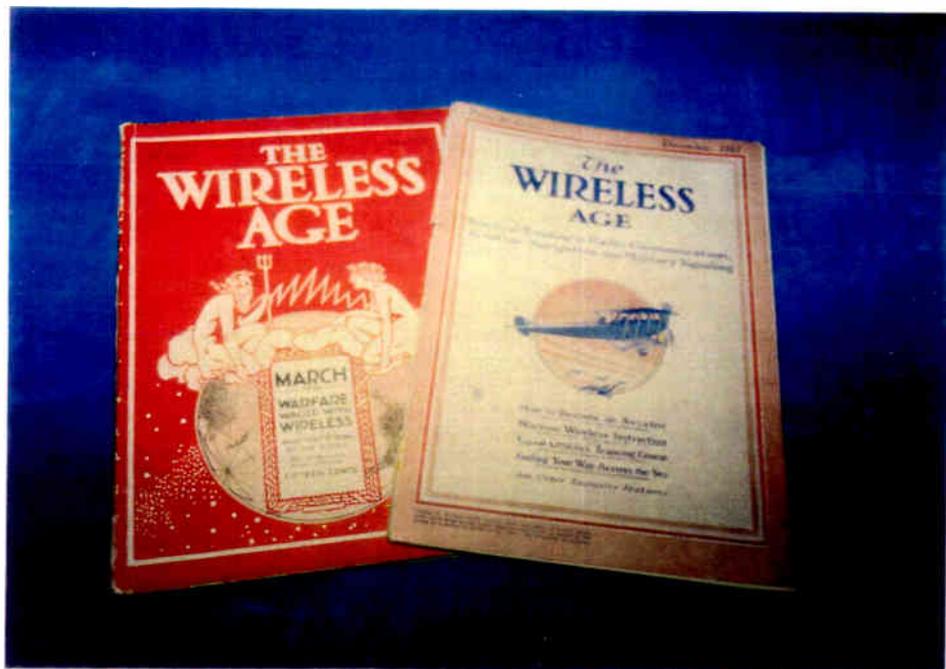


VOL. 21

DECEMBER 1992

NO. 4



For the story of the link  
between radio and aviation  
please turn to the center-  
fold.



# Indiana Historical Radio Society

## BULLETIN

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(317) 945-7735

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The *Indiana Historical Radio Society* is a non-profit organization founded in 1971. Annual membership dues are \$10.00, which includes the quarterly *IHRS Bulletin*. Radioads are free to all members. Please include a S.A.S.E. when requesting information.

Annual MID-WINTER Swap Meet

INDIANA HISTORICAL RADIO SOCIETY

Saturday February 20, 1993

Holiday Inn Southeast

5120 Victory Ln. - I465-Emerson EXIT 52

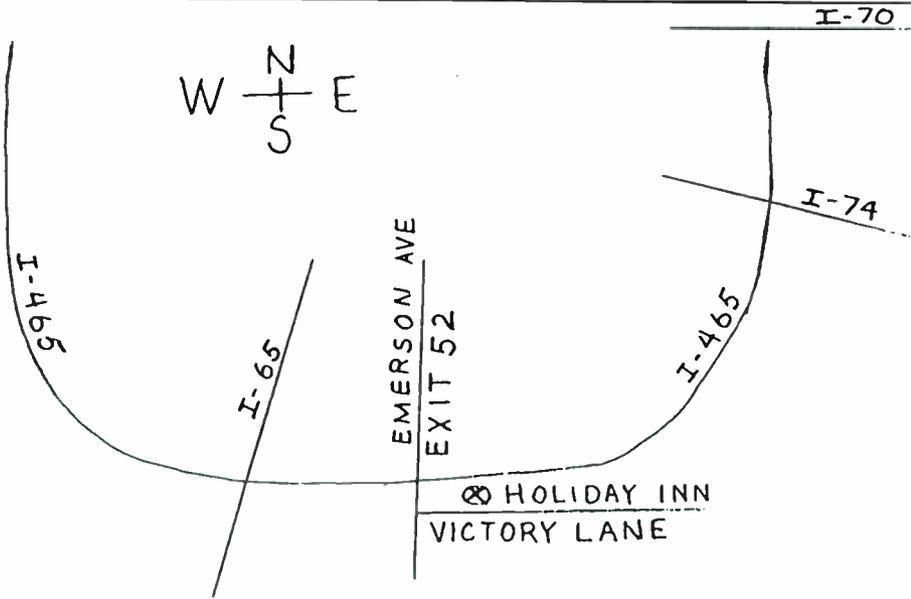
8:30 AM - 3:00 PM

FREE setup for Swap and Sell...

**CONTEST:** Your favorite table model radio,  
including transistors.

Other Information-

Bob Shuck (317) 849-0381



## PRESIDENT'S MESSAGE

First, congratulations are extended to all the officers and committee members for doing a fine job during the past year. Thanks to their efforts, and the memberships' dedication, we now have over three hundred members on the roll. Glenn, you should feel very pleased that this accomplishment came during your reign.

