

Indiana Historical Radio Society

BULLETIN

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245 N. OAKLAND AVE., INDIANAPOLIS, IN 46201

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IHRs IS A NON-PROFIT ORGANIZATION WHICH WAS FOUNDED IN 1971. ANNUAL MEMBERSHIP DUES ARE \$6.00 WHICH INCLUDES FIRST CLASS QUARTERLY IHRs BULLETIN. RADIOADS ARE FREE TO ALL MEMBERS.

* * PLEASE * * SEND A STAMPED, SELF-ADDRESSED ENVELOPE WHEN REQUESTING INFORMATION.

LOGANSFORT REPORT

The IHRIS Summer Meet was held in Logansport, Indiana, July 27, 1985, at Riverside Park Shelterhouse. Frank and Diane Heathcote were our hosts. Marilyn Johnston, Secretary, was unable to attend, so I shall try to report on the activities. President Bob Shuck thanked Frank and Diane Heathcote and the "Food Committee" for our carry-in lunch. Minutes of the previous meeting were omitted; Diane Heathcote gave the Treasurer's report, noting that membership stood at 236.

Ross Smith mentioned that Peter Yanczer provided us with the Old Tyme Movie for the Friday night program at Auburn. We regret his contribution was inadvertently omitted. On the subject of Auburn, President Shuck announced that after fourteen years of chairing the Auburn IHRIS meetings, Del Barrett had asked to step down. IHRIS members have many good memories of the meetings at the ACD Museum, and we thank Del for his outstanding job, which was so often long and thankless. Ross Smith will succeed Del as Chairman of the Auburn Spring Meeting, jointly held with the Antique Wireless Association. Dates for Auburn are April 18 and 19, 1986.

Frank Heathcote gave us a "report" on his trip to England and commented on the radio collecting scene there. We hope to run his observations in a future BULLETIN.

George Clemans, the "other" Editor, asked members for articles, ads, and suggestions for the BULLETIN. BULLETIN upgrading will, of course, cost more, but the editors would like some idea of what IHRIS members perceive as possible improvements.

Ed Taylor moved that Honorary Life Membership be given to Marshall Howenstein.

Marshall goes back to wireless days, and he has served the IHRS as an officer and attends most all of the meetings. The proposal was unanimously carried.

After adjournment of the business meeting, the popular vote contest was held (written up elsewhere in the BULLETIN). And after that -- Steve Waldron conducted an auction of the "good junk" that didn't sell at the swap session. Then, we went home.

Edna

A final note. You may have wondered who provided the IHRS ball-point pens at the Logansport meeting. They were gifts from Paul and Marilyn Gregg. Thank you, folks.

TELEGRAPHY

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BODER'S INSTITUTE

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SLATE OF OFFICERS FOR 1986

The Nominating Committee, consisting of Ed Taylor (Chairman), Jim Fred, and Glen Rogers, submits the following slate of officers for the IHRS in 1986:

PRESIDENT	Paul Gregg
VICE PRESIDENT	Eric VonGrimmenstein
SECRETARY	Marilyn Johnston
TREASURER	Diana Heathcote
HISTORIAN	Ed Taylor
EDITORS	George and Edna Clemans

Additional nominations may be made from the floor at the Valpo meeting September 14th.

WHY ARE OLD RADIOS...?

PART 2

In the last issue we saw that the REGENERATIVE CIRCUIT was developed in order to achieve maximum amplification from a single tube. Sets using this type of circuit were a problem, however, because they had a strong tendency to oscillate and thus cause interference with nearby receivers. This problem was so severe in the mid twenties that uninterrupted reception of programs was practically impossible. Not surprisingly, a new solution to the problem was sought, and again it was Major Edwin Armstrong who found it.

The SUPER-REGENERATIVE CIRCUIT was his next offering in the race to develop a useful and sensitive radio. In order to oscillate in a regenerative circuit, the grid of the tube must be maintained at a slightly negative potential. If this is done, regeneration will eventually produce oscillations and widespread interference. If the grid were maintained at a positive potential, this would have the effect of placing a high resistance in the plate circuit, and regeneration (and hence oscillation) would stop. If this could be done every time the tube was about to break into oscillation, then interference would be eliminated. How to do it?

