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CARF the canadian amateur

April 1977 No. 4.

Directors acclaimed

The following Amateurs have been nominated as Regional Directors of the National Federation: Atlantic - Moe Lake VE1PX; Quebec - Eugene Lajoie VE2RA; Ontario (2) - Croft Taylor VE3OR, Fred J. Robinson VE3GCP; Midwest - J.R. McKenna VE6HO; Pacific - Peter F. Driessen VE7BBQ.

The deadline for nominations for Regional Directors was March 15. All nominated are therefore acclaimed and will take office on May 28, 1977 by the terms of Bylaw No. 2.

Directors at Large are nominated and elected by the provincial group members and the deadline for nominations is Mar. 31, 1977. Stella Broughton VE6VF and Martha Pankratz VE5YY have been nominated to fill two of the three vacancies.

THE (Un)Simulated Emergency Test

How about a Simulated Emergency Test that isn't?

Isn't simulated that is -- but always manages to provide at least one real emergency and a pretty convincing test of amateur radio's capabilities.

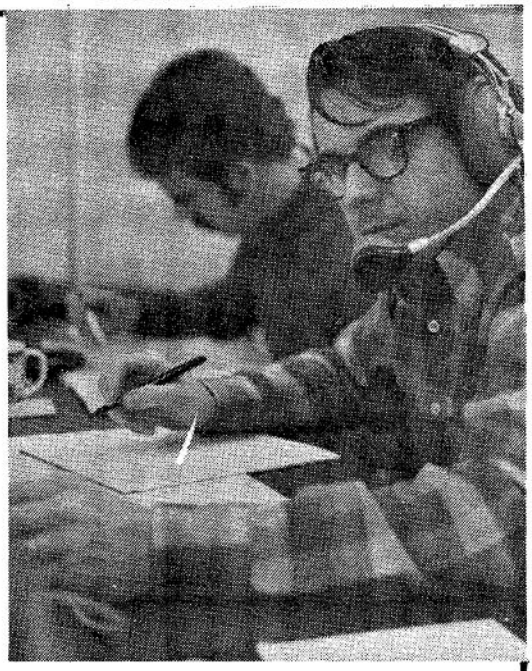
That's what Ottawa-area amateurs get every February when they provide the communications and data transmission facilities for the Canadian Ski Marathon.

The marathon is an annual fun event that brings about 3,000 cross-country ski addicts out to test their skills and endurance against a challenging 100-mile course from Lachute, P.Q. to Hull.

That many skiers, of widely varying levels of ability, provide lots of opportunity for creating problems and troubles

Continued on Page Seven

Providing communications for the Canadian Ski Marathon



Communications Co-ordinator Larry Bradley, VE3CRX in the net control station in Hull P.Q. (Photo VE3HVA)

CARF

the canadian amateur

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 educations in Amateur matters.

Correspondence should be addressed to the Editor, The Canadian Amateur, Box 356, Kingston, Ont. K7L 4W2.

EDITORIAL

JUST WHAT CAN BE DONE?

As Amateur radio operators we all have worked and studied hard to obtain our Certificates. Protecting our achievement and abiding by a morality with inherent respect for law is our contribution to the orderly and enjoyable use of our frequency bands.

How many of us have therefore listened with amazement, disgust and anger at the illegal stations or the illegal operations on the HF and the VHF bands and wondered why "something isn't done about it"?

Looking at the CB bands, the situation is even worse and legitimate users in St. Catherine's, Ont., recently became so incensed at the illegal transmissions, violence and retaliatory "vigilante" actions there, that a 2,000 name petition was presented to the DOC to "do something" about the situation.

"Until the DOC acts," says one complainant, "We're going to have guys trying to enforce rules on their own" states an editorial in the Toronto Globe and Mail in commenting on the situation. The editorial continues, "The people... breaking...CB rules don't want the DOC ruining their fun. Nor does the DOC appear too interested in ruining it. (It) prefers public education to prosecution of CB users who break the law. Therefore there haven't been many prosecutions.. "

According to the editorial, the DOC official contacted said "we don't want any publicity in this regard". It continued, "That attitude is faulty on both counts...public education programs are clearly not enough and the question of publicity now is moot...There is no apparent need for extensive or complex CB regulations, but the need to enforce the few that exist now should be obvious. Abdicating that responsibility is an invitation to just the kind of intolerable vigilante activity we are witnessing in St. Catherine's."

While the problems occuring on the Amateur bands are, thank goodness, not quite in the same category nor of the same magnitude, they were aggravating enough in the Quebec City area for local Amateurs to gather up detailed evidence of lawbreaking and present it to the DOC

office there. The Quebec City Club, knowing of the DOC high brass's policy of being reluctant to prosecute, wrapped up its frustrations with a telegram to the Minister of Communications.

As translated, it read; "Confronted with the illegal occupation of frequencies alloted to Amateurs by unathorized stations, the Quebec Radio Club has sent to the Quebec District Manager of Communications a file sufficiently documented to permit your Department to identify and prosecute some of the lawbreakers. The Quebec Radio Club asks that the law be vigorously and speedily applied and it expects that no effort will be spared to this end. It requests that you take the measures prescribed by law to re-establish respect for the Radio Regulations."

The provincial association (RAQI) endorsed the club's action with a telegram of its own and just for good measure, RAQI president Pierre Joron tells us that he phoned Madame Sauve, the Minister, just to be sure that she "got the message" both literally and figuratively.

So something CAN be done.

If you are fed up with what is happening on HF and what you hear on VHF and matters cannot be settled quietly in the Amateur tradition of self-policing, work through your local club to gather as much information as possible on lawbreakers, with names, locations and times and the type of offences (a recording can help to bolster a case) and discuss the matter with your local DOC office and ask for action...and let your Federation's executive know how you make out.

New CLARA Officers

The new executive for the Canadian Ladies Amateur Radio Association is: President Marjorie Karl VE6LC; V.P. Ann Nutter VE3HAI; Secretary Jeanne Gordon VE2JZ; Treasurer Marie Moskal VE6CHM; and Editor Vivian Taylor VE3 HGA. Past President is Donez Booth VE3DWF.

The CLARA twenty metre net meets each Tuesday at 1900 GMT on 14.160 MHz. The 80 metre net meets on the last Tuesday of the month on 3775 kHz at 0200 GMT.

The 'Morse' Code

With the current proposals by DOC to delete the Morse code from a proposed new Amateur certificate, this may be an opportune monent for a look at just what it is and how it originated.
just what it is and how it originated.

The original 'Morse' code was a system of 'clicks' at varying intervals used on Samuel Morse's 1836 invention representing the letters of the alphabet. If the clicks are presented as dots and dashes we have a telegraphic code which would resemble the one we use on radio today. The variation of this original code which you hear on the air is known as the International Morse code.

(Morse, by the way, studied art in England before he became interested in chemistry and electricity and developed into a painter and sculptor of renown.)

QSL Price Change

Inflation has caught up with the printer of the popular Canadian QSL cards. The new prices are $11.00 for 200, $14.85 for 300 and $22.00 for 500. (Ontario residents add 7% provincial sales tax.) Shipping charges are still the same; $1.25, $1.75 and $2.25 respectively for the above quantities.

For a sample card, a page of various distinctively Canadian designs to choose from and an order form, send 25¢ to CARF QSL Dept., Box 356, Kingston, Ont. K7L 4W2. Cards are available in various color combinations and a new special card for RTTY fans is now available...if you want a sample of that one, be sure to ask for it. The text on the reverse side is available in either English or French.

It's that time

Your notice of annual license fee dues should be out on time this year... according to DOC H.Q. Notices are mailed from Ottawa and should be received by the time you read this. It's $13.50 for the year.

(US Amateurs do not pay annual fees. Unable to devise a system for fee collection as ordered by a US Court, the FCC will not reinstate radio licence fees. These were suspended by the same court at the end of last year.)

CRAG Canadian Repeater Advisory Group

The west coast starts off this month's news. V37URG (449.0/444.0) is off the air indefinitely pending installation of solid state equipment. The Port Alberni repeater (84/24) is now under its new call VE7RAC, running 90 watts from Pye solid state gear. Temporarily located in the fire hall, they hope to move to a mountain site (3800 ft) shortly. Wind generator/battery power is proposed. VE7VIC (25/85) in Victoria had some problems with their new solid state receiver and have gone back to tube equipment. VE7ELK (46/00) in Chilliwack is off the air waiting for crystals. Their new frequency when they return will be 40/00 on a standard pair. VE7VAN (72/12) in Vancouver is sporting new equipment and claims about a 0.2 uv sensitivity figure and a 75 mile radius of operation. Thanks to the BCFMCA for the above info.

VE6LD, Don in Foremost, advised that the Border ARC repeater VE6BRC is a new one on the air (146.16/146.76). It is located near Milk River in southern Alberta.

