

# The Colorado Radio Collectors

Antique Radio Club

# FLASH!

Volume 11

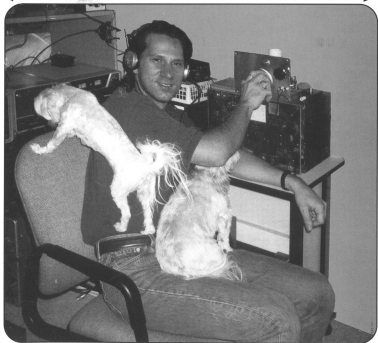
March



April

2000

Issue 2



*In this issue...*

- ◆ Dittmar Builds the Klase Regen ◆ Radio Parts - Updated List ◆
- ◆ CRC April Show Information ◆ Reading Molded Mica Caps ◆

## ABOUT THE COVER

Building home brew gear has always been one of the most pleasurable ways to learn about and enjoy this fine hobby of ours. Here's Mark Dittmar "SWL'ing" on his Klase regen. Turn to page 7 and let Mark show you how to build one of these really nifty, one tube low voltage regenerative receivers - a great project for kids!

## 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 in January (except: 3rd Sunday of May) at 1:00PM at the VectraBank Building, Community Room, 1380 S. Federal Bl. 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. Contact club for foreign rates. 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@ibm.net.

### C.R.C. 1999-2000 Officers

<b>President</b>	Tom Kelley	
	Boulder	(303) 444-1837
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	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

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### Upcoming 2000 CRC Events

CRC Show and Sale - April 15/16, CRC Meeting May 20th (*Saturday*)



# Colorado Radio Collectors Antique Radio Club

Founded October 1988

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

Volume 11, Issue 2

March/April 2000

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It is with deep sorrow to report the passing of these CRC members

Hal Burt, a CRC member since 1991, died in December of 1999

Dave Tripe, a long time member of the CRC, passed away on January 25th.

We extend our heart felt sympathies to each of the families.

# A CHAT WITH THE PRESIDENT

## Are You Ready!

by Tom Kelley, CRC President

Hello again fellow club members,

Well, we're well into 2000 and Y2K is now a distant memory. Hints of spring are in the air, and we have visions of new radio finds dancing in our heads from the upcoming summer shows.

Speaking of radio finds, don't forget our spring show is only a month away - April 15th and 16th at the Stock Show Complex. Our theme this year is "A Century of Radio", and we will have a timeline display of radios from each of the decades - one for each year hopefully(?) It should be quite a show!

I hope you can all contribute a radio to our time line as well as other show radios. We really need contributions for the very early years - can you help with those? This year we've added a new category for "Kits and Homebrew". Of course there were lots home made radios from 1900 to 1930.

Our show will once again be in the main room on the South side. And this year we will have nostalgia radio station KLZ along with disc jockey David Hixson in our booth greeting radio enthusiasts.

Hope to see you all there!

Tom



## The Annual CRC April Antique Radio Show and Sale

### Everything you need to know

Get ready for the CRC event of the Year! This year we will have the pleasure of radio KLZ, the Denver nostalgia music station, with us to add yet another dimension to our show. *David Hixson, KLZ's star DJ, will be on hand to greet listners radio enthusiasts.*

The specialty category for this year is "The 20th Century, One Hundred Years of Radio". Entries for this category will be accepted on a first come first served basis, for as many entires that will fit on the timeline tables. All types of artifacts are acceptable, but they must be table top items.

#### What, Where, When:

**Location:** The Denver Stock Show Complex - North Building

**Date:** Contest April 15, showing and sale April 15 - 16

Friday, April 14th - 2:00pm to 8:00pm - Setup

- ✓ This is the only time that you can drive into the complex to drop off equipment. Enter at N/E gate, then around to west entry ramp.
- ✓ You can setup Saturday, but you will have to carry equipment in.

Saturday, April 15th - Set up, Registration, Contest and awards

- ✓ 8:00 am - Setup and Registration
- ✓ 9:00 am - Complex opens to public, begin selling
- ✓ 10:00 am - Registration Cutoff
- ✓ 10:30 am - Judges Briefing
- ✓ 11:00 am - Judging Commences
- ✓ 1:00 pm - Awards Posted
- ✓ 4:00 pm - Complex closes for the evening
- ✓ 5:15 pm - CRC dinner commences

Sunday, April 16th - Display and sale continues

- ✓ 10:00 am - Complex opens to public
- ✓ 4:00 pm - Complex closes

### Costs for Space and Table Rental:

The stock show complex charges the CRC for the spaces assigned and for each table and chair that is used. The CRC pays for the show space and tables but passes on the cost of those items that are used by the sellers. **The cost this year is \$20 for a space and table combination.** Sellers may share this cost with each other in any combination.

