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WHOO TO WRITE TO: (Write legibly. Enclose S.A.S.E. for prompt reply)

Charles Breitford (President) 255 Danbury Circle So., Rochester N.Y. 14618
All official business, Conference and meeting activities (Tel. 716-244-9519)
Kenneth Gardner (Vice-Pres.) 42 Oakdale Ave., So., New Hartford, N.Y. 13413
All business, Amateur activities, Net Lists
Richard Rangeley (Secretary) 9 Belden Ave., Sodus, N.Y. 14551
Meeting notices, business reports, membership applications

Lincoln Cundall (Treasurer) 59 Boulevard Parkway, Rochester, N.Y. 14612
Address changes, new membership applications, dues (Tele. 716-663-0856)

Bruce Kelley, Main St., Holcomb, N.Y. 14469 (Tele. 716-657-7489)
All material for AWA Bulletin, All material for AWA Museum

Clifford Daykin, 19 Oxford Place, Geneva, N.Y. 14456
Museum activity and maintenance

Lauren Peckham, Ormiston Road, Breesport, N.Y. 14816 (Tel. 607-739-5443)
All material for Vacuum Tube Newsletter. All queries relative to tubes.

Dexter Deeleey, 8 Briar Circle, Rochester, N.Y. 14618
Bulletin mailing and back issues

Al Croun, 16 Costar St., Rochester, N.Y. 14608
A.W.A. Museum slide/tape shows, Museum photographs

Bruce Roloson, 701 Grand Central Ave., Horseheads, N.Y. 14845
Electrical equipment and light bulbs

Robert Morris, Sunset Lake Rd., RFD#1, Sparta, N.J. 07871
Houck Award Chairman and associated activities

REMINDER! Dues and address changes to Treasurer, NOT the Secretary.
NEW MEMBERS—
—welcome to AWA. This may be your first copy of the Association's Journal, the Old Timers Bulletin. Read it and file away for reference. We hope you will participate in AWA activities. Elsewhere in the Bulletin are notices of AWA meets. If possible, try to attend at least one of these events where you can meet fellow radio historians or collectors and discuss subjects of common interest.

--Membership Committee

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Send all material for BULLETIN to:
A.W.A., Main St., Holcomb, N.Y. 14469

What’s Coming Next!
in the “Old Timer’s Bulletin
“OLD CORTLANDT STREET”
History of “COLONIAL, KING & SYLVANIA RADIO COMPANIES”
The “REINARTZ MODULSCOPE”
The “INFRADYNE RECEIVER”
History of “PRESS WIRELESS”
Collecting BATTERIES
How to make an EARLY CRYSTAL SET
Collecting LIGHT BULBS
History of WESTERN COIL CO.
History of “DAY-FAN” Radio
History of “RADIO FREQUENCY LAB”
plus much, much more........

DUES: PAYABLE TO TREASURER

Lincoln Cundall
69 Boulevard Parkway
Rochester, N.Y., U.S.A.
14612

FIRST CLASS MAILING: 1 year- $6.50
(plus special handling) 2 years- $12.00
Required for Canadian members

THIRD CLASS MAILING: 1 year- $5.00
2 years- $10.00
OVERSEAS airmail - 1 year- $8.00

The Easy Answer

for a club program is the A.W.A.
SLIDE SHOW with TAPE COMMENTARY

Members who need program material for a radio club meeting will find the AWA 40 slide show and 32 minute tape cassette commentary ideal. In fact, it is even a great program for one’s personal use.

The slides show all kinds of radio material in the AWA Museum with tape telling about the various pieces of equipment and its history. We might add the commentary was made by former CBS radio announcer Stew Metz.

The show with tape is yours for only $21 postpaid. Make check out to A.W.A. and mail to:

AL CRUM
15 COSTAR ST.
ROCHESTER, N.Y. 14608
ANNUAL BUSINESS MEETING
AND ELECTION
Summary of minutes as reported by Secretary Richard Ransley
A detailed account of financial status by Comptroller Deeley indicated the Association was in excellent shape. Revenue from several sources has increased the Museum Fund immeasurably.
Current officers were re-elected with exception of Bruce Kelley who requested that he not be re-nominated as Secretary. Richard Ransley, Recording Secretary was nominated in his place. Kelley and three new members were elected to the Board:
R. Leigh, R. St. Louis and O. Schambarger.
R. H. G. Mathews was made an Honorary Member. After some discussion, the Board approved the publishing of a Journal. There remains the need to clarify and work out the details for publishing. Fred Brelesford appointed a Committee to be responsible for the Association's Museum. Reports from various Committee Chairmen indicated progress in all areas. The Board voted to hold the 1976 Conference at Canandaigua Sept. 29, 30 and Oct 1.

HOUCK AWARD
NOMINATIONS
The time has come again for members to select nominees for the HOUCK AWARDS. There are two Awards: One for Historical Documentation and the other for Historical Preservation. Give serious consideration as to your selection and send names to the Awards Committee:
Robert Morris, Chairman
Sunset Lake Road, RFD #1
Sparta, New Jersey 07871

SOUTH-EASTERN A.W.A. MEET
Holiday Inn North, 3050 N. Cherry St. Winston-Salem, North Carolina 27105
JUNE 8, 9, 10
PROGRAM
Thursday, June 8
3 P.M. Early reservations
Friday, June 9
3 P.M. "MAY 31, 1889" a story to remember, Lou Moreau, W3WRE
4 P.M. TRANSFORMER RESTORATION
--- Bob Lozier
5 P.M. The Q.C.W.A.
--- Val Valentine, K4JO
(Evening meal on your own !)
6 - 9 P.M. Hospitality Room
(Open to AWA members- Gabfest)
Saturday, June 10
8 A.M. PROPERTIES OF RADIO WAVES
Demonstration by Dr. M. Helms
10:15 A.M. "POLAR ADVENTURE" with Bud Waite, W22K (Bruce Kelley)
11 A.M. Setup displays
(Lunch -- on your own)
1 P.M. EARLY COAST GUARD RADIO
(1903-1930) Ed Redington, W4ZM
2 P.M. Display viewing
3 P.M. FLEA MARKET
6:30 P.M. Social Hour
7 P.M. BANQUET
M. C. Norvin Duncan of WFEC-TV
Speaker: Ralph Williams, NSVT "Atwater-Kent Lives On and ON"

SPECIAL LADIES' PROGRAM !!
For further information and registration form, write:
L. W. Elias, W4DBT
3919 Poindexter Drive,
Winston-Salem, N. C. 27106
(Phone 919-924-2162)
Advance banquet reservation necessary. [Registration: $3.00 + banquet $7.00 = $10.00 Total]
Note: Make room reservations at HOLIDAY INN direct- Singles $18.
and doubles at $22.

REMINDER
Three big AWA "MEETS"
California on APRIL 22nd
Indiana on MAY 5 and 6th
North Carolina JUNE 9, 10, 11

OTB STORAGE
Do you have a problem storing back issues of the BULLETIN?
We may solve your problem in the near future with a quantity purchase of either binders or a regulation library shelf file.
We lean toward the latter since they are relatively cheap ($0.00). The shelf file is a cardboard box that can be placed on a bookshelf (it looks like a book). Each box will hold about 20 Bulletins. More later...
WESTERN REGIONAL MEETING
Antique Wireless Association and California Historical Radio Society
SATURDAY, APRIL 22, 1978
9 A.M. to 5 P.M.
Foothill College Electronic Museum
12345 South El Monte Road
LOS ALTOS HILLS, CALIF. 94022

PROGRAM

Morning:
9:00-12:00 Registration, visit Museum, Swap/sale operation in parking lot and inspect Contest gear.
11:00-11:30 Judging Contest
11:30-1:00 Lunch in Campus Cafeteria or bring your own.

Afternoon:
(technical meetings in room F-12 near Planetarium.)
1:00-1:15 Official Welcome
1:15-2:15 Symposium on Vacuum Tubes, collecting, types and values.
    Lauren Peckham, Chairman of A.W.A. Tube Committee
2:15-2:45 Slides of British radio collections.
    Dave Brodie
2:45-3:15 Presentation of ribbon awards to Contest winners
3:15-4:15 A.W.A. presentation "Polar Adventure"
(30 years of radio operation in the Antarctic with Bud Waite, W2ZK.)

For advance registration or questions, contact DAVE BRODIE, Treasurer and Registrar, 315 Cotton St.
Menlo Park, Calif., 94025 or Tel. 415-323-0363

Paul Giganti
Committee Chairman

REGIONAL SPRING MEET
Indiana Historical Radio Society and the Antique Wireless Association
FRIDAY & SATURDAY, MAY 5 & 6, 1978
AUBURN-CORD-DUESENBERG MUSEUM at AUBURN, INDIANA

PROGRAM

Friday, May 5th
9 A.M. Early registration
   Museum Displays
1 P.M. Swap meet (South parking area next to the loading dock)
4 P.M. Program [to be announced]
7 P.M. "The Early Years" an AWA film show starring Clarence Tuska, co-founder AARL and President of Tuska Radio Co.

Saturday, May 6th
9 A.M. Inside & Outside Swap Meet
   Register equipment for afternoon auction.
   Register equipment for Contest (Classes to be announced)
11 A.M. Auction of donated equipment for IHRS Museum Fund.
1 P.M. Auction of personal equipment [10% donation asked for IHRS Museum Fund.]
4 P.M. Demonstration of Ultrasonic cleaner with sample display. [Dick Ransley, AWA Secretary]
   Contest Judging
7 P.M. Banquet
   Advance reservation for Banquet desired. For information, write:
   FRANK HEATHCOTE
   616 Barron Street
   Logansport, Indiana 46947
   [Tel. 219-722-3612]

COLLECTORS IN FLORIDA
If you are interested in early radio equipment -- why not join the AWA Pinellas Chapter (Tampa/Clearwater area). Write John Smith, W4ACG, 1924 Dolphin Blvd. St. Petersburg, Florida 33707

NEW MUSEUM EXHIBIT
Pres. Breisford introducing Guest Speaker R.H.G. Mathews (left). Seated are l. to r.: Mr. Harry Houck, Don Matteson and Ed Redington.

