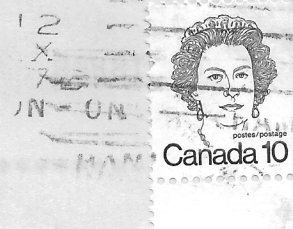


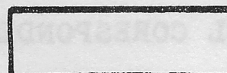
THE HAMILTON AMATEUR

HAMILTON AMATEUR RADIO CLUB INC.
P.O. BOX 253
HAMILTON, ONTARIO
L8N 3T8

FIRST
CLASS



Gerald Goldberg VE3 HLI
17 Cottrill
Hamilton Ontario
L8S 3L5





HAMILTON AMATEUR RADIO CLUB INC.

CLUB STATION...VE3DC...VE3RCB...

2 METER REPEATER...VE3DRW... INPUT: 146.160 MHz
OUTPUT: 146.760 MHz

1976 OFFICERS and DIRECTORS

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<u>1ST VICE-PRESIDENT</u>	PETE C. WALTON VE3FEZ	421 LODOR ST. ANCASTER L9G 2Z9	648-6872
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RED CROSS STN LICENCEE (VE3RCB)	VE3FHQ	GLENN A. GIBSON	385-2786
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MEMBERSHIP YEAR JANUARY 1ST to the following
DECEMBER 31ST

MEMBERSHIP FEES \$6.00 per year (all classifications)

PLEASE ADDRESS ALL CORRESPONDENCE TO THE SECRETARY AT - P.O. BOX 253
HAMILTON L8N 3T8

***** SEPTEMBER MEETING PROGRAM *****

Date: September 15/76
 Time: 8:00 P.M.
 Place: Chedoke Continuing Care Centre
 Topic: Fred Hammond VE3HC from Guelph will give a slide presentation
 and talk on Vintage Radios.

F EDITOR'S COMMENTS

Well, here we go again, into another term of meetings, classes, thinking about the summer holidays past, looking forward to the Xmas break and all the time we shall have, to finally FINISH that project we started on...how long ago was it!!

As usual, the executive does all in its power to provide interesting and enlightening meetings, along with a "digest-able" bulletin. But all can not be done alone, New and enthusiastic blood is needed. So if you would like to assist in one of the areas listed inside the front cover under "Committee Chairman", please contact the appropriate person.

Along the lines of attracting new members, it should be noted that many are receiving this bulletin and shall receive them until Dec. only, in order for you to evaluate our club, thru its activities and meetings. These complimentary copies are being sent to all interested persons in the Greater Hamilton & Burlington areas. At the back of the bulletin, a registration form can be found, and should accompany your dues to the Treasurer to avoid confusion and give us needed info; PLEASE PRINT, a membership card shall be issued as a receipt.

Remember, our Fiscal Year runs from Jan. 1 - Dec. 31 and applies to ALL Memberships, so please fill out the form and send in your New or Renewals NOW.

Let's all dig in and help make H.A.R.C. another one of the GREAT Ham clubs in the area.

73's Norm Freidin VE3CZI

COMING EVENTS

Sept. 18/76 - Cystic Fibrosis Shine-A-Rama sponsored by McMaster Students, with Amateur Radio providing communications. Please see Glenn VE3FHQ if interested in assisting.
 Sept. 18/76 - Hambarg Hamfest, Hamburg, N.Y. (just South of Buffalo)
 Oct. 22-24/76 - R.S.O. Convention, Holiday Inn - Don Valley at Eglington Ave. E. Toronto, Ont.

A.R.E.C. NEWS

Hope one and all had a good summer, and by now, most of us are back to normal operation.

If the mobile gear has been neglected, now is the time to get it back in order, for fall and winter activities.

Current Events:

Sept. 11/76 Display at Westinghouse Picnic, Ancaster Fair Grounds,
1 - 4 P.M. sponsored by Hamilton A.R.C.

