The Grid Leak

APRIL, MAY, JUNE – 2022

POST CONVENTION ISSUE

IT'S TIME TO PASS THE GAVEL.

Bill was one of the original members when HVRA began in late 1978. Over HVRA's 44 years, he has served in several capacities including Secretary, Treasurer, President and…..as everyone knows….*Auctioneer*. He has mentored new members, organized events, and, since Oct. 1994, served as President. Bill has announced that recent health issues have caused him to give serious thought to stepping away from the demands as HVRA President and passing the gavel to another qualified member. So this September we will be electing Bill's replacement. We are looking for candidates who are comfortable with Radio electronics and restoration and preservation techniques, who is familiar with HVRA events and will recognize the history of HVRA, following the Bylaws and the founding doctrine. If you feel you'd like to be considered, please contact Bill directly for a serious conversation regarding this position (see contact info on page 2).

Guys……I'd like to shed some light on something, I'm retiring as HVRA President.

UPCOMING EVENTS

- GENERAL MEETINGS AND AUCTIONS.
- SARGENT AUCTION, MAY
- HVRA MEGA-AUCTION & TEXAS CITY HAMFEST, JULY 9th.

WHATS INSIDE

HOUSTON VINTAGE RADIO ASSOCIATION

Since its founding on November 16, 1978, the Houston Vintage Radio Association has been dedicated to the preservation of vintage radios, electronics, and phonograph equipment.

Our members across the USA have varying backgrounds and experiences but are brought together by a common interest in electronics. Many interests represented in our organization include: preservation and restoration of vintage electronics including tube and transistor radios and TVs, phonographs, telephones and cellular communication equipment, telegraph equipment, HAM radios, amplifiers, PCs, relevant literature, recordings, etc.

HVRA COMMUNICATES WITH MEMBERS ACROSS SEVERAL PORTALS:

- The Grid Leak is the official Newsletter, currently published quarterly, distributed primarily by email (and by USPS as necessary).
- HVRA maintains a website, HVRA.org, used for information regarding future events, current activities, contact and operations information, and historical data including photo libraries and past newsletters. Additionally, HVRA information and activity descriptions can be found on Facebook.
- Our normal means of face to face communication is through monthly Board of Directors' meetings and monthly General Membership meetings located at the Bayland Park Community Center;. We have also used Zoom sessions for Board Meeting from home (as necessary) as well as offsite swap meets at alternative locations.

DISCLAIMER

The sharing of information pertaining to restoration and repairs, of any items, appearing in any form, contained in any of the HVRA communication methods, is contributed by members hoping to help and/or assist others in efforts to advance the education of collecting vintage electronics. Therefore, the reader or listener is advised to contact the contributor for a full understanding of the electronic, mechanical, and chemical risks involved in the information of interest. HVRA is not responsible for the accuracy and safety of any repair or restoration topics presented in any format.

MEMBERSHIP

Annual Dues: $20.00; normally payable prior to the HVRA Annual Convention
Membership Applications available at General Membership Meetings or on HVRA.org

HVRA BOARD MEMBERS

President:	**Bill Werzner**	**713-820-1778**	**werz1943@gmail.com**
Vice President:	**Lewis Brittain**	**281-493-0737**	**britfaml@juno.com**
Treasurer:	**Brett Martin**	**713-408-2505**	**bmartin2021@gmail.com**
Secretary:	**Mike Monsour(AC0TX)**	**832-829-2227**	**msircg@gmail.com**
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At Large # 1:	**Joe Gernand**	**281-723-1984**	**joegernand@gmail.com**
At Large # 2:	**Tom Taylor**	**281-229-2970**	**ihcrally@yahoo.com**
At Large # 3:	**Stephen Truch**	**630-229-1041**	**stephen@truch.net**
At Large # 4	**Open (see page 4)**		
Grid Leak Editor:	**Jerry Sirkin**	**281-844-4124**	**gsirkin@aol.com**
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From The President……. Bill Werzner

Moving along now into the second quarter of 2022 and looking back at our accomplishments during the previous quarter, we sprang back following a two year hiatus due to the COVID epidemic. And spring back we did with one of the finest and most successful conventions in recent memory! Without the dedicated involvement of our members, their spouses, and others who worked tirelessly to bring our 44th to a successful conclusion, convention 44 would have been impossible. I could spend time listing names that would fill a paragraph, but in attempting to list everyone, I'm sure I would have forgotten more than one. I know you will all agree that special thanks go to V.P. Lewis Brittain for the exemplary job he did in chairing and organizing the whole event – that was no small job! Special thanks also to At Large Board Member Tom Taylor for all the work he did in chairing our annual "Old Equipment" contest. So to all who devoted time and labor from accumulating and organizing estates (Steve, Joe, and others) to transporting material, organizing the contest, manning the web site, securing the hotel, registering guests, and handling the finances involved; kudos to you all for your exemplary teamwork in its finest! Now it is time to begin thinking about next year's convention #45 and what that convention theme should be. With AM radio becoming the rave in 1923, take a look at some of the radio magazines a century ago. I'll bet someone will come up with new ideas for a theme manufacturer, an interesting lecture, or exhibits of 1923 technology – this sounds like fun taking a nostalgic return to the early roaring 1920's.

