“The Decision”
COMING EVENTS

ANTIQUE WIRELESS ASSN.
Regional Conference
SOUTHERN MEET
JULY 11 - 12
HOLIDAY INN NORTH
3050 N. Cherry St
Winston-Salem, North Carolina

PROGRAM

Friday P.M.
REGISTRATION and get-together for early arrivals

SATURDAY
Morning: Antique radio display
Tour of Old Salem
for the ladies
Afternoon: FLEA MARKET
Antique radios Components
Magazines, etc.
Evening: Social hour
BANQUET - Prizes
Guest Speaker:
WAYNE NELSON, W4AA
Registration: $2.00
Banquet: $5.00

Radio Amateurs: Talk-in on 04/64

For full details, registration card and Motel information, write:
L.W. ELIAS, W40BT
3939 Polkinder Drive
Winston-Salem, N.C. 27106
"EVERYONE WELCOME!"

WHAT HAPPENED?

A.W.A. made a tape of early radio signals for the Annual Washington QCHA
Chapter Banquet. A check at W42M's prior to setting up the tape deck and
amplifier at the banquet indicated everything working--but not so when
it came time to play it back to the audience.

Kelley (W2ICE) said there would be some realistic static added to the
simulated SOS/007 signals of the sinking TITANIC--but not the severe
electrical storm that came out of the loudspeakers!

A jarring loose connection with 50 watts of audio was somewhat discomfiting to a patience audience. A later check found two Phillips screws loose on the rear deck panel. Moral: Keep everything up tight!

ANTIQUE WIRELESS ASSN.
Regional Conference
and
INDIANA HISTORICAL RADIO SOCIETY
Summer Meet
SATURDAY JUNE 21 PURDUE UNIV.
West Lafayette, Indiana

PROGRAM

Friday -- 8 P.M. -- 10 P.M.
OPEN HOUSE at home of Gary Vierk
2505 Kickapoo Drive, Lafayette, Ind. Informal welcome to distant travelers. Cabfest and view old gear.

Saturday
PURDUE MEMORIAL UNION
Stewart Center Room 306
8:00 A.M. REGISTRATION Coffee and doughnuts. See one of the largest regenerative receiver displays ever assembled.
9:00 A.M. SWAP SESSION begins. Bring your old gear, tubes and books.
11:00 A.M. AN AMERICAN INVENTOR: Life Story of radios greatest inventor. EDWIN HOWARD ARMSTRONG Rare pictures and tape interviews presented by Bruce Kelley, W2ICE
12 NOON LUNCH Union Cafeteria
1:00 P.M. OLD TIME RECEIVER CONTEST All receivers must be in Room 306 before 1 P.M. Contact Ross Smith for information.

CLASS I Regenerative - battery - commercial type - 3 or less tubes
CLASS II Regenerative - battery - homebrew type - 3 or less tubes
CLASS III Crystal set (pre-1921)
(Commercial or homebrew)
CLASS IV Crystal set (1921 & after)
(Commercial or homebrew)
1:15 P.M. LADIES PROGRAM
Assemble in Room 306
2:00 P.M. THE WIN STORY (Room 302)
Originated by Jack Gray and presented by Elmer Schubert, W0ALW and John Bruning, W6DR
3:30 P.M. FREED RADIO Movie made by the Freed Radio Co. in the late 20's showing receivers being made from raw stock to final shipping.
5:00 P.M. FINAL VIEWING AND SWAP SESSION in Room 306.
6:30 P.M. ARMSTRONG BANQUET Room 250 Purdue Memorial Union
OPEN HOUSE at Marshall Howenstein
WRITE FOR FULL PROGRAM AND REGISTRATION CARD: Indiana Historical Radio Society
245 N. Oakland Avenue
Indianapolis, Indiana 46201
Collecting vintage television sets can be very interesting. We have all seen numerous examples of the 1946 and later versions, but here, we will examine an RCA Television-Radio combo, model TRK-12, which was introduced at the New York World’s fair, in 1939. This set was one of a series that year, which included a 5 inch model, a 9 inch console, and this 12 inch version.

Because of its narrow deflection angle, the type 12AP1 cathode ray tube was too long to install in a horizontal axis, and was mounted in the cabinet vertically, with a mirror in the cabinet lid for viewing the screen. The sound channel was AM, and the 7300 Volts for the picture tube was derived from a 60 cycle power supply, using a type 2V3G tube.

Channel assignments were similar to those currently in use at the bottom of our VHF band, with old channel 3 coinciding with the present channel 4 (66-72 Mc.). Actually, the fine tuning control provides enough latitude to permit the set to tune in channels 2 and 4, here in the Detroit area. Also, this receiver was designed for a 441 line scanning system and the horizontal hold control provides sufficient range to lock in on our 525 line system. There is no horizontal AFC on this set. So, with these key items within range of adjustment, this old gal works rather respectably today!

Television sets of that day had no audio power amplifiers on them, and depended on the radio chassis for the audio. The accompanying receiver chassis has a push-pull 6F6 output, driving a 12 inch speaker. The audio amplifier in this particular set has a wafer switch on the chassis that permits optional inverse feedback...a most unusual feature.

Since Television first came to Detroit in 1947, this set is not a native to this town. I found it on Radio Row, in New York, in 1954, shortly before my separation from the Army at Fort Monmouth, N.J. It was shipped home for me as household goods, and has been one of my treasured pets ever since. All of the tubular capacitors were replaced in 1956, or thereabouts. The electrolytics are all original, and are some of the first of the twist-tab types to appear.

This set has been out of use since about 1957. After these pictures were taken, I fired up the old girl, and she still works just fine. A quick squirt of tuner juice will put her back in prime order, and ready for the next 36 years!
CALENDAR OF EVENTS

JUNE 21  CENTRAL REGIONAL MEET
         Purdue University
    West Lafayette, Indiana

JULY 12  SOUTHERN REGIONAL MEET
         Holiday Inn North
         Winston-Salem, N.C.

SEPT. 13  A.R.R.L. NATIONAL
         CONVENTION
         Reston, Virginia

OCTOBER 2-3-4  NATIONAL A.W.A.
         HISTORICAL CONFERENCE
         Sheraton Motel
         Canandaigua, N.Y.

OCT. 16  NEW ENGLAND REGIONAL MEET
         New England Wireless Museum
         East Greenwich, R.I.

NOV. 9    ANNUAL A.W.A. BUSINESS
         MEETING and DINNER
         Holloway House
         East Bloomfield, N.Y.

---------OVERSEA MEMBERS---------

[Dues via Airmail $8 per year]

NEW GEAR AT A.W.A.

TUBES: W1MV, Bob Ryan
BOOKS: W2QO, W4ZM, Bob Ryan
MISC.: W1MV, W4AA, VK4MR, Bob Ryan

A.W.A. EMBLEM -------
The Committee is exceptionally pleased with member’s response on design for an A.W.A. emblem. In fact, they may face a problem making the final decision since there are some very clever combinations of the letters A-W-A to be judged.

Designs are still being received so the final results will not be announced until the next Bulletin. Thanks for your time and interest...

EQUIPMENT SURVEY

Member’s response to the Equipment Survey sheet sent in the last Bulletin has been excellent. The material is being sent to Dr. Finn at the Smithsonian where totals will be tallied and other information catalogued. There are no plans at present to release results or print a Museum Listing.

The survey proved very interesting. Several large collections came to light as well as many rare pieces of equipment. We were quite surprised with the number of tube and book collections which appear to be on the increase. Several members sent samples of their cataloging system which enabled us to see how others were identifying their equipment. A big THANKS for your cooperation.

ASSOCIATION RECEIVES VALUABLE TUBE COLLECTION

Bob Ryan (Anaheim, Calif.) recently donated a very valuable collection of early vacuum tubes to the AWA Museum. In addition, Bob also gave the library a series of historical tube and lamp books which will provide a source of excellent reference.

The tube collection was highlighted with a Fleming valve and an extremely rare Marconi (Round) Type "N" tube -- one of the first practical British triodes. These very fine acquisitions will be housed in a special lighted display cabinet in Armstrong Hall. A big THANKS to Bob Ryan!

NEW TYPEWRITER AT A.W.A.

Fourteen years ago the Association bought your Editor a used typewriter to type parts of the Bulletin. The old machine has held up well through the years but had its limitations.

Special headings, articles and other work was done by the printer or different secretaries with their IBM Selectrics.

Checking the Treasury found a few extra dollars -- and now we have a new machine. Hope you like it...B.K.
**1912 MOVIE AT CONFERENCE**

A.W.A. recently purchased a roll of rare movie film from the Titanic Historical Society to show at the 1975 Conference. The film is a series of excerpts taken presumably from 1912 News Reels, edited and reduced to 16 mm. size.

The opening pictures show the great vessel at dock before her ill-fated voyage. This is followed by random views of icebergs in the north Atlantic taken at a much later date.

Now for the highlights: the SS Carpathia is seen entering New York Harbor followed by closeup shots of rescued passengers being interviewed. Then they zoom in on a New York City street and a building where the hearings took place -- and who do you see? -- none other than Guglielmo Marconi as he appeared in 1912 -- looking into the camera smiling.

Members interested in the Titanic and other White Star vessels of the period such as the Olympic may wish to join this unusual organization. Write:

Ed Komuda, Titanic Historical Society
Box 53, Indian Orchard, Mass. 01051

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**POSTAGE PROBLEM------**

The last Bulletin carried $.30 postage (28 page OTB- $.20, 32 page OTB- $.30) It is rumored postage will go up at the end of the year increasing the same $.30 to $.35 which is prohibitive when Annual Dues are only $5.

Pres. Brelsford presented the problem to the Board offering the following choices:

1. Decrease number of pages to keep postage down.
2. Increase dues to make up for additional postage.
3. Go to Third Class mailing at much lesser cost.

They agreed to 3rd Class mailing which will allow A.W.A. to hold dues at $5 and at the same time increase the size of the Bulletin since 3rd Class allows greater weight.

The change is not all on the plus side however. 3rd Class mailing requires ALL material in the envelope to be exactly ALIKE. This means the Treasurer can no longer include his dues notice or will it be possible to include selected Registration Cards and notices for Regional Meets.
SOLID-STATE TUBE REPLACEMENT
IN EARLY RECEIVERS
By Fred Rice, WA3K1C

Ed. note: Collectors of early receivers, like antique car buffs, insist on original components and frown on substitutes or change in design. This makes it difficult (and expensive) to operate certain early broadcast receivers which use expensive tubes such as WD11's. A further deterrent is the reluctance to apply plate voltage thru highly susceptible AFT's which seem to open most readily after 50 years of non-service.