Sept. 18/76 Again we will be giving communications to McMaster University students, in the "Shinerama" being conducted for the Cystic Fibrosis Foundation, Hamilton area to raise funds for research. This is a worthy cause. Thanks to all who have volunteered to assist in the morning (8:30 to 1 PM) and afternoon (1 - 5:30 PM) shift.

Please monitor the repeater and if extra mobiles are requested, your response and assistance would be appreciated.

If you come upon an emergency situation where communications are needed, please call me, or one of our local AREC Assistant Emergency Co-Ordinators as follows: VE3BOY, EHL, DSP, ARX, ANW, FLZ, & VE3GFE.

73's Glenn Gibson EC

VE3FHQ 385-2786

AMATEUR RADIO CODE AND THEORY CLASSES for Hamilton Area.Amateur Class

Sept. 27, Monday, at Sherwood Heights for East Mountain. Dave VE3JL Instructor.

Sept. 28, Tuesday, at Sir John A. MacDonald School on York St. Glen VE3DSP Instructor

Classes run 7 - 10 P.M. 20 sessions \$20.00 per person
Advance Registration during the week of Sept. 20.

Advanced Amateur Class

Sept. 30, Thursday at Sir John A. MacDonald School on York St. This is an informal type class, and would even be a good refresher for ~~xxx~~ those "Advanced Amateurs" who need it. 7 - 10 P.M. 20 sessions \$20.00 each.

QSY GROUP

Although this group is no longer existing, Glen VE3DSP has mentioned that a Trouble-shooting meeting could possibly be arranged for those having technical problems with their QSY Channelizers. Please contact Glen VE3DSP for further information, and if the numbers warrant, a meeting could possibly be arranged.

THE PRESIDENTS PAGE

Well, the long busy summer is over and I guess it is time to start thinking about erecting massive antenna arrays. I guess that still has to wait a couple of months until the Wx gets really nasty and there is a couple of feet of the white stuff on the ground. Hi! It really has been a busy summer and judging by the number of portable and mobile signals that I have heard everyone had a good holiday time.

Ham Radio activity did not stop during the summer, however, as there were a few interesting and well attended events. The 2nd annual Ontario Hamfest was hosted by the Burlington Amateur Radio Club and it was a resounding success. Frank still is being kidded about winning the major prize again. I would think that it was rigged except for the fact that it was drawn by none other than Renza Robinson, XYL of Fred, our infamous CARF Ontario Director. I heard the HW-202 Portable on the air, and seems to work well. Ask Frank about his refrigerator antenna.

Other activity was noted in the VHF regions and I understand that John VE3DTQ, Steve VE3HBX and Dan VE3HLC are active on both Oscar 6 and Oscar 7 with some old two meter Heath AM/CW apparatus. They have a very simple antenna system and seems to be working well on both satellites. Listen on 10 meters some night to the Oscar downlink and enjoy hearing Steve and his gang. Still in the planning stages, I understand that my brother is ready to go on 220 MHz and he has a couple of 29B sets operational and on frequency.

Stan VE3GFE did a good job in helping Norm VE3CZI with the Swap Shop which proved popular throughout the summer layoff. Norm & Stan do a lot of work on that and I hope that the members appreciate it.

I understand that while Stan was on holidays this summer, he visited Israel. I don't know if it is true, but I heard that he was teaching the Israeli Gov't how to negotiate loans with the United States. What a horse trader!!

Activities for this fall in HARC include interesting speakers, and I understand that the first one is going to be Fred Hammond VE3HC for our Sept. meeting. Better come early if you want a good seat for that meeting, because I think the house will be packed. The executive is also studying the feasibility of having facilities at the Brow, that would enable members to make their own printed circuit boards at low cost. This would be high quality photographic process boards, but at the present time, we are only in the planning stage.

