VOL 52
WINTER
2023
No.
4

# The Indiana Historical Radio Society BULLETIN

IN THIS ISSUE:

APEX

SUNCHARGER

PORTABLE BENCH

RICHMOND MEET

The Bulletin
A publication of the Indiana Historical Radio Society
Fifty-two years of documenting early radio

# The Indiana Historical Radio Society

The INDIANA HISTORICAL RADIO SOCIETY is a non-profit organization founded in 1971. Annual membership dues of $15.00 includes the quarterly IHRS BULLETIN. Radioads are free to all members.

Please include an SASE when ordering information. Send applications for memberships to Treasurer Don Yost.

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Indiana Historical Radio Society Historical Documentation

**DEADLINE FOR BULLETIN SUBMISSIONS: 2/15, 5/15, 8/15 AND 11/15**

**Visit our website at: www.indianahistoricalradio.org**

THE BULLETIN
Vol 52 • No. 4 • Winter 2023

Indiana Historical Radio Society

# IN THIS ISSUE



Let me begin with a belated Merry Christmas and Happy New Year to the membership of the IHRS. Usually, our winter "Bulletin" is published before Christmas. This year, circumstances with my family has caused this delay, for which I apologize. My father, Ray Whitaker, age 91 and a half, passed away on December 14. He was in hospice for the last twelve days of his life. I started staying with him, due to his sudden onset of health problems, on November 9.

Dad never was very supportive of my hobby, but was the cause of it, regardless. One of his best friends from the early 1970s through the early 1980s was Larry Neville. Larry had a side business—he sold used furniture and other household goods. Most house contents that he bought at auction, back in the 70s, included an antique radio or two. Dad, my brother Alan and I were over there fairly frequently. I always was checking out the antique radios. One that I wanted, that Dad never bought for me ("You'll burn the house down with that thing"), was a Zenith "Walton." Larry wanted the princely sum of $8 for it, and it went for months before it sold! The little building still stands, although it's quite a bit worse for wear. Larry passed in the 1990s.

The location of the meeting has been changed this year—the Johnson County Fairgrounds. The old location, the La Quinta Inn, has become cost-prohibitive. This also happened several years ago, when the management/ownership changed at the then Holiday Inn. I attempted to book the Hornet Park Community Center, which is where the club went after the Holiday Inn problems. Unfortunately for us, they do not open until 10am on Saturdays. Heritage Hall at the Johnson County Fairgrounds was available, for very little cost. It has been a nice meeting location for us in the past.

Speaking of meetings, special thanks are going out to the Cincinnati Antique Radio Society (CARS) and the Society for the Preservation of Antique Radio Knowledge (SPARK) for their cooperation and help in making our third Richmond meeting a resounding success. The donation auction was the highlight of the meet, and we split the proceeds of (fill in donation auction results here) between the three clubs. Lots of really good items were sold, including the few remaining items left from the now defunct IHRS Museum in Ligonier. Thanks also go to Don Yost, Mike Feldt and John Raskauskas for going to Ligonier to pick up these items. Contest results from Richmond are discussed elsewhere in this issue.

So, I will see you all on February 24, at Heritage Hall, located on the Johnson County Fairgrounds in Franklin. Contest categories and other meet particulars will be discussed elsewhere in this, the last regularly printed "Bulletin."

# Notes From The President's Desk

by Alex Whitaker

# NOTICE

As noted last year, printing costs have been steadily rising.
As a result, we have made the decision that future bulletins will be available to club members online at indianahistoricalradio.com

THIS EDITION WILL BE THE LAST PRINT BULLETIN FOR THE GENERAL MEMBERSHIP.

Members who still wish to have a print copy may contact us at batterymaker@gmail.com

INDIANA HISTORICAL RADIO SOCIETY

# SATURDAY, FEB 24
# HERITAGE HALL
## JOHNSON COUNTY FAIRGROUNDS
## FRANKLIN, INDIANA

The Johnson County Fairgrounds is northwest of the US31 and SR144 intersection, Franklin, IN. (250 Fairgrounds Street)


FREE ADMISSION
Seller space $15 per table.

