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Canadian Vintage Radios

The Publication of the Canadian Vintage Radio Society Incorporating the CVRS Newsletter

Christmas 2025 Issue

CVRS Director Wins Prestigious Award – Gerry O'Hara

The Antique Wireless Association (AWA), located in Bloomfield, New York, has awarded **Jerry Proc**, CVRS member and Director-at-Large (photo, right), the '*Houck Award for Documentation*'. The Houck Award for Documentation recognizes quality original research and writing on the history or evolution of electronic communication technologies in a published book, several articles in the AWA Review or AWA Journal, other publicly available periodicals, or a long-running web site. Preference is given to subjects that have not been covered elsewhere.

Here are some previous story titles authored by Jerry and published by the AWA:

- Wireless and the St. Roch
- A Brief History of Canadian Television
- Analysis of Transmissions in WWII
- Canadian Weather Ships
- Canadian Marconi Communications Systems

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Of Hydraulics and Grounding Rods – Matt King

Back in my misspent youth, I developed a fascination with electronics [*me too! - Ed.*]. This fascination matured with my desire to build transistor projects and vacuum tubes radios. For the radios I needed both an antenna on the top of my house (thanks Dad!) and a grounding rod.

The antenna that Dad agreed to was an inverted dipole held aloft by a 10' (3m) wooden pole securely attached to our brick chimney and four solid copper wires (maybe 12 gauge) leading down to eye bolts he screwed into the roof. No coax lead for us! No, that was too expensive. He purchased flat TV antenna wire to run to my bedroom.

As I recall our house did not have sockets for a grounding plug. Cont. on Page 2

In this Issue:

HEALTH and SAFETY: The Canadian Vintage Radio Society (CVRS) draws the attention of all readers of 'Canadian Vintage Radios' to the Warning and Disclaimer statement on the rear cover page of this document—please read and heed the contents of that statement as health and safety is our priority—thank you.

Editorial — Gerry O'Hara

I have been meaning to add a 'contents' feature on the cover page of 'Canadian Vintage Radios' for some time, but never seemed to get around to it, but I have finally pulled it off for Christmas this year(!). Hopefully, this, as well as the very useful index facility on the CVRS website will help folks find the article(s) they are looking for with less frustration!

Lots of great articles in this issue from the 'pens' of CVRS members—just goes to show that an appeal for contributions can 'do wonders' - keep it up folks as its very-much appreciated by me and all CVRS members!

As another year comes to its close, and Christmas is once again upon us, I wish all CVRS members a very Merry Christmas and Happy New Year!

Gerry

Local Representatives

Alberta Chapter — Rick Williams

Atlantic Network — Kevin Christopher

BC Lower Mainland Chapter — Ken Patenaude

Manitoba Network—Grant Sesak

Ontario Golden Horseshoe Network—Dave Chamberlain

Saskatchewan Network- Doug Parker

Vancouver Island (VI) Network—Gerry O'Hara

Local groups or chapters of the CVRS can represent a small group, whether geographically-based or otherwise, and Networks can cover small or large geographic areas. Thus we can have the Alberta Chapter, Vancouver Island Network or even the Northern Electric Special Interest Group—as long as a member of the CVRS wishes to run it and wants it to be represented within the CVRS. Why not step-up folks - we want to hear from you!

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The grounding rod that was in the ground (for the telephone) was on the opposite side of the house from my 'ham shack' in my bedroom. From someplace Dad found a diagram for a radio ground. As I recall we dug a foot deep hole outside my bedroom window, pounded in a 2' (0.6m) solid copper rod, attached a heavy copper wire which led up to a lightening arrestor, and ran the wire through my window for me to use. Oh, I think he also poured a box of rock salt around the top of the copper rod before filling in the hole.

With these two additions to our house (our next-door neighbor grumbled that he did not want us to mess up his TV reception), I was able to DX to my hearts content (photo, right). Late in the night I would spin the dials on my National NC-125 and listen to the long-wave broadcasts from around the world! I soon collected a stack of DX cards from London, Peking, Argentina and other exotic broadcasting locales.

Fast-forward to the summer of 2025. After reading a number of recommendations, I decide to stop using the household grounding plug and put in a dedicated grounding 'rod' for my radio reception.

To start, I tried to recreate what my Dad had done in the late-1960s. However, I searched my local hardware store and found that ¼" solid copper bar was way beyond my budget.

Using this marvelous invention called a 'Search Engine' a Ham site was found that suggested that, as a minimum a ½" copper pipe needed to be driven at least 6 feet into the soil.

I have some experience in my youthful past trying to drive 2" steel fence posts (hollow) into soil. It is not easy to do so even with a 4-foot post. I tried to imagine me, standing on a 6' step ladder and pounding a 6' (soft) copper pipe fully in too the soil using a 5lb sledge hammer... Oy!

I continued reading the Ham site and found a reply to the original author that a garden hose(!) could be used to 'drill' a pipe into the dense soil of my backyard in Victoria, BC. This entry reminded me that Howard Hughes (of the 'Spruce Goose' fame) made his fortune inventing a self-cleaning drill head ['*rock roller' bit—Ed.*] that used water to 'lubricate' the drill head, flushing the doss up and out of the pipe shaft (isn't it grand being old and have a wealth of useless information stored away?).

Off to 'YouTube' I went, and put this into their search bar: "*Sink grounding pipe for Ham radio using a garden hose*". A video or two popped up and I watch with some skepticism. I mean, not everything on the internet is true, right?

Yet, I was intrigued. I mean, what could go wrong (except failure), no?

One video, here, shows the author soldering a coupling to the copper pipe. Not having flux solder, I opted to purchase from the local hardware store a replacement brass female hose end. Instead of soldering coupling in the pipe, I made a simple (and rather leaky) 'gasket' out of electrical tape and crammed it snuggly into the end of my 6' pipe. My home-made gasket (photo, right) partially failed but hey, it worked! – and it cost under $5!

I dug a foot deep hole outside my basement window that was far enough from the eves to be wetted on rainy days by the gentle and blissful rains of BC. I attached my garden hose and lifted the pipe into a vertical position.

Standing in the warm sunshine, I started to push the 'drill head' of my pipe against the hard pan of my back yard soil. According to the internet, the area of ground beneath my house: '*…..is overlain by surficial deposits from the last glaciation, such as glaciomarine clay (Victoria clay), sand, gravel, and till…*'. What that quote does not mention is that underneath the top soil there many, many pieces of granite and even bedrock of the same material. Knowing this, and having hit many such rocks during sojourns into gardening over the years, I was hoping for at least two feet of depth for my pipe. Had I hit anything else during my drilling I decided that I move a foot or two from my first hole and try again.

My first observation with this process is that I was getting myself very, very wet with spray coming out from the top of the pipe… I guess my home-made gasket was less than secure. Second, I found my water-driven grounding pipe to actually be (mostly) penetrating smoothly through the top soil.

As my pipe passed the 2' point, I sighed a breath of relief and I celebrated my success with this technique! (photo, left). I was very pleased that I had not hit a stone or bedrock that would have been my end point.

As I was already soaking wet, I decided to see how far I could actually go with this hydraulic tool. I passed 3 feet, then 4, then 5, and finally I brought the top of my 8' pipe down below the level of the lawn! I did this all without breaking a sweat… although I was soaking wet from the hose shower(!).

I turned off the water, removed the coupling, clamped on a grounding clamp and ran a 14G bare coper wire into my basement radio room.

To satisfy the trust my 'Better Half' had placed in me while approving this project, I poured rock salt down the throat of the pipe (not wanting to accidentally kill the grass above the pipe), filled in the hold I had dug, and covered the hole with green sod. The grass recovered from the trauma and after 3 months looks good as new!

What had worked was a phenomenon called 'soil liquification'. A YouTube video describing this can be viewed here. In the larger picture, look up why the city of Anchorage, AK as a city park labeled 'Earthquake Park'.

