

The

FLASH!

An Official Journal Published For Radio/TV Collectors

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

Volume 7

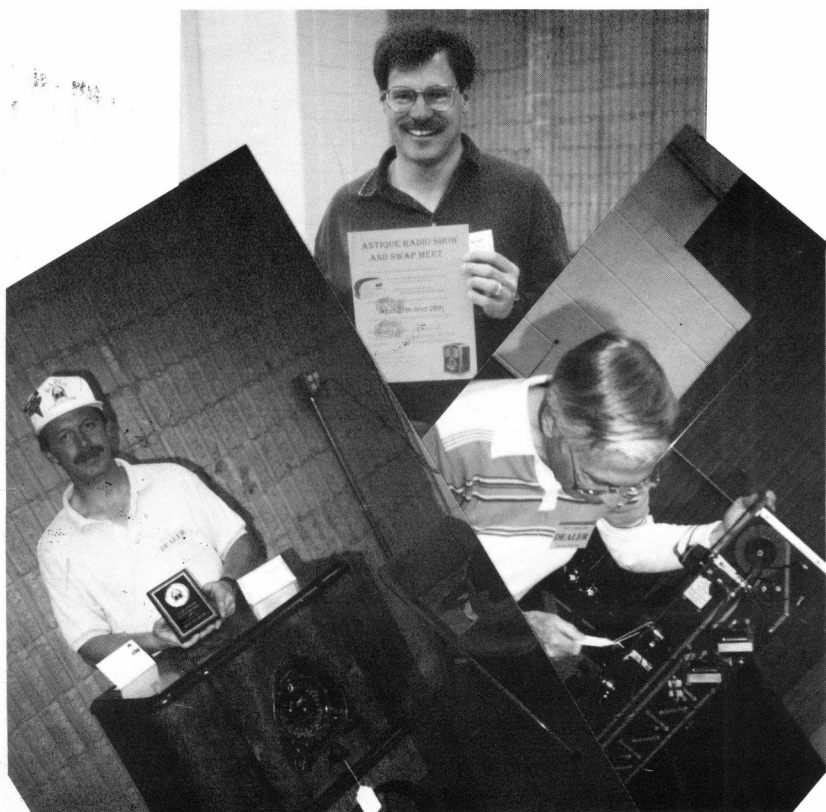
July



August

1996

Issue 4



In This Issue...

- ♦ The Boulderadio Company ♦ Master Finishing ♦ Reproducing Bakelite Knobs ♦
- ♦ CRC Annual Show Results ♦

Collector Books for Sale

CRC and NARCC Members get specially reduced prices from L&W Books of Indiana, up to %40 off the suggested retail. Add \$1.00 for shipping and \$1.00 for the CRC per each book purchase. Contact your rep for information.

Ordering will be available at meetings (NARCC/remotes by mail). The first price is the suggested retail. All have paperback covers unless otherwise noted.

ANTIQUÉ RADIOS, COLLECTOR'S GUIDE - 3rd EDITION

Bunis, '94-95 values, revised & updated, new photos, 278 pgs \$18.95 \$11.37

ANTIQUÉ RADIOS, COLLECTOR'S GUIDE - 2rd EDITION

Johnson, 144 pages, No prices, Repairing and refinishing \$14.95 \$ 8.97

CLASSIC TV'S, TELEVISIONS PRE-WAR THRU 1950's

Bunis, '94-95 values, revised & updated, new photos, 278 pgs \$16.95 \$10.17

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values, 224 pages, 100s of Radios in Full Color Photos \$18.95 \$11.37

PHILCO RADIOS, 1928 - 1942

Ramirez, Rarity Scale, 185 pages, All Color, No pricing \$29.95 \$17.97

RADIO & TELEVISION PRICE GUIDE - 2nd EDITION

Harry Poster, 1994 values, 195 pages, Years 1920 - 1990 \$17.95 \$10.77

RADIO, EVOLUTION OF THE - VOLUME ONE

227 pages, 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 \$13.77

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All different from Volume One, 226 pages, Color, Radios of the 1920s - 1960s, with 93-94 values, pix from CRC member Jim Berg \$24.95 \$14.97

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Stein, "Machine Age to Jet Age - 1933-1959", 100s of photos, 255 pages, 94-95 values, major manufact., resources, plastics & wooden \$24.95 \$17.47

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Bunis, 256 pages, 1994 prices, Full Color \$15.95 \$ 9.57

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Lane & Lane, 1994-95 prices, 168 pages, Photos, 2200 listings \$19.95 \$11.97

ZENITH TRANS-OCEANIC, ROYALTY OF RADIOS Bryant,

1995 Price Guide, 160 pages, History/Restoration, 100 Photos \$24.95 \$14.97

Official Journal of the
*Mountians N' Plains Radio
Collector's Association*

Dedicated to the preservation and understanding of wireless,
through the united efforts of organizations throughout the Rocky
Mountain region and the Great Plains.

Volume 7, Issue 4

July/August 1996

TABLE OF CONTENTS

Collector Books for Sale	IFC
Credits, About the Cover and Publishing Deadlines	2
Colorado Radio Collectors Antique Radio Club Column	3
• President's Message	4
Nebraska Antique Radio Club Collectors Column	7
• President's Message	8
CRC Annual Show and Sale - Results and Pictures	9
Lots of participation, lots of success - by Larry Weide	
Radio Riddle - Word Puzzle - Brain strain - by Larry Weide	14
Master Cabinet Finishing	
Really good info from a guy who knows - by Dave Gonshor	15
Reproducing Bakelite Knobs - A method	17
One of our English friends has a great idea - by Nigel Cook	
The Boulderadio Company	
A piece of fasinating Colorado radio history - by Wayne Gilbert	19
Wanted - Dead or Alive! - Help find this radio - by Bill Hinkley	23
The Open Trunk - Want Ads and For Sale Items	Back

ABOUT THE COVER

What a show! We had 'em all - from 1921 to 1991. This month we're featuring the results of the CRC annual April show and sale. On the cover we see our show manager, Smiling Matt Lutkis, holding up one of his day-glo flyers that he had posted up all over town. You can also see Bruce Young, proud as punch, standing behind his "Best of Show" entry. Finally, we have Leamon Brooks looking into what may very well have been the world's first radio made with a printed circuit. So, read all about the details on the inside. (When you're sure no one is looking, take a gander at our center-fold this month - whew!)