CONTESTS:

TUBE RADIOS
ALL MAKES/MODELS

TRANSISTOR RADIOS
ALL MAKES/MODELS

**7 to Noon**

# WINTERMEET '24

# RESTORATION Corner

When I was a kid, I picked up a Kennedy 20 without a cabinet--which was OK by me, all I wanted was the chassis. It had an original copper-painted chassis that looked like new. I just liked looking at it, especially at night. I also liked looking at the tubes glow and I could imagine I could see the electrons bouncing from the cathode and winding their way to the plate. It didn't take much to fix the radio and it was a good performer. One night I picked up New Mexico; as I was in Detroit, that was quite a distance for a TRF with three RF stages. Over time, the set disappeared, probably through a trade of some kind.

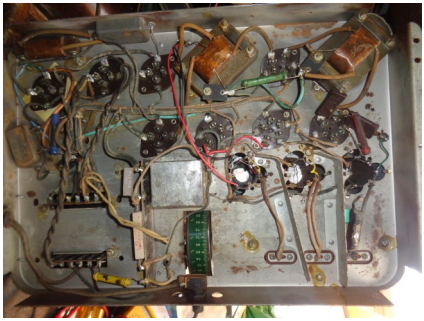

Recently, a friend of mine needed to downsize and any floor model radios with lots of issues got scrapped. He had an Apex 46 with a missing leg, so it was on the chopping block. It had a nice original brown chassis that was really clean, so I saved the chassis, speaker, knobs, escutcheon and the grill cloth. In my mind, this would replace the Kennedy 20 from my childhood.

When I got it home and I looked it over, I found the chassis to be rust free. I cleaned everything and the original brown paint looked great.

The bottom of the chassis had a metal plate screwed to it and was corrosion free. Only four screws held it in place and I found the chassis underside to be remarkably clean. I did see one paper capacitor had been chewed on and it tested as shorted. Another paper capacitor was found to be not just leaky, but down right shorted and it was in the B+ supplying the screen grids. The filter capacitors checked good and that didn't surprise me. The filters in a lot of early AC radios held up rather well. I found this to be true of Radiola 17's and 18's. There was a metal box with three bad capacitors inside, so I dug out the tar and placed new capacitors inside the box. This kept the chassis looking original and neat.

## Who Ate My Wire?

by Ed Dupart

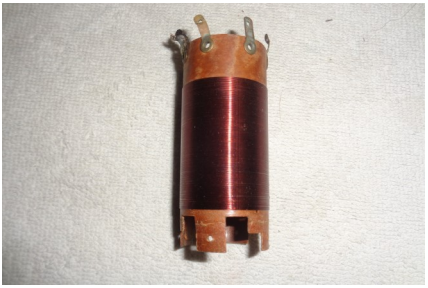


The wire-wound voltage divider resistor was obviously bad as its little wires were sticking out in a couple of places. After removing all the wire from the resistor's form, new modern wire wound resistors were soldered onto the existing terminals. All the other resistors were OK including the volume control.

All the tubes checked good. It was time to plug it in and see what happened. The audio stages worked and gave me a nice buzzing sound when I touched the first audio stage's control grid. There wasn't any plate voltage on the RF stages. B+ was at the RF coils, but none on the plate, and that indicated a bad coil. Removing them was a pain, but had to be done.

I made a roadmap showing where all the wires went to the coils and I only did one coil at a time. After removing the 1st RF coil, I found the wire going from the top of the coil down to the bottom terminal was missing.

This would have been a wire that originally ran down the inside of the coil. I found this odd and I figured it had to be the result of a varmint of some kind--a mouse readily came to mind. I've seen lots of roach, mouse and rodent damage over the decades. They will cut a wire in half but they don't eat the whole wire. As mentioned earlier, the underneath of the chassis was clean and there weren't any bits and pieces of wire or anything else. Whatever it was ate the entire wire--at least it didn't eat the coil. I added a replacement wire, reassembled the coil. Plate voltage appeared on the first RF tube. Whatever ate that wire either must have been really hungry or wanted some unusual roughage. I bet its poop was conductive.



