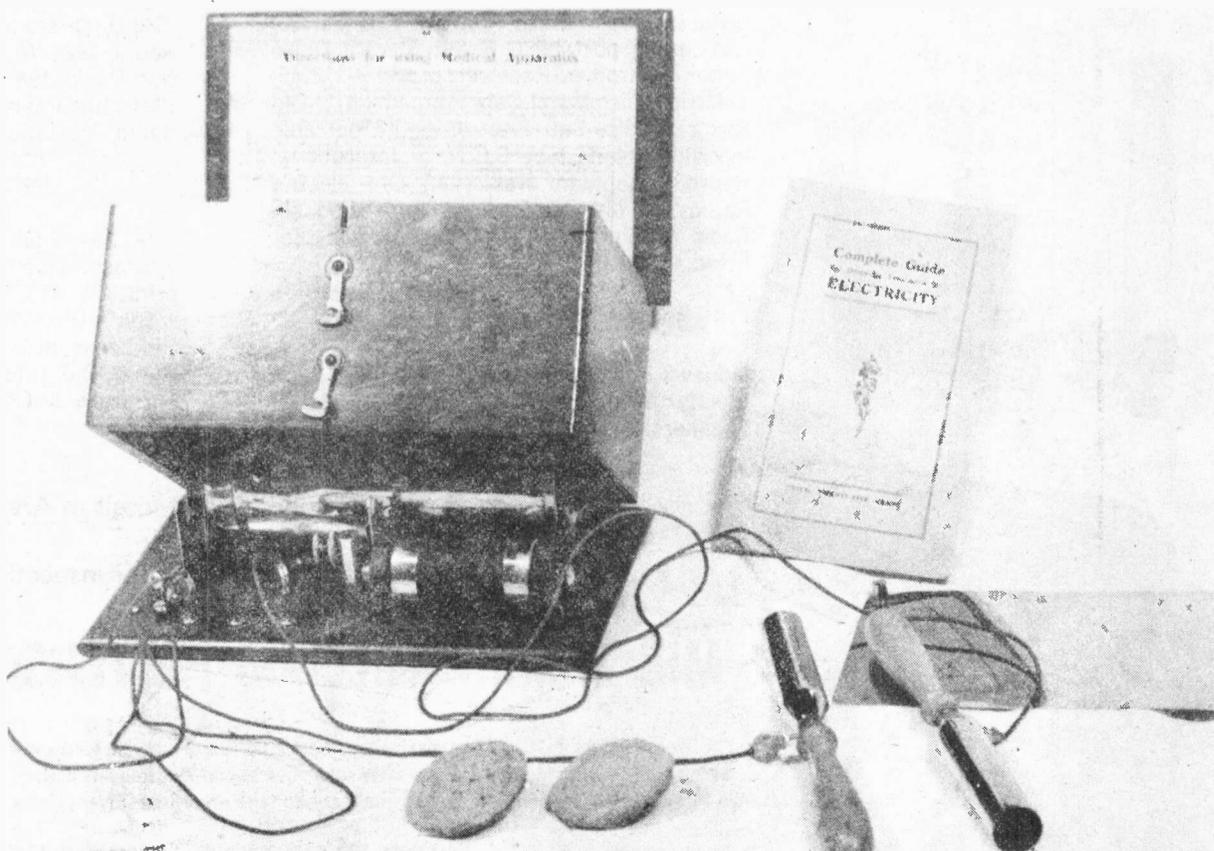
The subjects of the next meet should be very interesting. Chris Fandt and Larry Babcock will join forces to give a talk on early TV and they plan on having a Jenkins scanning disk TV on display. Dr. Ole Lindan will give our second program. His subject will be the use of electricity for medical purposes from the earliest quack instruments to the modern use of starting hearts with electricity.

The contest will cover early TV equipment of any kind and also crystal sets. There will also be a prize for the most unusual piece of quack medical equipment brought in for display.

Our weather should be fine by April 15th and at an entrance fee of \$1 you can't beat it for an enjoyable Saturday afternoon.

Larry Babcock, V. Pres. N.F.W.A.

