

# the canadian amateur

## Ham help for handicapped



Brian Hayes

-Photo:  
Prince Albert  
Daily Herald

See Page 17 for Story...

September 1977

No. 8

### NEW TICKETS HELD UP -

## Amateur/DOC symposium planned

The Department of Communications has agreed to a two-month delay in "gazetting" action for the proposed new "novice" and "experimenter" Certificates of Proficiency in Radio, pending further discussions on the subject.

In this connection, a conference, to be held in Ottawa, was agreed to at a meeting of your Federation and DOC on Aug. 29. Concern over possible adverse effects on Amateur radio has been growing ever since the DOC announcement that the Department was planning to introduce two new classes of Amateur certificates.

As a result of this concern, a meeting was held between your Federation's vice-president, Fred Towner VE2DNW, and Dr. John de Mercado, Director-General of Telecommunication Regulatory Service. The latter suggested that the con-

cern was due to the lack of sufficient explanation by the Department on the rationale of the proposed changes.

In addition to discussion on the proposed new certificates, it was agreed that this conference would furnish a good opportunity for a comprehensive look at the objectives of Amateur radio in Canada, taking into account changes occurring in the Amateur field, as well as the broader and related area of Amateur frequency spectrum management.

"Recommendations from this conference will be extremely valuable to the Department in helping to finalize plans for regulation changes and new classes of certificates for Amateur radio," Dr. de Mercado said.

It is proposed to invite Amateurs representing your Federation, the Am-

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The Canadian Amateur is the official monthly publication of the Canadian Amateur Radio Federation, Inc. It is distributed to members and is available to others for \$7.00 per year. The Federation 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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This issue of The Canadian Amateur marks the 10th birthday of CARF. The idea of creating an autonomous, national Amateur society as a Canada Centennial project came from the Amateur Radio League of Alberta and resulted in a meeting held over the Labour Day week-end 1967, in Winnipeg. This meeting was attended by representatives of the provincial societies of Alberta, Manitoba and Ontario, the ARRL (Cdn Div) and several 'interested Amateurs' with other provincial societies expressing interest and support. From this small beginning has emerged a major national Amateur society - your national Federation of 1977.

The concept of an autonomous national society for the Amateurs of Canada was first introduced in the early 1920s when the Canadian division of ARRL was formed to operate until such time as there would be sufficient numbers of Amateurs in Canada to create their own society. Some national organizations were started in the following 50 years but none succeeded and none were chartered, directed and organized to function as the Canadian national Amateur society until CARF came into being.

As the national society, CARF has to meet certain Canadian standards. Policy and management must be effected by a governing body of at least three persons freely nominated and elected by the membership (CARF has a 9 member Board of Directors); officers and officials must be selected by the Board to conduct day-to-day affairs (the national executive); a General meeting and an annual Board meeting must be held annually; reports on activities, developments and plans must be publicized to every member (through The Canadian Amateur).

Operating the Federation requires good financing. CARF's financial base is solid and the steadily increasing support of the Amateurs of Canada will enable CARF to assume greater responsibility and supply more and better services.

CARF's achievements and growth has been spectacular, particularly since late 1975 when the change to individual membership control was made. The "Voice of the Canadian Amateur", coupled with our policy of aiding and assisting federal regulatory bodies on all matters con-

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cerning Amateur radio, has grown from "Our (one and only) man in Ottawa" - the late Jim Strain, VE3BSG - to the present organized Ottawa group which among other things has done so much work in preparation for WARC '79 and the members of which are in day-to-day personal contact with Officers of federal Departments and agencies. A major step forward for the Amateurs of Canada in co-operation with DOC was the recent meeting with the Hon. Jeanne Sauve, Minister of Communications.

The up-to-date and timely information relating to the Canadian Amateur Experimental Service available now through the pages of TCA is in vivid contrast to the lack of information existing prior to 1973. Add to this the appearance of the CARF publications on Canadian regulations and Certificate Study Guides and the effect they have had on the development of Amateur radio in Canada. Those of you who have been Amateurs for several years may remember the remark made re the fledgling Federation in 1973 that a viable national Amateur society in Canada would have to depend on subsidization from outside sources as there will not be sufficient support for effective financing... The financial position of CARF now belies that pessimistic prognostication. Revenue obtained from membership dues is devoted wholly to production and circulation of The Canadian Amateur. It amounts to \$17,400 based on 3000 membership (which has been surpassed), paying cost of membership administration (\$3000) and operation of the National QSL Bureau (\$600). Other sources of revenue, such as the sale of advertising and publications, are used to pay all other expenses such as those incurred for travel and conventions.

In early 1973, at the time when The Canadian Amateur commenced publication with a circulation of approximately 350, the Amateurs of Canada strongly indicated in a sponsored poll to DOC that they desired their own, autonomous national society. The continuing growth of your national Federation is evidence that this desire has not diminished.

VE3AHU, Gen Mgr.

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As of July there were 17,294 licensed Amateur stations in Canada. Last year as of March 31 there were 15,346. Ten years ago there were 12,210.

## DOC letter misleading

Due to the poor wording of a recent letter from the DOC Minister's office to the Radio Amateurs du Quebec (RAQI), it appeared to the VE2 executive that CARF supports the DOC proposal for a 'no-code' Amateur certificate.

This is at complete variance with the fact that your CARF executive is bound by the wishes of its members who turned down the idea in an overwhelming negative vote in the opinion poll conducted last fall. Unfortunately, the rumor spread on all bands that CARF was all for the 'no-code' proposal.

This misleading inference was due to the fact that in French there is no neuter pronoun like the English 'it'. The statement in the letter to RAQI on the redundancy of the Morse code appeared to refer to the Federation having made the statement by using the word 'elle', which can mean either 'it' (the Federation), or 'she' (the Minister) to whom the statement should have been attributed.

Anyway, the ensuing uproar on the bands was such that the CARF executive immediately sent this telegram to the Minister of DOC:

"Contrary to your letter to RAQI dated July 30, 1977, (CARF) does not support the proposed DOC no-code Amateur Certificate.

"The unfortunate wording of the attachment to the DOC letter to RAQI has resulted in confusion and disruption of the normal amicable relationship between the Federation and its member provincial societies, and with its individual Amateur members. A referendum of Canadian Amateurs in 1976 indicated greater than 90% rejection of the DOC proposal."

## Handicapped Hams...

As noted a few months ago in these pages severely physically handicapped Amateurs in Sunnybrook Hospital in Toronto can operate their stations with little or no assistance as well as manage other activities by means of a Touch Operated Selector Control (TOSC). For information on TOSC, write to Larry Allen, VE3FXQ, c/o CARF.

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Canadian Repeater Advisory  
Group

### VE3DWL Hugh Lines

With radio activity slowing down due to vacation time, news on the repeater scene is scarce.

In Ottawa, VE3ARS, an RTTY machine on 147.90-147.30 is now off the air and will be replaced on the same frequency pair by VE3TWO, operated by the Ottawa Valley Mobile Radio Club. The Telephone Pioneers are also proposing a repeater for Ottawa (VE3TEL) but the frequency has not yet been settled. Its main purpose will be to cater to the special events at which the Pioneers help out with radio communications, such as local snowmobile events.

VE1ASG, in Dalhousie, N.B., advised that the local club is proposing a repeater for that area but no frequencies have yet been decided. Still in the Maritimes, the Moncton club deserves credit for a real good piece of PR work. If you stop at any provincial tourist bureau you will find that you can pick up a list

of Maritimes 2 metre repeaters, complete with a map locating them, put there as a club project.

This appears to us to be a great idea and something for every club to consider even if it's just for a local tourist bureau or information booth.

The Quebec government has realized the value of Amateur communications and has assisted clubs and RAQI, the provincial society, in putting up a number of repeaters, complete with links, to function with the provincial emergency measures organization, "Protection Civile". The "assistance" was on the generous side...like \$55,000....how about that!

The Nova Scotia VHF Association is tying its repeaters in with the NS emergency measures organization and has embarked on a program to equip all of its rigs with standby power.

This month's column must end on a sad note as just before press time it was learned that the CRAG Secretary, VE3CEZ, Lyle Ward, died suddenly while returning from Europe.

(Editor's note

As sponsor of CRAG, CARF asked Hugh, through its executive, to take on the duties of CRAG secretary as well as writing this column and he has accepted.)

## Future satellites

As well as the Russian satellites on the near horizon, the AMSAT group are preparing for the launch of the Japanese-built OSCAR 8 Amateur satellite, a 145 MHz to 432 MHz and 432 MHz to 145 MHz bird in February, according to "HR Report". This launch will put OSCAR 8 into an orbit similar to that of the Russian satellite.

UHF satellites such as OSCAR 8, with their small antennas, promise apartment dwellers not only a way to enjoy their hobby but a way of DXing never before possible for them.

Phase 3 of AMSAT's development will bring us satellites with an elliptical orbit reaching high above the North Pole. This orbit will mean several hours of daily transmission into Europe, South Africa and even short contacts to Australia.

Canadians have been prominent in the

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AMSAT programs, and have participated in constructing and assembling and even controlling both OSCAR 6 and 7. Canadians are also supplying parts for OSCAR 8.

These days even Amateur satellites cost relatively large sums of money and AMSAT-Canada has been formed to accept donations from Canadian clubs and individuals, who will, in the long run be able to get their money's worth in this exciting and interesting new phase of Amateur radio.

## Check your Label

Your membership address label has, as its first line, a coded reference such as: Y - 999 - JUN 77. The "Y-999" denotes your individual membership number as given on your membership certificate; "JUN 77" indicates that our computer service will print out this label (and all others with this date) in June 1977 and these labels will be forwarded to the CARF HQ Office. The Office will then use the labels to forward a renewal notice.

"Renewal stickers" for Membership Certificates are not issued due to the difficulty and expense incurred. Your address label is your renewal certification.

## Hamfest successful

The Montreal ARC held a very successful "Hamfest" in the Civic Arena in St. Lambert. Original plans for a more elaborate event including speakers had to be scrapped because of labor problems which could not be foreseen.

The chief attraction was a huge flea market both inside and outside of the arena, topped off with a demonstration of a radio controlled model helicopter. Before this spectacular event (it had about a four foot blade span) it was requested that all transmitters in the area be turned off!

RAQI, the Quebec provincial organization, your Federation and local clubs had booth space promoting Amateur radio, their publications and memberships along with many commercial exhibits.

Another attraction was the large number of prizes drawn throughout the day. Eric Meth, VE2AS of MARC said that in view of the attendance which was about the thousand mark, and the financial success the Montreal Club will probably present the event again next year, featuring not only the flea market and exhibits but talk forums as well.

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# NEWS BRIEFS

\* Of interest to radio teletype fans is the news that Edward Klienschmidt, inventor of the teletypewriter, died in Canaan, Conn. USA early in August.

Kleinschmidt, who remained active until his death was born in Bremen, Germany.

\* In the report on the CARF annual meeting on page 19 of the July/August issue, the list of standing committees omitted the DOC Liaison Committee Chairman Art Stark, VE3ZS.

\* A press report from Owen Sound quotes a racing-pigeon fancier that a serious loss of birds during races is blamed on their disorientation due to the radio frequency power radiated by the myriad transmitters which are found everywhere these days. A report some years ago quoted proof that migrating birds were indeed suffering interference to their navigating "equipment" in the area of high-power transmitters. (Wonder if the pigeon man complained to the DOC field office about interference!)

\* DOC is holding more discussion with GRS groups similar to the one in Toronto (see July/August issue, p.9) in other centres. Meetings are scheduled for Edmonton, September 16-17, Winnipeg, September 9-10; Halifax, September 24; Charlottetown, November 26 and St. John's, October 29. Amateur organizations have been alerted by CARF and already some have been asked by DOC to attend to assist in dealing with common problems. Interference, enforcement and tower restrictions are a problem for both Amateurs and CB operators. Meetings were held in Vancouver and Moncton late in August.