Each year everyone says, "The best yet!" The '77 Conference was no exception as hundreds convened for 3 days attending lectures, dinners, auctions and wandering thru the flea market. An outstanding feature this year was the fabulous Ford Museum and Greenwich Village--one of the finest in the world.

Much credit for its success goes to Pres. Breisford who was there several days before and after the event taking care of all arrangements with Museum Official Don Matteson. In addition, the smooth operation of all Committees left one with few complaints. Here are some of the highlights:

--Guest Speaker R.H.G. Mathews, ex-9ZN, living up to all expectations by "stealing the show!"

--announcement and disbursing of the first 100 copies of Gerald F.J. Tyne's "Saga of the Vacuum Tube".

--record auction sales supplemented by a vacuum tube division.

--excellent programming in the beautiful Ford Museum Theater.

--a surprise feature: 16 year old AWA member (and tube collector) David Peckham filling in the pro-

Glenn Streeter from California tells how to make loop antennas.

Old time CW operators meet- l. to r. Ken Gardner, Bill Gould, Art Goodnow
Radio historians reminiscing: Gerald F. J. Tyne and Harry Houck

gram by playing the huge theater organ.

--Ralph Williams receiving Houck Award for his outstanding work in documenting the history and equipment of the Atwater-Kent Company.

--Vance Phillips receiving Houck Award for preserving rare artifacts that otherwise would have been lost.

--Joe Pavek receiving the Conference Award for his outstanding Conference participation: 10 grueling years as Auctioneer!

--Art Goodnow receiving the Award as the winner of the Old Time Transmitting Contest.

--thanks to Dr. Wade who provided surprise caricature dart boards which enabled losing contestants to vent their wrath on the judges!

--and thanks to the judges and contestants for an outstanding exhibit of historical equipment.

--and thanks to members who manned the Headquarters Desk at the Inn, especially Otto Willis who provided and sold old 9ZN montages with proceeds to the Museum Fund.

--and lastly, sincere appreciation to Don Matteson and the Museum Staff for a most enjoyable weekend. See you at Canandaigua Sept. 30...
Program Chairman Bruce Kelley and R.H.G. Mathews. The two receivers were developed by Mathews and his company. At left is an early Reg. CRL receiver (Chicago Radio Laboratory) and right a late model Zenith 3-R.

Conference Award Winner Joe Pavek from Minneapolis
-- and a final appreciation and thanks to Harry, VE3GRC for all the fb photos.

Note: Information on the 1978 Conference will be printed in the June Bulletin. Program and registration/reservation cards will be mailed in August.
OLD EQUIPMENT AWARDS
NATIONAL HISTORICAL RADIO CONFERENCE

In spirit of good fun, Dave Peckham throws dart at Judge Comer's pix!

CLASS I Crystal receivers
1st- Ralph Muchow (French Type-A 1915)
1st Jr. - Carmen Ambroggio (Murdock, 1912)
2nd- John O'Bannon (BC-14-A)
3rd- Al Sayer (DeForest Everyman)

CLASS II TRF receivers
1st- George Wedemeyer (Wedemeyer 1927 TRF)
1st Jr. - Jim Kreuzer (AK-12 in original box)
2nd- Oran Sauder (Victor N.E. w/ Brown phones)
3rd- Ross Smith (Colonial 5 tube)

CLASS III Regenerative receivers
1st- Alan Douglas (Westinghouse SW)
1st Jr. - Marion & William Ernst (Geo. W. Walker Multi-unit)
2nd- Glenn Streeter (Kennedy 281-521)
3rd- Lauren Peckham (Zenith 4-R)
Special Award- Floyd Engels (Zenith 3-A)

CLASS IV Superhetereodynes
1st- John Caperton (Baldwin/phones)
2nd- John Allison (Stratospherer)
3rd- Larry Wright (All-American)

CLASS V Tube transmitters
1st- Richard Brewster (RCA trans.)
1st Jr. - Marion & William Ernst (850 kc. crystal oscillator)
2nd- Alan Douglas (Paragon 2-5-U Radiophone)
3rd- R. & K. Hanselman (G.E. tr.)

CLASS VI Spark Transmitters
1st- Ralph Muchow (Poulzen arc)
1st Jr. - Bill Baker (Rotary spark)
2nd- Joe Pavek (WWI spark set)
3rd- Norm Foster (BC-15-A)

CLASS VII Untuned broadband RF amp.
1st- Ralph Muchow (AK-5)
1st Jr. - Dick & Ann Schaumberger (Federal prototype)
2nd- Lauren Peckham (Radiola Comb.)
3rd- Don Patterson (Federal DX-58)

CLASS VIII Reflex receivers
1st- John Caperton (All-AMAX Sr.)
1st Jr. - Jim Wade (DeForest)

CLASS IX Tubes (WWI or earlier)
1st- David Peckham (DeForest Singer)
1st Jr. - Will Jensby (Weagant valve)
2nd- Glenn Streeter (DeForest CF-340)
3rd- Dick Kaufman (4 receiver tubes)

CLASS X Unusual wireless items
1st- Larry Wright (Vocatone)
1st Jr. - Will Jensby (El Co. #11000)
2nd- John O'Bannon (Sodion DR-6)
2nd- P. Benne (W.E. Electric Loudspeaker Outfit)
3rd- Tex Sloat (Daven Amplifier)

Special Award- Lou Moreau (Pearl Harbor key)
Special Award- Ed Taylor (Giant key)

BEST OF SHOW- John O'Bannon (Cutting & Washington set)
THE AUCTION

The old equipment auction held at the 1977 AWA Conference was again a very successful event thanks primarily to Joe Pavek and his efficient working crew. I must also mention the excellent facilities at the Dearborn Inn, a large rectangular room with plenty of space. Other than for the usual latecomers checking in gear at the last moment, it was a smooth operation with nearly $10,000 exchanging hands.

As in the past, prices were high on the rare items - equipment made prior to 1922, particularly well known names such as Deforest, WSA, Murdock, etc. A separate vacuum tube auction was held Sunday, although a few tubes were sold at this event.

Let's start with material other than receivers which made up about one-third of the sales. Headphones and speakers: Model "C" Baldwins sold for $13. A W.E. 10D horn @ $48, WE Mod. 540 spkr (excellent condition) @ $80, AK Mod. F2 spkr (excellent) - $22, Utah mag. spkr. (excellent) - $25 and a RCA Mod. 100 @ $15. These prices all seem quite reasonable.

Cables: Murdock loose-coupler (excellent condx) - $210, homebrew loose-coupler (excell.) - $45, DeForest coil mount with 3 honeycomb coils @ $20. Others were sold but this gives one some indication as to the trend - early commercial couplers are at a premium.

Test Equipment: G.R. decade box - $25, early Thompson A C meter (excell.) - $31, Supreme Tube and set tester Mod. 385 (good) @ $67.

Misc.: A 1910 carbon grid pot - $35, Brach key & sounder - $26, Anchor gap - $22, ElectroVoice card. mike - $4. Amperite velocity mike - $2, Dukane audio mixer (excell.) - ask $10 -- no sale! The message here is ----- if it is at all modern -- no sale! An old Wimhurst machine requiring some work went for $27. In addition, there were several medical machines which sold between $15 to $30.

Software: 11 issues (Vol. V) Electrical Experimenter mag. (excell.) - $50. 10 volumes of Hawkins - $16, Riders Manual III (good cond.) - $10, Bucher's "Wireless Experimenter's Manual" (excell.) - $12, and lastly, a hardcover copy of the original "Tinfoil to Stereo" (mint) - $36. I found this quite interesting since the original cost - $10. Present-day hard copies sell for $19.95 (soft-cover - $9.95). It shows the value of an original publication when printed in small quantities.

Receivers: The big attraction was of course the sale of receivers. I will try and list some of the more interesting pieces as well as sets at the bottom of the list. In addition to make, model and appearance, the purchaser is always interested in condition (good AFT's, etc.) and whether the receiver has tubes. This is important to say, a Radiola IIIA with 4 WD-11's which are worth almost as much as the set. Let us start with Radiolas: Radiola III, no tubes (condx unknown) - $26, Radiola III-A w/o tubes (condx unknown) $48, Radiola 17 (condx good) - $40, Mod. 16 (good) w/tubes - $55, Portable VIII w/tubes - $65, Radiola V with RCA spkr - $240. Atwater-Kent: AK-20 (large model) with tubes - $65, AK-40 (very good) - $30, AK-37 w/tubes - $25. Crosley: 5-50 (excell.) - $32, Mod. 52 (3 tubes) [Cont. next page]
tubes (good) - $35, Remler superhet w/o cabinet - $60, Paragon RD-5 $330, Navy Mod. RBA-1 (WW2 VLF) (excell.) - $65, Midwest Mod. 14 chassis w/tubes - $10, 2 tube (kit) Harkness reflex - $26, Freed-Eisenman NR-7 (good) asking $45 - no sale. Clapp-Eastham Mod. RHM (good) - $160, National 1-10 (VHF) (excell.) - asking $10 - no sale!

Crystal sets: Federal (Excell.) $150, Mengel-Etherion Mod. - 101 (good) - $145, Phimore crystal set $30. Misc.: Philco table model 20 (good) - $34, Wireless Speciality Appar. 2 stage audio - $110. DeForest Interpanel (3 tube) - $650, Magnavox Mod. D and amp. (excell) $300, Amrad Mod. 3500 (4 tube)(excell) - $520. Stromberg-Carlson Mod. 638 w/tubes (excell.) - $45, Browning-Drake, no contested, however, with proponents of TV on one side and FM on the other. Armstrong, inventor of FM, was the leader in requesting allocation for FM. The F.C.C. under pressure, granted a small range -- from 44 to 50 mHz -- to FM broadcasting. That section of the band -- no longer used for FM -- would have been Channel 1.

Well, what do you think of that? I am surprised the little National didn't raise $10 -- particularly with recent interest in classical sets. How do you like 10 bucks for the Midwest -- and the $650 for the DeForest Interpanel and $520 for the Amrad? Wonder what they would have paid for an original Marconi 106 or a WSA IP-76 or 500? Now you know where the action is -- see you at Canandaigua Oct. 1......... -- B.K.