### Contest Categories:

Accessories	Metal Case
Art Deco	Novelty - Transistor
Bakelite	Novelty - Tube
Battery - 1926-1929	Plastic - Tube
Catalin	Portable - Pre 1939
Cathedral	Portable - Post 1938
Classic Audio	Pre 1925
Communication Gear	Speakers
Console - Full Length	Specialty - "Radio Time line"
Console - High/Low Boy	Television
Crystal Set	Tombstone
Metal Box - 1920's	Transistor
People's Choice *	Tube/Parts Display
Best Restoration **	Wooden
Best of Show **	

\*=Popular vote by public    \*\*=Popular vote by CRC members

### Judging Criteria:

- Internal Condition
- External Condition
- Rareness - Meaning relatively few are in existence
- Uniqueness - Meaning novel, and not many like it
- Presentation - Meaning how well displayed, documented, etc.

As in past years there is an emphasis, by criteria weighting, on an entry's condition. This allows radios of all ages and collector value to compete fairly. Thus, collectors who have given time and care to restoration and/or cleaning to *any* of their radios should not hesitate to consider entering them into the contest. The show is only successful when there is abundant participation by CRC members.

### **Pre Contest Judges Briefing:**

- ☒ Explanation/Review of categories and criteria
- ☒ Judging assignments based on membership attendance and judge's own entries
- ☒ Pairing of judges
- ☒ Explanation of entry reviewing and arriving at a judging consensus

### **CRC Dinner Arrangements:**

We will continue to have the annual show dinner at the end of the first day of the show. This is a time when we can get together to relax, enjoy a leisurely meal, talk about the events of the day and have the official announcement of rewards. *You need not attend this dinner to receive your award(s).*

- Reservations must be made by 12:00AM on Saturday with the dinner coordinator. Decision on fixed price or general menu selection pricing will be known on show morning.
- If fixed price, payment for dinner must accompany reservations.
- Since we have to guarantee fixed price arrangements to the restaurant, there will be no refunds.

### **Additional Items of Interest:**

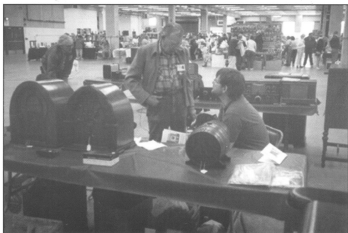
- Light snacks will be provided by the CRC for attending members.
- Volunteers are needed to watch over displays - Sat. & Sun.  
Please consider coming and staying for at least a while even if you're not entered in the contest or selling.
- You are highly encouraged to wear your CRC membership badge.  
You will need your badge for free exhibitor entry into the building. You will need your badge to receive complimentary CRC snacks.

### **A Timely Reminder - please read**

*The CRC does not assume any liability for lost, stolen or damaged articles, brought to this event by anyone, for show or for sale. The Denver Collector's Fair does provide a show-time walking guard and off hours security.*



Rows and rows of radios! Just a sample of what you can expect to find at the CRC radio show and contest.



You too could be selling your radios to one of Denver's largest collector crowds - just like these guys!

# Building the Klase Regenerative Receiver

By Mark Dittmar, CRC Member

[As those who attend CRC meetings will attest, Mark is a master of homebrew built radio equipment. He particularly enjoys constructing and operating radio amateur receivers and transmitters that, for all the world, could have come out of the 20's and 30's. So it's with a great deal of pleasure, and a tip of the hat to Mark, that we present his exceptionally fine article - Ed.]

In the last issue of the "Flash" (Jan/Feb 2000), a regenerative receiver design, using a single low plate voltage (12V) "automobile" pentode, was provided by Al Klase. I built up one of these little receivers using a 12AC6 pentode donated by Larry Weide, and what follows are some of the constructional details of my version of the "12-Volt Homebrew Regenerative Receiver."

I really built two versions of this receiver- my first was one that covered some of the short-wave frequencies ( approx. 3.5 - 14 Mhz ), whereas the second and final version covers most of the AM

BCB ( 670 - 1600 khz ). I will provide details for both, but the final version seen in the pictures is for the AM BCB.

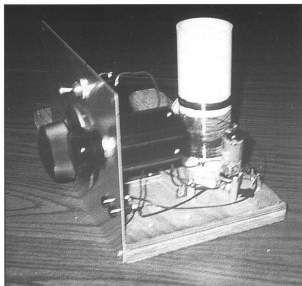
I built my receiver "breadboard style" on a scrap piece of 3/4" plywood, about 6" deep by 11 1/2" wide. The front panel is from my junkbox, and uses a piece of light gauge aluminum 5 3/4" high by 7 3/4" in length. If your intent is to build a version for the shortwave bands, a grounded metal front panel is very important to prevent shifting the receiver's frequency via hand-capacity effects. This is especially the case if you would like to use your receiver to pick up SSB (single sideband phone) and CW (morse code) transmissions. It is optional for AM BCB reception.