Once I turned off the garden hose to the buried pipe the soil de-liquified and neither love nor money would enable me to pull the pipe out of the ground by hand.

Put away your sledge hammers! You have nothing to lose but frustration and bashed fingers!

References:

- Brown, Rob. (1969) 104 Easy Transistor Projects You Can Build, McGraw-Hill Publishers, NY
- Morgan, Alfred, (1954) The Boy's First Book of Radio and Electronics, Scribner's, NY
- Morgan, Alfred, (1957) The Boy's 2nd Book of Radio and Electronics, Scribner's, NY
- Morgan, Alfred, (1962) The Boy's 3rd. Book of Radio and Electronics, Scribner's, NY

Local Chapters

BC Lower Mainland Chapter – Ken Patenaude

We will try to have January, March, and April events in 2026. Once dates are confirmed we will be posting details on the CVRS website. Due to poor turn-out we have cancelled all other events. We also post the event date one month prior on Craigslist. Meetings are held at the Charles Rummel centre in Burnaby (3630 Lozells Ave.) starting at noon, and are coordinated by Ken Patenaude (Tel: 604-856-0253).

Alberta Chapter – Murray Dickerson

The CVRS (Alberta Chapter) met on October 19 for our annual meeting with the voting in of all incumbent directors of the club; including Murray Dickerson as President, Rick Williams as Vice President, Gary Biasini as Treasurer, Ken Tanaka as Events Director and Tom Savage as Gen. Director. No new candidates came forward. The role of Secretary is shared by Murray and Rick.

After the annual meeting, Murray gave a presentation on 'The Repair of FM Radios', and provided a summary of the way FM works from transmission to monophonic reception and a detailed explanation of the circuits in tube-style radios. A follow-on presentation will delve into stereo FM, repair and tuning techniques, along with a suggestion of a 'Poor Man's FM Generator' that makes use of an existing working FM radio as a signal injector from front end to audio outputs. The idea behind this is that few people already have a FM Stereo Generator or are financially flush enough to go out and buy expensive FM equipment when they might only have a vintage FM radio or two to restore into working order. This amount of detail could not possibly be covered in a one hour presentation, so the next presentation will also deal with transistorized FM radios, which will be scheduled in the New Year.

On November 23, a presentation on 'Electric Trolleys' was given to the club by Rhonda Shand, who is currently an engineer working with the new LRT system development in the Edmonton area. Rhonda's interest in LRT led to getting involved with the restoration of early 20th Century street cars and electric trolleys especially consigned to operation in the Fort Edmonton early historic site park – a prominent tourist destination celebrating the history of Edmonton's development from its establishment as a fur trading fort alongside the North Saskatchewan River in the 1800's, up to the mid-20th Century. Several early streetcars and trolleys have been fully restored to their original appearance and full operation, including the first unit called 'Edmonton Number 1' of 1908. The club is arranging a group tour of both the rail line ride as well as the restoration barn in the Spring of 2026. Of course, the vintage electrical interest will be satisfied by looking at the insides and restored assembly of an early electric trolley motor. Sounds like fun, right?

Non-CVRS Organization News

News and events from other (non-CVRS) vintage radio groups and organizations.

Prairie Vintage Radio Society — Nothing reported from the boys on the Prairies for this issue.

Puget Sound — the CVRS always receives a copy of 'Horn of Plenty', the newsletter of the Puget Sound Antique Radio Association. This is a great publication with many interesting article in every issue.

Ontario Vintage Radio Association — for information visit their website, here

Ottawa Vintage Radio Club— The Ottawa Vintage Radio Club meets monthly simultaneously on-line and 'live'. Please visit our web site at www.ovrc.org, and note that our meetings have moved to a new venue in 2025. For information contact Gord Rabjohn, President, at gord.rabjohn@sympatico.ca or visit us online at http://www.ovrc.org/

Quebec — The SQCRA has 115 members mostly from Quebec but also in eastern Ontario, United-States and France. The SQCRA organizes local radio restoration contests, auctions, workshops and social events for its members and publishes the magazine "Radiophilie" 5 times a year. Visit their web site at www.sqcra.org.

Victoria Radio Group— Free to join! Vicradiogroup. For sale, trade, giveaway or "show and tell". Beacon Drive-In, 126 Douglas Street. 3rd Wed of every month: next meeting on and Dec 17, 2025. Winter start time is 6:30pm. Go on, look through your vintage electronic stuff, find what you can live without, then bring it with you! Contact: Lee Allder atlelee@gmail.com.

SPARC Radio Museum, Coquitlam — Vintage radio museum based in Coquitlam, BC. Check out the SPARC website and this presentation.

Regional Networks

Vancouver Island (VI) Network – Gerry O'Hara

All quiet in the VI Regional Network this time of year. With the National Zoom call now in the rear-view mirror, the VI Network is considering holding a Regional Network Zoom call, maybe in Spring 2026. In the meantime, why not join several other CVRS members who attend the Victoria Radio Group meetings held at the Beacon Drive Through in James Bay (opposite Beacon Hill Park) at 7pm on the 3rd Wednesday of each month. There is always lots of 'vintage radio chatter', fleamarket/swaps and 'give-aways', with the bonus of being able to enjoy a coffee, or better still, a yummy chocolate-dipped ice cream cone from the 'Beacon Drive Through'. 'Freebies' at the November 2025 meeting included boxes of all sorts of cables, plugs and sockets, and speakers—you just never know what will show up at these meetings!

If you are a CVRS member residing on the Island who is not yet a member of the VI Network and would like to join, please contact: Gerry O'Hara: vinetwork@canadianvintageradio.com

Atlantic Network — Kevin Christopher

If you are interested in learning more and/or becoming a member of the network, please contact Kevin Christopher: kevinivc@gmail.com

Ontario Golden Horseshoe Network — Dave Chamberlain

Several months ago a lady who lived a street away from me liquidated her belongings and put her house up for sale. I would never have known about it except I walk my new dog past the house almost daily. Well, as it turns out the ladies husband had passed away many years before, and he was a cabinet maker and electronics hobbyist. He also was a HAM radio operator. All in all he was one smart cookie and craftsman. I was able to acquire numerous pieces of test equipment, a Variac, boxes of good used vacuum tubes, several transistor radios, a working Realistic DX-160 shortwave receiver, a music box, books and more. One such piece of equipment was a working Heathkit OM-3 oscilloscope. The previous owner had built several other pieces of equipment and when I get time I will test and sort tubes, play with the oscilloscope, and admire the odd radio repair the man performed. I attach a photo of a GE Baby Champ Model 5002 the man rebuilt—it works fantastically. The 1950 music box is also unique and working—it plays the theme from "The 3rd Man". I wish all our members a very Merry Christmas and a safe and Happy New Year. If you are interested in learning more and/or becoming a member of the network, please contact Dave Chamberlain: y2klucker@gmail.com.

Manitoba Network— Grant Sesak

Nothing to report this issue. If you are interested in learning more and/or becoming a member of the Manitoba Regional Network, please contact Grant Sesak: gsesak@gmail.com

Saskatchewan Network – Doug Parker

A request was sent to our Saskatchewan members and many of our members have been busy with no-snow activities, including, myself during the summer months, however, there were some restoration purchases made to keep us all active during this winter—so lets get going!

If you are a CVRS member living in Saskatchewan and not a member of our group and would like to join, please contact: Doug Parker: dmprkr@yahoo.ca

A Call-in to the ARCI October Zoom Meeting — Gerry O'Hara

I was invited to attend the monthly Zoom call of the Antique Radio Club of Illinois (ARCI) on October 11, 2025. I receive such invites and newsletters from ARCI as part of the reciprocal arrangement between the CVRS and ARCI to swap newsletters.

I was particularly interested in attending this Zoom call as there was a presentation by Kent King, who had been very helpful to me when I was refurbishing an E.H. Scott Allwave 15 chassis a couple of years ago for a nephew of E.H. Scott himself (see article on the SPARC website, here). Kent is probably the most knowledgeable person on all things E.H. Scott-related and was only too pleased to be of assistance.

