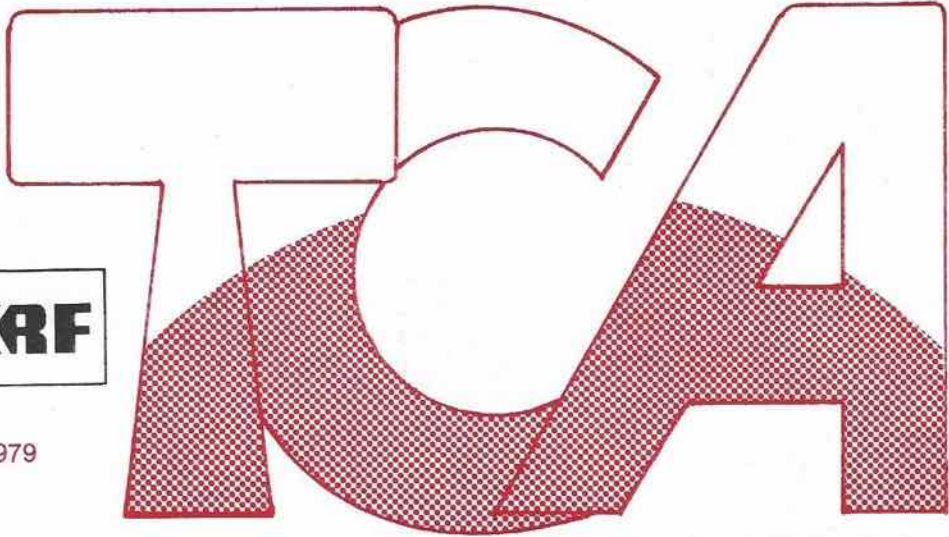


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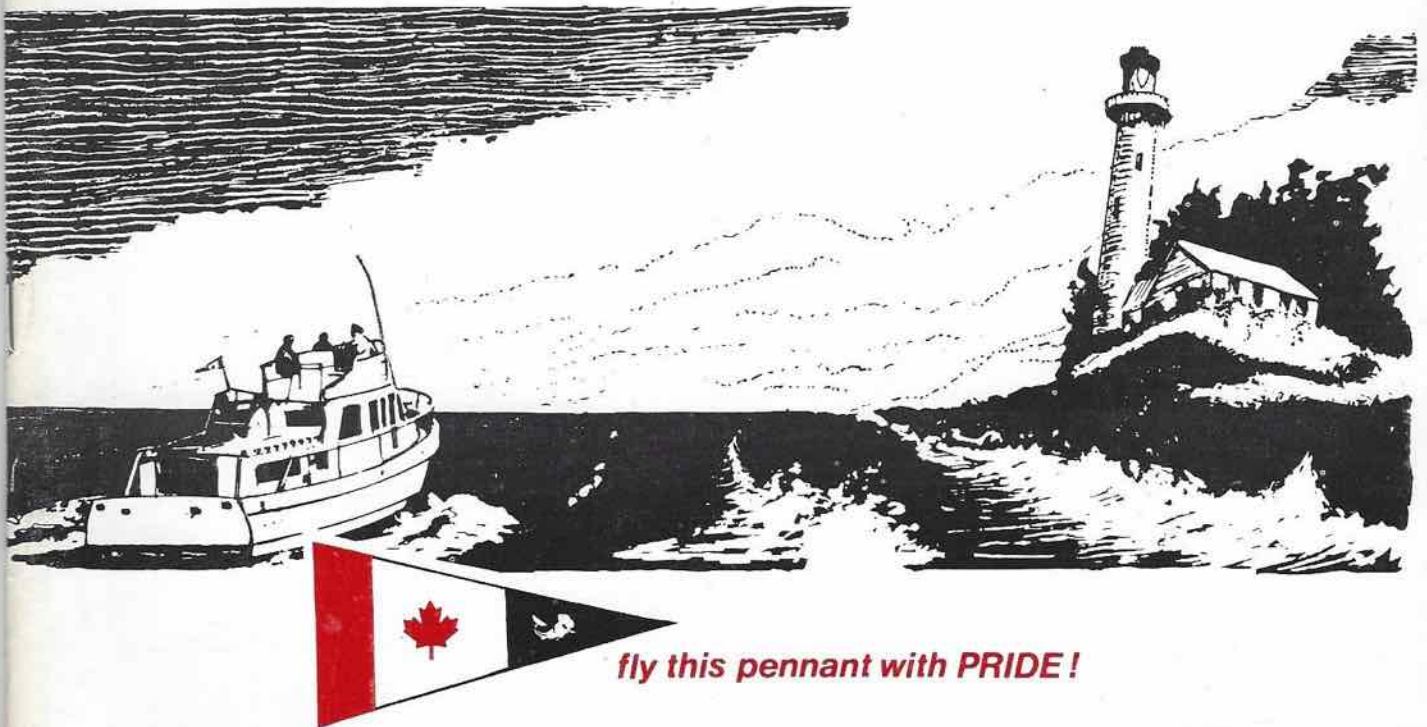
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THE CANADIAN AMATEUR

Amateurs wanted by Coast Guard

Page 27



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KENWOOD COMMUNICATIONS EQUIPMENT

TS-520

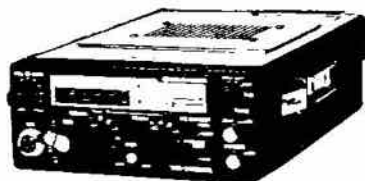


Desk Top Microphone
MC-50



VOX 3
TS-500
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TR-7400A



TS-820

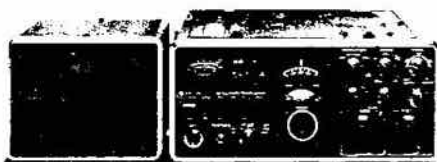


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TS-700A

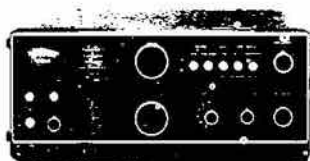


TV-502

TR-2200A



R-300

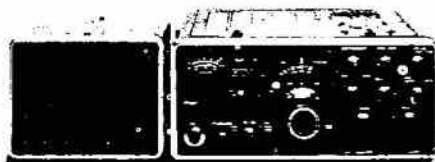


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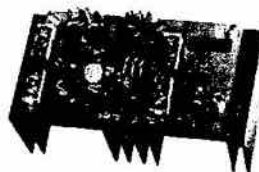


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C144	144-146	28-30
C145	145-147	28-30
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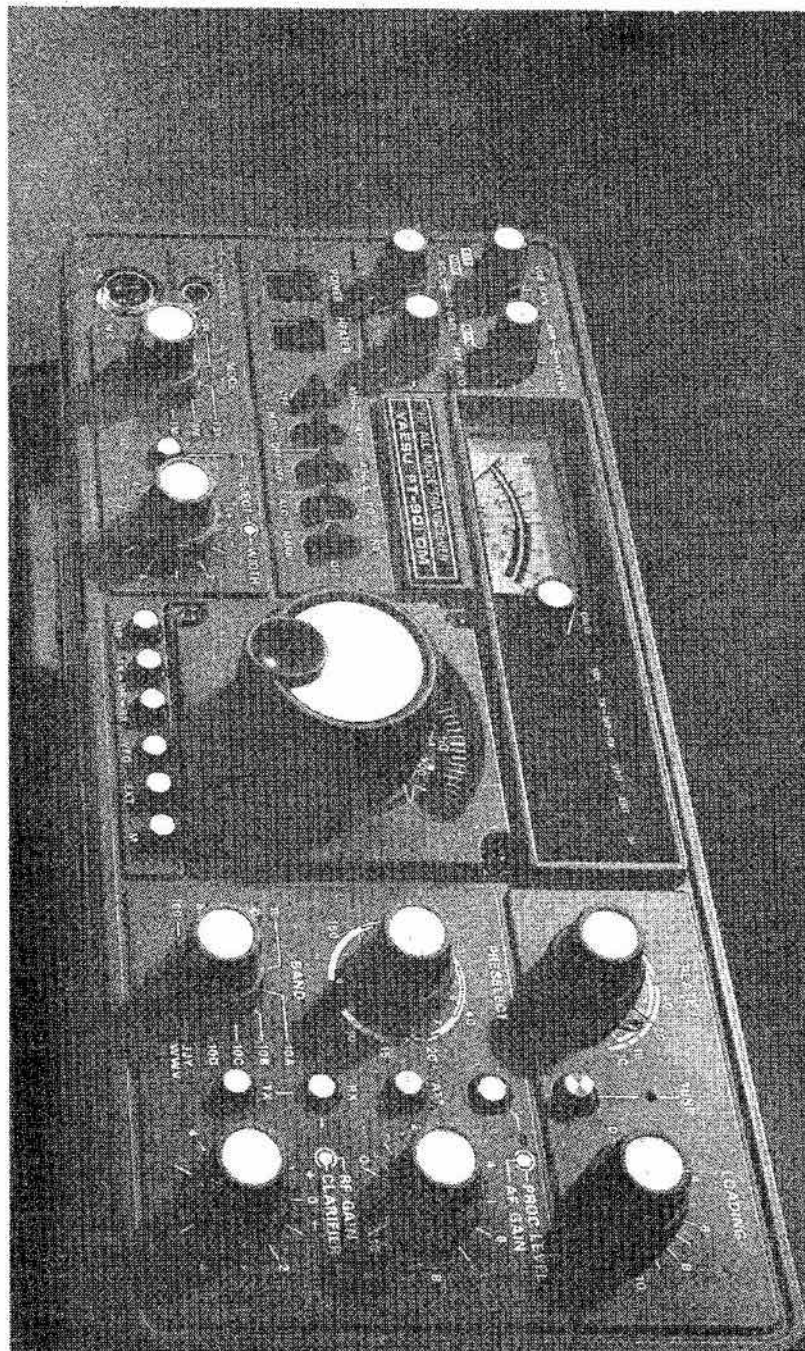
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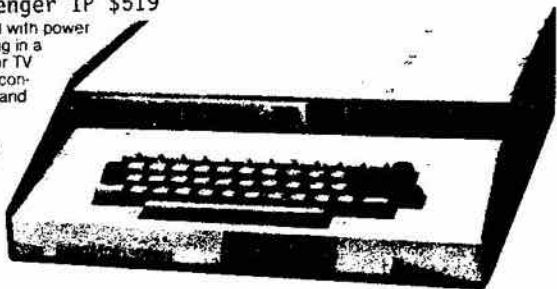
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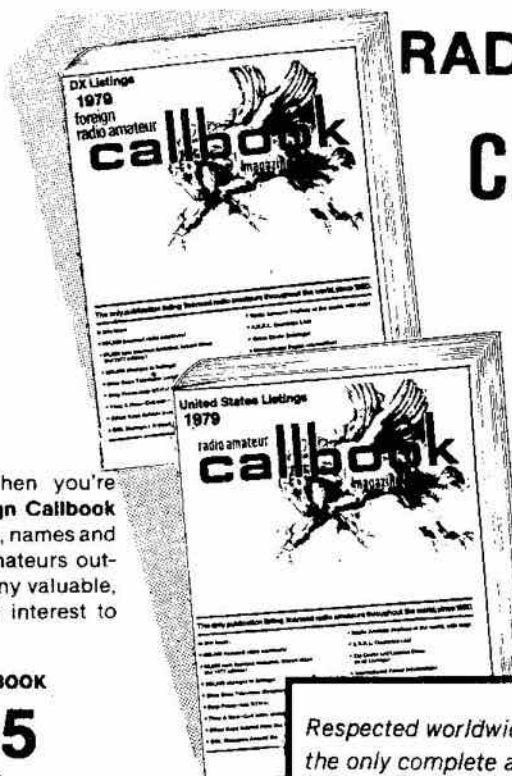
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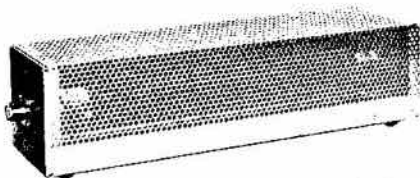
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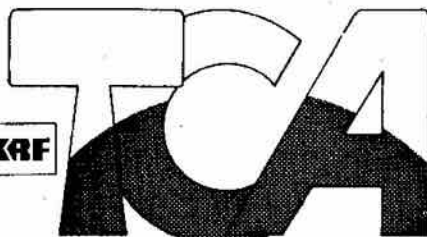
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THE CANADIAN AMATEUR

March 1979

Vol. 7 No. 3

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'TCA - The Canadian Amateur' is published in Canada 11 times per year to provide Radio Amateurs, those interested in radio communications and electronics and the general public with information on matters relating to the science of telecommunications.

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Technical Section

From 10-4 to CQ-10
Wire Antennas

LETTERS:

New Format

To all those who wrote in to congratulate us on our new look a heartfelt 'thank you' from the trio who put it together ... Steve Campbell whose design and layout work was super, Don Slater VE3BID our ad rep and yours truly, Editor Doug Burrill VE3CDC.

I have just received the February issue of the newly-named TCA. At first I thought it was a publication of the 'Trans Canada Airlines' but I soon realized it was a new name for the CARF magazine.

I am almost sure you will receive an avalanche of favorable comment from the members and I, too, wish to join in congratulating you and the Staff on the forward progress... The time now seems to be ripe for a real membership push. The individual efforts of sincere members might possibly do a great deal to increase the membership of CARF. Personally, I am doing my best in this respect. Best of luck and keep up the very good work.

