

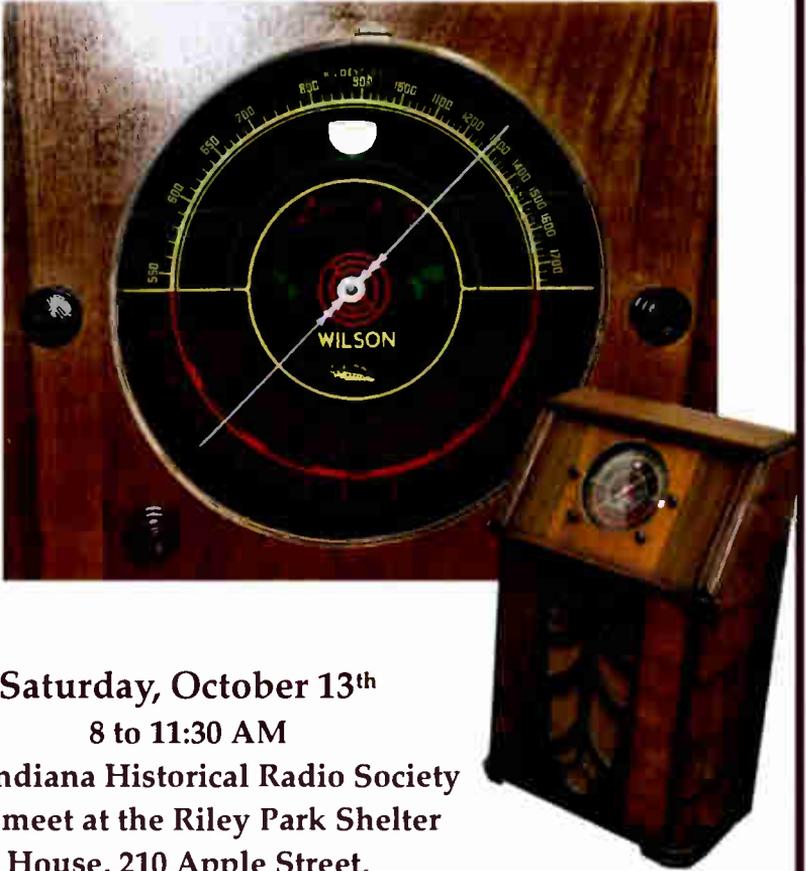
The
Indiana
Historical
Radio Society

BULLETIN

Volume 47

Fall 2018

Number 3



Saturday, October 13th

8 to 11:30 AM

**The Indiana Historical Radio Society
will meet at the Riley Park Shelter
House, 210 Apple Street,
Greenfield, Indiana,
for a Fall 2018 Vintage Radio Meet.**

The BULLETIN

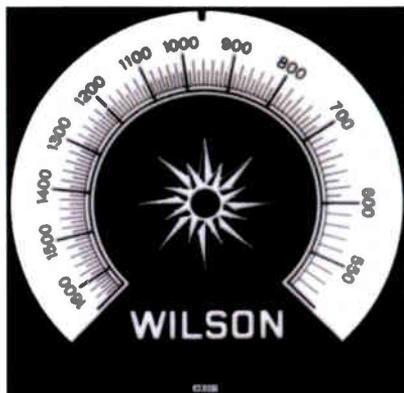
A PUBLICATION OF THE INDIANA HISTORICAL RADIO SOCIETY.
CELEBRATING FORTY-SEVEN YEARS OF DOCUMENTING EARLY RADIO

The Indiana Historical Radio Society Bulletin

Fall 2018

On the Bulletin covers :

Wilson Radio, Alexandria, Indiana, is displayed on the covers of this issue of the Bulletin. Michael Feldt entered his display of Wilson radios in the 2018 ARCI Radiofest Contest of vintage radio and won the Dr. and Mrs. Ralph Muchow "Best of Show Award". Congratulations Mike!



In this issue:

On *page 3* - We look forward to the Indiana Historical Radio Society "Fall Foliage" Meet on October 13 at the Riley Park Shelter in Greenfield. If you are new to our Vintage Radio meets, be there early. Though the meet officially starts at 8AM there is considerable activity during the 7AM set up period.

Page 4 - Mike Feldt describes the Indiana Made "Tom Thumb" arial.

Page 8 "The Metal Radio and Safety". Ed Dupart writes about his restoration of a Kent radio with emphasis on the dangers of shock with metal cased radios.

On *Page 14* Ed adds to his 'working safely' with electronic equipment and the importance of using an "Isolation Transformer".

Pages 16 - The 2018 Cool Creek Meet activity is shown with pictures contributed by Ed Dupart and text from Michael Feldt.

Needed! An IHRS Vintage Radio Contest Chairman.

With the retirement of Dr. Ed Taylor, our longtime contest chairman, the IHRS is in need of a member to manage the Old Equipment Contest at our meets.

