

# The C.R.C.

# FLASH!!

Official Journal Published For Colorado Radio Collectors  
Dedicated to the Preservation and Documentation of Wireless, Radio, TV, and Associated Equipment

Volume 4

JULY ☺ AUGUST 1993

Issue 4

## What's On the Air Today

Recently while rummaging through an antique flea market for "anything radio", I eyed a pile of old *Denver Post* newspapers. Although most of them were post-30s, there were some with very special dates. Victory in Europe, Victory in Japan, JFK's assassination, and others of similar historical significance were neatly placed in plastic bags and secured with tape. I browsed through them with idle interest until I saw a couple from the middle 1920s. Decorum tells us one should not tear into these wrappings just to satisfy curiosity. However...for the sake of the science of old radio collecting....I felt obligated to peek at a couple of these tombs for anything worthy of spending five



By Rick Ammon

**ANNUAL  
CRC PICNIC**

**Sunday July 11<sup>th</sup>**

Swim Party Swap Meet  
Food DX Contest

**Details on page nine**

bucks to assimilate into my collection. To my pleasure I found a number of major Denver stores advertising their newest radio models and must-have accessories. These printer's cuts are shown throughout this issue of the newsletter and well as a listing of radio programs we could have received in Colorado during the infancy of radio. Just try to pickup these East and West Coast stations today! Unless otherwise noted, all ads have come from the *Denver Post* of Thursday, November 11, 1926. Again, I've learned documenting old radio history can be inexpensive and as much fun as finding a perfect catalin. Of course, in all my years of collecting, I've never found a catalin!

Official Journal of the  
**Colorado Radio  
Collectors**

Founded October 1988

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

**WANT ADS**  
and  
**ARTICLES**

should be directed to the:

**C.R.C. Editor**

1249 Solstice Lane  
Fort Collins, CO 80525-1239

**All Dues Payable  
on June 1<sup>st</sup>**

(Joining dues are prorated)

**\$12<sup>00</sup> Annually**

Larry Weide

5270 East Nassau Circle  
Englewood, Colorado 80110

Please do NOT make checks to CRC,  
rather to "Larry Weide, CRC Treasurer"

**DEADLINE NOTES**

It's the intention of this Editor to broadcast our journal bi-monthly just prior to the CRC meetings. Articles about and pictures of your treasures are welcomed as are *Want/Sale* ads and any letters or comments about our great hobby. All materials used are the copyrighted (©) property of the *Colorado Radio Collectors*. All pictures returned.

Your Editor will put together articles about your best finds, restoration and electrical repair techniques, or your recollections, and stories about radio. Just provide a handful of information in any form...and we'll put it together!!

Our club can only succeed when we share our experiences, talents, needs, and adventures; you're being asked to contribute in whatever way you can. **SHARE** with us today!! Thank you.

**Deadlines:** (In the hands of the Editor)

December 15 • February 15 • April 15

June 15 • August 15 • October 15

**MEETING LOCATION**

Unless otherwise noted in this Journal, beginning in January, meetings are held on the second Sunday of every other month (exception: third Sunday in May) at 1:00 PM at the *SouthWest Bank Building*, Community Room - 1380 South Federal, Denver. A swap meet follows the meeting in the bank parking area.

**C. R. C. OFFICERS**

(All area codes below are 303)

**President:**

Barney Wooters 770 • 5314 Denver

**Vice President:**

Jerry Tynan 642 • 0553 Golden

**Treasurer:**

Larry Weide 758 • 8382 Englewood

**Journal Editor / Secretary:**

Rick Ammon 224 • 5446 Ft. Collins

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# THE DENVER DRY GOODS Co.

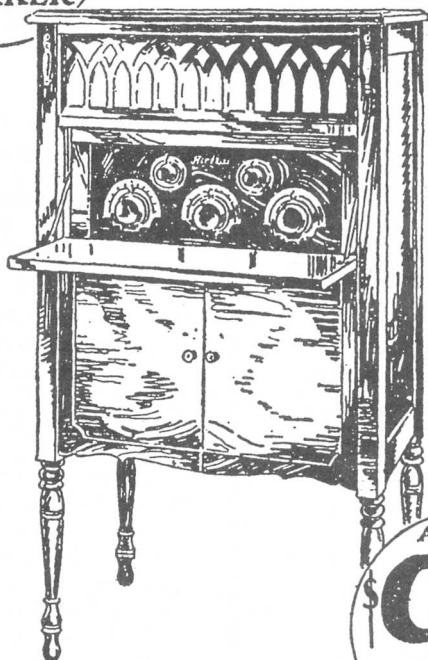
RADIO AND PHONOGRAPH DEPARTMENT, FOURTH FLOOR, 16TH ST.

## FREED-EISEMANN

Remarkable  
Offer!  
SET -  
CONSOLE -  
SPEAKER

Enjoy the Best Radio  
Programs—Here's Your  
Chance to Get a Wonder-  
fully Efficient Set for a  
Very Low Price

CONVENIENT TERMS



ALL FOR

\$**99**

Full size Console, 45 inches high, finished in grained walnut. Has sound chamber of special design, and equipped with Baldwin unit. Latest five-tube Freed-Eisemann — a remarkable buy!

Set, Console and Speaker for \$99—Complete with Batteries, Tubes and Charger for \$145.20

Price includes installation; no extra charge (within city limits) for connecting with your own aerial and ground.

Radio Department—Fourth Floor, 16th St.

# Radio Parts'n'Pieces

## ONE GOT AWAY

Former CRC President Bruce Young let another one get by and he probably didn't even know it! In the recent May '93 (Vol. 34 # 2) issue of the *AWA Old Timer's Bulletin*, a restoration article written by Bob Haworth gives an interesting tie to Denver. In the story, "A Classic Cathedral - The Clarion 85", Haworth notes a friend loaned the set to him for restoration after its trip from Colorado sometime during the past 50 years. The radio's early years were spent in a railroad repair shop as is traceable by the inscription heavily written on the rear of the chassis: "B. E. Young, 23rd & Page, c/o C. B. & Q. R. R. Co.\*, Denver, Colo.". The Chicago, Burlington, & Quincy Railroad Company is located in Denver. Bruce, your relatives let you down! - *Editor* -

## RADIO PIONEER DIES IN DENVER

E. Gordon Hubbel, a radio pioneer, developer, and teacher of the nation's first courses in radio broadcast, has died in Denver at age 84.

Born in New Jersey, Hubbel became an actor after graduating from Cornell University but turned to radio after writing a script on the Statue of Liberty that won a national prize. He went to work for WMAL in Washington, D.C. in 1936, where he wrote scripts, radio programs, and created a horror show with grisley effects.