Armstrong achieved just such a result with (Believe it or not!) yet another oscillating regenerative circuit coupled to the grid of a regenerative detector, this new circuit oscillating at a constant frequency of 10 kHz. Since the new circuit is coupled to the grid of the tube, the grid is alternatively made positive and negative 10,000 times a second. During the time the

grid is negative, regeneration occurs normally to give high amplification in the tube. The frequency of 10 kHz is so chosen, however, that before this regeneration can build up to the point of oscillation, the new circuit makes the grid positive and regeneration ceases. When the grid again becomes negative, the cycle is repeated. Thus, with SUPER-REGENERATION the full amplification of the tube can be realized without causing the interference associated with a simple regenerative circuit. It was actually possible to drive a loud speaker with a single 201-A tube in a radio of the SUPER-REGENERATIVE type. This created a sensation in popular radio circles of the time.

Needless to say, this new development did not solve all radio problems for all time. A SUPER-REGENERATIVE set will generally tune rather broadly, a real disadvantage as more stations came on the air. Also, 10 kHz is not entirely out of the audible range, and as a result a background hum of this tone is heard. Audio quality was therefore rather poor, another fact that limited appeal of the circuit. As a result, few commercial sets using this circuit were made for broadcast reception. Homebrew versions are occasionally encountered and can be recognized by the very large coil (usually a d1 1500 duolateral) in the low frequency circuit.

But other radio designers were also finding ways to gain maximum amplification from a small number of tubes. Perhaps the most successful development was the REFLEX CIRCUIT, the most efficient version of which was the INVERSE DUPLEX REFLEX circuit of David Grimes. In this circuit the idea was to make a tube do double duty--that is, function as an amplifier at audio, as well as radio frequencies. A single tube would thereby do the work of two. All that was

necessary was to take the audio signal from the detector and pass it through the radio frequency tube. If a crystal detector and one tube were used as in the HARKNESS REFLEX, it would be possible to produce a radio with one stage of radio and one stage of audio amplification, more than enough to get distant reception (DX) as well as to drive a loud speaker with one tube. The INVERSE DUPLEX REFLEX was a refinement in which tubes were used in inverse order for audio amplification as for radio amplification. That is, the first RF tube (carrying the least RF signal) would be the last AF tube (carrying the greatest AF signal), thus avoiding the problem of overloading a tube with more signal than it could handle.

The REFLEX CIRCUIT proved to be quite an effective and successful one, and a number of commercial versions are to be found. Early Grimes radios, needless to say, use this circuit and are therefore prized by experienced collectors. Also rather common are the early AC Dayton (Dayfan) sets. These are truly exceptional in their performance.

Once again, however, the race did not end. REFLEX sets are relatively unstable unless correctly set up and they were seperceded by other approaches. Of course, by 1927 AC tubes were developed and batteries were no longer needed. Thus it became possible to use large numbers of tubes and the need to minimize the number of tubes in a radio died.

Still, however, the difficulty of amplification at "high" frequencies (1200 to 1600 kHz) remained. We will discuss the popular solutions to radio frequency amplification next time.

