

# The Colorado Radio Collectors Antique Radio Club

# FLASH!

Volume 12

July



August

2001

Issue 4



*In this issue...*

- ◆ Transformers and Inductors - part 2 ◆ CRC Annual April Show Results ◆
- ◆ Collector Book Specials - for Members ◆ CRC Picnic Information ◆

## ABOUT THE COVER

All you regulars will recognize Bruce Young, long time member of the CRC. Nobody can "do" a bakelite radio like Bruce can. If you didn't buy one from him at this year's annual CRC show and sale, you can still turn to page 4 and read all about it.

## The Colorado Radio Collectors Antique Radio Club

**Meetings:** Unless otherwise noted in this journal, regular meetings are held on the second Sunday of every other month starting with January (except: 3rd Sunday of May) at 1:00PM at the Museum of the Americas Bldg, 863 Sante Fe. (between 8th & 9th Ave's). The meeting normally includes business items, discussions, "show and tell", a raffle and a swap meet.

**Membership:** All dues are \$12.00 annually. Joining dues are prorated to June 1st. Send dues and membership inquiries to the CRC Treasurer, Robert Baumann, 1985 S. Cape Way, Lakewood CO 80227, (303)988-2089, RGBdenver@aol.com

**Article Contributions:** Submission of articles are always appreciated. This would include historical and technical items as well as stories about individual collections. Articles may be written or e-mailed, and need not be in final form. Submissions and requests for information should be directed to the CRC "Flash!" Publisher, Larry Weide, 5270 E. Nassau Cir., Englewood CO 80110, (303)758-8382 lweide@attglobal.net.

### C.R.C. 2000-2001 Officers

<b>President</b>	Tom Kelley Boulder (303) 444-1837
<b>Vice Pres.</b>	Mark Dittmar Westminster (303) 403-0669
<b>Treasurer</b>	Robert Baumann Lakewood (303) 988-2089
<b>Publisher</b>	Larry Weide Englewood (303) 758-8382
<b>Archives &amp;</b>	Charles Brett
<b>Book Sales</b>	Colorado Spgs (719) 495-8660

**Want Ads:** Submission of Sell/Want ads are always free to CRC members. Non-members may advertise in the Flash! for \$0.20 a word. Display advertising is available by contacting the CRC publisher, Larry Weide, for info and rates.

**Publishing Deadlines:** All submissions must be submitted by the 1st of Feb, Apr, Jun, Aug, Oct and Dec. for publishing in the following months.

**Thanks** to the **Pressworks** for printing the Flash! - (303) 934-8600

**Upcoming 2001 CRC Events**  
**CRC Annual Picnic July 22, CRC Auction September 9th**



# *Colorado Radio Collectors Antique Radio Club*

Founded October 1988

Dedicated to the Preservation and Education of  
Wireless, Radio, Television and Associated Equipment.

Volume 12, Issue 4

July/August 2001

## TABLE OF CONTENTS

A Chat with the President	2
The CRC Annual Picnic Announcement	3
The CRC Annual Show and Sale Results - by Larry Weide	4
A look at the CRC May Meeting	10
Inductors and Transformers, Part 2 - by Dave Boyle	12
Collector Books for Sale - Great deals for CRC members!	18
The Open Trunk - Want Ads and For Sale Items	20

**CRC 2001 - 2002 dues are now past due**

**Did you pay yours?**

**Forgot? No problem, just send your check to our Treasurer  
TODAY**

# A CHAT WITH THE PRESIDENT

**W!hew, it's hot out there!**

by Tom Kelley, CRC President

Hello again fellow club members,

Sure it's hot out there ... it's summer time! I hope you're all finding those "hot" deals at seasonal garage sales, and maybe a national radio show or two.

First of all, I want to express our appreciation to Carrie York. She's the very gracious lady who donated the Grunow console that was auctioned at our May meeting. Thanks to Carrie, and Robert Baumann who handled everything, our treasury has an additional \$210.00. And, of course, a tip of the CRC hat to Don Adams who bought the radio.

Don't forget that the CRC annual picnic will be held on the fourth Sunday of July, the 22nd @ 1:00pm, at the Lakewood Historical Center - Wadsworth and Ohio - formerly known as "Belmar". We'll be on the South side of the museum barn.

Oh yes, and a note to those who haven't paid your dues yet; You're reading this message in your complimentary and last copy of the Flash. I know you just let it slip your mind and really don't want the music to stop. So, before you forget again, how about dropping that measly \$12 check in the mail to our Treasurer today - thanks.