In 1948 he developed and taught the first courses in broadcasting at American University and came up with what he called "News at Breakfast", which became the forerunner of morning news programs. - *AP* -



UX-171  
**POWER!**

When you want to get bigger volume, change the tube in the last audio stage to an RCA power Radiotron and you will get clear tone and big volume . . . both at the same time.

**RCA**  
**Radiotron**

## Crosley Filaments Glow Again!

Is it just me or has there been a lot of advertising lately for Crosley appliances? Is the renowned name making a comeback? On junk? Oh, forbid! - *Editor* -

# ON THE AIR

## Rick Ammon, C. R. C. Editor

This column is dedicated to the beginner collector. It may apply to only a few of you, but I felt compelled to give advice to the neophytes and CRC newcomers.

Getting started in this hobby can be easy if you make some simple decisions from the outset; those that can be altered at any time in the future. The first step is to survey your interests as to the era of radios you like best, their styling, and their esthetics. Oh, yea, this is a feeling hobby! Do you like the mechanical or electrical construction or both of a brand? You might decide on a certain direction for your collect only to move to another when you're introduced to something new. The important point...make initial decisions, write them down, and take the next step. Start looking for radios.

Probably the best piece of advice I can give is to find veteran collectors who don't mind showing you their "stuff" and absorb everything you can. ASK QUESTIONS! Don't be shy and learn, learn, learn...as quickly as you can. The first 10 years I collected everyone wanted to see everyone's collection. Nowadays, no one seems to want to show and no one ever asks! Radio collections have become guarded stashes!

More advise includes reading everything you can get your hands on. Best to borrow rather than buy, but there are a few you can't live without. (See the great prices on books available to members on page eight.) If you like the very early sets, get the Alan Douglas three-book series, "Radio manufacturers of the 1920's". The twenty's sets are harder to find but those from the 70's and 80's are not. See the Robert Breed book, "Collecting Transistor Novelty Radios" with many pictures from the collection of our club member, Lee Bruton. The Marty Bunis' "Collector's Guide...II" with its pricing guide is a must for anyone as are the "Evolution of the Radio" Volumes I and the new II. These cover many years and makes of radios. There are several for the collectors of classic plastics and catalins and a promised early transistor tomb due from Bunis this Fall.

There are several monthly and twice-monthly Want/For Sale ads publications available. None more respected than the "Antique Radio Classified". If you want to be a serious collector, you must order FIRST CLASS delivery. Scour every ad the minute it hits the mailbox and call at once if you want even a fair chance of buying from ad in these publications. But buyer beware! Make sure you can return items bought if you're not completely satisfied. Get clear pictures before (Continued on page eighteen)

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### Thanks, Contributors!

David Tripe • Wayne Gilbert  
 Fred Ringwald • Dan Busetti  
 Richard Knaack • Lee Bruton  
 Ray Kushnir • Erwin L. Dosch  
 Larry Weide • Barney Wooters

We sincerely thank member  
 Lonnie Smith and his  
 Denver company

### PRESSWORKS

for providing us with a super  
 nice looking issue of the  
 CRC newsletter.

# DUES RAISED AND YOURS ARE DUE!

By Larry Weide, Treasurer

According to the membership vote taken at the May '93 meeting, we need to raise the membership dues in order to allow for an upgrade in the quality of our semi-monthly publication, the *Flash*. Everyone at this meeting agreed that the May issue, an example of the improved quality, was worth the increase in dues cost.

1) Membership dues, regardless of the date you joined, are now **due on June 1st** each year. This will allow for far simpler accounting procedures and more predictability of Club funds.

2) Membership dues are now **twelve (12) dollars per year**, retroactive to January 1, 1993. This means all members, whose 1993 dues have been paid, owe the club an additional two (2) dollars.

After further discussion, Barney (Wooters, our new President - *Editor*) and I are in agreement as to also implementing the following:

3) **Joining dues will be prorated** into the year-half you're joining. This means you will pay twelve (12) or six (6) dollars for your first annual dues, depending upon which half of the year you're joining, before or after January 1st.

4) There should be **NO GRACE PERIOD**. This means May would be the **LAST *Flash*** delivered if dues are not paid by June 30th. At close to \$2.50 an issue we can no longer afford "freebies".

I'm getting new memberships in the mail from folks who don't know that the dues have gone up. These folks should have a short grace period to remit their extra two (2) dollars. We also need to point out to the folks who have already payed their '93 dues at ten dollars that they need to "cough up" two more dollars!

## Don't Blame Your RADIO

*Test Your Tubes*

*Free Test Service*

Burgess Batteries  
Last Longer

The Chas. E. Wells  
Music Co.

• 1626 California St.

Authorized R. C. A. Dealer

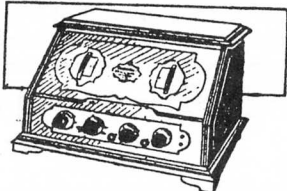
## RADIO



### Atwater Kent

Completely Equipped **116.60** Easy Terms

Model 20, compact, complete with best equipment—you do not have to buy any other part. Prices vary with type and completeness of equipment.



### Radiola No. 20

Completely Equipped **154.75** Easy Terms

A five-tube set, completely equipped. Provides ease of operation and long-distance and local reception.

## The Denver Music Co.

1536-40 Stout St.  
Established 43 Years

Coupon for Free Literature  
Send literature, list of equipment  
and terms on set checked below:

.....Atwater Kent. ....Radiola

Name .....

Address .....

# Ask for Eveready No 7111

You don't take  
any chances

NOT when you buy Eveready No. 7111 Dry Cell "A" Batteries. They are not ordinary batteries. They are scientifically designed especially for dry cell tubes. Test them for yourself.

PRICE 50c

*Manufactured and guaranteed by*  
NATIONAL CARBON CO., INC.

**EVEREADY**  
**Radio Batteries**  
*-they last longer*

# COLLECTOR BOOKS

Thanks to Past President Hagrman, our club has access to popular Radio and TV collector books, as well as other areas of collecting, at special club pricing. Your Editor has the list of hundreds of titles and you should see him at the meetings to order. CRC members get specially reduced prices, most up to 40% off the suggested retail, but the club must order six (6) titles or more at a time. Have your money or check ready at this meeting and get those books ordered! Descriptions and comments below are taken from the most recent June catalogue. The first price is the suggested retail and the second is what you as a club member pay:

**NOVELTY RADIOS, COLLECTING TRANSISTOR**, Robert Breed (with a lot of help and pictures from the collection of our own members Carolyn and Lee Bruton!), PB over 500 radios, 1990 values, full color, 217 pages.....\$ 24.95 \$ 14.97

**OLD RADIOS, POINTERS, PICTURES, AND PRICES**, Johnson, 1989 prices, PB with 225 pages.....\$ 16.96 \$ 10.17

**ANTIQUÉ RADIOS, COLLECTOR'S GUIDE**, Bunis, 2nd Edition, 1992 values, 1920-1960, color, PB with 215 pages.....\$ 17.95 \$ 10.77