Dick Schamberger, president  
515 Crescent Ave.  
Buffalo NY 14214



#1. Early quack medical equipment, the subject of the next meet.

# BOSCH RADIO

## ARMORED



What impressed me more than anything else was the fact that the tones were so perfect as to give the impression that I was in the same room with the artist instead of miles away. The Bosch Radio also has an advantage in that there is an utter absence of unharmonious sounds.

SIGNED BY

*Ethel Barrymore*



Model 57—Seven tubes, has Bosch RFL circuit, efficient built-in loop, built-in 18 in. reproducer, walnut cabinet with selected pattern woods, spacious power unit compartment. Single station selector, electrically lighted dial, Bosch Line O'Lite tuning, armored and shielded, wired for battery or socket power operation and operates on loop or wire antenna from two to two hundred feet. Price with built-in reproducer . . . . . \$340.00



Model 76—Six tubes, Bosch RFL circuit—single station selector, Bosch Line O'Lite tuning, wired for battery or socket power operation, armored and shielded, spacious power unit compartment, solid walnut cabinet beautifully finished with and without built-in reproducer—with built-in reproducer . . . . . \$195.00

Without built-in reproducer . . . . . \$175.00

which gives every model in this line leadership in keenness of tuning, in clearness, perfect melody and life-like natural tone without distortion or other annoyances. Just the radio reception you have been waiting for. Bosch Radio is also outstanding in construction—built on a steel chassis—every connection solid with the elimination of solder operations—nothing to get loose or out of order—a rigidity never before obtained in radio construction. A distinctive armored and shielded receiver—wired for battery or power socket operation. New models have electrically lighted single station

How fitting that Ethel Barrymore should instantly recognize the dramatic effect of the marvelous life-like tone of Bosch Radio. It is the technical excellence of Bosch

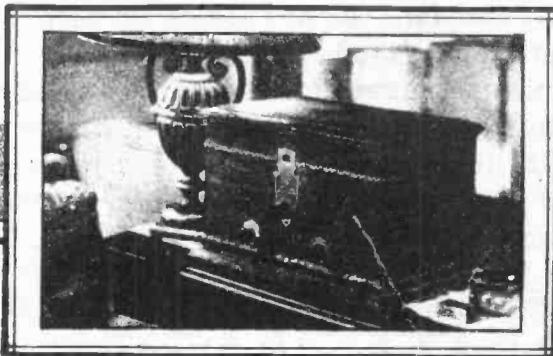
selector—the Bosch "Line O'Lite"—the utmost in tuning accuracy and simplicity. Built-in directional loop and other refinements mark the completeness of these radio

receivers in their spacious, new beautiful cabinets. Some with built-in speakers, others for use with Bosch Ambotone cone type reproducer. One of the foremost furniture designers of the day created the new Bosch Cabinets, and the simple, stately lines, harmonious proportions and the matched grained woods are indeed charming. See and hear Bosch Radio for yourself at your Bosch Radio Dealer's. The Bosch Ambotone cone type speaker and the Nobattery "B" power unit and the new successful Nobattery "A" power unit, a truly efficient "A" eliminator, are also ready for you.

AMERICAN BOSCH MAGNETO CORPORATION, SPRINGFIELD, MASS.

BRANCHES: NEW YORK CHICAGO DETROIT SAN FRANCISCO

All these Bosch Radio Models are ready for socket power operation with the famous Bosch Socket Power Units which successfully meet your demand for the elimination of batteries. The total cost for the Bosch Nobattery "A" and the Nobattery "B" is . . . . . \$100.



Model 66—Six tubes, Bosch RFL circuit—single station selector, electrically lighted dial, Bosch Line O'Lite tuning, armored and shielded, wired for bat-

Bosch Radio Receivers are licensed only for Radio Amateur, Experimental and Broadcast Reception. They are manufactured under patent applications of American Bosch Magneto Corp. and are licensed under patent applications and patents of Radio Corp. of America and under applications of Radio Frequency Laboratories, Inc.

tery or socket power operation, solid walnut cabinet—beautifully finished—an ideal table type radio receiver Price . . . . . \$99.50.