FLASH!! PUBLISHING DEADLINE NOTES

It's the intention of this Editor to mail our journal bi-monthly just prior to the 2nd Sunday of the issue month. Articles about, and pictures of your treasures, are welcomed as are **Want/4-Sale** ads and any letters or comments about our hobby. All material used are the copyrighted (C) property of the **Colorado Radio Collectors**.

The article submission deadline dates are set to allow timely mailing in the following month. These dates are the 1st of Feb., Apr., Aug., Oct. and Dec.

** ADS ARE FREE TO CRC & NARCC MEMBERS **

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Thanks to the *Pressworks* for printing the FLASH!!
(303) 428-8600

Kudos to this month's Flash contributors!
Nigel Cook, Wayne Gilbert, Dave Gonshor,
Bill Hinkley, Larry Weide

Colorado Radio Collectors Antique Radio Club

Founded October 1988

Dedicated to the Preservation and Documentation of
Wireless, Radio, Television and Associated equipment

MEETING LOCATION

Unless otherwise noted in this Journal, meetings are held on the second Sunday of every other month starting in January (except: 3rd Sunday in May) at 1:00PM at the **South West Bank Building**, Community Room, 1380 South Federal Ave.. A swap meet follows the meeting in the parking area.

C.R.C. OFFICERS

President:

Larry Weide
Englewood (303) 758-8382

Vice President:

Dave Boyle
Littleton (303) 979-5403

Treasurer:

Bob Cofer
Denver (303) 861-8454

ALL DUES

\$12.00

ANNUALLY

(Joining dues prorated to June 1)

Bob Cofer
P.O.Box 200632
Denver, CO 80220-0632

WANT ADS

and

ARTICLES

Should be directed to;

Larry Weide
5270 E. Nassau Cir.
Englewood, CO 80110

ON THE AIR

Busy As Bees

Larry Weide, C.R.C. President

Boy, this is the time of year when our radio club is really hopping! We just had our April show and sale, and the results are being reported this month. This year's show was a great success - lots of quantity *and* quality. I'd like to give thanks to everyone who participated and made it possible. AND, we need to give a special thanks to our show manager Matt Lutkis for all of his organizing and hard work.

Those who were at the May meeting know that we have elected a Vice President and a Treasurer to serve with our President Elect Dave Boyle. The up-coming officers are;

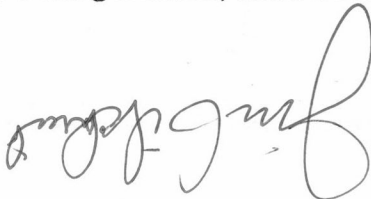
President	- Dave Boyle
Vice President	- Neil Gallensky
Treasurer	- Dick Hargman

Don't forget that in July we will not only have our regular meeting on the 14th, but on the 28th we will also hold our annual picnic - see the flyer elsewhere in this Flash for details. Those who've attended the picnic in past years will tell you that we always have a very enjoyable and relaxed time. So, consider coming this year - and bring your family and beaus.

You folks out there may want to also start thinking about getting ready for our September auction. What a great way to move out those items you don't really need and to garner some cash and/or pick up a jewel or two. Don't forget, as always, the auction *is* our September meeting

Enjoy the up-coming summer, and I'll see you at the meetings,

Larry



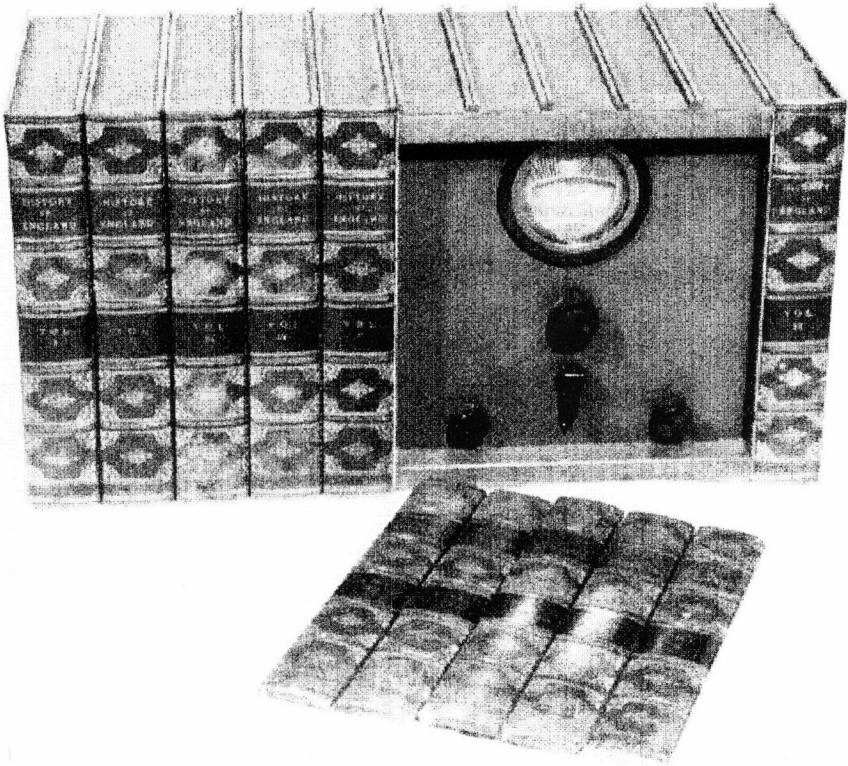
'See you at the....