\* Another bill has been introduced in the US Congress which would put the burden of beating RF interference to home entertainment gear where it belongs...on the manufacturer. Meantime, back at the ranch...Toronto, that is, the Canadian Standards Association committee on that problem is having another meeting on September 7.

\* Speaking of manufacturers, we wonder who is behind the latest "no-code" ticket in the US which emanates from something called the "American Radio Council" and proposes one for 220 MHz phone, with "exams" administered by Technician class or higher Amateur.

\* Would you believe that radiation from mobile and other transmitters will disengage the electronically controlled speed control on Cadillacs? (HR Report, Aug. 5)

\* The International Electrical, Electronics Conference Exposition, sponsored by the Canadian Region of the Institute of Electrical and Electronics Engineers, will be held in Toronto September 26, 27 and 28. Registration, which includes admission to exhibits and technical sessions is \$8.00. A digest of the Conference papers is available for \$25.

\* Hank Harley, VE3BR, of Ottawa has been elected to one of the five directorships of the International Quarter Century Wireless Club.

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# LEGAL NOTES

The prosecution of an Amateur in Cote St. Luc (Montreal area) on a charge that his antenna tower was violating a local bylaw (reported in our June issue) turned out in the Amateur's favor with dismissal of the case. The decision hinged on the interpretation of the words in a local zoning regulation which required an "unobstructed" back yard. It was ruled that the antenna tower did not constitute an obstruction as meant by the regulation.

The event got quite a play in the press and teledmedia. One paper turned on the old saying to come out with headlines stating that "A Ham's Home Is His Castle". Bob Benson, legal counsel for the ARRL Canadian Division acted in the case for Dave Boxerman, the Amateur involved, and for Dave's wife, the owner of the house.

While in this case the decision was in the Amateur's favor, it hinged on an interpretation of words in a local bylaw, leaving the real question unanswered. That question is, "Can local bylaws such as the one noted regulate or forbid the construction of and use of antenna supporting structures when the Amateur (and for that matter, the GRS (CB) station) is licensed to operate by the federal Department of Communication?"

With the increasing number of Amateur stations and the proliferation of CB antenna structures presenting a high visibility to the public eye, local authorities are beginning to think that the problem of poorly constructed or unsightly (to them) towers is one that they must do something about. Amateurs and GRS operators alike must look at this trend with increasing concern and take action to make their case clear; that is, their stations are under federal jurisdiction.

The problem is even more extensive in the U.S.A. and there is an attempt to take some meaningful action with the formation of a voluntary organization to gather and release information on this problem. The Personal Communications Foundation, with the support of individuals and radio organizations in the States and Canada, has been formed to meet the situation.

Your Federation, because of a number

of cases in Canada being brought to its attention, has formed a committee to act as a focal point for investigating and reporting on the situation in Canada and has applied for membership in the "PCF" in order to exchange information.

Another problem which is reaching significant proportions is the restrictive clauses on antennas amateurs found in agreements for the sale or renting of housing. There is a growing opinion that these may be restrictive of individual rights and not valid. The CARF committee is to study this question also.

In the interests of furthering this work, the committee chairman, C:A. (Al) Law, VE3ACZ, is asking anyone who has come up against or can lay hands on copies of these restrictions or has knowledge of local regulations governing towers, to please make them known to him. Write to him c/o CARF, Box 356, Kingston, Ont.

Al's committee is in the process of formation and at press time invitations to join were being extended to Amateurs with legal training. Because it is a mutual problem facing CB operators, as well as Amateurs, a national GRS organization, the Central General Radio Service Association, is also being asked to provide a representative on the committee.

## Yukon calls

A CARF request for distinctive call signs for Yukon Territory and the request by some Maritime Amateurs for distinctive provincial call signs for the three provinces is under study by DOC.

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# New jacks for phones

Several telephone operating companies are now engaged in an extensive program to replace all subscribers' connector blocks and the existing 4 pin jack plugs where these are used on extensions with a new type of plug and jack.

Practice up to now has been to require at least the main station in a house or office ties to be in permanently, with extensions, if desired, on jack plugs. This was to ensure that if the jacked phone was unplugged that at least the main station bell would ring.

The new system will have special jacks and plugs on any or all phones in a house or office, with a device installed on the incoming line to ensure that even if all phones are unplugged that it will at least give a ringing tone to the caller rather than a dead line, and will enable the phone company central office to test a line right to the subscriber.

While at first glance such a program would seem to very expensive, the company savings over having a service call or installer sent to subscriber's premises every time one moves or changes instruments (you can pick out a new special color or style phone right at the

company offices, cart it home and plug it right in) is a large economic factor in the new program.

"Sure, we will 'lose' a few instruments under this system, but the overall savings will make such losses an acceptable risk, one phone company official told your reporter.

## Long term membership

CARF now has a 5 year membership at a reduced rate (\$30) and LIFE membership (\$100) in your national Federation.

LIFE memberships paid during 1977 will be classified as Charter Life Members with a special certificate. (Those who now have the five year membership that was offered in 1976 may take out a Life membership at an additional cost of only \$75.00, if taken out before the end of 1977.)

A 5 year Family membership may be included at an additional cost of \$5.00 per immediate family member; a Life Family membership at an additional cost of \$15.00 per immediate Family member.

## Advanced Technology for the Discerning Amateur

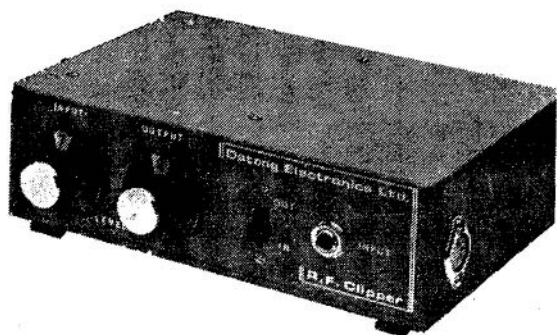


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---The World Administrative Radio Conference in 1979 originally was only going to concentrate on frequency allocations but a word from Geneva is that not only will Amateur frequency allocations be discussed but the present International Telecommunications Union regulations governing what it terms the "Amateur Service" will be examined. The parts concerned include the code requirement ... which signatory governments may ask the ITU to waive.

---According to HR Report, the ARRL (American Radio Relay League) at its July Board meeting "... proposed petitioning (the FCC) for a 25 kHz increase in the 80 metre Novice band; pushing for letting Technicians have all of 6 and 2 metres (and) increasing the phone bands..."

---The FCC held an open meeting with individual Amateurs and organizations in Washington on July 13. (This

is a form of consultation which the DOC has recently extended to the GRS in Canada. DOC now proposes to do the same for Amateurs by holding an Amateur 'symposium' in Ottawa.)

The FCC apparently has given up on pursuing the ban on 10 metre amplifiers ... which will make it tougher for DOC to control linear sales in Canada, as has been proposed. The meeting covered some of the topics that are showing up in the DOC/GRS symposiums being held here in Canada and which are applicable to the Amateur hands too. These include enforcement of the regs governing illegal operation and the sale of Amateur equipment to unlicensed persons, including the problem of linear amplifiers being sold and used illegally on the CB bands.

The FCC/Amateur meeting was regarded as highly successful and support for holding them on a quarterly basis was solid.

## Club affiliation with CARF

A letter was recently circulated to all Canadian ARC's for which the Federation has a listing concerning the change in policy for AFFILIATE Membership with CARF. As of Jan. 1, 1978, AFFILIATE Membership will be available to any Canadian Amateur Radio Club at no charge, providing that a minimum of 5 club members are also dues-paying members of the Federation.

The benefits of Affiliation with your Canadian national society are many and include a subscription to the CARF News Service; the use of The Canadian Amateur to publicize club activities and events; to use the offices of CARF to obtain factual information and direction on the varied problems that may confront club membership; and use of the CARF Out-Going QSL Service for forwarding club station QSLs. A continuing dialogue between Affiliates and members of the CARF Board of Directors will enable the Board to obtain 'grass roots' opinion on matters affecting Canadian Amateur radio, will give the Board direction in managing the policy and activities of your Federation and will give the club a good grasp of trends and developments on the national level.

CARF regrets that over 25 of the original letters mailed have been returned as 'no longer valid' addresses. If your club has not received this letter, please forward the correct mailing address to Box 356, Kingston and another copy will be sent.

## CB for UK ?

A group of interested individuals are campaigning for the establishment of a VHF Citizen's Band in the U.K.

The Technical proposal sent to the Home Office contains the following points to ensure that the British CB suffers from few of the disadvantages of the North American systems.

1) Modulation shall be F.M. which avoids many problems of TVI, BCI and audio eqpt break-in.

2) Each transceiver contains an automatic identifying signal which is transmitted every time the transmit key is depressed. This means that anyone misusing the CB can easily be identified.

3) Transmission time to be limited to 75 seconds to prevent channel being monopolised.

(from the Hamilton ARC Bulletin)  
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# Vhf engineering

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RX144C Kit..	140-170 Mhz rcvr w/2 pole 10.7 Mhz crystal filter.....	\$ 94.45
RX220C Kit..	210-240 Mhz rcvr w/2 pole 10.7 Mhz crystal filter.....	\$ 97.95
RX432C Kit..	432 Mhz rcvr w/2 pole 10.7 Mhz crystal filter.....	\$109.95
RXCF.....	accessory filter for above receiver kits gives 70 db adjustment channel rejection.....	\$ 11.90

## Receivers

RF28 Kit.....	10 mtr RF front end 10.7 Mhz out	\$ 17.75
RF50 Kit.....	6 mtr RF front end 10.7 Mhz out	\$ 17.75
RF144D Kit...	2 mtr RF front end 10.7 Mhz out	\$ 23.05
RF220D Kit...	220 Mhz RF front end 10.7 Mhz out.....	\$ 24.95
RF432 Kit.....	432 Mhz RF front end 10.7 Mhz out.....	\$ 37.95
1F 10.7F Kit	10.7 Mhz 1F module includes 2 pole crystal filter.....	\$ 37.95
FM455 Kit.....	455KHz 1F stage plus FM detector	\$24.95
AS2 Kit.....	audio and squelch board	\$20.70

TX50.....	transmitter exciter, 1 watt, 6 mtr.....	\$ 55.95
TX144B Kit..	transmitter exciter-1 watt - 2 mtrs.....	\$ 40.50

## Transmitters

TX220B Kit...	transmitter exciter-1 watt-220 Mhz.....	\$ 42.50
TX432B Kit...	transmitter exciter 432 Mhz.....	\$ 55.15
TX150 Kit.....	300 milliwatt, 2 mtr transmitter.	\$ 26.95

PA2501H Kit.	2 mtr power amp-kit 1w in-25w out with solid state switching, case, connectors.....	\$ 83.95
PA4010H Kit.	2 mtr power amp-10w in-40w out-relay switching.....	\$ 80.95
PA50/25 Kit.	6 mtr power amp, 1w in,25w out, less case, connectors & switching.....	\$ 70.95
PA144/15 Kit.	2 mtr power amp-1w in-15w out less case, connectors and switching.....	\$ 53.95
PA144/25 Kit.	same as PA144/15 kit but 25w.....	\$ 67.45
PA220/15 Kit.	similar to PA144/15 for 220Mhz.....	\$ 55.95
PA432/10 Kit.	power amp-similar to PA144/15 except 10w and 432 Mhz.....	\$ 69.95