# Standard Equipment Is Assured

Standardization Stage Here, Says American Radio Association.

That radio equipment is fast becoming standardized will be welcome news to radio users and people who would like to enjoy radio, says a bulletin just issued by the American Radio Association, the national organization representing the listener-in. It is said that a large number of people express a desire to own receiving sets but are fearful that they cannot hook up the batteries and antenna and make other electrical connections properly.

"Standardization means no less than bringing order out of chaos," said Alfred M. Caddell, secretary of the association. "Purchasers of radio equipment not otherwise skilled in the art will now be enabled to hook up the right battery to the right terminal in the set without fear of making a wrong and sometimes unfortunate mistake. For instance, a blue cord will be used to designate the antenna circuit, due to the fact that the antenna is always associated with the blue sky. Yellow cord will be used for the filament circuit, to suggest the color at which the filament of the tube burns. Bright red has been chosen to indicate the highest positive B battery potential, this being conventional electrical engineering practice. Black cord designates the ground wire, and so on. Telephone plugs and jacks, vacuum tubes, dry batteries and the like have likewise been standardized from the standpoints of terminology, physical dimensions, constructional details and features involving operation.

"If progress is to be assured in any art, standardization must go hand in hand with its development. This is very necessary to avoid confusion on the part of the users of the equipment and also desirable from the standpoint of interchangeability of one manufacturer's product with another. The credit for bringing about these welcome advances belongs to the Standards Committee of the Associated Manufacturers of Electrical Supplies, who made a thorough survey of the situation and decided

## Wave Lengths May Be Changed Again

Present separation of broadcasting wave lengths by ten kilocycles has been found insufficient by the Department of Commerce, and another effort will be made to relieve interference between stations radiocasting on adjacent wave bands

The department believes this relief will have to come from one or two sources, either the refinement of radiocasting apparatus to permit of much closer tuning by the listener-in, or the separation of wave lengths by fifteen kilocycles, instead of ten. The latter course is more probable.

The HORN SPEAKER..... 9820 Silver Meadow Drive, Dallas, Texas 75217

that radio was sufficiently developed to warrant standardization of certain necessary elements, with assured benefits to all concerned."

## World's DX Record by Brooklyn Amateur

Signals emanating from the amateur radio station of Kenneth Hewitt, of No. 1,208 Neptune avenue, Brooklyn, N. Y., have been heard by Roca Sarawa, who is located in Nacao, China. 2RK, the

call letters of Hewitt's station, was calling a station on the west coast when the Chinese amateur intercepted his signals. The distance is 12,400 miles air line, with in 100 miles of being exactly half way around the world.

Hewitt has been in the amateur game since long before the war and has made many other remarkable transmissions. However, none of them as far as China.

The installation at 2RK consists of two two-hundred and fifty watt transmitting tubes with an input of less than 500 watts. The

station is operating on a wavelength of exactly 82 metres.

Roca Sarawa in his communication, states that the signals of 2RK were exceptionally loud and without any noticeable fading.

## Milton J. Cross Is Now Head of a Family

Milton J. Cross, long known as the "Singing Announcer" of stations WJZ and WJY, New York city, has something to sing about now, for he is the proud father of

a buxom baby daughter. The event came as a complete surprise to the studio force at WJZ-WJY, so well had Mr. Cross dissembled his agitation over the anticipated arrival. The baby is the first child to be born to any of the WJZ-WJY studio personnel since the opening of the twin stations in May, 1923.

Cross, who was formerly known as "AJN of WJZ," created a sensation in the broadcast studios last April when he married Lillian Edgewood Fowler on Sunday morning, April 6, and announced the programs of WJZ that evening, as

Saturday, March 21, 1925.

TELEGRAM AND EVENING MAIL RADIO

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ALL READERS COUNTDOWN 9-8-7-6-5-4-3-2-1-0

WE WANT to make a public apology to all readers who have wrote or ordered from Historical Radio Services the past six months. We average over 300 orders and or letters per MONTH, even with a S.A.S.E. we have been very slow in processing each one, due to internal problems plus the volume of mail!!! Many FIRST-TIME collectors got impatient with us and had to write to this PUBLICATIONS to find out who we are. We have corrected this and refunded all monies when applicable. We feel we owe all you an explanation. At HRS, I'am just an individual collector like many of you and do this as a hobby sideline (back when we started 1971 there were very few services and/or Publications)older collectors know this.

