

Volume 30, Issue 2Next meeting - March 10th @ Castle RockMAR/APRIL 2019

# A Substitute Tube Adapter for 01A's

by Larry Snyder CRC Member

This paper discusses making a tube base adapter that allows substituting cheaper octaltype tubes for 01A tubes when restoring early battery-powered radios. For comparison, relative used tube prices are: 01A=\$20, 6K6=\$10, 1A5=\$5.00.

An article edited by Ludwell Sibley in the AWA Journal Old Timer's Bulletin, V33-3, August 1992 described how 1.4v and 6v octal tubes could be adapted as substitutes for 01A's. A simple adapter made with an octal tube socket, mounted inside an 01A tube base, holds the lower cost substitute. The adapter is wired to accept either a triode or pentode, by connecting the pentode as a triode.

The 1.4v and 6v adapters, with corresponding substitute tubes, can be mixed and matched at will in the same radio or used separately in any radio where 01A tubes are required.

For 1.4-volt substitutes, tubes like the 1A5, IC5, 1G4, 1N6, IQ5, IT5, & 3Q5 were suggested as possible replacements in the article. To use 1.4v substitutes in a radio with a 6v filament supply, it is necessary to put a half-watt voltage-dropping resistor inside the 1.4v adapter. Theoretically, a 91  $\Omega$  resistor is required; I used 82 $\Omega$ , but 100 $\Omega$  also worked. The resistor is in series with Pin 7 of the socket. I had success with the 1A5 & 1T5 tubes, but I did not have the other tubes to see if they worked also. The 1.4v tubes power up almost instantly like the original 01A's.

For 6v substitutes, triodes like 6AC5, 6AE5, 6AE6, 6C5, 6J5, 6L5, 6P5, or 6SF5 were suggested, as were the power tubes 6G6, 6K6, & 6F6. I was successful with the 6K6, 6F6 tubes and even 6V6 tubes which were not listed. I was unsuccessful, with the 6AC5, 6C5, 6J5 tubes, and I don't know why! I did not have the other tubes on hand to try. The 6v tube substitutes are slower starting up than the 01A's; I experienced about 20 seconds for the sound to come up.

### Seven Steps to Make an Adapter

1) An 01A tube base can be obtained from any dud tube that has a 4-pin 4D base. The 01A tube base is preferred because it is marked 01A and has the side locating pin. Other 4 pin tube bases from '26, 30, '45, 71, '71A, '80 or 112A's tubes, are physically the same and could be used, but the identification marking would be incorrect, and the side locating pin may have to be added. Unmarked bases, complete with the side locating pin, are available from Vacuum Tubes Inc for \$2.00. Part No. C4BaseB.

2) To remove the glass tube from the base several methods are available.

a. Heat the glass tube and the base by placing them under a stream of very hot water to soften the resin holding them together. When sufficiently warmed the base and the glass tube can be twisted slightly to break the bond, but they will still be connected by the internal wiring.

# Club Announcements

# MESSAGE FROM THE PRESIDENT

Welcome to the beginning of a really interesting and downright busy season for club activity and events.

\* Behind the scenes, under the leadership and skill of Yuriy Yedidovich and other club members, we now have a entirely new Colorado Radio Collectors Club website. Elsewhere in this Flash issue there is an introduction and summary of some of the website features, capabilities, member provisions, and public interfaces. You all will have to "check-it-out" soon.

\* Of course our annual show is in a few weeks, therefore our March meeting will be the final planning for this event. Bill Busch has volunteered to be Show Coordinator. The "featured" brand this year is Silvertone (Sears & Roebuck Co.) radios. Rick Kuberski has developed a really neat layout/floorplan for our space at this year's new venue; basically a "flow-through" for the public as they view our showcased radios and related stuff.

\* For those of you that are interested in collecting more radios,

tubes, literature, and attention to our colradcol@yahoogro free or good deals posted by any of us. on this list. I recently Greenwood Village basically free radios



parts be sure to give "email reflector" site: ups.com. Notices of often appear as Please sign up to be posted that a resident was offering or at least some basic

offer for about 30 decent collectable and/or restorable radios.