## Power Amplifiers

Blue Line....	RF power amp, wired & tested, emission-CW-FM-SSB/AM			
Model	Frequency	Power Input	Power Output	
BLC10/70	140-160MHz	10W	70W	\$192.95
BLC2/70	140-160MHz	2W	70W	\$219.95
BLC10/150	140-160MHz	10W	150W	\$359.95
BLC30/150	140-160MHz	30W	150W	\$329.95
BLD2/60	220-230MHz	2W	60W	\$219.95
BLD10/60	220-230MHz	10W	60W	\$192.95
BLD10/120	220-230MHz	10W	120W	\$359.95
BLE10/40	420-470MHz	10W	40W	\$192.95
BLE2/40	420-470MHz	2W	40W	\$219.95
BLE30/80	420-470MHz	30W	80W	\$359.95
BLE10/80	420-470MHz	10W	80W	\$399.95

PS15C Kit...	15 amp, 12volt regulated power supply w/case,w/fold-back current limiting and overvoltage protection.....	\$111.95
PS25C Kit...	25 amp - 12volt regulated power supply w/case,w/fold-back current limiting ovp.....	\$181.95
PS25H Kit...	same as PS25C with metres.....	\$209.95
O.V.P.....	adds over voltage protection to your power supplies, 15VDC max.....	\$ 14.95

## Power Supplies

PS3A Kit...	12 volt-power supply regulator card with fold-back current limiting.....	\$ 13.95
PS3012W/T	new commercial 30 amp 12VDC regulated power supply w/case, w/fold-back current limiting and overvoltage protection.....	\$339.95

TRX50 Kit..	Complete 6 metre FM transceiver kit, 20W out, 10 channel scan with case (less mike and crystals)..	\$339.95
TRX144 Kit.	same as above, but 2 metre & 15w out.....	\$294.95
TRX220 Kit.	same as above except for 220 Mhz.....	\$294.95

## Transceivers

TRX432 Kit.	same as above except 10W and 432Mhz.....	\$344.95
TRC-1.....	transceiver case only.....	\$ 26.95
TRC-2.....	transceiver case and accessories.....	\$ 53.95

HT144B Kit..	2 metre, 2W, 4ch, hand held transceiver w/xtls for 146.52 simplex nicad battery pack, charger rubber duck.....	\$219.95
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## Walkie Talkies Other Products

Other products available from VHF Engineering include repeaters, synthesizers, decoders and accessories - write for full line listing or individual brochures.

# ANTENNAS



BYTOWN MARINE OFFERS A WIDE SELECTION OF ANTENNAS AND ACCESSORIES FROM HYGAIN - BEAMS - QUADS - VERTICALS - WHIPS - INSULATORS - BALUNS - SWITCHES - MOUNTS



LEISURE TIME COMMUNICATIONS SPECIALISTS AMATEUR • CB • MARINE



This month we feature what is probably the biggest, best and most prestigious contest of the year; the CQ Worldwide DX Contest. The phone version runs the weekend of 29-30 October and the CW section is held 26-27 November.

The purpose in the CQ WW is to work as many Amateurs in as many different countries as possible. A single operator can enter the contest on all bands or on a single band. Many of us may have a good antenna on one or two bands, and poor or no antennas for the other bands. For these Amateurs the single band category allows them to compete favorably on their "good" band. Also chances are that any given band will be dead for at least part of the time, so that a single band competitor can get some

sleep and/or spend some time with the family!

To compute your score, take two points for contacts in North America, 3 points for contacts on other continents, and zero points for contacts with Canada. Multiply these points by the sum of zones and countries worked on each band. The world has been divided into 40 zones for the purpose of this contest. Separate multipliers per band--that is, work a country on two different bands and you have two multipliers.

The all-time Canadian record high scores in the various classes of entry are listed below for the CQ WW Phone. CW records will appear next month. (A - all band; 28,21 etc. - single band; MS - multi op single tx; MM multi op multi tx.)

CQ WW PHONE ALL TIME CANADIAN RECORDS

class	year	station	score	QSOs	zones	countries
A	68	VE7SV	1,752,576	1956	124	260
A	73	VE7WJ	1,702,416	2006	113	235
28	68	VE7IG	318,752	1280	30	82
21	69	VE3MR	550,212	1292	39	117
14	76	VE7BC	672,150	1855	36	114
7	76	VE3EDC	133,496	886	19	55
3.8	75	XJ3EDC	141,726	1030	19	50
1.8	76	VE3BMV	29,750	449	11	23
MS	72	VE1ASJ	2,574,318	2521	121	305
MM	75	VX9A	3,322,611	5109	77	202

It is interesting to study these results closely. Note that the 40 metre record score is lower than the 80 metre one, even though 40 metres should be a much better DX band than 80. This is because Canadian Amateurs under present regulations may not operate in the worldwide DX phone band 7050-7100 KHz. All DX stations on 40 outside North and South America must be worked split-frequency through the megawatt broadcast QRM. If you cannot operate where all the DX stations are (i.e. below 7100 KHz) then your score will suffer severely. (The CARF Board has passed a motion to ask DOC that Canadian phone be permitted below 7100 KHz partly in order to remedy this situation.)

Three new Canadian records were set

in 1976, on 20, 40 and 160 metres single band. VE3BMV was second in the world overall on 160 last year. With steadily improving sunspot numbers, new Canadian records can probably be set again this year.

The CQ WW DX Contests are a lot of fun, and all Amateurs are encouraged to participate. To work a station, simply exchange calls, reports, and your zone number. And do send your log in to CQ Magazine. No matter how small your results, chances are good that you will receive a certificate attesting to your efforts. Certificates are issued to the high score in each call area in each category, which is up to nine certificates per call area, so that by choosing your category carefully, you should be able to win one.

**WSI SALES COMPANY**  
 Barlow Wadley Short Wave Radios  
 18 Sheldon Ave., Kitchener, Ont. N2H 3M2  
 PHONE (519) 579-0536

**TEN-TEC**

**WSI SALES COMPANY**  
 SWL RADIOS - HAM RADIOS - ACCESSORIES  
 18 SHELDON AVENUE NORTH  
 KITCHENER, ONTARIO N2H 3M2  
 Telephone (519) 579-0536

## Total Solid-State HF Transceiver ...

THE *Triton IV* \$885.00

- Instant Band Change
- 80 thru 10 Meters
- 200 Watts SSB/CW

Ten-Tec's Triton IV... the transceiver that brings you all the advantages of state-of-the-art solid-state technology. The receiver offers low noise, outstanding sensitivity and selectivity, and less than 2% audio distortion with the built-in compression-loaded speaker. Off-set receiver tuning eliminates "leap-frogging." Instant transmitter band change — no "tune-up" needed. Has full CW break-in, S-meter, SWR bridge, 25 kHz calibrator, pre-settable automatic level control, 8-pole crystal IF filter. Individually compensated PTO for excellent frequency stability.

Plug-in circuit boards permits fast, easy service. Frequency coverage: 80, 40, 20, 15 and 10 meter bands in eight 500 kHz ranges. Accuracy:  $\pm 1$  kHz from nearest calibration

point. Receiver sensitivity:  $0.3 \mu V$  for 10 dB S+N/N. Selectivity: 2.3 kHz bandwidth. 1.8 shape factor at 6/60 dB points. Tuning dial: 25 kHz/revolution. Power required: 12-14 VDC; 18 A transmit.  $4\frac{1}{2} \times 13\frac{5}{8} \times 13$ ". Wt.: 12 lbs.

**Model 540 Triton IV Xcvr. .... 885.00**

**Model 252G Power Supply. 117 VAC input; 13 VDC, 18-amp output. .... 128.00**

**Model 262G Deluxe Power Supply. Same as 252G, but with complete VOX system and speaker built-in. .... 168.00**

**Model 215P Microphone. PTT... 37.00**

**Model 244 Digital Readout. .... 249.00**

**Model 245 CW Filter. Plug-in.... 32.00**

**Model 249 Noise Blanker. .... 37.00**

262G



Triton IV

KR50

## CONTEST CALENDAR

### September

- 10 NCI North American Sprint
- 10-11 WAE European Phone
- 10-11 ARRL VHF QSO Party
- 17-18 Scandinavian CW
- 17-18 VE/W Contest
- 24-25 Scandinavian Phone

### October

- 1-2 VK/ZL/Oceania Phone
- 8-9 VK/ZL/Oceania CW
- 8-9 RSGB 21-28 MHz Phone
- 15-16 RSGB 7MHz CW
- 29-30 CQ Worldwide DX Phone

### November

- 5-6 RSGB 7 MHz Phone
- 5-6 ARRL Sweepstakes CW
- 12-13 European RTTY
- 19-20 ARRL Sweepstakes Phone
- 26-27 CQ Worldwide DX CW

### December

- 3-4 ARRL 160 metre Contest
- 10-11 ARRL 10 metre Contest

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## Awards

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1977 FRIENDLY MANITOBA QSO Party  
Start: 22:00 GMT Saturday, October 15, 1977.

Finish: 02:00 GMT Monday, October 17, 1977.

The 4th Manitoba QSO Party, sponsored by the Amateur Radio Clubs of Manitoba, is dedicated to the Amateur Radio League of Manitoba to commemorate their 25th Anniversary in 1977.

MAILING DEADLINE: November 14, 1977. Details from Doug Bowles, VE4QZ, 1104 First Street, Brandon, Manitoba, R7A 2Y4.

### WHEAT CITY AWARD BRANDON, MANITOBA

Sponsored by The City of Brandon and the Brandon Amateur Radio Club. Details from Doug Bowles VE4QZ

### "WORKED ALL MANITOBA"

The WAM award will be issued for confirmed contacts with Amateur Radio Stations in a specific number of Manitoba Municipalities, Local Government Districts, Provincial Parks, Forest Reserves and National Parks in the following classes:

Class E. 50 contacts; Class D. 75 contacts; Class C. 100 contacts; Class B. 125 contacts; Class A. all 133 (Special Honour Plaque). Record book, application forms, rules and conditions are available for a fee of \$1.00 from: Doug Bowles VE4QZ

### THE THUNDER BAY AWARD

On January 1, 1970, the twin cities of Fort William and Port Arthur, were amalgamated into one unit to be known

as Thunder Bay, Ontario. To honour this union, the Lakehead Amateur Radio Club has made available to all Radio Amateurs and Short Wave Listeners a certificate to be known as: "The Thunder Bay Award." The requirements for this award may be had from Box 2571, Thunder Bay, Ont.

### WORKED ATLANTIC PROVINCES AWARD

Sponsored by the Moncton Area Amateur Radio Club. For details, send to Walt Jones, VE1AMR, 79 Waverley Ave., Moncton, N.B.

### THE WINDSOR AMATEUR RADIO CLUB

The Windsor Amateur Radio Club sponsors the following 2 awards, open to all Amateurs:

FREEDOM FESTIVAL AWARD - Contacts to be made June 24th and July 20th inclusive of each year. W's and VE's to work 5 club stations. DX require 3 club-member stations. Essex County stations require 10 contacts.

ROSE CITY AWARD - Essex county stations to work 15 club-member stations DX and others require 5 QSO's.

Mail all correspondence to Windsor Amateur Radio Club, Box 1322, Windsor, Ont. Canada.

### PENTICTON AMATEUR RADIO CLUB CERTIFICATE:

Requirements: Work any 24 Canadian Stations were the last letter of the call spells: Penticton, British Columbia. e.g.: VE5HP: VECXE: VE6AIN: VE7TT: etc. etc.

No Time Limit - Any Band or Mode - Certified Log Data - QSLs not required.

# W S I SALES COMPANY

SWL RADIOS - HAM RADIOS - ACCESSORIES

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## NEW! Remote Coax Switch


\$150.00

- Selects 1 of 5 antennas
- Grounds unused antennas
- Takes 2000 watts PEP

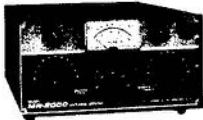
Remotely selects any one of five antennas. Front panel indicator monitors selection interval. "Rain-Hat" design shields motor and switches. Changes VSWR no more than 1.05:1, to 30 MHz. Control unit needs 110/220 VAC; 24-VAC, 2-amp motor.

