



Canadian Vintage Radios

Spring Issue

In Memoriam...

Len Farkas died in his home, in Vancouver, suddenly on the morning of May 5, 2006, after a lengthy illness, and just short of his 80th birthday.

Len was both a good friend of many years and a CVRS member, always looking forward to club meetings.

Twenty years or more ago, I heard Len's voice for the first time when he phoned me responding to my advertisement in the Buy & Sell. Len asked me if I wanted radio tubes and he had many. Was I fixing an old radio? Yes! I said to both. I knew little more than the on/off switch about repairing radios then. It was from Len that I got my first real 1930s radio tubes. I had just completed repairing and refinishing a lovely 1936 floor model radio cabinet (a Dominion Electrohome series A7M83-E with movie dial, made in the year I was born - this radio was my first radio as my wife Norma pointed out to me recently).

Len came over to my home, carefully explained and showed me how I could make the radio chassis work. So I went to work on it. When I completed the job, I turned it on and something went wrong. I told Len my problem and he came over again to see what the matter was. He said I hadn't paid close enough attention to what he'd said and that I'd put the con-

densers in backwards. They had blown and I could have been hurt. Len scolded me some more, then took the radio chassis home with him, repaired it and brought it back to me.

Len and I spent many hours, many days, and many months over many years scouring Vancouver and as far east as Chilliwack, looking for radios. We had a great time and many laughs finding and bringing home radios.

Len invited, then drove me to Steveston in his blue truck for my first CVRS meeting when the club was an infant of 1 or 2 years.

Shortly after my retirement, I left Vancouver and moved to the Sunshine Coast, settling in Sechelt, BC, where I continued with my ads in local papers and eventually met Joe Ovsenek. Joe became a CVRS member and attended meetings, where he met Len and visited him often.

Joe and I are deeply saddened by the loss of one of our club members and close friend.

*Ted Mitravitz
Sechelt, B.C. June 8, 2006*

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The next meeting for the BC Chapter is:

September Something

My First Radio by Bill West-Sells

When I turned four we had been living in Gordon River Logging camp on Vancouver Island. We had no TV, but a fifties radio record player. I remember my Brother and I listening to Superman on it, and I was looking into the back and wondering what the lights all did.

About ten years later we were living in N. Burnaby. Dad brought me home an old chainsaw ignition coil and condenser, and I began experimenting with dry cells. My math teacher in fact gave me that nickname. I also had an electricity teacher named Percival Switch! About that time the radio quit, with volume at maximum you could barely hear it ,and the sound was distorted, and there was a hum.

So I began to pester the local E. Hastings St. radio repairman, Mr. Wilkinson. He suggested to check the plate resistor of the 12AV6, and a new filter capacitor would cure the hum too. He was right, and I was away. We had kept that thing until Mom and Dad retired to Kelowna and I had moved to the Island, which was about 23 years. In the meanwhile I repaired scores of other old radios, and still do.

Do you have a story about your first radio? Was it your first love as well? Do you still have it in an honoured place, or have you moved on to others? We'd love to hear about it! Send your story to the editor by mail or e-mail.

ABCs of Electrolytic Capacitors for Tube Radios/TVs/Amps

By Justradios (c/o: <http://stores.ebay.com/JustRadios-Capacitors-and-More>)

ABC's "Electrolytic" Capacitors for Tube Radios, TVs and Amps

Although this guide is written from the perspective of tube radio enthusiast, this guide should also be useful to those who repair vintage TVs, hi-fi's, audio and guitar amplifiers and test equipment. We hope you find this guide useful and good luck with your vintage tube electronics repairs and restorations.

ELECTROLYTIC CAPACITORS - The Basics:

- Your old tube radio uses 4 types of capacitors: variable (tuning) capacitors, mica capacitors, paper capacitors and electrolytic (filter) capacitors. When you restore an antique radio you will replace the paper and electrolytic capacitors, but not the variable and mica capacitors.
- Electrolytic capacitors are often referred to a "filter capacitors". Electrolytic capacitors help to convert (filter) AC (alternating current) power into the DC (direct current) voltage that your tubes need to operate.
- Size wise, the electrolytics are the largest capacitors and most tube radios use 2 or 3 of them. The original electrolytic capacitors are typically the size of a roll of quarters or larger. On the old AC sets (radios with power transformers) they are usually encased in aluminum

On the old AC sets (radios with power transformers) they are usually encased in aluminum and mounted on top of the chassis. With the lightweight AC/DC sets of the 1950's they are quite often under the chassis and may have a cardboard case.

