



## *The Grid Leak*

### *July/August/September-2019*

***From The President.....Bill Werzner***

As the late Nat King Cole used to sing about “Those Lazy Hazy Crazy days of Summer,” suddenly here they are upon us in hot, humid, Houston! I want to begin by thanking V.P. Jerry Sirkin for stepping up to the plate and volunteering to take the position of newsletter editor following Jeff Heller’s departure from that position. Jeff returned to the workforce and was unable to devote the time necessary to fulfill his position as editor. Jeff did a super job as editor and we all should give him a round of applause for a job very well done. I know Jerry has some big boots to fill, but as V.P. all these years, and with his reputation for getting things done, not only will he fill those boots well; but he will train lions too! In September we will have another very important position to fill, and that will be for Jerry’s position as Vice President. In order for HVRA to continue functioning normally, we need members to think seriously about accepting a nomination for that position and others during the general meeting’s election of officers September 28.

Last month we had one of the best swap meets ever hosted by Mike Payne at Electro Junk Inc. in Alvin, TX. Mike’s annual event is one that many of us look forward to as kind of a “rite of spring” and this one was no less than spectacular with a large turnout and lots of stuff!. Many thanks Mike, for a fun morning from a bunch of us who treasure, recyclable resources amid trunk and tail-gate swapping, buying and selling.

Now looking ahead to Saturday, July 13, when we will again head to Texas City’s beautiful Doyle Convention center for our annual summer mega auction, along with the Tideland’s Amateur Radio Society annual swap meet. If you have attended this event before, I’ll bet you’ll be there again as it is certainly one of the highlights of the summer. Vendors will be on hand along with tables filled with just about everything imaginable for sale or trade. Plan to arrive early, and if you are an HVRA member, or a non member planning to sell during our auction, please avoid making sales in the parking lot. Your items will bring a higher price in our auction – guaranteed! For more details, please see the Mega Auction article in this Grid Leak.

In closing there is one item I am asking all of our members who attend our meetings, swap meets, auctions or HVRA gatherings to do. We are entering another national election cycle and HVRA is, and will remain, a non political entity. Everyone has his or her political likes and dislikes for reasons that span the spectrum. Political debate in our nation has in too many instances devolved into vitriolic hate speech, name calling, and even physical threats and violence. I am asking all of you to consider HVRA “ground neutral” and park your political arguments outside the door, out of earshot. We are here to enjoy our hobby and interact with friends, political arguments and name calling will only alienate and destroy friendships within our group. So, in essence “cool it” and help keep the peace!

## **HVRA Event Schedule: July through September 2019**

Check our web site often for unexpected schedule changes, or special announcements.

**Remember**, Board of Directors' meetings are open to all HVRA members. This is where you can share ideas, suggestions, or express concerns with our officers. Board of Directors' meetings are held on the 2nd Tuesday of each month at Bayland Community Center Library Room, 6400 Bissonet Street Houston, Texas from 6:30 to 8:30 PM. Pizza is served.

General Membership meetings are held on the 4th Saturday of each month, except for May, November and December when special arrangements are made to avoid holiday conflicts. These General Membership meetings are held at the Bayland Community Center, 6400 Bissonet Street Houston, Texas from 8:30 to 11 AM. Although these meetings are for the benefit of members in good standing, HVRA encourages guests to attend and acquaint themselves with HVRA's activities. Members can participate in announced contests, presentations and auctions during these meetings. Coffee, juice, donuts and snacks are available.

### **Tuesday, July 9. Board of Directors' Meeting 6:30 PM.**

**Saturday, July 13. Tidelands Amateur Radio Society & HVRA Summer Mega Auction.**  
Doyle Convention Center in Texas City, TX. 8 AM – 4 PM. HVRA Auction starts at 12 Noon.

### **Saturday, July 27. General Membership Meeting 8:30 AM - 11:00 AM;**

**Program: Transformers, Their Designs, How They Function, Modifications and Repairs**

Transformers are often a source of problems in the repair and restoration of vintage radios and equipment;

**Show and Tell:** Bring a repair or restoration and give a brief description what it is, where you found it and have you repaired it or plan to do so.

**Auction.**

### **Tuesday, August 13. Board of Directors' Meeting 6:30 PM.**

### **Saturday, August 24. General Membership Meeting 8:30 AM -11:00 AM;**

**Program: Voltage multipliers in both solid state and vacuum tube circuits.** Working examples will be presented showing both doubler and tripler circuits.

**Contest:** Bring a single transistor home brew code practice oscillator using no more than 9 volts for power. A small speaker or headphones can be used in the demo.

**Auction.**

### **Tuesday, Sept. 10. Board of Directors' Meeting 6:30 PM.**

### **Saturday, Sept. 28. HVRA ANNUAL Membership Meeting 8:30 AM – 11:00 AM**

**Election of Officers: V.P., Secretary, At-Large Position 2**

**Program: Single ended, parallel, and push pull audio output circuits, the different types, in vacuum tube amplifiers, their function, and how to trouble shoot them.**

**Auction**

### **Tuesday, Oct. 8. Board of Directors' Meeting 6:30 PM.**

### **Saturday, Oct. 26. General Membership Meeting 8:30 AM -11:00 AM;**

**Program: Bring your tube testers for a round robin tube testing comparison.** Both emission and mutual conductance types are welcome. A series of six common radio tubes, (good, weak, and defective) will be provided by a club member for comparative testing.

**Auction**

## **HVRA Officers**

**President:** Bill Werzner, 713-721-2242 [werz1943@gmail.com](mailto:werz1943@gmail.com)  
**Vice President:** Jerry Sirkin, 281-844-4124 [gsirkin@aol.com](mailto:gsirkin@aol.com)  
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## **Annual Election of Officers September 28**

Once again we are looking for a few good volunteers who are willing to accept nominations for a two year term as club officers. To qualify, you must be a member in good standing with annual dues paid, willing and able to attend both monthly Board of Directors and general meetings, and fulfill requirements of the office that you may be elected to serve.

