

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

MARCH - APRIL 1993

Issue 2

HAVIN' FUN WITH NICE OLD RADIOS

By The Old Geezer (OG)

His messin' around with old radios is all sorts of fun. Ever since joining the local club I've run into lots of neat guys who share my interests. So I thought I would just write about some of the fun we have.

Bein' the oldest guy in our little bunch kinda gives me a chance to help out the young squirts. Why, just the other day me and Frank and John and Sheldon went to a flea market lookin' for some old radios to have fun with.

Well, there was this guy unloadin' his truck and what do we see but one of those old Atwater Kent breadboards. This one musta been stored somewhere dry cause it still had a little paper sticker on the bottom and five of the

purtiest tubes with the little tips and brass bottoms you ever did see.

Sheldon goes over and asks the guy what it was. Then Frank pipes up with, "That's an old radio and someone done threw the cabinet away." Then John, he collects tubes, whispers to me he would love to have them bottles. Shucks, I been using those old jugs for target practice whenever I find them.

You know we are all pretty fergal with our money. The younger fellers all got families or new little kids and me facing retirement. So John and me circles the truck real quick while the other two is talkin'. We get back in the nick of time cause one of them high rollin' radio collectors is about fifty feet away tryin' to deal on a weird plastic set where they didn't mix the color right and it's all swirly.

John sez to the guy, "I'd sure be interested in that old radio if you hadn't throwed the cabinet way." By now the guy is lookin' kinda sad. Then I puts in my two cents and calls his attention to the fact that the speaker ain't nowhere around.

The guy sez to John, "Think I could get thirty for it?" Then John sez, "Sheeit, I might give ten."

(Continued on page seven)

**5th ANNUAL
C.R.C. RADIO
SHOW AND
SWAP MEET**

**Contest Categories And
Info On Pages 4, 5, & 11**

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:

C. R. C. Editor

1249 Solstice Lane
Fort Collins, CO 80525

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: (Editor to receive)

December 15 • February 15 • April 15
June 15 • August 15 • October 15

**Dues Presentable
Upon Membership
Anniversary**

\$10⁰⁰ Annually

Larry Weide

5270 East Nassau Circle
Englewood, Colorado 80110

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

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)

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Vice President:

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DR. WM. D. REYNOLDS
President

— KLZ —

The Reynolds Radio Co., Inc.

ESTABLISHED 1914

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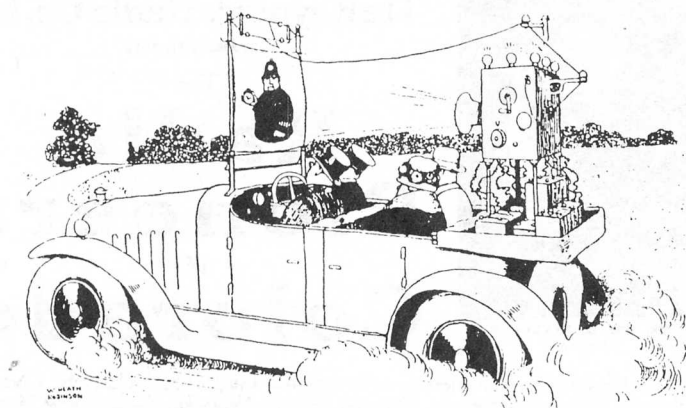
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DENVER —KLZ— COLORADO

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"When You Think Radio—Think Reynolds Radio"

Tell 'Em You Saw It in the Citizens Radio Call Book

"Go To The Radio Show"



A Proposed Television Set "The Motorist's Friend" (Circa 1924)

BEST OF SHOW
BEST RESTORATION
PEOPLE'S CHOICE

AC
(Wooden Table)

ACCESSORIES

ART DECO

BAKELITE

BATTERY SETS
(Prior To 1928)

BREADBOARD

BREADBOX/TREASURECHEST

CATALIN

CATHEDRAL

CHAIRSIDE

CONSOLES
(Full Length)

CONSOLES
(Zenith Back Dial, Scotts, Kennedy)

CONSOLES
(Hi/Lo Boys)

CRYSTAL SETS

METAL CASE

METAL BOX
(1920s)

NOVELTY
(Transistor)

NOVELTY
(Tube)

PLASTIC
(Tube)

PORTABLES
(Pre-1926)

PORTABLES
(Post-1925)

"R. C. A."
(Specialty Brand - This Year's Theme)

SPEAKERS

TELEVISION

TOMBSTONE

TRANSISTOR

TUBE DISPLAY

Each of this year's categories will sport a first, second, and third place winning ribbon, except the "Best" and the "People's Choice" awards. So, ready your equipment, pretty 'em up for the competition, but, more importantly, let's show the world the history that's been saved and documented!

ON THE AIR

Dick Hagrman, C. R. C. President

This March 14th meeting is important because we will be finalizing plans for our Fifth Annual Radio Show and Swap Meet.

As in previous years, it will be held in conjunction with the *Denver Collectors Fair* at the **National Western Complex** (I-70 and Brighton Blvd.). Show dates this year are April 24th and 25th with setup and registration Friday, the 23rd, between the hours of 2 and 8 pm. You will be allowed to drive into the west entrance of the building on Friday to unload. You may also register on Saturday morning between 8 and 9 am, but you can NOT DRIVE into the complex Saturday; registration that day should be limited to those items that can be carried in by hand. Show hours are Saturday 9 to 5 and Sunday 10 to 4.

