

Vol. 29

SPRING

No.1



WHAT IS IT???? See page 5



Officers

(revised 3/00)

Responsibilities

Activities, Business, Administration, & Publicity

George Freeman, Vice President 102 East Main Street Madison, Indiana 47250-3411 (812) 265-6878

Herman Gross, President

Kokomo, Indiana 46902 (765) 459-8308

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Fred Prohl. Secretary 3129 Lanam Ridge Road Nashville, Indiana 47448 (812) 988-1761

Dr. Michael Clark. Treasurer 6484 East 350, North Franklin, Indiana 46131 (317) 738-4649

Robert M. (Bob) O'Friel. Editor 7631 Cape Cod Circle Indianapolis, Indiana 46250-1844 (317) 849-4028

Dr. Ed Tavlor, Historian 245 North Oakland Avenue Indianapolis, Indiane, 48201-3360 (317) 638-1641

Sites and Dates of Meete

> Applications and Correspondence

Dues, Financial and Address changes, Please notify immediately of change of address

> News, Articles, Photos & Radio-Ads

Donations & Scrapbook Material

IHRS Museum Curator

Fred M. Schultz 1248 Lincolnway South Ligonier, Indiana 48767 (219) 894-3092 Bulletin Deadlines. News, Articles & Radio-ads, 2/15, 5/15, 8/15, 11/15.

The INDIANA HISTORICAL RADIO SOCIETY is a non-profit organization founded in 1971. Annual membership dues are \$15.00/year or 2 yrs./\$25.00, which includes the quarterly iHRS "BULLETIN". Radio-Ads are free to all members. Please include a S.A.S.E. when requesting information.

Comuns Events <u>ihrs/awa 29th Annual regional</u> spring fling radio festival.

Fri. 6/9, and Saturday 6/10, 2000 * Same great location as last year. Signature Inn East, Washington St. (U.S. 40) @ I-465.

Tel.# (317) 353-6966. Special rate, \$60.00 per night. Be sure you tell them you are with the IHRS so as to get the discount rate.

* = Only 2 days for the event this year. No early setups, (i.e. Thursday etc..) Spaces are numbered and registered and you will most likely be moved if you come in in advance and park in an assigned spot. See below, you can prepay and register.

Fri. 6/9 7:30 AM Registration and Flea Market opens.

Note that admission is free to non-dealers #. Dealers, \$10.00 per space outside on lot. Seller spaces are available in tent at a rate of \$15.00 per 8ft table for Friday only. (The auctions are held in the tent on Saturday.) The Friday vendors may move out of the tent spaces they have rented and may move into available outdoor spaces on Saturday at no additional charge. (# = see "Comments from the Editor" for additional insight.)

9:00 AM Contest room opens upstairs in Signature Inn.

12:00 noon Co-ed luncheon at Laughners' Cafeteria at 20 N. Franklin Rd. at Washington St.. Across the street and on the other side of I-465 from the Signature Inn.

1:30 Contest room closes for judging.

2:00 Seminars begin in upstairs meeting room at Signature. 5:45 IHRS Annual Awards banquet at Laughner's. Good food, low prices and Entertainment.(Yes we will have The Charleston Chasers again playing the music that was heard in the early days of Radio). 7:00 PM until ???? Contact: Dr. Mike Clark, (317) 738-4649, (after 6PM) or send your registration payment specifying how many spaces you want or tables you want to:Michael Clark, IHRS Treasurer, 6484 East 350 North, Franklin, IN 46131, (after 6PM call (317) 738-4649), or call Herman Gross, (765) 459-8308.

(see next page)

IHRS Northern Indiana Summer Meet, Saturday. August 19, 2000. High Dive Pavilion, 500 East Beardsley Ave., Elkhart. Indiana. Details to be announced later. Contact Ross

Smith, (219) 295-7770 or Terry Garl, (219) 679-4280, e-mail IHRSELK98@AOL.COM . Notice that this has been scheduled ahead of the Notre Dame Homecoming Game so as to avoid the motel booking conflicts that we faced in 1999. Every one has fun at this event so be sure to come. There will be the usual carry-in lunch and Equipment contests.

The IHRS "Fall Foliage" meet. Saturday, Oct.14, 2000. 7:30AM to ???? Riley Park, Greenfield, Indiana on Apple St. about 1 block north of U.S. 40 which is 1/4 mile East of State Route 9. Swap Meet and Equipment Contest details forthcoming. This is the Elections meet. Be there!! Contact: Herman Gross. (765) 459-8308 or Dr. Michael Clark, (317) 738-4649 for details.

Member Updates

An important event came about since the Winter Meet and the release of this publication. Gerald and Marjorie Fitzpatrick celebrated their 50th Wedding anniversary. Relatives and friends gathered together on Sunday, March 12th to honor the occasion. An invitation had been sent to the members of the IHRS to join in this great event but, unfortunately, circumstances of time prevented the communication. They have a great many friends in the club and the members may wish to send a belated card to honor the event. Their address is: Mr. and Mrs. Gerald Fitzpatrick, 38 Lakeshore, Clarksville, IN, 47129. In this day of short lived marriages, it is a pleasure to recognize the celebration. Our best to these two who always make it a successful meet when they attend.

To add on to the good news, Walt and Glenna Sanders will be celebrating their 50th Anniversary this October 14th. They have served the club well over the many years they have been members as well as having been active in various phases of management of the IHRS.

Don and Marilyn Johnston attended the Winter meet in February despite the threats referred to in Herman Gross's mention of the ice and other weather related hazards. Marilyn looked great after having had the major surgery on her knee replacement. It was great (see next page)

(member updates, continued)

to see them too. Ross Smith is coming along very nicely and you will find an article he submitted recently in this issue, proving that it's hard to keep a good man down. He is planning to be there for the big June Meet.

WANTED!

We are seeking articles for the "Bulletin" that would encompass technical approaches to the electronic repair of antique radios, or the aspects of the restoration of cabinets and/or finishes. These articles could enable the lay person to undertake the project of seeing some example of past radio excellence once again to look and operate as it did when it was new.

Share your talents and knowledge with those who have suddenly found the exciting world of collecting radios and need help to bring them back to life.

Please send any and all such material to:

Bob O'Friel, Editor, IHRS Bulletin 7631 Cape Cod Circle Indianapolis, IN 46250-1844

Information about our front cover. WHAT IS IT???

George Hausske, our member from Wheaton Illinois, sent in the photo of the unusual early Cathedral of an unknown manufacturer that appears on our front cover. The radio is a T.R.F. with a 24 RF amp, a 27 detector, a 27 first A.F. amp., a 112A output and an 80 rectifier. The speaker is an 8" magnetic unit which just fits snugly in the cabinet. It has a twisted cloth line cord and has crude dial markings of 10, 20, 30, etc. and no intermediate markings. He wonders if it is a depression product or whether anyone recognizes it. Send any replies, inquiries or other information to:

George E. Hausske, W9OLE

1922 Indiana Street, #86B

Wheaton, IL 60187-5932.