Positions open for nominations include: Vice President (Convention Chairman), Secretary, and At Large Position II (Convention Contest Chairman). We are always looking forward to having new officers elected from our general membership to bring new ideas and share their expertise as club leaders.

Note from the current V.P.: I have already gotten the ball rolling in preparation for the 2020 Convention and plan to stay involved thru February so that the new V.P will not be stuck with my Convention plans without sufficient help and guidance during the transition months leading to the event.

Nominations will be taken from the floor when the meeting opens at 9:00 AM. Yes, you can nominate yourself so don't be shy! Please contact Bill Werzner or Jerry Sirkin for additional information.

## **Please Welcome the Following New Members**

### **Joined 1st Qtr, 2019:**

***Clint Alexander—Magnolia  
Fancisco Gonzalez—Houston  
Lee Kinard—Burnet  
Richard Sellers—?***

***David Askin—Spring  
Bob Gwinn—Plano  
Dennis Mongeska—Spring  
Mark Walden—Duncanville***

***Jean-Marc Follini—Houston  
Frank Haecker—?***

### **Joined 2nd Qtr. 2019:**

***Joseph Blair—Cypress  
Larry Lamia—Mena, AR  
Clint Zabriskie—Houston  
Phillip So —Richmond***

***Glen Dingley—Alvin  
Richard Saint—Cypress  
Christopher Edwards—Bullard***

***Eugene Hult—Houston  
Jeremy Stovall—Cypress***

## RADIO STATION QUIZ by Jeff Heller

If you have collected radios or have had an interest in the history of AM broadcasting in the US, you are probably aware that many stations, particularly at the start of the modern radio era, used call letters that matched slogans which uniquely identified the station. Sometimes the call letters matched the location of the station, or identified the owner, or something else about the station in question. I grew up in Wisconsin and of course, Chicago's WLS at 890 AM was a powerhouse station on our dials. In its early years, the station was owned by Sears and Roebuck Co., and WLS stood for "World's Largest Store" identifying its original owner. You likely know of many more examples so this quiz will hopefully test your knowledge and be a fun exercise of nostalgic radio history.

Here are the "hints" followed by a list of the stations used here. You can verify the answers in a later section of this Grid Leak. See how many you can identify without going to the internet or even looking at the station list! Stations here are from Texas, generally, and some more well-known stations from throughout the US.

1. In this town, cotton was once king.
2. Broadcasting farm news.
3. Famous hotel.
4. Radio in a laboratory.
5. A famous river flows here.
6. Southern welcome.
7. Put on your happy face.
8. Chiropractors use them.
9. Low pay.
10. Insurance company.
11. A mystery here, does this early Texas station's call letters really stand for something?
12. A great newspaper.
13. Voice of labor.
14. A famous brand of chili gave this Texas station its call letters.
15. Another insurance company founded this station.
16. That Bakersfield sound.
17. Celebrating Christmas in this city.
18. Thomas Edison.
19. Named for a Texas lake.
20. Roman numerals.

List of stations: WSM, KTRH, KTXO, KRRV, KAND, KERN, WGN, WOW, WCFL, WOAI, KLVI, KMOX, WHO, WHB, WEEL, WLW, WBAP, WSB, KPRC, KRLD

**TEXAS CITY HAMFEST and HVRA 2019 MEGA AUCTION**  
**DOYLE CONVENTION CENTER in TEXAS CITY**  
**JULY 13, 2019**



This annual event also known as the Texas City “HAMFEST” will be held in the Doyle Convention Center, 2010 5<sup>th</sup> Ave. North, Texas City. HAMs, DX’ers, collectors, tinkerers, and curious individuals by the hundreds will be on hand enjoying the swapping and selling going on throughout the center and parking lots. You will find just about anything electronic, and then some, among the many tables, trunks, and tail gates. HVRA will have a table inside the air conditioned auditorium distributing newsletters and club brochures to all who stop for a visit. If you like swap meets, don’t miss this annual event. Plan to arrive around 7 AM or possibly earlier, to get a good place to park as the lot fills up fast. Food and drinks will be available inside. There is an admission charge of \$5.00 to enter the Hamfest area.

The HVRA Summer Mega Auction will start at 12 Noon in the adjoining Exhibit Room. All Mega Auction attendees not paying \$5.00 for the Hamfest must enter the Mega Auction room through the side hallway door, not through the Hamfest area. Set up of the Mega Auction will begin near 8AM in the exhibit room; sellers may begin staging their items at 9AM. Please bring your items through the side hallway door, not through the Hamfest area. The Mega Auction will begin at 12 Noon. Selling and bidding at the Auction is free to all current HVRA members. Non HVRA members will need to pay \$2.00 for a one-day membership in order to sell and bid (we also encourage non-members to join HVRA). Everyone anticipating selling or bidding must register and receive a bid card with a bidder (seller’s) number. All items presented for auction must be labeled with an HVRA seller’s form and contain the seller’s number, lot number and a brief description. No items (bought, sold or passed) will be allowed to be picked up until the conclusion of the auction, approximately at 4PM, when the check-out process begins. At check-out, all sellers will pay HVRA a 15% commission on each successful sale. Payments can be made by cash, check or credit card. Folks, this should be a great auction. Watch our web site ([www.HVRA.org](http://www.HVRA.org)) for photos and details as the manifest grows until the time of auction. We will attempt to publish photos in advance of the July 13 date that will include members’ items as well as some items from estates that did not make it to the February auction (i.e.: tube assortments, radios, test equipment, parts, etc.) Now is the time to round up those items that may be languishing in your attic or garage, take some photos, list them, and forward them to Bill Werzner at [werz1943@gmail.com](mailto:werz1943@gmail.com). If you have any questions, please contact the following Board Members: Bill Werzner (713-820-1778) or Jerry Sirkin (281-844-4124).