TV CHANNEL NO.1
Ever wonder what happened to Channel 1 on your TV set? It hasn't been on American receivers since 1947. In 1937, the F.C.C. established 19 six MHZ channels interspersed with other services in the region of 44 to 294 mHz.
Space in the spectrum was hotly contested, however, with proponents of TV on one side and FM on the other. Armstrong, inventor of FM, was the leader in requesting allocation for FM. The F.C.C. under pressure, granted a small range -- from 44 to 50 mHz -- to FM broadcasting. That section of the band -- no longer used for FM -- would have been Channel 1.

CTB cover: -- was taken from a pre-WWI silent movie. A little Liberty was taken however, with the 1925 Crosley "Pup" caption!
The recent interest in tube collecting helped by Tyne's column in the OTH and his SAGA, prompted AWA to have a separate tube auction at the Dearborn Conference.

Lauren Peckham volunteered to handle the event and we all gathered Sunday morning to see if anyone would show up.

They did. By 9:30 the room was full with tube collectors hauling in their wares or sitting around waiting for the action. Lauren and Bruce Roloson both served as auctioneers and within 2 hours they sold over $1300 in tubes.

Although the sales were mixed, I will separate receiving tubes from transmitting and list only those sales which will give the reader/collector a "number" to act as a guide. We'll start with receiving tubes:


It would appear that a deForest spherical Audion, even with a open filament, commands a stiff price ($130.) I never did find out if the sample Audion at $150 had a good filament. Note the Raytheon Kino-lamp used in early TV mechanical scanning sets going for $80.

Transmitting: Western Electric tubes VT-2 w/spec. base design-$21., a 211-E $7.50, 211-E in box-$8., 219-A (broken bulb for display only)-$10.

Experimental 250 watt @ $70., 231-D $11., 205-D $11., RCA 849 (open fil.) $12., RCA UV-204A $25., RCA 204A w/ xmtr parts $60., RCA 417 $17., RCA 852 $8., RCA UV-202 $15., RCA 202 w/ bakelite base (rare) $17., RCA 203A $27.

Marconi MT-4 triode-$42.

Transmitting: Nothing too exciting in this area. Top sale was for a Marconi MT-4 tube--a tube which could have been made in the 20's. Note 203A sold for more than the 204A. For good reason. Although a popular tube in its day, the 203 took a frightful beating from the radio amateur who invariably operated it twice the rated plate value leaving a blue plate or a hole. There are not too many around. The equally common 202 took the same beating.

A Vacuum Tube Auction is assured at all future Conferences.

NEW AMATEUR CALL LETTERS:

Morgan McMahon [Vintage Radio] is now N6VY, Don Ray [ A.W.A. printer] is WA2PKS and our new Secretary, Dick Ransley is WA2TLR.
QUE: In the early 20's there was advertised a "RAC-3 AUDION" manufactured by Radio Audion Co. of Jersey City, N. J. I have also seen a similar tube made in Montreal, Quebec known as the "MYERS TUBE". Are they similar? (The tubes are cylindrical with a black bakelite base at one end and red at the other.)

I have also seen the name "Myers" spelt "Meiers", Which is correct?

ANS: Myers is correct. The Radio Audion Co. had as its Chief Engineer, Elman B. Myers. They produced the RAC-3 tube for a time in the early 1920s, but were put out of business by infringement suits. There were two types: the "Universal" and the "Dry Cell". Myers moved to Montreal and sold tubes to U.S. customers on a mail order basis. He eventually went out of business. The story is quite lengthy and is fully covered in the SAGA.

QUE: I have a spherical type tube with copper shell base with the marking "METAL". I also have a Marconi-Osram "LS3" tube which appears identical except it has a silver (?) plated base. Are these tubes interchangeable? If so, which came first?

ANS: These tubes are almost interchangeable, although there is considerable difference in their amplification factors. The METAL tube is probably a WWI surplus tube of the type used by the French Armed Forces. Many of these early tubes were sold in this country surplus. The filament is of tungsten and takes 0.7 amp. at 4.0 volts. The usual plate voltage was 40-100 volts although when used in a transmitter voltage as high as 500 was sometimes applied. The Marconi-Osram "LS3" first appeared in 1925. The filament is also tungsten and takes 0.8 amp at 4.0 volts. Plate voltage was 60-400 volts. The base is nickel plated to retard oxidation.

RCA BRASS UV-210 (G.E.), c. 1924

The UV-210 was initially launched in 1922 for loudspeaker operation, rendering more power than heretofore known. It was first used in 1924 in connection with RCA's Model 104 dynamic loudspeaker.

At this time, the UV-210 was designed for and used by the US Navy as a transmitting tube. It was soon used in other important projects, transoceanic receiving equipment, being just one of them.

The UV-210 was one of the first power tubes with a carbonized thoriated tungsten filament -- an important improvement over the UV-202 and its pure tungsten filament.

RCA Power Tube Development

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<tr>
<th>Type</th>
<th>Filament Max. output</th>
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<tr>
<td>UX-112A</td>
<td>5v @ .25a.  .26w.</td>
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<tr>
<td>UX-171A</td>
<td>5v @ .25a.  .7w.</td>
</tr>
<tr>
<td>UX-210</td>
<td>7.5v @1.25a.  1.6w.</td>
</tr>
<tr>
<td>UX-245</td>
<td>2.5v @1.5a.  1.6w.</td>
</tr>
<tr>
<td>UX-250</td>
<td>7.5v @2.5a.  4.6w.</td>
</tr>
</tbody>
</table>

The UV-202 was discontinued in 1925 and one can safely assume the UV-210 replaced the less efficient UV-202. The UV-210 changed to the UX-210 early 1925. Westinghouse started development on the UX-250 in 1926 and it was announced in early 1928.

Summation: A very interesting chain of succession. And, a brass base UV-210 (with or without tip) is a difficult tube to find since few were manufactured. (Floyd Lyons with assist from Lauren Peckham.)
METAL WORK AND REFINISHING

Shown are some of the dial and name plates either made or refinished by Roland Matson (388 Concord Rd., Bedford, Mass. 01730 Tele.617-663-3877)
Note the refinished silver-satin Kennedy dial at upper left and the new antiquated RJ-4 deForest name plate at lower left. Write or phone for quote.

FROZEN POT METAL SHAFT

I recently picked up a Zenith 3-R and found it had frozen dial shafts. I checked with some friends at the Univ. of Illinois who were full of ideas and they suggested I try Zerex (anti-freeze) to break the shafts free.

I tipped the cabinet of the 3-R over and built a small silicone rubber dam around the frozen part and applied a small amount of Zerex within the rubber dam.

I waited thirty-six hours and found the Zerex had penetrated through the corrosion and had run down on the inside of the set. I then wrapped the shaft with some leather so as not to scratch the shaft and applied a pair of pliers. The shaft moved slightly. I kept up the wiggling motion back and forth with the pliers on the wrapped shaft and little by little it became free. This approach worked for me this time but I can't guarantee it will work for every situation.

YELLOW PANEL

The problem of the yellow hard rubber panel sometimes can be whipped by using tooth paste on a soft cloth and rubbing the entire panel with the stuff. The panel I had was not really bad but was beginning to show a yellow cast and the tooth paste did the trick. Are there any other solutions to this problem? I would like to know.

--Ron Scranton
HELPFUL SUGGESTIONS FROM
FRANK KOHL, WA4NM
---A book on Refinishing...---
Several years ago I came across
a dandy little paperback primer on
re-finishing old furniture called,
"From Gunk to Glow" by George
Grotz. It was written in easy style
and covered just about everything
a beginner needs to know to tackle
refinishing work. As my copy had
long since been loaned beyond re-
call, I wrote the publisher to see
if it was still available. It, from
Pequot Press, Chester, Conn.,
06412 at $1.25 A 50¢ handling ap-
plies per order.

They advised that Grotz also has
a newer book out called "The Fun
of Refinishing Furniture." This lat-
ter turns out to be a fleshed-out
version of the original with many
"how to" examples, plus a valuable
list of "where to get it" references.
It sells for $4.95...I can recomm-
end either book as a valuable work
bench reference on refinishing prob-
lems...---

---Fill for engraving...---
From time to time I see suggest-
tions in the Bulletin on filling in
panel and dial engravings, using
everything from egg white to Elm-
er's glue! I get best results with
a more traditional method using
artist's zinc white oil color, ob-
tainable in small tubes from art
supply dealers.

The method: First clean the old
wax out of the engraving with a
stiff brush and a little detergent
or other degreaser. Next, take a
dab of brush and a little detergent
or other degreaser. Next, take a
dab of a putty knife. Dampen it slight-
ly with turpentine, and with one
swipe across the work area, all
the excess color can be removed.
If you mess it up, simply clean up
the area with turpentine and try
again. One word of caution: the oil
color is slow drying and may take
several days to set up hard.

Hazeltine Granted a License for
Stereo Broadcast System

A worldwide exclusive license under all patents and
patent applications covering the AM stereo broadcast
transmission system and receivers developed by
Leonard Kahn has been awarded to Hazeltine Corpora-
tion of Greenlawn, New York.

Kahn Communications, of which Kahn is president,
has petitioned the FCC to adopt standards for compat-
ible AM stereophonic broadcasting which would permit
implementation of the system. The Kahn AM stereo sys-

---Patents in America---
The U.S. Patent Office is current-
ly offering a series of Patents( re-
productions) for 25 and 50 ¢ each.
There is a need to order their book-
let which includes an order blank
and description of each patent. Being
curious, AWA ordered 20 different
sets taken out by S.F.B. Morse,
Edison, Bell, Tesla, Marconi, Ber-
liner, Poulsen, Fleming, Armstrong
and others.