**ANTIQUÉ RADIOS, RESTORATION AND PRICE GUIDE**, Johnson, 2nd Edition, PB with 144 pages, NP.....\$ 14.95 \$ 8.97

**RADIO, EVOLUTION OF THE**, 227 pages, 118 in color, more than 800 radios pictured and priced, **VERY GOOD BOOK FOR THE COLLECTOR**, 1992 values, PB.....\$ 22.95 \$ 13.77

**NEW ☺ RADIO, EVOLUTION OF VOLUME II WITH 93-94 VALUES** (94 ??? - Editor) ALL DIFFERENT THAN VOLUME I, PB-226 pages, color, radios of the 1920's - 1960's.....\$ 24.95 \$ 14.97

**RADIOS REDUX, LISTENING IN STYLE**, Collins, PB with 119 pages, color, companion to "Golden Ages", '30s-'50s, no price guide.....\$ 17.95 \$ 12.57

**CLASSIC TV'S, TELEVISIONS PRE-WAR THRU 1950'S**, 1992 values, 86 pages, color, PB.....\$ 16.95 \$ 10.17

**HAKE'S GUIDE TO TV COLLECTABLES** (from TV shows - ed.), 1991 values, PB with 185 pages, 8 color pages.....\$ 14.95 \$ 8.97

## NEW Federal BOOK

Larry Babcock wrote us about his sixty-four page booklet encompassing the Federal Telegraph and Telephone Company from their beginning in 1921 to their demise in 1929. Over 60 illustrations, including pictures and descriptions of early Federal radio-frequency and audio amplifiers as well as all early radios and many parts, are shown. The article and speech by Dick Schamberger, the Federal expert, are included. All Federal models are listed by the year and month introduced, cost new, and brief description. The Federal broadcast station, WGR, first in Buffalo, NY, is described. There are two pages of references for more Federal information. Larry says this book is of good quality print and "has more about Federal than exists in any other single spot!" Please send \$4.95 plus \$1.00 shipping and handling to Babcock, 8095 Centre Lane, East Amherst, N. Y. 14051. (He did not provide an example. Ed.)



# ANNUAL C.R.C. PICNIC

**WHAT:** Pot Luck Bar•B•Que and Swim  
"Open Class" DX contest  
Swap Meet  
Mystery Raffle!

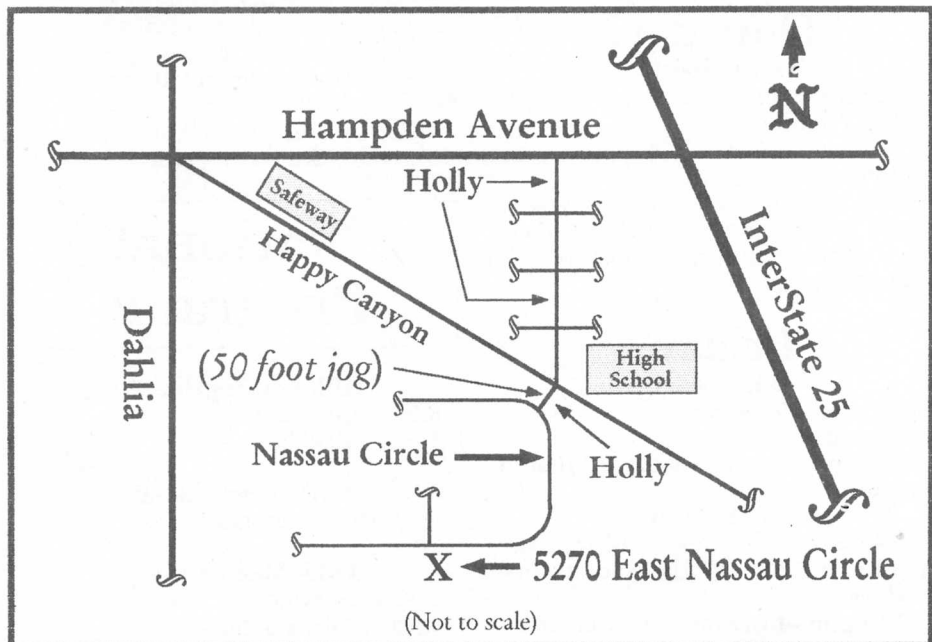
**WHEN:** Sunday, July 11<sup>th</sup> at 1 p.m.

**WHERE:** Larry Weide's Home  
5270 East Nassau Circle  
Englewood (SEE MAP BELOW)

**WHO:** All members, potential members, their families, and significant others

**R. S. V. P.** Call Larry 303♦758♦8382

Bring your own main dish. A side-dish will be determined when you R.S.V.P.. If you want something other than soda (Eastern slang *Editor*), Bring Your Own! Soda, paper goods, and pool provided.



# Radio Programs Heard In Denver

You've just returned from The Denver Music Company with your new Atwater Kent model 20 Compact. You had seen the same ad as on page six of this issue. It's November 1926 and you've just gotten your family an early Christmas present.

After several hours of stringing an antenna from the eave to that big cottonwood in the backyard and attaching the appropriate batteries to the proper connectors, it's time to turn on one of the most exciting and long-lasting attractions of mankind...the RADIO!

The "novelty" by this year has made itself a permanent appliance in nearly everyone's home. It's a serious mechanism with the ability to put into your parlour a speech from California, a concert from Chicago, or even vaudeville comics from Atlanta. Do you really mean we can hear radio programs beamed from all those directions right here in Denver? Yep! Sure can!

From the schedules on this and the opposite page, with interest, you might carefully look at all the areas of the country from where the Front Range easily gets radio signals. And, yes, it won't be but a matter of days from now that the new network called *NBC* will be easy to hear from the "repeater" KFKX, Hastings, in neighboring Nebraska. We have stations available from our own Columbine state at Greeley, Boulder, Gunnison, Colorado Springs, and a half dozen or so more places, not to include nearly a dozen stations of various magnitudes in Denver proper.

A most interesting fact is that one night you might receive several transmissions from different Cincinnati stations and the next night get none. No, it's not the sun, the weather, nor even your equipment. It's "Silent Night"! That's when stations sharing the same frequency, sign off to let others stations in other regions broadcast.

Oh, the fun of listening to this new wizard called RADIO in 1926! - *Editor* -

## Local Programs

### Thursday.

KLZ-384.4

8:00 p.m.-Music.

Silent Night.

KOA-322.4

3:15 p.m.-Talk.

3:30 p.m.-Matinee for housewives.

6:00 p.m.-Stocks, markets, live-stock, produce and news bulletins.

Silent Night.

### Friday.

KLZ-384.4

6:30 p.m.-Movie club.

7:00 p.m.-Orchestra.

8:00 p.m.-Sunshine Rescue Mission program.

