

Canadian Amateurs aid in Guatemala emergency

Canadian Amateurs, along with many operators from other countries, provided radio communication to earthquake stricken Guatemala last month until commercial circuits were restored.

Three operators who were prominent in this operation were Andy McLellan, VE1ASJ, Saint John; VE3GOS Heinz Stenzell, Ottawa; and Ron Belleville VE3AUM, the CARF Emergency Communication Committee chairman, also in Ottawa. Some hundreds of enquiries were telephoned to these operators, stimulated when Ron and Heinz appeared on national television newscasts.

As well as private enquiries about the safety of friends and relatives, Ron and Heinz handled traffic for the federal government.

At the Guatemala end of the circuit established by the Canadian operators were Mae and Pete VE6-CCA/TG9 who were quite fortunately located right opposite the Canadian Embassy. Other Amateurs in this circuit were Don TG9DF and Gerry TG9GI in Guatemala City.



the canadian amateur

March 1976

Number Three

18 hours a day...

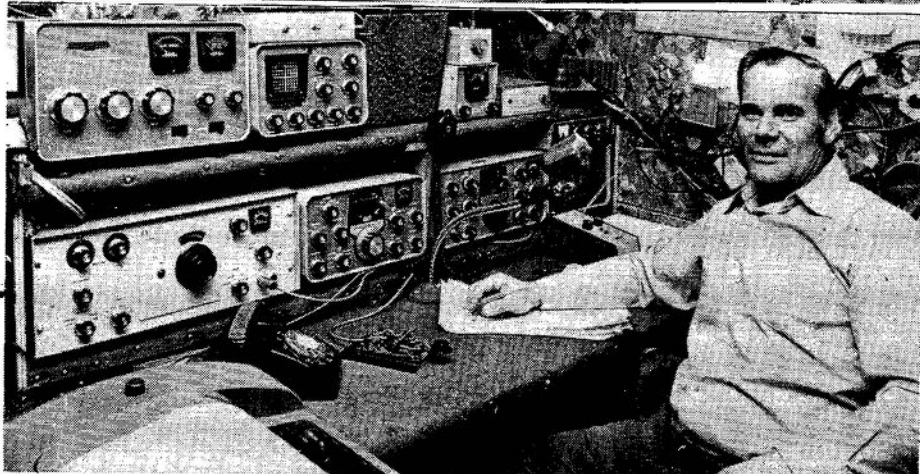
The Ottawa ops handled telephoned questions originating from Montreal to Victoria. Once the circuit got in full stride, Heinz reported that an average response time to questions about friends in Guatemala City was 45 minutes, especially where telephones were still available at that end.

Working up to 18 hours a day, the telephones in the Canadian stations were busy until all hours. Ron and Heinz both had the capable assistance of their daughters, Linda and Ursula, to handle the phone calls.

"After three a.m., however," said Ron, "I took the phone off the hook."

Operations at the Ottawa end got things off to a better start than the experience of the 1972 Nicaragua quake, but there is still room for improvement in liaison on the part of government agencies. (Continued on Page Three)

Ron Belleville, VE3AUM, above, and Heinz Stenzell, VE3GOS, below: Two of the Canadian Amateurs who provided radio communication to Guatemala after its recent earthquake.





the canadian amateur

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Managing Editor:
Steve Campbell
Associate Editor:
Doug Burrill VE3CDC
Art Editor:
Stan Hill VE3DQ
Technical Editor:
H.T. Edworthy
VE3CLG
Assistant Technical
Editor:
Brian Pass VE3BGP

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For CARF National QSL Bureau services, write to: PO Box 66, Islington, Ont. M9A 4X1.

From the Front Office

Every person who was a member of your national Federation should have received a new certificate. Two thousand have been forwarded and new members will be receiving their own distinctive certificate shortly after their membership applications have been processed. If the wording on your certificate is incorrect, please return it with the correction noted and a new one will be issued.

The month of January indicated a steady increase in the membership statistics of your national Federation with 120 new individual and 14 Affiliated clubs gaining membership an excellent start for a year full of promise!

Several of your national committees are burning the midnight oil on behalf of the Canadian Amateur service; Notably the CARF WARC committee that is formulating a preliminary position paper for the information of the DOC, and the Publications Committee tying up the loose ends of the publishing of the CANADIAN AMATEUR CERTIFICATE STUDY GUIDE. This and subsequent issues of TCA will carry reports on developments as they occur.

We have received several comments on the Study Guide. The writers, Bill Bushell VE3DXY, Bert Hovey VE3EW and Art Blick VE3AHU, are gratified to note that many Amateurs can appreciate the amount of work involved in the processing of such a manual and that your national Federation can serve uniquely in matters regarding training for the Canadian licence and co-ordination of training personnel who conduct classes. Publication has been scheduled for mid-March, but we are aware of the many 'unforeseen occurrences' (Gremlins to the old-timers) that can take place in these matters.

An excellent brief article on the 1979 World Administrative Conference, written by W6APW, is in the February 1976 issue of HAM RADIO. It deals with the work facing the US Amateur Working Group and the comments are applicable to the CARF WARC Committee. He notes that sheer numbers is not an important issue. What is important is how the Amateur Experimental Service uses the frequency bands allocated - "Is it being used wisely for the benefit of the public at large and in keeping with the Services Basis and Purpose...? Or is it being used for the personal amusement and satisfaction of a miniscule percentage of the...citizenry? What are the trends in the Amateur Service? Where will it be in the year 2000? How will or can,, WARC 1979 influence this?" Implied is the question - will the present trend to increasing the number of Amateurs at the sacrifice of entrance standards prove to be an asset or a liability in justifying the retention and increase of Amateur frequencies?

THE CANADIAN AMATEUR can be used as a Forum for the publishing of comment, opinion and ideas.

SHORT-CIRCUITS



"THAT SHORE IS INTERESTING, MRS. GLUB, THAT MY NAME AND CALL SIGN CAME OUT OF YOUR TV SET IN PLAIN ENGLISH, SEEING AS THERE AINT NO MICROPHONE IN THIS HERE HAMSHACK?"

