

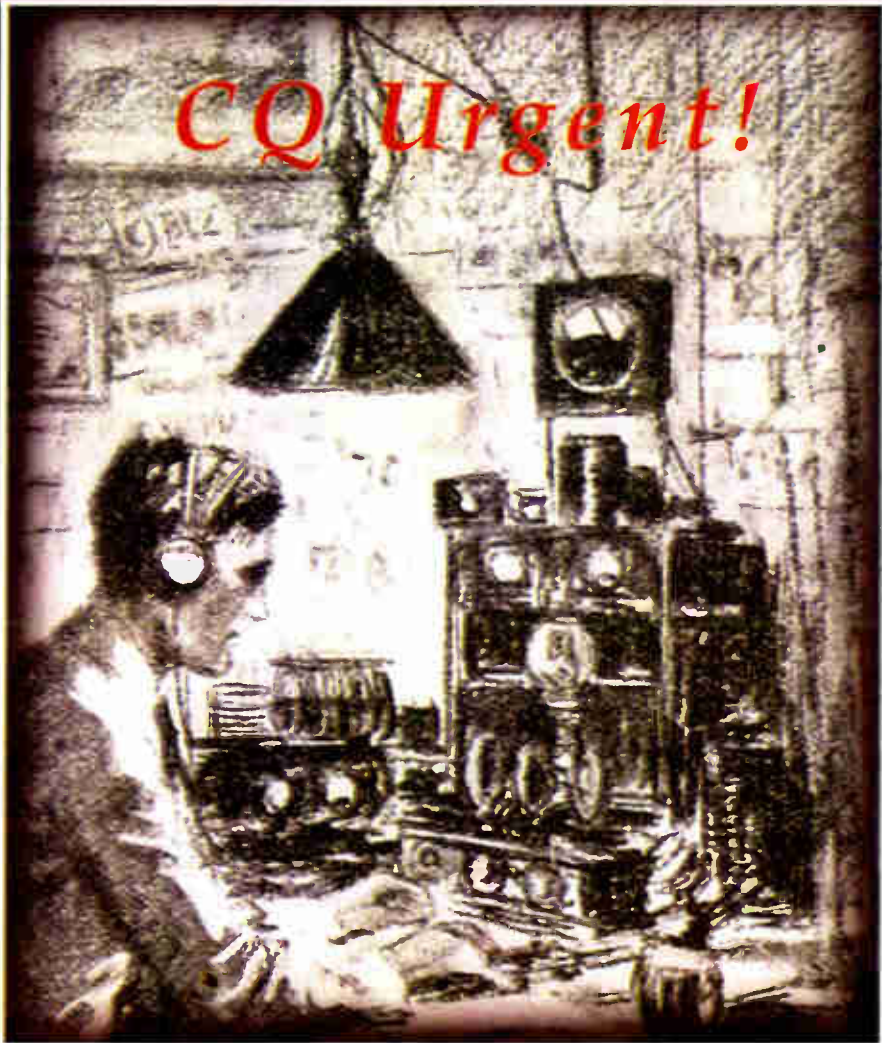
The
Indiana
Historical
Radio Society

BULLETIN

Volume 46

September 2017

Number 3



CQ Urgent!

The BULLETIN

A PUBLICATION OF THE INDIANA HISTORICAL RADIO SOCIETY.
CELEBRATING FORTY-SIX YEARS OF DOCUMENTING EARLY RADIO

The Indiana Historical Radio Society Bulletin

September 2017

On the cover of this issue of the Bulletin:

While researching material for a project other than radio I discovered "CQ Urgent", a short story, published April 1927 in the Classmate, A Paper For Young People; The Methodist Book Concern, Cincinnati, Ohio. The illustration associated with the article is as interesting as the story—so, we have it on the cover of this issue of the Bulletin. The story is about a young wireless operator and a doctor communicating with a ship board wireless operator about how to care for an injured sailor.



The illustration is by H. Weston Taylor. *Fred Prohl*

In this issue:

The IHRS in Greenfield, October 14 will be our final meet of the year. A check of the records will probably show that the Indiana Historical Radio Society has held a Fall meet in Greenfield on 40 or more occasions in the life of the Society. It is rare the weather is bad, the leaves are changing, and the company is good. If you've not been to the Fall Foliage Meet in Greenfield you'll find a lot of activity in the parking lot early in the day, usually beginning about 7AM. Indoors there will be a Popular Vote Contest setup, registration, tables available for the demonstration of radios and electrical apparatus, and sometimes a silent auction. Shortly before 11AM parking lot activities shut down in time for an 11AM pitch in lunch.

Starting on page 4, Ed Dupart tells us of his experience working at Heathkit. Ed also reports on his experience of repairing an Arvin AM/FM receiver with multiple transformer problems. Page 16.

This issue's centerfold pages show off the great looking radios from the Cool Creek Popular Vote contest. Congrats to the entrants - few people will understand the hours of work that go into restoring these radios to showcase condition.