KOA-322.4

11:45 a.m.-Weather, road reports, stocks, markets, livestock and produce.

12:15 p.m.-Instrumental concert by

Denver Union Pacific Shop Employee's band.

1:00 p.m.-Organ recital.

3:15 p.m.-Talk.

3:30 p.m.-Matinee for housewives.

6:00 p.m.-Stocks, markets, live-stock, produce and news bulletins.

6:27 p.m. -Sports review.

7:30 p.m.-Preview of International Sunday school lesson.

8:00 p.m.-Instrumental program.

8:15 p.m.-Studio program

## National Programs

KFI, Los Angeles-467

8:00-Varied features

11:00-Ballad hour

WHAS, Louisville-399.8

6:30-Musical program

WMS, Memphis-499.7

7:30-Orchestra

10:00-Miller's orchestra

# "L. X." Programs

(Compiled by United Press.)  
 (All stations alphabetically arranged by cities. All time schedules p. m. and mountain standard time.)

- 9:45—Peculiar entertainers.
- WSH, ATLANTA—428.3.
- WEEL, BOSTON—348.6.
- 4:45—Big Brother, music.
- 6:30—Novelty septet.
- 6:30—Programs from WEA.F.
- 8:00—Rines' orchestra.
- WNA.C, BOSTON—430.1.
- 4:00—Club; dinner music.
- 6:00—Organ; playlet.
- 8:05—Dance music.
- WGR, BUFFALO—319.
- 7:00—Program from WEA.F.
- WMA.K, BUFFALO—265.3.
- 5:30—Rochester program.
- 7:00—Musical program.
- 8:00—Musical program.
- 7:45—A.M. string quartet.
- CPAC, CALGARY—434.5.
- KYV, CHICAGO—635.4.
- 6:00—Stories; dinner music.
- 6:00—Family hour.
- 7:00—Concert.
- 8:30—Congress carnival.
- WMA.Q, CHICAGO—447.5.
- 6:00—Organ and stories.
- 6:00—Orchestra; lecture.
- 8:00—Violin-plate recital.
- WEH.H, CHICAGO—370.2.
- 6:00—Dance music.
- 8:00—Cello recital.
- 10:00—Dance selections.
- WLS, CHICAGO—344.6.
- 6:00—Supperbell program.
- 6:00—Mar-June duo.
- 7:00—U. of Chicago choir.
- 7:30—WLS trio; soloists.
- 8:00—Orchestra.
- 10:00—Popular features.
- WGN, CHICAGO—302.8.
- 5:15—Stories; dinner music.
- 7:30—Songs; Arabian Nights.
- 9:00—Popular entertainers.
- WLV, CINCINNATI—423.3.
- 5:00—"Visconti" orchestra.
- 6:00—"Pep" concert.
- 7:00—WLV trio.
- 8:15—"Pink of Programs."
- 9:00—Dance orchestra.
- WBAL, CINCINNATI—325.9.
- 6:00—Artist series; music.
- 8:00—Trade and Mark songs.
- 8:30—WBAL string quartet.
- WRC, CINCINNATI—325.9.
- 7:00—Hour of music.
- 10:00—Dance music.
- WBH, CLEARWATER—265.3.
- 6:30—"Open house" program."
- WTAM, CLEVELAND—489.4.
- 4:15—Lombardo's orchestra.
- 6:00—Auditorium program.
- 8:00—Horwitz Collegians.
- WHK, CLEVELAND—272.6.
- 5:30—Music and talks.
- 6:30—WHK quartet.
- 8:00—Popular programs.
- WEO, COLUMBUS—263.9.
- 6:15—Community chest program.
- 7:00—Hour of music.
- WOC, DAYTON—483.6.
- 4:45—Chimes; popular music.
- 8:00—Trade and Mark songs.
- 8:30—Erwin Swindell, organ.
- WHO, DES MOINES—526.
- 6:00—WHO Little symphony.
- 6:00—Stories; orchestra.
- 6:00—Four Hours; others.
- 8:30—Dance program.
- WWJ, DETROIT—352.7.
- 4:00—Dinner music.
- 6:00—Program from WEA.F.
- WGX-WJR, DETROIT—510.9.
- 4:00—Dinner programs.
- 6:00—Concert music.
- 8:00—Organ and soloists.
- 10:00—Merry, Old Chief.
- WHG, HARTFORD—475.9.
- 6:15—WTIC Symphonic ensemble.
- PWX, HAVANA—306.8.
- 6:00—Army band concert.
- 8:00—Cacard orchestra.
- KTHS, HOT SPRINGS—374.8.
- 8:00—Organ recital.
- 8:45—Frolke.
- WJAX, JACKSONVILLE—356.9.
- 5:30—24-hour studio program.
- WDS, JEFFERSON CITY—440.0.
- 6:00—Farm school; address.
- 6:00—Talks; orchestra.
- KFAB, JEFFERSON—340.7.
- 6:00—Lincoln orchestra.
- 8:00—Request Night program.
- KFI, LOS ANGELES—499.5.
- 9:00—Music (3 hours).
- WMAF, LOUISVILLE—307.8.
- 6:00—Concert.
- WMBF, MIAMI BEACH—384.4.
- 6:00—Concert.
- 8:00—Dance music.
- WHAD, MILWAUKEE—275.1.
- 6:00—Naxos; dinner music.
- 7:30—Classical program.



Gibbons' WOR, NEWARK—405.2.