- Electrolytic capacitors work hard and are probably the most unreliable part of an antique radio. As they wear out (or simply get old) you get that famous "tube radio hum". Yes, in most cases it is bad filter capacitors that are the cause of that hum.
- **WARNING! If you tube radio hums "turn it off and don't use it".** Bad electrolytics are not only hard on your ears; they are hard on the tubes, transformers and other parts in your radio. Capacitors are cheap....tubes and other parts can be expensive and hard to find.
- All electrolytic capacitors have both a capacitance value and a voltage rating. The capacitance value is a measure of how much electric charge a capacitor can store. The voltage rating is the maximum voltage the keep the electrolyte from drying out while it

allows some margin of safety for unexpected voltage surges. ***Never replace an electrolytic with one that has a lower voltage rating.***

- In service literature such as Sams Photo-facts, paper and electrolytic capacitors are usually expressed in terms "microfarads". Short forms for microfarad include mfd, MFD, MF, UF and uF. As a general rule, if a capacitor is more than 1 uF it's probably an electrolytic capacitor.
- In most cases AC radios can use 450 volt electrolytics while lightweight ac/dc tube radios can use 160 volt filter capacitors. However, there are exceptions so always best to refer to a schematic. Get a schematic (and parts list) before you start your recap job. It is often impossible to read the values that are on the original capacitors. Also, if the radio was repaired at some time in the past, there is a good chance someone threw in the wrong size capacitors, just to get the radio working. Without a schematic you'll be guessing.
- How about using NOS (New "Old Stock") capacitors? ***NOS capacitors are not recommended...***use at own risk! As electrolytic capacitors age their capacitance values drift, they dry out and they become leaky. Would you drive a 1940's automobile with NOS 60-year-old tires?
- Electrolytic capacitors have a shelf life of a couple of years, so ***make sure you are buying "fresh" stock electrolytics*** (not new "old stock").
- To maximize shelf-life, electrolytic capacitors should be stored at temperatures of 5 to 35 degrees C (40 to 95 degrees F) and in non-humid conditions (less than 75 relative humidity).
- Don't waste your money on audiophile, computer grade or tantalum capacitors. Sure they are good capacitors, but your old tube radio does not have the electronic circuitry to take advantage of those

- expensive capacitors. The only difference you will notice is a lighter wallet.

CAPACITOR Installation Tips:

- When restoring an antique radio it standard practice to replace certain of the radios capacitors. This is known as "recapping" a radio. An old radio may work with its original caps....but for how long ??and how safely ?? If the radio is going to be sold with a guarantee or is being given to someone as a gift, you should "recap" the radio.
- Capacitors used to be much larger and much more expensive than they are today. To save on space and cost "multiple section" electrolytics were used. These are simply two, three or four capacitors in the same case. You will notice just

WARNING!

***If your tube radio hums
"turn it off and don't use it".***

one ground connection (black wire) as all the caps share that ground. These "multi-section" caps can be replaced with single electrolytics. Modern electrolytics are compact and are easy fit under the chassis. You can leave the old can capacitor on the chassis for original appearance. Just be sure to disconnect it.

- When replacing an electrolytic capacitor, an exact uF replacement is not necessary. If you can't find a close replacement ...better to go with a slightly higher uF value than a lower uF. The old "rule of thumb" when replacing electrolytic capacitors is to not use more than 80% higher (or 20% lower) than "the original" uF size. If you replace an E-cap with one that has too high a MFD, the DC voltages will be higher than called for and your tubes and other parts will wear out faster. If you use too low a uF size, your radio will hum.

- Capacitors have either "radial" leads or "axial" leads. With "radial" type, both leads exit from the same end of the capacitors. With "axial" type, there is a lead at each end of the capacitors. Both types are equally good. Just ***be sure the capacitors you order have long leads.***
- Warning ! Electrolytics have a negative end and a positive end....if you install an electrolytic with the polarity mixed up not only will your radio not work...the electrolytic capacitor could explode. All the electrolytic capacitors that we sell have an arrow marked on them (with negative signs within the arrow). This arrow points at the negative side of the capacitor.
- On schematic diagrams the flat side of the capacitor symbol is the positive (+) side and the curved side is the negative (-) side. ***The positive end must be kept at the higher electrical potential*** (more positive voltage).
- Before replacing the capacitors, check the radios' resistors. Since you will be replacing the capacitors, you should snip one lead of each paper and electrolytic capacitor. This will help prevent false resistance readings.
- Put "heat shrink" (spaghetti) tubing on the leads of the capacitors and resistors before you solder them into the circuit. This will help prevent short circuits that are very dangerous. Short circuits will cause your radio to malfunction.
- If you need a higher uF than is available from your retailer, you can connect a couple of capacitors in parallel (side-by-side). For example if you need 200 uF at 160 volts you could connect two 100 uF / 160 volt capacitors in parallel and you would end up with 200 uF at 160 volts. You have kept the voltage the same while doubling the uF. In "theory" connecting capacitors in series (end-to-end) should result in a higher working voltage. For example "in theory" two 100 uF at 450 volts in series should give you 50 uF at 900 volts (double the voltage and half the uF).....however,

connecting capacitors in series is not recommended because with a series connection, one capacitor will usually end up getting more voltage than the other. This is because the leakage resistances of the two capacitors are rarely the same and the capacitor with the higher resistance will get a greater share of the voltage (which could result in the capacitor breaking down).

