The Colorado Radio Collectors

Antique Radio Club

FLASH!

Volume 13 January February 2002 Issue 1

In this issue. . .

The Colorado Radio Collectors Antique Radio Club

Membership: Annual membership in the CRC runs from June to June. Members are requested to pay their $12 dues at the May meeting. If unable to attend, please submit dues by mail to the treasurer. All payments should be made out to "Robert Baumann, CRC Treasurer." Annual dues entitles members to 6 issues of *The Flash!* and participation in club events such as the annual April show, midsummer picnic, September auction as well as meetings and swaps every other month. Also officer elections and the *Antique Radio Classifieds* annual subscription raffle every May!

New members are encouraged to join throughout the year. Only new memberships will be prorated to ensure renewal on the following June. New members who join from May to August should submit $12; September & October $10; November & December $8; January & February $6 and March & April $4.

Renewing members who fail to submit dues in a timely fashion risk interruption in the delivery of *The Flash!* Upon payment of late dues, recent past issues may be requested from the CRC Publisher. Older issues require contacting the CRC Archivist. For bookkeeping reasons, all renewing memberships run June to June at the $12 rate regardless of when one might realize their membership has lapsed.

Article Contributions: Submission of articles are always appreciated. This could 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!" Publishers.

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., 2nd floor. 863 Santa Fe. (between 8th & 9th Ave.'s). The meeting normally includes business items, discussions, "show and tell", a raffle and a swap meet.

C.R.C. 2000-2001 Officers

President	Mark Dittmar Westminster (303) 403-0669 mark_dittmar@maxtor.com
Vice Pres.	OPEN POSITION Apply now!
Treasurer	Robert Baumann Lakewood (303) 988-2089 RGBdenver@att.net
Publishers	Robert Baumann, Mark Dittmar, Mark Gibson Steve Touzalin
Archives & Book Sales	Charles Brett Colo. Springs (719)495-8660 brett3729@aol.com

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

Want Ads: Submission of Sell/Want ads are always free to CRC members. Nonmembers may advertise in the Flash! for $0.20 a word.

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

Colorado Radio Collectors Antique Radio Club

Founded October 1988

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

Volume 13, Issue 1 **January/February 2002**

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About The Cover

On the cover is a picture of an Atwater Kent Model #735. I recently restored one of these for some friends of ours. When I saw another 735 on eBay, I watched it with a great deal of interest. The auction ended on November 21st. The radio went for $900.00 !! (I figured $300-350).

- Steve Touzalin

A Letter From The President

Lots to Cover

This issue of The FLASH comes to you courtesy of the new "FLASH" editorial committee. This committee is comprised of Robert Baumann, Richard Beckmann, Mark Gibson, Steve Touzalin, and myself. Mark Gibson was editor-in-chief for this issue while we look for someone to fill the role regularly. Hopefully with this new structure the work of producing The FLASH will be more evenly distributed by making it a group effort. In this transitional period, your support of The FLASH through your articles, pictures, letters, ramblings, etc. is especially appreciated and helpful.

The January meeting will have a special program courtesy of Barney Wooters. Barney will be bringing in a slide show tour of the Antique Wireless Association Museum (AWA). The AWA museum has one of the finest collections of early wireless equipment in the world. If you can't make it to Bloomfield, New York to see it in person, this is the next best thing! Don't miss it!

Also in this issue you will find a brief membership information update. The point of this update is to get a clear understanding of what you value the most about CRC membership. This will help us better shape the direction and content of our club meetings and activities. Please take the time to fill this out. There is even a small incentive for your trouble (see the update sheet for details). Mail it if you like or just bring it in at the meeting, or have someone bring it in for you.

The CRC e-mail reflector is available to any member with an e-mail address. Drop me a note at *mark_dittmar@maxtor.com* if you would like to be added to the list or want more information.

Finally, I would like to take the opportunity to thank Larry Weide for his six years of dedication in producing The FLASH. He has done an outstanding job and has consistently produced an excellent publication. The new editorial committee hopes to continue this tradition.

As always, don't forget to bring in something from your radio collection for the show-and-tell. This a great chance to show your collection and to stimulate some very interesting discussions.

See you in January,

Mark Dittmar

CRC to Establish Presence at Local Ham Fests

Some CRC members are also regular participants at area ham fests. At the November meeting, the idea was discussed of establishing club visibility at these events by using the CRC banner and having recent issues of The Flash! and brochures available to attract interest in the club. (Referrals of unwanted vintage equipment, tubes and literature may also result from a club presence.) In addition, this would be an opportunity for CRC members who do not already attend these events to participate in another interesting aspect of the radio collecting hobby.

Traditionally, radio amateurs are more enthusiastic about communications equipment, although there is mutual interest in vintage gear and literature as well.