- 4:15—Dinner music; news.
- 5:30—Dance orchestra.
- 6:00—Lecture; Gipsies.
- 7:00—Studio grand hour.
- 8:00—Euterpe trio.
- 9:00—Vanderbilt orchestra.
- WEAF, NEW YORK—401.5.
- 4:00—Waldorf orchestra.
- 5:00—Synagogue service.
- 5:30—U. S. Army band.
- 6:00—Salon concert.
- 6:30—Joerr saxophone octet.
- 7:00—Froudbadlers.
- 7:30—Moment musicale.
- 8:00—Trade and Mark, songs.
- 8:30—Opera, "La Mascoque."
- 9:30—Bernie's orchestra.
- WJZ, NEW YORK—454.8.
- 5:00—Commodore orchestra.
- 6:00—The Imps.
- 6:30—Entertainers.
- 7:00—Hour of music.
- 8:00—The Record boys.
- 9:30—Astor orchestra.
- WNKY, NEW YORK—526.
- 4:30—Spanish lessons.
- 5:30—Alarms; Kelly trio.
- 6:00—Chamber music course.
- 8:00—Songs, talk, alarms.
- WHN, NEW YORK—361.8.
- 5:00—Orchestra; organ.
- 7:00—Four-hour program.
- WMCA, NEW YORK—340.7.
- 4:30—Six hours on the air.
- WRNY, NEW YORK—361.2.
- 6:15—"The Vagabond King."
- KGO, OAKLAND—374.2.
- 7:00—Bern's orchestra.
- 9:00—Farm hour; music.
- WOO, PHILADELPHIA—508.2.
- 5:30—Sylvania orchestra.
- 6:15—Lecture; quartet.
- 7:00—Bicentennial.
- 8:00—Fox studio program.
- 8:30—Sam Brown's orchestra.
- WLIT, PHILADELPHIA—304.5.
- 5:30—Dream Daddy.
- 6:00—Arcadia orchestra.
- 6:30—Doer saxophone octet.
- 7:00—Stanley theater hour.
- 8:00—Dance orchestra.
- WEAE, PITTSBURGH—461.3.
- 4:00—William Penn orchestra.
- 6:00—Miss Sweeney's Players.
- 6:30—Program from WEA.F.
- 7:30—Cree's West Virginians.
- 8:00—Programs from WEA.F.
- 9:30—"Les Confrey's" orchestra.
- KDKA, PITTSBURGH—300.1.
- 4:15—Westinghouse band.
- 6:25—Reports; lecture.
- 6:00—Westinghouse band.
- KGW, PORTLAND, ORE.—401.6.
- 7:00—Dinner concert.
- 8:00—Seventh Infantry band.
- 10:00—Entertainment.
- WJAR, PROVIDENCE—485.
- 5:30—Program from WEA.F.
- WRVA, RICHMOND—256.3.
- 5:00—Boys Radio club.
- 6:00—Markie's Haywards.
- 6:45—Louisa Choral club.
- 8:00—Organ recital.
- WALH, RICHMOND HILL—315.6.
- 5:30—Studio features.
- 7:15—Male quartet; lecture.
- KFO, SAN FRANCISCO—428.3.
- 8:00—Musical program.
- WGY, SALT LAKE CITY—379.5.
- 4:45—Reports; stories.
- 4:45—Agricultural program.
- 5:30—Orchestra; program.
- 8:00—Program from Syracuse.
- WBZ, SPRINGFIELD—383.1.
- 4:10—News; dinner program.
- 5:15—Orchestra; Nature club.
- 6:00—Studio recitatives.
- 8:00—"The Baritone."
- 8:30—Musical features.
- CFCA, TORONTO—356.9.
- 5:00—Orchestra.
- 9:00—Cornfield's orchestra.
- WBC, WASHINGTON—468.5.
- 5:00—Lee House trio.
- 8:30—U. S. Army band.
- 6:30—Programs from WEA.F.
- 8:30—LaJaya orchestra.
- 9:00—C.N.W. WINNEPEG—384.4.
- 9:30—Armistice Day program.

Electrical speedometers, clocks and revolution counters were among the accessories attracting most attention at the French automobile show.

# Friday's Programs

(Compiled by United Press.)  
 (All stations alphabetically arranged by cities. All time schedules p. m. and mountain standard time.)

- 7:00—Musical program.
- 9:45—Concert.
- WFG, ATLANTIC CITY—200.8.
- 5:00—News; organ recital.
- 5:30—Dinner music.
- 6:30—Hotel concert.
- 7:00—Dance orchestra.
- WBAL, BALTIMORE—246.
- 4:00—Sandman; dinner music.
- 5:30—Mixed quartet; trio.
- 7:30—WBAL string quartet.
- 8:00—City colored band.
- 8:00—WBL dance orchestra.
- WEEL, BOSTON—348.6.
- 4:45—Big Brother club.
- 6:00—Musical program.
- 7:30—Programs from WEA.F.
- WNA.C, BOSTON—430.1.
- 4:00—Club; dinner music.
- 6:00—Musical programs.
- WGR, BUFFALO—319.
- 5:15—Santa Claus talk.
- 6:00—Artist.
- 7:30—Programs from WEA.F.
- 8:00—Staller orchestra.
- WMA.K, BUFFALO—319.
- 5:00—Lessons; reports.
- 5:35—Program from WGY.
- CPAC, CALGARY—434.5.
- 7:00—Ladies' concert trio.
- KYV, CHICAGO—335.4.
- 5:00—Stories; dinner music.
- 6:00—Family hour.
- 8:00—Classical concert.
- 9:30—Congress carnival.
- WMA.Q, CHICAGO—447.5.
- 5:00—Organ; Wideawakes.
- 7:00—Light opera "Pirates of Penzance."
- WEH.H, CHICAGO—370.2.
- 6:20—Orchestra program.
- 8:00—Dance selections.
- 10:00—Dance music.
- WLS, CHICAGO—344.6.
- 6:00—Supperbell program.
- 6:00—May-June; features.
- 7:00—U. of Chicago Opera companies.
- 9:00—Popular programs.
- WGN, CHICAGO—302.8.
- 5:15—Stories; dinner music.
- 4:15—Paul Ann show.
- 7:30—Program from WEA.F.
- 8:30—Popular entertainment.
- WMA, CLEARWATER—265.3.
- ALL SILENT FRIDAY STATIONS
- ALL SILENT FRIDAY STATIONS
- WHB, CLEARWATER—265.3.
- 6:30—Organ recital.
- WTAM, CLEVELAND—489.4.
- 4:30—Collegian Serenaders.
- 5:30—Talk; concert programs.
- 6:30—Program from WEA.F.
- 8:30—Studio program.
- 9:00—Gill's orchestra.
- WHK, CLEVELAND—272.6.
- 4:00—Staller orchestra.
- 5:30—Studio program.
- 6:00—Popular hour program.
- WFAA, DALLAS—475.9.
- 5:30—Honey Boys orchestra.
- 7:30—Elizabeth Gay Jones.
- WOC, DAYTON—483.6.
- 4:00—Sport news.
- 6:00—Twins and quartet.
- 6:00—Merry Old Chief.
- 7:30—Programs from WEA.F.
- 8:30—Address, B. J. Palmer.
- 9:00—Philbrick's orchestra.
- 8:00—Solo artists.
- 10:00—Dance program.
- WGHF, DETROIT—270.1.
- 4:00—Dinner concert.
- 6:00—WHGF entertainer.
- 8:00—Skivari; dance band.
- WWJ, DETROIT—352.7.
- 4:00—Dinner concert.
- 6:00—"The Baritone" talk.
- 7:30—Program from WEA.F.
- WGX-WJR, DETROIT—510.9.
- 4:00—Dinner concert.
- 6:00—Studio program.
- WBAF, FORT WORTH—475.9.
- 6:30—Concert.
- 8:30—Church services.
- 10:00—Musical program.
- WHG, HARTFORD—475.9.
- 4:00—Skinny; dinner music.
- 5:00—Farm course; recital.
- 6:00—Organ recital.
- 8:00—Music hours.
- 8:00—Heimburger's orchestra.
- KTHS, HOT SPRINGS—374.8.
- 6:00—Patriotic program.
- WOS, JEFFERSON CITY—440.0.
- 6:00—Concert.
- 7:30—Talks; Fiddler's chump.
- 8:00—Popular selections; talk.
- KFAB, JEFFERSON—340.7.
- 4:30—Dinner music.
- 7:30—Musical program.