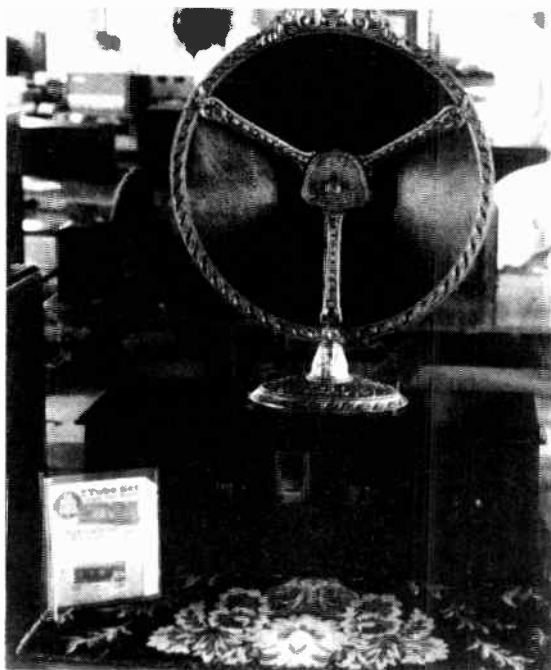
GEORGE B. CLEMANS

LOGANSPORT CONTEST RESULTS

Frank Heathcote several years back got the idea of a popular vote radio contest for everyone who attends the Logansport meetings. Experts, non-experts, and the inexpert could vote. Everyone votes! Now, Frank has to think up the contest categories, categories which will bring out some of the off-beat items in our collections. (Can we forget Wava Smith's past entries?) Frank challenged the members this year with three categories.

In the first category - "Radios ending in -dyne, -tone, or -phone" - was an APOLLO-DYNE, or APFOLLO-DYNE. You see, the radio name is spelled one way on the front panel, and another way on the instruction card mounted under the lid. The -dyne winner was A. C. Stoddard, Lansing, Michigan.



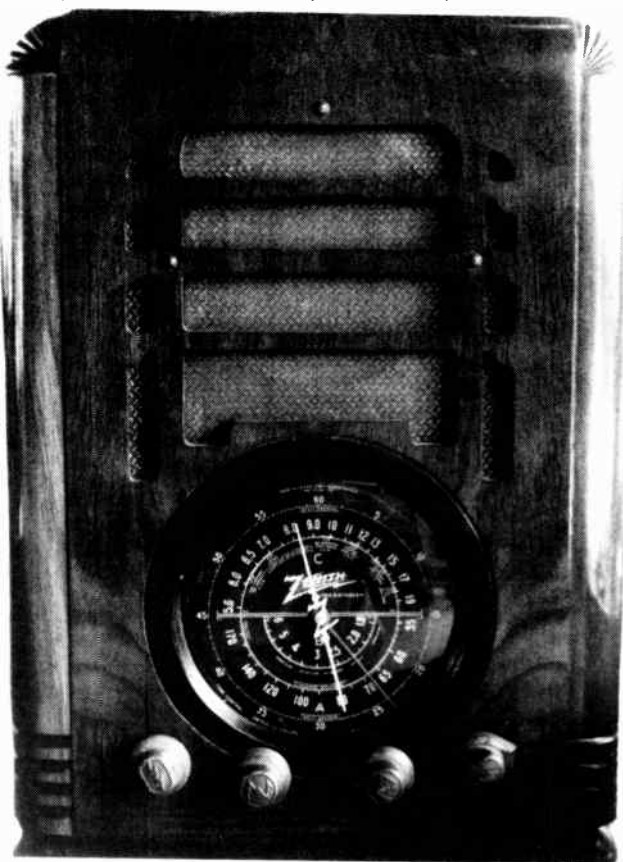


Category II - "Mail-Order Company Radios" - was won by Ed Taylor, with a beautiful 1926 METRODYNE RADIO with matching speaker. Ed included with his entry an advertisement with order form. Would that we could send off for a set from the Metro Electric Company in Chicago! A. C. Stoddard had in this category of mail-order radios a true DX devil. It was a Montgomery Ward, one-tube, AIRLINE SPECIAL, dry cell model. Documentation with this set was a list of stations logged in a recent two-week period:

Michigan	11
Canada	7
U.S. (other than Michigan)	28
Unknown	1
DX	San Antonio, Texas

