Second Class Mail Registration
Number 5073

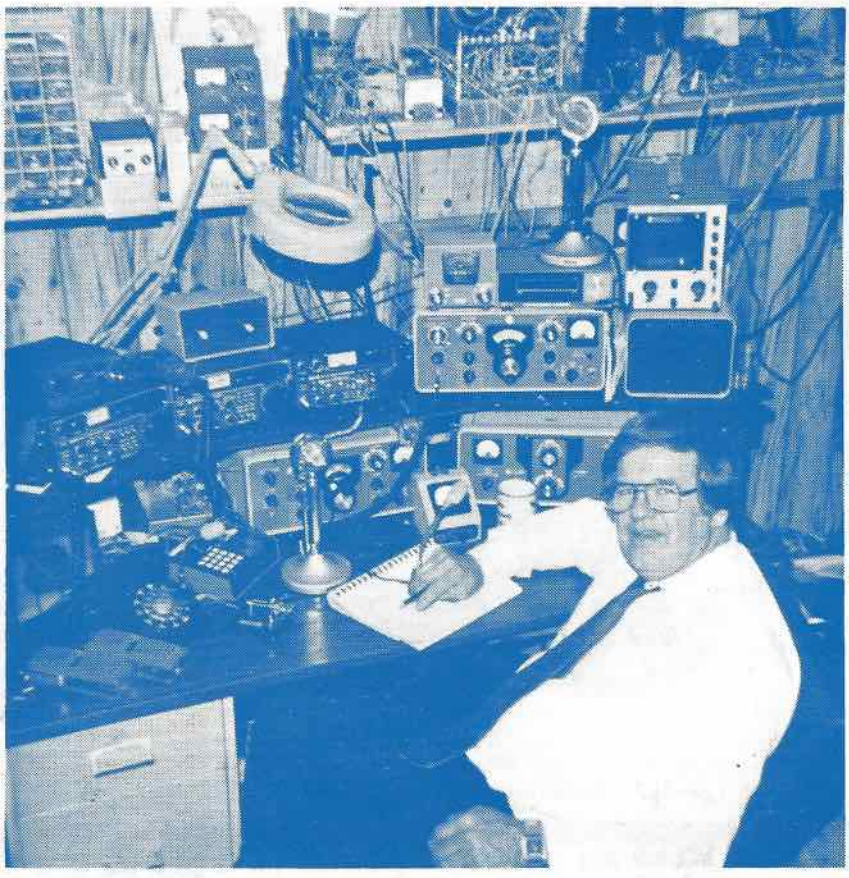
TCA

The Canadian Amateur Radio Magazine

$1.50

SEPTEMBER
1982

THIS ISSUE



Gerry King VE3GK...
VE7ZZZ — Contest Station
VE3MCS — A Youth's View of Amateur Radio
Bar Chart

ISSN 0228-6513

TCA

THE CANADIAN AMATEUR

SEPT. 1982 Vol. 10 No. 7

Thanks this issue go to Kris, VE3KLH, for her patience.

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

Unsolicited articles, reviews, features, criticisms and essays are welcomed. Manuscripts should be legible and include the contributor's name and address. A signed article expresses the view of the author and not necessarily that of C.A.R.F. Publications Limited.

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Indexed in the Canadian Periodical Index: ISSN 0228-6513

Second Class Mail Registration Number 5073

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- Five memories + VFO's - store your favorite repeaters.
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The ICOM IC-740 Cadillac

The IC-740 from ICOM contains all of the most asked-for features, in the most advanced solidstate HF base station on the amateur market...performing to the delight of the most discerning operator.

Study the front panel controls of the ICOM IC-740. You will see that it has all of the functions to give maximum versatility to tailor the receiver and transmitter performance to each individual operator's requirements.

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Options include:
- FM Module
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- Electronic Keyer
- 2 - 9MHz IF Filters for CW
- 3 - 455MHz Filters for CW
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Accessories.
- SM5 Desk Microphone
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- Linear Amplifier
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- Headphones
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- Memory Backup Supply
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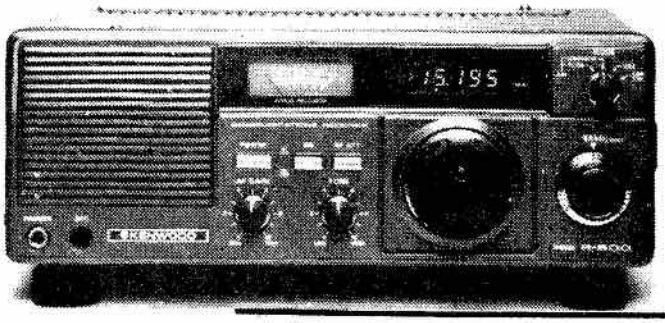
THE FINEST IN SWL IS AT GLENWOOD



R-600 $549

The R-600 is a high performance, general coverage communications receiver covering 150 kHz to 30 MHz in 30 bands, at an affordable price. Use of PLL synthesized circuitry provides high accuracy of frequency with maximum ease of operation.

30 bands, each 1 MHz wide, for easier tuning.

Five digit frequency display, with 1 KHz resolution.

6 kHz IF filter for AM (wide), and 2.7 kHz filters for SSB, CW and AM (narrow).

Up-conversion PLL circuit.

Global NR-82F1 $499

Global Coverage
Global Appeal
Global Operation

12-BAND WITH DIGITAL FREQUENCY COUNTER

Frequency Range

LW	145	– 360 KHz	VHF1	30	– 50 MHz
MW	525	– 1600 KHz	VHF2	68	– 86 MHz
SW1	1.6	– 3.8 MHz	VHF3	88	– 108 MHz
SW2	3.8	– 9 MHz	VHF4	108	– 136 MHz
SW3	9	– 22 MHz	VHF5	144	– 176 Mz
SW4	22	– 30 MHz	UHF	430	– 470 MHz

FEATURES

- Double conversion
- USB/LSB Switch
- Antenna adjust control
- RF Gain control
- Squelch control
- SW Calibrator
- Highly accurate digital read-out
- BFO
- Speaker/Headphone jack
- Tape record/playback switch
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- Bass and Treble controls
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- 452(W)x288(H)x130(D) mm.
- Weighs 5.4 kg

R-1000 $649

The R-1000 is an amazingly easy-to-operate, high-performance, communications receiver, covering 200 kHz to 30 MHz in 30 bands. This PLL synthesized receiver features a digital frequency display and analog dial, plus a quartz digital clock and timer. Its easy-single-knob tuning and high sensitivity, selectivity, and stability make the R-1000 a favorite amongst Radio Amateurs, shortwave listeners, engineers, maritime communicators, and others who demand high quality in a general-coverage communications receiver.

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Hamilton Amateur Radio Club
50th Anniversary Dinner
Wednesday, September 15, 1982

6:30 p.m.

Pavilion 3, 2289 Barton Street East
Hamilton, Ontario

Tickets are $12.00/person and are available by writing:

"TICKETS"
H.A.R.C.
P.O. Box 253
Hamilton, Ontario
L8N 3C8

ERRATA

Owners of the 1982 CARF? CRAG repeater directory should correct the telephone numbers therein for the CRAG co-ordinator, Hugh Lines, VE3DWL. The numbers should read - Office — (613) 392-2811 local 2989 and Residence - (613) 966-8223

CALL FOR NOMINATIONS

By terms of the current By-Law, the Federation hereby requests its members to submit nominations for the positions of REGIONAL DIRECTORS.

The membership of CARF is divided into 5 Regions:

1. **ATLANTIC — the Atlantic provinces**
2. **QUEBEC — province of Quebec**
3. **ONTARIO — province of Ontario**
4. **MID-WEST — provinces of Manitoba, Saskatchewan and Alberta, North-West Territory**
5. **PACIFIC — province of British Columbia and Yukon Territory**

Each Region, with the exception of Ontario, has 1 Regional Director with Ontario, because of its large Amateur population, having 2 Regional Directors. This division gives fairly equitable representative voting powers to each Regional Director.

