

THE OLD TIMER'S BULLETIN

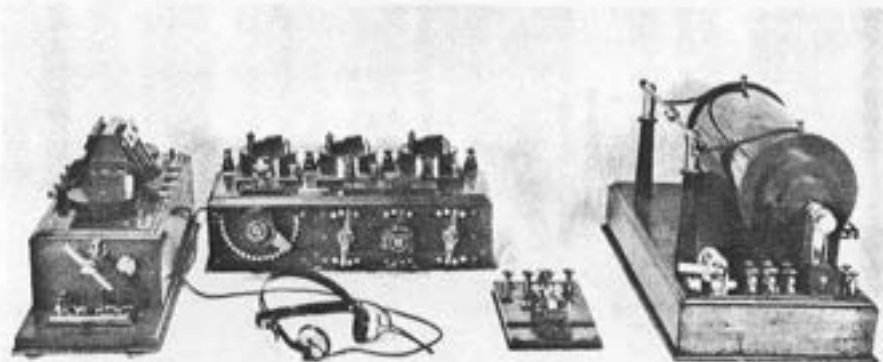
OFFICIAL JOURNAL, ANTIQUE WIRELESS ASSOCIATION
Published for the Old Time Wireless Operator, Historian and Collector

Vol. 4

SPRING 1963

No. 1

RARE HISTORICAL GEAR AT A.W.A. MUSEUM



A.R.R.L. MUSEUM - with the new building nearing completion plans are being made to setup the League's Historical Collection which heretofore was spread out in several places.

A very qualified historian has been assigned the job - Roland Bourne, W1ANA. Roland is well known as an amateur but not many know he was associated with the old American Marconi Co., ECA, the C.D. Tuska Co. and other organizations as well as Engineer or operator at WJZ, WSE, KKR, KKD, KYH, WIM WCC, etc. !

NEW AMATEUR MUSEUM can be found at the at the QTH of Bob and Nancy Merriam, W1NTE. They have converted a nearby barn to house their gear with the main interest centered around the 'library'. Speaking of books - one of their choice is the 1903 "Instructions for the use of Wireless Telegraph Apparatus" by Lt. J.M. Hodgins. This book is the predecessor of Bobison's "Manual of Wireless Telegraphy" which first came out several years later !

As a group, these three original pieces of historical wireless equipment may represent the ultimate in the collector's field. It is a complete authentic Marconi Wireless installation in working condition circa 1910.

At the left we see the Magnetic Detector ("maggie") with glass cover removed. The famous Multiple Tuner is in the center. This model is one of the earliest and was made in 1907. A full description of it may be found in Vol.2, No. 2 of the OTB. As far as we know, it is the oldest and possibly the only one in the United States.

At the right is the popular Marconi 10" spark coil transmitter. This huge coil works on a 1 1/2 to 2 1/2 volt battery source with inputs as high as 500 watts. The basic design remained the same on this coil from 1900 thru the first war.

This particular wireless "plant" was typical of the early Marconi era and may be seen at the club's Museum.

(Lincoln Cundall, W2QY)

OLD TIME ADS

SWAP - large collection of tubes. Want socket or holder for Meir's tube. Will pay cash. Vern Thompson, WJWV, 1403 So. 4th St., Effingham, Illinois

SWAP - large collection of early "Modern Electrics", Westinghouse RA/DA and other items. Want Audion detector and rotary gap to fill out my 1914 wireless set. Karl Kreech, W3BS, 1012 Wilde Ave., Drexel Hill, Penna.

SWAP - or sell Riders Vol. 5,6,8, and 9. Want "Popular Radio" for June and July, 1922. Russ Worthy, 361 Western Ave., West Lynn, Mass.

SWAP - highly desirable antique wireless items for "Robison's Naval Radio Manual" - prefer 1913 or earlier. W6IM, Box 308, Wrightwood, Calif.

WANT- Marconi Type "E" tuner with loose coupler on top, carborundum detector and variable condenser. Will pay any reasonable sum. Frank Riley, W6IG, 1223 1/2 Triskett Rd., Cleveland 11, Ohio.

FOR SALE - huge collection of historical domestic and foreign tubes. All must go. You name it - we have it. Send your 'most wanted' list to:
P.O. Box 185, Princeton Junction, N.J.

EXCHANGE SWAP LISTS - have parts, tubes and books. Kennedy XV receiver, WAI Aircraft receivers, Baldie type 'C' phones, Jewell wavemeter, etc. Need oscillation transformer for 1 kw spk transmitter. Warren Green, W7JY, 7202 N. Mercer Way, Mercer Island, Wash.

SWAP - have stacks of QSTs and CQ magazines plus all kinds of gear. Want old call books of the 1920s and a RJ-4 detector. Erv Rasmussen, Box 612, Redwood City, Calif.

SWAP - radio parts, cash or tubes for series of Radio News: 1943- want all months except Jan., Feb. and June. 1944 - want Mar., Apr., June, Sept. and Nov. 1945- want Jan. and March. V.F. Thompson, WJWV, 1403 So. 4th St., Effingham, Ill.

SWAP very early wireless magazines for copies of 'Practical Electrics' or 'The Experimenter' (not Elec. Experimenter). Vance Phillips, W6GH, 1010 Monte Drive, Santa Barbara, Calif.