Wear your name tag and tell the admission person at the front door you're with the Radio Show and you won't have to pay the admission fee either Saturday or Sunday.

We will have a dinner Saturday

evening after the show. The location will be announced well in advance of dinner time.

Spaces are available for sellers for thirty-five dollars per space, tables are six dollars, and chairs are one dollar. All prices are for the two day period. Electricity is available, but you will need an extension cord.

The agenda for the next meeting is:

- * Q and A period on April show
- * Report from officer nominating committee (Election in May)
- * A raffle (Donations are needed)
- * Progress report on the Spartan Blue Mirror renovation.
- * A swap meet after the meeting.

See you Sunday, March 14th! Dick

Once again we commend member Lonnie Smith and his company
PRESSWORKS
for providing us with a super nice looking issue of the newsletter.

WELCOME NEW MEMBERS

Joe D. Allen
Arvada

Cathedrals, Tombstones, Consoles,
Standard Transistors, Literature

Otis Chartier
Parker

Transistors, Novelty Transistors, more

Clayton Vedder
Durango

Virtually all areas...Wireless, Crystal Sets,
Cathedrals, Tombstones, Consoles, Novelty
Transistors, Headphones, Components,
Cylinder Phonographs, Literature, Books,
Test Equipment, Jukeboxes

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A Date With Radio

From the files of Rick Ammon

MARCH

APRIL

<1> On this day in 1920, commercial transatlantic radio circuits were opened and first messages were sent between New York and London.

<3> A gigantic radio transmitting tube, with a rated continuous output power of 500,000 watts, was revealed by R.C.A. on this date in 1950.

<5> The first sea-going radio broadcasting station was operating on this day in 1952. The Coast Guard cutter "Courier" beamed "Voice of America" programs to Eurasian areas. (*British "pirate" rock'n'roll stations used this technique in the 1960s. Ed.*)

<6> In 1939, the rhumbatron tube which projects a radio beam "as straight as a sunbeam" was invented. The beam is used today as a means for aircraft to make blind instrument landings.

<8> The first two-way radio was installed in a car in 1910.

<12> On this day in 1933, President Franklin Roosevelt delivered his first "fireside chat" and because of his frequent usage, became known as the "radio President"

<16> Two radio stations in New York City, one in Baltimore, and another in Hartford, Connecticut, began broadcasting on the same frequency at different powers to overcome the shortage of channels...new to radio this date in 1931.

<17> In 1827, Sir Charles Wheatstone
(Continued on page fifteen)

<1> On this date in 1929, it was discovered that if it hadn't been for Thomas Edison, we'd all be watching television by candlelight!

<3> In 1939, a radio station in Uniontown, Pennsylvania, set up a clinic to help analyze and solve some of the problems of juvenile delinquency. (*Some blame radio today for the problems of gang activity. Ed.*)

<4> David Sarnoff, Chairman of RCA, proposed on this day in 1946 that the principle of "Freedom to Listen" be established worldwide and that the United Nations conduct a system of international broadcasting, free from censorship.

<6> Easter services were broadcast over NBC on this date in 1938 from the "Garden of the Gods, the natural amphitheater near Colorado Springs, Colorado

<8> In 1929, a radio station in Montana started a "Lost and Found" program. During that year, an estimated \$27,000 in merchandise was returned to owners at a cost to them of \$345 in rewards.

<11> One of the first boxing matches to be broadcast was heard on this date in 1921 over KDKA, Pittsburgh. The bout featured Johnny Ray versus Johnny Dundee. (*We know Johnny won! Ed.*)

<12> Today in 1945, news of President Roosevelt's death at his home in Warm Springs, Georgia, was **FLASHED**
(Continued on page sixteen)

Next Issue's Features
More Midget **Radios**
YOUR ARTICLE !!
Early Transistor Radios

Thanks, Contributors!
Dan Busetti Lee Bruton
Dick Hagrman Larry Weide
Leamon Brooks

Havin' Fun... (Continued from cover)

The guy is lookin' kinda forlornly at the AK and I sees High Roller comin' our way. I quick whips out a fiver and fifteen ones all rolled up and scraggly from my "old money" pocket, and I sez, "Aw, come on, it's worth at least twenty."

John throws up his hands and walks away mutterin' somethin' about crazy Old Geezer's gonna catch it when he gets home. The guy hesitates a few seconds as I push the bills toward him and then he takes 'em. I picks up the AK and starts walkin'.

The funniest thing happens then. Old High Roller sees the AK and starts running toward me but he is so excited he doesn't see this big crack in the parkin' lot. He trips and falls face first in this mud hole and the wet mud come flyin' outta that hole like a geyser. Dang near got some on my new lace-up hight-tops.