A valid nomination contains the name, call and postal address of the Full member nominated (who must reside in the Region for which nominated) plus a statement, signed by the nominee, that he, or she, is willing to serve in the position if elected. The signatures of 5 Full members of the Region are also required on the nomination with the completed letter forwarded to the Secretary, CARF, P.O. Box 356, KINGSTON, ONT. K7L 4W2 before 31 Dec 1982. A photograph and resume of the nominee is welcomed for publicity in TCA, etc.

The Regional Director plays a most important role in your national Federation as together they form the Board of Directors which is responsible for the formulation of policy, for overall management of CARF affairs and activities and for the selection of the Officers and members of the National Executive that are responsible to the Board for the conduct of day-to-day affairs.

D. Goodwin, VE2ZP
Secretary.

Last issue

By now everyone hs had a chance to see the July August issue of TCA. Before you all start sending off your letters, I will try to correct some of the errors that crept into the issue.

On page 1, the date should be 'July / August" not December. I think the song goes "It's June in January". Not "It's July in December". I guess I will have to do something for the December issue.

Also on page 1, the volume is 10 and the number is 7. Ignore the membership charges at the bottom of the page. When we were laying out this page, we mistakenly used a page from last December's issue. We had meant to use June's. In spite of my declaration that we would no longer miss giving credits for articles printed, we managed to do so in the summer issue. On page 20, credit should have been given to the "West Carleton Amateur Radio Club".

On page 36, "Adventures of a Canadian Army Signalman", not only was the title misspelled, and the authors' name omitted, but I cannot find the original copy and so cannot give proper credit now. If the author would be so kind as to drop me a note, I will be sure to credit him or her in a future issue of TCA. Credit for pictures on pages 10, 14 and 41 go to Yorick. (Who is he?)

This issue

Gerry King, VE3GK, of Ottawa is well known in Ottawa for his Amateur Radio classes at Algonquin College. More than a few Ottawa area Amateurs were guided to obtaining their ticket by Gerry. A brief history and picture story appears in this issue of TCA.

Fred Towner, VE6XX became CARF's vice president last spring. His comments are also included in this issue. They are worth reading.

During the summer, CARF received many comments on the FCC docket 82-83. These were used as a basis for the CARF submission to the FCC, and a copy of this document is included this month.

Contests, DX, VHU / UHF and the Editor's Comments columns are back again. Judging from the Editors Comments column, this will be pick on DOC month. Not so. We don't pick on anyone. We comment, and sometimes criticize. If your friends won't criticize you, how will you truly know if you are doing anything wrong?

Credit for the CONCM '82 article should have gone to Ken Kendall, VE3IHX, and there were a few mistakes in that article that we should correct now.

The picture of the CN Rail trailer mentioned the truck mounted dish as an attachment. Sorry, the one in the picture belonged to another group at the conference. In the picture showing Wiggy VE3YE and Jose, VE2ELO, we mistakenly gave him the call VE1ELQ. Sorry Jose, these things will happen. Speaking of RAQI, in my editorial, I called RAQI "RACQI." Sorry.

Next issue

Ken Kendall, VE3IHX is becoming quite a reporter these days. On the August 13-15 weekend, he attended the RAQI convention in St Hyacinth Quebec. He expects to have a full report on the event for the next issue. From his comments, it would seem that the event was a success for RAQI. Congratulations to all who worked hard to make it so.

One of the problems of setting up and laying out a magazine of this sort is that you always have small spaces to fill. We can usually look to the CARF News Service for these little tid-bits. The months of June, July and August are the slack months and the service takes a break. This leaves me with no filler material. The one blessing with the system as we have it now is that I do some of the layout and can see how much space is left to fill. I can now add last minute items and reduce the amount of stale news.

Due to this new system it has been made possible to give a quick thank you to all the people who attended to Maritime "Convention '82" held in Charlottetown, PEI. From all accounts, the event was a major success for the organizers. I really enjoyed myself there, and the hospitality shown to Doug Burrill, VE3CDC, Nate Penny, VO1NP and myself was much appreciated.

A full report will be given in the October issue of TCA along with pictures that were taken by some of the participants. (If they send me some)

The card reproduced below was sent to me by Bjarne Madsen, VE5ADA and I thought it was worth reprinting here.

DEAR OM: **Fill in Date**

RE: THE ITEM YOU SENT ON .....

☐ WE WEREN'T INTERESTED AND WITH THE NEW POSTAL RATES, COULDN'T AFFORD TO TELL YOU SO.

☐ MAYBE SOME OTHER TIME - DON'T CALL US - WE'LL CALL YOU

☐ WE NEVER GOT IT - MAIL MAN ATE IT

☐ WE GOOFED, ETC.

PLEASE CHECK APPROPRIATE SQUARE & POST.

Letters:

Dear Sir:

I would appreciate very much your sending me some information as concerns my inquiry of interest.

Could you let me know the schedule of times and frequencies for SSTV transmissions and any Amateur facsimile being done.

Could I get back date issues of TCA if they contain an annual index? I am interested in finding out about weather satellite facsimile stations in particular. I keep reading about these in 73 magazine and QST. Surely there must be some Canadian Activity.

Yours truly

D'Arcy Brownrigg
Chelsea Quebec, J0X 1N0

Sorry D'Arcy, I really don't know of much activity of weather satellite stations, be I do know the activity is there. SSTV is more active, but nothing has been written on the subject vis a vis Canadian activity. The person to contact on that matter would be Syd Horne, VE3EGO in Belleville, Ontario. He is the expert. (Ed.)

Dear Cary:

I am surprised that you didn't get a flood of mail about Dave Goodwin's VE2ZP letter to Gordy Webster VE7BIR in the Feb TCA. Man, was he rough on Gordy. In many parts of society certain people will always take more out of the system that they put in. There are certain elements in Amateur Radio who tend to be "Macho" about their hobby and take up more spectrum than their share and feel that it is their right to set up contests on a more frequent basis each year. There is no doubt that contesters become very good operators, but there are too many contests and they really cram the bands on weekends and generally they are planned to utilize the particular band at a time when the conditions are most favorable. Thats the time when us other fellows want to operate too. It is time to re-evaluate all contests on a world wide basis and then to restrict the frequencies used to 100 Khz in a band. That would put all the QRM in one place. It would really sort out the real operators and their ability to handle messages under less than ideal conditions. Another suggestion is to restrict countries worked to a minimum of fifteen minutes of operating to qualify for a new country rather than RST and on the next station. What ever happened to a good old fashioned QSO which lasts for an hour on C.W. Many of my most memorable contacts have been on the good old hand key wound up at about twenty words per minute for a good old ragchew. I think that Gordy Webster had something important to say to the Amateur Community. Some people don't listen too much. They just transmit.

73"
Lou Beaubien VE7CGE

1515 Wilson Ave. Apt 305
Downsview, Ontario. M3M 1H1

The Editor, T.C.A.

Dear Sir:

I am taking the liberty of asking your advice as to how to improve the strength of weak DX signals. Can hear many but the readability is "Scrappy".

The big trouble is lack of a good antenna as I live in a single-bedroom apartment and cannot have an outside wire or visible inside antenna or fittings.

With a Radio Shack DX200 and using the 12 foot long drapery track to pick up signals, am getting world-wide CW if one includes the occasional exotic ones.

My last one was F08IT French Polynesia "Gilbert" on the atoll HA0 ISLAND — but so many foreign stations, that I can hear working (but the reading scrappy) "get away", so would a variable capacitor in the down lead improve things? My knowledge of present day radio is improving daily. Have been away from it mostly since was in Royal Corps of Signals in 2nd world war. Am age 78 but find my morse speed gradually getting back to what it used to be.

Yours faithfully

P.N. Squibb
Short wave listener

This is a question asked by many readers. The answer is not very simple. As you are forbidden any outside antennas, I would suggest you buy one of the commercially available pre-selectors. They might boost the signals up a bit. The DX200 is a relatively sensitive receiver as they go, however it is not really designed for the serious SWL enthusiast. A more expensive receiver, or an older receiver designed as a commercial all band communications receiver, like the 51-J series, or the Racal RA-17 or similar might improve the situation. Most of the RF is being absorbed by the building, so tuning the antenna to the desired frequency might also help. Other than that, I have few suggestions for you. Perhaps one of our readers might write in and help.

ed.