THE PRESIDENTS PAGE CONT'D

A new addition has been added to the Burlington Repeater VE3RSB during the summer. It is an Autopatch and it seems to work well. I hope Heathkit will hurry up and send me the microphone-touch tone encoder which I ordered in July. I understand that this proved to be such a popular item, that they sold out in the first few days after receiving shipment. I am told that the club is NOT supporting this project and that donations to pay the phone bill for the line would be appreciated from the autopatch users. See Hugh VE3AYR if you are interested in this.

Fred, VE3GCP plans an open meeting to discuss the proposed DOC licensing changes, and he will have more to say about that. This is ~~xx~~ your hobby, fellows, so let's do something about these proposals before it is too late. CARF was instrumental in getting the deadline for comment extended over the summer months, so lets have some comment.

I am running out of paper, but I haven't run out of things to say. The Editor won't give me any more space, so I guess this will have to do. See you at the September meeting and I hope we have an even more active group than we have had in the past.

73's

Dave VE3FLZ Pres.

On the first night of an Amateur Radio Code & Theory Class, the instructor asked the students to tell the class why they were taking the course. One women explained, " I have five children and so I've decided to channel my activity in another direction."

Here is Post Office supplied information relating to the number of copies mailed of various well-known Amateur Radio Magazines. From June 1975 through June 1976 the number of CQ mailed monthly to subscribers has dropped 10.5%. 73 Magazine has dropped 5.3%. Ham Radio is a big gainer, up 15.1%. QST Magazine increased 11.8%

(Credit: ARRL Newsletter)

Amateurs fighting court battles over municipal zoning by-laws insofar as antenna structures are concerned, may be helped financially through a pilot program recently authorized by the ARRL Board of Directors. Reimbursement may be authorized by our Gen. Counsel and League Gen. Mgr. for a Members out-of-pocket expenses, such as court filing fees (but not including lawyers fees) etc. Cdn. members can contact CRRL Counsel, B. Robert Benson, VE2VW, Suite 804, Dominion Square Building, Montreal, P.Q. Phone: 866-7851 (Credit: ARRL Newsletter)

Examining Co-Ax Jackets

This data, compiled by Ted, W8MO from Amphenol and Times Wire and Cable engineering information, should aid Amateurs in selecting co-ax cable to suit different situations.

The outer jacket on a coax cable has a lot to do with the useful life of the cable. There are several jacket materials used for available cables. Vinyl Class I is short lived and causes serious deterioration in a short time of the inner insulation around the centre conductor. Examples of cables using this jacket are RG-8/U, RG-58, RG-58A, RG-58B, RG-59 and RG-59A. These should only be used for short term projects.

The problem with Class I jackets is that to keep the plastic flexible a substance called plastisizer or extender is used. As soon as the cable is made up, this extender starts to migrate through the shield into the polyethylene insulation around the centre conductor. The polyethylene is damaged and cable losses go up. After a couple of years the increased losses are readily measurable.

The Class IIa jacket used on the newer cable is a rugged, long-life material that is abrasion-proof, not affected by the sun, and can be buried with expectations of a 10 or 20 year life. The jacket is non-contaminating, and the newer cables such as RG-213/U, which replaces RG-8/U, are standardized at 50 ohms impedance to match modern test and Lab. equipment. Cables using the Class IIa jacket are RG-213, RG-58C, RG-59B/U.

Theoretically, foamed coax will have less loss than solid dielectric cable. But no foamed cable is made with Class II jacket or to Mill-Spec as far as shielding is concerned. Furthermore, unless the foam is gas filled, moisture can ooze through the jacket and into the bubbles in the foam. Losses go up rapidly when this happens.

(The author recommends that Amateurs...) stick with late types of coax using Class IIa jackets and leave the foamed coax to TV types. Jacket details for coax may be checked in the cable makers' catalogues.

(Credit: T.C.A. via Bluewater and Sarnia Radio Club Bulletins)

.... It's hard to feel fit as a fiddle when you're shaped like a cello.

.... The horn of plenty is the one the guy behind you has on his car.