FOR SALE - IP-501-A in good condition. What an I offered? Stewart Perry, W1BS, 36 Pleasant St., Winthrop, Mass.



QCA HISTORICAL BOOTH

This interesting exhibit attracted a great deal of attention at the recent A.R.R.L. NATIONAL Convention, Portland, Oregon. It is part of Warren Green's historical collection which also made a big hit with an earlier I.R.E. Meet. We plan to have more on W7JY's work along with W7OE and the Seattle Museum.

WANT - E.I. galena detector unit in good condition with crystal and cat's whisker. Earle Young, 450 Magee St., Rochester 13, N.Y.

SWAP - old gear for early crystal detectors. What do you need? Gene Kerns, 235 W. Galena St., Milwaukee 1, Wis.

WANT - old catalogs such as Electro-Importing, Mardock, Mesco, or Duck. Also want "Modern Electrics". State price and condition. El Cummings, 65 Colonial Ave., Cranston 10, R.I.

WANT - C.R.L. Paragon with amplifigon or matching tube panel, quench sections for gap (SK1001), old government call books and 'Handy's Handy Handbook'. Frank Smith, W5VA, P.O. Box 840, Corpus Christi, Texas

WANT - info on when the IP-175 (#112) Detector Speciality Apparatus Co. detector was first made and what pair of crystals were used. Tate Thetresu, W8FX, 27209 W. Six Mile Rd., Detroit (40), Michigan.

WANTED - one good Arcturus type AC-26 tube (detector) for my Browning-Drake 6-B. Also want Federal Orthosonic Type 'C' receiver. F.F. Pagano, 1835 West 7th St., Brooklyn 23, N.Y.

FOR SALE OR TRADE - Kennedy 220 and Kennedy 110 with amplifier. Grebe CR-5, Grebe CR-9 and many others. Tubes at \$1 each. Send stamped envelope for list. Paul Giganti, W6GVY, 2429 San Carlos Ave., San Carlos, Calif.

FIRST RADIO SCHOOL noted in last OTB appears correct (1902 in England); however, we received several letters questioning the first in U.S. - all very well justified.

It would appear that the 1911 date was correct for the American Marconi school; however, Tom Appleby, W3AX, states that he received a letter last year from Elmer Bucher stating that "United Wireless" had a 'half-baked' school for training their men at old 42 Broadway in 1906. It was sort of a meeting place ("NY") for the operators with very little instruction. At the same time, Tom, was doing the same thing down in Philadelphia (1906) at the Bell-ewe Stratford station "BS".

On April 1, 1911, Dave Heilig and Tom opened the Philadelphia School of Wireless Telegraphy "PW" in Philadelphia. Shortly after, Elmer Bucher, at United Wireless, asked Tom for info on their training course. Under the circumstances, it would appear that Appleby's "PW" was the first "all wireless" school.

El Cummings, ex-LWP, checked into the matter further and comes up with this info: The American Wireless Institute at Detroit, Michigan, had an ad in the November, 1910 issue of "Modern Electrics" and points out that in a book titled "Operator's Wireless Telegraph & Telephone Handbook" written by Victor H. Laughter, printed in 1909, the author states he was the Technical Director of the American Wireless Institute.

In addition, El points out that the "Massachusetts Radio and Telegraph School" establishes their date as 1903 and that the "Port Arthur College" was founded in 1909. The last two school have had 'ads' in QST and other magazines for years and usually carry these dates.

We may be "sticking our neck out" in coming to any kind of a conclusion - but it would appear that the other "schools" were either a temporary training base for operators, a school for landline operators specializing in code or a combination of the two.

We note that the Wireless Press, Ltd., published in London, 1912 states:

"Thomas Appleby opened the first wireless school in America.".....nuf sed !

The well known historian Howard Pyle, W7OE, thoroughly covers the story of old "PW" in the current issue of the OOTC "SPARK GAP TIMES". In addition, Howard dug up some fo photographs to go with his article.

And lastly, we plan to print sometime in the near future an article by Walt Weber, K2EE, covering a school he founded.

OLD TIME RECEIVING CONTEST

Open to all A.W.A. Members. Unusual Certificate Award.

CLASS I Homemade gear (loose couplers and associated equipment.)

CLASS II Commercial gear such as the IP-500, etc.

RULES

1. ALL equipment must be over 40 years old.
2. Receiver cannot use tubes.
3. DX reception of ANY station except the two high power VLF stations NAA and NPG.
4. You cannot substitute a germanium diode FOR the crystal detector nor a pair of hi impedance phones for your 'Baldies' or Branies !

All results must be in by Dec. 31

Judges: Thorn Hayes, W9AX

Dick Kaufman, K2DMR

Include- approximate distance received, type of receiver, antenna used, time and nature of transmission.

SE-95A and NAVY CW-936 Wireless Telephones are the latest historical acquisitions at W2ZI. The latter is complete and was one of the first phone sets ever made - a real collector's item ! It preceded DeForest's well known type "O" wireless telephone.

The Navy SE-95-A longwave receiver may be even more rare . It belonged to Ken Warner who used it at the old Marconi Belmar station during WWI to copy POE and OOI. Later, Warner used it to copy MUU when they gave Godley's receiving results of the 1921 Transatlantics ! (El. note: if anyone can find real historical gear - El Raser can - and this proves it !)

SOUTHERN CALIFORNIA QCWA MEET scheduled April 23. Program tentatively booked is A.W.A. show "PIONEERS OF WIRELESS" with W6GH officiating.