---

11 Metre Blues

The following letter was received by me last spring and it appeared to be a good commentary on the situation on the GRS bands. Shortly before I was to publish the letter, I received a call from the author. It seemed that he had sent an iden-

tical letter to the DOC in his region, and the contents had been leaked out to the local GRS group. The result was some very nasty phone calls (anonymous of course) to the author, plus some vandalism to his personal property. Although he wished to have his comments published, he felt that further harm might come to him should it be published under his name. For that reason I am publishing his letter without divulging his name or location. It seems a shame that this sort of thing has to happen, but I guess it does. One of my major complaints when I was editor of a local club bulletin, was that GRS crowd were being allowed to operate in a manner that was, to say the least, unacceptable to those who work hard and pay dearly for the privilege of operating a radio station, be it Amateur or commercial.

We have all noted that the DOC intends to increase our fees in the near future. Their reason seems to be that it is taking more and more time and manpower to administer Amateur Radio in Canada. I feel that before they try to 'sock it to us', they should demonstrate a willingness to help clean up the act of both the GRS and the Amateur bands.

VE3ARS

Dear Sir:

CB Licenses in Canada may have dropped by 33 /, but have you ever listened in the range 27.5 and 28.0 MHZ, our old 11 MTR band, taken away from us some years ago?

It seems to me that the illegal activity there is sharply on the rise. You can find stations there from all over the owrld, including Canada, using trange call signs and even stranger operating habits. Technical incompetence of these illegals, their frequently misadjusted and grossly overmodulated transmitters often emit spurious signals in our 10 MTR band and cause QRM.

Merely listening occasionally in that range, I find that many of these bootleggers are using amateur type equipment, including high power amplifiers and triband beams. Some are organized using PO Box numbers given over the air, WW calls or RC (Radio Canada) calls. Some are intruding right into the the 10 MTR amateur band calling amateurs and often interfering with ongoing QSO's. Some local groups in the area can be heard almost any time of day or night. One local bootlegger was overheard saying that he will see to it that the antenna and radio equipment of a licensed VE amateur be smashed by an "Enforcer" because he allegedly "Illegally interfered" with the operation of the bootleggers.

And what do you suppose may happen when this section of the HF spectrum becomes unusable for DX contacts due to decreasing solar activity? I have already listened to strange goings-on in the 20 MTR band.

Why am I saying all this? - First, with their poor operating performance and sometimes foul language a bad image can be created of radio amateurs. Most ordinary citizens don't know the difference between CB and amateur radio, and anyone using a two-way radio as a hobby is a "Ham". Second, with a vast increase in their numbers, cases of TVI and HI FI interference will increase, and the ham around the corner will have to take the blame for it. Third, I think it is unfair that we licensed amateurs are controlled by the dock have to pass an exam, which for many of us requires hard work, and have to pay a yearly fee. All the while the bootleggers are getting away unscathed.

Is the doc complacent or have they given up on the matter? After all, with all the information made available on the air as to their location by the bootleggers themselves and with the sophisticated equipment at the doc's disposal it should be possible to catch a few.

Amateur publications hardly ever mention this problem and act as if the whole mess didn't exist. If ther are laws covering the illegal operation of transmitters, then these laws should be rigorously enforced, with equipment being confiscated and stiff fines handed down. Names and facts of such cases should be published in amateur publications. The word will spread quickly and the bootleggers will think twice before pressing the button.

I suggest that you write to the Minister of Communicatons in Ottawa, Mr Francis Fox or your member of the Federal Parliament and complain about this situation.

Furthermore amateurs with equipment which tunes the frequency band 27.5 to 28.0, like the TR-7, can use their beam antennas for direction finding, and use mobile equipment to further localize the source of the signals and pass all pertinent information to their regional doc officer.

Name withheld by request

Dear OM:

I would like to inform you that the Elliot Lake Repeater moved to its new hill top site in late June. Coverage is up to about a 45 mile radius for mobiles and further for base stations. The Repeater frequency will remain on 147.60/147.00 Mhz. However the call was recently changed to VE3TOP from VE3WRR. Please note that VE3TOP is the only Repeater in that area. The call, VE3NSR has and still continues to be listed in some Repeater Directories. This is incorrect as the call VE3NSR belongs to the North Shore Radio Club in Oshawa.

Many thanks, 73.

Sincerely yours,

Gord Woroshelo VE3EYW

Dear Sir:

I am experiencing a difficulty in tracking down the whereabouts of members of the amateur fraternity. I feel there may be some benefit in requesting information of the whereabouts of these individuals through your publication. I request that you print the list noted below in your next issue and ask your membership to pass information concerning these amateurs to the above address, Attention J. Nosotti.

Thank you for your co-operation in this matter. The list of unknowns follows:

Johannes Jacob Oosterdag
VE3COO
Ralph Blair Daniels
VE3HXD
Richard Edward Hobson
VE3BZY
Gerald Ernest Vickers
VE3IAF
Joseph Szikora
VE3GSU
Kenneth C. Ellis
VE3BCK

Yours truly,

J. Nosotti
Supervisor - Enforcement
Room 909 9th Floor
55 St. Clair Ave., East
Toronto, Ontario
M4T 1M2

To whom it may concern:

First I would like to say that we certainly appreciate receiving your "News Service" bulletin. It has proven to be informative reading not only to myself but also the staff some of whom are amateur operators.

I would like to advise you of our change in address for our Charlottetown office.

Department of Communications
97 Queen Street
Charlottetown, P.E.I.
C1A 4A9

Yours truly,

Clinton J. Landry
District Manager
D0C Charlottetown, P.E.I.

Gentlemen:

For your publication we wish to state that the Shuswap Amateur Radio Club is holding a Hamfest on September 10, 11 and 12 of 1982

Thank you

Yours truly

M. Parry VE7 EFR
Secretary

Social Events

Dear Cary:

I appreciate the publication of the letter regarding the Hamilton Amateur Radio Club's 50th Anniversary Dinner. Unfortunately the date of September 22, 1982 that I quoted, is incorrect and the actual date is **September 15, 1982.**

Thanks very much

Yours sincerely

Bob
F.R. Dyer VE3 KTY
President,
Hamilton Amateur Radio Club

Exotic spot for a convention

The 12th Annual South East Asia Network Convention SEANET 82 will be held in the Imperial Hotal, Bangkok, Thailand on November 12, 13, and 14. Registration is $50 U.S. Information and registration are in care of RAST Secretary, Box 2008, Bangkok, Thailand.

There is one drawback to this exotic location . . . anyone attending is asked NOT to bring any amateur radio equipment with them as the government forbids bringing it in or taking it out unless special permission is granted!

TEACHING HAM RADIO EFFECTIVELY
A one-day seminar for instructors

Topics will include effective presentations, audio-visual aids, experiments and demonstrations, testing techniques.

All topic leaders are qualified teachers and hold advanced licences.

OCTOBER 17, 1982
TORONTO

For more information contact:
Philip Gebhardt, VE3ACK
14 Odion Cres.
Aurora, Ont.
!4G 3T4
(416) 727-2167

York Region Amateur Radio Club

The York Region ARC is holding its annual fleamarket on Saturday 13 Nov 82 at the Newmarket Community Centre, NEWMARKET, Ontario. The town of Newmarket is just north of Toronto and easily accessible by Highways 11, 400, or 404. The fleamarket will operate 0800-1400 EST, with doors open for exhibitors at 0630. General admission is $2.00 (children admitted free of charge if accompanied by an adult) and the cost of admission includes a door prize ticket. Tables for exhibitors are available for a fee of $2.00 per table.

The talk-in station, VE3YRA, will be operating on 142.52 MHz simplex, and through the local repeater, VE3YRC, 127.225 MHz input/147.82 MHz output. Refreshments will be available on the premises.