Innovations in annual ski marathon

Ottawa and Montreal Amateurs, using two metre and 450 repeaters (VE2CRA and VE2RM) and simplex frequencies, did an excellent job again this year on Feb. 28 and 29 by providing administrative and safety radio nets for the annual Canadian Ski Marathon, a two-day national sporting event for cross-country skiers.

The complete route, about 100 miles from Lachute to Hull, is on the edge of the Laurentians and provides some difficult VHF paths. One innovation this year was the use of a portable repeater to overcome one particularly bad path. Another was the use of teletype on VHF to speed the transmission of data on the more than 3,000 skiers and their progress. With Amateur radio communication, the race results were calculated and known when the last skier crossed the line; otherwise the results would not have been known for a number of days.

The event, held under difficult winter conditions and using mainly portable and mobile rigs, proved to be an excellent exercise for the Ottawa club's emergency group and the 40 or so enthusiastic Amateurs involved, under the co-ordination of VE3CRX, Larry Bradley.

Another hazard!

The BC FM Communication Association has provided a sequel to the article on unique hazards to be found in our hobby. Their Bulletin carries a warning about the radio-active hazard inherent in certain tubes and the poisonous fumes from selenium

rectifiers that have been burnt out from overloading.

The tubes in question are Raytheon OA2, CBS Hytron OA2W, RCA OA2WA, Raytheon OB2 and OB2WA, CBS Hytron OB2WA and RCA 809 and 811. These tubes contain elements which have measurable radio-active emanations. Avoid inhaling gas from a broken tube, or cuts from the broken glass of the envelope. The debris should not be handled with bare hands in any event.

Selenium rectifiers release measurable quantities of selenium dioxide and hydrogen selenide, both of which are toxic gases. The effects of these selenium compounds are similar to those of arsenic.

Ah, well, on to solid state or back to stamp collecting!

Directors nominated

The following Amateurs have been nominated for the position of Regional Director in your national Federation:

ATLANTIC DIRECTOR: Mike Koval, VE1AJI

QUEBEC DIRECTOR: Eugene Lajoie, VE2RA

ONTARIO DIRECTOR: (Two Positions)

Croft Taylor, VE3OR

Fred Robinson, VE3GCP

Harold Braun, VE3DWH

MID-WEST DIRECTOR: Martha Pankratz, VE5YY

PACIFIC DIRECTOR:

Frank Merritt, VE7AFJ

Peter F. Driessen, VE7BBQ

Stella Broughton, VE6VF, has been acclaimed as Director-at-Large.

Elections are therefore necessary in the Pacific and Ontario Regions and ballots will be included in the April issue of THE CANADIAN AMATEUR.

The April issue will also include a capsule background of the Directors nominated.

Guatemala

The traffic peak tapered off in ten days, when commercial circuits were restored to a workable level.

ATV article awarded

Experimentation in the UHF bands in the form of ATV is flourishing in the Toronto-Hamilton area according to 'The Ontario Amateur'. The Ontario ATV Association was recently advised that an article by VE3CDM and VE3BBW had been awarded a prize by 'A-5 Magazine', the ATV experimenter's Bible. If that's the Bible, then the article, 'An Introduction to Canadian ATV Operation', is the ATV primer for Canadian Amateurs interested in this fascinating aspect of our hobby. The original 200 reprints of the article were snapped up and plans are under way to update the article for future distribution.

Interested Amateurs can contact VE3BBW, George Davis, or VE3CDM, Tom Atkins, either directly or through CARF Inc., Box 356, Kingston.



Canadian Repeater Advisory Group

The near North is joining the space age. From the BC FM Communications Association comes the news that a 146.34-146.94 30 watt machine is to serve White Horse, Yukon Territory, with the call VE8AA; Dawson Creek is coming up with VE7DTE on the same channel to be located later on Bear Mt. and Fort St. John, BC, will be on 146.46-147.06 - the call is not known.

The repeater development in Quebec is increasing at a fast rate, especially in the areas north of Quebec City. First of all, VE2TG has changed from 146.46-147.06 to 146.43-147.03 and will be situated at Port Alfred. VE2ES is changing location to Lake Ha!Ha! on the edge of Parc des Laurentides to increase coverage.

A new repeater, VE2EFA, is undergoing trials and will be permanently located at Dolbeau on 146.10-146.70. Another machine is to go in Alma on 146.13-146.73 and one at Les Eboulements (call not yet known) on the north shore of the St. Lawrence River about 150 miles north of Quebec City. Along with the existing repeaters VE2IU, VE2EFB (450), VE2VP, VE2SP and VE2CVR, the Lake St. John/Saguenay area and the St. Lawrence shore from Quebec City north will have excellent two metre coverage.

UHF linking will be installed where necessary to extend the coverage.

Horror story from below the border: according to HR Report, published by HAM RADIO, FCC top officials 'gave ARRL's brass quite an earful' recently, including words on 'problem areas like interconnects (phone patches and autopatches) and frequency coordination both for VHF/UHF and (possibly!) the lower bands...' (HR Report, Jan.23)

Just how this can be done without some international complications was not explained.

The new autopatch repeater in Ottawa/Hull, originally noted under the interim call VE3DRC, will operate under the new call VE2KPG.

Windstorms cause trouble

A number of Maritime province operators lost their beams and towers in the unbelievably ferocious windstorm that hit without warning last month.

Although commercial communications stood up well to the ordeal, as an aftermath of the 100 mph blow, the salt spray carried miles inland from the coast triggered power transmission system failures on an unusually large scale for some days after the storm. The salt corrosion broke down insulation and resulted in a large number of blown transformers in both Halifax and Saint John plus the generation of high levels of radio interference from leaking insulators.

The New Brunswick Power Commission, according to latest reports, has imported special washing equipment from Ontario and is carrying out a program to clean the salt spray from the transformers.

