

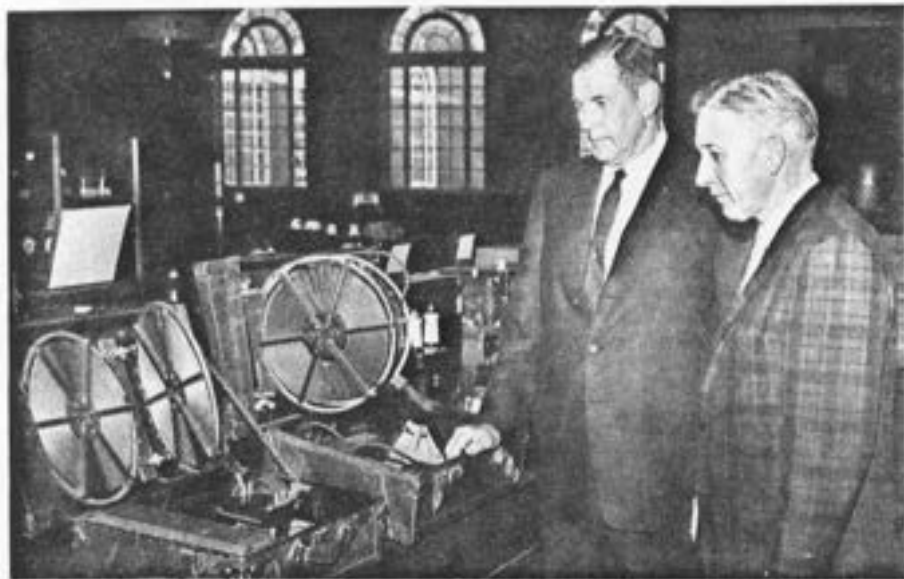
THE OLD TIMER'S BULLETIN

OFFICIAL JOURNAL, ANTIQUE WIRELESS ASSOCIATION
Published for the Old Time Wireless Operator, Historian and Collector

Vol. 5

SUMMER - 1964

No. 2



General Cook, W4FZ (left) and Frank Davis (Curator, Ford Science Museum) are seen admiring some early WWI gear on display at the Museum.

DEARBORN OLD TIMER'S NITE - In spite of a holiday weekend (Memorial Day), over 400 attended this annual affair at the Ford Science Museum. Top speaker of the occasion was W4FZ, Maj. Gen. Earle Cook (U.S.A. Ret.) with A.R.R.L. Directors W9UYP (Great Lakes Div.) and W9HPG (Central Div.) present.

OT's in attendance included W3AX, W6AM, W6BO, W6CJD, W6DX, W6HP, W6JYJ, W6LU, W6MO, W6SS, W6UA and W6WI. The evening program was preceded by a QSWA noon luncheon. (Thx - W6PX)

SIGMUND-SHUKERT 'tone' generator of about 1895-1900 vintage is the newest addition at K3MCA. It says it is of German origin and is somewhat similar to a miniature Alexanderson alternator.

ORIGINAL PATTERNS - used to make loops for old cage antennas are now in the club's museum. Designed by Gil Crossley, W3YA, subsequent "dupes" were used in 26 different broadcast stations as well as dozens of amateur stations of the 1920's....which reminds us..W2AM should have a cage antenna !

NEW GEAR AT A.W.A.

Magazines - K2EE, W3YA
Books and Literature - K2DQ, W2DA, W4AU
Early Amateur gear - Morgan Rich
Tubes - W2QO, W6ONE
Misc. equipment - K2EE, W6ONE, W3YA
K3LJV W2DJ, Prof. Newell

ANNUAL BANQUET - MORSE TELEGRAPH CLUB

W2QY, W2XND and W2ICE journeyed to Albany, N.Y., recently to present the A.W.A. show "120 Years of Brasspounding" at the Joseph Henry Chapter of the M.T.C. They found Will Andrews, W2ONE, host and approximately 40 members present many of whom were amateurs and telegraph historians.

The highlight of the occasion took place at 8 P.M. when knives and forks were dropped and everyone copied a greeting from Pres. Johnson in morse on several sounders spread around the various tables (see foto). Western Union provided a direct line which was tied in with other chapters in U.S.A. and Canada with the Grand Chapter in Los Angeles.

They were told that there were 68 Chapters and to qualify for membership one must have been or are actively engaged in landline work. They include Western Union and former Postal Union employees, Press and Stock Broker telegraphers, Railroad telegraphers, and of course, old time Wireless operators who know Morse. W2QY and W2ICE were visibly surprised at the number of high speed women telegraphers in the group who could take Morse at 40 to 50 W.P.M.

A.W.A. membership includes other Morse historians in addition to W2ONE such as W2ZI, W2XND, W2ZC (K2OBY), W2FX, and W2WE - the latter having one of the finest collections in the country.

BILLY JONES AND ERNIE HARE - the "Happiness Boys" - bring back memories of the old broadcast days ?

The newest historical tape in the club's tape library is one made from a 78 RPM record made in the '20s of these early broadcasters. The record is a Victor and titled "TWISTING THE DIALS".....

W2PI had the tape made for us which is surprisingly clear of needle scratch. Frank, by the way, is the guiding star behind the "HARMONIC" a publication printed by the South Jersey Radio Association...one of the oldest Amateur Radio Clubs in the country having been continuously active for 48 years ! The club has a nice call too - you guessed it - K2AA !