The agenda for the call, introduced by Tom Zaczek of ARCI, was as follows

Presentations:

- ***The History of E.H. Scott, Part 1.*** *– Kent King. Kent is a renowned expert and historian on E. H. Scott radios. Some of you may have attended his excellent presentation at the recent Radio Fest Expo covering some of E.H. Scott's patents. Tune in to hear all about the history of this company known for its large tube-count radios and chrome plated chassis.*
- ***A Brief History of Kits*** *- Brian Belanger. Brian is the curator of the National Capital Radio and Television Museum in Maryland and brings yet another excellent presentation to the Virtual Forum. Many of you club members likely built some of these kits from these companies he will be covering.*
- ***Sound Level Meters*** *– Bill Ballad. Bill has a collection of tube-based sound level meters. These were used in the audio and radio industry to calibrate the sound levels of equipment designs. Bill will review the design elements of these meters and cover some of units in his collection*
- ***Reviving a Dead Italian*** *– Alan Gard. Alan recently restored a large General Motors Model 140 from around 1930, known in its advertising literature as "The Late Italian". See how he overcame some tricky challenges to get this beautiful radio working again.*

The formal presentations were followed by:

- Show and Tell – Tips and Techniques
- ARCI Swap Meet – An update on the upcoming swap meet and the one we just held
- Items Wanted/For Sale
- Open Session – Non-moderated chat session

Kent's presentation on the history of E.H. Scott was very interesting and informative, covering Scott's life and companies until the late-1930's. This included details about his childhood in New Zealand, his early work on a vehicle ignition tester/analyzer (pre-WWI), his Service in WWI in France, move to the USA, and subsequent further development and marketing of his ignition tester after WWI, plus two publications about the topic. In the post-WWI years, Scott became interested in radio, and, in 1924, he and his wife travelled to New Zealand for an extended stay, on which Scott wanted to take a 'great radio' with him. He researched many designs and selected a 9-tube superhet for the purpose. He logged many stations during the trip, and broke several world records for reception over long distances. He even built a second radio of the same design to prove his first receiver was 'not a fluke'. However, he found that others attempting to copy the design were having trouble achieving the same level of performance, which Scott attributed to the IF transformer design being used. He therefore developed his own IF transformers and started to market them under the brand 'Selectone' in 1926. Subsequently, Scott founded E.H. Scott laboratories and started manufacturing radios, hiring 16 year old Clifford Coon as his first employee (Clifford stayed with E.H. Scott until after WWII). Several 'classic' radio designs followed, each building on the success of its predecessors, adopting the screen grid tubes in 1928 in the 'World Record Shield [screen] Grid 9' design, and the 'Screen Grid AC-Ten' in 1929. Around this time, Scott introduced ever more elaborate and fashionable cabinets to house the radios, custom built for purchasers. The first 'signature' Scott chrome chassis radio was introduced in 1931 – the 'Scott Allwave', a 9-tube tuner chassis and 3-tube amplifier/power supply chassis. This was a high-performing receiver, but was complex to operate, as this needed sev-

eral switches to be thrown, coil changes and even antenna connection swaps when changing bands(!). This was the last Scott/Coon chassis design, as Scott hired Ernie Pfaff and George Rothel around this time, who designed the subsequent 'Allwave Deluxe' in 1933. This featured the carousel (turret) method of changing coils, greatly simplifying band changes, 2 x 45 tubes in the output stage, and a 12" speaker. This model is the 2nd most common Scott radio found today. Pfaff left the company not long after this, and soon after the Allwave 15 was introduced, featuring 2 x 2A3 tubes in the output stage and a Jensen speaker. This radio was a 'transition' set to the Allwave 23

(example belonging to a CVRS member shown in the photos, right and left), and, as such, went through numerous circuit changes 'on the fly' during its 2 year production run. Kent mentioned that he had seven different schematics for this model, but even so, not all changes were recorded(!) – design changes included changing the detector from a 'Wunderlich' tube to a Type 55 tube. There were even 2v and 6v 'farm set' versions of this design produced. In 1935, the 'Allwave Imperial' was introduced, however, Scott was sued by the 'Imperial Radio Company' for the name, so this set was renamed as 'Full Range High Fidelity' – over 500 examples of this design are known to still exist. Scott hired Murray Clay as Chief Engineer around this time, and this became the 'Scott's Golden Age' with the best chassis and cabinet designs, the most esoteric design being the 'Quaranta', some versions of which sported 48 tubes and had three audio channels (bass/mid/high). This model cost $2,500 in 1936 (over $58,000 in 2025!), and weight-in at 620lbs.

Part 2 of Kent's presentation took place on November 15. I attended this also and gave a presentation on SPARC and the CVRS. In the after-presentation discussions, Kent mentioned that he owns around 30 complete Scott console models and 40 chassis-only examples, and exhibits these in his own museum. Part 2 of the presentation covered the late-1930's through to Scott's passing in 1952, and the ultimate demise of the company, and will be summarised in the Winter 2026 issue of 'Canadian Vintage Radios'.

In Memory of Frank Epp—Laurie Frost

Manitoba recently lost a well-known and respected member of its vintage radio community. Frank Epp was a collector and avid restorer of tube radios and electronic equipment. Frank was a regular at local auction sales where he was often buying classic radios and equipment as well as some 'good ole beaters'. He wasn't always interested in their collectability but rather couldn't wait to get home and start his restoration work. Frank's workshop was always open to those looking for restoration help through advice, repair or some electronic part that couldn't be found elsewhere. His memory will live on through his radios as many have made their way into the hands of family, friends and local radio enthusiasts.

Frank's obituary can be found here.

(*Please note that this note was meant to be included in the Fall 2025 issue of Canadian Vintage Radios—apologies, Ed.*)

The Vancouver Radio Laboratories (VRL) Model VRL-250 Receiver (Part 4)—Cosmetics and Additional Performance Testing—SPARC Radio Museum, Coquitlam, BC (authored by Gerry O'Hara)

The first three parts of this article described the background, inspection, restoration, troubleshooting, alignment, and some performance testing of the receiver. This final part describes cosmetic work, further performance testing, and some thoughts on the receiver's ergonomics.

Cosmetics

I had already cleaned the chassis, as well as the knobs and dial during the work on the receiver and power supply chassis. However, I removed all the knobs again, cleaned the five fingerplates (three on the receiver and two on the power supply) with Novus #2 and #1, and polished the front panels of both units with Novus #1.

I then replaced the baseplates on both units, and carefully scraped off the paint finish from the sides and rear aprons of both units in preparation for re-painting (photo, right)).

The original paint scraped off fairly easily as I do not think a primer had been used on the metal. Thankfully, the paint finish on the front panels appeared to be adhering well to the underlaying metal (aluminum).

I refinished the side panels and top covers of both units by applying a coat of metal spray primer (photo, left), and then two coats of colour-matched paint from a local paint store, applied with a small fine-texture sponge roller. The resultant appearance (photo below) is much better than it was originally and certainly looks like it belongs in an army-type setup.