W1 DE FOREST crystal receiver (1918) has been added to W6ACU's collection. Jim says he hooked his 160 meter antennas to it and has picked up good DX!

OLD HOBBY Col. Glodell (ex-2AVY, 9UX, 6CPS, CP5Bq, etc.) is one of the world's foremost CASTANET makers ! An authority on Latin America, we find Roy as interesting and diversified personality we have encountered for a long time. An ardent radio historian, he is now associated with Worcester Tech after a long and colorful government career.....

HOW DID DE FOREST INVENT
THE GRID AUDION...

by Lloyd Espenschied

The insertion in the electronic diode of the third element in the form of an intervening grid, as a control electrode, proved to be such a revolutionary contribution that many have wondered how Dr. Lee de Forest managed to do it - in the Winter of 1906-7.

This question has been raised again in The Old Timers Bulletin for the Fall, 1962, Vol.3, No.3, in an intriguing story by George Applegate on "An Adventure in Book Collecting." In foraging for old radio books George found an original edition, 1906, of J. A. Fleming's famous book, "The Principles of Electric Wave Telegraphy", a copy that had been owned by de Forest's old assistant C. D. Babcock. Bab, as Lee had called him, had made in it many interesting notations, one of which, on page 398, was a reminder to "look up" the Zehnder Trigger Tube there described. George Applegate recognizes the Zehnder Tube as having been "the first device to use internal electrodes, positioned between the cathode and the anode, for the purpose of triggering an external source of power by means of received signals." (Incidentally this at once disposes of Lee de Forest's claim of having invented the "B" or anode battery.)

The question is raised as to whether Bab did look up for Lee the original Zehnder paper, which had been published in Wiedemann's Annalen der Physik in 1892. He would not have had to look far, for it appeared in English that same year, in "The Electrician", of London, Dec. 30, 1892, p.253. It is well known that de Forest followed closely the German technical literature and this is quite in line. Turning to the Zehnder paper one finds he used a cold-cathode Geissler tube, which was a relay kind of detector rather than an amplifier, and that he observed a vital point: he placed his third electrode (a minute glow-discharge gap in itself) "near the cathode since it is known that in the neighbor-

hood of this lies the greatest resistance of the air path"-meaning the gas path.

The present writer had known Lee de Forest since the Spring of 1907 and exchanged many communications with him, but never was it possible to obtain from him a description of how he managed to come upon the grid control element. His assistant in early 1907, the late John V. L. Hogan, told the writer that Lee de Forest was experimenting with a Fleming Valve, trying all manner of ways of influencing it by means of radio signals starting with outside electrodes, and gradually felt his way to the intervening "hairpin." The Figures in de Forest's patents support this view-point. Already, in his AIEE paper on "The Audion" of October, 1906, describing the two-element tube, there is clear indication of his seeking to employ an additional electrode for control, as yet outside.

Now we come to another bit of evidence, which ties up with the Babcock notations in the Fleming book of 1906: The late Robert H. Marriott wrote a remarkable history of early wireless in the USA, entitled "Radio Ancestors", the only known copy of which was presented to the IRE by his widow Mrs. Blanche B. Marriott in 1952.

Chapter XIII is entitled:

Doc Asked Bab to Stick in
the Third Electrode

This paragraph comprises some twelve pages, of which the present writer has made the following abstracts:

- p.1 "When I reached N.Y. in late 1907, C. D. Babcock was in charge of the United Wireless factory; Cloyd Marshall, Secretary of United at 42 Broadway, went to the factory daily for a conference with Babcock." (Factory was in Jersey City; de Forest was then out of United.)
- p.4 In the Jersey City factory was "a Sprengle Vacuum Pump."
- p.5 According to Babcock, Dr. de Forest had had the Fleming

Valve copied.

- p.6 Bab quoted de Forest as having said, in effect: "Bab, if two electrodes in a bulb make a detector, maybe more electrodes will make a better one," and asked Bab "to make up some vacuum tubes with three or four electrodes..."

De Forest always maintained that he came upon the Audion from having experimented with gaseous conduction in flames, following early science work in Germany, and evidently did so experiment, as early as about 1900. He never would admit having built upon Fleming's (or the somewhat earlier Wehnelt) thermionic tube, and he and Fleming had verbal arguments about the matter. Having taken that stand to get out from under the Fleming patent (the US version of which was later annulled due to the priority of Wehnelt), de Forest was at a loss to explain how he did invent the triode. That he did so by the time-honored cut-and-try method, by literally feeling around for a sensitive control, was nothing of which to be ashamed at the time. The text books on electronics just didn't teach how to do it. The truth of the matter is that there was a large gap between the scientists, who were interested in discovering and measuring the electron and its properties, and the inventors who, knowing little of the science side, had to feel their way along. They must have been guided by the cathode-ray oscilloscope with its third electrode in the form of an electromagnet, or electrostatic plates, for deflecting the cathode-ray beam, - and this we see in the German attempts at the electron amplifier that ran along contemporary with de Forest's Audion experiments and that also came to use an intermediate electrode form of control.

Difficult it is to account for how an invention took place; but it is very much more difficult to look forward and anticipate an invention - facing the curtain of ignorance that always lies ahead! But cheer up - there is always opportunity on this sun-satellite of ours.