Three of the IHRS meets offer a "Popular Vote" contest. The Spring Meet is a contest judged by a team of IHRS members.

The contest chairman provides the contest guidelines, judging sheet, ribbons and supervision of set up and operation of the contest.

Interested? Contact an IHRS Officer.

IHRS 2018 Fall Foliage Meet

On Saturday, October 13, 2018

the Indiana Historical Radio Society and the Hoosier Antique Phonograph Society will meet at the Riley Park Shelter House, 210 Apple Street, 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 \$10.00 for current members of the Indiana Historical Radio Society and \$15.00 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

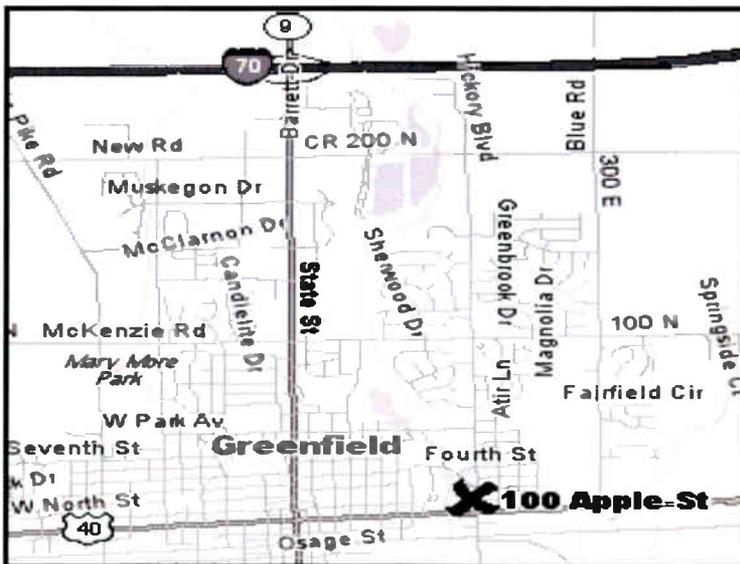
9:00 AM Popular Vote Contest entries in place

Contest categories— 1. Non-Wood Cabinet Tube Radios

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

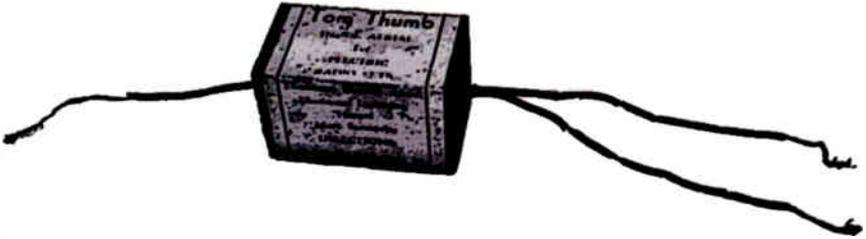


"Tom Thumb" - Inside Aerial - by Michael Feldt

About three years ago I was given this rather interesting little radio device called the Tom Thumb. It's an inside aerial and a noise reducer for electric radio sets and it was originally found connected to the antenna and ground posts of an Atwater Kent model 60 console radio. The way

but at the cost of seriously reducing the AM signal so the claim made by this device's manufacturer is only partially true.

This device was manufactured by the S - L Radio Laboratories of Kennard, Indiana, a small railroad town of less than 500 located SW of New Castle, Indiana. I'm



it's supposed to be hooked up is the red wire connects to the radio's antenna post, the green wire connects to the radio's ground post, and the black wire connects to earth by way of a water pipe or a steam radiator. With an ohm meter, I was able to determine that the red wire is directly connected to the black wire and the green wire doesn't seem to be connected to anything. The only thing this device achieves is grounding the incoming RF signal, thus, reducing the AM static

guessing the letters S and L represented for the names of the two people who founded and ran the company. This device is ultra simple in construction comprising of a hollowed out wooden block with three wires held in place with red colored hard wax. The only thing hi tech about this device is the professionally printed label that wraps around the wooden block. The whole device is so simple that it could have been made in a small garage, basement, or even on a kitchen

Tom Thumb

INSIDE AERIAL

For

ELECTRIC

RADIO SETS

Eliminates Outside Aerial

Eliminates Lightning

Hazard

More Sensitivity

DIRECTIONS

Attach Red wire to Aerial post of set. Attach Green wire to Ground post of set. Hook Black wire to good ground, such as water pipe, radiator, etc.

S - L Radio

Laboratories

Kennard,

Indiana

table. It was probably sold through some radio stores in and around the New Castle area and there's a chance that it could have been advertised and sold through a few local newspapers.

In my opinion, this was nothing more than a cheap gimmick which was probably so cheap that once a buyer realized that it was nothing more than a gimmick, it wasn't worth the effort in seeking a refund.