St. Paul DXpedition

A Canadian DXpedition is planned to St. Paul Island, off the coast of Nova Scotia, which has been declared a 'separate country' for Amateur Awards and Contests. The call sign VE0YB has been applied for from May 28 to June 3 1976 by VE3BGX, VE3EGS, VE3GUJ and one other Amateur.

Operations will include SSB and CW with stations operating simultaneously.

Frequencies to be used are:

CW: 3530, 3710	SSB: 3765, 3795
(Novice only)	
7030, 7110	7230
(Novice only)	
14030	14170, 14196
21030, 21110	21250, 21350
(Novice only)	
28110	28525

QSLs are to be forwarded to Box 7341, Ottawa, Ont. K1L 8F4. VE/VOs to send SASE; foreign stations to send SASE and IRC.

St. Paul Island is located in the Cabot Strait, 13 miles off the northeast tip of Cape Breton Island, Nova Scotia. The lighthouse keeper is the sole inhabitant.



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BOX 126 - AGINCOURT - ONTARIO - CANADA

Unauthorized communications

Canadian Amateurs are NOT authorized to communicate with radio stations of the US Radio Amateur Civil Emergency Service (RACES) which is a civil defense radio service using large portions of the ITU Region 2 Amateur bands (ours) on a shared basis with the US Amateur Radio Service.

Although restricted to manning by Amateur operators, these RACES stations may be owned by civil defense authorities or may be Amateur stations enrolled in the civil defense organizations. RACES stations may only communicate with other RACES stations and in some cases with radio stations outside the Amateur allocations. They are identified by the letters WC followed by the appropriate US Amateur call sign district designator and three letters, effective March 23 according to a recent US Federal Communications Commission Order (Docket 19723).

The activation of RACES is limited to declared emergencies in the USA and to a maximum of one hour per week for tests and drills.

MP pays tribute to Amateur efforts

After the fine work of Amateurs in the Guatemala tragedy, recognition was paid to their efforts in the House of Commons on Feb. 17 when a BC member, Hon. Donald Munro, in questioning the government on preparations for emergency planning, asked, "... has any effort been made to enlist the support of Canadian ham radio operators so as to improve communications between Canada and stricken countries? I know ham operators are ready, willing and able to co-operate".

External Affairs Minister MacEachen replied, "... I believe that the suggestions made by Mr. Munro are constructive and I will certainly have them examined and, if feasible, acted upon in the Department..."

Your Federation has been pursuing this matter for some time with indifferent success and will, in the light of these statements, draw the attention of the responsible ministries to the fact that in 1973 the (now defunct) Canada EMO considered the Amateur role in emergencies sufficiently important to convene a Working Group on this subject at the Canada EMO College at Arnprior, Ont. The group, consisting of Amateurs from all over Canada, made a number of excellent recommendations to remedy the lack of awareness by government of Amateur radio's potential, such as was evidenced at the first operations immediately after the disastrous Nicaragua earthquake in 1972. Unfortunately, due to the subsequent splitting up of the responsibility for emergency communications planning, after the disappearance of Canada EMO, the recommendations of the group received a low priority from the federal government and hence little action. The recommen-

dations included a plan for a 'Canadian Amateur Radio Emergency Service', among other recommendations, a number of which would have ensured contact between governments at all levels and Amateurs on an organized and definite basis.

AC/DC Results

The results of the AC/DC, Annual Clara Day Contest are as follows:

Non-CLARA winners -

1. Garry Hammond, VE3GCO, with 258 points (Trophy and Certificate)
2. Cliff Sawyer, VE3EJK, with 203 points (Certificate)
3. Roy Tuttle, VE3BNV, with 105 points (Certificate)

CLARA winner: Vivian Prodaniuk, VE6BDA, (Clara pin and Certificate)

Prize Draw: Gail Murray, VE3GSQ.

Walk, don't ride!

Handy-talkies are not welcome on the Victoria BC bus system. A VE7 was put off one recently for operating his hand-held job while riding a local bus. Our reporter queried the transit commission management who explained the episode by stating "it was just a policy". What next?!

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MODEL 8010

SPECIFICATIONS

Frequency Ranges;

Bands(meters)	Frequency(MHz)
80	3.5 ~ 4.0
40	7.0 ~ 7.5
20	14.0 ~ 14.5
15	21.0 ~ 21.5
10(A)	28.0 ~ 28.5
10(B)	28.5 ~ 29.0
10(C)	29.0 ~ 29.5
10(D)	29.5 ~ 30.0
11	27.0 ~ 27.5 Receive only
WWV	15.0 Receive only

Mode of Operation;
Input Power;

LSB, USB, CW and AM
180 Watts DC INPUT SSB & CW
90 Watts DC INPUT AM

Carrier Suppression;
Sideband Suppression;
Spurious Radiation;
Distortion;
Microphone Impedance;
Modulation Method;

50 dB
50 dB at 1,000 Hz
Down 40 dB or more
Down 35 dB or more
High
Balanced modulation(SSB)
Low power modulation(AM)

Transmitter Frequency
Response;
Frequency Stability;

300 to 2,700 Hz(down 6 dB)
Less than 300 Hz drift in starting
Less than 100 Hz drift or less
after 30 minutes of warm up

Antenna Output Impedance;
Receiver Sensitivity;

50-75 ohms unbalanced
.03µV S/N 10 dB (at 14 MHz) SSB/CW
1µV S/N 10 dB(at 14 MHz) AM

Image Interference Ratio;
IF Interference Ratio;
Receiver Selectivity;

- 50 dB and more(at 14 MHz)
same as above
SSB/AM
2.4 kHz at -6 dB and
4.0 kHz at -60 dB

Audio Output;

CW
600 Hz at -6 dB and
1.5 kHz at -60 dB
2.5 Watts or more
(10% distortion at 4 ohms load)
4 ohms

Audio Output Impedance;
Power Source;

100/110/117/200/220/234 Volts
AC 50/60 Hz
13.8 ±10% DC

Power Consumption;

AC: 350 VA at the maximum
final input
DC: 22A at the maximum
final input. 7A in receiving
with final tubes heater "on"
and 2A with heater "off"