Closure

Performance

The VRL 'package' (receiver and power supply, plus the mounting frame) is physically a rather large set up, and quite weighty too at 103.5lbs. On paper, the circuit should deliver a better-performing receiver, sporting two RF and three IF stages, amplified dual AGC lines with adjustable 'hang' time, noise suppressor, etc. but it falls a little

Joining the CVRS

Member Benefits: These are many, but here are some of the obvious ones:

Networking: Opportunity to network with like-minded folks—radio restorers, collectors, repairers, historians etc.—by joining local chapters, attending member-organized swap-meets and local meetings to chin-wag about radio-related topics.
Schematic Service: The CVRS offers a free copy service for Radio College of Canada (RCC) schematics to members currently in good standing. A pdf file of an RCC schematic can be obtained by emailing schematics@canadianvintageradio.com with the manufacturer and model number of a radio made in Canada between 1927 and 1980. If possible, please provide an estimated year of manufacture or the latest year of patent registration (usually given on the model tag). Members wishing a printed copy of a schematic should send a SASE (self-addressed, stamped envelope, Canadian postage) to the CVRS Membership address given below. If you wish to make sure that an RCC schematic for your radio exists before sending a SASE, send an email to the above email address.
Website: The CVRS website provides updated meeting information, membership and contact information, as well as access to radio-related information and links of interest to Members.
Forum: An active forum is available to members and non-members, however, enhanced functionality is being considered for members.
Newsletters: For prior calendar years, electronic copies of 'Canadian Vintage Radios' (the Newsletter) can be accessed (where available) and downloaded by current members in good standing. Passwords to access this section will be sent annually to those members taking out membership in the current year.

Payment of Dues: Members will receive five 'pdf' copies of 'Canadian Vintage Radios' per year of their paid-up subscription. Members will be notified when the latest copy of the Newsletter is available for download from the CVRS website.

Paying by Cheque or Money Order: If you pay by cheque or money order, the annual dues are $20. **Subscriptions for printed copies of the Newsletter are no longer available.** Please send a cheque or money order for the appropriate amount ($20) to: **CVRS Membership, 4757 London Green, Delta, BC, V4K 4X1, Canada.** If you are a new member, please include the following information for our member database: name, address, phone number(s), email address, occupation, any special areas of interest in vintage radio or related topics.

Paying Online: Two options exist for you to submit dues electronically:

PayPal
1. You may submit your dues by using the SEND MONEY tab. Select the "Personal" and "Other" transfer options since you are not purchasing a commodity or service. Enter the CVRS membership email address (membership@canadianvintageradio.com) as the address for PayPal to send the transfer notification.
2. If you are a new member, fill out and email the information requested above.

Interac Email Transfer:
1. Log on to your online bank account, go to pay bills and transfer funds, select Interac Email transfer, enter the amount and email to membership@canadianvintageradio.com.
2. When you enter the amount and email address, it will ask you to suggest a question and answer. Just make a question up and submit it and the answer,
3. After you have completed the transaction, email the question and answer by separate email to membership@canadianvintageradio.com. If you are a new member include the member information requested above.

short in its implementation for accurate tuning (see Postscript, below).

The receiver's frequency stability is good, with a short warm-up time and low drift thereafter – I suspect this is mainly due to the separate power supply chassis on which most of the heat-generating components are located, eg. rectifier tube, power resistors and power transformer, and that the power supply would be mounted above the receiver on the frame, dissipating heat upwards, away from the receiver unit. The location of the tuned circuits under the chassis and in a well-screened box will also contribute to the overall frequency stability. Allowing around 3 hours warm-up with all the covers fitted, the air above the power supply chassis measured 43C (110F), whereas that in the receiver chassis measured 32C (90F) – photo, right, when the ambient air temperature measured 22C (73F).

The VRL's performance is on par with several other communications receivers of its era that were intended for military use, but, in my opinion, is not really in the same league as several

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others, eg. the RCA AR-88, both in terms of overall build quality and performance (similar weight though!).

Ergonomics

Although its large 'halfmoon' dial is remarkably accurate considering the limited tracking adjustments in the RF stages, by covering 1.4MHz to 28MHz in only 4 bands without electrical bandspreading results in cramped scales at the higher frequencies, although the 3-frequency calibrator does help in this regard. Also, the tuning dial is a very dull affair visually, with no illumination and a darkish background with little contrast to the black lettering, making reading of the dial difficult under certain lighting conditions and viewing angles. Worse, the top edge of the metal dial escutcheon completely obscures part of the Band 'A' scale between 2.0MHz and 2.3MHz when viewing the dial straight on (photo, right) – a ridiculous flaw in the mechanical design.

The front panel layout works reasonably well for the operator, though I would have preferred that the crystal filter controls were located on the right side of the panel, but this would have meant a major rearrangement of the circuit layout on the chassis. Also, the interconnect between the two units should have been made using Jones plugs (or similar) to avoid errors in connecting the units, especially if the original umbilical was not available or had been damaged, as well as to facilitate servicing.

Postscript

Once the base covers had been re-fitted to the receiver and power supply (before re-painting the side panels and covers), I repeated the semi-quantitative sensitivity tests, this time with an HP8640B signal generator connected to the BNC socket on the receiver rear apron, ie. a fully-screened connection. I left the calibrator connected to the 'A1' antenna terminal via a 5pF silver mica capacitor, so there could have been minor noise pickup from the short wire to the calibrator, however, I felt that as this would be a typical connection left in place while the receiver was in use, this should remain in place. I obtained the following results for a minimum audibly-discernable signal above noise:

	AM	CW
Band 'A' (2.2MHz):	<0.25uV	<0.06uV
Band 'B' (4.5MHz):	<0.15uV	<0.03uV (photo, below, shows the HP8640B set for this output level)
Band 'C' (9.5MHz):	<0.15uV	<0.04uV
Band 'D' (19.0MHz):	<0.25uV	<0.06uV

These figures are a considerable improvement to those obtained without the covers in place (see table in Part 3), even with the impedance mismatch between the signal generator and the receiver input circuit, and are likely a better representation of those that could be expected in normal use of the receiver. As such, my opinion of the receiver performance has been upgraded, but my other thoughts still stand, especially regarding build quality and ergonomics, in particular the tuning dial.

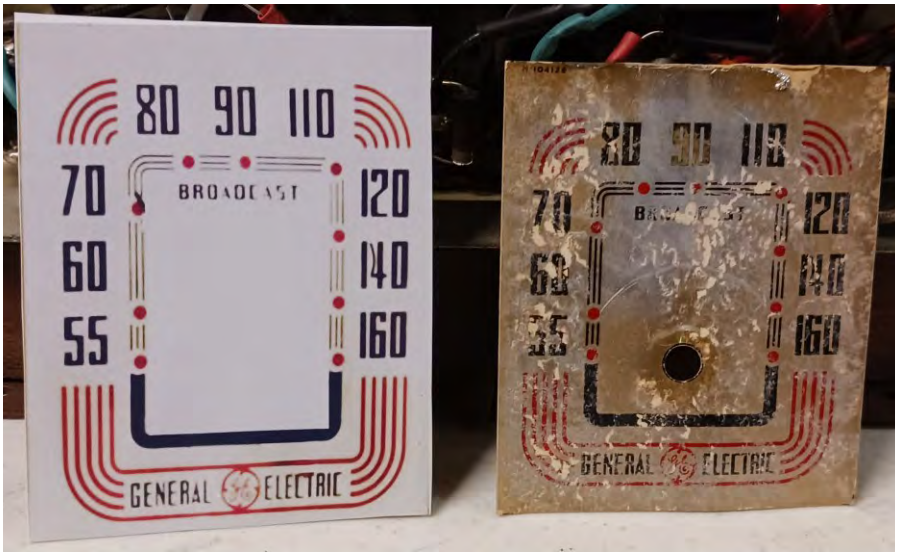
A brief demo of the receiver operating on the upper part of the Broadcast band after restoration can be viewed here.

Some Sets I Have Been Working On —Dave Chamberlain

I have been working on a Philips PH105M, a General Electric Model JK51 (aka RCA Master Nipper KM51), and a Northern Electric Model 5200 Baby Champ. As I have only been able to squeeze out a few minutes a week this last couple of months repairs are at a snails pace.