Nothing from the prairies this month, or Ontario. However, we do have a new machine near Montreal on Mt. St. Bruno. VE2HH, a home brew unit, is reported to be operating very well on 222.9/224.5. Thanks to George VE2SZ for that information. The Montreal area boys are apparently using VHF Engineering kits for their 220 mobiles, and highly recommend them.

The International Repeater Group advises that VE1TWO (10/70 Saint John, N.B. is back in operation, however, operating on reduced power while cavaties are being built. VE1KMT (46/06) in Perth, N.B. was off the air, and VE1LHR (04/64) in Gore, N.S. is back on after construction and installation of control equipment.

For those of you who have requested repeater directories, you should have them by the time you read this. If they have not arrived, the Gremlins got your request. Drop another line and one will be in the mail poste-haste (if that's possible with our postal system!)

Amateur courses

Your Federation would like to make a survey of the number of training courses leading to the Amateur Certificate and the Advanced ticket are going on across the country. We would appreciate details as to the number of starters and those who make the grade, whether the courses are sponsored by clubs or are offered by educational institutions, etc. So far we have replies listing radio clubs, private individuals, schools and municipal recreation departments as sponsors.

Certificate Collectors

Guelph, Ontario is celebrating its 150th anniversary during 1977 and DOC has authorized the use of the special prefix "VB" by radio Amateurs in the city of Guelph.

Ontario stations proving ten 2-way QSOs with stations using the prefix "VB" will receive a commemorative certificate from Guelph ARC. Stations outside Ontario will require only five 2-way QSOs. Copies of logs duly certified by two other amateurs should be mailed to Awards Chairman, P.O.Box 1305, Guelph, Ontario. N1H 6N9.

Comments on linears

In reply to DOC's notice of intent to attempt to control the sale of linear amplifiers to unauthorized users your Federation has presented to the Department a detailed comment on its proposals, which were published in our February issue.

To assist in making the proposed changes to the Radio Regulations more meaningful and effective the following recommendations were suggested and are summarized here:

As well as the control of linear sales, provision should also be made for control of the sale of radio transmitters capable of operation in excess of the authorized power output on frequencies allocated to the General Radio Service; for forfeiture of equipment, in addition to other penalties, upon conviction; for positive identification of the purchaser and for warning the purchaser, on the proposed declaration form, that false statements are punishable by law.

Meanwhile, south of the border where manufacturing and selling linears is big business, the US FCC fed to the teeth with the illegal use of these devices has proposed an outright ban on selling, importing or distributing linear amplifiers capable of operating between 24 and 35 MHz.

That's one way of getting a handle on the problem!

A nasty precedent

In our February issue we told the story of a Montreal CB operator who was hauled into a Quebec small claims court and made to pay compensation to four neighbours for harassing them by interfering with their TV programs.

The federal DOC did not appear to be interested in prosecuting the case but rather left it to the small claims court to be involved in an affair which would appear to be under the DOC jurisdiction.

As a result of the case, the present work going on in the CSA and CRTPB with regard to setting tolerance standards for radio interference susceptibility in home entertainment equipment seems to have been hit a nasty blow. In the judgement the following appeared; "It is wrong to hold that the owners of televisions sets should be obliged to equip their sets with special filters, because the use of television sets is not regulated at the same level as that of CB sets".

TRS to move?

The telecommunications community in Ottawa was astounded recently to hear reports around town that the DOC top management had been preparing to move the Telecommunication Regulatory Service out of Ottawa to some place in rural Quebec. A local newspaper carried the story as a "rumour" and bits and pieces of gossip around town lent credence to what might be thought a fantasy except for the fact that the present government's policy of "de-centralization" has already resulted in part of the Department of Supply and Services ending up on the Gaspe Peninsula area.

It could not be determined at press time whether or not the idea had been finally dropped.

New Prairie Clubs

Director Martha Pankratz VE5YY reports increased activity in Saskatchewan with new clubs being formed in North Battleford and Melfort. It is hoped that there will be one in Yorkton shortly.

Prairied Amateurs will miss VE5SM, Harry Slack who passed away recently. Harry was an avid proponent of the 10-10 net and never passed up an opportunity to let you know what could be done on ten metres.

Microprocessor fans note:

Member Keith Ryan would like to hear from Amateurs who have Mil Mod 8 or Mod 80 microprocessers running. The objective is to work together on programs for contests, logging, CW and RTTY. Keith's address is 1673 Meadowbrook Rd, Ottawa, Ont., K1B 4W6, or he can be called at home: (613) 741-7937 or at work: (613) 992-3069.

CARF HQ & VE3VCA opened

Kingston, Ont. -- A large group of local Amateurs, Old Timers, and visiting dignitaries assembled in the J.K. Flett Memorial Centre, Kingston, Ont. on Feb. 19 to officially open the CARF HQ Admin Office and the radio stations VE3VCA (CARF National Station) and VE3KAR (Kingston ARC station).

After a welcome by Bert Hovey VE3 EW, the Project Co-ordinator for the Kingston Old Timers ARA, and the introduction of the guests, including the Hon. Flora MacDonald, MP for Kingston and the Islands, Mayor Ken Keyes and ex-Mayor George Speal, the official opening was held with the cutting of a length of coax cable as well as the traditional ribbon.

The accent was on KOTARA and its plans for the future involving Senior Citizens interested in Amateur radio and its staffing of the CARF HQ Admin Office. The newly-installed equipment purchased as part of the New Horizons grant given to KOTARA for its first 18 months of operation was inspected by the guests and members. CARF Treasurer Bernie Burdsall VE3NB presented the initial monthly cheque to pay for services rendered to the Federation and its members to President Hugh Conn VE3ANG.

Miss MacDonald, in her address, noted that she was no novice to communications as her father had been a telegraph operator in the Maritimes and that she appreciated the work of the Amateurs in keeping alive the best tradition of radio telegraphy. She proved her competence by expertly handling a phone patch through VE3VCA to the office of the Hon. Marc Lalonde in Ottawa.

VHF communications also had their day with the mayors of Kingston, Belleville and Napanee talking over VE3VCA and the local repeaters.

New Act

The new federal Telecommunications Act, designed to replace a number of Acts governing telecommunications (including the Radio Act) was introduced into the House of Commons on Feb. 23.

One part of the proposed Act would help enforcement: DOC officials would have delegated authority to suspend radio licences and certificates for 40 days. Prosecution for certain illegal activities, however, would still require the Minister's authority to proceed.

Warning---
Watch that BeO

While normal use of electron tubes using Beryllium-Oxide Ceramics is safe, BeO is now used on most, if not all, ceramic power transistors such as are used in VHF power amplifiers and all Eimac 4CX250's now use it. Beware of broken, chipped or abraded ceramics. Many are not labelled as containing BeO but all should be treated as such. Never alter, grind, clean, etc. any ceramic part on tubes, transistors or accessories which could generate dust or fumes, and, for disposal, all should be returned, prepaid, to the manufacturer with written authorization for its disposal.
(VE3AAC in the CARC Groundwave)

Marathon

Continued from Page One

which put real pressure on the Amateurs as they provide vital communication for real people and cope with real problems -- winter in the Ottawa Valley doesn't take a breather even for a ski marathon.

Amateurs being what they are (bears for punishment that is) they aren't satisfied to simply head into the bush for two-and-a-half days, and do what hams have proven for 40 years that they can-- that is, provide simple, efficient voice communications on a controlled network.

Oh no. The Amateurs who work in the ski marathon insist on making life complicated for themselves.

They operate two separate nets, with two separate control points. And after the first day's operation, they pick the whole thing up and shift it 50 miles or so along the route to stay ahead of the skiers.

In addition, in the last couple of years, the Ottawa hams have decided that simply talking to each other is easy, but it's not too efficient for passing the data which forms a major part of the traffic. So they've added teletype communications and this year they even tried linking the whole system to a portable mini-computer to try to keep track of the entrants.

The whole system is divided into two separate operations. There's an administration and safety net -- to let the people who run the marathon talk to each other and help locate people who don't arrive at a checkpoint when they should.

And there's the data network -- the area of most of the experimenting over the past years.

At a typical station, out in the bush, you would find a team of two amateurs, in most cases set up in a camper-trailer.

The station has two complete rigs - one for voice, one for RTTY data, both on two metres. Add power supplies, a Model 33 ASR, two antennas, and something to sleep on, and you can see it's no picnic.

As skiers slither into checkpoints, take some refreshment, and push on. Ski marathon staff bring the radio operators lists of "bib numbers", the identifying number shown on the plastic bib worn by each skier.

The amateurs punch out a paper tape with the bib numbers, time in to the checkpoint, and time out. Then they link up with the data control station, on a direct frequency, and feed it all in.

The piled up coffee cups **and the** microphone are a familiar background to old-time operator Art Stark VE3ZS shown doing his bit at a check-point station.

At the same time, the second operator is handling routine administrative traffic, requests for transportation, and queries from families of the skiers on a separate net, this one working through repeaters (VE2RM on the Saturday, VE2 CRA on the Sunday of the end of February weekend).

