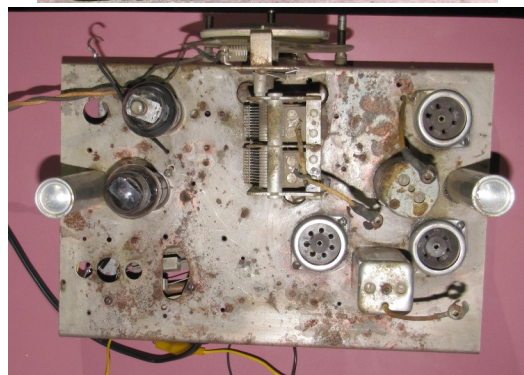


Resurrected Radio Rich Kuberski

Sometime back in the last decade, I became the owner of a TATRO tombstone radio. I knew that it had significant problems, but it looked pretty nice. I don't remember what I paid for it, but knowing me, it was not much.

First off, I refinished cabinet. It looked bad, but was not missing parts or things like delaminated or missing veneer. Then, I took a look at the electronics. My first challenge was to figure out what the model number was. There were no labels on it and when I did a search, I could not find any Tatro chassis that matched up with mine. The tube count was wrong, the tube line up was absolutely wrong. There was an old resistance cord on the radio and it was intact enough for me to make resistance measurements, but it was so old that much of the insulation was damaged or missing. With my resistance measurements I was able to make a crude power supply with power resistors. I recapped it (SOP for me) and with my DIY power supply I was able to get it to work. Not an elegant solution, but it did work.

Well, last winter, I dug it out again and, with renewed vigor, I went looking again for the model num-



ber. On the grillecloth.com website they have a search engine that you can use that uses only what information you have and then gives all the radio chassis that are a match. I came up with 4 possible matches. One was a farm radio that had a vibrator on it. The more I looked at my chassis, I decided that the empty hole in my chassis was the likely location for the vibrator. In the past, someone had altered my radio. How could that be?

Anyway, with that guess, I was able to decipher other changes that had been made. One tube changed and another tube added. What the heck, if someone else had made changes, so would I. I put in a rectifier tube and a transformer to supply it. Somehow, my changes conflicted with previous changes and I now had a dead short in the radio. With some help from my consultant team, I sniped one wire and the problem was solved.

The chassis had been copper plated, then galvanized. The copper showed through in several places and some green crud was growing on it. I cleaned up the chassis and painted it with hammertone paint and it now looks great.

COLORADO RADIO COLLECTORS ANTIQUE RADIO CLUB

Founded October 1988

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Message from the President

I have been involved in the hobby of actively repairing, restoring, and collecting old radios for almost 30 years. I actually purchased my first...an RCA Model 120 cathedral style radio back in 1975.

At that time I had a feeling that someday I might own a few more.

Well a few more seemed to follow me home starting in 1986. I have no regrets. My hobby has "morphed" or evolved into more of a repair avocation for other collectors and the public.

I still can't believe that I continue to look forward to another chal-

lenge confronting me as I stare at the underside of another old radio. The variety of models, the sophistication of the circuitry (or not!), the multitude of issues and problems presented all collectively keep my mind and fingers busy.

Many of us know of the personal satisfaction we get as we, perhaps, listen to an old record being broadcast on KEZW, 1430Khz on the dial of the radio we just brought back to life.

Life is good!

See you all at the July meeting, Castle Rock

David Boyle



CRC CONTACTS

President	David Boyle 303-681-3258 Djboylesr at msn.com
Vice President	Position open Can YOU fill it?
Treasurer	Merrill Campbell 719-596-3482 Campbell321 at junos.com
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Webmaster Website	Bill Grimm www.radioace.com

NOTE: at = @ in email addresses

Upcoming Events

7/4	Independence Day
9/21	CRC Auction

Meeting Locations

(Unless noted otherwise)