We run a Wholesale Auto-Home Speaker and Electronic accessories business for a livelyhood!!! We also are the Official OLD Time Radio Representative for PHILCO (they route all customers and general Public to us for Help!), plus handle orders and inquiries for the General Public, donated our time to educational institutes, convalescence homes, radio stations on a local and national level.

If we can not help you, we route all through our directory to those who can, 95% of the time we can help in any situation. Many readers get very impatient and think these parts and services are just as easy to secure as going down to your major Electronic Chain Store to pick up at the counter the same day...this is far from the truth. It takes years of collecting, research plus tons of knowledge..all this is in our latest Directory updated and revised each quarter. We do get complaints and have them classified. In the first-timer category, many order, send no additional postage and want their order in a WEEK, will not accept our acknowledgement card or letter, sometimes our refund and without further investigation criticize the whole operations. One and only one party formed his own opinion and accused us of running off to Mexico with his \$15.00 order. We still have a great reputation, but all it takes are a few opinions like this. A Canadian Vintage Radio Wireless Association Quote: "A GOOD NAME LIKE A GOOD FRIEND IS WON BY MANY ACTS AND LOST BY ONE."

We also want to make an APPEAL to all the real Expert Radio Collectors, retired citizens to lend their hand...so many readers need help and services according to our volume of mail....TO others who just collect on an INDIVIDUAL STATUS QUO, change your ways, lend some help and the fruits of this will multiply your friendships, collections beyond belief!!! To all the GREAT READERS WHO HAVE ORDERED, WAITED, AND MAYBE STILL ARE...WE APOLOGIZE, thank you in advance for your patience, bare with us...perhaps we have bit off more than we can handle!!!!!!!!!!!!!!!!!!!!!! STILL ANOTHER NEW RELEASE: Have you ever wondered what the OLD EQUIPMENT Contest's were all about? What RULES the Judges use/or Show Host? How they were all judged in each category? Been Afraid to enter your Old Equipment in the local contest for fear of loosing or being laughed at? NOW THIS IS ALL CLEARED UP!!! Get our 2nd revised National 100-POINT SCORING SYSTEM/JUDGES RULES, compiled by experts, used in different areas of the U.S.A. This is a set of four forms including definitions and Score Sheets. It is a value to contestants as well as the judges since it gives an insight into how judges will view an entry the only FIRST TRUE WAY 100-POINT SYSTEM: ORDER forms HRS-J-1,2,3,4, Plus a Bonus HRS-AI appraising form, all for \$1.00. still write us..73's Brent Dingman, Historical Radio Services, Box 15370 Dept. HRS-1 Long Beach, Ca. 90815 U.S.A.

# ANTIQUERS DIRECTORY

though nothing unusual had happened. It was three days after the ceremony before any of his colleagues knew that he had been married. The honeymoon was postponed until last summer. A few days ago Mr. Cross telephoned into the studio to ask if he could be excused from announcing the afternoon program that day, since he had just become a father.

Xavier Cugat at WFBH.

Xavier Cugat, celebrated violinist, who has just returned from Europe, will make his radio debut from station WFBH this evening at half-past six o'clock.

While touring Europe Cugat played for King Alfonso by invitation and impressed Alfonso favorably. Music critics in Germany and Italy where Cugat played, declared that he is one of the great violinists of the day. He is a product of Professor Willy Hess and has been acclaimed wherever heard.