Pages 12 and 20 go to Mike Feldt and his ARCI Old Equipment Contest award winning Luetz Superheterodyne radio. Congratulations Michael!

Fred Prohl, Editor

IHRS Fall 2017 Foliage Meet

On Saturday, October 14, 2017

the Indiana Historical Radio Society and the Hoosier Antique Phonograph Society will meet at the Riley Park Shelter, Greenfield

The Riley Park Shelter is located one block north of US 40 on Apple Street, Greenfield. Radio Swap space is available inside and outside the shelter building.

General admission is free. Swap N Sell vendor fee is \$15.00 for current members of the Indiana Historical Radio Society and \$20.00 for non-members.

Schedule of events:

7:00 AM Set up Swap N Sell of vintage radio equipment.

Set up indoors or out in the parking lot, first come first serve.

8:00 AM The IHRS Fall Foliage Meet officially begins

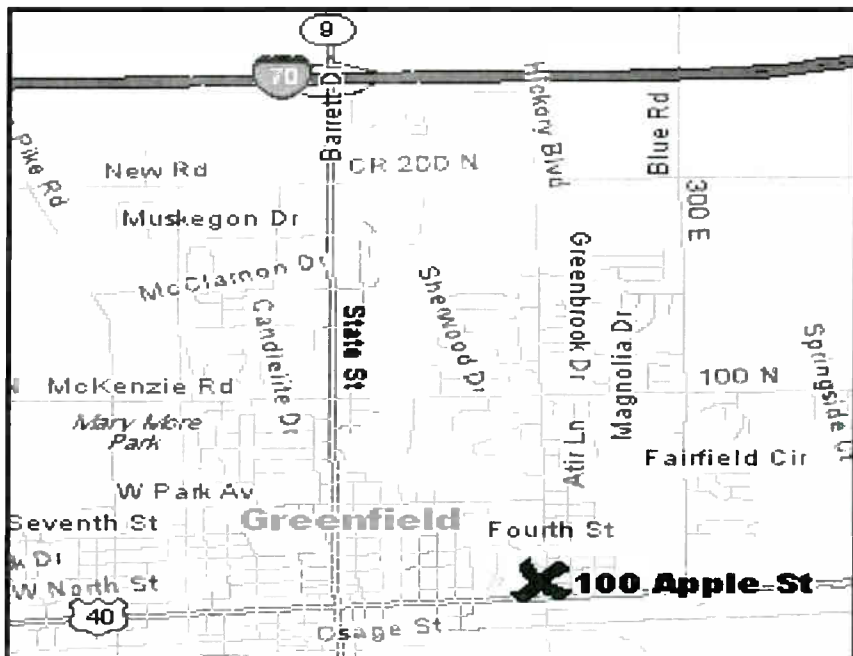
9:00 AM Popular Vote Contest entries in place

Contest categories—1. Tube FM (or tube AM/FM) receiver

2. Open to all radio and related equipment

11:00 AM Lunch – If you are able, bring a dish to share along with IHRS provided lunch meat service.

Questions? Contact an IHRS Officer. The Officers are listed on page 19 of this Bulletin . Or check indianahistoricalradio.org



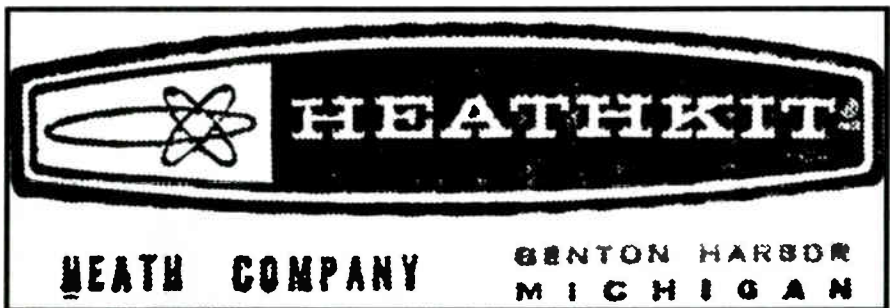
A Day at Heathkit, by Edward Dupart

Heathkit during the 1970's was doing quite well and one day I saw an ad in the paper where Heathkit was wanting electronic technicians. I was wanting to move back to Michigan and leave the soybean and corn fields of Indiana behind, so I applied. Next thing we knew in 1979, we were back in Michigan living along Lake Michigan near Stevensville. Our kids could play among the mini-sand dunes, go down to the beach and look over Lake Michigan and I was enjoying working at Heathkit.

Heath had two large parking lots, one to the east of the building and one to the west of the building and a small one by the house where they sold unclaimed kits that was across the street from the factory, more on that later. The lot I parked in was the west lot that was between the factory, Lakeshore Drive and Lake Michigan. After I parked I used a key card that was issued to me so I could enter the building in the morning

and I had a time clock I had to punch, something I wasn't used to doing. Then I would go to my workbench. Either Bill Adams or Mr. Frye would give me new projects to work on or I would continue with what I started the day before. So, that was the beginning of my day.