Fred Rice solved the problem by using low voltage solid-state substitutes. Most noteworthy is the fact there was no need to change the wiring. A.W.A. members attending the 1974 Conference witnessed Fred's demonstration of a Radiola III with balanced amplifier operating a loudspeaker powered only by a small 6 volt battery. This prompted your Editor to find out how he did it...read on..

Having read Bob Morris' article in the June '74 QTB telling of using transistors in an Atwater-Kent breadboard, I decided to try and do the same in other early receivers but without changing the wiring.

I also wanted to simplify the problem of handling delicate Mosfets. The answer was the use of an inexpensive N-channel J-Fet such as Hep-801 which works nicely and found easy to handle.

The first receiver to be transistorized was a Radiola III which I had purchased at a recent hamfest for eight bucks. This was an ideal choice since they are quite popular and used the hard-to-find WD-11 tubes.

My objective was to make plug-in units to REPLACE each tube and NOT change the wiring. Obtaining several defunct WD-11s (which was not hard since 9 out of 10 have open filaments) I removed the glass envelope and rewired the empty tube base as shown [Fig. 1].

A 2200 ohm resistor was found to be an ideal source resistor (equivalent to a cathode resistor). This eliminated the need for any fancy bias requirement for the J-Fets. Neither was a by-pass capacitor necessary since the circuit already had too much gain and added capacity could make it unstable.

OPERATION: Plug-in the re-wired tube base sockets, tie all the B+ leads together and fasten to the PLUS (+) of a 6 volt battery. Short all the remaining leads [A,A,C,B] and fasten to [-] NEGATIVE battery terminal and you are in business!

OTHER RECEIVERS: The same procedure was tried on an Aerola Sr. belonging to Ron McClellan. The set worked beautifully. There is one drawback, however, to these J-fets: they won't handle much power so don't expect to drive a loudspeaker unless you have an amplifier such as the balanced audio amplifier with the Radiola III.

(Cont. on next page)
I have also tried the solid-state replacement units in a Radiola 25. Here I had to make a slight change: there was a need to pad the second I.F. "tube" with a 1000 PF capacitor from "P" to "F" pins to prevent oscillation. Rotating the loop acted as a perfect volume control! Using this set in Philadelphia [Pa.] I was able to receive CHML in Ontario and numerous other stations with loudspeaker volume.

Closeup of Fred Rice's Radiola III and amplifier with solid-state tube replacements. Don't be alarmed by the WD-11 tube in far right socket--it was placed there for photograph to show difference.

A.W.A. PARTICIPATION

A.W.A. recently exhibited equipment at two events:
FORMAL OPENING of new educational FM/TELEVISION Station WXXI. The occasion called for a display of early television receivers to show past and present. Our display consisted of a Jenkins scanning set circa 1928, a Pilot 3" set, a CBS mechanical color scanner and an Iconoscope tube. In addition, the Association showed several early broadcast sets and horn speakers.
RADIO WEEK at the Rochester MEMORIAL ART GALLERY found A.W.A. with a large display of old receivers and speakers. The accent was primarily on cabinet design of the 1920's and 30's.

SPRING MEET

ANTIQUE RADIO CLUB OF AMERICA
Friday and Saturday June 6-7
Valley Forge Hotel, Valley Forge
Pennsylvania
TALKS, SWAP SESSION and JUDGING
Banquet Saturday P.M.
A.W.A. Members welcomed

Change In Address?

Mail information to the Treasurer who handles current mailing list.
(Not the Secretary)
L.A. CUNDALL, W2QY
60 BOULEVARD PKWY
ROCHESTER, N.Y. 14612

Get it "Out of the Air"
OLD TYME ADS

OLD TYME ADS are FREE to members who are interested in collecting and restoring historical equipment as an amateur. They are not to be abused.

RULES FOR ADS:

1. Material must be over 25 years old and related to radio or electricity.
2. Ad MUST be written on separate sheet of paper -- not part of letter. For acknowledgement -- send S.A.S.E.
3. Give full address, Zip number and call letters (if any).
4. AWA will not print repetitious ads or ones indicating regular sale for profit.
5. The Association is NOT responsible for any transaction.
6. AWA retains the right to reduce size of ad if OVER 8 lines including address.
7. Only ONE ad per member per issue.
8. All ads must be received 6 weeks prior to mailing date. (See deadline dates on this page.)
   Main St., Holcomb, N.Y. 14469

WANTED: Info on Doubleday Broadcaster possibly noted in Radio Broadcast mag. about 1925. Trade: Arborphone and other broadcast sets, old guns for; wireless gear made before 1922. State fully eqpt. you may offer to trade. Send SASE for list. W2CE, 8604-55th Rd., Elmhurst, New York 11373

SALE: Radiola V Instruction Folder (Reproduction) F.P. $3.25 each. Still looking for metal covers for Radiola V, will trade or buy. Write: R.V. Klageswitz, 825 N. 2nd St., Reading, Pa. 19601

SWAP Pilot #361 audio with descriptive factory literature (good windings).

TRADE: Need 1922 issues of QST, Radio News or Popular Radio magazines. Greg Dockter, 2519 Avenue "C", East, Bismarck, N.Dak. 58501

WANTED: Signal Corps Radio set SCR-131-151 (BS-146-151); WD-11, 120 tube bases or d.r. tubes. Joseph Lee Kemp, 946 D, Frederick, Md. 21701. (301) 662-3482

HELP: Need secondary tuning condensers and knobs for Federal 61, small knobs for Kennedy V, complete Radiola RC and two good UV-199's. Have for trade Riders Vol. 1; Crosby Super-Trihyd regular. Bob Lozier, 318 E. Houston St., Monroe, North Carolina 28110

SWAP: Atwater-Kent 55. Looking for Radiola III or IV. Carl Stone, VE3EH. Box 892, Clarksburg, Alberta, Canada

TRADE: Chassis of console AK. Mod. 55-C with tubes & speaker and Radiola 100A speakers for Radiola or Aeriole Jr. or any AK breadboard with all parts intact but not polished yet. Also D-12 loop brace. Mark Twitchell, 103 Hunter Ave., Fanwood, New Jersey 07023

WANTED: Philco Mod. 52 or 86 Neutrodyne Plus chassis for console (See page 146 Vintage Radio) 1 3/4" between end knobs. May consider trade from my collection or will buy. Cary Micnaski, 226 Henry Avenue, Manchester, Mo. 63011

TRADE W.E. 212-D, 250 watt for Deforest spherical audion triode with candleabra screw base with good filament. L.E. Schnedorf, W3ZWK, 610 Monroe Ave., River Forest, Ill. 60305
NEW/OLD tubes for sale: Type 10, 24A, 27, 47, 7A, 35, 61, 70, 80. Price $1000 for 3000 tubes. Also many hard to find types available. Bruce Hertzberg, 343 Wagrar Av., Hawthorne, N.J. 07506


DEADLINE FOR OFFER ADS:
Jan. 15 ----- March issue
Apr. 15 ----- June issue
July 15 ----- Sept. issue
Oct. 15 ----- Dec. issue

WANTED: ABB60 and ABL60 bandspread coils for National FB1X receiver. Have extra set ABB20 coils for trade or sell. W6KL, Leland Smith, P.O. Box 38-B, Route #3, Jasper, Arkansas 72641

WANTED: Type A Wunderlich detector tube (6 pin 2.5v); Cabinet, escutcheons, knobs, and shortwave antenna tuner for Scott All-wave 12 Deluxe A/C; Jewel 2" round 50 ma meter; Service and owner's manuals for an Edison R4 or R5 radio (copy O.K.). George Harris, 3212 36th St., Lubbock, Texas 79413

TRADE: Tube tester, Superior Instruments Co., Mod. V-11; One head, RCA Type 0, Mod. Miyah, 150; Two brand new earphones, Brandes Superior Type; for 201-A tubes. Daniel Gaidossz, 3120 West River Road, Orange, Conn. 06477

FOR SALE: Send S.A.S.E. for small list of battery sets, QST, parts, etc. Want pancake-type helix & others, Spark items, also Crosley 50 & 51A, Fada crystal det. parts, Grimes 40 tubes, Lenco instruct. sheet & DeForest terminal knob. Write: Nick Ammon, Box 104, Mt. Carmel, Ill. 62543

WANTED: radio made by Denning Radio Co. Any literature or information. Will buy or trade. Richard Cane, 8391 N.W. 21st Street, Sunrise, Fla. 33322

WANTED: Radio Boy books by Breckenridge. Write: R.W. Randall, KGARE, 1263 Lakehurst Rd., Livemore, Calif. 94550


WANTED: Daven television lamp Type 2070, 1½ sq. in. picture; Daven amp. tube Type K20 for Daven resistance coupled TV amplifier. Herber Richards, #2IV, Argyle, New York 12809

WANTED: Mint or near mint older type Kennedy 2811 and 2821, National SW-4 or 5 with coils and Music Master 60 any condition. Doug Bullock, 961 Heard Ave., Augusta, Ga. 30904. Phone, 404-733-7937

WANTED: Any information on a marble paneled electro-medical machine made by Aloe Co., St. Louis. It has two spark gaps. John Green, 3040 Hickory St., Omaha, Nebraska 68106

FOR SALE OR TRADE: Radiola Super-Ket Victor 9-55 for phonograph top; Radiola 3-A, AK-20 LG, Need DeForest D-12 loop and driver horn. V.E. Peterson, 5714 West 78 Terr., Prairie Village, Kansas 66206


FOR SALE: Freq. Meter BC-221C made for Signal Corps by Bendix with 5-221-M AC power supply. Max Oertelt, 103 Agricultural Ave., Rehoboth, Mass. 02769

NEED: Daven MU-20; bottom dial plate for Syncophase, grid leaks. 1124 mag. and 30,000 ohms. Steve Kaymer, 1568 E. 19th Street, Minneapolis, Minn. 55404

WANTED: Supreme Analyser Mod. 336 or similar, Base & driver for Radiola UZ-1320 or 1325, 1½" wooden bell for M.M. driver for AK Mod. L, 3 binding posts, thimbles, etc. For Crosley Mod. 50, Have to Trade Arbornoheh 27, Radiola VIII & 199 tubes. Mike White, 118 Countryview Drive, Naperville, Ill. 60540