Apparently whoever originally owned the Atwater Kent 60 console, in which this device came out of, must not have caught on to the ripoff and just left it in place for the entire time that the set was in regular use.

Michael Feldt, September 2018

We Remember

Indiana Historical Radio Society member Paul Gregg passed on July 30, 2018.

Paul and his wife Maryln were active in many areas of the IHRS with Paul leading the organization as President during 1986 and 1987.

Paul was a veteran of the U.S. Air Force. He graduated from Carmel High School in 1945. He was also a graduate of Purdue University, with a degree in electrical engineering. He retired from Ransburg Corporation and was an avid ham radio operator.

Paul was 90 years old.

The Metal Radio and Safety - by Edward Dupart



Kent Metal Case Receiver
(Arvin model 402A)

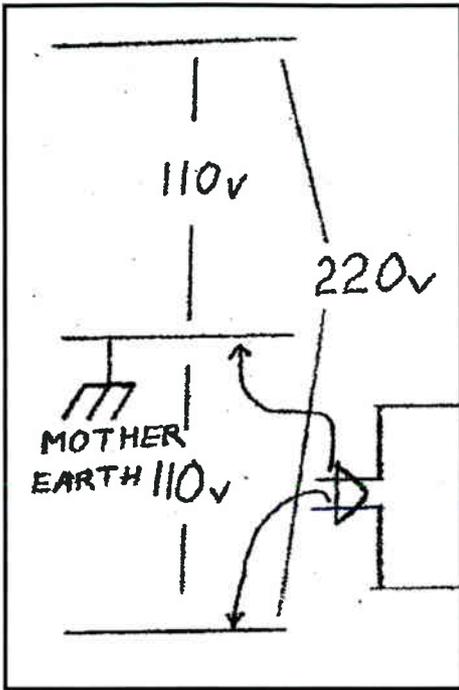
I recently acquired a nasty looking Arvin/Kent 402A radio of 1939-40 vintage that has only 3 tubes. Radios with few tubes and metal radios fascinate me so I couldn't resist picking this one up. How I restored this radio will come later; right now I want to discuss the safety aspect of the metal radio.

Imagine yourself with your prized little metal radio that fits so nicely in your kitchen that worked so nicely, but now it broke down. You take it to the local radio/TV repair shop and you hand it to the man behind the counter and he immediately pulls out his wire cutters and chops off the cord and hands it back to you. Are you stunned or what? You can't believe he actually did that! He explains that metal radios are shock hazards and they have killed people and that he refuses to fix them.

Sadly, you take your little radio back home with you, not sure if you should take it to another repairman or buy a new radio, but not a metal one.

For years I lived in East Central Indiana teaching electronics, computers, technology and math and being involved in the electronics industry as a technician and sometimes as an advisor, but I also had an advisory board. The advisory board would keep me connected with the latest developments in electronics and what should be taught in the electronics program. One of my advisors was Harold from Knightstown, Indiana and he had been a radio/TV serviceman for years and he hated metal radios and he would chop off the cords of metal radios when someone brought one to him to fix, so the above story is a true one. No one really got mad at him or sued him; they simply took his word for it that they are dangerous little radios or took it to someone else to fix it.

Now a little review of how the power comes into the house and how it makes these little radios dangerous. I will use 110 volts and 220 volts realizing different figures have been and are used, but 110 and 220 are easy numbers to work with and most people are familiar with them. 220 comes into



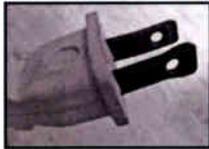
touches the outside metal of the lamp, then there is a good chance that 110 volts will pass from the floor through the person to the lamp. Water fixtures in bathrooms and kitchens make a good ground connection as well as water in a bathtub. So any electrical appliance that is wired or plugged in such way to make the outside cabinet or metal pieces hot with respect to ground are potential electrical hazards. I remember back in the 1980's a girl was electrocuted in Indianapolis when she was in the bathroom and touched a metal lamp and the faucet at the same time. Such a tragic ending to a young life. TV's with metal cabinets were a shock hazard and I would warn people who had one and were using it in a basement or a house with a concrete floor.

the house with a middle leg or common ground that is literally connected to mother earth. So there are 110 volts between one leg, hot sides, and ground and 110 volts between the other leg and mother earth. See the included diagram. This is where basements and concrete floors can become a real electrical hazard. If a metal lamp is wired where the hot side of the AC 110 volt line is connected to the metal lamp, then there is the potential for 110 volts to be between the outside metal of the lamp and the floor which is connected to mother earth. This means if someone is in his or her bare feet and