## Basic Electronics Classes at EPO

A series of five classes will be held at Electronic Parts Outlet, 3753 Fondren Road, in Houston beginning Tuesday, July 30. Pre registration is required as seating is limited. These classes will be targeted for ages 12 and up; note pad and writing material provided along with take home study guide material. You can select which classes to attend, but you must pre register at EPO. See web site at [www.epohouston.com](http://www.epohouston.com).

Here is your chance to improve your job skills, or perhaps prepare for high school or college in a relaxed and informal series of two and a half hour classes. We are planning for five classes starting July 30 and continuing on Tuesday and Thursday afternoons into August from 1 to 3:30 PM. These classes will be conducted by one or more members of the Houston Vintage Radio Association. A fee will be charged by EPO for each class that will include lecture, hands on lab, and take home written exercises for you to complete. There is no final exam, but your completed take home work will be reviewed from class to class for you to check yourself. These very successful classes were last held over ten years ago in the Houston Medical Center area, now offered once again. Drinks and snacks will be available. Register now at EPO as class size will be limited. These classes are recommended for ages 12 and older.

**Class I**, July 30 will cover introduction to basic electronics: series & parallel circuits, basic house wiring, fuses and circuit breakers, GFI's and safety, voltage and current, both AC and DC, watts, batteries, calculating power usage, voltmeters and ammeters, reading circuit diagrams, Ohms, resistors, and basic trouble shooting. Setting up a work bench and test equipment.

**Class II**, August 1 will begin with a review of your take home exercise from **class I** and answer questions. This class will continue where class I left off with an introduction to capacitors and how they are used in electronic circuits. This includes blocking DC and passing AC, frequency, capacitive load, voltage classification, charge and discharge, electrolytic and non electrolytic types, introduction to transformers, coils, and rectifiers in circuits.

**Class III**, August 6 Review of take home exercise from **class II** questions and answers. Following the previous class introduction into transformers, coils, and rectifiers, we will discuss different kinds of transformers including step up, step down, auto transformers, choke coils, solenoids, and explain transformer calculations, turns ratios, DC chopper circuits and pulsing DC. Full wave and half wave rectifiers and how they function in electronic circuits, and solid state rectifiers. Following will be an introduction to voltage multipliers and power supplies.

**Class IV**, August 8 Review of take home exercise from **class III** questions and answers. This class will begin by focusing on power supplies for electronic equipment, examples of voltage multipliers in circuitry, a review of rectifier circuits including solid state and vacuum tube. Voltage regulation techniques, zener diodes and how they function, then conclude with an introduction to vacuum tube and solid state amplifiers.

**Class V**, August 13 Review of take home material from **class IV** questions and answers. Now that the basics of simple electronic circuits have been covered, we will delve into vacuum tubes, how they function, various tube designs and what they do, vacuum tube testing. Single end, parallel, and push pull output stages, output transformers, 70.7 volt line transformers, types of speakers, balancing, bass / treble control and trouble shooting an AM radio. Class V will be the last in this introductory series of classes.

Additional classes will be offered during the fall probably on a monthly schedule and will deal with specific topics such as the evolution of radios for the home and automobile – a fascinating piece of history.

## At the bench.....*The Troubleshooter by Bill Werzner*

### WW II Battleship Texas Sound Reproducer Restoration – Part II



In my previous “Trouble Shooter” article, I described how sailors aboard the now one hundred and seven year old Battleship USS Texas, during WW II, were entertained via a three channel communications system called the RBO. Now I want to share with you how I placed six of those units back in operation. I mentioned how we first used the 1MC ship wide public address system for a few years to both play era music as well as make microphone announcements such as “a guided tour will start at the gangway in ten minutes”, or “the ship will close in thirty minutes”; or in event of an emergency, “please exit the ship via the nearest exit”. I don’t have to elaborate any further about the importance of a functioning communications system as evinced by the terrible ITC fire in March that

put the ship and entire area under a shelter in place order that lasted six weeks. About ten years ago, the ship’s staff decided to no longer use the 1MC system for entertainment, but use it strictly for communication purposes for which it was intended. I was approached by ship’s staff to determine if the RBO system could be placed back into operation as its original function was during the war.

I knew these units had not been operational since probably late 1945, and restoration would be a challenge. But for a guy who has restored numerous, what I call “barn sets” much older than the ship’s RBOs, I accepted the challenge. I decided to start with one that I thought was probably the cleanest, and it was secured to the bulkhead in the officers’ ward room forward on the second deck. With some assistance, I unbolted the heavy unit and took it home to my workshop to analyze and determine what could be done to make it functional once again. Opening the water proof enclosure I found a ten pound pre alnico pm speaker mounted on the hinged front along with a toggle switch, a small jeweled lamp socket and a couple of large knobs. Mounted on the chassis were three empty octal tube sockets, two potted transformers, a potted choke coil, and two oil filled capacitors along with some resistors and deteriorated wiring (see fig. 2 diagram). My first challenge was to find out just what I had to work with and what if anything could be salvaged. Fortunately there was a faded schematic diagram pasted to the back of the enclosure that was crumbling with age. There was enough of it still legible that I was able to redraw a diagram from which to begin. The unit had a three channel input, a dual volume control, a two pole double throw toggle switch for AC or DC, (the Battleship Texas was DC powered). There were three tubes required; one 35Z5 rectifier and two 36L6 output tubes wired in push pull. I was surprised to find all of the potted transformers checked good, along with the eighty year old speaker. The tube filaments were wired in series, and the input was from a 70.7 volt line source from a lower deck amplifier. A quick calculation showed the unit would probably consume around 20 watts of power if restored, including the small separately powered dial lamp. I removed the components and returned the enclosure to the ship for bead blasting and repainting.

Back on board the ship, I opened several more RBOs along the second and third decks, and as I suspected, they were in much worse shape than the one in the ward room. All had tubes missing, components were badly corroded, some had wiring cut loose, etc.; a major modification would therefore be necessary. Replacing the original tubes was out of the question as neither of those tubes is being produced today and the existing supply is diminishing. However, thanks to a renaissance in tube type amplifiers, output tubes such as the 6V6 are readily available and this is what I chose to use and install as a single ended amplifier. It would have been possible to bypass the chassis rebuild and simply use a 70.7 volt line transformer to do the job, but there was a problem and I chose not go that route for a good reason. Background noise varies widely around the ship and with a local amplifier equipped with a volume control and having adequate gain, the problem would be solved.