... Too many people are ready to carry the stool when the piano needs to be moved.

AMATEUR RADIO FRATERNITY REPORT

The past two months have seen much discussion over several subjects, but they were over shadowed by the new license proposal by the D.O.C.

One of the lesser noted subjects was the "Modifications of the Radio Act." as it pertains to AMATEUR RADIO. This was a project to modernize the regulations to include "up to date technology" such as satellites. When the D.O.C. asked the C.A.R.F. to tackle this job, a special committee of Amateurs was formed to review the "Act" and recommend changes, and include suggestions from interested Amateurs in their work. The final draft for presentation is now in the final stages. This large undertaking was headed by Art Stark VE3ZS of Ottawa, a retired D.O.C. man and a valued member of the C.A.R.F. advisory staff.

During the summer, CARF was proud to introduce the first copies of it's new teaching manual. The idea for the new manual has been considered for some time but came to a head when CARF was asked to supply guidelines for the revised D.O.C. Amateur Exam. Our Executive saw the opportunity of the production of the teaching manual, with the new exam format. Much time was spent with the D.O.C. when working on the book, and was finally named Canadian Amateur Radio Certificate Study Guide. It sells for \$5.00 and consideration is being given to supply bulk orders to clubs, as the book has received much acclaim across the country. The first printing is sold out but the second printing should be available by the time you read this article.

Work and planning for the World Administrative Radio Conference in 1979 is still proceeding and will again be our prime concern, when the priority of the license proposal has been taken care of.

In this issue, you will find a copy of a questionnaire regarding the new license proposal for and "Experimenter" and a "Novice" class of license. Basically, the Experimenter license calls for a technical exam with "no code" and allows operation above 50 MHz. Phone privileges on 80 thru 10 would be granted, with no further exam, after a preset length of time, if the licensee desired.

The Novice plan is basically a reduced exam of only 5 wpm code and will give CW privileges on 80, 40, 15, & 10 meters in specified 50 KHz sections, and would expire in two years.

In order to gather the feelings of the Amateurs of Canada, the CARF is soliciting comment from all interested parties and groups. This input will be used to draw a CARF opinion, which the D.O.C. has requested. The Radio Society of Ontario and ARRL are also gathering input for their comment. The most important thing to keep in mind is that the proposals are made by the D.O.C. and unless they are defeated now, will stand a good chance of becoming law. It is of prime importance, then, that you supply your opinion before October 31, 1976. It is not necessary to answer "yes" or "no" because CARF has agreed with D.O.C. that the proposals are open to alternative suggestions. Another point to note, is that, to abstain from giving your opinion, will indicate that you are not opposed to the proposal as is.

"The Canadian Amateur" will publish a copy of the proposal in the current issue, along with a questionnaire. We are also planning several open meetings at various clubs for September to discuss these proposals.

AMATEUR RADIO FRATERNITY REPORT CONT'D

At the end of May CARF held its annual executive meeting and in addition to the subjects and plans of the present time, elected its new executive and appointed the Chairman. The coming months look to be very hectic for those at CARF headquarters and we are anxious to obtain your input on matters with which we are concerned, as well as articles for T.C.A. magazine.

'73's

Fred J. Robinson VE3GCP
C.A.R.F. Ontario Director
27 E. 25th St.
Hamilton, Ont. L8V 2Z9

The summer sun may burn a bit
But you never have to shovel it. (Arnold H. Glasgow.)