Glenna continues as our Treasurer. She is busy with member's dues, address changes, paying invoices and expenses to operate IHRS and many other clerical details. She compiles the Annual Report and submits the records to the Secretary of State for our non-profit organization. Hers is a very time-consuming office to hold and run.

Paul does an excellent job of preparing the club's minutes of meetings and is ready for additional tasks when asked. Paul has a knack for knowing just what to include in the minutes and the words for conveying the action.

Due to Eric's promotion and his home and job changes, he found it necessary to relinquish his Bulletin responsibilities. Thanks Eric for being an active and progressive Editor. We all extend our best wishes to you and your family in your new position and location.

Jim Fred has taken the ball and is running for a touchdown. The Fall 1992 Bulletin was, of a necessity, a rush job given to Jim at the last minute. Thanks Jim for graciously accepting the Editorship when IHRS called on you. I doubt if there are many--or any--who do not know Jim but, for those who do not, you should be aware that he has lots of experience and a long record of writing and publishing. He has been our Editor in past years and we welcome him back in that capacity.

John Kellar is your very active and new Vice President. In the short time he has been in office, he has already firmed up our four meetings for 1993.

2/20	Holiday Inn, SE, Indianapolis Inez and Bob Shuck, Chairmen
5/20, 21, 22	Ramada Inn, Kokomo Spring Meeting
8/28	High Dive Park, Elkhart
October	Riley Park, Greenfield Glenn Fitch, Chairman

Every club or organization should be as lucky as IHRS is with our own Dr. Ed Taylor, Historian. Ed is the best judge and arbiter an officer could ever hope to meet and work with. IHRS needs his expertise, good memory, and versatility. If you have a problem, discuss it with Ed and you'll see. He and Jim are two of the original thirteen Charter Members, who have helped shape and form the IHRS. Members like these have been there to support and encourage the growth of this quality and friendly society.

Please help me to do a Class A performance in my duties. You have provided me with the best in officers. Your Board has some ideas for the coming year that we hope will please you and continue IHRS' growth. Call on me if you have a question or problem. I'll do my best to steer you to the answer. If you have missed an issue of the Bulletin, I want to know it at once. And that goes for anything else that might occur and prevent you from enjoying your membership to the fullest.

My address and phone number are in the front of the Bulletin.

Sincere Wishes for Happy Holidays for  
You and Yours,

*Marilyn*

## EARLY RADIO GADGET

George E. Hausske  
1922 E. Indiana  
Wheaton IL 60187

This device, as advertised in 6/13/25 RADIO WORLD, sounded so intriguing as a tube and battery saver, and claimed to reduce static and improve tone quality, that I had to find out why I had never seen one.

I made a device with a IN34 diode in series with a .02 blocking capacitor and connected directly from plate to grid prongs of my AK-10 detector tube. Volume dropped to almost "zilch". I tried connecting it direct from detector RF coil to detector plate prong, by-passing the .00025 grid capacitor, plus grounding the detector cable B plus lead--all with the same results after reversing polarity as well.

Has anyone found one of these gadgets and can correct my assumptions on how it should be constructed and connected? I'm sure many of us would like to know how to accomplish the advertised claims.

P.S. In my Webster Dictionary, gadget is described as an interesting but relatively useless or unnecessary object. This device qualifies in my book. G.E.H.

**STATIC REDUCED**  
TO A MINIMUM  
**REDUCED BATTERY  
CONSUMPTION**



**Welty's DeLux  
Crystector**

Welty's Crystector fits in standard tube socket instead of detector tube in neodyne and radio frequency sets. No trouble to install. Wiring not changed—distortion and volume only slightly reduced. The difference in natural tone and lack of static is wonderful. Summer reception is a pleasure as compared with tube detector.

**LET US PROVE IT**  
If the Crystector does not function in your set, money cheerfully refunded.

Price, \$4.00 Prepaid

**WM. A. WELTY & COMPANY**  
34 S. STATE STREET, CHICAGO, ILL.



MARSHALL and HELEN HOWENSTEIN  
celebrated their  
GOLDEN WEDDING ANNIVERSARY  
on  
SUNDAY, JULY 19, 1992  
at the  
CENTRAL PRESBYTERIAN CHURCH  
LAFAYETTE, INDIANA

They are Charter Members of Indiana Historical  
Radio Society and the membership wishes them  
many, many more years of Wedded Bliss

C O N G R A T U L A T I O N S  
to  
Marshall and Helen

# ANNOUNCEMENTS

In the last BULLETIN there was an error in Herman Zeps address. His correct address is:

Herman Zeps  
319 S. Williams St.  
P. O. Box 282  
Bluffton, IN 46714

\* \* \* \* \*

We have several Scott-Meck booklets that members may have by sending \$1.00 for postage to the Editor. Price for non-members is \$3.00 ppd.