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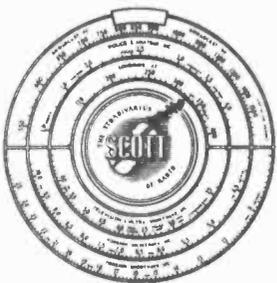
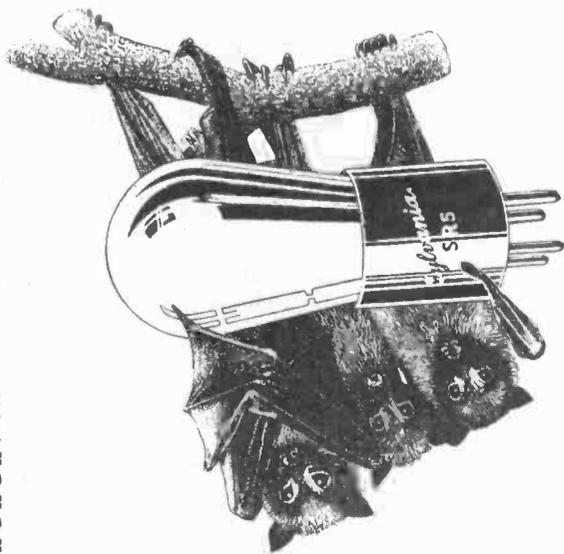
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- \*\* Show and Tell -- Mel Comer
- \*\* Introduction to Federal Receivers -- Dick Schaumberger
- \*\* And the Flood Came -- Lou Moreau
- \*\* What Set is This? -- Dick Ransley
- \*\* Tune in Atwater Kent -- Ralph Williams
- \*\* Story of the AWA Museum -- Rod Phillips

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 TELEPHONE: 215 - 265-6100. Reservation card in next GAZETTE.

## LADIES PROGRAM:

Historic tours planned. Huge shopping mall nearby. Possible trip to Philadelphia Art Museum or Independence Hall area. Sign up at Registration Desk.

See the next GAZETTE for more details or phone Bill Denk, 81 Steeplechase Rd., Devon, Pa. 19333

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Seidel, 925 Starlite, Grants Pass, Oregon 97526. Phone: 503 476-1078.

FOR SALE NEW and USED TUBES:  
 7A4, 7A6, 7A7, 7A8, 7AG7, 7A57, 7B4, 7B6, 7B8, 7C6, 7C7, 7E7, 7EY6, 7G7, 7J7, 7L7, 7Q7, 7S7, 7W7, 7X7, 7Y4, 11A7, 11B6, 11C7, 11E7, 11H7, 11N7, 11Q7, 11R7, 35A5, 35Y4, 35Z3, 50X6, New \$4.25 ea., used \$2.75 each.  
 7A5, 7B5, 7C4, 7C5, 7HG8, 7Z4, 11C5, 50A5 new \$3.25 each, used \$2.00 each.  
 5A24, 7E7, 7C6, 7F8, 7V7, new \$5.25 each, used \$3.00 each. Add \$1.50 per order for mailing. Have other series of new and used tubes, inquiry welcome. Send SASE don't have a tube list. B. Murphy, 511 Meyer Lane, Redondo Beach CA 90278.

FOR SALE: Here is what I promised you collectors a couple of months ago....More Binding post hardware.. tops for Crosley and Atwater Kent, the ones I told you were being machined.....\$5.00 per dozen, too. Atwater Kent tops, just like the originals, are coated with beautiful "Golden Lacquer", that I also make.. like on the early telegraph sets. For each dozen Kent post tops ordered I will send you a bonus, free, of enough copper plated staples to restore six breadboard radios...how can you beat a deal like this..... postpaid, too.  
 Roland Matson, 388 Concord Road, Bedford MA 01730.

AK Bread Board switches \$10.00 each pp. USA.

K. Parry, 17557 Horace St., Granada Hills CA 91344.

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FOR SALE: Over 3000 radio magazines from 1913 to 1945, "Radio News, Radio, Radio Topics, Pacific Radio News, Popular Radio, Wireless Age, Radio World, QST, Elect Exper" plus more. Radio service manuals, RCA, AK, Riders, Supreme, plus more. Write for list R-4-78 75¢ plus SASE w/2 13¢ stamps. Krants, 100 Osage Ave., Somerdale, N. J. 08083.