Bill Skarstedt VE2DR,
Pointe Claire, P.Q.

(Now, if each member sold only one membership...!)

Incorporation

Congratulations on the new TCA. It is an outstanding improvement and was totally enjoyable.

Re your lucid article on the No-code Licensees (Pg. 17). I had thought I was the only one not blind to the commercial interests in our hobby...

As the author of 'Incorporation in Ontario' (Feb. p.18), I was pleased to be part of the first re-vamped issue. However, your necessary editorial abbreviation of the last paragraph could convey the erroneous impression that legal advice is not required. This is not so.

In fact, legal advice was obtained, on a personal basis. And since we did our own 'leg-work' for the lawyer, these

march 1979 - 10

fees were unnecessary. I hasten to note that this was a summary for a specific club situation. It may not necessarily be exactly applicable to all clubs.

Credit should also be given to Ted Hamer VE3LI for his article on this subject in a 1977 issue of The Ontario Amateur (RSO).

Phil Washburn VE3HAA
Ajax, Ontario

Article 41

Re our editorial in TCA for February, VE7BS writes:

I think the argument against Article 41 change should go like this -- "The present wording making no mention of speed, it is loose enough to allow administrations to do what they want anyway, so why meddle with it?" That is better than arguing about whether CW is necessary or not...

Although I was brought up to build my own gear, I don't do so much building these days, and some of the manufactured products are sure beautiful, and signals are relatively clean compared with before the war. These days most people buy their gear, and maybe a big strong Amateur service supported by business is better than a relatively weaker one deserted by business.

Bob Eldridge VE7BS
Burnaby, B.C.

Safety First

Re: Safety First for jumper starts, p.24, your February issue. I disagree with paragraph 8. I strongly recommend first starting the car holding the booster battery. Better one car engine running than two failing to start - especially in winter.

Incidentally, if you are also well and truly stuck, you will then be able to use your horn to send out S.O.S. until the gas runs out!

Peter M. Smith VE3DEX
Kingston, Ont.

TCA welcomes Letters to the Editor. For speedy processing, send correspondence directly to Doug Burrill VE3CDC, Editor TCA, 151 Fanshaw Ave., Ottawa, Ont. K1H 6C8.

CBers are Hams...

With reference to the article "CBers are Amateurs/Hams are Amateurs" in the November 1978 issue of T.C.A. by Bob Rouleau VE2PY.

The article implies the confusion in what our operations are called, none of which really apply. Myself, I have never liked the terms 'Amateur Radio', 'Radio Ham' or 'Ham Radio'.

In his last paragraph Bob suggest that someone come up with a better name for our 'Art'. May I offer 'Hobby Radio' and as individuals -- H.R.O.s (apology to National Co.) 'Hobby Radio Operators'.

Let's hear from some more members with new name suggestions.

Floyd G. Gribben VE7XN

(We've already got 'hobby radio operators' Floyd -- listen to 27 MHz! Ed.)

Repeaters

I would like at this time to drop you a line and let you know that I have just received my first copy of The Canadian Amateur. After reading it from cover to cover, I have come to the conclusion that you publish an excellent magazine and we are proud that it is devoted to the Canadian Amateur. I live in Pickle Lake, Ont. which is about 360 km north east of Kenora. As of this time, myself and two other gentlemen are hard at the books (CARF Study Guides) so that we may obtain our Amateur Certificates.

We would like to install a two-metre repeater in this area. One of the men that I study with is a Microwave Tech. with Bell Canada and I was in the electronics trade before I joined the Provincial Police, so we do have a fairly extensive knowledge of things. I would like to know if you or any of your readers could give us some information on type of equipment, antenna, power outputs, etc. of some of the many kinds of repeater equipment available. We would like to set it up so that we can be heard from Kenora or Thunder Bay area. I know that

this is a considerable distance but due to the flat terrain, we thought it might just work, and if you help us in any way it would be greatly appreciated. As we are so remote, we thought that this project just might help the promotion of Amateur Radio into another of our fine Canadian areas.

Frank Thornton

P.O. Box 127,

Pickle Lake, Ont. P0V 3A0

It Bugs Me!

Re: 'It Bugs Me!' by Bob VE2PY. I completely disagree with Bob on one point -- the word "Affirmative". Bob rants and raves over the use of this word. Apparently he has not handled up to 15 aircraft in a circuit or fighting forest fires. They, 100%, want the word 'Affirmative' to 'Yes', perhaps because there are four syllables in it, compared to one for 'yes', and therefore there is less chance of them missing the reply. I also take the liberty of referring Bob to the DOC booklet 'Radiophone operator handbook, land/sea/air', page 8 and 9, Para 2.1.5, title 'Procedure words and phrases'.

Jim McKenna VE6HO

Ghana

Now that I am back from Ghana, I receive your magazine a bit more regularly. It was a real ball operating from 9G1 land, and I was always glad to have a QSO with the VEs and VOs. Ghana was a great country to DX from with my home-made bamboo quad at 40 feet, which I could not rotate. I was still able to contact 163 countries from December 1976 til May 1978.

Because of poor mail service, there may be some Amateurs who sent me QSLs I did not receive, so could you mention that anyone who had a QSO with me and would like confirmation should send me a QSL direct or by the Bureau and I will make sure they get one. I still

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Letters (cont'd)

have 200 left of the 2,000 I had made in Ghana.

I would also like to thank the many VE operators who I had regular contacts with. When you are a long way from home it is nice to hear what's going on. I can now say there is no place like Canada!

Keith McGillivray VE5VJ

(ex9G1MK)

1513 East Heights, Saskatoon,
Sask. S7J 3B4.

Fox Hunting

Recently received the Feb issue of 'TCA' and have only great admiration for the production crew and executive, to bring The Canadian Amateur to this attractive format... One comment I would like to make is regarding your article on 'Fox Hunting'. I realize you are probably not at fault, but it should be noted that I put this same article into 'The Hamilton Amateur' bulletin in 1976, giving due credit to Bruce VE3GXQ, who originated the article in the Metro ARC bulletin...

Bob Rouleau's (VE2PY) articles are direct and to the point. The November article 'CBers are Hams; Hams are Amateurs' and his approach of focusing our attention on the use of the word 'Amateur' must make all of us more aware of the reaction of the 'uninitiated' to Ham Radio operation. I have enclosed a copy of an ad taken from 'The Canadian Amateur' Magazine which was published out of Vancouver, B.C. in the late 1950's, where this very topic was used as the main attraction in a contest. Does History repeat itself?

As an Initial Subscribing Patron #G-030, I am more firmly convinced that CARF is truly representing Canadian Amateur Radio to the best of its ability.

Norm Freidin VE3CZI
Hamilton, Ontario

My wife and I just received our Feb. 1979 issue of TCA. We find it a great improvement over the old format and are looking forward to many more of the same.

We would like to point out an error which we think should be corrected. On page 28, a VHF DF loop was published march 1979 - 12

without the proper credit. This loop was originally designed by myself (VE3GXQ) and was first published in the South Pickering Amateur Radio Club bulletin of January 1977.

Bruce Weber VE3GXQ
Whitby, Ontario

(The article in question has been recycled from bulletin to bulletin over the years; so just who did what, with what, to whom is still unclear ... We thought it a good one and borrowed it from the Lakehead ARC bulletin, but the author not being credited, Bruce was left out in the cold. Because we used it however, there's a little something on its way to Bruce from TCA to thaw him out.)

Russian tickets

I recall an article in Wireless World December 1974 which described some requirements for Amateur licencing in the U.S.S.R. For a first class licence, an applicant was required to send and receive the code at 18 wpm and be capable of designing receiver and transmitter circuits. Additionally, the individual had to be able to build and service advanced transmitters and receivers, and if successful in the exam, could operate on 3.5-420 MHz with 200 watts. Prior to this, one had the privilege of merely listening on the bands, if successful in a 10 wpm code test and basic electronics course. Contrast those conditions with our own.

It is apparent to me that there is far too much demand for a reduction in our standards, and I was disgusted to read (your January 1979 issue) that none of the three new exams required a Morse sending test. So what if the Digital Operator exam is especially difficult? Must every candidate be necessarily successful and, if not, the exam format modified until even a five-year-old child can become licenced, a la CB? What is worth having if easily gained?

John K. Leslie VE3GPA
Burlington, Ontario

Odds & Ends

Rowlie Beardow VE3AML writes that Australian Novice class calls are now VK2N, VK3N but, having run out of these calls for Novices, VK2V has been added for New South Wales stations and VK3V

for Victoria stations. He adds, "the Canadian ten-metre net now has over 350 registered members and meets on 28400 kHz at 2000 hrs (GMT??) on Sundays. Western net controller is VE7CMT. Eastern net controller is myself".

VE1BCN Doug Cormier sends a plaintive note: "If someone has the time, could 'TCA' publish a list of all of the prefixes? All of these new American prefixes are driving everyone nuts. The XYL worked an 'A' station that turned out to be on the Arabian Sea. I had passed it by, thinking that it was just another Yank." ...How about a new call book, Doug?

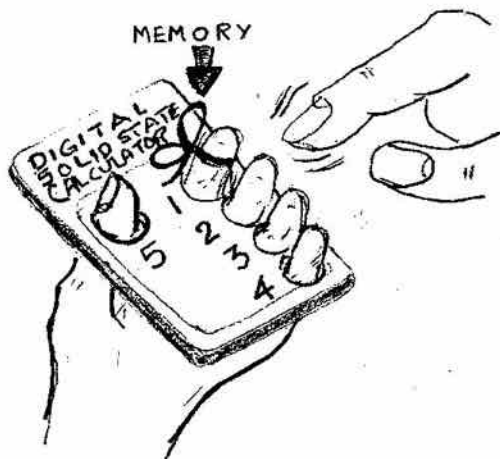
Thanks to John Blommers VE7DAB for his letter on the new exams; a look at our editorial this month provides an answer. VE3BZT John Lester sort of jumped the gun in his letter asking for a better cover paper. Happy to oblige, John, as you can see.

Calculators allowed

Would you please inform all your members, and any other interested persons, that a candidate for any Amateur

Certificate will be permitted to bring and use a non-programmable calculator at all future sittings of the Amateur examinations.

Yours truly,
J.J. Rousseau,
Manager, Spectrum Management
Operations Division
Telecommunications Regulatory
Service.



'DOC to allow Non-programmable Calculators in Exams' - TxVSWC's 'Zero Beat'.

From the Front Office

Elsewhere in this issue we report on the Special Preparatory Meeting (SPM) of the CCIR for WARC '79. After having read this article you may ask, "Why did we write it?"

The reason is simple. The competition for space in the radio spectrum is fierce. Amateurs need to be concerned about it and how that competition is going to be resolved.

For an Amateur to communicate he needs four things: a receiver, a transmitter, an antenna and finally frequencies. Without adequate frequencies his hobby is next to nothing: his investment is almost worthless.

In the HF spectrum users in the broadcasting, maritime, aeronautical and fixed services all want spectrum space while in VHF and UHF those in the maritime and land mobile are all

looking for more frequencies. WARC '79 will establish the framework by which these needs will be accommodated for the next 10 or 20 years. The next few months will tell as the proposals for frequencies from other countries begin to roll in and the competition we face is better known. Not all countries will make known their proposals, preferring to keep their views for the WARC instead.

Amateurs in Canada may want to speak up again regarding WARC '79 before the Canadian delegation goes to Geneva. Because no report on the SPM was available to give you in a few pages, some idea of what WARC '79 might be like, we prepared the article on the SPM to better inform you of the issues.

W. J. (Bill) Wilson, VE3NR
President.



John, VO1FX, advises that the repeaters proposed for Gander and Grand Falls, Newfoundland have inter-changed their frequencies and as a result, Grand Falls will be on 146.34/146.94 and Gander (VO1AV) will be on 146.46/147.06. Neither of these machines is on the air yet, but Grand Falls should be operational soon.

In Nova Scotia, the New Ross Repeater Group has been assigned the frequencies 147.84/147.24 for a unit proposed for their area. Hopefully, they will let us know when it is on the air.

In Ontario, the Halton ARC has a new repeater operating from Georgetown (VE3IXK on 146.22/146.82) and is also working on a six metre rig (VE3IZO) on 53.13/52.13.

VE3PBO, Peterboro, now has an autopatch in operation on 146.34/146.94. In London, VE3OPR now has a sister machine that will be on UHF shortly. No frequencies have been passed on as yet.

In Toronto, there is to be a UHF repeater installed on the CN Tower. The Toronto FM Communications Society (VE3RPT) has been given permission to connect to a multicoupler/antenna system as long as the selected frequencies (449.4/444.4) are compatible. The equipment will be ready to go as soon as the antenna system is ready. The call sign will be VE3TWR.

The Pickering ARA advises that they have a repeater that is alive and well on 146.07/146.67.

VE3IL has been operating in Pickering since September 1975.

In Whitehorse, Y.T., VY1BWR on 146.34/146.94 is now re-located to Canyon Mountain. The all-solid-state repeater will shortly boast an autopatch and is completely battery operated.

VE3YAK repeater (a ragchew rig?) in Sault Ste. Marie area, on 147.75/147.15 is planning an autopatch. The St. Joseph Island Repeater Association sponsors two certificate awards to finance VE3SJI in 146.28/146.88; details available from Gordon Waroshelo VF3EYW. VE3SRS, Sudbury, changed its call to VE3NRB last fall and is now on a new site on a cable TV tower. Autopatch is hoped for.