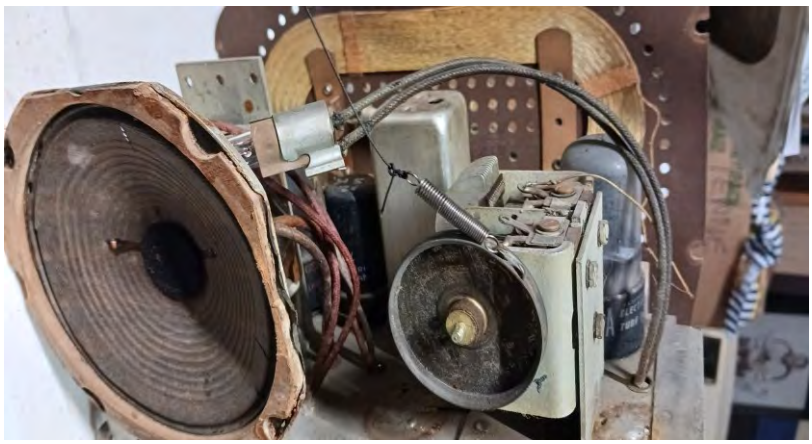
Each of these radios have also had an issue or two that have bogged me down. The General Electric JK51 had to be completely stripped of a layer of off-white spray paint (four photos, right).

It took weeks of soaking the cabinet in the laundry tub to clean it up(!), and I made my first attempt at replacing a paper dial face (photo, below).



I restrung the dial on this set (photos, left and below), and did it without the use of a string diagram.

Needless to say things have been busy here but not in a way I can disclose. I am hoping to squeeze out a bit more time for another Issue.



Cont. from Page 1 As well as many published article, Jerry has developed and is the Webmaster for an extensive and informative website, specializing in HMCS communications and, in particular, products of the Canadian Marconi Company (CMC), as well as several other topics of interest to Jerry — this website is a great historical and technical resource. Jerry's website can be found here: http://jproc.ca — why not check it out today!

The plaque itself (photo, page 1) reads as:

Antique Wireless Association
Houck Documentation Award 2025
Jerry Proc
For articles for the AWA Review and long-running website

Never one to 'rest on his laurels', Jerry has recently submitted a new article titled "*RCN Naval Radio Operations During WW2*" for publication in a future edition of the AWA Review.

Please join me in congratulating Jerry for the all the hard work and dedication to vintage radio that led to this recognition by the AWA.

WELL DONE JERRY!

Professor's Transmitter?—Ken Farrell

When I was about 18 back in the early 70s, I watched '*Gilligan's Island*' and saw the 'Professor' make a transmitter out of a radio.

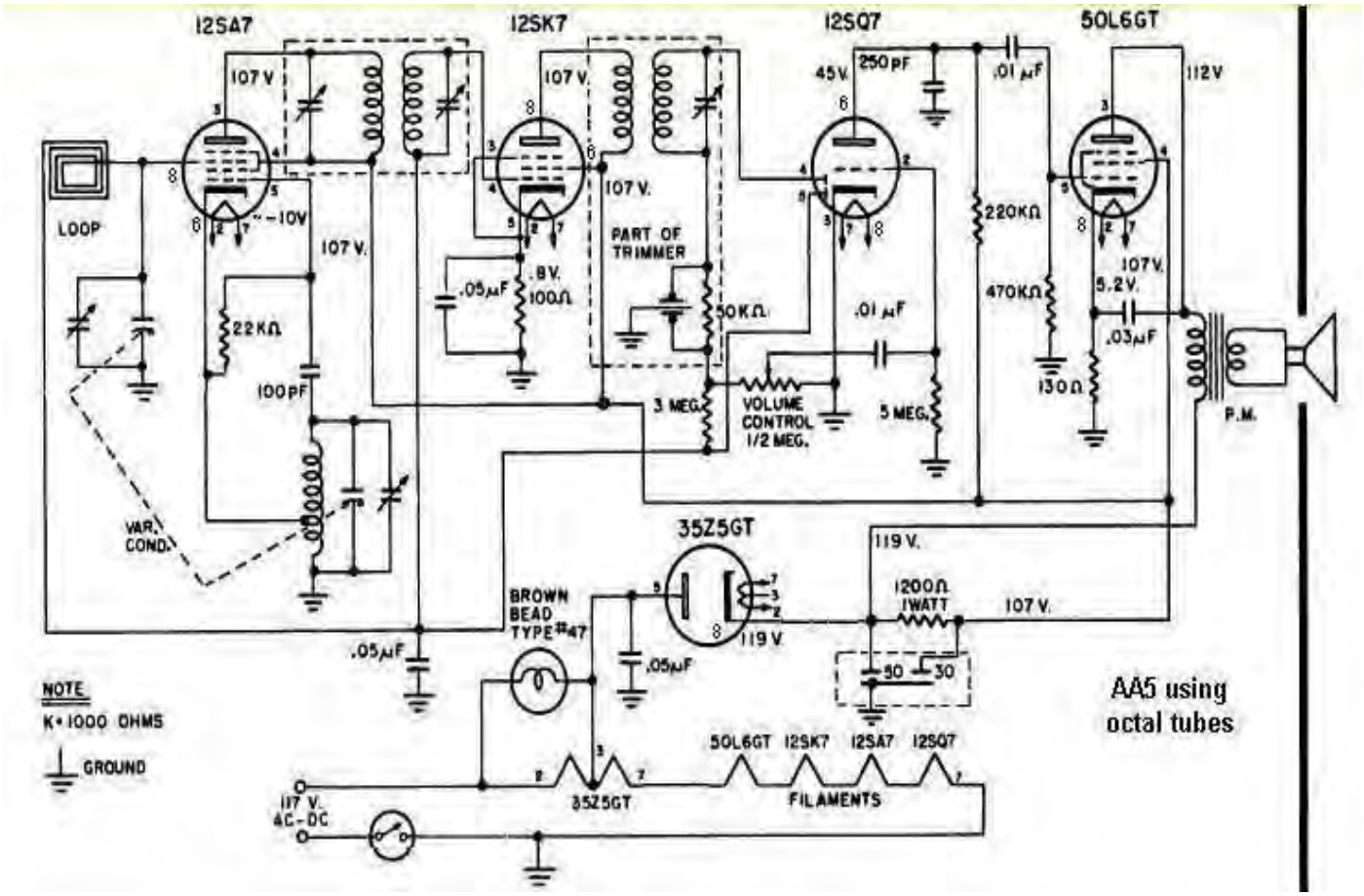
The Professor's radio was a Packard Bell model 8RT2 AM radio (photo, right), or Aiwa AR-851 8 transistor radio with an antenna rod and handle added. That got me wondering how easy it would be to do this.

I decided to try it with an old 'All American five' radio I had. My plan was to generate the RF signal with the 12SA7 Pentagrid convertor and the audio signal I would amplify with the 12SQ7 tube.

I knew about (AM) modulation types like grid modulation and plate modulation, and I knew the most efficient method would be plate modulation, but could not figure out how I could find a modulation transformer to match the impedances.

Note: If I were to do it now I am sure I would do it differently, but this was before the internet and more of a proof of concept than anything. I have since seen other authors make transmitters out of radios but as I said, I was not influenced by anyone else in this design.

The radio I had was very similar to this design but it has been probably fifty years since then so the exact method I used is a little foggy. Anyway, this is the basic concept:



Referring to the schematic, above, first the RF and method of modulation:

The 12SA7 convertor already has a Hartley tapped coil oscillator, so I only had to adjust the oscillator frequency to 1600KHz, as this frequency was not used in my area. The local oscillator is normally set to 455KHz above the incoming frequency of the station you are listening to, so this would be a dial setting of 1145KHz. I used a fixed value of capacitor across the tapped coil to resonate the coil at 1600KHz, and didn't use the variable capacitor.

I disconnected the IF transformer from between pins 3 and 4 of the 12SA7, and placed a small RF choke across those pins in order to turn the stage into a broadband RF amplifier. I fed the audio into pin 8 of the 12SA7, and that created a grid modulated transmitter when I connected a small antenna to the plate of the tube through a small value capacitor.