**Drake Model RCS-4** ..... \$150.00

### MATCHING NETWORKS



**MN-4**  
200 watts  
\$149.00



**MN-2000**  
2000 watts PEP  
\$299.00



## TR-4CW SIDEBAND TRANSCEIVER

\$799.00 OR \$950.00 PACKAGE DEAL!

## NEW!

\$63.00

**Drake 1525EM**



## Encoding Auto-Patch Mike

Pushbutton encoding microphone is pre-wired for use with TR-33 transceiver; can be used with almost any FM transceiver by modifying connections. No internal battery; takes 12 VDC from transceiver. Uses state-of-the-art IC technology. Reliable Digitran® keyboard. Impedance: 500 ohms. Wt.: 1 lb. \$63.00



## 2 METER FM PORTABLE TRANSCEIVER Model TR-33C



**Amateur Net** \$289.00

- SCPC\* Frequency Control
- 12 Channels with Selectable Xmtr Offsets.
- All FET Front-end and Crystal Filter for Superb Receiver Intermod Rejection.
- Expanded Antenna Choice.
- Low Receiver Battery Drain.
- Traditional R. L. Drake Service Backup.
- Single Crystal Per Channel.

## LINEAR AMPLIFIER Model L-4B



**L-4B Linear Amplifier** ..... \$1080.00

- 2000 Watts PEP-SSB • Class B Grounded-Grid — two 3-500Z Tubes • Broad Band Tuned-Input • RF Negative Feedback • Transmitting AGC • Directional Wattmeter • Two Tautband Suspension Meters • L-4B 13-15/16" W, 7-7/8" H, 14-5/16" D. Wt.: 32 lbs. • Power Supply 6-3/4" W, 7-7/8" H, 11" D, Wt.: 43 lbs.

### POWER SUPPLIES

- AC 4 Power Supply ..... \$150.00
- DC 4 Power Supply ..... \$169.00



May be repeated twice using different calls. Call of any Club member may be used for any required letter. Fee: Fifty Cents. Repeat Endorsement Seals. Send

SAE to Awards Custodian...Norm Taylor VE7BNT, Gartrell Rd. R.R.#2, Summerland, B.C.

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## *Transcan RTTY Net*

Here is a summary of the CARF Communications Committee presented to the executive meeting on April 2.

Attempts are still being made to begin the TRANSCAN NET. Attempts were made for some 15 months to operate the Net on 20 Metres but this was not successful due to the fact that the probable times for 20 Metre activity have not been available to those attempting the project. Activity was maintained for about 18 months on 80 Metres. In general conditions have been so bad that only about 25% of the time is it possible to realize fair print between Parksville and Calgary.

Some 30 letters have been written to Amateur Radio operators having RTTY capability in Saskatchewan and Manitoba to try and break the impasse. This has resulted in virtually no response. Several VE3-Amateurs have been suggested and one VE1. Letters to these Amateurs have not produced results.

A major breakthrough exists in the new Headquarters station, VE3VCA. With

the staffing of the station maintained by retired personnel, it is hoped that some contact can be made to begin 20 Metre activity during a time of day that is reasonable from the standpoint of propagation. Arrangements have been made for activity with the UBC station, VE7UBC, to meet the schedules during the daytime. This is through the courtesy of Peter Driessen, VE7BBQ.

Efforts have been made and are being made to recruit an Eastern Canada station to try and use 160 Metres for the purposes of the TRANSCAN NET. Due to its extremely long ground-wave, it may be profitable to maintain part of the activity of the TRANSCAN NET on this band. (Approval for RTTY on a special case basis has been obtained from DOC. Ed)

Help is greatly needed to begin Net activity on a periodic basis.

Frank Merritt VE7AFJ  
(Retired operators with RTTY are asked to contact Frank and give him a hand in this project - Write c/o CARF)

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## *Package Deal announced*

To celebrate our 10th Birthday, to stimulate the conduct of courses on Amateur radio and to attract membership, your national Federation has initiated a package deal for club use. This includes a year's membership in CARF (\$7.00), and a copy of the Canadian Amateur Certificate Study Guide (\$5.00) and Radio Regulations Handbook (\$4.00) - value \$16.00 - for a total cost of \$13.00. The membership can be either Full or Associate (with automatic change to Full when the Amateur certificate is obtained) and Family members may be added at a cost of \$1.00 per such member.

This Package Deal is only available through clubs and to encourage the distribution of the Package, CARF will provide a FREE copy of the Instructor's Package (\$2.50) when 10 Packages are ordered and a FREE set of 35mm slides for the Instructor's Package (\$5.00) when

20 are ordered through the club.

Simply forward a listing, by name/call, postal address of those wishing the Package Deal with a cheque/money order to cover cost to CARF. We will do the necessary book-keeping and forward the free items as soon as the necessary numbers have been received.

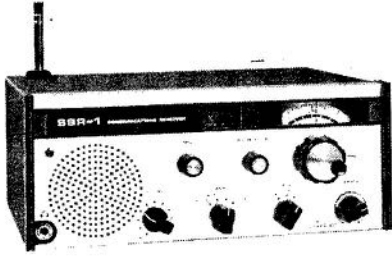
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## **ADVANCED**

CERTIFICATE STUDY GUIDE

CARF now has copies of the Canadian Amateur ADVANCED Certificate Study Guide in stock and ready for mailing. To order your copy, send \$4.00 to the Canadian Amateur Radio Federation, Inc. P.O. Box 356, Kingston, Ont. K7L 4W2. For other useful CARF Publications, use the handy order form on Page 30 of this issue.

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 KITCHENER, ONTARIO N2H 3M2  
 Telephone (519) 579-0536



**Drake SSR-1**

\$369.00 + shipping

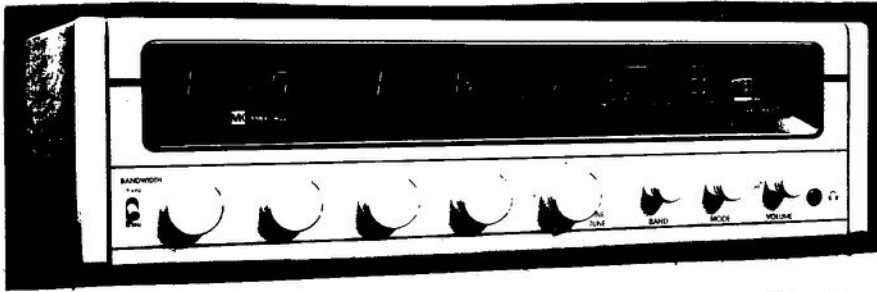


\$27.00 + \$2.00 ship.



**Drake SPR-4**

\$759.00 + shipping



McKay Dymek

DR-22

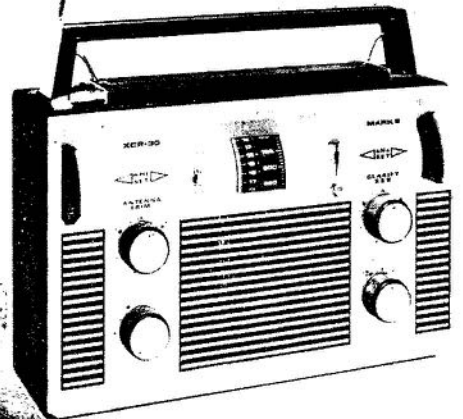
SWL RECEIVER!!

\$1249.00



\$49.00 + \$3.00 shipping

DO WRITE US FOR A  
 BEAUTIFULLY ILLUSTRATED  
 COLOR BROCHURE



**Barlow Wadley XCR-30**

\$299.00 + shipping

Ontario residents  
 add 7% OST

**Illuminated Spot Location Globe**—destined to be collectors item. This 12" illuminated globe has a latitude wheel and longitude wheel which moves an illuminated dot within the globe to any location in the world. Find the Canary Islands by yourself by simply dialing the co-ordinates. This globe also has two way illumination, when it's illuminated it's a physical globe showing the world's topography. When it's not illuminated it becomes a political globe designating country outlines. An ideal conversation piece and a great educational item! Comes complete with a book of coordinates of famous places, historical events and much more.



# Ham help for handicapped

Brian Hayes, of Stettler, Alberta, who is physically handicapped and blind as well, finds his time is occupied mainly by Amateur radio and travelling across Canada in his motor home with his wife, Lida, whose hobby is showing dogs.

Finding it difficult to get around his motor home in a wheel chair, he began a project, assisted by Deane and Barry Ogden (VE5BO) to devise a 12-volt electric winch hoist which, running on a 16-foot track, allows Brian to manoeuvre about the motor home.

Other Amateurs who assisted on the construction of the winch were Ervine Noe, VE5IC and Alex Burgess, VE5XR.

Barry Ogden, by the way, is a volunteer member of the Canadian Paraplegic Association and to top it all off, was recently awarded the Saskatchewan Amateur Radio Efficiency award at the Swift Current SARL Hamfest for his work in the forest fire communications early this summer.

## DOC consults with GRS

The General Radio Service (CB) symposium held by the DOC in Toronto in June has been repeated in Moncton and Vancouver with one planned for Winnipeg on Sept. 9-10, Edmonton on Sept. 16-17, and Charlottetown, Halifax and St. John's will get their licks in on Nov. 26, Sept. 24 and Oct. 29 respectively.

The feedback from participants to the DOC, which has been represented by assistant deputy ministers, Parliamentary Secretary Ross Milne, legal advisers, officials of the Telecommunications Regulatory Service, Regional Directors and District Officers, has been obviously made at a high level. The Department has recognized that the problems associated with the GRS must be faced and is seeking ways to overcome them. One might say it is 'participatory democracy' for the GRS!

Prominent Amateurs assist at the meetings at the invitation of DOC as there are many mutual problems on which the Amateurs can advise and assist the GRS participants.

One note from the Vancouver one is that enforcement against illegal stations on the Amateur bands will be speedily prosecuted.

GRS rules will be relaxed in the fall to delete the restrictions against hobby use and other rules will be made to ensure better technical operation and installation of GRS stations.

DOC has announced that it is studying "possible new frequency bands for new GRS classes of service which might be-

come necessary in the future".

Detailed information is not available, but it is known that the uses of the whole of the VHF and UHF spectrum are being studied for possible re-allocation. A study on 406 MHz to 960 MHz, for example, has been going on for some time.

## Amateur/DOC symposium planned

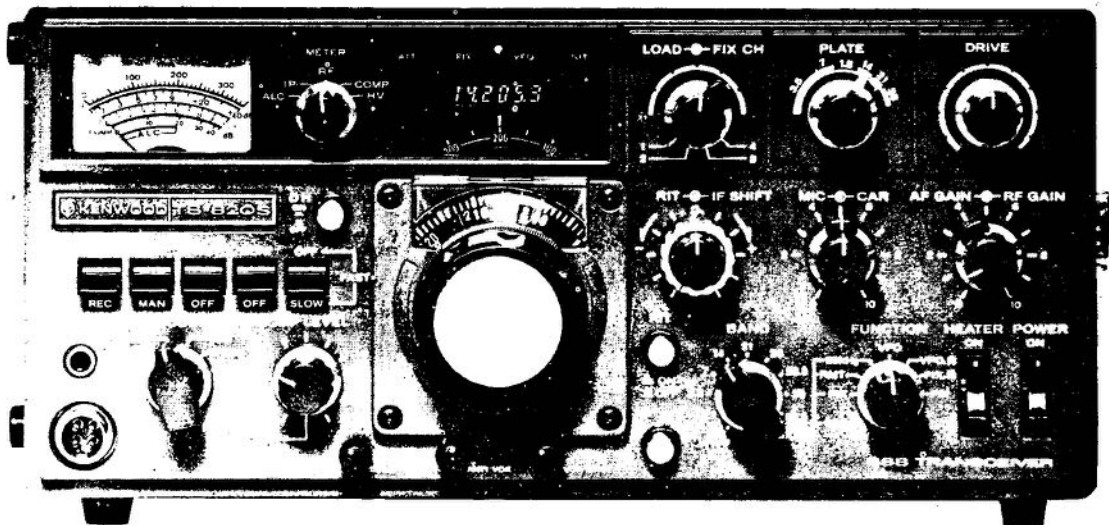
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erican Radio Relay League's Canadian Division, the provincial societies and other interested groups. Information as to time, place and agenda will be publicized as soon as these details have been worked out.