Arvin and other radio companies were aware of this hot chassis problem and took steps to minimize the shock hazard concerning their metal radios. They used a polarized cord on their radios where one prong is wider than the other prong so it would go in only one way in the wall outlet. Even back in the 1930's 2 prong outlets without the round third safety ground was polarized where one opening was wider than the other was. The wider side is the ground or neutral side and the shorter side

The Metal Radio and Safety, continued

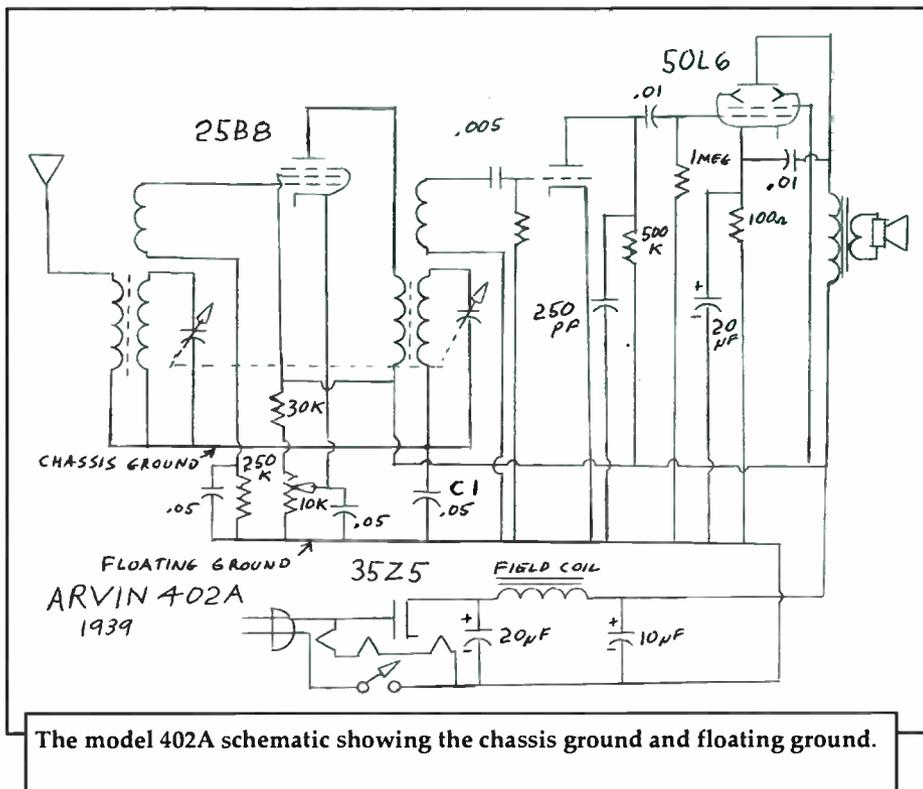
is the hot side. Then the radio companies used a floating ground in their radios, which prevented the AC line from being directly connected to the metal cabinet. Some of you are probably thinking, wait a minute, the tuning capacitor or variable capacitor is mounted directly to the metal chassis, so how is it connected to ground or the negative side of the power supply? If you look carefully in the schematic you will see a .05 mfd capacitor going from the floating ground to the metal chassis. Reactance wise, it will look like a short to radio frequencies, but an open circuit to the 60 Hz line voltage/current. With the polarized plug and the floating ground, these radios were relatively safe. Not so with the TV's where I could measure 110 volts between the cabinet of a 1959 Muntz TV and ground. Reversing the plug cured the problem and I would instruct owners of metal TV's to reverse the plug if they could feel a little tingling, buzz or roughness when they touched the metal cabinet.



Another real shock hazard I ran into was at our house in Detroit where we could get really shocked bad if we touched the refrigerator and the garbage disposal switch plate at the same time. The

switch plate was grounded and the refrigerator was hot. I proved it one day when I took a 110-volt bulb and connected it between the switch plate and the refrigerator handle and it lit up at normal brilliance. Reversing the refrigerator plug solved the problem.

Now you are probably wondering why all the concern over the metal radios and why did Harold hate them so? One reason may be about the capacitors. The capacitors back then were not of the high quality of today's capacitors and the paper capacitors of yesteryear tended to become leaky and behave like a resistor or actually short out. If the .05 mfd I mentioned earlier develops leakage or shorts out, then that would make the chassis/cabinet a potentially hot chassis/cabinet and thus a shock hazard. The next problem occurs when the power cord goes bad and gets replaced with a non-polarized plug. If the radio is plugged in wrong, you now will have a hot chassis/cabinet. The next issue is where the building wiring is wrong and the ground side of the outlet is now the hot side and I've seen this before. I used to work on, do warranty work and install new microwave ovens. The first digital/computer-operated microwave ovens were very static and voltage sensitive and if the case was not grounded



The model 402A schematic showing the chassis ground and floating ground.