# The Scrounge Box

A New Continuing Column

By Larry Weide, CRC Treasurer

Hi...all you CRCers! The subject for this month's Scrounge Box is the care and feeding of old tubes. I'd like to give a special thanks to Barney Wooters for a lot of help with the information I'm presenting. By-the-way, I had a chance to visit Barney and was privileged to be taken down to see, among other things, his absolutely magnificent early tube collection. Barney's collection goes all the way back to the grand-daddy of them all - the DeForest Audion!

Let's say you've managed to acquire a really great old radio or two, or perhaps you've picked up some old tubes at a swap-meet. In any case, it's a good bet some of these tubes are going to have problems (which may be the very reason the old radio was put off the shelf and forgotten - until you came along!!). However, it's also a good bet, with a little patience and work, some of these problems can be overcome.

## Filament Rejuvenation

Although many things can go wrong with an electron tube, the most typical failure is an open filament or the filament's electron emission has weakened beyond usefulness. In the early days the filament was used as the actual electron source, whereas most modern tubes use the cathode element for the electron source and the filament is used as a "heater" - a common filament synonym. Of course an open filament means you've just become the proud owner of new high-tech fishing float. However, with certain older tubes there is hope for a "weak" filament.

Fairly early in the tube design process it was discovered that the oxides of certain rare-earth elements were efficient producers of electrons when heated. Unfortunately these compounds are neither good conductors of electricity nor particularly strong physically. Consequently they were used as coatings on Tungsten filaments. This coating practice is also used on modern cathode equipped tubes. However, it turns out there were a few tube types that used filaments that had the electron producing material, Thorium, actually imbedded in the Tungsten as well as being used as a coating. Impregnated Tungsten was known as Thoriated Tungsten. It's this type of tube filament that has a chance to be rejuvenated by a technique known as flashing. Fortunately, this group of tubes include the ubiquitous '01A.

The flashing process consists of two steps. First is a relatively high "flash" voltage application to the filament, then a lower "aging" voltage - each for a specific voltage and time duration depending on the tube type. Fig. 1 (shown on page 15) is a chart showing the voltage and duration values for each tube capable of using this process. Be *VERY* careful to note the tube types that *CANNOT* use the flashing process and, in fact, may be damaged by it. You might be interested to know this technique was worked out many years ago in the labs of RCA.

Before you get "flash happy", you're going to want to make sure the tube you're about to flash really needs it. Flashing a good tube will materially reduce it's remaining useful life. So, run your suspect tube (Continued on page 14)



## MEMBERSHIP NOTICE



**\$12<sup>00</sup> DUES ARE PAYABLE AS OF JUNE 1<sup>ST</sup>**

# WELCOME NEW MEMBERS

*Dale Kronquist*  
Arvada

*Robin Koelmel*  
Littleton

*John Wolfe*  
Denver

*Dan Mason*  
Santa Fe, N. M.

*William Zaggle*  
Greeley

*Ed Sage*  
Albuquerque, N. M.

*Vic Smith*  
Loveland

*Henry Lamb*  
Golden

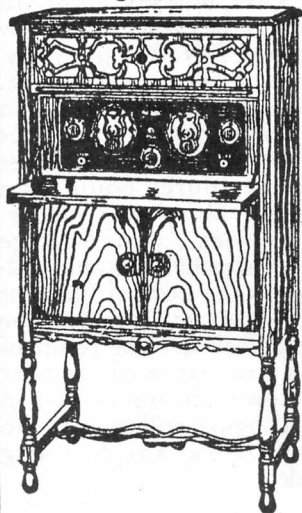
*Curtis Kimball*  
Sterling

*Bart Whitehouse*  
Littleton

*Robert Bauman*  
Lakewood

We have no info about collecting interests from any of these new members. (Please fill out the "interests" form available from your Editor. Thanks!)

NEVER A  
SATURATION POINT  
FOR SUCH RADIO  
MERCHANDISE  
AS THIS  
The A. C. Dayton XL-25  
Console.



A lovely masterpiece of small console design artistically finished in light walnut. With a loudspeaker of finest tone quality. All batteries and wires concealed. This console contains the famous Dayton XL-25 receiver, which, with the new principle of second stage tuning, is setting a standard of performance which radio engineers thought impossible.

Provision for power tube hookup batteries and loudspeaker concealed. Has appearance of fine writing desk. Unbelievable range and power. Gold plated micrometer 2-dial control. Extreme simplicity of operation.

A. C. Dayton standard of performance guaranteed.

**Gray Brothers Company**

Exclusive Distributors,  
1453-1455 Court Place,  
Denver, Colorado.

Authorized Radiotron  
Distributor

*The Equipment Service Co*

13th and Lincoln

**Radiotrons**  
**HENDRIE &**  
**BOLTHOFF**

**Scrounge Box** (from page 12) through it's paces on a tube tester first. In this case we're only interested in emission values. Figure 2 (on page 16) is emission test data to provide minimum guidelines for determining if a tube has impaired filament emissions (Note that Fig. 2 is unfortunately not as complete as Fig. 1). You could use this information in lieu of access to a tube tester. If you use the Fig. 2 data in a simple hook-up, remember to tie the grid to the plate first as if the tube were a diode.

O.K., now it's time to flash! It's unimportant if the flash voltage is AC or DC. Perhaps the easiest source of voltage would be the tube tester itself. Just make sure that you *DO NOT* press any test buttons, as flashing must be done without any plate current flowing.

Another voltage source might be a stepdown transformer driven by a Variac. Another voltage source could be a variable DC power supply. In any case, your voltage supply should be capable of 2-3 times the normal filament current draw for the tube being flashed. The result of this process will be that whatever Thorium is left in the Tungsten will be driven to the surface as a replenishing oxide.

### Loose Tube Wires

Another problem with many old tube types is a tube lead wire becoming disconnected from it's base pin. The most probable reason for this is poor or incomplete solder tinning of a lead wire and/or it's pin. After time, corrosion, arcing

or thermal stress will cause the lead wire to separate. Sometimes the relatively heavy current draw of the filament will fracture a poor solder connection, and, as it turns out, is the most common failure of this type.

A tube that tests as totally dead, or there's no control when the test grid bias is changed, is the clue for a loose wire. However, an open filament is really the most likely cause of a dead tube. You could start with a conservative approach by placing the tube in a clamp of some sort, with the pins pointed downward, and try to re-sweat (re-solder) the wires to the pins - starting with and testing the filament pins first. The problem here is that the wire or pin may be corroded, the wire is too short or the wire is actually broken. If you still suspect a loose wire you'll need to remove the bakelite base of the tube in order to inspect and repair.