We look forward to hearing from the excellent talent we have in the club who have been there and have seen that.

Message From The President Herman Gross

Greetings to all! Preparations are well underway for the 29th Annual IHRS/AWA Spring Radio Festival. It will held in Indianapolis at the same location as last year....**Signature Inn East at I-465 and East Washington Street, (HWY-40).** The event will be for two days this year,

....Friday, June 9 and Saturday, June 10. Signature Inn East has already informed me that they have 29 rooms left from the block we reserved for IHRS members. The special rate is \$60.00 per night. Be sure to tell them you are from the IHRS when making your reservations. Bob O'Friel has lined up some great entertainment for this year again. Paul Irwin, who has the radio program, "Indiana Today", will entertain us with his "Old Radio Daze" presentation at the Friday noon co-ed luncheon at the near by Laughner's Cafeteria. For the evening "Awards Banquet", again at Laughner's, the Charleston Chasers will play your Dixieland and jazz favorites bringing back the sounds heard over those Atwater Kents, RCA Radiolas, Zeniths, Philcos of the late 20's and early 30's. Last year we had a ball. Don't miss this. You don't have to eat with us to enjoy either of these fine programs but the food at Laughner's is really great and not very expensive. If transportation is a problem, let me know.

We are experimenting with the auction. Last year, we didn't get very many interested participants and the auction was over fast. Some clubs have members send a list of items they think they will have available for auction and the club compiles these lists into one large advertisement and mails it to all members and other neighboring radio clubs. This has resulted in some very well attended auctions. We are doing the same. Please send me a list of items you think you will have available for the auction. This is not a contract, of course, and so it is non binding. **Please send your list to me by May 18th.** I will compile the list and have it mailed in advance of our Spring meet. Hopefully, this will spark some interest. I handed out a brochure to this effect at the Winter meet in February and, so far......you guessed it....no response! I think this year will tell the tale whether or not we continue to have an auction,

especially, a consignment auction. For Y2K, our Old Equipment Contest categories are: 1) Indiana made radios, 2) Novelty Transistor radios, 3) Farm Battery radios, 4) Crystal sets, and 5) an "Open" category. June 9 will be here soon so now's the time to think about entering your favorite radios that fit in these categories. We also have an interesting slate of seminar presenters. We will have a few "Hints and Kinks" to offer in these sessions, but I ask you to offer your hints as well. We all have something we could offer in this regard. Doesn't have to be long, just a couple of minutes. Don't be

(see next page)

bashful. Sign up now by calling me, send an e-mail, or writing to me to let me schedule you in our seminar on Friday. Even I will be offering some hints....most quite elementary, but very useful, at least to me. Now, if I can do it, so can you. (For other new items, see "Comments from the Editor".)

Here's our condensed schedule for the Spring Meet:

Friday, June 9, 7:30AMRegistration and Flea Market begins. Registration is **FREE**, but Flea Market spaces* are \$10.00 per outside space, (for both days) and \$15.00 per table under the tent, (Friday only under the tent).

> *=All spaces are numbered and assigned, you may not enter and set up until you are registered.

9:00 Contest Room opens upstairs in the Signature Inn. 12:00 Co-ed Luncheon at Laughner's with

entertainment by Paul Irwin.

1:30 Contest Room closes for judging.

2:00 Seminars begin in meeting room upstairs in Signature Inn.

5:45 IHRS Annual Awards Banquet at Laughners. Contest awards given at about 6:45 with the Charleston Chasers following at 7:00 until ????

Saturday, June 10

7:30 Registration and flea market opens.

8:45 Bring in items for both the donation and consignment auctions.

10:30 Start donation auction.

11:15 Start consignment auction. (Will start shortly after the donation auction).

To those who missed the Winter meet in February, you did miss a good one...but you know that because it has always been a super meet. Too bad the icy conditions loused up the plans for those of you who had planned to be there. We did miss you! As a result of the reduced attendance, the meet was over by 11:00 and we couldn't have a business meeting for lack of bodies. Business will go on as usual, won't it? Do you want things to remain status quo? Do you want changes? Do you want to help? We could use a bit of help for the Spring Meet. Are you promoting the IHRS? Do you think the IHRS will always be around? There are always a few members who will do what they can to keep things going, but you know of the dwindling attendance at many organizations and ours is no exception! I have one question to ask all of you. For multiple day meets, such as the spring meet, **must** we always hold it at a motel??? I leave you with these questions to ponder. I look forward to receiving your auction lists and, most of all, I look for-

ward to seeing you all at our "Spring Fling" big radio meet.

Respectfully, Herman Gross, IHRS President

Durward Kirby, An Indiana Legend

Although he was born in Covington, Kentucky, we have adopted him as one of our own since his Radio career began when he was a student at Purdue University on their radio station WBAA in 1931. He attended Arsenal Technical High School here and then went on to Lafayette.

He fell in love with broadcasting and went on to join the staff at WFBM, back when the studios were on the 2nd floor of what is now the Indianapolis Star Building. Coincidentally, his wife, Mary Paxton Young, was born in Indianapolis and worked for WFBM, WIBC, and WIRE but they were not to meet until the both of them showed up at WLW in Cincinnati. They married in 1941 and were together until she passed away in 1994. Durward contacted Glen Rogers, the then current manager for WBAA in 1987 to explain that he was trying to find a mike like he first used at WBAA for his mementos. Marshall Howenstein, one of the original





(Durward Kirby, cont'd)

founders of IHRS, was contacted and he began a search and was able to find the original mike itself which he had plated and presented the microphone to Durward in behalf of the IHRS. Durward was so moved by this, he sent a letter back stating, Dear Mr. Rogers, The Mike arrived and it's just the greatest. I told Marshall that it's something that I have tried that I have tried for years to locate, and NOW I've got it. Thanks to you and the generosity of the IHRS. It now occupies, and will continue to, a very prominent place in our home. I am so proud of it." Durward claimed many honors over the years in Radio and TV including being the announcer for the Gary Moore Variety Show, (along with Carol Burnet). His picture with the microphone in hand was featured on the cover of the *Bulletin* in the March 1988, (Volume 17, #1) edition.

Durward, had joined the IHRS after Marilyn Johnston brought him in to give a presentation at the May 21st meeting at Kokomo in 1993 for the Twenty Second IHRS/AWA Spring Meet. Durward had just released his autobiography, "My Life...Those Wonderful Years". He passed away on a Wednesday in March at the age of 88 in Fort Myers, Florida.