\* \* \* \* \*

If you want a back issue of the IHRS BULLETIN you must send \$2.00 per copy for each one ordered. They will be shipped postpaid by Herman Zeps, address above. Checks should be payable to IHRS.

\*\*\* \*\* \*\*\* \*\* \*\*\* \*\* \*\*\* \*\* \*\*\*

We need more Radioads. Other clubs have as many as four pages. We hardly get enough ads to fill one page. Surely you have surplus radio materials to sell, trade, or want to give away. You will be helping your fellow collectors. You can also advertise for parts you need to complete one of your projects.

\*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\*

HAVE YOU READ?

by Ed Taylor D.Sc.E.E.

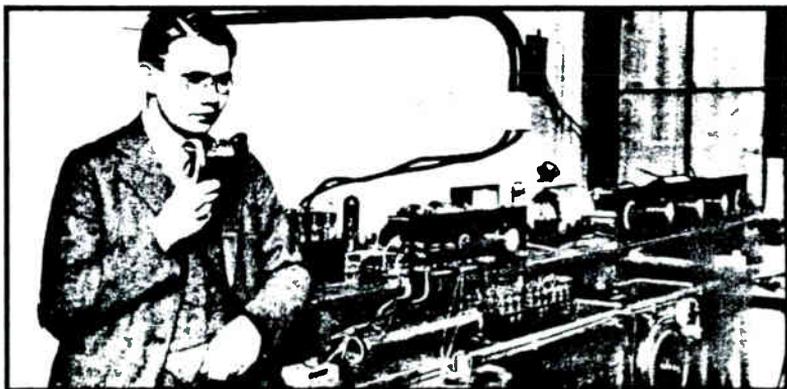


MAKING WAVES IN THE INFORMATION & SPACE AGE

by George F. Metcalf - 1992

The author of this book was the featured speaker at the 1992 Antique Wireless Association Grand Banquet in Rochester N.Y. As a former General Electric Company vice-president, he has written more than a professional career autobiography. This is a documentation of the amazing progress which G.E. made in the fields of electronics, communication systems, and aerospace technology.

Of particular interest to IHRS members is the account of how Mr. Metcalf and Walter Lanterman, while attending Purdue University in the early 1920's, built what is now radio station WBAA. He recalls how he was paid 25¢ per hour to drill a hole (with a hand chisel and hammer) through the 6" concrete roof of the Purdue Electrical Engineering building. Illustrations include photos of this building, the original 50-watt 9XE transmitter, and an early view of a WBAA studio.



Binford & Mort Publishing, Portland, OR,  
\$24.95 plus shipping.

## REPRODUCTION RADIO B BATTERIES

George B. Clemans

In the battery compartment of a 1923 Ozarka radio that I acquired recently, I found a pair of old radio B batteries that were still in pretty good physical shape. Because of the chance that they would leak if I left them there, I decided to try to use them to make replicas for display. First, I took them to my local Kinko's and made color Xerox copies of the best looking front and side panels. Next, I made a box slightly smaller (by about 1/8 of an inch) than the original batteries. I found that either poster cardboard or the new "foam board" (which seems to be styrofoam pressed between paper) work well for this purpose, the cardboard perhaps resembling the original more closely. The top of the box was recessed about 1/4 of an inch below the top edges and was glued in place with white paper glue. The bottom was made flush but was left removable to allow access to the inside of the box. The whole thing can be held together with rubber bands while the glue is drying.

The Xerox copies of the front and side panels were next cut out and glued to the boxes using wallpaper glue. This also works very well, but a little care must be used since the Xerox paper does not hold up to water as well as wallpaper and tears easily. Finally, terminals (in my case fahnstock clips) were attached to the recessed top using spacers to raise them to the level of the top edge of the box. To complete the replicas, melted wax from a pair of black votive candles was poured onto the recessed top, filling it to the bottoms of the terminals. This gives a somewhat flat finish on the wax surface, which can be shined up with several coats of liquid floor polish.

## B Batteries (Continued)

The result at this point is excellent for display purposes. It looks very realistic, since the Xerox reproduces all the blemishes of the original. In the case of the batteries I found, the copies also reproduced a hand-written date when they were first put into service (October 1, 1930!). The replica can also easily be made into a functional B battery, however. I built mine with additional fahnstock clips on the inside as well as outside at each terminal. All that is necessary is to put five 9V. transistor batteries in series to get the appropriate voltage and then hook them to the inside terminals. When the bottom is put in place, you will have a functioning B battery for your antique radio that is virtually indistinguishable from the real thing.

Editor's note: Photos of the battery boxes are on the back cover.

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## STARR SPEAKER

At the top of the back page you will find a photo of a seldom seen "Starr" speaker manufactured by the Starr Piano Company of Richmond, IN. The cabinet is made of walnut and the bell of the speaker is made of spruce. Apparently there never was a grill cloth covering the speaker. On the lower part of the bell there is a decal indicating the brand name and manufacturer. It is similar to the decal found on Starr pianos and phonographs. Submitted by Mike Feldt, Carmel, IN.