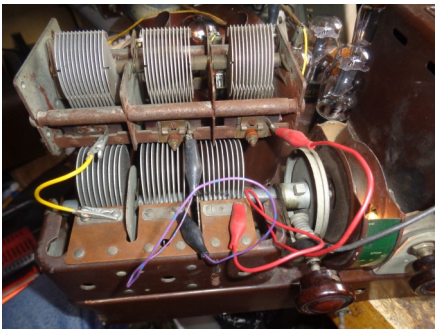
The 2nd RF stage also didn't have any plate voltage, so I had to remove that coil as well. Not only did the critter eat the wire inside the coil form, but went to the top of the coil and munched on the form. The primary winding was destroyed.

The wire for the primary was discarded and re-wound with wire of the same size. I also wound it in the same direction as the original. This is very important; winding coils in the opposite direction will reduce the output of the transformer. After installing the repaired RF coil, not only was there plate voltage on the second RF stage, but a weak signal appeared--progress!

The weak signal was due to the antenna input transformer. Upon inspection--you guessed it--the wire inside the coil form

was completely gone as was in the other two RF transformers. That coil was removed, the missing wire was replaced. Stations were now coming in loud and clear.

A new problem popped up--the variable capacitor was made of pot metal. The stations at the top of the dial came in, but when tuning down to the lower frequencies the plates shorted out. With some bending of the plates a few more stations came in. I discovered that when two screws for the rotor were loosened, the entire rotor could be moved back and forth and that really helped. I could now tune in lower stations.



The pot metal variable capacitor reminded me of other radios from that time period. Those capacitors were so warped it rendered the radio inoperative. I came up with a way that can make a radio like that useful. I set the variable capacitor to minimum capacitance, high end of the dial, where the capacitor plates weren't shorting out and placed a newer matching variable capacitor, in my case a three section variable capacitor, and placed it in parallel with the bad capacitor. It worked! I aligned the trimmer capacitors on the new variable capacitor at a station around 1400kHz for maximum volume. After that I could tune in the broadcast band and pick up lots of stations. Of course, the radio has to be tuned from inside the cabinet. Many people only listen to one station, so at least the radio is useable. Coming up with a perfect, original pot metal variable is difficult. Engineering a newer capacitor onto the chassis is even more difficult, so this is an easy way out.

My Apex 46 now works. I can look at the tubes glowing at night while listening to one of my favorite stations and imagine how the electrons are bouncing around in those warm glowing tubes. The question still remains; who ate those wires?

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# RADIO Activity

Check each organization's webpage for upcoming meets, etc:

Indiana Historical Radio Society
www.indianahistoricalradio.org

Antique Radio Club of Illinois
www.antique-radios.org

Central Ohio Antique Radio Association
www.coara.org

Mid-South Antique Radio Collectors
Available on Facebook

Antique Wireless Association
www.antiquewireless.org

Cincinnati Antique Radio Society
www.cincinnati-antique-radio.org

Michigan Antique Radio Club
www.michiganantiqueradio.org

Mid Atlantic Antique Radio Club
www.maarc.org

# CONSTRUCTION *Corner*

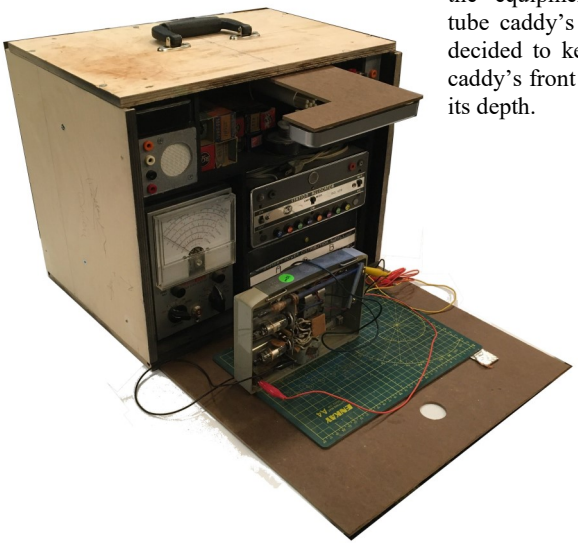
# The "Off the Grid" Portable Workstation

by Bill Morris

As George Carlin said, I needed "A Place For My Stuff…"

Over the years, I've accumulated many pieces of battery-operated equipment. They're handy when I don't have access to the AC models. However, over time, they were getting in the way.

I was thinking about piling them onto a shelf or into a cardboard box, but then I got an idea—what if I needed to repair a set and I was stranded out in the middle of nowhere? Why not assemble these things into a portable workstation?