THE INDIANAPOLIS RADIO CLUB'S MARCH MEET

(The following is taken from their write up of the event with their permission). There are some who may not know that there is another club in Indy following the history of radio albeit with a different approach. That of the Radio Amateurs, (hams). Alex Whitaker, (KB91ZL), the past president of IHRS addressed the group with a program on the restoration of old radio receivers. He brought 4 "old time" radios with him two of which were turned on for listening after the presentation. Alex is a collector and restorer of old equipment who has been doing this for over 11 years. First, he covered the most common types of old radio design. Receivers of the following types were discussed: TRF, super hets, and reflex designs. He gave the group a list of hints and tips for restoring these units to operable condition. On very old units he recommended that one first......

- Replace all electrolytic capacitors
- Replace all paper capacitors
- * clean tuning capacitors with naval jelly and/or alcohol
- * use no-noise type spray on all controls and switches--though with due care
- * clean wooden veneer cabinets with Go-Jo and steel wool, carefully

* Polish and wax wooden cabinets with good household available products He also suggested a typical list of test equipment that one should have available for working on these old radios to include a good VOM, AM signal generator, oscilloscope, soldering irons- low and high wattage and the usual array of hand tools that are found in most ham shacks. Alex gave a very interesting and enthusiastic presentation and probably gained a few new recruits for the IHRS.

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Comments From the Editor Bob O'Friel

Well tax time has passed, (not without casualties). I hope that you passed through without much difficulty. One can't help wondering what they mean when they keep referring to a dubious "Paperwork Simplification Act". On to more important issues. Our feedback from the members seems to indicate that those that were last reported as having medical problems are moving along on the path to recovery including Ross Smith, who just notified me that it's "Spring Cleaning" time at his home as you will note from the number of items he has for sale in the Radioads section. Ross has also submitted a technical article which appears in this edition. There seems to be more responses and interest developing in that column. Remember to send your ads to me at the address noted on page 2.

I must apologize for the fact that the "e-mail" address listed on page 2 has had many problems in the past and, as a result, any e-mails sent to me at that address did not get through. Finding that others were having similar problems, I discontinued that particular service and hope to be "on-line" with a new service soon. Page 2 will reflect my success in that endeavor by means of a new, updated, listing. "Snail mail" is always there if all else fails. Actually, with rare exception, most mail that I receive or send seems to have a one working day turnaround, (sometimes 2). I have found that taking the "Bulletins" to the Castleton post office often gets them to the majority of the destinations in the state the next day. I did not have the same success with the Carmel post office.

The "Big Show" of the year is coming up and it is important to note here that there are some changes dictated by the need to attract dealers who will bring in more interesting material and the dedication to stay in place for a longer period than was evidenced in recent meets. One way to do that is to provide a larger potential audience/ customer base that will insure them of a better return on investment. Accordingly, there will be free admission for all the attendees that are not dealers. There will be no increase in Registration costs for the dealers compared to last year so, if they have more customers, they should be able to feel more successful about the meet. The lot is apportioned into numbered spaces and it will be to your advantage to register early so that you can have your space/s assigned. We are having a meeting on Saturday, April 29th with the club officers in order that the planning is solidified. This show represents a lot of ef-(continued, next page)

fort and the comments in the past have been more and more positive. We do need more volunteers for the "Spring Fling" meet. You may contact Herman Gross, Dr. Michael Clark or myself if you can assist with Registration, helping to setup tables, policing the lot to make sure all vendors have their passes, and/or helping to guide Vendors to their assigned spaces etc.. In view of the fact that only vendors are involved, Registration should be easy. The tasks involved are such that if each volunteer would give us a half hour of support, the overall mission would be complete.

We have lost some important people in the ranks of Radio Collectors. Dr. Ralph Muchow who had been a dentist in Elgin, Illinois, passed away on March 4th. He was more renowned for the wonderful collection of many great radios from the early days and had received many awards and visitors from all over the world. His son will continue manning the 3 story Museum that Dr. Muchow had established at the site of his dentist's office. He had been an important part of ARCI and will be missed by many. There are examples of very rare radios in addition to many E. H. Scott, Atwater Kent, RCA, Philco and other great and fabulous radios at the museum so it is well that someone who has a close interest in the hobby will take over.

One of our members, famous for his many years on the radio and TV, passed away at the age of 88 on March 15th. Durward Kirby's picture and story appear elsewhere in this edition.

Words of warning here, Ed Taylor, our historian, sent the following notice to me for the Bulletin which appeared in the December QST. <u>"Ham Convicted of Fraud In Bogus Equipment Offers"</u> is the headline. Michael T. Kirby, (no relation to Durward), a Florida ham, W5JBV, (ex K4-VFY) of Panama City, Florida, was arrested August 20 for scheming to defraud the U S mails and was sentenced to the next 5 years in prison after pleading no contest September 30 in Bay County, Florida's 14th Judicial Court. Panama City Police Detective Robert Luther said that this means he put himself on the mercy of the court. Kirby has a record of arrests and convictions for allegedly accepting payment for equipment he never delivered. Detective Luther said that Kirby's fraudulent dealings were extensive and that while Kirby received somewhat less than \$20,000 in proceeds from his illegal dealings, the attempted fraud is much greater than that.

The court required Kirby to make restitution "to as many victims as I can identify" Luther said. Some victims have already received refunds and those who have not received a refund or been in contact (see next page)

e next page 11 with authorities should send him "original proof" that fraud occurred. This means original documentation, letters, correspondence and similar material as well as the amount of money and the dates involved.

Those believing they were victimized by Kirby can e-mail Luther for more information at **panamaone@aol.com** or call him at:

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850-872-3129

Jim Fred, one of our long-time members and, I believe, one of our founders, sent an article that appeared in the Antique Week newspaper. In a recent auction, a total of 73 Catalin radios brought a total of \$180,000. Although this makes the average price to be \$2,465. the real shockers are, a Garold three ring radio, model 126 from 1940 brought \$11,000 and a light green General Television model 5B5 went for \$6,500. An Emerson "Little Miracle" radio in black and orange sold for \$7,700. Wow!!! What concerns me, (and I'm sure Jim), is what I perceive to be a case of some of the Antique collecting crowd hears that these radios are of extreme value so they set a high price when they acquire one without any technical evaluation and, thereby, drive the pricing upwards. I've seen similar instances of this in the field of record collecting. One dealer that I visited in Richmond, Indiana had a large group of 78's with a sign that stated that all records were \$1 each except Gennetts which were \$4.00 each. Gennett made many records and were forerunners in recording jazz. While it is true that an original "King Oliver" disc might be worth many times that figure, the "run of the mill" standards are of no interest to the vast majority of record collectors who would consider \$0.25 each as an overinvestment for most Gennett recordings. These dealers thus create an artificial market value for these 78 RPM discs. I agree with Jim, some of these Catalins do not contain special technical interests. They are typically the universal 5 tube AC-DC table model sets that happen to be in a very attractive housing. I do see that our hobby is expanding and that, as it grows, the prices of some of the rarer items continue to rise mainly because of the desire to have something like a Zenith 12 tube "Shutter Dial" in their collection. The prices of items such as the Zeniths, Atwater Kents. Scotts. and other rarer items will go up as the supply dissipates because of finding a home along with other collectibles. I think it is important to not drive pricing upwards through the emotional aspect that is part of the "Auction Scenario" fever that takes place at these events. You should consider the real value to you, the time it will take to repair and restore these units to make it an item you'll realize as the "Pride Of Ownership", 'Nuff said.