OLD BOOKS - can be bought through the mail from used book stores quite reasonable according to Charles Henry. He recently picked up one of the "Wireless Boys" series (1912), Lodge's "Signaling Without Wires" (1894) and a 1918 Bucher.



John McNamee, Chapter President (retired Press Commercial Telegrapher) is seen copying the President's message. Looking on is old time Western Union Telegrapher Art Dixon.



(Left) Doris Russell, Club's Vice President and old time Telegrapher with her Vibroplex. Smiling, is A.W.A. and Morse Historian Will Andrews, W2ONE, Western Union Wire Chief.

QCWA MEET - the 'gang' down in the Washington area ended up with some real OTs on their board for 1964: W3RE (Chairman), W3GD (Vice-Chairman) W3CDQ (Sec'y/Treas.)...speakers at their meet included W2NE, W3ARK, W3PS and W3YA..... and Bruce Boyd, W3QA, writes that he was elected Chairman of the Baltimore Chapter....congrats !

"THE OLD TIMER'S BULLETIN"

A news bulletin printed for members of the Antique Wireless Association.

Editor: Bruce Kelley, W2ICE, ex-WBACY

Pub. Editor: Larry Triggs, W2YBK

Published at Holcomb, N.Y.

ANTIQUA WIRELESS ASSOCIATION

A.R.R.L. Affiliate

An organization documenting the history and technology of wireless and the work of its pioneers.

President: George Batterson, W2GB
Vice-Pres.: Lincoln Candall, W2QY
Secretary: Bruce Kelley, W2ICE
Directors: Clarence Dengler, W2IK
Charles Brelsford, W2CTA
Larry Triggs, W2YBK
Kenneth Gardner, W2BGN

Club Station: W2AN

Annual Dues: (including the "Old Timer's Bulletin", certificate and other benefits) - \$2.50 per year payable to Club Treasurer - Lincoln Candall, W2QY
69 Boulevard Parkway
Rochester 12, N.Y.

MANUFACTURERS OF DOUBLE HEADSETS (1905 to 1925)

Briggs & Stratton	Federal
Warren	Elwood
Leich	Everett
Dictograph	Heslar
Roller-Smith	Frost
Stromberg-Carlson	Eisemann
American Electric	Monarch
Towers Scientific	Globe
Randolph Special	Liberty
Automatic Electric	Brown
Western Electric	Brownlie
Thompson-Levering	Kellogg
Holtzer-Cabot	Electro
Connecticut	Lucas
Red Star	Brundes
Manhattan	Baldwin
Royalphone	Murdock
Red Head	Cory
Sullivan	Collins
N & K (Neufelt & Kuhnke)	

This interesting list was sent to us by Geo. Applegate, W2IA. How many can you recognize? George developed the list by looking thru different periodicals and was quite surprised to find 39 different brands. Can you add some more?

ATTENTION: RADIO HISTORIANS

One of the most comprehensive listings of historical radio reference material ever to come to our attention was recently received from Gerald Tyne.

Consisting of many pages, it lists available "duplicate" copies of letters, newspaper clippings, magazine articles and other material from his enormous files. The "dupes" are available at slightly above printing and handling costs.

Several listings are available...the most impressive being one covering DeForest history. Copies of many rare and unpublished items are available to the radio historian. If interested - send a large self addressed envelope with 15¢ postage to: Gerald Tyne
40 Kline Place S., Berkeley Heights, N.J.

Please do not request the list unless you are genuinely interested in this type of material.....

TRENTON OLD TIMER'S NITE

It is with pleasure we can again report on this well known event. As usual it took place at the Stacy-Trent Hotel with a large attendance of A.W.A., OORC and QOWA members.

Three well known radio pioneers highlighted the program: Roland Bourne, W1AM (A.R.R.L. Curator), Clarence Taska, ex-1WD (co-founder of A.R.R.L.), and John Cooper, ex-4EI (former Director of Naval Communications).

Letters received indicated many were disappointed because W2ZI did not display his old gear which has been the custom. (We sympathize with Ed on this count - lotta hard work and equipment subject to damage.)

A vote was taken on whether to continue the event as a 'stag' affair. Although there were many dissenters, the 'stags' won. It is well to remember, however, there are some pretty well known OT women pioneers around such as Eunice (W1MPP) and Liz (W3CDQ) as well top historians as Lou Moreau (W3WRE) and Nancy (YL-W1NTE).

A very successful affair, everyone hopes it will continue. This one (1964) was the 17th - the first in 1946.

CONSTRUCTION CHALLENGE - W3KKY has accepted the challenge of making a replica of one of the more difficult pieces of historical equipment - a magnetic detector! The first model used a small A.C. motor to drive the continuous wire core; however, there was A.C. pickup from the motor. This was overcome by using a spring driven phonograph motor which is now doing the job with interesting results.

Valuable DeForest Data
Now in ANA Archives

ANA archives now contain an almost priceless file of original data on Lee DeForest beginning with material on the frenzied finance of DeForest's entry into the wireless telegraph business at the turn of the century, the DeForest radiophone demonstrations of 1907-1910, the stock-selling fraud trials of 1911 and 1914, the Marconi Fleming patent suit, and finally, a large body of DeForest audion vacuum tube catalog data—particularly covering the tubes marketed from 1925 onward.

This material—a couple hundred exhibits—has been presented to ANA by well-known tube historian Gerald Tyne, being xero-graphic reproductions of original material in his voluminous historic archives on the origins of wireless and, more particularly his exhaustive collection on vacuum tubes.