I along with other members, will be exploring possible swap meet and auction sites around the greater Houston area in the coming weeks. Some of us need to downsize our "accumulations" so there will be plenty of items to be auctioned or sold in swap meet settings.

We are welcomed to hold rear parking lot events at Electronic Parts Outlet; an event at EPO for sometime in May is a good possibility.

The Texas City annual HAM Fest is scheduled for the second Saturday in July, but we are not clear at this time on the cost for renting that one quarter section of the convention hall where we have held past HVRA Mega-Auctions. Last year as I recall, the rent was around $250.00 for our one day event. Watch our web site and email blasts for details and announcements as things develop.

Now, to another matter that involves "yours truly". As most of you are aware, I have dealt with some serious heart health issues since last October. A couple of years earlier I spent a week in the hospital suffering from atrial fibrillation that was successfully brought under control. Then in late October last year, I experienced unexplained weakness, a pulse rate of 42, and an irregular heartbeat. So, it was back to Memorial Hermann Heart Institute for this old guy for a pacemaker and three stints in my right ventricular artery that was about 90% blocked. Two months ago I returned to the hospital to have the pacemaker removed and replaced with one that also contains a defibrillator option. So far everything is ticking along nicely, but age is beginning to take a toll. I will turn 79 in August and need to slow down a bit. Our annual election of officers will be in September, and having served as your president for over two decades, it is time for me to pass the gavel on to some deserving member. I will remain a Board member as per our bylaws, and auctioneer along with my outstanding assistant Lewis Brittain as long as I can. We have been blessed with a dynamic organization these many years, and I feel a bright future lies ahead for HVRA, so let us continue!

2nd QUARTER 2022 EVENT CALENDAR

Monthly Brd Mtgs 7:30 PM via ZOOM; Monthly General Meetings 8—11 AM at Bayland Park will include a Program and an Auction: donuts, coffee, juice and snacks will be available.

April
12th, Tue. Board Meeting
23rd, Sat. General Meeting. **Program: Trouble Shooting With the VOM—Which One Is Preferred** (staff).

May
Note: A Basic Electronics Class and a separate Swap Meet at EPO, Dates & Times to be decided.
9th, Tue. Board Meeting
14th, Sat. Swap Meet at EPO; 7:30 - 11 AM...More details, by email blast, when available. ***Rain date June 11th.***
21th, Sat. General Meeting. **Program: Diagnosing Oscillator Problems in AM Radios, and Alignments** (staff).
Note change for May meeting to 3rd Saturday due to Memorial Day Weekend

June
14th, Tue. Board Meeting
25th, Sat. General Meeting. **Program: Troubleshooting Amplifiers and Radios Using the Oscilloscope.**

July
9th, Sat. HVRA MEGA AUCTION in conjunction with the TEXAS CITY HAMFEST (details in this Grid Leak)
12th, Tue. Board of Director Meeting
23rd, Sat. General Meeting. **Program: Aligning 1920's and 1930's Radios.**

September, 2022 Board of Directors' Elections

The HVRA Bylaws describe the Board of Directors' duties. Below is a list of the positions up for election at the Annual Meeting scheduled for September. If you would like to be considered for one of the following positions, please contact Bill Werzner or Lewis Brittain for specific details (see page 2 for contact information).

President

Paragraph 1. Shall lead the membership in a manner consistent with the Association objectives (**ARTICLE II**) and these Bylaws.

Paragraph 2. Shall preside at all meetings of the Association and the Executive Board.

Paragraph 3. Shall appoint all committees and chairpersons, except for those assigned to the Vice President.

Paragraph 4. Shall recommend, appoint, or remove the Association Auctioneer.

Paragraph 5. Shall appoint or be chairman of the program committee.

Treasurer

Paragraph 1. The Treasurer is the officer entrusted with the accounts and funds of the Association. These funds shall be maintained in a bank account as approved by the Executive Board. Signature authority on this account shall consist of the President, the Vice President and the Treasurer. Checks issued from this account will require one signature of authorization.

Paragraph 2**.** Shall maintain a detailed record of all transactions, collections, and disbursements of funds, goods, and Association dues. These records will be maintained in a form as approved by the Executive Board.

Treasurer Position continued

Paragraph 3. Shall keep an accounting of membership dues and assist the Editor in notifying members at least one month in advance of membership expiration.

Paragraph 4. Shall make records available for audits as directed by the Executive Board and shall make records available within five days for any special audit.