I really wanted to use an RF transformer to match the plate impedance to the antenna but didn't have anything suitable. I can't remember how I prevented any incoming signal or static at pin 8 from beating with my amplitude modulated signal—I might have just substituted a resistor for the loopstick antenna.

Next, the audio:

The audio for the modulation was fed in through a phone jack I installed on the chassis. It went to pin 2 of the 12SQ7 tube. The amplified audio was taken out of pin 5, the control grid of the 50L6, and fed back into pin 8 of the 12SA7 tube. I believe I disconnected the primary of the speaker transformer.

When I fed a microphone or record player into the input jack, I could receive my 'radio station' about a block away.

An interesting historical piece Ken, but folks, please 'do not try this at home'(!) – it is likely that this 'transmitter' was pushing out loads of harmonics and, if it could be received a block away, was also likely emitting too much power for a compliant low-power AM transmitter—Ed.

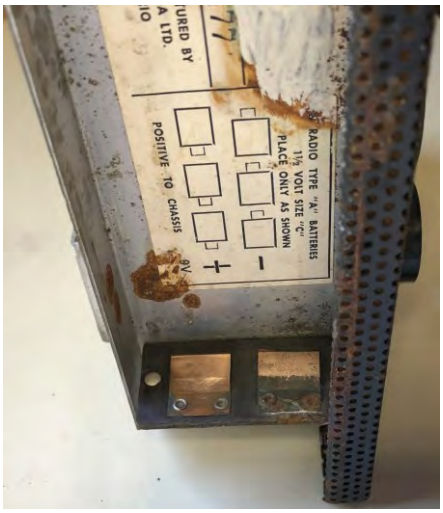
Restoring a 1959 Sparton 8Li 'Hiker' Transistor Portable

—John Coady

I recently purchased and refurbished this seemingly very rare Canadian-made transistor set for my collection and posted a report with many pictures and a video here.

The 8L1 'Hiker' was designed and manufactured by Sparton of Canada, Ltd. at London, ON. I am guessing it was introduced around 1959 from a Canadian newspaper of that year listing for an 8-transistor Sparton portable radio. In 1958, they offered a leather-bound 'Hiker' which only contained six transistors. In 1962, there are ads for the '8M1' version which is somewhat different. There are two examples of that model to be seen on-line, both are blue/white.

After seeing pictures of the only known example of this neatly styled 8L1 again not long ago with its tuned RF-amplifier stage, vernier-tuning, and 'point-to-point' hand-wired steel chassis having socketed transistors (photo, top of page 17), the 'bug' bit, and I decided to commence a serious and thorough search. I contacted radio friends in Canada and frequently viewed all known on-line sales sites. I also mentioned my interest to collector friend Russ Abrams who owned this set at that time and very thankfully just recently he offered it to me, thus ending the 'quest'. I received the very-well packed radio in June 2025, and with childish excitement, soon began this project.



While looking through this article, notice the interesting design differences between it and similar radios made elsewhere.

There was a thick coating of green oxidation residue on two of the three battery contacts. I used tiny pieces of Scotch Brite clamped into hemostats along with Windex to clean once the majority was carefully scraped off with the tip of a small screwdriver.

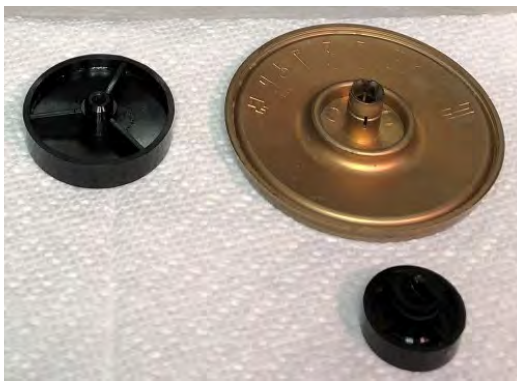
Someone had applied a tough, brushed-on white coating over corroded areas of battery compartment pieces, but the rust has come back through a bit—photo, left. It appears that they didn't remove the crusty residue beforehand. 91% IPA didn't affect it, so I left it alone for fear of causing other damage with stronger solvent. Someone had thankfully made a copy of the label on the compartment lid before applying the coating which covered portions of it. The notice read "DESIGNED AND MANUFACTURED IN CANADA BY SPARTON OF CANADA, LTD. AT LONDON".

There were deteriorating strips of fiberglass-strand reinforced tape folded over edges of the grille assembly (I don't know if this was factory applied or was added later). When the chassis was removed, the exposed fiberglass made removal an 'irritating', and messy job. I ended-up holding a vacuum cleaner nozzle nearby to capture the tiny fibers as it was peeled/scraped off. This tape had held moisture against the steel at some point and caused more rusting (photo, right).

The use of Canadian square-drive (Robertson) screws is interesting. I had read about this awhile back, but this is the first Canadian vintage product I've ever 'played with'. I remember when I first saw and bought that type of screw for home projects back in the '90's and thought it was a great new design at that time before many years later learning their history.

The cabinet colour was originally gray, but it had discoloured a bit and now has a 'goldish' hue, which looks great with the black grille and brass trim. I spent a couple of hours detail-cleaning the unusually thin and very lightweight vacuum-formed plastic (this had split from shrinkage in the upper right-hand corner), and its gold anodized aluminum handle (which has a very slight downward bend in top towards right side that needs future attention), and the tiny half-round brass-plated feet. A few paint and grease specks required removal with Q-Tips soaked in 91% IPA. The roughly-cut outer edge took the most time, as it had accumulated oily/dirty residue and I had to go over it many times with Q-Tips and 91% IPA before a final wipe-down using Windex. I was very careful around the labels so as not to cause harm. Because of it's Canadian historical significance and rarity, I did not use any polish on this radio's plastics.

There were only two of the three cover-retaining screws present when I received the radio. Even though Robertson type, the oval-head screws seem too large for the application. K.J. Mercley's later 8M1 uses common slotted pan-head sheet-metal screws. I messaged John Eng about his 8M1, but received no response. Maybe someday will find what type were originally used?



I then carefully detail-cleaned the knobs, being especially gentle to reverse-painting behind inner tuning knob. I used 'Blue Coral' car-wash solution and old soft toothbrushes. The knob's bright finish were a bit discoloured, so I waxed them with 'Mothers California Gold' carnauba paste formula—photo, above right. I noticed that "PLASTIC-WARE N.Y.C." is moulded inside the rear of the tuning knob (photo, left).

I spent a couple of hours detail-cleaning the grille assembly after carefully removing the trim strip which was held into place with 'speed-nuts'. Several baked-on grease spots required much firm rubbing using 'Go-Jo' hand cleaner and Q-Tips to remove from paint surfaces. The backside of the inner panel had quite a bit of battery-leakage corrosion and I had to vigorously and carefully use a stainless-steel brush to remove this. After cleaning, there were still quite a few rusty areas on the inner panel behind the grille which showed through, so I very carefully separated the two using a thin, wide-blade putty knife to gently bend out the edges. This made me think of automotive-type construction - a very poor design, as liquids that splashed onto the grille could be trapped between the two steel layers and cause rust where the paint film is weak or damaged (which is exactly what happened here). I was sure thankful it hadn't been spot-welded together! I used 'Scotch Brite' under running water to remove rusty patches on the grille side and edges of the inner steel panel which required a lot of scrubbing. I also cleaned the inside surface of grille thoroughly with dishwashing detergent solution.

I then wiped down the inner panel a few times with acetone in preparation for painting. First, I securely taped it to the top of an empty oatmeal container and placed a weight inside for stability. I gave it three good coats of 'Krylon Fusion' satin black and let it dry for almost two weeks to hopefully ensure full cure (photo, right). I temporarily placed blue painter's tape on the edges of the grille to prevent scratching the new paint during re-installation. Once together, I removed the tape, and very carefully, re-bent the grille edges over the panel flanges using a hammer and small piece of plastic to secure it. A few tiny paint specks remained on the grille which had to be very carefully scraped off with tip of small screwdriver without harming the finish. I carefully removed any residue using Q-Tips and 91% IPA, then buffed out the resulting dullness by vigorously rubbing with soft cotton cloth.