Leafing through this fascinating file of letters, newspaper clippings, court records and contemporary magazine articles, transports the casual reader back to the feverish time of wireless exploitation, when the giant technical strides of the art were all but obscured by the furor over its get-rich-quick possibilities. Only the oil strikes in Texas and Oklahoma stirred up as much excitement among the investing public.

Comedy, tragedy, slapstick journalism, pathos, heroism, venality, integrity and mayhem can be read in the record. At the bottom of his typed resignation as Scientific Director of the American DeForest Wireless Telegraph Company in 1906, after a good drubbing from the first of his exploiter friends, DeForest wrote: "This is the funeral of my first child! This the fins to the hopes and efforts which have made up my strenuous life for the past five years. That which I had wrought with pain and ceaseless endeavor to make grand and lasting and important is prostituted, sand-bagged, throttled and despoiled by the Robber who has fattened off my brain. But my work goes on, while I live." DeForest was 34, ten years out of Yale, and, it appears, not about to quit!

MEMORABLE DATE - here is one to tuck away in your notebook - the first regular full length Hollywood movie to be televised was titled "THE CROOKED CIRCLE" shown over W6XAO (later KFI and KFI) 31 years ago (1931).

Starring Ben Lyon and Irene Purcell with Zasu Pitts and James Gleason, the movie established a precedent for Hollywood movies now makeup a fair percentage of all television programs....

2ND NATIONAL HISTORICAL
MEET

Amateur Historians, Collectors
and Pioneer Operators.....

SATURDAY, OCTOBER 3

New England Wireless Museum
Tillinghast Road, East Greenwich
Rhode Island

Friday P.M.

"Get-to-gether" and entertainment for the "Early birds".

Saturday (Starts at 10 A.M.)

Full day program for the Old Timer, Collector and Historian. Well known Pioneers will be present. Outstanding exhibit of historical equipment. Contest for the collectors. Luncheon at Noon. A big Banquet at 6 P.M. Be sure and bring old gear to sell and swap as well as to display.

Sunday A.M.

"Old Timer's" Breakfast

Registration and Banquet
\$5.90 payable in advance
\$4.00 for XYL's

Please make out and mail check by
Sept. 27 to: Nancy Merriam,
Tillinghast Rd., East Greenwich, R.I.

Don't miss this event - it promises to be the largest ever held. Fellows plan to attend from California and Texas! Only a couple hours from New York, plenty of Motels with Fall rates, meet your friends - nuff sed!

STUBBLEFIELD - Nancy Merriam, our historian down in Rhode Island, found info about this little known radio pioneer. She said her information was found in a book titled "The First Century of American Broadcasting" by Shurick on page 6. It starts out - quote "There is a LEGEND of Nathan B. Stubblefield of Murray, Kentucky (legend being in italics).....he is said to have sent his voice and harmonica through the air without wires in 1892 and demonstrated wireless in 1902. He got his patents in 1908 but was afraid someone would steal his idea and never commercialized it. He rather became a hermit and was found dead in 1928. The Assembly of Kentucky passed a resolution honoring him in 1944..." Anyone else have information on Stubblefield? What type of equipment he used for transmitting and receiving?

TUBE COLLECTION- WASHINGTON

NAVY YARD

The notice in the last OTB re "Lieut. Eaton's Collection of Historical Tubes" shown in Mary Loomis' book brought several interesting letters.

The key to the subject was supplied by Tube Historian Gerald Tyne who sent us a copy of a 1936 report written by George Clark (see Vol.3, No.3 OTB).

According to Clark - the tube collection hung for many years on the wall of the Radio Test Shop, Washington Navy Yard. In 1933, Clark, a former Navy man and RCA Historian, borrowed the collection for display and lecture purposes at the Chicago's World Fair.

Following the Fair, the collection was returned to RCA for temporary storage purposes. The next couple of years found the collection a 'touchy subject' between Clark and NBC Officials. Because of space, we will not go into detail other than to say that it appears that RCA and NBC officials gave George a rough time.

To make the story short - when he finally got the tubes back to return to the Navy - it was found they were ALL smashed as a result of either poor shipping or storage! (???)

And what about Lt. Eaton? Jimmy Jones writes and tells us he is very much alive and happily retired in Washington.

SILENT KEYS

CHARLES LEUTE, 65, April 28, at Red Bank, N.J. Recently retired from Senior Staff of Johns Hopkins Applied Physics Lab, he pioneered in early wireless starting with Marconi Wireless Telegraph Co. and later formed his own company manufacturing receivers in the 1920's. (See article by WAAA, Vol.4, No.1)
- - - Tlx Ted Duvall

MELVILLE EASTHAM, 79, May 5, at Boston, Mass. He was founder and retired President of General Radio Co. and co-founder of Clapp-Eastham Co. (See p.3 Vol. 2, No.2, OTB)
Tlx Dexter Bartlett

LOUIS HAZENBINE, 77, on May 26, at Newark, N.J. Inventor of the neotrodyn circuit. Former Professor and Chairman of the Electrical Engineering Dept. of Stevens Institute and Director of the Hazeltine Corp. Tlx - Lou Hardy, W200

FRANK BILEY, W3ID, Cleveland, Ohio. Manufacturer of Wind Speed and Directional Equipment for F.A.A.



The young fellow in the foto is Joe Mullen, K4JKR. Don't let the call letter and foto fool you however since the picture was taken over 52 years ago!