Paragraph 5. The Treasurer shall prepare an annual report to be presented at the Annual Meeting.

Historian

Paragraph 1. Shall maintain all historical records of the Association including one copy of each Association publication.

Paragraph 2. Shall maintain a copy of the Official history of the Association in a "scrap book along with suitable photographs and newspaper clippings regarding the activities of the Association and its members

Representative at Large – Position Two

Paragraph 1. Shall serve as Contest or Auction Chairperson at the Annual Show and Auction.

Paragraph 2. Shall perform other special tasks as assigned by the President.

Representative at Large – Position Four

Paragraph 1**.** Shall be responsible for working with assessment, coordination, and inventorying of estates that HVRA will assist with liquidation.

Paragraph 2. Shall maintain the HVRA policy for terms and condition that HVRA will enter into with estates. Said terms and conditions shall be voted on for approval by the Board of Directors.

Paragraph 3. Shall seek assistance from board members and other club members in the execution of their duties.

HVRA welcomes our new members :

Jordon Lagrone Houston **David Wilkins China Springs (near WACO)** **Timothy Laing Lima, OK**

Warren Thompson Pensacola, FL.

HVRA welcomes back old members :

Bob Flagel League City **Joe Duhon Pearland**

HAVE YOU RENEWED YOUR 2022 MEMBERSHIP? DON'T LET THIS BE YOUR LAST GRID LEAK NEWSLETTER.

The Board of Directors made the following adjustments to your renewal date:

- **Member in good standing as of July 1, 2021:**
  In order to attend the March 2022 convention, you must renew, and the new expiration date of your membership expires a day prior to the next convention (2023 date TBA)
- **New members after July 1, 2021:**
  1. Membership expires the day before the 2023 convention (date TBA) and are eligible to attend the March 2022 convention with no additional membership dues.
- **After the March 2022 convention, all members will be on a universal membership expiration date that expires the day prior to the 2023 convention date.**

Questions concerning your membership status or renewal date please contact Brett Martin, HVRA Treasurer, at bmartin2021@gmail.com or 713-408-2505; or, download the renewal form from HVRA.org.

2022 ANNUAL CONVENTION REPORT

By Lewis Brittain

The 2022 Annual Convention was HVRA's premier event for the year. It was a two and a half day event held at the Houston Marriott North, as it has been held for several previous years. Generally the service has been excellent, and they certainly didn't let us down this year. There were a total of 77 attended convention registrations, with 462 lots spread over two days of auctions. There was an excellent presentation of the development of the Atwater-Kent company by Jeff Heller, some awesome displays in the Old Equipment Contest organized by Tom Taylor, and a fine banquet featuring guest speaker Ted Oberg of Channel 13, attended by 62 members and guests. The event was concluded with a Sunday morning swap meet.

The auction went exceptionally well thanks to the efforts of Joe Gernand and handlers Ron Carroll, John Derry, John Given, Logan Hardy, Gilbert Hedge, Kayden Hedge, Wayne Jones, John Schmitt, Mike Slovan, Jimmie Stewart, and Pat Zapalac. Steve Scheel devoted a tremendous amount of effort, both mentally and physically, to getting the estate items to the auction. Despite recent health concerns President Bill Werzner was able to move through the great number of lots with his usual finesse, with occasional relief provided by myself. At the auction table were Treasurer Brett Martin, Ron Soyland, and Carolyn Given recording the proceedings. Special thanks to Gail Sirkin, Lois Janssen, and Fatima Brittain for their help at the registration table and their assistance with improving my organization skills. And extra special thanks for Jerry Sirkin who served as my mentor and motivator throughout the process. A big thanks to Steven Pena for taking photos of this event, including individual contest photos. And so many others contributed who may have not received mention by name.

Unfortunately prices were quite low this year and there were very few high value items in the auction. The low prices were offset by a high volume of donated items. Overall auction sales were $12,462. In addition to the auction net there were the registration fees and banquet tickets, and a few other small income items like swap meet table rentals and sales, raffle tickets, and hat sales, for a net income of $7185. Overall expenses were $8367, for a net loss of $1182.

Bill Werzner and Lewis Brittain taking turns as auctioneer, along with a great support team of Carolyn Given, Brett Martin, Ron Soyland, John Schmitt. Gilbert Hedge, and Pat Zapalac.

Tom Taylor presenting Contest Awards; Bill hoping his entry was a winner.

Bill, Lewis, Guest Speaker Ted Oberg

CONVENTION CONTEST UPDATE:

OLD EQUIPMENT CONTEST CHAIRMAN TOM TAYLOR

I want to extend a word of THANKS to the many that turned out as exhibitors in the Vintage Radio Contest of our annual HVRA Convention. Your participation went a long way towards reestablishing a long overdue 'normal' for our club and for those in attendance. The recent two years of our lives saw many changes, few of which were welcomed. However, with 33 exhibits filling all categories, but two, there was much to enjoy and consider. Perhaps we will remember this time as a mark to exceed. Perhaps we will just remember it as a look towards what we can do to reaffirm and maintain our new normal. Thanks to the volunteer judges: John Schmitt, Gilbert Hedge, Steve Scheel, and Jeff Heller. And finally a special thanks to those that brought more than one exhibit. I sincerely hope others learned from his rewards. Below. And throughout this GL are some photos of winners.