I'll see ya'll at the meeting - and the picnic,

Tom

'See you at the....



# CRC Picnic

Sunday, July 22st 1:00pm  
Lakewood's Historical Village  
West Side Of The Museum Barn  
- Wadsworth & Ohio, Lakewood -

- \* Bring your family, sig. other, whoever
- \* Bring your own main course/meat
- \* Bring something to share, i.e. salad
- \* Drinks and paper goods provided
- \* Swapmeet in the parking lot

# *The 2001 Annual CRC Show and Sale Report*

by Larry Weide, CRC Member

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On April 21st and 22nd the CRC held it's annual show and sale at the regularly scheduled monthly Denver Collector's Fair. We had a respectable turnout with 60 items registered for the contest, and quite a few more placed on the tables just for display. I want to give a big thanks and a tip of the CRC hat to our Vice Pres. Mark Dittmar, who both promoted and organized this year's event - not an easy task.

Note: In cases of tied scores, placement was decided by coin flip.

**\*\* Best of Show \*\***

**Sparton 557 "Sleigh" 1936**                      **Jerry Tynan**

**\*\* People's Choice \*\***

**Sparton 557 "Sleigh" 1936**                      **Jerry Tynan**

**\*\* Best Restoration \*\***

**Philco 87 1929**                                      **Paul Dozoretz**

<b>Category/Description</b>	<b>Owner</b>	<b>Score</b>	<b>Place</b>
<b>Specialty - Art Deco:</b>			
Automatic Tom Thumb 1934	Larry Weide	410	<b>1st</b>
Stromberg Carlson 235H 1938	Leamon Brooks	405	<b>2nd</b>
Jackson Bell Swan 62 1931	Bruce Young	400	<b>3rd</b>
Silvertone 1708 1933	Jerry Tynan	400	
Sparton 557 "Sleigh" 1936	Jerry Tynan	390	
RCA 143 1934	Dan Busetti	385	
Philco 84 Jr	Larry Weide	350	
RCA Radiola 33 1928	Larry Weide	335	
RCA 96X1 1939	Jerry Tynan	325	
Stromberg Carlson 125H 1936	Leamon Brooks	325	
Dumont Freshman 1932	Mark McKeown	315	
Midwest 34-16 1934	Mark Brauer	300	
<b>Battery - 1926-1929:</b>			
Magnavox 5 tube 1927	Leamon Brooks	460	<b>1st</b>
Stewart Warner 325 1926	David Solliday	380	<b>2nd</b>

**Cathedral:**

Atwater Kent 944	David Soliday	285	<b>1st</b>
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**Communication Gear:**

Collins 51S-1 1965	Barney Wooters	465	<b>1st</b>
National HRO500 Cir 1970	Robert Baumann	445	<b>2nd</b>
Japanese WWII Transceiver	Leamon Brooks	410	<b>3rd</b>
Collins TCS12 1945	Mark Dittmar	340	
Hallicrafters SX122 1961	David Soliday	205	

**Console - High/Low Boy:**

Westinghouse Columnaire 1930	Bob Cofer	350	<b>1st</b>
Philco 87 1929	Paul Dozoretz	285	<b>2nd</b>
Philco 370 1935	David Soliday	240	<b>3rd</b>

**Crystal Set:**

GecoPhone 1925	Bob Jensen	450	<b>1st</b>
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**Homebrew, Kit:**

Regen Receiver	Mark McKeown	345	<b>1st</b>
Regen Receiver	Mark Dittmar	275	<b>2nd</b>
Hartley Osc Transmitter	Mark Dittmar	250	<b>3rd</b>
Inverse Duplex Receiver	Mark Dittmar	250	
6L6 Transmitter	Mark Dittmar	185	

**Metal Box - 1920's:**

Stewart Warner 900AC 1929	David Soliday	270	<b>1st</b>
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**Metal Case:**

Detron Cir. 568-1 1945	David Soliday	205	<b>1st</b>
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**Plastic - Tube:**

Silvertone 4516 1936	Jerry Tynan	460	<b>1st</b>
RCA 65X2 1946	Jim Mize	355	<b>2nd</b>
Packard Bell 100A 1950	Dan Busetti	310	<b>3rd</b>
Zenith 5G03 1950	Tom Kelley	275	

**Portable - Post 1938:**

Zenith B600 1958	Johnny Johnson	400	<b>1st</b>
RCA PB10 1941	David Soliday	295	<b>2nd</b>
Zenith H500 1952	David Soliday	280	<b>3rd</b>

**(Continued on page 8)**

# The 2001 Annual



Bruce Young charms his customers



Does Curtis Kimbal know happy hour, or what?