CRC Picnic

Sunday July 28th 1:00pm
At Lakewood's Historical
Belmar Village - West Side
Of The Museum Barn

- * 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



Philco 37-630 - 1937
Owned by Bob Stutzman, CRC Member

NEBRASKA ANTIQUE RADIO COLLECTORS CLUB

N.A.R.C.C. OFFICERS

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Bob Jensen
Alliance (308) 762-7391

Vice-President:

Vern Killion
Lexington (308) 324-2502

Secretary/Treasurer:

Steve Morton
North Platte (308) 534-4778

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Steve Morton
905 West First
North Platte NE 69101**

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ARTICLES**

Should be directed to;

**Steve Morton
905 West First
North Platte NE 69101**

Nebraska Antique Radio Collectors Club

President's Column

by Bob Jensen

The April meeting was held on a cloudy and cool Sunday at the Cotton Mill Lake Lodge in Kearney, Nebraska. Thanks to the efforts of Lavern Clark the fireplace was burning and the room was warm. This made a great place to hold a club meeting, and the stone walls provided a great backdrop for the radios that were displayed. More discussion was held on the club auction with a few new ideas that we will table until the June Meeting. A few of the recent radio books appeared and were a topic of discussion. These books are more numerous than ever before and are quite informative. In the late 1960's and early 1970's there were only a hand full of radio books in print, now there are several books written on each of the specialized areas of radio collecting. The documentation of all of the information as well as the photographs will help to keep the interest alive for decades if not longer. While we are on the subject of radio literature, please remember to pay your dues for next year before the last meeting this year. This should reduce the confusion about notification of when the first meeting of the next year is going to be held. This will also keep the FLASH coming to your mailbox without interruption. The July meeting will be held at the Victoria Springs Recreation area near Broken Bow, Nebraska on July 28th. Please bring a radio or related item for display. The August meeting will be held at the KRVN transmitter site north of Holdrege on August 25th. If you have a crystal set bring it along -- the reception (of KRVN) will never be better. This meeting will be held at the site of a 50 kilowatt transmitter, and hopefully Vern Killion or Gary Reiss will give us a tour of the transmitter facilities. A 50kw broadcast transmitter is an impressive sight. I hope to see you there!

Bob

The CRC Annual April Show and Sale

by Larry Weide, CRC Member

Hey, was this a party or what! On April 27th and 28th the Colorado Radio Collectors held their annual show and sale at the Denver Stock Show Complex. This year we were situated in the premier display location right next to the entrance to all of the other displays. Of course this meant that everyone who went into the complex had to pass our spaces. Not only did this give the CRC the maximum exposure to the public, but it also gave those members who were selling radios and such the much needed traffic.

As you can see from the following listing, this year we really had a great turnout. Not only did the CRC members come in with the quantity, but there was a great deal of quality.

One feature that I would like to point out to the membership at large, is that this was definitely *not* an élitist show. That is, you didn't have to enter a Scott or a "Bluebird" to win the kudos. With few exceptions, the winners were the medium priced *but* every well prepared entries. Maybe the best example of this is the bushel basket of ribbons won by Bruce Young. All of his entries were restorations projects - hard worked, hard won.

This review would not be complete without a tip of the hat and a lot of thanks to Matt Lutkis - our show manager for '96. The success of this event had a lot to do with his organization skill, attention to detail and innovation (how many of you were "awakened" by his timely postcard?).

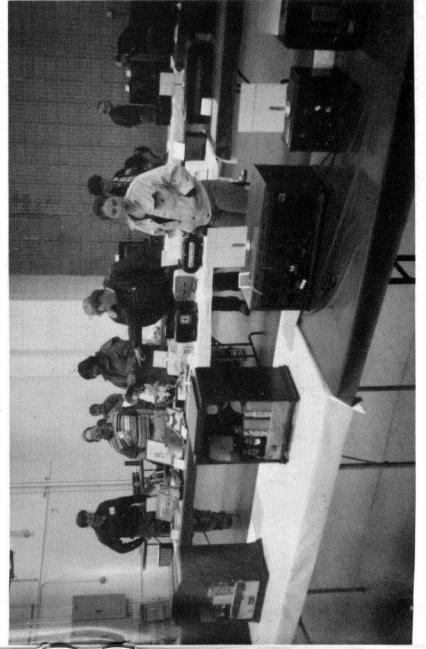
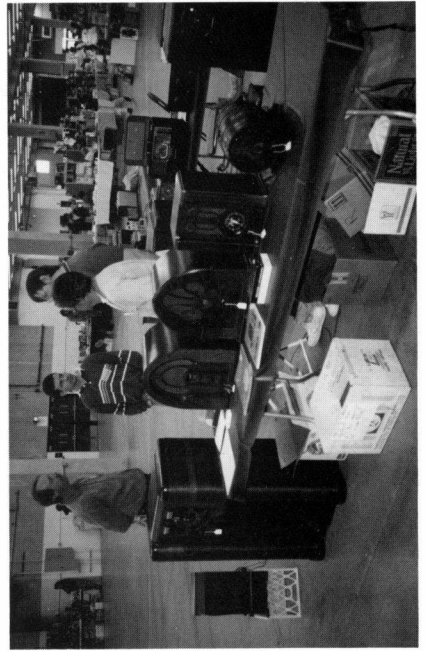
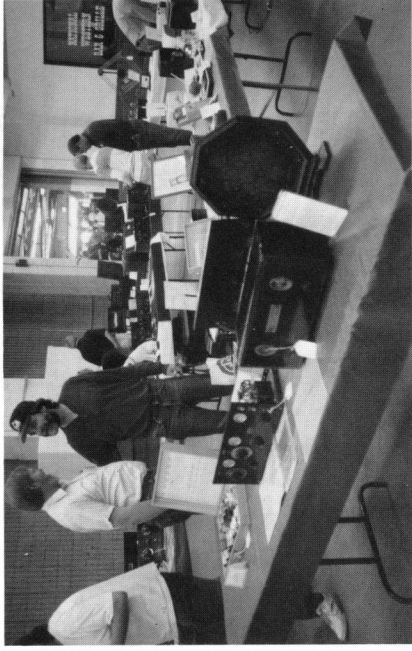
What follows then are the complete results by category and ranking. The score for each entry (except for the first three which were by popular vote) is the of sum of the five judged values (interior/exterior condition, presentation, rareness and uniqueness) multiplied by their respective criteria values.

