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Activities, Business,
Administration, & Publicity

Sites and Dates of Meets

Applications and correspondence
Dues, Financial, and Address
Change. Please Notify
Immediately of Change of Address.

NOTE



News Articles, Radio Ads, Photos
for Bulletin publication

Donations & Scrapbook Material

IHRS Museum Curator

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/year or 2 years/\$25.00, 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 Herman Gross, our treasurer as noted above.

Indiana Historical Radio Museum – Report



Greetings from the Indiana Historical Radio Museum and its FM Station WNRL, 105.9 FM. The museum has been closed January through March for some much needed changes.

The year 2005 was one of our best years in attendance with October having over 600 visitors. Much of this was due in part to the publicity we received from various parts of the news media. At present we are in the process of applying for a grant to replace the Museum carpet. This will be the Museum's 14th year at its present location and the carpet has received a lot of wear.

After many years of hosting a late summer meeting in Elkhart, the Indiana Historical Radio Society will move the meet to the Ligonier Recreation Center. Located a quarter mile from the Indiana Historical Radio Museum, the August 12 meet will take place at the home of 105.9 WNRL, the museum's FM station. The Ligonier Community Recreation center can accommodate both inside or outside meets with plenty of space for both.

I will miss the Elkhart location. I have always looked forward to going there, and it was a great location. We all owe a big thank you to all the members that worked so hard to make it a great success. More information about the Ligonier meet will follow in the IHRS Bulletin.

The following are some recent additions to the museum collection:

1. A beautiful display of the four 1947 Emersonett Midget radios including the brown, ivory, green, and red all in mint condition with documentation from Andy Schultz's collection.
2. A very large collection of early books and paper items from Serge Krauss covering all aspects of early radio and electronics, including telephone, light bulbs, television, telegraph, Radio Boys and Radio Girls, etc.
3. Zenith console and several other radios.
4. Telegraph items.
5. Radio tubes.
6. A gray Regency TR-1
7. Novelty radios.
8. The Indiana State Police collection will again be on display.

Museum Report (continued)

The IHRS FM Radio station can now be picked up on the internet at wnrl.org. It also can be found by going to Google and typing in shoutcast and then WNRL. At present WNRL operates on a 24 hour day six days a week schedule. Students at the local



high school are on live Tuesdays and Wednesdays at WNRL's satellite studio located at the West Noble High School. WNRL's present broadcasting schedule will appear on its web page when you go to [HTTP://wnrl.org](http://wnrl.org).

The present web page is only temporary and will be changed with pictures added in the near future.

When you visit the Indiana Historical Radio Museum be sure and also visit the WNRL studio. Call me at 260-894-3092 to schedule a visit.



Have a great summer!

Fred Schultz, IHRS Museum Curator

from the Microwave Journal: *Salvan: Cradle of Wireless*

by Fred Gardiol and Yves Fournier Vol. 49, No. 2, February 2006, page 124

How Marconi Conducted

Early Wireless Experiments in the Swiss Alps

On September 26, 2003, the IEEE dedicated a "Historical Milestone," acknowledging some of the first wireless experiments conducted in 1895 by Guglielmo Marconi in Salvan, Switzerland, a picturesque resort in the Swiss Alps. This historical development had been described in detail by an elderly citizen, who had assisted Marconi during his short stay in Salvan. A very interesting article about a young man assisting Marconi in Salvan, Switzerland. The article can be seen at

http://www.mwjournal.com/article.asp?HH_ID=AR_468

Contributed by John Foell

The Indiana Historical Radio Society 2006 Meeting Schedule

Spring Meet

Johanning Civic Center, Kokomo – May 5&6, 2006

Summer Meet

Ligonier Community Center, Ligonier – August 12, 2006

New location – Loads of indoor and outdoor set up space several blocks from the Indiana Historic Radio Museum!

Fall Meet

Riley Park, Greenfield – October 7, 2006

* * * * *

2007 - Winter Meet - 2007

Hornet Park, Indianapolis – February 12, 2007

Regional Events of Interest to Members

Mid South Antique Radio Club For information contact George Freeman jgfree@verizon.net

Northland Antique Radio Club www.geocities.com/northland.geo
Next meet: Radio Daze Swap Meet, May 19 & 20, 2006

Antique Radio Club of Illinois www.antique-radios.org Next meet – April 30, 2006 - American Legion Hall, Carol Stream, Illinois

Michigan Antique Radio Club see www.michiganantiqueradio.org

AWA-Antique Wireless Association

Annual Conference, August 23-26, 2006

The original and largest historical radio group. The AWA publishes a quarterly Old Timer's Bulletin. Membership is \$20 per year. Write to: Antique Wireless Association, Inc.Box E, Breesport, NY 14816
www.antiquewireless.org

IHRS Contest Categories for 2006 – Prepare Now!

Spring Meet - Johanning Civic Center, Kokomo – May 5&6, 2006:

- 1 Open
2. Made in Indiana
- 3 Homebrew receiver or transmitter
4. 1920's Battery Radios (table or console)
- 5 Transistor radios
- 6 Crystal sets (pre 1930)
- 7 pre 1940 AC radios (table or console)

Summer Meet - Ligonier Community Center, Ligonier – August 12, 2006:

- 1 Portable tube radios
- 2 Cost me less than \$20.00

Fall Meet - Riley Park, Greenfield – October 7, 2006:

- 1 My favorite radio
- 2 Commercial Amateur Radio Equipment

Tables will be available at each meet for Vintage Radio Displays.

2006 IHRS DUES NOTICE

Your Indiana Historical Radio Society membership is now due if your mailing label reads 12/05 or earlier. Please send a check payable to the *Indiana Historical Radio Society* in the amount of \$15.00 for a one year membership or \$25.00 for a two year membership.

Send your payment to:
Herman Gross, IHRS
1705 Gordon Drive
Kokomo, IN 46902.

Please include your current mailing address, if not on your check, and your email address, if you have one. Membership questions? Contact Herman at hw12x12ihrs@sbcglobal.net or call him at (765) 459-8308.