\* A lady in Colorado Springs has offered, through the club, to give away most of her late husbands and her extensive collection of radios, mostly Zenith. Included will be parts and tubes. Of note, the collection contains about 45 Zenith Royal Transoceanics. Allin-all probably 100 plus radios including many radios have been repaired and all radios are generally in good shape. Her collection also includes several restored classic Zenith "black-dial" radios...these will be sold pending negotiation but will sell for quite favorable terms. Details of the Great Radio Giveaway of 2019 will be part of our March meeting agenda. I suggest anyone interested be at the March meeting...don't be "behind the door" when really neat and free radios are going "out the door"!

Shine up those show radios and......Stay Tuned *David*.....

## **Meeting Locations**

(Unless noted otherwise) Littleton Castle Rock January March May July September November CRC MEETINGS

Meetings are held on the 2nd Sunday of every other month starting in January (except May is the 3rd Sunday) at 1:00 pm. The meetings consist of business, "show & tell", raffles, auctions, swap meets, technical discussions and other subjects of interest.

#### **CRC MEMBERSHIP**

Annual membership in the CRC runs from July to June. Dues entitle members to attend meetings, "The Flash!" our newsletter, participation in our spring show and Fall auction. Current annual dues are \$20. New memberships will be prorated to the following June.

### Upcoming Events

Mar.	- 10th	CRC meeting
Mar.	31st	Vintage Voltage
May	19th	CRC meeting

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b. Or soak the tube base in alcohol for 24-48 hours to soften the resin. Be aware that flammable alcohol and explosive fumes may be inside the base and should be removed before unsoldering the electrode wires.

c. Or you may find it more expedient to just put the glass portion in a bag and smash it with a hammer!

d. Next hold the base in a vise so the ends of the 4 pins can be heated to melt the solder while gently pulling on the glass tube or exposed wires. When the pin solder melts the base and wires can be separated from the glass.



Glass tubes removed from the bases

3) Remove any residual resin or glass that may have remained on the inside of the base.

4) Obtain an 8-pin octal tube socket. They can be purchased from Radio Daze, No.NOS SKT-55 for \$1.35; or possibly found in your "parts". I like the "Molded-In-Plate" (MIP) variety shown below because the metal tabs limit how far the socket can be inserted into the 01A base and they can be held onto when removing the tube.



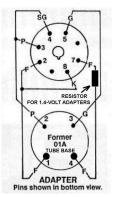
The NOS SKT-55 Pin Socket

5) To center the octal tube socket when it is inserted into the base, I made a  $1/8 \times 1/4 \times 3 7/16$  long flexible strip and super-glued it into the 01A base. I used rubber, but any other material will do the job and it does not have to be a complete strip; 3 or 4 small pieces equally spaced will center the socket. A little sanding of the rubber may be required for ease of inserting the octal tube socket.



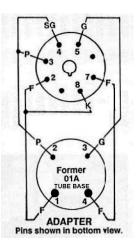
Centering strip is glued in the 01A base

6) Use #24 gage wires to connect the octal tube socket to the 01A base per the diagram below. I cut my wires 6" long and soldered them to the octal tube base first.





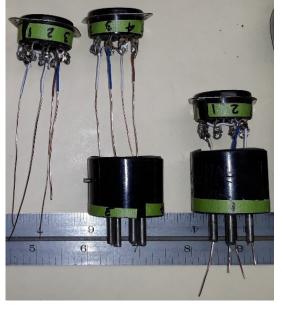
Wiring diagram for 1.4v tubes with resistor Such as 1A5 or 1T5





Wiring diagram for 6v tubes Such as 6K6, 6F6, or 6V6

7) Insert the long socket wires thru the 01A base pins and push the socket in as far as it will go before soldering the wires to the pins. After soldering, cut off the excess length of wire and file the pin ends smooth.



Inserting the 6" long wires The green tapes are marked with pin numbers to aid aligning the socket pins with the base pins during assembly.



Comparing lengths A 6v 6F6 tube & adapter are on the left and an 01A is on the right.



A finished tube adapter

Notes:

I made (6) each 1.4v & 6v adapters and mixed them in my current radio projects. I am quite please with the results.

My preference is for adapting the 1.4V tubes primarily beause they start up the radio quickly, like the original 01A's. Plus, they are cheap and I have many in my tube supply.

After studying Ludwell Sibley's article in the Old Timer's Bulletin I am under the impression that he did not actually try all the tubes he suggested. So there may be many other tubes that could be adapted, and even tube with different filament voltages.