All four of us reconvene at Frank's truck and start to examine the AK. John of course wants the tubes so I get ten back right away. Sheldon, he is after the three little coils for an

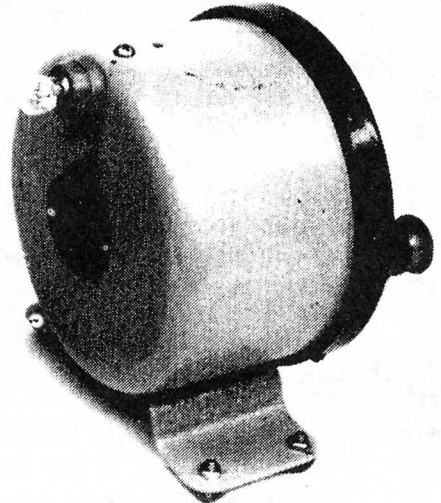
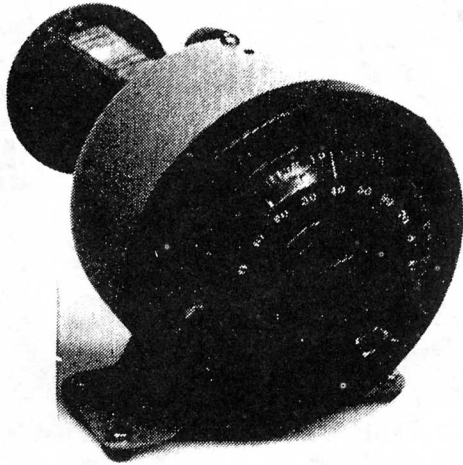
antenna tuner he is buildin'. My screw driver blade wouldn't fit the slots in them little wood screws, so I just pried 'em off the board and only chipped one real bad.

Frank is a little disappointed but says he can use them little brass binding posts and the two tube sockets, and maybe can tear apart the other thing with the three tube sockets on it.

By this time we pretty well got the old klunker parted out except for the board and the tuner condensers in the cans. Frank already told me to get the board off the wet grass or it would warp. Shucks, the grass didn't hurt a thing and even got that little paper off the bottom.

Bein' kinda creative, I suggest we see what we can make out of what's left. All of us bein' hams, there must be somethin' we can do with the remains. Sheldon says the board is so pretty he could use it for a plaque to paste family pitchers on. That leaves me and Frank with the condensers.

About this time Old High Roller comes runnin' up with the mud still
(Continued on the next page...)



MEMBERSHIP NOTICE



The month/year next to your address on the back cover is your membership expiration date. Where appropriate, please renew at this meeting or see the inside front cover of this journal.

Havin' Fun... (Continued from page 7)
 drippin' from his jowls and holes tore in the knees of his pants. He takes one look at what's left of the AK and sets down and starts blubberin' like a three year old. We just stand there shakin' our heads cause we know he gets a little daffy about old sets.

Frank and me give a lot of thought about what to do with the condensers and come up with some ideas. Here is a resonance indicator we made from our rigs. Just add a coil socket, a pilot light, and gray paint, and she works like a charm. (Picture on previous page - Ed.)

Next we'll discuss crystal sets made from nice old radios.

(Footnote by Larry Rosin, W00G. Honest, we didn't do that to the AK. But someone did. Frank bought the "slightly" modified AK unit at guess what - - a hamfest. Frank White KBØTG, Sheldon Wheaton - KCØCW and John Walker - The Tube Collector, all love their nice old radios and tubes and wouldn't commit such an act. However, we all believe a little tongue in cheek joking about the hobby is a relief from some of the more serious discussions we hear.)

[From the April 1992 Mid-America Antique Radio Club newsletter, "Broadcaster", with permission. Editor]

EXPERT SERVICE

SILVER'S

and

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EST. 1919

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 Free Drive-In Shopping Station .. Open Evenings and Sundays



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R. C. A.
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RADIOS



MOTOROLA
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CAR RADIOS
PHILCO
REFRIGERATORS




WASHING MACHINE SERVICE

REFRIGERATOR SERVICE

AUTOMOBILE SERVICE

Tunes All The Stations Separately

SEPARATES THE STATIONS

NEUTROWOUND'S straight-line-frequency condensers separate the short waves as well as the high ones. All the stations in the wave-band are an equal distance apart on the NEUTROWOUND dials. Other radios jumble the short wave stations together on the lower part of the dial, because their condensers are not the straight line-frequency type, and because they are cheaper to build. For efficient tuning of all stations, straight-line-frequency condensers as used in NEUTROWOUND are absolutely essential.

Batteries Last Longer With Neutrowound

"B" Batteries last three to five times longer with NEUTROWOUND sets. Many users have had their NEUTROWOUND operating on the same set of batteries for a year or more. This is a big item—it's the same thing as gas mileage in a car. You can't afford to own a radio that is a "battery hog." Investigate this point before you buy a radio.

Entirely Different

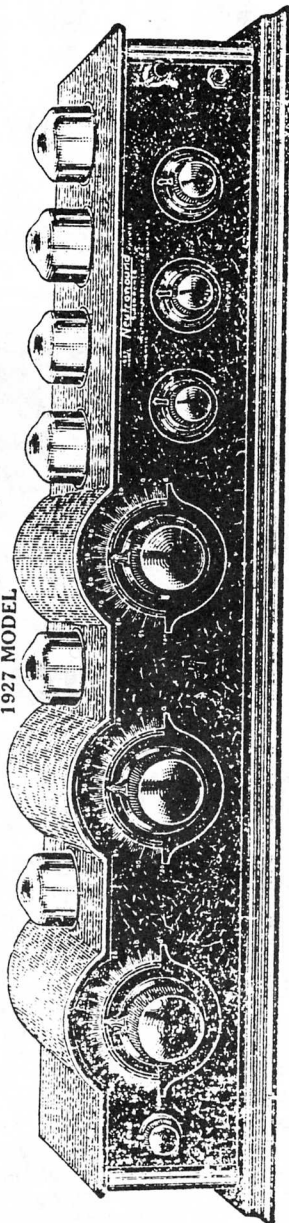
With the average over-simplified radio you are comparatively helpless. You twist the dial, and if the station doesn't come, you're through.