Officers note: Waiting to the May meet to pay your dues?
Do your treasurer a big favor and send your renewal check now! Doing so will simplify his job considerably.

Kokomo Radio Station “WIOU” and the “Mike Radio”

By Fred Prohl

The Station WIOU– 1350 AM

On January 8, 1948, a construction permit to build a new radio station in Kokomo was granted by the FCC to North Central Indiana Broadcasting Company. General manager and co-founder was John Carl Jeffrey. On July 16, 1948 WIOU went on the air from 8:30 p.m. until 10 p.m. WIOU broadcast live for its first full day, from 6 a.m. until midnight, on July 17, 1948.



North Central Indiana Broadcasting Company sold WIOU on September 11, 1956, to Booth-American Company of Detroit, Michigan. John Carl Jeffrey remained general manager of the station. Two days later the decision was made to move the downtown studios to a facility on SR 26.

On November 28, 1962 WIOU applied to the FCC to increase daytime power from 1,000 watts to 5,000 watts.

In March of 1964 WIOU applied to the FCC to construct and operate an FM station at the same location as WIOU. They decide to call it WKMO-FM. Construction began on the FM station began in May and. WKMO-FM went on the air for the first time on November 20, 1964 from 8 a.m. until 11 p.m.

In 1972 John Carl Jeffery retired as general manager of WIOU-WKMO. He remained at the stations as a consultant and an account executive. Booth-American appointed George Corwin as general manager.

On Thanksgiving Day, November 1976, WKMO-FM became WZWZ-FM, retiring the WKMO call letters. The station format was also changed at this time from easy listening to Contemporary Top-40.

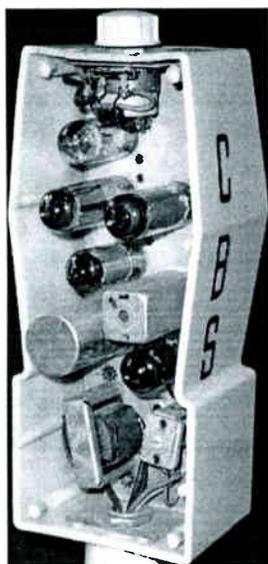
Booth American sold WIOU-WZWZ in November 1983 to Kokomo Community Service Radio of Martinsville, Indiana. David Keister was the president.

In October of 1984 Kokomo Community Service Radio sold WIOU-WZWZ to the Caravelle Broadcast Group of Charlotte, NC. Howard Schrott was the founder and president.

Then in November 1, 1993 Caravelle Broadcast sold WIOU-WZWZ back to David Keister of Martinsville, Indiana. The parent company became known as Mid-America Radio Group. They are the owners of WIOU-WZWZ

IHRS member Rob Rupe is the morning man on WIOU 1350 AM. Rob provided the Kokomo Tribune news article for the above information.

The Mike Radio – WIOU 1350 AM



As the pictures show, the Mike Radio is shaped as a broadcast microphone. It is plastic, stands about 15" tall, and is designed to receive one station only – 1350 AM. The set works great when powered up. It receives WGCL 1370 AM (Bloomington, about 30 miles away) better than many other AM receivers of the same vintage in my collection. There was no filter hum, so I chose not to risk plastic case damage by removing the chassis. The circuit is AC/DC with the standard late 50's early 60's circuit. The front end uses two ferrite rod antennas, a padder/trimmer style capacitor and a tunable RF coil/transformer. The tube lineup is a pentagrid converter -12BE6, RF amp 12BA6, detector amplifier 12AT6, audio amplifier 50C5, and a 35W4 half wave rectifier. Since I expected a TRF front end but found the

circuit uses a 12BE6 consistent with a super-het, I used a tube extender and o'scope to monitor the 12BE6 output. The circuit does create an IF frequency of approximately 440KHz as an intermediate carrier. Why spend on the extra circuitry to select one station? If it was to improve selectivity for the 1350 KHz, it does not work very well. I transmitted a modulated signal at 1350KHz and had to detune the circuit by adjusting the padder/trimmer capacitor in order to override the unwanted 1370. My guess is the manufacturer conveniently used a stock chassis (to keep costs down) and skipped the variable capacitor for single frequency tuning. The

series filament string and the need to drop the line voltage with the 12BE6 probably played a part as well.



The WIOU AM Mike Radio was evidently a gift to a WIOU station staff employee. It was sold at a Kokomo auction in 2004 and eventually ended up in my collection.

An FM Mike Radio is reviewed at antiqueradio.org.

If WIOU is a familiar call to non Kokomo residents, you may be remembering a TV sitcom about the staff at a radio station nicknamed WIOU. The program had a short run in the early 1990's and starred Marette Hartly and John Shae.



Reference: Kokomo Tribune, July 14, 1998

Fred Prohl has been collecting radios for over 50 years (seriously for 37 or so). His first radio, at about 10 years old, quickly came out of its case so he could see the warm glow of the tubes at night. (His first night light.)

* * * * *

IHRS Winter Meet, Hornet Park, Treasurer's Report

We had 31 family registrations. Thirty-one Swap N Sell vendors rented 36 tables.

- Family registrations - \$305
- Table rentals \$180
- Donation jar \$42.74
- Membership dues \$285
- Expenses:
- Hornet Park \$400
- Insurance \$35.25
- Doughnuts \$30

Excluding membership dues, receipts/expenses were positive for the Winter Meet at \$62.49.

Herman Gross, IHRS Treasurer

35th IHRS & AWA 2006 Spring Meet Friday, May 5 & Saturday May 6

35th Annual Vintage Radio Meet at The Johanning Civic Center in Kokomo, Indiana

Located on the northeast leg of the US31 bypass, the Civic Center provides space for an all indoor meet with ample room for all activities.

The space is on ground level with easy vehicle unload/load.

Friday May 5

3:00 pm Doors open for indoor Swap N Sell set up

4:00 pm Radio Swap n' Sell.

8:00 pm Doors locked for the evening.

Saturday May 6

7:00 am Radio Swap n' Sell.