Best of Show	Zenith 12S265 1938	Bruce Young
People's Choice	Zenith 10S452 1940	Bruce Young
Best Restoration	Majestic 5T 1939	Larry Weide

<u>CATEGORY</u>	<u>DESCRIPTION</u>	<u>OWNER</u>	<u>SCORE (PLACE)</u>
Accessories	Berling Loop Antenna	Jerry Tynan	435 (1)
Accessories	Bristol Amplifier	Bob Slagle	410 (2)
Accessories	Stenite Antenna Tune. 1929	Bill Hinkley	405 (3)

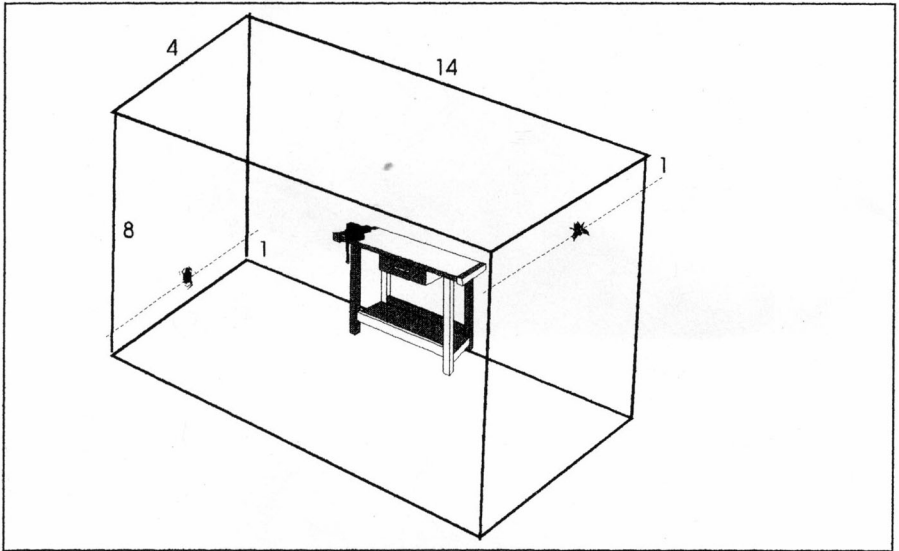
Accessories	Nipper Dog	Fred Bantin	390
Accessories	Magnavox Amplifier 1922	Leamon Brooks	320
Bakelite	Majestic 5T 1939	Larry Weide	450 (1)
Bakelite	Sonora WAV-243 1941	Bob Slagle	395 (2)
Bakelite	Kadette Jewell 41	Riggs Smith	370 (3)
Bakelite	Crosley 10-138 1950	Riggs Smith	370
Bakelite	Zenith H-511 1950	Bruce Young	365
Bakelite	Belmont 6D120 1947	Jerry Tynan	360
Bakelite	Crosley 10-135 1950	Bruce Young	350
Bakelite	Airline 94BR 1950	Merril Campbell	335
Bakelite	C Lorenz 1944	Henry Lamb	310
Bakelite	Admiral 1945	Steve Axelson	280
Battery - 1926-1930	Slagle Radio IV 1925	Bob Slagle	455 (1)
Battery - 1926-1930	Atwater Kent 30 1926	Doug McDowell	410 (2)
Battery - 1926-1930	RCA Radio 16 1927	Larry Weide	395 (3)
Battery - 1926-1930	Atwater Kent 20 1925	Jerry Tynan	395
Battery - 1926-1930	Magnavox J 1925	Leamon Brooks	385
Battery - 1926-1930	Supertone 1926	Leamon Brooks	360
Battery - 1926-1930	Kolster 6D 1926	Otis Chartier	265
Catalin	FADA 1000 1946	Bill Hinkley	480 (1)
Catalin	Garod 6AB-1 1940	Matt Lutkus	385 (2)
Cathedral	Philco 89B 1935	Bruce Young	440 (1)
Cathedral	Majestic 50 1931	Otis Chartier	400 (2)
Cathedral	Philco 70 1931	Matt Lutkus	390 (3)
Cathedral	Philco 20 1930	Merril Campbell	230
Console - High/Low Boy	Atwater Kent 60 1929	Otis Chartier	75 (1)
Crystal Set	Gecophone 1925	Bob Slagle	425 (1)
Crystal Set	Jubille 1948	Fred Bantin	395 (2)
Crystal Set	Atwater Kent 1924	Tom Pouliot	390 (3)
Crystal Set	Filmore	Fred Bantin	300
Metal Box - 1920's	Philco 65 1929	Riggs Smith	350 (1)
Metal Box - 1920's	Atwater Kent 35 1926	Doug McDowell	290 (2)
Metal Case	Arvin 40 1938	Jerry Tynan	425 (1)
Metal Case	Arvin 422 1941	Riggs Smith	370 (2)
Metal Case	Silvertone 8003 1950	Dan Busetti	300 (3)
Metal Case	Arvin 840T 1954	Bruce Young	250
Novelty - Transistor	Tropacana Orange 1992	Jack Mattox	470 (1)
Novelty - Transistor	Casio FM Card	Bob Slagle	450 (2)
Novelty - Transistor	Boat radio	Jerry Tynan	445 (3)
Novelty - Transistor	Parkay radio	Jerry Tynan	420
Novelty - Tube	Emerson Book 581	Bob Slagle	375 (1)
Novelty - Tube	Abbotware Z477 1950	Fred Bantin	355 (2)
Plastic - Tube	Emerson 511 1946	Riggs Smith	75 (1)
Portable - Pre 1926	RCA Radio 16 1925	Tom Pouliot	75 (1)