First you will need to disconnect all the wires from the pins by heating each pin with your soldering iron and sucking or wicking out the solder with an appropriate tool. Next the tube base is removed by softening the base cement with iso-propyl alcohol. Brush the alcohol liberally around the base of the tube, held in an upright position, keeping the cement wet until gentle twisting and pulling will allow the base to pull away from the tube. You can use the old cement, while it's still soft and tacky, to re-attach the base after you've made the repair.

Now you can make a final check on the filament with (Continued on page 16)

## TUBE REACTIVATION CHART

Tube Type	Flashing Voltage (Volts)	Flashing Time (Seconds)	Aging Voltage (Volts)	Aging Time (Minutes)
'99	12	10	4	30
'20	12	10	4	30
'22	12	10	4	30
'01A	16	10	7	30
'00A	16	10	7	30
'40	16	10	7	30
'71	16	10	7	30
'10	16	10	9	30

### NOTE:

**TUBES THAT \*\*CANNOT\*\* BE FLASHED**

'11, '12, '00, '26, '27, '45, '50, '80, '81, '71A |

Fig. 1

# Radio.

A friend dropped in to fix my set;  
I couldn't get a call.  
He worked three hours, and now, alas,  
I can't tune in at all.

(A filler)  
*The Denver Post*  
November 11, 1926

## *Before Buying Radio*

SEE --- HEAR

# New Brunswick Radiola

Combined in one handsome cabinet with the Brunswick  
Panatrope.

## **PUBLIC DEMONSTRATION**

**Tomorrow Noon Between 12 and 1  
You Are Invited**

**The Chas. E. Wells Music Co.**  
1626 California St.

*Ask to Hear Record No. 754, "For My Sweetheart"*

**Scrounge Box** (from page 14) an ohmmeter. If you've found that problem was a loose wire then begin reassembly by making sure each wire is tinned and straight. If a wire is broken or too short then solder on an extension. Make the splice close to the tube to allow for as much distance as possible between the solder splice and the re-soldered wire/pin joint. Also, do your best to see that the inside tips of the pins are as clean and tinnable as possible.

After you've made sure that the old cement is very soft and in position to "squish" against the tube glass, slide the base back onto the wires and press the base back into place against the tube. Wait until the cement is dry before you begin to re-solder the wires.

When re-soldering the wires, try to get some of the solder to tin around the outside bottom of the pins - just enough to "catch" the pin were you know it's clean, but not so much that it would obstruct the pin from entering the tube socket.

Barney says that there was a tool available, at one time, that would neatly cut out a small section of the bottom of a pin so that you could more efficiently and quickly make a repair (he also says that he "might" have one of these gizmos laying around somewhere).

### Miscellaneous Problems

I've had some luck with tubes that have had the grid cap wire break off by "nipping" away a little of the glass around the stub of wire left at the top of the tube - just enough to solder on an extension wire, but not so much that the glass fractures. Make this

extension wire flexible, and have it long enough to already be soldered into the grid cap and still have room to work on the stub. After soldering you can use the old cap cement as above, or use a little epoxy to replace the cap.

An old timer, that Barney knew, use to re-align the element stacks that had gotten out of line inside some older tubes by carefully nesting the tube within the grasp of his hand and hitting the outside of his hand against his thigh.

You might remember the "infamous hum" in some 600 model tubes, of the 1930's, that Dan Buseti talked about in a previous Flash article. This may be caused by inter-element high resistance shorts. This type of short is usually at it's worst when the tube is cold, and can be measured with an ohmmeter. Using a tube base diagram, measure from the cathode to all the other elements. Typical shorts measure from around 500K to about 2M. If you find one don't throw it away just yet - sometimes the short gets "better" after the tube warms up, and/or it may work suitably in another radio.

Maybe this is old news, but a good way to identify a tube, whose number has faded away, is to fog it with your breath as you would your eye glasses in order to clean them. Then, hold the tube up to the light to catch the faint image in the moisture. Dick Hagrman says that putting the tube in the freezer works as method of providing the moisture. The glass needs to be as clean as possible for these techniques to work well, BUT you don't want to use anything but a very gentle DRY wiping to clean the surface. Once you've found the tube type, mark it on the base with a scribing tool.

I hope this information helps you to save some of those precious old tubes of yours. Of course, now that you're not so worried about your tubes anymore, you've got plenty of time to let me know what should be in future Scrounge Box articles!

### EMISSION TEST DATA

Tube Type	Filament Voltage (Volts)	Plate Voltage (Volts)	Minimum Current (mA)
'99	1.1	50	6
'20	3.3	50	15
'01A	5.0	50	20
'00A	5.0	50	14
'40	5.0	50	14
'10	6.0	100	85

FIG. 2



# May Meeting Minutes

**Treasurer's Report:** Finances are in "good shape" with \$622.00 as of May 16th. Cost of the show was \$454.00 for tables, ribbons, space, etc. Amount taken in from the show was \$329.00. We signed up 6 new members during the show.

**Show Comments:** Barney Wooters noted more items were needed for the show. Some of the categories were either left empty or had only one, maybe two entries (examples: plastic, battery sets). The club's turn-out of members, interaction with dealers, and the supper all made it one of the better club shows according to Lee Bruton. The question was raised as to whether people showing and selling radios should be a member of the club. Apparently, one current member was selling equipment owned by a former member. Ethics were questioned here. It was pointed out other non-members who used the show had paid for the space to the benefit of the club, the show, and themselves. The matter will be taken up before the next show.

**July Picnic/Swim:** The picnic will be held the 2nd Sunday in July (the 11th). Bring your families, significant others, people with an interest in the club! Larry Weide requested we give him a call to see what is needed for the pot luck so everyone can share a variety of delectable tidbits. Have fun, bring goodies, swap stuff. Larry also suggested we have a "mystery raffle" this year. Items should be pre-wrapped and sold in lots. So, lets have some fun with this one, guys! Lee Bruton suggested we have a sideshow...a "DX Contest" to see what radio will pick up the most distant signal. He suggested an open class and all bring a set!

**September Auction:** Last year's auction sold 140 lots which brought over \$3,000.00. There was a lot of outside participation and hope to continue to increase this. The buy-back policy will be in effect with a slight premium of 5% to 10% when used (details when we get closer to the auction.). So start finding things to auction. Dick Hagman says, "If you haven't used it in three years you probably never will...so you may as well get rid of it and this is a good way to do it!"

**Newsletter Update:** The club brochures for the show and the May issue were exceptionally costly. Although the best looking issue yet it cost about \$2.00 each. Editor Rick Ammon suggested with the cost of the newsletter perhaps a quarterly issue would be preferable to six times a year to keep costs about equal to last year. It was voted, however, that the newsletter continue as is, and club dues be raised to \$12.00 a year to support the publication. Barney Wooters' concern about mangled mail is one of the reasons for the cost increase of the newsletter. "We are trying to get good publications out with minimal damage."