Bob O'Friel, Editor





GEORGE BURNS

How many remember listening to "MAXWELL HOUSE COFFEE TIME", (Thursday night radio) with George Burns and Gracie Allen? The incredible George Burns celebrated his one hundredth birthday with a collection of anecdotes that made him one of America's foremost comedians.

George Burns's career spanned the history of show business: vaudeville, nightclubs, radio and television. Here he has served up a treat for his fans in a book of his favorite and funniest stories. Each gem is on one or two pages. From recollections of events and performers who crossed his path - Al Jolson, Groucho Marx, Jack Benny, Judy Garland, Dean Martin and others, with many tales about his beloved Gracie.

Reminisce, enjoy, and laugh out loud.

Hardbound with 214 pages. ISBN: 0-399-14179-0



(Editor's note, in the last issue, I introduced Mr. Behr as Gary and published his first entry in the Bulletin as a new member. He gives us insight as to the challenges within the Radio Service Industry. His actual name is Cogley A. Hall and he goes under the identity of "Grey Behr". We welcome his followup story.)

TWO WAY WOES and GROUND PLANE BLUES By "Grey Behr"

In the early days of the citizen band two-way radio, I encountered many new problems to solve with our installations, in addition to the malfunctions of customers!

Alternator power sources were in the future on autos and trucks and the switch from 6-volt to 12 volt systems was only recent, at that time. The Globe transceivers in our service trucks had a persistent whine from the generator's brushes and adjusting the squelch control to combat it reduced sensitivity to uselessness.

My boss designed a "tank" filter to partially eliminate the hash. It consisted of a small coil form with heavy copper wire turns and a mica trimmer capacitor mounted inside, connected to the armature terminal of the generator with the capacitor. When properly adjusted......voila!, we had blessed quiet and good reception too,

The Globes were an early two-way radio but, the later Lafayette HE20A would become the darling of the DX'ers with its 12AW8 beam power output. My own personal car, a 1957 Ford Ranchero pick-up sported a cantankerous Regency regenerative transceiver--- infamous for its lack of crystal control.

Regency was an Indianapolis based manufacturer of early tube type twoway radios and the first "new fangled" transistor radios. Regency is sadly gone now as well as an early component manufacturer---Sarkes Tarzian of Bloomington. On the Indianapolis locale---I spent many a happy hour searching the clutter of the Esse Radio and military surplus store near downtown. Their store logo was painted on a surplus aircraft drop tank above the entrance door!

Back to the two-way radios, be warned of what is overhead when installing antenna's! I was returning from a service call in Kentucky and was aboard the auto-ferry boat in the middle of the Ohio River at Aurora Indiana, when I saw a very bright flash from a three story building in the town of Aurora. By the time we docked on the Indiana shore, the roof of the old hotel was in flames and the fire department was on the scene.

I later learned that a local man was erecting a ground plane antenna for his citizen-band base on that roof when the antenna in his hands contacted a high voltage service cable overhead!! His hands were severely burned, but his life was spared because the mast he held was in contact with the metal rain guttering on the roof, which also caused the fire. "Grey Behr"

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The Technical Corner Converting a 6 volt Farm Radio to 117 Volts AC Ross Smith

In the early 1930's before rural electrification, a large number of farm radios were built to operate on a single 6 volt wet "storage" battery. The "B" and "C" batteries were eliminated by using a synchronous self rectifying power supply. Examples of these sets include Zenith chassis 5405, Philco model 624, and RCA model M-34.

Purchasing a 6 volt automobile battery to operate the radio is not a practical solution to a power source. Conversion to a 117-volt power supply can easily be done with the purchase of one extra transformer and 2 solid state rectifiers. The transformer needed is a 6.3 volt, 6 ampere filament transformer that will feed into the original power transformer and replace the 6.3 volt DC circuit. Since the vibrator is no longer used, the new transformer may be mounted above the vibrator socket. Terminals on the vibrator socket can be identified and used for tiepoints in the new circuit.

The six leads from the original high voltage power transformer must be positively identified and wire color codes should be recorded. The center tapped primary will measure less than one ohm. The three leads from the secondary will check 400 to 700 ohms across the full winding and half of this figure at the center tap. Note that one end connection of the primary is not used. Using the outside primary winding would result in only half of the "B" plus output voltage.

The new 6.3 volt transformer will also light the tubes and pilot lights. Some sets use a combination of 6 volt and 2 volt tubes. Dropping resistors for the 2 volt tubes are already part of the original circuit and need not be changed.

When the radio uses all 2 volt filament tubes, such as the

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Philco Model 624 with type 19, 30, 32, and others, the filament supply should be direct current. The change to D.C. requires a rectifier and a small electrolytic capacitor across the filaments, (be sure to observe the polarity), in order to remove the possibility of 60 cycle hum. If tubes are the heater type with separate cathode connections, such as the Zenith chassis 5405, rectifiers are not needed. If the radio has a combination of filament and separate cathode heater tubes, only the filament type tubes, such as type 19 output tubes, need to be changed to 2 volt direct current.

Ross Smith, Phone (219) 295-7770.



Wanted! Technical articles such as the above, dealing with electronic and/or cabinet restoration. Send any and all to:Bob O'Friel, Editor to the address shown on page 2.

Vacuum Tube Cross Reference See note at bottom of page

Oftentimes I see postings in the radio newsgroups from people that are not sure if, for example, the globe type CX301A is equivalent to the generic type '01A. The short answer is "Yes". Before about 1932, three digit numbers were assigned to receiving types, and in some cases, the first digit signified the company. RCA's numbers were "200" numbers, and most small companies defaulted to these. As far as the other major players, Cunningham used "300" numbers, DeForest and Sparton used "400" numbers, and Arcturus used "100" numbers. Below is a table summarizing the equivalents, along with giving equivalents for some peculiar lettered types. Note that none of the Western Electric types with similar numbers are equivalent to these standard types below.