For the first time this year, a mini-computer was tried. At the data control points, receiving operators also ran off a tape of the incoming data. That was fed in to the computer, in an attempt to give marathon organizers a constantly updated picture of who was where along the route.

The computer experiment was something less than a success. It worked, but only occasionally, on the first day, and not at all on the second. Seems the electrical system at the Hull Armoury, the finish-point, wasn't quite up to coping with the computer. It kept blowing fuses.

But according to the Ottawa emergency coordinator, Larry Bradley VE3 CRX, it may be tried again. A full assessment is yet to come.

As for the rest of the operation, Larry is delighted.

Some of the ways amateur ingenuity is tested?

Well, one of the Saturday checkpoints is nestled in a picturesque little valley between two towering hills. Nice for the marathon crew; a disaster for

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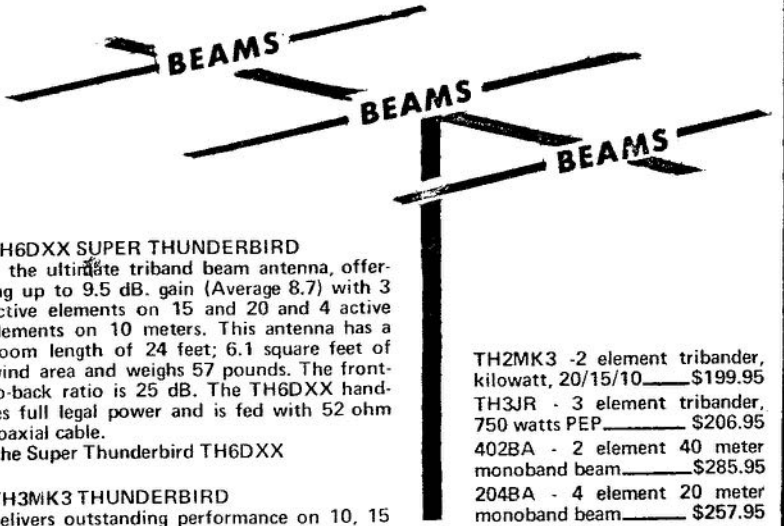
BEAMS BEAMS BEAMS



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The Super Thunderbird TH6DXX

TH3MK3 THUNDERBIRD
delivers outstanding performance on 10, 15 and 20 meters with an average gain of 8 dB. and a front-to-back ratio of 25 dB. This antenna has a boom length of 14 feet, 4.03 sq. ft. surface area, and weighs only 36 pounds. Full legal power.
TH3MK3 Thunderbird

TH2MK3 -2 element tribander, kilowatt, 20/15/10——$199.95
TH3JR - 3 element tribander, 750 watts PEP——— $206.95
402BA - 2 element 40 meter monoband beam———$285.95
204BA - 4 element 20 meter monoband beam——— $257.95
BN-86 -BALUN COIL suggested for use with beams——$23.95

If you are in the market for a new antenna or rig, there are three factors to consider ..... the Product, the Dealer and the Price.

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No. 280 10 meter resonator and whip—— $22.50

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the two metre rigs. They can't "see" any area repeaters from there.

So an "insta-peater", a portable 12 volt cross-band 220 MHz to 146 MHz rig, is hauled up to the top of the hill to provide a link. That worked nicely.

Another "insta-peater" is pressed into service at the Hawkesbury data control point on the first day, to allow the station there to operate on both data and administrative frequencies without cross-modulation interference.

And on day two, Quebec Hydro's transmission lines, laden with ice from a series of storms in the preceding days, give up on the Camp Fortune location of VE2CRA. The repeater went on to automatic diesel-generator power and performed well throughout the day.

After 40 hours of net operations, by 34 amateurs countless pieces of voice traffic, about 10-thousand lines of RTTY data and a fifth of a mile of paper tape, the Ottawa-area amateurs know they've been through a real test of their emergency skills.

EC VE3CRX looks back on the past four ski marathons and sums up the effort;

"I can't conceive of anything we could think up, that could begin to test the skills of amateurs like the ski marathon does."

The test finds them ready and able.

Ron Adams VE3FMW

How I didn't conquer a 2M Portable

Amanda King VE7AQS

If a man has a choice between his lady and amateur radio, chances are amateur radio will win most of the time!

Two years ago I found myself competing with a hand-held two-metre portable. Derrick took it with us on dates, in the car, to restaurants, on walks, and even to university. He chatted with his two-metre pals while I silently hoped no one would think he was a policeman. I winced whenever I heard a squelch break.

I was also introduced to friends of his; dedicated Amateurs. I spent many a social evening trying to show some signs of intelligence while Derrick and his Amateur friends compared rigs and spewed forth radio jargon.

Gradually I realized I was missing out on something (besides half the conversation and much of my man's attention). There seemed to be a special bond between Amateur radio enthusiasts -- friendship, willingness to help others, satisfaction for the creative types in designing and building equipment.

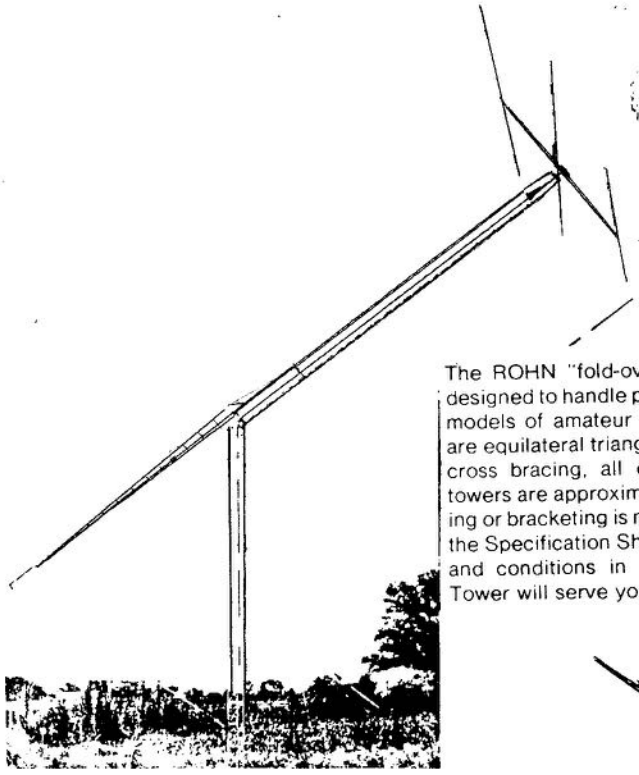
Then, as now, I enjoyed designing and building stories, poems, and drawings--why not Amateur radio?

So I convinced myself I should try for my certificate.

I mentioned it to Derrick. That Christmas I received a $130.00 Heathkit build-it-yourself QRP rig. At that point I realized he was serious about my decision.

I buckled down and bought books which explained all the theory and regulations I needed to know. I built the Heathkit and in the process learned one end of a soldering iron from the other. I learned what resistors, capacitors, inductors, and integrated circuits look like, what they do if you wire them up correctly...

Get to the TOP...
without ever leaving the ground!



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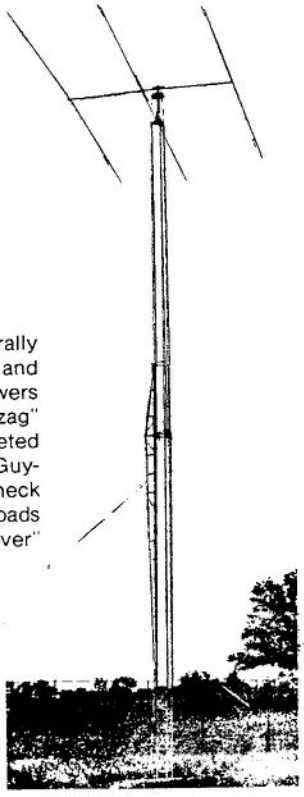
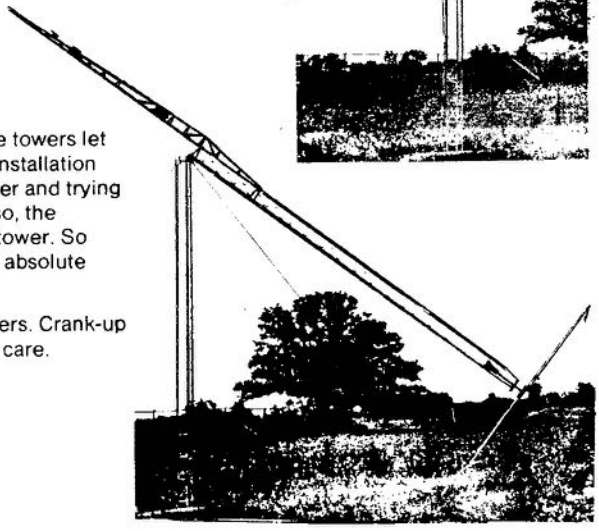


ROHN "fold-over" Towers offer unbeatable safety. These towers let you work completely on the ground for antenna and rotator installation and servicing. This eliminates the hazard of climbing the tower and trying to work at heights that could mean serious injury in a fall. Also, the "fold-over" eliminates the risks of a crank-up or telescoping tower. So use the tower that reduces the risks of physical danger to an absolute minimum . . . the ROHN "fold-over"!