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The Winnipeg DX club has recently set up a repeater on 147.78/147.18 but has run into problems with the local RTTY group which has been using one of the frequencies. (The latter group are now discussing an RTTY repeater). Problems arose, according to the 'Manitoba Amateur' when the frequency co-ordinating service of CANAM repeater council were overlooked.

VE3OCR, Carleton University, Ottawa 146.25/146.85 is now operating parallel on 223.34/224.94, as well as out on six metres on 53.15 MHz.

NOTICE to all Repeater Licences: CARF plans on producing an up-to-date repeater directory in time for summer travellers. If your repeater was not listed in last year's directory or if there have been any changes please notify VE3DWL Hugh Lines, 53 Monterey Drive, Ottawa K2H 7A9. Location, call sign, frequency, autopatch if any and linking, if any, should be included. Licensee or club officers should sign the letter.

It would be appreciated if CRAG correspondents or repeater council chairman could provide up-to-date lists.

DOC nominates Amateur rep

Bud Punchard, VE3UD, has been nominated by DOC to be the member representing Canadian Radio Amateurs on the Canadian Delegation to the 1979 World Administrative Radio Conference.

If his nomination is approved by the Government, Bud will serve as a full delegate and be involved in all aspects of the work of this important conference, including participation in delegation meetings where the day-to-day decisions are made regarding the work of the Conference. Bud's nomination is an excellent choice as he has been an Amateur since the 1920s and is active on all bands up to and including 70 centimeters. As well he is well-known and respected by all those engaged in radio in Canada, having been president of the Canadian Radio Technical Planning Board for several years.



news briefs

To celebrate the 60th anniversary of the Newfoundland Telephone Company, the special call VO6ONT will be heard on the air from St. John's during 1979 on all bands from 160 to 10 metres on SSB and CW. QSL is via VO QSL Bureau or VO1HP, Frank Davis, 18 Rutledge Cres., St. John's A1A 3J6.

* * * * *

The status of the Sable Island operation which first showed up as 'VGW-211' and then used VE1MTA last fall for a short period has been labelled 'illegal' by the Halifax DOC office. The call was one of a series assigned to Ministry of Transport isolated stations along with some FT-101s to act as morale boosters for personnel at these places. VE1MTA licence was not renewed in the Halifax office after it expired in March 31, 1978. Just who authorized its use cannot be found out, despite a considerable amount of digging. MOT and DOC officials contacted seemed to have difficulty in recalling the episode and so it will have to be written off as what was charitably termed by one as an 'administrative oversight'. Current rumours are that a bird-watching expedition to Sable is trying to legalize the call for this summer.

* * * * *

VE3HLL Eric S. Walden, RR 1 Gowansdown, Ont. N0G 1Y0, has organized 'Ski Canada Award' which requires working two stations from each major ski centre in B.C., Alberta, Ontario and Quebec. There are no band or mode limitations. For details send SAŞE. Entry fee is \$2.00 with log.

* * * * *

Harvey VE6AVV formed a weather net in Alberta to give road conditions during the winter months. When the RCMP have difficulty getting info, they can call VE6 OH who gets them the dope on road and weather conditions from areas they can't contact.

Publication of the Canadian WARC '79 proposals has been delayed. Originally scheduled for publication around January 24, the proposals were submitted to the Federal Cabinet. At press time they still had not surfaced.

* * * * *

The next set of Amateur exams will be held by the DOC on May 9. The following set is tentatively scheduled for July 11.

* * * * *

MYSTERY SOLVED

VE3GCO's plea in our February issue to find out just who 3B2GA/3CO is prompted a reply from the president of SONRA, John Tessier VO1FX: "3B2GA was VO2GA using the special '3B' prefix of 1967, held by Harry White who now holds the call VO1HX." As to 3B2GA/3CO, John ventured that it could have been a misreading of Harry's fancy call with the maritime operation suffix VE0, inasmuch as Garry VE3GCO had stated that the station in question was "somewhere in Hudson's Bay".

CFARS Report -

DND have requested suitable frequencies from DOC for the Canadian Forces Amateur Radio System and are hoping for a favourable answer in a few weeks or so. Standard CFARS operating procedures are nearly completed. About 18 Amateurs who regularly work Canadian Amateurs with the forces in the Middle East have been chosen and as soon as authority is received from DOC, CFARS calls will be assigned and the Middle East network will begin operation. The remaining networks will be set up shortly afterwards.

VE1 beacons on 2 & 6

A mention in our November issue of the two-metre beacon operated by Andy McLellan VE1ASJ brought forth from him the following interesting story on his VHF beacon stations.

The beacons are located at the site of VE1KI repeater about 12 miles east of Saint John, N.B., on top of an 870 foot hill. There are actually two transmitters one on six metres and one on two metres, using the same call, VE1SIX. The six-metre transmitter is a Clegg Thor running 38 watts to a dipole 20 feet above ground. It also has a second signal which runs much lower power for 30 seconds out of a one minute transmission. This has been measured at 100 milliwatts, so the pattern of xmission on six is 30 seconds of high-power, 30 seconds of low-power to the dipole. During the high power it has a ten second tone, ten second CW identification, VE1SIX and another ten second tone.

The six metre beacon operates 24 hours a day on 50.088 MHz and has been on almost two years now.

The two-metre beacon transmitter is a Johnson 6 NZ, running 17 watts (cut back) to a 'Big Wheel' antenna. It operates exactly the same as the six-metre beacon. It also sends VE1SIX

(Not the best call for two metres!). The low power is under 100 milliwatts but I am really not sure how much under. The two-metre beacon frequency is 144.072 MHz not 144.084 as was mentioned in the November issue.

Now I might mention some results -- The six-metre beacon has been heard in 47 states that I know of. I have reports from VO1, VO2, VE1,2,3,4,5 and even a bit of DX. (KP4, VP9, KZ5, HC and T12).

The two-metre beacon has been reported by stations in Maine, New Hampshire, Vermont, Connecticut, Rhode Island, Massachusetts, New York, New Jersey, Maryland, Pennsylvania, Virginia, North Carolina, and Ohio all of VE1,2 and VE3.

The beacons seem to be great for detecting Aurora, Tropo, E's, F layer propagation and coasting ducting and even meteor activity on UHF.

A K8 station in Dayton hears the two-metre beacon almost every morning on random meteor reflections.

Lately I have been trying to work a few on meteors myself. The results have been good. On two I worked Virginia, Ohio, Michigan and Indiana.

P.E.I. Amateur appointed

VE1AIC, Ron Mackay of Meadowbank, Prince Edward Island recently received recognition for years of service to fellow Amateurs by being appointed the Canadian Representative to the ARRL VHF Advisory Committee in the U.S.

Ron is with the C.B.C. at Charlottetown, P.E.I. From its inception until recently, Ron was president of the Charlottetown Radio Club and is now vice-president. In addition to putting in many long hours as theory instructor at Amateur classes, Ron contributed a great deal to the success of Field Days.

Ron has been the owner of VE1AHC, a repeater on 146.4 in and 147 out, for years, and until very recently this was the only P.E.I. repeater with phone patch capabilities. To make it even more

interesting, Ron put up another repeater in Nova Scotia, VE1SPR, and connected the two with a UHF link. Two repeaters were not enough and Ron now has a UHF repeater VE1UHF on 449.4 in and 444.4 out with a radiated power approaching 1,000 watts. This is a first for the Maritimes and, as with his other repeaters, all of the financing and maintenance has been handled by Ron. To fill in what spare time he has left, Ron has been emergency co-ordinator for ARRL for P.E.I. and has completed the emergency measures course at Arnprior, Ont. Congratulations, Ron, on your latest appointment, which ensures a Canadian input to the solution of problems common to both Canadian and U.S. Amateurs.

Since the CANADAWARD program began on 1 July 1977, 27 certificates have been issued. This CARF-sponsored operating award program requires one to submit proof of contact with all Canadian provinces and territories on any one given band.

Of the awards issued to date, by far the majority were for 14 MHz. What happened to all the other bands? Now that the sunspots are up, it is very easy to work across Canada on 21 and 28 MHz. You can probably work all provinces and territories any weekend now on the higher bands. There is a Trans-Canada net on both 14140 KHz and 28400 KHz every weekend, making it very easy to find missing provinces on these bands.

The lower bands are a bit more difficult. Seven megahertz suffers from a lack of Canadian activity, especially on phone. However, if and when the DX phone band below 7100 kHz is made available to us, that will change very quickly. 3.5 MHz is a very active band with lots of provincial nets. However, propagation is not always favorable for working from coast-to-coast on this band. But with patience and perseverance, the CANADAWARD can be obtained on the lower bands also.

Probably the best approach to obtaining the CANADAWARD is to first search the Trans-Canada nets for the provinces you need and then make skeds with them on the bands you need. If, for example, you need VY1 on 7 MHz, find a VY1 on the 14 or 28 MHz Trans-Canada net, and make a sked with him on 7 MHz. This is a far better approach than just random-

ly listening around hoping to find what you need. Activity from the rarer provinces can be pretty slim on some bands and skeds can help to create that activity for you.

FIRST FIVE BAND CANADAWARD

Garry Hammond VE3GCO has earned the very first five-band CANADAWARD. To achieve this historic first, Garry had to work and confirm all Canadian Provinces and territories on each of 5 different Amateur bands. Garry made it on 14, 21 and 28 MHz in short order; 3.5 MHz came a little later; and finally he made it on 7 MHz to complete all 5 bands. A remarkable achievement!

Garry writes on how he did it in a story next issue. It was clear that he made extensive use of skeds. In many cases he worked the same station in a far-away province on more than one band. Congratulations, Garry, and CARF awaits your application for the first six-band CANADAWARD. Which band will you choose for the sixth one, 1.8 MHz, 50 MHz, or one of the satellite bands?

One of the ideas of the CANADAWARD was to create more activity on the Amateur band besides 20 and 2 meters. Apparently this hasn't worked, since virtually all the CANADAWARDS issued so far are for 14 MHz. How about it? Make some skeds on other bands besides 14 MHz and discover what you have been missing!

CANADAWARDS issued to date

All Amateurs on this list should have received their award certificates by the time you read this. If you did not, please advise.

5 BAND --VE3GCO	10 -- WD9ACQ -- mix	28 MHz
14 MHz	11 -- DA1HO -- SSB	1 -- VE3GCO -- SSB
1 -- VE3ET --SSB	12 -- VE6PW -- SSB	2 -- WB9WFZ -- SSB
2 -- VE3GCO -- SSB	13 -- W3TVB -- CW	3 -- VE1BNN -- SSB
3 --VE2QO -- SSB	14 -- VE7CNE -- CW	21 MHz
4 -- W9VWV -- SSB	15 -- VE3IUU -- mix	1 -- VE3GCO -- SSB
5 -- W6BZ --CW	16 -- VE3JIJ -- mix	7 MHz
6 --K6VY -- CW	17 -- VE3DMC -- mix	1 -- VE3GCO -- mix
7 -- WB8YXT -- mixed	18 -- VE3IPR -- mix	3.5 MHz
8 -- WD8CYR -- CW	19 -- WA8VDC -- mix	1 -- VE3GCO -- SSB
9 -- VE3IUE -- mix	20 -- VE3JPJ -- SSB	

from the clubs

VE3DSP and VE3HWB in the Hamilton area are preparing for packet radio transmissions. The trial link will allow voice as well as data transmission, a combination necessary for the initial testing. Data will be 4800 Band ... 100 times faster than RTTY. (Tx 'The Hamilton Amateur')

At the request of RSO the Peel ARC Inc. has undertaken to meet with reps of the deaf and hard-of hearing to investigate the possibility of assisting deaf persons to become Amateurs. They could then use RTTY to communicate. The interested Amateurs intend to investigate training methods and the extent (if any) to which DOC would be willing to adapt examination requirements ... the use of visual Morse, for example. Readers can contact Bill Tracey VE3JOL.

From the Victoria Short Wave Club, which just celebrated its 50th anniversary, comes word that it is setting up a TVI/BCI Committee to assist local ops with problems. VE7BEU will undertake the necessary liaison with DOC. The club's 'Zero Beat' (one of the best bulletins in Canada) reports also that the South Vancouver Island Senior Citizen Club has received a good portion of its New Horizons grant and expects VE7RSR as the call for its new repeater on 144.81/144.21. (On NBFM we hope. Ed.)

One club notes that Pakistan has been removed from the banned countries list. No official notice has been received from DOC to this effect. The CARF list of ITU proscriptions therefore shows Pakistan as still on the no-no list.

The Canadian Ladies' Amateur Radio Association has a new executive. Prez is Ann Nutter VE3HAI, veep is Diana Vanderzande VE7DTO, sec. Jeanne Gordon VE2JZ; i/c moneybags is Vivian Taylor VE3HGA. Past prez is Marjorie Karl VE6LC.

Winners of the Ontario Trilliums Weekend Contest are Sid Wheat VE3CQY (the third time for him!) first; Steve Bamber VE3JPJ, second; David Adams VE3HBF, third. A draw from all logs submitted netted \$5.00 to VE3JPJ, \$3.00 to VE4MG Malcolm Timlick and \$2.00 to VE3FXM, Myrtle Manning. The Trillium gals run the VE3QSL Bureau and have asked that Ontario ops who send or expect QSL cards to send a supply of self-addressed stamped envelopes (SA SE) to the VE3QSL Bureau, The Ontario Trilliums, Box 157, Downsview, Ont. M3M 3A3.