One of the first things to consider is whether or not you will be using a vernier dial for the tuning. In the short-wave version, a vernier dial is an absolute necessity, since at the high end of the tuning capacitors range, a few degrees of rotation can cover a full Mhz! For AM BCB reception, a vernier dial is not necessary, but it does make the tuning a bit easier. Since my initial

version of the regen was for SW reception, I used one of the verniers in my junkbox, a nifty National "velvet vernier" with a 3" diameter dial. The vernier dial bolts right onto the front panel, and the coupling from the dial passes through a hole drilled in the front panel. For mounting the tuning capacitor, I use a 2" steel "L-bracket" available at any

mounting arrangement many times - it's cheap and easy!

The 7-pin mini socket for the 12AC6 is mounted at the rear right of the breadboard, using 6/32 wood screws and some nylon spacers I had handy. Surrounding the socket and screwed directly onto the breadboard are three two-terminal tie lug strips. 5-terminal strips are readily available at your local Radio



hardware store. The tuning capacitor bolts onto the L bracket, and the whole assembly (L-bracket/capacitor) is screwed directly onto the baseboard after the capacitor tuning shaft is mated to the vernier. I have used this

Shack store. These strips are convenient tie points for wiring and for mounting the miscellaneous components, such as the grid leak and grid capacitor.

For the antenna coupling capacitor (C1), I mounted a small

50 pf air trimmer on a small L-bracket I had, and screwed this onto the breadboard. For SW, I use a 10 pf trimmer. This capacitor is mounted at the rear left of the receiver, near the main tuning coil. I don't recommend using a fixed capacitor here - a variable antenna coupling capacitor is very useful during operation.

The main regeneration control used in my version is a 10 turn, 100K ohm potentiometer. This potentiometer is used as a simple voltage divider to adjust the screen-grid voltage (and hence regeneration) of the 12AC6. A 10 turn pot is useful for SW frequencies if SSB and CW reception is contemplated. Critical adjustment of regeneration is necessary to make SSB signals intelligible, and is useful in bringing the tube easily to the point of oscillation. For AM BCB reception, a 10 turn potentiometer is not needed.

For the B+ (12 VDC), B-/ground, and antenna connections, I use Pfanestock clips screwed onto the baseboard. For headphone connections, I use standard tip jacks mounted on the front panel.

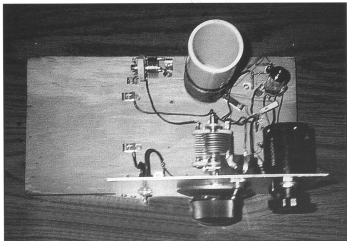
The grid leak resistance is 10 megohms. Grid capacitance is 130 pf. The main tuning capacitance for both the SW and AM BCB versions

of the receiver is a 140 pf air variable, which was all I had on hand during construction. This is just the right size for the SW band version, but not nearly sufficient to cover the entire AM BCB. To cover the majority of the AM BCB, I found it necessary to add a switch to the front panel, immediately above the vernier dial, which adds an additional 100 pf of capacitance across the 140 pf air variable tuning capacitor and secondary coil. I recommend values for tuning capacitors at 140 pf max or so for the SW bands and 365 pf max for the AM BCB. This should give you coverage of 3.5 - 14 Mhz for the SW version and 530 - 1650 khz for the AM BCB version with the two coils described next.

The secondary and tickler coils for the AM BCB are wound on a piece of 1 1/2" diameter PVC pipe; the pipe I used was cut to about 5 inches in length, although only 3 1/2" length is plenty. The secondary is close-wound (no space between turns) with 75 turns of #24 AWG enameled "magnet" wire, and the tickler is wound with 14 turns. The two windings are separated by about 1/4". It is VERY IMPORTANT that the two windings are wound in the SAME DIRECTION. Looking at the rear or side photographs of the receiver, you can see the two windings on

the pipe, with the secondary winding at the bottom of the pipe, nearest the baseboard, and the tickler winding above it. The connections are made as follows: (1) the BOTTOM of the secondary winding in the picture is connected to the GRID of the 12AC6 (2) the TOP of the secondary is connected

excess wire length. This "anchors" the start of the winding in place. Then just start winding, careful to keep tension on the wire. Every 20 or so turns, I put "coil dope" on the wires to help hold them in place. When the winding is finished, I drill two more holes, similar to the first set, and thread the end of the wire



to ground (3) the BOTTOM of the tickler winding is connected to the output (headphones) and (4) the TOP of the TICKLER winding is connected to the PLATE of the 12AC6. If you wire it up like this, it will regenerate properly. When I wind coils like this, I drill two small holes in the coil form, about a 1/4" apart, where I want to start the winding. Thread the wire through these two holes, leaving 6" or so of

through them; this anchors the end of the winding. I then apply "coil dope" to the entire winding and set it aside to dry. This will make a neat, tight winding that won't come loose.

The secondary and tickler windings for the SW version of the set are wound on an empty 35mm plastic film container. I use 19 turns of #26 AWG close-wound for the secondary and 4 turns for the



tickler. Space the two windings about 1/8" - 1/4" apart. The connections to the circuit are the same as outlined above. Again, make sure that both secondary and tickler windings are wound in the same direction.