Littleton	Castle Rock
January	March
May	July
September	November

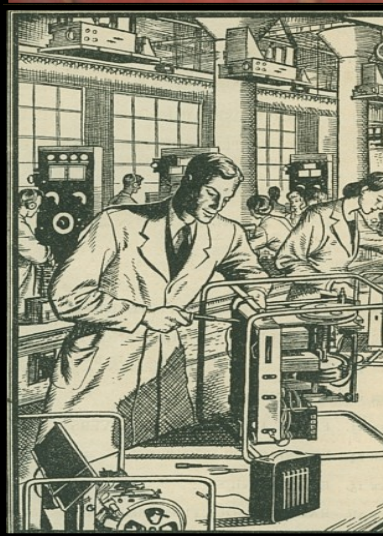
CRC MEETINGS

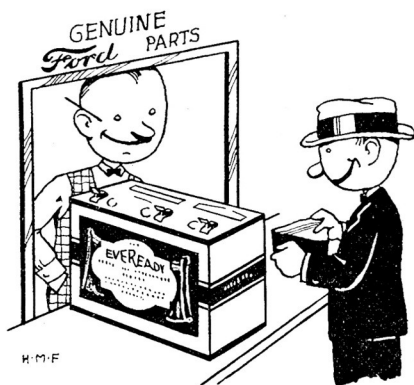
Meetings are held on the 2nd Sunday of every other month starting in January (except May is 3rd Sunday) at 1:00 pm. The meetings consist of business, "show & tell", raffles, auctions, swap meets, technical discussions and other subjects of interest

CRC MEMBERSHIP

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

Radio Advertisements





RADIO Sales for FORD DEALERS

THE current required from the B-battery for "plate" voltage is but a small fraction of that required from the A-Battery for heating the tube filaments. But the required B-battery voltage is much greater, ranging from the 22 volts of earlier sets, to the present standard of 90 volts, with 135 volts or even more when power tubes are used.

The length of "life" of B-batteries is affected by the *hours-of-use*, and by the *number-of-tubes* in the radio set. However, the life is by no means inversely proportional to the number of tubes. In other words, on a 6-tube set for example, the B-batteries will not last even half as long as they would on a 3-tube set. One-third as long would be nearer the actual life. Because of the excessive current drain (for B-batteries) required by the set having more tubes. From which we learn that "rate of discharge", in proportion to the *size* of the battery, is an important factor in determining length of life of B-batteries.

As good dry B-batteries will last six months or more, if not abused, they are economical to use—within the limits of their capacities. Ordinarily, dry batteries are very economical up to and including 90 volts. Many radio owners also use them successfully up to 135 volts, much depending upon the number and type of tubes that are used.

With the smaller radio sets, using 1 to 3 tubes (usually of the UV-201 type), the B-battery current was small, and the life of B-batteries was often from 6 months to a year. However, since the public has adopted the 5-tube (or more) set as standard, the drain on B-batteries has become much greater. Comparing the UV-201 tubes (used with dry cell A-batteries), with the tubes now used on stor-

age A-batteries, we find that with 67½ volts plate voltage, a single UV-201 type tube draws 2.5 milliamperes. While the UV-201-A tube, at the same voltage, draws 3.5 milliamperes, or an increase of 40 per cent! With the more usual plate potential of 90 volts, the plate current drawn is 3.9 milliamperes for the UV-201 tube, and 6.00 milliamperes for the UV-201-A tube, or an increase of more than 50 per cent!

The plate current drawn by the UV-201-A tube varies with the plate voltages used as follows:

render the radio owner a real service by selling him the larger batteries. The use of additional B-batteries, connected in parallel with the regular B-batteries of the set, will reduce the current drain on the B-batteries and thereby increase their life considerably. But observe this precaution: "Never connect *new* B-batteries in parallel with *old* ones." The extra voltage of the new battery will be wasted through the old battery, bringing down the good battery to the level of the old one.