## WW II Battleship Texas Sound Reproducer Restoration – Part II (continued)

After successfully restoring the ward room RBO, I chose five additional RBOs to rebuild and they are all now in operation on the second and third decks (see **fig.1**). The old oil filled capacitors shown in **fig. 2** diagram, should not be used and if leaking oil, remove them and have them safely disposed as they may contain PCBs!

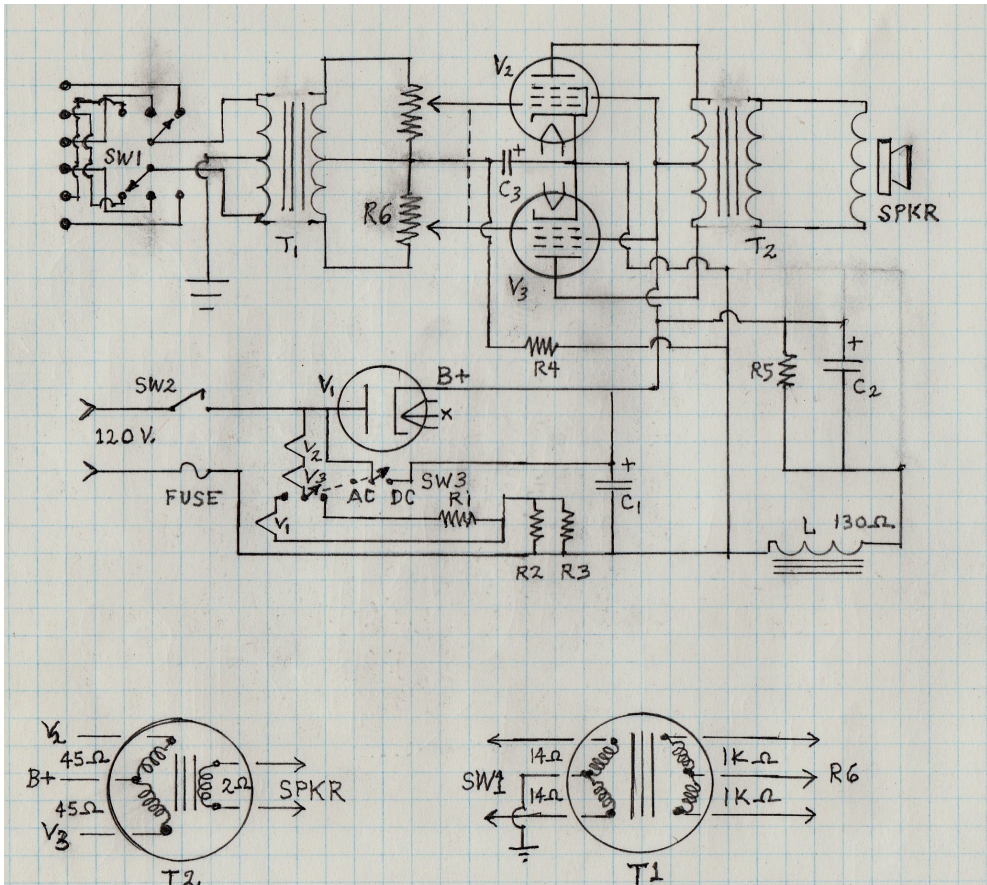
The original input, output transformers, and choke coil may test good, and can be put back into operation. In checking them with an ohmmeter, compare readings with those shown in **fig.2**. The power supply shown in **fig. 3** contains a voltage doubler circuit that provides B+ of around 290 VDC. Today all but one of the restored RBO's are in operation playing music and news from 1944 – 45. The ward room unit has been temporarily turned off for a video about the ship's history that is shown there. A 100 Watt Bogen solid state amplifier delivers the sound to these units from a station in Kansas that provides nostalgic music for museum exhibits around the country.



**Fig. 1** Battleship USS Texas RBO # 5  
Located on second deck now restored



## WW II Battleship Texas Sound Reproducer Restoration – Part II (continued)



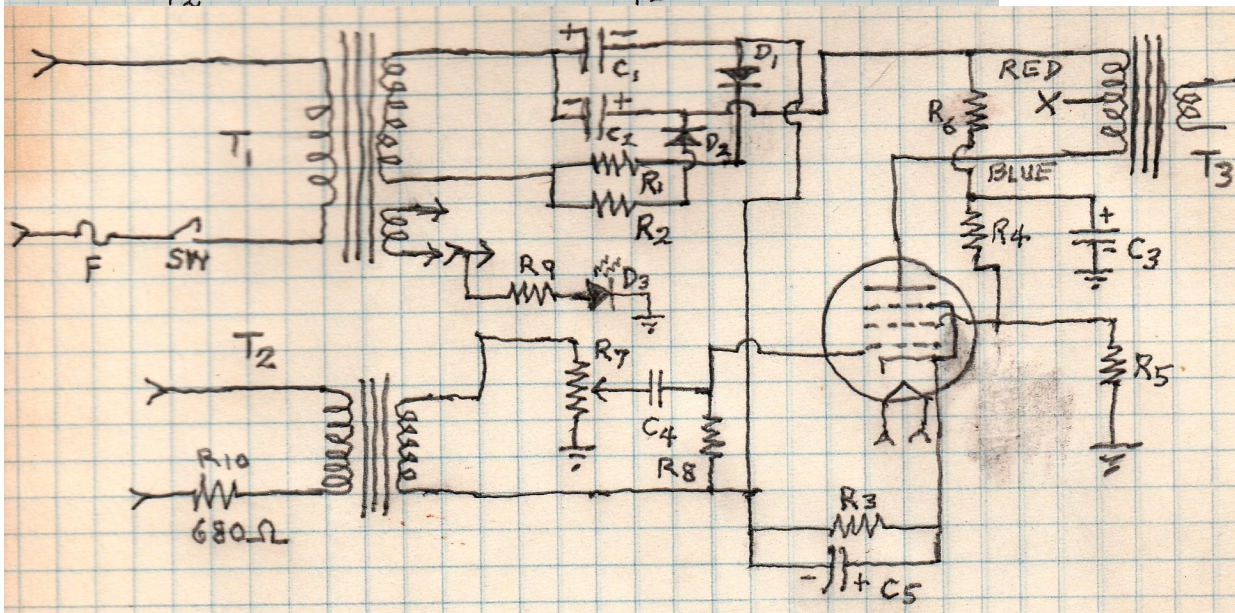
**Fig. 2** RBO Schematic prior to modification for restored operation.