The Hamilton club is planning a cable TV series which would assist potential Amateurs in learning more about the hobby.

**RADIO ACT AND GENERAL
RADIO REGULATIONS**

CANADA

**LOI SUR LA RADIO ET RÉGLEMENT
GÉNÉRAL SUR LA RADIO**

OPERATOR'S NAME (SURNAME AND GIVEN NAMES) - NOM DU CONDUCTEUR (NOM ET PRÉNOMS)

SEX / SEXE M F DATE OF BIRTH / DATE DE NAISSANCE D J M Y - A

OPERATOR'S ADDRESS - ADRESSE DU CONDUCTEUR

OWNER'S NAME (SURNAME AND GIVEN NAMES) - NOM DU PROPRIÉTAIRE (NOM ET PRÉNOMS)

OWNER'S ADDRESS - ADRESSE DU PROPRIÉTAIRE

has established a radio station in vehicle - a établi dans le véhicule

LICENCE NO / N° D'IMMATRICULATION PROVINCE YEAR - ANNEE MAKE - MARQUE

in violation of the Radio Act or General Radio Regulations / en contravention de la Loi sur la radio ou du Règlement général sur la radio, une station

- unlicensed station (Section 3, Radio Act) / exploitée sans licence (Article 3, Loi sur la radio)
- unable to produce a licence (Section 10 of the General Radio Regulations, Part II) / pour laquelle il n'a pas pu présenter de licence (Article 10, Règlement général sur la radio, Partie II)
- other / autre

SUED AT / NEAR - CONTRAVENTION ÉMISE A PRÈS DE

TIME - HEURE DATE

ED BY - CONTRAVENTION ÉMISE PAR

OF THE / DE LA

See reverse side - Voir au verso 16-843 (1177)

The official publication of the Canadian General Radio Service Association's 'CB Canada' notes that police are checking mobile sets for licences using a new 'ticket' issued to offenders under the Radio Act for not being able to produce a licence. This applies to Amateurs as well. Carry a photocopy of your station licence in your car, as you are legally bound to do and avoid a lot of trouble.

To mark the 100th anniversary of the founding of Bancroft, Ontario, the Bancroft ARC will be on the air with 'X3TBC' during 'Homecoming Week', August 11-18, this year, on a 24-hour basis.

VE2RM bulletin quotes Burt Lang VE2BMQ's warning about plugging your rig into the cigarette lighter of some of the new cars which may have the 12 volt polarity reversed from the traditional 'plus' on the tip with the 12v negative on the case which is grounded to the dash panel on the usual car. Some of the new vehicles have plastic dash panels and thus the lighter has two wires running to it. Some of these may have the negative on the tip and the positive on the case. "It might", concludes the note, "be worth checking first".

The 'Algoma Amateur' says that a group in the Nipigon area, near Thunder Bay are reportedly in the process of erecting a solar and wind powered repeater, probably on 146.34/146.94.

DX ops and Editors please note the words of the 'Cape Breton Amateur' in reporting a plea from John A. McKinnon VE1AX. He said, "My call sign VE1AX continues to be used illegally. I have had my call bootlegged for almost seven years and I continue to receive unwanted DX cards. I feel sorry for those DX stations who will therefore not receive my QSL. Anyone contacting VE1AX is advised to wait for my QSL."

The Nova Scotia Emergency Measures Organization recognizes the usefulness of Amateur communications and is arranging an all-expenses paid two-day seminar in Camp Debart, tentatively for March 17-18. Operators who took part in the recent emergency test will be invited. (Cape Breton Amateur)



Transcan Net

At the moment we are still struggling to get on the air with the Transcan, so probably the best route is to start with what we have and hope that the operation expands.

In my recent article on the net I mentioned a frequency of 14,103 kHz which I must hasten to correct as it is not legal to operate F1 above 14,100 kHz on twenty. We will try 14,098 kHz for starters and see how it goes. On the question of time there was some division of opinion but in the main most were agreeable to Sundays at 1800z. To the best of my knowledge there is only one interested person who is unable to make that time frame. The problem on this end is that this station is now available after that time until about 2100z. If enough of the participating stations would prefer 2100z or later we will change.

Until such time as the net is a viable proposition it would appear necessary for us to be present on the net. It is obvious

that it will be a long uphill struggle with many days of few or no participating stations and little or no traffic. Having gone this route with other nets, however, we feel it can be promised that if we persevere long enough the net will succeed.

One way to ensure its ultimate success is for us all to originate traffic for the net. If your club attends fairs, exhibitions etc., take traffic for the system. If you have any non-urgent routine traffic feed it into Transcan where possible. Some tests have been made on 14,098 at 1800z and it appears good. We propose to write those who were interested and get started during February. In the meantime, if you have any ideas please let us have them. (PS; the 'WE' is a collective 'WE' meaning the net!)

Art Spence VE7DKY
Manager Transcan Net
Box 818, Vernon, B.C. V1T 6M8
(604) 545-0101

CARF Bulletin Station sked

CARF Newsletters and News Bulletins will be heard over VE3TCA the first official CARF News Service Station, utilizing the facilities of VE3OCU, Carleton University Ottawa, on the following sked:

- 14.140 MHz SSB Sundays 1745 GMT
- 14.080 MHz TTY Sundays 1830 GMT
- 14.070 MHz CW Sundays 1930 GMT
- 3.755 MHz SSB Sundays 2300 GMT
- 3.590 MHz CW Tuesdays 0100 GMT
- 3.610 MHz TTY Tuesdays 0130 GMT

Carleton's three repeaters will also transmit the bulletins simultaneously on MCW using their own call sign VE3OCU on 146.85 MHz, 224.94 MHz and 53.15 MHz on Wednesdays at 0100 GMT. (Note

that GMT times for Tuesdays and Wednesdays are Monday and Tuesday in Canadian time zones.)

With the advent of Daylight Time in the summer, the GMT times will be one hour earlier. Local times in areas which use DST will be the same as now.

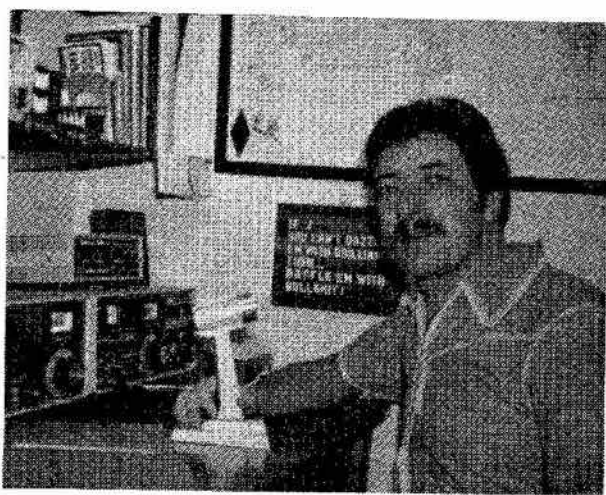
(Your editor has a nostalgic memory of setting up the first station at Carleton College, as it was back in 1948, along with then VE3BAY John LeGrand. A home-made 40 metre FM and CW transmitter plus an RCAF surplus R 1155 receiver and some bits and pieces of old Army No. 19 sets stolen from the physics lab put VE3CCO 'Carleton College, Ottawa' on the air.)



Rare DX

DX fans wanting to contact the only country still operating from Zone 26 should listen for HS1ALT (ex-VE3JKD) Gary Morgan in Bangkok, Thailand. He can be heard on or near 14.160 MHz from 1000 GMT when working his father VO1CW Newt Morgan in Killigrews, Nfld. after 1300 GMT it's 'CQ Canada' from Bangkok.

Gary, along with VS6CZ and 5K3BP originated the Canadian Net Overseas (CONET) which meets informally Thursday and Saturday on 14.140 MHz at 1430 GMT. Also look for check-ins from other Canadians overseas with prefixes DU4, 7P8 YB0, P29 G3, EL1, VK2 and others. Gary, who works for External Affairs Department, will be closing down HS1 ALT this summer and heading either for home or another DX posting.



DOC News

Radio licences excepting GRS and Amateur licences will cost more after April 1, DOC announced recently. These two services represent more than 70% of radio station licences in Canada.

* * *

Jim Baber VE3JCB writes to tell us of the quick and excellent response from the Toronto office when Jim drew attention to an ad in a Toronto paper addressed to GRS operators telling them that, if they were fed up with crowded conditions, for \$10 the advertiser would forward them a circuit showing how to modify their CB rig to work on other bands. A subsequent letter from DOC is worth reprinting. It said, in part:
Dear Mr. Baber:

Thank you for your letter of January 1, 1979 ... Our Toronto Radio Regulation staff saw the ad and proceeded to Barrie on January 4 to investigate the matter. They found that the ad had been placed by a recent graduate of an electronics course who had not been able to find employment. The individual involved was warned about the seriousness of his

ad and informed of the consequences of making revisions to GRS equipment and of counselling others to do so. The visit was followed up by an official letter from the Department outlining the pertinent sections of the Criminal Code and the Radio Act and Regulations. We believe that the regulatory action taken has effectively curtailed this business endeavor.

Your comments about unlicensed operations above and below the GRS band are noted. You may rest assured that if the Department is able to obtain positive identification of the individuals involved in such operations we are prepared to take appropriate enforcement action. In connection with unlicensed operations, should you or any member of the Amateur fraternity have evidence to contribute, the nearest District Office, Radio Regulations would appreciate receiving it.

Yours truly,
J.J. Rousseau,
Telecommunication Regulatory Service.



International News

DX ops will be disappointed to learn that Willi de Roos 3YBOZ will probably not be able to get on the air from Peter 1 Island due to current hazardous landing conditions, even though it's summer in the Antarctic.

* * * * *

The University of Surrey has announced Britain's first Amateur space craft. The two year building program is being supported by AMSAT and RSGB and a number of British manufacturers and government agencies. A possible early 1981 launch exists. It will carry a scientific payload possibly including a TV camera for weather observations.

* * * * *

CB organizations in the U.S.A. are getting serious attention from the FCC on petitions to get 40 new channels for SSB between 27475 and 27995 kHz and one to permit a no-code 'Amateur' service in that same frequency range.

* * * * *

Legislation to meet the radio interference problem by requiring better rejection of unwanted signals in home entertainment equipment has again surfaced in the U.S. House of Representatives. Another perennial U.S. bill is the Communications Act rewrite, now being considered for both Houses of the Congress.

* * * * *

Another note on U.K. activities comes from the Warrington and District ARC and announces a special call GT4CDA for what it terms a 'DXpedition' to the Isle of Man, July 1 to July 4. Info can be had from Jeff Maynard, 10 Churchfields, Widnes, Cheshire, England. Send a SASE.

* * * * *

U.S. international broadcasters are upsetting plans for the U.S. proposals for WARC '79. With a lobby just as powerful as the international broadcasters have in Canada, their recent refusal to accept the compromises worked out

between other H.F. users "rankles observers both in and out of the government". (The broadcasters involved in both Canada and the U.S.A. are government organizations such as the CBC and Voice of America.)

* * * * *

(Our thanks to 'HR Report' for most of the info in this column.)

VE3VCA Operating Schedule

Wednesdays

0030-0130 Z 14.060 MHz CW

0130-0230 Z 14.160 MHz SSB

Saturdays

1900-2000 Z 14.060 MHz CW

2030-2100 Z 14.160 MHz SSB

Sundays*

1500-1600 Z 14.060 MHz CW

1600-1700 Z 14.160 MHz SSB

*Third Sunday of each month only.

To find local standard time, subtract from Z time 3 1/2 hours for NST, 4 for AST, 5 for EST, 6 for CST, 7 for MST, 8 for PST and 9 for YST. Note that Wednesday hours are Wednesday local time in Canada, but Thursday Zulu. During the months when most of Canada is on Daylight time, operating hours will be one hour earlier Zulu, thus the same local time for those regions of Canada on DST.

All frequencies are plus or minus QRM, we will try to find a slot within a few kHz of the listed frequency. VE3VCA operators are volunteers pressed from the ranks of the Kingston, Ont. ARC. You will seldom hear the same voice/fist more than once a month.

From 10-4 to CQ-10

Rob Bareham VE3ACY

With the advent of the expansion of the General Radio Service from 23 to 40 channels, a by-product has emerged which is of great benefit to the Amateur Experimental Service. This is the availability, at sometimes below cost price, of the old style 23 channel transceivers.

Since by far, great numbers of our new Amateurs are ex CBers, who no doubt still may have their now unused transceivers collecting dust, and the fact that retailers of CB sets are anxious to clear their old stock of 23 channel sets at reasonable costs, makes the conversion of these sets to 10 metres most appealing.

These radios are mostly quality pieces of communications gear, have met with DOC type approval, are surprisingly low in spurious signals and have receivers designed to pick a weak signal out of an overcrowded frequency, all of which results in a piece of equipment which should, once converted to ten metres, complement any Amateur station.

The range of these units on ten metres, is comparable to two metres and in fact, can exceed two-metre ground wave coverage given a comparable antenna system and power output.

This article is not meant to give a step by step guideline for any particular type of CB set, but to give a general outline of what is involved in converting one of these units.