Mark Dittmar - Mr. Sparks!



Some of the CRC dinner revelers



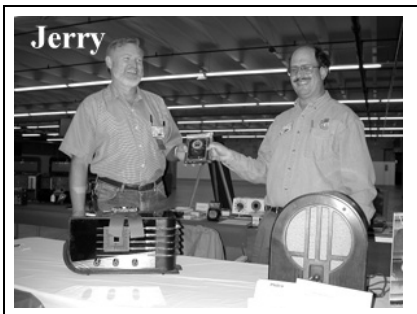
A ribbon for brand new member  
Paul Dozoretz



As usual, Bob Jensen wins big



# CRC Show and Sale



Jerry Tynan (left) receives yet *another* award from Neal Galinsky



Boy, did we have bargains for you!



Making the tough judging calls



Dan Busetti finally finds a use for his toothbrush



Hey, this ain't no garage sale!



Johnny Johnson had the good stuff

**(Continued from page 5)**

<b>Category/Description</b>	<b>Owner</b>	<b>Score</b>	<b>Place</b>
<b>Pre 1926:</b>			
Lutz C-7 1925	Barney Wooters	445	<b>1st</b>
Federal 110 1923	Bob Jensen	445	<b>2nd</b>
Neutrowound C6 1925	Leamon Brooks	420	<b>3rd</b>
Crolsely 51 1924	Mark McKeown	375	
Stewart Warner 325 1925	David Soliday	340	
<b>Television:</b>			
Singer TV6 Cir. 1965	Bill Hinkley	280	<b>1st</b>
Packard Bell 2621 1953	Mark Brauer	260	<b>2nd</b>
<b>Tombstone:</b>			
Atwater Kent 145 1934	Larry Weide	425	<b>1st</b>
Zenith 9S232 1938	Johnny Johnson	405	<b>2nd</b>
Zenith "Walton" 9S232 1938	Barney Wooters	405	<b>3rd</b>
<b>Transistor:</b>			
Sony TR6 1956	Neil Gallensky	380	<b>1st</b>
Regency TR1 1954	Neil Gallensky	370	<b>2nd</b>
Sony TR86 1959	Neil Gallensky	355	<b>3rd</b>
GE C-2415A 1970	Tom Kelley	345	
Sony TR63 1957	Neil Gallensky	325	
Sony TR608 1958	Neil Gallensky	320	
Sony TR610 1958	Neil Gallensky	320	
Sony TR69 1958	Neil Gallensky	295	
<b>Tube/Parts Display:</b>			
Tube, water cooled 1922	Barney Wooters	395	<b>1st</b>
<b>Wooden - Line Powered:</b>			
Zenith 6S22 1938	Bruce Young	355	<b>1st</b>
RCA 96-T4 1947	Bruce Young	265	<b>2nd</b>
Philco 84 1934	Jim Mize	265	<b>3rd</b>