A sales table can accommodate 8-10 normal sized radios, pieces of test equipment, boxes of literature, etc. If even five members wish to participate in each event by bringing just one item for sale, each individual's cost would be only ~$2 for that item plus their admission which is usually $3 or $4. So for about $5, members can offer an item for sale, gain early admission during seller set up and participate in a related radio experience. Each admission usually includes a raffle ticket for valuable amateur radio items and sometimes cash prizes.

For this idea to work, the number of participants and items for sale must be known in advance so that adequate space can be reserved and prepaid. Table reservations should be made about a month in advance. Since each member is paying a nominal amount for his space on the table, participants would be absorbing the cost for promotion of our club.

We would like to try this at the Aurora Repeater Association ham fest on February 17 at the Adams County Fairgrounds. Table reservations will be made following the regular January CRC meeting. Anyone interested in participating should indicate so to Robert Baumann either in person at the meeting, by e-mail or phone. In addition to names, we will need to know the number of items and brief descriptions to determine the space required.

Especially for those who will be new to ham fests, this should not be considered as a one time opportunity for everyone to unload all of their extra stuff. Such an approach can be disappointing as radio amateurs are as selective as antique radio enthusiasts in how (and how much) they spend. A few carefully selected, quality items generally results in a more rewarding outing than a truck load. And don't forget you'll need to bring along some cash and your checkbook for those treasures you might find!

- Robert Baumann

Mark's Corner

A Look Back At Spark Radio Part III

by

Mark Dittmar, CRC Member

The first two parts of this series on the spark coil transmitter covered some of the background and history of the spark coil transmitter, as well as descriptions of the circuits and components involved. In this part, I will describe the constructional details of a working replica transmitter. The next part in this series will document some of the technical characteristics of the signal produced by such a device. In particular, I will examine coupling vs. signal bandwidth and the effect of antenna "load" on the signal bandwidth. This information may seem somewhat dry and arcane, so be forewarned!

I have reproduced for the reader's convenience the schematic of an inductively coupled spark coil transmitter from Part 2 of this series in Figure 1.

In the diagram, IC = induction coil, C= capacitor, SG = spark gap, and OT = oscillation transformer. The battery (power supply) and key are also indicated in the schematic. The spark coil transmitter which I constructed is based on this circuit. Views of the completed transmitter are shown in Figures 2 and 3.

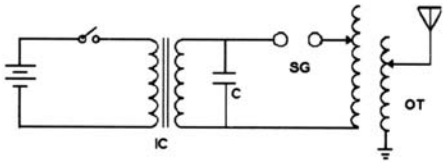


Figure 1

Constructional Details

The "Battery"

Here I used a run-of-the-mill DC regulated power supply, capable of delivering 2 amps between 6 and 12 volts. This is not at all critical. Spark coils were generally run at these voltages on the primary. I used 7.5 VDC for most of my experiments, as this seemed to work the best with my coil. For all

connections between components, I used a heavy gauge (#12) solid conductor insulated wire.

The Key

The key makes and breaks the primary circuit of the induction coil in the form of the "dits" and "dahs" of the telegraph code, and so must be capable of withstanding the primary current. The key contacts for this particular transmitter do not have to be particularly heavy as the average primary current is not very high, so just about any telegraph key will do. For effect, I used the only spark key I own, with big 1/4" diameter contacts.

The Induction (Spark) Coil

The induction coil is the source of high voltage in the spark coil transmitter. Its purpose is to charge the capacitor which is connected across its secondary terminals to the breakdown voltage of the spark gap. It does this at a rate of 40 - 100 times per second depending on the coil characteristics and its magnetic interruptor. The spark coil used in the replica transmitter was the one which was discussed in considerable detail in part 1 of this series. It appears to be a 1/2" to 1" "size" Electro Importing company coil of early 1920s vintage. Recall that the size of a spark coil is given in inches of spark length, which is measured in air between two needle points across the secondary. Open circuit voltages (without a capacitor loading the secondary) from such coils typically range between 11,000 and 20,000 volts. The loaded voltage is considerably smaller. As the size and therefore unloaded voltage of the spark coil increases, more capacity can be used across its secondary terminals. The power of a spark coil transmitter is proportional to the product of the main tank capacitance, the number of sparks per second, and the square of the voltage on the capacitor. So, for a bigger signal, use a bigger coil! The spark rate can be roughly adjusted by a thumbscrew on the coil's magnetic interruptor. The thumbscrew basically just moves the armature (an iron disc which is attracted to the coil when the primary is energized) closer or further away from the iron core of the coil. A small amount of variation in spark rate can be had here. This adjustment is somewhat critical, as there is a point where the interruptor will not function properly. See the discussion in part 1 of the series. Ideally, one would like a high spark rate, both

for the increased power produced as well as the higher tone which would be heard at the receiving end. I attempted to measure the interrupters rate of movement using an ancient analog scope of dubious triggering ability but was unable to get a good measurement. By listening to the tone produced in a receiver, I would estimate the spark rate at perhaps 40-50 Hz.