As these transceivers are crystal controlled on 23 fixed frequencies, a band plan is necessary. There are at present two different band plans in effect for AM CB sets. The original plan called for a 1.035 MHz shift up from the original CB channels. However, this was found to be incompatible with those operators already operating on the AM portion of ten metres, who were using high power, VFO controlled rigs and interested in weak signal work, rather than working Joe Ham who lives across town.

Since the phone segment of 10 metres is sliced up by a gentleman's agreement as follows, there remained only one logical place to locate the channalized transceivers.

28.0 to 28.1 -- CW

28.1 to 28.8 -- SSB (except USA Amateurs who are restricted to phone above 28.5)

28.8 to 29.0 -- AM

29.0 to 29.4 -- seldom used

29.4 to 29.5 -- Amateur Satellite band

29.5 to 29.7 -- FM

For this reason, the trend has been to convert these rigs exactly two MHz up from their original CB channels, placing channel 1 (the call channel) at 28.965 MHz.

For SSB CB sets, there is no organized band plan as there is for AM. However, as the USA Amateurs generally flock around the SSB calling frequency of 28.6, they usually put channel 1 of their

converted CB sets at 28.5 MHz (up 1.535 MHz from the original CB channels). In Canada, we are not restricted to staying above 28.5 and most Canadians seem to converge a few kHz below the bottom of the US phone band to avoid QRM. For

this reason, the few Canadians that I know who have converted the SSB type of CB set have moved them up 1.495 MHz from the original CB channels with channel 1 starting at 28.460 MHz.

Converting CB sets

There are three general categories of CB sets available. The first is the older type which uses a single crystal for transmit and one for receive for each channel. The second, which is the most common and the easiest to convert, uses a crystalplex type of synthesizer, where the changing of usually 4 to 6 crystals results in 23 channels on 10 meters. The third type uses a phase lock loop system which involves usually the changing of only one or two crystals but is more complicated to convert than the second type.

The actual conversion consists of the crystal change, and retuning the receiver and transmitter. You will be happy to know that no I.F. alignment is necessary and a minimum of test equipment is required. It should also be noted that no coil or capacitor changes should be necessary for a standard crystalplex rig.

The following items are presented as hints in conversions:

-- Try to obtain the service manual: It's a great help.

--Although one can tune to the final transistor of an AM CB set to an excess of 7 or 8 watts output, it is not suggested

you exceed about 4 to 5 watts output as the modulators cannot produce sufficient output to modulate this much power, and the transistor may have difficulty in handling this current.

-- Virtually all SSB models and some AM models have a control known as either a Clarifier or Delta Tune or RIT which shifts the receiver about 100 kHz, usually a jumper can be installed to make this control also shift the transmitter.

--Many manufacturers made only one or two different models but they are marketed under various brand names, for example, one particular model is a Hygain, a Sears, a Citizen and a Lafayette along with a few others.

-- By experimentation, a variable L/C network can be used instead of one of the synthesizer crystals for VXO control.

Finally, good luck in your conversion, the half hour or so spent in converting one of these rigs over will reward you with many hours of DX and ragchewing. In order to recover some of your costs for crystals, how about submitting an article to this magazine giving step by step details for converting your particular rig!



WANTED:

'TCA' is seeking new, original technical material from our readers, and pays for articles published.

Manuscripts should be typewritten, double-spaced, and drawings ready for the printer; however, we will accept anything we can decipher. Please include your name and call (if licenced), plus

Technical Articles

your full mailing address. We would also appreciate receiving copies of any club or society bulletins which have technical content.

Please send all technical material to CARF Technical Committee, P.O. Box 356, Kingston, Ont. K7L 4W2.

Wire Antennas

(The first article in a series by Bob Eldridge VE7BS.)

The other day I was in the scrap metal yard hunting for big transformer cores (a wonderful source of enamelled copper wire) when I came across a reel of #12 PVC-insulated copper, about 800 feet on a 1,000-ft. reel, so I bought that instead. Might just as well, when it is all available at scrap copper price, sold by weight rather than by the foot.

The junk man found it hard to believe that I intended to use it all on an antenna. To most people, an antenna is a little thing made of aluminum tubing, stuck on the top of a pole. When I explained that my hobby is making antennas out of wire, usually suspended from a 100' tree, he shook his head, shrugged his shoulders, and decided that if you ask stupid questions you are likely to get stupid answers.

If you, too, find it hard to believe, and think that hams who use up several

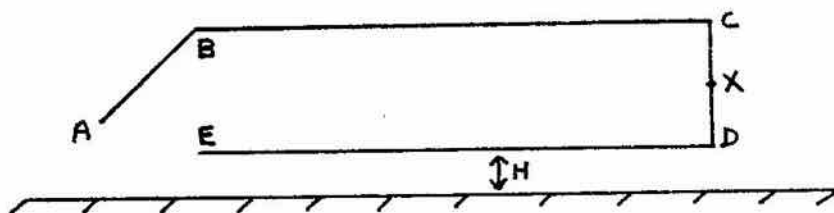
thousands of feet of wire sometimes in a year need their heads looked at, you may as well skip this piece; on the other hand, if you are one of us, stay with it just in case there is something here to send you up into the trees this Spring in search of the better wire antenna.

The G8ON All-band Antenna

This is a fine example of the type of antenna which is mainly horizontal, but radiates vertically polarized signals on the lower bands. It was first described in print by G8ON in the September 1957 RSGB Bulletin, and further experience with it was reported in the June 1966 issue of the same magazine.

It is basically an 'up-over-down-and-back' design, with current maximum in the vertical position, and single wire high impedance feed.

It looks like this:



Design Frequency	A-B	B-C D-E	C-D (vert)	H
1.8	44	116	33	5-10
3.5	14	52	28	5-10
7.0	14	27	12	5-10

All dimensions are in feet. A shorter version, with a loading coil at E, will be described later.

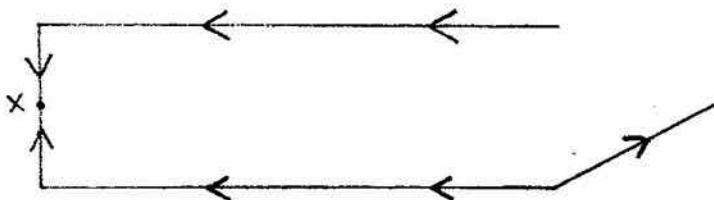
The effective portion, B-C-D-E is a half-wave 'bent in the right places', and the length C-D is about as long as it could be if it is to function effectively as a vertical on 14 MHz. If the lowest band to be used is 7 MHz, and high

supports are available, C-D could be made any length up to 66 feet, keeping the midpoint of a halfwave at X, the centre of the vertical piece*. This is

*If all this seems wrong somehow, give yourself full marks for alertness. But it will become clear when we deal with the addition of phasing extensions at point E.

In the next part of the series, we will look at the things which can be done

with a loading coil and/or extension attached at point E.



Perhaps this is the place to put in a to the transmitter.

adjusted to present a resistive 50 ohms then left alone; the transmatch must be adjusted into a 50 ohms dummy load and the transmitter should first be correctly As with all transmatched arrangements, arrangement should take this into account. itive reactance, so the transmatch ar-A-B, the transmitter will 'see' a capac-and on 3.5 MHz using the full size antenna and on 1.8 MHz, the 'design frequency' of 1.8 MHz,

But if you draw arrows to show the direction of current at a given instant in the upper and lower wires you will see that they now look like two half waves in phase.

On twice the design frequency, the length B-C-D-E is a full wave, and X becomes a voltage maximum. The current in the upper and lower halves of the vertical wire now flowing in opposite directions, it doesn't radiate very effectively at low angles.

reminder that you cannot load the transmitter into 50 ohms on low power and end up with the correct pi-network settings for matching on full power. The pi-network is an impedance matching circuit, matching 50 ohms to the impedance of the output stage. If the voltage applied to the output stage is constant, then the higher the input current to the stage, the lower impedance it presents to the pi-network.

Avoid sharp bends at the corners, or This is true of most bent antennas, especially triangles, where the angle would be less than 90 degrees if you just run it through a single insulator. The lower wire should be as nearly as possible underneath the upper one. E should be out of reach of unsuspecting people and well-insulated -- it's a high voltage point.



The length A-B is not important to the operation of the antenna, except that it should be relatively short. Some lengths will be easier to match than others. If the antenna has to be some distance from the shack (for example, if all supports are some distance away, it would be better to feed it at B with an open-wire feeder, zepp style, like this:)

necessary to keep the horizontal wires out of phase with each other at each point. (An equal and opposite voltage appears at B and E, and displacement current then flows between them, as it does between other points on the upper and lower wires -- it is nice to have invisible vertical antennas working for you.)



Amateurs wanted by Coast Guard

Here are details on the new Canadian Coast Guard auxiliary units, the Coast Guard Volunteer Marine Rescue Auxiliary on which we carried a story last month. The five units are seeking the co-operation of individual Amateurs and their organizations to provide communications, along with General Radio Service ops (CB). The units objective is to promote boating safety and to assist the Coast Guard in search and rescue operations

The Auxiliary will be formed from interested voluntary groups and individuals including Amateur radio and CB operators who will operate under the guidance of the Canadian Coast Guard. The Auxiliary will be organized on a regional basis and will be largely self-governing but will maintain a close liaison with the Coast Guard Regional Co-ordinator.

The Coast Guard will provide overall co-ordination and establish guidelines for Auxiliary operation to ensure that there is a standard approach across the country as far as local customs and conditions permit.

A group or individual may become associated with the Auxiliary by meeting the following general eligibility requirements:

a) applicants must be willing to be members of an organization affiliated with the Canadian Coast Guard by contract;

b) they must have reached the age of majority as defined by the province in which they reside;

c) they must be willing and able to

provide a needed service in support of the stated aims and objectives of the Auxiliary;

d) they must satisfy such other eligibility criteria specified by the Association and the Canadian Coast Guard.

Short training courses in relation to rescue activities and techniques arranged from time to time by the Canadian Coast Guard would be a requirement for Auxiliary members. These would not duplicate training available from other sources such as St. John's Ambulance, Red Cross and Canadian Power Squadrons.

When on authorized search and rescue duty, members of the Auxiliary may be entitled to receive compensation in the form of a composite allowance for the use of their vessels, the cost of fuel, oil, out-of-pocket expenses and repairs not otherwise covered by the owner's hull insurance. Members would be required to have adequate protection and coverage for their craft, equipment and liability. The additional cost of this protection while on authorized duty, if any would be borne by the Canadian Coast Guard.

Accepted Auxiliary organizations and their members will have identifying pennants and other appropriate insignia, supplied by the Coast Guard which would reflect their affiliation with it.

For further information on how to volunteer to join with other dedicated men and women in this Volunteer Marine Rescue Auxiliary, it can be obtained from any regional Canadian Coast Guard Auxiliary Co-ordinator located at:

Ministry of Transport,
Place de Ville,
Ottawa, Ont. K1A 0N7

Maritimes Region
P.O. Box 1013,
Dartmouth, N.S. B2Y 3Z7

Central Region,
Toronto Star Building,
1 Yonge St., 20th Floor,
Toronto, Ont. M5E 1E5

Newfoundland Region,
P.O. Box 1300,
St. John's, Nfld. A1C 5N5

Laurentian Region,
2 Place Quebec,
Room 212,
Quebec, Que. G1R 2B5

Western Region,
Canadian Coast Guard
Base Kitsilano,
1661 Whyte Avenue,
Vancouver, B.C. V6J 1A9

CONTEST CALENDAR

- 10-11 Mar BERU CW
- 17-18 Mar ARRL DX CW
- 24-25 Mar CQ WPX SSB
- 7- 8 Apr ARRL Open CD CW
- 21-22 Apr ARRL Open CD Phone
- 21-22 Apr ARRL EME Contest
- 19-20 May ARRL EME Contest
- 9-10 Jun ARRL VHF QSO Party
- 23-24 Jun ARRL FIELD DAY

With March comes one of the best contests of the year, the C.Q. World Wide WPX SSB Contest (March 24-25). It's a fast-moving, exciting, yet simple contest. The rules are straight-forward, and the exchange is short.

Briefly, the rules are as follows. If you are a single operator, you may operate no more than 30 out of the 48 hours between 0000Z Saturday March 24 and 2400Z Sunday March 25. Your breaks must be no less than 15 minutes in duration. For each contact in North America, you get two points with the exception of your own country. Contacts within your own country are worth 0 points. Contacts outside North America are worth three points. Your total number of points is multiplied by the number of different prefixes you have worked. With each station you exchange a report and a consecutive serial number beginning at 0001. There is a wide selection of classifications. One can enter as Single Operator all bands or single band, Low Power, Multiple-Operator Single Transmitter or Multiple Transmitter. For a more complete explanation of the

rules see either February or March issue of CQ.

CQ WPX SSB CONTEST

These are the all-time Canadian records for this contest. Last year every record except the 1.8 and 3.5 MHz records were broken. Since last year, the FCC has issued several whole blocks of new prefixes including AA-AL, KA-KZ, NA-NZ. With all these new multipliers and improved band conditions, these records should be broken again this year.