It's different with NEUTROWOUND. Here is a set you can make do everything that it is possible for a radio to do. You can tune it at the highest point of efficiency for every station. If a station can be tuned at all, NEUTROWOUND will do it. NEUTROWOUND can be adjusted to suit the exact wave-length of the station you want to tune. A low plate voltage for low waves; a higher voltage for the high waves. That's what does the trick — and NEUTROWOUND gives it to you. This adjustment control is the Neutrostadt, an exclusive NEUTROWOUND feature. With it you can vary your volume from a whisper to a roar, with remarkable clarity and purity of tone.

\$95 Neutrowound

REG. U.S. PAT. OFF.
1927 MODEL

All The Radio
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At Any Price



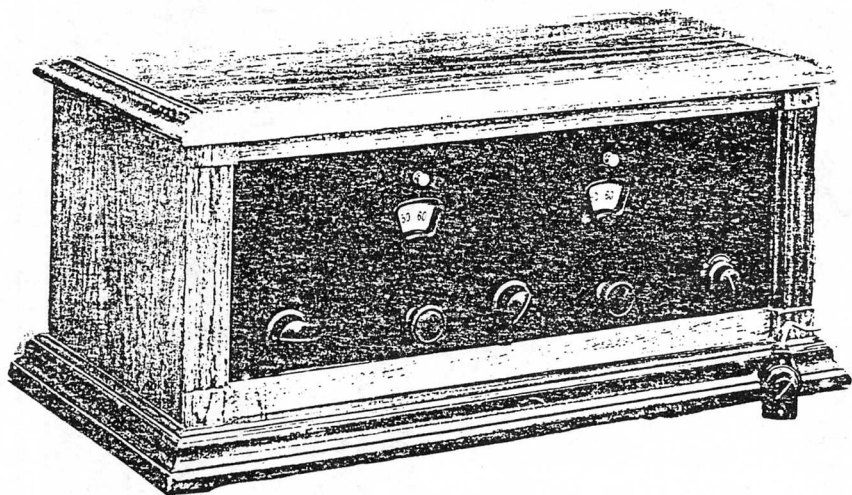
Neutrowound Radio Receiving Sets are manufactured under our own patents and under a reciprocal license from the navy department of the United States Government.
Exclusive Michigan Distributors

GENERAL SALES CO.

128 Woodward Ave., Detroit, Mich.

BOULDER RADIO REVISITED

By Rick Ammon



The "Eight-In-Line" receiver made in 1927 in the Electrical Engineering Department at the University of Colorado

This look at Boulder's profitable radio company begins with an article from the Boulder *Daily Camera* dated September 21, 1927:

"BOULDER MADE RADIO WILL BE SOLD TO A NATIONAL SALES ORGANIZATION UNDER BIG CONTRACT

"The entire output of the Eight-in-line unit radio of the Boulderadio Manufacturing company has been contracted for by the Gradergood Company, a national sales organization, it was announced this week by Hurlbert Anderson. The factory which is located at 1949 Pearl, has built up a fine reputation and has developed a radio that is one of the best of the market. The radio is highly praised by citizens of Boulder and others, who have acquired sets.

"A six-page pamphlet describing the

Boulder-made radio has been issued by the sales organization. It is illustrated with cuts of cabinets, of the receiver connections to the panel, loop and loud speaker, and with diagrams of the layouts.

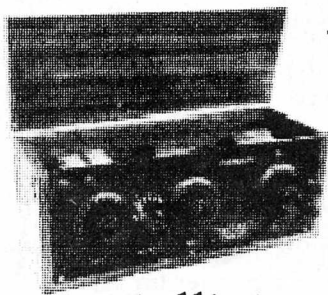
"An entirely new conception of a super-heterodyne is highlighted within the text of an article appearing in the pamphlet. The article says in part...

"A sympathetic engineer in Colorado grew tired of seeing his friends tearing their hair because their home-made supers would not work properly, or still worse, refusing to even start building them because the mountain looked too steep to climb. Funny, isn't it, how steep a hill always looks until we start going up it.

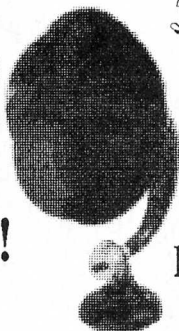
"Anyway, this engineer, being a friend of humanity, sought to help his suffering fellow men by providing all the workings of a Super Heterodyne in

(Continued on page 13)

ANTIQUQUE RADIO SHOW and SWAP MEET

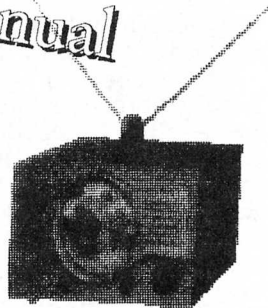


Sell! Buy!
Trade!!

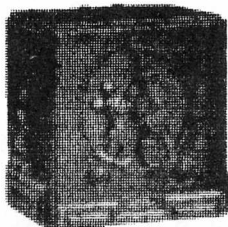


5th Annual

Vendors!
Displays!
Discussions!