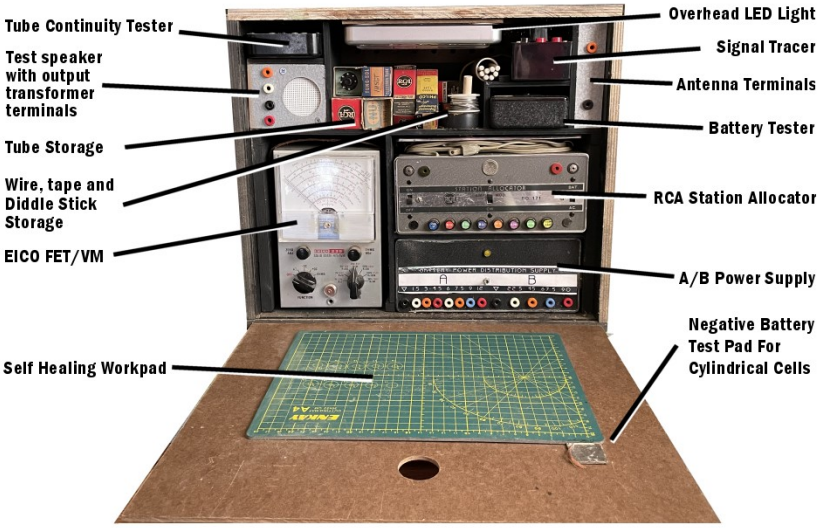
It would be portable and lightweight, preferably something that didn't threaten to pull my arm out of its socket.

It would be stocked with the most needed components--signal generator, vtvm, test speaker, remote antenna, power supply, tools, etc.

It would be ALL BATTERY—self-sufficient, no AC umbilical in sight.

Early on, I made half-sized models of what I wanted. In a perfect world, I saw all of this fitting into a standard tube caddy, but the equipment's dimensions against the tube caddy's were not compatible. So I decided to keep the standard width of the caddy's front dimensions while lengthening its depth.

# FRONT VIEW

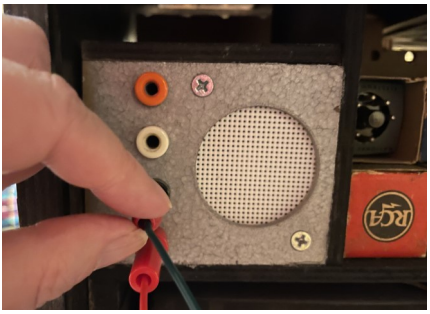



The final design is a little larger than a caddy, but still luggable.

It has front and rear compartments that are accessible from sliding panels. The front panel doubles as the work surface and has a self-healing cutting pad. I added a small pad of circuit board with a wire trailing out. This allows you to test cylindrical batteries much easier; clip the tester's negative lead to the wire, then apply the positive lead to the top.

# REAR VIEW

The front section contains the following:



A built-in test speaker—since space is at a premium, I used a miniature elliptical speaker from an RCA personal radio along with its output transformer. Sockets are provided for input via transformer and speaker itself.


An Eico Model 239 FET-VM. Uses three nine-volt batteries and a D cell.

An overhead LED light I picked up at a hardware store. Uses two AAA batteries. I designed it to where it slides out when you're ready to work, slides back in for storage. I might be replacing it when I can find something a bit brighter.

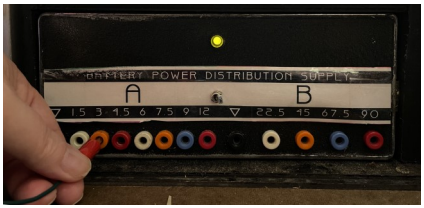
Test Antenna—this is a loop antenna from an RCA BP-10 Personal radio. It's mounted above the LED light. Its leads are routed to a panel in the front.


Space didn't allow for a true tube tester, so instead I have a continuity tester, a Precision SS-10. It has a small light bulb indicator that checks filament continuity for battery and AC tubes. A tube straightener is built in.

Battery tester—a small pocket unit made for Canadian Eveready. Voltages are available on its front panel. You just plug the leads into the appropriate socket.