The primary of the induction coil is in series with the "battery" and key. The secondary of the coil is connected to the capacitor, spark gap, and the primary winding of the oscillation transformer as shown in Figure 1. The spark coil can be seen in the foreground of Figure 3.

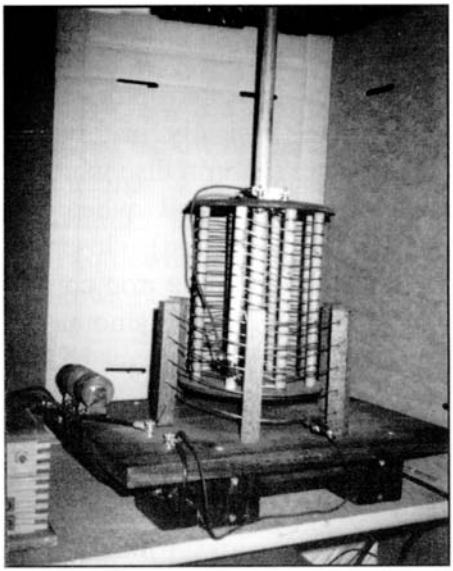


Figure 2

The Capacitor

The capacitor is charged to the breakdown voltage of the spark gap and forms part of the resonant "tank" circuit with the primary of the oscillation transformer. The capacitor chosen for this transmitter was of the simple plate glass and foil design. My capacitor consists of alternating layers of 8" by 10" glass pieces (the kind used in picture frames) and the heaviest gauge of aluminum foil I could find. The capacitor required 6 of the 8" by 10" glass rectangles. Two of the glass pieces formed the top and bottom of the capacitor. Capacitor "plates" were made by making a 7" by 9" rectangular template of heavy card stock, with a 1" wide "tongue" extending from one corner of the template. The aluminum foil plates were then cut using this template. Five capacitor plates were required. Two of the foil plates were cut using the mirror image of the template. To construct the capacitor, the base piece of glass was laid down and a spray adhesive was applied to the surface. Then, very carefully, one of the foil plates was "squeegied" onto the glass. Spray adhesive was then applied to one side of the next glass piece and laid upon the first capacitor plate. Then adhesive was applied to the top of this glass

piece and a "mirror" image foil plate was "squeegied" onto it. The rest of the stack followed this construction. Note that when the whole thing is done, there are "tongues" extending beyond the edge of the glass pieces on alternating sides between each glass insulator. The "tongues" on a given side are then mechanically connected together and brought out to two binding posts made from 8-32 brass hardware. These form the two terminals of the capacitor. The whole device was built into a poplar frame to hold everything together.

As constructed, the capacitance of this device was measured at 0.003 microfarads, and with the 3/32" thickness of the glass insulators, should be able to withstand a respectable voltage. Although it is somewhat difficult to see, the glass plate capacitor is visible in Figure 2. It lies directly underneath the base of the oscillation transformer. According to "The Junior Operator", July 1920 QST, .003 μf is just about right for a 3/4" spark coil.

The Spark Gap

The spark gap serves as an electronic switch which "closes" when the potential between its electrodes reaches a "breakdown" voltage. This breakdown voltage depends strongly on the distance

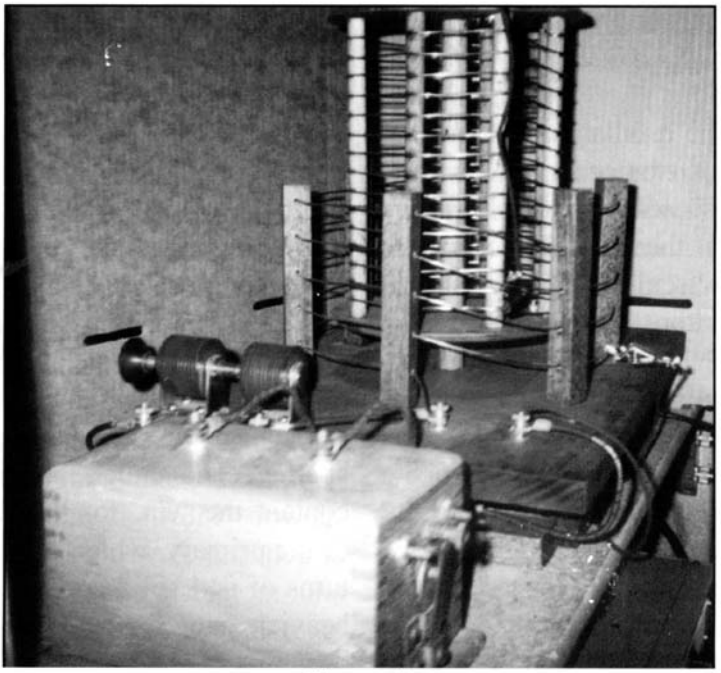


Figure 3

between the electrodes. A typical gap used in such simple transmitters would have consisted of two zinc rods, perhaps 1/4" in diameter, mounted in a pair of binding posts. I don't know where to get zinc rods. I cheated here a bit and used a beautiful finned spark gap liberated from a trashed diathermy machine. The gap is a Fischer 1 kilowatt capacity design. It is extreme overkill for this project but it sure looks nice. The gap is fully adjustable with insulated knobs for on-the-fly adjustments. This gap is visible immediately behind the spark coil in Figure 3, and is mounted directly on the baseboard.