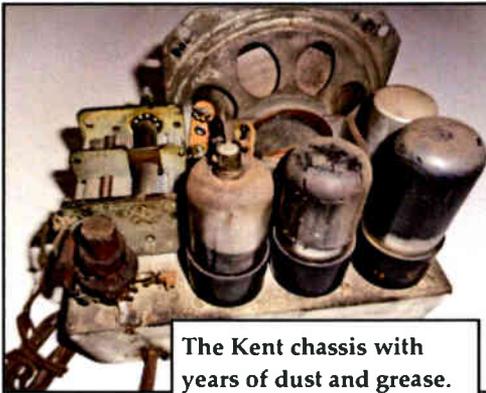
properly, the digital/computer board would go bad. One customer had problems with his microwave oven going bad frequently and what I discovered was that his outlets were wired backwards. Once the outlets were wired right, his oven problems disappeared. So, a metal cased radio could become hot if the building is not wired right. I tried to convince Harold that if the capacitor running from the chassis to the AC line is good and the radio has a polarized plug, then the radio is relatively safe. Nope, he wouldn't have any of that! He continued

chopping the cords off. As a side note, I did fix a couple of his customer's metal radios and I made sure the capacitors were good and it had a polarized plug.

So what did I do to resurrect this little Arvin/Kent radio? Obviously I replaced all the capacitors and I made sure the .05 mfd capacitor that goes from the chassis to the floating ground was a high quality capacitor. This radio had been used in a kitchen and had a lot of grease accumulated on the insides of it. The outside of it was rusty with missing paint but not grease coated, but I figure the lady

of the house kept it clean.

The first thing I did was take the chassis out of the cabinet and inspect it. The only capacitor that had been changed was the filter capacitor; all the others were original, including the resistors. The 35L6 took the place of the 50L6, which the radio originally came with and a dropping resistor was added to suck up the extra 15 volts when using the 35L6. More on the tube switch later. The speaker cone was loose and the variable capacitor was really full



The Kent chassis with years of dust and grease.

of grease and the chassis was coated with grease. 409 cleaned up the chassis nicely and it cleaned up the variable capacitor after I removed it and soaked in 409. I used a toothbrush, an old one, to clean between the plates and all over that variable capacitor. The toothbrush worked great on the chassis too. The variable capacitor was rinsed with plain

water and left out in the sun to dry, after I shook it like a dog shakes itself after getting out of the lake and now it looks like



If this .05 mfd capacitor fails as a short, the chassis and floating ground are common—a shock hazard!

new. The tubes checked good and with new capacitors I plugged it in and it didn't work. This is rare but a new .01 mfd ceramic capacitor was shorted. Ceramic capacitors are normally very rugged and reliable, so this surprised me. I checked the other new ceramic capacitors of the same brand and type and they all checked good. So I replaced the bad NOS capacitor and the radio works. The speaker was re-glued and the cone was positioned so the voice coil didn't rub and now it sounds pretty good.

A paint stripper was used to remove all the paint from outside the cabinet, but before that I removed the bevel with a thin

scraper. Once the paint was gone, I took sandpaper and sanded all the rusty spots. A Dremmel tool with a wire brush worked great at getting rid of paint that remained in tight spots in the grill area and in creases. Be careful with the rotary wire brushes because at high speeds they like to throw out wire and can be a potential eye hazard, so I recommend wearing safety glasses when using rotary wire brushes. Paint thinner worked great at cleaning up the cabinet and made it ready for primer paint.

I stuffed an old plastic bag inside the cabinet to protect the paper work from paint. Then I set the small cabinet on top of a paint can so I could reach all side. I had a red filling primer. A filler primer is capable of filling in small dents and scratches, which this radio didn't have, just the natural little lines from being pressed out at the factory. I do a real thin coat at first what painters call a tack coat. This allows the next coat to really stick

to the surface and is less prone to running. The primer dries fast so it didn't take long to build up a few



The Kent with primer/filler

coats and it looks pretty good red.

A decision had to be made on what color I was going to paint this radio. I have seen them done in wild candy apple colors, regular automotive colors, original colors and chrome plated. I chose to keep



The restored Kent





Stripper, primer, and finish for the Kent

it original. After using steel wool on the yellowed cigarette stained paint I saw a bright ivory color that I couldn't find at Walmart, so I went to the auto store. There I found a GM color that was almost a perfect match so I bought it, not cheap, but it worked out very well. Using the same technique of starting off with a tack coat made the following coats go on better and I didn't have any runs. Having painted lots of cars helped with this project. The GM paint dried very fast so it didn't take long to apply about 5 coats and so now the cabinet really looks great. My wife had a double-backed tape and that's what I used to put the bezel back on with. I did use the paint stripper on the bezel to bring out the highlights like the numbers and lines, but left the rest of it dark. A red magic marker was used on the KENT letters, to replace the original red that was removed by the paint stripper. The cabinet now looks like new.