Portable - Post 1925	Sentinel 286-PR 1947	Matt Lutkus	405 (1)
Portable - Post 1925	Zenith K412R 1953	Matt Lutkus	400 (2)
Portable - Post 1925	Zenith H500 1953	Bill Hinkley	380 (3)
Portable - Post 1925	Emerson 640 1950	Fred Bantin	375
Portable - Post 1925	Zenith H500 1952	Jack Mattox	375
Portable - Post 1925	RCA BP-10 1941	Otis Chartier	355
Portable - Post 1925	RCA 2BX63 1953	Bob Jensen	350
Pre 1925	Federal 135 1923	Barney Wooters	500 (1)
Pre 1925	Erla Superflex Kit 1924	Barney Wooters	485 (2)
Pre 1925	Kennedy 281/521 1922	Barney Wooters	465 (3)
Pre 1925	Crosley 50-A 1924	Bob Jensen	455
Pre 1925	Crosley VI 1923	Bob Jensen	455
Pre 1925	Grebe CR9 1921	Tom Pouliot	445
Pre 1925	Crosley 50 1924	Bob Jensen	440
Pre 1925	Westinghouse RC 1921	Barney Wooters	440
Pre 1925	Gilfillan GN2 1924	Tom Pouliot	390
Pre 1925	Stewart Warner 300 1925	Fred Bantin	380
Speakers	Riley-Klotz Arkay	Bob Slagle	290 (1)
Speakers	Music Master 1924	Fred Bantin	255 (2)
Speakers	Trimm Speaker 1924	Jerry Tynan	220 (3)
Speakers	RCA Radiola 100A	Doug McDowell	190
Specialty Brand - Zenith	Zenith 6D628	Riggs Smith	420 (1)
Specialty Brand - Zenith	Zenith 10S452 1940	Bruce Young	405 (2)
Specialty Brand - Zenith	Zenith 9S262 1937	Tom Pouliot	390 (3)
Specialty Brand - Zenith	Zenith 5J217 1937	Dick Hagman	355
Specialty Brand - Zenith	Zenith 7S530 1941	Jerry Tynan	355
Specialty Brand - Zenith	Zenith 6B129 1937	teve Axelson	260
Specialty Brand - Zenith	Zenith 12S265 1938	Bruce Young	240
Television	Sony Micro TV 1965	Bill Hinkley	75 (1)
Tombstone	Atwater Kent 145 1937	Bruce Young	405 (1)
Tombstone	Zenith 6S229 1937	Bob Slagle	395 (2)
Tombstone	RCA 8T 1936	an Buseti	390 (3)
Tombstone	Graybar radio8 1931	Otis Chartier	390
Tombstone	Coronado 7J 1935	Tom Pouliot	360
Transistor	Zenith Royal 555 1965	Neil Gallensky	465 (1)
Transistor	Zenith RD14 1972	Neil Gallensky	460 (2)
Transistor	Emerson 888 1958	Merril Campbell	455 (3)
Transistor	Zenith Royal 500B 1957	Jerry Tynan	455
Transistor	Pennys 41-810M360 1950	Bruce Young	415
Transistor	Regency TR5C 1958	Bill Hinkley	410
Transistor	Emerson 888 1957	Jerry Tynan	390
Transistor	Automatic SAC 1960	Neil Gallensky	310
Tube/Parts Display	Tube Display	Barney Wooters	450 (1)
Wooden - Line Powered	Atwater Kent 1932	Riggs Smith	475 (1)
Wooden - Line Powered	Zenith 6-S-222 1937	Bruce Young	375 (2)
Wooden - Line Powered	Zenith 7S634R 1942	Riggs Smith	325 (3)
Wooden - Line Powered	Bendix 0526E 1946	Merril Campbell	285
Wooden - Line Powered	General TV 49 1946	Bruce Young	260



Radio Riddle - Word Puzzle

by Larry Weide, CRC Member



There is a radio fixit shop I know that is 8' high, 14' long and 4' wide. I noticed that at one end of the shop, at the center of the wall and 1' foot up from the floor, there's a spider lurking. At the other end of the shop, also at the center of the wall but 1' down from the ceiling, there sits a fly.

Can you tell me what is the shortest distance that the spider must travel in order to scurry over to catch the unsuspecting fly (and no web swinging!)?

(Answer on inside back cover)

Cabinet Finishing by the Masters

by Dave Gonshor, CRC Member

The following information on cabinet finishing is courtesy of the E. H. Scott radio company, enhanced by my own experiences in doing it. First, a word of caution. If you're interested in reproducing the mass produced finishes of Zenith, Philco and others, read no further. They were inexpensive finishes and relatively crude in order to cut costs. What we are talking about here is the quality furniture finishes done by the master woodworkers in the 1930's, like E. H. Scott cabinet finishes. Their techniques result in the glass smooth, deep and beautiful finishes -- even on open grained woods. Be prepared to spend a LOT of time.

The bare wood is sanded smooth, then stained. The inexpensive oil stains were not used; aniline dyes were. You can use pigmented stains, but read the cautions below. The grain is then filled with grain filler. Tint the filler to taste. Grain filler is not enough to smooth out open grained woods like mahogany and laurel. More is needed. The secret is shellac. Yes, shellac! Three coats of shellac are applied, lightly sanded between coats. Brushed-on


shellac results in a fuller coat much thicker than lacquer. The final coat is sanded smooth like a baby's butt. When you do this, you'll see the magic of shellac. Use 400 grit sandpaper, no less, no more. If you try to hurry this or any other procedure that follows, your shortcut will be evident in the finished product. Trust me, I tried the shortcuts and they don't work. You must let the shellac dry thoroughly between coats; a full day at least, a week is better. If you try to sand sooner, the shellac will ball-up on the sandpaper. The shellac forms a base coat, to fill the wood and provides a solid foundation for the final coats. The sanded shellac will result in a perfectly smooth surface. You can use either clear or amber shellac. Amber shellac produces a rich golden glow to the finish. Use Bullseye brand. Other brands have a much more limited shelf life and are usually bad by the time you buy them, and the chain store will not have a clue. Other shellacs may not ever harden enough to sand properly. I recommend against spray can shellac. Keep oil based stuff away from shellac, including soaked rags and brushes (shellac is

alcohol based). Let oil stained surfaces dry for at least a day before applying shellac.

