

**CARF**

the

**canadian  
amateur**

January 1979
No. 1

## Special call in Cape Town

The University of Cape Town, South Africa, is commemorating its 150th anniversary with a special station call ZS1UCT from February 17 to March 17. A special card and award will be issued. For the latter contact the Award Manager, ZS1MO, Box 5100 Cape Town 8000, Republic of South Africa. Look for it on Saturdays and Sundays 0600 - 2000 hrs GMT and weekdays 0700 - 1000 hrs GMT and 1500 - 2000 GMT, on 40, 20, 10, 15 and 2 metres ... 7050 kHz, 14120 kHz, 21200 kHz, 28800 kHz and 145.500 MHz.

## DOC reviews exam questions

The second round of Amateur certificate exams is being held on January 24 in various centres across Canada. Appointments had to be made about a month in advance in order to permit DOC to make arrangements for premises and distribution of the exam books.

As a result of the first round, written on November 15 and the comments received, the Department set about a review of the exam content. CARF is participating in the review which is being undertaken to analyse the reason for the high failure rate.

Those who wrote the Digital Op's ticket and found that it was too stiff will be happy to know that rather than mark five questions at 20 marks each, the DOC will count the four best answers with a possible 25 marks for each. Out of the total of 40 who wrote, it is interesting to note that, of those already holding Amateur tickets, 21 out of 28

passed while out of 12 non-Amateurs only 3 made the grade.

The failure rate on the other exams (written by 428 candidates) which has prompted the review is shown here on a DOC Region basis:

	Amateur	Advanced Amateur
Atlantic	53%	81%
Quebec	85%	80%
Ontario	70%	62%
Central	28%	20%
Pacific	85%	66%

The good showing by the Central Region is probably due to the small statistical sample, according to our informant. Only 6 wrote.

The distribution of the failure rate by subject was:

	Amateur	Advanced Amateur
Theory	66%	61%
Regulations	45%	29%

Continued on Page 11

# the canadian amateur

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Editor:  
VE3CDC Doug Burrill

Publisher:  
Steve Campbell

 from the **Front Office...**

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

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From time to time Amateurs ask us, "What makes CARF unique?". They feel that there may be some duplication of activities between CARF and other organizations.

Surprisingly, though, there is very little duplication.

For example, while the CARF requests made to DOC for Amateur allocations to be obtained at WARC '79 are not incompatible with other Amateur submissions, the CARF approach was unique. It was to convince DOC that the CARF proposal to meet Amateurs' needs was not incompatible with the needs of other users and that it therefore could not be reasonably rejected. CARF did not favour the strategy of presenting a demand which, in the context of Canadian conditions, would be unhelpful in assisting DOC in arriving at the solution to conflicting proposals by users.

In presenting briefs to government, no matter what the subject, CARF makes every effort to ascertain the views of Canadian Amateurs and to reflect those views in the briefs which it submits to government.

In many other areas, CARF alone provides a service. Let's look at the list:

1. CARF News Service ... Monthly newsletters and bulletins provide up-to-the-minute news about Amateur Radio in Canada and are used by many clubs across Canada.

2. The National Symposiums, convened by CARF, are excellent opportunities for Amateurs from across Canada to discuss matters of national importance with DOC officials and make recommendations.

3. The uniquely Canadian 'Amateur Operator's Handbook' will be printed by CARF early in 1979 and will be most useful to all Amateurs.

4. The Digital Operator's Study Guide will also be printed early in 1979 to help Amateurs to obtain the new Digital Operator's Certificate.

5. The Certificate Study Guide and the Advanced Certificate Study Guide are both specifically tailored to the Canadian students' needs.

## Russian award

-- The Russians have announced special awards for contacts through its 'RS' satellites, launched three months ago. Applications for awards and information should be directed to the Satellite Communications Committee, Box 88, Moscow, USSR.

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6. 'The Canadian Amateur' covers topics not covered in most other Amateur periodicals. It is distinctly Canadian and provides a forum for ideas and an outlet for those Amateurs who like to write.

7. The Canadian Repeater Advisory Group (CRAG) was founded by CARF to promote band planning, keep Amateur repeater councils advised on repeater problems and to keep a register of Canadian repeater frequencies.

8. A committee has been set up on the recommendation of the Calgary Symposium to develop procedures (protocol) for digital communications.

9. The Transcan Net is being developed to be a distinctively Canadian net.

10. The CARF QSL Bureau is last but not least on the list. The bureau handles out-going QSL cards free for CARF members. It is a popular service that, for its extent, is unique in being free.

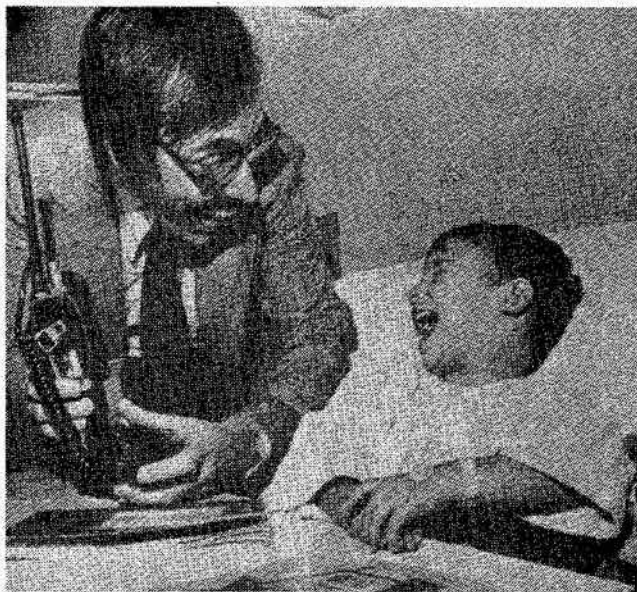
It is quite obvious that CARF has quite a good many positive things going for the Canadian Amateur. We like to use our resources efficiently to benefit Canadian Amateurs, hence we do not engage in unnecessarily duplicating services to Canadian Amateurs.

-VE3NR

## Santa on-the-air

Bringing happiness to small children and good vibes to Amateur radio public relations at the same time, many clubs and nets run QSOs with Santa Claus at Christmastime. Here is Jean Demers VE3KJD bringing in a bilingual Santa to talk with Dominik Desrosiers, 2, at the Ottawa Children's Hospital.

-Ottawa Citizen photo



## Stories wanted for TCA

WANTED! News Items, Pictures, Original Stories, Technical Articles!