To be exact, it was while he was stationed on the U.S.S. CYCLOPS in 1912..... Joe was assigned to her as soon as she was placed in commission. Prior to this he was at the old Massie station "BI" on Block Island in 1909 where he remembers using a Branly coherer with tape.

The outfit on the CYCLOPS was a Fessenden receiver with electrolytic detector and a 2 KW. spark set. Joe was on the ship until after Vera Cruz affair at which time they took refugees to New Orleans and Galveston. The CYCLOPS very mysteriously disappeared during WWI causing much speculation.

Now retired, K4JKR, looks back on an adventurous career including employment with most all of the old wireless companies. He recalls being on the Revenue Cutter "Mohawk" when she escorted the "Carpathia" back to New York with the Titanic survivors. Later years he was radio engineer with U.S. Mail Service setting up Poulsen Arc xmits and then later as President of the Brunswick Radio Co. of Canada.....

"A GOLD-AWARDED SOS" is the latest article written by author historian W2AAA. The "Nautilus" article will appear in "73" magazine according to Frank.....

GENE AUTHY of Cowboy Motion Picture fame is Honorary Vice-President of the Morse Telegraph Club!

"OLD TIMER" AWARD - Many of you have attended events where recognition is given to the oldest amateur present - but Walt, KZEE ask "How do you define the oldest amateur ? By age ? By years of continuous activity ? Years of continuous licensing ? or when first license was obtained ? At one time another we have seen an award given to each of the above categories.

One certainly can question age - surely, you would prefer recognition to an old time wireless operator who started in 1912 versus one who picked up his ticket in 1962 even though the latter may be a couple of years older.

One can also argue the "continuous activity" angle...A fellow starts in 1912 and drops out in 1914 and then gets back in 50 years later. Another fellow starts in 1913 and remains active - who is the winner ?

And then we have the 'licensing' one to chew on. Some feel the date of the first license is the key to the problem. Can this be fair however ? Suppose Amateur "X" picked up his ticket in 1913 whereas Amateur "Y" could verify his activity as early as 1909 (before licensing) and could verify by early listings, magazine articles, etc., but due to location didn't pick up his license until 1914. Who is the winner - "X" or "Y" ? What are your thoughts on this ? ?

DE FOREST PHONOFLIM - Charles Henry corrects a Spring issue item: Dr. Lee de Forest gave him the optical sound-on-film clip in September 1924 and not in 1926 as we stated. Phonofilm opened at the Rivoli, April 12, 1923. It, and not the sound-on-disc Vitaphone opening in August 1926 marked the genuine beginning of the 'talkies'. In August 1924, Lee de Forest made motion pictures with sound in Washington of Pres. Coolidge and Sen. La Follette, and later of John W. Davis. The three presidential nominees were seen in movie houses in a talkie news short on September, 1924. By that time several movie houses were including Phonofilm news and entertainment shorts in their programming. AWA member Charles Henry dates it this way: A de Forest employee took him from the studio to the Rivoli where the political news short was on the film.... (References: "Father of Radio" page 370 also - Ralph Newman's History Quiz, News Syndicate for May 10, 1964)

DID YOU KNOW - that KDKA received its call Oct. 27, 1920 and was assigned from a roster of ship calls (WLDL)

HISTORICAL GEAR CONTEST AT RHODE ISLAND MEET

Do you plan to attend the big historical meet in October ? If so, bring along a few pieces of old gear and you may go home with an engraved plaque for your efforts.

There must be at least 3 entrants in each class. Members are limited to only one entry per class. All equipment must have been made before 1930 and judging will be based on:

1. Appearance and finish
2. Complexity in design, size, etc.
3. Rarity and historical value

CLASS I - The best broadcast receiver
CLASS II - The best commercial receiver
CLASS III - The best piece of amateur equipment (receiver or transmitter - homemade with commercial components).

This is the first competition of its kind ever held - let's make it a success and bring an entry.

NEW GEAR ON MEMBER'S SHELVES

FLOYD LYONS has several new pieces of gear including a 1919 Clapp-Batham ZMF Tuner, a 2 tube Reinartz receiver and a couple off-beat items- an 1870 Stereoscope and a 1915 Music box with metal discs !

JOHN BAUM, KZVEB, reports picking up a Clearstone crystal detector for only 25¢ which means there are still good "bugs" if you want to hunt...

BUSS WORTHY hit the jackpot recently when he located several huge Scott 33 tube FM/AM Philharmonic receivers !
"TATE" THERIAU, WSPX, pinned down an ICW Chopper Wheel used on the ship "Western States" (WCTA). The wheel will end up in the Dossin Great Lakes Museum Wireless Shack. Tate also located an off brand Galena detector stand made by the Gisholt Machine Co. called "CYDAR".
BILL TRAVERS - adds a Braun rotary gap and an Adams-Morgan loose coupler to his collection. He tells us that he now has 12 different De forest sets !

FRANK DONAHUE - found a nice W.E. 3A receiver (4 tube) plus several NEBCO components including a BC-104 heterodyne unit and a 3 tube receiver.
KEN CONRAD - W2IIE, says he made out well at the WNY Hamfest where he found several old BC sets for sale very reasonable.

(Note to members: Write and tell us your latest "finds"...everyone is interested in what the collectors are doing...let's keep this column going...)