For those without access to a tube manual, the 12AC6 has the following pin connections (7BK tube basing):

- 1: control grid
- 2: suppresser grid
- 3: heater ( 12 VDC )
- 4: heater (12 VDC )
- 5: plate
- 6: screen grid
- 7: cathode

#### **Operation:**

For best results with this receiver, an outdoor antenna and a good ground should be used. I used my 67' long "inverted L" antenna, but a 20' or longer random wire strung about the room should work OK. I have a 6 foot long copper pipe driven into the ground outside my radio room, which I use as a ground for this receiver. The receiver will work without a ground, but the difference in signal strength and number of stations received when using a good ground is significant.

Connect a source of 12 VDC to the receiver. I use a 12V

regulated supply, but a battery will work just as well. With all due respect to Al Klase, who designed this radio, I decided not to use a "wall wart" for power as he does in his Jan/2000 Flash article. My concern is with the wart's typically unpredictable regulation - unless it's carefully matched to the load.

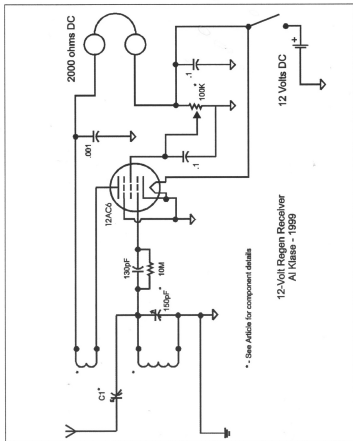
Use a set of high impedance (2000 ohm) headphones with this receiver. I use an OLD pair of "Brandes Matched Superior Tone" headphones I picked up at a swapfest. Walkman headphones won't work with this circuit unless an impedance matching transformer is added. Set the antenna coupling to maximum to start out with. As the dial is turned, you should hear some stations. Advancing the regeneration control will increase the sensitivity of the detector up to a point, whereupon the tube will start to oscillate. If you are just listening to AM BC stations, you will want to operate below this point. You will know the tube is oscillating if you can hear "whistles" or heterodynes as you tune across a station. With 50 pf of coupling, I found that the detector will "swamp", meaning strong stations will overload the set. Slowly reduce the coupling; this will require you to re-tune the main tuning dial. Then re-adjust regeneration for the best reception. I like to operate with the

least amount of antenna coupling possible. This improves selectivity (the ability to separate stations) quite a bit, although it will reduce the signal level that reaches the detector.

I was very pleased with the

performance of this simple set. Both AM BCB and SW versions worked very well, and had plenty of volume and adequate sensitivity.

It was fun and easy to build, and is simple to operate. Build one and impress your non-radio friends!



\* - See Article for component details

12-Volt Regen Receiver  
Al Klasse - 1999

# Identifying Molded Mica Capacitors

by Larry Weide, CRC Member

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Oh boy, oh buy! You were just at the local hamfest and you bought a bucket of molded mica capacitors for next to nothing. These kinds of caps are great; they're stable, low loss, usually fairly high in voltage rating and typically not inclined to deteriorate with age. So, as you pour your treasure trove of capacitors out onto your workbench to sort and store them, you notice that these kinds of caps are marked with colored dots to indicate their values - not unlike resistor markings. Cool, you know the color code, there'll be no sweat here figuring out these "hummers".

Oh no! You just realized that the markings on these caps are not all the same. That is, the pattern style of colored dots seems to be different from cap to cap. Now what are you going to do?

Well, your observations are correct, you probably do have caps with different kinds of markings, But as you'll see in this article, it's not a big deal. Over the course of the decades that mica capacitors have been manufactured there have been a number of marking schemes

used to indicate values. The RMA (Radio Manufacturers Association) and JAN (Joint Army Navy) have been the organizations that have set the standards for nomenclature for civilian as well and military use. Starting around 1948 these organizations finally standardized on one mica cap marking style.

So, in the following diagrams, you will see how to read the variously marked caps. You will notice that, except for placement of the color coded dots, the fundamental reading technique is the same regardless of whether the various RMA or the JAN standard is used. In all cases any one color always represents the same number. For example, brown is always the number "one" and red is always the number "two" - the same as it is with resistor value color coding. For those who are not familiar with this scheme, or need a refresher, here is the complete list of colors and their values;

COLOR	VALUE
Black	0
Brown	1
Red	2
Orange	3
Yellow	4
Green	5
Blue	6
Violet	7
Gray	8
White	9

For molded mica caps, the voltage rating will be a single color dot whose digit value is then multiplied by 100. The value tolerance is also a single color dot that expresses the tolerance as a percentage. I might mention an old and easily remembered expression to keep the color/number relationships in your mind, which goes like this; "(B)ad (B)oy's (R)ile (O)ur (Y)oung (G)irls (B)ut (V)iolet (G)ives (W)arning" [you old codgers out there will notice that the expression has been slightly modified -Ed.]. You see, "Bad" is black for zero, "Boys" is brown for one, "Rile" is red for two and so on. Keep in mind that when a color specifies a "multiplier" the color indicates how many zeros to add to complete the value. For example, a multiplier of red means add two zeros.