## Olde Tyme Radio Humor



# The May Meeting of the



**Mark Gibson's Italian coin,  
commemorating Marconi**



**Robert Baumann show his latest  
Transistor find. Yep, it's in the  
book. Hey, it's ON the book!**

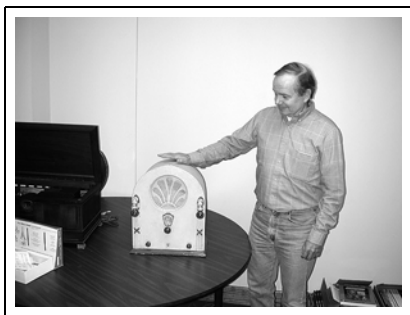


**Robert Baumann auctions off the  
donated Grunow model 1191**

# Colorado Radio Collectors



**Bob Cofer (mid) & Tom Kelley  
find a raffle winner**



**Bob Slagel finds a what?  
Yes, by Jove, it's an Edin!**



**Tom Pouliot plays his mid  
20's Stromberg Carlson  
battery set**

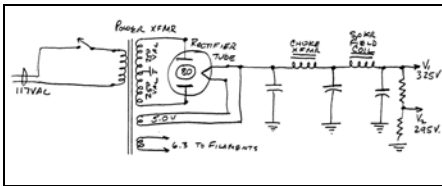
# INDUCTORS AND TRANSFORMERS IN OLD RADIOS

A Continuing Technical Series by David Boyle, CRC Member  
Part 2 of 2

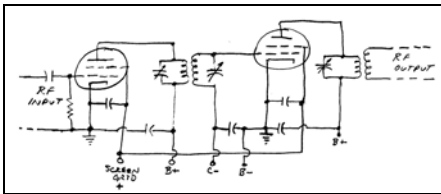
## Section 3

### Transformers:

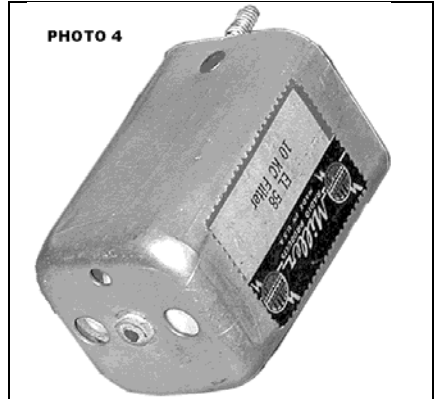
In the first installment we addressed inductors and coils. Transformers are essentially two or more inductive devices combined together to "transform" electrical energy from one or more circuits to one or more different circuits at the same frequency but usually at a different voltage and current value. In old radios the transformers (XFMR) are utilized at all frequencies. Examples are found in Figure 5, below.



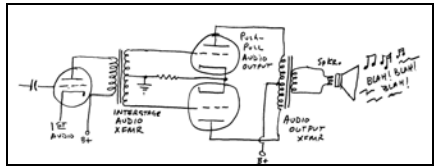
Typical power supply circuit



Typical RF and IF Amplifier - Refer to photo 4 for example of tunable RF/IF transformer.



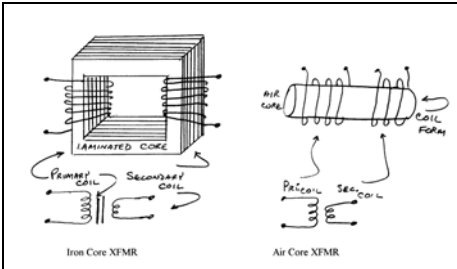
audio output circuit



Some transformers are used to change the impedance between adjoining circuits to better transfer signal energy between these circuits. A secondary benefit of transformers is that they provide isolation between circuits; especially D.C. voltages.

In its simplest form, a transformer consists of a primary

coil and a secondary coil wound near one another, usually on a mutual magnetic core - as in inductors, previously discussed. Figure 6 shows a simplified xmfr. Transformers may be wound with many primary and secondary windings. Some windings have taps, refer to xmfr's in Figure 5a and 5c and photo 5.



For a given varying magnetic field, the voltage induced in a coil in a magnetic field will be proportional to the number of turns on the coil. If the two coils of a transformer are in the same field it follows that the induced voltages will be proportional to the number of turns on each coil. This is called the turns ratio and an example is given in the following problem;

**Problem:** A xmfr. has 400 turns in the primary winding and 2,000 turns in the secondary. When an applied voltage of 115 volts AC is applied to the primary what will be the voltage at the output of the secondary winding:

**Solution:** 
$$E_s = \frac{N_s}{N_p} E_p$$

Where  $E_s$  = Secondary Voltage  
 $E_p$  = Primary Voltage  
 $N_s$  = Turns in the Sec.  
 $N_p$  = Turns in the Pri.

$$E_s = \frac{2000}{400} \times 115 = 575 \text{ Volts AC}$$

The relationship of  $N_s$  to  $N_p$  is the turns ratio.

Future articles will address several of the more complex inductance and transformer operational principles. All this will eventually lead to basic discussions on capacitive and inductive reactance, impedance, turned circuits, and oscillators. As they say about old radios, please stay "tuned in".

### **Section 4**

#### **Care and feeding of inductors and transformers:**

Let's start with common air core wave trap, antenna and RF style coils. These are usually wound on a tube form or woven over a "spider

web" or "honeycomb" flat core. The common failure mode is a "open" coil. This could have been caused by over current, mechanical damage, or both (old age!) My experience indicates failures occur at the termination point such as an eyelet or solder joint. Yesteryear solder fluxes were corrosive and through the years this corrosive flux takes its toll. I've traced down opens using an ohmmeter or multimeter (VOM) and found multiple breaks or opens. In this case a simple solder repair turns into a rewinding job. I'll cover this repair technique at an upcoming CRC meeting lecture. A loss of one or two turns of a coil will not radically affect the operation of the radio circuit. If you are going to rewind the coil(s) be sure to count the turns of the wire as you remove it. You can preserve old coils with a coating of "Q" dope (polystyrene) or a good varnish. These products will provide an adhesion factor between the old wire and the coil form and also protect against moisture absorption. It can also make them look kind of new.