Jerry Sirkin

Best of Show

Exhibitor's Choice

Special Convention Theme

1st Place Atwater Kent Category

Gilbert Hedge

Best of Show Runner Up

People's Choice

Best Restoration

- **Crosley Pofrtables 4 Pack**

1920's Battery Receivers

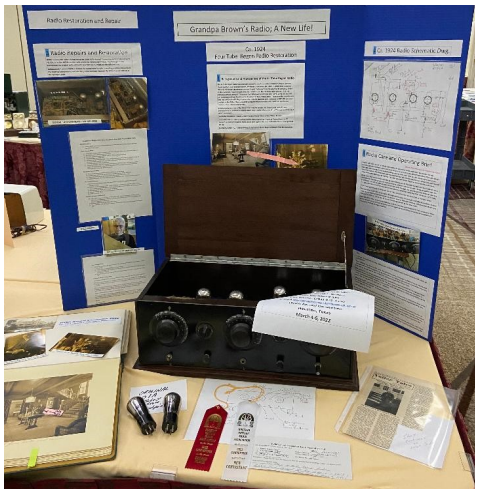
- **Pine-A-Tone**

Best Collection and Artifacts

Born From Junk by Ed Mustoe

Display & Camera Tubes by Reid Shipp

New Contestant Award
Family Heritage Regen
by David Brown



Crystal Radios 1st Place
Lance Borden

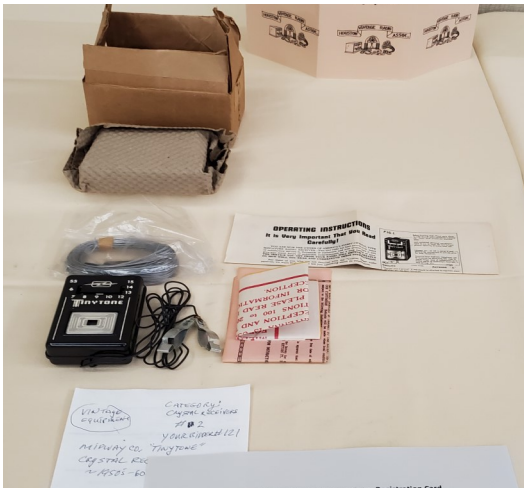


Table Radios – Wood
, Bill Werzner 1st Place
Jeff Heller 2nd Place

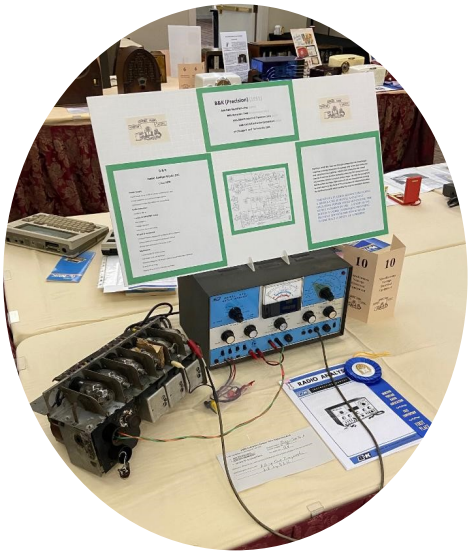
Table Radios – Non Wood
G.E. Stover 1st Place
GE Clock Radios

Modern Electronics
Four Pocket Computers
Gino Candida

Transistor Radios
Westinghouse
Ron Schneider)

Phones, Speakers, Mics
RCA 77 Microphone
Frank Haecker

Misc. Vintage Electrical Equipment
B & K Analyzer
Tom Taylor



Military Electronic Equipment
Chinese HF 339
Lance Borden

Mike Langston Exhibit 13
2nd Place

Lance Borden Exhibit 2
2nd Place

Lance Borden Exhibit 2
1st Place

Bill Werzner Exhibit 4
1930 Echophone 1st Place

Exhibit 6
Jeff Heller Sparton Sled 2nd Place
Bill Werzner 1950 Crosley Dashboard

Exhibit 9
John Schmitt
1920s AK and Musette
Phono Attachments

Ron Schneider Exhibit 7
Westinghouse RPM 5010

George Wilder Exhibit 7
Zenith Transistor Radios

Gino Candida Exhibit 7
Transistor Radios

Exhibit 16 Foreign Radios
Lance Borden
Normende Transistor

While at the Convention our befriended neighborhood cat had hidden her litter of 4 kittens under our deck.