The Oscillation Transformer (OT)

The oscillation transformer consists of two parts, the primary and the secondary. The primary serves as the inductance in the resonant circuit formed by it and the capacitor. As the spark gap breaks down and conducts, current is dumped into the primary of the OT from the capacitor, and passes back and forth between the capacitor and OT primary until the spark gap opens again. Energy is transferred from the "closed" circuit formed by the tank to the secondary of the OT. The secondary of the OT, together with the distributed capacitance and inductance of the antenna or load, forms the "open" circuit. This is the portion which radiates all of the signal. Both primary and secondary inductances are tapped to permit independent adjustment. By changing the location of the tap on the primary for a given capacitor, the frequency of the radiation can be adjusted. The open circuit is then tuned to resonate at the same frequency as the closed circuit by adjustment of the tap, allowing for an efficient transfer of energy between closed and open circuits. An OT is generally fitted with some means of varying the coupling between the primary and secondary.

My OT was built on a 16" by 11" poplar base, and can be seen in either Figures 2 or 3. The primary coil former is built using six 3/4" square dowels, 5.5" in height. The six dowels are mounted vertically and equidistant around the circumference of a circle having a radius of 4.5". Five holes are drilled in the center face of each of the dowels, and are 1" apart. The holes are used to contain the wire for the windings of the primary, which consists of 5 turns of #14 solid copper wire. A heavier gauge wire would have been more appropriate, but for

ease of assembly the smaller gauge was used. This coil has a calculated inductance of about 4µh. Using a grid dip oscillator, I was able to determine the approximate resonant frequencies with the .003 µf glass plate capacitor as a function of coil tap:

0.5 turns = 2.25 Mhz
1.0 turns = 2.10 Mhz
1.5 turns = 1.66 MHz
2.0 turns = 1.60 MHz
3.0 turns = 1.40 MHz
4.75 turns approx. = 1.00 MHz

So, right in the old 200 meter amateur band!

In the center of the primary coil a central rod, 20" in length and 3/4" in diameter, was attached to the baseboard. The purpose of this rod was to act as a guide for the secondary coil, which was made to slide up and down along the rod to vary the coupling between the primary and secondary. The secondary was made using two 7" diameter wood discs, eight 3/4" dowels, and about 30 feet of #14 solid copper wire. Holes were drilled in the center of each of the discs to accommodate the coupling rod. Then the eight 3/4" dowels, each 7" in length, were attached to the two discs equidistant around the circumference of the discs to form a "bobbin". In each of the eight dowels, 15 notches, about 1/2" apart, were cut along the length of the dowels to serve as guides for the winding. 15 turns of the #14 wire were then wound around the "bobbin". The calculated inductance of the full 15 turns of secondary winding was about 28µh. Two binding posts, made from 8-32 brass hardware, were mounted on the top disc.

One of the posts connects to the bottom of the coil, the other post has a wire with a heavy clip on the end to make the tap connection to the secondary. The antenna/ground or load is connected to these two binding posts. A simple clamping mechanism was devised to allow the secondary to be held firmly in place at a desired distance of coupling.

That's it for this time around... Thanks for staying with me in this rather long series of articles! Next time I will be discussing adjustment of the spark coil transmitter and the bandwidth measurements mentioned at the beginning of this article. I also hope to include some anecdotal stories of spark coil transmission "records" set at the beginning of amateur radio.

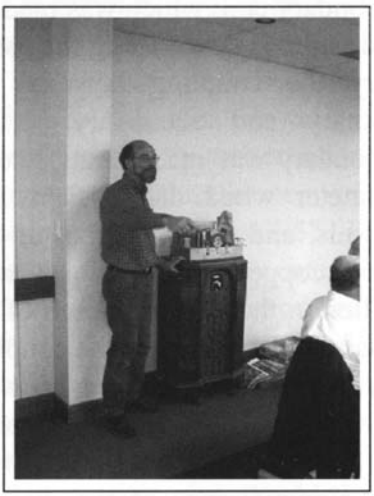
73 Mark AB0CW

Some of the CRC members "schmoozing" during the mid meeting break.

Bill Dial displays his flea market find of a mid 1920's super heterodyne radio kit.