Make pocket money by writing for The Canadian Amateur! Original technical articles are especially welcome. We can use simple construction projects, antennas, hints and kinks, explanations of the theory and practice of modern Amateur operations and equipment. Photos should be glossy black and white prints, although we can use color prints and slides in a pinch. Written material should be typed, double spaced. Legible handwriting is acceptable. Finished artwork and schematics will add to the value, but sketches and rough drawings are acceptable.

Send Technical articles only to TCA Technical Editor, CARF Inc., Box 356, Kingston, Ontario K7L 4W2. Send all other material to Doug Burrill VE3CDC, Editor TCA, 151 Fanshaw Ave, Ottawa, Ontario K1H 6C8.

## Bermuda repeaters

- For the 'snow birds' who head to Bermuda, there are two two-metre repeaters on the island, VP9DC 146.16/146.76 and VP9AX 146.34/146.94. There is also a CW 10-metre beacon on 28235 kHz, on the air 24 hours a day. (Tx VE1FQ)

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### Hugh Lines VE3DWL

Apologies to Art VE7DKY in Vernon. The letter he wrote on August 3 arrived on my desk on the 7th of December. Art was kind enough to send us a few notes on the Vernon B.C. repeater (VE7RSS). The station is located on Silver Star Mt. at an altitude of about 1900 metres. A commercial Mopar transceiver is giving fantastic performance. It provides an effective range of about 300 kilometres. They were recently able to assist in a search and rescue operation for a lost woman in remote mountain territory.

From the St. Lawrence Valley Repeater Council we hear that VE3STP in Renfrew (46/06) is now all solid state running 130 watts at 1250 feet. VE3KBR in Belleville is now on 146.985/146.385. VE3NRR (16/76) has been relocated to Pembroke with a temporary antenna at 130 feet. In Ottawa, VE3YOW should be on the air shortly on 441.1/449.1. VE3s HCM, HWV and IVC advised that they

were planning to put a repeater on the air at Brighton to fill a gap between Brockville and Toronto, and have applied for frequencies of 147.075/147.675.

John Tessier passes on the following info from Newfoundland. Corner Brook is really two words!! and VO1MO is on 34/94. A proposed repeater for Grand Falls should be on 46/06 soon. VO1AV is on 34/94 at Gander, VO1EN is on 46/06 and VO1GT is on 34/94 at St. John's. Also, VO2AD in Wabush/Labrador City is no longer on the air.

For those of you contemplating a trip to the sunny south, we have word of two repeaters on the air in Bermuda, VP9DC on 16/76 and VP9AX on 34/94. On that warm note, a very happy New Year and the best in '79 to all.


## Boo-boo dept.

Right in line with the big daily newspapers of today this publication employs no proofreader, relying on the intuition, erudition and quick wittedness of its compositor. All this failed us in our November issue, however and in our report on the National Symposium, Ed Ducharme, head of the WARC '79 Canadian Interdepartmental Committee appeared as 'Ed Cucherme' while Hugh Dollard VE7PB, got a billing as 'Hugh Dallard' ... at least the first vowel was 'a' and not 'u'!

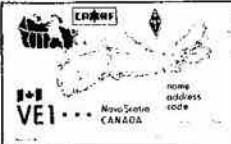
Credit for the picture of Will de Roos' yacht 'Williwaw' should have been attributed to Liv Kennedy of Vancouver. Those of the National Symposium were taken by VE6GN, Arn Sommerfeld and your editor, VE3CDC ... the good ones are Arn's!

## Satellite transmission


-- Montreal was the scene recently of the Fourth International Conference on Digital Satellite Communications, and to mark the occasion the first digital facsimile satellite transmission of newspaper pages was made from Paris and Milan; the Globe and Mail was sent in reply.




(1) Canada Map (Permanent Colour) (Blue, Green, Yellow)




(2) Provincial Map  
New Scotia CANADA  
home address code



(3) OSCAR 8 (Satellite) (Temporary) (Yellow/Orange)



(4) CX World Map (Temporary) (Temporary)



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Right, the people who make up the Administrative HQ in Kingston. Members of the Kingston Old Timers Amateur Radio Association and CARF officials at their Xmas party. Front row, l to r: Bob Dunbar VE3CZW; Nate Penney VO1NP (visiting); 'Mike' Hartlin; Bill Bushell VE3 DXY. Standing, l to r: Ralph Clifford VE3UG; Stu Watts VE3IVX and xyl Mary; Gary Penwarded VE3HWS; Arthur Blick VE3AHU and xyl Eileen; Marg Burdsall; Lila Hovey; Ed Hartlin VE3FXZ; Bert Hovey VE3EW and Bernie Burdsall VE3NB.



Right, below, the executive meeting on December 2 at St. Lawrence College, Kingston, Ont. Front row, l to r: Steve Campbell; Gen. Mgr. Art Blick VE3AHU; DOC Liaison Committee Chairman Art Stark VE3ZS; Second row: Don Slater VE3BID, ad rep; Joan Powell VE3FVO, secretary; Bernie Burdsall VE3NB, treas; Bill Bushell VE3DXY, publications committee. Third row: TCA Editor Doug Burrill VE3CDC; Leon Arnold VE2FCX, TCA Committee. Fourth row: Bob Rouleau VE2PY, director; Jean Evans VE3DGG, QSL Bureau Manager; Nate Penney VO1NP, director.



## Attention Clubs:

Recognition of editorial effort and club activities can be more interesting if they are timely. To help in this end, bulletins addressed to CARF, Box 356, Kingston, Ont., should be sent directly to the editor of The Canadian Amateur, Doug Burrill VE3CDC, 151 Fanshawe Ave., Ottawa, Ont. K1H 6C8.



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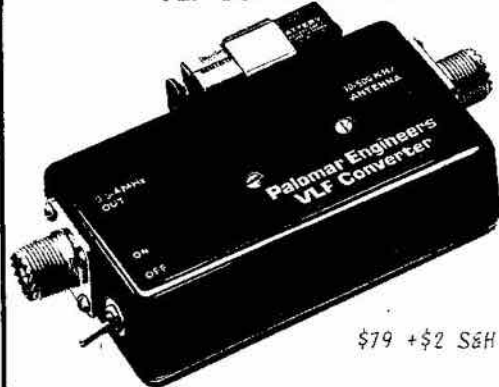
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## WARC 1979 Report

The next word on the Canadian position for the World Administrative Radio Conference next year will probably surface about January 24, according to DOC statements to the Canadian Radio Technical Planning Board general annual meetings early in December. CARF reps at the meeting, VE3UD and VE3CDC, heard that the DOC review of the spectrum from 406 to 960 MHz will precede the WARC position paper by a week or two. To date DOC has proposed re-allocating 420 - 430 MHz from Amateur to another service and has been hunting for a spot to start up a small boat marine mobile service, somewhere in the 406 - 960 MHz portion or elsewhere.