WANTED: Large or small wireless or radio collections. Will pick up. Jerry Vanecek, 3313 So. Lowe Ave., Chicago, Ill. 60616

SELL OR TRADE Rider's P.T.S. Manuals No. IV, VIII, (2) VIII, IX, X, XI, (2) XII, (2) XIV at $3.50 each take all. You pay postage. Need Kennedy 525 amp. Basil Abbott, Rte. 5, Box 322, Mechanicsville, Va. 23111 (Tel. 716-361-14)

FOR TRADE: Scott B6 AM/FM radio in Chippenham cabinet. Plays AM but not FM. A little rust & cover plate of tuner missing. Trade for early battery set of equal value. Walter Sanders, 15 Todd Place, Terre Haute, Indiana 47803

WANTED: DC filament voltmeter for Kennedy 110 longwave receiver. Can also use original cabinet. G.G. Maconry, W6AKL, 367-10 Florida Avenue, Mesa, Calif. 92343

SELL OR TRADE collection of old sets, speakers and parts. S.A.S.E. for list. Want crystal and one tube sets, A-K parts and wireless parts for spark transmitter. Aaron Solomon, VEIAC 8 Crichton Park Rd., Dartmouth, Nova Scotia, Canada B3A 2N8

(Cont. on next page)
SWAP: Grebe CR-3, Aerola Sr., Radiola III, Want Brandola, Thermodyne FT-6, NUV-RAD 15, 18 and Bristol one dials. Art Harrison, 1021 Falcon Drive, Columbus, Mo. 65201


SELL: collection of early binding parts, switch points, square brass rods for slinders, bakelite panels and other parts. Also some tubes. Free list for SASE. Postals ignored. W6JA, Box 308, Wrightwood, Calif. 92377


WANTED: Scott and McMurro-Silver radios. Also telegraph equipment. Enclose full ad if possible, state price and condition in first letter. J. Clark, 1617 Rose Lawn, Lansing, Michigan 48915

WANTED: Scott Laboratories receivers & literature, receivers preferably in northern California. Need band switch knob for Scott All-wave (1936). Write: Nicholas Vaskovik, 23S Marvin Avenue, Los Altos, Calif. 94022

WANTED: Cabinet for TRK-12 '39 TV set, 2V3 tube; soundbox for Magnavox MT-4 phonocarm; AFT for '21 Magnavox AC-3 six tube AF amplifier. Dave Cleland, Box 183 Route 897, Reinholds, Penna. 17569

WANTED: Driver and base for Magnavox 18" bell horn speaker. Ross A. Smith, 1133 Strong Ave., Elkhart, Ind. 46514

WANTED: back issues of "Oscillator", original CQ & 73 magazines and Modern Radio all published in EARLY 1930's. Also need 5th, 6th and 7th Ed. of RADIO handbooks. Also "Radio" before 1933 and "CQ" in 1945. Write: K4KJ, 12300 Lawyers, Herndon, Virginia 22070

WANTED: back issues of "Oscillator", original CQ & 73 magazines and Modern Radio all published in EARLY 1930's. Also 5th Ed. ARRL & 13th Ed. of RADIO handbooks. Also Radio before 1933 and 1945 CQ. Nage, K4KJ, L2330 Lawyers, Herdon, Virginia 22070

TRADE: Radiolas IIIA, Superb FM-612, 25 with Loop and Crosley 32 for other battery sets and horn speakers. Steve Meyerkorth, 2206 So. 50th Avenue, Omaha, Nebraska 68106

WANT: Slide rule dial for Philco Model 41-235. Can use complete insert or glass only. Lane Poulter, K7WQ, 6344 Garwood Ave., Las Vegas, Nevada 89107

WANTED: Cardwell 21 or 23 plate variable condenser, also a round 4 inch porcelain base 10 ohm rheostat. W6DC, Willis Otto, 2009 West 10th Street, Davenport, Iowa 52804

WANTED: Cabinet for A-K Model 20 (Standard Model). Will pay postage. Samuel Rotundo, W5KIA, 10 Van Vorst Street, Utica, N.Y. 13501

WANTED: Low cost oscillograph and tuning knob (wheel) for Grebe Synchrom, Wes Chatellier, W5DPM, 1950 Chevelle Dr., Baton Rouge, La. 70806

WANTED: Old test equipment such as Jewell 578/580/581, Hickok SC/SC/SC, etc. Beautiful Marcydome (3 tube regen.) for sale. C. Orval Parker, 7516 California Ave., San Diego, Calif. 92119

FOR SALE: A few battery radios and other gear. SASE for list. Want IP-500 or similar, also Linnorograph tapes. Alan Smith, 6712 Bliss Lake Ave., San Diego, Calif. 92119

WANTED: Old National 5800 or 5806 power supply and Magnavox horn for R-3 driver. Clarence Milley, W7KE, 1109 S 2, Hamilton, Montana 59840

WANTED: crystal detector for Mirale radio. Also thumb screw for ground connection and owner's Manual (or copy). Need pwr. supply resistor for A-K Mod. 44, Jim Berg, Box 72, Clovisdale, Calif. 93225

WANTED: Dayfan OSM 7 ft nrnt panel, A-K cathedral radio, Fresonam Masterpiece tuning knob (K3674), horn Speak. base & driver for RCA, RGA UZ-1325, Magnavox, AK "I" & "M". Al Mackenzie, 1924 Cheltenham Lane, Columbia, S.C. 29206

WANTED: Operating manual (or copy) for FADA 1923 3 tube neutralyno, info on the Alco Co. of St. Louis electo-medical machine circa 1919, matched set of good FADA or Kellogg 3:1 AFT made before 1924. John Green, 5540 Hickory Street, Omaha, Nebraska 68106

(Continued on page 31)
CURRENT TREND IN EARLY RADIO EQUIPMENT

Nearly 15 years ago A.W.A. sent a questionnaire to several well known collectors asking for their appraisal of 64 items which included receivers, tubes, books and components. The results were averaged and appeared in OTB 2-3-7. A similar survey was recently made and may be of interest to members.

Seven (7) members living in various parts of the country participated. They were asked to mark down in their opinion a fair market value for each item. (There is usually a difference between ASKING and SELLING price. It is the latter we were interested in.)

Receiver conditions were defined as follows: "Complete with original components, average condition, no open transformers or broken parts, without tubes. Restoration requires only cleaning, polishing and possible white filler for dials, etc."

Summary: The results from the seven (?) participants were totaled and averaged. As an example, Item #1 -- Radiola III-A was, $60-50-45-45-40-40-35 = $315/7 = $45.

A value was deleted if difference was greater than 100% of the other 6.


In this case the $15 appraisal was deleted since it was less than 100% of the average.

The use of 100% difference is arbitrary but it was necessary to start somewhere to eliminate out-of-line numbers. Of over 300 numbers only 15 were deleted or 5% which indicates the participants were thinking much alike.

Note the sets do NOT have tubes. This would up the value of the Radiola III-A if it had WD-11's but would have little effect on a SW-3.

As expected, the pre-WWI items (#26, 33, 34, 35, 36 and 37) have the greatest value.

The value for a loose-coupler (#26) was surprising. Not so pre-1910 Marconi Multiple Tuner #37 of which there are only one or two known. There are many 1910 and later.

The next OTB will list vacuum tube appraisals. We trust this information will be helpful.
BRITISH MARK III WWI RECEIVER
by Frank Emery
Aberystwyth, England

The Mark III military receiver has surfaced in several collections in recent years and commands much interest (and value). It is in the same category as American WWII field and aircraft equipment -- the BC- 14A and SCR- 65 which was sold surplus in the 1930's. (See OTB 14-4-26 lower and 9-1-11)

The Mark III was used in artillery batteries to receive signals from Royal Flying Corp spotting planes which used Sterling spark transmitters. The planes would fly over the enemy's position during an artillery barrage and report back to ground the results of their shelling.

Transmissions from the aircraft were of limited nature-- and all in coded signals which were changed daily to confuse the enemy. Here are some examples sent from the plane and received on the Mark III receiver:

OK -- direct hit
H2 -- stop firing or wait
E -- are you receiving my signals ?
S -- short, R -- right, L -- left

The question that should come to the reader's mind is "How did the ground wireless operator (at the artillery base) communicate with the airplane which had no receiver?"

Very easy. They used what was known as "Ground Stripes" which were white strips of cloth about 2 feet wide and up to 30 feet in length. They would hurriedly lay out on the ground coded letters such as "L" or "M" which the pilot could see as he passed over.

I was an operator at one of these artillery bases and well remember this procedure. Sometimes the pilot wasn't happy with our Ground Stripes operation and would zoom in over my head and sound his "Klaxon Horn" !

(Cont. on next page)
As noted, the operator had a selection of several crystals to use in the Mark III. "Perlkon" was most frequently used but it had a drawback — when the wireless shack was too close to the gun battery, the vibrations from the gun fire would dislodge the crystal contact and one would temporarily lose any signals being sent. The carbonium detector did not present this problem because of the rigid contact.

NEED FOR NEW TUBE?

Roy Usher, V9BB (St. Albert, Alta.) like others are concerned over inability to purchase new tubes for operating early battery sets. He agrees it would be impractical (and unprofitable) for tube manufacturers to make a wide variety such as WD-11s, 190s and 201-As but wonders if one universal battery triode could be made that could be adaptable to most early receivers by using adapters, etc. and changing the filament voltage where necessary. Even the old Type 30 (230) tube could be the answer. Anyone have thoughts on the subject?

THE MUSEUM

At this writing (April 18) progress is moving ahead for the May 4th Opening in spite of several disastrous "work weekends" which had to be cancelled. The most recent (Apr. 4) found the small village of East Bloomfield buffeted with one of the worse April storms in history with 8 foot snow banks and up to 4 feet in front of the academy Museum. The Board has approved additional money to assist the Bloomfield Historical Society with plumbing facilities and the volunteer electricians have spent long hours to meet the deadline on State Inspection requirements. Target date for the formal opening of all exhibits will be the October 4th weekend of the Conference when most members can be present for the ceremony.

THE AMERICAN FREEDOM TRAIN

"The American Freedom Train is a steam-powered, 24-car train which will carry this nation's most treasured documents and artifacts to people in all 48 continental states during the Bicentennial era of 1975 and 1976. Beginning April, 1975.