Standard #	RCA et al	Cunningham	Arcturus	DeForest	Sparton	CeCo	Van Horne
WD-11	WD-11	C-11		1	-		<u> </u>
WD-12	WD-12	C-12					1
WX-12	WX-12	CX-12		1			i:
00A	200A	300A		1	1		5VD
01A	201A	301A	101A	401A		A	5VA
10	210	310	-110	410		L-10	6P
12A	112A	112A	012A	412A		F-12A	5VC
20	120	220		420		E	
22	222	322	122	422		RF-22	
24A	224/224A	324/324A	122/124	424		AC-22	
26	226	326	126	426		M-26	
27	227	327	127/127A	427	427	N-27	-
30	230	330	130	430	·		1
31	231	331	131	431			
32	232	332	132	432			
33	233	333	133	433	1		
34	234	334	134	434		-	
35/51	235/251	335	551	435/451	435	Town of the state of	1
36	236	336	136/136A	436			t
37	237	337	137/137A	437			
38	238	338	138/138A	438		(
39/44	239/244	339	139A	439			
40	240	340	pm	440		G	1
45	245	345	145	445		L-45	
\$7	247	347	PZ	447			
50	250	350	150	1450	585/586	L-50	
7IA	171A	371A	071A	471B		J-71A	
30	280	380	180	480		R-80	5R
31	281	381	181	481		R-81	7.5R
9	199	299	099	499		В	3VB
374	874	374		i n			

When I attended one of the CARS events in Florence, Kentucky, Jim Cross of Vacuum Tubes Inc. gave a wonderful presentation on the history and progression of tubes. As part of it, he gave out the cross reference chart that appears (see next page bottom)

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Octal Tubes and Their Predecessors

It probably would not surprise anyone to learn that while there are thousands of different tube numbers, many of these are just the same electronic type with a different envelope or different basing. The list below gives 4, 5, 6, and 7 pin types and their octal equivalents. In some cases, the loktal and miniature equivalents are given also. The types given are electronically identical, except for some small interelectrode capacitance differences due to differences in construction, and, given the appropriate adaptor or socket change, will be direct substitutes. These vary from the well known (a 5Y3 is the octal equivalent of the 80) to the obscure (a 6Y7G is the octal equivalent of the type 79). Hopefully you will find the following table useful as some of these tubes become scarce.

4,5,6,7 Pin	Octal	Loktal	Miniature
1A4	1D5G		
1A6	1D7G		
184	1E5G		
185	1H6G		
1C6	1C7G		
1F4	1F5G		
1F6	1F7G		
5Z3	5U4G, 5X4G		
6A3	6B4G		
6A6	6N7G		
6A7	6A8G	7B8	
685	6N6G		
6B7	6B8G		
6D6	6U7G	l	
6F7	6P7G		
25Z5	25Z6G		
30	1H4G		
41	6K6G	7B5	6AR5
42	6F6G		
43	25A6G		
75	686G	7B6	
76	6P5G		
77	6J7G	1	
78	6K7G		

4.5.6,7 Pin	Octal	Loktal	Miniature
79	6Y7G		
80	5Y3G, 5Y4G		Ţ
83V	5V4G		
84/6Z4	34/6Z4 6X5G		6X4
85	6V7G		
950	1J5G		
951	1E5G		
	1A5GT	1LA4	
	1E4G	1LE3, 1LF3	
	1H5GT	1LH4	
	6G6G		6AK6
	6J5GT	7A4	
	6R7GT	7E6	
	6SF5	784	
	6SK7	7A7	
	6SL7GT	7F7	
	6SN7GT	7N7	
	6V6GT	7C5	
	12A8GT	14B8	
	12SN7GT	14N7	
	35Z4GT	35Z3	
	35Z5GT	35Y4	35W4
	117Z4GT		117Z3
	2050		2D21

(Vacuum Tube Cross Reference, continued)

on these 7 pages. He also granted IHRS the permission to copy this info for you and, speaking for IHRS, we give our thanks to him. See page 23 for Jim's name and address since he is a good source for those hard to get types. I am sure that you will want to keep this issue in a special spot around the shop for the valuable information that Jim has here.

2 Digit Tube Types: 1 to 100

You may have wondered why there are gaps in the numerical listing of tube numbers between 1 and 100. Most of us are familiar with the more common types like 24A, 26, and 27. But what happened to 25? The following listing contains some unusual types. Very short descriptions are given for common types. Notes: 1. The two digit designation is given here. Although many were issued as three digit numbers (e.g. UX213), they appear in later books and substitution lists as two digit numbers (e.g. 13 or 13). 2. The UV prefix indicates the base with four short pins (also called the Navy base). The UX prefix indicates four long pins, and the UY prefix indicates the standard five pin base. 3. Philco/Sylvania sold ballast tubes numbered 2 through 9 not listed here. 4. RF = radio frequency and mu = amplification factor.

00A Triode. Originally made by GE for RCA in late 1920 as the UV200 which had a 5V, 1A tungsten filament. Intended for use as a soft (slightly gassy) detector, it contained argon gas at a pressure of .05mm of mercury. The UX200A was introduced in 1926. the 200A differs from the 200 in that the 200A uses cesium vapor instead of argon and has a 5V, .25A filament.

01A Triode. Originally made by GE for RCA in late 1920 as the UV201 which had a pure tungsten 5V, 1A filament. A Westinghouse version, made briefly, was tubular with a 4V, .8A rating, then Westinghouse standardized their production. The UV201A with a 5V, .25A thoriated filament was introduced in 1922 and UX201A tubes were introduced in 1925.

1 Rectifier. RCA's type 1 is the mercury vapor version of the 1-V rectifier, and is equivalent to KenRad's type KR-1. As far as I know, the type 1 is only listed in a suppliment to RCA's receiving tube manual R-10.

The other early numbers in this series (202 through 209) were transmitting tubes of RCA or Western Electric, and the two digit designations between 2 and 10 were never applied to receiving tubes (although 1 through 9 were Philco ballasts).

10 Power triode.

11 Triode. 1930s era tube characteristic lists mean WD-11 when "11" is listed. This dry cell tube was introduced in 1922 and was originally made by Westinghouse for RCA. It has a unique four pin base with one large pin and three smaller pins. Its principal use was in the Radiola III and IIIA.

12 Triode. 1930s era tube characteristic lists often mean WD-12 when "12" is listed. This dry cell tube was introduced in 1923 and was originally made by Westinghouse for RCA. It is essentially a WD-11 on a standard UV base (four short pins). The WX-12 was issued in 1926, and is the same tube on a standard UX base (four long pins). Not to be confused with the UX112 or 112A.

12A Power triode. The UX112 was released in 1925. The 112 had a 5V, .5A filament, and was soon replaced by the 112A with a 5V, .25A filament. This is the power amplifier version of the 01A.