Ahh, my workbench! I liked my wood workbench, as it was well equipped. I'm guessing, but I think it was about 5 feet wide and had one or two shelves behind it with a wide array of test equipment on the shelf. The HP distortion analyzer was my pride and joy. If there was a piece of equipment I needed, they would supply me with it. There was a parts room and if I needed any parts, resistors, transistors, diodes, etc. I would go there, so my bench wasn't cluttered with a lot of little parts. A Styrofoam cup did hold a few of my most commonly used non-static sensitive parts. There was a grounding mat on my bench and



one on the floor for my feet to rest on and a grounding strap for my wrist. With all that I never had any static sensitive parts go bad. The Styrofoam cup was another issue as any static sensitive parts would be destroyed if they were inserted in the cup and I learned this early on and was a lesson for the others in the factory that liked to use Styrofoam cups for parts. We were also issued a ¼ " piece of plexi-glass to put over circuit boards that could have exploding parts. So, that gives you an idea what my bench looked like.

As I recall the technicians were organized in about three groups, an analog group, that I was in, the digital group and the group that repaired the kits people would send in. The digital and analog groups were out in the open factory with the assembly line behind them. The group that repaired the returned kits was in a room all by themselves and next to the parts room. I'm guessing, but I think there were about ten technicians in each group.

There were two offices, one was at ground level in front of the technicians and one was high up where they could overlook the whole plant. Bill Adams was in the high up office and Jim Frye was in the ground floor office, both were

good men and highly respected. I believe Jim Frye wrote several educational books for Heath. Both of them interviewed me by spreading out a couple of schematics and asking me what the symbols represented and then asked me some generic electronics questions, all of which I flew through. At that point I was hired. After that, the only time I went to the office was if I had a question.

The assembly line was basically two rows connected at one end to form a very long, narrow U with enough room for a supervisor to walk in-between the rows. I don't remember seeing any men on the assembly line, only women. Women are known for their ability to work with small parts and doing small, critical soldering. At the beginning of the line, someone would stuff a couple of parts in the board, solder it, then pass it to the next person. They would stuff a couple of parts in it and so on until it got down to the end of the line where it is now completed and put into a crate/box. Each person would stuff the same parts in the board. So line worker one would stuff R12 and Q1 on all the boards they would get for that run. The crate/box would be given to a technician who would have a test jig for that particular board and he would make sure it worked. If it

A Day at Heathkit—continued

didn't he would fix it. If he couldn't fix it then he would place it into another box and I would get all the boards the other technicians couldn't fix. I fixed the "dogs" and I could fix them as fast as the other technicians could fix the easy ones. The usual problems we would see from the assembly line would be wrong parts put in, parts switched, no solders and solder bridges.

The gender makeup I saw at Heath in 1979-1980 was all female for the assembly line and all male technicians except for one young lady that worked on returned oscilloscope kits and she was good at it. We tried to get women to enroll in the electronics program I ran at a college in Indiana, but we didn't get many takers, the women we did get were very successful. I experienced the same thing at the high school level and the boys really wanted to see some girls in their electronics class, but it just didn't materialize.

All products assembled at Heath were 100% burned in and there were shelves where finished products were placed, plugged in, turned on and run for several hours. How many hours I don't remember, but I do remember one vacuum tube power supply ran overnight and one of the four lug

chassis mounted electrolytic capacitors launched and went right through the metal ceiling covered with stone asphalt and was never recovered. Some of us thought it might be out in Lake Michigan, which was just across the road from the plant. It's a good thing it launched at the factory and not in somebody's home. There's a nice little patch in the ceiling/roof as a reminder of the power an electrolytic can have.

“ . . . chassis mounted electrolytic capacitor launched and went right through the metal ceiling covered with stone asphalt and was never recovered.”

Most of the people I worked with were nice, pleasant and helpful, but there were two that were a little testy. At the time Heath was selling a lot of AM/FM stereo receivers as kits and in assembled form. All the kits came with pre-aligned front end and IF boards and we aligned them for the assembled units, also. Only three of us could do the alignment. We tried to train others but no one had the patience to do it. So it was the engineer, Pretzel (nickname), and myself that aligned those boards.

Now, Pretzel was a very good technician, but he liked to play practical jokes and one of his jokes was to walk up behind you when you were working on a PC board with your full concentration dedicated to solving the problem with that board and dump a box of nuts and screws on it. Of course the technician jumps about three feet off his chair, scares the crap out of him and destroys the board in the process. Now, I didn't care for that kind of joke and he tried it on me and he got an earful from me. It probably went something like this, "Try that again and you are likely to be on the floor and they will have to scrape you off the floor." He never did it again to me and it's a wonder he never got fired.

The other testy technician was a digital technician and he knew digital inside and out. One day I was approached about joining the digital group because of the overwhelming demand for a certain digital product and I said, "Sure!" I knew the basics of digital, but I was clueless about this certain product and I wish I could remember what it was, but I don't. XY technician would not help me at all. He believed if he had higher productivity, his job would be more secure and so he didn't want to help anybody and he was probably their best digital techni-

cian there. I didn't like his attitude and Bill and Jim let me take home all the material I needed to study this product so that when I came in the next day I was ready to tackle it. Tackle it I did and I could fix those boards faster than XY technician as well as their dogs and XY technician was very surprised. It was up your nose with a rubber hose XY technician. Everyone else there was nice to me from the janitors to the management.