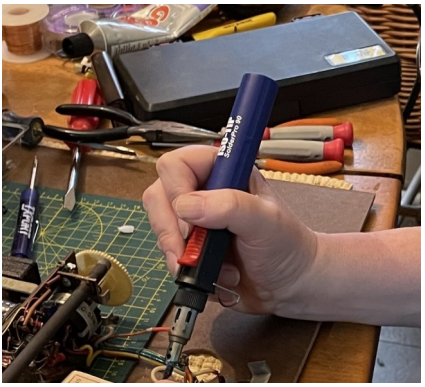
Signal Tracer—a small Radio Schack pocket model. Allows for tracing audio and RF circuits.


Signal Generator—a prewar RCA Model 171 Station Allocator. Its purpose was to aid the serviceman with pushbutton adjustments on console radios. It was made during the FCC's AM station reallocation around 1940. They designed case around an elongated BP-10 personal radio cabinet. On the front are eight pushbuttons, each set to a desired frequency. The first one I aligned to 455 khz for IF frequencies, the rest are stations on the AM band, allowing quick access to them during alignment. The unit can be operated by battery or AC. In this case, it's powered by two C cells for filaments and its own regulated power supply for the B voltages.




A/B Power Supply—this is a homebrew panel and uses the shell of an RCA BP-10. I designed it to match the station allocator's layout. A small yellow LED lets you know it's on. Below the LED are jacks for all filament voltages from 1.5 to 12 volts and B voltages ranging from 22.5 to 90 volts. The filament voltages are fed from a bank of six C cells tapped at their respective voltages.

The rear compartment has the batteries for the signal generator and the A/B power supply. Each supply has a small regulated B+ power supply using six AA cells.




The top left compartment contains an ISO-Tip butane soldering iron. It also doubles as a small butane torch.

In the top right compartment rests a working transistor radio. I use it as a beat frequency tester. You place it against the non-working radio and tune through the band. If the non-working radio's oscillator is working, you'll hear a squeal.

Other compartments carry test leads, spare octal and miniature tubes, solder, bus wire and electrical tape.

Future changes—I want to add a small holder for three Pomona test sockets—squat and longer 7 pin models and octal models. Also planning on painting the cabinet in the style of seventies RCA's tube caddies as shown below.

# IN MEMORIUM

RON RAMIREZ
1960-2023

Mr. Philco has passed away.

Ronald (Ron) A. Ramirez died peace fully at his home on November 22, 2023 after a long battle with cancer.

He is survived by his loving wife Debbie. Ron has two daughters: Kandi (Jason) Tyson and Angela Ramirez and three grandchildren.

He was born on April 16, 1960 to Mary (Alvey) and David Ramirez in Kansas City, Missouri. He started his interest in vintage radios in 1974 and made Philco radios his specialty in 1990. His book, *Philco Radio: 1928-1942* – was published in 1993. He also hosted the Philco Radio website, philcoradio.com, an official Facebook group titled "Philco Radio Enthusiasts" and maintained a blog called "Ron's Radios." He was well known and respected by other radio collectors around the world.

When Ron asked Debbie to marry him, the proposal came with a special clause: If she said yes to adding him in her life, she also was saying yes to his radio collection. Together they created a cozy mid-century home filled with Ron's collection of antique radios, furniture and décor of the 1950s and 1960s.

Ron was a quiet man with a witty sense of humor. He looked forward to springtime and seeing the daffodils blooming. His loyal cat, Viktor, was always by his side. Ron will be missed, but he leaves behind a legacy.

In lieu of flowers, donations can be made to the Dubois County Humane Society (www.duboiscountyhumane.org).

# The "Old Man" Says:

"If you haven't already, now's a great time to renew your IHRS membership."

**Annual Membership $15**

Send your payment written to the **INDIANA HISTORICAL RADIO SOCIETY** to:

Don Yost c/o IHRS
3814 E 400 N
Windfall, IN 46076

Include your current mail address and email address (if applicable)

# Articles Needed!!

Got something you'd like to see in the bulletin? Write an article and send it in!