# Radio Flyers

*A close look at radio history shows  
an inseparable link with early aviation.*

By TSgt. Vic Johnston  
1st Fighter Wing Public Affairs

Courtesy of Langley AFB, "The Flyer"  
July 10, 1992

Radio is the very heartbeat of modern aviation. Radio voices from air control towers guide pilots from take off to landing. Radio carries weather, news, storm warnings and other lurking hazards throughout the length of every runway, and beyond. If we look at radio's early development, we see that radio and aviation have never been far apart.

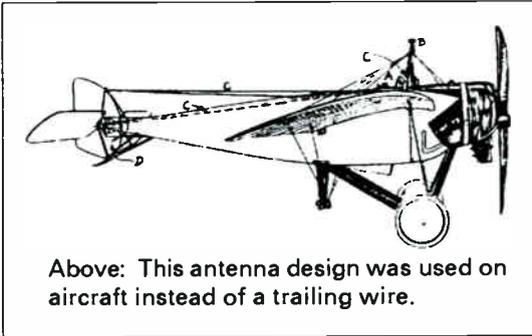
Wireless telegraphy, the precursor to modern radio, first

found practical military and commercial use in maritime applications. Radio pioneers Jack Binns and David Sarnoff gained fame for themselves and earned respect for this new form of communication in the early twentieth century. However, some of the initial reaction to placing a "Wireless Set" on an aircraft was anything but positive. At one time pilots objected to radio in their airplanes because of the extra weight and the potential fire hazard caused by sparks from those first sets.

At first, radio was fraught with technical problems. In the early days of aeronautics, the same elements which fought men in the air fought radio. Storm clouds which men-

aced flights through mountain passes piled up a barrier to radio waves in the form of static. Nowadays that devil of the air has all but been eliminated by the development of improved electronics and frequency modulation.

Like they say in the "Steely Dan" song, "no static at all; FM."



Above: This antenna design was used on aircraft instead of a trailing wire.

Radio technology and military applications are inseparably linked. Just as the military has had an impact on the evolution of aviation, military use of radio has

spurred research and development almost from the day it was invented.

The Army first tested aircraft radio equipment in Washington D. C., May 13, 1908. On that day, Lieutenant F. L. Lahm piloted a balloon to an altitude of 1,000 feet. In the balloon was a wireless receiver, from which he listened to radio signals from transmitters located at the Washington Navy Yard and Annapolis. This test was successful and led people to seriously consider the use of radio in aircraft.

In 1911 an interphone set which permitted conversations between pilot and ob-

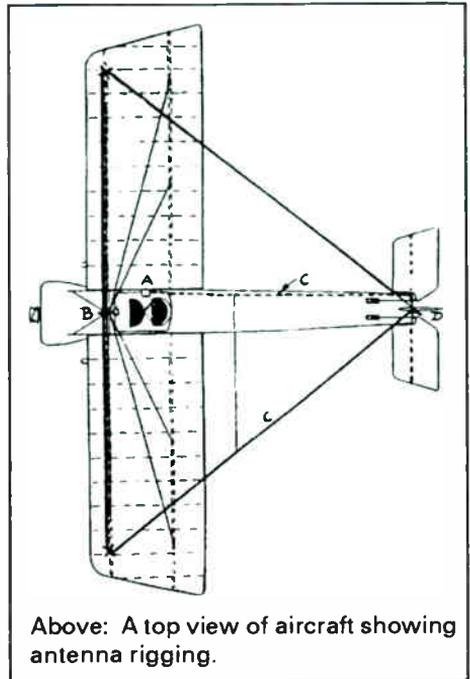
server was designed. Then in 1912 J.O. Mauborgne designed a radio set which for the first time could be used to control field artillery fired from the air. The pilot of the aircraft was Lt. "Hap" Arnold and the observer and radio operator was Lt. Follett Bradley, two of the most famous aviators in Air Force history.

Three years before the U.S. entry into World War I, in 1914, Mauborgne used a "Radiotelegraph" in an Army aircraft. With a telegraph key strapped to his knee, he managed to transmit a brief test message 11 miles. This was also the first successful experiment where radio signals from a ground station were received by a heavier-than-air machine in flight. Many heated debates over the possibility of radio sets without "grounds" followed.

The big push toward aircraft radio communication was the 1917 entrance of the U.S. into WW I. Until then radio installation in aircraft was done in a very makeshift manner. Although the Signal Corps didn't want the first crude sets, flaws in design were quickly overcome and in short order demonstrations of radio linked formation flying and artillery fire control were commonplace. The radio set in an airplane thus completed its transformation from an idea, to an experiment, to a valuable tool in helping fight and win a war.