Radio, Television, and Equipment Contests



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April 24 & 25, 1993

Saturday 9am to 6pm ☺ Sunday 10am to 3pm

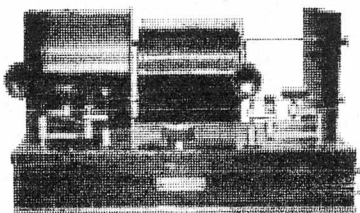
National Western Complex - Denver

(One mile East of Interstate 25 on Interstate 70)

Dick Hagrman

C.R.C. President
Littleton, Colorado

303 • 794 • 6674



A.C. RADIO REPAIR SHORTCUTS

By Dan Busetti

Now that the snow is flying, its a good time to fix all those radios we bought last summer. If you're like me, there are a few lingering puzzlers that seem to defy repair. I've been trying to get the most done in the least amount of time, so I've tried to systematize the process.

A few books can really help. I use (amongst others) Radio and Television Receiver Troubleshooting and Repair by Alfred Ghirardi and J. Richard Johnson, the 3rd edition from 1943, and Mallory's Radio Service Encyclopedia, 4th edition, from 1941. These can give me a large amount of critical information that will save time. Mallory's has a complete Rider's index as well as info about control circuits. Ghirardi's 3rd case histories of almost 5000 models of radios and shows how to fix the problem. The other Ghirardi book has a systematic approach to repairs and shows how different kinds of circuits work.

Expanding on Ghirardi's thoughts, radio troubles can be classified into five major area, with the greatest area listed first:

1. Tubes
2. Capacitors
3. Transformers and Inductors
4. A.C. Line Cords
5. Resistors

Tubes can be really troublesome because not all tube testers test alike or accurately. Many times hums, squeals, and static can be cleared by changing the right tube or substituting types. Substitute tube types with caution! Missing or improperly placed tube covers can cause hums and squeals. Some tube problems are not revealed by tube testers. The infamous 6C5 hum is discovered by changing it, but rarely by testing on a tester.

Almost everyone who fixes radios knows about the problems with capacitors. Electrolytics dry out. Wax-

molded ones melt and rot. The only reasonable route is to replace all of them with newer ones. Be sure to use solderwick to remove excess solder and also free up the leads. Many old radios have solder splash, cold solder joints, and excess solder. Some capacitors are buried under layers of wiring and other parts. IF they are NOT electrolytic or wax-molded, they can be tested by unsoldering one lead and then check them on your cap tester for value and leakage. If they pass, leave them in; if not, start unlayering and change them.

Transformers can get really ugly when they go. Often the cause is a shorted filter cap. Many times the rectifier tube will experience meltdown creating multiple problems. The speaker field coil can also short out or go open. A chain reaction can sometimes be discovered which necessitates repairing and/or replacing all the related components.

A.C. line cords are easy enough, but sometimes it's hard to tell what the original was (rubber, cloth, etc.). Use solderwick to remove all the solder from the lugs and attaching the new one will be easy. How many sloppy tape-jobs do we see? No solder, just tape?

Resistors that aren't obviously burned can be checked for value. A burned resistor often is caused by something else drawing too much current and/or voltage through it. Check the related circuits for a shorted capacitor or tube. Sometimes resistors go open or just short out. Resistors are cheap, so replace them freely.

I haven't covered everything that could go wrong on an A.C. radio. but my experience shows that most radios can be fixed by checking these five things. Even some of the most puzzling problems can be cleared by paying attention to the basics.

Boulderadio (Continued for page 10)

a single, foolproof, dustproof, convenient unit.

'This he did, and now the fellow who built his boat but bought the engine may get out the old saw and screwdriver and make himself a panel and cabinet, confident that he can buy the "engine" in one piece, at one place, and rest assured it will work and do what he wants. The particular advantage of this plan is that it allows an individual a chance to express his individuality, both as to appearance of the set and selection of the instruments to be mounted on the panel.

'The "workings" consist of a plywood box shaped much like the toy piano usually purchased for little daughter at Christmas time. Instead of keys, it has a

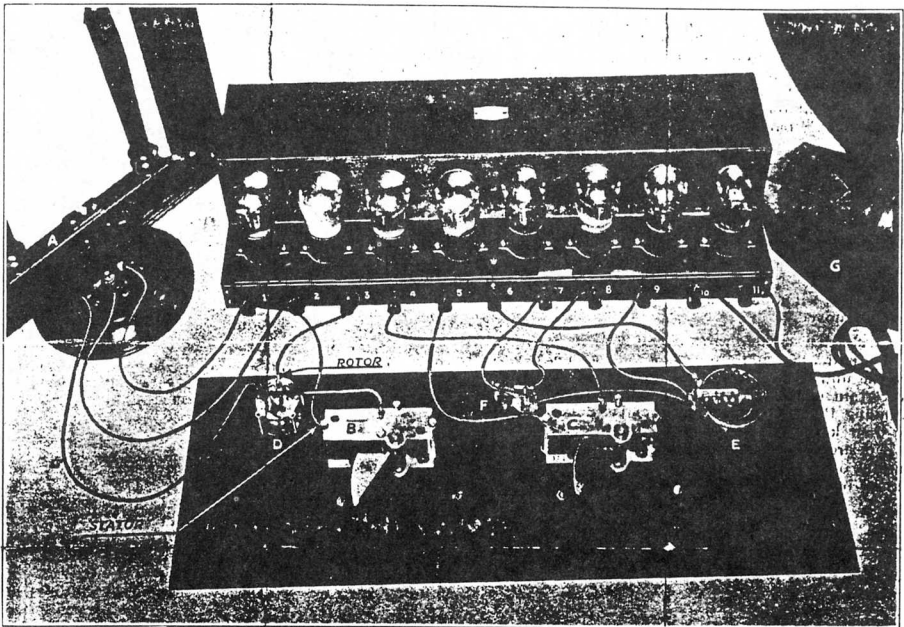
shelf on which are flush-mounted the eight sockets to accommodate the tubes.