I can understand why not many of these radios survived with the fragile plastic cabinet and tendency of the steel

cosmetics to rust!

Next, I very gently cleaned the thick steel name/trim strip, this being well-worn and having somewhat chipped painted-on graphics. It appears to be just a piece of 3/8" wide, 3/32" thick steel bar stock with two steel pins spot-welded in place—there was lots of steel used in this set! With the oxidised/dirty and discoloured remaining cracked/wrinkled paint, I thought it would be nearly impossible for me to touch it up properly, so I decided to leave it original, and carefully wrap it up and save it in a zip-loc bag.

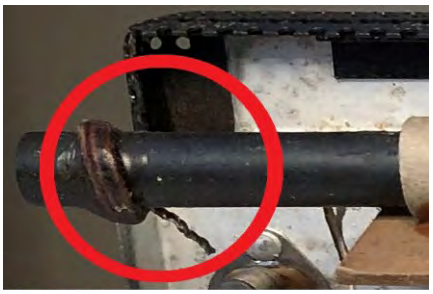
Making a new piece was a challenge, but after much thought, I decided to use a strip of sturdy black plastic of the correct thickness, cut from scrap saved off an old TV set cabinet. I measured it precisely, and drilled two holes for 2-56 flat-head screws which were to be used for the mounting pins. I very carefully countersunk holes so the screw heads would be flush beneath the label. I scanned the original trim-strip and spent many hours cleaning up the graphics in Microsoft 'Paint' since I don't have any special software. Much of this was 'pixel by pixel' to get a near-original appearance. I sampled a small bright spot of the original gold paint to obtain the background color, again so it would hopefully look somewhat original. Once the graphics were restored, I inspected it carefully and ensured sizing of the image was correct. Since they were to be used on a wrap-around label, I added a background colour area to both top and bottom. I originally wanted a quality vinyl label, but a local shop quoted $35 minimum, so that was a 'no-go' on that idea! My back-up plan was to laminate a quality colour laser-printer paper image, so I went forward on this. I tried a self-serve copier/printer at Office Depot, but it wouldn't recognize the file's image size info and printed it full-page. When I told the clerk, she kindly said she'd print it free on their commercial laser printer, and the quality and colour rendition were noticeably superior and the image size was perfect (photo, right).

While there, I purchased a small package of 3M Scotch self-seal laminating sheets. I had embedded three images in a document to have some spares, so I cut out one slightly oversize and laminated it. It looked great, so I added Grafix permanent double-sided adhesive film to the back, took careful measurements to center the graphics on the strip, and marked near the edges of any excess material. After a final cleaning of the plastic strip surfaces with 91% IPA, I peeled off the backing and very carefully positioned the strip with the installed screws in place, and firmly rubbed the new label with soft cloth for the adhesive to bond. I then carefully and firmly rolled the label upper and lower sections over the edges of the strip, and towards the back surface, carefully notching material to clear the screws. I pushed the material tightly over the back and then down to finish, trimming excess super-carefully using a new razor blade. I was very thankful that it turned out so well! - the photo, above shows the original and the reproduction (top) for comparison.

Next, I detail-cleaned the chassis with Q-Tips and Windex (photo, right). The set appears very well-made with quality transistor sockets, and is heavy for its size. I very gently cleaned the dust off the speaker cone with a piece of soft cotton cloth and extremely careful use of a vacuum nozzle [*yes, very carefully—I once had an accident doing that…! Ed.*]. Again, because of its rarity and historical significance, I decided to carefully de-solder and disconnect one lead of the original electrolytic capacitors and leave them in place if new parts were required. However, I was sur-

prised to discover that all of them tested good with an LCR meter. I used clip-leads to temporarily compare the effect of new electrolytics in each circuit on performance/sound and there was no noticeable difference, so I reconnected and re-soldered the leads of original parts. I was surprised at the noticeably higher melting point of the solder used. De-soldering with a Hakko iron was a bit more difficult, and I had to adjust the iron to 700° F for it to flow properly-maybe a higher tin content solder was used?

I applied power and the radio played, but at low volume. The volume control itself worked perfectly, and with no noise. At maximum position, the audio distorted though the level was much lower than expected. However, when power was applied the next morning, there was no sound at all and current draw quickly rose to over an Amp(!). One of the output transistors had become very hot, so after it cooled I placed it in a transistor tester. I found that it had a very high leakage current and no gain. The other of the pair tested fine. With both output transistors removed from the chassis (photo, right), I measured all resistances in the circuit and all were fine. I installed a matched pair of NOS Russian PNP transistors which were given to me, and audio was then very good with plenty of volume. Next, I installed a good set of output transistors from a Zenith parts chassis for comparison. There was no noticeable difference, so I decided to use the Russian parts.



I checked the IF alignment by ear with a weak signal, and they were very nearly spot-on. I thought the way that they tuned the ferrite-rod antenna was very interesting: by adjusting a few shorted movable turns located at the end of the rod—circled on the photo, above, left (termed a 'loop padder' on the schematic).

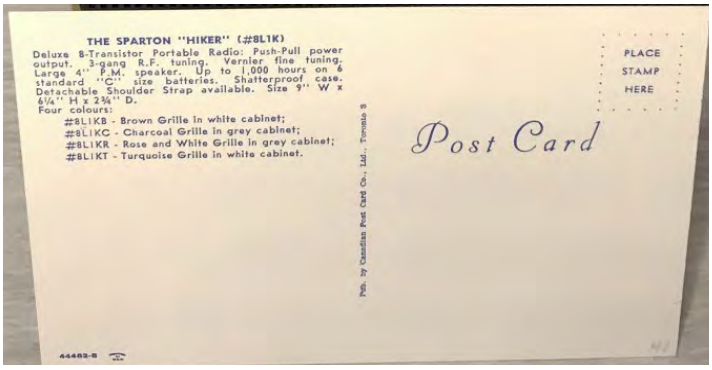
A small tweak of the 'ANT' trimmer made a significant improvement in performance across the entire band—the set now had excellent sensitivity and selectivity!

Once the cabinet was back on the chassis (photo, right), the sound quality was fantastic for an early transistor set, though it is very heavy with the 6 'C' cells installed. The silky-smooth, easy, and precise vernier tuning, along with the large protruding tuning knob, makes this a great DX radio. This set has quickly become one of my top favourites, and I had to do the 'radio shuffle' to give it a prominent and easily-accessible spot in one of my display cabi-