The Old Timers Bulletin is the official journal of the American Wireless Association and is available for purchase at the AWA museum store. I find the OTB articles to be an excellent source of tips and tricks for restoring old radios. See www.antiquewireless.org for more information.

## The CRC has a new Website!

Yuriy Yedidovich has agrred to be the new webmaster and the new address is http://coloradoradiocollectors.com/CRC/

Check it out and let Yury know what you think of it !!

## March 10, Daylight Savings Time

# 2019 Colorado Radio Collectors Annual Show

The **2019 CRC Annual Show** in conjunction with Vintage Voltage is on March 31st this year. This is the twelfth year that we will be joining the Vintage Voltage Show. The show is at a new location this year, The Denver Mart Expo Hall. See advertisement below.

Every year the turnout is tremendous with thousands of people going through the facility. This is your chance to show off your stuff. Bring your treasured radios and equipment to show everyone and see what others have brought. Although there will be a featured category, don't forget that all of the standard categories will still be available.

Every radio counts! Ribbons for top entries in each category as well as a **Best of Show** plaque will be awarded as a result of paired member judging. Take advantage of this opportunity to show off your stuff! We have yet to run out of space for the display of radios, so dig deep and bring a bunch with you!

## **CRC Show Schedule**

Doors open/setup	8:00 AM
Registration	8:30 - 9:30
Judging Begins	10:00 (sharp!)

## **Judging Criteria**

- Exterior condition
- Interior condition (if visible)
- Presentation: display, documented, etc.
- Rareness: few are in existence
- Uniqueness: novel, not many like it Note that these criteria are weighted, with an emphasis on condition and presentation, so everyone has a chance!

Be sure to place your display(s) in the correct areas designated by the display category signs. Also be sure to go to the computer desk to register and get entry tags.

Also, we depend on members to do the judging - **please be available**.

Please use the enclosed form to enter your items for the show. For early registration, email your information to: Alexis Alexandridis <u>alekosalexand@gmail.com</u> - <u>Recommended !!!</u>



2019 Colorado Radio Collectors Annual Show Entry Form

# **Contest Judging Categories:**

Accessories	Metal Box (1920's)	Telephony & Telegraph					
Bakelite	Metal Case	Television					
Battery (1926-1929)	Military	Test Equipment					
Battery nonportable (1930+)	No Judging (Display only)	Tombstone					
Catalin	Novelty (Transistor)	Transistor					
Cathedral	Novelty (Tube)	Tubes/Parts Display					
Classic Audio	Phonograph	Wooden (linepowered)					
<b>Communications</b> Gear	Plastic (Tube)	*ADDITIONAL AWARDS*					
Console (Fulllength)	Portable (Post 1938)	BEST OF SHOW					
Console (High/Low Boy)	Portable (Pre 1939)	BEST OF SHOW BEST RESTORATION					
Crystal Set	Pre 1926	MOST EDUCATIONAL					
Homebrew	Speakers	PEOPLES CHOICE					
$\operatorname{Kit}$	Specialty - Sears Silvertone	I EOI LES CHOICE					
2019 Colorado Radio Collectors and Annual Show Competition March 31, 2019 Denver Mart Expo I-25 at 58th Avenue The Specialty Category this year is: Sears - Silvertone Record your entries information on this form and submit it to the computer operator							
NAME	PHONE#						
BRAND MODEL/YEAR	CATEGORY	RESTORE PROJECT? Y/N					
1							

1		
2		
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	PUT ANY ADDITIONAL ITEMS ON THE BACK	

# January Meeting Photos





Bill Dial with his 1926 8-tube Victoreen Superhet set



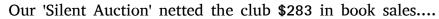


Merril Campbell with his refurbished Philco, Majestic, and Stewart Warner cabinets



Some serious discussions also transpired...







Dana Cain talked about the upcoming Vintage Voltage Show



Bill Eccher announces his Hickok website (see page 7)



Yuriy Yedidovich demonstrates his AM transmitters





Manny Dubois and his 1946 4-tube RCA Model 54B3 radio

This Philco 37-610T netted the club another \$100



**REPAIR SERVICE:** Radio repairs for club members. Reasonable rates. Good references.

#### Call David Boyle 303-681-3258

#### For Sale:

1) Signal generator, Eico model 320 electronically refurbished. Ideal for aligning old tube radios. \$30.00 2) Tube tester, Heathkit TC-3 with manual. Completely electronically and mechanically refurbished ... ready to use. \$60.00

#### Call David Boyle, 303-681-3258 djboylesr@msn.com

For Sale : Radio Tubes. From time to time I have sold tubes to club members. I have decided to advertise that fact. I will sell previously used "very good" to "good" tested and boxed tubes. I test them on some of the the top-end and calibrated Hickok testers for this determination. Have around 3000 plus tubes, tested and boxed ready to go. Also new ones too. Prices typically would be 50% or less, of AES posted prices. Every tube selling price can be somewhat negotiated. Need to trim down on my inventory ... win-win for both of us.