The train will exhibit in ten specially designed display cars a priceless collection of historical documents and memorabilia gathered from important museums and historical societies across the country. The display items will reflect American achievements in nearly every aspect of life, including art, sports, science, architecture, and government. Among the hundreds of historical documents and objects expected to travel on the Freedom Train are: the first Bible printed in the United States, Benjamin Franklin's draft of the Articles of Confederation, Pennsylvania's Ratification of the Constitution, Delaware's Ratification of the Bill of Rights, Credentials of the Pennsylvania Delegates of the Continental Congress—Benjamin Franklin's credentials or those signed by Franklin, George Washington's copy of the Constitution—Committee on Detail, a lunar rover and a moon rock.

Moving walkways will carry an estimated 10,600,000 visitors through the exhibit cars during the train's 21-month journey at a rate of 2,000 people per hour.

The American Freedom Train Foundation has asked the Mount Vernon Museum of Incandescent Lighting to provide a display-history of our nation's electric lighting. We are most happy to comply. First, a strip of six important steps in lamp development will be lighted—three in series, so that hopefully a two-year life expectancy may be achieved. Edison's 1834 bamboo-filament lamp will be in number one position. This will be followed by lamps showing the squirited-cellulose filament of 1895, metalized carbon filament of 1899, drawn tungsten filament of 1910, tipless tungsten filament lamp of 1923, and finally the coated tungsten filament lamp of today.

The first three will be sixteen candle-power lamps, and the final three of sixty-watt intensity. In this manner, the increase in lumen-output during lamp development through the ninety-year period can be emphasized.

Dr. Hicks, Curator of Mt. Vernon Museum of Incandescent Lighting, sent AMWA the above copy. Of particular interest, of course, is the large lighting display which shows the development of the electric light bulb. Dr. Hicks' Museum (Baltimore, Md.) is believed to be the largest of its kind. Steam buffs may be interested in knowing the steam locomotive will be fired with oil — not coal. The reason: coal and water facilities were removed from railroad sidings almost 20 years ago.
GOOD READING

AMERICAN BROADCASTING
Source book of history of radio and television.....
by Lawrence Lichty
and Maelchi Topping
Published by HASTING HOUSE
10 East 40th St., New York, N.Y. 10016

This book will undoubtedly prove to be the book of the year [1975] to the radio historian. 728 pages jammed with information offering one several weeks of casual reading. Notes, bibliography and index make it an excellent addition to a research library.

The book consists of 93 absorbing selections by well known engineers and historians. Examples:

---work of early pioneers Locom, Tesla, Marconi, Dolbear, DeForest, Fessenden, etc.
---story of the super-heterodyne by Edwin H. Armstrong
---early television development by Vladimir Zworykin
---development of Magnetic recordings
---history of early Broadcast Networks
---radio programming, etc.

This reviewer was naturally interested in early radio history but in time found himself reading reports in the back of the book on broadcast programming which he found equally absorbing.

It's a great book. Highly recommended.

The price may appear a little stiff ($26.50 hardcover) but then, all large hardcover technical books of this type are now in the $20 to $30 range. A paperback is available at lesser price.

(Hardcover- $26.50 Softcover $15.00)

THE RADIO CLUB OF AMERICA

The March "Proceedings of the Radio Club of America" placed in print the interview between Wayne Nelson, W4AA and Pioneer Paul Godley. The occasion was the 1971 A.W.A. Conference at Canandaigua. Lou Noreau, W3RE, provided the tape and John Bryant, W4UX, did a tremendous job editing their conversation making it an outstanding historical documentary. Paul became a Silent Key in October, 1973. Kb W4UX !

A HISTORY OF AMATEUR RADIO IN THE PHILIPPINES
by Dr. Edmundo Reyes, DULOR

For those who want an exciting and little known story about amateur radio, written by a master craftsman four times president of the Philippine Amateur Radio Association, a man distinguished in scholarship, medicine, music, semantics and an honored visitor to the major countries of the world, this book is a discovery to treasure and enjoy.

No review can do justice to a book of this quality, but the hope of this reviewer is that the reader will be impelled to buy the book, enjoy it, and make it his own.

It is the history of the amateur in the Philippines. Significant also in the story is the unobtrusive effectiveness with American personnel, largely military, were able to provide a helping hand to amateur radio in the Philippines during the period between World Wars I and II, and following the Japanese occupation. Old friendships have lasted and new ones have developed since independence was achieved in the Islands in 1945.

The sections of the book on visiting amateurs at home and abroad are particularly revealing, not only of the personality and astonishing range of talents possessed by Dr. Reyes, but in highlighting the fraternal character, internationally, of amateur radio.

Information on activities of Philippine operators during the Japanese occupation is limited because destruction of records, but the story is clearly one of mixed heroism and tragedy as operators sought to place their skills and resources at the disposal of the guerrillas. Successful efforts were made to establish direct radio contact with MacArthur's headquarters in Australia, permitting the exchange of information and materials, thus aiding in eventual liberation of the islands.

Dr. Reyes has written for us an intriguing and fascinating story, carrying it from spark and crystal to the vacuum tube and CW, to SSB, and marked, like developments in many countries, with occasional lack of agreement as to who was to run the show. A fascinating documentary. (P. Schroeder, WIPNY)

Published by: Garcia Publishing Co., Quezon, R.P. (222 pages, 1974)
MORSE KEY COLLECTING 'DOWN UNDER'  

by Allan Shawsmith, VK4SS Brisbane, Australia

In this business I must confess to being a bit of a 'Johnny-come-lately'. A humble Johnny with still a lot to learn. Only three years ago, polishing brass was a foreign occupation. The metal was for 'pumping' not cleaning. Any Brasso work needed around the house was left strictly to the YF as a matter of principle.

Now in the year just past, 1974, more time has been spent shining and restoring the stuff than pounding it.

Getting together a presentable display of MORSE KEYS here in VK-land has its problems. Probably no more than fifty 'fair-dinkum' made in Australia' keys have been patented here since the inception of the first land telegraph. Many models patented in the UK and USA have been imported but nevertheless the total number remains small. This means that any collector who wants to add diversity to what he has on display, must look overseas.

The Postmaster General's Department has control over communications. The Morse section used nine different models of keys. At the change over to teleprinters the code was phased out and many of the keys in use were sold or melted down for scrap; so obtaining a full set of the PMG keys is quite a difficult job. A three paddle key known as the AUTO-MORSE or AUTO-DASH has become almost impossible to obtain.

One private concern that manufactured keys during WW2 and before was the A.W.A. - Amalgamated Wireless of Australia. These were mostly marine type keys. They cannot be mistaken as all carry a distinctive circular plate at the knob and marked A.W.A.

Of the imported keys from USA, the Bunnell and Vibroplex are most commonly used here.

This collector has managed to put together over one hundred different keys. Some date back to the last century 1870 circa. Many are of WW2 vintage. There are a variety of semi-automatics, homebrew types of odd shapes and one or two novelties.

One key that seems to catch the eye of the visitor is the AUTO-DASH mentioned above. This is because it has three large paddles and looks complicated. This particular model was made in South Australia in the late 1920's or early 30's. The extra paddle makes automatic dashes as the name implies.

Another, is a huge hand key weighing approximately 6 lbs. This key is reported to have come from a whaler or from the whaling station, Tangalooma, which was situated on the East coast of Australia. It would make a good door stop.

Restoring old and dirty keys to a full polish by the armstrong method can be a long and arduous task - sometimes twenty to thirty hours of rubbing. If you have a small electric drill, a brighter finish can be achieved in a fraction of the time. Clamp it horizontally in the workshop vice and insert a 1/2" wooden dowel or twist drill into the chuck. Cover this with a soft steel wool pad. The type the YF buys at the supermarket is OK. First soak the key parts in a cleaning fluid then apply them to the spinning wool pad. Chrome or brass, a big, quick shine is the result.
Most historical references to the so-called "Cyrus Field Atlantic Cable" (1857-1858) attribute the early difficulties with the first cable to its parting at various times during the laying operation. Although this element was the cause of many delays and frustrations, one rarely finds reference to a much worse problem - insulation defects - so serious when the facts are reviewed that it is almost unbelievable that a signal of any kind could be received over the cable. When it was in the process of manufacture in Greenwich near London, it was coiled in four large vats, and there left exposed day after day to the heat of a summer sun which was intensified by the tarred coating. Explicit orders have been given that sheds be erected over the vats to prevent this, but for unexplained reasons they were never erected. As a result when laying time arrived, large sections of the gutta-percha insulation were found to have melted and left exposed the conductor. Some thirty miles of faulty cable were cut out and discarded before laying, but the many miles of cable which was deemed acceptable, or sufficiently good to warrant the gamble of submerging, deteriorated badly during the laying operations. Despite the large current leakages of the conductor to ground in the salt water, some four hundred messages were successfully transmitted between Ireland and Newfoundland.

There was a persistent degree of scepticism for a time in some quarters that the cable was ever actually laid, and that the whole affair was a hoax. But, with the actual exchange of messages such as those between England's Queen and the President of the U.S., people everywhere began to fully appreciate the importance of such a communications link. Accolades and poems appeared in the news journals, and impromptu displays of flags, illuminations and the sounds of bells celebrated the new tie between the Old and New Worlds.

But the success of the first cable was short-lived. As the insulation deteriorated further after being sub-
merged, higher voltages were impressed on the cable hoping this would force through a readable signal. When the voltage was increased to some 2,000 what was left of the gutta-percha was punctured in so many places that the cable finally became completely "silent" forever.

But Cyrus Field refused to acknowledge defeat and in 1865 founded the Atlantic Telegraph Company and contracted for another cable laying across the Atlantic in 1866. The venture was a success and a reliable facility was finally realized.

It is rare to find a reference in telecommunications history to the fact that the French Government was, in the period 1860-1870, instrumental in forming a company known as "PQ". (These happened to be the initials of the chief officers of the company.) PQ laid its first cable in 1869 between Brest and St. Pierre Miquelon (French island possession south of Newfoundland) a distance of 2665 nautical miles. It obtained from the US a cable landing license and laid its second cable in 1893 from Brest direct to Cape Cod which was the longest cable ever laid up to the time - 3174 nautical miles in length.