NOT REALLY THE CAT WHISKERS I WAS HOPING TO FIND THAT WEEKEND!!

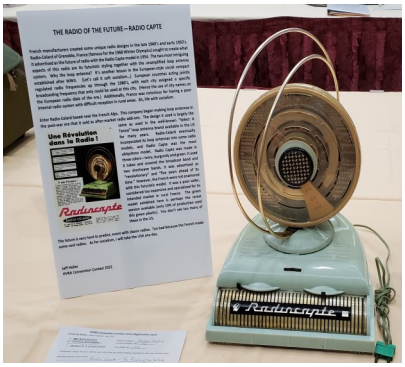
TEXAS CITY HAMFEST and HVRA 2022 MEGA AUCTION
DOYLE CONVENTION CENTER TEXAS CITY JULY 9, 2022

The Texas City "HAMFEST" will be held in the Doyle Convention Center, 2010 5th Ave. North, Texas City. HAMs, DX'ers, collectors, tinkerers, and curious individuals will be on hand, swapping and selling throughout the center and parking lots. You will find just about anything electronic 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. 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; 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. **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) can 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.

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 (NO JUNK, PLEASE) to Bill Werzner at werz1943@gmail.com or if you have any questions, please contact Bill at 713-820-1778).

Hi-Fi Equipment by Mike Slovan
807 Amplifier



Foreign Radios by Jeff Heller 1st Place

Phonographs by Bob Botto
Experimental Edison Gem

Atwater Kent Display by David Herlinger

Open Display by Lance Borden
Solas ll Survival Lifeboat Radio

Amateur Radio Equipment >10 Yrs by Pat Zapalac
Hammarlund HQ 150

RADIO DIAGNOSTICS by the NUMBERS - PART IV: MIXER/OSCILLATOR By Tom Taylor

This the last in a series on radio design highlights will attempt to cover the oscillator/mixer (AKA oscillator/converter, oscillator/first detector) section encompassing the signal path from antenna to the mixer IF frequency output .

In the early radio days tube and therefore overall radio gain was on the short side due to losses in each area which becomes a progressively larger barrier to operation at Higher Frequency defined as > 3MHz. As these losses were overcome it was more important to address selectivity interests particularly on the higher end of the Broadcast Band, BCB. The parallel combination of an Inductor/Capacitor, L/C, provided a tuned circuit often placed before the first control grid to maximize that station selectivity. Placement of that pair across a signal path takes advantage of the fundamentals of resonance that presented the highest possible impedance and therefore the least shunting of signal to ground. The technique was embraced, and it became common in RF amplifier stages placed ahead of the mixer.

Contributing to circuit losses that restrained operation above the BCB were capacitor traits including those within a tube as well as both lead placement and lead lengths. Typical early tube test data states inter electrode capacitance, ie. that between tube elements, as near ~5 pF, a seemingly small value. However, a capacitance of that value has an equivalent resistance of ~30K ohm at the Broadcast Band, BCB, frequency of 1KHz which is certainly dominant against grid leak resistors >1 meg as well as influential against internal tube plate resistances of ~10K ohm (#01A tube) for the era. It was these capacitive reactance losses inversely proportional to frequency that inhibited operation at higher frequencies.

Superheterodyne designs that followed sidestepped the problem of frequency dependent C and L reactive losses inherent with both the tube and its surrounding circuitry by shifting the signal of interest to an Intermediate Frequency, IF just below the low end of the BCB. In this new design approach the mixing or conversion of incoming signals with that of an internal radio oscillator produced two more signals, the lowest frequency enjoyed the least frequency dependent attenuation caused by capacitance. Here in the IF high Q (or quality, a figure of merit) tuned circuits further separated adjacent channel interference while providing a great deal of gain. It can also be shown mathematically that the percent separation of adjacent stations is much greater once they are shifted to a lower IF than when originally broadcast and amplified as a Radio Frequency, RF, signal, a condition that enhanced selectivity.

Early designs used a dedicated tube, the triode, at first for each task to perform the oscillator and separately one for the mixing of two signals arriving at its elements. Subsequent superhet radio designs then adopted use of a single tube with two internal amplifying structures such as the 6F7 and 6K8 and then later a single five grid structure within one envelope called a Pentagrid Converter. Both approaches reduced the tube count, ccost, power consumption, real estate, wire complexity and therefore associated losses. Typical tubes with this pentagrid structure were the 1R5, 1L6, 2A7, 6A7, 6A8, 6D8, 6L7, 6SA7, 7B8 on the way towards the 6BE6 (or 12BE6 its 12 volt version) favorite in a miniature glass envelope.