Send all social event notices to:
"SOCIAL EVENTS"
TCA, PO Box 2610
Station D, Ottawa,
Ontario. K1H 5W7

From the President

Fred Towner VE6XX

I guess you were probably thinking that I would never get around to writing something in TCA. Sorry for the delay, but things have been hectic. A lot of things have happened since I took office as VP of the Federation last spring one of them being the passing of our Midwestern Director, Jim MacKenna, VE6HO. Needless to say, Jim's passing came as a real shock to many of us out here. Although I had been aware for quite some time that Jim's days were numbered, it still came as a shock when I got the news that he had died. As most of you know by now, Norm Waltho, VE5AE of Moose Jaw Sask is Jim's replacement and I know you will all give him as much support as he needs in his new position.

I am delighted to announce two new Assistant Directors. Sil Shaw, VE7QC has been a well known and respected Amateur in the west for more years than I can remember. Now retired, after years of service in the interior of BC with the Dept of Highways, Sil is very active in traffic handling in the west. Sil will, because of his advantageous position in the BC interior, make an ideal bulletin station for the federation, in addition to assisting me in the eastern area of BC. Sil's address is: PO Box 2854, Creston, BC.

The other Assistant Director is Tony Field, VE6CCS. Tony has been a knowledgeable and vociferous supporter of CARF for many years. Tony is a well known Amateur locally and is, presently, negotiating with Calgary University in an attempt to get cooperation between CARA and the university in developing networking techniques utilizing Amateur Radio and Packet Radio. Tony's address is 2011 - 30 St sw Calgary, Alberta, T3E 2L6. His telephone number is (403) 249-5338.

Just a little over two years ago I resigned my appointment as Vice-President of CARF in order to accept nomination as Vice-Director, Canadian Division, ARRL. No, I was not deserting the CARF ship. The nomination committee of ARRL would not accept my nomination unless I severed ties with the Federation. This, on the grounds that it was contrary to the leagues "Rules of Association", because the Federation was publishing books of interest to Amateurs.

I was hoping that, by becoming a member of the league executive, I might be able to forge some sort of agreement on the cessation of hostilities between the two organizations, and, possibly engineer a merger that would be of benefit to all Canadian Amateurs.

Unfortunately this was not to be. On the one side it was apparent that there was no interest on the part of CRRL executive to consider the possibility of a merger, and on the other side, the proposal by CARF for a merger could have no other result than rejection by the league. This merger proposal was couched in terms that were more closely indicative of a takeover than a merger. Although the federations executive planned this proposal as merely a point from which to start bargaining, a more realistic proposal would have been much harder for CRRL to turn down out of hand.

bination of circumstances, I was not as effective a Vice-Director as I would have chosen to be. At the beginning of my term I had a long period of illness which precluded my making many of the visits to Clubs and Hamfests I had planned on making. This, coupled by a total lack of communication from CRRL HQ in London effectively left me out in the cold and severely limited any influence I might have had.

During my tenure as Vice-Director of the Canadian Division the matter of U.S. phone band expansion was brought up. I am able to report that the Canadian Director spoke strongly against this motion. However, the Canadian Director is only one voice and one vote as opposed to many. The motion carried, and we are now faced with the spectre of a notice of proposed rule making by the FCC, proposing to expand the 20 meter phone ban down to 14.150 MHZ and a notice of inquiry to consider expansion of other phone bands. When this matter was first proposed by the League's Board of Directors, I requested that Canadian Amateurs drop me a card indicating their opposition to this matter with unemotional, logical reasons why it should not be done. I am sorry to say the response was less than 100 cards and/or letters, and the response was, for the most part, far from reasoned and logical. In all I received only about five or six cards with reasons that could be presented to the League's Board of Directors, The FCC and the DOC as reasons why this should not be done. As for the numbers who responded, I can only say I was shocked and disappointed. A response of less than .5% can hardly be portrayed as strong opposition. When this band expansion comes to pass there will be a great hue and cry, and demands will be raised that the Federation, the CRRL and the DOC do something to reverse the ruling, but it will be too late. The time for for action was a year ago when this was first brought to your attention. The fact that you chose to do nothing was your decision. The fact that we are going to effectively lose 50% of the 20 meter phone band (and probably other bands as well) is a direct result of the decision you made to do nothing. Without popular, massive support, those who would have tried to preserve those freqencies for you were handicapped to the point of being completely ineffective.

Although it is probably too late to save the 20 meter band, it may just be possible to apply sufficient pressure to save our remaining bands. I urge you to write CARF Headquarters outlining your calm, logical reasons why the FCC should turn down this application for phone band expansion, copies of this should be sent to ARRL Headquarters in Newington,

Conn., and to FCC Headquarters in Washington DC. Addresses for all these places will appear at the end of this editorial. If you are to have any effect at all we must accomplish two things, we must swamp them with overwhelming numbers and we must persuade them with overwhelming logic. Throwing barbs at U.S. operators because of crude, ill-mannered operating habits (while using ultra-high-power) will have no effect. Remember, we have our lids as well. One only has to listen to some of the Trans-Canada net sessions for ample proof that Canadians are not without turkeys. The deliberate QRM, the tuners, the discourtesy are all disgusting examples of how vulnerable we are in our own glass house.

Further to the problem of phone band expansion; we have recently received word from DOC that they are in receipt of a letter from FCC urging them, in no uncertain terms, to permit U.S. Amateurs visiting Canada to use those "Foreign" portions of the bands where they are now excluded. Wiser heads, experienced in international frequency negotiation are quick to point out that this would be tantamount to giving our permission for carte-blanche expansion. Once again, our best defense against this tactic is to insure that DOC is fully aware of our opposition to this maneuver.

It has occurred, in the past, where a U.S. Amateur, operating in a major contest, has claimed to be portable VE, in order to get that coveted, "tops in call area" certificate. Once they have full permission to operate in all portions of all phone bands how will this be policed. Remember, there is no longer any need for U.S. amateurs to apply for permission from DOC to operate in Canada.

I wonder, if they do get permission to operate in the foreign portion of the bands, does this mean that to operate in the now forbidden portion? Interesting question that.

While I'm up here on the soap box I might just as well comment on one other thing that has just been bugging the blazes out of me. How come when both CRRL and CARF are working with DOC on a particular matter it is usually reported in a manner that would lead one to believe that only one organization is doing all the work. If one organization comes up with a spectacular effort it sure would be a change to see it reported that way by the other organization. Oh well, I've yet to see Eatons congratulate Sears on a fine sale. But at least guys, if the other organization has done most of the spade work, don't try to claim it as your own "victory". All this will lead to is a resumption of the ill mannered sniping that so weakens us in the eyes of all observers.

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Well, one final item and I'll bow out for this month. The 1982 Amateur Radio Symposium was sponsored by the Scarborough Amateur Radio Clubs this year. The advances that have been made through the medium of these Symposia are countless. They deserve your support. This is our most effective way of reaching the ears of the decision makers at DOC. If you have a point that you want to get across to the agency that governs us this is your effective way of doing it. Attend in person if you can. If you are unable to attend, submit a paper to CARF with your ideas outlined. Your paper will become a permanent record of the symposium and will be considered by those attending. Urge your club to send a representative. It's your hobby and you have a right to be heard. Make your voice effective. The 1983 Symposium is being held on the east coast. Plan to attend.

Well as promised, time to climb down off the soap box. It's good to be back.

Fred Towner VE6XX, Vice President of CARF welcomes your comments on this article. Send your comments to him at 123 Rundleridge CL. N.E. Calgary, Alta. T1Y 2L2

Canadian proposals to ITU Plenipotentiary Conference in Nairobi now available

OTTAWA, August 6, 1982 -- Copies of the Canadian proposals to the Plenipotentiary Conference of the International Telecommunication Union (ITU) are now available, Communications Minister Francis Fox said today. The Conference will take place in Nairobi from September 28 to November 5, 1982.

The ITU, founded in 1865, is the United Nations specialized agency responsible for telecommunications, and the regulation of international telecommunications is achieved mainly through the work of the conferences of the Union The Plenipotentiary Conference, last held in Spain in 1973, is the supreme organ of the ITU and is responsible for determining the general policies and purposes of the Union and the rights and obligations of its members.