In these early days most cable signals were read through the fluctuation of galvanometers with code signals based on spacings between positive and negative "keying currents" applied from the sending end. Signalling techniques advanced through the use of tiny mirrors reflecting a light beam from an oil lamp. Then extremely sensitive ink-siphon-recording on paper tape was developed which increased the speed of signalling. By the turn of the century "magnifiers" were developed using thermo-mechanical principles, and later "regenerator" techniques greatly improved the speed capabilities. All however continued to use the original polar changing techniques offered by the use of direct current.**

All the old DC telegraphic transatlantic undersea cables went into abandonment with the advent of the laying of new multi-voice-grade-co-axial type cables in 1956.

It is interesting to note that today in 1975, PQ, the French Cable Com-
pany still exists in New York, operating channels between New York and Paris using the new coaxial cable facilities. It is the only foreign telecommunications concern operating in the US in direct competition with the US owned international carriers (RCA-Global, ITT-Worldcom, and WU-International). Should the question arise, the answer is no, the French Government does not permit non-French carriers to operate in France. All telecommunications in France are a monopoly of the "Postes & Telecommunications", a government entity.

** (A no-signal or "space" condition was indicated by the light galvanometer needle resting at "zero-center". Code signal dots appeared to the left and dashes to the right. On the syphon-tape recording technique used in the later years, the dots were above, and dashes below "zero-center". Actually the inherent electrical sluggishness of the cable could not at usual operating speeds show the individual dots and dashes on the tape recording. Operators learned to read the intended signal by the length of time the pen remained below or above the "zero-center" line for each character. For example, the four dots involved in the letter "H" caused the pen to remain on the upper side of "zero-center" four times as long as it did for the letter "E".

Cable handkeys were double-levered affairs, with two buttons - one on each lever. Normally the first finger keyed the lefthand lever which was "dots" (positive DC) and the second finger keyed the "dashes" (negative DC). In later years all transmission was by perforated tape (keyboard).

(Our author, Don de Neuf, is former President of Press Wireless. Don promises to write other articles for the OTB on early communication.)

YOUR "AD" MISSING ??

The deadline is the 15th of the month - that means you have to mail it SEVERAL days BEFORE to insure arrival by the 15th. All mail received after the 15th deadline is set aside for the next OTB. NO exceptions!

AND PLEASE -- keep your copy short because if you don't it will be CUT.
This was the product of the Apco Manufacturing Company of Providence, R.I. The exact date of its production I do not know since I have never seen it advertised for sale. It contains two complete triode element assemblies, with grids, plates and one end of the filaments tied together. The other end of each filament is brought out to a flush contact on the bottom of the UX type base. Under the second filament pin are two switch arms which are movable.

The only identification on the tube is an oval black paper label glued to the glass bulb above the base. On this label, in red ink, appears the marking:

APCO
5V TWIN .25A
TUBE

As obtained new, one of the switch arms was in contact with one of the flush contacts, hence one set of filaments is activated. The characteristics are similar to those of the UX-201A. When this filament fails, the second switch arm may be turned to press on the second flush contact and the other set of elements can be used!

If desired, both contacts may be used in parallel in which case the characteristics of the tube would be similar to those of the UX-112. The two filaments in parallel will, of course, require 0.5 amperes. The tube is magnesium gettered, so the elements can not be seen.

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OUTDOOR VACUUM TUBE CLINIC
at A.W.A. Conference

Members attending the two day Conference usually spend as much time outside the Motel as they do in. The huge parking lot [which is 90% AWA parking] provides a place to meet fellow collectors, buy and swap old gear, admire a beautiful restoration job and lastly -- technical discussions by the pro's. Here we see noted tube authority Jerry Tyne examining a De Forest spherical audion with a magnifying glass. He can tell the history of a tube by its internal construction: filament design, plate and grid outline, etc. Note the boxes of tubes on car hood waiting their turn.
First Radio Receiver
Given to Navy Museum

What is believed to be the first radio receiver ever installed aboard a United States ship has been turned over by the company that made it to the Navy Memorial Museum.

When the 1915 receiver went aboard the USS New York it stayed in a guarded compartment with only a select few trained and trusted officers permitted to operate it.

The unit was primarily for ship-to-ship communications but it could also receive shore transmissions. This ability to communicate without resort to visual means gave U.S. Navy ships distinct advantages over contemporary fleets of the day. —J. Fleming.

Several members called our attention to the above news clipping and questioned the "1915 receiver." As most historians know, wireless equipment was installed on U.S. Naval vessels around 1900 making the 1915 date an error (?...)

The book titled HISTORY OF COMMUNICATION, U.S. NAVY tells of wireless aboard the USS NEW YORK in the fall of 1899. Further reading in DeForest's autobiography "Fether of Radio" tells of a 1905 Naval installation, Page 190 and a picture facing page 150.

A.W.A. REGIONAL MEETS

The Association will participate in five Regional Meets this year. Members and friends are invited to attend these gatherings. General information appears in the BULLETIN. Full information and registration cards available from Committee Chairman whose address is noted in OFF. The same Chairman will also send information on local motels which may offer reduced rates.

A.W.A. welcomes the Southern Contingent to the group for the first time. We wish Lew Elias and his Committee great success and urge all members in the area to attend their July 12 gathering.

WEST COAST MEET, April 26
Foothill College, Los Gatos, Calif.

ATLANTIC MEET, May 3
Peckham Museum, Bressport, N.Y.

CENTRAL MEET, June 21
Purdue University, W. Lafayette, Ind.

SOUTHERN MEET, July 12
Headquarters: Holiday Inn North Winston-Salem, North Carolina

NEW ENGLAND MEET, Oct. 26
New England Wireless Museum
East Greenwich, Rhode Island

The Table-Talker—a loud-speaking device that has achieved nation-wide popularity because of its high standard of performance and remarkably low price. Clear of tone—mellow, harmonious true. Always ready to reproduce the whole program with every shade of expression that keeps the voice or the music real.

Good-looking; too. Simple of line, graceful, and finished in a neutral shade of brown. Worth comparison with any loud-sounding device on the market. And sure to be chosen at its phenomenally low price.

Table-Talker $10.00
In Canada, $14.00; 50¢ additional east of the Rockies.

(Written on page)

C. Brandes, INC.
FRANK CASWELL, W1ALT AT MODEL OF MARCONI SOUTH WELLFLEET STATION

(Photograph by Tom Swan)

It has been nearly 60 years since live spark signals have been heard at South Wellfleet, site of the old Marconi Station CC-MCC-WCC. Former AWA member Fred Parsons built a scale model of the building and AWA has printed several articles on the station but it took O.O.T.C. members and Frank Caswell to come up with a real live spark signal. Although the signal from the replica is a far cry from the once mighty station of the past, it will generate ozone and gives a snappy note. It will be on display in the lobby of the Cape Cod National Seashore Headquarters off Route 6.

REMEMBER

A.W.A.

Big Event of the Year

NATIONAL HISTORICAL RADIO CONFERENCES, OCT. 4
Canandaigua, N.Y.

DID YOU KNOW ---
the AMRAD "S" tube of the mid 20's was the first practical cold cathode rectifier and forerunner of the later Raytheon DH tube?

The tube designation "S" was named after its inventor: G.S. Smith.

AWA NETS

PHONE

Sunday -- 12 noon
3903 Kc.

Tuesday -- 8 P.M.
3865 Kc.

CW -- 3584 Kc.
8 P.M. First Wednesday of each month
4 P.M. Daily
E.D.S.T.

WRITING COPY FOR QTB??
If so, keep it brief
we want info not words.

20
PEN HOLDER

Thumbing through the spring issue of "Elementary Electronics" magazine I came across another excellent construction project by Art Treuffer. This time Art tells how to make desk pen sets using early radio components. Very clever and original. Suggest you read the entire article since there are several versions other than those illustrated plus construction details.

This brings to mind the idea of making a reading lamp using a UV-204-A as pedestal. W2GB has one and it is a real conversation piece. (No, he doesn't light the filament!)

MISSION COMMUNICATIONS

by Prescott Mebon

is the story of Bell Laboratories, its people, and their contributions over half a century of modern telecommunications. It is an illustrated history of insight and innovation by scientists and engineers in common purpose -- to help, by advancing the arts and sciences of communications.

A.W.A. member Lloyd Espenschied (co-inventor of coaxial cable) and others are mentioned in this 50th Anniversary issue which unfortunately is not available for public distribution. There is however a copy in the Association's Library for reference purposes. (Bell Labs is one of the world's largest research laboratories.)

FOR THE MUSEUM LIBRARY

A.W.A. ACQUIRES RARE BOOKS

Bob Ryan recently donated a collection of rare books and notes covering tube and lamp development. The assortment also included a beautifully bound set of Jerry Tyne's "Saga of the Vacuum Tube".

This material augments the ever growing library which is centered around Clarence Tuska's donation and the original A.W.A. collection of several thousand books and magazines.

The A.W.A. Library is a treasure house for the student, engineer and technical writer doing research. Many of the books are limited editions and date back to the mid 1800's. Material of this type is difficult to find in most college and public libraries.

Members and friends interested in using the library and other material in the museum for research should contact one of the four designated custodians. A complete inventory will be made later in the year cataloging all material on IBM read-out scroll by name and subject matter.
RESTORING OLD EQUIPMENT

How did you SOLVE a problem when restoring an old receiver? Drop us a note telling how you did it.

FILLING ENGRAVING ON PANELS

Al Woody, W7WQ

The first step is to thoroughly remove old filling with dull point. Wax may be removed by heating panel with hot bulb or nearby heat lamp and wiping clean. Hard fillers may require a solvent.

An inexpensive and satisfactory filler is just plain white marking crayon. A more durable and expensive wax filler is MonoFill obtainable in several colors at jeweler's supply houses. After application it can be lightly buffed to a high polish.

When using wax fillers, heat the panel first with light bulb or heat lamp to near wax melting point. Work fast and while the panel is still warm wipe off surplus with cheesecloth.

A paste filler is somewhat easier to apply and is more intensely white than wax. Mix zinc white with soap egg white base, apply with finger, let set and wipe surplus with cheesecloth.

The most permanent and most difficult to apply is white enamel. The enamel should be thinned so it can flow into lettering with a fine camel hair brush. Any remaining surplus on the panel can be removed with edge of a thin card such as a plastic pocket calendar.

After the filling has dried, the remaining surface film can be removed by carefully wiping with a wet cheesecloth (water) containing a small quantity of laquer thinner and then polishing with a dry cloth.

It may be well for the novice to experiment with an old panel before he starts on his Kennedy or Federal !