A set consists of anywhere from 3
to 9 sheets (7 3/4x 11 1/4") includ-
ing sketches of the invention. If you

are interested, send $1. to:
U.S. Government Printing Office
Pueblo, Colorado 81009
and ask for booklet titled:
"Revolutionary Ideas, Patents and
Progress in America".
(Info from Frank Krantz)
SHORT HISTORY OF

THORDARSON ELECTRIC MFG. CO.

by PETER KAILUS

Background:
--Thordarson Electric Co. founded in Chicago, Ill., 1896
--Became a division of Burgess Battery Company in 1936.
--Became a division of Macquarie Industries, Inc. in 1940.
--Became Thordarson-Meissner (Division of Components Corp.)

The Thordarson Electric Manufacturing Co. was founded in 1895 by Chester H. Thordarson, originally a native of Iceland. A manufacturer of electrical goods, it specialized in amateur equipment in the early days with emphasis on high voltage transformers used in spark transmitters. Old time amateur well remember the Thordarson line which was available from 1/4 to several kilowatts with voltages over 25,000 volts.

or at the University of Wisconsin (1896) he acquired some equipment for the Chemical Engineering building from a newly formed company bearing the name "C. H. Thordarson". In time the two met and a lifelong friendship began.

Forty years later (1936) the Thordarson Company was in desperate financial trouble with numerous business debts. Creditors were preparing to put through a re-organization order by which Thordarson would be eliminated. He would also lose his valuable electrical library which had been mortgaged.

After a lengthy research by Burgess, a plan was worked out whereby the Burgess Battery Company would finance the retirement of outstanding indebtedness and become owner of

Thordarson Type R Transformer

For use on 110 to 115-volt 60-cycle alternating current. Provided with adjustable magnetic leakage gap which controls primary inductances, giving a wide range of amperage and permitting easy adjustment. No impedence or choke coil necessary in primary circuit. This transformer has some wonderful long distance records and has given general satisfaction to amateurs for years. Works best when used with rotary spark gap producing about 800 sparks per second. Shipping weight, 55 and 55 pounds.

<table>
<thead>
<tr>
<th>Article Number</th>
<th>K.V.A.</th>
<th>Ampereage</th>
<th>Sec. Volt</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>563 1 630</td>
<td>1/2</td>
<td>1 to 6</td>
<td>10,000</td>
<td>$21.00</td>
</tr>
<tr>
<td>563 1 632</td>
<td>1</td>
<td>21/2 to 14</td>
<td>25,000</td>
<td>38.00</td>
</tr>
</tbody>
</table>

Thordarson Type RS Transformer

This type differs from the well known model shown above except that it does not have the adjustable magnetic gap. All other features of nearly compact construction and correct electrical characteristics are the same. For use on 110 to 120-volt 60-cycle alternating current.

<table>
<thead>
<tr>
<th>Article Number</th>
<th>K.V.A.</th>
<th>Sec. Volts</th>
<th>Shipping Weight</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>563 3 633</td>
<td>1/4</td>
<td>8,000</td>
<td>25 pounds</td>
<td>$10.60</td>
</tr>
<tr>
<td>563 3 633</td>
<td>1</td>
<td>25,000</td>
<td>25 pounds</td>
<td>20.60</td>
</tr>
</tbody>
</table>

In addition to the spark transformer, the company made oscillation transformers and rotary gaps. The early transformers used a frame of molded cast or malleable iron. Later models used a frame of pressed steel to reduce cost. An outstanding feature on some models was the magnetic shunt control which protected the transformer from undue surges.

Chester Thordarson had an interesting life. As early as 1896 his path crossed that of Charles Burgess (later of Burgess battery fame). When Burgess was an E.E. Instruct-

Common stock. Thordarson would become owner of Preferred stock and President of the Company. The plan saved the company and in time he recovered his valuable library.

Following WWI the company expanded to a full line of power and audio transformers, choke coils and other radio items. The name became prominent in radio for the next 30 years and contributed much during WWII.

A sidelight to Chester Thordarson's life was his interest in Rock Island located in Lake Michigan.
near Green Bay, Wisconsin. He purchased the 900 acre island in 1914 with visions of creating an Icelandic kingdom of his own, similar to the island he had known as a child.

His most important legacy to the island was a huge stone boat house which has become known as Viking Hall and at one time housed his valuable historical electrical library and one of the largest collections of Icelandic literature in the world.

Thordarson had become a book collector in early life and in 1941 moved his huge collection to Rock Island where the books were placed in tall cases around the walls of the great hall.

Chester Thordarson died in 1945 leaving to his heirs the history-laden island.

In time the magnificent library was purchased by and moved to safety by the University of Wisconsin (1964). Rock Island was purchased by the State of Wisconsin in 1964 and is presently known as Rock Island State Park.

Audio amplifier and power supply of the mid 20's. The company also manufactured a line of amateur transmitters in the late 1930's.

PICKERILL COLLECTION

given to

BROADCAST PIONEERS LIBRARY

Much of the soft-ware (books, catalogs, photos, etc.) remaining in the Pickerill estate has been given to the Broadcast Pioneers Library in Washington, D.C. by his cousin Eugene Baker.

"Pick" was a Honorary Member of AWA, pioneer wireless operator and aviator. The Association made a slide/tape show of his career several years ago before his death.

CORRECTION: #5 slide in AWA Museum slide show is mounted in reverse. Turn slide over so contents of slide will match tape commentary.
Once in awhile, radio equipment turns up that was previously unknown -- since the 1920s, anyway. On a hunch that we might like it, a local bookseller bought one of these Westinghouse sets from a furniture dealer he met at a motel while attending his daughter's graduation.

When we saw it, we tracked down the source: a Pittsburgh man who had found about 20 of these tuners and 28 amplifiers in an attic. He had been selling them at flea markets all over Pennsylvania for $20! He had only two sets left, and had wised up to their true value by then, but, --to make a 500 mile trip worth while, we bought them anyway.

Dr. Frank Conrad, already responsible for establishing KDKA, envisioned a national broadcasting system of a few large stations relaying programs to smaller regional ones. Believing that shortwave transmissions might be used to interconnect the stations, he began experimenting at KDKA, transmitting programs to KDPM Cleveland and WBZ Springfield on 3000 kHz.

Favorable results led to the establishment of KFKX in Hastings, Nebraska specifically as a relay station, having minimal studios of its own. Beginning in November, 1923, KFKX picked up KDKA's transmissions on 3200 kHz and re-broadcast it at 1050 kHz; reception was reported from coast to coast.

Probably in late 1923, Westinghouse built a group of these short-wave receivers for use in their relay stations. The tuners were production units from Radiola Grands, turns being removed from the coils as required to raise the frequency.
ceiving station to the transmitting location.

Provision was made for a small loop antenna besides the regular inverted-L, to null interference from the re-broadcast 1050 kHz signal. All hardware (even case screws) is gold-plated; boxes are highly-finished and as noted in the photo are copper-shielded.

Copyright Law

The new U.S. Copyright Law became effective Jan. 1, 1978. Members sending in copyrighted material for the Bulletin should obtain a WRITTEN release from the publisher. Further, authors who wish to have their articles protected should notify AWA. The Copyright LAWS are very specific.

A.W.A. has a large file of newspaper, magazine and book releases. Although AWA is a non-profit organization, there is still a need to obtain permission (release).

How many other Westinghouse stations ever used this equipment, I can't say; perhaps some former Westinghouse engineer can continue the story.

References:
Radio Broadcast, June 1923, p. 119
Radio News, March 1924, p. 1242
Radio Journal, March 1924, p. 111
Radio Age, January 1926, p. 17

NIPPER

Visitors to the AWA Museum this past fall have been startled as they ascend the staircase and find themselves staring at a huge dog with his ear in a phonograph horn.

Yes, it is a replica of NIPPER, the well known RCA-Victor trademark which was given the Museum by Clayton Lacy of Buffalo.

After a little repair work, Chuck Breelsford placed it on the front seat of his car and delivered it to the Museum. The huge dog brought continuous glances from passing motorists......
OLD TYME HAM ADS

WANTED

- Av WATER-KENT breadboard items, Wm. B. Duck #14 radio catalogue and Acme AFT. Glen Angle, KUTAM, Clear Lake, S. Dak. 57226
- condition antenna operated & crystal radios. Any model. Please help novice get started. Mark Kaplan, 129 Howell St., Canandaigua, N.Y. 14424 Tel. 716-384-3663
- any Marital sets, Crosley #48 or 56 reproofed cathodes, old wooden blade ceiling fan. Buy or trade. Richard Cune, 5391 N. W 21st St. Sunrise, Florida 33322
- would the party who was selling the RCA "ACR" communication receivers at Dearborn Con. please contact Doug Houston, 3060 Three Mile Drive, Detroit, Michigan 48224 (313-830-3300)
- help! who has Crosley parts? Need tuning dial, book, condenser, AFTs, ACE V panel. Also Crosley IV, V & VI, AK-63, 50. Dave Crocker, Tavern Path, Plymouth, Ma. 02360
- HRO-60 coils & QSTs before 1934, Sell 100 QSTs 1934-1935. SASE for list. Joel Levine, 1083 E. 22 St., Brooklyn, N.Y. 11229
- complete audio section for Grebe CR9 or component parts to make one. Trade or cash. Ross Smith, 1133 Strong Ave., Elders, Indiana 46514
- Scott Special Communication receivers & others. 1020's xmitter restorable. Trade: WE-4D receiver for model. I don't need related accessories. Carl Elkins, WD4KWO, 1701 Woodlawn St., Nashville, Tenn. 37206
- Kolster Mod K-45 speaker assy, Stromberg-Carlson Mod. 12-A tone control assy, also factory SVC manuals related to above items. Ted Silva, 1078 W. Upham Apts., San Pedro, Calif. 90732
- 25 tube S.B. Philharmonic. any model, P. Beet, Box 59, Bridgeport, Conn, 06607
- cabinet for Radiola VIII and Thermodyne TF-6; AFT for Tuska 225 and RCA 20. J. Wasilewicz, 229 Saries Lane, Pleasantville, N.Y. 10570