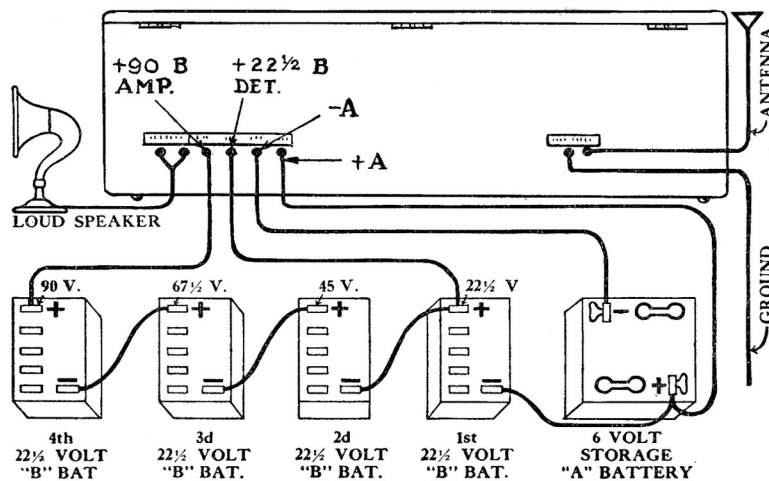
When in service, the voltage of

Plate Voltage	22½
Plate Voltage	45
Plate Voltage	67½
Plate Voltage	90
Plate Voltage	135

Plate Current	0.5 milliamperes
Plate Current	1.5 milliamperes
Plate Current	3.5 milliamperes
Plate Current	6.0 milliamperes
Plate Current	11.0 milliamperes

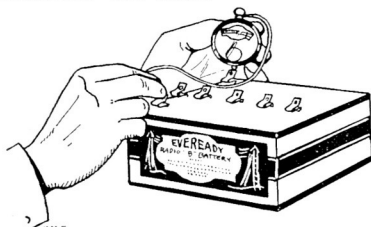
The "heavy duty" B-batteries, while costing about a third more, will last twice as long as smaller B-batteries, so the Ford parts salesman will

dry cell B-batteries drops *gradually* at a rather definite rate, until a certain point is reached. Whereupon the voltage drops very rapidly, and



Connecting the B-Batteries

the battery becomes useless. Just before the batteries begin to deteriorate, an active chemical decomposition takes place within them. This chemical action manifests itself by "frying, sputtering or popping" noises in the loud-speaker or ear-phones. Replacing the worn-out B-batteries with new ones completely eliminates this noise.



Testing Batteries is Important

When new, dry cell B-batteries have an open circuit voltage of $22\frac{1}{2}$ volts or slightly more for the $22\frac{1}{2}$ volt units, and somewhat over 45 volts for the 45 volt units. B-batteries have a "shelf-life", by which we mean they are subject to slow deterioration on the shelf, even when not in use. That is, a battery will ultimately run down while merely setting on the shelf in the dealer's stock-room. Which means that it is extremely important for the Ford parts salesman not to overstock on batteries, but to keep them *moving*, so that he will be constantly supplied with fresh shipments.

The Ford parts salesman should point out to the radio owner that the average $22\frac{1}{2}$ volt B-battery is seldom serviceable, when its voltage has dropped to 17 volts. The 45 volt B-battery is often worthless, when its voltage has dropped to 35 volts. From these points downward, the batteries may produce squawks and noises, and a material reduction in the volume and quality of the sound. Of course, if the results are still good, the battery may be kept in service even when the voltage is low.

To sell radio batteries properly, it is as necessary for the Ford parts salesman to have a volt-meter, as it is necessary for a grocer to have scales to sell bulk sugar. The purchaser should be *shown*, in every instance, that the battery is new and fresh, by actual *demonstration* with the volt-meter. This also prevents come-backs, in case the radio owner shorts the battery and allows it to become run down. Marking down the *actual voltage* on the sales slip is a good idea.

CONNECTING B-BATTERIES

So many wires are used to connect the batteries to the radio set that this

sometimes results in connections not being made correctly. Then the battery may be blamed for troubles that are not its fault. At the back of the average set, there are seven or more binding posts. Because of the small size of the C-battery, it is often placed within the cabinet, which has the advantage of cutting down the length of the grid leads.

After the "Ground" and "Antenna" connections have been made, the A-battery may be connected. Then we are ready for the B-battery connections. A frequent arrangement is three B-battery binding posts marked respectively, "B", and "+B DET", and "+B AMP". So we connect all the blocks of B-batteries in series, and then connect "plus" wires from the batteries to the set where the voltages add up to the required amount.