To understand this mixing or conversion scheme, consider again that control grid influence on a triode is such that a small positive going voltage there acts like a gas pedal to dramatically increase current flow within the tube as found at both the plate and in the filament (or cathode if available) reference to a ground. Subsequent tubes with filament heated cathodes obtain their ground return path through a resistor on its way to the power supply negative. Oscillation can be established when we couple or add a little positive going filament (or cathode) return signal current to some positive going grid signal current. This is positive feedback. Alternatively, we could just as well have taken some of the negative going plate signal of that tube, inverted in a tapped coil taking the resultant positive going signal at the opposite end of that coil and coupling it to the positive going grid signal for the same result. Keep *that* inversion in mind the next time you hear a regenerative radio break into oscillation. Fundamentally, if one end of a coil handling an AC signal swings positive while its tap is held constant (no signal) with a DC voltage, the other end of that coil must swing negative in a like fashion. You know this. It happens in the secondary of center tapped power transformers. The feedback path facilitating oscillation of that period most often utilized inductors or capacitors in either a Hartley or Colpitts oscillator circuit configuration. See Note Below

Reasons why an oscillator stage fails to work in our old radios are often associated with corrosion or resistive losses taking place over time. Unfortunately, the original moisture sealant on paper composition coils was often paraffin or bees wax which look very much the same on an enameled wire wound coil. While paraffin has a poor affinity for water, the beeswax is known to absorb moisture much like paper variant coil forms of the era. Disregarding the accelerant to corrosion of the fine wire used in these coils, this absorption leads to coil resistive losses we might see as either reduced circuit gain or selectivity where they are used. The component quality parameter Q for both capacitors and inductors reduces gain and bandwidth in direct proportion to an increase in component resistance. Coils wound on synthetic materials like polystyrene which was not available in radio designs of the time or ceramic forms that were used in military equipment are for that reason superior. Ceramic was also found in better designs like that of the Midwest radios. Once moisture is allowed in or on RF and oscillator coils an open conductor is in its future which is often identified by a very small green dot of corrosion where you may find under magnification the wire has ended.

Another stage culprit is an oscillator which has been adjusted so far from its intended target that a wrong mixer product makes its way to the IF stage. Most chosen components generally limit such extremes of adjustment but be alert to

RADIO DIAGNOSTICS by the NUMBERS—Continued
PART IV: MIXER/OSCILLATOR By Tom Taylor

those rare cases where radio literature cautions the technician about tuning a coil to the second signal peak OR to start alignment with the slug placed at one extreme or the other. Some mighty strange outcomes show up if you face such a radio that has been adjusted wrong. Where these precautions are found, proper alignment in the proper order is a remedy when band coverage has gone west.

A failed oscillator's ability to tune or vary even the background hissing noise can be an audible symptom of its failure. IF observed, just look for continuity of all coils in the oscillator area. Your tools for that task is of course the voltmeter but can include oscilloscopes with bandwidths above about 5 MHz for our sinusoidal oscillator waveform viewing of the very weak signal or an RF probe which is perfect for small AC signal measurement where it will be seen as a mV DC level on a Digital Voltmeter, DVM.

Still another diagnostic aid is to place an operating BCB radio nearby tuned to a clear spot greater than 1 KHz on its dial while you tune the suspect radio from 560 KHz towards its indicated 1245 KHz point. A working oscillator in the suspect will be heard sweeping across the set point on an adjacent good radio since the suspect oscillator would be tuning higher or between 1015 and 1700 KHz if it was working. For alignment accuracy you will really enjoy us of a digital display on the good radio. THIS procedure assumes an IF of 455 KHz in the suspect radio and I just verified this trick for you using two radios.

Although I stepped off into some deep water here and there, I have attempted in this series to provide some circuit fundamentals, some diagnostic options and to identify a few regular culprits. The best teaching takes place when you face the problem with what you have and take steps with safety in mind. You will then quickly associate the problem with the method and hopefully remain free of your own over voltage condition.

It is best to act as if voltage might still be there even when you have your item unplugged, even when you have checked circuits with a meter, and even when voltage shouldn't be there. I have been bitten pretty hard with ~500 VDC shortly after checking an 'unpowered' chassis only to see moments later the lead wire slide right out of the probe serving my voltmeter. The proper habits and precautions help immensely. Now please think about all that.

Note:
To aid in your memorization here you can readily identify each configuration by associating the first letter "C'"of Colpitts with a capacitive signal divider feeding energy back from the cathode to control grid. Similarly, we can associate the first letter "H" of Hartley as a similar feedback scheme using inductors where inductance is measured in microHenrys represented by the letter "H". Yes, there was a slight of hand presented with those letters but maybe this linkage will work for you too.

Me Likem Oscilloscopes by Tom Taylor

Although the reason escapes me, again, I brought home an antique RCA Model 155A oscilloscope bought for $7 at the 2022 Vintage Radio Convention. Everything was there including a good power cord suggesting the promise of an easy run. An uncovered assessment provided evidence that someone before me cared enough to change components and that they might as well have put their name on the chassis because they were comfortable operating a soldering iron. A few tests brought my attention to the underlying reason for a missing green scan on the instrument face. As you might expect, the High Voltage, HV, wasn't and its source didn't.