WANTED

- Owner's manual or sales catalog for Koden C-13, Freshman Masterpiece, Radiola 20 & Crosley 50, 51, 52 Paul Neupert, 32 Delton St., Tonwanda, N.Y. 14150
- restoring West, BC receiver, need components & knobs for DA set. Will pay your price or trade. Howard Granoff, 2445 Lyttonville Rd., Silver Springs, Md. 20910
- need large quantity of #957 and 956-A Acorn tubes and ceramic Acorn tube sockets for use in educational projects. Bob Ryan, Anaheim Plaza #101, 500 North Euclid St., Anaheim, Calif, 92801
- "Junker battery sets", early radio parts, other radio mags., Grebe, Radiola (except III), crystal, Kennedy, Federal sets & AK breadboards. D. A. Sindall, 1123 San Jose Lane, Hanahan, S.C. 29410
- radios using Kellogg 401 tubes or other unusual early AC sets especially Mohawk, Marts, Clear- ton, Bell, Wall, patent, Minerva Crusader, Suprex, etc. Will pay top prices. Mel Rosen- tal, 507 S. Maryland Ave., Wilmington, Delaware 19804
- Pre-WWII VHF receivers as National HFC, TR-56, NFIU, Halli- crater Ultra 3-10, etc. parts for superhet described in Apr. 1934 QST. Also history/info on Halli- crater Diversity Revr. John Nagle, 12300 Lawyers Road, Herndon, Va. 22070 (703-820-3066)
- RCA sales literature for racks, phones, TV sets, etc., publications of RCA & CBS on early color TV. Information on pre-1946 RCA TV camera. Carleton Sarver, 256 W. 85th St., New York, N.Y. 10024
- honeycomb coils, any size. Also any make variometers & variocouplers. David Rees, K6JU, Box 448, Mount Shasta, Calif. 96067
- horn for ampion AR-19 base & driver, driver for AK Mod. L horn, detector for AR-1300 crystal detector made by GR/RCA, knob for Bristol 1 stage amp. Mod. A. Joseph Panico, 812 S Clubhouse Rd., Virginia Beach, Va. 23452
- Radiola Mod. 1, II, IV, VII, IX, X, 24, 26 & Grand Crosley Mod. Pup, 52, X. KJ, Tridney Newtop, Tridina Special, S. L. F. Babcock, 3005 Centre Lane, East Amherst, N. Y. 14051 Tel. 716-741-2882
- gric, AFT, any condition and antenna loading coil to restore Crosley Triody 5-83. W5PX, H. P. Bohlender, 2731 Hawthorne Road, North Hills, Pa. 15038
(215) 866-8566

Mail all ads to:
Antique Wireless Assn.
Main Street, Holcomb, N.Y. 14169, U.S.A.
- DeForest items of all kinds for Museum displays in deForest's home town & Omaha. Donors given credit on cards in showcases.
- Write: Lee deForest Museum Projects, Art, Traffer, Curator, 118 Fourth St., Council Bluffs, Iowa 51501 (712-322-0778)
- 2nd AFT, bands, audio sockets & grid leak for AK 32; Write: Tom Thomson, PO Box 634, Iron Mountain, Mich. 49801
- One AK-20 tuning knob. Pete Yaneczek, 835 Brickle Place, Warren Woods, Mo. 63122
- Jump lead, front fork knob and back to Radiola 17. Suzanne King, 55 Golf Ave., Pittsford, N.Y. 14584
- Iron & side cover for WE 25-B amplifier, circuit or pictures of Kilbourne & Clark Type T-5 receiver, see far left.
- Commercial crystal sets, commercial crystal set kits & commercial crystal set transistors. Richard Gagnon, KARR, 5725 Becker Drive, Rochester, MN. 55903
- Tube socket strip for Radiola IV and UV-199 tubes. Henry Watkins, WBYCH, 2168 Greene St., Augusta, Georgia 30904
- Two (2) Federal #35 RF transformers for set being built from scratch. Floyd Lyon, 450 Post St., San Francisco, Calif. 94102
- Single headphone Murdock #56; 1500 to complete set, also Drinkwater Vol. 1 thru 6. Jack Piper, 492 Bay St., Brookhaven, Miss. 36801
- Information or photo of loop antenna on 1931 vintage 4 mHz BC-148 trans/cvr made by Cardwell. Geo. Hauske, 1922 East Indiana, Wheaton, Ill. 60187
- National SW-3 receiver with coils. D. Sheehan, 15 Arcadia Rd., Andover, Mass. 01810
- World Record Sager 6 or 10, pre-1931 Scott radio, also Wurlitzer mod. 700, 600, 850 or 950. 78 rpm juke box, Box or have AFT, bands, other sets to swap. J.G. Hauser, 2438 So., Howell Ave., Milwaukee, Wisc. 53207
- Want WWII military sets, telegraph equipment, grobe CRO & CRQ. Trade deForest D12, D10, F5, Aerola Sr. & others. Battery sets & tubes for sale. SASE for list. Robert Corum, 125 Locust Ave., Wallington, N.J. 07057 (Telex. 201-775-0641)
- Verification cards 1920's to 1950 Early foreign & domestic SW & MW (BC) qsl cards, station letters, letters, any condition. No amateur qsls desired. Interest is history club. Chicago, L.B. Zimmerman, 3448 NO. Harding Ave., Skokie, Ill. 60076
- W.E. B1A tubes, DL250 and DL 1500 honeycomb coils and mount. Also varistor to build superregen set. Rodney Schrock, 402 Lincoln St., Somersett, Penna. 15481
- CB, for RCA ABB12 (Radiola VIII), top of AK "L" horn, info on Willard Roush, AK "L" (Add. your name). Also aflt for Fresh. Masterpiece. Dave Dazer, 172 Bradley Hall, St. Marie, Mich. 49783
- Driver unit for Dicogrand spkr. Driver unit for Magnavox horn spkr. Need schematic for Federal Type II. George Ayers, 3302 N. 9th St., St. Joseph, Mo. 64505
- Any type Philco products service literature, parts, junkers, etc. Any related information from 1919-1950. Need representatives to help provide service for Philco in N.J. and Canada. Ernest Dugan, Box 15370, Dept. OTB, Long Beach, Calif. 90815
- 1/2 green can #2 RFT for AK BD. Swap only; two Karsan AFT's or (2) Thoradore AFT's, OR #631 cond., GE #712 AFT, Kellogg variometer or coupler, Remler or Phenix r.d.'s, Basil Abbott, 4 Banker Hill, Richards- ton, Texas 75000
- Eight lights from 1880 to 1925, carbon & tungsten filas, will pay for working types more for unusual items. To aid new collectors or get started. Jerry Korby, 205 Wood-Ridge St., Wood-Ridge, New Jersey 07075
- Glass dome cover for Philmore crystal set, 1936 Andrew Dene- riany III radio and manual for Kossel 5-50, Trade 1933 Kadette Jr. AC-DC. George Potter, 238 Village Dr., Lewisville, Texas 76677 (214-356-5944)
- Metal lid support for Radiola Grand; 2 tuning knobs for Fresh- man Masterphone (type w/window dial); 14 inch wooden bell section from Music Master horn. Bill Hennen, 324 Forest Ave., Aurora, Ill. 60505
- Type A (Smar) 2 1/2v. Wunder- lich det. tube, 6US eye eec-touches; Scott tube & coil shields, Const. manual & info for Scott Super 9 (16 EB, 5024 AFT). Ajax 45, Rider manuals 1, 2, 3, 19, 22, 23; buy or swap George Harris, 3212 36th St., Lubbock, Texas 79413
- Any Crosley radio, speakers, signs, brochures & parts. For sale; Radio Boy books (40 differ.) Zenith farm set $30, good condition. Jack Bacon, WQYEO, 2840 Alabama Ave. S., St. Louis Park, Minnesota 55416
- Model 7Q (or similar) Philco Grantmaster's clock (p. 112 of Flick of Switch). Also AK breadboards & cathedral radios. A.R. Noff, 620 Auburn Cr., Burlington, Ontario, Canada L7V 3B2
- AFT's & rear audio control knob for Stromberg-Carlson 1-A receiver, and horn speaker for same. Paul Sengel, 8181 Turin Rd., Rome, N.Y. 13440
- W.S.A. Radiola knobs, A-K breadboards, West. DA. Aerola Jr., AK manual, Rider #5, old QSTs, Trade or sell Stromberg-Carlson Mod. 653 chassis. Bob Husted, 200 F. Boca Raton Rd., Boca Raton, Fla. 33431
- If you are interested in selling collection of pre-1930 radio magazines for single price, contact C.P. Byrnes, 1204 Sycamore Terrace, Space #102, Sunnyvale, Calif. 94086
- Baird TV receiver, old grill cloth (12' x 14') 1936 Emerson AL 190 or 210 or 214. Available a 1937 RCA color TV & misc. tele- graph items. Dick Brewster, 434 Diablo Dr., Pittsburgh, Pa. 15241
- deForest Radiophone & Everyday. Crosby Pap., mike rings & springs, wood horn, brass tubes, QST 1910-23. Dean Almendinger, 34 W. Mariel St. Orlando, Florida 32806
- Will buy cathedral, radios, working or not. Also large zenith table sets & consoles. Have sets to swap. Nate Alexander, 2063 N. Farrell Ave. #12, Milwaukee, Wisc. 53211

FOR SALE and/or TRADE
- AK20 Dayton XL25, Fresmath E, Magnavox 10 & other sets plus magazines & books. Send large SASE with 2 stamps on it for list. Rick Ammon, Box 104, Mt. Carmel, Ill. 62635
SOLD

--- Trade Zenith 40, Kennedy XV, AK-9 (#4415), Want Grebe CR-13, deForest D-10, Amrad, Paragon, Murdock, other breadboards, etc. Mike White, 118 Country Drive, Naperville, Ill. 60540 (312-243-2868).

---sell Savage CT-100 color TV w/orig. service info. Best offer over $200 plus shipping. C. E. Clutter, 105 S., 1st E., Richmond, Ind. 46565.

---trade Zenith 40, Kennedy XV, AK-9 (#4415), Want Grebe CR-13, deForest D-10, Amrad, Paragon, Murdock, other breadboards, etc. Mike White, 118 Country Drive, Naperville, Ill. 60540 (312-243-2868).