Dimensions;

14-3/4" wide(350mm)
6-1/2" high(165mm)
13-1/4" deep(333mm)
Approx 39.6 Lbs. (18kg)

Weight;

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3.	CW filter as standard	Yes	No	No
4.	Regulated screen voltages for stable operation of final	Yes	No	No
5.	Independent rf circuits for Tx and Rx	Yes	No	No
6.	Dual RIT control 5kHz or 1kHz	Yes	No	No
7.	Slow/fast AGC switch	Yes	No	Yes
8.	PLL VFO for excellent stability and tracking linearity	Yes	No	No
9.	Noise Blanker for pulse type noise	Yes	Yes	Yes
10.	Hybrid dial with digital analog read-out	Yes	No	No
11.	RF amp and fan switchable when receiving only - as desired	Yes	No	No

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Specifications of TS-700A

Frequency range	144MHz—148 MHz
Mode	SSB (A _u), FM (F _i), CW (A _i), AM (A _i)
RF power output	SSB.....more than 20 watts DC input FM & CW...more than 10 watts output AM.....more than 3 watts output
RF output impedance	50 ohms (unbalanced)
Carrier suppression	Better than 40 dB
Sideband suppression	Better than 40 dB
Spurious radiation	Less than -60 dB
Maximum frequency deviation (FM)	± 5kHz
Repeater frequency shift width	600kHz
Tone burst time	0.5 - 1.0 sec.
Modulation	SSB—balanced modulation FM—variable reactance frequency shift AM—low power modulation
Microphone type	500 ohm dynamic microphone
AF response of transmitter	400Hz—2,600Hz (-9dB)
IF frequencies	SSB, CW, & AM—10.7MHz FM—1st IF—10.7MHz; 2nd IF—455kHz
Receiver sensitivity	SSB & CW—0.25µV input for 10dB S/N FM—1µV input for 30dB S/N AM—1µV input for 10dB S/N
20dB noise quieting	Less than 0.4µV
Image rejection	Better than 60 dB
IF rejection	Better than 60 dB
Bandwidth	SSB, CW, & AM—More than 2.4kHz (at -6dB) FM—More than 12kHz (at -6dB)
Selectivity	SSB, CW, & AM—Less than 4.8kHz (at -60dB) FM—Less than 24kHz (at -50dB)
Receiver AF output	More than 2watts (at 10% distortion, 8 ohm load)
Receiver AF output impedance	8 ohms
Frequency stability	Within ± 2kHz during one hour after one minute of warm-up, and within 150Hz during any 30 minutes thereafter.
Squelch sensitivity	0.25µV
Power consumption	Transmitting: Maximum 95 watts (120/220VAC); 4 amperes (13.8VDC) Receiving (no signal) 45W (120/220VAC); 0.8 amperes (DC13.8V)
Power requirements	120/220VAC, 50—60Hz; 12—16VDC (standard DC voltage—13.8VDC)
No. of semiconductors used	Transistors—6; FETs—17; ICs—3; diodes—100
Dimensions	Width 278mm (10.9 in.) Height 124mm (4.9 in.) Depth 320mm (12.6 in.)
Weight	11kg (24.3 lbs)
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Additional Amateur classes for Canada?

New proposals for a Beginners class of Amateur appear to run in two year cycles. Your national Federation canvassed the provincial societies and their members for comment and opinion on this matter in 1972 and again in 1974. Neither brought forth any ground swell of positive opinion but the tabulated results were given to the Department of Communications for their information.

The latest proposal for creation of a Canadian Novice and a Canadian Extra Class of Amateur has been originated by a group of Ontario Amateurs. This proposal was forwarded to DOC with copies to CARF, RSO and ARRL.

Your Federation noted the proposal, advised DOC of our previous canvass and offered the services of publicity and information available to CARF and the provincial societies to conduct another referendum.

The Radio Society of Ontario, Inc. has published the proposal in the latest issue of The Ontario Amateur and has requested comments from their members.

The Director ARRL (Cdn Div), representing the Canadian members of the League, has informed the DOC that they do support the Novice class but not the Extra Class.

The DOC have advised that the proposal will be published in the Canada Gazette, Pt. I and comment requested from 'interested parties'.

Several factors must be considered before reasoned decisions can be made. The US Novice and Technician programs, instituted several years ago, did result in a significant increase in the number of US Amateurs. This sharp increase levelled off in a few years and, in recent years, the number of US Amateurs has been declining. In an effort to reverse this trend, the FCC have now proposed a complete restructuring of the US Amateur Radio Service, details of which have been carried in previous issues of The Canadian Amateur.

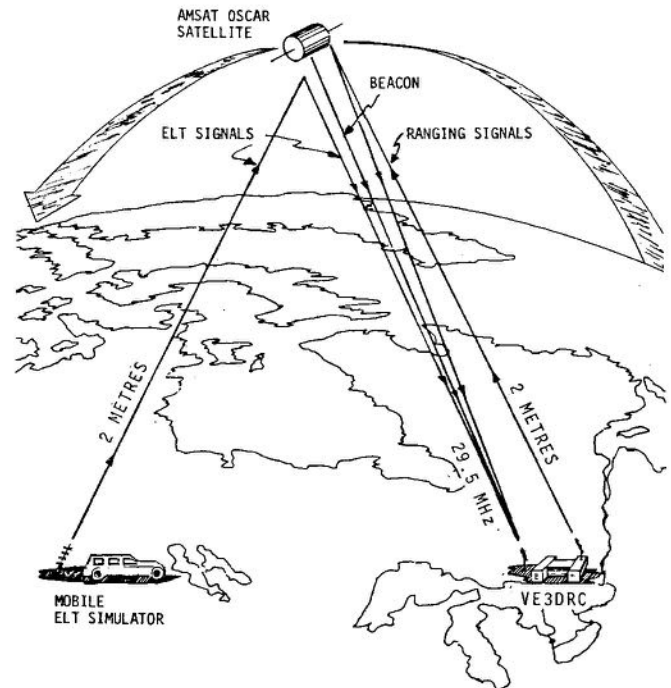
In the past four years, Amateur and Advanced Amateur courses have been developed, particularly in Ontario, as part of the provincial program of Continuing Education. These courses, run at the Community College and High School level with qualified instructors and good training facilities, have seen a doubling of the numbers of Amateurs in these areas over the last three years. It would seem to be worthwhile to have these courses made available in every community in Canada and thus achieve the doubling of numbers of fully qualified Amateurs.