NOTE: ROHN does not recommend the use of crank-up towers. Crank-up towers can be dangerous even when operated with extreme care.



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and what they do if you don't!

It wasn't all smooth going, however. It took me a week to understand amplification. (How can a tube do that?) Resonance was another big stumbling block, and when the morse code came along I despaired.

Learning the morse code is like learning to read music backwards. You hear the note and put it on paper. If you're very good at it you can put many of these notes on paper per minute. I was not very good at it.

After the initial hopelessness wore off, I found my code speed increasing at a fair rate. My general understanding of radio theory also improved, to my surprise. Derrick began to make threatening noises about setting a date for my test, so to appease him I made my appointment for the following month.

The day before my test the weather was beautiful and warm. We turned down offers to go sailing and spent hours indoors reviewing diagrams for a receiver, transmitter, and a few other, simpler things. I practised morse code for a couple of hours and worked myself into a nervous snit. That night I didn't sleep at all.

The big day dawned rainy and cold. I drove downtown to Communications Canada. The secretary told me to wait. I waited, feeling my stomach twist into knots. Finally someone beckoned me into a room and gave me the multiple-choice theory paper.

The questions were not difficult, but in my state of mind I was not able to appreciate the fact. I weltered through, however, and somehow managed to pass the diagrams and the morse code sending tests.

But like many other hopefuls before me, I failed my 10 word-per-minute morse code receiving test miserably. I walked out of there feeling distinctly relieved. The worst was over and I was determined to pass the second time.

A week later I did just that.

I'll never forget that delicious feeling of hard-won success. I floated away with the ink still wet on my station licence, found a phone booth, and called Derrick at work.

"I'm VE7AQS!" I babbled to whomever answered the phone.

A few weeks later I bought a two-metre portable and proudly chatted to my two-metre pals. I made a few contacts with my Heathkit and even designed and built a power supply for it, which didn't work, but I had fun doing it.

At around that time, I got my second license--a different kind though as my boyfriend became my fiance, and we were married two months later by another ham--WB0NST--who just happened to be a minister.

It's worth being a ham--not only for the friends you make, the excitement of new contacts, the fun of tinkering--but for the bond you share with other hams: in my case it's a very special bond!

The 420 - 450 MHz Band

For the past six years, a committee of the Canadian Radio Technical Planning Board (CRTPB) has been studying frequency allocations in the 450 to 960 MHz band. This has been allocated mainly to mobile, broadcasting and fixed services.

Extensive studies have shown that commercial mobile interest is growing at a tremendous rate and the broadcasters have strongly stated that the portions 470 to 608 MHz and 614 to 890 MHz allocated to them is insufficient for all of the UHF TV broadcasting stations being planned for the future. This has created a major conflict of interest between these powerful groups.

The committee has studied ways of improving the selectivity of UHF TV receivers in order to reduce the numerous 'taboos' which are taken into account when assigning UHF broadcast station frequencies. The purpose of these studies is to find even more broadcast frequencies in less total spectrum space in order to broaden the spectrum available for mobile. After six years of work, the results are still inconclusive.

In the meantime, the committee has reported its work in several documents to the Department of Communications. In August 1976, the DOC issued a background paper entitled 'Spectrum Allocations in the 406 - 960 MHz Frequency Band'. Notification of this paper was published in the Canada Gazette in August, calling for comment from all interested parties by December 20, 1976. Since this broadened band included the

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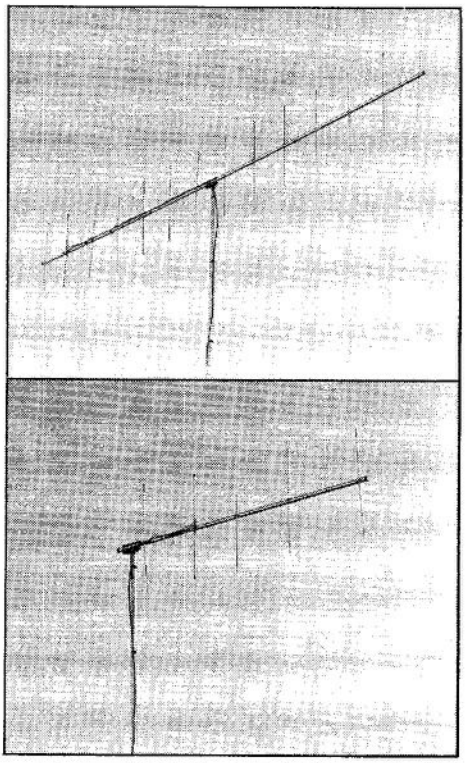

vertically or horizontally polarized. And all are constructed of the finest aluminum and ZMI hardware.

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SPECIFICATIONS	214	208	205	203
Mechanical				
Boom length	186″	148 ¾″	75″	43½″
Longest element	39½″	40¼″	39 ⅝″	40¼″
Turning radius	95″	75 ⅛″	73″	43½″
Wind survival	80 mph	80 mph	80 mph	80 mph
Mast diameter	1¼-1⅝″ O.D.	1¼-1⅝″ O.D.	1¼-1⅝″ O.D.	1¼-1⅝″ O.D.
Boom diameter	1¼″ O.D.	1¼″ O.D.	1¼″ O.D.	1¼″ O.D.
Wind load area	1.65 ft² max.	1.26 ft² max.	.740 ft² max.	.496 ft² max.
Net weight	5.5 lbs	4.1 lbs	2.9 lbs	2.2 lbs
Electrical				
Forward gain	13.0 dBd*	11.8 dBd*	9.1 dBd*	6.1 dBd*
Front-to-back ratio	20 dB	20 dB	20 dB	20 dB
Maximum SWR	2:1	2:1	2:1	2.1
Band width	2 MHz	2 MHz	4 MHz	4 MHz
Maximum power	250/500 PEP	250/500 PEP	250/500 PEP	250/500 PEP
Impedance w/balun	52 ohms	52 ohms	52 ohms	52 ohms
½ power beam width	35° vertical	43° vertical	60° vertical	95° vertical
	35° horizontal	36° horizontal	45° horizontal	60° horizontal
Stacking distance	82″ min.	82″ min.	82″ min.	82″ min.

*Hy-Gain antennas are gain rated against a standard dipole antenna (dBd) instead of a theoretical isotropic source (dBi). This is a more honest and realistic means of comparing forward gain.

420 -450 MHz Amateur band, it was essential for Amateurs to reply to the DOC's request. This was done by the Canadian Amateur Radio Federation in a brief which was submitted before the deadline.

All members of the Canadian Repeater Advisory Group across Canada were polled to determine the extent of Amateur activity on this band. From these reports, a composite story was assembled, listing the main activity in each of the urban centers which reported. All known repeater, repeater-link and simples frequencies were listed, together with information concerning OSCAR VI and VII frequencies. Moonbounce, RTTY and facsimile work was listed and briefly discussed. More complete data was included on Fast-Scan Amateur Tele vision and Amateur Satellite work. Copies of technical papers already published by the CCIR Study Group II of the ITU concerning the technical feasibility of frequency sharing in the Amateur Satellite Service were included as annexes.

Because of the number of control frequencies in this band the frequency lists obtained were considered as 'CONFIDENTIAL' and DOC has been asked NOT to publish these frequencies when it issues copies of the various briefs to interested participants in this struggle for spectrum space. For the same reason the lists submitted did not show call signs.

The 420 - 450 MHz brief made the same recommendations as were contained in the CARF WARC '79 brief which concerned all Amateur bands (submitted in October 1976). In essence it recommended that, "Because of the extensive present use of the band 430 - 440 MHz, for satellite operations, it seems reasonable to recommend that this section be allocated for Amateur use exclusively, with the other sections, 420 - 430 MHz and 440 - 450 MHz, shared on a secondary basis as at present".

It is important to realize that this band has always been shared with Radiolocation Services. Up to the present time, little use has been made of this band for radiolocation so Amateurs have experienced little or no interference. It is now understood that more extensive use for radiolocation is being planned in the USA and undoubtedly some activity will follow in Canada. Perhaps it is unrealistic to expect to get an exclusive portion but at least Amateurs have laid out their reasons for this request. It is hoped that the Canadian Government will support the CARF position and that, at the 1979 WARC, Amateurs will at least maintain what they now have on a shared (non-interfering secondary) basis.

Bud Punchard, VE3UD
Chairman, CARF WARC '79

Radar-beater fuss...

Your Federation wrote to the Ontario government and pointed out that it believes, the proposed Ontario Legislation to declare police radar warning monitors illegal to be redundant inasmuch as these receivers are already illegal under the federal Radio Act and its Regulations. The province, nevertheless, has replied that it believes it has the power to enact such legislation.