BRITISH TUBES & RECEIVERS

Members have written asking about purchasing and identifying British made equipment. We recommend TUDOR REES' latest book/catalog. It is full of tube (valve) listings plus receivers and other radio equipment some dating back to 1920. Send $2 U.S. cash to cover cost and mailing to: TUDOR REES

64, Broad Street, Staple Hill, Bristol, BS16 5NL, Gt. Britain.

PLASTIC DUST COVERS for A-K breadboards and other open sets.

Gordon Eklund (Prospect, Ky.) likes others was concerned over dust accumulating on his open Atwater-Kent breadboard receiver. The problem was solved when he answered an add in QST offering clear plastic covers for sale.

A letter brought a brochure listing for sale ready-made tops for most amateur sets (Drake, Collins, Heath, etc.) plus a range of custom made covers.

Gordon ended up with a beautiful clear custom-made vinyl cover (29" x 10" x 7") for only $6.95. He tells us the price varies with sizes over 19".

Covers for popular amateur sets (all ready made up) range from $2.95 to $4.95. Write: COVER-CRAFT, Box 10 Roselle Park, N.J. 07204

ELECTROLYTIC CONDENSERS

A note in the last issue of the QST concerning electrolytic condenser (capacitor operation brought several queries. The note reads: "do not use with voltage well below their rated level, etc."

This excited several readers for they knew that a 8 mfd. 600 volt capacitor would work, as an example, on a 12 volt supply.

The hooker is: the 600 volt unit may not be 8 mfd. at 12 volts!

Electrolytics are peculiar beasts that may change with age, type of construction (remember the old wet types ?). Applied voltage specs, leakage, temperature, etc.

If you have access to laboratory equipment, grab a dozen mixed old and new electrolytics and run them through some tests. We would like to know the results.

This business of specs also holds true with non-coded (tolerance) resistors. One may pick up a resistor which by luck may be right on the button - but the next one could be 15% off!
1925 MC MILLAN EXPEDITION TRANSMITTER - RECEIVER

This beautiful piece of equipment aroused much interest at the 1974 Conference. It was given to a Zenith employee on the expedition's return and purchased by Alan Douglas (Pocasset, Mass.) in 1973. As noted, it was made by Zenith, presumably designed by John Reinartz and used on an amphibian aircraft for emergency use. The transmitter (at left) consists of an oscillator using a 201A in a modified Colpitts circuit modulated by another 201A for phone work. The receiver used (3) 199's -- a regenerative detector followed by two stages of audio. Operation was confined to the 40 meter band and according to Alan still works as well as the day it was made. Note the clean layout and rugged coil design. The set will be featured in the new A.W.A. show titled "Polar Adventure".
Can you identify each piece of equipment in this early ship installation? Look on last page for answers.
WITH THE COLLECTORS

Lauren A. Peckham
Ornston Road
Breesport, N.Y. 14816

FLOYD LYONS (San Francisco) built a test board so he could demonstrate or test early light bulbs. Floyd has also expanded his tube collection with items such as a very rare 1907 DeForest Audion, Singer tube with candleabra base, "II" type transmitting tube, UV-196 and several Speed Triple Twin tubes.

AL DOUGLAS (Pocasset, Mass.) added a Radio II and an interesting Receptrad Super made in 1924.

ROSS SMITH (Elkhart, Ind.) assembled a one tube set by National Monodyne after a kit.

MARC PARNES (Austin, Texas) located a bunch of Crosleys including models 5J, V, VI, Ace 2B amp., etc. W.E. 4-B and a SPCO crystal set.

PAUL CRIUM (Chicago, Ill.) has been in radio broadcasting for many years and recently found a DeForest spherical Audion and a Signal Corps SCR-74A spark set made by Amrad.

GEB DOOKTER (Bismarck, N.D.) found a Federal 59, Paragon 2, Airway F and a Crosley X.

ALLEN KUNKENDALL (Douglasville, Penna.) has good luck at flea markets as he now has a Radiola IV, Tuska 225 and a Federal Type 140 combined with a phonograph mounted in a nice console.

BASIL ABERTO (Mechanicsville, Va.) has a Grebe ROWN, Crosley 3R3 and several crystal detectors.

AL JOCHEN (Quincy, Ill.) located an AK-12 (4910) in working condition plus several Western El. 7A, 2A and Radiola R5.

JOHN FITCH (Philadelphia, Penna.) found a Radiola III-A that had been stored in an attic for 50 years.

LARRY PILBOLE (Tampa, Fla.) is another new A.W.A. member off to a good start with a Ware Model L, AK-55, Spartan Jr. and others.


RON MC CLELLAN (Haughtown, Penna.) has an unusual 2-unit detector/audio receiver made by Turney Coil Co. and a Radiola RAE-68 radio/phono combination.

GUY MARTIN (Azusa, Calif.) added a rare Slaty-Arco coherer to his collection.

ROBERT LOZIER (Monroe, N.C.) is pleased with a Federal 6J, Kennedy V and a rare Standardyne with multivalue tube.

DAVE GLEND (Reinholde, Penna.) is the lucky owner of a Mignon HD-1 "Radio Receptor", and an early RCA RA-359 TV set.

JOHN PARSONS (Glenshaw, Pa.) has several nice items including an AK 10B, Grebe CR-5 with RORK amp., and Westinghouse RA-DA.

RAY KUHNSWITZ (Reading, Pa.) has 40 sets in his collection including a deForest Interpanel, Grebe CR-9, ROKK RF amplif., CR-13 and Federal 110.

KEN McINTYRE (Baltimore, Md.) enjoys early TV sets such as Daven kit receiver, Jenkins cabinet TV and Baird Short-wave TV set.

ORVAL PARKER (Pocono Summit, Pa.) is a new AWA member who is hoping to acquire the book "200 Meters and Below" and a William B. Duke No. 15 catalog.

COLLECTORS: Please send me your latest news as soon as you receive this OTH. I have a deadline to meet...Lauren.

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VACUUM TUBE COMMITTEE

LIEBEN-REISZ

may not be a familiar name to some but to tube collectors the LIEBEN - REISZ thermionic relay is one of the more sought after tubes. Lauren Peckham recently acquired one for his collection and prizes it very highly.

It is one of the first practical triodes to be developed after the Audion and is named after its inventors. The tube was patented in 1911 and is sometimes known as the LRS Relay -- the letter "S" is added after the third inventor named Strauss. It is hoped Jerry Tyne will tell more about the tube in his column.

All this brings up the subject of forming a Tube Committee within the A.W.A. Board. The increase interest in this field warrants a special group to plan vacuum tube symposiums at the Conferences, establish standards for cataloging, etc. Action on the matter will be reported in the next Bulletin.
ALL THINGS considered it was a pretty good winter for AWA Nets & OT Mtr. Contest. Old Sol frowned on us a few times—like early March when WW was sending W2 condx. In fact on Mar. 10 the 4 PM Net faded right out in the middle. On Mar. 11 only a few checked into 3565 ke. 8 PM Net w/d W2/IPE Kansas, W5/DFM La., and W6/CFK FLa. Taking DX honors. Several nites W5/SHN/4 & w5/MACG checked in from Florida.

W2/DU OF QST FAME now frequently checks into SSB Nets & W2/PWM/Bill, is back on the air & hopes to call in often. On CW Nets we frequently hear W2/PWM and W2/EF. DURING JAN.—FEB., Gross, W2/EK, had two operations and had to go to Buffalo for chemo-therspy. While there he was called or visited by Clara, W2/CF, almost daily. Clara then reported to 4 PM CW Net. After ERM returned home & fired up his sideswiper, Clara spent a stretch in another hospital. A RAMMY Net furnished us reports on her. An example of ham radio providing service again. Incidentally while in hospital, Gross monitored the 4 PM Net and listened to AWA OT MTR. Contest & sent in Calls Heard like the old days.

RALPH, W2/ESR, joined the monthly CW 8 PM Net recently. Anybody want info on Atwater-Kents? Ralph is the expert and collector extraordinary. CATS HAVE an affinity for RF, Ham Radio, warm spots or raucous noises emanating from loudspeakers or just activity. Witness the TOM stories in QST in the 20's wherein Kitty got the blame and was spat at for all the ills of Ham Radio. Witness the tales of the many cats that developed static trying to take a peas at a whirring rotor, the cats that curled up on the warm M3 set, the one that was vaporized crawling into the warm tank of a 50 kW EC station or the one fascinated by the dot vibrator in a Vibroplex in center tap keying!

OM CLIFF, W2/FE, was given a cat which he dubbed LeeRoy. Whenever Cliff tunes up for the 4 PM Net the inquisitive LeeRoy runs from way up on the 2nd floor to the cellar to listen to the boys, to watch or to curl up on the log book. If he falls asleep, Cliff says: "Pee QRF." Oh, for a second operator!

I GUESS we all know more about electrolytic condensers after the thorough discussion on a recent Tues. 8 PM Net sparked by Bruce's squib in the QST. But, W2/ZK, has some old American electrolytics if anyone is interested.

START THINKING now about building that 50 year old MTR or an OT rovr....

---

50TH ANNIVERSARY
QSO LISTING


Congratulations to Editor Ken Gardner on confirmation of his 50th Anniversary QSO and Dick Agolf, W2/WX with a 1912 date. It isn't easy to qualify for an Anniversary Listing for there is a catch — here is the rule: "Have a qso with a fellow amateur whom you worked 50 or more years ago."

Sure you may have been on the air 50 years ago — but try and find someone you qsoed: Silent Keys, new call letters and locations, etc. It isn't easy.

We note that W6/LN and W3/RK hold the record for they have been having regular contacts for the past 65 years!

Send your Anniversary Listing to:
Ken Gardner, W2/BGK
42 Oakdale Ave., S.
New Hartford, N.Y. 13413

---

The ELECTROSE
RADIO INSULATION
Made in America and Used
Throughout the World
Approved By:
U. S. Government, Army and Navy
and Commercial Operating Companies
PERHAPS we shouldn't call it an OT Xmir Contest anymore because of the large number of OT rovs showing up. Six of them were of the regenerative type! How about Old Tyne Gear QSO Party?

OUR WINNER this year was WDLM, Art Goodnow of Darien, Conn. with his 1925 TX & 1928 RX. Congrats Art or FB OM as K.B., Warner or H.F.M. were wont to say in QST as of yore!

OUR RUNNER UP is W2LV, Bob Morris of Sparta, N.J. who already is a three time winner.