Another technician, who was a nice person, didn't follow the safety rules. Earlier I mentioned we were issued a piece of ¼" Plexiglas to put over PC boards we were working on to protect our eyes. Brand new capacitors, IC's, diodes, transistors and other semiconductors have never had power applied to them until they are put into a product and fired up. An electrolytic capacitor usually has a plastic sleeve on it showing the values and the polarity. If the plastic is put on 180 degrees off, then the positive terminal is now labeled a negative terminal. The person on the assembly puts it in right according to the plastic sleeve, but

A Day at Heathkit—continued

the polarity is actually reversed. Most technicians/engineers know that electrolytics can blow up. I demonstrate this in the classroom by placing a small, $\frac{1}{2}$ " x $\frac{1}{4}$ " or so, electrolytic capacitor under a coffee can and launch it a foot or two off the stool. I've seen IC's flip their lid so nicely that you can look into the IC and see the tiny chip with its fine legs running out to the terminals, same thing with transistors. Unfortunately, the above mentioned technician didn't put the Plexiglas over the board and one of the parts blew up and he is now blinded and his eye looked very ugly. The only good thing about his tragic accident is that I have told all my electronic classes about his accident and hopefully, my students will follow the safety rules wherever they work.

Heath had a function generator that didn't align very well and so I went up to the front of the building where all the engineers and management were and we talked about the problem and he came up with a solution that was incorporated into the next run. There wasn't any hassle from the engineers and they were great to work with.

Heath had another digital product that used a proprietary IC, but

it was proprietary to the IC manufacturer and it came to Heath with a special number that was meaningless to Heath other than to tell them it goes into a certain product. It only has real meaning to the IC manufacturer. What the engineer did was tell the IC manufacturer I have this input and I want this output, so make us an IC that will do that. Apparently the engineer couldn't find any off the shelf IC that could do the job for him, so he went to the IC manufacturer to get what he wanted and they charged Heath a bunch for that IC. Finding a generic IC that could do the same job became one of my challenges and I did find a generic IC! It was even in stock in Heath's store-room. Needless to say, Heath was very happy with my research and it saved them a lot of money. Did I get anything for this? No, just a pat on the back and maybe some more job security, which might of helped in moving into another position at Heath.

Lunchtime at Heath was fun in nice weather. Right across the road from Heath was Lake Michigan and several of us would take our bagged lunches and run down the steep embankment to the lake and we would eat our lunches there watching the lake. When we were done we would race each other up

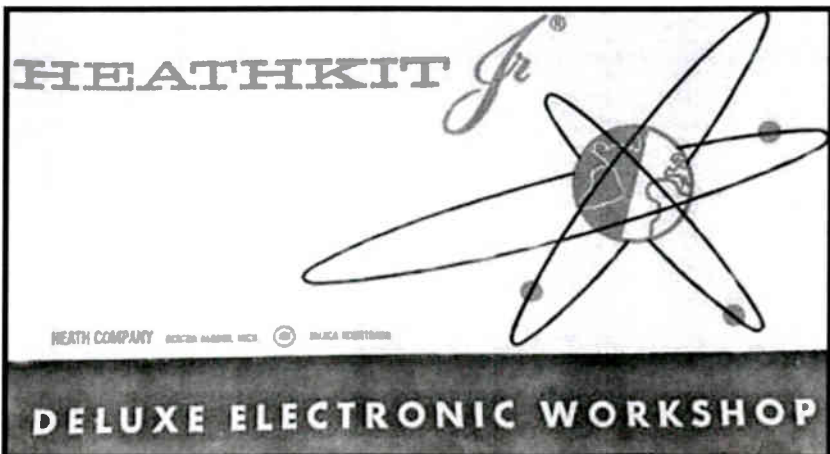
the steep embankment and it seemed Pretzel would win, we were all young but he was tall, wiry and quick.

Going home was interesting because I could watch the hang gliders float over Lakeshore Drive and it seemed like they could stay up there forever. The winds coming across Lake Michigan would rise along the steep embankment, almost a cliff and would create strong updrafts for the hang glider to fly on.

Anybody that was around Heath at all will remember the house across the street from the factory that had lots of surplus Heathkits. Once a month it was opened to the employees of Heathkit and was a delight for us electronic enthusiasts. If a kit was ordered and was sent to an address that no longer existed or was incorrect, it would be sent back to Heath and it went to the house, it

didn't get restocked in the Heathkit store. The first kit I bought from there was a digital clock that my wife put together and we still have it. There were also a lot of manuals there and I picked up quite a few and over the years they have been disbursed at various radio shows, so don't bother calling me to see if I have a certain Heath manual, because they are all gone. The surplus Heath house was a nice employee benefit.