### FCC Final Proposals

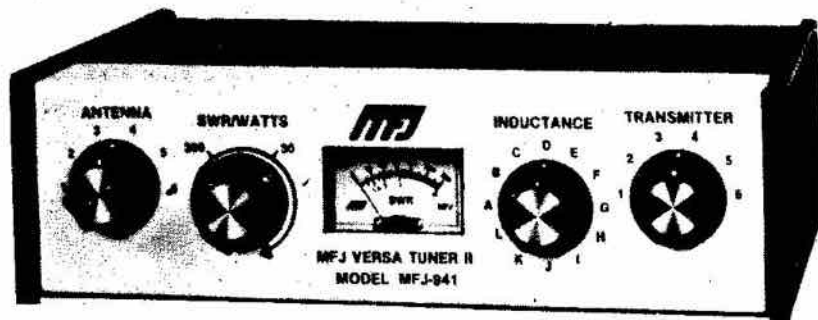
The FCC in its recent proposals for the U.S. position has relegated the Amateur Service to a secondary use on 220 to 225 MHz and deleted radiolocation with the marine mobile being inserted on a primary basis. At press time DOC still had not made similar commitment for the marine mobile service although the possibility exists.

The U.S. position for Amateur frequencies proposed no change to the present Region 2 75 and 80 bands, in contrast to the DOC present position which

lops off 3800 to 4000 kHz from the Amateur allocation. On 160 metres the FCC cut 60 kHz off by giving 1800 to 1860 kHz to broadcasting. They threw in 1900 to 2000 kHz for a shared Amateur band and propose 6950 to 7250 kHz exclusive for Amateur, with the 7250 to 7300 kHz present Amateur slice which is already infested with hi-power broadcasting being given to that service exclusively.

A new band appears at 101800 to 10200 kHz; twenty metres is unchanged at the present 14000 to 14350 kHz. The U.S. position now proposes new bands at 10100 to 10200 kHz, 18068 to 18168 kHz and 25110 to 25210 kHz with a 50 kHz expansion in the 15 metre band at the low end, making it 20950 to 21000 kHz. In exotic world of UHF a new band at 902 to 928 MHz is proposed and a reduction by 25 MHz in the 1215 MHz band, leaving 1240 to 1300 MHz.

Just how much the Canadian proposals in January will be compatible with these U.S. proposals remains to be seen. It would appear that there will have to be some compatibility in the VHF and UHF proposals as there is an existing bilateral agreement to co-ordinate the use of these parts of the spectrum.



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Att.-Doug Wismer VE3EHC





# classified ads

Single insertion is \$1.00 (minimum charge) for 10 words and \$1.00 for each additional 10 words. To renew, send copy and payment again. Deadline is first of month preceding publication.

Put your membership number and call (not counted), if any, at the end of your ad. Print or type your ad and include your address with postal code. If using a phone number, include the area code. CARF and The Canadian Amateur accept no responsibility or liability for content or matters arising from ads.

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FOR SALE: Panasonic Allband Digital Portable RF-2800. Never used. \$285 postpaid. Gabe Gely 329 Vanier Ave., Lucerne-Aylmer East, Quebec J9J 1E8. Ph: 684-2689.

## Amateur Radio Week

-- Amateur Radio Week, suggested by CARF, had widespread support, as already noted in these columns. The South Pickering ARC had a display in a local shopping mall. Rigs for both high and low bands were on the air for the whole day, with others on display. Visitors included a number from England and other countries. (Tx VE3DAX). P.E.I. Amateurs had working displays at three centres, Montague, Charlottetown and Summerside. It was topped off by a banquet where Walt Hyndman, an Amateur since 1920 and ex-lieutenant-governor

of P.E.I., was given a life membership in the local association. Doug Cormier VE1BCN reports that the CBC made a short movie for Amateur week that is tops in quality and in human interest, for TV showing. Walt was interviewed in it and, to quote VE1BCN, "the public ate it up, especially when Walt (who is a young 75) mentioned the Titanic".

Also, a CB organization, the Canadian General Service Association, featured a plug for Amateur week in its magazine 'CB Canada'.

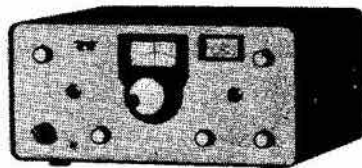
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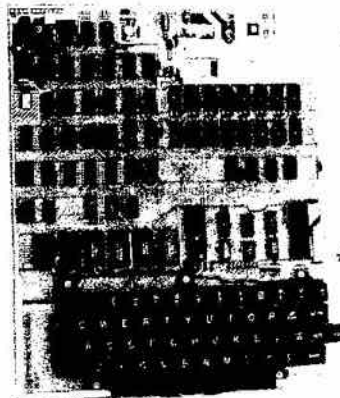
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# INTERNATIONAL NEWS

-- The horror story of Jonestown in Guyana has caused waves in the Amateur world. The colony's station WB6MNH/8RI and WB6MID/RI had been breaking the rules for some time by handling forbidden traffic. As a result the U.S. FCC and other countries are taking a hard look at such stations and it may go rough with other 'missionary' Amateur stations in other countries.

-- VE3FXT should now be on the air from another African homeland, 'Vendaland' but, like other operations from similar 'homelands' in South Africa, the DXCC status is not available from the U.S. organization which makes such weighty decrees. VE3FXT (George Collins) plans to be home in Baden, Ont. in February.

-- Australian novice licences are now designated with the letter 'N' after the country prefix, becoming 'VKN' calls. They can operate on 28.5 to 28.6 MHz.

-- Some optimist in the U.S. is bugging the FCC for model control frequencies from 222 to 224 MHz. Wonder how it would work out with the Canadian packet radio allocation and U.S. proposed marine mobile services, the first of which is a reality and the second is proposed for WARC '79.

## We goofed!

Several Membership Cards were recently sent out with the Expiry Date of 'JAN 1979'. This should have read 'JAN 1980'. If you have received such a card, please correct it. Our thanks to the members who brought our attention to this error.

VE3AHU, G.M. CARF

News items, articles, pictures, club bulletins and letters to the editor should be addressed to: Doug Burrill, Editor, 'The Canadian Amateur', 151 Fanshaw Ave., Ottawa, Ont. K1H 6C8. Classified ads should go to CARF Inc. Box 356, Kingston, Ont. K7L 4W2.

## Exam

Continued from Page 1

The figures for the Code Test were not available.