Indoor set up continues.

Set up for Old Equipment Contest, Operating Radio Display

9:00 am Doors close to additional setup.

9:00 am Old Equipment Contest and Operating Radio set-up closes. Contest judging begins.

10:00 am to 10:30 am

Registration of donation items for the auction.

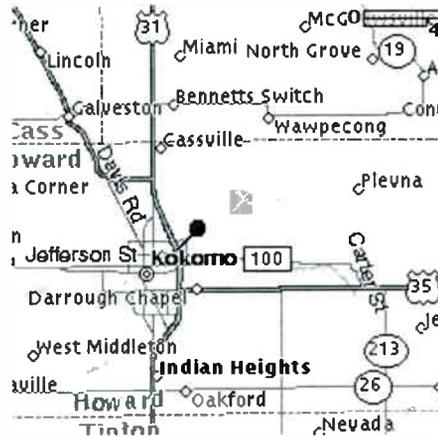
11:00 am Awards Luncheon

Menu: Oven baked steak, gourmet macaroni and cheese, mashed potatoes & gravy, green beans, garden salad, rolls, fruit cobbler, coffee, ice tea and water.

Join us for lunch and be eligible for a "Vintage Radio" give away!

12:00 pm Auction of vintage radio equipment.

3:00 pm Spring Meet concludes



Fees - Registration is 5.00 per family, good for both days. One Swap n' Sell space for the sale and trade of vintage radio equipment is \$10.00, good for both days (the space includes one eight foot table.) Awards Luncheon is \$8.00 per person.

Need a small amount of table space? Sign up for "**Share a Table**" Pre-register with a request to share a table. We will hold a 1/2 table space for you at half the Swap N Sell cost.

IHRS/AWA Spring 2006 Meet (continued)

Old Equipment Contest - Contest is open to all Indiana Historical Radio Society and Antique Wireless Association members. Non member entries will be for display only. The Founders Award is reserved for IHRS members. The entries are judged by historical significance, documentation, and condition of radio.

Contest Categories:

- 1 Made in Indiana
- 2 Homebrew receiver or transmitter
3. 1920's Battery Radios (table or console)
- 4 Transistor radios
- 5 Crystal sets (pre 1930)
- 6 pre 1940 AC radios (table or console)
- 7 Open – Radio related entries

Operating radios will be judged in the appropriate contest category:

OR1. An operating 1920's battery radio with a horn speaker.

OR2. An operating 1930's AC radio.

Radio Display – Want to show off a set, generate a discussion? Space will be available to place your radio related equipment on display.

Pre-Register - Send a check for meet registration (\$5.00 per family), Swap N Sell table reservation (\$10.00 per table), and Awards Luncheon (\$8.00 per person) payable to IHRS, to: Herman Gross, 1705 Gordon Dr., Kokomo, IN 46902

Meet contacts: Fred Prohl, 812-988-1761 - - Herman Gross, 765-459-8308

Motels: (Listed from closest to Civic Center to farthest.)

1. Comfort Inn 522 Essex Dr (US-31) - - (765) 452-5050 or 1-800-228-5150
2. Clarion Inn 1700 E. Lincoln Rd - - (765) 459-8001 or 1-800-228-2828 (This was the old Ramada Inn for previous Kokomo meets.)
3. Motel 6 2808 S. US-31 - - (765) 457-8211 or 1-800-466-8356 (This was the old Howard Johnsons, adjacent to the Clarion)
4. Fairfield Inn 1717 E. Lincoln Rd - - (765) 453-8822 or 1-800-228-2800 (motels 2, 3 and 4 are located across the street from Delco/Delphi)

Additional Kokomo information at www.johanningciviccenter.org

IHRS Auction list (Partial) – Saturday, May 6, 2006 – 12 noon.
All bidders must register for the Meet and with the Auctioneer.

The following list is primarily from two collections – IHRS members John Jones and Hal Hunt. Both collections have a large amount of radio and audio equipment.

Sparton radio	Motorola mod 51D portable
Audio Lite mod 1101	Fisher mod X100 stereo
Reel to Reel tape deck in cust cab	Sears radio mod 4763
Silvertone radio mod 4763	Edison Disk phonoC19 #33
Case radio	Zenith mod G730 table
Arvin 45 record player	Delco nod 3201 32 vdc
Admiral TV 6"19A1-S-A	General Motors mod 281 converter
Record Player in drawer	Philco mod 44 cathedral
Fisher Nod 50 suitcase phono	Crosley mod 5-38 battery set
Philco radio rotary dial	Crosley mod 4-29 battery set
Capehart 78 record changer	RCA mod 18 AC set
Fada mod 790	RCA mod 100A speaker
Panasonic 8 track player	Operadio Dynamic 12" speaker mod 1106
Craig/Pioneer 8 track player	Howard radio mod A-5
Pilot mod PT-1015 phono w/Garrard tt	Steinitz mod 993 console
Magnecorder mod M-30 RR tape deck	Grunow mod 6HB 620&621 chassis
Cousino tape recorder P144	Hallicrafter mod 1000 portable
Pioneer PL-202A2 stereo tt	Majestic 381 Treasure Chest
Various auto radios	Westinghouse mod H126 Ivory
Philco mod 60 cathedral	Zenith 7H920uz
RCA sterio cartridge tape rec/play	Crosley JM-8WE tube/transistor book
Howard radio end table	Westinghouse radio H-39875
Horn speaker – no base	Jewel mod 505
Shure phono w/Garrard nod M100W	Travler mod TR282-B
GE AM/FM portable radio	Horn speaker
2 sets - Rider Manual I-XX	Zenith 6S229 Tombstone
RCA 45 record player	Zenith portable 7G605
Zenith transistor radio mod R26Y	Case radio mod 61-4-3777
Norelco Cassette recorder	Headsets: WLS, Utah, Nathaniel Baldwin
Koyo transistor radio mod 6TS2P	Brunswick mod 5KR
Emerson AM/FM radio	National Carbon mod 1, AC 1927
Brunswick speaker mod E1-A	Magnecord PT6 tape deck and amp
Zenith radio mod 7E01	(2) Ampex RR tape deck (601&602)
Sportmatic radio	Ampex amp/speaker mod 620
Arvin radios mod 859T and 5571	GE radio mod 410 – table
Airline radio mod 84	Norelco RR tape rec. EL3516G/53
GE table radio wood mod 410	Sears multiband portable radio
Pooley cabinet mod1600 A1 cond	(2) Crosley 51 radios
Atwater Kent radio mod 20	Atwater Kent mod 40 no top
Atwater Kent mod 20C	GE radio YB 60-2 white
Atwater Kent mod 33	GE portable radio P977B
Atwater Kent mod 55 in Kiel cab	Mercury (Phillips) protable
Atwater Kent type 2 speaker	Magnavox radio nod OF
Crosley 3R3 Newport 1123 A1 cond	Brunswick mod A speaker
Crosley mod 66TC Amer. Overseas	Wooden small tombstone speaker
Fada mod 950 table radio	Philco radio 46-250
Brewster mod 9-1084	Fada radio mod 1000
Midwest mod Ultra 5	Teltape 3" RR min tape recorder
Utah cone speaker all wood carved	Steelman phonograph w/speakers