13 Full wave rectifier. Originally issued by RCA as the UX213, this was the forerunner of the type 80. The 13 and 80 are similar in characteristics, except that the 13 does not deliver as much current. So, you can substitute an 80 for a 13, but not a 13 for an 80.

14 Screen grid tetrode. The 14 was made by Philco/Sylvania, and is a 14V filament version of the type 24A. This was used in the Philco model 46 set designed for 110V DC operation

15 RF Pentode. introduced by Sylvania, but made by many others, this tube was used as a combined first detector/oscillator in early 1930s superheterodynes.



16 Half wave rectifier. RCA issued the type UV216 in 1921 as the rectifier version of the type UV202 transmitting tube. The UX version, the UX216B or 16B was introduced in 1925 The 16B was used in the first AC radiolas, and it was the forerunner of the 81. The 16B and 81 are similar in characteristics, except that the 16B does not deliver as much current. So, you can substitute an 81 for a 16B, but not a 16B for an 81. Both RCA and Perryman both made a 216A briefly, but the numbers were dropped to avoid confusion with the Western Electric 216A.

17 Triode. The 17 was made by Philco/Sylvania, and is a 14V filament version of the type 27. This was used in the Philco model 46 set designed for 110V DC operation.

18 Power pentode. The 18 is a 14V filament version of the type 42. It was designated for use as an output tube in transformerless sets, but was supplanted by the type 43, whose 25V filament was better suited for the purpose.

19 Twin triode (high mu). A 2V tube designed for class B audio. The 1J6 is the octal equivalent.

20 Power triode. Originally issued as the UX120, this is the audio output version of the UX199, and it bears the same relationship to the 99 as the 12A does to the 01A.

21 Triode. The RCA UX221 was the export version of the UX201A. It has the same characteristics, except that it only has a filament current of .06A. The Canadian 201C is equivalent.

22 Screen grid tetrode. This was the first screen grid tube. Designed for RF amplification, its directly heated 3.3V, .13A filament was meant for battery sets.

23 No known use.

24 Screen grid tetrode. The first AC screen grid tube. The 24A is an improved version.

25 Triode. UX (later UY) 225 was RCA's developmental type number for the type 27. The few that are known either have an unusual five pin base or a standard four pin base with a cap on top.

26 Triode. Essentially designed as an 01A for AC.

27 Triode. Cathode type intended for use as a detector. One of the first AC tubes.

28 Sold by the Shamrock Tube Company, this was a high mu version of the 27.

29 Double grid detector. Originally sold by Sylvania as the 229, and then just 29, this 2.5V tube was equivalent to the Wunderlich A made by Arcturus.

30 Triode. 2V, .06A general purpose tube for portable receivers. Can replace the 99 if the filament voltage is dropped. Originally issued as a tubular tube like the 99, but the small globe then small ST bulbs were later adopted.

31 Power triode. 2V, .13A power tube for portable receivers. Can replace the 20 if the filament voltage is dropped. Originally issued as a tubular tube like the 20, but the small globe then small ST bulbs were later adopted.

32 Screen grid tetrode. 2V, .06A designed for battery sets. 33 Power pentode. 2V, .26A designed for battery sets.

34 RF pentode. 2V, .06A designed for battery sets.

35 Screen grid tetrode. This tube was RCA's response to the variable mu 551, and is essentially a variable mu type 24A. The types 35 and 51 were so similar that the type numbers were merged to 35/51. See 51.

36 Screen grid tetrode designed for automobile receivers.

37 Triode designed for automobile receivers.

38 Power pentode designed for automobile receivers.

39 RF Pentode. See 44.

40 Triode. High mu equivalent of the 01A designed for resistance coupled circuits.

41 Power Pentode. The 6K6 is the octal equivalent.

42 Power pentode. The 6F6 is the octal equivalent. The 2A5 is the 2.5V version.

43 Power pentode. 25V tube designed for transformerless sets. The 25A6 is the octal equivalent.

44 RF Pentode. Same as type 39 with a higher cutoff.

45 Power triode.

46 Power tetrode. Similar to the 47, except that no suppresser grid is provided.

47 Power pentode. Similar to type 46, except that the 46 has no suppresser grid.

48 Power tetrode. 30V, 0.4A filament. Was used mostly in theater amplifiers.

49 Power tetrode. 2V, 0.12A filament.

50 Power triode. As the S-21 sized globe or the ST-19 bulb, this was the largest tube used in home receivers.

51 Screen grid tetrode. Originally issued as the 551 by Arcturus, this was the first variable mu tube. This tubes characteristics were very similar to the type 35, and eventually the two types were merged as type 35/51. Several companies, among them Raytheon and Sylvania made both a 551 and a 235.

52 Dual grid triode. This tube was introduced by Raytheon.

53 Twin triode. The 6A6 is the 6.3V version.

54 Not a receiving type. When seen, usually refers to a Heinz and Kaufman transmitting type.

55 Duodiode triode. The 85 is the 6.3V version. The 75 is similar to both the 55 and the 85, except that the triode sections of the 55 and 85 have a mu of 8.3, while that of the 75 has a mu of 100.

56 Triode. Similar to type 27, except has a higher mu (13.8 vs 9) and draws less current (1A vs 1.75A).

57 Sharp cutoff RF pentode. The 6C6 is the 6.3V version.

58 Remote cutoff RF pentode. The 6D6 is the 6.3V version.

59 Power pentode.

59B Power pentode. Filamentary version of type 59 used in Majestic receivers.

60, 61, 62, 63 - No known use.

21

64 Screen grid tetrode. The National Union types 64, 65, 67, and 68 were the original 6.3V tubes designed for automobile radios. All were rated for 6.3V, .4A service. All of these tubes that I have seen are S-14 globes (the size of a globe 24A). However, various literature states that they were also issues in the S-12 size (the size of a globe 56). The 64 was supplanted by the type 36 which is equivalent, except for the 6.3V, .3A filament.

65 RF pentode. The 65 was supplanted by the type 39/44 which is similar, except for the 6.3V, .3A filament. See type 64.

66 Not used for receiving tubes. Sometimes used to refer to the 866 rectifier. I have seen an 866 made by Hytron that just says "66" within the octagon.

67 Triode. The 67 was supplanted by the type 37 which is equivalent, except for the 6.3V, .3A filament. See type 64.

68 Power pentode. The 68 was supplanted by the type 38 which is equivalent, except for the 6.3V, .3A filament. See type 64.

69 Double grid detector. Made by Sylvania, this 6.3V tube was equivalent to the Wunderlich A Auto made by Arcturus.

70 Double grid detector. Made by Sylvania, this tube was probably equivalent to the Wunderlich B made by Arcturus.

71A Power triode. Originally issued as the UX171 with a 5V, .5A tungsten filament, it was soon replaced by the UX171A with a 5V, .25A oxide filament. Sylvania made special 10V filament type 171s that were used in a DayFan 110V DC set.