Jerry Tynan shows off his restoration of a 1941 Detrola model 3281

David Soliday obviously is pleased with finding an exact glass replica of a Philco Dial.



Tom Pouliot auctions off the donated console radio.

NAME

ADDRESS

CITY, STATE., ZIP

STAMP

The Colorado Radio Collectors
5270 E. Nassau Circle
Englewood CO 80110

The Colorado Radio Collectors Antique Radio Club

Membership Information Update

The new officers and leadership of the CRC want to know what is important to you, the Club members, to help us better serve your interests. To help in this effort, we would like to ask you to fill out and return the following membership information update. By identifying which aspects of Club membership you value, you will help to show us how the Club could better serve your interests.

As an incentive, all members who return an update by mail or in person by the May 2002 club meeting will be entered in the annual raffle for a one year subscription to the "Antique Radio Classified". Alternatively, members who return an update can pick up one raffle ticket for any regular meeting raffle.
Please check here if you would prefer a regular meeting raffle ticket: _____

Please indicate how valuable you find each of the following items:
(1-little or no value, 2-some value, 3-very valuable)

The Flash!

Overall	__	Reprints (ads, comics, etc.)	__
General Club/Flash info (inside the front cover)	__	Auction notices & results	__
		Member directory	__
Letter from the President	__	Resources list	__
Articles (technical, historical, etc.)	__	Swap meet schedule	__
		Web site reviews	__
CRC Event photos	__	Collector book list	__
Radio & equipment photos	__	Free classified ads	__

Comments _____

_____

_____

Club Meetings

Overall	__	Sales & swaps	__
Club administration & business	__	Interaction with other members	__
Equipment raffle	__	The "What I Need" session	__
Presentations & demonstrations	__	Location	__

Comments _____

_____

_____

Annual Show

Overall	__	Buying & Selling	__
Time of year	__	Entering equipment for judging	__
Location	__	Participating in judging	__
Equipment displays	__	Club dinner	__

Comments _____

_____

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Annual Auction

Overall	__	Selling	__
Location	__	Window shopping	__
Buying	__	Watching the auction	__

Comments _____

_____

_____

Annual Picnic

Overall	__	Location	__
Time of year	__	Swap meet	__

Comments _____

_____

Miscellaneous Club benefits

Overall	__	Yahoo eGroups & e-mail	__
Archives	__	Club discounts	
Book discounts	__	(like Rejuvenator)	__
Member contacts & interaction	__		

Comments _____

_____

_____

What would you like to see the Club do, or do better? _____

_____

_____

How did you first hear about the Club? _____

_____

Should we create a listing of members' collecting interests, skills, etc.? ___

Do you have access to the Internet? ___

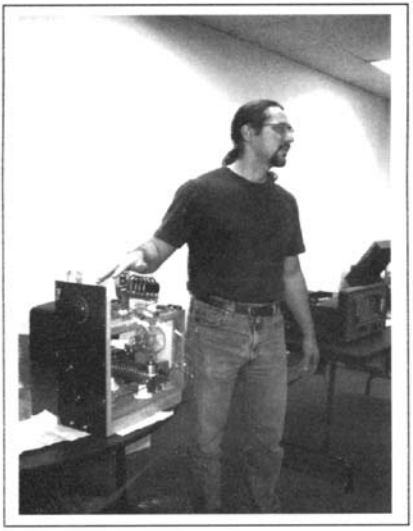
Please use the space below to write in any comments, ideas, concerns and/or constructive criticisms you may have concerning the CRC as a radio club and how it may be improved.

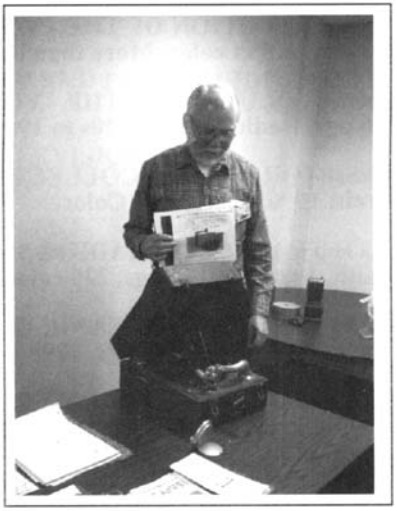
Remember to include your name in the return address in order to be eligible for your raffle ticket. *THANK YOU FOR RESPONDING!*

November Club Meeting

Tom Pouliot demonstrates a working Marshal 5 battery set from his fine collection.

Mark Dittmar, our new President, shows us the amateur radio transmitter he built from 1931 plans.





Ray Kilcoyne plays us a tune on his 1920's Waters Conley 45A windup record player.

Mark Gibson explains how he refinished the bakelite on the Airline "Global" BC/SW radio he recently restored.