DE FOREST "O" RADIOPHONE TRANSMITTER

This xmitr was donated to the Houston Amateur Radio Club by Frank Smith, W5WA. An excellent example of an early phone transmitter, it represents one of the several items Frank is collecting for the club's historical museum.



V.W.O.A. President - J.W. Burns down in Washington, D.C. wishes we would give the names of fellows mentioned in the OTB in addition to their call letters. He has a good point since many of the readers may not have a call book.

GROWING COLLECTION will soon force WGYM out of house and home. New gear includes a Kennedy 220, a DeForest Panel set, a 1916 Signal Corps receiver, many crystal detectors and an E.I. electrolytic detector, marble base keys and even several DeForest spherical audions!

OLD TIMER with some gear to sell is Cy Pruitt, ex-91Y. "Cy" has been in the game since 1904 and has some good gear to unload. Drop him a line at P.O. Box 296, Nowinger, Missouri, and find out what he has left.....

FAST BULLETINS AVAILABLE - extra copies of Vol. 2, No. 3 and Vol. 3, No. 3 are now available to A.W.A. members at 5 copies per dollar postpaid.. If you recall, Vol. 2, No.3 carried the Valuation Listing and the Dan McCoy Story. ALL other bulletins are OUT OF PRINT and not available.

RARE TUBE is a UX-225 which Frank Pagano found in the loft of the old Fard Tube Co. in New York City.

NEW BOOK REVIEW

"ELECTRIC WAVES" by Heinrich Hertz, English translation with preface by Lord Kelvin. Written in 1893 with direct copy in 1962. (200 pages)

Amazing deductions as presented by Hertz himself. Easy reading - and be sure not to skip the introduction. This book was recently released and we consider it a 'must' for the serious historian's bookshelf. Can be obtained from your local bookstore or send \$1.75 plus 10¢ postage to Dover Publications, 150 Varick St., New York 14, N.Y. (It is a heavy paperback.) A good tip from Vance Phillips, WGH.....

MAGAZINE REVIEWS:

NIKOLA TESLA biography can be found in April ('63) issue of RADIO ELECTRONICS. We were pleasantly surprised when we glanced at the author's name and found our friend Dexter Bartlett out in Portland, Oregon. Although the writeup was relatively short, the life of this pioneer was well covered including an appendix giving the writer's source of information. We wish more authors would follow Dexter's example in this matter.

HIRAM S. MAXIM - father of Hiram P. (co-founder of A.R.R.L.) was in many ways more active than his son. An article covering this pioneer inventor, may be found in February ('63) issue of TRUE magazine. Most interesting of his achievements was the invention of the machine gun!

KANSAS HISTORIAN is A.W. Mgrave, W2GB. "Misty" feels there is a need to record and document local radio history before it is too late. A recent article of his titled "A Legend-the Old Timer" is excellently written and should be read by all radio men in the mid-west.

BOOK SALE - on books listed in last Bulletin went like 'hot-cakes'. To make the sale fair to all (15 different requests!) the names were dropped in a hat and 'teen age daughter drew the winners....The "Nymph and the Lamp" is a book that Ed Raser tipped us off on several years ago. It is a novel concerning the adventures of a Marconi Wireless Operator on remote Sable Island. It is exceptionally well written and can frequently be found on the shelves of used book stores. We also understand that it was in 'paper back' form for awhile..(W2ICE)



HISTORICAL STATION AT DETROIT

Yes, this old time marine installation actually exists. The next time you are in Detroit, drop over to the Marine Museum and take a look at it.

It is a replica of the transmitter and receiver used on the SS Western States, call "WTCA". Needless to say, the fellow behind this restoration is historian "Tate" Thetrea, W8PK.

FEDERAL TELEGRAPH AND LEE DE FOREST....
A reprint of DeForest's lecture given on Nov. 6, 1912 can be found in the March, 1963 "IEEE (IRE) PROCEEDINGS". The article covers DeForest's work while with Federal and concentrates somewhat on early arc work on the west coast. The IEEE plans to print other early articles of historical interest - we'll keep you posted....

GOVERNMENT RELEASE

No. 2 "The Telegraph and Telephone"
(U.S. National Museum Bulletin 228, Paper #89, covering the Development of Electrical Technology in the 19th Century.)

Although this booklet (60 pages, 9 x 11 1/2" glossy paper) does not refer directly to radio, it may be of interest to the serious amateur radio historian since it covers various forms of early landline communication. It is well documented with over 40 sharp photographs. Written by James King, former Electrical Curator of the Smithsonian, it is well worth 70¢ (Order #53AA with the above information) Government Printing Office, Washington 25, D.C.

ANTIQUE WIRELESS ASSOCIATION

A.R.R.L. Affiliate

An amateur organization interested in the history of early wireless...

Annual dues: (including the "Old Timer's Bulletin", Certificate and other benefits) - \$2.50 per year payable to Club Treasurer-

Lincoln A. Cundall, W2QY
69 Boulevard Parkway
Rochester 12, New York

"OLD TIMER'S BULLETIN":

Editor: Bruce Kelley, W2ICE
Main Street, Holcomb, N.Y.
Publishing Editor: Larry Triggs,
W2YBK

IP-76 - Ted Duvall would like to hear from anyone who is familiar with the early IP-76 manufactured by Wireless Speciality Apparatus Co. around 1914 or 15. There appears to have been two different types and he would like to know the difference. Drop him a line at: 5214 Decatur St., Hyattsville, Md.