### Components

V1 35Z5 rectifier tube.  
 V2 35L6 output tubes.  
 C1 16 uF capacitor.  
 C2 8 uF capacitor. C3  
 1.0 uF capacitor. L 130  
 ohm choke. R1 230  
 ohm 10 Watt resistor.

R2, R3 130 ohm 2 Watt  
 resistors. R4 220K 1  
 Watt resistor. R5 470 K  
 1 Watt resistor.

R6 25K dual section  
 wire wound potentiome-  
 ter.



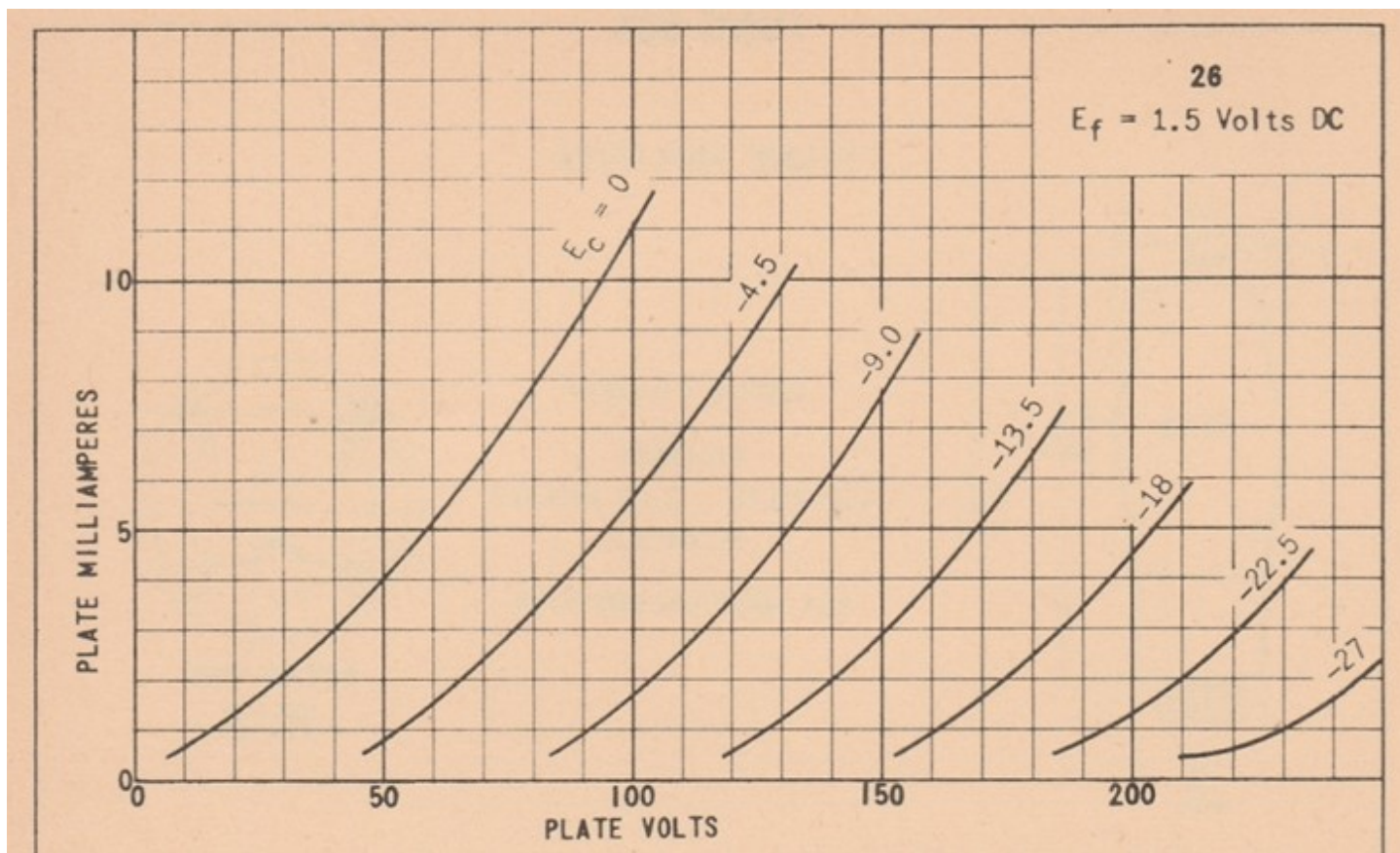
**Fig. 3** Schematic diagram of RBO amplifier modification using a 6V6 output tube.

### Components

Tube 6V6 GT or metal. C1,C2 22uF / 250 V. electrolytic. C3, 22 uF / 450 V. electrolytic. C4, 0.01 uF / 400 V. mylar. C5, 22uF / 50 V. electrolytic. D1,D2, 1N4007 diodes. D3 clear LED to light the jewel on front panel. R1, R2, 75 ohm 1 Watt. R3, 470 ohm 1 Watt. R4, 4.7 K 1 Watt. R5, 470 K 1 Watt bleeder resistor. R6, 270 ohm 0.5 Watt. R7, 500 K potentiometer with switch (sw). R8, 680 K 0.5 Watt. R9, 510 ohm 0.5 Watt. R10, 680 ohm 0.5 Watt. F = 2 Amp fuse. T1, Hammond 262F6 power transformer 120 and 6.3 V output. T2, Stancor A53-C audio interstage transformer. T3, AES P-T291 8 Watt universal output transformer.