PAPER BACK 8½ X 11 REPRINTS: Radiola III, s & amp data from 6 sources, 30 pages--\$5. Radiola battery manual 1922-7, 35 pages--\$5. Radiols AC & battery manual 1922-30, 100 pages--\$10. Battery set manual 1919-27--early part of Riders Vol. I, 200 pages--\$17.50. Index for Vols. 1-15--\$12.50 or Vols 16-23--\$5., 1-15 & 16-23 together--258 pages \$15. K. Hanson, 3403 Broadway, Long Beach CA 90803. Tel: 213 433-1983.

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FOR SALE OR TRADE: Kennedy 110 receiver and matching 525 - 2 stage audio amplifier, AK 60 chassis, AK 30 in a Pooley dest type cabinet. Want AK5, AK10, and late electric AK table models or what have you. Ray Miner, 1215 B., Ft. Madison, Iowa 52627. Ph: 319 372-1271.

FOR SALE: Antique AC and battery radios, speakers, radio parts and tubes, test equipment. Radio magazines and books. A SASE gets you a list from three collectors. H. George Arnold, 8004 50th St., N, Lake Elmo, Minn. 55042.

FOR SALE: Two AK 40s, Federal B-30, Erla S-11, Phanstiehl 20, Philco 640, Zenith 8C01 (dual FM/BC), plus more. Also many rare tubes, parts, books, magazines. Large SASE for list. H. Burke, 1201 Happy Hollow, Plattsmouth NE 68048.

AK THUMB NUTS: Free sample for SASE. Quantity prices quoted. K. Parry 17557 Horace St., Granada Hills CA 91344.

FOR SALE: Rider's Radio Volumes VI through XIV, 9 large manuals, fine condition, only \$125. Lawrence Beitman, Box 46, Highland Park, Ill. 60035.

SEND SASE for lists of early tubes, magazines, etc. for sale. Will Jensby, Box 96, Davenport NB 68335.

SASE for large list of radios. Lane, 2301 Independence Ave., Kansas City MO 64124.

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**WANTED**

WANTED: RCA 99-T pushbutton table radio; radio escutcheon and chassis for RCA K-130, U-30, U-46, U-126, U-128 or U-129 consoles; RCA 70-F-5 12-inch speaker; radio parts for RCA TRK-9, TRK-12, TRK-90, TRK-120. Write with condition and price. C. H. Sarver, 256 West 88th St., New York NY 10024.

WANTED: RCA 45 rpm record players: 9J, 9EX3, 9Y51, 9Y510, 9Y511. RCA 78 rpm record players: V-140, 65U-1, 63E. RCA radios: 8K11, 6K10, 10T11, 8T10, 124, 96X12, 91B, 102, 1X591, 9X561. Write with condition and price. C. H. Sarver, 256 West 88th, St., New York NY 10024.

WANTED: Zenith Super Portable (P. 116-V.R.) and other Zenith suitcase portables (Pre-WWII). Also, early AC sets using Kellogg tubes. Cash or trade. Rosenthal, 507 S. Maryland Ave., Wilmington DE 19804.

WANTED: Atwater Kent speakers type-E, type-H, Baldwin 14" horn, three dials for Freshman Masterpiece. D'Arcy Brownrigg, Chelsea, Quebec JOX 1NO CANADA.

WANTED to correspond with collectors of APEX receivers. (Has three Honeycomb coils independently tuned.) Also ACE type 2B two stage audio amplifier using two WD-12 tubes. B. Murphy, 511 Meyer Ln., Redondo Beach CA 90278.

WANTED: DeForest tuning dials, as used on Interpanel set shown on page 83 of Vintage Radio, or will buy the complete tuning unit, or any old DeForest parts. Ralph Maddox, Purgitsville W.VA 26852.

WANTED: A good Radiola III. Front panel for Atwater Kent couples circuit tuner. Also board for open set number 3925. Lyle Scheid, Iroquois, So. D. 57353.

WANTED: Westinghouse RA/DA schematic or information. Cabinet for Crosley Showbox 706 and Dynacone type F speaker. J. Allen Call, 1876 E., 2990 So., Salt Lake City, Utah 84106.

WANTED: Anyone out there who has an extra Loose-Coupler for sale similar to those shown on page 153 in VINTAGE RADIO. Ralph G. Maddox, Purgitsville, W. VA 26852.