APPROACH TO SYSTEMATIC TROUBLESHOOTING

by Charlie McBride VE3GYT

- 1) Approach the ailing instrument in a confident manner. This will give the often mistaken idea that you know something. This also will impress anyone who happens to be looking, and if the instrument would suddenly start working, you will be credited with its repair. If this step fails to work, proceed to step two.
- 2) Wave the schematic diagram at the instrument. This will make the instrument assume that you are at least familiar with the sources of knowledge. Should this fail to work, proceed to step three.
- 3) In a forcible manner, recite Ohm's Law to the instrument. Before taking this step, refer to the Radio Amateur's Handbook to assure your knowledge of Ohm's law. This will prove to the instrument beyond a shadow of a doubt that you do know something. This is a drastic step and should only be attempted after the first two are tried. Should this fail, proceed to step four.
- 4) Jar the instrument lightly. This may require 6 to 8 lbs pressure applied by the sole of your right shoe, or a 3 to 4 foot drop, preferably on a concrete floor. However, we must be very careful with this step, because while jarring is an approved method of repairing an instrument, we must not mar the floor. Again, this is a drastic step and should it fail to work, we are forced to step five.

APPROACH TO SYSTEMATIC TROUBLESHOOTING CONT'D

5) Add a new tube, switch or relay. This will prove to the instrument that you are familiar with the mechanical and electrical components. Also, this will give the instrument an added load to carry and will thereby increase your advantage. Should all these five steps fail, we must proceed to the most drastic step of all. This step is seldom needed and must be used only as a last resort.

6) DONAIS' LAW (Amended 1966)

When all else fails, read the Service Manual.

 --- Would you call a train sensitive because it has a tender behind?

--- Girl's underwear was once referred to as "unmentionables."

Now they wear nothing to speak of.

FREQUENCIES TO BE REVIEWED

OTTAWA (CP) - The communications department will review the system of frequency allocations for a big section of the congested public airwaves.

Radio spectrum use in the 406 to 960 MHz freq. band will be reviewed and possibly changed to meet a growing demand for radio services, the D.O.C. said.

The band is used for ultra high Freq. T.V. broadcasts on channels 14 to 83, land mobile and Amateur Radio, Paging Devices and other radio location systems, radio Astronomy and for some industrial and scientific uses.

The dept., which controls allocation of radio freqs, called for submissions from interested parties by Dec. 20 on possible changes in the high Freq. Band. -from Hamilton Spectator Aug. 21/76

HAM RADIO IS EXPENSIVE:

This misconception is popular in some quarters of the non-ham community. But the fact is, amateur radio is only as expensive as you make it. Every ham knows that many hams are people on limited incomes, such as the youngsters, the golden agers, the handicapped, to whom the return in enjoyment on a modest investment is priceless. Of course, the resale value of equipment is often overlooked. For example, a 10 year old transceiver is likely still on the air, and will bring back a greater percentage of its original cost than a 10 year old TV or a 10 year old car. These may be points to emphasize when a beginner asks you, "It's an expensive hobby, isn't it?"

(credit: Nortopics, Toronto, Ont.)

It's hard to be a meanie

To a girl in a bikini.

SOLDER

Solder is an alloy of tin and lead, and has a lower melting point than either of the two metals from which it is made. The melting point of pure tin is 450°F and that of pure lead is 621°F. If the two metals are mixed in the proportion of 63% tin and 37% lead, the alloy has a melting point of only 361°F and changes directly from the solid to the liquid state at this temperature. If the proportion of tin to lead is other than 63/37 the alloy starts to melt at 360°F but does not become completely liquid until a higher temperature is reached. The difference between the two temperatures is called the "Plastic Range" of solder.

Two proportions in common use are 50/50 and 60/40 (note that the percentage of tin is always given first). The 50/50 solder is completely solid at 360°F and completely liquid at 414°F, a plastic range of only 53°F. The 60/40 solder has a plastic range of only 9°F. The proportion of tin to lead not only governs the plastic range of the solder: It also determines the hardness and stress resistance of joints made with the solder.

Solder can be obtained in a variety of forms: block, bar, ribbon and wire. The most common form of solder used in electrical work is a hollow wire containing one or more cores of flux, the flux being deposited on the work as the solder melts. (Credit: Niagra Penn. ARC)

GUY ANCHORS AND GUYS, FOR GUYS (OR GALS) WHO GUY by John VE3COY

The latest ARRL Antenna Book covers tower erection pretty well. Among the types of anchors mentioned, is the screw-in anchor. Here are some further details.