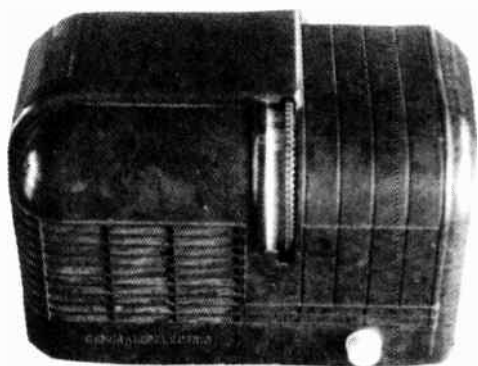
The final category brought the most varied group of entries and some great

stories. Category III as Frank described it was for "Your very first old radio, or the one you've had the longest. Bring the radio that turned you on." Bringing a 1937 Zenith, Model 55127, was John Miller of Lexington, Kentucky. "Some older and very good friends of the family gave this radio to me when I was in high school. A friend who was taking an electricity class at school volunteered to repair it for me. When he finally returned it, he said it was TOO OLD to fix; he also lost the knobs for it. While stationed in Illinois with the Air Force a few years later, I stumbled upon Jim Fred's antique radio column in ELEMENTARY ELECTRONICS. Jim listed sources of books, schematics, etc., that I had not



known were available. Inspired by this, on my next trip home, I dug the Zenith out of my dad's basement and took it back with me. My friend in high school had really messed up the chassis electrically, but armed with a reprint schematic from RIDER'S, I dug into it. By the time I was finished and heard this baby play I was hooked. That was about ten or eleven years ago, and I still love 'em. This radio had turned me on !!"

From Ross Smith: "I purchased this Model H-500U GENERAL ELECTRIC new in 1939 for my girl friend at a total cost of \$12.95, in four payments. The radio worked very well, and we were married two years later. (This makes my wife my second collector's item.)"



And the winner was A. C. Stoddard with a Radiola III-A: "My first antique radio was a Radiola III-A abandoned by my father for an Atwater Kent electric. I used it in the early thirties, powered for both A and B, with used No. 6 batteries obtained from the neighbor, who worked for Ma Bell. I soon converted it to "two-way," with a mike across the antenna and ground, and broadcast all over the neighborhood. What I



did not have then was the Canadian cabinet, the push-to-talk mike, the converters for O1A's, and the antenna switch." The cabinet was manufactured by SMS Radio Cabinets, The Strathroy Furniture Company, Ltd., Strathroy, Ontario. Mr. Stoddard told me that he had had a clock hooked up to the set as a timer, and that he remembers listening to WLW in Cincy and to Tony Wons.

It was a fun contest. You'll be hard-pressed, Frank, to dream up some equally inviting and strange categories in the future, but we know you'll try. Many thanks for the photographs.

Edna Clemans

AND YOU THOUGHT YOU HAD IT BAD

Frank used to date my best friend, so I had heard about and seen his "small" radio collection. I even found an old cathedral at a flea market in Kokomo. It was extremely heavy, but I thought Frank might like it so I lugged it back to my car. (I later found out he thought it was a piece of junk and gave it away!) Anyway, I should have known what I was getting into, but I thought he was just going through a phase. I wasn't concerned because I knew that in time I could change him. Was I ever wrong--an antique radio is no fair match for any female!

Many wives worry about their husbands spending too much time in bars or chasing other women. That generally is not a concern for the wives of radio collectors. I can rest assured that Frank is in his workshop, fiddling with his latest find. I may not see him for days at a time (although he occasionally makes an appearance for food or to use the restroom), but I always know where he is. If he has a free hand to press the button, he will sometimes buzz the intercom to let me know he's still alive.

A common problem encountered by radio collectors is lack of space. Actually, it is more of a problem for the spouse who finds that she no longer has furniture similar to that of the average housewife but, instead, has radios taking up any available space (Frank, where did you put the clothes that used to be in this closet?). Frank solved that problem for us. He bought the two-story garage next door to display his radios in. Unfortunately, they wouldn't sell the garage without the house so I now have the honor of being a landlady.

Any person who works looks forward to her weekends so she can rest and catch up on

things she wants to do. I used to be one of those people. When the alarm started ringing at two a.m. on Saturday and Sunday mornings and we were on the road by three a.m. to go to a flea market or auction two states away, the word "relaxing" was removed from my weekend vocabulary. I actually looked forward to Mondays and a room full of ornery students so I could rest!