72 Not used for receiving tubes. When listed, usually refers to Raytheon RK-72 rectifier.

73 Not used for receiving tubes. When listed, usually refers to Raytheon RK-73 rectifier.

74 Not normally used for receiving types. Infrequently used in reference to the type 874 voltage regulator.

75 Duodiode triode. The 2A6 is the 2.5V version. See also type 55. A 6F5 triode and 6H6 duodiode are together equivalent to a 75.

76 Triode. 6.37 version of type 56. The 6P5 is the octal equivalent.

77 Sharp cutoff RF pentode. The 6J7 is the octal equivalent.

78 Remote cutoff RF pentode. The 6K7 is the octal equivalent.

79 Twin triode. 6Y7G is the octal equivalent.

80 Full wave rectifier. 5Y3G or GT is the octal equivalent.

81 Half wave rectifier. Simply a type 50 with no grid.

82 Full wave mercury vapor rectifier. The 82 is a 2.5V version of the 83, and handles only half the power.

83 Full wave mercury vapor rectifier. The 83 is a 5V version of the 82, and handles twice the power.

83V Full wave rectifier. A high vacuum version of the 83, but not usually interchangeable due to lower ratings. 5V4 is the octal equivalent.

84 Full wave rectifier. Also known as the 6Z4.

85 Duodiode triode. See type 55.

86 No known US use, although JRC did issue a mercury vapor rectifier type 986 which is sometimes referred to as type '86, and there is a Canadian type 86.

87 Canadian tetrode.

88 Full wave rectifier. This mercury vapor tube was originally issued by Perryman as the 588, and was intended as a mercury vapor substitute for the 80.

89 Power pentode. Most often seen as 89Y, the "Y" suffix indicating a low loss (usually micanol) base.

90 Double grid detector. Made by KenRad, this 2.5V tube was equivalent to the Wunderlich A made by Arcturus. KenRad also sold this type as the KR-20.

291 Twin triode. This is the 12.6V version of the Speed 295. See 295. Note that RCA sold an industrial thyratron as a type 91.

92 Double grid detector. Made by KenRad, this 6.3V tube was equivalent to the Wunderlich A Auto made by Arcturus. KenRad also sold this tube as the type KR-22.

293 Twin triode. This is the 6.3V automobile version of the Speed 295. See 95.

94 No known use.

95 Power pentode. This is equivalent to a 2A5. KenRad sold this as the KR-25. 295 Twin triode. Originally issued by Speed (Cable Supply Co.) as the 295 "triple twin". This is essentially a 27 coupled to a 45 in one envelope.

96 Half wave rectifier. Made by KenRad, this 6.3V mercury vapor tube was equivalent to and essentially replaced by the vacuum type 1-V. KenRad also sold this tube as the type KR-1.

98 Full wave rectifier. This 6.3V mercury vapor tube was equivalent to and essentially replaced by the vacuum type 84. Ker.Rad also sold this tube as the type KR-28.

99 Triode. General purpose battery triode originally made by GE for RCA and issued as the UV199, later UX199.

Editor's Note. Once again, our thanks to Jim for supplying this data. Bob O'Friel.

For a good local source of those hard to find types as well as data, contact: **Jim Cross**

Vacuum Tubes Inc. 3246 Floridale Lane

Cincinnati, OH 45239-6203

Ph./FAX (513)385-3855 Email: jim@vacuumtubesinc.com

Website: http://www.vacuumtubesinc.com

RADIOADS

These ads are 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.

Help: I am restoring a Sparton 557 Blue Mirror Sleigh Radio. The wood part of the cabinet has a black finish that is smooth to the touch but has a crystalline appearance. It needs to be refinished. Can anyone out there do this refinishing, or tell me how to do it and where to get the right paint, lacquer, or whatever it is. I want this to be authentic. Ted Rogers, 6938 E. Waco Drive, Syracuse, IN 46567. Phone 219-457-8886, Fax 219-457-8776. Thanks!!

Wanted: Looking for any Skylark, Imperial, LePilot, and Lyradion battery radios of the 1920's. Also seeking any Wilson and Fairbanks-Morse radios of the 1930's. If anyone has information or literature on these Indiana brand radios or if you have nice examples of these radios that I can use in illustrating future articles, please contact me.

Michael Feldt, 12035 Somerset Way East, Carmel, IN 46033 Phone: (317) 844-0635 e-mail: feldtm@iquest.net

For Sale: Scott 23 tube Imperial, chassis mint, cabinet excellent, plays great, w/manual - \$2,500 or BO. Sorry, pickup only. Don Johnston, 3621 E. 700N, Windfall, IN, 46076 Phone: (765) 945-7735

(see next page)

For Sale: McMurdo-Silver Masterpiece V in a beautiful inlaid cabinet. Don Patterson and I both think that the cabinet is an Ozarka cabinet that was professionally redone for this set. This is in beautiful condition. (It's for sale because I don't need 3 of these.)

Also, Rock-ola "Super Rocket" model 1434 jukebox, set up for 78's. Needs restoration. \$600.00.

Coke Machine, Cavalier Model CSS173. Refrigeration works and it's all there, including the key. Holds a lot of 12 oz. (or smaller bottles). \$250.00.

These items, including the McMurdo Silver, Rock-ola Juke Box, and the Coke Machine, may be seen by appointment, but bring money. Mike Clark, 6484 East 350 North, Franklin, IN 46131. Tel # (317) 738-4649, e-mail maclark@iupui.edu.

FOR SALE: Radio schematics-\$2.50. Rider's radio and TV manuals, Xerox copies of service manuals, Zenith, 942 pp-\$65, Philco, 300pp-\$30, Crosley, 322pp-\$30, Atwater Kent, 463pp-\$35.00, Rider's Radio Index, 1 through 23-\$25.00. Books, SASE for list. All plus shipping. Philco cabinets, front panels, colonial clock top trim and finials, etc.. Other parts....inquire. (Plus shipping) Dick Oliver, 28604 Schwalm Dr., Elkhart. IN 46517. (219) 522-4516

FOR SALE: Photocopies: Hallicrafters S-22, Zenith 1000-1, Radiola III, 18, 60, 100A, 103, Majestic 52, and other radio, tube, and Test Equipment manuals. Also some Novelty radios. LSASE for list. WANTED: Good escutcheon for Philco 42-355 or 42-390, (9 pushbuttons) and original (or tracing) of the back for an Emerson EP-375, ("5+1").