Several comments have been made recently on the need to attract technician/technologist and university students into Amateur radio. Such students do have the necessary technical background to be a tremendous asset to the Canadian Amateur Experimental Service. Though they are attracted by the wide field for experimentation above 30 MHz, many are not attracted by the necessity of learning the

Morse Code. The suggestion has been made that the Federation pursue the creation of an Amateur VHF Experimenter class with no Morse requirement.

There will be more articles on this subject in future issues of TCA and comments are invited.

CRC experiment to aid search and rescue



Experimenting in the Amateur bands is very much alive in Canada although the emphasis is shifting to VHF and UHF and to more sophisticated areas of enquiry.

Utilizing the DOC's Communications Research Centre, CRC, Amateur station VE3DRC in Ottawa, and AMSAT's OSCAR 6 satellite, experiments are being conducted with a system which would use satellites to pick up and relay signals from the Emergency Locator Transmitter (ELT) device which is ejected from a downed aircraft or a small boat in distress. The ELT automatically starts transmitting a distinctive distress signal on always-monitored aircraft VHF frequencies.

By processing the Doppler frequency shift of the ELT signal received and relayed by OSCAR 6, studies showed that the downed aircraft could be located within 20 miles. Results of actual experiments on two metres have indicated it is possible that a location prediction can be given which is accurate within five miles.

This experiment, which is only one of a number of projects utilizing AMSAT satellites, may well end up in a system which could not only cut down dramatically on the cost of search and rescue operations but would greatly add to the safety of life in both air and marine emergencies.

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Letters to

Dear Sir:

When I became an Amateur radio operator 25 years ago, I found that 4 out of every 5 times that I called CQ, I received one or sometimes two replies to my call. My observations today tell me that one is doing well if one out of five CQ calls draws a reply.

It is my opinion that we Amateurs should now begin asking ourselves some very serious questions about where Amateur Radio has been and where it's going. I ask myself, why do we now have large chunks of our Amateur bands sitting in silence where once stations were stacked over each other? Why are all of my young friends not inclined to pursue Amateur Radio as a satisfying long term endeavor? What has happened over the years?

Things have obviously changed for the worse and it now behooves an organization like CARF to analyse the situation, search for the answers and come up with the solution. For many Amateurs, operating within their own groups on favorite frequencies or those with sophisticated high powered equipment, things are just fine as they are now, but Amateur Radio in Canada can no longer depend on operators of this type to provide the stimulus for the necessary vitality and growth that Amateur Radio needs to properly survive.

I suggest that we open up the band 145 to 146 MHz to anyone who can describe the basic workings of a transmitter and receiver. This licence would have no code requirement. Operation would be FM on specific channels. A similar novice licence would be available for CW band segments. A recognition of the code characters would suffice as the code requirement. I oppose putting time limits on these licences. VHF-FM operation would be direct point to point only.

I would like to suggest that by means of self-regulation and Government encouragement, we proclaim that every 100 KHz mark in all our frequency bands be recognized as the 'getting together' frequency, or if wished, 'calling channel'. Frequencies such as 3.800, 7.200, 14.200 MHz would be kept clear of QSOs and become useful calling and listening frequencies. If most of us can agree on it, this plan could start today. More contacts would be initiated and the long winded and fruitless calling of CQ would be no more.

If we don't take steps such as I have described, many of us might wake up some day to find that the cherished and well-meaning Amateur expression 'old man' will have taken on a new meaning in the Amateur vocabulary.

Yours very truly,
Joe Cusimano VE3OV

Dear Sir:

The Westminster Amateur Radio School is a group of local radio Amateurs that teaches morse code and basic radio theory to people on the west island of Montreal who wish to become radio Amateurs.

the Editor

Is there a list of other clubs across Canada that provide the same type of public service? Our formation would like to correspond and exchange ideas with these groups.

Sincerely,
B. Balla (Secretary)

(Members of this group can be contacted at PO Box 323, Montreal Int'l Airport, AMF - Editor)

Dear Sirs:

In regard to an article appearing in the CRAG column of the November '75 issue, pertaining to RTTY: VE3TTY, 146.10-70 in Toronto has been operational since December 1974. This machine was set up originally as an RTTY repeater using the recognized accepted 146.10-70 RTTY repeater pair. To the best of my knowledge, this is still the accepted RTTY Pair.

In the 14 months that the machine has been operational, only twice was it used for its original purpose! A notice was sent to the RTTY association, and was published in their bulletin, requesting what their members would like in the way of frequency shift, etc. Not one reply was received! In view of this, the machine was opened up as a normal FM Repeater.

We are shortly moving VE3TTY and its sister VE3UHR (449.25-444.25) to their permanent site. We would like VE3TTY to be a versatile machine and our plans are to set up a time schedule for it to be used for RTTY, computer logic and slow scan TV. An autopatch will be installed and operational when it is moved April 1.

VE3TTY will have an expected useable coverage of about 60 miles from the Toronto area transmitting 75 watts into a 6 db gain antenna.

VE3UHR will have an expected useable coverage of 35 miles, running 75 watts into a 6 db antenna. This machine has been operational since September 1975 and is also equipped with autopatch.

Both machines are open to use by all licensed Amateurs and will be controlled by radio and telephone line links. The autopatch facilities are Private Line and for the use of the members of our Association.

Yours very truly,
Gordon Clanfield VE3HKE
Toronto Amateur Radio Repeater Association

Clara executive chosen

The following officers have been selected as the CLARA Executive for 1976.