After you have produced the "baby's butt", apply three coats of lacquer. A spray can of the common Deft brand works fine, but follow the directions on the can to prevent orange peeling. After the third coat has dried thoroughly (don't rush it, you have applied three coats!), use fine pumice to provide a coarse polishing. Then apply the final coat of lacquer. You will have applied seven coats of finish. After the final coat, pumice it again lightly, then do the final polishing with rotten stone.

My experience says that it will take up to 40 hours of work to do a large cabinet the right way. Don't plan on cutting this time; your shortcuts will be evident in the finished product. The key is the shellac base. Even cheap cabinets of the period used one coat of shellac, followed by one coat of lacquer. If you're doing this to make money, you might have a problem following the master's way. It takes a lot of time! Good luck,

Dave



Wire Your Set With
"CELATSITE"
(Spaghetti Wire)
5 Colors

Cut Insulation and slide it off

You can't beat this for a neat job. It is No. 14 tinned copper wire covered with a varnished insulation in 5 beautiful colors. Looks like "spaghetti" but is smaller and goes into narrower places. It bends without cracking and strips like the bark on a whistle! Highly dielectric; thoroughly moisture proof. Sold by dealers in 30 inch lengths. Send for

Bends without cracking

Free Folder Telling HOW TO SOLDER

This folder also describes Acme "Celatsite", Spaghetti, and Stranded Enamel Antenna.

THE ACME WIRE COMPANY
Dept. N. New Haven, Conn.

ACME WIRE
Makes Better Sets

M O M

Making Reproduction Bakelite Knobs

by Nigel Cook, Guest Author

E-mail - diverse@tcp.co.uk

[Note: This article is used, with permission, from the antique radio bulletin board. Nigel has allowed me to alter the "Kings" English (just a bit) to make it a little more comfortable for us colony readers. - Ed.]

This technique produces convincing looking bakelite knobs.

Requirements:

- Flexible molding liquid (obtainable from craft shops for casting chess pieces etc)
- Polyester resin and hardener
- Mold release agent
- Source of scrap bakelite
- Broken rare earth magnet
- Iron filings
- Modern-day knob smaller than required knob
- Engraving tool for vibration
- Power grinding wheel.

Step 1: Create the knob mold

Clean and polish the knob you would like to replicate. Make sure that the knob has no severe undercuts. Attach an old potentiometer to a metal plate that will be attached to the top of the container in which you will pour

the molding liquid. Mount the 'pot shaft down *into* the container. You must be able (for the precise alignment of all mold pieces) to re-attach the plate to the container in exactly the same position every time its disassembled.

Remove the set screw from the bakelite knob and place a small plug of cable sleeving in the hole and reinsert the set screw. Attach this knob to the 'pot shaft (firmly but removable by pulling) Assemble the mold jig and pour in the molding liquid. Vibrate the assembly with the engraving tool to get rid of the air bubbles and set it aside to cure.

Grind down the scrap bakelite and collect the powder. When you are ready to make your casting, mix the bakelite powder with as little resin as possible - preferably keeping it cool to reduce viscosity.

[NOTE: There was one entry in the antique radio bulletin board indicating that it was dangerous to grind bakelite since it contains asbestos. Others responded that this was not so, in that although there were/are a number of formulations for

bakelite, asbestos content was not in any one of them. This author cannot verify either position. - Ed.]

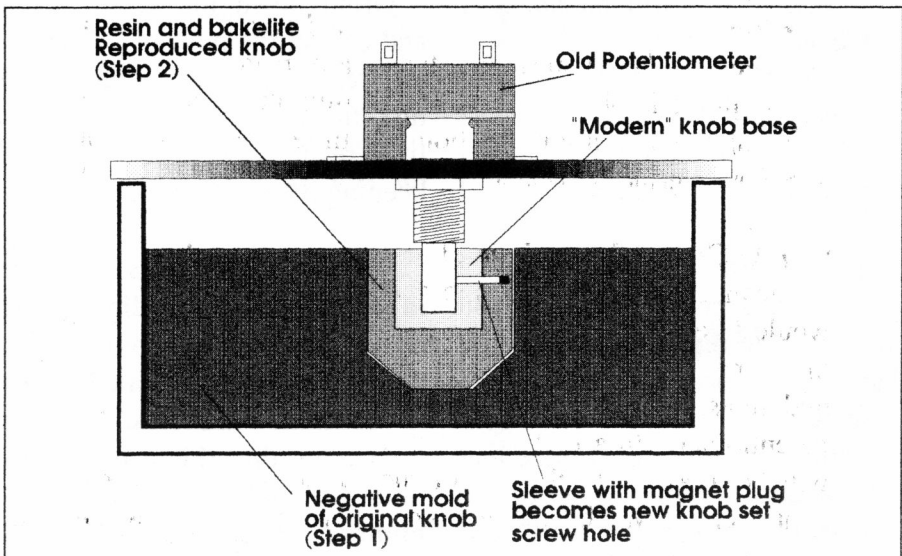
Step 2: Create new knob casting

Prepare a modern knob as the base of the reproduced knob. This knob must be small enough (or filed/ground down small enough) to fit *inside* of the casting to be created. Mark the radial position of the set screw hole on the rear surface of the knob - to help locate the hole later. Repeat the set screw plug as above and attach the knob to the 'pot shaft. Extend the set screw hole with a piece of cable sleeving, plugged at the outermost end with a glued piece of the magnet material. The length of the

sleeve must be *just* short of the inside of the mold.