This raises rather an interesting question because our information is that these devices are receivers tuned in to police speed trap radars in the 1250 MHz band. As a radiolocation device the radar transmitter operates in a band which is shared with the Amateur Experimental Service. Just where this puts the Amateur who operates a receiver there legally under a federal license when it comes to provincial legislation apparently encroaching on the federal preserve is a very interesting question indeed and one which your Federation intends to pursue with both the provincial and federal authorities.

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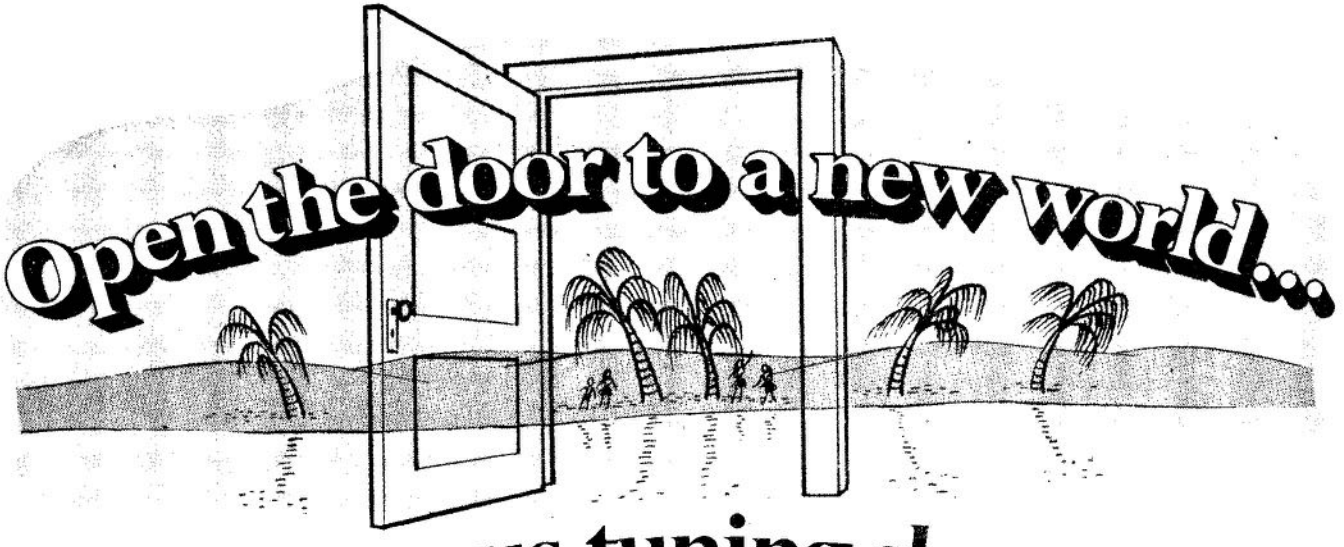

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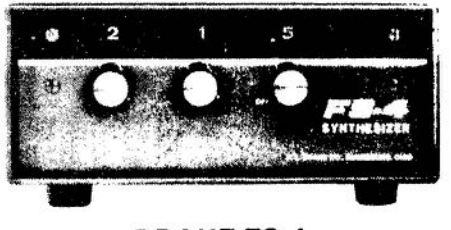

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Yukon ARA

A couple of short items from the Yukon Amateur Radio Association. The Department of Communications staff at Whitehorse has been most helpful in arranging an Amateur Radio Course for beginners at this location The course is sponsored by the Whitehorse Recreaion Department. Ian Rutherford, VE8AR and Andy Cobham, VE8AS, both DOC, and Jack Wreggitt, VE8RC, Yukon Forest Service have been the instructors for this course, which began in the fall of '76. We hope to have about a dozen new Amateurs on the Air by May of this year. It is also hoped that another course can be started this fall, in addition to a program to take the new Amateur to his or her Advanced license.

The Whitehorse two meter repeater (146.34/146.94), when established will have the Call VE8BWR in memory of the late Larry Wilson, who was VE8BW. Our main concern is the supply of a duplex. If any of your readers know of one please pass the information on to me, Ron McFadyen, VE8AD, President, Yukon Amateur Radio Association, Box 4597, Whitehorse, Y.T. Y1A 2R8.

VE3CPC opens

RCMP back on the air

Amateur radio can be a real boon to police operating in isolated posts and RCMP and other police from across Canada can now see it for themselves at VE3CPC, a new station situated in the Canadian Police College in Ottawa.

The Canadian Police College Amateur Radio Club, with a membership of 50 is running classes in morse and radio theory and with the opening of the new station can now offer aspiring Amateurs a chance to see just how interesting this hobby can be.

VE3CPC was opened on March 7 by RCMP Commissioner M.J. Nadon. From the new station and VE7FCB in Victoria he spoke with RCMP and Canadian Forces commanders on the West Coast. Contact was also made with VE7WL, Richard Wild, who is an old-time veteran of the RCMP and at 85 is still on the air. VE4CE, R.T. Taft, ex-chief of the Winnepeg police force also called in. A veteran Amateur operator since 1936, he is a graduate of the CPC Course No. 10, back in 1939.

The equipment which was used to contact many thousands of Amateurs all over the world when it was used in the RCMP Centennial station in 1974 is now installed and working in the new station, VE3CPC.

Ron Belleville, VE3AUM, makes the first entry in the log of the new station VE3CPC while RCMP Commissioner Nadon contacts West Coast officials over VE7CFB. Credit VE3HVA

Canada's Youngest?

VE2CTQ, Cam Thomas has a Scout troop in Kincardine, Ontario and has been working with some of them to get their Amateur Certificate. Two of his pupils have been successful so far and Paul Crozier, VE3IXO, 12 and Jamie Mallory, VE3IXP, 13, may be the youngest Amateurs in Canada. Can anyone top that?

Cookbook

For guaranteed, postpaid delivery of a copy of the Canadian Ladies' Amateur Radio Association cookbook, send $2.75 to Ann Nutter VE3AHI, 135 Weston Place, Waterloo, Ont. N2J 3W2, before May 1. The books will be on sale for cash and carry for $2.75 at the ARRL convention, Toronto, in June and it is expected that they will be cleaned out at that event.

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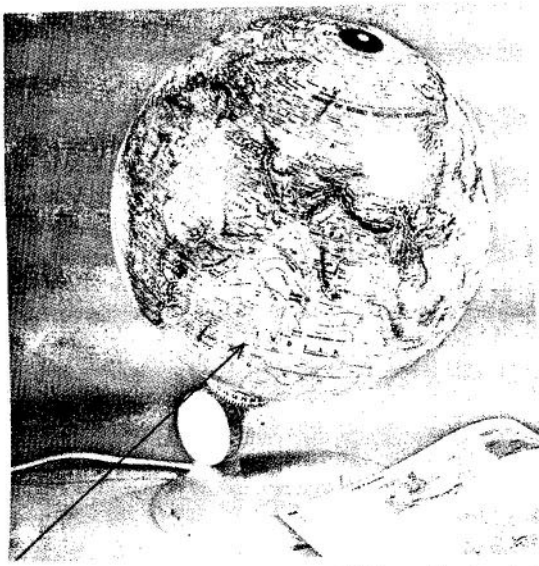
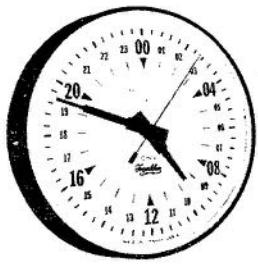


Franklin 24 Hour GMT Clock



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.

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Canadawards

Last month, CARF announced the CANADAWARD series in TCA. Please note that the starting date is 1 July 1977, not 1 Jan 77 as printed. We apologize to anyone who may have started to work on the award before 1 July. You cannot announce an award after it has already started! The number one certificate for each band will be issued on the basis of who worked ALL provinces and Territories first, after 1 July 77, as shown on the QSL cards. To allow for delays in receiving cards, we do not expect to issue the first award until September 77, so that we may be sure that he who deserves the number one award will in fact get it.

The stations needed for the twenty meter certificate can probably be worked on the first day of the award (1 July 77), so CARF will carefully scrutinize the cards to determine the winner of the number one certificate. Note that the CANADAWARDs are separate awards on each band, and will be numbered independently. It may be a long time before the number one six meter CANADAWARD is issued, for example.

Red face dep't

The excellent technical article "An Audible Continuity Tester" in our March issue was attributed to VE7BBQ, who points out that while he is a steady contributor, he didn't write it. Our apologies to the author, who, because of our filing system or lack of one, will remain unknown unless he lets us know who it is so our humble apologies may be offered to him;
...Your embarassed Editor

An optomistic note ...

Recent business meetings in Ottawa and correspondence have provided CARF and ARRL Canadian Division (CRRL) officials with the opportunity to exchange views on Canadian Amateur radio problems. Cooperation between the two organizations is an important and yet difficult point to resolve and at your Federation's initiative a written proposal on this subject has been sent to the Director, CRRL. The response indicates that a basis of co-operation may be achieved.