C-BATTERY

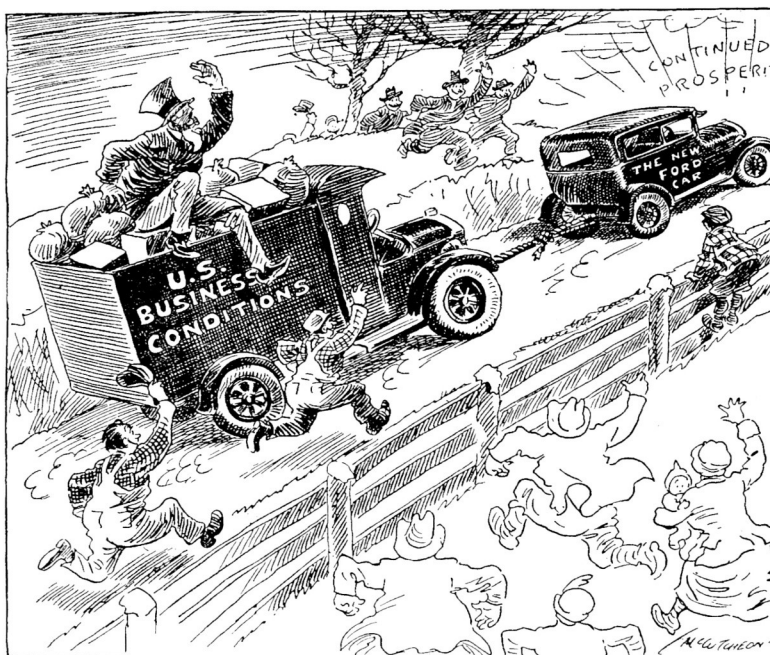
THE C-battery performs two vitally important functions in radio—it imparts to the receiver a quality of tone impossible to obtain without its use. And through its action, materially reduces the B-battery current consumed by the set, thus materially prolonging the life of the B-battery. On all but single tube sets, a C-battery should be used.

The C-battery delivers but a tiny current, and therefore will ordinarily out-last the B-battery. Nevertheless,

because of the important part played by the C-battery in providing high quality reproduction and in reducing the flow of B-battery current, it is desirable that all possible precautions be taken to maintain practically the full C-battery voltage at all times. With this in view, and considering the low cost of C-batteries, we advise that new C-batteries be installed every 6 months, unless when tested with an accurate volt-meter, the C-battery is found to be up to practically full voltage.

Auto Headlights for the Wash Rack

ADJUSTABLE automobile headlights provide plenty of illumination for car washing in the Dodge Street Garage of Omaha. On each side of the rack a 2x4 horizontal is suspended from the ceiling. To each horizontal three headlights are attached, one far enough from the other to make even distribution of light along the whole length of a car to be washed. The ropes by which the horizontals are suspended pass through pulleys against the ceiling and down to fasten against the wall. Then the washer may raise or lower the horizontal as he pleases. The lights are connected up with the regular garage lighting system.



Now For Good Business

Here is an interesting cartoon reprinted from the "World's Greatest Newspaper," the Chicago Tribune. It reveals the recognized effect that Ford activity has on all business. The New Ford is out! Business is good!

Photos from the last meeting.



Merrill Campbell presiding over the meeting in Dave's absence



Good turnout this month.



Mike McCutcheon with video
On Fistel's operation



Bill Dial with his Madison Moore radio
project in progress



Raffle table



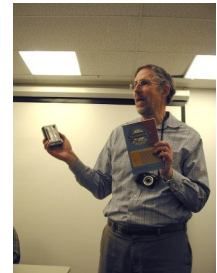
Raffle table



Bill's Madison Moore radio



Tom Pouliot's
Adams Morgan Paragon radio



Bill Grimm with his long used
indestructible pocket radio



Barney with early
KLZ carbon microphone



Steve Touzalin's 28D7 replacement
for a #48 tube



Steve's tube

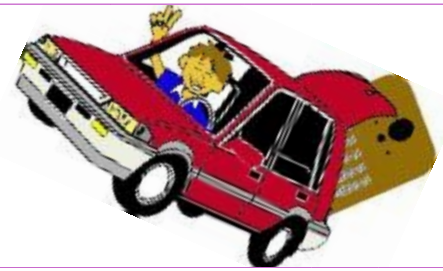
Wanted/Needed

Articles for the Flash. Our well has run dry and we need your submissions. Don't be bashful, send in your article to Steve Touzalin—
Thanks!!!!