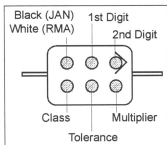
Let's walk through an example; Look at the chart showing the

configuration for current standard coded capacitors. Notice that, in this case, you would hold the capacitor so that the upper left dot is black or white - depending if the cap was made through a JAN or RMA contract. On many capacitors however, there is a molded-in arrow pointer showing you how to orientate and read the cap - see drawings.

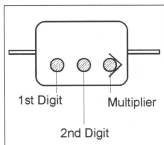
Let's say that in our example the dot shown as the first digit is red, the dot shown as the second digit is green and the dot shown as the multiplier is orange. So, we write down the cap's value as 2-5-000. That is, 25,000 micro micro farads. Again, notice that the multiplier of orange gave us three zeros - not the number "three".

The value of mica capacitors is always expressed in micro micro farads, which is also called pico farads. If you want to convert that value into micro farads simply move the decimal point six places to the left. Because of the nature of the capacitor, it's dielectric material and such, you won't normally find them in very large values.

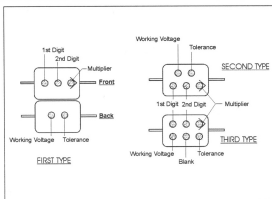
I mentioned before that one of the features of these kinds of caps is that they're stable. In fact, some of them were/are made with silver plated plates and were certainly the stability standard of their time back in the "good old" days.



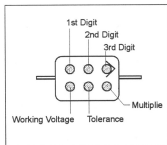
Current Standard Code



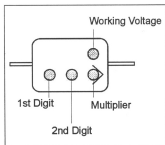
RMA 3-Dot (Obs.) 500WVDC



RMA (5-Dot Obsolete)



RMA 6-Dot (Obsolete)



RMA 4-Dot (Obsolete)

# Collector Books for Sale

CRC Members get specially reduced prices on popular collector books. Place and receive your order at club meetings. If ordered for mail shipment add \$1.75 postage for each book ordered. For information and ordering: Charles Brett, (719) 495-8660, brett3729@aol.com. This listing has item and price updates - 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>ANTIQUÉ RADIOS, 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>ANTIQUÉ RADIO RESTORATION GUIDE - 2rd 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 and priced for 1992, picture from the collections of CRC members Jim Berg and Johnny Johnson	\$22.95	\$18.00
<b>RADIO, EVOLUTION OF THE - VOLUME TWO</b> All different from Volume One, 226 pgs, Color, Radios of the 1920s to 1960s, with 93-94 values, pix from CRC member Jim Berg	\$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, 1995-1965</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 gpgs, 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><u>Machine Age to Jet Age, Radiomania's Table Radio Guide I, '33-'59</u></b> Stein, 255 pgs, 100's photos	\$24.95	\$19.00
<b><u>Machine Age to Jet Age, Radiomania's Table Radio Guide 'II, 30-'59</u></b> Stein, 358 pgs, 100's photos	\$28.95	\$22.00

<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 & Prorise, 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

## NOTICE

There are a number of very limited quantity one-time purchases of books that are only available at meetings and are not listed here. Be sure to check with Charles Brett for availability and titles that you might be interested in.

### UPS Special Standard Mail (Book Rate)

	<u>BookRate</u>	<u>Priority</u>
1 lb	\$1.13	\$3.20
2 lbs	1.58	3.20
3 lbs	2.03	4.30
4 lbs	2.48	5.40

# RESOURCES FOR RADIO COLLECTORS AND RESTORERS

by David Boyle, CRC Member

Hello fellow radio collectors. Well, its spring and time to bring out the resources list for another airing - so to speak. Actually, there's even a better reason; I've got updates and of course we have many new readers of the Flash since the last publication of the list. So, I hope you find it valuable, and here it goes;

## LOCAL SOURCES : (NO PARTICULAR ORDER)

FISTELLS; 303-629 -1312; EVERYTHING IMAGABLE INCLUDING NOS OLD TUBES. ASK FOR CLUB DISCOUNT.

GATEWAY; 303-458-5444; PARTS, USED TEST EQUIP.,SURPLUS STUFF.

RADIO SHACK.COM; SO. COLORADO BLVD, ZILLIONS OF NEW PARTS.

NATIONAL SPEAKER; 303-777-4970; SPEAKER RECONING,-- GET CLUB DISCOUNT.

DICK HAGRMAN; SPEAKER GRILL CLOTH, 303-794-6674

## GENERAL PURPOSE PARTS SUPPLIERS (USUALLY COMPANIES AS OPPOSED TO INDIVIDUALS):

ANTIQUÉ ELECTRONIC SUPPLY; 602-820-5411; MOST POPULAR AND WELL. KNOWN SOURCE OF RADIO PARTS, TUBES, AND GOODIES.