Sparton mod 930 Lowboy, restored, works
Fada neutrodyne, restored, works
Goodyear (1937) console radio
RCA 96T (1938) table radio
Sears Silvertone early 40's table radio
Aervox L-C checker mod 95
Channel King rabbit ears
Sparton radio mod AC63
Navy Comm Rcvr RBO
Heathkit SWR & Pwr meter HM-2102
Taylor Inst Co. Barometer
Heathkit Amat. Radio Tx/Rx HW-202
Windsor headphones
Western Electric 516W headphones
Universal Roller-Smith headphones
Brandes Superior headphones
Telephonics TH-37 headphones
Communications receiver unknown mfrg
Weston tube tester 981 THPE2 nice cond.
B&K tube tester mod 707
Hickok Mut. Cond. Tube tester mod 530
lot of 100's PC & surface mount pots
lot of 100's precision & power resistors
lot of 100's dipped silver mica capacitors
Hickok crystal controlled sig gen 288X
lot of 100's 17 - 150 v electrolytic caps
Hallicrafters Receiver SX-42
lot of 100's dipped silver mica capacitors
lot of resistors, 1W carbon
Horn speaker mfg unknown, repaired base
lot of 5 books -Radio By Collins etc
lot of 4 books - Flick Of The Switch etc
Hallicrafters Receiver SX-28
lot of 4 bks - McMahan Vint Radios, etc
Silvertone Arial box w/misc parts
Philco console radio 39-55
Hallicrafters receiver S20R Sky Champion

lot of 3 books - tyne Vacuum Tubes, etc
lot Jackson sig gen 106 & misc test equip
lot Knight sig tracer & capacitor testers
lot of 6 books - Philco, Ramirex etc
lot of 3 books - Auto Radios, etc
Zenith "Long Distance" chassis 7-J-259
lot 4 books - Communications Rcvrs. Etc
(3) Zenith black dial chassis - no mod num
Zenith Rotor Wavemagnet console antenna
Zenith chassis mod 10S669
lot of 4 books - 3 vol Alan Douglas etc
Zenith chassis with tubes 10S669
Zenith black dial chassis 10S668
Military receiver BC348X
lot of 100's dial lamps
lot of 100's resistors & mica capacitors
JFD radio dial belts
General Cement radio dial belts
Reel of battery radio power cable
Pioneer solid state stereo receiver SX-939
(2) Simpson Multimeters
(2) Heathkit VTVM, mod V-6
Hewlett Packard VTVM mod 410B
Hewlett Packard VTVM mod 4102A
Heathkit power supply IP-271B
Battery Radio power supply
Solar Capacitor tester, mod CE
Heathkit voltmeter, SS mod IN-13
Heathkit frequency counter IM-4100
Heathkit capacitor checker IT-28
Feiler signal tracer TS3A
Weston AC voltmeter, 150&300 V
Sony FM&TV receiver mod TV515
Several large lots of new and used tubes

This auction includes a large amount of good condition test equipment not listed above. Many are laboratory quality ready for your workbench. Some are antique from the 20's, like Weston mirror scale meters. As noted in the auction list, there are 1000's of tubes. Collectors needing to build up their on shelf supply and resellers of tubes will benefit.

Due to the quantity of auction items currently on hand no additional consignment items will be accepted.

The exception will be items placed in the IHRS Donation Auction between 10AM and 10:30AM auction day.

IHRS at Elkhart - August 2005

Photos by Ty Gregory



Jack DenHartigh
Zenith
Ugly Radio Contest



Robert Avey
Homebrew
Ugly Radio



Jack LaVelle
Stromberg Carlson
Open category



Jack LaVelle
Zenith Puzzle Radio
Open



Robert Avey
Airline
Under \$20



John Hoffman
Champion Crystal Set
1920' Radio



Robert Avey
A. C. Gilbert
1920's Radio



Ed Dupart
1930's Radio
RCA Tombstone



Fred Schultz, in line for lunch.
A favorite IHRS Elkhart event.



Bill Arnold and his nicely finished radios



A fantastic display of John Meck Radio equipment. John Meck Industries, Plymouth, Indiana.
Deisplay setup by John Kellar

IHRS Hornet Park – February 2006

Photos by Ed Dupart



Ed Dupart
Diode Radio – Heathkit



Ed Taylor
Hande-ee Wrist Radio



Fred Prohl
Diode – American Leader



Michael Feldt
Diode Radio
Miller 595



John Leming 1st place
Radio Advertising
1931 Westinghouse Model display



Peter Yanczer
Radio Advertising
Major Bows Clock



Sparton Radio
Advertising



Ed Dupart – operating
farm battery set demo.



Former IHRS President
Terry Garl reading the manual.