NATIONAL A.R.R.L. CONVENTION

New York City, August 21, 22 and 23

This promises to be one of the finest amateur conventions ever held in the East. Not only will the amateur enjoy top programming highlighted with such personalities as Barry Goldwater, but he can attend the nearby World's Fair all in the same visit. Special hotel rates are offered at the New York Hilton - and they really are reduced for we checked! More info can be found in any of the leading radio magazines.

A.W.A. HISTORICAL EXHIBIT

The A.W.A. will have their usual large display in the Exhibition Hall. All Officers and several Directors will be on hand to greet the 'gang' and show the club's old gear.....

OLD OLD TIGER'S CLUB PROGRAM

Saturday, Aug. 22, 5 P.M.

"Grand Get-together of old time Wireless Operators....."

conducted by

BERT OSBORNE, W4WF
Pres. O.O.T.C.

Entertainment

"120 YEARS OF BRASSPOUNDING"

This well known show has been up-dated and includes many new features such as W6GH's "Story of the United Wireless Operator". Originally conceived by WJWRE, it covers a brief history of telegraphy from Morse through to present day traffic nets. Brilliant pictures and vivid sound makes it one of the most popular historical radio shows.....

TRIODE TRADEMARK - yes, this word was actually registered in Washington as the trademark for Wireless Speciality Apparatus Co. (see p.233, April issue, Radio Amateur News). Soon after, however, the company discontinued its use for ethical reasons and it being a common word in engineering circles.....

The actual story behind this little incident in radio history was obtained from George Clark's file "Radicon" and sent to us by Jerry Tyne...

UX-199 Ralph Yeandle, W2ETV, recently hooked up a one tube transmitter using a single UX-199 tube and worked a W3 over 200 miles away for his first QSO. Powered by batteries, it operates on the 160 meter band - anyone else with an old time xmtr on the air ?

WIRELESS HISTORY GETS ASSIST IN MD MAGAZINE

The next time you go to the doctor's office, ask to see his April, 1964, copy of MD, a national medical journal, in which the MD staff has written a brief but most accurate sketch of the history of radio. The article is entitled "Wonderous Waves" and contains some fine illustrations of early BC listening. If you have been hard put lately to explain to your grandchildren just how radio waves get into the air, you will enjoy the MD author's succinct but excellent explanation of this phenomenon. In fact, the whole article is a model of compression and lucidity.

And there's another article in the same issue (page 232) bearing on the wireless age which may prove even more important, historically, to many readers—a story of author Edward Stratemeyer (1862-1930) and his hundreds of boys' adventure books, including not only "The Rover Boys" and the "Tom Swift" books but our own "Radio Boys", written under the pseudonym of "Allen Chapman" and with forewords by Jack Binns.

Stratemeyer, beginning in 1899, turned out 160 juvenile books under other names, fifty under his own name, and "farmed out plots for some 700 more books to less inventive writers". Millions upon millions of these boys' books were sold.

While many of Stratemeyer's plots contained technical inaccuracies, the "Radio Boys" series probably was more accurate than most because of Jack Binns, who must have given ready counsel on most of them. Many of our readers are well up on the facts of the case.

Incidentally, Stratemeyer's daughter, through the Stratemeyer Syndicate, launched a new Tom Swift series in 1954—with modern electronic overtones—which bids fair to carry on the Gernsback tradition of peering into the future somewhat further than most scientists dare to!

AWA wishes to congratulate Dr. Felix Marti-Ibanez, editor of MD—a most learned man and himself a historian of note—on the competence and great readability of these and similar articles regularly appearing in MD. (Thanks to AWA member Jose Garcia for tipping us off to these articles.)

SWAP - hundreds of tubes made between 1928 and 1940 for what have you ? Write W2FVK, c/o A.W.A., Holcomb, N.Y.

WANT - Federal #66 output transformer for Federal #61 receiver. F.A.Nichols, W9AKH, 720 E. Eldorado St., Appleton, Wisconsin, 54912



RADIOLA III



BALANCED AMPLIFIER



RADIOLA III-A

PRICE

Radiola III, with one set head telephones and two Radiotrons WD-11.....	\$55.00
Radiola III Balanced Amplifier, with two Radiotrons WD-11.....	30.00
Radiola III-A, with one set head telephones and four Radiotrons WD-11.....	65.00
Radiola III-A, with one set head telephones, four Radiotrons WD-11 and Radiola Loud Speaker U7-1325.....	90.00

A.W.A. UX-210 NET

WINTX, W2EY, W2ICE, W2OZR and W3JDV plus several others are all currently building 80 meter transmitters using parts of the late 20's or early 30's. Most xtrs will use a single 210 in the final w/xtal osc. using another '10. Some plan to use heising modulation for phone work.

They plan to form a net this fall- only one stipulation- all gear must be over 35 years old. Interested ? drop W2ICE a line or look for more info in next QTB.....

HISTORICAL PROJECT - WINTX is presently undertaking the tremendous task of cataloging the history of EVERY '2' letter call ever issued ! His work will show the chronological history of all calls issued since 1912 ! Frank, we envy your patience.....

Here is some info on the popular Radiola III and III-A. A well known receiver of the mid '20s, it was seldom advertised in radio magazines or catalogs of the time.

A "must" for the collector shelf, they are not too difficult to find; however, he may run into restoration problems:

1. The cushioned tube socket assembly is usually always broken. This being a mechanical problem it can be remedied without too much trouble.
2. The audio transformers are frequently open. Replacements are difficult to find but one can bridge around with condenser and resistor or use a substitute transformer.
3. Tubes: WD-11's are now a collector's item and one is reluctant to actually use them. You can get around this by making adapters and using a later type.