There is a second excellent contest this month also. The BERU is on March 10, 1200Z to March 11, 1200Z. It lasts 24 hours and there are no time outs. You contact only stations in the British Commonwealth and for each contact you receive 5 points. There are no multipliers, instead the first 3 contacts in each call area are worth a bonus of 20 points each. There are a few call areas which are exempt, and thus do not count for an additional 20 points. Unfortunately the list of these exceptions combined with the countries which are included is too long to print. The complete list can, however, be found in the December 1978 issue of the RSGB magazine 'Radio Communications'. A word of warning, for each wrong exchange you lose points, and for each wrong call you lose complete credit for that contact. The RSGB crosschecks each log with a fine tooth comb, so be careful. The exchange consists of signal report and consecutive serial number, e.g. 599001.

CQ WPX SSB CONTEST ALL TIME CANADIAN HIGH RECORDS

Entry Class	Call	Year	QSCs	Mult	Score
MULTI-MULTI	VC7WJ	1978	7396	436	9,389,696
MULTI-SINGLE	CG3AKG*	1978	3394	470	4,607,410
SINGLE-ALL BAND	CG3EUP*	1978	1746	411	2,091,990
28 MHz	CG7CIB*	1978	1587	160	575,760
21 MHz	VE3BMV	1978	2173	402	2,445,336
14 MHz	VE7BGK	1978	1985	314	1,517,876
7 MHz	CG3IXE	1978	725	118	345,032
3.5 MHz	VE3KZ	1976	394	194	283,240
1.8 MHz	VE3FFA	1976	106	77	31,416

CLUB ----- Toronto DX Club 1978 10,798,450

*CG was special VE call for Commonwealth Games.

Interference

The increasing prevalence of electromagnetic interference (EMI) has led to considerable effort in Canada to achieve electromagnetic compatibility (EMC) between sources of interference and equipment now affected by them, through technical committees of the Canadian Standards Association (CSA) and the Canadian Radio Technical Planning Board (CRTPB).

EMI includes unwanted radiations from devices such as power tools, light dimmers, power transmission lines, etc. but, closer to home, the unwanted effects from licensed transmitters such as GRS and Amateur transmitters interfering into a radio, hi-fi, telephone, etc. EMC is achieved by these committees when a reasonable balance is obtained between control of the severity of the interference and the annoyance of those interfered with.

Well, that's the theory; in practice progress is very slow because of the many conflicting cost and political factors.

CARF is taking an active part in committees that are most relevant to the Canadian Amateur's radio problems. The CRTPB is an organization of radio spectrum users which provides (principally to DOC) a consensus of opinion of industry and of radio users in order to guide or influence Federal government legislation on radio technical matters.

CRTPB has an 'EMI Committee' and there are seven CSA 'EMC' committees currently active. They have government and industry committee members who develop voluntary standards of performance that are often adopted in government legislation. One of these is entitled, 'EMC of Receiving and Audio Equipment and the Immunity of Electronic Apparatus'. This group is charged with developing methods of measuring the sus-

ceptibility of consumer apparatus to interference and establishing limits on the degree of such susceptibility of the device. The first phase is concentrating on the unwanted effects of licensed transmitters in the 500 kHz to 300 MHz range.

Although there are Amateurs sprinkled throughout the memberships of all these committees, the official CARF member directly representing Amateur interests on the CRTPB 'EMI Committee' and the CSA 'Immunity of Electronic Apparatus' committee is Barc Dowden VE3TT. Barc has attended all of the CRTPB meetings and a statement of the principal concerns of Canadian Amateurs with respect to EMI together with a little supporting data has been provided.

In the CSA 'Immunity Committee', Barc also chairs a working group whose task is to choose or develop methods of measuring the susceptibility of consumer devices (TVs, recording devices, radios, telephones) to radiation from transmitters of all kinds. Incidentally, most of the members of this CSA committee also serve on an international EMC committee (CISPR/E of the IEC) and since combined meetings are held, your CARF representative also observes the international situation.

So what has all this activity achieved for Amateurs? On the surface not a great deal so far because it's a long, grinsing pull. The long road to legislation has the following roadblocks:

1. The manufacturers of nearly all of the TVs, radios, recording devices and hi-fis are in foreign countries and the relatively small Canadian consumption gives us little leverage on the manufacturers to improve the electromagnetic compatibility of their equipment vis-a-vis the generators of 'interference'.

Editorial:

Last December, the covers were barely closed on the DOC examination booklets when the wails of anguish and outrage were being heard at Federation and DOC Headquarters.

Even though an increased failure rate was anticipated, due in part to the early date of the exams and partly because of the revised format of the exams, the condemnation of the exams still came as a surprise.

In the January issue of TCA, some of these concerns were aired, both editorially and by some who had written the examinations. However, all was not as black as it appeared. One of our correspondents, reporting on the digital exam at the Federation's request, declared glumly that even though he presumed he had failed badly he would try again. Then came the good news, DOC announced they had changed their marking procedures and our pessimistic writer was informed he had passed with a respectable mark of 82%.

Still, criticism of the exams persisted. I asked DOC for permission to review the examination papers of several individuals who had complained to the Federation about the alleged unfairness of the examination, or about unfairly stiff marking of the papers. In the papers I reviewed, I found the Department had frequently given partial marks for answers which I considered to be totally incorrect. Based on the papers received, I feel DOC's marking was extremely lenient.

One person, claiming a long background in professional electronics, in-march 1979 - 30

formed the Federation he felt he had done very well on the Advanced exam and was highly indignant at a mark of only 39% on the theory portion. For the record, he also failed the regulations and code portions of the exam as well. A reading of his paper revealed that, even if he had correctly answered all of the questions to which he had responded, he had still not answered a sufficient number of questions to have obtained a pass mark.

Here is one question that appeared on the Advanced exam: "What is the effect on the inductance of a coil if the number of windings are reduced by one-half?" Surprisingly, most Amateurs blew this one. Do you know the answer?

After spending a lengthy period of time reviewing these papers, I came to a number of conclusions:

1. Too many people appeared to have been ill-prepared to write the exam. They simply had not been properly taught.
2. Too many apparently did not properly read the questions.
3. Even more, it seems, did not read the simple instructions accompanying the exam.

My evaluation of the situation is simply, if we, as Amateurs, wish to maintain the high standards of our hobby in Canada, if we wish to continue to attract number of young people into our hobby, if we want to impart sufficient knowledge to these prospective Amateurs so they will be fully able to enjoy and participate in the wide spectrum of varied interests offered by Amateur Radio, then we old-time Amateurs had better

Amateur Exams

get our act together and upgrade our own abilities.

Our hobby has long since passed the 6L6-oscillator-to-a-Zepp-antenna and a TRF receiver level of technical requirements. Unfortunately, although our hobby has progressed beyond this, far too many of us have not. We undertake to teach new Amateurs, but we fail those who put their faith in us by teaching 6L6 theory and using teaching methods that are just plain inadequate; -- or even worse, we've taught nothing at all, but only attempted to program our students to respond, Pavlovian style, to a known set of questions.

As far as the Federation is concerned, we shall endeavor to do our part in upgrading Amateur instruction in Canada. CARF's Amateur Study Guide and Advanced Amateur Study Guide are in the process of being updated and upgraded. Our new Amateur Operators Handbook and the Digital Study Guide will be released shortly. The biggest change, however, will be in our Instructor's Package. Plans are being formulated for a complete re-design of the Package. It will contain a complete course syllabus, detailed lesson plans, training aids, guidelines to assist instructors in teaching some of the more difficult aspects of our hobby, along with a mini-course outline, for instructors, on techniques of instruction.

It is our intention to reduce the failure rate of those attempting the Amateur exams by upgrading our instructors and their methods of instruction and, by doing so, upgrade the level of knowledge

of those coming into the world of the Canadian Amateur Experimental Service.

Your letters to the Federation have indicated strongly to us that this is your wish. Utilizing the talents of some of the most successful instructors in this country, we hope that by the time courses re-start this fall we will have all the material necessary for your instructors and students to achieve the success necessary for the continued healthy growth of our hobby.

We intend to do our part. The upgrading of the courses sponsored by your clubs is your responsibility. Together we will produce a superior product, a better course of instruction and a more knowledgeable Amateur. It's up to us, all of us.

VE2NM

NOTE: Subsequent to the writing of the above editorial DOC informed CARF that the marking of the Amateur and Advanced Amateur Certificate examinations is carried out by the District Offices. DOC head office sends example answers to the District Offices to aid in this marking. If a candidate believes that there is a discrepancy in the marking of his paper, he may appeal to the District Office which will review the paper.

The Federation feels that this procedure unfortunately lays open the possibility of unequal standards of marking across the country and is currently discussing possible alternatives with the Department.

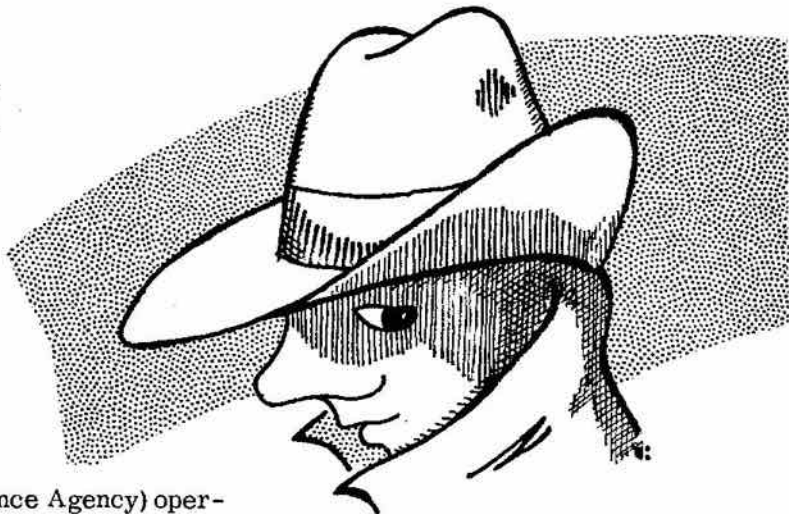
(The Digital Operator exams are marked in Ottawa at DOC head office.)

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The Geneva Mission

Secret Agent VE1PZ

A CIA (CARF Intelligence Agency) operative's report on WARC '79



Using the cover of a trip to some 'working groups' at the World Health Organization, I arrived uneventfully in Switzerland on January 28, 1979. The only cause for alarm was at Mirabel airport, where my cover was nearly blown when the security check identified a Wilson two metre transceiver (kindly furnished for the trip by VE1BBS) in my briefcase. The guard summoned a lady constable of the RCMP who insisted that it had to be checked through as regular baggage and not hand-carried, despite my argument that it was fragile.

I might have won, but she went deeper into the briefcase and pulled out my very home-brew receiver antenna coupler (two variable condensers from old transistor radios, a tapped coil wound on the celluloid container of a styptic pencil, an alligator clip to hook onto the radio antenna, and a hank of wire to throw out of the window) which she took to be some sort of infernal machine. In any event, the rig survived the trip and permitted some interesting QSOs from the hotel room via the repeater on the Dole mountain, HB9G, that covers a great swath of Switzerland and France on 145.720 MHz out. For an antenna I used a Sony TV's rabbit-ears with a suction cup for mounting on the hotel window, a toroidal choke balun and a home-brew mini-matchbox.

I penetrated the International Telecommunications Union by the simple expedient of asking permission to operate 4U1ITU and presenting a Canadian

station licence and Advanced Amateur certificate. A pass was then provided which permitted me to circulate freely in the bowels of the Tower and the Old Building on my way to the club station. I saw a lot of insulated steam pipes but not much else in the basements, and while many offices on the third floor of the old building (where the club station is located) had their doors unlocked, my scruples plus the lack of proper spy equipment kept me from entering. I could tell the doors were unlocked because some were open and some did not have any locks at all.

I was not followed by counterspies on my wanderings, because on Saturdays and Sundays the guards spend most of their time at the reception desk in the main entrance section of the Tower (future secret agents take note!) but twice in the evening when I was trying to work some rare DX, a watchman came by on his rounds and reminded me to leave the key downstairs when I was through. Is there some mysterious significance to be read into that double warning?

My visit to 4U1ITU having yielded nothing but some QSOs with VE1, VE3 and VE4 land, I then tried to suborn staff members. Once again embarrassed by the lack of proper secret agent equipment (I don't ever seem to have any proper blackmail material around) I was reduced to taking various characters to the cafeteria for coffee on workdays. Since they invariably insisted on paying for the coffee, I was hardly in a position

In which the author enters the world of intrigue and espionage, risking life and limb to deliver this candid report on 'the Geneva Operation' to CARF's CIA.

to put the screws on. Those of you who know me personally may think they detect a note of inconsistency here when I refer to 'coffee' but in fact I did drink tea and in fact it was pretty good. Future secret agents may wish to note that Darjeeling tea 'marries' well with Geneva water.

I missed some potential informants altogether, and was reduced (since I had my cover to think of) to going back to WHO meetings and telephoning them during coffee (tea) breaks.

Summing up the data from all sources, I noted the following: The World Administrative Radio Conference will be held for ten weeks beginning September 24. Like most international agencies, ITU has had preparatory meetings to sound out the member countries, and there has been much interest in the position of China, which was not a member at the time of the last WARC in 1959. It seems likely that Amateurs will be asked to trade off a piece of the 10-metre band and the high end of 15-metres in return for 100 MHz segments around 13, 18 and 31 metres. This may involve giving up a total of 500 kHz or more of spectrum in return for 300 kHz, but the new sections will be better-situated. There is still a lot of pressure to give the international broadcasters a piece of the 75-metre band, which is now mainly used in the tropics, but this was unclear for the moment.