VINTAGE TV AND RADIO SUPPLY; 216-671-6712; NOS PARTS, REPRO ITEMS, BOOKS, ETC.

PLAY THINGS OF PAST; 216-251-3714, LARGE INVENTORY OF ALL PARTS AND SUPPLIES USED IN RESTORING RADIOS. HAS SOME RADIOS FOR SALE, RESTORATION SERVICES. CATALOG AVIALABLE

PUETT ELECTRONICS, SEND FOR CATALOG, PO BOX 28572, DALLAS TX 75228. BOOKS, SCHEMATICS, MANUALS, KNOBS, ETC.



THE OLDE TYME RADIO CO.; 301-587-5280, 2 STAMP LARGE SASE  
FOR 20 PAGE FLYER.

ALLIED RADIO; 1-800-433-5700; MAJOR SUPPLIER OF PRESENT DAY  
ELECTRONIC PARTS. LARGE CATALOG , \$25.00 MIN. ORDER.

FAIR RADIO SALES; MILITARY SURPLUS, RARE TUBES,  
TRANSFORMERS, ETC., 419-227-6573, LIMA, OHIO

GREAT NORTHERN, ZENITH STUFF-PARTS & LITERATURE,  
612-727-2489

TUBES & RELATED SUBJECT:

DEXTER FRANCIS ( HE BOUGHT OUT QUEST ELECTRONICS 50,000  
TUBE STOCK) SAYS HE IS VERY \$\$\$ COMPITATIVE, 719-260-5512

ETE; 802-879-1844; BETTER PRICES THAN AES.

C & N, 1-800-421-9397; BUY AND SELL HIGHER END TUBE TYPES,  
SPECIALITY TYPES. 400,000 TUBES IN STOCK. HAROLD  
BRAMSTEDT, NICE GUY TO DEAL WITH.

DAN NELSON; 602-243-7421; TV-7, ETC. TESTER REPAIR, LOTS OT  
TUBES AT LOW PRICES.

REMANUFACTURED TV PICTURE TUBES, CRTs: SUPERIOR  
PICTURE TUBE CO., 908-541-9354, CARTERET, NJ

CRYSTAL SET PARTS:

MIDCO; 305-925-3670

CAPACITORS:

FRONTIER; 701-378-2341; BEST PRICES ON TYPICAL ELECTROLYTIC  
AND PAPER TYPES, LOT QUANTITY DISCOUNTS.

RF PARTS

RF PARTS CO., SAN MARCOS, CA, 1-800-737-2787, 1-619-744-0750  
(BUSINESS STUFF)

**DIAL GLASSES AND COVERS AND INDIVIDUAL DIALS:**

DOYLE ROBERTS; 501-745-6690; PLASTIC COVERS--100'S TO CHOOSE FROM! EXAMPLES: AK337, 145, FADA, PHILCO, ZENITH ALL AT \$14.50 EACH.

RAY SANDERS, 342 SO. MAIN ST., COTTAGE GROVE, OR 97424; PHILCO, MISC.

MERRITTS ANTIQUES; 215-689-9541; ROUND GLASS INCL.CONVEX SHAPES.

ROCK SEA ENTERPRISES; MIKE TOBIN, 805-646-7362

TIMESAVERS; 1-800-552-1520; ROUND GLASS INCLUDE CONVEX.

ANTIQUE RADIO RESTORATIONS; 618-632-7423; PHILCO AK, ZENITH, ETC.ETC, LARGE CHOICE OF DIALS, ILLUSTRATED FLYER.

**GRILL CLOTH**

JOHN OKOLOWICZ; 215-542-1597; SAMPLE CARD AVAILABLE

MICHEAL KATZ; 516-781-6202

**WOOD RADIO CABINETS AND PARTS THERETO**

DICK OLIVER, 219-522-4516, ELKHART, IN; PHILCO CATHEDRAL SPECIALITY. FRONT PANELS, ALL STYLES OF BASE MOLDINGS ( CAN REPRODUCE FROM A SAMPLE OF YOUR PIECE), GRAND FATHER CLOCK FINIALS. COMPLETE PHILCO 90 CABINET, READY TO FINISH @ \$175.00, FINISHED @ \$225.00.

**SPEAKER AND RELATED TOPICS:**

RON RAMIREZ; 502-667-5440; PHILCO CATHEDRAL FRONT PANELS; PHILCO EXPERT.

JACKSON SPEAKER SERVICE; VIRTUALLY ANY TYPE SPEAKER REPAIRED. RON MCGEE, 517-789-6400

BUFORD CHIDESTER; 717-266-4450; RADIOLA 103 TAPESTRY-REAR BONNET. EVERYTHING FOR CONE SPEAKERS, EXCELLENT WORK.