With no figures on the old method available to us, comment is not possible but it is obvious that the results required some investigation of the new format.

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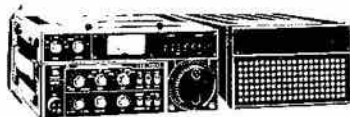
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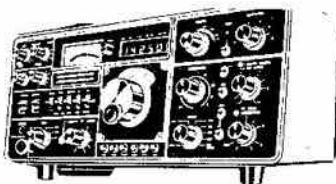
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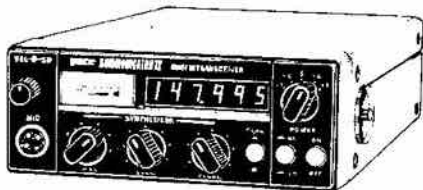
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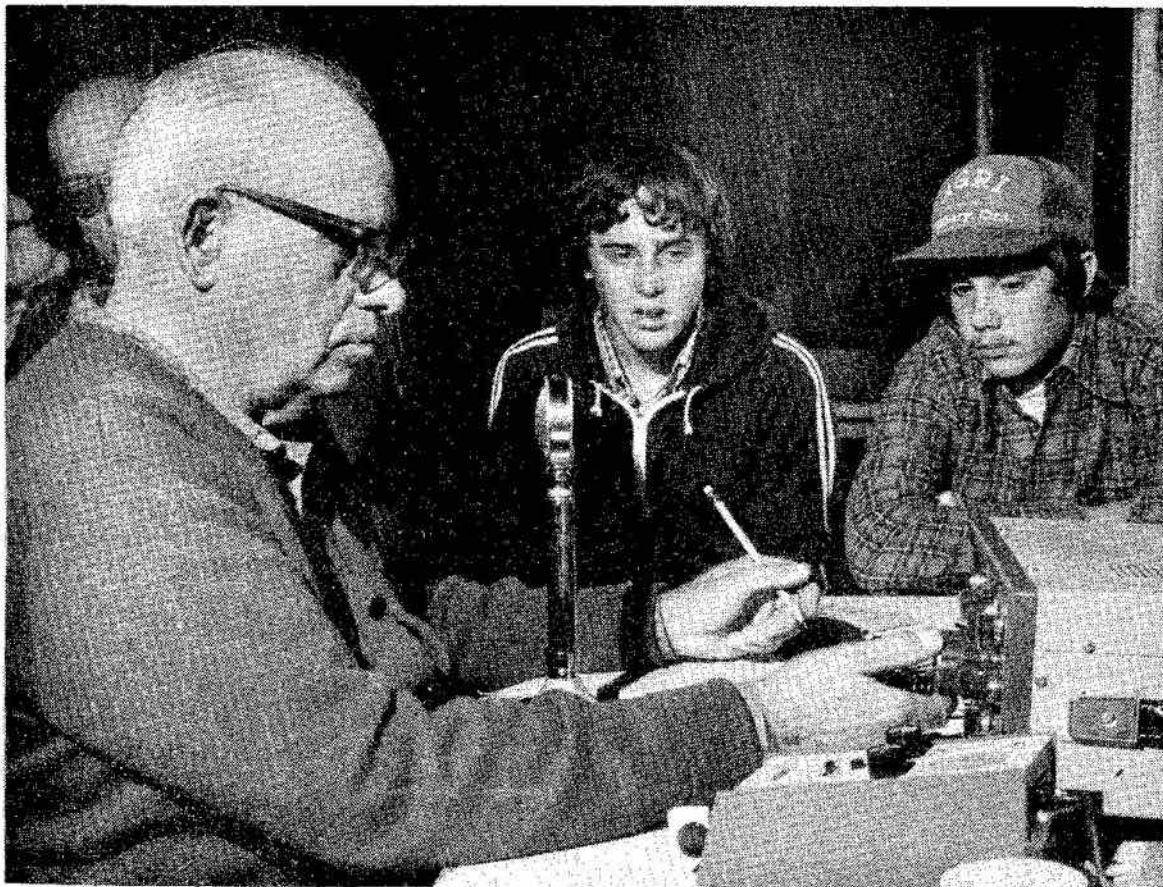
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## JOTA

Jamboree-On-The-Air

Scouts Tom Pollard and Eric Martin (hat) listen as Glenn Crowe VE3BSM of Wallaceburg contacts Boy Scout stations all over the world during the Jamboree on the Air held in October.

-Photo VE3JFP

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# TECHNICAL SECTION

## Digital Ham Clock

Glenn McMichael VE3CGU

Many of you may have been trying to find a suitable digital clock for your shack. If you are like me you scanned the adverts but has to eliminate most of them because they were only available in 12 hour format. It gets complicated trying to convert am/pm all the time. Many times in order to get the required 24 hour display you have to give up some other useful features. If you finally did get one of the kits and assembled it only to find that it never really worked dependably join the club. I've had the same thing happen.

Last year I discovered a solution to this problem and now have two National Semiconductor model 1010C kits that I am well pleased with. The clocks fill every imaginable need and combine reliability with a reasonable price.

The whole system, including power supply is contained on a single glass epoxy circuit board 1.75" by 3.75" (Fig. 1). It features bright red .84" digits in the 24 hour format. While .84" doesn't sound very large they are half again as big as most clocks and can easily be read at ten paces. The Led segments are driven directly (not multiplexed) to avoid radio interference from the rapid switching commonly found in similar types of display. (Try your pocket calculator near a radio some time. Most of them employ multiplexing and cause a loud buzzing noise.) The module also features 50 or 60 cycle operation, power failure indication, brightness control, seconds display, full alarm & clock radio control including 'snooze timer' and an 'alarm on' indication for those who want

pin connection diagram



Figure 1

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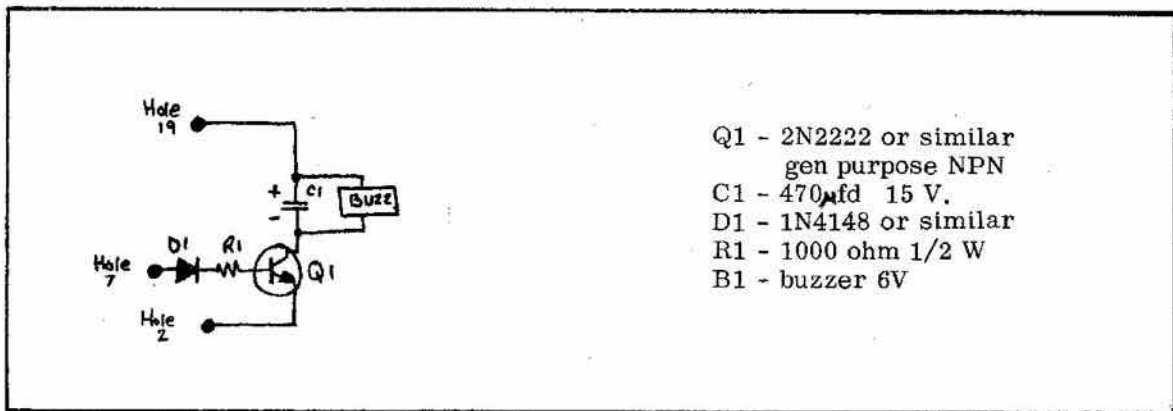
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to use it in the bedroom.