Transformers are a different story. Many are totally in cased in metal "clamshell" cases, (photo 5) which I call closed frame or can be of the open frame design. Open frame types are usually other than the power types such as audio output (photo 6 below).



As with air core inductors, the best instrument to use for transformer trouble shooting is a VOM. Some simple ohmmeter tests for audio interstage (driver) and audio output are typically:

**Audio interstage primary**  
hundreds of ohms

**Audio interstage secondary**  
tens of hundreds of ohms

**Audio output primary**  
hundreds of ohms

**Audio output secondary**  
less than 5 ohms

**All high resistance ( megohms )  
measurements**  
open/failed winding



Transformers are made with all windings insulated from the core laminations and case. In a few cases, you will find a transformer that has a center tap on a coil that is internally connected to the case, but this is not common. Generally, ohmmeter measurements between any coil and the transformer core case should show megohms of resistance. During manufacturing, a "hipot" (high potential) test is used, checking for leakage with several thousand volts between the coil and case. However, most coil-frame insulation failures will show up on a low-voltage VOM, which should show "infinite" resistance on its maximum sensitivity. Note that when making measurements over a few megohms, holding the probes in your hands, and other leakage paths, may affect the measurements. All coils should be insulated from each other as well.

The above tests will not show shorted turns or leakage in the windings themselves. A simple test for this is to connect a 6.3 volt filament transformer or similar to one of the coils and measure the voltages on other coils. On a 10:1 turns ratio interstage transformer, you should see around 63 volts, if you energize the short winding, or 630 millivolts, if you energize the long one. Magnetizing current with the transformer coils open-circuit should be milliamperes, and you can put a small resistor (say 100

ohms) in the driving circuit and use the voltage across it to determine magnetizing current. If the coil under test loads the resistor with significant voltage drop, you've got shorted turns. Losses introduced by shorted turns in the windings are dramatic, so this will be essentially a go/no-go test.

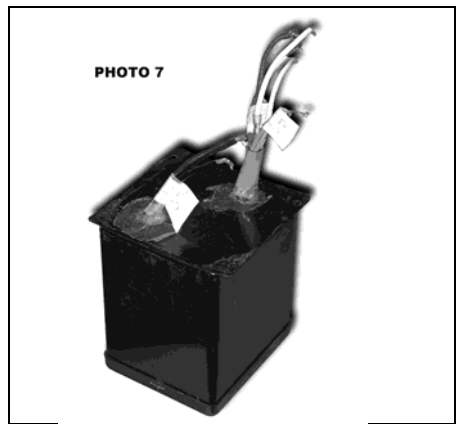
The impedance ratio and inductance of transformer windings is a function of the square of the turns ratio. Thus, a transformer that has a 10:1 turns ratio has an impedance ratio of 100:1. One significant ratio to keep in mind is that the ratio of a center-tapped coil in total to that of one side to the center tap is 4:1. Impedance and inductance measurements on audio units are made a 1000 Hz as a matter of note only.

Note that DC resistance measurements of coils DO NOT correlate to the turns ratio or impedance ratio. Coils are wound with different sizes of wire, and the DC resistance will vary as a function of wire size and length, not the number of turns. Inductance and impedance are a function of the number of turns and the magnetic characteristics of the core, and measurements to get these values MUST be done using ratios. On a balanced center-tapped winding,

the DC resistance of one side to the center tap will be different from the other side, if the winding is large. Reason is that the bobbin size increases, and it takes more wire length to get the same number of turns on the outside part of the winding than on the inside.

You can check out AC power transformers similarly. Coils should be continuous, and all coils should be isolated from the frame. 6 or 12 volts connected to the 120 volt primary should produce outputs from the rectifier plate winding and each of the filament windings. For example, a typical old radio with an 80 tube rectifier has plate windings typically 500 to 600 volts center tapped, to supply around 225-275 volts of B+. With 6.3 volts on the primary, you should read 25-30 volts on the whole secondary, and half that from each side to the center tap.

In the context of this article, repairs to transformers are limited. Enclosed transformers can be opened up carefully and new pigtail leads can be often soldered on. In any case, at least new shrink or spaghetti tubing placed over the old and decomposed leads. I've injected silicone RTV rubber into the lead egress hole on in-situ transformers (not removed from the radio chassis) to capture, encapsulate, and insulate around all the old inter-connecting pigtail wires.



A previous flash article addressed the repair of some transformer windings by the application of a high voltage/current surge to "weld" previously burned out windings. You are on your own. I've never tried it! There again, these topics will be discussed at an upcoming CRC meeting lecture.