The Plenipotentiary Conference will be revising the ITU Convention, which will govern the Union's operations for the next five to eight years, until the next Plenipotentiary Conference. The conference will also elect the members of the Administrative Council and officers of the Union and approve budgets, financing, staffing, conferences and other items.

Amateur Radio

A view from a fifteen year old Amateur

I have always loved to pull electrical or mechanical things apart. This little habit of mine has led me to new knowledge and, inevitably, more questions to ask. A prime example of this occurred four years ago when I was eleven years old. It was a fine December day and I was enjoying it by sitting in my basement admiring a relatively new AM/FM/Shortwave receiver. It had intrigued me endlessly and my curiosity was finally giving way to action. With two screwdrivers, a pair of pliers and a soldering gun. I began to unscrew, unsolder, rewire and destroy a perfectively good radio. Soon I began to question my own ability and decided to stop. Unfortunately this was about $75 too late. My father soon put a temporary end to my electronics career.

Four years have passed and I no longer tear things apart senselessly. I tear them apart and recycle the parts in other projects. I have no doubt that this past time led me to acquire the call sign VE3MCS. My interest in Amateur Radio grew from an interest in CB. I had at one time, obtained a number of CB rigs. (I still have one if anyone wants to buy it) CB turned into an obsession with me and for a while I was at it day and night. Soon my interest in that aspect of communications was lessened as I regained my sanity. I had heard of Amateur Radio from a family friend, Lew, VE3CBF, who introduced me to the hobby. Right away I was very curious and intrigued by such a past time. Lew had studied on his own to obtain his 'ticket' but he recommended that I join a club which gave code and theory classes.

My father and I both joined a radio club but attended only a few of their classes before we realized that we were in over our heads. A few years later, when I was fourteen, we joined the Nortown (Toronto) Amateur Radio club. Belonging to this well run club made all the difference. Immediately my father and I started attending their Monday evening code and theory classes. My father eventually realized that he was not succeeding and dropped out leaving me to carry on. Being technically oriented, I had little difficulty with the theory and none of this had any adverse affects on my schoolwork. Soon I was ready for the exam.

The exam was held on April 14, 1980 and as I had already learned the code at the previous club, there was no pressure on me when I wrote the theory part. Despite this, at the end, I was still unsure of the results, as was everyone who had written that particular test. When I finally received the results, I found that I had become a full fledged Amateur Radio operator. Shortly afterwards I received my licence with the call VE3MCS.
(Toronto) contained not only my parents, my sister Laura and I but also an Amateur Radio station. My first station consisted of an old Viking Ranger transmitter and a Radio Shack short wave receiver. Lew helped me raise a twenty metre inverted vee and I was all set to go. I chose twenty mainly because forty metres seemed so crowded and the only other band I could receive besides twenty was eighty metres. My first contact was, appropriately, Lew who had some kind words to say about my CW. From there I went on to become interested in DX. This is not the prime interest I have in Amateur Radio. I do like to chew the rag, and I always love a good chat with someone interesting, but I have always been intrigued with far away places and unexplored areas of the world so I come by my interest in DX honestly.

Late one night while listening to the low end of the band, I heard a fairly strong station using the call 4K1B calling CQ. I very quickly looked up his QTH and found that he was in Antarctica. I ran the rig up to full power (60 watts) and began calling him. After many tries, I heard through the pile up and across eleven thousand miles of ocean and land, VE3MCS DE 4K1B K. The contact, although short and sweet, was the highlight of Amateur Radio for me. To sit and realize how incredible it really was, using only a very basic station and yet contacting a Russian on the last continent to be explored; Antarctica.

The Antarctic is as large as Europe and Australia combined, and yet has a year round population much less than that of Toronto. The temperature in this hinterland will reach minus 100 degrees F on a regular basis. The continent is surrounded by the stormiest seas on earth. They are in constant turmoil, never frozen. The winds on the ice sheet can be incredible, lifting aircraft off the ground, or throwing a man a hundred feet across the land. It is not difficult to see why I was excited by this contact.

Recently my family and I moved out of Toronto and are now living on a four acre site near Caledon, Ontario. During the summer of 1981, my parents helped me to finance a new rig. I now have a Yaesu FT101ZD tranceiver, and a multiband verticle antenna. Although I operate ten, fifteen and twenty metres, I am mainly on ten since I now have my ten metre endorsement.

I feel that Amateur Radio is a very worthwhile hobby. Canadian Amateurs are, I have found, the most courteous and well mannered operators on the air. Even if it means missing some DX, Canadians remain polite and patient on the bands which is a nice change from some of the other operators from other countries. Through Amateur Radio, we keep our fine reputation worldwide, reflecting the essence of Canada - a country we can all be proud of.

73 and Best DX to all.

Mike Pratt, VE3MCS

Mike just recently obtained his Advaned Amateur Certificate. Congratulations Mike!

THE CANADIAN

Contest Scene

by: Dave Goodwin Ve2ZP 4 Victoria Place, Aylmer, Quebec, J9H 2J3.

Contests Calendar

Sept 11 - 12 — European DX SSB*
18-19 — Can-Am SSB
18-19 — Scandinavian Activity CW
25-26 — Can-Am CW
25-26 — Scandinavian Activity SSB
Oct 2-3 — VK/ZL/Oceania SSB
9-10 — XK/ZL/Oceania CW
16-17 — CLARA AC/DC
16-18 — CARTG RTTY
30-31 — CQ WW DX SSB
Nov 6-7 — ARRL SS CW
13-14 — European DX RTTY
20-21 — ARRL SS SSB
27-28 — CQ WW DX CW

* see July/Aug. TCA.

Conditions this summer have been nothing short of horrible a succession of solar flares and magnetic storms coupled with the generally poorer propagation and high. The noise levels of summer have made this a summer to forget, as far as Amateur Radio is concerned.

The Canada Day contest saw a good deal of participation, and was spared the worst of this summer's propagation disasters. Stations in all provinces and territories were on, and logs were received from all but VE8 so far. In the eastern half of the country, there was little or no action on 10 or 15 metres, save for a few scatter openings between Central Canada and the Maritimes. Very few east of Manitoba managed any contacts out west on these two bands. Out west, there was a slightly different story, with some fairly dependable propagation between VE4-5-6-7.

20 metres was the primary band, as usual, with good coast-to-coast openings during most of the contest period. There was very little in the way of any short skip openings, keeping VE2/VE3 QSP totals down from what they should have been.

40 and 80 were quite good, and some coast-to-coast work was done, but not as easily as last year. 160 was in very poor shape, and few managed to pick up even 4 multipliers on that band.

Single operator, all band was the centre of a real horse race this year, with VE2ZP, VE3KZ and VE3FLL rolling up scores of 267k, 241k and 155k respectively. VE7ZZZ was the premier multi op entrant, rolling up a new record score of 365 k+, mostly through hard work collecting multipliers.

20 metres was the centre of all the single-band action, with a number of stations rolling up scores well over 10k, and some over 30k. VE7AB, using one of Canada's three four element 40 metre yagis appears to lead the 7MHz entants, and VE2CUA returned to lead the way on 80. VE3INQ was the only person brave enough to try 160 single band. So far, I have no all band Amateur Class or QRP figures. Results will appear in November TCA.

The IARU was hit by two irresistible forces this year. The first, and least expected, was the succession of solar flares just hours before the contest began. This pretty well destroyed all Western hope of working Europe, and Eastern hopes of working Japan. The other force was the World Cup, whose finals were held on that same weekend. Every red-blooded European and South American almost certainly took time out for these 'Olympics of Soccer'.

According to Ron, VE3MHI, who was a member of the VE5DX MS team, no Europeans were worked on 20, and only a few on 15. Most of their 2750 QSOs were with the USA. VE2HQ, a new MS group from the Quebec City area, fared better, working many Europeans among their 3000 QSOs. Their operators include VE2s, FU, HQ, EZU and FOU, and as they showed in the WPX CW, they will be a big force in MS competition in Canada. So far, I have no word of VE1SPI's score.