I had to quit and go back to Indiana. During Jimmy Carter's reign, house interest rates went to unbelievable highs, 19% as I recall and it made it impossible to sell the house in Indiana. Our daughter was also homesick for Indiana, so back to Indiana we went and I became the electronics department chair at the local college. That was a very good experience and a good move for me. But I liked working at Heath. *Edward Dupart, August, 2017*



Popular Vote Contest, Cool Creek, August, 2017

Contest pictures taken by Ed Dupart and Michael Feldt

(contest results are on page 14)



A 1934 Kadette 40
entered by Ed Dupart



1920's Home Brew Crystal Radio
an Ed Dupart entry



A 1937 Zenith 5S228, 1936 Crosley 6615 and 1936 Zenith 4B131
entered by Ken Lichtle

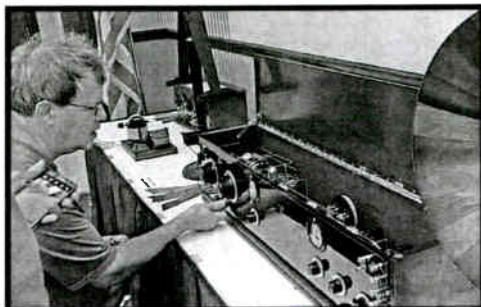
1935 Philco 84
entered by
Tom Williams)



1930's RCA Victor Farm Radio
A Tom Williams entry
An AC adapter is installed in the
battery department.



1938 Raco Super Clipper
entered by Michael Feldt



Michael Feldt adjusts his prize winning Leutz C-7 at ARCI's 2017 Radiofest "Old Equipment" contest. Mike was awarded the Dr. & Mrs. Ralph Muchow Best of Show Award as well as the popular vote for his entry.

My 2017 ARCI Radiofest" contest entry was a 1924 Leutz C-7 copy with the inscription of "C. E. Hallon, Chicago, C-7" engraved on the front panel. I don't know if Carl Hallen was the builder or the buyer of this receiver but I'm sure he was proud of owning it. I acquired this receiver, through a trade, from Robert Dobush who originally got it from an Estes estate auction last January. It was missing the two meters, two of it's three General Radio audio transformers, and most of the buss wiring in the audio section. I completely disassembled the set down to the very nuts and bolts, cleaned and polished everything and slowly built it back up again. In a short time period I was able to acquire two replacement General Radio audio transformers and the correct gauge of new buss wire in order to rewire the amp section. The two missing meters turned out to be the exact same meters that

are used on my 1924 Leutz model C receiver so all I had to do is temporarily borrow those meters and install them on the C-7 receiver in order to make it fully functional. Normally the C-7 was designed to run off of an external ariel but a switch on the upper left corner of the panel allows it to also run off of an indoor loop antenna. Currently the receiver is completely restored and fully functional. I'm still on the lookout for a multi tap Jewell 0-7 volt meter and a Jewell 3 amp current meter to complete the restoration. At the contest, my receiver was hooked up to a Beckley Ralston loop antenna, an Orchestrion horn speaker, and was powered by an ARBE-III power supply. The receiver was tuned to Chicago news station WBBM and left on during most of the afternoon and evening for the contest and banquet display.

Michael Feldt, September 2017

- 2017 Regional Vintage Radio -

Indiana Historical Radio Society (IHRS)

October 14—Fall Foliage Meet Greenfield Riley Park

indianahistoricalradio.org

Mid-South Antique Radio Club (MSARC)

Meet information contact: layvinrad@twc.com

Antique Radio Club of Illinois (ARCI)

www.antique-radios.org

October 8 and December 10

American Legion Hall, Carol Stream, IL

Michigan Antique Radio Club (MARC)

www.michiganantiqueradio.org

Cincinnati Antique Radio Society (CARS)

Info. at oltubes@roadrunner.com or Bob Sands 513-858-1755

Dayton Antique Radio Club (SPARK)

Contact - Ed App 937-865-0982

Central Ohio Antique Radio Association (COARA)

Info. at <http://coara.org> for event schedule.

Pittsburg Antique Radio Society (PARS)

information at pittantiqueradios.org

AWA-Antique Wireless Association

www.antiquewireless.org

If the date on your mailing envelope for this issue of the Indiana Historical Radio Society Bulletin is 12/17 or earlier, it is time to renew your membership. Make your check payable to the *Indiana Historical Radio Society* in the amount of \$15.00 per year and send to: Don Yost, IHRS, 3814 E 400 N, Windfall, IN 46076. Include your current mailing address, if not on your check, and your email address, if you have one.