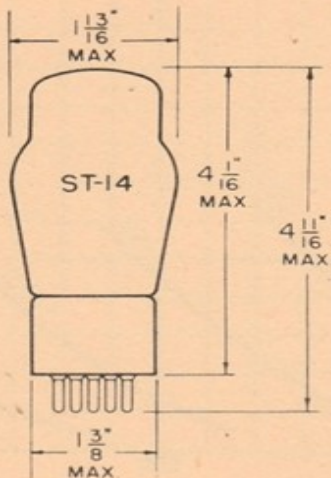
## The #26 Triode by Bill Werzner

Have you ever been in one of those situations where you are rebuilding a vintage radio or amplifier, and someone before you either cannibalized it for parts or did an incomplete restoration job. You find tubes and parts missing, and only a partial schematic to guide you in a restoration project. I came across a 1946 Tung Sol vacuum tube book a number of years ago that shows diagrams and detailed characteristics (curves) of many vintage tubes. I decided to share this information in our newsletter, one tube at a time per quarterly publication starting with the #26 triode. This information is essential in rebuilding a circuit from scratch, or troubleshooting as well. The #26 was a breakthrough in vacuum tube technology as it became one of the first commercially available tubes to have a filament powered by AC that functioned without the ubiquitous hum problem! This tube is found in Radiola 17 and 18 models along with other late 1920's radios and some audio amplifiers as well. Watch for the #27 tube next quarter.



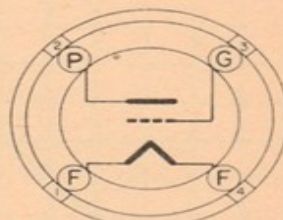
**TUNG-SOL**

**TRIODE AMPLIFIER**



GLASS BULB

COATED FILAMENT  
 FILAMENT  
 1.5 VOLTS 1.05 AMPERES  
 AC OR DC  
 ANY MOUNTING POSITION



BOTTOM VIEW  
 MEDIUM  
 4 PIN BASE

THE 26 IS A TRIODE AMPLIFIER INTENDED PRIMARILY FOR USE IN RF AND AF STAGES OF AC OPERATED RECEIVERS.