**SEND YOUR ARTICLE AND ASSOCIATED PICTURES IN WORD FORMAT TO BATTERYMAKER@GMAIL.COM**

# TRANSISTOR RADIO *Corner*

## The Zenith Royal 555

by John Raskauskas

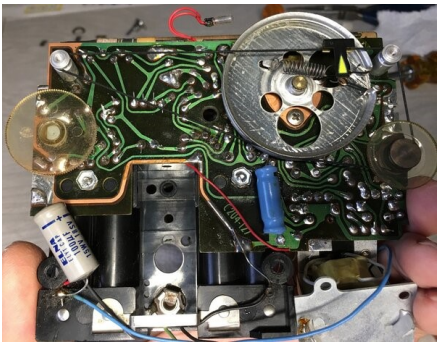
I recently refurbished two early Admiral sets for a collector friend. I asked if he had a Zenith Royal 555 Suncharger parts set. I needed a repairable black handle which was missing on one of my sets. He sent two sets; one had a complete and working white handle, a badly hacked chassis and broken black cabinet. The other had a complete and repairable chassis, a solid black handle missing its lens along with a few of its solar cells. Kinda funny since my first "pair" of 555's refurbished years ago included what was once a white set with black back cover and a complete black set---and I had bought a discolored white back cover from him to "originalize" the white one…

After close examination, thought I could make two complete working sets by combining the best parts of these two with my working "handle-less" set. After completely disassembling and detail cleaning both, I saw that the chrome front panels were much better than my incomplete unit, so I also disassembled it for the "project". One of the emblems was missing from the dial-light button and the other was dented and loose. I removed the one and very carefully worked out the tiny dents by placing a small piece of sturdy but flexible clear plastic over the edges and firmly rubbed the surface of plastic with a tip of a screwdriver until the aluminum was smooth. To remove denting from the center of the "crest" itself, I placed the emblem upside down on a Formica table and again, very carefully, smoothed them out from the inside using a plastic alignment tool. Afterwards, I polished and waxed with Mother's California Gold carnauba wax using a Q-tip. The button without emblem had pitting, so I removed and swapped it with a complete one from my "handle-less" set.

The "handle-less" set had been refurbished as much as possible several years ago and though it worked well, the AC power supply transformer had an open primary. The transformer in the badly hacked parts set had good primary windings, but one of the secondary leads had corroded off due to battery leakage. I was able to carefully scrape and tin the tiny stub protruding from its edge and soldered on a new lead. I also carefully desoldered the diodes and replaced them with good parts from the bad transformer module after cleaning the remainder of battery leakage residue.

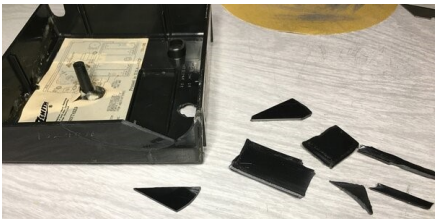
After detail cleaning, the white handle looked very good, so I assembled the best of the front panel pieces for it.


The chassis from the incomplete black handle set was in very good shape including its battery compartment, so I decided to use it in this radio. It actually worked pretty well initially as it was except that the audio-output transistor pair got burning hot after a few minutes (noticed volume slowly decreasing while radio played) and discovered that the two 120 ohm resistors in biasing circuits were both over twice their value when measured! After replacing the two bad resistors and all electrolytic caps, I decided to also replace the audio-output pair with those from the "hacked" set. After alignment touch-up, the radio worked very well but the sound quality was just not quite as good as another refurbished set.

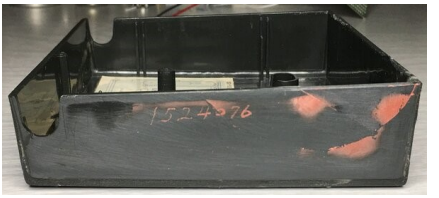


The "incomplete", but good black handle went with the "2nd best" assemblage of front panel parts along with the already refurbished and working chassis from the "handle-less" set. I also used the best of the black cabinet backs. Thought I had enough good solar elements left over from an earlier Hoffman Solaradio project, but discovered otherwise, so this radio now sits waiting for four good elements (and a lens) so it can be finished. I may try a reversible mod and temporarily mount some newer solar cells one day if the originals from a junker can't be found.