Like fraternal twins, radio and heavier-than-air flight arrived on the scene at virtually the same time and have spent most of the twentieth century growing up together. Radio is with us in our car, our home, and because of miniaturization, it can be virtually anywhere. Because radio has proven to be an invaluable resource in the cockpit, no pilot would ever want to fly without it.

*Editor's Note: In his off-duty hours, TSgt. Johnston is a radio historian and avid collector of radio memorabilia.*



### ***Pioneering Air Corps Officer Paved Way to Static Free Radio***

One of radio's greatest pioneers did a lot of his early experimentation and work while he was a Captain of the Army Signal Corps during WW I.

Edwin H. Armstrong had already invented the regenerative circuit for radio, making the puny crystal set a thousand times stronger. Because of his fame as a wireless wizard, he was offered a commission in the Army.

He soon found himself in France directing tests in the development of an aircraft communications system. The flying machines of that era had open cockpits which subjected the occupants and equipment to all of the elements. With numbed hands trying to adjust delicate yet crude pieces of radio equipment, he managed several successful tests.

Before the end of the war he had developed the basic circuitry on which almost every radio made to this day is still based, the super heterodyne. The fundamental design is still used, from the clock radio on your night-table, to the stereo in your car.

His other inventive contributions include superregeneration, which has had applications in radar use, and the early development of FM have significantly impacted aircraft communications.

## Amperite Filament Control

The Amperite was used in filament circuits in place of rheostats in the mid 1920's. An ad in the Feb 1925 QST by the Radiall Co. (p65) states, "takes the place of a good hand rheostat, a delicate meter and an expert operator, etc." Figure 1 shows that such hype is far from truth. Apparently American Bosch accepted this notion because they used five of them in their Amborola radio.

The effect of the Amperites is shown by curves 2RF-301A and 2AF-301A. They show the resulting voltage applied to the filament of a Cunningham C301A when an Amperite is in series with it to the A-voltage source. They have very little of the expected curvature. At battery voltages below 5.6, they rob voltage from the filament. Above this, they overvoltage the filament. And because of the lack of any rheostat, the Amborola has no volume control other than coarse antenna taps.

S. Gernsback's Encyclopedia (1927 p67) states "a fine wire is placed in a glass tube filled with an inert gas. The wire has the property of increasing its resistance rapidly with any increase in current... possible to arrange such a device to pass only a fixed amount of current ... thus not only an automatic rheostat, but also a safety valve..." It is possible that the inert gas has leaked out. But its presence would have carried away some of the heat which was necessary for its resistance to rise. It seems logical that a vacuum would have been better. (Air now?)

The basic theory of using a wire with a high positive temperature coefficient of resistivity is reasonable on the face of it. But two facts prevent it from being very effective. First of all, there are few metals including iron - that have a radically higher coefficient than incandescent tungsten. (The Amperite shows no color.) Secondly the Amperite has no leverage with which to work: at most it would have only one volt across it out of a fully charged 6-volt battery, while the filament is in control of the other five volts.

## AMPERITE (Continued)

It is interesting to see what an ordinary low coefficient resistance does in place of the Amperite, see curve  $3.4\Omega+301A$ . Throughout the normal operating range,  $E_f$  deviates less than 0.1 volt from that obtained with Amperite 2AF! Next replace the tube filament with a low temperature coefficient  $20\Omega$  resistance in series with the Amperite, curve 2AF+20. Now we begin to see some of the curvature that was apparently expected.

The other curve (upper) was made with a device marked 'Ballast' sold by Daven. It looks like an Amperite but I've found no claim for what it is supposed to do. Its plot shows almost no curvature at all, and its resistance is too low for the .25 ampere 301A.

**For ANY Tube  
D.C. or A.C.**

**Reliability...Yesterday,  
Today & Tomorrow...**  
In 1922 Amperite meant Quality...and today, it still does! In fact...many of the original Ballast regulating tubes built into your equipment are still available. **Call us today!**