Amateurs will welcome the Department's initiative as a demonstration of DOC's continuing interest in Amateur radio affairs. It is the Federation's hope that this conference will be the first in a series of periodic meetings of this nature, thus broadening the informal contacts which have always characterized DOC/Amateur relations.

(A word of explanation... "gazetting" is the process of publishing proposed regulations or changes in "The Canada Gazette". Part I of the Gazette carries proposed regulations and public comment may be requested. Publication in Part 2 is official notice that a regulation is in effect...Editor)

# TS-820S



We told you that the TS-820 would be the best. In little more than a year our promise has become a fact. Now, in response to hundreds of requests from amateurs, Kenwood offers the TS-820S\*... the same superb transceiver, but with the digital readout factory installed. The worldwide demand for the TS-820 far exceeded our initial production plans. However, production capacity has been substantially increased and our objective is to make the TS-820S more readily available to you. As an owner of this beautiful rig, you will have at your fingertips the combination of controls and features that even under the toughest operating conditions make the *TS-820S the Pacesetter that it is.*

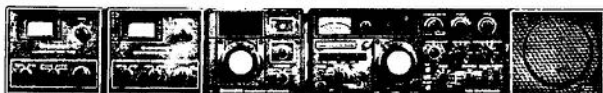
## Features

Following are a few of the TS-820S' many exciting features

**SPEECH PROCESSOR** • An RF circuit provides quick time constant

compression using a true RF compressor as opposed to an AF clipper. Amount of compression is adjustable to the desired level by a convenient front panel control.

**IF SHIFT** • The IF SHIFT control varies the IF passband without changing the receive frequency. Enables the operator to eliminate unwanted signals by moving them out of the passband of the receiver. This feature alone makes the TS-820S a pacesetter



TV-506  
\$269

TV-502  
\$169

VFO-820  
\$169

TS-820S  
\$199

SP-520  
\$36

**PLL** • The TS-820S employs the latest phase lock loop circuitry. The single conversion receiver section performance offers superb protection against unwanted cross-modulation. And now, PLL allows the frequency to remain the same when switching sidebands (USB, LSB, CW) and eliminates having to recalibrate each time

**DIGITAL READOUT** • The digital counter display is employed as an integral part of the VFO readout system. Counter mixes the carrier, VFO, and first heterodyne frequencies to give exact frequency. Figures the frequency down to 10 Hz and digital display reads out to

100 Hz. Both receive and transmit frequencies are displayed in easy to read, Kenwood Blue digits.

## Specifications

**FREQUENCY RANGE** 1.8-29.7 MHz (160-10 meters)

**MODES** USB, LSB, CW, FSK

**INPUT POWER** 200W PEP on SSB

160 W DC on CW

100 W DC on FSK

**ANTENNA IMPEDANCE** 50-75 ohms, unbalanced

**CARRIER SUPPRESSION** Better than -40 dB

**SIDEBAND SUPPRESSION** Better than -50 dB

**SPURIOUS RADIATION** Greater than -60 dB (Harmonics more than -40 dB)

**RECEIVER SENSITIVITY** Better than 0.25uV

## RECEIVER SELECTIVITY

SSB 2.4 kHz (-6 dB)

4.4 kHz (-60 dB)

CW\* 0.5 kHz (-6 dB)

1.8 kHz (-60 dB)

\*with optional CW filter (installed)

**IMAGE RATIO** 160-15 meters: Better than 60 dB

60 dB 10 meters: Better than 50 dB

**IF REJECTION** Better than 80 dB

**POWER REQUIREMENTS** 120/220 VAC, 50/60 Hz, 13.8 VDC (with optional DS-1A DC-DC converter)

**POWER CONSUMPTION** Transmit 280 Watts

Receive 26 Watts (heaters off)

**DIMENSIONS** 13-1/8" W x 6" H

x 13-3/16" D

**WEIGHT** 35.2 lbs (16 kg)

## VFO-820

Function switch provides any combination of transmit, receive, transceive with the TS-820S. Both are equipped with VFO indicators showing which VFO is in use.

CW FILTER #55  
DC-DC CONVR. #59

## SP-520

Although the TS-820S has a built-in speaker, the addition of the SP-520 provides improved tonal quality. A perfect match in both design and performance.

## TV-502

The TV-502 transverter puts you on 2-meters the easy way. Operates in the 144.0-145.7 MHz frequency range with a 145.0-146.0 MHz option. Completely compatible with the TS-820S, the TS-520S and most any HF transceiver.

## TV-506

Similar to the TV-502 except that it opens up the 6-meter band (50.0-54.6 MHz) to your HF rig.

\*The TS-820S and DG-1 are still available separately.

FOR THESE AND OTHER ITEMS IN OUR LATEST CATALOGUE, WRITE TO:-

**GLENWOOD TRADING COMPANY LTD. 278 East 1st St. North Vancouver, B.C. V7L 7B5**

# The Canadian DXer

Peter Driessen, VE7BBQ

Why is it that when 20 metres goes dead at night, Canadian Amateurs generally will move down to 80 m instead of 40 m? Why does it seem that 20 m and 80 m are the most popular HF bands in Canada with 40 m running a distant second?

To answer these questions, we must consider what activity there is on 40 m, why 40 m seems to be so little used compared to 20 and 80 m and what could be done to increase the usefulness of 40 m to the Canadian operators.

On 40 M, 7000-7100 KHz is allocated to the Amateur service on a worldwide exclusive basis. 7100-7300 KHz is allocated to the Broadcast Service worldwide except in North and South America (ITU Region 2) where it is available to the Amateur Service. All countries outside Region 2 (ours) can only use 7000-7100 KHz on 40 M and cannot operate above 7100 KHz. This narrow 100 KHz is divided roughly equally between CW and phone with about 7000-7050 CW and 7050-7100 phone. Without exception, all DX countries allow phone in 7050-7100 KHz and DX CW is found in 7000-7100 KHz even though they are allowed above 7100 KHz too. 7100-7150 KHz is the US Novice CW band and 7150-7300 KHz is the US phone band. 7100-7300 is used by broadcasting outside Region 2. See the diagram below.

Note: The 7050 KHz division between DX phone and DX CW is approximate. As usual, RTTY is between the CW and phone bands.

Under current regulations, Canadian phone stations may operate only in 7150-7300 KHz. This segment is shared with megawatt broadcasting stations and US Amateur stations. As a result, the cur-

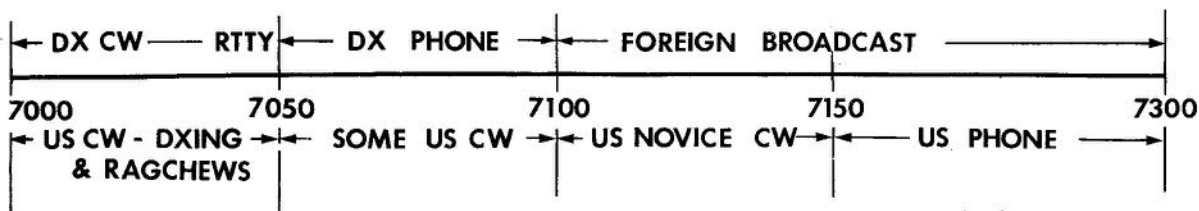
rent Canadian phone allocation is a total shambles with broadcast heterodynes every 5 or 10 KHz and US Amateurs filling in the space in between them. The QRM at night is unbelievable! By comparison, the 20 M and 80 M phone bands are relatively free from QRM and do not suffer from megawatt BC interference. Naturally, the Canadian phone operator will not enjoy operation in this QRM-ridden phone band and hence he prefers to work on 20 or 80 M. The CW op can operate away from the BC interference and so he can enjoy 40 M just like any other band.

To make 40 M phone operation as attractive as 20 M or 80 M phone, we need relatively clear, QRM-free frequencies for phone on 40 M just like we have on 20 and 80 M. These clear frequencies can only be found below 7100 KHz, away from the megawatt broadcasters which operate in 7100-7300 KHz. It is suggested that the relatively QRM-free worldwide exclusive Amateur band 7000-7100 KHz can be split equally between phone and CW in Canada. This would allocate 7000-7050 KHz CW only and 7050-7150 CW and phone. In the band shared with broadcasting, the US Novice segment 7100-7150 KHz would be kept for CW only with 7150-7300 KHz CW and phone as at present.

The Canadian allocations would then correspond to those observed in the rest of the world as shown on the chart. Note that 100 KHz is still allocated to CW only. If 100 KHz is enough CW space on 20 M then 100 KHz should also be enough CW space on 40 M.

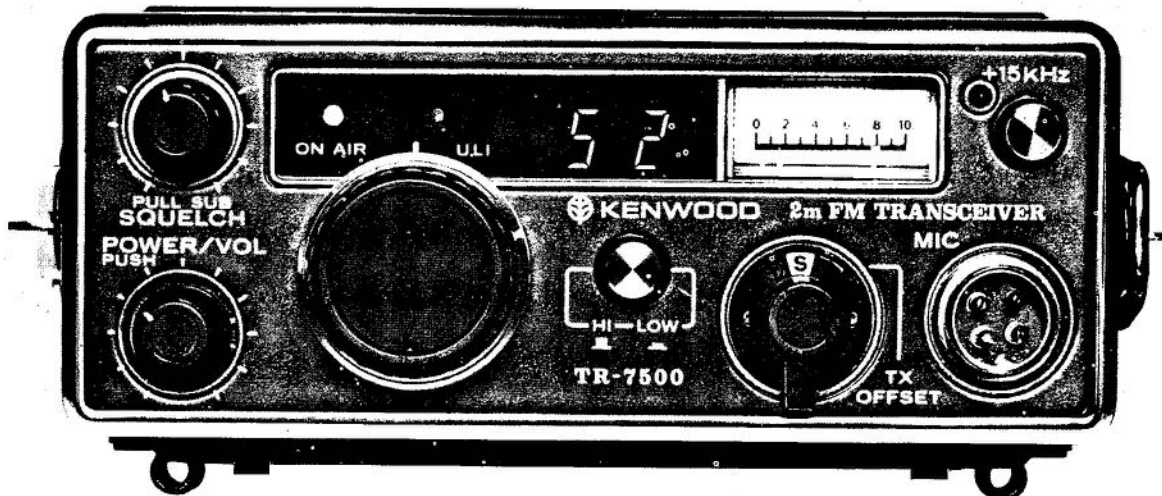
Canadian Amateurs would have 50

Continued on Page 21



ORDER NOW

# TR-7500



There are a number of good 2 meter FM transceivers on the market. You may already own one. But, even if you do, we suggest that you put your radio to this test. And, if you're thinking of buying one, this test should be a helpful guide.

**INTRODUCTORY OFFER**

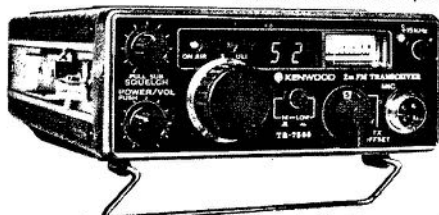
**\$399**

- Is it PLL synthesized?
- Does it have 100 channels (88 pre-programmed)?
- Does it have 12 extra diode programmable channels?
- Does it have single knob channel selection?
- Does it have a LED digital frequency display?
- Does it have a powered tone pad connection?
- Does the receiver have helical resonators?