COLLECTING 200's and 201's ? !

Collecting this popular battery tube can be inexpensive and interesting. There were dozens of manufacturers, many of whom made different types thru the years.

The largest collection we know of belongs to Howard Schrader who has between 120 to 130 different types. The collection includes most of the 200 and 201 series starting with the first UV-200 thru to the latest 01-A.

Odd prefixes such as AX, SX, MX, etc, as well as numbers other than 00 or 01 are included plus different bases, manufacture's markings, glass envelope, and "getter". To be part of the collection, however, the tube must be a direct substitute. The 112, 240, 171A, etc, are obviously not in this category. How many do you have ?

VETERINARIAN with many hobbies including historical radio is W6CAK out in Beverly Hills, California....

VOICE OF AMERICA and one of the largest radio installations in the world can be found near Greenville, N.C. - two huge transmitting installations each covering nearly 3000 acres of beam antennas plus a like receiving site. The power leaves one staggering: six 500 kw. and six 250 kw. extra plus another dozen 5 and 50 kw. jobs ! Sure makes 'ole 'LY' and the once famous 500 kw. WLV BC job look small....(tax K2POI)

COLLECTOR'S COLUMN

"DE FOREST TUBES"

by Earle Young

In the 1920's two interesting groups of DeForest tubes were released. These were the "DV--" and the "DL--" series. The tubes were packaged in cylindrical screw-top cans about 2" in dia. and about 5 1/2" high. Most of these tubes were made with white isolantite bases but some were made with a dark brown composition. The white-base tubes were marked:

DeForest
Reg. U.S. Pat. Off.
AUDION
Reg. U.S. Pat. Off.
Patented as shown
on carton
Isolantite base

The only identification of the tube type number was by means of an orange sticker on the glass bulb and by the marking on the container. Tubes in the "DV--" series had short pins whereas the "DL--" series had long pins.

It is believed that the following is a complete list of all tubes made in these series. Does anyone know of any others ?

DV-1	DV-6	DV-9R (rectifier)	
DV-2	DV-6a	DL-2	DL-7
DV-3	DV-7	DL-3	DL-9
DV-3a	DV-8	DL-4	DL-14
DV-5	DV-9	DL-5	DL-15

(The DV-9 is a power tube)

WIRELESS INSTALLATION of 1910 complete with 10" coil and 'maggie' is W1TU's objective. Of Marconi veterans are helping Charlie assemble this old station. A good start is a nice big desk from the U.S. Navy !

OPEN HOUSE

A.W.A. Barn Museum
Holcomb, N.Y.

Saturday, May 11, 1963 10 to 11:45 AM.

OLD TIMER'S LUNCHEON

12 noon

Guest Speaker:

Ed Redington, W42M
Arlington, Virginia

Guest of Honor:

George Grammer, W1DF
A.R.R.L., West Hartford, Conn.

Everyone Welcome...see you May 11
73,
Geo. Batterson, W2GB

HOW DID IT SOUND?

Philip E. Hatfield, W9GFS

After I have shown my antique gear, my old publications, and my old QSL cards to one of the newer hams, the question often arises, "How did it sound on the air in those old days?" It is hard to put into words the weird and wonderful sounds that passed for signals in the early thirties, and my efforts to do so fail miserably. Since I am not familiar with the spark days, I can only imagine how things sounded then.

Although I can't claim to have made an extensive search, I have never heard of any authentic recordings of antique signals that are still around. Of course, there are recordings of signals from restored gear, and in recent correspondence with Ted Duvall I learned of some recordings that once existed. This seems rather strange to me since the invention of practical methods of sound recording preceded that of wireless by a number of years.

We are all familiar with the work of Charles Apgar in recording the signals from the German station at Sayville during the first World War, but surely he was not the only one to try off-the-air recording. Perhaps the general use of wax cylinders that could be shaved and reused accounts for the apparent failure of any old recordings to survive. However, old-record collectors are familiar with the story of the cylinder recordings made by Lionel Napleson, who was associated with the Metropolitan Opera Company, near the turn of the century, and these recordings survived somehow.

There are a few scattered references to disk recording of amateur signals in copies of QST of the early thirties, but there is nothing whatever about what was recorded.

One memorable moment that someone surely must have recorded occurred one minute after 3:00 AM when we legally returned to the air on the 80 meter band. I assume that the FCC must have a recording of the 24 hours before the deadline when the band was filled with both CW and fone stations using self-assigned, comic (?) calls. Perhaps we can get the FCC to run off a few copies, hi. Strictly speaking, off-the-air recordings would violate the secrecy provisions of the radio laws, but this surely wouldn't be too important if the recordings were made of amateur stations years ago.

Even if no amateur signals were recorded in the early days, it seems unlikely that the phonograph record manufacturers would have completely ignored their arch-rival, broadcasting; surely someone must have made a few off-the-air recordings just to keep a record of what the broadcasters were up to.

Lacking any authentic recordings, it is still possible to give a visitor some idea of what early broadcasting sounded like. When you prowl around the junk shops, looking for some old piece of gear that somehow has been overlooked by other collectors, shuffle through the piles of old phonograph records. Look for some of the performers of the early twenties: Harry Snodgrass, the Happiness Boys, etc. If you can acquire any of these, rig up a phono oscillator and play them through an old Radiola IIIA with a horn loud speaker. Now you are mighty close to the way it sounded way back when.