David Boyle 303-681-3258 or better yet: djboylesr@msn.com

For Sale: Radiola 1925 Super-heterodyne Second Harmonic "Semi Portable (AR-812). Cabinet has some scratches on original varnish. Contains 6 RCA 199 triodes that test good. Sub chassis components are encased in wax and are difficult to access. The receiver does not play. Battery power. \$250 Jerry Knievel 303-766-0845 jerryknievel@gmail.com

For Sale: Full size/console TV 1950's B&W RCA 6-T-65 "Eye Witness" Farnsworth small console radio/record player k-262

Larry Steele (719) 596-8883 larrysteel@comcast.net in Colorado Springs

WANTED TO BUY: 1980's Atari 520 or 1040 ST computer components (keyboard, monitor, etc.). I still need it for several specialized programs I wrote including a simulator for transistor and tube circuits.

Dave Laude dlaude1@msn.com

#### FOR Sale:

Dozens of radio books cheap. Call or email me for list and prics Wayne Gilbert 303-431-6774 wagil2@aol.com

FOR SALE: Classic audio stuff. 1000+ Reel-Reel tapes, Teac Reel-Reel recorder, many 16" transcription records, lots of 33 1/3 LP's, and a few radios. **Bob Slagle** (719) 564-7894 Pueblo, CO peakradio@q.com

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#### For Sale:

Tube Radios - Tombstone, Cathedral and Novelty Transistor Radios. I have collected radios of all types for 35 plus years and now it is time to let them go to new home/s. I have over 250 tube type and over 5,000 transistor (both novelty and shirt pocket type) Please call 303-2381384 radios4us@aol.com

Thank You, **Ron Smith** 



Having a hard time making connections with Litz wire - the wire type that came with old earphones and speakers?

Remove the outer cover, keep the inside wire and cloth together and wrap/solder a single strand of multistranded wire around the end.



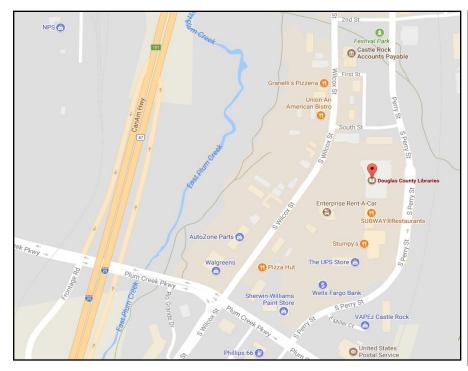
www.Eccher. com proceed to

'VHSystems'

#### SUBMISSION OF ARTICLES & AND ADVERTISEMENTS

Classified Ads for The Open Trunk and articles of any radio/electronic or historical related subject to be published in the Flash are encouraged and welcomed. The article(s) should be submitted in Microsoft Word, OpenOffice, RTF, or as plain text. Submit to Steve Touzalin by email at: stvetou@comcast.net or Larry Snyder at Lsnyder200@cs.com or by postal mail to 417 So. Queen Circle, Lakewood CO 80226. Formatting isn't necessary, but if you do, set the font to Times New Roman, size 10, left justified. If you have graphics (.jpg files) to be inserted, please name them and be specific about how you would like them placed. We will do our best based on space limitations.

# **CRC** Meeting March 10th at 1:00 PM



**Directions to Miller** Library in Castle Rock: From I-25: Take the Plum Creek Parkway, exit #181. Turn East onto Plum Creek Parkway. Turn Left (North) onto S. Wilcox Street and continue north 2-tenths of a mile. The Philip S. Miller Library is on the east side of the street at 100 S. Wilcox St. The building is towards the back of the parking lot, past the Dairy Queen.



**Colorado Radio Collectors Antique Radio Club** 417 So. Queen Circle Lakewood, CO 80226

**1st Class Mail**