Now that 10 MHz has been released to us, it is important to remember that there is no organized contest of DX work as yet. The attitude taken by Amateur organizations is that we should develop activity and explore the potantial of this band gradually. 10 MHz is going to continue to be shared with the fixed service. As Amateur Radio will continue to be a secondary service, we should do nothing to disturb the primary established users. For the time being, perhaps for many years. 10 MHz contacts will not be valid for either contest or DX work.

Results of the ARRL 10 metre contest have been released, and congratulations go out to VE6OU and VE7BTV for their outstanding mixed mode and SSB only performances. Canadian scores appear below.

The August issue of CQ magazine includes extraordinarily early high claimed scores, amassed so early that the entry deadline had not passed. Those who sent in their logs very close to the mailing deadline will have to wait until March to see how they stood. C'mon CQ, we all like to see the high claimed scores, but let's wait until the deadline, eh?

The same issue of CQ revealed the high claimed scores for the CQ 160 metre contests. In the SSB contest, VE1YX, the only Canadian, placed No 47. No other VEs

appeared in either the CW of SSB high claimed scores.

For the approaching contest season, it might be a good idea to remind all of you that some of us have been meeting on 14.173 to exchange scores, information and impressions immediately after each contest. As well, after the Canada-x DX info net on 14.173 Sundays at 1630z, a contest roundtable is held, where a good deal of useful information is exchanged. Bob, VE3K2 is usually in the chair. Bob, by the way is the new Canadian representative on the ARRI's Contest Advisory Committee.

APRL
10 Metre Contest

Canadian Results

Single operator, both modes

VE6 OU	755,496
VE3BVD	493,782
VE3MFT	294,264
VE7ZB	204,120
VE2MJ	156,954
VE3LAJ	66,312
VO1AW	62,478
VE3NBE	50,460
Single operator, CW only	
VE4YY	69,360
VE2DPO	45,600
VE5AAD	42,018
VE3LUG	27,280
VE5BBQ	15,540
VE2AEJ/3	13,688
VE3KZ	13,216
VO1QU	12,878
VE2FMW	3,650
VE3AYP	528
Single operator, SSB only	
VE7BTV	628,056
VO2CW	565,536
VK3WA,VE3	426,096
VE5QM	404,600
VY1CJ	289,188
VE7FAO	245,300
VE5ADA	178,296
VE4DK/4	121,800
VE2DKK	76,140
VE6 YB	67,984
VE2XL	45,430
VE3FEA	35,190
VE4QST	24,600
VE2AQU	21,420
VE5ACY	20,400
VE3CDS	17,640
VE3JRX	13,860
VE2HN	13,568
VE6CCL	12,728
VE3FIU	7,488
VY1DD/m	3,840
VE6CHS	3,700
VE3GWM	2,604
Multi - operator	
VE3TY	249,278
VE3HQV	107,352
VE2FSN	86,314
VE3JHX	75,894
VE4AHT	32,376

CQ WPX SSB 1982
EARLY high claimed scores

A VE6OU	5,252,808	No 2
14 XK5 AE	189,875	No 8
1.8 VE3BBN	24,922	No 1
MS VEIDXA	8,395,926	No 1
MS XK5XK	7,775,222	No 2
MS XK5GF	3,645,460	No 12
MM VE7 ZZZ	8,354,304	No 4

No - Placing worldwide.

Can-Am Contests

Period: SSB: 1800z 18 Sept. to 1800z 19 Sept.
CW: 1800z 25 Sept. to 1800z 26 Sept.
Band: 1.8 through 28 MHz
Classes of Entry: Single op., all bands; single op., single band; Multi-op., single transmitter. Single operators may operate a max. 20 Hrs.

Exchange: RST, serial number and prov/terr.
Points: 2 pt/QSO with Canada, 3 pt / QSO with USA. Work only Canadian and USA stations.

Multiplirs: Total of Provs / terrs / USA states worked on each band. Saint Paul, Sable, USA Carribean possesisons and USA Pacific possesions each count as separate multipliers.
Entries: must include dupe sheets if more than 200 QSOs are made on one band. Official log and entry forms are available from VE3BMV, P.O. Box 292, Don Mills, Ont., M3C 2S2. Entries should be mailed within 30 days of the end of the contest.

VK/ZL/Oceania

Period: SSB: 1000z 2 Oct to 1000z 3 Oct
CW: 1000z 9 Oct to 1000z 10 Oct
Bands: All Amateur Bands.
Classes of Entry: Single op, all bands only.
Exchange: RST and QSO serial number
Points: 2pt/QSO with VK/ZL; 1 pt/QSO with other Oceania.
Multiplier: Total of VK / ZL call areas worked on each band.
Logs: Separate logs must be used for each band. A summary sheet must be included, including a multiplier checklist. Logs should be mailed as to arrive by 31 Jan at NZART Contest Mgr., Jock White ZL2GX, 152 Lytton Rd., Gisbourne, New Zealand.

Results CARF Phone Commonwealth Contest 1982

Conditions for the second running of the Phone Commonwealth Contest were nothing short of horrible. There were a series of solar flares, magnetic storms and other propagation disasters which kept scores down to what I hope will be an all-time low. Participation is still poor, but hopefully this will improve in the coming years.

Congratulations go to Al Stater, G3FXB who this year came out on top, and wins the CARF Phone Commonwealth Contest plaque with a score of 3700 points. As a measure of how much poorer conditions were this year, Al's second place score last year was 70% higher than this year's first place showing.

The top single band entrant was VE1JW, with a fine score of 1600 points. Throughout the entire contest, 20 metres seemed to be the only band on which one could make contacts. There were some strange openings in 10 metres, however, and VE7EOH noticed openings to VK2 and W7 at the same time. From here in Southwest Quebec, I heard a number of Southern Ontario stations, all Auroral-sounding, over a ridiculously short 400 km path.

Naturally, conditions were the

topic most discussed in logs received. All we can hope is that lightening won't strike this same contest next year. With a little bit of luck, and a higher level of participation next year, this contest may turn in to something comparable to the RSGB's CW contest.

VE2ZP, VE3KKB.

Comments:

Band conditions so rotten . . . hope next year is better - it couldn't be worse - **VO2CW.** Conditions were morbidly interesting - **VE3KZ.** Called it quits early - **VE3LQJ.** 10 metre band was the pits - **VE7EOH.** I hope everyone else suffered the poor conditions we did in VE1 - **VE1JW.** Poor conds and poor support though still had fun - **G3FXB.**

Class	Call	Score	QSOs	Bonus QSOs	
A	G3FXB	3700	256	121	*
A	VC3KZ	3040	200	102	*
A	VC5RA	2535	175	83	*
A	ZB2EO	2185	133	76	*
A	VO2CW	2135	179	62	*
A	ZL1AOV	1660	104	57	*
A	G3VOF	1610	112	60	*
A	9Y4TAM	1230	124	31	*
A	VO1AW	940	61	32	*
A					
14	VE1JW	1660	148	46	*
14	VC2ZP	1205	89	38	*
14	VE3LQJ	750	42	27	*
14	VC2PD	375	15	15	*
14	VE2QO	250	10	10	*
28	VE7EOH	300	15	12	*

XMTRS affect Japanese car

A few years ago when automatic speed controls for cars first came on the market, mobile transmitters caused some of them to malfunction, resulting in dangerous accelleration. Some electronic ignition systems were also affected; in one known case switching on the mobile HF rig killed the car engine. These problems seem to have been overcome but the increasing use of electronics in autos has, in the case of one new Japanese model, led to a similar hazard according to an item in 'W5YI/Report', a U.S. Amateur newsletter.

It quoted an ARRL newsletter story that Subaru, a Japanese car manufacturer, has warned buyers of its cars that it recommends "CB and Amateur radio not be installed in 1982 Subaru vehicles since such installation may interefere with the electrically controlled carburetor and possibly result in erratic driveability".

The story came to light when a U.S. buyer, despite a warning notice found by him in a new car after delivery, was twice assured by a salesman that there would be no problem with the use of mobile rig.