There was some talk of the advantages of log-periodic antenna arrays for

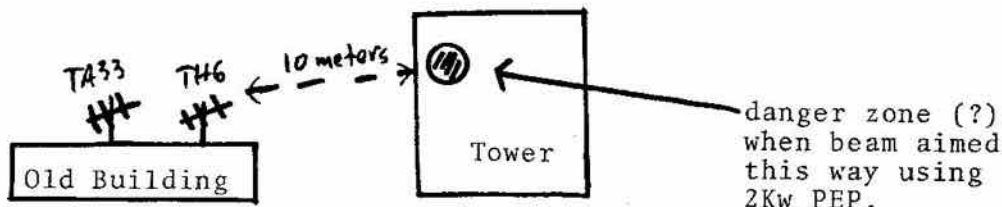
the new band layout. Conventional trap systems would be less applicable to the new set of frequencies, which would not all bear a harmonic relation to each other, unless the long-wires or Yagi elements have a separate trap for each band. Those clever designs that cover 10-80 metres with one set of traps will now have to have at least two or three sets of traps. Random wires used as end-fed Hertz antennas can be used, of course, and ingenuity will provide more approaches as time goes on.

The DOC people who attend ITU meetings undoubtedly know more than I was able to discover, but are not allowed to spill the beans. Looking over my notes, there was nothing anyone told me that was not either highly problematical or else published in all the news sources. It's a good thing WHO bought my ticket to Geneva; CARF's CIA would not have gotten its money's worth!

For those who read my last comments on 4U1ITU in these pages, this time they let me use the Collins* but I got scared and ended up with the Yaesu anyway. The TA33 beam works fine, but the big TH6 has a short in a trap. It may have been disabled by one of the fellows working in the adjoining ITU tower building who were worried about the radiation hazard (see diagram)!

Respectfully submitted,
Secret Agent VE1PZ

*Agent Ruderman managed to be operating 4U1ITU's Collins when the final mysteriously went up in smoke...Ed.)



ITU WARC '79

We have heard a lot about the International Telecommunications Union's upcoming World Administrative Conference (WARC '79) but very little about the Special Preparatory Meeting (SPM) of the ITU's International Consultative Committee on Radio (CCIR) held in Geneva from October 23 to November 17, 1978. As the CCIR is the body that provides technical advice to the Conference and radio administrations of member governments, it met especially "to prepare all the technical information and conclusions considered to be of importance to the work of WARC '79".

Almost 90 radio administrations out of a possible 154 took part and the meeting is therefore a good indicator of what is likely to happen at WARC '79 even though the CCIR and its SPM was not empowered to discuss frequency allocations or regulatory matters. The report will be a very important reference for the delegates to the WARC '79.

Because there were around 750 participants and they discussed about 700 papers, it is difficult to report more than a few of the highlights in the limited scope of this article. We can, however, give you some idea of what it was like.

While the report says relatively little about the Amateur Radio Service when compared with all the other services that must be provided for by WARC '79, what it does say is reasonably accurate. It was based on papers officially submitted to the CCIR by Australia, Canada and the United States. The substance of these was adopted without any challenge of the usefulness of the Amateur Service. Indeed, many were quite complimentary. The IARU also distributed some very good papers which no doubt helped considerably.

The unity exhibited by the Amateurs was very good. The five IARU representatives, having only observer status, were not able to say much on the floor. Despite this they worked very hard in small groups behind the scenes. They and the 50 or so Amateurs who were members of participating delegations were

so active that the Broadcasters (who were very well represented) finally told the Amateurs that unless they eased up the Broadcasters would have to be much more 'pushy'.

The Amateur Service is fairly well described in the report ... It goes on to say that its communication capability would be significantly enhanced by a better distribution of the frequencies available to it below 30 MHz. A suitable family of frequencies with narrower spacing between successive bands than is at present the case would have some technical advantages. These statements were backed up by good references to HF propagation data for high, medium and low sunspot numbers. What Administrations do about recommendations like these at WARC '79 has yet to be seen. For example, while Amateurs want more spectrum, one major power made it quite clear that, while they would not agree to more spectrum space in total, they could agree to a redistribution of spectrum space already occupied by the Amateur Service. Another was prepared to support Amateur Radio provided it did not affect broadcasting.

There is an important section on Amateur Service sharing with other radio services below 30 MHz in which it says that this is a "new question and therefore no data, on which to base a technical conclusion in the sharing between Amateur and other services, is available". Amateurs can only hope that, at the WARC, the delegates will forget this statement and recall the simple, well-known truth that in AM radio, power dominates, and realize that sharing between Amateur Radio and broadcasting is generally impossible.

The report made no comment on sharing between 30 and 960 MHz but, importantly so, it observed that Amateurs sometimes engage in inter-Regional communications on frequencies above 30 MHz and that bands common to the three ITU Regions were desirable.

No longer do Amateur bands need to be harmonically related. Exclusive all-

Special Preparatory Meeting

ocations where possible would help meet the particular needs of the Amateur Service.

There is a very good section on the technical feasibility of sharing by the Amateur Satellite Service and it concludes by saying that it is feasible to use existing world-wide Amateur frequencies in the earth-to-space direction (uplinks) under the same limitations that now exist for their terrestrial use. It is also feasible to use those frequencies allocated exclusively to Amateur radio for the space-to-earth direction (downlinks). Additionally, the report says that, subject to there being technical controls on Amateur satellites to prevent their causing harmful interference as well as power flux limitations, it would appear feasible to use the bands 1.215-1.300, 2.3-2.45, 5.65-5.67 and 10.475-10.500 GHz for downlinks.

The report recommends that Amateur equipment be excluded from stability and tolerance requirements but makes no mention of spurious emissions. There was even a short note on frequencies for Extra-Terrestrial Intelligence!

Of course, there is more to a conference than the methodical consideration of facts. To give one example of how things can go, the use of compatible single side-band (CSSB) in HF broadcasting was proposed by Sweden and Switzerland, who now transmit CSSB, as a very good solution to broadcast band congestion. It came up for discussion at the SPM almost simultaneously in two working groups. The delegates who were concerned about spectrum for broadcasting succeeded in convincing the first working group that there was no need to do anything about the Swedish/Swiss proposal as it was being dealt with in the second working group. When they won their point, they tore off to the second working group and convinced it that the first working group had taken account of the Swedish/Swiss proposal quite satisfactorily and that no further action was required.

Had the delegates concerned about

the broadcast spectrum let a recommendation get into the SPM report that CSSB should be adopted, those delegates interested in spectrum for the other services would have ganged up to cut by half the spectrum given to broadcasting -- an intolerable situation for those engaged in broadcasting but wonderful for the Amateurs and others.

The SPM was the first CCIR meeting where international politics came fairly close to the surface. African, Arab and other groups of third world and emerging countries met frequently outside the SPM and at plenary meetings of the SPM they often sat in groups. The tensions this created were quite evident throughout the meeting. Naturally, these countries are looking for their share. Of prime interest to them are frequencies for broadcasting followed by frequencies for ship and aircraft communications and orbital slots for satellite broadcasting and communications. At WARC '79, where frequency allocations and plans and frequency registration requirements are discussed and decisions taken by vote, (unlike CCIR which confines itself to technical matters and makes recommendations on the basis of concensus) these countries voting together may well upset some of the best-made proposals and recommendations, especially if these proposals and recommendations do not give these countries what they want.

The next phase leading to WARC '79 are the three ITU Regional Seminars. These will be held at Nairobi, Panama City and Sydney during the period of February 12 - April 10, 1979, and will provide informal opportunities for countries to exchange views regarding WARC '79 and to discuss the application of the recommendations of the SPM.

When these are over we should have more information as to how things are likely to progress at WARC '79.

VE3NR

(Messrs. Decloux, Jones and Ducharme of DOC HQ attended the Nairobi meeting in February.)

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Director Nominations

There will be elections for the posts of Pacific Director and Ontario Directors with two candidates in the west for one position and three candidates in Ontario for two directorships. Incum-

bents in other Regions were not challenged.

For the Pacific directorship, the two candidates in the upcoming election are Peter Dreissen VE7BBQ and Art Spence VE7DKY.

Nominations - Pacific Director



PETER DRIESSEN VE7BBQ

Peter has been a director since 1976 and is currently president of the B.C. Amateur Radio Association. Although working hard at post-graduate studies at UBC, he is active in Amateur affairs and is especially interested in DX and contests. Peter originated the CANADAWARD and currently administers it. His address is 1946 York Ave., Apt. 203, Vancouver, B.C. V5J 1E3.

A.E.M. (ART) SPENCE VE7DKY

Art was born in Montreal in 1916. He first became interested in radio when he qualified as a Regimental Signaller with the Royal Canadian Regiment in 1937 but did not obtain his Amateur licence until January 1946 because of WW II, when he obtained VE7ALQ in Vancouver.

Art is past president, Vancouver Amateur Radio Club; past Director, B.C. Amateur Radio Association, past President, Vernon Amateur Radio Club; and past President, North Okanagan Radio Amateur Club. He currently produces the club paper.

Art was very active in the National Traffic Service of the ARRL where he held positions of Manager, Daytime Seventh Region Net; Member of the National Traffic Staff, Pacific Area Staff, PAM, EC, ORS, OPS and was manager of the BC Amateur Radio Public Service net. He holds net certificates from Area, Region and Section levels with NCS and Liaison endorsements on all and was No. 2 on the Public Service Honour Roll at one point.



Currently Manager of the Transcan Net, Art is nursing a CARF RTTY traffic net in the formative stages at the moment.

He is active on the air daily, his main interest being in traffic via SSB, CW & RTTY with a well-equipped station including VHF, available.

Art admits to a strong drive toward a Canadian identity but within that framework he is willing to work with any

group or persons with the same objectives. While no longer very active in that field, he has had a vast amount of experience working with Civic groups, etc. Art is a member of the Quarter Century Wireless Association and active in the interior. Being an active Amateur, if

elected Art would be available to other Amateurs on the air or otherwise at any time and would plan on keeping Pacific Region hams advised.

Art's address is Box 818, Vernon, B.C. V1T 6M8.

Nominations - Ontario Directors

The three-cornered race for the two positions in Ontario features two new names, Art Sheffman VE3FTO and Marv

Nash VE3FON, with Fred Robinson VE3GCP the incumbent also running.

MARV NASH VE3FON

Marv Nash was born in Toronto in 1939 and is an optometrist practising in Toronto. He is married with three children.

He was first licensed in 1970 and obtained his Advanced ticket in 1971, and is active on HF bands and has a particular interest in antennas; and some operations on VHF and UHF bands.

Marv has been a member of the Ontario Science Centre ARC, Westside ARC and TFMCS, all in Toronto. He has been

a delegate, director, chairman of public relations, First and Second vice-president and is past president of RSO Inc. He is currently chairman of external affairs committee and continues to be the RSO's RFI troubleshooter.

Professionally, Marv is a member of the Ontario Association of Optometrists and the Canadian Association of Optometrists. His address is 43 Bruce Farm Rd., Willowdale, Ont. M2H 1G4.

FRED ROBINSON VE3GCP

Fred Robinson VE3GCP became a CARF director in 1976 and has been a familiar face at clubs, hamfests and conventions ever since. Fred got his ticket back in 1965 and has been active in his hometown Hamilton club, and has been the Hamilton delegate to the RSO. Fred's address is 126 W. 19th St., Hamilton, Ont. L9C 4H6.



ED SHEFFMAN VE3FTO

Ed Sheffman VE3FTO was born in St. John's, Newfoundland, and graduated in medicine from Queen's University, Kingston, Ont.

After a period of post-graduate training, Ed returned to Toronto and commenced practice as an anaesthesiologist. He was first licensed in 1964 and the following year obtained the Advanced Amateur certificate.

Ed's activities include HF and VHF. Other interests include the applications of electronics in medicine and in particular this applies to diagnostic apparatus of an electronic nature. Club activities include membership in the Nortown ARC

for many years until about three years ago when this membership was discontinued because of a conflict in meeting times. He was also active at the Amateur Radio Club of the Ontario Science Centre. Further activities include work with the Radio Society of Ontario as Emergency Co-ordinator for the Toronto area. His address is 182 Fenn Ave., Willowdale, Ont.

Ballots will be provided to full members in the Pacific and Ontario Regions. Those directors elected will take office at the Board of Directors meeting in late May.

BALLOT

For election of Ontario and Pacific Directors

Elections have been called to fill vacancies in the 1979/81 Board of Directors for the Ontario and Pacific Regions. Full voting members of these Regions - in Ontario those with 'G, H, I' and in Pacific with 'N, P' membership numbers -

are required to vote for the two candidates in Ontario, and one candidate in Pacific Region. Please note that Ontario Full members may only vote for Ontario Region candidates and Pacific Full members for a Pacific candidate.

The nomination slate for the 1979/81 Board is:

Atlantic Region - Nate Penney VO1NP
(acclamation)

Quebec Region - no nomination received.

Ontario Region - (2 vacancies) - Marvin Nash VE3FON, Fred Robinson VE3GCP, Edward Sheffman VE3FTO.

Mid-West Region - Jim McKenna VE6HO
(acclamation)

Pacific Region - (1 vacancy) - Peter Driessen VE7BBQ, Art Spence VE7DKY.