**RATINGS**

INTERPRETED ACCORDING TO RMA STANDARD M8-210

FILAMENT VOLTAGE	1.5	VOLTS
FILAMENT CURRENT	1.05	AMP.
MAXIMUM PLATE VOLTAGE	180	VOLTS

**DIRECT INTERELECTRODE CAPACITANCES**  
 WITH NO EXTERNAL SHIELD

GRID TO PLATE	8.1	μf
INPUT	2.8	μf
OUTPUT	2.5	μf

**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**

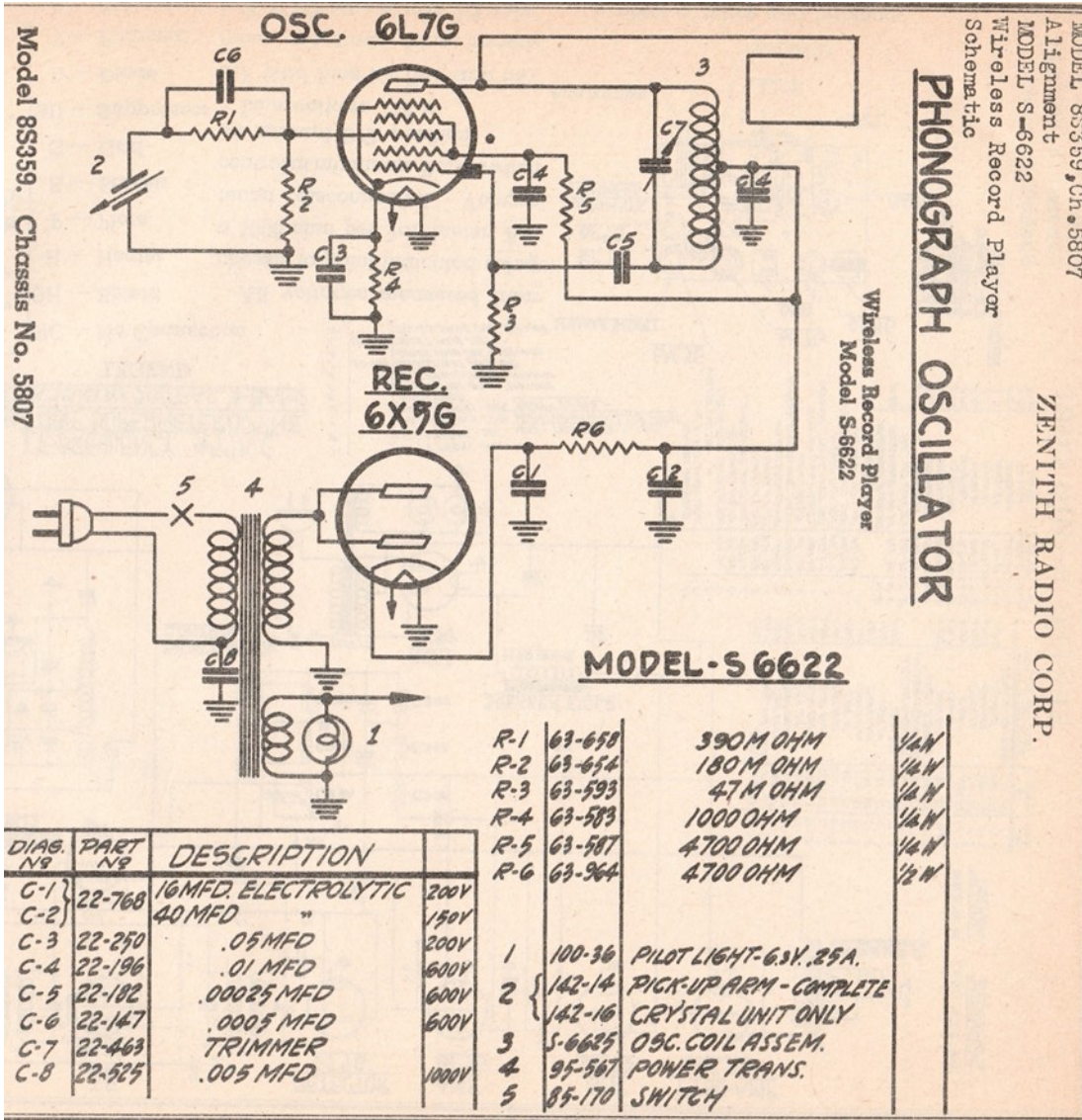
**CLASS A AMPLIFIER**

PLATE VOLTAGE	90	135	180	VOLTS
GRID VOLTAGE <sup>A</sup>	-7	-10	-14.5	VOLTS
PLATE CURRENT	2.9	5.5	6.2	MA.
PLATE RESISTANCE	8900	7600	7300	OHMS
TRANSCONDUCTANCE	935	1100	1150	μMHOS
AMPLIFICATION FACTOR	8.3	8.3	8.3	

<sup>A</sup> MEASURED FROM MIDPOINT OF AC OPERATED FILAMENT.

→ INDICATES A CHANGE OR ADDITION.

# PHONOGRAPH OSCILLATOR REPAIR Submitted by Bill



I found this diagram for a Zenith phonograph oscillator in Riders Vol. X and it brought back one of my childhood memories, back then this one really whetted my interest in electronics. The year was 1957, we were high school freshmen, and one of my classmates who lived across the street from us, found an old phonograph in their basement. He took it apart, experimented with it, and found he could transmit not only music, but his voice as well around the neighborhood. For an antenna he used their outside antenna that was probably a good 50' high. His name was Bob and one morning he called on the phone and said, "hey Bill! Turn the dial just past WROY (Carmi, IL) on your radio and listen. Then loud and clear, came his voice "it's time for us to go to school," followed by music from one of his records.

In building this unit, for C-7 a 100 pF variable or trimmer could be used, but be careful as there will be high voltage across it! If you decide to use the AES (Antique Electronic Supply) adjustable slug tuned coil, a fixed 47 pF capacitor for C-7 should work just fine. For an antenna, use a long insulated wire with a 500 pF capacitor in series with the tube's plate. Aluminum gutters also work well. The transformer should have 115 V. and 6.3 V secondaries for power. The oscillator coil wired as a Hartley could be salvaged from a junker radio or purchased from AES model P-C70-OSC. Give it a try and if you don't have a 6L7G tube, try a 6SA7 GT, or a 6SA7 metal, but with pin #1 connected to pin #6.

## **HVRA 2020 CONVENTION UPDATE by Jerry Sirkin**

HVRA and The Marriott North have signed a 2020 contract for our annual convention and auctions scheduled for Friday and Saturday, February 7th and 8th. As in the past 3 years, we have increased our auction area and added one more large room that was used for Technical presentations. We also plan to have storage space allotted to us for items that members could not load on Saturday evening. We are discussing, with the Marriott, providing cash concessions both days (previous years only one day was negotiated). Fortunately, the Marriott agreed to reduce our guest room rates from last year's \$94 to \$85 per night.

Please log onto our HVRA.org website for updates beginning late July or early August. One request I have; we need volunteers for various activities during this event. Please contact me.

### **Local Sources for Radio and Electronic Parts**

**EPO (Electronic Parts Outlet)**, 3753 Fondren Rd., Houston 77063 (713) 784 – 0140  
**ACE Electronics**, 3210 Antoine Dr., Houston 77092 (713) 688-8114

### **More Radio Clubs**

**Oklahoma Vintage Radio Collectors** President: Jim Collings, PO Box 50625, Midwest City, OK  
jcradio@cox.net; \$15 annual dues. Monthly meetings, annual show.

**Antique Radio Club of Illinois**, [www.clubinfo@vintage-radio.org](http://www.clubinfo@vintage-radio.org)

**Collins Radio Association (CRA)**. David Knepper, PO Box 34, Sidman, PA 15955. No dues.  
[www.collinsra.com](http://www.collinsra.com)

**Louisiana & Gulf Coast Antique Radio Club**. Phil Boydston, 750 Moore St., Baton Rouge, LA 70806.

**Michigan Antique Radio Club (MARC)**. Don Colbert, MARC, Pub: The Michigan Antique Radio Chronicle, quarterly. Dues: \$20. [membership@michiganantiqueradio.org](mailto:membership@michiganantiqueradio.org). Annual Extravaganza and other quarterly meets. [www.michiganantiqueradio.org](http://www.michiganantiqueradio.org)

**New Mexico Radio Collectors Club (NMRCC)**. Monthly newsletter and members meeting (with flea market, auction and theme program). Dues: \$20. For more information contact John Anthes, [jpanthes@comcast.net](mailto:jpanthes@comcast.net) Club website: <http://newmexicoradiocollectorsclub.com>

**Texas Antique Radio Club**, Doug Wright, Canyon Lake, TX. [wrightdougas70@yahoo.com](mailto:wrightdougas70@yahoo.com)

**Vintage Radio and Phonograph Society (VRPS), Dallas / Ft. Worth, TX**. George Potter  
[vrps@sbcglobal.net](mailto:vrps@sbcglobal.net), website: [www.vrps.org](http://www.vrps.org)

**Texas Panhandle Vintage Radio Society (TPVRS)**. Contact: Elroy A. Heras, 4086 Business Park Dr., Amarillo, TX 79110

**Antique Radio Collectors Club of Ft. Smith, Arkansas (ARCC)**. Paul Tucker, 4700 N. "N" St., Fort Smith, AR 72904. Dues: \$10. Monthly meetings, annual show.