This is a TRF radio and is not a high performing radio. It picks up the local station very well and other regional stations come in pretty good at the upper end of the dial. Stations at the lower end of the dial didn't come in as well, but for three tubes, not bad. It's a cute little radio and I can see why it would have been popular in the kitchen and maybe the bedroom.

My research tells me this radio was built in 1939 to maybe 1940, so it is a pre-war radio. When I lived near New Castle, Indiana I would service radios and TV's and about anything else that didn't work and there were times I would work with Art, an old time radio TV repairman. He had been at it since about the beginning of radio or so it seemed to me. He was full of stories and told me about the tube shortages during WWII and how he got around the shortages to keep a radio going for his customer. Earlier I mentioned the 35L6 replacing the original 50L6 and now I want to explain a possible reason why. If a repairman during WWII didn't have any 50L6's, but had a lot of 35L6's then I could see why he replaced the 50L6 with the 35L6 and added the dropping resistor.

Ed Dupart, July 2018

2018—VINTAGE RADIO ACTIVITY—2018

Indiana Historical Radio Society—Swap Meet

indianahistoricalradio.org

October 13, Riley Park Community Center, Greenfield, IN

Antique Radio Club of Illinois

antique-radios.org

Swap Meets: October 7 and December 9

American Legion Hall, Carol Stream, Illinois

Michigan Antique Radio Club—Vintage Electronics Expo

michiganantiqueradio.org

Central Ohio Antique Radio Association

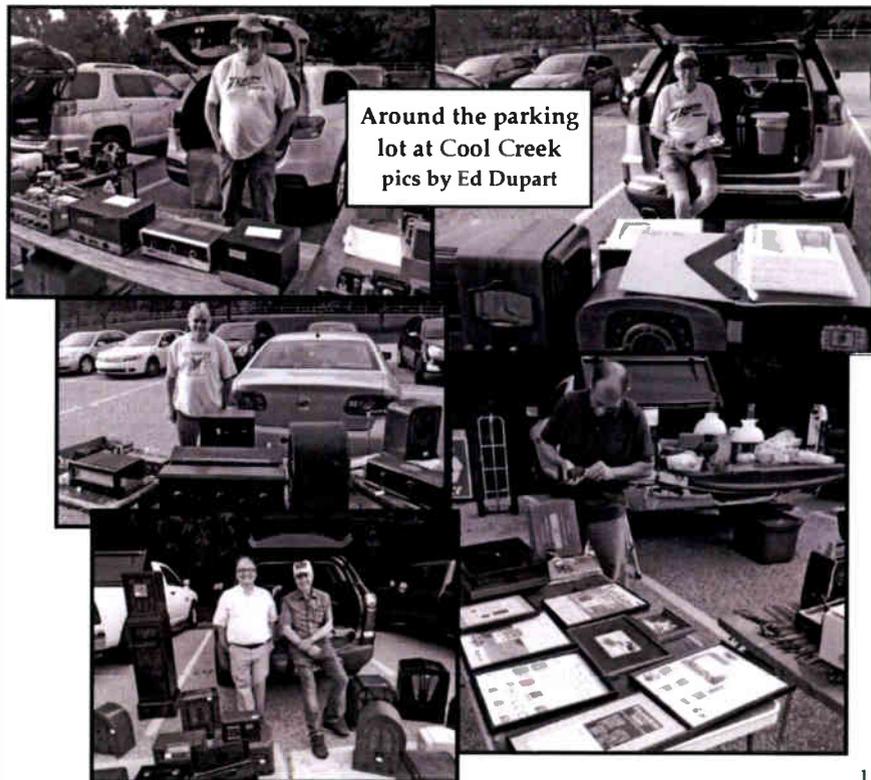
coara.org

Pittsburg Antique Radio Society

pittantiqueradios.org

AWA Antique Wireless Association

www.antiquewireless.org



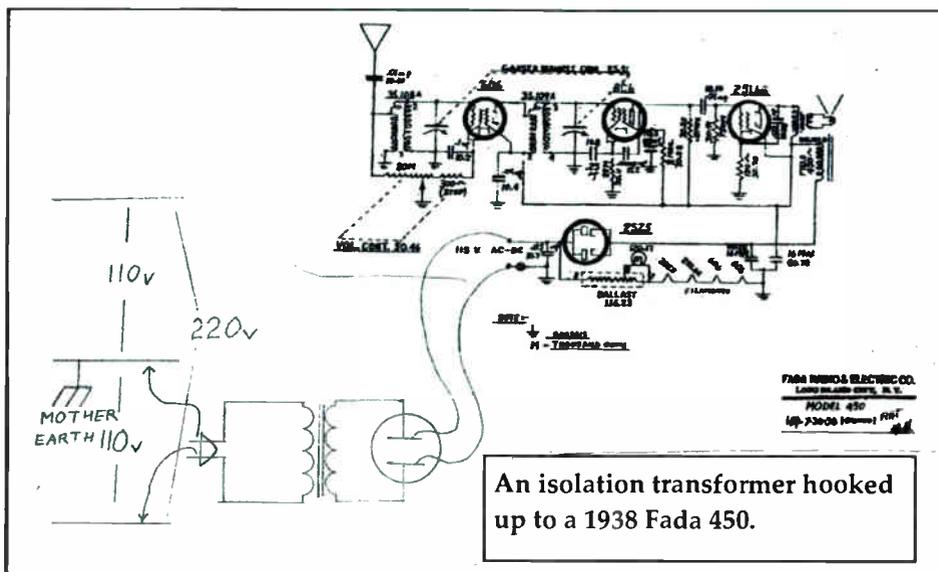
The Isolation Transformer—by Ed Dupart

For anyone who will be working on AC/DC equipment, especially radios, a must have item is an isolation transformer. The reason for this is the inherent shock hazard that comes with working on AC/DC equipment, which I have already discussed. Most test equipment is grounded and if the radio chassis is hot then sparks will fly when the test equipment ground lead is attached to the radio and in most cases it is an attempt to attach it. I remember one technician decided not to use an isolation transformer and when he tried to attach the ground lead to the radio the sparks flew and the fuse blew. The look on his face was priceless. A number of different types of isolation transformers are available, the one I use is a B&K TR-110 and has two non-isolated outlets and two isolated outlets and was/is a popular unit in shops and schools. My backup is a simple one to one transformer with one outlet. Isolation transformers can be found at radio/ham swap meets and on EBAY and they can be bought new.