An active morning at Hornet Park – Beech Grove

We Remember

Indiana Historical Radio Society member Harold E. "Hal" Hunt passed away on January 15, 2006. He was 78. He was born in Indianapolis on November 15, 1928, to Henry J. and Julia E. McFarland Hunt.

During the Korean War, he served in the U.S. Army. He retired in 1989 from Central Soya. Hal was also a member of the Antique Wireless Association, and the Antique Radio Club of America.

Members will remember Hal for his appreciation of vintage communications receiver/transmitters and teletype equipment.

Indiana Historical Radio Society member Charles "Chuck" Mooney died in June of 2005. Charles' home was in Bowie, Maryland.

Dear Indiana Historical Radio Society members,

Thank you for the lovely floral arrangement, your cards, your prayers and support during this difficult time.

I truly appreciate all of you.

Sincerely,
Elaine Hunt

the Heathkit CR – 1 Crystal Radio

(or Ed's Blue Ribbon Diode Receiver – Winter Meet 2006)

By Edward Dupart

This is another one of my childhood radios that I never parted with. My older brother, Victor, knew I was fascinated with radio at an early age and he was always encouraging me by finding electronic “stuff” for me. One day in 1958 he surprised me with a brand new Heathkit CR-1 crystal radio. A friend of his bought one, put it together and was able to drive a speaker with it on a local station or put the headphones in a bowl and listen to it that way. My brother was so impressed with the way it performed that he went out and bought one, then he gave it to me. I distinctly remember listening to the song “Venus” on it.



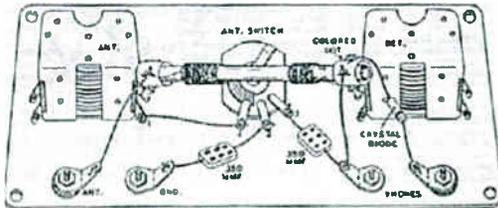
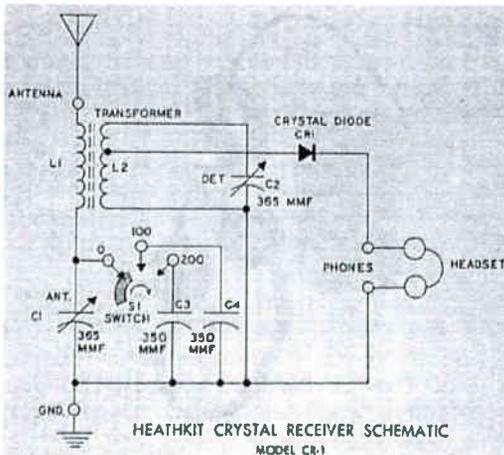
As you can see, it is not in mint condition, but it still works great. I used it a lot and sometimes I would take it with me when I went to relative's houses or out to our cottage near Brighton, Michigan. I loaned the radio to my nephew in the late 1960's for a couple of years and he enjoyed it and then I got it back. I built a lot of plastic and wood models of cars, planes and ships and that is why the DC 7 decal is on it and it will stay there. Here in Indiana I have been able to drive a speaker on the local station in New Castle and with headphones I have been able to pick up New York, Detroit, Nashville, Chicago, West Virginia and lots of other local stations. The antenna I use is about 75' of wire strung around the attic and the ground I use is a pipe driven in the ground near the house.

the Heathkit CR – 1 (continued)

This radio worked so well, that I decided to copy the circuit and make new crystal radios, but using Quaker Oats and other large coil forms for winding the coil on. They always worked quite well and putting taps in the coil enables the radio to pick up short-wave. Over the years I have had many students build them in my electronics classes and they are always impressed at how well they work with out batteries or AC power.

During the early 60's I borrowed the coil out of it for transistor radios I was building and eventually I lost the coil. Fortunately, there was a Heathkit store on 8 mile in Detroit and I was able to obtain a new one. After installing it, my CR-1 worked like new. To this day, I still hook it up and enjoy listening to it.

Ed Dupart, past editor of the IHRS Bulletin, is noted for his knowledge of vintage radio circuits. He is a frequent contributor to the Bulletin as well as a presenter of radio repair and restoration seminars at IHRS radio meets.



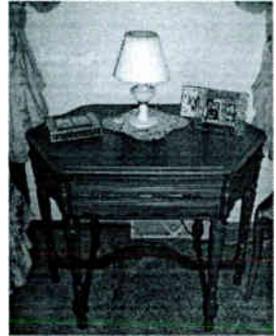
Heathkit CR-1 Schematic and parts layout.

Restoration of an AK-55C / Kiel Table or “The Radio From Hell”

Pictures on page 28

By: Herman Gross

It was a dark and stormy night. Suddenly a shot rang out, the maid screamed, a door slammed. I burst into the house, tripped over the threshold, staggered, foaming at the mouth, gasping for air. “It works! It works!” I stammered. “That radio from hell works!.” “Well it’s about time” my wife Shirley said, catching her breath. “It’s taken you forever and I’m tired of hearing you calling that thing such nasty names. I could hear you half way across the house at times. What must the neighbors think?”



It all started on a warm sultry day in June of ‘03 when we got a call from Shirley’s good friend Nancy, whose “job” it is to scout out all the garage sales in the area.....seven days a week if she could. She keeps an eye out for radios for me at the same time. Well see....we get this call from her and she’s all out of breath. “Good thing I got this cell phone. It might be gone before you get here otherwise,” she says after Shirley calls me to the phone. “There’s this radio in a table you might be interested in at an estate sale on Santa Fe”. “Humm, a radio in a table I mused. Could it be.....?” Well, I grabbed my wife’s check book and she and I jumped in the truck. Santa Fe is close by and only took us 10 minutes to get there. Sure enough, there it was, an AK in a Kiel table. I had to have it. After first looking at other “stuff” the lady was selling I strolled over to the Kiel table, looked at the radio and speaker inside. They looked OK. All the tags were intact and all the tubes were in it, including a pair of globe 45s. I decided to make her a “fair” offer. “Does it work?” I asked. Of course she didn’t know but said it was in her Dad’s garage for over 30 years. I made her an offer I thought she couldn’t refuse. Shirley cringed and gave me that “I don’t know you” look. The lady, hands on hips, informed me she looked up Kiel tables on the internet and had a good idea of what they were “really” worth. “Oh darn” I thought. “This will cost me.” I pointed out the top had to be refinished and there was a broken support inside and who knows if those tubes are any good. She agreed to my second

offer. A nice neighbor of hers helped me load it in the truck and I was off with my treasure.