WHAT A DIFFERENCE the new multiplier system made! Many OT rovs were dug out of the attic or cellar, polished and tuned for gathering signals again. The operator sharpened his wits too in the absence of knife selectivity to which we have become accustomed to. K2W and K1TS operated with only OT rovs and did quite well.

IN AN ATTEMPT to avoid our own glorious QRM, frequency hopping was the order of the day. To make QRM worse, a foreign multi-KIVI station occupied 3524 at times and the Russkie fishermen opened up with tcf on 355. Barry, W2ARX ran a foul one of these who got so mad he held down his key and burned Harry off the air! A VFO is the only answer.

EVEN A NOVICE entered our party, albeit unknowingly. After Cq AWA, Art, WDLM was called on 3584 by a WNL!! Art slowed down and kindly told him he was out of the Novice Band. The movie came back with "Name Mike, QTH L.I." Art slowed further and tried to make him copy but he came back again with "Name Mike, etc."

A third attempt to get him to QSY back into the Novice Band produced results. Barry says he nearly fell off his chair laughing at this episode which happened in the closing hours of Jan. 26 and that Art should be given extra points for his good deed.

WE HAVE SOME information concerning the OT rovs used. Those who didn't give info, PLEASE send us a brief description of circuit, tubes, features, etc. The RX year doesn't tell much.

---

DIRECT-READING WAVEMETER

Range 150-3000 Meters

Price $68

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RESULTS AWA Old Time Transmitter Contest

<table>
<thead>
<tr>
<th>STATION</th>
<th>TX Year &amp; Final</th>
<th>RX Year</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDLM</td>
<td>1925 21L-A</td>
<td>1928</td>
<td>537</td>
</tr>
<tr>
<td>W2LV</td>
<td>1931 PP 210's</td>
<td>1937</td>
<td>480</td>
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<tr>
<td>W2DN</td>
<td>1932 21L-D</td>
<td>1932</td>
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<tr>
<td>W2BJT</td>
<td>1934 202</td>
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<tr>
<td>K4JO</td>
<td>1931 210</td>
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<td>W2BE</td>
<td>1943 211</td>
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<tr>
<td>VE3EDV</td>
<td>1938 45</td>
<td>1938</td>
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</tr>
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<td>1938 T-40</td>
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<tr>
<td>W2QY</td>
<td>1937 807</td>
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<td>W5EWF</td>
<td>1937 NK-39</td>
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<tr>
<td>W2BF</td>
<td>1927 203-A</td>
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<td>W2IJT</td>
<td>1936 616</td>
<td>Mod.</td>
<td>129</td>
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<tr>
<td>W2AQ</td>
<td>1929 210</td>
<td>Mod.</td>
<td>81</td>
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<td>W2ARX</td>
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<td>Mod.</td>
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<tr>
<td>K2W</td>
<td>Modern</td>
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<td>K4TS</td>
<td>Modern</td>
<td>1936</td>
<td>77</td>
</tr>
<tr>
<td>W2AF</td>
<td>1927 PP 210's</td>
<td>Mod.</td>
<td>65</td>
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<td>W2FW</td>
<td>1939 807</td>
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<td>W570S</td>
<td>Modern</td>
<td>Mod.</td>
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<td>W LAB</td>
<td>Modern</td>
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<tr>
<td>W2AB</td>
<td>Modern</td>
<td>Mod.</td>
<td>17</td>
</tr>
</tbody>
</table>

Bi-note: The final tally sheet provided by W2KHM is an exceptional breakdown of all operation on each band. Unfortunately, it is too lengthy to reproduce in QST.

Calls Heard by W2KHM in Buffalo Hospital:

Participants NOT submitting logs:
W1IJ, W1MT (OT xmir), W2AY, K2MAJ, K1NP, W2OF, Q2LI, W2FV, W2K, W2XH, W3KI0 (OT xmir & rovs), K4WR, W4ZM, W6CG, W7FY, W3ZIJ and W68G.

---

STATISTICS

# OT TX- 19, # OT RX- 16
Oldest Xmir: W2BJT (1924)
Oldest rovs: W2BJT (1926 Grebe)
Lowest power: VE3EDV (5 watts)
Highest power: W2BF, W2PE (100 wts.)
Oldest tube: W2BJT (202) WDLM (VT-2)
Biggest tubes: WDLM (WE 211A) W2BN
(WE 211A), W2BF (203A), W2PE (211)
Largest number qso's: W2LV -- 47
Tot. GSO's 441 (80m- 379, 40m- 50 (20m- 12)

---

Have you seen our Type 247-W combination Filter and Wavemeter? Range 150 to 500 meters. Price $10.

---

GENERAL RADIO CO.

Manufacturers of
Electrical and Radio Laboratory Apparatus
Massachusetts Ave. and Windsor St.
Cambridge Massachusetts
AN EXCITING SIDE-LINE
FOR ANY COLLECTOR

Tired of drooling over $200 AK breadboards? -- beating the bushes for old TRF sets and poking through boxes looking for brass-base 201's? If so, why not try another collecting sideline by accumulating a vast assortment of meters. Meters can be broken into several categories:

1. General run of the mill types such as round Weston and Jewell panel types made in the 20's and 30's.
2. Same as #1 except off-brand like Read-rite, etc.
3. Handy pocket types used for checking A and B batteries and the "miniatures".
4. Large industrial/commercial panel meters (see illustration).
5. Lab instruments for table use (see illustration).
6. Exotic types: light galvanometers, suspended types in bell jars, tricky multi-range meters, early bridge ohmmeter, etc.

Interest (and value?) increases with each category with much over-lapping: a dandy little "miniature" (#3) may have more attraction than a large power house meter (#4) or a lab meter (#5).

Collectors don't seem to get excited over old test equipment such as tube checkers, analyzers, etc. unless they can find some actual use for them -- besides, they take up too much room.

Value? I have talked with several collectors on the subject and came away confused. Apparently the demand isn't there yet and an identical meter will sell for $5 to $25 -- depending on a variety of circumstances -- not like other collectible items which have in recent years slotted themselves into more or less a definite pattern.

The outer meters are Industrial types (#4) and a #5 Lab type in center.

--- Photo by Ted Woolner, WALAEP
Good news! -- W-U has a museum again. Until a few years ago the company maintained a fine museum in lower Manhattan. In the process of moving to a new location, they boxed up the collection and did not re-open at their new facilities. This left only the National Telegraph Museum (Union, N.J.) and a few scattered museums such as A.W.A. with telegraph instruments.

Word has been received that W-U has again a museum on Pioneer Square, Occidental Ave., So. in Seattle, Washington. Several AWA members have already visited the exhibit and have came with glowing reports. Reproduced below is copy from the Museum brochure. We might add the Dr. Finn of the Smithsonian contributed much time and material to this fine communication museum. (Tnx W7JY & W7WQ)

The Museum

The mezzanine houses The Museum, an exhibit tracing the history of Western Union from its early beginnings to the Space Age. Over 100 pieces of Western Union memorabilia are shown, the majority of them courtesy of the Smithsonian Institution. There are also a few collectors' items from Western Union offices and employees. On the walls, diagrams and photographs of the early development of telegraphy, the development of Western Union, information on the telegraph and The Northwest, submarine cable laying, and the wiring of the continent are illustrated. Of special interest in the seven display cases are:

The First Telegraph Instrument

Built in 1835 and modified in 1837, the original instrument's frame was made out of an artist's old canvas stretcher. Inventor Samuel Morse was a painter by profession. Wooden clock gears pulled a roll of paper on which a pencil hanging from a pendulum made zigzag marks denoting dots and dashes. An electromagnet, attached to a bar in the middle of the canvas stretcher, moved the pendulum. The instrument was never used commercially, but it served to create interest and was the basis for the development of Morse's 1844 instrument.

The Morse Key and Register (receiver)

A reproduction of the instrument used to demonstrate the first commercial telegraph circuit ... used to tap out Samuel Morse's famous first telegraphic message: "What Hath God Wrought!" The original instruments, on display at the Smithsonian, were used at the inauguration of Westar in 1974, when R. W. McFall, Chairman of the Board and President of Western Union Corporation, transmitted the same message "What Hath God Wrought!" via Westar satellite.

The lobby, with its turn-of-the-century theme, has an old-style counter, writing ledgers, oak flooring, brick walls and an old-fashioned staircase, leading to the mezzanine. A four-by-six-foot photomural of a New York street lined with telegraph poles and wires is featured on one wall to illustrate the impact of the telegraph industry on the life of the nation. A wide variety of signs, metal and wooden, are shown on the other walls. Two Western Union uniforms -- one in navy blue, worn in the latter part of the 19th Century, the other in khaki green, used from 1900 through the 1940s -- are on wax figures at the rear of the lobby, under the staircase.

By contrast, the operating area is filled with high-speed electronic equipment in a modern office setting. A full range of communication services is available to the general public including Telegrams, Personal Opinion Telegrams, Malignant Notes, Weary Orders, Clandestine Grams, Dolly Grams, and Flowers by Air. The office, manned by 12 professionals, is open from 7 A.M. to Midnight.

SMITHSONIAN INSTITUTION

1976 is our nation's bicentennial year and the centennial (1876-1976) for the telephone. On a recent trip to the Smithsonian Institution I found Elliot and Barney making plans to celebrate the occasion. The museum has a wealth of historical material for such an exhibit which promises to be the highlight of the '76 season.

Their exhibit will include rare pieces made before the turn of the century by Bell, Berliner, Dolbear and others.

This all brings to mind that maybe A.W.A. should have a small telephone exhibit next year. The Association has several historical telephones including a rare Blake made in the early 1880's. More on this later.

While at the Smithsonian we were shown some of the new amateur equipment recently received for their proposed Bicentennial Amateur Station which will become a permanent installation. Elliot (K3RJA) told me they have plans to establish a club to maintain the station and are counting on amateurs in the Washington metropolitan area to operate it. There will be a rotary on 10/15/20 and long wires on 40 and 80. To prevent being caught with man-made interference from within the building, they're going to make several location checks on the roof of the huge building before erecting the antennas. (B.K.)
NEW MEMBERS
--who are or have been associated with communication or electronics.