The Open Trunk

Member submitted advertisements



WANTED: Buy/Sell/Trade: "Heavy Metal" communications gear, telegraph related items, vintage calculators & micro-phones.

Robert Baumann, 303-988-2089
HQ180A@aol.com. (07/09)

REPAIR SERVICE:

Radio repairs for club members. Reasonable rates. Good references.

Call David Boyle
303-681-3258

11/09

For Sale: by Dave Boyle

Most of the following instruments have been completely refurbished, repaired as needed, and calibrated

Most have manuals and test leads.

Prices are negotiable so please make an offer.

1) Eico Capacitor Tester, Model 950 , also tests for leakage and resistance. \$63.00

2) HP 608 F VHF Signal Generator, with scope cart, also spare special tubes, and manual. Free to a good home!

3) Eico 5inch oscilloscope, Model 425 Completely gone-thru, new hi-voltage caps, all out of spec parts replaced, **NEW CRT!**, etc. \$68.00

4) Eico "Professional" VTVM.6 inch wide meter. \$45.00

5) RCA Institute RF Signal Generator All standard frequency ranges and 400 Hz audio frequency too. \$30.00

6) Heathkit TV Alignment Generator, Model IG-52. \$25.00

7) HP 651 B Test Oscillator, rack mounting with manual. 10 Hz to 10 MHz.

Make offer!

8) Ballantine Labs. Model 321 VTVM.true RMS and p-p measurements. Rack mounting with manual. Make offer!

David Boyle, 303-681-3258

Philco Model 91 *complete working* radio chassis with two good speakers and a working tuning shadow meter! One 8 inch and one 12 inch. Call for negotiable price.

David Boyle, 303-681-3258 11/13

Wanted: 1920's Wooden Horn Speakers and a Crosley Musicone Speaker.

Also 1920's battery sets, especially Neutrodyne sets, Pre 1930 AC Radios and a

Crosley Widget Console Radio

Michael O'Leary 602-354-7011

moleary9@cox.net.

WANTED: To buy: 1948 Motorola 5A9B portable radio, Maroon color. Good condition only.

Dewey Reinhard 719-596-5516

deweyfly30@gmail.com

WANTED: Broadcast or recording mics, especially from 20's to 1950's.

Shirt pocket transistor radios, working or not.

NBC chimes, all eras.

Tom Keeton

303-797-8073

I have collected radios of all types for 30 years and now it is time to let them go to new homes.

Please call me for an appointment to see if any of them would fit in your collection.

I have tube radios including Tombstone, Cathedral, and Novelty etc.

I also have a large collection of transistor radios both shirt pocket and Novelty type.

Please call 303-238-1384
Thanks in advance,
Ron Smith

RADIOS4US@aol.com

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For orders, catalog prices and further info contact the seamstress directly.

Judy Houser
(303) 771-3577
Highlands Ranch, Colorado

SUBMISSION OF ARTICLES & ADVERTISEMENTS

Classified Ads for The Open Trunk and articles of any radio/electronic or historical related subject to be published in the Flash are encouraged and welcomed. The article(s) should be submitted in Microsoft Word, RTF, or as text cut/paste into your email. Submit to Steve Touzalin by email at: stevetou@comcast.net or by postal mail to 417 So. Queen Circle, Lakewood CO 80226.

Formatting isn't necessary, but if you do, set the font to Times New Roman, size 10, left justified. If you have graphics (.jpg files) to be inserted, please name them and be specific about how you would like them placed. We will do our best based on space limitations.

The July 13th 1:00 meeting will be at the Miller Library in Castle Rock



Directions to Miller Library in Castle Rock

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



Colorado Radio Collectors
Antique Radio Club
417 S. Queen Cir.
Lakewood CO 80226

FIRST CLASS MAIL