Helix Screw Anchors can be obtained in diameters from 4 to 15 inches. Some are designed to be installed by hydraulic power tools and can be put to a depth of 100 feet or so, using 6 ft extensions. It is presumed that no ham will require this, unless the tower is in a marsh or swamp. The anchors designed for hand installation have a rod approx. 5 ft. long, and the hold strength in "average" soil is approx. as follows:

4 in dia. screw	-	holding strength	-	3000 lbs.
8 in dia. screw	-	"	"	- 6500 lbs.
15 in. dia. screw	-	"	"	- 20,000 lbs.

It should be noted that 2 or 3 feet above the screw part of the anchor should not be subject to seasonal wetting and drying or freezing and thawing. The anchor rod should be installed in line with the pull. If the anchor is installed at a 45 degree angle, multiply length of rod penetration by .707 for vertical depth. These anchors are re-claimable, so can be moved and reinstalled elsewhere.

GUY ANCHORS AND GUYS, CONT'D

Clothes line, even the heavy duty type, does not make good guy wire. Zinc coated steel strand guy wire is available in $\frac{1}{4}$ and $\frac{5}{16}$ in. diameters. $\frac{1}{4}$ inch, 7 strand has an allowable tension of 1950 lbs., while $\frac{5}{16}$, 7 strand, has an allowable tension of 3400 lbs. These should be good for most installations. Stronger guy is available, such as $\frac{5}{8}$ copper weld 19 strand, allowable tension, 11,400 lbs.

If the guy is to be "broken up", use compression or strain type insulators. These can be installed using "preformed grips", which are easily installed and look neat, or the guy can be "severed off" strand by strand. Serving the guy takes longer and removes some of the coating, but is cheaper and just about as strong, if properly done. It is easiest to install screw-in type anchors in the Spring, especially in clay type soil.

Line hardware suppliers can supply the anchors, guy wire, strain insulators, guy pre-formed grips, clamps, etc.

(Credit: TFM Bulletin)

WELCOME HOME

Hallicrafters, recently purchased by a CB firm, that is a "spinoff" of Radio Shack, has announced that it will be re-entering both the CB and Ham markets in the next few months. Those of us who remember the excellent quality of Ham gear that this company produced in the past, can only hope that they will resume with equal quality. Welcome back to the Ham Shack.

SHOCKING REVELATION

It doesn't take much current to injure or kill a human. As a matter of fact, only 200 ma. can cause cardiac arrest, severe burns and even death. While different people have different tolerance to electrical shock, the majority of people will experience effects as follows:

- 1 ma. - usually imperceptible
- 3 ma. - May have mild sensation
- 5 ma. - May feel pain, annoyance, or surprise.
- 9 ma. - Likely to freeze to electrical source; will suffer burns
- 30 to 200 ma. - Ventricular fibrillation, fainting, loss of muscle control and difficulty in breathing.

Over 200 ma. - Will suffer muscle contractions and cardiac arrest, usually resulting in death. (Credit: Squelch Tales)