Faced with why there was an incomplete HV winding I recalled schemes for producing high voltage such as a transistorized multivibrator (free running circuit), perhaps an old monitor fryback or even a TV HV tripler package. I then recalled from several ham radio Handbooks the VERY simple composition of three capacitors and three diodes (plus the defendable series surge resistor) that yields 3X the peak input Alternating Current, AC, voltage.

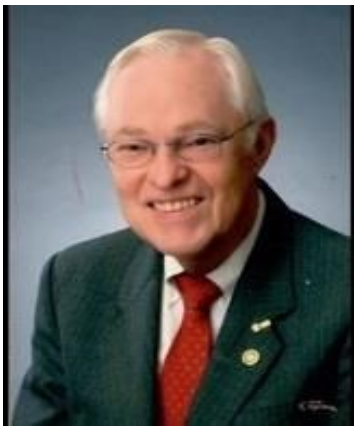
Under chassis space limitations called for physically small capacitors to be placed in this low current load application where small values serve well. We got us a marriage here. Borrowing a WW2 Bakelite terminal board from a garage junk tub, 0.01 uFd capacitors and 1N4007 diode Do-Alls were first tried against the >750K ohm chain of Intensity, Focus and fixed resistors in series. Divide about 1000 expected Direct Current, DC, volts for a CRT green scan with 0.75 meg ohm and you come up with a VERY small current of ~ 1.3 milliamp. Such a current is NO challenge for an existing plate voltage winding which is already providing about 350 volts DC for a three tube challenge.

This first tripler parts combination gave a wimpy 650 DC volts which told me the scope circuit load was high relative to chosen capacitor value. Greater energy storage comes with greater capacitance. Gray hair suggested I change them by a factor like 10 or 20 favoring the 0.22 uFd at 600 VDC capacitors available from local stock with a 0.15 at 1500 VDC capacitor across the output. Presto as BullWinkle would say. We got us a green sweeping CRT AND all them other knobs aworking. Since the CRT is looking for that amount of voltage to be negative we need only reverse the polarity of all diodes in use to meet the need.

OBITUARY

Henry deForest Ralph, Jr.

1933-2022



Henry deForest Ralph, Jr., age 88, passed away on January 25, 2022, after a sudden, brief illness. "deForest" is survived by his two sons and their wives and children: Forest III, Felicia, Carolyn, Emily, and Noah Ralph; Randal William, Catherine, Austin, and Brooks Ralph; sister Elizabeth Ralph Mertz; sisters-in-law Ruth Page Lawrence and Susan Page; and numerous nieces and nephews and their children.

deForest was born at Georgetown University Hospital in Washington, DC on April 11, 1933, the second of three children of Dorothy Walker and Henry deForest Ralph. (Coincidentally, both his sons would obtain their undergraduate degrees at GU, taking classes in the same, converted old hospital building.) When he was fourteen, he was struck by rheumatic fever and appendicitis. To convalesce, he spent a year in Madeira Beach, FL where his grandfather, the Rev. Philip Ralph, had founded, and was the first minister of, the Church by the Sea. After his return to DC, the Ralph family moved to Tulsa, OK, which is where deForest met his wife-to-be, Martha Austine Page. They graduated together from Tulsa Central High School in 1951.

deForest studied Chemical Engineering at The Rice Institute, earning his B.A. and B.S. in 1955 and 1956, respectively. He and Martha were married while he was in school, the ceremony conducted by his grandfather at Martha's "airconditioned" Tulsa home on July 24, 1954. Upon his graduation, the couple moved to El Paso, TX, the city where their two sons were born. While there, deForest began his career as a refinery engineer for Standard Oil of Texas (Chevron).

The couple returned to Houston in 1961, where they made their permanent home and raised their boys.

deForest would work for a handful of companies over the next 22 years: Trunkline Gas, Panhandle Eastern, the Pace Company, and Gulf Interstate. His longest stint was at Coastal States (Coal and Chemical Division), where he served as Vice President(s) of Economics and Planning and Wycon Chemical Company. In the mid-1980s, he formed his own consulting business and was co-editor of a local natural gas newsletter.

deForest loved Houston and embraced the Texas culture and ethos. He played roles in his sons' extracurricular activities, including Indian Guides, Boy Scouts, and Willow Creek Little League baseball. He got involved with Amigos de las America, his son Forest's later interest. **He was active in the Houston Vintage Radio Association, inspired by his connection to his great uncle, Lee de Forest, one of America's early pioneer inventors in radio. deForest had a signature saying - "over and out" - when wrapping up a phone message**.

