

# SOUND WAVES

VRPS SUMMER 2012

## FROM THE PRESIDENT



By Jim Sargent

Wow!!! 32 years and I finally went and done it....I submitted my retirement papers, left AT&T in mid-July

and I am now officially retired! I have very few regrets because I have had some really wonderful job opportunities and traveled places and met folks I will never forget. I suppose now I will have all the time in the world to do all the things I have wanted to do, but I could not find the time to do. Okay, according to my

already retired friends, I have a rude awakening coming...but at least I can dream a little while longer. Now, back to reality...

We are entering the busy summer season where swap meets, auctions, and radio conventions abound. You do not have to look far from home to see activities that will fill your dance card. Our monthly meetings offer exceptional opportunities to network with other collectors and learn something new about the hobby. Our Annual Repair Session (July's meeting) is a perfect example of what I am talking about. We have talented, knowledgeable folks in our organization who are willing to share what they know. Bring your questions and your broken radios, and we will show you how to troubleshoot and, hopefully, repair your set. This will be a great follow up to June's meeting where Bret Menassa presented a program on aligning radios. This is a step in the restoration process that is critical to getting the most performance from your set, yet is often skipped or performed incorrectly because of lack of understanding. For several years now our meetings have been drawing 30+ members each month, thanks in no small part to the efforts of Mike Grimes, who plans those meetings. When you see Mike, or any of the directors, tell them how much you appreciate their effort.

Looking across the rest of the summer, I will be heading to Willowbrook (outside of Chicago) for the annual Antique Radio Club of Illinois Radiofest (we call it a convention). This three day event is a must if you have only one event you can make during the vacation season. Again this year, I will be calling their auction on the first evening to kick off the full slate of activities. They really do a good job, and this year there will be a special display recognizing the 100th anniversary of the sinking of the Titanic and the role that radio played in that tragedy. Trust me, there will be some really wonderful and early items on display. I will attempt to take a lot of pictures and present them at a future VRPS meeting.

Oh, and lest I forget, there is a notice elsewhere in this issue about an auction I will be doing in Little Rock, Arkansas, in October. This auction will primarily focus on ham radios and military radios, often referred to fondly as "boat anchors". Watch for details on my website, [www.sargentauction.com](http://www.sargentauction.com)

Well, enough for now. Gotta go find out what my wife is wanting me to do. Somehow she found out I am retired!....Good Hunting

## SARGENT AUCTION SERVICE PRESENTS

Another Great Radio Auction  
October 13, 2012

Auction starts at 10 AM CST

Doors open for viewing at 8:30 AM on the  
day of the sale.

Auction location - 155 Cornerstone Road Alexander, Arkansas

This is a western suburb of Little Rock. Directions:

From I 40 take I 430 or I 440 to I 30W. (you can also take I 30 from I 40 through downtown) Take I 30W to Exit 126 Alexander Road, turn left to

Cornerstone Road (first street on right) turn right 500 feet to Fun Dunk (business) Turn right into Fun Dunk parking lot 147 Cornerstone, building at rear is 155 cornerstone, auction is in unit "B".

This sale will include something for all radio collectors, including ham radio, military radios and boat anchor radios.

There is plenty of food and lodging near by. Check out the partial photo lineup at [www.sargentauction.com](http://www.sargentauction.com)

Terms: Cash, checks, VISA, MasterCard and Discover

5% buyer's premium for all sales

Sargent Auction Service

Jim Sargent, Auctioneer, TX License 16135

Member NAA, TAA, AWA, VRPS, HVRA, ARRL, QCWA, MTC

200 Thomas Road Granbury, TX 76049-1921

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Watch this website for more information and updates at [www.sargentauction.com](http://www.sargentauction.com)



## VRPS

# CONVENTION 2012

will be November 16-18, 2012. It's not too early to make your hotel reservations

### THE HAMPTON INN & SUITES 1700 RODEO DRIVE MESQUITE, TX 75149

You can use the direct link on the **VRPS WEB SITE ([WWW.VRPS.ORG](http://WWW.VRPS.ORG)) TO MAKE YOUR RESERVATIONS OR CALL (972) 329-3100 OR 1-800-HAMPTON.**

The VRPS has arranged a special discount room rate. Room rates are \$86.00 (plus tax) for single/double rooms or \$106.00 (plus tax) for suites. You must make your reservations by midnight, October 20, 2012 and state that you are there for the Vintage Radio Convention to take advantage of this special rate.