RADIO MUSEUM of W9OEP is now real sharp with an extra balcony (!), additional shelves and a new paint job. If in the Minneapolis/St. Paul area - stop in and see Joe's collection.....

I.R.E. ANNIVERSARY ISSUE - hate to keep bringing it up but Dexter Bartlett out in Portland has finally **straightened** us out...this fb historical volume (and I mean volume !) can now be **purchased** direct from the I.R.E. for \$5 at 1 East 79 St., New York 21, N.Y.

FIRST POLICE RADIO was in 1916 when the New York City Police used spark transmitters to communicate with their boats in the harbor....

TOP RECEIVERS 30 to 35 years ago for BU use, according to Russ Worthy, were National, Stromberg-Carlson, Hammarlund-Roberts and others. These A.C. receivers were the ultimate and are treasured by the collector of 'classics'. Russ is well informed on their 'specs' and is now trying to locate one of the Hammarlund Roberts H1 Q series.

SILENT KEYS

Dr. L. S. Baird, ex-980, Nov. 30, 1962, well known amateur historian, a prolific reader and a gentleman well informed on many subjects. He was one of the founders of the Milwaukee Radio Amateur's Club (1917) and devoted a lifetime to radio. (W6GB)

Erwin Stewart Fridham, 81, Jan., 1963, an inventor and cofounder of the Magnavox Company. One of the first experiments of the company after its founding in 1911 produced the sensitive moving coil that became the basis of a loudspeaker which made the company famous. (W3KDU)

MILTON B. SLEEPER passed away recently after several months illness. Although always active in the radio field, he was best known to the old timer for his articles written in the 1920's (Thx to Russ Worthy)

POWER SUPPLY FOR BATTERY RADIOS - have you ever wanted to "fire up" one of your old receivers and found you lacked the power? Instead of building a B & C supply and looking for a storage battery, you can now obtain the whole business of latest design. Write Paul Fuge, 455 Bayberry Rd., Somerville, New Jersey for more info.

AUGUST 17 - - - AUGUST 17

First big 'round-up' and 'meeting' of Amateur historians and collectors..
Keep this date open..more dope in June Bulletin...

KENNEDY INSPECTOR was once a position held by George Greeze (Clayton, Mo.) when the old Colia B. Kennedy Co. used to be located in St. Louis back in the early 20's. George is the owner of a nice collection of early receivers and of course several Kennedys. He is also a steam 'buff' and fancies a Stanley Steamer!

TUBE HISTORIAN - a new member to join the ranks is W9JWW. Vern has over 1000 tubes beautifully mounted.

POLICE RADIO - licensed amateurs in the Cleveland Police and Fire departments have an active organization headed by "OT" W5LY! If you live outside Ohio and work 3 members, you are entitled to their award certificate. Write Mike for more info.



FRED SCHNELL, W4CF, delivers main speech at last year's OLD TIMER'S NITE at Ford Dearborn Science Museum. Seated left to right facing audience: W2QY, W3CJT, W6CRM, K3CFU, W2ICE, K9EBS, W6FX and Minor Thomas (Chief Curator). Information on this year's meet (May 4) can be found on the enclosed "Flyer". Frank Davis, Curator, is going all out to make this another great occasion for the 'ole timer. See you May 4!

OLD TIME CW NET....the suggestion has come up several times so it is about time we placed it in print. How many members have parts to assemble an old time station? It is suggested that we form an 80 meter CW net and meet once a month. All equipment must be over 30 years old. A likely transmitter would be a 47 xtal osc. w/ UX210 amp. ea 2B0 ea 2B1 rectifiers. The rx could be a det. ea 1 step audio using any of the early A.C. tubes - or better yet, if you have an SW-3 - you're in business! If interested, drop us a line and a suggested time and frequency will be set.

NEW GEAR ON LOAN AT A.W.A. BARN MUSEUM

Receivers: W2ETV, ex-3DW, W4ZNL, Russ Worthy and Gene Kerns.
Rare Meters: K9OVE, W6QJR, W2ETV, W6MCC
Misc. gear: W2OTB, W2ETV, K2SEN
Tubes: W1DM, W2CTA, W2LK, W2RG, W2VZV, K2TLI, K2VVO, W2ETV, ex-2QO, Gene Kern.
Manuscript: W3QA, W2LIT, W2IF, W3YA, W6JNV, K2FOI, W1LDD, W3BMT, W6ORP.
Leyden Jars: W2YBK and H.V.B. Voorhis.
Books: W9AX, W3YA and Fred Fenard
Commercial Insulators: W6MCC, ex-1CPW
Transmitters: ex-3DW/W3BWT/ex-3JJ
Historical souvenirs: ex-2QO
Historical condenser: Prof. Newell

OFFICIAL HISTORIAN - W2IK announced that he is again the historian for the National Organization of Associated Public Safety Communication Officers....He is very interested in history of early police and fire radio. W2IK is a Director of A.W.A. and Chief of Radio in the Rochester area.