Cont. from Page 3

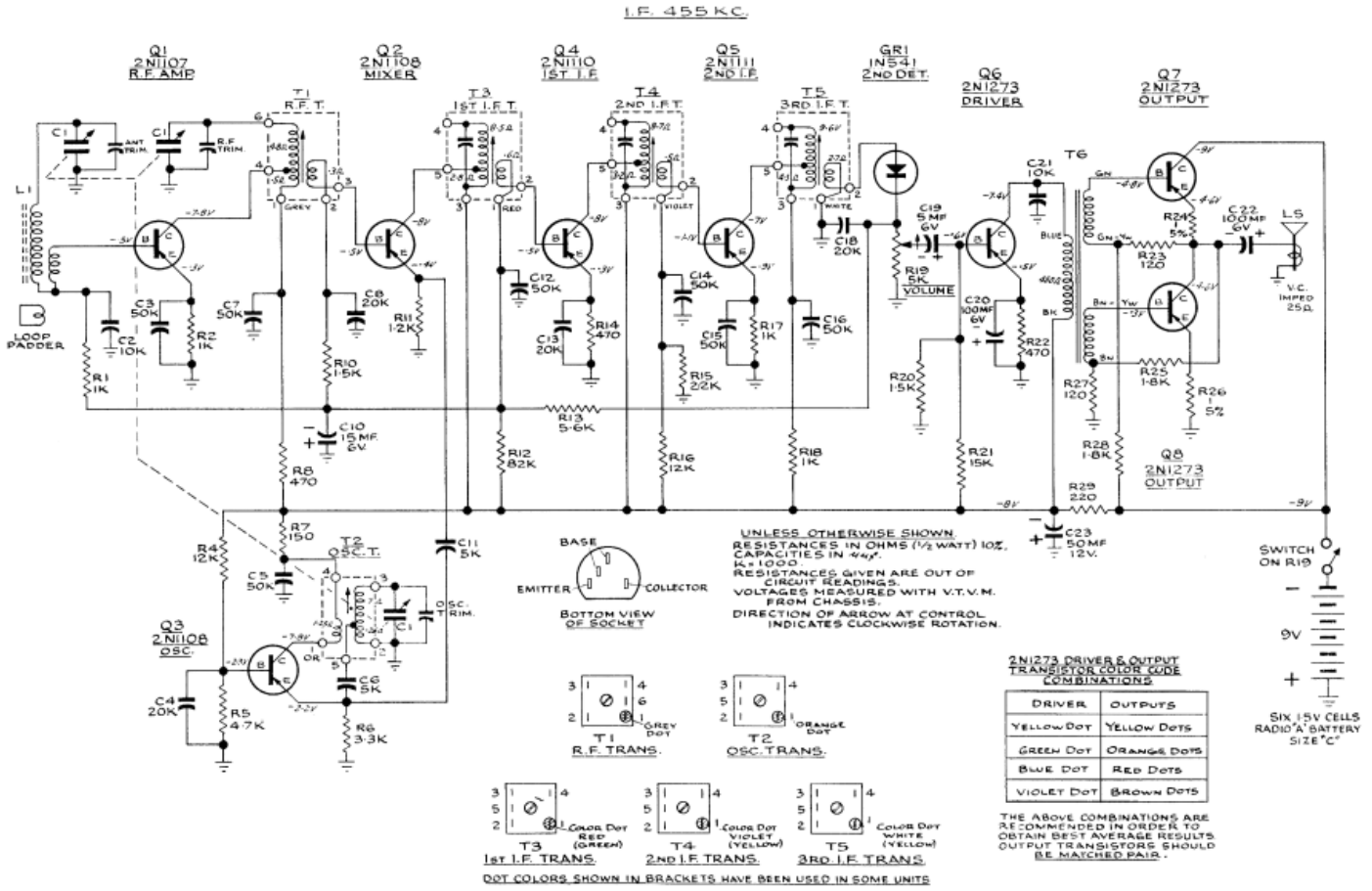
nets. Sparton of Canada definitely had a winner with this model! Along with the cosmetic weaknesses mentioned earlier, perhaps they were simply 'used to death'? This is the only example of this model that I'm aware of, so please let me know if you know of any other or have information about it!

I noticed that when I laid the radio on its back to take a photo of its underside that I'd forgotten to polish the two left-side brass feet which were heavily oxidized from battery leakage. So, I spent a while with Q-Tips and Peek polish making them presentable. I also notice the neat Maple Leaf emblem and 'Made in Canada' label on base of the cabinet (photo, above).



Before my search for this radio began, I had found an advertising postcard for this model on eBay. I saved the listing pictures as I didn't want to spend the almost $20 plus shipping for it, but after buying the radio it was still available so I decided to get it… the front of the postcard can be seen on at the top of page 14, and the rear is shown in the photo, right.

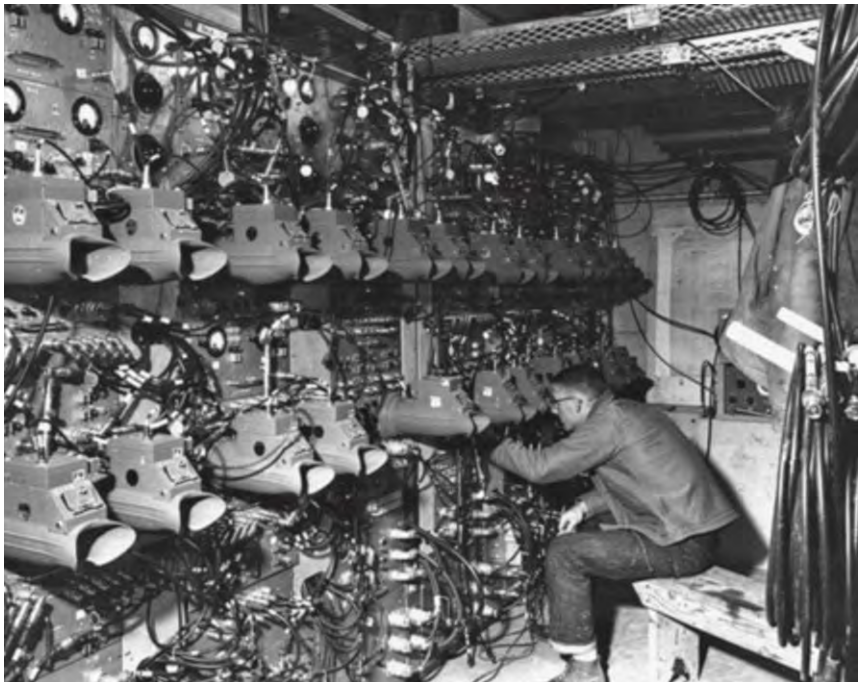
A schematic of the set is shown below, a view of the topside of the chassis and of the restored set are shown



below. And finally, a video of the finished radio playing can be viewed here, and if anyone is familiar with this model and has some information on it, please contact the author at xrhonda91@gmail.com—thanks!

Radio—Caption Competition— Eamonn Tork

Another version of our 'Radio Caption' competition, this time with saucy/Christmassy themes — if you would like to enter, please send suggestions here. A couple of examples to bring a sparkle to your eyes...



- Bitten by the amusement arcade bug at an early age, Ralph had devoted most of his spare time building the ultimate 'What the Butler Saw' machine in his basement. The level of sophistication was incredible given the 1950's technology he used. Back in the day, he was very popular with his friends, given his machine could be used by up to 20 people at a time. However, as technology progressed, and his friends grew up, sadly he became a recluse, unable to admit to himself the project had been a complete waste of time and money...

- A rare photo of the Santa tracking radar used by NORAD in the 1950's—located in a well-insulated cabin on the (then) 'DEW Line' in Canadas far north. Here, the operator, Ralph, spent hours each December 24 peering into the radar screens to catch the first glimpse of Rudolph's red nose and Santas packed sleigh. Personally, he was hoping Santa would bring him a comfy chair...

WARNING and DISCLAIMER: Vintage radios and other older electronic equipment were not manufactured to meet modern-day safety standards. These radios (especially AC/DC radios) and equipment can present electrical and other safety hazards, eg. exposed high voltage/hot parts, and materials health and safety hazards, eg. asbestos, PCBs, cadmium, in their original form. Any modifications to, repairs of, work on, or operation/use can pose a significant risk of injury, even death. Also, these units may have been/are home to rodents, spiders and other pests that can cause harm, or leave residues that can be harmful to health. Readers undertake work on such radios or other electronic equipment entirely at their own risk and must take appropriate mitigating actions, including use of personal protective equipment (PPE), eg. eye protection, dust mask, nitrile gloves. The CVRS and authors of articles appearing in 'Canadian Vintage Radios' hereby waive any responsibility or liability whatsoever associated with anyone working on, modifying, or operating any piece of electronic equipment or otherwise making use of any information contained within this publication or available elsewhere from the CVRS, including but not limited to, the CVRS website.

And finally.....

We encourage all CVRS members to submit articles or letters that relate to vintage radios or associated items. Please send any editorial mail to:

Gerry O'Hara
226 Dallas Road
Victoria
V8V 1A5
Canada
Email: gerrycohara@gmail.com
Tel. 604-671-6062