President, Donez Booth VE3DWF; Vice-President Marjorie Karl, VE6LC; Secretary, Ann Nutter, VE3HAI; Treasurer, Mae Beaton, VE5OH; Past President, Cathy Hrischenko, VE3GJH; Editor and Publisher, Vivian Taylor, VE3HGA.

Antenna Gain

By W. H. Galpin VE3CK★

The advent of two metre FM activity has seen us subjected to so many extravagant and/or misleading claims of super gain antennas advertised for ham consumption that some basic facts of life just have to be made known. Triggered in this instance by a recent advertisement that claimed "5.7 db gain over an 'isometric' source". We are still trying to figure that one out. The most extravagant claims seem to be made for collinear base station antennas and variations of five-eight wavelength mobile whips. At this time we will comment only on the fixed station collinear antenna, popular for its omnidirectional gain capability combined with an excellent radiation pattern.

A two section collinear, vertically polarized, with the sections properly phased, is capable of 3.0 dBd or 5.15 dBi gain (over a reference dipole or theoretical isotropic radiator respectively). A four element collinear 6.0 dBd or 8.15 dBi, and an eight element 9.0 dBd or 11.15 dBi. The gains are limited to these figures by certain physical laws that to date, despite the advance of science, we have been unable to repeal.

Though advertisers can sometimes be excused their enthusiastic abuse of "poetic licence" in an effort to sell their product, the hard reality of specification integrity as it relates to the ability of the antenna, as sold to you, to perform as claimed, is of utmost importance. It is after all, the performance of the antenna to its specification, that you believe your hard earned money is purchasing.

In all honesty we can only say "caveat emptor", let the buyer beware of these performance claims.

★ Sales Manager —

Sinclair Radio Laboratories Ltd.

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Classic



		CLASSIC		TRAP MASTER		
		CL-33	CL-36	TA-33	TA-33Jr.	TA-36
Forward Gain	on 10 meters	reference dipole 08.0 db	isotropic source 09.0 db			
	on 15 meters	reference dipole 10.1 db	isotropic source 11.1 db	08.8 db	08.0 db	08.0 db
	on 20 meters	reference dipole 08.0 db	isotropic source 08.0 db	10.1 db	10.1 db	10.1 db
Front-to-Back Ratio	on 10 meters	15.0 db	20.0 db			
	on 15 meters	20.0 db	20.0 db	20.0 db	20.0 db	20.0 db
	on 20 meters	20.0 db	20.0 db			
Power Rating	AM/CW	1 KW	1 KW	1 KW	300 wts.	1 KW
	P.E.P. SSB input to the final	2 KW	2 KW	2 KW	1KW	2 KW
Number of Elements		3	6	3	3	6
Maximum Element Length		27'	29' 9"	28'	26' 8"	29'
Boom Length		18'	24'	14'	12'	24'
Recommended Mast Size (diameter)		2"OD	2"OD	1½"OD	1½"OD	2"OD
Turning Radius		16'	19' 3"	15' 6"	14' 9"	19' 3"
Wind Surface Area (in square feet)		6	10.7	5.7	4.3	10.7
Wind Load (EIA Std. 80 MPH)		120 lbs.	210 lbs.	114 lbs.	86 lbs.	210 lbs.
Assembled Weight (approximately)		42 lbs.	69 lbs.	37 lbs.	20 lbs.	69 lbs.
Shipping Weight-via truck (approximately)		45 lbs.	71 lbs.	41 lbs.	28 lbs.	71 lbs.
Price		\$270.00	\$360.00	\$238.00	\$174.00	\$395.00

THE FOLLOWING INFORMATION APPLIES TO ALL OF THE ABOVE ANTENNAS.

Feed Point Impedance . . . 52 ohms

VSWR (at resonance) . . . 1.5/1

Recommended Transmission Line . . . RG-8/U

2 Metre Antennas

- D12 Diplomat 5/8 ground plane \$35.50
- BASE ANTENNA
- MY-144-9 E1. 14dB 2KW Yagi \$49.50
- MY-144-5 E1 10dB 2KW Yagi \$39.50
- MM-144 5/8 mobile C/W spring and base \$31.50

ROTORS

- AR-30 \$55.00
- AR-40 \$66.50
- CD-44 \$129.00
- HAM II \$189.00
- Wire for AR-30 and AR-40 12¢ ft.
- Wire for CD-44 and HAM II 20¢ ft.
- RG-58U coax 12¢ ft. RG-11U 23¢ ft.
- RG-8U 23¢ ft. RG-'8U foam coax 25¢ ft.

Eico Multimeters

- 4A3 4000 ohms per volt
- 20A3 20,000 ohms per volt \$22.50
- 100A4 100,000 ohms per volt \$52.50
- PL-259 connectors for coax \$ 1.25
- Chassis connectors \$ 2.50 (single hole)
- Also DelHi and ROHN towers, etc.....

Prices subject to change



RV-4C

Covers 10, 15, 20, and 40 meter bands. Power rated at 750 watts AM/CW and 2000 watts PEP input on SSB. Feed point impedance 52 ohms. Height approximately 22'. Recommended mast size 2" OD. Shipping weight 10 lbs., 4 ozs.

\$77.50

RV-8C conversion for 80 meters

... \$44.25

MacFarlane Electronics Reg'd

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Phone (613) 353-2800
VE3BPM

Liaison officer resigns

Due to age and ill health, Owen H. Evans VE7QT has resigned from the position of Radio Amateur Liaison Officer to the BC Provincial Emergency Program. Owen thanks all the Amateurs of the province that have given their time, energy and use of their equipment to make the operation the success it is, and expresses deep appreciation to Michael Considine, BC Communications Officer, for the effort he has put into the development of the organization and the assistance he has given to many other Amateur projects throughout the province.

Owen recommends Rupert K. Grant VE7UH as his successor. Rupert has been an Amateur since the early Thirties (VE4RC) and has held the calls VE3-QQ and VE2QQ prior to VE7UH.