## Section 5

### **Glossary (Selected)**

**EMF** = ElectroMotive Force, the force that causes electricity to flow when there is a potential difference between two points. The unit of measurement is the volt.

**Flux Density** = also called induction density. The number of magnetic lines of force passing through a unit area. eg: square inch.

**Henry** = the measure of inductance (h). Usually fractions of a henry are used to characterize coils used in old radios. eg: millihenry (mh) = (.001h).

**Hystereis** = the amount of magnetization of a iron core lags the magnetizing force due to molecular friction.

**Inductance** = In a circuit, the property which opposes any change in the existing current. Inductance is present only when the current is changing.

**Inductor** = conductor used for introducing inductance in an electrical circuit. The conductor is wound into a spiral, or coil, to increase its inductive intensity.

**Magnetic Field** = an area where magnetic forces or lines of force exist. See "flux density".

**Permeability** = the measure of how much better a given material is than air as a path for magnetic lines of force. Its symbol is  $\mu$  (u).

**Reluctance** = the resistance of a magnetic path to the flow of magnetic lines of force through it.

**Saturation** = the state of magnetism beyond which a metal core material is incapable of further magnetization.

**Variometer** = a variable inductor in which the inductance is changed by the relative position between two or more coils. Definitely an "old radio" or early radio component.

# Collector Books for Sale

Special CRC prices. Order at club meetings. Mail order shipments: add \$1.75 postage for each book ordered. Info/order: Charles Brett, 5980 Old Ranch Road, Colorado Springs 80908, (719) 495-8660, brett3729@aol.com. void all other listings

Retail

## Club

<b>RADIOS, (GENUINE PLASTIC) OF THE MID CENTURY</b> Jupp & Pina, hard bound, 219 pgs, 1998 PG, 450+ color pics	\$39.95	\$28.00
<b>ANTIQUA RADIO, COLLECTOR'S GUIDE - 4th EDITION</b> Bunis, 1997 values, revised & updated, new photos, 248 pgs	\$18.95	\$15.00
<b>GUIDE TO OLD RADIOS, POINTERS... - 2nd EDITION</b> Johnson, 277 pgs, 1995-96 prices	\$19.95	\$15.00
<b>ANTIQUA RADIO RESTORATION GUIDE - 2nd EDITION</b> Johnson, 144 pgs, repairing, refinishing, cleaning	\$14.95	\$12.00
<b>RADIO, EVOLUTION OF THE - VOLUME ONE</b> 227 pgs, 118 in color, More than 800 radios pictured, 1992	\$22.95	\$18.00
<b>RADIO, EVOLUTION OF THE - VOLUME TWO</b> 226 pgs, Radios of the 1920s to 1960s, with 93-94 values	\$24.95	\$19.00
<b>TRANSISTOR RADIOS, COLLECTOR'S GUIDE VOL II</b> Bunis, 1996 prices, Full Color	\$16.95	\$13.00
<b>ZENITH TRANSISTOR RADIOS, 1955-1965</b> Smith, 1998 PG, 160 pgs, 226 color pics, info, descr.	\$29.95	\$22.00
<b>THE ZENITH TRANS-OCEANIC (THE ROYALTY OF RADIOS)</b> Bryant and Cones, 160 pgs, 1995	\$29.95	\$22.00
<b>ZENITH RADIOS THE EARLY YEARS 1919-1936, Cones</b> 1997-98 Price Guide, 223 pgs, 100's Photos, Desc., Hist.	\$29.95	\$22.00
<b>RADIOS BY HALLICRAFTERS, revised 2nd edition</b> Dachis, 1999 values, 220 pgs, 1000+ pics, id's, history	\$29.95	\$22.00
<b>CLASSIC TV'S, PRE-WAR THRU 1950'S</b> 86 pgs, color & b/w pics, descriptions, etc.	\$18.95	\$15.00
<b>Machine Age to Jet Age, Radiomania's Table Radio Guide 'III, 33-'62</b> Stein, 256 pgs, 100's of b/w photos	\$29.95	\$24.50
<b>TRANSISTOR RADIOS, 1954 TO 1969</b> Norman Smith, with prices, 160 pgs, 1000 photos, 1998	\$29.95	\$22.00
<b>PHILCO RADIO: 1928 - 1942</b> Ramires & Prosisie, 160 pgs, 828 pics & drawings, 1993	\$29.95	\$22.00
<b>RADIO AND TV PREMIUMS</b> Jim Harmon, 256 pgs, 200+ photos, 1997	\$24.95	\$19.00
<b>RADIO MANUFACTURES OF THE 1920'S VOL I</b> Alan Douglas, 225 pgs, 1988	\$24.95	\$19.00