Mix the resin/bakelite with hardener and pour it into the release agent prepared mold. Vibrate the assembly with the engraver as above. When cured, remove the casting,/base assembly and use the iron filings to find the exact location of the magnet plug (and consequently the screw hole). Carefully drill down to the imbedded sleeve. Grind the rear face of the knob smooth if required, and remove plug/sleeve from the new knob set screw hole.

This modified polyester resin can also be used for repairing chipped/broken cabinets - with suitable undercutting/keying to help it to adhere.



The Boulderadio Company

by Wayne Gilbert, CRC Member

Would you buy a radio from a company whose expressed purpose was to "engage in, ... the business of buying, selling, designing, manufacturing, constructing, repairing, operating and generally dealing in radio receiving equipment ..."? This was the charter of The Boulderadio Manufacturing Co., and it is presumed that they had some time for doing radio stuff after they finally got their intentions stated.

The company was formed in 1926 by Colorado University's Wallace Cassell, along with a couple of his colleagues and, of course, a lawyer. Mr. Cassell's resume included constructing CU's first broadcasting equipment and working in General Electric's radio perfection department.

By December of 1926 the Boulderadio Co. had sold "300 machines," a pretty impressive accomplishment for a company with only 5 employees, still including, I presume, the lawyer. They seemed to have had a ready market for their "machines," as most of them went to one wholesaler in Denver. They also were obliged to turn down a contract offer to produce 1000

more machines for some unspecified Eastern company.

Their machines were constructed in Boulder, [40 miles N/W of Denver - Ed.] which in that era meant that they were indeed built there from components, not assembled there from sub units constructed in Taiwan or elsewhere. Newspaper accounts of the time emphasized their ability to wind their own IF coils from "nearly four miles of wire almost as fine as your hair." This is significant because that technology was also an area of expertise where Professor Cassell excelled. Even the cabinets were constructed locally.

The radios were popular because of both their "excellent receiving power and moderate price," the basic "8-in-line" selling for \$125.00. Units were priced with and without cabinets, and installation of the chassis into the cabinet was advertised to be possible "within 15 minutes." The buyer is cautioned, however, not to open the chassis, lest he break the radio's workings as well as the guarantee.

The chassis was unusual in that it was made of wood and was

sealed with a wooden bottom cover. Its shape has been described as looking like a child's piano, with the tubes aligned along the keyboard. The recommended tube compliment consisted of seven 01-A's and one "power" tube, thus giving the set its name of "8-in-line." The power tube was normally a 112 or equivalent.

Eleven binding posts lined the front of the keyboard and were used to connect the chassis to the front panel, the antenna, and the speaker. The "A" and "B" battery connections were made via a wrapped cable through the back of the chassis. The "C" battery connectors were identified as being "the brown wires, having either one, two, or no knots." Curses upon the technician who replaced the wires w/o replacing the knots!

The "A" battery drain by 8 tubes would total at least 2 amperes, which exceeded the capacity of many battery eliminators, but the increased performance provided by these additional tubes

was the feature that made the "8-in-line" set such a popular model.

The "8 in line" machine seems to have come in several different models which differed cosmetically but were similar electronically. It also seems that

this particular model may have bordered on infringing upon other established patents (Perhaps Professor Cassell remembered how the General Electric sets were made when he designed the 8-in-line). There are references to other models being produced that didn't have this problem.

In 1929 the Boulderadio Co. produced a 6 page sales brochure to tout their latest products and models. Undoubtedly the old standby "8-in-line" was featured along with a new non patent infringing set, the Model 64. There must have been other new models pictured although it has not been possible to locate or identify any of these other sets.

The "8-in-lines" were sold with an accompanying instruction sheet that explained the hookup and operation of the set. This sheet was well written and assured the buyer that the set could be set up and running within approximately 15 minutes. Experience has shown that 2 average radio collectors, with normal equipment and experience, can indeed READ the instructions in 15 minutes, although interpretation and implementation did take a bit longer. It is humbling to realize how much ability and expertise were expected of the typical 1920's radio buyer.

Although, contrary to expectations, neither the crash of cymbals nor the voice of angels greets the listener when this set is first turned on, it does perform acceptably. Operation of the set is one of those "acquired tastes," but all in all it is a pretty forgiving set due, in part no doubt, to its having 8 tubes. Although it will play without all of the tubes installed, removing two tubes does result in some distortion and loss of volume. The "C" voltages are also somewhat negotiable, and it's generally best to supplement the required centertapped antenna with a long wire.

By September of 1927 the company was selling all of the radios it could produce, but as alternating current sets became more common and affordable, Boulderadio's battery powered sets doubtlessly lost much of their appeal. By 1930 the company had ceased operation in Colorado and unconfirmed reports indicate that the company was moved to the Los Angeles area. Schematics and technical data pertaining to the "8 in line" radio are hard to find and relatively few of these radios remain in Colorado collections.

The Boulderadio company, like most of the smaller companies who built radios at that time, has faded into obscurity and it's left to the

collectors to preserve these old sets that are a part of Colorado radio history.

Sources:

Boulder Historic Soc.
Mr. Tom Myer
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Boulder Daily Camera 9/21/1927