How does an isolation transformer work? The transformer has two windings, a primary that is plugged into the wall outlet and the secondary where the radio is plugged in. There is no physical connection between the primary

and the secondary and so there is no physical connection to the hot side or the neutral/ground side of the power line, hence, isolation. The enclosed diagram shows an isolation transformer hooked up to a 1938 Fada 450, a cute little TRF radio that works surprisingly well. One side of the AC cord goes directly to the metal chassis and the original cord was not polarized. This is not unusual when the cabinet is plastic and the Fada 450 used a Bakelite cabinet, but if you were to hook up test equipment to this cute little radio you would have a 50/50 chance of the chassis being hot. So using an isolation transformer with this radio eliminates a lot of headaches.

Somebody out there is probably wondering how do I work on an AC/DC radio when I don't have an isolation transformer? Most technicians/engineers will say, "Don't work on it until you get an isolation transformer." If you absolutely have to work on the radio without an isolation transformer then measure the voltage or hook a 110-volt light bulb between the chassis of the radio and the ground of your test equipment. If the meter says zero volts and the bulb doesn't light, then it should be OK to work on the radio. If the AC/DC radio or more commonly an AC/DC TV that has a voltage doubler



An isolation transformer hooked up to a 1938 Fada 450.

circuit, then an isolation transformer is a necessity. Diodes in the voltage doubler circuit make such a nice popping noise and they smell so good when they go up in flames.

Radios and TV's with a power transformer may already be isolated, if the secondary is not connected to the primary in any way, shape or form. Again, use a meter or a 110-volt light bulb to make sure there is no voltage between the chassis of the radio or TV in question and the test equipment ground. So power transformer-

powered radios and TV's may not need an isolation transformer, but again check for voltage between the chassis and test equipment ground. Also noise-reducing capacitors that are commonly placed from the AC line to the chassis and would destroy the natural isolation of the radio or TV's power transformer.

Not only does the isolation transformer protect your radio, TV and your test equipment, but it also protects you!

Ed Dupart, July 2018

Don't miss your opportunity to add the "Quality Queen" battery radio to your collection of Indiana Radio. Check the RadioAds!