## NOTICE

This year we will be offering a choice of entrees at the Awards Banquet. The choices are below. Read them over and start thinking about which one you would like. The Convention packet will include a form with the choices. When it arrives, please fill it out with your choice and return it promptly with your registration.

1. Pasta Primavera (vegetarian)
2. Grilled Tilapia with grilled vegetables and rice pilaf
3. Santa Fe Chicken (salsa & avocado on top) with garlic mashed potatoes

Caesar salad and dessert will be included with the meal.

THE THEME FOR CONVENTION 2012 WILL BE MOTOROLA. HERE ARE THE CONTEST CATEGORIES FOR THIS YEAR. PLEASE READ THEM OVER AS THERE ARE SOME CHANGES FROM LAST YEAR.

- |  |  |
|--|--|
| 1. Crystal Radios                                    | 11. Vacuum Tubes   |
| 2. Battery Receivers Pre- 1928                       | 12. Restoration Category-Must Include Documentation (Pictures, etc.) |
| 3. AC Table Radios Pre WWII                          | 13. Open Category (Items That Don't Fit In Other Categories)         |
| 4. AC/DC Tube Radios                                 | 14. Car Radios (Tube Type Only)                                      |
| 5. Transistor Radios Pre 1965                        | 15. Theme Category- Motorola (Can Include Non-Radio Items)           |
| 6. Phonographs and Related Accessories Pre-1928      | 16. Radio-Related Advertising Items and Ephemera                     |
| 7. Loudspeakers/Microphones                          | 17. Early Homebrew/Kit Radios  |
| 8. Military/Amateur Radio Equipment (Tube Type Only) | 18. First Time Contest Entry From a VRPS Member                      |
| 9. Novelty Radios (Tube or Transistor)               |  |
| 10. Art Deco/Catalin Radios                          |  |

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## AC/DC RECEIVER TO TRANSMITTER CONVERSION

By Mike McCarty

The August meeting will be a demonstration of how to convert a common AC/DC radio to an AM transmitter. The members are encouraged to bring the necessary parts and tools (see below) to the meeting and modify their own radio. For members planning to attend the meeting the following materials are necessary to perform the AC/DC radio to transmitter conversion. For those not attending the meeting more information can be found at:

<http://smg.photobucket.com/albums/v652/ranickel/AA5%20Transmitter/>

<http://www.youtube.com/watch?v=6bdqa9tuu1s&feature=plcp>

Materials Necessary to Perform AC/DC Receiver to Transmitter Conversion:

AC/DC Floating Ground NOT HOT CHASSIS[\*] Receiver in Good Operating Condition with one of the Following Tube Line-ups (schematic would be helpful)

Remove the chassis from the case, but bring it and the knobs with you.

12SA7 12SK7 12SQ7 50L6GT 35Z5GT/35Z4GT

12BE6 12BA6 12AV6/12AT6 50C5 35W4

Ten feet of stranded high voltage insulated wire.

100-300 pF ceramic or mica capacitor. You may be able to get this from the back of the volume control.

Optionally, a 10 ohm 2W resistor, to replace the speaker.

Insulated electrical tape.

3VAC to 24VAC (not DC) output "wall wart" style transformer.

Extension cord, length unimportant. Just the last foot or so will be used to connect the "wall wart" to the volume control.

Normal tools necessary for electronics work; solder, soldering iron, needle nose pliers, wire cutters and strippers, etc.

[\*] With the receiver cool and unplugged, turn it on and measure the resistance

from each power plug prong to chassis. If the resistance from either prong to the chassis is less than 200,000 ohms, then the receiver is unsuitable for this purpose.