---sell Stromberg-Carlson 501A, AK-7, recond. sprk., old tubes, SASE for Info. Want info on Precision tube tester Mod. 812, Ser. 19425. Herman Fathe, 10 Jackson St., Stoughton, N.Y. 10074.

---sell 2) Radiola 100 spkr. $40 each, (2) Mod. 100A spkr. $40 ea. Radioa 33 w/tubes $30, Mod. 60 w/tubes $30, Mod. 60 w/earbuds $8. Will pay shipping. Larry Flieg, 5310 17th Ave., Shefield, Alabama 35660.

---sell Ediphone cylinders (used on Edison dictaphone mach.) By trimming a few can be used on Edison phonographs. New blank in orig. box. Case $12. $800. (4) $50 each. Robert Elison, Box 38074, Detroit, Mich. 48239 (Large case shipping $5.)

---Crosley Pop & Acriola Sr., with brassbase WD-1 tube for trade. Want equip. by John Firth (Firco), AK-50 or Kodel 1 tube or crystal set. Larry Wright, 4200 W. Lake Ave. 101-C, Glenview, Ill. 60025.

---sell radios of 1920's, recond. etc. SASE to Arthur Harrison, 1021 Falcon Dr., Columbus, Mo. 65201.


---collecting old car radios? send $ASE and I will put you in touch with several who have a large collection. Bill Laverty, RD #1, Box 62K, Egg Harbor, N. J. 08215.

---sell/swap Riders both Radio 4-22 & TV 1-20 for old magazines or OTB's. Free schematics from Riders Radio. Give make model, circa-allow several weeks. Don Erickson, 5059 Essex, Riverside, Calif. 92504 (714-687-5910).


---large number of battery, AC crystal sets, horns, etc. SASE for list. Prefer pickup. Bob Lane, 2301 Independence Ave., Kansas City, Mo. 64124.


---sell new horn speaker cords 4 1/4' or 6' black @ $3 each, Add $1 for postage per order. Want Victor, Brunswick, Silverton, RCA model 2 button factory service manuals & literature. Bob Goodman, 7940 Ponce, Canoga Park, Calif. 91304.

---huge variety of tubes for sale, SASE for list. Herman Lubinsky, 201 S. Main St., Alhambra, Calif., 91802.

---for sale glass dome covers for Philmore crystal set detectors $1.50 each p/pd. Mike Kennedy, Public Glass Blower, Reymall Manor Shop, Center City, Reymall Rd., Winston-Salem, N. C. 27106.

---must reduce size of collection. Large SASE for list of major items. No components list. Write needs. Charles Hinkle, K4TE, Rte. 2, Box 3, 41 Ferry Road, Fredericksburg, Va. 22401.

---sell many QST and CQ radio magazines, also Popular Science & Popular Mechanics @ 25¢ & 50¢ per copy. SASE for list. James Fred, Rte. 1, Box 41, Cutler, Ind. 46920.

---sell radio magazines, catalogues, tubes, parts & misc. items. SASE to Gary Scheiderich, 6849 Commonwealth Blvd., Parma Hts., Ohio 44126.


---send SASE or List for 77-11 showing radios and parts for sale. Dave McKenzie, K6WSJ, 1200 W. Euclid, Indianapolis, Ind. 31515.

---Kennedy 110 & 220 dials @ $8 ea. Aquila Jr. @ $10. 3 dials for $45, Various, York. Radius J-9 panel, pre-drilled @ $5. RR-5 cabinets @ $10. Handbook & Calibooks to sell Roland Matzen, 388 Concord Rd., Bedford, Mass. 01730 (817-463-3877).

---for audio purging or collector 14 new 2A3 tubes (RCA/Cunnningham/Sylvania). Also 2 used RCA 675 in original cartons. SASE to Charles Kaetel, W6SNK, N50 W6252 Pin Oak Court, Menomonee Falls, Wisconsin 53051.


---sell/swap AK broadboard Mod. II, Radiola Superhet (semi-portable) both advertised in 1921 Oct./Nov. Nat. Geographic, also National Airphone Corp one tube set plus several speakers. SASE. Les Birger, 2238 Cranbrook, Birmingham, Mich. 48019.

---old style AK-55 @ $65., Aquila Sr. (repaired & works) $125., Hallcatter 8-106 85¢ or trade for good SW-3, also one WD-11 @ $20. Bruce Burkhardt, Railroad Ave., St. Michaelis, Md. 21663.


---trade Radiocraft (deForest).
18 year-old David Peckham needs no introduction to members who have attended AWA Conferences since he has served on both the Vacuum Tube and Auction Committees. He is an outstanding radio historian and has been collecting tubes since he was 10. David can identify a rare tube quicker than you can a Crosley 51! In addition to being a radio historian, he is an outstanding organist. He is pictured at the huge Marr and Colton theatre organ in the Clemens Performing Arts and Community Center where he recently appeared with vocalist Ella Fitzgerald. He also entertained members at the Ford Theatre in Dearborn. His speciality: playing background music for Laurel & Hardy silent movies.

CORRECTION ---

WHITE VALVE FOLLOWUP

The White valve pictured and described on page 20, Sept., 1977 OTRB has an interesting ending. First, the photo credit should go to Finn Stewart of Faulconbridge, N.S.W., Australia who owns the tube...

Finn tells us it was given to him by Ben Gow who brought six White valves to Australia from England following WWI. He experimented with the first five and promptly threw them away when the tube lost emission or filament burned out (!)... Fortunately, he kept the sixth sample which is now in Fin's Tube Museum.

Winners of 1977

HOUCK AWARD

HISTORICAL DOCUMENTATION
RALPH WILLIAMS, N3VT
For historical research and documentation of A. Atwater Kent and his radio manufacturing organization and for the detailed data relative to the many outstanding radio receivers of Atwater Kent.

HISTORICAL PRESERVATION
VANCE PHILLIPS, W6GH
For an outstanding collection of early radio artifacts with emphasis on early detector units and early radio literature pertaining thereto. Nominations are now in order for the 1978 Candidates.
Much has been written in the OTB about Ham-built Hartleys, the IDH, the TNT, the PTG, etc., but very little about the early commercially-built transmitters. Early Hams were in-veterate experimenters and builders so it was only natural that they assembled components—tried the circuit and reassembled the parts into another circuit—and then tore the whole thing down again. What need was there of a beautiful panel and cabinet job which hid the loved inner works from the eye? And it was cheaper that way!

In spite of this inborn pioneering philosophy, a few equally pioneering manufacturers began to test the market for their complete transmitters of various types.

In 1910, DeForest advertised its Type O, 10 watt radiophone as available to Amateurs, and in 1920, Type OT-5 and OT-10. The latter could be used on 110 DC or 32 volt DC using dynamotors. Radioland of Jamaica, New York announced a 5 watt.

In 1921, DeForest brought out the Midget OT-3 (5 watts) and the Oscillon (500 watts). Adams-Morgan introduced the Paragon 2-5-U (10 watts fone, CW and ICW). Benwood advertised a 10 watt transmitter. Westinghouse marketed the Model TF, 20 watt CW—10 watt fone and General Electric produced the ET3619 a similarly rated rig. These latter two were sold by RCA.

In 1922, Tresco of Davenport, Iowa, built a 5 watt, and in 1923 A. H. Grebo introduced a 10 watt Deluxe CW.

Note that this development of transmitters followed that of vacuum tubes. 1919-1920 was surplus Western Electric VT2, DeForest V2 and VT21 tubes started the move to undamped waves, and in 1921 RCA UV202, UV203, UV204 and appropriate tube rectifiers provided the big push. Amateurs, during this same period, experimented with simple 5-watt rigs and those of all sizes up to quite complex 1000 watt fone or CW beauties. With this background, let's consider one unit bearing the famous name of Paragon, the 2-5-U Radio Transmitter, from the standpoint of our present knowledge of the art. See picture Figure 1.

Early Hams spent hours pouring over catalogs, appreciating fine cabinets and the "technical" look of a good panel layout. Modern collectors also have this 'feel' and so the first job is to refinish the cabinet, polish the panel and metal parts. There is no substitute for stripping the wood, re-staining, and applying elbow grease and real wax. Then carefully remove the old engraver filling and refill with a paint stick.

Paragon parts are not very heavily plated and require great cleaning and polishing care. A previous owner of our particular 2-5-U had replaced the mic and key binding posts with the type which have holes to take cord tips. The original posts are smaller than the power posts at the right side of the panel but fortunately the buzzer battery posts remained. Our good friend, Floyd Bennett, turned out some matching posts and we had them plated along with the tap switch levers.

Because of the mad scramble in the 20's on the part of manufacturers to supply the demands
for components and because of the rapid changes to effect improvements, parts in quantity were not always available to Adams-Morgan. We find the 2-5-U sold thru different outlets equipped with three different types of RF meter. The first models used Eldredge 0-1 Amp. Hot Wire meters and some later models used General Radio 127-A 0-1 Amp. Hot wire meters. Then there was the raging argument as to whether a thermo-couple type meter was better than the hot-wire type. So we find later 2-5-U transmitters sold thru Montgomery-Ward equipped with Jewell Pattern 64 0-1 Amp. Thermo-couple RF meters. QSL cards in those days often stated radiation as being so many thermo-couple Amperes.

Another production variation concerned the number and placement of panel binding posts. Early models had six standard size posts on the right margin with labels, starting at the top, A (Ant), B+, B-, A+, A-, and E (gnd). Along the bottom of the panel were six smaller posts arranged in pairs and marked from left: M (mic.), K (key), and B (bat.).

Later models had six standard posts on the right labeled: A (ant), + BB -, + AB N -, the E(gnd) post being relocated at the bottom between the Plate and Wavelength tap switches. Along the bottom now were placed five smaller posts labeled: M-K (common), M (mic), K (key), and B (buzzer battery).