deForest was a longtime member of the Rotary Club of Houston, a recipient of their Honorary Emeritus Life Member award, and was a Paul Harris Fellow multiple times. He spent many years volunteering for literacy and ESL programs at HISD elementary schools, including Tijerina and Golfcrest. deForest was forever active with all things Rice: athletics, music, and academics. He loved the School of Engineering, and was President of the Alumni group REA in the 1980's. He established an annual scholarship prize to encourage Rice students to bring their engineering skills to bear on solving society's problems, naming it in honor of "Bob" Dickson, his roommate who died tragically in 1953 while on a Navy ROTC flight. Lastly, deForest worshipped at Emerson Unitarian Universalist Church, serving in various lay leadership capacities over the years. His most fulfilling role was leading Emerson's involvement in their Partner Church program, firmly establishing a bond with Gregory St. Nickolas Church of Transylvania (Romania).

Bill, Lewis, and Ted Oberg with Ted's Award Radio (Restored and donated by Bill Werzner)

Gilbert Hedge 1920s Battery Receiver Entry

Pine-A-Tone

Buy, Sell, Trade, & Services Offered

WANTED

Greetings,
Wanted to buy old jukeboxes. I am most interested in the ones made prior to WW II from 1920's to 1940's. Most of these have wood cabinets and although they are coin operated jukeboxes and select records, their deco design resemble upright floor model radios of that time period. Therefore I was hoping you might be able to help me locate some. They do not have to be in working condition. Some of the brand names that I am looking to buy include: AMI; Capeheart; Evans; Gables; Holcomb and Hoke; Mills; Rock Ola; and Wurlitzer.
I live in Pensacola, FL and have a daughter that I frequently visit living in San Antonio, TX. Please feel free to call me at the number listed below. Thank you for your interest and assistance.
I have included a few sample pictures of typical deco jukeboxes but would be happy to receive cell phone pictures of any vintage jukebox. I would appreciate any leads and if you know of someone having such a box that they might want to sell please pass along my contact information.
Happy collecting to all.
Warren Thompson
850-478-0413 (home phone for conversations)
850-748-5973 (cell phone for texting and sending photos)
warrenthompson@cox.net email



WANTED

Wanted: Atwater Kent Model 36 radio with matching type "Y" power supply in working condition. Will purchase either early or late versions (or both if available).
Wanted: Atwater Kent Model K speaker in working condition
Contact: Jerry Sirkin 281-844-4124; gsirkin@aol.com.

Wanted: I'm looking for a Philco D-10 record changer (c. 1947). I can be contacted at joegernand@gmail.com

Castle Speaker

Auction Price

$125.00

What –A– Deal

SERVICES OFFERED

Vintage Sounds
Vintage Sounds is located in the Market Place Antique Center, 10910 Katy Freeway, Houston, they service and repair vintage phonographs, radios, telephones, in addition to selling phonograph records, radios, phonographs, telephones, vacuum tubes, books, light bulbs, parts, and so much more. Open Friday, Saturday, and Sunday 10 AM - 6 PM. HVRA members 10% discount on radio items.
(713) 468-4911 www.vintagesoundshouston.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, Jims@sargentauction.com Jim Sargent, WA5QBR, Auctioneer, TX license 16135 Location: 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 (www.tomgranger@mac.com)

Ace Electronics: 3210 Antoine Drive Houston, TX 77092 713-688-8114 (www.ace4parts.com)

Electronic Parts Outlet (EPO): 3753 B Fondren Rd Houston, TX 77063 713-784-0140 (www.epohouston.com)

MARCH, 2022
HOUSTON VINTAGE RADIO ASSOCITION
ANNUAL CONVENTION

Other Radio Related News

Texas Broadcast Museum: 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: 550 Roosevelt in Silsbee, TX. Please contact Jimmy Edington for appointment at 337-476-4328 (atwaterkentsrus@gmail.com). Jimmy, a 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. See his website, www.atwaterkentsrus.com.

More Radio Clubs

Delaware Valley Historic Radio Club www.dvhrc.com

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

Antique Radio Club of Illinois (ARCI)
www.clubinfo@antique-radio.org

Collins Radio Association (CRA). David Knepper, PO Box 34, Sidman, PA 15955. No dues. www.collinsra.org

Michigan Antique Radio Club (MARC). Don Colbert, MARC, Pub: The Michigan Antique Radio Chronicle, quarterly. Dues: $20. membership@michiganantiqueradio.org. Annual Extravaganza and other quarterly meets. 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 Club website: http://newmexicoradiocollectorsclub.com

Texas Antique Radio Club (TARC), Doug Wright, Canyon Lake, TX. wrightdouglas70@yahoo.com

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

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

Canadian Vintage Radios Society (CVRS) Contact Gerry O'Hara 226 Dallas Road Victoria V8V1A5 Canada (gerrycohara@gmail.com) 604-671-6062; CVRS Website: canadianvintageradios.com

MORE CONVENTION PHOTOS