Somebody failed to tell those who collect radios that the quickest way to reach your destination is to stay on main roads and to stop only for food and restrooms. Frank has a sixth sense that smells radios or antique stores ten miles away. That is the direction that our car generally heads on the chance that a radio "might" show up.

If you're married to a radio collector, you are usually provided with the opportunity for travel. For instance, we just returned from nineteen days in England. I was ecstatic at having the chance to go. I should have known Frank had ulterior motives. While I was spending my time figuring out what clothes to take, he was busy trying to figure out how to pack the radios he was taking with him.

Someone visiting our home recently summed it up best--Frank has "CRS" (Cathedral Radio Syndrome), and there is no cure!

Diane Heathcote

PS. In all fairness to Frank and his hobby--it does give us an opportunity to meet lots of interesting people. We have friends all over the world. He also includes me in all that he does, which many husbands don't do. I really can't complain...but I will the next time the alarm goes off at two a.m.

D. H.

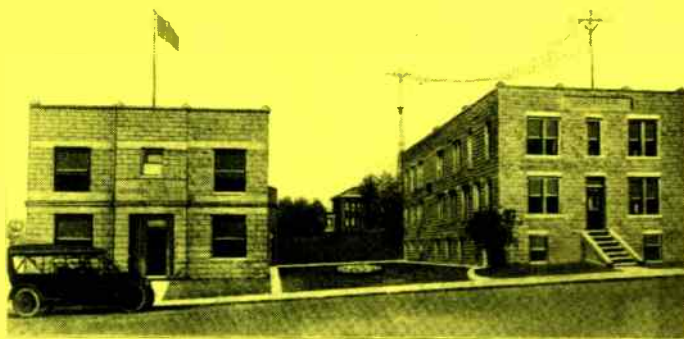
RADIOADS

WANTED: Two Bremer-Tully diecast two-gang 17 plate variable condensers that were used in the B-T Counterphase 6-tube battery radio. Mine are warped and must be replaced. I saw a pair of them two years ago at the Auburn Flea Market and wonder if they are still available. L. L. Gibbs (W9BHT), 701 Brookfield Road, Kettering, Ohio 45429.

WANTED: Blank bakelite panel (for homebrew radio), old cabinet for 7 x 21 in. panel homebrew, GR Model 231 audio, parts for Air-Way battery radio. Will be at Valpo. George B. Clemans, 951 West Wooster Street, Bowling Green, Ohio 43402 (419) 352-7198.

FOR SALE: Five-tube Freshman Masterpiece battery set in nice condition, \$45. Will bring to Valpo. George B. Clemans, (419) 352-7198.

WANTED: Power pack for AK 36. Buy or trade. Harold A. Bolz, 3097 Herrick Road, Columbus, OH 43221.



DOUGES' TELEGRAPHIC WIRELESS AND RAILWAY INSTITUTE - VALPARAISO, INDIANA

NEXT IHRS MEETING

SATURDAY, SEPTEMBER 14, 1985
8:00 A.M. - CHICAGO TIME
VALPARAISO, INDIANA

The Valparaiso Technical Institute Alumni Association and the Wilbur H. Cummings Museum of Electronics have invited the IHRS "back to the campus" for our Fall meeting. The Alumni Association will have coffee, sweet rolls, and juice for the early arrivals, and the museum will be open for our perusal. The parking lot will be the scene of much swapping (we hope), and at noon, V. T. I. will provide lunch for us. Following lunch, there will be a business meeting and the election of officers for the coming year.

To give our hosts an idea of how many people to prepare for, send a postcard to

Art Hershman
Valparaiso Technical Institute
1 Center Street
Valparaiso, Indiana 46383

If you have never attended one of our IHRS meetings at Valpo, you ought to come on out for this one. The Cummings Museum is really a good one, and the campus hospitality is tops. Visit and meet on a site important to Indiana and radio history; Valpo began in 1874 as Dodge Institute of Telegraphy!