## NOTES FROM THE APRIL 21, 2012 MEETING

## Bill McKeown

Club vice-president Randy James conducted the meeting at the Garden Center location in Irving, TX. Randy informed us that the club website (vrps.org) has been greatly improved. He requested that members access the “Members” page where you can look at the membership roster and provide corrections to your personal information as it appears on the roster. He asked that we help to keep it current by using the link to the update form. The website now provides a link to the YouTube video of the Jim Sargent interview by the Dallas Morning News during our November 2011 convention. He reminded us that the June 16 meeting will give us an alignment process refresher course and will include a showing of Bret Menassa’s DVD on the subject. Another reminder was that we have another of the ever-popular Repair Sessions coming up on July 21. Be sure to test your tubes, if you can. The club has decided to move the annual summer swap meet from August to September, hoping for more comfortable weather a month later.

The purpose of this meeting was to conduct an “Ugliest Radio” contest. Randy introduced our program organizer Mike Grimes, who announced the rules. Eligible entries were to be as-found or as-built (and not deliberately damaged or disfigured to become ugly). The winner was to be determined by secret ballot. Many members had been made aware of this contest and brought their entries. Each owner described his entry and told the story about its acquisition. Among others, Mike Grimes showed his Mantola wood radio; Ron Daniel, a Bendix clock radio with a lamp on top and Howard Stone a pre-1920 hard rubber panel similar to a DeForest interpanel unit. John Isbell showed his Philco 46-421 wood table radio with white knobs. Another entry was a radio-in-a-crate (literally). Someone had taken an old Zenith radio and used a wooden crate as a new cabinet for it, featuring a fold-down front. Jon Butz-Fischina was astounded to see Mike Grimes’ Stromberg Carlson radio that he had worked on in New Jersey 19 years ago. The owner was from Princeton. The radio uses five type 201A tubes. Now it’s going back to New Jersey with Jon, after his having made a deal with Mike. (Jon has recently moved back to NJ). Jon also showed a GE radio with an inverted chassis. The cabinet has disappearing doors and a matching humidor.

All of the entries had been sequentially numbered for the voting process. Members voted for their “most ugly” favorite by placing its number on a slip of paper and placing it in the ballot jar. The winner, with the most votes, was John Isbell’s Philco 46-421. At one time John said that it had a “Take Me – Free” sign on it, with no takers.



**The Winner of the contest was John Isbell (far left) who received a cash prize and the “Most Uglyest Radio” trophy designed by Mary Ann Caruth.**

## NOTES FROM THE FEBRUARY 18, 2012 MEETING

Bill McKeown

Club president Jim Sargent conducted the meeting at the Garden Center location in Irving, TX. He reminded us of the upcoming spring auction to be held at the Senter East location. The location has turned out to be a lot more convenient and lower cost than the Grapevine Convention Center was for earlier auctions. He also said he would have yet another flatbed trailer load of items donated to the club and for auction in the parking lot before the big auction. He noted that the April meeting would feature a contest for the "ugliest radio" and that members should bring one item each to enter the contest.

The program topic for the meeting was car radios, and Jim introduced the program presenter Jake Fleming. He started out in Mt. Pleasant, TX teaching Shop at the high school. He had a car-full of radio parts that he delivered for the Crabtree stores. Later, he worked at Moore Chevrolet and other car dealers, during the 1947-1948 period, installing and repairing radios. In 1948, Jake became a chief technician for RCA and was with them from 1948 to 1985. He recalled how the Buick and Caddy radios sounded so good with their big speakers and push-pull audio output stages. Singer Mel Torme wanted an RCA 45 RPM record player installed in his Corvette, so Jake was tasked with getting it done. He displayed several different radio vibrators dating from the 30's to the 60's (by 1961 they all had 12 volt tubes and did not need vibrators). The most common were the 4-pin type, which required a rectifier tube (usually 6X5 or 0Z4). Then there was the 6-pin synchronous type used in Delco radios. Those have a set of contacts that provide mechanical rectification. Vibrators had various types of sound-deadening provisions, some with rubber padding, so they didn't hum too loudly. Jake gave us tips on how to clean the contacts (use only a metal file) and how to adjust the contacts "live" while maximizing the DC supply voltage. If all else fails, ARC sells potted solid-state replacements. He revealed the secret of operation for the Signal Seeker function (touch-bar or foot-switch triggered) - a solenoid is energized to pull the tuning device all the way to one end of travel against a spring. Then the solenoid is de-energized and the spring starts it back against a damper that regulates the speed. When the AVC voltage exceeds an adjustable negative threshold value, a brake halts the motion, holding the station. He warned us that the '51 and '52 Ford Sylvania radios used the infamous mica wafers inside the I.F. cans. Noise interference from ignition systems was a common problem. It was important to have a good connection to the antenna wire shield and the car frame, as well as the radio chassis. Another important feature was the toothed strip making good contact with the engine compartment hood. (Hubcap grounding was another issue because of static electricity buildup and discharges from the tires.)