'On the vertical panel under this shelf are a row of binding posts. These connect to the loop, batteries, instruments on the panel and loud speaker. And that is all that is visible on the outside.

'Inside it is a different story, but you may rest assured that the instrument you will purchase will be sealed, with the guarantee broken the same time the seal is. The normal individual is not likely to dissect his Waterbury to find out what makes it go, and there is no more reason why he should open the box.'

The others associated with Hurlburt Anderson in the Boulderadio Manufacturing

(Continued on page 17)



Simplicity of wiring the front panel, antenna, and speaker to the Eight-In-Line Unit

The Scrounge Box

A New Continuing Column

By Larry Weide

Hi...all you CRCers! Welcome to the first installment of the Scrounge Box. "What's a Scrounge Box?" you ask. Well, back when I was a kid, this is were you'd put all those little parts and what-nots you didn't know exactly what to do with, but didn't have the heart to throw out. Sure enough, just when you needed a certain gizmo, there it was - in your "Scrounge Box".

This is what I'd like to accomplish with this column. That is, a fund of mostly technical information, in no particular order, to be shared by all of us. The purpose would be to increase our knowledge of restoration and repair techniques, where and how to find "stuff", to share various hints and tips, and so-on. In addition, by putting this information into print, you will always have a source for future reference.

Ah, but there's a catch! I like to think I have a reasonable grasp of the subject, but that doesn't come close to the level of the collective knowledge of our membership. Consequently, I'll be asking **you** to help me with gathering information for subsequent articles. Of cours, full credit would be given to whoever submitted the information to me. Here's a sample of the kind of subject material I think we could use:

- * Hints and tips to help find what otherwise could be allusive problems.
- * Techniques to restore, rebuild, or refinish.
- * Techniques for substituting one part for another
- * How and where to find information and parts
- * Stories of interesting finds and fixes
- * The latest prices on high profile radios
- * Lists...such as equivalent parts and foreign numbers
- * Articles on particularly interesting radios
- * Diagrams of handy hookups and useful circuits

I will accept material in any format. It can be a finished, ready to print article, or something we work on together, or simply data you entrust to me. You only have to give me a call (if I haven't already cornered you at a club meeting) to make arrangements for an article.

So come on folks! This should be fun, and hopefully, we'll improve an important dimension of our club - **LEARNING AND SHARING!**

PRICE CHECK

For this month I'd like to pass on what I found when I was looking for a couple of tubes (Dec/92) I needed for a 1946 Philco portable restoration project. Of course, this won't represent every tube you need, but it shows it sure pays to shop carefully. Note that except for Antique Supply, all the suppliers are in the Denver area.

Tube:	Antique Supply	Fistells	Trade- A-Tube	Elec. Bits & Pieces	Crump
1T4	\$ 3.00	\$ 7.13	\$12.00	\$ 7.50	\$ 3.00
117z3	\$ 4.20	\$12.50	-----	\$ 6.25	-----

LOOKING FOR OLD RADIOS

By Lee Bruton

Now just where are they? Hunting them reminds me of fishing. With fishing you know they are in the water, but just where? In fishing there are books and experienced people to tell you feeding, breeding, and loafing areas for the fish.

With radios it isn't as clear. Okay, there are your antique shops and shows. Then, maybe some radios can be found at Goodwill and other thrift shops. Oh, flea markets, don't forget those. And look at auctions, too (not my bag).

Now if I was really hungry, I

might ask other fisherman if they wanted to sell some fish. The same goes for radios (not in boats). To buy from a collector who has turned "Dealer". Sometimes their interests are different from yours and a deal can be arranged. You know..."three of mine for one of yours" or was that "three of yours for one of mine"? Then, there's that green stuff. I offer you more (or less) than you can believe!

This past summer Carolyn and I attended five of these meets. I went to Lansing with Johnny Johnson.

(continued on next page)

A Date With Radio MARCH

<17> (from page six) invented an acoustical device to amplify weak sounds and named it a "microphone".

<18> On this day in 1940, the F.C.C. authorized twenty-two experimental FM radio stations and by 1960 there were a thousand.

<20> Pioneer station KDKA in Pittsburgh hired its first full-time announcer in 1921.

<22> The Edison Phonograph Company introduced "long playing records" on this date in 1926 aiding radio's ability to entertain.

<24> Vaughn De Leath started "crooning" on radio in 1920. She found

that high soprano note enough times to routinely break sensitive tubes in the radio transmitter panel.

<26> Sound effects were used on radio as early as 1922. In that year, a station in New York slapped two pieces of wood together to reproduce the sound of a door closing.

<27> On this date in 1899, Marconi sent a wireless message across the English channel, giving France and England their first linkup through instantaneous communications.

<30> "The Early Birds", a breakfast club show, had its start on the radio in Dallas in 1930. (*Does anyone remember Don McNeil and the Breakfast Club? Ed.*)

Boulderadio... (From Page 13)

Company were Claude B. Rosenberg, W. L. Cassell, and Hardy Searcy, according to the *Daily Camera* article.