Renew your Indiana
Historical Radio
Society membership
NOW! (thanks)

the Old Man Says

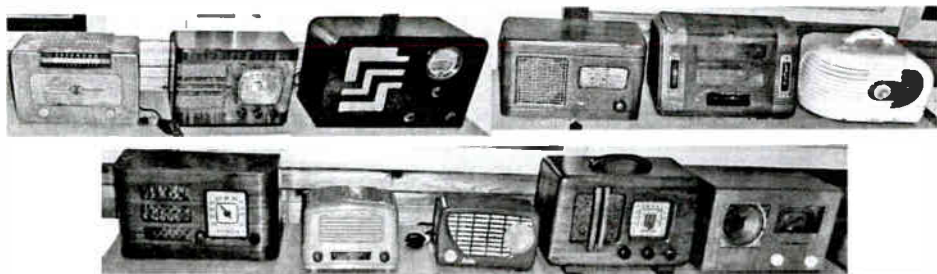


IHRS Cool Creek – 2017

The August 2017 "Cool Creek" summer meet turned out to be another successful meet this year with just about the same number of attendance as was enjoyed last year. This year's weather was so beautiful that all of the vendors decided to setup and sell outside. The IHRS received so many compliments concerning the swap meet and the Cool Creek facility that at the end of the show, we wasted no time in setting up and reserving the facility for the same

time next year. This year, we conducted a silent auction in order to sell the donated Paul Marciniak radio collection from nearby Noblesville, Indiana. About \$500 was raised from the auction and the much appreciated proceeds will help pay for future IHRS swap meets, awards, and the publication of the club's bulletin. A special thanks goes to John Goller for giving the IHRS heads up on the availability of this collection.

Michael Feldt, September 2017



Above - A sample of donated radios sold at the Cool Creek Meet.

Results of the 2017 Cool Creek Popular Vote Contest:

Category 1: 1930's Table Radio:

1937 Zenith 5S228 (Ken Lichtle) - **First Place**

1936 Crosley 6615 (Ken Lichtle)

1936 Zenith 4B131 (Ken Lichtle)

1934 Kadette 40 (Ed Dupart) - **Second Place**

1935 Philco 84 (Tom Williams)

Category 2: Open to all radio and radio related equipment.

1938 Racor Super Clipper (Michael Feldt) - **First Place**

1920s Home Brew Crystal Radio (Ed Dupart) - **Second Place**

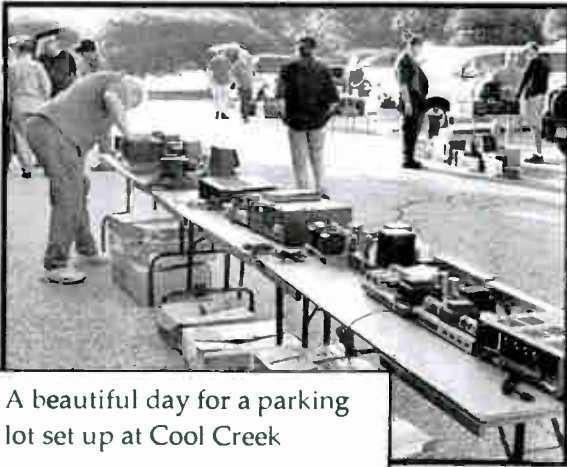
1930s RCA Victor Farm Radio (Tom Williams)

Summer Radio Activity!

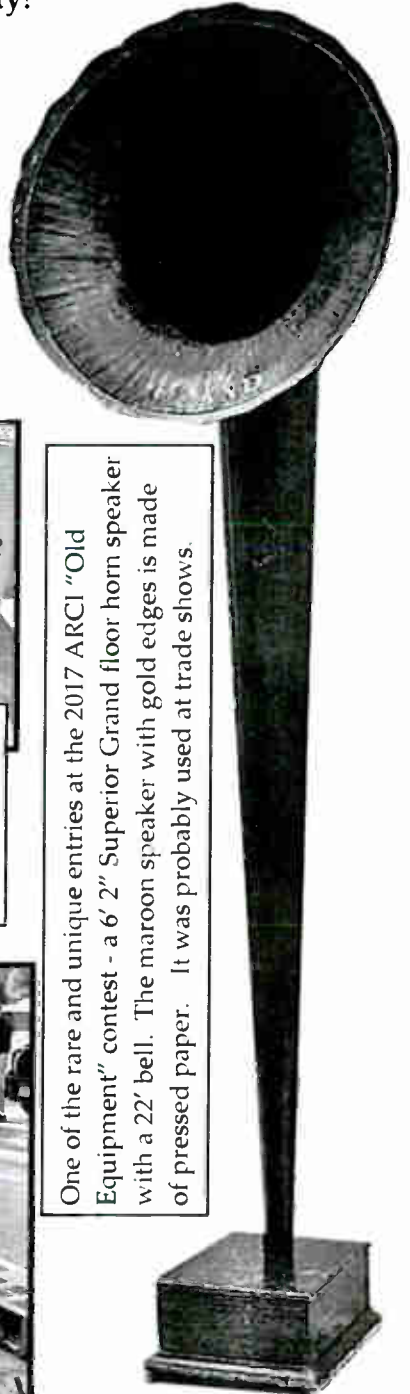
Ken Lichtle with his Cool Creek Popular Vote Contest entries.