## Buy, Sell, Trade, & Services Offered

**Vintage Sounds** Radio & Phonograph Sales & Repair including vintage auto radios, battery sets, foreign sets, etc. We also sell and service vintage telephones and telegraph equipment also parts, new & used tubes, transformers, schematics, books, phonograph parts & needles, records, etc. **Vintage Sounds** celebrating our 33<sup>rd</sup> year in business. Open Friday, Saturday, & Sunday from 10 until 6 PM. Now located in The Market Place Antiques, 10910 Old Katy Road, in Houston (Located about two blocks west of the Athena Gun Club on the westbound I-10 feeder road). 10% member discount on radio items. (713) 468-4911 [www.vintagesounds.com](http://www.vintagesounds.com) [www.vintagesounds.com](http://www.vintagesounds.com)

**Borden Radio Company** website:<http://www.xtalman.com> Antique Radio Schematic Service included in web-site. Crystal radio kits for sale. (281) 620 – 6692

**Sargent Auction Service:** [www.sargentauction.com](http://www.sargentauction.com), [Jims@sargentauction.com](mailto:Jims@sargentauction.com) Jim Sargent, WA5QBR, Auctioneer, TX license 16135 | 200 Thomas Road, Granbury TX 76049

**Allen Speaker Service:** Speaker re-coning and repair, 919 W. 19th St. Houston, (713) 862-2747.

**Tom Granger Restorations**, radio and phono cabinets. (281) 338 - 8277.  
[wwwtomgranger@mac.com](mailto:wwwtomgranger@mac.com)

**Escutcheons For Sale:** Extensive collection of escutcheons for sale. Nearly a dozen each Philco and Zenith PLUS Air King, Airline, Columbia, Courier, Glorytone, Majestic, Pacific, RCA, Silvertone, Stewart Warner, Traveler, Westinghouse etc, several with the glass. Tom Taylor: [ihcrally@yahoo.com](mailto:ihcrally@yahoo.com) [IHCRally@Yahoo.com](mailto:IHCRally@Yahoo.com)

## Other Radio Related Activities

**Texas Broadcast Museum:** This museum is located at 416 E. Main Street in Kilgore, TX, phone 903-984-8115. There are hundreds of pieces of vintage paraphernalia related to radio and TV broadcasting. Admission is \$6.00 (\$5.00 for seniors and military vets).

**Edington Family Museum of Atwater-Kent Radios:** Jimmy Edington, long-time collector and original HVRA member, has re-purposed a beautifully restored hotel to display his outstanding collection of Atwater-Kent radios and related products. It is located in Silsbee, TX, about 80 miles east of Houston. See his website, [www.atwaterkentsrus.com](http://www.atwaterkentsrus.com). If you would like to visit, please contact Jimmy in advance, 337-476-4328 or [atwaterkentsrus@gmail.com](mailto:atwaterkentsrus@gmail.com)

## ANSWERS TO JEFF HELLER'S RADIO QUIZ

1. KPRC in Houston stood for "Kotton Port Rail Center"
2. One of the few "W" stations west of the Mississippi, WOAI in San Antonio (1200 AM) identified itself as the "World of Agriculture Information"
3. The famous Rice Hotel in Houston gave rise to the call letters, KTRH.
4. KRLD in Dallas was an abbreviation for Radio Labs of Dallas.
5. The Red River Valley in Alexandria, Louisiana was the source for call letters KRRV.
6. Famous Atlanta station WSB used the call letters to make the phrase: "Welcome South, Brother"
7. "World's Happiest Broadcaster" was the name behind station WHB in Kansas City.
8. A Chiropractor founded this famous station in Des Moines where Ronald Reagan began his career. The call letters WHO stood for "With Hands Only"
9. WLW was Powell Crosley's superstation based in Cincinnati. Crosley bucked the trend of the era and historians don't think his call letters stood for anything. However, employees of Crosley claimed WLW stood for "World's Lowest Wages"!
10. One of two insurance company radio stations on this list, WOW in Omaha, NB stood for Woodman of the World Insurance Co., later known as Mutual of Omaha.
11. Another very early west-of-the-Mississippi station with a "W" call sign, WBAP in Dallas, was similar to WLW in that its call letters were not requested for the purpose of representing a trade name or catchy phrase but rather were assigned from alphabet order by Herbert Hoover. However, some locals claim the call letters represent "We Bring a Program".
12. The Chicago Tribune, the "World's Greatest Newspaper", owned WGN for many years
13. WCFL in Chicago was the Voice of Labor, identifying its affiliation with the Chicago Federation of Labor.
14. This is a strange one, as KAND in Corsicana was associated with "Wolf Brand KANded Chili"; the station owner's attempt to get WOLF as call letters was rejected by the FCC back in those days; apparently, Wolf Brand Chili was once made in the city
15. "We Shield Millions" was the meaning behind the call letters WSM in Nashville (AM 650) when it was founded by a large life insurance life company.
16. Bakersfield, CA is located in Kern County and hence KERN for this famous station
17. KMOX in St. Louis stood for Kirkwood MO XMAS (station located in that suburb); indeed, very odd but true
18. The call letters for Boston's famous station, WEEL, founded by Thomas Edison's company, stood for the company's name "Edison Electric Illuminating Co."
19. Lake Texoma is behind the station call letters, KTXO in Sherman, TX
20. In Beaumont, KLVI stands for "56" in Roman numerals, signifying its place on the dial at 560 AM

***The Grid Leak***  
***July/August/September 2019***  
**Website – [www.hvra.org](http://www.hvra.org)**

**From The HVRA President**

**Upcoming Club events calendar and club news**

**Texas City Hamfest and HVRA Mega Auction**

**Basic Electronic Classes**

**Technical and Troubleshooting Articles**

**2020 Convention Update**

**Radio Quiz**

**Ignore any expiration date shown on your mailing label! We now have a new annual membership period February 1 thru January 31.**

**THANK YOU JEFF HELLER FOR YOUR REVIEWS AND SUGGESTIONS**