600 Palisade Avenue  
Union City, New Jersey 07087  
(201) 864-9503 • (800) 752-2329  
Fax: (201) 864-3955

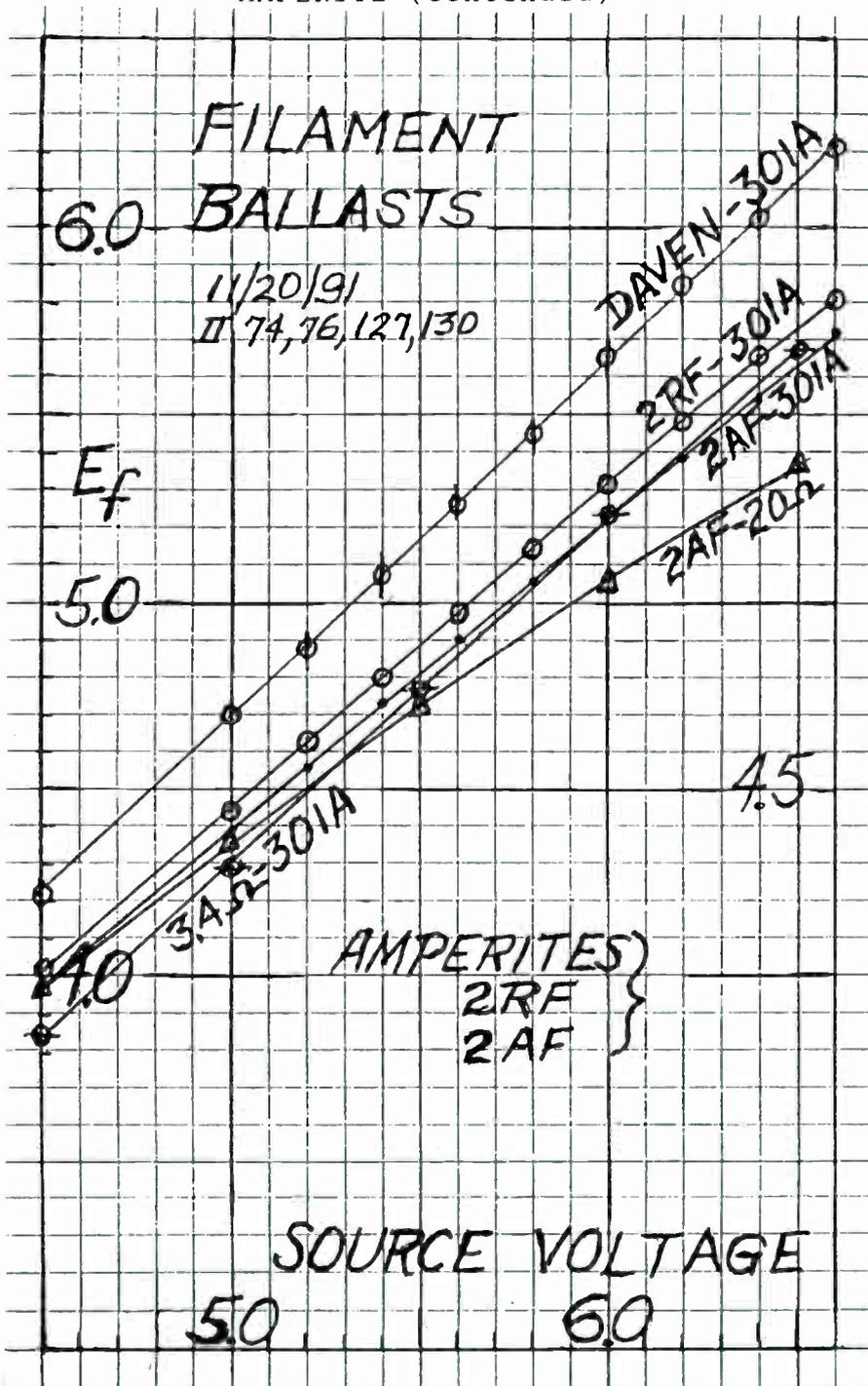
**AMPERITE**

**AMPERITE**  
REG. U.S. PAT. OFF.  
**The "SELF-ADJUSTING" Rheostat**

\*- Actual Ad from 1927

Amperite advertisement reprinted from the October 1992 issue of Electric Radio magazine.

Robert Miller, Fresno, Ohio



## OTHER CLUB MEETINGS

Future meetings of the Michigan Antique Radio Club are:

February 6, 1993, Grand Rapids, MI at Hilton, host, Larry Anderson, 616-363-7889. Swap meet and auction.

July 16-18 1993, EXTRAVAGANZA '93 at Holiday INN South, (new location this year.

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There has been a date change for the SPARK swap meet, on January 23, 1993. It should read as follows:

"SPARK" Winter Radio Swap meet will be held inside the DeVry Institute of Technology, 1350 Alum Creek Drive, I-70 exit, 103B, Columbus, OH. Contacts: Gil Zalewski, at phone 614-866-0094 or Jim DiRuzza, at phone 513-233-5004 evenings.

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# DUES!

Dues for membership in the IHRS pay for one year, January 1 to December 31.

Please support the IHRS by paying your 1993 dues now. Make your \$10.00 check payable to Treasurer IHRS and mail it to Glenna Sanders, 15 Todd Place, Terre Haute, IN 47803.



# Ken-Rad

## Radio Tubes



One of the lesser known radio related industries in Indiana was the Ken-Rad Company in Daviess County.

Since 1902 the production of electricity has not been the only aspect of the electrical industry in Daviess County. The municipal utility was joined in that year by the Kentucky Electrical Corp., a private firm which manufactured various electrical products, including light bulbs.

The firm was not financially successful, but continued operation until 1918 when a young Pennsylvania businessman, Roy Burlew, of Emporia, PA came and purchased the factory.