IHRS member Bob Sands was awarded 2nd place at Radiofest for his Stewart Warner R123 entry.
(Bob won Best of Show for this same entry at the IHRS Spring Meet, Kokomo)

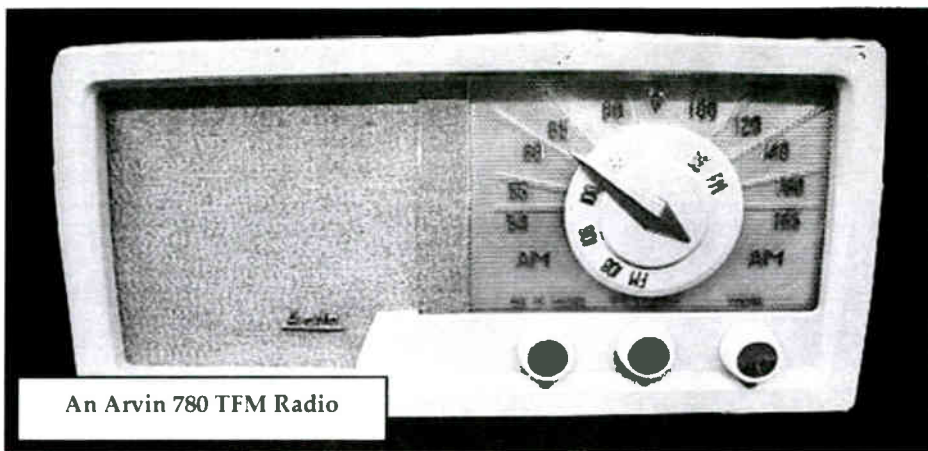


A beautiful day for a parking lot set up at Cool Creek



One of the rare and unique entries at the 2017 ARCI "Old Equipment" contest - a 6' 2" Superior Grand floor horn speaker with a 22" bell. The maroon speaker with gold edges is made of pressed paper. It was probably used at trade shows.

Arvin 780 TFM, by Ed Dupart



I recently acquired this nice Arvin of about 1953-54 vintage. It is a fairly high quality radio with a power transformer power supply and with FM.

Out of all my radios, I only had three tube radios from the 1950's, this Arvin, a Traveler from 1950 and a beautiful Star-Lite RN-7 red and black portable tube radio the size of a transistor radio that found a new owner before the contest. I tried to get him to enter the Star-Lite, but he wouldn't. So I would concentrate on the Arvin.

When I turned the Arvin on it was totally dead, but the pilot light did work. What I discovered was the primary side of the audio output transformer was open. I hooked up a test speaker and the FM worked fine, but the AM had

that familiar bad IF transformer crackle that sounded like lightning. Did I really want to try and resurrect the silver mica capacitors in the Arvin transformers? Not really, I was running out of time and I wanted to get this ready for the upcoming contest at the MARC Kalamazoo meet, which was going to happen in just a few days, so I was looking for a quicker way to get this radio up and running. The IF transformers looked like a Zenith version, smaller than the common IF of the 30's and 40's but bigger than the popular IF's of the 50's and up. There was a junk RCA sitting nearby with the modern type IF transformers and I looked at them and then I looked at the Arvin transformers and I wondered, would the modern IF transformers fit inside the Arvin IF can? One way to find out so I scav-

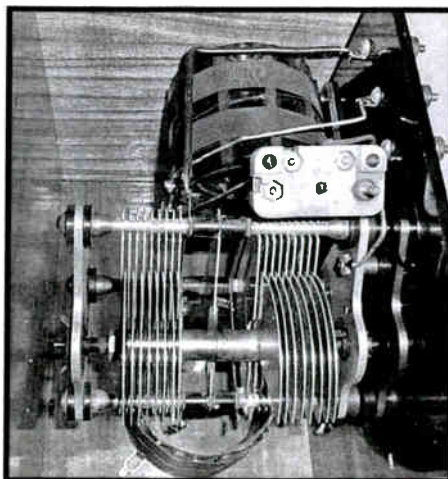
enged the modern small IF's out of an RCA and determined the terminals lined up exactly like the Arvin IF's, so I removed the Arvin's IF guts and inserted the entire modern IF transformer in the Arvin housing and it worked great! That was a fast fix for the IF problem!

What about the bad audio output transformer that was riveted in? My Dremel tool works great for grinding out small rivets in tight places and that's what I did. My used transformers all had a mounting spacing that was about ¼ inch greater, so I picked one and using my Dremel tool cleaned one of the mounting tabs down to shiny metal on both sides of the tab and put solder on both sides. I also sweat soldered the mounting bracket on the speaker. The transformer was bolted down with one screw and I sweat soldered the tab on the transformer to the mount-

ing bracket on the speaker and so now the transformer is securely mounted to the bracket on the speaker. All I had to do was hook up the wires and try it out and it played fine.

Even though the radio worked fine with the original capacitors, I decided to change them all, especially after determining the audio coupling capacitor was leaky, which was determined by measuring the control grid voltage on the 6V6 and found it to be slightly positive. It should be 0 to negative. Fortunately the filter capacitor was of the modern metal can type and it was perfect and there was no ripple hum. A touch up of the alignment and the radio is done electrically.