In order to permit your executive and directors to discuss related problems and proposals with the Director, CRRL and invitation was extended to him to attend both the Federation's executive meeting in April and the May annual general meeting.

Raise explained

To our members who receive this publication belatedly, please note that the whole press run is mailed at one time but the handling of "third class" mail is somewhat erratic in places...in fact one member suggested to us that the letter postage rate is actually still 10¢ - the extra two cents are for storage charges!

Convention

Write to: Scarborough A.R.C., Box 1011, Stn. 'C', Scarborough, Ont., M1H 2Z4, or check into the following SARC nets: Daily - 3818 kHz, at 0100 GMT; Sundays 28.4 MHz at 1500 GMT or 3820 kHz at 1615 GMT. Convention VHF frequencies are VE3RPT 6.46/7.06, VE3 TOR 6.34/6.94 2nd 6.52 simplex.

BC Amateurs Note:

Pacific Director and BCARA president Peter Driessen would like readers of the BC FM Association bulletin to note that his phone number was incorrectly listed therein; it should be (604) 732-3298...and he monitors 147.90 MHz when home.

NEW DRAKE SSR-1 RECEIVER

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WARC '79 First CIC Draft

80, 40 SLICED, 20 OKAY

The first draft of the Canadian Interdepartmental Committee's proposals for the 1979 World Administrative Radio Conference has been released.

Showing some losses and some interesting gains for Amateurs, the paper will be discussed and commented on publicly at a meeting of industry and users with the CIC on April 4, 5 and 6 in Ottawa. Your Federation will be represented by members of its WARC '79 Working Group.

Relevant details of the CIC paper are enclosed. Details of the proposals by the CIC for the Amateur bands will be published in the May issue, along with a report on the April meeting and any changes stemming from it.

For a comparison of just how the CIC proposals for Amateurs noted here stack up with those of the FCC and the ARRL see our February issue. (Incidentally, in that table, under 80 metres, change the ARRL column to read "exclusive, world-wide".)

Starting at the low end, here are those CIC proposals which show a change or on which there is no comment at present; 160-200 kHz is "not mentioned" but next up the line (ouch!) 3800-3900 kHz is reallocated from Amateur to the Fixed and Mobile Services and 3900-4000 kHz is given to Broadcasting Services, leaving us 3500-3800 kHz exclusive world-wide.

Forty metres is sliced up to take 7100-7300 away from Amateurs and give it to Broadcasting Services but to compensate, CIC proposes an additional 1 meg by lowering the band to 6900 kHz. The CIC proposal thus leave a 40 metre band 6900-7100 kHz but it is world-wide exclusive. The Amateur Satellite Service shown in this band in the present ITU table is removed.

On the positive side the CIC draft shows a new band from 10100 to 10400 kHz world-wide, exclusive, as proposed in the CARF and IARU briefs. This new band, however, does not show up in the first FCC draft proposal, now out for public comment in the USA. CIC further comments that 10500-10800 or 10875-11175 kHz may be more appropriate for this new band.

Twenty metres stays as is, except that the Amateur Satellite Service, as in the present forty metre allocation, is also removed here.

Other goodies which show up are the CARF-recommended (but not FCC-recommended) new band 18100-18500 kHz, exclusive, world-wide, plus a further 150 kHz added by CIC to extend it to 18650 as in the IARU proposal and another new band, 24000-24500 kHz exclusive, world-wide, as recommended by IARU but not accepted by the FCC's first cut at the allocation.

Ominously or otherwise, no mention is made in the CIC draft of six, ten, eleven, fifteen and two metres. Perhaps the April meeting with CIC may resolve some of the indecision on these bands.

220 MHz drops from exclusive Amateur use in Canada to sharing with radiolocation. On the other hand, the FCC proposes cutting out the radiolocation sharing. This could set up things in the USA as a better prospect for CB allocation from 222-224 MHz under the heading of "Mobile Service" which idea is currently being booted about south of the border. Such allocation to a "commercial" service like CB is however, subject to co-ordination under a Canada - USA bilateral agreement.

Users of the 450 MHz band will be unhappy to find that CIC proposal takes the first 10 MHz away from the Amateur allocation and gives it to other services. As a consolation the remainder, 430-450 MHz, already shared with radiolocation, will have the Amateur use upgraded to primary, from being secondary to radiolocation.

The IARU proposal for a new band, 902-928 MHz, on a shared basis (included in the FCC proposal) did not show up in the CIC paper. The 1215-1300 MHz band remains as is, shared with radiolocation.

It is important to realize that the CIC proposal is only a FIRST DRAFT of Canada's position for WARC '79. These proposals are now up for public comment and they are not necessarily

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final but they do represent current Canadian Government thinking. There is much more work to be done in this complicated task and many adjustments will be no doubt made in the course of domestic negotiations before a national position is finalized.

* GRS (CB) band

FIRST DRAFT WARC PROPOSALS BY CANADA

The Department of Communications has just issued the first draft proposals by Canada for the ITU World Administration Radio Conference (1979) for the general revision of the Radio Regulations Canada's position for the 1979 WARC has been prepared by the Canadian Interdepartmental Committee (CIC) which was formed in December 1974. Since then various meetings have been held to discuss these preparations in general terms with all of the organizations affected by frequency allocations. Preliminary documentation of requirements from many sources was issued in August 1976 and discussed at a joint Government/Provinces/Industry meeting in September 1976. A target date of October 15, 1976 was established for receipt by the Department of further comments on this documentation. The final CARF Brief on Proposed Frequency Allocations for **Canadian Radio Amateurs was submitted** by this date.

In the past few months, the CIC has been analyzing all the indicated or anticipated future Canadian needs for spectrum and has prepared proposals designed to satisfy to the maximum extent possible its understanding of these needs, taking into account that in many instances, there exists competing needs by different services for identical parts of the spectrum.

Proposals for some parts of the spectrum have not yet been completed and are omitted in the first draft. The following summary of the government's position with respect to proposed allocation of spectrum for Radio Amateur operation is not necessarily final, but does represent its current thinking. In drafting the proposals, the government is concerned that while the reallocation of parts of the Fixed Services bands is consistent with future Canadian civil requirements, it may be inconsistent with the requirements of other users of the Fixed Service bands, especially the developing nations who are expected to proclaim that they have a large and continuing need for Fixed service allocations in the HF bands. This concern may become the major factor to be considered when these proposals are revised.

J.C.R. Punchard, VE3UD
Chairman
CARF Working Group
WARC '79

BAND	REGION 1	REGION 2		REGION 3
		CIC	CARF	
0-10 KHz	NOT ALLOCATED	NOT ALLOCATED	0-10 KHz shared	NOT ALLOCATED
160-200 KHz	NOT MENTIONED	NOT MENTIONED	10 KHz band between 160-200 KHz	NOT MENTIONED
1800-2000 KHz	1605-2000 FIXED MOBILE except aero mobile	AMATEUR RADIO NAV Radiolocation	AMATEUR exclusive when LORAN "A" phased out by 1980	AMATEUR RADIO NAV Radiolocation
3500-3800 KHz	AMATEUR	AMATEUR	AMATEUR	AMATEUR
3800-3900 KHz	FIXED AERO MOBILE LAND MOBILE	FIXED MOBILE except aero mobile	AMATEUR exclusive world wide	AMATEUR FIXED MOBILE
3900-3950 KHz	AERO MOBILE	BROADCASTING	AMATEUR exclusive world wide	AERO MOBILE BROADCASTING
3950-4000 KHz	FIXED BROADCASTING	BROADCASTING	AMATEUR exclusive world wide	FIXED BROADCASTING

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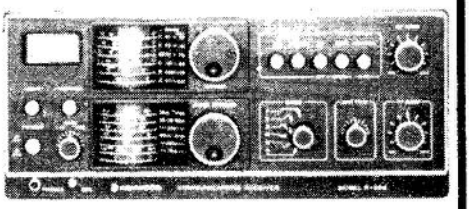
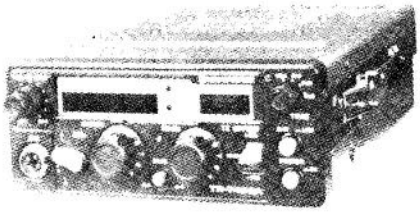


R-300
RECEIVER

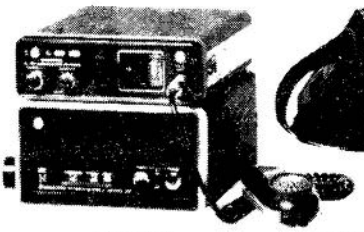
TS-520
80-10M TRANSCEIVER

NEW



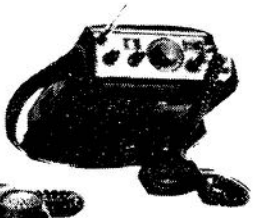
TR-7400A
2 M SYNTHESIZED MOBILE
TRANSCEIVER

MC-50

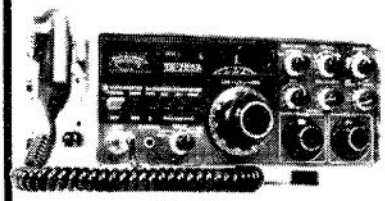


TR-7200A
2M MOBILE TRANSCVR

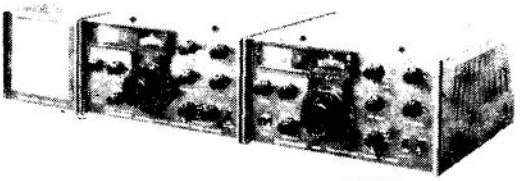
PS-5
AC/DC POWER SUPPLY



TR-2200A
2M PORTABLE TRANSCVR



TS-700A
2M TRANSCEIVER



R-599D
160-10M RECEIVER

T-599D
160-10M TRANSMITTER

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GLENWOOD TRADING COMPANY LTD.