- Please remember to always work safely. The high voltages stored in large capacitors can kill! Before working with these capacitors they should be completely discharged. This can be done by (bridging) connecting the two ends the capacitor in question with a high wattage 1000 ohm resistor via insulated clips and leads.

Please remember to always work safely. The high voltages stored in large capacitors can kill! Before working with these capacitors they should be completely discharged.

- Don't put your tube radio into storage after you have restored the electrics. Once a month let the radio sing for a half-hour or so. This will prevent the electrolytic capacitors from drying out.
- What should it cost you to replace the capacitors in your radio? To "recap" a typical 5-tube radio you will need a couple of electrolytic capacitors and about a dozen film capacitors.....Total cost for these parts should be \$10 or less.
- Last but not least...where can one buy the right sizes and right types of capacitors? You have found the right place.....JustRadios carries a complete line of electrolytic, film, mica, disc and safety capacitors for tube electronics.

You can find the ebay store for JustRadios at:
<http://stores.ebay.com/JustRadios-Capacitors-and-More>

News From Provincial Chapters

Photographs from the B.C. Chapter May meeting:



The Next meeting In BC will be on September 17th.

It starts at noon at Charles Rummel Park. 3315 Lozells Ave Burnaby
See the CVRS website for a map.

New members are welcome !

Shown: Ted Mitravitz, Ralph Parker, Ken Patenaude, Elmer Rudolph, Don White (seated), Sue McMillan, and Suavek Kownacki.



Don White on a schematic hunt...



Ken's current wood working project. A workshop on cabinet stripping is planned for the September meeting with Mohawk stripping products. If you're not familiar with Mohawk, check them out, they're worth discovering.

<http://www.mohawk-finishing.com>



One of Sue's McMillan radios. No schematic available - a summer project!





We're on the web!
canadianvintageradio.com

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The CVRS offers a free copy service for Radio College of Canada (RCC) schematics (only) to members currently in good standing. A pdf file of an RCC schematic can be obtained by emailing Don White, don@canadianvintageradio.com with the manufacturer and model number of a radio made in Canada between 1927 and 1980. Members wishing a printed copy of a schematic should send a self-addressed, stamped envelope, Canadian postage to: CVRS Schematics

10271 Algonquin Drive
Richmond, BC V7A 3A5

If you wish to make sure that an RCC schematic for your radio exists before sending a SASE, email Don at the above address or phone him at 604-274-5522.

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Canadian Vintage Radios is published five times yearly in the first week of February, April, June, October, and December.

Membership is \$24 Canadian funds, or \$17.50 US. Overseas: \$22 US. An electronic version of this newsletter is available for \$15 CDN. We encourage all CVRS members to submit articles or letters that relate to vintage radios or associated items.

Send memberships or concerns to: CVRS
4450 Royal Oak Avenue
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The summer holidays of my childhood were spent traveling through Small-town BC and my father tearing out each town's telephone listings for the antique stores. He'd visit each one hoping to find a telephone to take home and work on for the rest of the year. Ostensively, we were camping. Those were the days before Ebay (remember?), when locating that treasure of a radio (or in my father's case, a telephone) was half of the battle. Forty years later, my father now keeps a sharp eye on the auctions and his catalogues while he fine-tunes the age of his collection. Last summer, while looking through a booklet of types of telephones (and if you think there's many, many brand names of radios, it's nothing compared to telephones, with cross-overs between both radio and telephone worlds - Stromberg-Carlson is a good example), I told my father that he would never have ALL of them. He looked a bit saddened by that.

When a CVRS member asked what he should be buying next for his collection, I was reminded of that comment to my father. This fellow's first (and only) radio so far is the Philco 90 that was pictured on the cover of the last newsletter. In earnest, he thought that his budding collection should take a certain course, with only the best or a certain type to be included. In this day of Ebay, finding just the right radio for our collections is almost effortless, the only requirement is the price willing to be paid...and I have to wonder—would we pass up the radio that came our way from the guy next door?

Cheers, Sue McMillan



News From Provincial Chapters

CVRS REGINA MEET APRIL 2006

It was an outstanding accomplishment . . . the Saskatchewan chapter of the CVRS held its tenth consecutive show, sale and swap meet at the Regina Exhibition grounds on April 29th. in conjunction with the Regina Antique Auto Association.