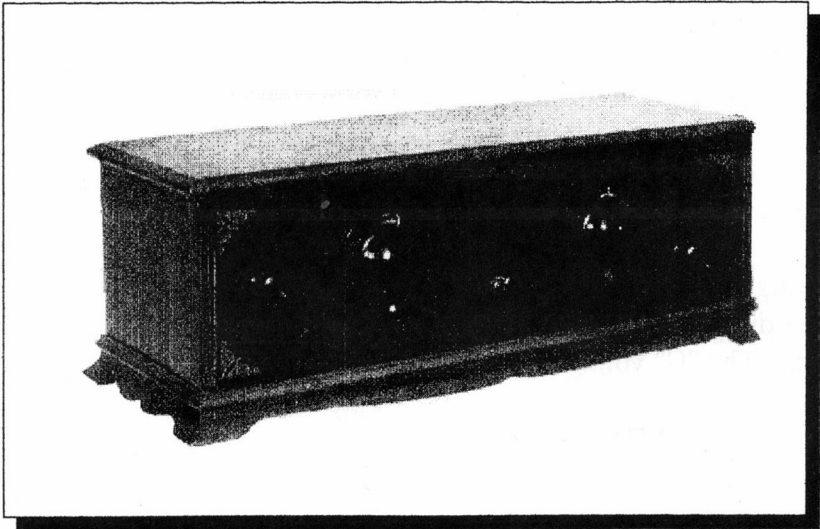
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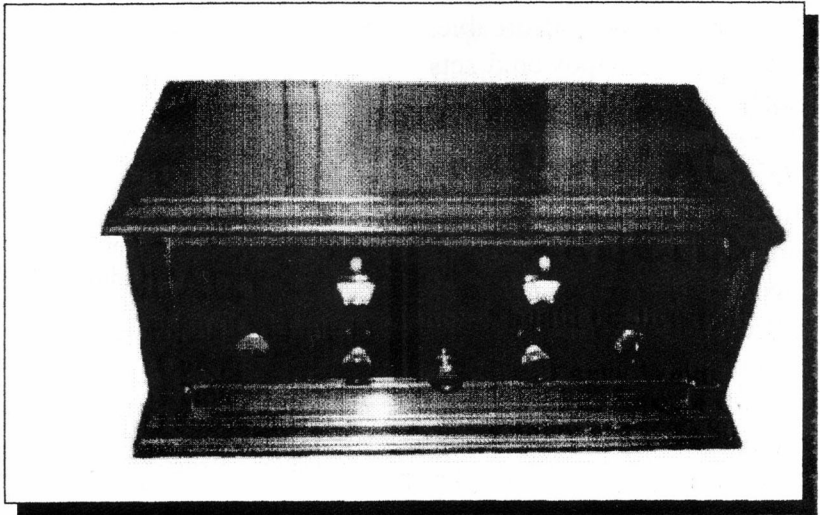
Radio Log. 9/1978. Radio Receiving Set Co.

Leman Brooks, CRC Member
Conversations, Experimentation

Instructions for Hooking up & Operating Eight in Line Unit.
Boulderadio Manufacturing Co.



Two Models of the Boulderadio - "8-In-line" - 1926



WANTED



**Any information leading to the
capture of this radio**

Believe it or not, that's my Dad and his twin sister in the lap of my dear Grandmother - back in 1936. I would love to find the radio that you see in this picture. Can anyone help me identify it? Notice the fairly unique half circle dial that might be a clue.

Thanks for looking, Bill Hinkley (303)730-8539 - Collect



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No wobble of dial.

Accuratune Micrometer Controls fit all standard condenser shafts. Mount flush with panel. Easily replace ordinary dials with no set alterations.

**Canadian
Representatives:
Radio, Ltd.,
Montreal**

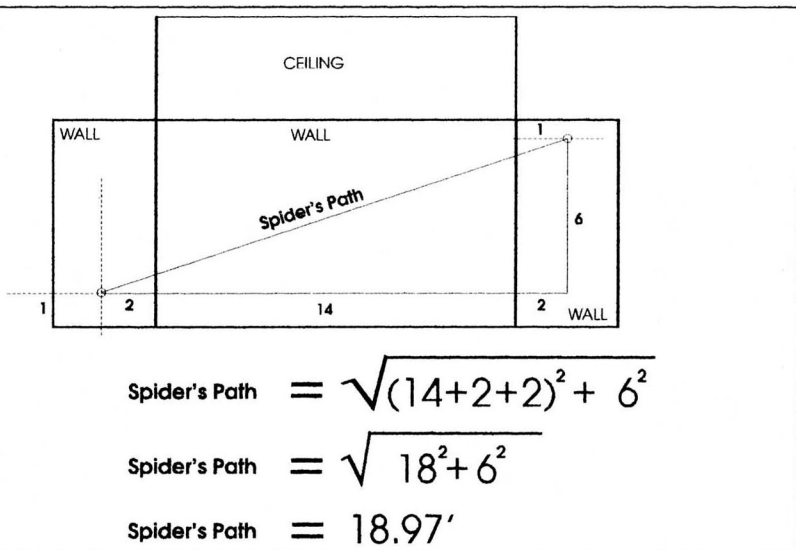
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Radio Riddle - Word Puzzle Answer



You might think that the shortest distance between the spider and the fly would be to simply crawl up the wall to the ceiling, go across the ceiling to the other wall and then down to the fly (this is 28'). However, if you "unfold" the room and draw a straight line between the two bugs, you will see that there is a much shorter route. You can now use good ole' Pathagrean's Theorem to calculate the spider's path. Notice that the shortest route doesn't even *touch* the ceiling.

The Open Trunk

4 Sale:

◆ "Return With Us Now..."

The gallery guide to the fall/95 antique radio museum show at Lakewood's Historical Belmar Village

- ◆ Pictures and details of all radios
- ◆ Articles on the pioneer people, companies and broadcasters
- ◆ Radio dating for the beginner
- ◆ Patent #'s by year, 1836 - 1987

\$4.00 at meetings, or

\$5.00 post paid by mail to:

Dick Hagrman

3429 W. Berry Pl.
Littleton CO 80123
303/794-6674

Wanted:

- ◆ Book - "Vintage Radio Sketch Book" by D.H. Moore, Early Superheterodyne Receivers
- ◆ Information on the "High Frequency Laboratory Co."
When was this Chicago based radio sales company of the 20's and 30's written up in Radio Age Magazine?

Wayne Gilbert

10751 Routt St.
Broomfield CO 80020
303/465-0883

4 Sale:

- ◆ At last, reproduction grill cloth is available in Denver! Many patterns *and* sizes. Personal pickup, or mailed with charges. Sorry, no mailable samples are available.

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Collector's Association

CRC/NARCA

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