The refurbished 2-5-U is now on display at the Museum. It was put thru its paces on a dummy load with a variable condenser substituting for the conventional antenna capacity. These old sets, like all early tube transmitters, had their quirks. Frequency instability was one, and we found that all panel adjustments interlocked. Buzzer ICW and Fone modulation produced sidebands like an FM transmitter and CW keying chirped like the robins. However it was readable on a regen receiver. Using a storage battery and a well-filtered plate power supply, the carrier note was acceptable, but with AC on the filaments and a motor generator that antennas sway in the wind, swaying trees in proximity change the capacity, and moisture changes in the ground affect the resonant frequency, a rolling ship could almost make the shore operator seasick! Telephony or ICW was not so vulnerable but heterodyne CW reception was sometimes almost impossible.

Note that the antenna current also flowed thru the .01 condenser---the instruction manual, however, did recommend RF chokes in the B supply, and filament bypass condensers if an AC source was used. Depending upon the impedance matching ratio (the setting of S1 and S2 to obtain the rated tube load and desired wavelength), the stability of frequency was more or less affected by changes in tube parameters caused by heating and keying.

Coil L had a tap range of 6.5 to 70 microhenries and the variometer 160 to 540 microhenries. These rather large values permitted operation from 160 to 352 meters (1875 - 923

---

**Figure 2**

**ORIGIN**

CIRCUIT

OF

2-5-U

---

Later models had six standard posts on the right labeled: A (ant), + BB -, + AB N -, the E(gnd) post being relocated at the bottom between the Plate and Wavelength tap switches. Along the bottom now were placed five smaller posts labeled: M-K (common), M (mic), K (key), and B (buzzer battery).

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Coil L had a tap range of 6.5 to 70 microhenries and the variometer 160 to 540 microhenries. These rather large values permitted operation from 160 to 352 meters (1875 - 923
Tests so far were made in the design range of wavelengths. A little quick calculating on the ARRL lightning calculator indicated that the set might get 80 meters. Could we get enough stability and power output to make a QSO? We fired it up using a storage battery filament supply and a well filtered 350 volt RAC supply. Two UX-210's warmed the inners. It started at 150 meters and slowly worked downward-decreasing the dummy load condenser and carefully working the antenna tap switches and variometer to maintain oscillation and the best output power. Somewhere on the way we lost the hotwire ammeter reading and the note got fuzzy but the set oscillated at 60! Body capacity effects were terrible and we tuned with wooden rods. Keying? WOW! If you tuned in the dots you couldn't hear the dashes and vice-versa!

Something had to be done, so we disconnected the grid to variometer lead and connected a 3584 crystal and 5K ohm grid leak back to the filament. The note cleared up and keying was acceptable but the power output was only a few milliwatts. Too many losses.

Next a major circuit revision was undertaken. OM Hartley was called into action. The B+ lead was moved up to the first tap and the grid lead taken off the variometer and connected thru a grid condenser to the bottom of the coil. The 5K leak was left from grid to filament. Result—6 turns in the grid. Then the plate lead was taken off S2 and connected to S1. Result—a variable plate coil. Since the plate coil was hot with high voltage, a .01 condenser was connected between the A post and S1. These changes are shown in Figure 3.

Hartley requires a tank condenser and so a .0005 MF Wireless Specialty variable condenser was attached to the A post and (to sneak power to my doublet) to a coax connector. Lo and behold, after juggling the variable condenser and S1, with the key down; the wattmeter showed about 8 watts, while the 210's glowed a dull dark red.

A little more juggling and the receiver said power was going out on 3584 kh-more or less. Come 4:00 p.m. we blasted out a call and raised W2AFK, W2ARX and VE3AFW. They were generous in their reports but had to admit the keying was chirpy. Next morning we worked W1DM with like reports thereby fulfilling the catalog claims.

We didn't dare try phone or ICW for reasons stated above. We don't know if Paul Godfrey is grinning or if he turned over in his grave at the post's license we exercised but we did it----or did he? Anyway, we put it all back together again, and the Paragon 2-5-U rests at the AWA Museum.

OPEN WINDING IN HORN LOUDSPEAKER

Jerry Korb reports he was faced with the unpleasant task of re-winding an open coil in an Atwater-Kent horn speaker. Gritting himself for the lengthy task, he pulled the coil out of the housing and started--but, you guessed it—he found a poor solder connection at the terminal (acid core?) that had eroded leaving an open circuit. Quick application with the iron and the speaker was working.... We might add, this same problem frequently occurs with old audio transformers. Always check the terminals for a poor connection.

MAN WHO MADE THE WD-11 TUBE ALIVE

Howard Schrader reports that Lee Sutherland, the Westinghouse engineer who designed the famous WD-11 tube is living in Cardwell, N.J. and recently enjoyed his 88th birthday....
SHORTWAVE SPARK TRANSMITTER

Pictured is an unusual 60 meter rotary gap spark transmitter patented 56 years ago -- a time when few vacuum tubes would oscillate at low wavelengths. The success of this high frequency transmitter will never be known since spark operation was being phased out about the time it was patented in 1922.

From what we can gather, the two ring rotary gap was also the primary with the flat strip helix at right being the secondary antenna coil. The set used a Thordarson 13,000 volt 1/2 kw. transformer and a .01 condenser.

Joe Pavek sent AWA the picture with the 6-page Patent papers. Can any AWA member shed more light on this unique device?

Old time codes: There is a difference of 11 characters between Morse and Continental in addition to punctuation. Note the old time Continental punctuation.
A Must book for the hobbyist or collector

Saga of the Vacuum Tube

This exciting, new book records the history of the evolution of the thermionic vacuum tube. The author has devoted his life to pursuing the complex genealogy of the vacuum tube. This fascinating study not only traces the history of the tube in the United States but presents little-known information gleaned from French, English, Dutch, and German pioneers.

It has 494 information-packed pages beginning with electrical developments prior to 1880 and concluding with the early days of broadcasting, 1920-1930. Included is a ten-page index of tube types. Many historical photographs and diagrams are presented to further describe the text.

No. 21470 (softbound) $9.95 List Price
No. 21471 (hardbound) $19.95 List Price

STEINMETZ ERA 1892-1923

The latest in a series on the history of General Electric has been released and in our opinion is better than the first issue (Edison Era).

The Steinmetz Era covers a period of great development, particularly in radio. The large 6¾” x 11” volume, 74 pages, is 75% pictures with description making up the remaining 25%. The photographs range from early super-power electrical installations to Alexander alternators, electric cars, famous people, etc...Want a copy?

Send $2.95 to: Bernard Gorowitz, CRD K-1, General Electric Co.
P.O. Box #8
Schenectady, N.Y. 12301

HISTORICAL REVIEW

"Electronic Design", Sept., 1977

The Electronic Design Editor "pulled all the plugs" on this issue with historical articles covering everything from the work of Samuel F.B. Morse to satellite to optical communication—all in one big issue. Seldom seen pictures (unusual shot of Alexander Alternator at Rocky Point), detail development of television, FM, etc., making it one of the best historical series printed in recent years...

MUSEUM OF BROADCASTING NEWS LETTER

The Museum of Broadcasting (N.Y.C.) described on page 36 in the June 1977 0TB is now publishing a Newsletter. Vol. 1, No. 1 (Fall, 1977) tells about new acquisitions at the Museum, a feature article on Edison's phonograph, etc. plus a lengthy list of books covering broadcasting and the arts which are available to members at a discount.

The NEWSLETTER will be printed quarterly and is one of the museum membership benefits ($20 annual dues). Interested? Write:

Museum of Broadcasting
One E. 53rd Street
New York, N.Y. 10022

HISTORY OF HAM RADIO "CQ" Magazine

"CQ" has been running an interesting series on radio history by Eric Shalkhauser, W5CI. The Dec. '77 issue will be of special interest to AWA members since it covers the period immediately following WWI. The author tells about the first ARRL Convention in Chicago (Sept., 1921) plus a QST (Jan., 1920) reprint describing and picturing R.H.G. Mathew's station 9ZN. The June, 1977 0TB (page 7) tells about Matty--this article tells about his station......

Good copy.

EDISON
The Man Who Made the Future

is the title of a new biography on Thomas Edison written by Ronald Clark and published by PUTMANS, N.Y.S. at $12.95 (W2AY)

Review:

"It is at once a fine piece of Americana, a fascinating portrait of the inventor of the modern age and a revealing study of the creative process in action."

--Publishers' Weekly
DAWN OF SEMI-CONDUCTOR AGE
History of solid-state development. Exceptionally well illustrated.

OLD RADIO MAGAZINES
Do you collect (and read) old radio magazines? Then don't fail to read this article by AWA member John Nagle, K4WJ.

WWII SURPLUS STORY
Review of the post-war surplus market. Another interesting story by Bill Orr.

NN3SI AT THE SMITHSONIAN
Descriptive writeup of amateur station NN3SI at the Smithsonian Institution. All four of the above articles appeared in one magazine: the 1977 "Wrap-Up" issue of HAM RADIO HORIZONS.

NATIONAL SW-3 RECEIVER
If you're thinking of purchasing a SW-3, we strongly advise you to read Bill Orr's article in Feb. '78 "CQ" magazine. Bill goes into great detail on the various models (schematics, etc.) plus a chart showing the different types of coils. Did you know in addition to general coverage and bandspread coils, there were also three different types: the 10-20, 30-40 and 6-70 series?

BRITISH WIRELESS SHOW
We just reviewed the illustrated program for the CLASSIC RECEIVER SHOW held at the Victoria S Albert Museum, London. It was a great show! Writeup and photos in next issue of QST.

HUGE RADIO BOOK LISTING
A.W.A. recently received the latest catalog from Bantam Books which lists over 1000 early radio books and pieces of literature for sale. Interested? Send $1. to cover handling to: BANTAM BOOKS "Frankly", Dayman's Hill Tiverton, Devon EX15 4LL ENGLAND

$1.5 MILLION COLLECTION A DUD
Several members investigated a collection (Fall, 1977) which the owner would sell only in its entirety for $1,500,000! Excluding the phonographs, it was a great "buy" (?) for one who wanted a warehouse of consoles and piles of 3-dialers....

STUBBLEFIELD AGAIN!
Some publishers still pay authors to write about Stubblefield, the INVENTOR OF RADIO. I wonder why? See Nov. '77 issue of HIGH FIDELITY magazine...