A treasure you might ask? Who the heck wants an AK 55....they're a dime a dozen. Of course you've figured out that I wanted the Kiel table. It was made near my Wisconsin home. Kiel Wisconsin was the home of the Kiel Furniture Company. Anything with a Wisconsin connection like that still pulls at my heart strings even though I've been transplanted to Hoosierland these 33 years.

I started with the cabinet after removing all the electronics including the power and antenna wiring that runs through the hollow rear legs.....a "neat" feature. The antenna and power connectors in the rear feet were in good shape. Later I cleaned them up and replaced the aged wiring with new.

The top cover was removed along with all its hardware. The under surface was in great condition as well as the edges, but the top was sad. Fortunately there were no rings to deal with. I used Formby's furniture conditioner to remove most of the existing finish on top being careful not to damage the edges. When thoroughly dry I very lightly sanded it with 400 and 600 grit paper. It really didn't need much work. The overall color of the table is lighter than any of the few Kiel tables I've seen. I had to mix a couple stains together to obtain something "close enough" so I could redo the top as well as a couple small scratches here and there on the bottom portion of the table. I stained the top and let it dry for several days before giving it the first of about 7 coats of lacquer. I lightly rubbed each one down with 0000 or 600 wet-or-dry in between coats. I usually use about 5 thin coats of gloss to give the finish some "depth" and in this case finished with two applications of satin.

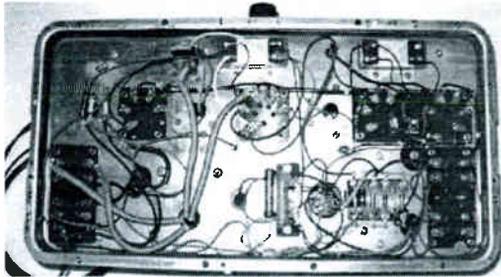
The legs, spreaders and four sides were cleaned and touched up with the stain I'd mixed. At the same time I repaired the split radio support member inside. Some clod had put a very fat screw through a very thin part of it to correct a problem many years ago and it just didn't do the job. It is as good as new now....my first experience with Gorilla glue. (Be careful, it foams and oozes all over but makes a great bond.) Then I repeated the lacquer regimen the top went through.

Restoration of an AK-55C (continued)

After a week or so of “curing”, I gave the whole thing a light coat of Johnson’s furniture wax, buffed it with my old flannel pajama top and there it was, a thing of beauty. It was fun fixing up that table. We found a nice spot for it in our spare bedroom. But it didn’t have a voice.....

Now the fun really started. I blasted a path through my work shop and cleared off a sizable portion of the work bench. With a hernia truss securely strapped in place, I jockeyed the AK chassis on the bench so I could examine the corpse. I never fire up a chassis to “see if it works” when it’s this old. Instead I make several visual, resistance and continuity measurements first.....then I might put it on a Variac without the tubes in place to get an idea of what’s what. I determined the power transformer was OK as well as the filter choke. The power supply filters, thankfully not electrolytic but potted and well protected, were “good enough” to keep. I’m one of those nuts who frequently rebuilds metal encased condenser assemblies and this was no exception. There are two such assemblies in the 55-C and I dutifully opened each one and replaced all the condensers with new mylar units without even testing to see if any of the originals were good. Now I don’t have to worry about those items. I also shined up the metal cases so they looked good even though no one would ever see them.

I checked all the resistors. Many were wire wound on a flat substrate with the end of the elements connected with hollow rivets or eyelets to a solder terminal. I’d been



forewarned about the reliability of the AK resistors by reading the notes in the Ghirardi Radio Troubleshooter’s Handbook for this model. The manual suggested that one should “squeeze” the rivets to make a tighter connection if it was intermittent. I tried that....it didn’t work.....and even if it would have worked I wouldn’t have used that fix to save my life. Talk about walking wounded! The two bias resistors for the 45’s were a common problem according to the manual and several entries were made regarding replacing them with different

values. It turns out that EVERY resistor but one had to be replaced. I used mostly 1 & 2-watt composition resistors except for the bias resistors where I used 10 watt units for reliability in what seemed to be a problem application. (Once the radio was operating I adjusted the bias values to what I thought to be optimum for a pair of 45's operating at the voltages present in this radio. In fact I checked for symmetrical clipping of the audio output with an oscilloscope to see if the bias was right. It is now and the radio sounds pretty good.) Truly, this radio was destined to fail....but that was the level of technology for that time. Isn't it interesting to see the evolution of radio and of radio components over the decades?

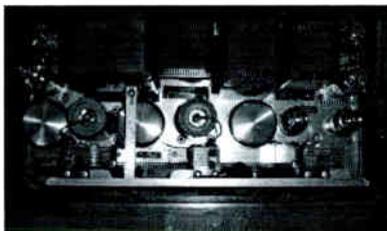
Many of the leads from the transformer, especially the four filament leads, were heavy gauge copper with thick rubber insulation that was as brittle as....well, as peanut brittle. To those I applied generous coatings of colorless fingernail polish (I just can't bring myself to use pink) in order to prevent the insulation from shattering. I sometimes use Duco cement for the same purpose if I need a thick coating. This works very well and looks nice too. Disposable acid brushes are good for applying the cement. I wasn't satisfied with nail polish as a final solution however. I gingerly unsoldered the four heavily insulated filament leads and slipped a long piece of shrink tubing over each one. The shrink tubing would insure that the original insulation would stay in place forever. Then, on top of that, I slipped a large piece of cambric tubing over the full length of each one being very careful not to bend the wires at all times. I applied a lot of nail polish at the point where the wires exited the transformer frame. That is where the wires would flex when I moved them ever so slightly and I couldn't get cambric in that tight area. Other smaller wires were dressed away from the chassis as much as possible, considering the chassis is only 1" deep, and fastened to insure they didn't interfere with anything, especially anything sharp. I also replaced all the wires to the local/distance and power switches and other places I deemed necessary. (That cambric tubing was a fortuitous purchase at an AWA Conference flea market back in 1999).