NO YES

**AVAILABLE  
 AUGUST  
 1977**

If your answer is NO to any of these, the TR-7500 is the radio that you should own. And, in addition to these important features, you get proven Kenwood quality, value and service.



*Specifications*

**NEW!**

- TR-7500
- Semiconductors: Transistors ..... 41
  - FETs ..... 8
  - ICs ..... 7
  - Diodes ..... 35
- Frequency Range: 146.01 to 147.99 MHz  
 Mode: FM  
 No. of Channels: 100  
 Operating Temperature: -20 to +50 degrees C  
 Power Voltage: 11.5 to 16.0V DC (13.8V DC nominal)

- Grounding Polarity: Negative ground
- Antenna Impedance: 50 Ohms
- Current drain: Less than 0.5A in receive with no input signal
- Less than 3A in transmit (HI) Less than 1.5A in transmit (LOW) (at 13.8V DC)
- Dimensions: 172 mm (6-3/4") wide
- 250 mm (9-7/8") deep
- 75 mm (2-15/16") high
- Weight: Approximately 2.2 kg (4.8 lbs.) (at 13.8V DC)
- TRANSMIT SECTION
- RF Output Power: High: 10 Watts
- Low: 1 Watt (approximately)
- Modulation: Variable reactance frequency shift
- Frequency Deviation: ±5 KHz
- Spurious Radiation: Better than -60dB

- Tone Pad Input Impedance: 600 Ohms
- Microphone: Dynamic microphone with PTT switch, 500 Ohms
- RECEIVE SECTION
- Receive System: Double conversion superheterodyne
- Intermediate Frequency: 1st IF: 10.7 MHz
- 2nd IF: 455 kHz
- Sensitivity: Better than 0.4 uV for 20dB quieting Better than 1 uV for 30dB S/N
- Squelch Sensitivity: Better than 0.25 uV
- Selectivity: 12kHz at -6dB down
- 40 kHz at -70dB down
- Image Rejection: Better than -70dB
- Spurious Interference: Better than -60dB
- Audio Output: More than 1.5 watts across 8 Ohms load 10% distortion
- Intermodulation: Better than 66dB

FOR THESE AND OTHER ITEMS IN OUR LATEST CATALOGUE, WRITE TO:-

**GLENWOOD TRADING COMPANY LTD. 278 East 1st St. North Vancouver, B.C. V7L 7B5**

KHz of relatively QRM-free space for phone below 7100 KHz away from the megawatt broadcasters in 7100-7300 KHz. The availability of clear frequencies for phone on 40 M will increase the usefulness of 40 M to the Canadian Amateur. For example, a Trans-Canada phone net could be set up in the evening on 40 M when 20 M is dead. An additional benefit is that Canadians will be able to work DX stations transceive on 40 M phone just like we already can on almost all the other CW and phone bands.

With the suggested changes in 7050-7100 KHz, 40 M would be much more useful to Canadian Amateurs and would very likely become just as popular a band as 40 M cw. With clear frequencies available for phone use, the 40 metre band would become just as enjoyable to use on phone as 20 and 80 metres.

(Note: the writer is active on all bands, 160 to 2 metres and makes about 4,000 QSOs a year, half on CW and half on SSB.)

## *Know those Regs?*

In various US Amateur publications, one occasionally sees articles on operational procedures and regulatory practices which may lead Canadian Amateurs astray. They are by no means inaccurate but - and here is where the danger lies - they refer to FCC rules and regulations, which in more cases than is generally realized differ from our DOC rules under which Canadian Amateurs must operate.

In many instances Canadian regulations are much more lenient than those of the FCC and in general are broader and simpler. So don't get upset if you find that there are somethings which you can't do but which your US confreres can.

The first thing to remember is that when operating outside Canada under reciprocal operating privileges, you are still subject to all Canadian regulations as long as they do not conflict with those of the host country in which you are operating. At the same time you are subject to the rules of host country. So you have to put the two sets of rules together and do only that which is permitted by both Canada and the host country.

One recent article will serve as an example. It told how to operate your 2-metre handie-talkie on board a commercial airplane. This is quite legal for a US Amateur on board a US plane flying over the US or the high seas (if he watches his frequencies in ITU Region 1) provided he has the approval of the pilot. However Canadian Amateurs are restricted to operation on board private aircraft. In Canada "private" aircraft are generally those not used

by commercial air carriers, i.e., airlines - scheduled, non-scheduled, charter, etc. Nor would it be legal for an American Amateur, even on a US airliner to operate while in Canadian air space, because as well as obeying his own country's regulations he is also subject to Canadian ones.

Another example concerns identification when operating in the US. While it is true that the FCC have relaxed their portable and mobile identification requirements and no longer require stations so operating to identify as such, DOC regulations do require the additional identification. So, a Canadian Amateur operating in the US must still indicate the call area in which he is operation, and, likewise, an American Amateur must do the same when operating in Canada. This point is also covered by the "Reciprocal" Treaty which permits such operating.

The frequency of identifying is another point. Canadians when operating in the US must identify at least every 10 minutes, to comply with FCC Rules, while at home the requirement is at least every 30 minutes and at the end of a series of transmissions; conversely US Amateurs must identify at least every 10 minutes regardless of where they are operating.

Another item which has recently appeared in US publications concerns operation on an unlicensed basis in the "unused" 160 kHz band. While this may be acceptable in the US, it is certainly not in Canada where these frequencies are allocated to the Fixed Service. A CARF request during WARC '79 discussed  
sept 1977 - page 21

# CHOOSE TOP PERFORMANCE FROM THIS SHOWCASE OF H.F. RIGS



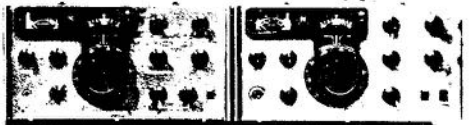
## NEW . . . TS-820S from KENWOOD

The same superb transceiver but with the digital-readout now factory installed. Many features, including 10 thru 160 meter coverage; 200 watts P.E.P.; integral IF shift; solid-state except driver and final stages; noise-blanker; VOX and semi break-in CW; PLL Circuitry; USB/LSB/CW/FSK; phone patch terminals; RF Speech processor; and much more.



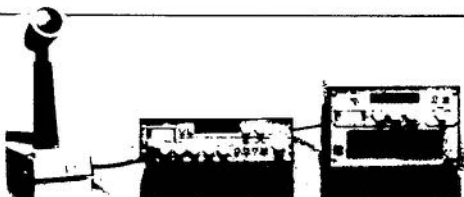
## NEW . . . TS-520S from KENWOOD

It combines the fine, proven characteristics of the original TS-520 with many new and improved features! Covers 160-10 meters completely plus WWV. Improved sensitivity and spurious response characteristics; new improved speech processor; new highly effective noise blanker (NOISE BLANKER THAT REALLY WORKS!); phone patch terminals; completely solid-state except driver and final stages; built-in supply; switchable AGC; RTI control; 25 KHz. calibrator and much, much more, at an unbelievably reasonable price.



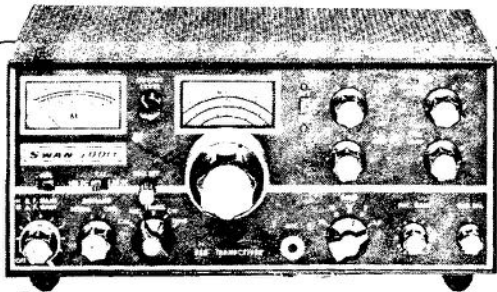
## KENWOOD R599D/T599D . . . THE TWINS

The no compromise pair . . . R-599D features all solid state; 1.8 to 29.7 MHz; WWV; 1KHz readout; crystal filters; effective noise blanker; 4 way VFO; built-in squelch; accurate S-meter regardless of RF Gain setting; switchable AGC; 25 KHz. calibrator; RIT . . . The T-599D features solid state except driver and finals; highly stable VFO; 4 way VFO; VOX Semi-break-in CW with sidetone; transverter terminals; covers 3.5 - 29.7 Mhz. Drop us a line for detailed specifications.



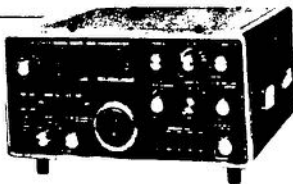
## NEW . . . THE ASTRO 200

Brand new transceiver built in the U.S.A.; state of the art 100% solid-state communications center with over 40,000 frequency synthesized channels covering 80-10 meter bands completely with 200 watts P.E.P. input. Push-button VFO frequency control - no tuning knob!; large 6 digit frequency display; fully RIT and harmonic suppression; built-in SWR bridge; broadbanded - no finals to tune; CW filter/station console/AC Supply/Matching speaker/mobile mount, available. Write for specs.



## SWAN ELECTRONICS 700CX TRANSCEIVER

700 watt P.W.P. Powerhouse, 80-10 meters; 25 KHz calibrator; best "watts-per-dollar" value on the market today!



## UNIDEN 2020 TRANSCEIVER

A unique SSB transceiver with an unusual combination of advanced engineering and operating features. Operates USB, LSB, CW, and AM on 80 - 10 meters. Features include: Phase-lock-loop (PLL) Oscillator circuit, hybrid digital frequency readout, advanced solid-state design (only 3 tubes), AC & DC power supplies built in, CW filter (standard), cooling fan (standard), VOX and semi-break-in CW, 25 KHz. calibrator, WWV receiving capability, dual RIT control, plus many more.

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DOWNSVIEW ONT.

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# HAMTRADERS INC.

sions, for an allocation in this portion of the spectrum, although originally not accepted by the DOC on the premise that other services had greater needs, is being reconsidered.

To help you determine what frequencies and modes of emission you are authorized to use in the US remember that a Canadian Amateur Operator's Certificate is considered to be the equivalent of a US General Class Amateur

Operator Licence and our Advanced Amateur Operator's Certificate the same as a US Advanced and/or Extra Class License.

VE3ZS

(You should know the Canadian regulations in order to operate your station in accordance with them. Refer to the invaluable info in "The Canadian Amateur Radio Regulations Handbook" available from CARF for \$4.00 ppd.)

## *Selective calling*

or SILENCE IS GOLDEN

Two-metre FM - what is it about this mode that makes it so appealing? The main thing seems to be the concept of having an "intercom" in the shack with the fraternity in the local area. One can then instantly inquire from the group if a certain part is available, technical advice, the announcement of band openings, road information and, of course, just keeping in touch with what the guys are up to, not to mention the public service aspect. These reasons give two-metre FM a unique edge in versatility over any other single amateur band and mode.

Ideal you say! For a while it was - then we started getting bigger until our "intercom" was so clustered with these activities that people got tired of monitoring the constant chatter and either left for quieter places or turned the "intercom" off completely. The system had now lost its effectiveness, and continues to do so.

If one takes the time to contemplate what the ideal system would be, it becomes apparent that all we need to hear is the call for assistance or CQ and the identification of the calling station. "Enter the hero", the 567 tone decoder chip (PC boards and a design will be available at a later date). This 'select call' unit fits between a rig and its external speaker (no internal connections). Each unit would be set up to respond to two different number sequences, one of which would be "2580" and the other would be your own personal number - hopefully received from the area 'Tone Coordinator'. When someone now punches up either 2580 or your number on their Touch-Tone pad, your speaker comes to life and you hear his call. When he is finished

a number-sign (#) will turn your speaker off again or it could be designed to reset to 'silent' after a given time. If you wish to reply you just throw the manual switch on the encoder and call him. You no longer have to monitor all the chit-chat in order to catch any calls which may be for you.