ARRL has accused Subaru of "deceptive sales practices, shoddy customer relations . . . and sloppy engineering", according to the 'W5YI Report'.

Programmed Score Checking

After reworking the scoresheet for the last Canada Day contest I found that a lot of errors could be detected easier by the computer than working over the dupesheets.

I looked for such a program in a variety of magazines but couldn't find one and therefore had no choice but to do my own. Here is a sample program that can be adapted to check the scores on most contests and can also be adapted to print the log with few changes.

When working more than one band input the band in the transmission mode by adding 40 A1 instead of A1 and all bands can therefore be checked.

The program has been set for 400 QSO's but is easily changed to handle more only dependant on the computers memory.

I hope that this information may help others to avoid errors in completing future scoresheets like I had in the last one.

CONTEST DUPE CHECKER

In TRS 80 Basic

```
 5  CLEAR 8000: CLS
15  DEFSTR A-C
20  DIM A(400), B(400), C(400)
25  FOR I = 1 to 400
30  CLS: INPUT "CALLSIGN"; A(I)
40  INPUT "QSO NUMBER"; B(I)
50  INPUT "TRANSMISSION MODE"; C(I)
60  CLS: PRINT A(I), B(I), C(I)
65  FOR D = 1 to 800: NEXT D
70  forx = 1TO (1-1)
75  IF X = 1 and 1 = then NEXT I
80  IF A(X) = A(1) AND C(X) = C(1) THEN PRINT "DUPLICATE":
    PRINT A(X), B(X), C(I): INPUT "PRESS ENTER TO CONTINUE";
    Z 85 IF Z ◄ ► 0 THEN 80
90  NEXT X: NEXT I
```

VE7 EZR

DX Column for July/August, 1982

by D. W. Griffith, VE3KKB

As much as I enjoy the Summer months for their beautiful weather, I can't say that I'm sorry to see the departure of the annual h.f. doldrums. Traditionally, I am not very active during the Summertime, and any time that I got on the air only served to remind me of the reasons why. Sure there were some days of good propagation, but by and large, as far as the pursuit of rare DX was concerned, it all seemed like a collossal waste of time.

Fortunately, September should herald the return of decent conditions. The early part of the month will be difficult to predict because it is a transition period, and there will be days of typical mid-Summer (lousy) conditions, but these will be tempered with Fall-like propagation, meaning that the higher bands will be open more during the day, and there will be more openings on the lower frequencies at night. Static levels on 80M, and 160M should also be considerably lower for many days of the month. This trend, coupled with the fact that our current sunspot cycle appears to remain stalled, with a smoothed sunspot number around 120 forecast for September, 1982, should provide sufficient incentive to dust off our rigs, and check out the antennas in preparation for another good season of DX.

A recent examination of the standings for 5 Band WAZ has not found any Canadians among the 37 recipients of the award. Nor are any of our countrymen listed in the top 12 contenders. Garry Hammond, VE3GCO, was listed in an earlier list of contenders, but does not appear on the latest one. I hope that Garry is still actively working towards the award, without a doubt the most challening in Amateur Radio, and that soon we will see a VE recipient.

The VERON Award and Certificate guide is a guide to more than 75 awards, and certificates available from the Netherlands. The guide is an English translation, and is available for $3.00 U.S., inside Europe, and $4.00 U.S. outside. Annual updates will be provided as they become necessary. Copies are available through VERON Amsterdam, P.O. Box 9, 1000AA, Amsterdam, The Netherlands, or John Hofstee, VE3IZH, 425 Boyne Avenue, Listowel, Ont., Canada, N4W 3K5. The national club station, PA0AA, is on 14.100 Mhz, at 2215Z, each Friday.

1983 will be observed as World Communications Year by the United Nations, and it's communications organ, the ITU. The Year is intended to focus attention on telecommunications worldwide, and on accelerating the development of communications in Third-World Nations. Look for lots of special prefixes to be floating around next year. Hopefully, it will also mean a relaxing of restrictions in many of these countries with respect to amateur radio, and we will see activity from many areas where there is currently none.

Although 10M will still provide lots of thrills for those Canadians who have not yet upgraded to Advanced Amateur certificates, the day is coming when this will no longer be true. If you haven't upgraded yet, now might be a good time to think about it. The next examinations will be held on October 20, 1982. The DOC has also announced the examination dates for 1983. These are:

February 9, 1983
April 20, 1983
June 15, 1983
October 19, 1983

Closing dates for applications are roughly 1 month prior to the examination dates.

Many aspects of DX'ing we take for granted. However, to the blind Amateur, many of these tasks are not easy. Without sight, obtaining DX information, and QSL'ing are not particularly simple operations. The idea of providing a DX service to the blind Amateur was the brainchild of Phil Scovell, AF0H, who lost his eyesight some years ago. His dream has finally become a reality in the form of The Braille DX Service. Each month, a cassette of current DX information, DX'peditions, and QSL information is sent to subscribers. A current DXCC list is provided, either in braille, or on tape, and an outgoing QSL service has been established through the efforts of volunteers. The service is available for a one-time donation of $2.00 U.S. Further information may be obtained from Phil Scovell, 8347 W. Sixth Ave., Lakewood, CO., 80215, U.S.A. *(What a tremendous idea. ed.)*

Bits and Pieces

Cards for the following operations are still not being accepted for DXCC: 7Z2AP
XZ
A6XJC
G5/5A
KF10/CE0X

Les Sampson, 7Q7LW, is the only Amateur currently operating in Malawi.

5RBAL . . . Malagasy Republic . . . Alain is back on the air again, and now has a rotor tnx to the IDXF. Watch 21.325 around 1730Z, and 28.610 at 1400Z. QSL's go to WA4VDE.

The following calls were to have been used in July/August by W4MGN on an African tour: C53CC, EL2AG, 5Z4CS, 9U5JM, D68AM, FH8CL, W4MGN/3B8, and S79ARB. If you worked any of these stations during this time, QSL's go to WA4VDE.

The following calls were to have been used during a Pacific DX'pedition during August: N5RM/NH0, KC6WS (to have been used for both DXCC E., and W. Carolines), AD1S/KH0, KX6OS. QSL to AD1S.

5A1AD . . . Libya . . . This station has again been heard in Europe, around 1100Z, on 21.292. QSL information was given as I8ACR.

ZA . . . Albania . . . EA2AJH was in Albania earlier this year, and was permitted to make a few controlled QSO's, mainly with EA stations. There was a hint that a larger operation MAY be condoned in the future. OH2BH has also been trying to make inroads in ZA, and has been trying to set up an Amateur radio station at the University of Tirana, so far unsuccessfully. Recent off the air rumours have any upcoming operations delayed (AGAIN!), in spite of EA1AJH's rather optomistic forecast; and another indicates that all operations are off completely. Don't destroy that place on your wall set aside for your ZA card - it'll happen some day - after all, look what happened to China.

VKO . . . Heard Is . . . The long awaited DX'pedition to Heard is apparently still on course for an early Jan./83 start. The last major expedition was back in 1969/70 when a group was there for 6 months. The operation next year is supposed to last about 6 weeks, but Heard is in a very rough part of the world, and I wouldn't wait for the QRM to die before attempting to work it, as anything could happen to shorten their stay. It may be a long, long time before another group gets there.

VP8 . . . Falkland Is . . . At the time of writing, there were no amateurs active on the Falkland Is. VP8AIC, currently in Britain, hopes to be back in the S. Atlantic soon, and resume normal Amateur operations. WA6TKT did hear a QSO with a station signing a VP8 prefix, and claiming to be in that area, but there is no confirmation regarding the legitimacy of the station. Only the operators on the S. Orkney's had resumed operations at the time of this writing.

VE1 . . . St. Paul Is . . .Andy, VE1ASJ, and friends appeared as predicted in July, and appeared to be doing a booming business. Andy is a treat to listen to on CW, and was working them quickly, and efficiently. For VE1ASJ/1, VE1CER/1 and VE1SPI, QSL to Garth Hamilton, VE3EUP, P.O. Box 1156, Fonthill, Ont., Canada, L0S 1E0.