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
RADIOS, (GENUINE PLASTIC) OF THE MID CENTURY **Jupp & Pina, hard bound, 219 pgs, 1998 PG, 450+ color pics**	**$39.95**	**$28.00**
ANTIQUE RADIOS, COLLECTOR'S GUIDE - 4th EDITION **Bunis, 1997 values, revised & updated, new photos, 248 pgs**	**$18.95**	**$15.00**
GUIDE TO OLD RADIOS, POINTERS... - 2nd EDITION **Johnson, 277 pgs, 1995-96 prices**	**$19.95**	**$15.00**
ANTIQUE RADIO RESTORATION GUIDE - 3rd EDITION **Johnson, 144 pgs, repairing, refinishing, cleaning**	**$14.95**	**$12.00**
RADIO, EVOLUTION OF THE - VOLUME ONE **227 pgs, 118 in color, More than 800 radios pictured, 1992**	**$22.95**	**$18.00**
RADIO, EVOLUTION OF THE - VOLUME TWO **226 pgs, Radios of the 1920s to 1960s, with 93-94 values**	**$24.95**	**$19.00**
TRANSISTOR RADIOS, COLLECTOR'S GUIDE VOL II **Bunis, 1996 prices, Full Color**	**$16.95**	**$13.00**
ZENITH TRANSISTOR RADIOS, 1955-1965 **Smith, 1998 PG, 160 pgs, 226 color pics, info, descr.**	**$29.95**	**$22.00**
THE ZENITH TRANS-OCEANIC (THE ROYALTY OF RADIOS) **Bryant and Cones, 160 pgs, 1995**	**$29.95**	**$22.00**
ZENITH RADIOS THE EARLY YEARS 1919-1936, Cones **1997-98 Price Guide, 223 pgs, 100's Photos, Desc., Hist.**	**$29.95**	**$22.00**
RADIOS BY HALLICRAFTERS, revised 2nd edition **Dachis, 1999 values, 220 pgs, 1000+ pics, id's, history**	**$29.95**	**$22.00**
CLASSIC TVS, PRE-WAR THRU 1950S **86 pgs, color & b/w pics, descriptions, etc.**	**$18.95**	**$15.00**
Machine Age to Jet Age, Radiomania's Table Radio Guide 'III, '33-'62 **Stein, 256 pgs, 100's of b/w photos**	**$29.95**	**$24.50**
TRANSISTOR RADIOS, 1954 TO 1969 **Norman Smith, with prices, 160 pgs, 1000 photos, 1998**	**$29.95**	**$22.00**
PHILCO RADIO: 1928 - 1942 **Ramires & Prosise, 160 pgs, 828 pics & drawings, 1993**	**$29.95**	**$22.00**
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RADIO MANUFACTURES OF THE 1920'S VOL I **Alan Douglas, 225 pgs, 1988**	**$24.95**	**$19.00**
RADIO MANUFACTURES OF THE 1920'S VOL II **Alan Douglas, 266 pgs, 1989**	**$29.95**	**$22.00**
RADIO MANUFACTURES OF THE 1920'S VOL III **Alan Douglas, 285 pgs, 1991**	**$29.95**	**$22.00**
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CRYSTAL CLEAR VOL 2 **Maurice Sievers, 252 pgs, 1995**	**$29.95**	**$22.00**
RADIO TUBES AND BOXES OF THE 1920'S **George A Fathauer, 112 pgs, 1999**	**$26.95**	**$20.00**
70 YEARS OF TUBES AND VALVES, 2ND EDITION **John Stokes, 264 pgs, 1997**	**$29.95**	**$22.00**
RADIO DIAGRAM SOURCEBOOK **Richard Gray, 264 pgs, 1996**	**$18.95**	**$15.00**
THE RADIO COLLECTOR'S DIRECTORY AND PRICE GUIDE, 2ND ED. **Robert Grinder, 524 pgs, 1995**	**$26.95**	**$21.00**
COLLECTOR'S GUIDE TO VINTAGE TELEVISION **Durbal & Glenn Bubenneimer, 200 pgs, 1999**	**$15.95**	**$13.00**
NOVELTY RADIOS, VOLUME 1 **Marty Bunis & Robert Breed, 223 pgs, 1995**	**$18.95**	**$15.00**
NOVELTY RADIOS, VOLUME 2 **Mary Bunis & Robert Breed, 199 pgs, 1999**	**$19.95**	**$15.00**
COMPLETE PRICE GUIDE TO ANTIQUE RADIOS: PRE-WAR CONSOLES **Mark Stein, 235 pgs, 100's of b/w photos**	**$29.95**	**$22.00**
TUBE TESTERS AND CLASSIC ELECTRONIC TEST GEAR **Alan Douglas, 166 pgs, 2000**	**$25.95**	**$19.50**
RADIOS - THE GOLDEN AGE **Philip Collins, 119 pgs, 1987**	--------	**$15.00**
COLLECTOR'S VACUUM TUBE HANDBOOK, VOLUME I **Robert T. Millard, 196 pgs, 2001**	**$25.95**	**$19.50**
THE PLATING MAN'S ELECTROPLATING MANUAL, 2ND EDITION **Don Culver, 38 pgs, 2000**	--------	**$10.00**
TUBE DATA ON CD ROM **Holm, 27,000+ tubes, for Windows 95/98**	**$39.95**	**$28.00**
SILVERTONE ANTIQUE RADIOS 1930 - 1942 **Stein, 239 pgs, 2001**	**$34.95**	**$25.50**
ANTIQUE RADIOS COLLECTOR'S GUIDE 5th EDITION **John Slusser, 264 pgs, 2001**	**$19.95**	**$15.00**