Jake has a 1941 Lincoln Zephyr and belongs to a Lincoln collector's group. He has given up working on all car radios except for his and others' Lincolns, and that keeps him busy enough. He said that Zenith made the first pushbutton-tuned car radio and that Sylvania made one that was turned on whenever any pushbutton was depressed. (Examples are Zenith 5M294 and Sylvania 1CH748, Lincoln #1H-18805).

Mike Grimes and Cleo Cherryholmes each brought a car radio that featured a steering-column tuning head. Because early automobiles didn't have factory-installed radios, this type of radio was more practical to "add-on" by allowing the main chassis to be installed under the dash (many vehicles had no available space behind the dash). Mike mentioned that the reason for frequent failures of the "buffer" capacitor is that the pulse current is very high. It is very important to replace that capacitor on every visit to the "radio hospital".

Author's Notes: In the late '40s I had a setup to provide power to fix car radios, first with a car generator belt driven by a used washing machine motor, and later with a battery that was kept charged by a home-built wet rectifier. Word-of-mouth brought me quite a few car radios to fix. I also fixed a private plane two-way radio that had been in the shop many times for an intermittent failure. It was a bad connection to the coil inside an I.F. can. It's amazing that tube radios didn't give even more trouble with the kind of vibration from airplane engines and props. I converted a Buick radio with push-pull 6V6s to AC and put it in an old console cabinet having a 12 inch speaker. It really sounded great and had super sensitivity!

## NOTES FROM THE BENCH



HOWARD STONE

In the picture I am working on a SCR-68 from 1917. It is a 5 tube transmitter and receiver used in airplanes in WWI. At the right in the picture is a VT52 Single-ended stereo amplifier that I built 2 years ago. I realized that I listen to more music in the shop than in the house. I also have cable TV there and a Hammarlund SP-600 communications receiver to listen to shortwave so I usually have something going when I am working on a radio in the shop.

By Dale B. Allen

## SILVER MICA DISEASE

It's been a long night trying to repair a simple AA5 radio. The electrolytics have been replaced as well as the paper capacitors and all tubes have been tested. Still, there is no reception but rather a popping noise that sounds similar to lightning strikes. Touching the volume control proves that the audio section is alive. An RF signal coupled to the input produces no output. OK, now we will apply a 455 kHz signal to the plate of the converter tube! Still there is no output. Well, it must be that a previous restorer mistuned the IF when he tightened the cores in the IF transformers. OK, we will vary the 455 kHz signal at a high level and monitor the result at the 1st IF secondary. Once again the only output is the popping sound. These are the symptoms of the fault commonly referred to as "silver migration" or the dreaded "silver mica disease"!

This problem is most likely to occur in late 1940's and early 1950's radios which employ the slug-tuned IF transformers. Refer to Fig. 1. These transformers have a single adjustment hole in both top and bottom. Capacitive-tuned IF transformers have two adjustment screws on the top. Refer to Fig. 2. The popping noise is caused by the migration of silver from the primary capacitor to the secondary capacitor, which in turn applies B+ from the previous stage to the grid of the next stage. Although not common, when I performed a search for "Silver Mica Disease" on Antique Radio Forum, there were 196 hits! It generates a lot of discussion. Fig. 3 shows the migration on a mica wafer removed from a defective IF transformer.