**Election Information:** Barney Wooters was nominated as President and Jerry Tynan as Vice President (President-Elect). Dick Hagman declined renomination. Both Wooters and Tynan were voted into office. It was suggested the Vice President move into the Presidential post after a one or two year term as determined by the current president and that VP recruiting be a continual process.

**Show 'n' Tell:** Barney Wooters showed 'n' told about his advertisement ink blotters and Zenith advertising memorabilia, an instruction manual for Philco models 70, 72, etc, and a Cunningham/Riders book of schematics in the original box! Rick Ammon showed 'n' told about a 1970-circa Sony sign that uses fiber optics and colored film over a light for effect, an early transistor Arvin with a dial that flips so you can see it no matter how you carry it, and Crosley's only transistor radio. It's a hybrid with 3 tubes and 2 transistors in the shape of a small BOOK!

**ON THE AIR** (Continued from page five) you commit the farm for any radio from long distance. Best advice is to buy at a club swap meet, the annual auction, or annual show and sale until you get much more confident to "hear the flaws" a set might have just by listening to what a seller, a thousand miles away, isn't telling you.. Stay local and dicker a lot!

There are dozens of clubs with newsletters, but the most respected is the Antique Wireless Association formed forty-one years ago. With thousands of members, its quarterly newsletter, *The Old Timer's Bulletin*, is superior. The AWA publishes other valuable volumes on restoration techniques, radio histories, and very much more. The twelve dollars a year for the basic newsletter and membership is a steal!

Don't forget the video tape "Show 'N' Tell"s arriving on the scene. A bold, first-step was taken by Bill Burkett of Arizona showing many early transistors in detail. Get it!

So, now I feel a bit better knowing you beginners will enter into this fun hobby so well prepared, confident enough to challenge any auctioneer for the buy of a lifetime!

# WHY THEY OVERSOLD!

## *Why We Rushed a Re-Order!*

The name of Freshman is already so famous with the people who demand perfection in radio reception that when we offered this Freshman Masterpiece in this magnificent Highboy model, our patrons realized it was

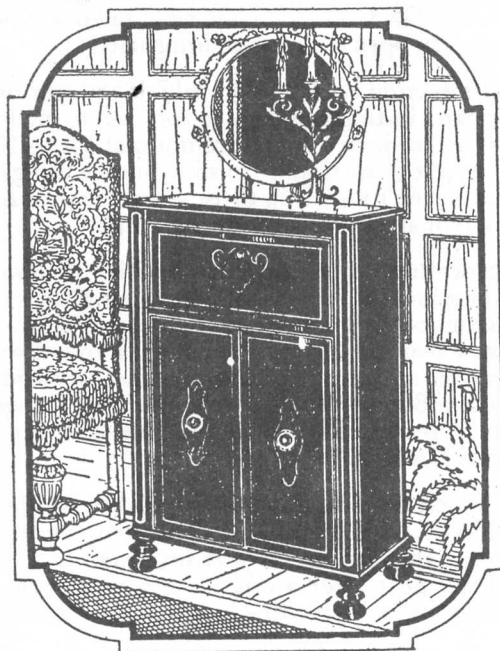
### THE GREATEST RADIO VALUE TODAY

*Our Shipment Is Here—But Will Not Last Long*

New and Improved  
**FRESHMAN  
MASTERPIECE**  
5-TUBE HIGHBOY SET

**\$129.50** Terms as  
Low as  
\$4 Weekly  
May Be Arranged

Perfect reception, distance, selectivity and simplicity of operation make this the ideal home radio. The tone quality is unsurpassed. The fine cone built-in speaker assures mellow reproduction of the voice and concert programs, as well as brilliant loud tone for dancing. The genuine mahogany cabinet of beautiful design makes this radio appropriate for the most luxurious music room.



Radio Dept.  
First Floor Balcony  
Store Hours:  
9 A. M. to 5:30 P. M.

*The May Co*

Showing the  
Magnificent Built-in  
Cone Speaker

# The Open Trunk

## Wanted:

- Philco Predicta TVs.  
**Richard Knaack**  
10654 West Ontario Place  
Littleton, CO 80127  
(303) 972 • 8809

## Wanted:

- Transistor radios, novelty and standard (1954 → 1964).
- Still looking for TSMs.

**Lee Bruton**  
176 Sagebrush  
Golden, CO 80401  
(303) 279 • 1299

## 4 Sale:

- Belmont 6D111, new paint \$135
- All American Mohawk in Pooley mahogany HiBoy \$200
- Hickock Cardomatic tube tester \$40

**Dan Busetti**  
P.O. Box 706  
Bennett, CO 80102  
(303) 664 • 4202 / (303) 398 • 8251

## Service:

- Transistor & tube radio repair. Will trade for sets.

**Ray Kushnir**  
2213 Alpine Drive  
Colorado Springs, CO 80909

## 4 Sale / Trade:

- **Zenith** model 5B07 AC or battery portable XLNT cloth/wood case c. 1946?
- **Philco** 48-2500 Projection TV, operational. 1948 model with SAMS Photofact.
- **LM** frequency meter (BC-221) mfd 1935 by Radio Research.

**Erwin L. Dosch**  
70 South Chase Drive  
Denver, CO 80226-2315  
(303) 237 • 4705

## Wanted:

- Televisions, televisions, televisions!  
Mostly pre-1950's.
- **SAMS** Photofacts from 50 - 120... especially needed # 108 & #160.

## 4 Sale:

- WWII military radio equipment:  
FT-244-A Field TX  
RAL-7 receiver  
BC-778-D "Gibson Girl"
- **Riders** television manuals 1, 2, & 3 at \$10 each or 3/\$25.

**Fred Ringwald**  
3803 Half Turn Road #126  
Colorado Springs, CO 80917  
(719) 550 • 9419

## Wanted:

- Dial glass for RCA 911K console

## 4 Sale / Trade:

- Sparton 7-36
- Arvin 444
- Knight Span Master

**Wayne Gilbert**  
(303) 321 • 6705

## Wanted:

- Any literature, manuals, brochures, on RCA model 9-40 Orthophonic Electrola Radiola Borgia II

**Barney Wooters**  
8303 East Mansfield Avenue  
Denver, CO 80237  
(303) 770 • 5314

## Wanted:

- AC adapter for Zenith Trans-Oceanic 3000-1.

**David Tripe**  
1673 Macon Street  
Aurora, CO 80010  
(303) 364 • 2812

# Colorado Radio Collectors

1249 Solstice Lane  
Fort Collins, CO 80525-1239



**POSTMASTER: FIRST CLASS MAIL RUSH!!**

**If undeliverable, please return to sender. Thanks!**

90266-5841 20