The Colorado Radio Collectors
Antique Radio Club 2002 Membership Roster

NAME		CITY	TELEPHONE	EMAIL ADDRESS
Don	Adams	Longmont	303-776-3180	djadams@svvi.net
Rick	Ammon	Fort Collins	970-224-5446	wireless@antique-radios.com
Dave's	Service	Tucson	520-790-2618	
Carl	Armon	Boulder		cxa-blc@indra.com
Fred	Bantin	Greeley	303-343-7508	bantin@sprynet.com
Robert	Baumann	Lakewood	303-988-2089	rgbdenver@att.net
Richard	Beckman	Aurora	303-344-8565	
Jim	Berg	Northport	509-732-4047	
Norm	Bernicky	Colorado Springs	719-599-3176	
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Mark	Brauer	Westminster	303-430-9467	markbrauer@luco.com
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Bob	Cofer	Golden	303-642-0254	
Charles	Combs	Albany	660-726-3038	
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Tom	Duffy	Denver	303-750-3105	
Bill	Eccher	Highlands Ranch	303-471-2547	
Doug	Furney	Lakewood	303-985-0407	
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Martin	Guth	Colorado Springs	719-495-3912	ribbit@compuserve.com
Dick	Hagrman	Littleton	303-794-6674	rhagrman@aol.com
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Jack	Heavey	Colorado Springs	719-633-2277	

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Bob	Jensen	Alliance	308-762-7391	radionut@bbc.net
Karl	Jesness	Colorado Springs	719-637-1837	
Randall	Johnson	Littleton	303-741-4209	johnso12@ix.netcom.com
Don	Jones	Arvada	303-423-1902	
Tom	Kelley	Boulder	303-444-1837	
Ray	Kilcoyne	Lakewood	303-278-4084	ray.kilcoyne@uchsc.edu
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Curtis	Kimball	Sterling	970-522-2557	ckimball@henge.com
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Chris	Larsen	Colorado Springs	719-596-3849	
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Dennis	Laurence	Colorado Springs	719-278-9181	drl@pcisys.net
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Henry	Marsh	Colorado Springs		
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Mike	McCutcheon	Aurora	303-343-2956	mikem@csd.net
D. H.	McDowell	Littleton	303-791-3559	
Mark	McKeown	Golden	303-278-3908	mmckeown@tde.com
Jack	McMillen	Colorado Springs	719-534-9374	
John	Miner	Denver	303-759-9152	hohum@uswest.net
James	Mize	Boulder	303-499-5894	
John	Moore	Des Moines		
Robert	Morrison	Live Oak		rmorison@suwanneevalley.net
Steve	Morton	North Platte	308-534-4778	
Miguel	Munoz	San Juan		kp4jzenx@isla.net
Travis	Ogden	North Platte	308-534-6337	pugsley@kdsi.net
Richard	Oliver	Goshen	219-537-3747	dolivears@aol.com
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Jerome	Ray	Longmont	303-772-7261	jray@ball.com
Larry	Roohr	Boulder	303-931-7133	lrryr@home.com
Robert	Schineller	Longmont	303-682-1749	rgschin@aol.com
Dennis	Schmidt	Morrison	303-761-1091	
Durbin	Seidel	Fort Collins	970-221-2559	
Richard	Shepherd	Price		

New In This Issue

The Web is an amazing place. If you have any doubts, I invite you to get online and have a look for yourself. On the next two pages you will find the initial installment of what may become a semi-regular column intended to highlight some of the many outstanding antique radio related web sites out there. The first two sites presented, **Nostalgia Air** and **Phil's Old Radios** are large, well known web sites. In future installments I hope to cover all sorts of web sites, large and small, familiar and obscure. If you find these reviews useful, or if you have a favorite site to recommend, or even review yourself, please drop me a note. My contact info is in the CRC roster on page 18.

By the way, if you are not already online, most public libraries have computers available that are ready and waiting to help you "surf the web". Careful though, it can be addictive...