Along the bottom of the module is a row of 22 holes. Depending on what features you require, pairs of wires are soldered to the appropriate holes and connected to momentary contact n.o. pushbutton switches. In its simplest form the clock has two switches, 'fast advance' and 'slow advance'. Additional switches

for hold and seconds display are added in similar fashion. Shorting holes 18 and 20 produces full brightness. Connecting a 10,000 ohm potentiometer between these holes allows the seven segment LEDs to be dimmed as desired. Should you require alarm capability a small additional circuit must be fabricated (Fig. 2).



- Q1 - 2N2222 or similar  
gen purpose NPN
- C1 - 470 $\mu$ fd 15 V.
- D1 - 1N4148 or similar
- R1 - 1000 ohm 1/2 W
- B1 - buzzer 6V

Figure 2

This circuit is the one suggested in the instructions but almost anything could be controlled by Q1, the solid state switch. A small round LED to indicate that the alarm is enabled is built into the front of the display.

Should the a.c. power fail for more than three seconds the display pulses on and off at a 1 Hertz rate to indicate that the time shown is incorrect.

You should have no trouble getting your clock to work the first time. The large instruction sheets are clear and explicit. I was impressed by the overall quality of the kit. The board has good non-tarnishing foils and is well put together. The special transformer is quite husky and doesn't run overly warm. Even the switches are name-brand items.

A kit of parts which includes the module, dual secondary transformer and seven switches is available from Digi-Key Corporation, Box 677, Thief River Falls, MN 56701 for \$11.95. The buzzer #139C sells for \$1.50 U.S. The choice of enclosure is yours but for best appearance you may want to get the #400 display bezel with red lens @ \$4.95 and the #421 mounting adapter @ 69¢. The bezel eliminates reflected glare and improves the general contrast of the display. (All U.S. prices. Ed.)

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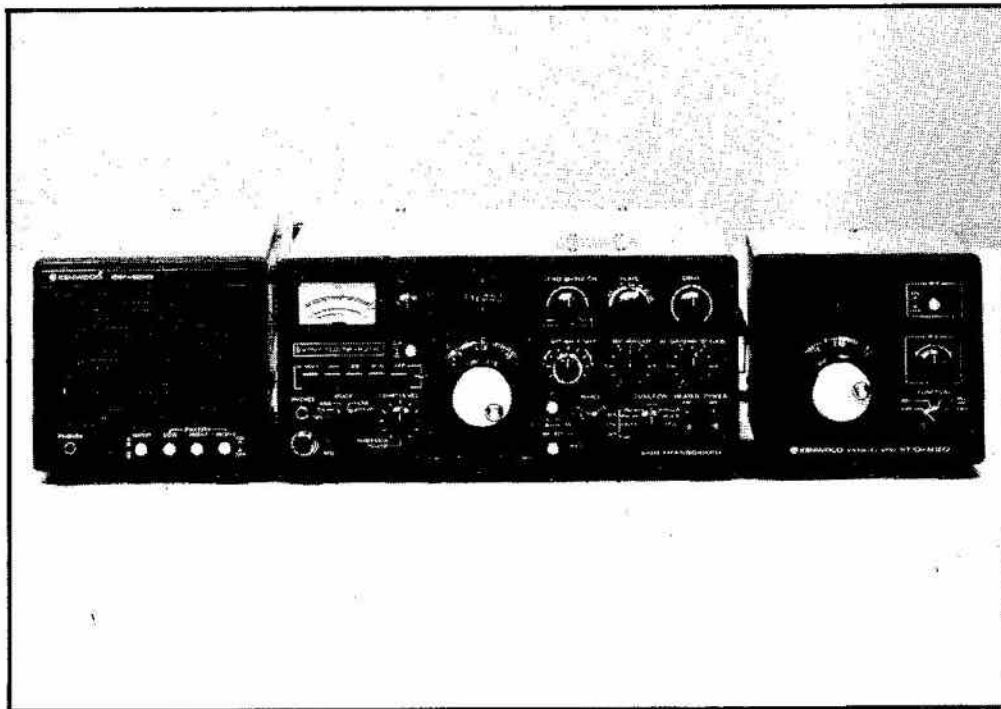
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# Calling RTTY Ops

by A.E.M. Spence VE7DKY

Anyone for an all-Canada RTTY Net? What, you say, "Oh no, not another net"? Yep, another net. Well anyway, another proposed net. Frank Merritt VE7AFJ, Chairman of the CARF Communications Committee, had the brilliant thought that I should suffer for some reason and has with malice aforethought ( or after thought) appointed me as Manager of the TRANSCAN NET. (I should have learned a long time ago to keep my mouth shut and I won't end up with more work.)

Seriously though, Canadian Amateurs have been notable for their reluctance to become involved in any form of formal traffic endeavour. Those of us deeply involved in the National Traffic System (NTS) can be counted on the fingers of one hand. I have a very strong feeling about public service and the necessity to justify the many juicy frequencies we occupy. Unfortunately, so many take the selfish attitude of allowing others to do the rough work while they 'shoot DX' or work contests/gab with good ole Joe in the next block. Have we no national pride? Surely we could mount and support just one Trans-Canada formal traffic net, all on our own?

Well, for my sins, that is what I am going to try and do. And I am going to need lots of help doing it. For a start, I would like the benefit of your ideas and suggestions. After the start I would like your active support. Both in taking a part in the net activities and by originating traffic.

I appreciate that the idea has been tried before. One factor has been the lack of traffic. It takes a lot of guts to stick in there day after day when there is no traffic. However we can rectify that situation by generating traffic. There is a second factor. I do not as yet have much info ... in fact, literally none. Also I don't want to steal anyone's thunder with premature announcements. However, I am advised that it is proposed to have a Military/Amateur System, called the Canadian Forces Amateur Radio Service, similar to MARS in the U.S.A. This could be a juicy source of

traffic and in so doing we could support the people who are supporting us "in the far-flung reaches of the Empire" as they used to say.