Changing the company's name to the Kentucky Electric Lamp Co., Burlew concentrated on the manufacture of light bulbs and by 1920 had boosted employment from about 20 to over 100.

In 1922 he created a separate corporation—Kentucky Radio Tube Mfg. Co.—to produce tubes for radio sets. The name Ken-Rad was coined to designate both firms and was used in national advertising during and after 1929.

After employing more than 4,000 people during WWII and expanding to Bowling Green and Henderson, KY and Huntingburg and Tell City, IN, Ken-Rad was sold in separate transactions in 1945 to the General Electric Co. and Westinghouse Electric Corp.

GEORGE A. FREEMAN  
CAPTURES AWA  
BEST OF SHOW AWARD

Indiana Historical Radio Society member, George A. Freeman, won the Eunice Thompson Award for the best display in the equipment contest at the September 1992 Antique Wireless Association meet in Rochester, New York.

The overall theme for AWA's 1992 contest was 'General Electric'; Freeman's display, in the category of GE Television, covered broadcasting centered on WRGB, the pioneering (prewar) station in Schenectady, New York.

The unique feature of Freeman's exhibit did not rely on photos and visual material, but rather a taped interview with Marilyn Armstrong, an air personality on the station in the late Forties when television broadcasters were just learning the game.

\*\*\*\*\*

For "the rest of the story" we must turn to George for a record of his perseverance in obtaining the material which led to his earning this coveted award.

"Antique Week, published in Knightstown, Indiana, had an ad for Worthville Antiques in Worthville, Kentucky. It was practically in sight of my tower at WIKI, Carrollton, Kentucky. The listing said she was open Sundays and Mondays only from 11 'til 3 during April through October. This was what led to this IHRS Member winning the best of show award at the 1992 AWA convention last September in Rochester, New York.

"It was the winter of 1990. The shop had no heat. The little proprietor was all bundled up. Said she had no old radios, no tubes, no advertising--the only old radio stuff was herself. I asked what she meant. Marilyn Armstrong revealed she had been an actress on network radio during the Golden Age.

George Freeman, (Continued)

"Six months later we recorded a two-and-a-half hour long oral history in her kitchen. It took another year-and-a-half before she finally had assembled paper documentation. This included original photos of her as the weather girl at WRGB-TV, Schenectady, New York in 1945.

"I copied an excerpt of her telling how each day she wrote a sixty second comedy skit dramatizing the weather forecast. She then delivered the skit live on the air. This narration played on a continuous loop cassette player behind pictures taken 47 years ago in television's infancy. Her riveting ad-lib enabled our simple display to compete in an environment where we were overwhelmed by much larger, flashier, technically more interesting displays of GE meters, radios, tubes and even their radio stations."

George A. Freeman

Thank you, George, for obtaining the focused and lengthy interview with Marilyn Armstrong, retired Performer/Staffer. Congratulations on the Best of Show award and thanks for sharing a special bit of history.

---

ALVA COLLINS

Alva Collins, K9HNA, R. 1, Box 275, Flat Rock, Indiana, age 85, died December 1, 1992. He had owned and operated Collins Jewelry Store for 31 years and retired in 1972.

In 1981 Collins received a commendation from then Governor Robert D. Orr for 56 years as a Watchmaker. He was a registered gemologist and held memberships in ARRL, American Gem Society, AWA and National Rifle Association. He had been a member of IHRS since 1975.

Survivors are Kathryn (Dow) Collins, wife; Sheila May, daughter; and one grandchild.

# William J. Halligan, 93; founded electronics giant

By Kenan Heise

William J. Halligan, 93, founder and retired chairman of Hallicrafters Co., started the firm in 1933 as a supplier of amateur shortwave radios and then developed it into a major manufacturer of electronic equipment for the home, industry, the military and aerospace.

A resident of Bal Harbour, Fla., and formerly of Chicago, he died July 14 in Miami Beach.

Hallicrafters was begun with the idea of supplying amateur radio operators with precision shortwave sets. Within a short time, it was manufacturing them in a plant at 26th Street and Indiana Avenue.

During World War II, Hallicrafters made shortwave radios for the military. After the war, it produced home television sets and peacetime radar. It continued to be the prominent name in the field of amateur and shortwave radio, selling sets through the catalogs of Sears, Roebuck and Co. and Montgomery Ward & Co.

By the early 1960s, the company's military contracts constituted 70 percent of its revenues, and it had helped the Air Force develop the QRC (quick reaction capability.) It then moved into space communications systems.

Mr. Halligan, a native of Boston, got a radio license while in high school and held the call letters W9AC. He worked as a wireless operator on excursion ships between Boston and other coastal cities and then served in World War I as a radio operator on the battleship Illinois.

He attended West Point, but quit



William J. Halligan in 1963.