The only drawback was that since a different building was secured for this year, the higher rental necessitated holding a one-day meet only as compared to a two-day event in prior years.

Despite being limited to one day, the original four founding fathers of the Regina show, namely Roy Sawley, Joe Veeder, Bob Grocholski and Stan Marlin provided four familiar faces to the array of tables in the radio section. Sid Swedenski returned as a vendor after a year's hiatus while Al Deeg and Dale Jensen offered more material for Roy's table.

Ted Mitrovitz from the B.C. chapter flew in for the second year in a row while his side-kick Joe drove down from the Sunshine Coast with his grand-daughter to take in the proceedings. Brian and Arlene Ashwick made their fifth trip to the annual event from Medicine

Hat (AB). Unfortunately, our Manitoba hobbyists were not able to attend this year.

Roy and Dale showed off no less than three Atwater Kent breadboards which stood out like pristine gems with their perfect restorations. A Sparta hornspeaker and Radiola IIIA on Stan's table went rather quickly while Bob cleaned off a variety of odds and ends from his table. Bob also showed a very old G.E. model 76 console from the 1920s which used only 201As. Sid had numerous new, old stock parts for sale while Joe's table featured a variety of plastics, wooden sets and a beautiful console in behind. Club member John Reitmeier was not able to participate as a vendor this year but did renew acquaintances in the early afternoon.

Since the meet was limited to one day, proceedings came to a very quick end and most of the radio boys expressed disappointment that our usual Sunday time of visiting would be lacking. However, we Saskatchewan collectors do keep in close touch by phone and email and are constantly exchanging ideas, information and parts. It seems that the Regina meet is the main glue which bonds the prairie collectors together and numerous friendships are rekindled every April.

CVRS AD: CVRS Alberta has video taped our recent seminars (up to an hour or more of highly useful information) and copied them onto DVDs that you can purchase for \$10.00 each for your own use including shipping and handling. Here is the list of what you can obtain: 1. **A Short History of Vintage Radios** With Don Killips. Using slide pictures of the old radios from the 1920's through to the 1960's, this presentation gives you an overview appreciation of the important radio types collectors look for when getting into this hobby. 2. **Beginner's Guide to Restoring Old Radios - The Electronics.** With Murray Dickerson. This presentation tells you what you need to know to start doing your own electronics restoration of old radios. 3. **Beginner's Guide to Restoring Old Radios - The Cabinets.** With Charlie Calarco. Tells you what techniques and materials are required to restore wooden radio cabinets to their original appearance. Given by one of the leading antique wood restorers in Edmonton (note that the sound on this one is not very clear). 4. **Who Invented Radio?** With Murray Dickerson. Tells the story of how radio was actually invented and the people who made the greatest contributions to one of the most important inventions of human history. Surprise!...the presenter claims that Marconi, while important, did not invent the radio. 5. **The All American 5 Radio Circuit.** With Don Killips. Everything you need to know to understand and repair the All American 5 radio. 6. **Plastic Radio Cabinet Restoration.** With Dennis Vriend. Ever tried to repair a broken plastic radio cabinet to its original condition? If so, you'll know how challenging that can be. You'll need this info. 7. **Recreate the Golden Age of Radio.** With Mike Robichaud and Murray Dickerson. Tells you how to download all of the old radio programs from the web and then how to play them through any old radio to transport yourself back to the 30's, 40's and 50's of family listening pleasure. 8. **All About Transformers.** With Don Killips What you need to know when dealing with these radio components that are so hard to find replacements for, as well as how they work. 9. **Old Radio Programs CD.** Actually, this is a CD of over 80 assorted old radio programs that includes dramas, serials and historic broadcasts. Someone said that if they just follow the download instructions of #6 presentation above they can get it for free. That's true, but how much is your time worth? This CD has about 40 hours of material on it for \$7. You'll need an MP3 CD player but almost all CD players have this capability anyway.

These DVDs are available from rick@canadianvintageradio.com,
Rick Williams 9611 142 St. Edmonton AB CA T5N 2M8

FOR SALE: Almost 40 radios from the 1920's, including 5 AK breadboards, 2 Marconiphones, 4 Mercury Super Tens, 2 Rogers Batteryless, etc. Also around 20 horn and cone speakers including 3 Amplions.
 Send an e-mail to: Robert.Murray@mts.net for lists.
 Photos are available.

Wanted:
 Atwater-Kent Model #42 power unit and/or chassis (or power unit that is similar such as: #40 or #52).
 Contact : Ted Mitravitz at 604-740-3989



The console (above left) is being offered free for pickup in the Vancouver area. The GE H-86 console (above right) is for sale and located in St Mary's Ontario. See the forum for details. Got a radio for sale ? Post your ad on the forum for free !

<http://www.canadianvintageradio.com/phpBB/index.php>