GREENBAUM RADIO REFINISHING; 410-752-2438; WOOD AND METAL SPKR. GRILLS ( AK, ETC. ).

**KNOBS: & RELATED PLASTIC REPRODUCTION PARTS; DECALS & LABELS**

WADE'S; 602-830-7849; UNDERSTAND THAT THIS CO. ONLY SPECIALIZES IN JUKEBOX PARTS

OLD TIME REPLICATIONS; 818-786-2500; VAN NUYS, CA, LARRY BORDANERO, OVER 5000 MOLDS AVAILABLE. ALSO ESCUTCHEONS, HANDLES, ETC. REASONABLE PRICES AND NEAT GUY TO DEAL WITH.

RICHARD AND ROSE'S RADIO MART; 918-627-7481, LARGE LIST AVAILABLE – GREAT SELECTION

KEVIN CURLEY, CUSTOM & STOCK REPRO TAGS, METAL & PAPER DECALS 513-256-1494

**PHONOGRAPH PARTS:**

JOE SMOLSKI; 508-879-2778; CARTRIDGE REPAIR/REBUILT

YESTERDAY, ONCE AGAIN; WINDUP-VICTROLA PARTS, ANTIQUE PHONOGRAPH INFO, MAINSPRINGS, RESTORATION PARTS, ETC.  
JOHN ANDOLINA, 716-247-3056

YESTERDAY, ONCE AGAIN, VICTROLA PARTS AND LOTS OF INFORMATION, 719-963-2474.

PREMIUM PARTS+, DRIVE BELTS & WHEELS, 516-536-5000

VINTAGE ELECTRONICS; ED CROCKET, 601-264-4755, CARTS, ETC.

RON SITKO; 518-371-8549;

WYATT'S MUSICAL AMERICANA; 707-279-2824 ;

WEST-TECH SERVICES, CRYSTAL CARTRIDGES REBUILT (\$19.95), LARGE ASSORTMENT OF CARTRIDGES FOR SALE, IDLER PULLEYS RESURFACED, NEEDLES, DRIVE PULLEYS, BELTS, ETC., SEBRING FL, STEVE KARPIAK, 941-471-0922. CATALOG AVAILABLE

TEST EQUIPMENT MANUALS--1950'S

TUBE MANUAL'S PLUS; 206-531-9031

SHIELDS--PHILCO 70 & 90 MULTI-SECTION STYLE

M.B. GASKINS; 502-465-3755.

TRANSFORMER HELP

STANCOR/WHITE ROGERS DIV., 314-865-8799 IN ST. LOUIS

AUTOMOBILE RADIO VIBRATORS

RADIO MART; 918-627-7481.

ANTIQUE AUTO RADIO, 813-785-8733; BEST SELECTION, ALSO CAR RADIO PARTS.

JIM FARAGO; 6-PIN VIBRATORS. 612-722-0708

WIRE

JOHN GIELCZYK; 5456 KATHERINCE CT., SAGINAW MI 48603, "LITZ" WIRE, RADIO & ANTENNA WIRE (SAMPLES AVAILABLE)

BATTERIES

VINTAGE RADIO & ELECTRONICS; SCOTT WEBSTER, 818-395-0811, NEW MANUFACTURED BATTERY PACKS FOR OLD PORTABLE RADIOS - ZENITH T/O, ETC.

# "The Open Trunk" Classified Advertisements

◆ See IFC for ad details ◆

WANTED: 1940 Deutsche Arbeits Front (DAF) 1011 • Radione 1939 portables R-2, & R-3 • Any VE-301 • Any Japanese 1930's radio • Zenith T-O bomber or sailboat • Hoffman "Nugget" sub min tube pocket radio • WWII axis powers clocks or watches. Will pay your price. Condition not important. **John A. Miner** (303) 759-9152 voice, (303) 759-5438 FAX hohum@uswest.net

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

FOR SALE: Crosley "Bullseye" with fins. **Bill Hinkely** (303)730-8539

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

FOR SALE: Copper Rod, save \$\$\$\$\$\$, 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 900 & 903. **Tom Kelley**, 971-1/2 Pleasant St., Boulder, CO 80302 (303)444-1837

FOR SALE: Arvin 450 • Belmont 636 • Airline 94-HA-1528 • Motorola 50-X-1

WANTED: Chassis for Sparton Model 931. • Cathedral cabinets for Philco mod 50 & AK 627 • Chassis for RCA 120/124 & Steinite mod 22 • Information about any radios manufactured in Colorado; A&M, Madison/Moore, Buckwalter. etc. **Wayne Gilbert** (303)465-0883

WANTED: Dial drive assembly for a Philco 42-327, or a junker with dial plate, support, dial pointer and sheaves intact. • Case and knobs for a Zenith 6D311 Bakelite set. • Articulated detector arm for a Flivver crystal set. • Westinghouse Little Jewel (Refrigerator); H-124 dark green, H-127 burgundy. • Palomar base/amplifier. **Fred Sodamann**  
2603 N. Greenwood, Pueblo 81003  
(719)543-6654, fritz@market1.com