Everything is fluid at the moment. As a starting point, I would suggest a weekend operation for the beginning. On 20 metres, perhaps 14,103 kHz, at about 1800Z. This is strictly RTTY and Formal Traffic. I should think that we could keep some flexibility, though, by accepting SSB or CW breaks with traffic. (Hopefully people would realize that a Model 19 Teletype isn't much good for a phone patch!)

I plan on a maximum of publicity and input before firing up. This may be the early part of the year, but when we do get going we would have an organized operation. The CARF Headquarters station VE3VCA likely would be the pivot point NCS. Hopefully, again, (always hoping) we would interface with the military net and the NTS. Possibly we could hope for traffic from those taking part also in Section or Region Traffic Nets. In turn we could feed traffic into those nets as a terminal proposition. I have had good acceptance of the idea from some of those sources. But please, write, wire or telephone your ideas and offers of help.

As it was in the beginning: Anyone for an RTTY Traffic Net???

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# LETTERS TO THE EDITOR

Lenn Batson VE7BCO suggests that we carry a Canadian net directory. Will someone volunteer to collect all this dope and we will publish it? ...Days of operation, time (Zulu), frequency mode, nature of business (e.g., traffic, swap, etc.). We have some listings but are short on western ones.

In a letter from John Brychka VE4 ADX, he wishes to publicly thank white caner Stanley VE3GFE in Hamilton for his help to himself and others in guiding them around Toronto and Hamilton via VE3DRW repeater on 146.16/146.78.

Murray Strome VE3JSO writes, "I recently returned to the ranks of active Amateurs after many years away from the hobby. I notice a lot of changes. Perhaps one of the best is the existence of an active, truly Canadian Amateur radio organization. I also belong to the ARRL ... and want them to continue to provide their services to North American Amateurs but I strongly support CARF as the 'official voice of Canadian Amateurs' in dealings with DOC".

Thanks to letter writers VE3IU for his stand on enforcement (...we agree... "we need more of it"); Jim VE3JCB for ideas for a membership drive (... we're looking at them) and Pete VE6AMQ ... the full symposium report will be available soon. It is a long hard job to reduce a full day's talk from four workshops to something readable! DA1QR/VE4ABO takes us to task for goofing up his call sign in the report on the new licensees at CFB Lahr and CFB Baden, Germany and adds that Jan, DA1 FN also got her Advanced certificate.

C.B. Smith, Toronto wrote us a most interesting letter but it would help in replying if we had an address, a call sign or a membership number. (ever try to locate a Smith in a city that size by using a phone book?)

## Deskfax

Before my retirement I was an engineer with the Western Union Telegraph Co. R&D lab., and I did some of the

design work on the W.U. 'Deskfax'. I understand this is being used by some Canadian hams, and I would like to get in touch with them as I am interested in what they are doing and might be of some help.

Frank T. Turner VE1BJV,  
Box 3, RR 1 Plympton,  
Nova Scotia B0W 2R0

## Prices

Keep up the good work with The Canadian Amateur as it is becoming better by the month. A suggestion would be to convince the advertisers to put a price on their products even if it is only for a short fixed period. The reason ... is that most of us know the price in the USA but it is a nuisance writing to find out the price in Canada.

Harry Coomber VE3GNH

## RSO Con

On behalf of the London ARC and its Convention Committee, I would like to say "thanks" to the Federation for arranging to have Dr. Peter Ruderman VE1PZ come to London to speak at our Convention.

Dr. Ruderman's presentation was certainly well received. We heard many positive comments about it afterwards.

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Carl Smith, Vice-President of the League was particularly impressed with Dr. Ruderman's knowledge of his subject material. Without the assistance of such people as yourself and Dr. Ruderman, our Convention programme could not have been the success that it was.

Harry MacLean VE3GRO

## Third Party

- There is a subject which has been causing me some concern since upgrading to Advanced last March: third party traffic. What the regulations state seems fairly straightforward:

-- no one can operate your station unless he is duly licensed and you (the licensee) retain control of the station. (GRRII 50)

-- your station shall not ... (pass international third party traffic) ... unless such communications have been authorized by the countries concerned. (GRRII 50.7)

Unfortunately, trying to apply the regulations in practice is no easy task, particularly for a newer participant in this hobby like myself (licensed June '76).

Let me give you a sampling of my own particular questions:

--What constitutes third party traffic? Clearly, if an Amateur in another country gives me a formal message destined for (or from) another individual, third party traffic is being handled.

But what if an Amateur from another country wants me to call a local operator to get the local on frequency?

Thanks to The Canadian Amateur, there is always a reasonably up-to-date list of existing third party agreements between Canada and other countries, but I would like to know how agreements come about? Specifically, what can we do, either individually or collectively, to foster such agreements? The foreign Amateurs to whom I've talked assume that no third party agreement exists due to objections by the Canadian government. The Canadians assume it's the foreign government. Where do the obstacles really lie?

... There may be a substantial number of Canadians, particularly newcomers to 15 metres and 20 metres SSB, who are as ignorant as I in this area. An article in The Canadian Amateur dealing with third party traffic could go a long

way toward improving this situation and thereby maintaining the reputation Amateurs have earned for high calibre operation and self-policing. (Coming up, in a future issue. Ed)

Keep up your good work with The Canadian Amateur.

Norm Sadler VE3HGD

## CFARS

On behalf of the Canadian Forces National Defence Headquarters, I would like to convey my thanks to you and to the CARF for having permitted Capt. Ron Gebhardt to give a presentation on the Canadian Forces Affiliate Radio System (CFARS) at the 1978 CARF National Amateur Radio Symposium. The CARF symposium provided a firm base for the introduction of the CFARS concept to the radio Amateur community.

Ever since the inception of Amateur radio, many Amateur communicators have given the Canadian Forces their constant support, especially to military personnel at remote or isolated locations. The resulting morale enhancement to our servicemen and servicewomen cannot be over-emphasized.

It is expected that the initial operation of the system will begin early next year. Specific operational procedures will now have to be drawn up, and membership affiliation criteria defined, commensurate with DOC approval.

Again, our many thanks for your cooperation and assistance.

Lt. Col. G.L. Coady  
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# New exam format draws comment

The new Certificate of Proficiency exams tried out for the first time in November have aroused interesting comments. The new format is a book with all three exams presented: Amateur, Advanced and Digital Operator, the latter being code-free. The first two required only receiving tests. This saves time and money, we suppose, but the truth is that the inspector job in DOC no longer requires a knowledge of code. The next exams are on January 24.