<b>RADIO MANUFACTURES OF THE 1920'S VOL II</b> Alan Douglas, 266 pgs, 1989	\$29.95	\$22.00
<b>RADIO MANUFACTURES OF THE 1920'S VOL III</b> Alan Douglas, 285 pgs, 1991	\$29.95	\$22.00
<b>CRYSTAL CLEAR VOL 1</b> Maurice Sievers, 282 Pgs, 1991	\$29.95	\$22.00
<b>CRYSTAL CLEAR VOL 2</b> Maurice Sievers, 252 Pgs, 1995	\$29.95	\$22.00
<b>RADIO TUBES AND BOXES OF THE 1920'S</b> George A Fathauer, 112 Pgs, 1999	\$26.95	\$20.00
<b>70 YEARS OF TUBES AND VALVES, 2ND EDITION</b> John Stokes, 264 Pgs, 1997	\$29.95	\$22.00
<b>RADIO DIAGRAM SOURCEBOOK</b> Richard Gray, 264 Pgs, 1996	\$18.95	\$15.00
<b>THE RADIO COLLECTOR'S DIRECTORY AND PRICE GUIDE, 2ND ED.</b> Robert Grinder, 524 Pgs, 1995	\$26.95	\$21.00
<b>COLLECTOR'S GUIDE TO VINTAGE TELEVISION</b> Durbal & Glenn Bubenheimer, 200 Pgs, 1999	\$15.95	\$13.00
<b>NOVELTY RADIOS, VOLUME 1</b> Marty Bunis & Robert Breed, 223 Pgs, 1995	\$18.95	\$15.00
<b>NOVELTY RADIOS, VOLUME 2</b> Mary Bunis & Robert Breed, 199 Pgs, 1999	\$19.95	\$15.00
<b>COMPLETE PRICE GUIDE TO ANTIQUE RADIOS: PRE-WAR CONSOLES</b> Mark Stein, 235 pgs, 100's of b/w photos	\$29.95	\$22.00
<b>TUBE TESTERS AND CLASSIC ELECTRONIC TEST GEAR</b> Alan Douglas, 166 Pgs, 2000	\$25.95	\$19.50
<b>RADIOS - THE GOLDEN AGE</b> Philip Collins, 119 Pgs, 1987	-----	\$15.00
<b>U.S. SCOUTING COLLECTIBLES</b> George Cuhaj, 323 Pgs, 1999	\$24.95	\$19.00
<b>THE PLATING MAN'S ELECTROPLATING MANUAL, 2ND EDITION</b> Don Culver, 38 pgs, 2000	-----	\$10.00
<b>Electrifying Time: Telechron and GE Clocks 1925 - 1955</b> Jim Linz, 256 Pgs, 2001	\$34.95	\$25.50
<b>Silvertone Antique Radio 1930 - 1942</b> Stein, 239 pgs, 2001	\$34.95	\$25.50
<b>Antique Radios Collector's Guide, 5th Edition</b> John Slusser, 264 Pgs, 2001	\$19.95	\$15.00

# "The Open Trunk" Classified

## ◆ See IFC for ad details ◆

FOR SALE: Reproduction Philco Cathedral cabinet parts. Front panels, rear arches, bottom moldings. Grandfather clock finials, colonial clock top trim and finials. Reproduction 90, 70 and 20 (std) cabinets. Other needs such as other style moldings from your sample. Inquire. **Dick Oliver**, Antique Radio Svc., 28604 Schwalm Dr., Elkhart IN 46517. (219)522-4516

WANTED: The female power (battery) plug for a Kemper portable K-52. Similar to octal except has 7 pins and two round locating pins (edge and center). • Knobs for a Crosley 601 bandbox. **Mark McKeown**, (303) 278-3908 mmckeown@tde.com

WANTED: Stewart-Warner model R-123 chassis, used in receiver models 1231 to 1239 (see Riders volume 6 page 6-2 for picture of chassis). • Chassis for AK 217, and Majestic 371. **Jerry Tynan**, (303)642-0553 jtynan@worldnet.att.net

WANTED: White or beige knobs for a GE 401/410/411. They look like the smaller size of Reese's Peanut Butter Cups. **Mark Gibson**, Loveland CO (970)593-3032, mark\_gibson@hp.com