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FOR SALE: Victor console, 1927. • GE Tombstone Model A63, 1935. • Majestic Tombstone, 1935.  
• Zenith 5G01, 1950. • Emerson Model 529, portable record recorder, 1950 Two tone arms and mike - NITB.  
• Precision Tube Tester Model 10-54.  
• 2 spools of jumper leads, 2 spools of 40's hookup wire. **Clyde Benge**,  
10057 S. Falcon Creek Dr., Littleton CO 80126, (303)683-0624

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FOR SALE: *Juke Boxes !*

- Rockola 441 "Deluxe" \$300.
- Wurlitzer "Cabaret" \$300.

**Dave Wanner**, 3230 W. Grand Ave.,  
Englewood, CO 80110 (303)797-7563

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WANTED: Mountain Dew BB-92 • Napoleon Cognac BB-93 • Peachtree Cream BB-97 • Scotch Seven BB-100 • Mr & Mrs "T" BB-106 • 7-UP Vending Machine • Pink Panther BB-390 • Battlestar Galactica BB-447 • Batman BB-353 • Mickey Mouse (Breed 1 Plt 115)

**Ron Smith**, 145 Carr St., Lakewood  
CO 80226, (303)274-7522

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WANTED: Old Radio magazines for my research library in Antique Radio. Need copies of pubs like Radio Design, Radio Age, and Radio Craft -1920's thru 1940's. Will provide good 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: Zenith H511/50L6 chassis or part # 22-1804 & diag/schematic • Crosley 56TN-L restorable cabinet. **Fred White**, Day (303)966-5386, Eves 303-828-3250

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FOR SALE: Emerson model 587, working, refinished \$45 • Philco model 7-205, working \$35 • Atwater Kent model 60C, Highboy console, working \$300 • Airline Console, working \$150  
• Graymark model 510, working 60's plastic \$10 • Arvin model 450, brown Bakelite, working \$45 • Arvin model 450, white Bakelite, not working \$35 • Motorola model 5X11, not working, dent in dial \$45 • Silvertone model 6050, works, missing dial lens \$35 • General Television Variable Inductor \$32 • RCA model 45-EY-2 45 Record Changer, works \$45 • **Transistors:**  
• Zenith Royal 285, works, some rust on stand \$25 • Sony TR84, works,

small piece missing from bottom \$15 • Guild Teapot Radio, works, does not have hotpot \$80 • Emerson model 31P51, broken antenna \$25 • Sony MicroTV model 5-303W Works \$40 • **Books:** • Sylvania Tube Manual \$10 • Coyne Radio & TV service manuals 5 book set \$20 • 1963 Tube substitution Guide by Riders \$3 • 44th Edition of ARRL Handbook 1963 \$10 • GE Essential Tube Characteristics \$10 • Elements of Radio, 2nd Edition, Marcus & Levy \$10 • Fundamentals of Semiconductors & Tubes \$5 • Everybody's Radio Manual, Popular Science, 1944 \$8

• Principles of Radio Services, EM962, Armed Forces Institute \$12

**WANTED:** • Copper IF cans for GM Little General Cathedral radio • White/silver knob for Crosley E15EW dashboard radio **Ed Brady**, 1333 White Rim Pl. NE, Albuquerque NM 87112, (505)292-0487, [cebrady@esscom.com](mailto:cebrady@esscom.com)

**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 (606)726-3038

**FREE - JUST FOR SHIPPING!!:**

Plug-in peak noise limited for National TC5 Revr • Zenith rotor wave magnet 9x4x16 • Original factory ship. carton for Philco F743

• Philco "G" elec/dny speaker

• Crosley Prestotune 12, model 1227 chassis w/tubes • Sears model 1324 chassis w/tubes • RCA R-32 chassis (3 pc's) wo/tubes • Sparton 966 chassis wo/tubes • **Bill Busetti** 902 Bellview #6, La Junta CO 81050 (303)384-2365 week days

**WANTED:** Tuning condenser for an RCA K80 or K81. Chassis RCA415A. **Dick Stewart**, 656 Squire St. Colorado Springs, CO 80911 719-392-9694 [StewartWCF@AOL.COM](mailto:StewartWCF@AOL.COM)

## NOTE

Please let me know if you have a change, updates or deletions to/of your ad. Remember, when this column fills up I'll begin to delete ads starting from the oldest ones to accommodate as many advertisers as possible.

Your Flash Editor

Colorado Radio Collectors  
Antique Radio Club  
5270 E. Nassau Cir.  
Englewood CO 80110



**FIRST CLASS**



Don't forget to come and be a part of the  
*CRC* Annual April Show and Sale  
at the Denver Stock Show Complex  
April 15th and 16th

The March meeting is on Sunday the 12th at 1:00 PM  
VectraBank Building at Federal and Arkansas