To 2 metre travellers

If you are travelling to foreign countries and plan to take along a two-metre rig, you may wish to have a look at their regulations and find out how to obtain reciprocal operating privileges.

A new international directory, the 'International VHF-FM Guide' does just the job. There is a wealth of information in this small booklet which covers 24 countries with FM Amateur band operations (except the US). The price is \$2.00 by airmail. Surface mail is \$1.00 plus one IRC. The publisher is Julian Baldwin, G3UHK, 50 Aldbourne Road, Burnham, Slough, SL1 7NJ, England.

CARF meets request for Canadian proposal

The DOC has told your Federation that it is seeking a distinctly Canadian proposal for Amateur frequency bands for the 1979 ITU conference which will suit Canadian needs and environment. To meet this requirement, a draft proposal is now being developed by your Federation. When it is ready, comments will be sought from Canadian Amateurs. A request for suggestions and ideas for this brief was sent to provincial societies last September. Various aspects of the Amateur frequency requirements for 1979 have been discussed over the past months in this magazine, along with requests for readers' views.

In the meantime, the DOC asked CARF for a preliminary outline of its proposal for submission to the Feb. 25 meeting of the Canadian Interdepartmental Committee for WARC 1979.

This was presented with the condition that the draft proposal will subsequently be circulated to Canadian Amateur organizations and publicized through the columns of THE CANADIAN AMATEUR and the final submission to the DOC will reflect the feedback thus obtained.

The Federation Working Group is actively involved in frequency management. Three of the members have participated in the work of Canadian delegations at international telecommunications conferences.

The Working Group's on-the-spot Ottawa representation ensures the advantage of informal contacts with DOC and other federal departments. This will allow consultation with other radio users who have influential voices in the Interdepartmental Committee, and their support of your Federation's proposal would be valuable.

Also, direct liaison has now been established between the FCC WARC Amateur Working Group and CARF's. Information has been exchanged and discussions held on mutual problems and approaches made by the two Working Groups to their respective ITU delegations.

Correction

The US call sign of Larry Kayser, VE3QB, is WA3ZIA, not WA3Z1A as was stated in the February issue of TCA in 'Decoding CHU'.

RAQI executive elected

At a meeting on March 6, the Radio Amateurs of Quebec, Inc. (RAQI) elected its new executive.

President is Pierre Joron, VE2DV, Chicoutimy, and other officers are Jules Provost, VE2BDM, Montreal; Andre Houle, VE2AEV, St. Leonard; Eugene Lajoie, VE2RA, Perkins; and Lionel Grouleau, VE2LG, Sillery. Congratulations gentlemen.

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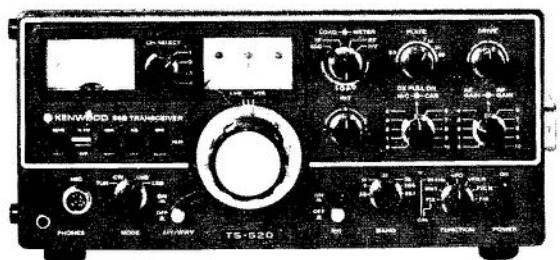
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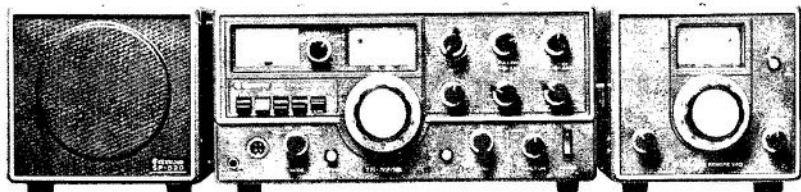
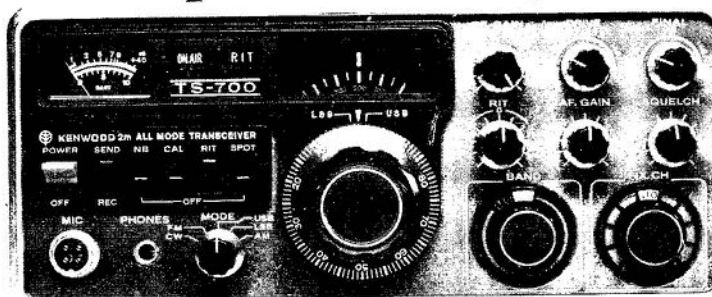
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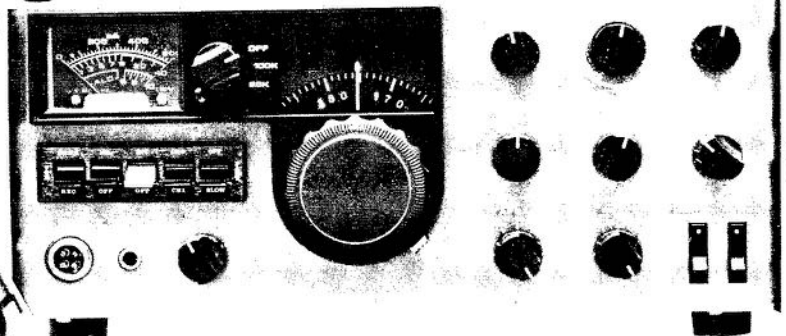


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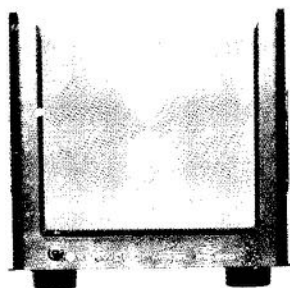
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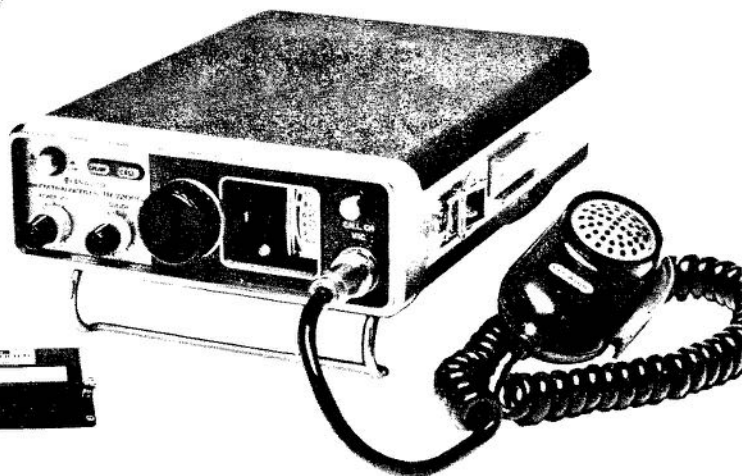