KENNETH WILSON  Henry Ford Museum
Director Collections/Preservation
ALEXANDER MC KENZIE W280UI/WALIQF, LBFPI
Mt. Washington Observatory, Yankee Network, N7Z Radio Lab, etc.
LINDA PETTIT  W662SE  Secretary Amateur Morse Network
WARDELL SMITH  W2BRRQ  Daven Company, Tung-Sol, Dumont, etc.
JOSE CADRECHA  (Shelbourne, Vt.)
ex-C02XF, I.B.M. (Electronics)
WARD KREINER (Pom Lauderdale, Fla.)
Borroughs Corp., Radio/TV, etc.
KENNETH HELTON (Chillicothe, Ohio)
Electronics Industry
CHARLES RAKER  KYING, Electronic Kit Co.
GEORGE SAKOY (Etobicoke, Ontario, Canada)
Electro Sonic Inc.
ROBERT BOAT  K7HPS, ex-9DKQ, 8DDX
SHERWIN SHARON W2OZK, ex-W3FTC
Engineer National Broadcasting Co.
ALIAN BURNS  W3DHY, ex-3CDA  City Elect.
Inspector & Radio Service Manager
HAROLD DITZIE  W2AZU, ex-2ACP U.S. Govern.
Quality Assurance
WILLIAM MOZER  W6GAI, W6XRC Radio,
N.Y.C. Engineering Super. C.W. Post College, Director of Broadcasting
LE ROY KIRCHART  W8CZA Supt. of Communication, Dept. Electric Utility
LEWIS STEBB  K4NB, ex-9BAO Commercial operator -- Great Lakes
H.D. UTZ (Sacramento, Calif.) Supt. of Electronics, McClellan A.F.B.
RALPH TROTTER (Hopewell Junction, N.Y.)
Elect. Engineer I.B.M.
ROBERT LINDSAY (San Jose, Calif.)
Hewlett-Packard Corp.
WILLIAM DERRICK  W2LUG, ex-2AIIO
Radio Corp. of Amer., I.T.T.
TERRY FLEGES (Tampa, Fla.) Announcer broadcast station
DORIAN CHALLONER (Ottawa, Ontario, Canada)
Communication Tech. Satellite Project
RAYMOND POCK (Fullerton, Calif.)
Electronics Metal Fab., etc.
JOHN MARKS  W6CZD, ex-W7VS, W6ELD
Naval Radio
JOHN GLEASON (Richmond, Virginia)
A.F. Communication Officer
PAUL KLITSCH (Hope, Arkansas) G.E.
Loudspeaker manufacturing
EROS ERICKSON  W3FPF  WQFC, Marine oper.,
State Police Radio

HERB PALMER  (Overland Park, Kans.)
DIXON GREENWOOD  (Ashtabula, Ohio)
Chief Radio U.S.A.M.P.S.
W. HAARMANN  (Milwaukee, Wisconsin)
Station WTMJ
ROY ROSEMBURY (Masillon, Ohio)
Stations WTVG, WHBC, WADD
ORVAL REETER (Pontill, Ontario)
Audio-visual Technician
JERRY FINK  WOUU, Pink Electronics
LURIE JACKS (Lincoln, Nebraska)
Electronics teacher
W. ANDERSON  W6QV, ex-9QU, '6EIE
Electrical engineering
JOHN NAGLE  K4KJ, ex-W9JVL
GEO. HARRIS  (Lubbock, Texas)
Chief Engineer MIZAK
FLOYD LENNON (Hull, Quebec, Canada)
Station Manager CKCU
DAN MACPHERSON  (Rensselaer, N.Y.)
Chief Engineer WFLY
MATTHEW KELLMAN W6ZANJ, ex-W6ZVI
Skip operator (Standard Oil)
LEONARD NELSON W6UIR, U.S.N., Hunter Lab
WILLIAM CONDON  (Santa Monica, Calif.)
Supervisor Pioneer Magnetics
DR. EDMUNDO RIVETE DULOR, ex-K1AR
Rizal, Philippine Islands
BROTHER PATRICK  DOWD  WGGK ex-W2ZTV
Teacher/Tube Historian
CHARLES R. LEITZ  (New Jersey) Son of
well known receiver manufacturer
MIKE FEHR  W6LQLZ, ex-W6QGU, W6HQT
Engineer B.M.R. Telemetry

On Review

A Pictorial History of Radio

A FLICK OF THE SWITCH

"FLICK OF THE SWITCH" was announced several months ago but wasn't released until recently. We now understand why: Morgan increased the number of pages from 250 to 312 and added hundreds of 1930-40 classic and amateur receivers plus a large array of early TV sets, info on commercial wireless and WW II vacuum tubes. This book is by far the best book ever printed for the collector. It sells for only $6.95 hardback and $9.95 hardcover. See next page for Table of Contents. Mail check to:

VINTAGE RADIO
Box 2045  Palos Verdes Penms., Ca. 90274
TRADE: 4 books, Boston, Wash., Montreal, St. Louis Elec. Rbks, pub. 1904 by AIEE as guide to Int'l Elec. Congress, St. Louis, Copies or original old rare & callbooks, other old radio publications & instr. Want Grebe, 1P500, Vibroplex, etc. Horace Gos, WAB, RFD, Essex, Conn., 06426

FOR SALE: WE amplifier with 2 WE tubes, Mod. 25A, FB-7 cabinet with some parts, Mod. F-1 AK speaker, open coil. 210 and 226 in boxes, Radiola 33, UX-159, UX201A U701 tubes, Kennedy Mod. 20, Type 440. Jack Nelson, W2FW, 915 Sherman Street, Shenectady, N.Y. 12303

NEED: original tube socket assembly (bakelite tube socket plate, rubber mounts and metal clamps & screws) for Radiola Balanced Aplifier. Also four good WD-11 tubes. Phil Howell, 700 Crescent Rd., Nashville, Tenn. 37205

WANT: 2nd AFT for Tuska Superlyne Jr., horn for WE 10D spkr., Colls., hwe for ME300 pony relay, Grebe tuner for ROKD, "vol" rheostat for West. Coil Co. W-12, & any kind of early incandescent lamps. Have SW-3 for trade. Barney Wooters, W5KSO/9, 8303 E. Mansfield Ave., Denver, Colo. 80237

WANT: Instruction and Service Manual for Hammarlund "Comet Pro" (circa 1933) Also cabinet for same. Dixon Greenwood, 6237 Murray Ave., Ashtabula, Ohio 44004

WANTED: historical info on KFPU radio founded in 1924 in Bristow, Okla., moved to Columbia, Mo., Oct. 1925. Letters, Brochures, records of programs, etc. material for copying, recollections, etc. Also to buy G.E. JPM-90 FM tuner circa 1940. Al Germond, KFPU, Box 718, Columbia, Mo. 65201

FOR SALE: AK Model 20 radio in mint condition; also Scott Phantom Deluxe console, Baldwin phones & spkr units, misc. dials, knobs, escutcheon plates. Will Klett, 5-B N. Main Street, Lombard, Ill. 60148  (WBDMV)

WANTED: AK breadboards, parts and A-K literature. Also have a King-Buffalo TRF set for sale @ $60. Terry Chew, 3218 Savetelle, Los Angeles, Calif. 90066

WANTED: Philco Model 70 parts--4 knobs, tuning dial and escutcheon plate. Write: Lawrence Moser, 5925 W. Florida Avenue, Lakewood, Colorado 80226

WANTED: AK breadboard on-off switch, RF coil with label on top, table mtd. rheostat, coupled cir. tuner or any breadboard parts. Will trade breadboard parts for those I need. SABE for list. WBEMPJC, Arnie Schwartz, 4728 Dunman Avenue, Woodland Hills, Calif. 91364
Inventor W. D. Coolidge, Developed Lamp Bulb

Dr. William David Coolidge, world-famous scientist whose many inventions led to the development of the incandescent lamp bulb and x-ray tubes, died Monday in Schenectady, N.Y. He was 101.

Dr. Coolidge held more than 80 patents and indirectly accounted for hundreds of others. A former vice president and director of research for General Electric Co., Dr. Coolidge was noted chiefly for his discovery in 1906 of a means of making a tough metal, ductile tungsten, into a pliable one. This discovery made practical the use of tungsten as filaments in lamp bulbs, and was chiefly responsible for their long life and high efficiency.

He also was the inventor of the form of x-ray tube that became widely used in medicine and other types of work.

E.N. Rauland

77 years, Evanston, Ill. April 2

E.N. Rauland was Chairman of the Board of Rauland-Borg Corp. He was a pioneer radio manufacturer and radio broadcaster. Rauland was President of Rauland Corp. and founder of station WBBR (now owned by Zenith) -- Tnx Geo. Rausske

Moreau Jansky

Jansky (79 yrs., Washington, D.C.) was a member of the firm Jansky & Bailey, pioneers in development of coverage standard for radio broadcasting, directional antennas and associated equipment. The firm built and operated the third FM station (WJXO, Lj36) in the nation.

Bell Labs Scientists

Mark 50th Anniversary

In 1974 Bell Labs completed 50 years of significant accomplishments for the Bell System.

Bell Labs, working closely since 1925 with Western Electric, AT&T and the operating telephone companies, performs the basic research, development, design and engineering necessary to produce new and better equipment and services for telecommunications while holding down costs.

In its first 50 years Bell Labs scientists and engineers have been awarded more than 17,000 United States patents, two Nobel physics prizes (in 1937 for demonstrating the wave nature of matter, and in 1956 for invention of the transistor), three National Medals of Science and hundreds of other prizes and honors.

One of the largest industrial laboratories in the world, Bell Labs is an organization of about 16,500 employees, with 18 locations in nine states. Among the highlights of Bell Labs activities in 1974 are the following:

Construction was started on the first section of a new kind of high capacity transmission system...called "millimeter waveguide", capable of carrying a quarter million telephone calls simultaneously. This system uses digital techniques to handle these huge number of calls in a 2½ inch tube of copper-lined steel.

Pilot Radio sold

One of the oldest names in audio, Pilot Radio Co., is the latest to be sold to a Japanese company, Mitsubishi International, a major trading company, is acquiring the Hi-Fi firm. Controlling interest had been held by National Union Electric Co., which once owned the Emerson and DuMont television receiver operations. Motorola's television business was sold last year to Matsushita Electric Industrial Co. which now manufactures the sets in the U.S. and sells them under the Quasar brand name.

Got Into One of the Huge Shielded Air Condensers and Caused a Short Circuit that Cost His Life and a Few Moments of Interruption of Program

Bug Stops WJZ

Headlines, Oct. 9, 1925)