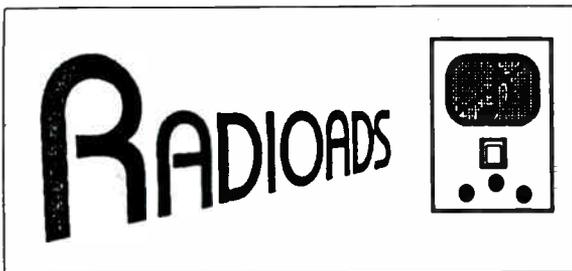
and became a newspaper reporter in Boston and later New York. He left journalism to become sales manager for a radio supply company in Boston. He started his own company in 1933.

A 1953 Tribune article said of Mr. Halligan: "Because of his prominence in the industry, he is sometimes referred to as Wireless Willie or Radio's Number 1 Ham."

Mr. Halligan, who served as president and then chairman of Hallicrafters, continued in that position after it was acquired in the 1960s by Northrop Corp. He retired in 1967.

Survivors include two sons, William Jr. and Jack; 10 grandchildren; and 12 great-grandchildren.

Services were private.



FOR SALE: Knight Star Roamer, near mint, \$30.00; Radiola IIIA misc. parts-good panel & cabinet, sockets, 2 open audios, good output xfmr., coil but rusty shafts & brackets plus battery cable, \$25.00; General Radio # 1740 Wave Meter, less cabinet, but complete with Xtal & galvanometer, good shape but working condition unknown, \$17.50. all above ppd. WANTED: a cabinet for a 14 X 7 inch panel. Geo. Hauske, 1922 E. Indiana St., Wheaton, IL 60187. Ph. 708-668-3845.

Our new 1993 color, Add-A-Page catalog will be available after January 1, 1993. This catalog will arrive flat in an envelope, inside a plastic report cover. For an SASE you will receive additional pages to insert through 1993. Send \$2.00 to James Fred, R 1, Box 41, Cutler, IN 46920. and you will be one of the first to receive your catalog. For those of you who do not wish to spend \$2.00 you may receive selected pages FREE if you send an SASE with your request. Due to the cost of the color catalog none will be sent FREE.

## RADIOADS, (Continued)

FOR SALE: Zenith model J504Y portable in nice shape & working, \$25.00 ppd. WANTED three 1 5/8 inch tube shields for Scott Phantom and 2 Tuska rheostat knobs. Geo. Hausske, 1922 E. Indiana St., Wheaton, IL 60187. Ph. 708-668-3845.

WANTED: AUDAR arm chair radio model RER-9. Anything from Audar Circa 1947-1950. Mfg. by Audar Inc., Argos, IN. Also a portable radio made by John Meck or a Plymouth radio by Meck, mfgs. number 237, John Meck Industries of Plymouth, IN, circa 1947-1950. John E. Kellar, 2202 Rockne Dr., South Bend, IN 46615. Ph. 219-287-4310.

WANTED: 1934-1935 RCA Victor, General Electric, Westinghouse modern console radios. RCA Victor models 262, 281, 322-E, 327, 341, C-9-6 and C-11-1. General Electric models M-85, M-106, M-107, M-125, M-69, M-89, A-87, and A-125. Westinghouse models WR-303, WR-304, WR-305, WR-312, WR-314, WR-306, WR-315, WR-500, WR-501, WR-601, and WR-336. If anyone can help me please call 219-295-7230. John A. Checchio Jr., 2629 Decamp Ct., Apt. 124, Elkhart, IN 46517.

WANTED: for early 70's stereo, two 6HU8 tubes. George B. Clemans, 851 W. Wooster St., Bowling Green, OH. Ph. 419-352-7198.

WANTED: Farnsworth table model radios. Herman Zeps, P. O. Box 282, Bluffton, IN 46714.

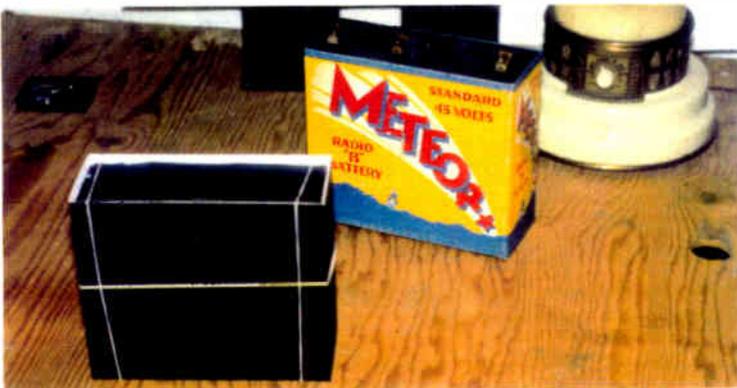
WANTED: copy of the schematic for a Knight Space Spanner, 3 tube regenerative receiver. Dr. Ed Taylor, 245 N. Oakland Ave., Indianapolis, IN 46201.



This seldom seen speaker is a "Starr" made around 1925 by the Starr Piano Company of Richmond, Indiana.



The original battery (right) and the finished replica.



The plastic box before covering.