With a little cleaning it now sounds and looks fine and is ready for the contest. *Ed Dupart, July 2017*



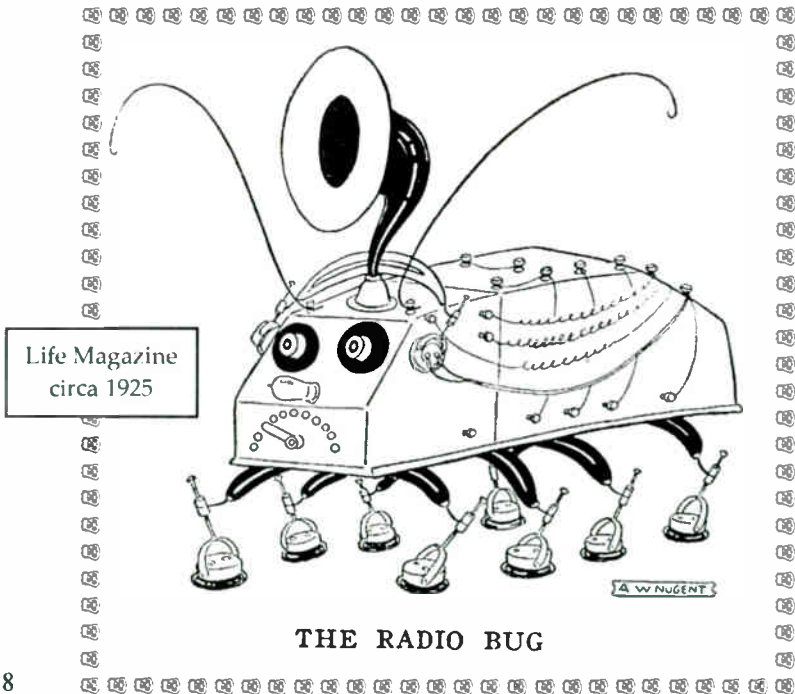
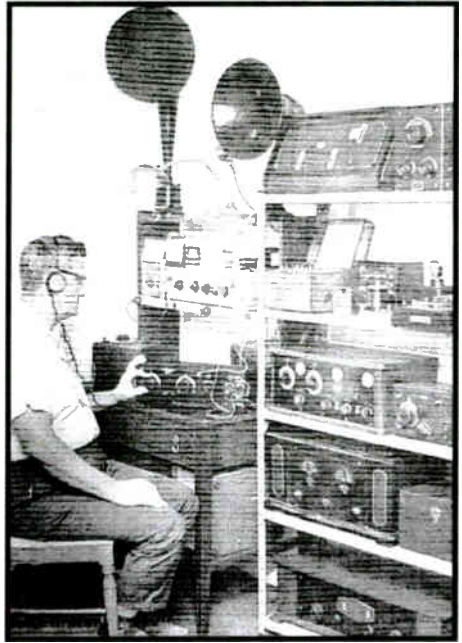
The DIY Crystal Receiver Ed Dupart entered (page 10) in the Cool Creek Popular Vote Contest is made from rescued parts of a 1925 AC Dayton XK-25 two dial TRF. The XK-25 is unique in that it used a two ganged variable capacitor, as shown in the picture. Ed cut the front panel from the original panel and used China-berry wood for the cabinet.

Editor

Del Barrett

At the Kokomo, 2017 IHRS Meet, while rummaging through vintage radio paper, Neal Baitcher discovered this Fort Wayne news paper picture of Del Barrett sitting at one of his work desks. In this late 1970's picture, Del is tuning a 1920's battery set. Del is one of the original 13 who organized the Indiana Historical Radio Society. Neal and I reminisced on how friendly and helpful Del was to those of us new to the repair and restoration of vintage radio. Using his cell phone, Neal snapped this pic and emailed it to me . Considering it is a picture of a news print picture, it turned out pretty good! Thanks Neal.

Fred Prohl





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Responsibilities

Activities, business,
 administration, & publicity

Sites and dates of meets

Dues, financial, and address
 change. Please notify
immediately of change of address.

News articles, radio ads, photos
 for Bulletin publication
 Maintain indianahistoricalradio.org

Donations & scrapbook material

Bulletin Deadlines: News, Articles & Radio Ads, 2/15, 5/15, 8/15, 11/15

IHRS Web site address: www.indianahistoricalradio.org

The INDIANA HISTORICAL RADIO SOCIETY is a non-profit organization founded in 1971. Annual membership dues of \$15.00 includes the quarterly IHRS "BULLETIN." Radio-Ads are free to all members. Please include an S.A.S.E. when requesting information. Send applications for membership and renewals to Don Yost, our treasurer as noted above.

The BULLETIN

**A publication of the Indiana Historical Radio Society
 Forty-six years of documenting early radio.**



Michael Feldt's prize winning Leutz C-7 at the ARCI's 2017 Radiofest "Old Equipment" contest. Mike was awarded the Dr. & Mrs. Ralph Muchow Best of Show Award as well as the popular vote for his entry. (See page 12 for details of Mike's contest entry.