Here is one letter we received which offers some constructive criticism. It's from B.A. Morrison of Gananoque, Ont, who is a professional engineer specializing in electronics and computers.

"The unexpected questions on the exam so threw me that I couldn't even answer the remaining questions at all well. I am demoralized to the point where I don't feel like trying again, and certainly won't until I have a firm idea in advance which topics are going to be covered...

"The key question to answer is whether this certificate is to be Amateur and microprocessor/packet radio based, or whether it is to be professional and restricted to academics and professionals in the digital radio communications fields ... However, if we are to attract the Amateur computer operator, and technically proficient Amateur generally, then future exams have to be changed; otherwise, all of the academics, digital radio specialists will get their ticket this year or next and then the 'well' will dry up -- and there will only be 30 or so new Amateurs.

"I am convinced that there is a fairly large number of potential Amateurs out there ... However, their interests are not being represented directly, except by CARF. Please see what you can do."

Mr. Morrison enclosed a letter which he wrote to DOC and which we quote in part for the information of prospective Digital ops:

"I found the inspectors very cooperative, interested and helpful (and) they... exhibited sensitivity to the needs of the applicants ... The theory exam,

Part IV, contained some involved and time-consuming calculations ... Persons with hand calculators (had) a distinct advantage when writing this exam\*.

"In Part IV, five questions were offered. All five had to be answered; each is worth 20 points. A passing grade is 70%. Thus, if any one question dealt with an area with which the applicant is unfamiliar such that he is unable to answer it, his maximum mark would be 80%; he would probably fail the exam.

"I feel that a fairer system would be to adopt the layout of past Amateur theory exams which is to give 'n' questions and ask that 'n-2' or 'n-3' be answered...

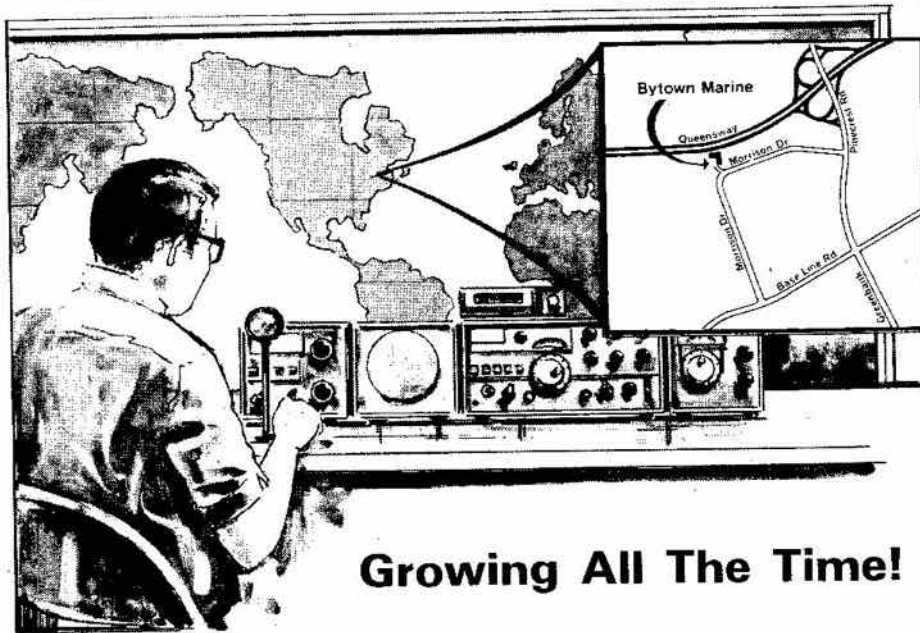
"The suggested reading material (in DOC TRC-24) included many microprocessor references, so I assumed that microprocessors would form a major part of that exam. In fact, only two of the topics listed (2 and 4) were on the exam. In place of the others were questions on information theory, statistics and the design of a pulse transmitter. No questions dealt with 'micros'.

"I felt that I was well-prepared to write on all topics listed, particularly with emphasis on microprocessors. I know nothing about information theory and little about statistics, so I was not able to answer questions 1 and 5 correctly, and was so disoriented as to probably do poorly on the remaining three ... I feel very strongly that the exam questions should have been restricted to the five general topics listed in TRC-24.

"As presently composed, the digital certificate is not an Amateur certificate; it is a professional one. Nobody can expect to pass the test unless he has a reasonably thorough knowledge of cueing theory, information theory, and statistics. These are all advanced and complex mathematical subjects. Thus, the basic prerequisite for the certificate is a BSc or BaSc Degree, specializing in

(\*DOC advises that 'non-programmable' calculators will be allowed in future ... Editor.)

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computers and digital radio communications ... I thought that this concept had been abandoned after discussion with Amateur groups.

"I feel that if cueing theory, information theory and statistics were deleted from the requirements, that the remaining topics listed in TRC-24 would represent a reasonable level of competence such that the holder of the certificate could become active in packet radio and related fields. He would not be able to participate meaningfully in some of the standards development for packet radio, but it is not important that all Amateurs be at a professional level. To insist on that is to miss the point of the entire group of Amateur licences..."

Mr. Morrison went on to recommend some changes to DOC. He especially suggested that DOC's pamphlet TRC-24 mention that calculators are permitted and "that an applicant who passed all but Part IV of the examination on Nov. 15 be allowed to re-write Part IV at any of the examination times in 1979 and, upon passing, be granted the certificate".

He concluded: "A population of potential Amateur-experimenters exists in Canada. These are generally people of higher technical skills than present Am-

ateurs, and who... would like to get into packet radio, some into EME links, some into satellite work, some into Amateur TV, some into UHF antenna design, etc. ...I feel that they have a natural right to have access to that portion of the electromagnetic spectrum above 100 MHz, if they can prove themselves reasonably knowledgeable in radio theory and regulations... I feel that they were denied such access by an unreasonably stringent examination which required them to have knowledge on a professional level -- knowledge which is not necessary for normal design, construction and operation but which is needed only for some of the standards development in packet radio."

"I was really disappointed by the test. I had expended considerable energy to become knowledgeable in fields outside my specialty. I have apparently failed. I hope that future exams are changed to represent a more reasonable level of competence that is more in line with the restricted privileges of this certificate.

"I would appreciate your forwarding this letter to the individuals responsible for this examination."

(We did ... Ed.)

---

## Computers & Amateur Radio

Kim Lantz VE1AKL  
in the 'Cape Breton Amateur'

Computers are becoming more and more a part of our everyday life and if anything Amateur Radio is receiving more than its share of effects from computers. With the recent developments in integrated circuitry, the cost of these units has dropped to such an extent that a system is now available to the hobbyist for a reasonable price. These systems are capable of things that it would formerly have required a several hundred-thousand-dollar computer to do. Today's smaller and cheaper units do it faster, and better than ever before.