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LF-30



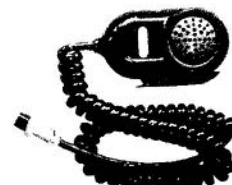
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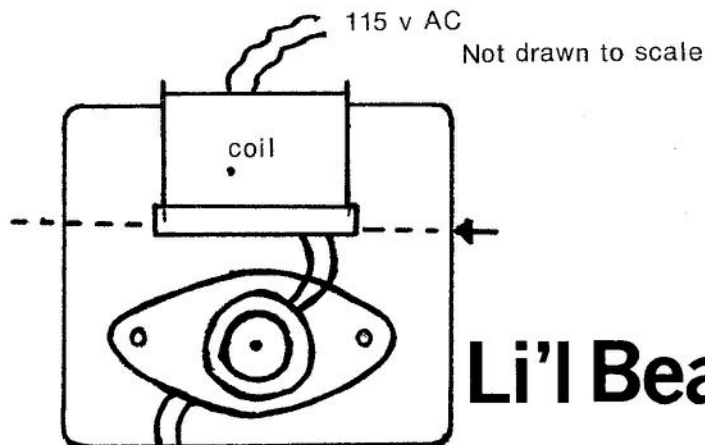
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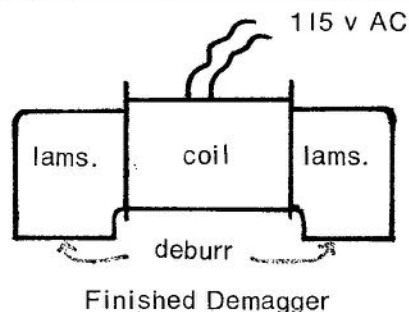
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Phono motor before alterations



Li'l Beaver Demagnetizer

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This little demagnetizer, the hottest and most versatile gadget ever, is cheap to make, costing no more than a little phonograph motor gleaned from the junk box, and has a million and one uses.

Pictured are two sketches of the phonomotor, before and after. If you carefully look at your motor, you will notice how the laminations are put together. Each manufacturer has his own pet way of assembling his products.

In any case, try to take the motor apart to hacksaw the rotor part of the motor. Before taking it apart, scribe a mark where the saw cut will be. File any burrs that may be around the corners, as you do not want any sharp edges to scratch your pink little hands. Be sure to leave a little metal below the coil form so that the lower edge of the coil form will not touch the article being demagged.

In use, it will get quite warm, even hot to the touch. This is because you have cut away a considerable amount of iron and now it tends to heat when used a considerable length of time. At any rate, the amount of work you will do at any one time will not be too much.

Perhaps you can hacksaw the motor without taking it apart. BE SURE THAT YOUR HACKSAW CUT IS SQUARE. Each pole piece must fit flat on the job being demagged for best results. Sometimes the job to be demagged is irregular in shape, so use the best you have.

Attach a four foot light cord to the coil terminals and DO NOT leave it plugged into the 115v outlet as it will get HOT! When demagging, plug into power outlet and bring demagging tool to the job slowly till you are touching the job and try to cover every space of it with a circular motion. After a few moments, draw the demagging tool slowly away from the job. Do not pull power plug when the demagging tool is near the job as it will not do its job as it should.

It will erase any recording on a tape to whisper clean; not a trace of the old recording left to bleed through a new recording! Pass it over the heads of your tape recorder for a clean up job (watch the

fine wires attached to the heads; do not tear them apart). Your little transistor radio sluggish? Perhaps the ferrite rod is magnetized. Just thoroughly carress the Li'l radio with the demagging tool and watch the stations roll in!

If you want to give your radio a real overhaul and give it new pep and life, take all your slugs out of the tuned coils (one by one of course) being sure to get the set going before taking another one out. Thoroughly demagnetize the slug and put it back. Don't blame me is you have to pft the XYL atop of the rig to hold it down. But don't fear, for the Li'l rcvr will be so hot she won't sit there long.

If you want to magnetize, hold the gem against job tightly with one hand and pull the line cord with the other. If you were fortunate, you may have hit the point of maximum current in the cycle of AC thus magnetizing the job. Try several times to hit the right cycle point just right.

BANNED COUNTRIES LIST

Iraq, Khmer Republic**, Libya, Pakistan, Somalia, Turkey, Viet-Nam*. Peoples Democratic Republic of Yemen.

* - Stations XV5AA, XV5AB and XV5AC were authorized to exchange communications with Amateurs of other countries by the former Saigon regime.

** - Station XU1AA has been authorized to exchange communications with Amateurs of other countries.

THIRD PARTY TRAFFIC AGREEMENTS

Bolivia, Chile, Costa Rica, Dominican Republic, Guyana, Honduras, El Salvador, Israel, Nicaragua, Peru, Trinidad, Tobago, U.S.A. (Territories and Possessions) and Venezuela, Guatemala and Uruguay.

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Belgium, Brazil, Dominica, Dominican Republic, France, Ecuador, Federal Republic of Germany, Guatemala, Israel, Peru, Luxemburg, Netherlands, Norway, Nicaragua, Poland, Portugal, Republic of Panama, Senegal, Sweden, Switzerland, Uruguay, U.S.A., Venezuela, Denmark, Iceland and Finland.

Note: All Commonwealth countries are eligible for reciprocal Amateur operating privileges unless evidence that a country does not grant reciprocal operating privileges to Canadian Amateurs.

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