When I did the resistance checks I discovered that there was a missing "short antenna" winding on the antenna coil primary. I removed the shield from the antenna coil. I could see a jumble of wires inside the core that was once a neat tapped antenna coil primary. The leads attached to the coil were amateurishly "soldered".

Restoration of an AK-55C (continued)

Was it the same clod who split the mounting member with that over-size screw, who damaged the winding? Or had it been hit by lightning? Also the shield for the antenna coil had been pierced in three places on the top and a failed attempt was made to solder to it for some reason that I'll never guess. One of the antenna connectors was missing as well. I found a replacement antenna coil, connector and nice shiny shield via an advertisement I placed in the Antique Radio Classified magazine. (Prices varied from \$15.00 for all the parts post paid to almost \$50.00 from some "entrepreneur").

While waiting for the replacements to arrive, I shined the top of the nickel plated chassis and brass bottom plate captive nuts with 0000 steel wool. It made the chassis look almost new. There were no rust spots to contend with. I also cleaned everything else in sight. The cases for the transformer, choke, filter condensers and output transformer and coil shields look great with their coating of, you guessed it, Johnson's furniture wax. The speaker was of great concern because I'd heard that most of them are bad. My continuity measurements showed the field coil to be "close enough" to spec and also the voice coil. The acid test was about to be administered. First I had to rebuild the interconnect cable because the insulation was deteriorated.



I fired up the radio on the bench with the wrong antenna coil and it worked of sorts just using a 20' hank of wire strewn around the shop. Not very sensitive but I was happy I could receive more than just local stations. In fact I logged stations from St. Louis, Cincinnati and Nashville TN. It squealed a lot at different dial settings. Oh yes, the dial. The rubber portion of the vernier tuning knob had partially worn away through the years and what was left was solid as a rock. I cured that condition by removing all the old hardened rubber and replacing it with a 7/16" length of 3/16" ID fuel line forced over the brass shaft. The rubber "meshes" with a toothed wheel attached to the dial mechanism and works like a dream. The man at the local auto parts store was kind enough to give me a 3" piece of fuel line after I

described how I intended to use it. The antique radio application intrigued him but not enough to entice him to join the IHRS or even visit one of our meets. Oh well I tried.

With all the “new” parts in place I fired up the radio again. It was unstable at various dial settings and without the top shield (and even with it) was very susceptible to hand capacity. Entries in the Ghirardi manual regarding squeals or whistling suggest that the “tuning condensers are not properly aligned” or a “screen by-pass condenser is open”. Well, the condensers were not the problem except for the fact they are located about 4 to 7 inches away from the tubes. I broke my “no modifications” vow and added a couple screen by-passes directly at the tube sockets grounding them as closely to the socket as practicable. I’m not sure they helped much but I feel better that they’re there. In examining the tuning condensers I noticed the last (third) condenser was miss-aligned from the other two by about 30 degrees. “Ah ha!” I thought, “could this be the problem?” I loosened the pulley on the condenser shaft and moved the condenser a bit. Hand capacity was terrible so I used a foot long dowel to make the rough adjustment. After some experimenting with positioning the condenser I was satisfied I couldn’t do any better. Fortunately instability seemed to be minimized with all this adjustment and with the top shield and bottom cover in place.

The installation of the radio in the Kiel table was not much of a job. It just sits in there of it’s own weight and the speaker is held in place with a couple wooden blocks screwed into the base. I attached a make-shift antenna to the connector in the foot of the rear leg, plugged the power plug in, snapped on the new power switch I’d installed and bingo, the radio came to life. I tuned the whole band using the local/distance switch from time to time. Reception doesn’t knock your socks off, so-to-speak, but it’s pretty good for this vintage radio. Yes, there is some minor “growling” at various places on the dial but I choose to ignore that. The one thing I wish I would have done is remove the “tone-quality” condenser as AK chooses to call the condenser connected across the plates of the type 45 tubes. Turns out it is potted in the output transformer can. The high frequency response is quite lacking since the speaker is facing downward to the floor.



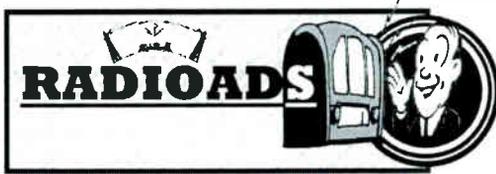
Restoration of an AK-55C (continued)

I suppose the carpeted floor doesn't help this situation either. I managed to remove the cover from the transformer can and see a "bump" where the capacitor is covered with tar but haven't tried to dig it out so as to clip one of its leads. I guess I'll just live with it because other radio restorations are calling.

I revel in the "oohs and aahs" from my friends and relatives as I show off this Kiel table radio but why do I suspect they're just humoring me?

See the Spring 2001 IHRS Bulletin for history on the KIEL Table Radio.

Herman Gross, IHRS member and current treasurer, is retired after 35 years as an Electrical Engineer for General Motors. Herman joined IHRS because he wanted to get two radios, a Majestic 72 like his parents had when he was a kid and a cathedral. He now has a large Delco Radio collection and asks "what did I do to myself?"