DESCRIPTION

Radiola III—is a high grade regenerative broadcast receiver employing two Radiotrons WD-II. One stage of audio frequency amplification is provided, with the embodiment of new discoveries for clearer, purer amplification. Radiola III may be adapted to antennas of various lengths, and a choice of two types of tuning circuits is afforded. One is a sensitive single tuning circuit and the other is a more selective circuit for use when local interference is present. The apparatus is mounted below a horizontal panel of moulded material, and enclosed in a solid mahogany case. A flexible cable of generous length permits concealment of batteries on floor or elsewhere.

Radiola III-Balanced Amplifier is a two Radiotron, balanced or "push-pull" stage of audio amplification, made to match perfectly with Radiola III in physical and electrical design. This, too, has its cable to connect with the same batteries that operate Radiola III.

Radiola III-A. This is Radiola III and Radiola III-Balanced Amplifier in one case. It is somewhat more compact and portable for those who wish to buy the two units together.

FEATURES

1 The extremely low cost of this group places them within price reach of everybody living in the rural districts. The farmer cannot now afford to be without a Radiola. Accurate market reports, flashed daily, may easily save him the cost of the receiver in a single day's shipments. Then it goes on paying for itself daily in market and weather reports, in addition to the almost magic service it renders in enabling the farmer and his family to be entertained nightly by the best talent and speakers of the cities. To think that radio makes this possible in rural districts should, of itself, make a Radiola of incalculable value to the farmer, and the prices, so low as to place them within reach of every purse, should cause them to sell in outlying districts with a rapidity that nothing before them ever has sold.

2 They are compact, and neat in appearance. These units take up no room at all, and may be placed almost anywhere there is mere shelf room. A table, a sewing table, any small stand that it is convenient to use will accommodate the instrument.

A cable of small diameter and generous length permits placing batteries in an inconspicuous place.

3 The sensitivity of the units is high. The use of regeneration in a standard, established circuit gives results that are positive and dependable.

The very simplicity with which this is done, insures reliable working qualities year in and year out in the districts isolated from facilities of service and repair.

4 Ease of operation is a delight to all who use these sets. A single control does all tuning, while another knob controls the "tickler" or intensity. Anyone can tune these Radiolas, without a minute's instruction.

5 A selective connection is provided, enabling the separation of local stations to a degree far beyond that of other single circuit receivers.

6 All Radiotrons are cushioned in a special shock cradle. This eliminates noise while sets are in operation, and is a protection against knocks and jars which shorten the life of the Radiotrons.

7 Battery connections are well labelled and simple to connect, by a cable provided, to the batteries, which may be placed out of sight.

8 Dry cell tubes are used throughout. Just as loud and clear signals are obtained as with the usual storage battery receivers, with none of the inconvenience of charging or unsightly appearance.

9 The grid or "C" battery provision in these Radiolas contributes much to the higher quality of reproduction, and effects an appreciable economy of "B" batteries.

OLD TIME HAM-ADS

SWAP - books, etc. for a RCA UL-1006 edge wound tank coil. Bob Merriam, WINTS, Tillinghast Rd., East Greenwich, Rhode Island.

WANTED - Federal Model 58 receiver. Will pay cash. Frank Donahue, 13055 Roscoe Blvd., Van Nuys, Calif.

SELL - retiring to Florida and must sell rare book collection including such books as Fleming's "Waves and Ripples, in Water Air and Ether" (London, 1902), original first edition of Robison's Manual series (1906) as well as others. Write for more info. Col. Frank Shannon, W3GR, Apt. 829 1500 Massachusetts Ave., N.W., Washington 5, D.C.

SELL - QST's (scattered) from 1921 thru 1956, many early publications including E.I. catalogs, DeForest DL-5 tubes, var-

ious battery receivers and other equipment. Edison cylinder phonograph with 200 records. Jessie York, Box 130, Downsville, New York

SWAP - National SW-5 (without coils but coil forms), coils for PB-7X receiver (20, 40 and 80) Want - Rheostat for Grebe CR-9, New Ford coil, indoor revolving type antenna loop, horn for Edison phonograph, commercial built crystal sets. Have early Tom Swift books and QSTs - want Railroad magazines before 1929. John Baum, K2VZB, 929 Douglas Ave., Wantagh, L.I., N.Y.

WANTED - VLF receiver (DeForest, Kennedy or similar) Also want Grebe RORB, RORB, RORU, RORL, CR-3, CR-8, CR-9, Radiola II, III, III-A. All must have good tubes and in working condition. Ken Conrad, W2IIE 5482 Crittenden Rd., Akron, N.Y. 14001

(This is the second in a series by Floyd Lyons covering the history of the electric light bulb - the predecessor to the vacuum tube.)

Much information, as to age, can be gleaned by scrutinizing the filament of the early light bulbs - its shape, size and type. Other revealing factors come under "getters" and "stem-seals". An endeavor has been made below to cover the basics and to include a few interesting 'tidbits' here and there.....

FILAMENTS

1880 to 1893 - Carbonized bamboo. These were, of necessity, hairpin shape. The length between ribs of the bamboo was not sufficient to allow even one extra loop. Also, bamboo fibres do lend themselves to tortuous bending and/or twisting.