WANT to correspond with collectors, restorers, operators of early Super Hgts. such as Madison Mobre, Luetz, Victoreen, etc. Edward Crosby, Chatey Road, W. Willington CT 06279.

**WANTED**

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(page 191 Vintage Radio)

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WANTED: Chassis for Jackson-Bell model 84 (Peter Pan) working or not. Also dials, if available. Russ Goodlive, 1401 Franchere Pl., Sunnyvale CA 94087.

WANT TO BUY for cash Silver Marshall and Lincoln radios. Herb Balmer, 610 N-14th, Marysville KS 66508.

WANTED: Power supply and knobs for Radiola 67, model # AR 1168. D. S. Voydanoff, 1141 Yorkshire, Grossepointe Park, MI 48230

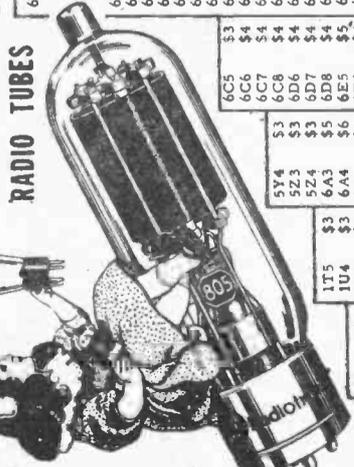
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6S8	\$3	7E7	\$4	12R7	\$4	25D6	\$2	50Y7	\$4	117Z4	\$4
6S9	\$3	7E8	\$4	12S7	\$4	25E6	\$2	51	\$4	117Z6	\$4
6S0	\$3	7E9	\$4	12T7	\$4	25F6	\$2	52	\$5	117Z8	\$5
6S1	\$3	7F0	\$4	12U7	\$4	25G6	\$2	53	\$5	117Z9	\$5
6S2	\$3	7F1	\$4	12V7	\$4	25H6	\$2	54	\$5	117Z0	\$5
6S3	\$3	7F2	\$4	12W7	\$4	25I6	\$2	55	\$5	117Z1	\$5
6S4	\$3	7F3	\$4	12X7	\$4	25J6	\$2	56	\$5	117Z2	\$5
6S5	\$3	7F4	\$4	12Y7	\$4	25K6	\$2	57	\$5	117Z3	\$5
6S6	\$3	7F5	\$4	12Z7	\$4	25L6	\$2	58	\$5	117Z4	\$5
6S7	\$3	7F6	\$4	13A7	\$4	25M6	\$2	59	\$5	117Z5	\$5
6S8	\$3	7F7	\$4	13B7	\$4	25N6	\$2	60	\$5	117Z6	\$5
6S9	\$3	7F8	\$4	13C7	\$4	25O6	\$2	61	\$5	117Z7	\$5
6S0	\$3	7F9	\$4	13D7	\$4	25P6	\$2	62	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	13E7	\$4	25Q6	\$2	63	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	13F7	\$4	25R6	\$2	64	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	13G7	\$4	25S6	\$2	65	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	13H7	\$4	25T6	\$2	66	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	13I7	\$4	25U6	\$2	67	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	13J7	\$4	25V6	\$2	68	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	13K7	\$4	25W6	\$2	69	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	13L7	\$4	25X6	\$2	70	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	13M7	\$4	25Y6	\$2	71	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	13N7	\$4	25Z6	\$2	72	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	13O7	\$4	25A6	\$2	73	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	13P7	\$4	25B6	\$2	74	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	13Q7	\$4	25C6	\$2	75	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	13R7	\$4	25D6	\$2	76	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	13S7	\$4	25E6	\$2	77	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	13T7	\$4	25F6	\$2	78	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	13U7	\$4	25G6	\$2	79	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	13V7	\$4	25H6	\$2	80	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	13W7	\$4	25I6	\$2	81	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	13X7	\$4	25J6	\$2	82	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	13Y7	\$4	25K6	\$2	83	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	13Z7	\$4	25L6	\$2	84	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	14A7	\$4	25M6	\$2	85	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	14B7	\$4	25N6	\$2	86	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	14C7	\$4	25O6	\$2	87	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	14D7	\$4	25P6	\$2	88	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	14E7	\$4	25Q6	\$2	89	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	14F7	\$4	25R6	\$2	90	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	14G7	\$4	25S6	\$2	91	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	14H7	\$4	25T6	\$2	92	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	14I7	\$4	25U6	\$2	93	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	14J7	\$4	25V6	\$2	94	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	14K7	\$4	25W6	\$2	95	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	14L7	\$4	25X6	\$2	96	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	14M7	\$4	25Y6	\$2	97	