Herman Gross, 1705 Gordon Dr. Kokomo, IN 46902. (765) 459-8308, e-mail w9itt@juno.com

(see next page)

(RADIOADS, continued)

FOR SALE: Pocket transistor radios. Send SASE for list. Serge L. Krauss, 141 Homerun Ave., Elkhart, IN 46516-5027.

Wanted: Aurora plastic radios similar to the one shown in the photo. The one I really want is a one tube model in a case identical to this. They were sold as a kit to meet Boy Scout Radio Badge requirements. There are other models that I am also probably interested in so contact me. Mike Clark, 6484 East 350 North, Franklin, IN 46131, (317) 738-4649, e-mail maclark@ iupui.edu





AUCTION NOTICE

A PROMINENT IHRS MEMBER HAS DONATED SEVERAL RADIOS AND OTHER EQUIPMENT TO BE AUCTIONED AT THE <u>SPRING MEET</u> FOR THE <u>BENEFIT OF OUR IHRS</u> <u>MUSEUM</u>. IN ADDITION, THERE WILL BE RADIOS, TEST EQUIPMENT AND OTHER <u>DUPLICATE</u> ITEMS THAT ARE IN STORAGE AT THE MUSEUM THAT WILL BE OFFERED FOR AUCTION WITH PROCEEDS TO GO TO OUR MUSEUM. HERE IS A GOOD OPPORTUNITY FOR THOSE OF US WITH EXCESS ARTICLES TO HELP WITH THE MAINTENANCE OF THE IHRS MUSEUM. PLEASE CHECK YOUR "WAREHOUSES" FOR ITEMS THAT YOU COULD DONATE TO THE CAUSE. ALSO, CONTRIBUTIONS TO OUR DONATION AUCTION TO HELP WITH THE RUNNING OF THE IHRS WILL BE APPRECIATED. KEEP BOTH OF THESE EVENTS IN MIND.

FREE ADVERTISING!! SEND ME YOUR TENTATIVE LISTS OF ITEMS YOU THINK YOU WILL AUCTION AT EITHER THE DONATION OR CONSIGNMENT AUCTIONS. DO IT BY MAY 19th AND IHRS WILL MAIL A COMBINED LISTING TO ALL MEMBERS AND ADJACENT RADIO CLUBS IN AN EFFORT TO INCREASE INTEREST IN THE AUCTIONS AT OUR SPRING MEET IN INDY. DON'T DELAY GETTING YOUR LIST TO ME. THESE LISTS ARE NOT "CONTRACTS", YOU CAN'T BE HELD TO WHAT YOU SEND. THIS IS JUST TO GET AN IDEA OF WHAT YOU MAY WANT TO AUCTION AND TO ADVERTISE IT FREE FOR YOU. IF YOU DON'T WANT TO BE SPECIFIC THEN TELL US ABOUT <u>HOW MANY ITEMS</u> YOU PLAN TO ENTER IN THE AUCTION. PLEASE SUPPORT YOUR CLUB IN THIS EFFORT. SEND YOUR LIST TO ME, HERMAN GROSS, 1705 GORDON DRIVE, KOKOMO, IN 46902, OR AT MY NEW E-MAIL ADDRESS: <u>w9itt@mindspring.com</u>.

(Radioads. Continued)

MESSAGE: We have slowed down, but we are still making WD-11 adapters, etc., plug-in coil forms, rebuilding audio transformers and doing all of the things we have done for 21 years. James Fred, 5355 S. 275W, Cutler IN 46920. (765) 268-2214.

SERVICES: Hickok test equipment, repair and calibration. Factory authorized contact person. Wendall E. Hall, 3 Mockingbird Circle, Jeffersonville, IN 47130. Shop phone/fax, (812)256-2090, home phone, (812) 282-9709.

WANTED: Music Minus One (MMO) musicians background LP records. Thanks. Walter Sanders, 15 Todd Drive, Terre Haute. IN, 47803. Tel. # (812) 877-2643.

FOR SALE: Magnavox 15" dynamic speaker, no rust or rips, good 500 ohm field--\$20.00 postpaid. George Hausske, 1922 E. Indiana St., Wheaton, IL 60187. Phone (630-668-3845.

WANTED: Pioneer RT-909 tape deck or any similar deck with 4 track stereo recording/playback capabilities operating at 3 3/4IPS and 7.5 IPS with the ability to handle the large 10 1/2 inch reels. Need ASAP. Bob O'Friel, 7631 Cape Cod Circle, Indianapolis, IN 46250-1844. Phone (317) 849-4028. Would consider Akai 6635D or 6636 or Revox B77. Also looking for Pioneer SA8500 integrated amplifier.

WANTED:Any source of information on Lyradian Manufacturing of Mishawauka, Indiana. Looking for advertising, documentation, or personal knowledge of this Indiana Radio manufacturer of the 20's. Fred Prohl, 3129 Lanam Ridge Road, Nashville, IN 47448, (812)988-1761, e-mail = fprohl@worldnet.att.net

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(RADIOADS, continued)

WANTED: Copy (or original) Manual or Schematic for Sargent 1939 Streamliner Receiver. Harry Blesy, N9CQX 9S740 Clarendon Hills Road, Hinsdale, IL 602521 Phone/FAX: (630) 789-1793

FOR SALE:Radio Sets & Speakers: 1) Colin B. Kennedy Type 281 with new top and label. Type 521 replica two-stage amplifier included. \$900. 2) Sparton 6-15 Neutrodyne, first Sparton 7 tube AC set, uses C-401 tubes. Operating. \$195. 3) Stewart Warner 301A Short Wave Converter with coils. Not restored. Has wood \$50. 4)Philco Mantel Clock/Radio with model 51 cabinet. chassis, restored and working. \$450. 5) Steinite Crystal set, 8" X 7", a ribbon winner. \$175. 6) Firestone 4-C-16, 5 tube AC-DC-Battery portable in a beautiful Tan Marble plastic cabinet. Restored. \$30. 7) Westinghouse RA tuner, less variometer, looks good on the shelf. \$50. 8) Westinghouse DA 3 tube detector amplifier with good tubes. \$225. 9) Peerless Gothic Magnetic Speaker, needs cord. Not restored. \$35. 10) Sonora horn speaker in mahogany box, 15" X 8" X 9 1/2" high, like new. \$95. Can and will deliver to IHRS Meet in June or to AWA Meet in September. Otherwise, extra for shipping. Ross Smith, 1133 Strong Ave., Elkhart, IN 46514. Phone # (219) 295-7770

Send all ads to: Bob O'Friel, Editor, IHRS Bulletin, 7631 Cape Cod Circle Indianapolis, IN 46250-1844 Be sure to attend the IHRS/AWA 29th Annual Regional

"Spring Fling" Radio Festival in Indianapolis, Friday, 6/9 and Saturday, 6/10. See "Coming Events" or "Comments from the Editor" for details.

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