As licenses to produce superhets were granted by R.C.A., sets constructed by numerous major manufacturers reduced the demand for the "you put it together" Eight-In-Line set. It was reported the company moved to California about 1930, where it was known as the Warner Engineering Company.

Anderson was one of the early radio amateur operators, starting in Bridgeport, Connecticut, in 1911. During World War I, he served as chief radio electrician at Brest, France. In World War II he became an instructor in radio at the University of Colorado and by 1945 an engineer with radio station KOY in Phoenix. Later in the same year he went to Dixon, California, as an engineer for the radio station built by the National Broadcasting Company for the Office of War Information. Returning to Boulder in 1947, he operated a radio shop until illness forced his retirement. Hurlburt Anderson died September 24, 1955 and his obituary appeared in *Boulder Daily Camera* two days later.

Boulderadio disappeared into obscurity in the '30s, but a few of the Eight-In-Line Unit receivers still exist to attest to the great radio idea that put Boulder on the national radio map!



LEND US YOUR GAT

A twin headphone,
With as good kiss meter,
Makes the best chaperone,
A real word-beater,
For the flip young flapper,
And her spruce and dapper Cake-eater!

A Date With Radio

(Continued from page 6)

APRIL

<12> around the world by radio. For one of the first times, the networks cancelled all commercial programming to provide coverage.

<16> "Fibber McGee and Molly" launched a long-running radio series on this date in 1935. (*Deary, don't open that closet! Ed.*)

<19> The "National Barn Dance" first made its appearance on radio from Chicago on this day in 1924.

<21> Eyewitness reports of the Ohio State Penitentiary fire which killed 318 men were broadcast on this date in 1930.

<23> Radio broadcast directly from the Anzio beachhead on this day in 1944. It was described as the "first time in history that a broadcasting station has been erected and put into service this close to the front line".

<24> Daily reports for the farm began on this day in 1941. A station in Cincinnati bought a farm and operated it on a sharecrop basis to learn firsthand the problems facing practical farmers in its listening area. (*We know that to be Crosley's WLW, but it sounds more like WKRP! Ed.*)

Looking For... (From page 15)

Carolyn and I went to Elgin, Rochester, Dallas, and Los Angeles. They all have points of interest for each collector, but if you want the best show, go to Elgin in August. The weather can be bad in Chicago. For the past three years, it wasn't too bad. The picking was the best of any of the shows...people buying and selling from the East to the West.

If you have the opportunity next summer, ask around...to those who have been...maybe the things you want will be there next time. But the fishing, YUK! Too hot for the fish in August in Illinois.

Elgin - Best show, best tours, best flea markets.

Lansing - best auction, great show

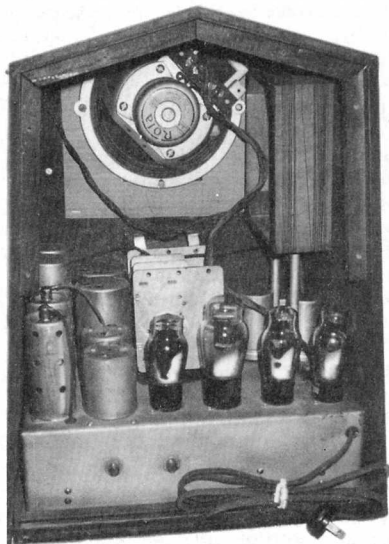
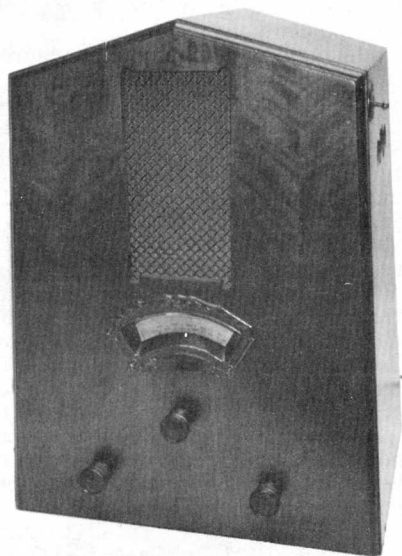
Rochester - a disappointment for me, maybe better for the buss-bar set.

Dallas - auction, not enough good sets
Los Angeles - flea market, not enough to go around

Oh yea, **Denver**. Like all events...fun, but not enough to go around. One of the better shows (looking for bragging rights)

Always fun to compare, envy, brag, cherish, teach, and help. Remember, buy two and sell *me* one!

NOT WHATZIT! BUT WHOZIT??



This rather unique radio does not provide a single clue as to who manufactured it. The radio is an 8 tube superhet with the power switch on the side of the cabinet. The tube line-up is: 78-rf amp, 6A7-osc/mix, 78-1F, 6B7-det/amp, 37-audio, 43-audio, 25Z5-rect, and a second 25Z5 used as ballast only. The set is well constructed and under chassis wiring is laced, good quality parts were used such Aerovox caps and a Rola speaker. It has a built in loop antenna which is wound on a wood frame and appears to have had a wooden back cover when it was new. Cabinet dimensions are 13.25' by 10.25" with a height of 17.5".

If you have any information about this radio, please let me hear from you.
Thanks, Dick Hagrman (303) 794-6674

Radio Parts'n'Pieces

WWV's 70th ANNIVERSARY

By Vicki A. Ehrlich-Ammon

On March 6, 1923 regularly scheduled broadcasts began from the National Bureau of Standards' radio building on Connecticut Avenue in Washington, DC. WWV was born.