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	14N7	\$4	25Z6	\$2	98	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	14O7	\$4	25A6	\$2	99	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	14P7	\$4	25B6	\$2	100	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	14Q7	\$4	25C6	\$2	101	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	14R7	\$4	25D6	\$2	102	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	14S7	\$4	25E6	\$2	103	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	14T7	\$4	25F6	\$2	104	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	14U7	\$4	25G6	\$2	105	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	14V7	\$4	25H6	\$2	106	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	14W7	\$4	25I6	\$2	107	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	14X7	\$4	25J6	\$2	108	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	14Y7	\$4	25K6	\$2	109	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	14Z7	\$4	25L6	\$2	110	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	15A7	\$4	25M6	\$2	111	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	15B7	\$4	25N6	\$2	112	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	15C7	\$4	25O6	\$2	113	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	15D7	\$4	25P6	\$2	114	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	15E7	\$4	25Q6	\$2	115	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	15F7	\$4	25R6	\$2	116	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	15G7	\$4	25S6	\$2	117	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	15H7	\$4	25T6	\$2	118	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	15I7	\$4	25U6	\$2	119	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	15J7	\$4	25V6	\$2	120	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	15K7	\$4	25W6	\$2	121	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	15L7	\$4	25X6	\$2	122	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	15M7	\$4	25Y6	\$2	123	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	15N7	\$4	25Z6	\$2	124	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	15O7	\$4	25A6	\$2	125	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	15P7	\$4	25B6	\$2	126	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	15Q7	\$4	25C6	\$2	127	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	15R7	\$4	25D6	\$2	128	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	15S7	\$4	25E6	\$2	129	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	15T7	\$4	25F6	\$2	130	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	15U7	\$4	25G6	\$2	131	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	15V7	\$4	25H6	\$2	132	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	15W7	\$4	25I6	\$2	133	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	15X7	\$4	25J6	\$2	134	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	15Y7	\$4	25K6	\$2	135	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	15Z7	\$4	25L6	\$2	136	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	16A7	\$4	25M6	\$2	137	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	16B7	\$4	25N6	\$2	138	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	16C7	\$4	25O6	\$2	139	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	16D7	\$4	25P6	\$2	140	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	16E7	\$4	25Q6	\$2	141	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	16F7	\$4	25R6	\$2	142	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	16G7	\$4	25S6	\$2	143	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	16H7	\$4	25T6	\$2	144	\$5	117Z0	\$5
6S3	\$3	7G2	\$4	16I7	\$4	25U6	\$2	145	\$5	117Z1	\$5
6S4	\$3	7G3	\$4	16J7	\$4	25V6	\$2	146	\$5	117Z2	\$5
6S5	\$3	7G4	\$4	16K7	\$4	25W6	\$2	147	\$5	117Z3	\$5
6S6	\$3	7G5	\$4	16L7	\$4	25X6	\$2	148	\$5	117Z4	\$5
6S7	\$3	7G6	\$4	16M7	\$4	25Y6	\$2	149	\$5	117Z5	\$5
6S8	\$3	7G7	\$4	16N7	\$4	25Z6	\$2	150	\$5	117Z6	\$5
6S9	\$3	7G8	\$4	16O7	\$4	25A6	\$2	151	\$5	117Z7	\$5
6S0	\$3	7G9	\$4	16P7	\$4	25B6	\$2	152	\$5	117Z8	\$5
6S1	\$3	7G0	\$4	16Q7	\$4	25C6	\$2	153	\$5	117Z9	\$5
6S2	\$3	7G1	\$4	16R7	\$4	25D6	\$2	154	\$5	117Z0	\$5