Popular Vote Contest—Cool Creek, 2018

Picture credit—Edward Dupart



1934 Zenith 706
Entered by Ken Lichtle



Arvin 402A (Kent)
Ed Dupart
See page 6 of this Bulletin



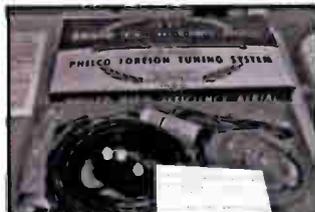
Philco Battery Set
Joe Farkas



1942 Truetone
"Commentator" (Candy Cane)
Entered by Russell Starkey



1942 Truetone
Entered by Ken Lichtle



1937 Philco Aerial
Tom Adelsperger



Silvertone Farm
Battery Radio
Fred Prohl



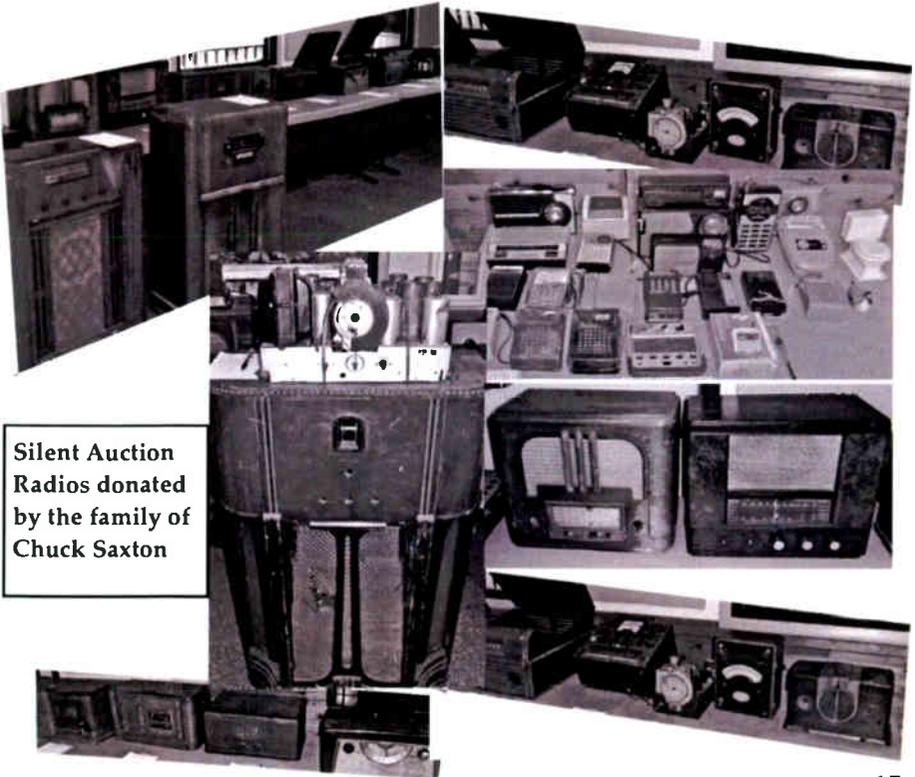
1937 Philco
Entered by Michael Feldt

Donation Silent Auction – Cool Creek

This year we held another successful swap meet at the Cool Creek Park Nature Center which is located just north of Carmel, Indiana. There were slightly fewer sellers there this year than last year despite the beautiful weather that we had. We held another donation auction which, this time, comprised of contents from Chuck Saxton's radio collection. Chuck passed away back in September of 2015 and his daughter Charlene, along with her husband Bill Underwood, were gracious enough to donate and help move the last contents of Chuck's radio collection. The items donated were mostly parts sets and sets that needed restoration but they still brought in a total of \$263 in silent bids. The IHRS wishes to thank Charlene and Bill Underwood for all they did in making the donation auction possible. *Michael Feldt*



Charlene and Bill Underwood



Silent Auction
Radios donated
by the family of
Chuck Saxton



Submit your "FREE TO CURRENT MEMBER" RadioAd by the 15th of February, May, August, or November in time for the Bulletin issue that follows. Unless otherwise requested, RadioAds will run two consecutive issues.

For Sale: Phillips Sagitta model 363-A, missing one tone push button, plays, \$30.00, speaker from Philco 95, \$15.00, eye tube 6G5 \$5.00, used tubes tested good in playing radio \$2.00 each 6V6Gt, 224A, 5U4, 50L6, 227, 6F6GT, 80,. Used tubes one dollar each 12BA⁶, 12BE6, 12AV6, 35C5, 50C5, 12SK7, 35L6, 50L6 Contact James S. Looney at mowman7777@yahoo.com, 276-531-8677.

For Sale: Radiola 51, 1930 doored console, condition very good, \$150.00; Radiola 60, 1927, casket style box, refinished, works, \$70.00; Crolsey, ~ 1937, small table set, not working, \$50.00; Atwater Kent, 1929, model 60, console, refinished—works, \$150.00; Crosley, Buddy Boy, case only, \$35.00; Queen Quality Battery set, 1925, casket style box, nice with 01A tubes, Evansville, IN, \$75.00; Courier 652, ~ 1932, doored console, very good condition, not working, \$150.00; Radiola 66, Console, very good condition, \$150.00. Contact Richard Grogg via e-mail dickpamg@gmail.com; phone 618-554-3506 .

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

\$15.00

the Old Man Says





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Indiana Historical Radio Society
Historical Documentation

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-seven years of documenting early radio.**



IHRS member, Michael Feldt, won the Dr. and Mrs. Ralph Muchow “Best Of Show” award at the 2018 ARCI “RadioFest” in Chicago. His entry was “Wilson Radio Alexandria, Indiana”