SWAP SHOP: FOR SALE

- VE3CZI Norm 388-9813
- Solid State Mobile c/w GLB Synthesizer, similar to Motorola Motran.
45 watts O/P, Cables & control head \$400.00
- VE3HGZ Rocko 824-1157 (guelph)
- Hustler Mobile Antenna c/w Traps \$125
- VE3BNW Red 735-5398 (Welland)
- TR-4C c/w Noise Blanker built-in, A.C. Power Supply & MS-4 Spkr.
Ask. \$800.00
- VE3GVT Bill 527-7392
- FTDX-400 XCVR \$400.00
- VE3HVD John 545-4878
- SB-401 Tx \$300
- SB-220 Linear \$600 Asking
- VE3DJF Jeff 388-1107
- HR-10B Rx with matching DX-60 & HG-10 VFO plus crystal calibrator
\$150.00
- VE3CZN Rae 632-0344
Stark Sig. Generator \$60.00
- VE3KQ Chuck 444-2314 (T.O.)
- 6 meter Prog-Line Rigs, Mobile c/w access. \$20.00 for basic unit,
plus extra for access.
- VE3CCP Les 491-4450 (Toronto)
- G.E. Prog-Line 5 Freq. Xcvr, 2 separate Rx, 50 watts o/p \$150.00
- VE3HBA Barry 637-7521
- G.E. TPL Mobile 30 watts, 2 chan, c/w 3DRW & .52 Sx \$100
- VE3ABG Joe 221-0512 (Toronto)
- 12 VDC Power Supply, 15 Amp, Electronically Regulated. Prefer a
swap for QSY Channelizer kit or built-up.
- VE3BOH Ian 632-0557
- Dycomm 2 meter Amplifier, 10 Watts in - 40 Watts out \$75.00
- VE3DJF Jeff 388-1107
- Qty of rolls of Teletype Paper @ \$2.25 each.
- VE3FSI Ed 634-2520
- Heathkit Coax Antenna Switch \$10.00
- VE3HSF Gord 529-9876
- Drake R-4C Rcvr \$750.00
- VE3ISH Dennis 659-7402
- NCX-3 XCVR \$200 with Power Supply \$275.00
- VE3VK Fred 226-3265
- 12VDC 6 Amp Homebrew Regulated Power Supply \$60.00
- Qty of 2N44 Transistors \$1.50 ea.
- VE3FYR Fred 827-3253
- 5 Band Ts, Johnson Invader, 200 watts o/p c/w Electro-Voice
630 mike \$200.00
- VE3EXI Marty 632-7173
- Kenwood R-599 Rx and matching T-599 Tx with speaker \$750

SWAP SHOP CONT'D

- VE3CZI Norm 388-9813
 - 1 lb. rolls solder \$5.00 ea 1/2 lb. rolls solder \$2.50 ea
 - Epoxy Diode Bridges 200 PIV 10 - 15 Ampx \$1.50 ea.
 - 6 ft. Rack Cabinet c/w Heavy Duty Casters, O/H flourescent light and fan. Asking \$45.00 and Neg.
- VE3ALM Bill 632-7693
 - DT-23 Marconi Mobile 2 chan, 3DRW & 3RSB \$60.00
- VE3BNW Red 735-5398 (Welland)
 - Hallicrafters HT-37 Tx, SSB - CW - AM, c/w mike \$175
 - Heathkit SB-220 Linear \$600
- VE3HFJ Henry 822-5578 (Guelph)
 -DX-160 General Coverage Rcvr. 6 months old \$160.00
- CF3HM Tom 935-6668 (St. Catherines)
 - Tecraft converter, can be used with Gen. coverage Rx. Tunes from 27 - 31 MHz for 144 - 148 MHz asking \$20.00
 - Oscar Tx, 40 watts CW, 2 xtals supplied, 1 for Oscar 6, one for Oscar 7 \$60.00
 - Phillips Headset, Two earpieces with Hi-Z boom mike \$25.00
- VE3CJW Bob 662-7631
 - Hy-Gain 18AVT 5 Band Vertical \$90.00
- VE3FMB Art 632-3226
 - Heathkit IM-18 VTVM c/w RF Probe \$40.00
- VE3IAT Tony 824-1918 (Guelph)
 - Eddystone Gen Coverage Rcvr, Model 680X \$260.00
- VE3TL Bert 633-7020 (Tronto)
 - Drake W-4 In Line Wattmeter, Good to 30 MHz, 200 watt & 2KW Scales \$60.00
- VE3COO John 822-5737 (Mississauga)
 - Qty of 3, PYE Batham Portables, non-converted, 3 channels, 1 watt o/p, c/w nicads batterys & carrying case \$65.00 ea.
 - Qty of 3, Motorola Base Stations, one is 1 chan, two are 2 chan. 30 Watts o/p, ~~walkie~~ solid state Rx, Solid State Tx exciter with tube finals \$75.00 ea.
- VE3SP Ron 387-1536
 TR-2200G 2 meter Xcvr c/w .52 Sx \$225.00
 -Extra crystals available for above on following channels: DRW, RSB, KSR, & DRW reverse. \$8.00/pr
- VE3HBX Steve 648-6078
 - HY-Gain TH-3 Jr. Beam \$175.00
- SWL Tom 447-6761 (Toronto)
 - Motorola HT-220, 5 watt, 6 channel c/w P?L, carrying case, remote speaker-mike, charger, 2 antennas (telescoping & rubber ducky), tuning adapter. Asking \$650.00 or would like to horse trade.
- VE3TL Bert 633-7020 (Toronto)
 - Ultra-Com 25 Xcvr c/w Hustler 5/8 Antenna, 8 chan crystallled up for Toronto area \$300.00
- VE3ENH Bill
 - IC-230 xcvr c/w 40 watt power amplifier, Touch-Tone interface already installed, but no pad. 4 months old. Asking \$500.00