The hacked unit also had a broken and sloppily glued black cabinet back, so I decided to attempt "bodywork" and then paint



it antique white to match the handle. A chunk of plastic was missing, so after sanding the edges smooth around the opening and making a pattern, I carefully cut a replacement piece slightly oversized from a junked black Panasonic cabinet. Then I sanded its edges little by little until I had a good fit. I superglued this new piece into place while holding the side of the cabinet tightly against a piece of release paper on the table to ensure that outside surface would be flush with original. After the glue set, I carefully scraped and shaved the excess from it with a utility knife blade in preparation for sanding and painting. The new plastic piece turned out fine---but while scraping off excess glue from previous repairs, a very small chunk of the bottom corner broke off—and got sucked up accidentally into the vacuum cleaner ! So I carefully poked around in the most recently layer of debris and thankfully I found it. After carefully filing the tip edge of the new patch piece, I glued it into place. Had some tiny gaps at the glue line, so I got out my automotive spot putty to fill---and it had separated due to age. Squeezed enough out of tube to mix, and applied carefully.



I'd painted the repaired black case with a can of nearly 30 year-old Krylon I had in the utility closet. The cap color was almost identical to the solar handle, so I decided to give it a try. The paint appeared to have thickened from age and it did not spray well, but I went ahead and used it. Paint dried well and it had an acceptable appearance, but finish was not as good as it looks in the picture having many tiny "fish-eyes" on smooth sides. From a short distance it looks fine though, and will suffice since this radio was traded to me as a "parts-set" with the white handle mounted on a greenish-gray trimmed front panel which originally came on a black set (and still have a good black cover).

Found the front diffuser panel for an old Radio Shack "light-organ" kit that was given me for salvage around fifty years ago as a kid. Since the original panel was missing from the solar-handle, thought I could cut a piece from it to make a usable replacement. Took careful measurements of handle recess and carefully cut the plastic by scoring MANY times with sharp utility knife until needed piece could be "snapped" off. After cutting, carefully sanded cut edges until it fit snugly---checking every several "strokes" to be sure I didn't overdo it. Thankfully, it turned out well and fits nice-

ly. Once I find some solar elements to replace those missing and damaged, I'll wet-sand the edges and polish to give a more finished appearance before gluing into place. The style of the diffuser is noticeably different than original, but definitely looks better than nothing and should work fine..

The final picture shows white handled set with good black cover---am still working on the "to be" white cover. Hopefully all will come together "properly" with these one day. And yes, I even got a headache reading through this---it is now 3:13 AM and it's been a long day!

30



## INDIANA MADE RADIO


Ken Lichtle - Zenith 6D117
Cabinet built by
an Indiana Collector

# FALL MEET CONTEST

Categories were Indiana Made Radio and Ohio Made Radio

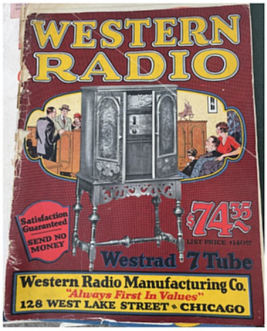

Michael Feldt
Fairbanks Morse Model 82

## OHIO MADE RADIO


Ralph Brueckner
Crosley 515

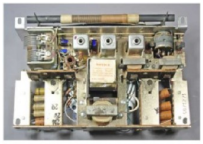
# 2023 FALL MEET

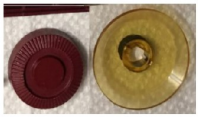
## Held at Springwood Park Pavilion in Richmond





Wanted: Case Model 601 (Imperial) chassis or radio as pictured. Contact Joe Koester at 931-200-0243 or email at jwkoest@charter.net





Wanted: Junk early Raytheon 8TP transistor radio chassis and maroon tuning knob and inner transparent dial for Zenith Royal 500B. Contact John Raskauskas at 317-846-4160 or email at xrhonda91@gmail.com

Wanted: Junk RCA 54B-series personal radios as shown below, the junkier the better. Also looking for hombrew portable radios. Contact Bill Morris at batterymaker@gmail.com

For Sale: 1923 ERLA battery set, restored. Can be used either on AC or battery. Also has a cathedral-shaped speaker. Contact Wilber Haggerty at 765-667-9598 or email at haggertyw@hotmail.com

Wanted: Scott 340B receiver. Looking for complete set to restore. Might be interested in restored unit as well. Contact Scott Beard at Triodesb@gmail.com

The Indiana Historical Radio Society

BULLETIN