- Mark Gibson

NAME		CITY	TELEPHONE	EMAIL ADDRESS
Garold	Slagel	Madison	605-745-3265	
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Bob	Stutzman	Englewood	303-770-3406	robstutz@earthlink.net
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Ray	Windrix	Colorado Springs	719-597-5098	
Barney	Wooters	Denver	303-770-5314	bnjwooters@mindspring.com
Layne	Wright	Denver	303-368-9783	lwright@lasertech.com
Bruce	Young	Denver	303-458-7408	youngrogers@earthlink.net
Richard	Yubeta	Oracle		

NOSTALGIA AIR

Space Coast, USA

http://www.nostalgiaair.org/

Nostalgia Air has extensive online references for antique radio repair and restoration, some of which were contributed by CRC members. In the *Online Schematics* and *Online Manuals* sections, free for the taking, are complete Riders Volumes I through XIX, and portions of other volumes. You'll also find Rider's Perpetual Troubleshooter's Manual Volumes I through VII as well as excerpts from Beitmans, Majestic, RCA and others. There are also manuals for radios and test equipment and tube tester updates, which are all indexed by manufacturer. Schematics are currently scanned at 300 dpi (dots per inch) resolution.

In the *Online Tube Substitutions* section you will find a searchable tube substitution and characteristics database which provides American substitutes for both American and European tubes, and tube base diagrams.

The *Tips and Training* section has many articles dealing with repair and restoration topics including many articles by CRC members from our own Flash.

Other reference materials you will find include color code references for resistors, capacitors, transformer and battery leads, a table of dial lamp characteristics, and voltage tables for specific radios including tube list, function, pin voltages, currents, etc. (This last section appears to be just getting started.)

Other notable sections include the *Forum* for Q&A and discussion, and *Links to Related Sites* which provides nice synopses of recommended web sites.

The good folks at Nostalgia Air are always looking for contributions of paper or scanned documentation or even equipment which they auction off to raise money to support the site.

As impressive as the site is today, the web master tells me that many updates and improvements are on the way. Before long you'll find a new search engine to search all or part of the site, radio photos to go with the schematics, more comprehensive indices for schematics and manuals. Riders for example has been completely re-indexed by hand. And schematics will be scanned at 600 dpi for much better resolution. The round of updates currently underway should bring the total number of scanned pages to over 100,000! They're also working on a way to have schematics e-mailed to users to avoid problems some have with their browsers. The technical information section will include tube lineups and you'll even be able to search by tube lineup if you don't know the model number.

Phil's old Radios

http://www.antiqueradio.org/

Phil's Old Radios is a wealth of information and a very attractive site to browse through. The main page has just a few sections to choose from but each section has plenty to explore. What follows are outlines of the major sections of the web site.

The *Gallery* is a collection of high quality photos of radios of all types. They are sorted by category (Bakelite, Plastic, Wooden, Transistor, Communications, Radio Literature, and even Tube Box Art. Most images have commentary of some sort and larger format images are available by clicking on the smaller, thumbnail images.

Radio Beginner has many extensive articles that serve as guides for newer radio enthusiasts or collectors. Articles address topics such as "How can I identify my old radio?", "How to check out a radio before playing", and "How to replace Capacitors", with background information, details, photos, and step by step guides.

I Want to Know lists hundreds resources including books, parts suppliers, museums, clubs, other web sites, etc. You could spend hours browsing through all the links, reading the book summaries and other great info here.

Radio Wrinkles is for those who want to roll up their sleeves and get their hands dirty. There are many extensive articles on radio projects to build and restoration techniques. The projects include complete building plans for things like AM transmitters and a crystal short wave radio (right down to a printable cabinet decal). Many of the restoration articles are accounts of restoring specific radios, like a Hallicrafters Model SX-28 for example. These articles have many clear photos, and lots of background information and detailed descriptions of the problems encountered and solutions found during the restoration. There is also a more generic "Ground-Up Radio Restoration" article offering more generic descriptions, again with lots of good photos.

The *Radio Directory* offers an alphabetical listing the hundreds of articles and pages on the site. Or you can use the search engine or the site map on the main page to find what you are looking for.

Rounding out the site are free classifieds to buy, sell or trade antique radios and related items.

"The Open Trunk" Classified Advertisements

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

WANTED: White or beige knobs for a GE 401, 410 or 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: Silvertone tube shield top for model 1320, 1322 or 1324. Sloted, 1-7/8" dia.

• Cabinet for a Philco 90 *lowboy*

Wayne Gilbert (303) 465-0883

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

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 phone/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

WANTED: Escutcheon for a Jackson-Bell Swan cathedral, pictured at right and in Bunis #4 page 116. **Ed Brady,** 1333 White Rim Pl. NE, Albuquerque NM 87112 (505) 292-048, cebrady2@yahoo.com

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: 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@att.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

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

STAMP

FIRST CLASS

The January meeting will be held on Sunday the 13th at 1:00pm, at the Museum of the Americas, 863 Santa Fe (between 8th & 9th Ave's.