278 East 1st St. North Vancouver, B.C. V7L 7B5

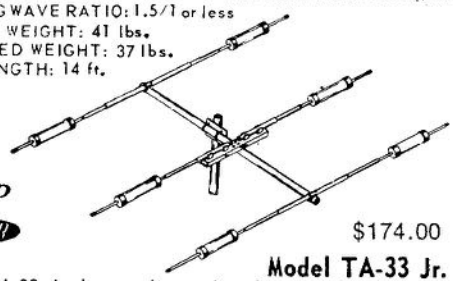
BAND	REGION 1	REGION 2		REGION 3
		CIC	CARF	
6900-7100 KHz	AMATEUR	AMATEUR (AM'TR SAT excluded)	7000-7325 KHz AMATEUR exclusive	AMATEUR
7100-7300 KHz	BROADCASTING	BROADCASTING		BROADCASTING
10100-10400 KHz NEW	AMATEUR	AMATEUR (10500-10300 KHz or 10375-11175 KHz may be more appropriate)	AMATEUR exclusive world wide	AMATEUR
14000-14350 KHz	AMATEUR	AMATEUR (AM'TR SAT excluded)	AMATEUR exclusive world wide	AMATEUR
18300-18650 KHz NEW	AMATEUR	AMATEUR	18100-18300 KHz AMATEUR exclusive world wide	AMATEUR
24000-24500 KHz NEW.	AMATEUR	AMATEUR	-	AMATEUR
21000-21450 KHz	NOT MENTIONED	NOT MENTIONED	21000-21450 KHz AMATEUR excl. world wide	NOT MENTIONED
28000-29700 KHz	NOT MENTIONED	NOT MENTIONED	28000-29700 KHz AMATEUR excl. world wide	NOT MENTIONED
50-54 MHz	NOT MENTIONED	NOT MENTIONED	50-54 MHz Amateur shared	NOT MENTIONED
144-146 MHz 146-148 MHz	NOT MENTIONED NOT MENTIONED	NOT MENTIONED NOT MENTIONED	144-148 MHz AMATEUR excl. world wide	NOT MENTIONED NOT MENTIONED
220-225 MHz	216-223 MHz AERONAUTICAL RADIONAVIGATION BROADCASTING 223-235 MHz AERONAUTICAL RADIONAVIGATION Fixed Mobile	AMATEUR Radiolocation	220-223 MHz Amateur shared 223-225 MHz AMATEUR excl. world wide	216-225 MHz AERONAUTICAL RADIONAVIGATION Radiolocation
420-430 MHz	FIXED MOBILE except aero mobile Radiolocation	FIXED MOBILE except aero mobile Radiolocation	Amateur shared	RADIOLOCATION Amateur
430-440 MHz	AMATEUR RADIOLOCATION	AMATEUR Radiolocation	AMATEUR excl. world wide	RADIOLOCATION Amateur
440-450 MHz	FIXED, MOBILE except aero mobile Radiolocation	AMATEUR Radiolocation	Amateur shared	RADIOLOCATION Amateur

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 1½ 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 : 5.7 sq. 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.

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
Hy-Gain 18ABT/WB 10-80 MTR $138.95

PL-259 connectors for coax $1.00
B&W 550A 5 pos coax switch $21.00
Coax Lightning Arrestors $ 5.50
R.S.O. Low Pass Filters $31.50

6 digit LED clock kit 12/24 hr.
Kit includes .4 in. readouts
1-MM5314 clock chip, 13 transistors
diodes, resistors, molex pins,
power supply, etc. and case

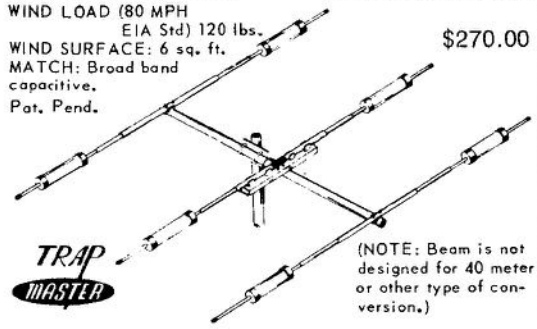
$33.50

The Classic 33 10, 15, and 20 meters

Beam designed to provide the extra gain for working hard-to-reach DX. Incorporates 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.
WIND SURFACE: 6 sq. ft.
MATCH: Broad band capacitive.
Pat. Pend.

$270.00



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

CDE ROTORS
AR-30 $59.50 AR-40 $79.50
CD-44 $149.00 HAM II $199.00
Wire for AR-30 and AR-40 12¢ ft.
Wire for CD-44 and HAM II 20¢ ft.
RG-58U coax 10¢ ft.
RG-8U 25¢ ft.

RG-11U 23¢ ft.
RG-8U foam coax 28¢ ft.

'Big Talk' $125.00
KDR-123 3 amp
12v Pwr Supply $35.00

KENWOOD TRANSCEIVERS
TS520 80-10 meter SSB CW
110/220 AC or 12 VDC
power required **799.**

TR-7200G 22CH Mobile 2 meter
with 52/52 installed **230.**

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

Prices subject to change

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Phone (613) 353-2800
VE3BPM

BAND	REGION 1	REGION 2		REGION 3
		CIC	CARF	
1215-1300 MHz	RADIOLOCATION Amateur	RADIOLOCATION Amateur	1215-1275 MHz Amateur shared 1275-1290 MHz AMATEUR excl. world wide 1290-1300 MHz AMATEUR excl. world wide for AMATEUR satellite	RADIOLOCATION Amateur
2300-2350 MHz	FIXED Amateur Mobile Radiolocation RADIO NAVIGATION	RADIOLOCATION Amateur Fixed Mobile RADIO NAVIGATION	2300-2310 MHz AMATEUR excl. world wide 2310-2450 MHz Amateur shared	RADIOLOCATION Amateur Fixed Mobile RADIO NAVIGATION
2350-2450 MHz	FIXED Amateur Mobile Radiolocation	RADIOLOCATION Amateur Fixed Mobile		RADIOLOCATION Amateur Fixed Mobile
3300-3325 MHz	RADIOLOCATION	RADIOLOCATION Amateur	)	RADIOLOCATION Amateur
3325-3360 MHz	RADIOLOCATION RADIOASTRONOMY	RADIOLOCATION RADIOASTRONOMY Amateur	)3300-3500 MHz)Amateur shared)with one 10 MHz)slot excl. world	RADIOLOCATION RADIOASTRONOMY Amateur
3360-3400 MHz	RADIOLOCATION	RADIOLOCATION Amateur	)wide)	RADIOLOCATION Amateur
5650-5670 MHz	RADIOLOCATION Amateur	RADIOLOCATION Amateur	5650-5925 MHz Amateur shared with one 20 MHz slot excl. world wide	RADIOLOCATION Amateur
10.0-10.5 GHz	RADIOLOCATION Amateur	RADIOLOCATION Amateur	10.0-10.5 GHz Amateur shared with one 25 MHz slot excl. world wide	RADIOLOCATION Amateur
24.0-24.25 GHz	NOT MENTIONED	NOT MENTIONED	24.0-24.05 GHz AMATEUR excl. world wide 24.05-24.25 GHz Amateur shared	NOT MENTIONED
48.0-50.0 GHz	AMATEUR	AMATEUR	48.0-50.0 GHz Amateur shared	AMATEUR
71.0-76.0 GHz	AMATEUR	AMATEUR	71.0-76.0 GHz Amateur shared	AMATEUR
165-170 GHz	160-165 GHz AMATEUR 165-170 GHz not allocated	160-165 GHz AMATEUR 165-170 GHz not allocated	165-170 GHz Amateur shared	160-165 GHz AMATEUR 165-170 GHz not allocated
240-250 GHz	AMATEUR	AMATEUR	240-250 GHz Amateur shared	AMATEUR
300 GHz up	NOT MENTIONED	NOT MENTIONED	300 GHz up Amateur shared	NOT MENTIONED