Rob Bareham, VE3ACY  
in Ottawa ARC "Groundwave"

## *RAQI Hamfest*

The Quebec provincial radio society, Radio Amateurs du Quebec, held a successful hamfest at La Tuque on August 13 weekend.

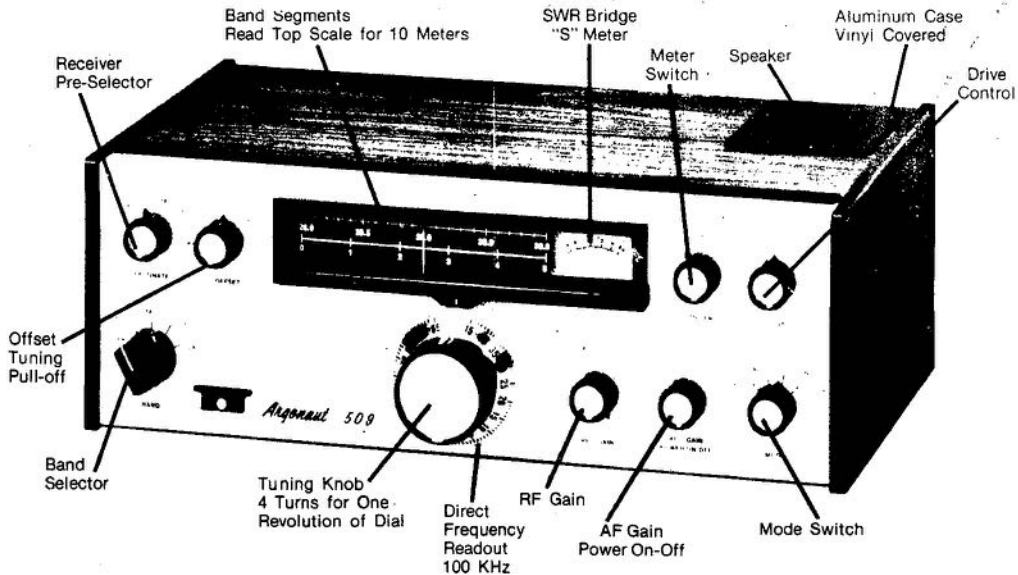
The keynote speech was by Mr. Marc-Andre Bedard, the Minister responsible for the Quebec emergency measures organization, Protection Civile. Br. Bedard emphasized that the provincial government strongly supported Amateur radio and RAQI in its emergency work. He noted that \$55,000 had been spent by the Quebec government on outfitting repeater stations (a number of them are linked) for use in assisting the Protection Civile during emergencies or disaster work.

CARF was represented by its President John Henry, VE2DNM, who, happily, is at home in four languages, including French.

## **DOC NEWS**

The new type exams had some references to tube theory mixed in with the solid state questions. CARF has asked DOC to eliminate these as they have stymied some people who have studied solid state electronics only.

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## Argonaut 509

**TEN-TEC, INC.**



TR-7200A  
2M MOBILE TRANSCEIVER

TR-2200A  
2M PORTABLE TRANSCEIVER

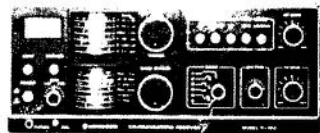
PS-5  
AC/DC POWER SUPPLY



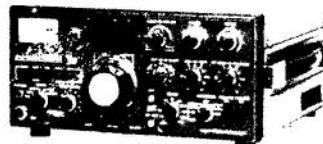
R-599D  
160-10M RECEIVER

T-599D  
160-10M TRANSMITTER

**KENWOOD**  
...premier in amateur radio



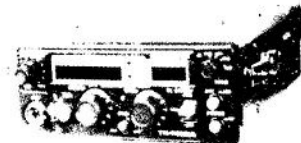
R-300  
RECEIVER



TS-820  
160-10M TRANSCEIVER



TS-520  
80-10M TRANSCEIVER



TR-7400A  
2 M SYNTHESIZED MOBILE  
TRANSCEIVER



TS-700A  
2M TRANSCEIVER



MC-50

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Toronto Amateur Dept.: 47A Colville Road Toronto 15



# *The Russians are coming!*

It's not the movie this time. The Russians are, however, coming on real strong in the Amateur satellite business with the appearance of their official notice to the International Telecommunications Union Frequency Registration Board of the impending launch of not just one, not two, but three or possibly four Amateur "birds".

Speculation is that three or four satellites will be on a single launch into orbit and will be individually separated or "kicked out" by the famous "side-door launch" trick. Launch possibility is late this year or early next.

Here are some of the details gleaned from the ITU FRB notice; the name will be the USSR Amateur System "RS" for "Radio-Sport", the Russian name for Amateur radio activities. The orbit will be near circular, up 950 km. (593 miles), with a 10 minute period at 82 degrees inclination.

The up-link from ground stations will be on 145.800 to 145.900 MHz, with 100 kHz bandwidth. The recommended output for the up-link stations is 100 watts ERP, i.e. 10 watts plus a 10 db gain on the transmit antenna.

The down-link from the satellite to ground receivers will be on 29.300 to 29.400 MHz with a 100 kHz bandwidth, with a 1.5 watt output from a possibly circularly polarized half-wave antenna.

With the recent loss of AMSAT's OSCAR 6 satellite after almost four-and-a-half years of operation, the Russian announcement is welcome news. The slightly lower orbit than the OSCAR bird will decrease the maximum range of operation from 2450 miles to about 2000 miles, which gives lots of room for continental communication and for the eastern half of Canada to work Europe. The biggest difference will be that with three or four satellites in orbit it could mean nearly continuous communication during certain times of the day, as one bird follows another.

One suggestion for those who will work it is to transmit on the 145 MHz up-link with 50 to 60 watts into a five-eighths wavelength antenna and listen with a dipole that can be switched between vertical and horizontal into a 10

metre pre-amplifier to really make the S-meter move.

Now is the time for all the new Kenwood TS-700, Yaesu FT221 and Multi 2700 rigs to be put to the test. Also note that an IC 22-S can be programmed to provide a stable CW signal source in the 145.800 - 145.900 MHz band.

A 10 watt transmitter and 6 or 8 element 2 metre beam antenna will provide a good S-5 up-link signal for three-quarters of the time. There will be ample time to experiment as the Russians plan to have these satellites going for a number of years.

While today we take space exploration and satellite communication for granted, it was only twenty years so that we all woke up one fine day to the news that the Russians had launched a 200 lb. space satellite, Sputnik 1. This was followed a month later by Sputnik 2, the half-ton space-craft which carried the dog Lyka.

The USA program got off to unfortunate starts until Explorer 1 went up. Although it weighed only 30 lbs., it discovered for us the Van Allen radiation belt which greatly altered and enlarged our knowledge of the earth's weather and upper atmosphere physics.

Since then we've become used to TV from Europe via Telstar, moon walks, panoramas of the Martian Horizon, and TV and telephone in the high Arctic, provided by the world's first commercial satellite communications system, owned by Telsat Canada.

## *New wrinkle in illegal operating*

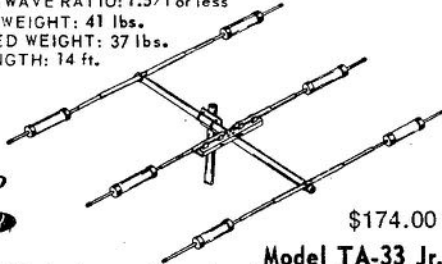
Truckers in Montreal area have been purchasing Amateur equipment from a Plattsburg chain store and other sources and working just outside or in the 144 Mhz band. This has recently turned into something new...they have been using Montreal phone patch repeaters to make business calls. Local Amateurs have assisted DOC and other interested parties in tracing some of the malefactors.

# MOSLEY ANTENNAS

## Model TA-33 for 10, 15, and 20 meters \$238

The Mosley TA-33 three element beam provides outstanding 10, 15, and 20 meter performance. Exceptionally broadband - gives excellent results over full Ham bandwidth. Exclusive Mosley trap design offers resonant frequency stability under all weather conditions. Element center sections are of double thickness aluminum to reduce sag. Boom requires no bracing. Heavy duty universal mounting plate fits masts up to 1 1/2 inch O.D. Antenna handles full KW AM/CW or 2 KW P.E.P. SSB input. Feed with one coax line, RG-8/U recommended. The TA-33 may also be used on 40 meters with TA-40 KR conversion. Complete with Hdw.

FORWARD GAIN: Up to 8 db. TURNING RADIUS: 15.5 ft.  
 FRONT-TO-BACK: 20 db, or better WIND LOAD: 114 pounds.  
 MAX. ELEMENT LENGTH: 28 ft. WIND SURFACE: 5.7sq. ft.  
 STANDING WAVE RATIO: 1.5/1 or less  
 SHIPPING WEIGHT: 41 lbs.  
 ASSEMBLED WEIGHT: 37 lbs.  
 BOOM LENGTH: 14 ft.



\$174.00

### Model TA-33 Jr.

Mosley TA-33 Jr. has quality and performance found in the TA-33. Rated to 300 watts AM and CW, - 1000 watts P.E.P. on SSB. Complete with Hdw. The Junior may be converted to MP-33 with higher power rating with MPK-3 Kit. Shipping weight 28 lbs. Assembled weight 20 lbs.

## The Classic 33 10, 15, and 20 meters

Beam designed to provide the extra gain for working hard-to-reach DX. Incorporated exclusive Mosley "Weather-Proved" traps with resonant frequency stability. Features new boom to element clamping and balanced radiation. Hardware is stainless steel. Feed with 52 ohm RG-8/U coax. Fits up to two inch mast. Use with most heavy-duty rotors. 1 KW AM/CW or 2 KW P.E.P. SSB input.

FORWARD GAIN: Full 8 db. compared to reference dipole or 10.1 db. over isotropic source.

FRONT-TO-BACK: 20 db, or better on 15 and 20; 15 db. on 10 meters.

STANDING WAVE RATIO: 1.5/1 or better.

MAXIMUM ELEMENT LENGTH: 27 ft.

ASSEMBLED WEIGHT: 42 lbs.

BOOM LENGTH: 18 ft.

SHIPPING WEIGHT: 47 lbs.

TURNING RADIUS: 16 ft.

WIND LOAD (80 MPH

EIA Std) 120 lbs.

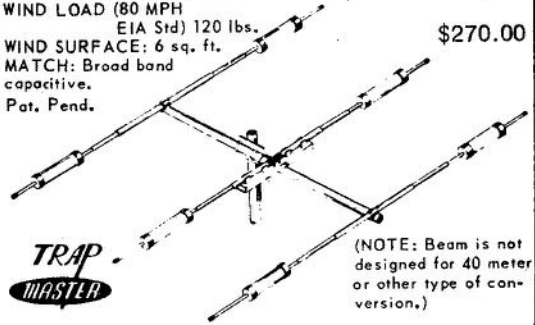
\$270.00

WIND SURFACE: 6 sq. ft.

MATCH: Broad band

capacitive.

Pat. Pend.



(NOTE: Beam is not designed for 40 meter or other type of conversion.)

## CL-36 \$360

## Mosley 2 Metre Antennas

D12 Diplomat 5/8 ground plane \$35.50

BASE ANTENNA

MY-144-9 E1. 14dB 2KW Yagi \$49.50

MY-144-5 E1 10dB 2KW Yagi \$39.50

MM-144 5/8 mobile C/W spring and base \$31.50

HF Vertical Antennas

RV-4C 40 - 10 mtr, 2 KW \$77.25

RV-8C 80 mtr conversion \$45.25

80 - 10 Mobile antenna available

TA-33 Jr. Pwr. Conversion Kit

MPK-3 \$63.00

HY-GAIN ANTENNAS

18ABT/WB 10-80 mtr. vertical \$138.95

TH6DXX 6el. tri-band beam \$330.00

204BA 4el. 20 meter beam \$259.00

BN 86 balun \$ 22.50

RG-8U 25cft. RG-8U foam 28cft.