LIST OF SHORE STATIONS OPERATED BY THE UNITED STATES NAVY (1908)

Name of Station	Call Letter	Power	System	Wave Length Meters	Masts and Aerial
Cape Elizabeth, Me.	PA	5 Kw.	Telefunken	....	130 ft. high 250 ft. long
Portsmouth, N. H.	PC	3 Kw.	Stone	380-510-900	190 ft. long
Boston, Mass.	PG	3 Kw.	do.	560-470	190 ft. long
Cape Cod, Mass.	PH	5 Kw.	Telefunken	....	285 ft. long
Nantucket Shoal Lightship No. 66	PI	5 Kw.	do.	425	50 ft. long
Nantucket Shoal Lightship No. 78	PI	5 Kw.	do.	470	73 ft. long
Newport, R. I.	PK	5 Kw.	do.	....	180 ft. high
Fire Island, N. Y.	PR	5 Kw.	do.	425-600-950	200 ft. long
Navy Yard, New York	PT	15 Kw.	Stone	....	180 ft. high
Cape Henlopen, Lewes, Del.	PX	3 Kw.	Massie	475-690-625	150 ft. long
Annapolis, Md.	QG	2 1/2 Kw.	Telefunken	337-625	275 ft. long
Washington, D. C.	QI	15 Kw.	Massie	840-1125	300 ft. long
Norfolk, Va.	QL	3 Kw.	Telefunken	350	170 ft. long
Cape Henry, Va.	QN	3 Kw.	De Forest	....	180 ft. long
Diamond Shoal Lightship No. 71	QP	1 Kw.	Fessenden	425-320-630	75 ft. long
Diamond Shoal Lightship No. 72	QP	1 Kw.	do.	do.	do.
Fivers Is., N. C.	QS	5 Kw.	Massie	....	....
Charleston S. C.	QU	5 Kw.	do.	....	185 ft. high
Charleston, Lightship No. 34	QV	1 Kw.	Fessenden	....	62 ft. long
St. Augustine, Fla.	QX	3 Kw.	Shoemaker	....	250 ft. long
Jupiter Inlet, Fla.	RA	3 Kw.	do.	....	187 ft. high
Key West, Fla.	RD	35 Kw.	De Forest	1200-1050-1375	300 ft. long 213 ft. high
Dry Tortugas, Fla.	RF	3 Kw.	Telefunken	....	180 ft. high
Pensacola, Fla.	RK	10 Kw.	De Forest	....	180 ft. high 200 ft. long 180 ft. high 300 ft. long
New Orleans, La.	RO	5 Kw.	Telefunken	....	180 ft. high
San Juan, P. R.	SA	35 Kw.	De Forest	....	200 ft. long
Culebra, W. I.	SD	13 Kw.	Telefunken	....	....
Guantanamo, Cuba.	SI	35 Kw.	De Forest	....	315 ft. long
Colon, Canal Zone	SL	35 Kw.	do.	....	208 ft. high
Navy Yard, Puget Sound	SP	3 Kw.	Telefunken	....	182 ft. high
Tatoosh Island	SV	15 Kw.	Massie	....	186 ft. high 215 ft. long
North Head	SX	5 Kw.	Telefunken	....	....
Cape Blanco	TA	5 Kw.	Massie	415-465	....
Table Bluff	TD	5 Kw.	do.	240-318	205 ft. long 160 ft. high
Mare Island, Cal.	TG	2 1/2 Kw.	Telefunken	240-318	do.
Farallon Island, Cal.	TH	10 Kw.	do.	480-650	180 ft. high
Yerba Buena Island, Cal.	TI	2 Kw.	do.	....	130 ft. high
Point Arguello, Cal.	TK	3 Kw.	Shoemaker	520-640	175 ft. long
Point Loma, Cal.	TM	10 Kw.	Massie	485-670	225 ft. long
Island of Oahu, Hawaii	UC	2 Kw.	Telefunken	....	....
Island of Guam	UK	3 Kw.	do.	....	....
Cavite, P. I.	UT	5 Kw.	do.	....	....
Sitka, Alaska	SO	20 Kw.	Pierce	300-1600	180 ft. high 400 ft. long

SHORE STATIONS CONTROLLED BY THE CANADIAN GOVERNMENT

Point Amour, Labrador	PR	....	Marconi	100-450	....
Whittle Rocks, Labrador	WR	....	do.	100-450	....
Battle Harbor, Labrador	BH	....	do.	220	....
Belle Island, Quebec	BI	....	do.	100-220	....
Fame Point, Quebec	FP	....	do.	100-220	....
Cape Race, Newfoundland	CE	....	do.	....	....
Cape Ray, Newfoundland	CR	....	do.	....	....
Venison Island, Labrador	VI	....	do.	220	....
Domino, Labrador	..	....	do.	....	....
Cape Sable, Nova Scotia	SB	....	do.	220	....
Sable Island	SD	....	do.	....	....
Heath Point	HP	....	do.	100-220	....
Cape Breton	..	....	do.	Ultra-Potent	....

This is 2nd in a series of pioneer wireless station listings contributed by Bill Gould, K2NP. The first list appeared in Vol. 3, No. 3 of the "Old Timer's Bulletin".