HEAVY DUTY HAM TOWERS

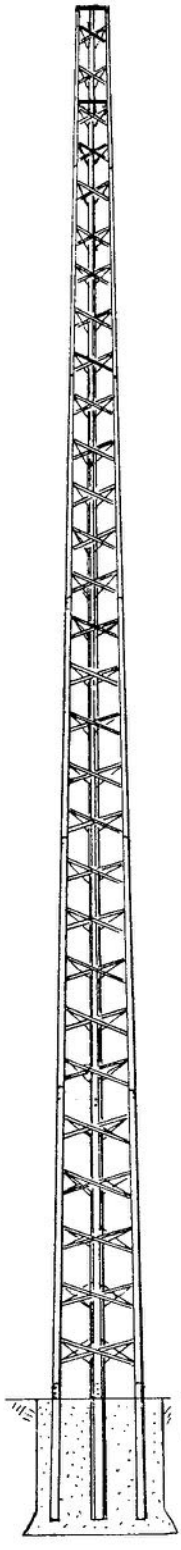
DMXHD Heavy Duty Ham Towers can support a large amateur beam of up to 9 sq. ft. wind area. Guy wires must be used if larger loads are required or cross bar mounted antennas or if greater height using straight sections is needed.

DELHI DMXMD and DMXHD towers use the larger and stronger sections of our standard eight section, 68 foot TV tower, Model DMX-68. DMXMD towers have a DMX2T top section, DMXHD towers have a DMX3T top section. Both top sections have a No. 244A cast aluminum mast clamp installed on the top plate.

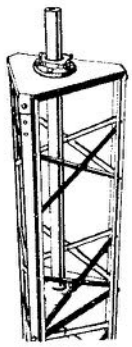
Each section is 8 ft. long and has beaded channel legs riveted together with "X" braces. Legs and braces are high tensile steel, heavily galvanized before fabrication. Rivets are solid heat treated aluminum. Sections fit accurately together and are joined by heat treated nuts and bolts. The uniform tapered leg design together with evenly spaced "X" braces give the tower greater strength and reliability.

NOTE: All DMXHD Series Ham towers are shipped complete with the following:
8 ft. tower sections, top plate with cast aluminum mast clamp, rotor plate, three 4 ft. concrete base stubs, special nuts, bolts and washers. (No mast is included in package).

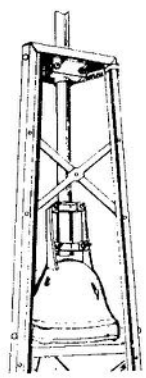
Model No.	Height of Tower	Tower Section Supplied	Wt. in lbs.
DMXHD-32	32	DMX3T, DMX4, DMX5, DMX6	170
DMXHD-40	40	DMX3T, DMX4, DMX5, DMX6, DMX7	241
DMXHD-48	48	DMX3T, DMX4, DMX5, DMX6, DMX7, DMX8	314
		Items which may be ordered separately.	
CBS6		Concrete base stubs for DMXHD-32	14
CBS7		Concrete base stubs for DMXHD-40	20
CBS8		Concrete base stubs for DMXHD-48	21
HUB 3-6		Hinge-up base for DMXHD-32	20
HUB 7-8		Hinge-up base for DMXHD-40 or DMXHD-48	24
HD Mast		2" O.D. x 12 Ga. x 8' Galv. mast	18
MD Mast		1-1/2" O.D. x 14 Ga. x 8' Galv. mast	10
BBMB		Cast alum. ball bearing mast bearing: 2" O.D. capacity	2
TA-6		Thrust bearing with tapered rollers. 1-1/2" O.D. capacity	2



DMXHD-48

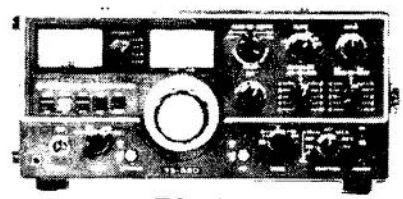


Top of tower with mast clamp plate installed.



Any make of rotator can be mounted on rotor plate.

NOW AVAILABLE!



TS-520
80-10 M Transceiver

Prices subject to change

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

MacFarlane Electronics Reg'd

RR No. 2 Battersea, Ont
Phone (613) 353-2800
VE3BPM

NOTE 1 For the purposes of these proposals, all services in the table are categorized in the following manner:

a) Services in capital letters are "primary services".

b) Services in lower case letter are either "secondary or permitted services".

NOTE 2 AMATEUR SATELLITES - at present there are primary allocations to the service in the bands 7001-7100 KHz 14000-14250 KHz, 21000-21450 KHz, 28-29.7 MHz, 144-146 MHz and 24-24.05 GHz, and a secondary allocation by footnote in the band 435-438 MHz. Proposals for the 1979 WARC are aimed at providing allocations to the service in parts of the bands lying between 1200 MHz and 10.5 GHz which are already allocated to the Amateur service. These allocations would promote the extension of the investigations into all aspects of communications into the higher regions of the spectrum.

Since the requirement foreseen for the Amateur-Satellite service in the 7001-7100 and 1400-14250 KHz band has not materialized, it is proposed to suppress these two allocations.

Northern note

The Nipissing FM Association provided communications for the Ontario Winter Games held recently in North Bay.

The Association set up two base stations at the Games Headquarters. One base station operated through the repeater VE3NM and the other simplex.

The results of events were passed from the game sites to game headquarters and a link from game site to game site was also provided.

Those directly involved included: VE3 FLX, DPI, CJM, GBM, GNY, ELD, CZA, GWN, JHA, JHC, CDE and HQW.

The Association Executive is: President Hal Schperl VE3FLX; Vice President Arnold Dunlop VE3DPI; and Sec-Treasurer Doug Mills VE3CJM.

The association meets on the first Wednesday of each month at 7:30 p.m. in Widdifield Secondary School, North Bay, and extends a welcome to anyone in the area.

Paul Convey, VE3HEJ.

BANNED COUNTRIES LIST

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

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

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

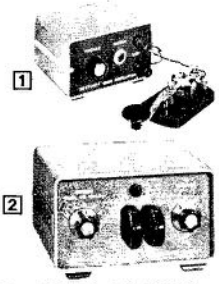
THIRD PARTY TRAFFIC AGREEMENTS

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

RECIPROCAL LICENCING AGREEMENTS

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

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



from QRP to SSB...

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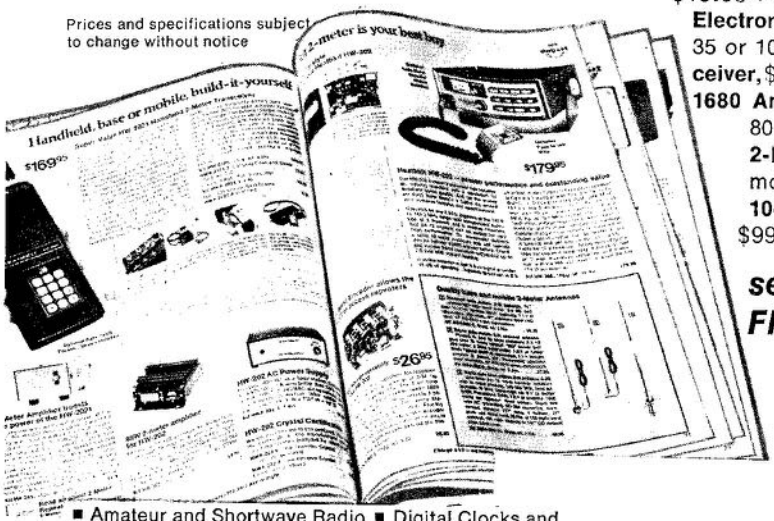
Heathkit Ham equipment has been the start, and standby, of thousands of Amateur Radio hobbies the world over. It offers you superior performance, day-in day-out reliability, and more VALUE for your money. And because Heathkit Ham gear comes to you in easy-to-assemble kit form, you learn more about your hobby as you put the kits together, you SAVE money over comparable assembled units, and you can service the equipment and keep it in top operating condition. You get more out of it because we design more into it! So whether you intend to work the world on a couple of watts CW or "go the limit" with state-of-the-art SSB, you'll find Heath is the place to get and keep yourself "in gear."

[1] **HD-1416 Code Practice Oscillator,** $15.95 Perfect for beginners. [2] **HD-1410 Electronic Code Keyer** $74.50 Sends 10-35 or 10-60 wpm. [3] **HW-8 QRP Transceiver,** $177.50 A super-value. [4] **HR-1680 Amateur Receiver,** $299.95. Full 80-10 meter coverage. [5] **HW-202, 2-Meter Transceiver,** $279.95 A mobile 2-meter standard. [6] **SB-104 Digital CW/SSB Transceiver,** $999.95. Probably the world's finest!

Prices and specifications subject to change without notice



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