On the subject of FIRST, may we remind you to look again on page 30, June, 1976 QST under the title LECTURE. Joseph Henry was transmitting and receiving "oscillatory electric discharges" in the 1840's...pre-dating ALL other inventors in cluding Hertz...

TELEGRAPH KEYS
Dec., 1977, page 18 QST magazine
Brief review of Lou Moreau's key collection by Joel Kleinman.

Joel has written a 2 page interview with Lou who tells how she started collecting keys. The article has several pictures including a 1848 key made by Thomas Hall of Boston. We found this of great interest since it helped us date a similar key in the A.W.A. Museum.

VOLK'S RADIO
Of the several fine articles read in recent club papers, the one I found most fascinating was one titled VOLK'S RADIO in the Dec., 1977 issue of the Canadian Vintage Wireless Association's paper, "The Cat's Whisker". The Volk radio was a product of the 1930's.......the need to have a low cost radio during Hitler's regime. The author, Maurice Chaplin writes in great detail on the subject -- a 2 tube receiver plus rectifier. Interested in joining CVWA? Write to: Jack Knott, 69 Rossburn Dr., Etobicoke, Ontario, Canada, SAUCEPAN SPECIAL

An equally interesting receiver is described in the British Vintage Wireless Society's December Bulletin where the author, Rosaleen Smyth describes a low cost receiver designed for use by natives in Rhodesia and Nyasaland in the late 40's. A SW set, it was housed in a kitchen saucepan!
Communications news

BRIEF REVIEW OF RECENT EVENTS

Razing of Radio Tower Signals End of an Era

Rocky Point—An era in world communications will end this week when the giant radio transmitter tower owned by RCA topples unceremoniously to the ground.

The 400-foot structure, the tallest on Long Island, has stood since 1921. It was one of 12 that originally constituted the broadcasting antenna of the largest, most powerful transmitting apparatus in the world, dubbed "Radio Central." Beginning in 1921, when the antenna system relayed a 67-word message from the White House to 28 countries, the station linked the United States with the world.

The tower’s beginning was more propitious. According to RCA officials, American leaders became concerned during World War I that the United States had no domestically owned and operated communications system. Telefunken, a German firm, had an operation here including a transmitting station in Sayville, and Marconi’s Wireless Telegraph Co., Ltd., which was based in Britain, also had facilities in this country.

RCA, originally Radio Corp. of America, was formed in 1919, primarily by General Electric Co., at the behest of the Navy. One of the infant corporation’s first moves was to create a major transmitting station. Rocky Point was selected as the site, according to Lundquist, because land was available and cheap. RCA bought its original 10-acre tract for $35 an acre.

The 12 transmitting towers were erected amid the scrub oak wilderness of the North Shore. A special train took wireless experts and foreign dignitaries to the site to inaugurate the facility on Nov. 5, 1921. (Ed. note: This was the last of several towers used on the antenna for their longwave transmitters which were originally Anderson alternators.)

FCC PROPOSES PROHIBITING radio transmissions by ship stations when the vessels are on land (Docket 21405). The proposed amendment to Section 83.1778, the FCC said, resulted from increasing complaints about radio transmissions from vessels on land, such as those beached in driveways, docked at marinas, and trailer-

Crash Kills Inventor Of Color TV

HARRISON, N.Y.

Peter Goldmark Sr., the former CBS Laboratories director who developed the long-playing record and color television, has died in an auto crash. He was 71.

Goldmark Sr., of Stamford, Conn., was driving southbound in heavy morning commuter traffic Wednesday on the Hutchinson River Parkway when the accident occurred.

His car moved from the driving lane to the passing lane and caught a second car’s right front bumper, driving it into a guardrail before hitting it broadside. Westchester County Parkway Police said.

"Dr. Goldmark’s tragic death comes as a profound shock to all who knew him," said CBS Board Chairman William S. Paley. "His remarkable contributions to the advancement of electronic technology assure us his high place in the annals of 20th Century scientific progress."

LAST MINUTE NOTES--
Congrats to the group that manned KMCC during January commemorating the 75th Anniversary of the first Transatlantic two-way contact.

--Try and attend the huge outdoor/indoor flea market at the Rochester Hamfest, May 20. 15 acres of "goodies" for sale. Write R. A. R. A., Box 1388, Rochester, N.Y. 14603 for complete information.

--and don’t forget the meeting and auction of old receivers and other gear at the AWA Museum May 13. See page 31 for details.

--and lastly, don’t forget to hand in your score sheet for the Old Time Transmitting Contest.

Museum Is Closed

EAST BLOOMFIELD

Bruce Kelley, curator at the Antique Wireless Association museum, in the Historical Society Building on South Avenue, reports it is closing for the season. He reports that approximately 4,000 viewed the exhibit in the short time it was open in 1977. The guest books shows signatures from California, England, New Zealand and Moscow.

In addition the museum had several tours of college and grade school students as well as Boy and Girl Scout troops.

Besides the 15,000 pieces of radio and television equipment, the museum had an additional exhibit of early phonographs to celebrate the 100th anniversary of Thomas Edison’s invention of the machine in the fall of 1877.

The museum will be open May 1. Groups interested in touring the museum should schedule their visits before that date. Admission is free.

[Reprinted permission DAILY MESSENGER]
**SCHOLL MEET**

**SATURDAY, MAY 13**

East Bloomfield, N.Y.

2 P.M. **AWA Museum** Open
   Flea market
   Register equipment
   for Mini-Auction

3 P.M. **Locust Lodge**
   (3 miles west of Museum)
   Business Meeting

4 P.M. **Auction** of old gear

5:30 P.M. **Dinner** (buffet— all
   you can eat...$5.95)

6:30 P.M. **Entertainment**

Please write or telephone Lincoln
Cundall if you plan to attend.
69 Boulevard Pkwy., Rochester,
N.Y. 14612 (Tele. 716-663-0856)

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**BACK ISSUES**

Historical reference and
good reading....

The following **OLD TIMERS BULLETINS** remain in stock. Make out check to A.W.A. and send to:

**DEXTER DEELEY**

6 Briar Circle
Rochester, N.Y. 14618

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Vol. 1 #2 Vol. 1 #3 40¢ each

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**COMING EVENTS**

**ANTIQUE WIRELESS ASSOCIATION**

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<td>MAY</td>
<td>Indiana Historical Radio Society and A.W.A. Meet Auburn, Ind. May 5 and 6</td>
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<td>A.W.A. Museum Opens May 7</td>
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<td>A.W.A. Spring Meet, Museum &amp; Ionics, N.Y. May 13</td>
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<td>N.Y.S. ARRL Convention Rochester, N.Y. May 20</td>
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<td>JUNE</td>
<td>Rome Hamfest (Exhibit) Rome, N.Y. June 3*</td>
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<td>South-East AWA Regional Conference, Winston-Salem, N.C. June 9, 10 and 11</td>
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<td>JULY</td>
<td>Southern Tier A.W.A. Meet Breesport, N.Y. July 15</td>
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<td>Central N.Y. A.W.A. Meet Kirksville, N.Y. Aug. 26</td>
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<td>SEPT-</td>
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*To be confirmed

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**RADIO**

Collectors of Radiola superhets are advised to read a series of articles by John Wolkonwicz in the Dec. '77 and Jan.'78 issues of "Radio Age." Informative, well written and with pictures.

**COLOR OTB COVER**

The Association received many flattering compliments on the December Bulletin’s color cover. It was our FIRST and came as a surprise since we hadn’t ordered it. Our printer, Don Ray felt the December issue should be something special—so after much trial and error with color separation negatives we have the BOY AND HIS DOG! The cost? Nothing. Don gave his service to AWA as a Xmas present. Thanks Don.

---

**SILENT KEYS**

BILL BARNES, K2LT, ex-W8SZG
Syracuse, N.Y.

R.H. ROHAN, ex-9EKY
Boynton Beach, Florida

WICK STEED, Albany, California
A.W.A. HISTORICAL MUSEUM
East Bloomfield, N.Y.
Bruce Kelley, Curator

Museum Hours:
Sunday ——— 2 to 5 P.M.
Wednesday ——— 7 to 9 P.M.
May through October
Open to groups by appointment
Tele. (716) 657-7499
Free Admission
Museum Telephone:
(716) 657-6260

MUSEUM PHOTOGRAPHS
Sharp, professional color photographs of AWA Museum and equipment now available at cost. Write for information. Al Crum, 16 Costar St. Rochester, N.Y. 14608

New Equipment in A.W.A. Museum


WDAE TRANSMITTING EQUIPMENT
The Association, ever on the lookout for historical equipment was the recipient of several pieces from Florida's pioneer station WDAE [Tampa] donated by Rex Matlock. The three pieces consist of a S.A. modulation monitor temperature control crystal oscillator and frequency monitor. Although not part of the original station which went on the air May 15, 1922 (Florida's FIRST broadcast station) these units are in the 50 year range and have historical value.

UNION COLLEGE AND RARE TUBES
Union College (Schenectady, N.Y.) Electrical Engineering Department proved to be a gold mine when they gave Ed Feeding a collection of early measuring instruments plus tubes for the Museum. Some dated back to the 1880's and included was a rare and exotic light galvanometer. The outstanding gift, however, was a small collection of experimental vacuum tubes made between 1913 and 1919 by Irving Langmuir and White at General Electric.

The collection included a wire plate triode (page 143 SAGA) and the original "P" tube (page 145 SAGA). It would be difficult to evaluate these extremely rare tubes.

ARTHUR BATCHELLER DONATION
A surprise gift came from Arthur Batcheller, the Grand OM of the Radio Inspectors. With Bob Flanagan acting as intermediary, a large assortment of radio and telegraph equipment was deposited at the Museum including a WWI Lowenstein triple detector and Lowenstein Tone detector. Of special interest was a very unusual key which will be featured in a future OTB.

Arthur was New England A.I. out of Boston before WWI. Following the war he was placed in charge of the 2nd District, a post he held until his retirement in 1956 -- a total of 36 years. Thousands of old timers in the N.Y.C. and Jersey area have his signature on their original license.