PL-259 connectors \$1.00 \$10.50 doz.

Coax lightning arrestors \$ 5.50

RSO-low pass filters \$31.50

6 digit LED clock kit 12/24hr. \$33.50

Larsen magnetic mounts \$16.50

## KENWOOD RADIOS

TS-520S \$859.00

TS-820S \$1199.00

TS-700A \$639.00

TR-7200A \$295.00

TR-7400A \$499.00

TR-2200A \$299.00

## CDE ROTORS

AR-30 \$59.50

AR-40 \$79.50

CD-44 \$158.00

HAM II \$199.00

Big-Talk \$125.00

Tail Twister \$379.00

Rotor plate \$6.50

Rotor wire 21cft 8 wire

12cft 5 wire

All orders over \$350.00 shipped prepaid in Canada except VE8 land and Labrador

Prices subject to change

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VE3BPM

# Letters to the Editor

## On CARF & TCA

Dear Sir:

My introduction to the world of radio was through the Amateur fraternity. I owe that fraternity much allegiance; consequently I am an unashamed supporter of CARF.

From regular reading of The Canadian Amateur, I believe your analysis of the state of affairs vis a vis enforcement to be accurate.

Both the Amateur and General Radio Service fraternities are in an excellent position to influence government policy. The CB people press by sheer weight of numbers. Their growing political sense is a positive development. Amateurs with their traditional technical expertise and professional affiliations are well equipped to offer alternatives.

CARF's recent submission to the Minister of Communications and other activities in preparation for WARC '79 are credible and laudable activities. However, it would please me to see CARF and (the Canadian General Radio Service Alliance) cooperate to balance the lobby of the home entertainment manufacturing and importation industry in regards to RFI and interference susceptibility.

Please continue with confidence ... your service does credit to you and enhances the meaning of the word "service".

Sincerely yours,

An amateur and professional radio operator turned public servant (name withheld by request)

## VE7AFJ replies

The article by VE7AFJ in our May issue (Feeding the Dipole Antenna) resulted in several letters commenting on the technical points, some of which were published in our mid-summer edition.

VE7AFJ has replied, saying, "In the first place, I feel that basically what I wanted to do has been started. I intended to stimulate technical input to TCA and it looks like this has been accomplished ... I will not attempt a point-by-point

comment, but I think a few observations on my part will be adequate."

"Commenting on the card from R.H. Fransen VE6RF - I find a definite lack of technical understanding and certainly not much experience in building. I have built many baluns and I have never had any difficulty with them. They work and they are repeatable ... I think that the "name of the game" is to get some experience in these matters.

"With respect to the letter from J.D. Robinson VE3BTY, it is interesting to note that this entire dipole dilemma originated in the Electronics Experimenter Bulletin (now extinct) published in Tasmania in 1971. My article is an expansion of a letter published in EEB in 1972. Incidentally, my letter was well received in quite erudite circles. To the best of my knowledge, this matter has never been treated in any Amateur radio journal ...

"I find the author's (VE3BTY) comment in the third paragraph to be less than technically objective. I have read his critique of the article over carefully and I conclude that VE3BTY really has little quarrel with the logic and material presented in the article.

"Reading and re-reading the letter from "Name withheld", it is very evident that he did not read my article carefully and he really has little understanding of antennas. I mentioned in my article that a dipole antenna directly fed with coax does work. In fact, I laboured the point. Of course coaxial baluns work. The point is, who wants to make one for 40 or 80 M? I rather imagine that one might stretch the antenna wire as tightly as one wants to, considering the strength of the wire, the stability of the supports and the strength of the support ropes. This is rather a nit. In fact, the postscript in that letter re-hashes what I said in the article:

It is obvious that I tilted at some sacred cows as far as these three individuals are concerned. I would be infinitely more concerned if a competent engineer, or at least an Amateur with logical arguments, were to make reason-

able comments about the incorrectness of the article."

73,

Frank Merritt VE7AFJ

(Any takers?...Ed.)

## Boaters

Dear Sir:

Re your enquiry asking for Ham boaters, I operate on board all summer on my 36' Cruiser in Lake Simcoe.

I would be pleased to hear from VE2 ADQ and any other boaters with Amateur equipment on board.

Capt. Al Yetman VE3HTV  
Box 271, Stn. A  
Scarborough

P.S. We have 3 other Amateurs on board: VE3HTW, VE3IFN and VE3IFO.

(Editor's Note: Tom Atkins VE3CDM of the Don Valley Power Squadron wants to compile a list of Ontario Amateurs who are Power Squadron members with a view to assisting in presenting a new course, "Ham Radio for the Boater". Tom's address is 55 Havenbrook Blvd, Willowdale, Ont.)

## In for Life

Dear Sirs:

Herewith is my money order for life membership ... I am celebrating my 67th birthday with this gift to myself and with the sincere hope that CARF will be successful in its endeavours.

I firmly believe that we Canadians should have our own liaison with our government rather than through ARRL or other not too interested parties.

I first became licensed in 1935, certificate #2830, and have derived much pleasure from ham radio during that time. I therefore feel that I should support an organization devoted to our own particular Canadian needs and problems with ham radio; so I am putting my money where my mouth is and supporting CARF to the best of my ability.

Yours sincerely,  
VE2DQ

Thanks to VE5WK, VE3JLG, VE3FZG, VE2DG, VE1RI and VE6BBE and others for their letters, constructive remarks and kind words... Doug VE3CDC, Editor.

## Antique buffs:

The DOC Ontario Regional Office in Toronto is looking for communication gear to display in their office, for a period possibly extending to 1 year. They would like donations or the loan of equipment going back to the early days of radio.

If you do have any old equipment buried in the attic or barn please contact Stan Ribee DOC Office at 880 Ouellette Ave. Windsor, Ont. Ph. 254-4335. Or contact the Windsor Amateur Radio Club at P.O.Box 1322 Windsor.

VE3BJK

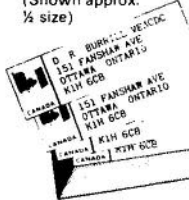
Anyone whose operating days reach back to the early '20s are requested to search through their archives and see if they might have a copy of the list of Canadian amateurs of the period 1920-1923. We are seeking in particular the list of VE1's, although they were not known as VE1's at that time. It was apparently a typewritten list, which came out prior to the Call list Booklet published by the Dept. of Marine and Fisheries, who were the equivalent of the present DOC. Anyone having such item on hand might get in touch with this editor and we will be pleased to arrange to get a copy from you.

VE1FQ, Brit Fader, Halifax

## TVI PROBLEMS ?

TVI Committees may find a DOC brochure "For better Television Reception" useful when dealing with a TVI complainant. Obtainable from DOC District Offices.

(Shown approx.  
1/2 size)



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This valuable Handbook, produced by your Federation, includes information on regulations and guidelines pertinent to the operation of Amateur radio equipment in Canada.

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**P.O. BOX 356**  
**KINGSTON, ONTARIO CANADA, K7L 4W2**

# Ferrite Rings reduce Interference

by Bill Westbrook, VE3EKA  
(in Ottawa ARC "Groundwave")

When it comes to interference problems, there is a simple device that most North American hams have overlooked. Thanks to our friends in the U.K., we have recently become aware of the use of ferrite rings which do a lot of neat things to reduce interference.

There is no doubt that the ferrite ring core is the most useful device

## DOC NEWS

DOC Deputy Minister Max Yalden has left that position to become the federal bilingualism watchdog, succeeding the flamboyant Keith Spicer as commissioner of the official language act. "My jobs in the past have been ones where one tended to follow the book" he is quoted as saying. Maybe; but it was not noticeable that he followed the book of the Radio Act in the matter of active enforcement during his regime. A successor had not been named at press time.

## RV Net

For those amateurs who travel mobile during the year trailing living quarters of some sort behind there is an interesting organisation known as the RV (Recreational Vehicle) Net which meets at many times during the day. Every morning on 7.233 Mhz between 7 and 9. 7.275 every morning between 9 and 10 Rocky Mtn time. 7.263 Mhz every morning between 10 and 11 Pacific. On 14.308 Mhz at noon and 5 o'clock Eastern Time and on 3.895 Mhz 5 and 5:30 Central time.

from West Island Amateur Radio Club  
Newsletter

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WHEN SENDING FUNDS...save time!  
Be sure your cheque is filled in fully and correctly...the month must be written out either in full or abbreviated...postal money orders should not be endorsed on the back.

---

available to amateurs in the never-ending battle against breakthrough (interference here is breakthrough over there). You might even call it a 'breakthrough on breakthrough'.

A big advantage in using these ferrite doughnuts is that in the majority of cases the leads to be filtered do not even have to be cut and the filters are used external to the equipment affected. They are easily removable, and the resale value of the equipment is unchanged.

This device is a wideband unit and is equally suitable for use on UHF, VHF, TV or radio, Hi-Fi, AC line filters, etc.

Most cases of interference to stereo systems can be traced to long unshielded speaker leads. Up to now, we have recommended shielded wire as a cure. A few turns of the unshielded leads around a ferrite ring (Amidon, Phillips or Mullard VX1588) will do the job. Usually about 8 to 10 turns is enough, but neither the number of turns nor the grade of ferrite used is critical. They may be used for both receiving or transmitting purposes.

If rings are not available, transistor radio ferrite rods are a good second best in many cases.

(OARC Editor's Note: Try also the ferrite cores from scrapped TV Flyback transformers)

---

### BANNED COUNTRIES LIST

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

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

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

### THIRD PARTY TRAFFIC AGREEMENTS

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

### RECIPROCAL LICENCING AGREEMENTS

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

Note: all Commonwealth countries are eligible for reciprocal operating privileges to Canadian Amateurs.

---

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Take our HW-2036 Frequency-Synthesized 2-Meter Transceiver for example

## Our circuit designs prove it

The HW-2036 offers true digital frequency synthesis for real operating versatility. No extra crystals are needed and there are no channel limitations. Advanced digital circuitry uses a voltage-controlled oscillator (VCO) that is phase-locked to a highly stable 10 MHz crystal-controlled reference. Double-tuned stages following the VCO in the receiver and transmitter provide clean injection signals. The result is a signal that has spurious output more than 70 dB below the carrier (see spectrum analyzer photos below). Additionally, the "add 5 kHz" function is accomplished digitally in the HW-2036 so that no frequency error is introduced.

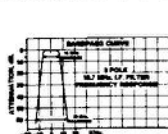
## True FM

Careful attention to the transmitter audio circuitry and the use of true FM gives exceptional audio quality. A Schmitt-trigger squelch circuit with a threshold 0.3  $\mu$ V or less provides positive,

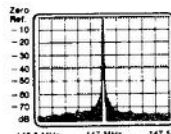
clearly-defined squelch action. Other design advantages include diode-protected dual-gate MOS FET's in the front end, IC IF and dual-conversion receiver.

## Outstanding Specifications

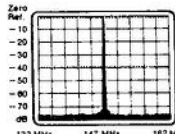
The HW-2036 puts out a minimum 10 watts and operates into an infinite VSWR without failure. Receiver sensitivity is an excellent 0.5  $\mu$ V for 12 dB Sinad making the HW-2036 ideal for use in crowded signal areas. We think you'd be hard-pressed to find a comparably-priced 2-meter transceiver that gives you the features and performance of the HW-2036.



An 8-pole IF crystal filter greatly reduces adjacent channel interference.



Actual spectrum analyzer photos of the HW-2036 transmitter output operating at 147 MHz. Spurs within 20 MHz of carrier are down a full 70 dB.



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