Full members concerned are requested to mark an 'X' against the candidate(s) of their choice, put their CARF Membership number on the LH side of envelope enclosing ballot, and forward to CARF, Box 56, Kingston, Ont. K7L 4W2 before April 15, 1979.

Ontario Directors

2 vacancies for Board of Directors.
Vote for 1 or 2 candidates ONLY.

Marvin Nash VE3FON

Fred Robinson VE3GCP

Edward Sheffman VE3FTO

Pacific Director

Vote for 1 candidate ONLY

Peter Driessen VE7BBQ

Art Spence VE7DKY

To be used by Amateurs in those regions only

Advertiser's Directory

For the convenience of our readers, we list those advertisers who appear in this issue of TCA. Remember, when responding to advertisements, say you saw it in TCA - The Canadian Amateur.

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Canadian QSL's	42
Hamtraders	42
VE Amateur Radio Sales	43
Microwave Filter Company	44
Metro Ham Shack	45

Interference

from Page 29

2. There is a tendency in Canada to await the availability of standards of American and European organizations and copy them. VE3TT says, "I am happy to report that this is not the case in the CSA Immunity committee. We are forging ahead with home-made methods of measurements and interference limits."

3. There is a reluctance in democratic countries to tell the consumer that he must buy a higher quality device and pay a little more for it, or that he mustn't buy the foreign device at all since it is not good enough for him.

4. The measurement, recording and mapping of the present EMI environment in Canada and the prediction and measurement of EMI effects is technically difficult and expensive.

CARF believes that continuing participation in this EMC work will strengthen the Canadian Amateur cause in national and international affairs and may also influence the EMC legislation in our favour. Comments and data on EMC matters from individual Amateurs and provincial societies across the country is continually needed for the CARF member to properly represent you. Your local EMI (EMC) can help, by writing a report on unusual cases of interference and their solution to: VE3TT c/o CARF Inc., Box 356, Kingston, Ont. K7L 4W2.

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Send to CARF, Inc., Box 356, Kingston, Ont. K7L 4W2.

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WANTED: Heathkit HW-16 Transceiver and HG-10B VFO; manuals. Elliott VE3GTF, P.O. Box 100, Green Valley, Ontario K0C 1L0.

10B VFO; manuals. G. Elliott VE3GTF, P.O. Box FOR SALE: Yaesu Monitor Scope, model YO-100. 2 months old, factory converted for 8 mcs IF, but comes with conversion parts for use with Yaesu equipment, all cables. VE2MH, 2160 Cote Vertu Road, Montreal 514-3 6-9640.

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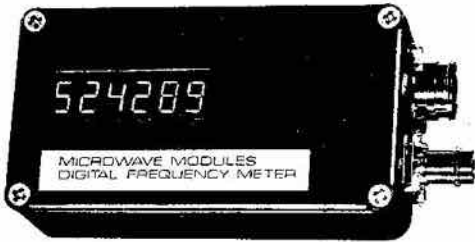
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Frequency Ranges	: 0.45 - 50 MHz
	: 50 - 500 MHz
Sensitivity	: Better than 50 mV RMS over 0.45 - 50 MHz.
	: Better than 200 mV RMS over 50 - 500 MHz
Input Connector	: 50 ohm 8NC
Input Impedance	: 50 ohm
Power Connector	: 5 pin 270° locking DIN socket
Power Requirements	: 11 - 15 volts DC at 300 mA approximately

\$150.

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This counter has two ranges which are selected by supplying +12 volts to one of two pins on the DIN socket. Internal diode switching brings the input in the 0.45 - 50 MHz range to a wide-band amplifier which drives a high speed TTL divider in the main counter logic. On the 50 - 500 MHz range the diodes switch in a high speed ECL prescaler and the decimal point is changed accordingly.

A low angle AT cut quartz crystal is used giving a typical temperature stability of 0.5 ppm per degree C. Provision is made for setting the crystal frequency, and the accuracy of reading is normally better than 200 Hz at 50 MHz, or 2 KHz at 500 MHz.

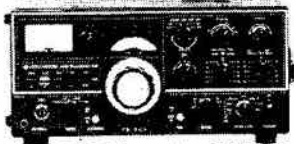
The counter has reverse polarity protection and operates satisfactorily from a nominal 12 V DC supply. A suitable 5 pin DIN plug is supplied.

H. Peters

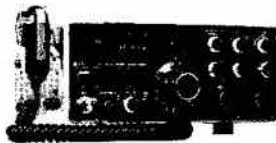
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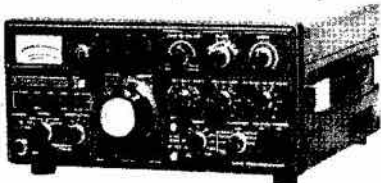
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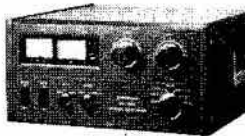
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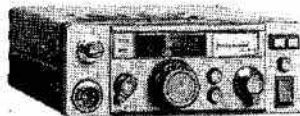
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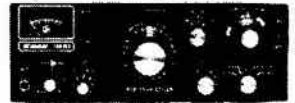


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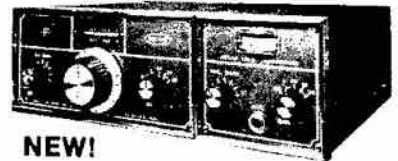
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70cm to 10m receive converter
70cm to 2m receive converter
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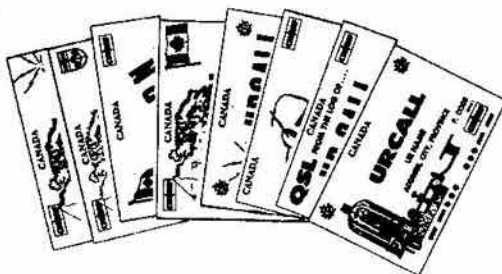
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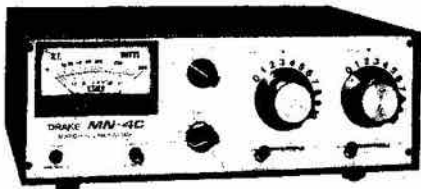
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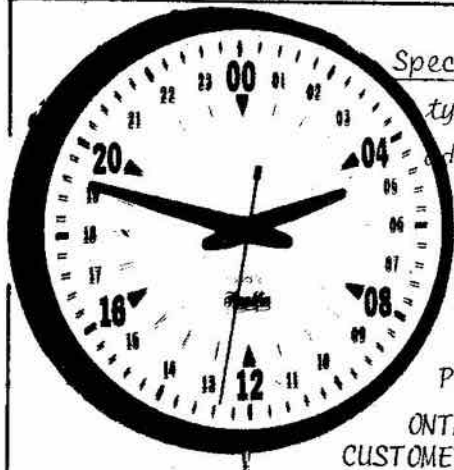
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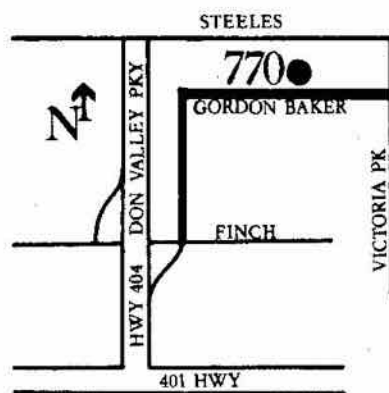
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The Canadian Amateur Radio Federation Inc. is incorporated and operates under a federal charter, with the following objectives:

1. To act as a coordinating body for Amateur radio organizations in Canada;
2. To act as a liaison agency between its members and other Amateur organizations in Canada and other countries;
3. To act as a liaison and advisory agency between its members and the Department of Communications;
4. To promote the interests of Amateur radio operators through a program of technical and general education in Amateur matters.

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(If you want to contact the Federation, write or call a Director in your region or write to CARF, Box 356, Kingston, Ont. K7L 4W2.)

- VE7BBQ Peter Driessen, 1946 York Ave., Apt. 203, Vancouver, B.C. V6J 1E3. 604-732-3298.
VE6VF Stella Broughton, Ellersleid, RR3 South Edmonton, Alta.
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VE5YY Martha Pankratz, 1212 Temperance St., Saskatoon, Sask. S7N 0N9.
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WANTED:

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Technical articles are especially welcome. We can use simple construction projects, antennas, hints and kinks, explanations of the theory and practice of modern Amateur operations and equipment.

Photos should be glossy black & white prints, although we can use colour prints and slides in a pinch. Written material should be typed, double spaced. Legible handwriting is acceptable. Finished artwork and drawings will add to the value, but sketches and rough drawings are acceptable.

Technical material only: Technical Editor, CARF Inc., Box 356, Kingston, Ont. K7L 4W2.

All other material: Editor TCA, 151 Fanshawe Ave., Ottawa, Ont. K1H 6C8.

CARF News Service Stations

Your Federation is looking for individual and club stations to broadcast news items and information of interest to Canadian Amateurs.

As bulletins become available, they will be sent as quickly as possible to 'Official CNS Stations', appointed by the CARF Executive from time to time to give the best geographical coverage. A variety of modes and frequencies will be used to transmit bulletins at regular times and dates.

Stations wishing to participate in this new CARF service for Canadians can contact CARF, Box 356, Kingston, Ont. K7L 4W2 for full details.

Logo Stickers

CARF Logo Adhesive Labels and Window Decals are available from CARF, Box 356, Kingston, Ont. K7L 4W2. Size: 6 x 2 1/2". 4/\$1.00.

Name Badges

Name Badges: Hot stamped foil logo in vivid Royal Blue on a White background with your name and call in contrasting Black. Size: 3 x 1 1/2".

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Save on Memberships!

New memberships obtained through affiliate clubs will be taken at \$6.00 instead of \$7.00. Clubs can either pass this saving along to its individual members or it can collect the \$7.00 and keep \$1.00 for the club coffers. Memberships go to CARF, Inc., Box 356, Kingston, Ontario K7L 4W2. Club orders must be stamped or otherwise identified as such and signed by a club official.

Another discount is available for publication orders tagged on to the memberships. It works this way: any order for any one of the three CARF current publications, The Amateur Certificate Study Guide (\$5.00), The Advanced Certificate Study Guide (\$4.00) and the Regulations Handbook (\$4.00), will give you

a reduction in membership or your renewal. Add up the cost of the publications you order, plus your membership or renewal and deduct from the total \$1.00 for each of the books ordered.

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5. Send to CARF QSL Services, P.O. Box 66, Islington, Ont. M9A 4X1.
6. Do NOT register parcel. This causes delay.
7. Check with Post Office for requirements if sending by Third Class Mail
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BANNED COUNTRIES LIST

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

** Station XU1AA has been authorized to exchange communications with Amateurs of other countries. Note: The calls 7OA to 7OZ are assigned to the Peoples Republic of Yemen.

THIRD PARTY TRAFFIC AGREEMENTS

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

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Barbados, Belgium, Bermuda, Brazil, Columbia, Costa Rica, Dominica, Dominican Republic, France Ecuador, Federal Republic of Germany, Guatemala, Honduras, Israel, Peru, Luxemburg, Netherlands, New Zealand, Norway, Nicaragua, Phillipines, Poland, Portugal, Republic of Panama, Senegal, Sweden, Switzerland, United Kingdom, U.S.A., Uruguay, Venezuela, Denmark, Iceland and Finland.

Note: As a general rule, DOC will consider licensed Amateurs of Commonwealth countries for reciprocal privileges in Canada if the other country does the same.



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IF RENEWING MEMBERSHIP NO IS:

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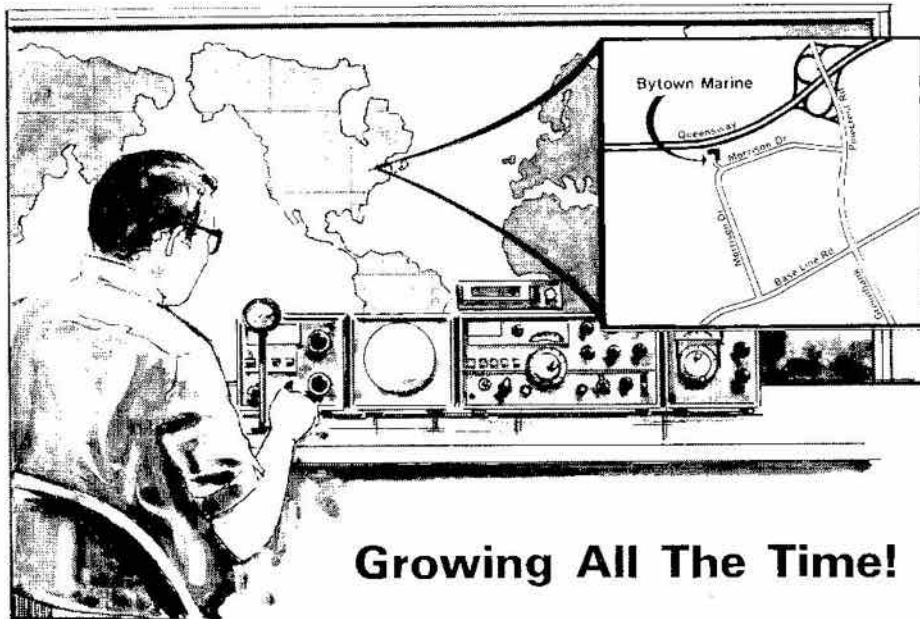
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