For Sale: Acme Earphones, \$20.00; 1947 Admiral 7T10-C, Original \$35.00; 1932 Aetna, Walnut, \$65.00; 1932 American, Walnut, \$65.00; 1946 Arvin 544A, white, \$55.00; Home made Balanced Amp, \$115.00; 1950 Crosley 10-138, Maroon, \$100.00; 1934 Crosley 5M3, Walnut, \$110.00; Emerson 108 Brown Bakelite, \$245.00; 1946 Farnsworth, ET-064, \$75.00; 1948 Farnsworth GT-051, white, \$125.00; 1932 International Kadette, \$150.00; 1932 Majestic Walnut, \$65.00; 1927 Peerless Speaker, Mahogany, \$45.00; 1934 Philco model 60, Walnut, \$150.00; 1942 Philco 42-PT95, Walnut, \$50.00; 1930 Philco 20, Walnut, \$250.00; 1931 Philco 70, Mahogany, \$350.00; 1939 RCA 9TX31, Bakelite, \$65.00; 1946 Pilotuner, Walnut, (Doesn't work) \$25.00; 1924 RCA 103 tapestry speaker, Black, \$100.00; Sentinel 309-1, White, \$45.00; 1949 Zenith 7H920, \$45.00; 1950 Zenith G725, Brown, \$35.00. All are subject to prior sale. Most of the radios have been restored and play nicely. My list of radios change from time to time depending upon what I fix up and what I sell. If interested contact Bill Arnold 1 Cindy Kay Drive, Washington, Indiana 47501 or phone 812-254-1702. Also email: bbarnold@excite.com 10/05

RADIOADS (continued)

For Sale: Photocopies: Manuals for B&K E-200D Sig. Gen, Radiola III, IIIA, 17, 18,25, 60, 100, 100A & 103 and other paper, some original. LSASE or email for list. Herman Gross, 1705 Gordon Drive, Kokomo, IN 46902 765-459-8308 Email: w9itt@sbcglobal.net 10/05

For Sale/Trade: See our new website for beautifully restored radios. Choose from deco tabletop models to gorgeous consoles. Always open to reasonable offers. Check us out at: www.tubularradio.com Actively collecting Zenith and other high-end 30's wooden sets. Bob Snively, Richmond, Indiana Phone: (765) 935-3746 E-mail: totallytubular@aol.com 10/05

Wanted: Any information about Marconi No. 3574 receiver (made by "MWTC, Ltd. London") using carborundum, valve, and perikon detectors. Needed for restoration project. George B. Clemans, 851 West Wooster St., Bowling Green, OH 43402. (419) 352-7198, clemans@bgnet.bgsu.edu. 10/05

FOR SALE: Reproduction Philco cathedral cabinet parts and reproduction cabinets for model 20, 21,70, 90. Grandfather clock finials: Philco 570, GE H-91, Crosley 124. Philco Colonial Clock top trim and finials. Rider's Radio Index, 1 through 23 -\$20.00 ppd. Books, SASE for list. All plus shipping. Philco cabinets, front panels, see page 22 in Volume 29, #4 the Winter edition. Other parts, inquire. Call or e-mail for details. Note new phone # and address. Dick Oliver c/o Antique Radio Service, 1725 Juniper Place, #3 10, Goshen IN 46526. New phone # (574) 537-3747, e-mail dolivears@aol.com 10/05

For Sale: Philips Radio tube books. I am currently reducing my stocks of my book "Illustrated History of Philips Radio Valves to 1935" and am offering signed copies to fellow IHRS members for \$10 cash including air mail postage.

Also available - Various American and British military tubes at \$5 each plus postage - JAN577W thyatron ? , 2K48 klystron, CV372, CV2868 thyatron, VU133 rectifier, CV73/11E1 pentode, CV415 small transmitting, CV398 trigatron, CV2902 gas diode, VU120 rectifier, SU2150 rectifier, VR118/KT2 tetrode, CV404 rectifier, CV354 low power triode, NGT2 argon relay, AWA (Australian) VT46/866A rectifier, Australian STC 3J160E small water cooled transmitting tube. I have about six of each tube available and most are new old stock. All 4 of the last listed tubes have stress cracks, no markings and are believed to be experimental. Photos are available and I welcome any enquiries.

Please reply to Fin Stewart, "Cockerdale", 380 Bulga Rd, Wingham, N.S.W. 2429, Australia.. email address - ferrowatte.m.380@bigpond.com 10/05

Interested in TV history? Want to see how it started? Try this Web site.
www.televisionexperimenters.com You'll be amazed how far we've come.
Pete Yanczer, 635 Bricken Place, Warson Woods, MO 63122-1613 10/05

For Sale: Indiana book: "From Crystal to Color, WFBM". This beautiful 190 page, hardcover book, published by Indianapolis station WFBM in 1964, tells the history of the station from 1924. First edition with dust jacket in excellent condition. \$18.00 Harry Blesy (630)789-1793 10/05

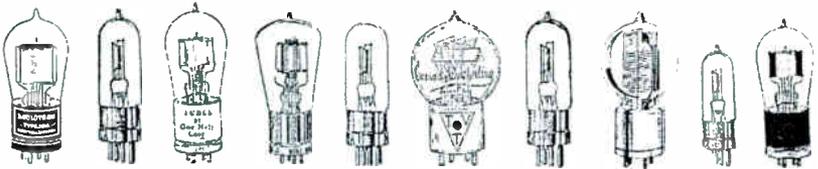


Write!

Radio ads - Free to IHRS members. Please limit them to 100 words. Unless we are advised otherwise, we will run ads for two issues. The exception would be where services, etc. are being listed. Please send your ads to the editor at the address shown on page 2. Please, type all ads before

submitting them. If you cannot submit an electronic copy, we can scan in a typed copy.

Articles for publication. Radio history or restoration and repair of radio, your own radio collection; someone else's radio collection; your recent or memorable radio find; your experience at a radio event. Pictures are encouraged. We can scan good quality color or B&W prints. Sending jpeg pictures on CD-R works well. Please do not email high resolution pictures, your editor is on dial-up and the download time is unbearable.



Join the Tube Collectors Association and receive the *Tube Collector* six times a year. Membership is \$20 for one year with multiple year rates. Visit the TCA at their website: www.tubecollectors.org or write to: Tube Collectors Association, Inc. PO Box 636, Ashland, OR 97520.


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Restoration of an AK/Kiel Table Radio

See page 19 for the story