The LEUTZ Story

By Wayne Nelson, W4AA

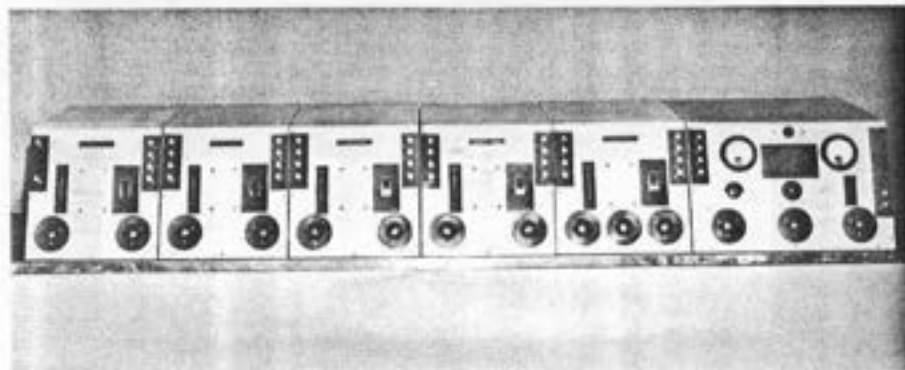
Charles Roland Leutz was born at Jamaica Plain, Boston, Mass., December 18, 1898. During the summer of 1910, while summer vacationing at Lexington, Mass., he became fascinated by the elaborate wireless station owned by Marsten Harding, the master of "Ponywold". This experience so fired his enthusiasm and ambition that while in grammar school he started building wireless receivers in accordance with plans that appeared in Sunday newspapers.

He received his Amateur Operator's license on August 12, 1913, and amateur station license 1NE on Feb. 2, 1914. The transmitter was a modest 1 inch spark coil but associated with an elaborate transmitting antenna, and a single wire receiving antenna nearly 1000 feet long. Through this station, and his membership in the Amateur Wireless Telegraph Association of New England, he soon met many friends.

While attending Mechanics Arts High School in Boston, Leutz used the school's

facilities to build more advanced radio equipment and, with two associates, formed the Eastern Scientific Apparatus Company. This initial wireless venture was directed toward "Safety at Sea", exploiting a virgin market in supplying wireless telegraph transmitters and receivers to private yacht owners. The Marconi Wireless Telegraph Company of America looked with disfavor on anyone invading its sanctum businesswise and soon put a heavy hand on this enterprise.

Leutz, eager to "get into" radio, went directly from high school to work for Clapp-Eastman Company for about six months to "see how it was done". He then went to work for Bethlehem Steel Company's Fore River shipbuilding yard for about six months in order to examine commercial and military radio equipment installed in merchant ships and Navy surface ships and submarines. Previously, he obtained a Commercial First Class Operator's license on May 25, 1915.



The Universal Transoceanic in the W4AA collection (35 to 3600 meters) is serial numbered "X33". The original invoice, still with the set, shows its sale in February 1927 to a Fairbanks, Alaska,

customer for \$570.00 net. The set is in excellent condition. The six unit assembly consists of four RF stages, detector and output.

During the fall of 1917, Leutz left Boston for New York and went to work for Marconi Wireless Telegraph Company of America at their factory in Roselle Park, New Jersey. After three weeks in the test department, he was promoted to Assistant Engineer. Here, for the duration of War I, he had the good fortune of working with some older and very competent engineers. Most of this time was spent as assistant to Paul F. Godley. At that time, Godley was undoubtedly the most competent designer of military radio receivers in the United States.

During 1921, Leutz formed the Experimenters Information Service to produce and market blue prints covering instructions that amateurs could follow to build their own receivers and transmitters. At this time, there were no super-heterodynes on the market at all, kit form or complete. Leutz had reason to believe that the super-heterodyne would be the receiver of the future, so he developed a design and drew up the plans to be marketed. This was the 10 tube model "I", contained in two cabinets, each 8 inches high, 8 inches deep and 40 inches long. This design was an immediate success. The demand for the blueprints was followed by an immediate market for the necessary parts to build the receiver. The Model "I" was followed by more compact and efficient designs, the model "C", "C-7" and "C-10" that were sold internationally. By 1925, sales were running at the rate of \$3,000,000 a year.

At that time, the competition offered by major manufacturers involved receivers having detectors and two stage audio amplifiers. Through a joint RCA and Westinghouse patent action, an injunction was obtained to prevent further marketing of super-heterodyne blueprints and kits. RCA and Westinghouse refused to issue a patent claiming that the super-heterodyne was too complicated for public use. Today, that same refusal might be claimed as an act of 'monopoly' or 'restraint of trade'.

With the super-heterodyne business blocked, Leutz turned his genius toward the development of sensitive and selective multiple-stage tuned radio frequency receivers. Initially, this was a difficult task, but with the advent of tubes with shielded grids in 1927 it was possible to build a special TRF broadcast receiver superior to the super-heterodyne of the day.

From 1917 thru 1940, Leutz wrote many practical articles on radio that were published in Wireless Age, Radio News, Electrical Experimenter, etc. He published "Super-heterodyne Receivers" in 1922, "Modern Radio Reception" in 1923 (first Edition) and "Short Waves" in 1930. "Short Waves" was internationally regarded as a very comprehensive state-of-the-art report.

Charles R. Leutz has three sons and daughters now located in different parts of the country. So far, fourteen grandchildren. He has not been connected with radio since 1940.

ABOUT OUR AUTHOR: Wayne Nelson, W4AA is one of the more active historians and collectors in our organization. The owner and engineer of several radio stations, active in radio for 50 years, we feel he is well qualified to handle any subject pertaining to radio. More scope re W4AA can be found in Vol.2, No. 1 "OTB".