An editor in a 1924 QST Magazine wrote: "Probably no radio station has ever rendered the American radio world so great a service as that of WWV in transmitting the standard wave signals. Before these signals began, both broadcasting and amateur waves were uncertain and often wavemeters disagreed violently. Since the signals began, those in the East have been able to make precision calibrations of their own wavemeters and pass the information on into the West."

The editorial was expressing appreciation for the solution WWV brought to a troubled industry. In fact the "glamour industry of the age" was on the verge of self-annihilation even before becoming firmly established. Regulation was minimal. There were no dependable standard frequencies so broadcasters were unable to calibrate their equipment and stay within their assigned frequencies. The resulting static, garbling, and fading (a phenomenon which is the result of interfering radio waves) was cancelling crossed radio signals, making reception inconsistent and frustrating.

The standard-frequency broadcasts begun in 1923 by WWV were eagerly accepted by the broadcasting industry. WWV's broadcasts were hailed as the "greatest service to American radio" and the industry promptly began self-policing, using WWV standards.

Original broadcasts, made from the NBS grounds from 1923 to 1931, were transmitted between 11 p.m. and 1:15 a.m. Eastern-time after commercial stations left the air, allowing users the opportunity to calibrate their wavemeters.

Over the next 35 years the station moved from the NBS grounds in Washington to four other locations. The first move, in 1933, took WWV to College

Park, Maryland, northeast of DC, where the standard was maintained through the use of a tuning fork circuit. The second moved the station to a 25 acre site at the Experimental Farm of the Department of Agriculture in Beltsville, Maryland. The third move in 1943 took WWV to a site just 3 miles further south.

In this new facility WWV served the nation with time and frequency broadcasts during the critical years of World War II. The monotonous format emanated from a small, brick building with black curtains covering the windows. By this time the tuning fork had been replaced by three quartz crystals buried in a concrete vault 25 feet below the earth's surface. There, the temperature and humidity were constant and the crystals provided time and frequency signals of unprecedented accuracy.

In the late 1950's, with the address again changed to Greenbelt, Maryland, WWV was crowded into NASA's Space Center which finally owned the site. Since the equipment was obsolete by now and the location far from the new NBS time/frequency control center (the Radio Standards Physics Division at Boulder, Colorado), a new site was selected. WWV needed a more central location providing more uniform coverage of the continental United States. Seven miles north of Fort Collins, Colorado, (50 miles from Boulder) where there was no industrial crowding and the highly conductive soil of an ancient lake bed provided an ideal transmitting site, was chosen as the last home. Transmissions from this new site began at 5 p.m., December 1, 1966 (zero hours Greenwich time).

Today, 70 years after its original transmission, WWV occupies the 380 acre site at Wellington, Colorado with its own building, emergency power plant, and seven-antenna array. It continues to broadcast standard frequencies to a mature and well-ordered broadcast industry, reaching virtually every home in America with video and sound, while operating around the clock. We've come a long way from the unregulated, interference ridden beginnings of an industry, when "radio telephony" was received hap-hazardly by a select few with archaic equipment.

Wanted 48ale

48ale:

25-tube Capehart Console model 115P2. Riders vol. # 9, 10, 11, 13, & 18. Very nice condition. \$17 each

Dick Hagrman

3429 West Berry Place
Littleton, CO 80123
(303) 794 • 6674

Wanted:

Unusual transistor radios. Novelty or early sets. Looking for Sam's Transistor Service Manuals

Lee & Carolyn Bruton

1140-E South Reed Street
Lakewood, CO 80226
(303) 937 • 7325

Wanted:

Arvin Rhythm Baby model 417

Mike Reynolds

Box 936
Rock Springs, Wyo. 82902
(307) 875 • 6745

48ale:

WWII military radio equipment....
BC-348-R, rack FT-244-A Field Tx,
RAL-7 CND-46156, BC-778-D
"Gibson Girl". All excellent and very reasonable.

(Ad continues below)

Wanted:

Riders TV manuals, volumes 1-7, and Pre-1950 televisions

Fred Ringwald

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

Wanted:

Knobs and working chassis for FADA model P80, small four-tube AC/battery portable with miniature tubes.

Dan Busetti

P.O. Box 706
Bennett, CO 80102
(303) 544 • 4202 or 398 • 8251

WANTED TRAN\$TOR RADIOS

Bitten by the PNP-NPN Bug!

Early Transistor Radios Have Consumed Me....Bring what you have to sell to the next meeting. Let me at least look at'em! Please! \$\$ Thank you, Rick Ammon \$\$

NEED PARTS?

The Editor is assembling a list of CRC members and your old radio interests. This database has over 55 collecting categories (era/type of radios, pre-/post-war TVs, novelties, transistors, types of paper goods, etc.) and will represent an immediate source of parts and potential expertise about your restoration project. A membership list is expected twice a year and we should include this valuable resource information. If you haven't filled out the questionnaire, please make an effort to do so at the next meeting or call the Editor and get one by mail.

Please Support This Project!



CONTRIBUTIONS NEEDED



Seeking articles and stories relating to radio, TV, or associated equipment for use in our publication. Tips, suggestions, hints, and descriptions of restoration techniques solicited

Colorado Radio Collectors

1249 Solstice Lane
Fort Collins, CO 80525-1239



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If undeliverable, please return to sender. Thanks!