FOR SALE: Copper Rod, several diameters available to make your own soldering iron tips (or I can for you). • Radio repair and restoration service. **David Boyle**, 1058 Colt Cir., Castle Rock, CO 80104 (303)681-3258

WANTED: GE clock radios, models 935 & 936. **Tom Kelley**, 971-1/2 Pleasant St., Boulder, CO 80302 (303)444-1837

WANTED: Silvertone tube shield top for model 1320, 1322 or 1324. Slotted, 1-7/8" dia. • Cabinet for a Philco 90 *lowboy* **Wayne Gilbert** (303)465-0883



WANTED: Novelty radios: Mountain Dew - BB-92 • Mr. & Mrs. "T" BB-106 • Shell - Breed 296 • Coke - Breed 387 • Coke Breed - 388 • Slot Machine - Breed 435 • Light Bulb - Breed 494 **Ron Smith**, 145 Carr St., Lakewood CO 80226, (303)274-7522

WANTED: Old horn speaker parts, drivers and incomplete units. Also, old light bulbs with tip and good filaments. **Charles Combs**, 508 E. Daniel St., Albany MO 64402 ph/fax (660)726-3038

WANTED: Old Radio magazines for my research library in Antique Radio. Need pubs like Radio Design, Radio Age, and Radio Craft -1920's thru 1940's. Will provide home, or purchase singles or full sets at a fair price. Also interested in publications from various companies; Aerovox, RCA, Sylvania, Bell Labs, etc. Likewise, need old test equipment literature and manuals.

**Charles Brett** 5980 Old Ranch Rd.,  
Colorado Springs CO 80908  
(303)495-8660

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WANTED: Communications gear, manuals, parts & catalogs from manufacturers such as Hallicrafters, Hammarlund and kit makers. Also, telegraph/morse keys, bugs & paddles. Cash or trade (including transistor sets). **Robert Baumann**, (303)988-2089, [rgbdenver@aol.com](mailto:rgbdenver@aol.com)

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FOR SALE: 4,600 Radio & TV tubes, *New in original boxes*, \$920.00 (.20 ea) Sold as LOT only. Approximate value of \$20,000 if priced in "Antique Electronic Supply Catalog". **Norm Bernicky**, (719)550-5810, Colorado Spgs. [norm@norbern.com](mailto:norm@norbern.com)

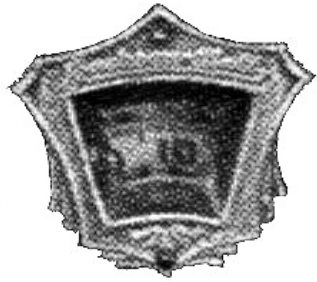
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WANTED: Novelty **tube** radios, such as books, horses, lamps houses, kegs etc. **Ray Windrix**, 617 N. Murray Bl., Colorado Springs Co 80915, (719)597-5098 or (719)596-7196

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FOR SALE: • Zenith R-7000, the very last trans-oceanic made. Call for details. (303)730-8539

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WANTED: Escutcheon for a Jackson-Bell Swan cathedral - pictured here and in Bunis #4 page 116.

**Ed Brady**, 1333 White Rim Pl. NE,  
Albuquerque NM 87112  
(505)292-048, [cebrady2@yahoo.com](mailto:cebrady2@yahoo.com)

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WANTED: Hoffman Nugget pencil tube pocket radio • Japanese WWII morale receiver. Will pay your price.

**John A. Miner**, (303) 759-9152  
[hohum@qwest.net](mailto:hohum@qwest.net)

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FOR SALE: 1935 RCA tombstone T6-9, \$135 • 1937 Philco cathedral MD37-60 \$140 • 1946 Philco Transitione 46-200 \$40 • 50's Motorola yellow leatherette & plastic portable 5P23WB-1 \$30 • RCA "12,000 Miler" table wood 56X5 \$50 All excellent and working.

**Clyde Benge** (303)683-0624,  
[cbenge@usewest.net](mailto:cbenge@usewest.net)

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FOR SALE: 2 TRF radios - brands unknown. One is complete and in very good condition, the other is missing the top but otherwise appears complete. Both for \$120. **Bob Schineller**, (303)682-1749 or [rgschin@aol.com](mailto:rgschin@aol.com)

*Colorado Radio Collectors  
Antique Radio Club*

5270 E. Nassau Cir.  
Englewood CO 80110



**FIRST CLASS**

STAMP

**The July meeting is on Sunday the 8th at 1:00 PM  
Museum of the Americas, 863 Santa Fe (between 8th & 9th Ave's.)**