What does a computer have to offer the Amateur without any special inter-

ests other than the normal CW/SSB operator? Well, there are several things. Firstly, a complete log-keeping system, where by he can instantly find out if he has worked a particular station before, when, and what this person's special interests are. You really shock someone that you may have worked a year or more ago, by instantly knowing his name ... and you might ask him how his tropical fish are! This tends to surprise a person, and they might think that you are blessed with a tremendous memory. We all know how you pulled it off though.

For the CW operator, there is a bit more to offer. Firstly, the computer is

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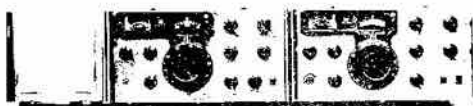


## TS-820

## 599D SERIES

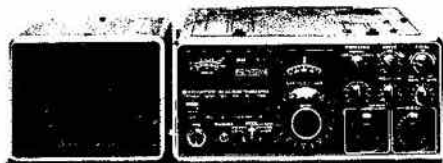


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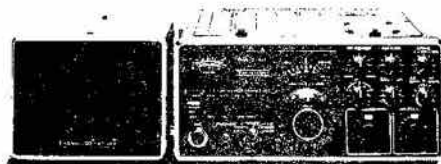


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an ideal CW keyboard, but it can offer much more than any keyer, keyboard, or memory keyer. You can have a great deal of information stored such as CQ's and your station description, plus other things of interest. The main advantage is of course that you will sound like W1AW when sending CW! Although CW can be received quite well by computers, it tends not to be too practical due to the fact that the computer cannot distinguish between say a noise pulse (static) and a 'dit'. This tends to be the fault of a poor interface between radio and computer more than the fault of the computer.

Ah! I have finally got to my favorite subject, and the purpose of this whole thing. Computers and RTTY; there was never two things that went together better. If anything Amateur Radio is the best thing for computers, and RTTY is the ultimate mode for the computer users. It is thoroughly possible to use a computer for your complete RTTY station, and these systems are in use all over North America and Europe. They range from just simple transmit and receive programs to very complicated and extremely functional station controls built in.

A word about autostart and how it works. Basically you leave your receiver on a certain frequency all the time, but your teletype machine if 'OFF'. This can work for both computer equipped stations and ordinary 'mechanical' stations. When someone comes on the frequency, and starts to transmit an RTTY signal, your teletype machine instantly comes to life and you get the message. When this person has finished the message your machine will shut off, and resume its listening for RTTY.

This system has been in effect for some time now, and is really nothing new.

All the fun starts when you start adding computers to an autostart net. I will try to describe a system that is in effect on 20 meters (14.082500 MHz) and is working out very well indeed. The whole thing is mainly possible due to the programming skills of a few 'geniuses'. You do not have to know a heck of a lot about it to use it yourself, you simply get the programs from someone else.

Everyone is on autostart -- we have gotten this far. Say for example if I

want to know if Martin, VE3JCU is really on autostart and printing me ok, it's very easy for me to find out. I just go on frequency and send JCUZW identify and then shut off my XMTR. If Martin is there, his computer will turn on his transmitter and send 'VE3JCU (on) 13/11/78 (date) and maybe the time'. Now, say I am looking for VE3CM but cannot find him. I can leave a message at Martin's place by typing the right command; it will store in memory, when I have finished my message, I type NNNN, which tells Martin's computer to stop recording. Now, if I send JCUZR (R for Relay) then his computer will turn on his Xmitter and send back the message just recorded, this way I know it was received ok, and I can be sure that Dick (VE3CM) will receive it.

If I want to know the time my message was received, I just type 'TIME' and his computer will send me the time. Also, when I was sending the message to Martin's computer for reading, if I made a mistake, and put long spaces in the text his computer will fix it all up. I will give you an example: The following would be an example of a typical message.

First I send JCUZW to see if he is actually on the air. If I get a reply, then I can leave the message. (The errors are deleted by sending XXXX).

```
JCUZC
VE1TB DE VE1AKL - COULM XXXX
COULD NOT GEY XXXX GET YOU
ON HERE PIERRE SO LEAIN XXXX
LEAVING MESSAGE ON MARTINS RE-
LAY
73 AND SEE YOU LATER
ON NNNN
```

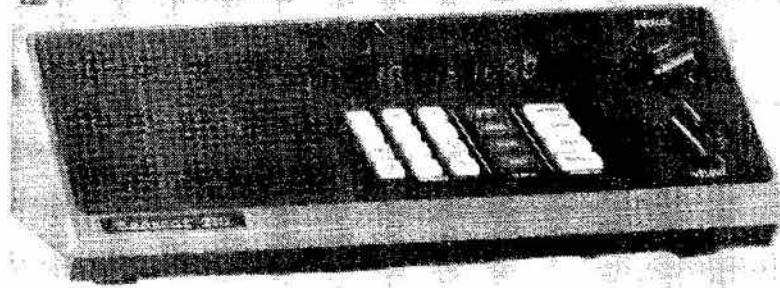
After processing it reads:

```
VE1TB DE VE1AKL - COULD NOT GET
YOU ON HERE PIERRE SO LEAVING
MESSAGE ON MARTIN'S RELAY 73
AND SEE YOU LATERON NNNN
```

All the errors and spaces have been fixed by the computer.

This is just a small part of what is happening. Remember all of this is still in its infancy and is bound to blossom as more and more people get in on the act. So, hold on to your hats, you are in for one heck of a technological change within the next few years. Join in the fun on RTTY!

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VE8 Northwest Territories

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All Amateur bands may be used. Each distinct satellite mode (432in/144out, 144in/29out, 144in/432out, etc.) will count as a separate band.

Mail all applications for the CANADAWARDS to: P.O.Box 76752, Vancouver, B.C., Canada, V5R 5S7.

## Computer fans:

**COMPUTER FANS!** If you want your club to get plugged in to an information net on a national basis have your executive give their names and addresses to CARF Inc., Box 356, Kingston, Ont. K7L 4W2. Info on computer hobby activities and the new Digital Operator certificate will be a new CARF service. The DOC will be using CARF news media for information on the new Digital Op certificate operations. Expansion into the world of microprocessors is dictated by the fact that a survey of some computer clubs revealed that about 50% were already holding Amateur or Advanced Amateur Certificates. We need articles for beginners in the microprocessor hobby as well as stories on the experiences of those who manage to get the Digital Op's ticket.

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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.

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