The repair, although tedious and time consuming, is relatively straight forward. The object, simply stated, is to remove the mica wafer and either lift the contact strips or remove them. See Fig. 4. Another transformer style employs a rivet to hold the mica wafers. This requires drilling out the rivet before removing the wafer. Before removing the IF transformer, mark the orientation on the chassis, number the terminals and make a sketch of the connected components. Next, we need to determine the value of the silver mica capacitors needed to replace the ones just removed. The possible values based on my research are from 100 to 140pf.

Using the test setup of Fig. 5, Step 1 is to find the resonant frequency with a 100 pf. cap and then solve for the inductance (L) of one side of the IF transformer. Then substitute 455kHz for the resonant frequency and insert calculated value of L. Solve for C which is the value to be used to provide a 455kHz resonant frequency once installed in the radio. Reinstall the transformer and add the new silver mica caps externally. Recall the formula for resonance:  $f_2 = 1/4 \pi \sqrt{LC}$ .

Finally, be sure to repair both IF transformers and then align and test the set.



FIGURE 1



FIGURE 2



FIGURE 3

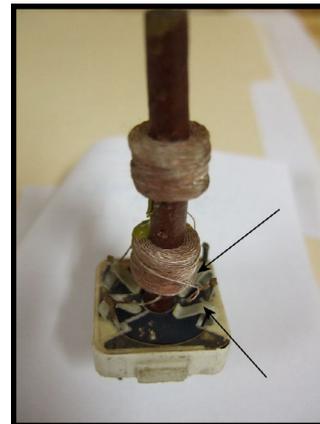


FIGURE 4

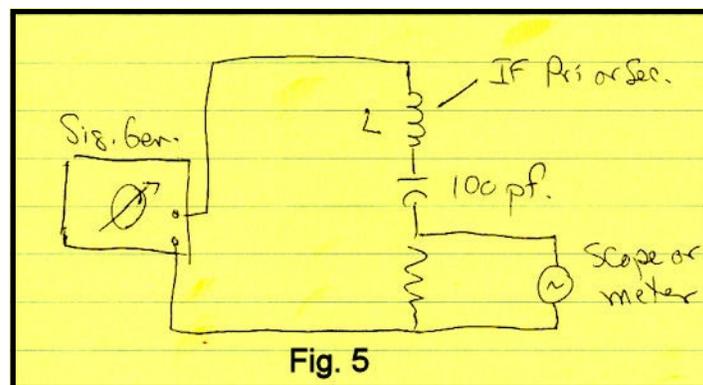


Fig. 5

FIGURE 5

## MONTHLY MEETING PROGRAMS

### MONTHLY MEETING PROGRAMS

NOTE: Programs will be held at various locations in Irving, Texas. Make note of the location as they will change from time to time. Senter East, 228 Chamberlain St.; Garden and Arts, 906 S Senter Rd; and Heritage Park, 217 S. Main St.; will be the locations.. Refer to the WEB site. Programs start at 2pm. unless otherwise noted. Call us on the cell tellie if you get lost: 972-898-7251 or 972-742-8085.

#### **AUGUST 18, 2012**

Senter East Building

Hands-On workshop: convert your Superhet to an AM broadcast station to provide a program source for your AM radios. Also using a Signal Generator as well. Mike McCarty will lead the program. Bring your tools, solder, iron, etc. to work on your own radio.

#### **SEPT 15, 2012**

Garden & Arts Building

Tail Gate Swap and Trade Day. 8am to 12noon.

#### **OCTOBER 20, 2012**

Senter East Building

Show and Tell. Bring your latest project of restoration and share with the club.

#### **NOVEMBER 16-18, 2012**

Hampton Inn; Mesquite, TX.

Annual Convention. Go to Convention Page of [www.VRPS.org](http://www.VRPS.org) for detail.

#### **DECEMBER 8, 2012**

Garden & Arts Building

Annual Christmas Party. 5pm to 11pm

Programs are subject to change, contingent on scheduling conflicts. As always, your suggestions for programs/content are welcome. If the programs do not fit your needs and you want something different, let me know. I need volunteers to organize other programs, so consider presenting a program yourself.

Call me anytime or send me an email. Mike Grimes 972-898-7251 (cell), or [K5MLG@verizon.net](mailto:K5MLG@verizon.net).

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