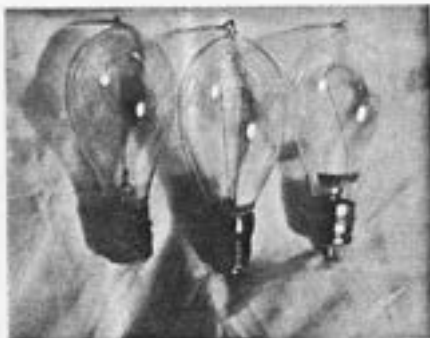
Year of 1894 - Squirted cellulose was commonly adopted, although it had been invented six years earlier.

1899 to 1906 - Osmium, invented by Welsbach. It was 75% more efficient than the carbon lamp. Used only in Berlin and Vienna and in small quantities. It was very expensive to manufacture due to the rare metal. This accounted for its short life in light bulb history.

1905 to 1918 - "GEM" came into being. It was a carbon filament coated with graphite and 25% more efficient than the old straight carbon filament. The first Gem had two single hairpin filaments connected in series. The single oval came out in 1909. ('metals' have a 'positive' characteristic - that is, they increase in resistance as temperature increases. Gem filaments act the same way so it was called "General Electric Metalized" or abbreviated "GEM" for short !) This type bulb was made for 110 volts only.

1906 to 1913 - Tantalum. This was about 2.71 times efficient as the Gem lamp. The metal in original form was impervious to water - was named after the fabled 'Tantalus' who was condemned to stand up to his chin in water which constantly eluded his lips when he attempted to quench his thirst.

Year of 1906 - Tungsten. At this early date, it was not believed to be ductile - that is, capable of being drawn out and/or hammered thin. There was a great court battle on the subject of granting patent rights with Just & Hanaman of Vienna finally winning out. This filament was



All of the above bulbs are hand blown and were made before 1900. The first two have bamboo filament and the one with the single loop is squirted cellulose. The bases are Westinghouse with one prong, Edison Screw and Thomson-Houston (tapped center hole in base). All are from the writer's collection.

also known as pressed tungsten.

Year of 1909 - Mazda Lamps. Mazda is not the name of a thing but the mark of a research service rendered to the manufacturers by the General Electric Co. at Schenectady. Their goal and motto was "To make the best lamp possible at the moment". Therefore, many lamps by various companies were known as MAZDA. The name was first used by G.E. however.

Year of 1911 - Drawn tungsten bulbs were put on the market after 13 years of experimenting.

Year of 1913 - Coiled filament gas filled lamps were devised. This was the brain child of Dr. Langmuir of General Electric.

GETTERS

Definition: The word "Getter" as now applied is any active agent used inside a bulb, either to assist in getting a better vacuum, or to improve the quality of the lamp - usually by preventing the blackening of the bulb. The two most famous 'getters' were Skaupy and Needham.

The first use of a getter, although not known as such, was in 1894 by the Waring Electric Lamp Co. who manufactured the Novak Lamp. The substance used bromine gas.

Malignani of Italy used phosphorous vapor two years later to obtain the same results. This system was so good that General Electric Co. bought up his patent rights for this country. It was never called a 'getter' but more a means of obtaining a better vacuum. The

'getter' era centered, mainly, around the years 1912 to 1917.

Skaupy 'Getter' - Certain chemicals were placed together in a cavity in the end of the glass arbor which supports the filament anchors. As the bulb heated, the compound broke up and formed a vapor which in turn reduced the blackening effect on the inner surface of the glass. This getter was used only in high voltage lamps of 100 watts or more.

Fink 'Getter' - The chemical used was potassium iodine dropped on end of glass arbor. It was suitable only for 15 to 40 watt lamps in 110 volt circuits.

Needham 'Getter' - This was a combination of sodium and aluminum fluoride, made into a paste and placed on anchors supporting the filament but not touching it. It was suitable for 25 to 60 watts lamps in 110 volt supply.

Gill 'Getter' - Sodium chloride dissolved in water and spread directly on the filament and mount. When heated, it deposited an invisible vapor on the glass envelope.

Friederich 'Getter' - Barium chlorate was placed in the hollow end of the glass arbor - much on the same order as with the Skaupy 'getter'.

STEM - SEALS

In 1880, lead-in wires were of platinum with glass "petticoats" around each lead. These in turn were sealed in the glass stem. The early 1880 Models had a round glass seal. In late 1890 the "petticoats" were eliminated. The stem was flattened directly around the lead-ins. Hence, were known as flattened seals. As time progressed and platinum prices increased, the platinum lead-ins kept getting shorter; copper wire connections were made thereto and said connection welded directly inside the glass stem.

Nickel-steel was also used very successfully in glass-filled lamps. Platinum was discontinued about 1911 and a nickel-iron alloy was used for the next two years. Then came 1913 and the advent of domet. Domet was just an improvement of the aforementioned alloy; it had a nickel-iron core with a copper sheath and a borax coating.

It must be remembered that many of the above described steps of evolution were, sometimes, very short-lived. Some of the changes came about so rapidly little record was made. Some of the larger companies swallowed some of the lesser ones and all was not sweetness

RECENT A.W.A. EVENTS

- MARCH "A.W.A. Historical Program" at Orleans Radio Association
APRIL "A.W.A. Historical Program" at Morse Telegraph Club
MAY "A.W.A. Old Timer's Dinner and Program" Western New York Hamfest
JUNE "A.W.A. Historical Program and exhibit" Penn-York Annual Hamfest

COMING A.W.A. EVENTS

- AUGUST 21-23 A.W.A. Programs and Exhibits at A.R.R.L. National Convention, New York City
OCTOBER 3-4 2ND A.W.A. NATIONAL MEET, New England Wireless Museum, East Greenwich, R.I.
OCTOBER 17 "Open House" and A.W.A. Dinner, Holcomb, New York
NOVEMBER 21 Annual A.W.A. Board Meeting, Armstrong Residence, Pittsford, New York

ODD TUBES - speaking of tubes - the AMA just received several rare tubes from Lou Hardy, W2QO. Two were of unusual interest - one was a dead ringer for a VT-1 (same base and envelope) except the internal construction resembled that of the "French" tube - maybe Jerry Tyne can help us out on this one ?