REGISTRATION FORM

The Hamilton Amateur Radio Club meets on the THIRD Weds of each month, except July and August, at the Chedoke Continuing Care Centre, in the Cafeteria, at 8:00 P.M.

The Bulletin is published every month except July and August. Deadline for copy is the first Monday of each month.

Requirements of membership: an interest in Amateur Radio

Dues are \$6.00 per year (all classifications) and run from January 1 to December 31 and includes use of the repeater VE3DRW

Please send in this form with your dues.

HAMILTON AMATEUR RADIO CLUB INC.
MEMBERSHIP APPLICATION FORM

NAME: _____ CALL: _____
ADDRESS: _____
CITY: _____ PROV: _____ POSTAL CODE: _____
PHONE: _____

Class of License: Amateur
 Advanced Amateur

- * - * - * - * - * - * - * - * - * - * - * - * - * - * - * - * - * - * -

New Member:
Renewal Membership:
Do you need a membership Certificate: YES NO
Do you need a Certificate Renewal Sticker: YES NO

SIGNED: _____ DATE: _____

COMMENT ON D.O.C. PROPOSAL FOR TWO NEW FORMS OF AMATEUR LICENSES

Dear Sirs:

I have read and understand the proposal as put forward by the D.O.C. regarding an EXPERIMENTORS AND NOVICE LICENSE, and my basic points of comment are as follows.

EXPERIMENTOR AMATEUR RADIO OPERATORS CERTIFICATE

- | | | |
|---|-----|----|
| A. Agree there is an need..... | YES | NO |
| B. Agree with terms proposed..... | YES | NO |
| C. Agree with frequencies proposed..... | YES | NO |
| D. Agree with "no code" idea..... | YES | NO |
| E. Would improve the amateur service..... | YES | NO |
| F. Would create problems (below)..... | YES | NO |

NOTES

NOVICE AMATEUR RADIO OPERATORS CERTIFICATE

- | | | |
|--|-----|----|
| A. Agree there is an need..... | YES | NO |
| B. Agree with terms proposed..... | YES | NO |
| C. Agree with frequencies proposed..... | YES | NO |
| D. Agree with " NO CODE" idea..... ^{5 wpm} | YES | NO |
| E. Would improve the amateur service..... | YES | NO |
| F. Would create problems (below)..... | YES | NO |

NOTES

I now hold C.B. License YES NO
 I now attend school YES NO AGE _____
 I have held an Amateur License for _____ YRS.

NAME _____ CALL _____ CITY _____

Solicited by Fred J. Robinson VE3GCP Ontario Director
 Canadian Amateur Radio Federation

Date _____