The other tube is an off-brand UV-20Q with the marking "ROJCE 5 Watt Oscillator". This tube was in the original box.

WATSON TUBE COLLECTION - and here is some more news on tubes..word has just come in that W3BO has donated his tube collection to the Smithsonian. According to a newspaper clipping- quote- "...it is believed to be the largest and most comprehensive of its kind in the United States - possibly the world". (??) The collection consists of a total of 1600 tubes including several variations of the same type.....

and light in said brotherhood..and the wonders of the laser beam were yet far in the future. One must admit, however, that a lot of progress was made from 1880 to 1915 in the light bulb history.

REFERENCES:

- "The History of the Incandescent Lamp" by Rowell & Schroeder
"The Incandescent Light" by Floyd A. Lewis
"History of Electric Light" by Schroeder

REVIEW - "Restoreth Thy Relic Radio" by Ted Hannah, KJCVI. Article printed in Popular Electronics magazine, May, 1964, page 31.

A very interesting and well written article covering early broadcast receivers which should prove of interest to the laymen. The article contains many illustrations and briefly covers the development from the crystal set days thru to early A.C. receivers.

The advance collector will find the writeup of only average interest since much of the material is all too familiar; however, Ted's article should awaken interest in the newcomer since it gives a new light on our hobby.

(Thx Jose Garcia and Russ Worthy)

REVIEW - "National's Anniversary Photo Album...1914-1964" published by the National Co. of Melrose, Mass.

This interesting publication consists of 16 well illustrated pages showing the company's products from the 1920's thru to present. We particularly admired the pictures set off on a black background. We believe the booklet is free by writing.

Although the writeup indicates they are celebrating their 50th Anniversary, no information could be found on their products prior to the middle 20's unless one believes the picture captions.

One picture shows a familiar shortwave receiver with a stage of tuned RF gated 1923 (!!) In another illustration one sees a television receiver using a scanning disc and a receiver with the familiar National dial. The picture is titled a "National Spot Scanner - 1921" (??) And lastly, one sees the old standby SW-3 with the caption "This receiver started 9 out of 10 Old Timers in Radio"!!!!... The author of this one really had an imagination since the SW-3 attained its greatest popularity in the early '30s. What did the OT use prior to 1930 - and we certainly question "9 out of 10" even at its height of popularity.

On the good side - one can see the entire line of National receivers in pictures with a brief history about each. The following are a few of the National receivers in the club's museum: SW-3, SW-5, Thrill Box, FB-7, FB-7X, AGS, and NC-101X. They are all in excellent condition, in fact, we have found less trouble with old National receivers than ANY OTHER RECEIVER ON THE MARKET! After 30 years - they still perform as well as the day they were purchased - no burnt out resistors or transformers or shorted condensers.....

LETTER FROM A.W.A. MEMBER GROTE REBER
(Pioneer Radio Astronomer)

6th March, 1964
C.S.I.R.O.
Hobart, Tasmania

Dear Bruce,

Thanks for the nice mention on first page of Winter O.T.B.

Dr. Southworth and I sort of pushed BTL into building the reproduction of Jansky's antenna (page 8, O.T.B.). See Bell Lab Record, Oct., 1963, p. 351 or Bell Lab News, Oct. 15, 1964 p.2

I supplied the Model T front axles, wheels and rims upon which it turns. Some of these were secured by me while I was at Green Bank in 1959. However, part were shipped in from Maui, Hawaii when I was cleaning up there in 1960. Down here there are still Model "T"s on the road.

I used a Ford Model "T" truck rear axle, drive shafts and universal joints on my first radio telescope. Model "T" parts were cheap and plentiful in junk yards during the early 1930s. I doubt Henry Ford ever realized what an important part his cars played in the beginning of radio astronomy!

73,

Grote Reber

SPRINGFIELD, MASS. MUSEUM - The Antique Wireless Association, in conjunction with the A.R.R.L., plans to loan historical material from their museums to the Springfield Museum for display purposes. This is an accord with A.W.A. policy to loan equipment for educational purposes. Selected equipment will be viewed by the public on a changing basis. Arrangements are being made by Roland Bourne, WIANA, A.R.R.L. Curator.

CHANGING TIMES - Fred Fenard suggest you look up the book "Electricity in Everyday Life" by Edwin Houston (1905) and read the article covering the first wireless newspaper printed at sea in 1903. One of the news items concerns "Castro revolutionists in Venezuela!" sounds familiar doesn't it?

The same book describes Poulsen's wire recorder and tells the story about the 1865 Trans-atlantic cable...all good copy in an old book.

COMING EVENT - a "get-to-gether" of former employees of the old AMRAD Corp. is slated Aug. 29 This promises to be an unusual event. If you worked for Amrad in the old days and would like to attend - write Eunice Thompson, WIMPF, Lovell, Maine, for more info...