While there has been nothing official announced yet, it appears that 8Z4, the Saudi/Iraqi Neutral Zone, will be deleted from the DX-CC rolls. Further, it is also expected that HK0, Baja Nuevo, and KS4, Serrana Bank and Roncador Cay will follow the fate of the Dodo bird. Watch the ARRL for official confirmation in months ahead.

That's it for this month. Many thanks to Long Skip, QST, and CQ Magazine, for some of the material appearing here.

Call Sign	QSL VIA
1A0KM	I0MGM
3B8ZZ	W2TK
3D2AB	WB8WMS
3D2EH	K8VIR
3V8DX	G3SVK
4S7MX	SM3CXS
4X2BYB	WB2WOU
4Z4KX	VE3IXE
5B4IJ	OE8PSK
5R8AL	WA4VDE
5W1DC	DL3GU
5Z4CS	JI1VLV
5Z4CV	W2KF
6W8AK	WB4LFM
6W8AR	WB4LFM
8Q7BC	KL5BC
8Q7DL	DL9BAF
9J2JN	WB2IZN
9J2NO	JA3RLI
9J2TS	JA2LZB
9K2BE	G4GIR
9K2DX	N6TR
9L1EX	LA2EX
9L1Ls	N3ADC
9M8WR	G4DXC
9Q5ZA	ON6FN
9X5SP	DL8OA
9Y50VU	W3EVW
A22GM	N4FD
A35RF	VK3VU
A35TN	VK3VU
A92DD	K7DVK
AH8AA	W4FGX
C53DZ	DJ6SI
C6ADV	N7YL
CE0ZAD	WB6WOD
CN8BX	AK3F
CN8CY	GW3IEQ
CO7AM	EA1QF
CP6IM	WB1DQC
CZ3PCA	VE3KKB
D68AAB	G4DYO
DA2AR/HB0	DA2DC
DA2CK/HB0	KA2JFY
DJ6SI/3X	DJ6SI
EF5SSC	EA5BAA
EL8N	SMA4CWY
EL9B	KA8BXA
D0DYM/FS	W3HNK
FK88DD	KA3E
F0OKP	W6SZN
F0OWA	W6SZN
FP0FXZ	VO1FB
GD4INU	VE3IUI
HH2A	AJ9D
HK0EHM	WD9DZV
HS5AID	AG6N
J2OZ	F6ATQ
J3AVT	W8UVZ
J6LOV	K2QIE
KH8AC	WP2ACL
OA4JR	KA9FKL
OD5LX	SM0DJZ
OH0BA	OH2BAZ
R6L	UK6LAZ
T32AF	WH6AIF
T12JIC	AG1K
TL8CK	F6EWM
TU2HU	W3GHK
TU2IE	DL4BAM
TYA11	ON5NT
UPOL22	UA0QFY
V2ADX	W9SWM
V2AN	KA1JP
V3ME	G3OGO
VK9ZD	VK6YL
VK9ZG	VK6YL
VK9ZH	VK6YL
VK9ZR	VK2BJL
VP2EC	N5AU
VP2ED	AB8J
VP2EE	AA4NC
VP2VIC	KA2IXW
VP5JEX	W4DR
VQ9CW	WB1DQC
VS6JW	G4LRG
VU2YOU	K4YT
WB0MKR/KH3	KB2RV
XK5DX	VE5DX
XZ5KNU/9	DL2KAO
YB0PG	KB5AS
YBICD	WA1ROI
YJ8VU	DK5EX
YK3AB	OE1DH
ZD8CG	W9CN
ZD8DZ	AB4B
ZD8JGN	W9CN
ZD8MJH	G3GIQ
ZD8MW	G3GIQ
ZD9BV	W4FRU
ZK1XG	DL1VU
ZK2BA	VK3VU
ZK2BB	VK3VU
ZL0AEO	WB8WMS

VE7ZZZ — "The Prince George Contest Club"

by Frank VanderZande VY1DD

Since the early 70's, the Fort George ARC has been using a beautiful site at Lynx Lake for the annual field day operation. The forty acre clearing complete with a couple of old buildings had previously been used for a logging and sawmill operation and could best be described as "Ham Heaven".

Three families live at the lake, however their residences are almost a mile away. No powerline QRM here because you have to produce your own AC and no one lives close enough to be swamped by the RF emitting from the transmitters. A few miles to the south Baldy Hughes radar base with their air inflated radar dome is visible. Downtown Prince George is approximately fifteen airmiles northwest and when there is a low overcast night, the reflection of city lights can be seen quite brightly.

The big club's field day efforts have always been fun and turned out well when held at this site. Consequently the place really started to grow on some of the keen contester types. Before we knew it, we started having several field day operations a year. CQ WW DX, WPX etc. were operated from here using one or our individual call signs. (No lack of 2 letter calls here). But it was hard work. Moving towers, antennas, generators, gear etc. in and out gets to be quite a chore. Once a year for the ARRL field day we don't mind the hard work, but putting up 3 beams, long wires, verticals and dipoles every couple of months is too hard on the back, and on top of that, we were all getting older, the muscles a bit weaker.

After the 79 CQ WW DX CW contest five die-hard contesters, who were members of the Fort George ARC, decided to form the Prince George Contest Club, not

The 20 meter beam at VE7ZZZ, 5 elements on a 48 ft. boom 55 feet high. Also an assortment of wire antennas.

to be in competition with the main organization but to form a small group to permit the funding and acquisition of some permanent antennas at Lynx Lake. We realized that it was not fair or possible to have the Fort George ARC provide funding for what amounted to be a small group interest in the main organization.

The founding members were:

VE7AV — Frank VanderZande — Now VY1DD and ex VE8OO, VE5ES, VE3EEE, VE5LV, VE8NO, VE4WN and VK2DJZ. Frank is a radio inspector by profession and is currently the District Manager of the Whitehorse District Office. His XYL is Diana, YV1DV. He now mainly provides moral support but still manages to get to Prince George once in a while to operate . . a major contest.

VE7ENF — Bill Foster. He is the club's specialist and self appointed QSL manager. His mighty saw and axe keeps us all cozy and warm during the contests. Bill works for a major British Columbia wholesaler of electrical supplies.

VE7ENI — Lorne Goodwin — ex VE5GL, VE7BFL who also operated from VE7ACS & VE7UBC. Lorne is a chemical engineer. His specialty is CW and is considered to be the club's "philosopher".

VE7SK — ex VE7DSA & VE3FIE who also has operating experience from VE7UBC. The club was Bob's brainchild. He is also our antenna expert. Bob is a super operator who loves both CW & Phone pile-ups. He works in the construction industry and specializes in the insulation end of things.

VE7VX — Mike Glowa — ex VE7AQR & VE6OD. Mike's specialty is phone. The more stations calling him, the better he likes it. He can also be heard frequently working contests from his home QTH when VE7ZZZ is at rest. Mike's 2KW PEP station equipment is what gives the ZZZ call sign a big signal. He is maintenancea supervisor for the largest pulp and paper mill in Prince George.

The group of five met at Mike's place to discuss and exchange ideas. We easily reached concensus as to the format of the club. It was decided to keep the club very small to avoid the hassels of large organizations. We felt that in this way, decisions could be made quickly without having to go through formal meetings, motions, voting, etc. This did not mean we would be the only ones operating from the contest site. On the contrary, we still would need guest operators to help in the multi-single or multi-multi opetations since it would not be very often that all of us would be available to operate the same contest together.

We decided to issue six shares, one to each of the founding members and to have one floating share which Bob agreed to temporarily finance. The floating

share was later offered to and picked up by our newest member who is:

VE7EPZ & Ken Smith — ex VE2EUB and who is signing VE3CRD from Sault Ste. Marie. Ken is an avionics technician and like Frank, every opportunity he gets, he flies back to Prince George for the big contests. It wasn't very unusual for Ken to drop in at the contest site by helicopter when he was working in Prince George. It sure made the three families who lived at Lynx Lake wonder what was going on!

Frank had already checked on the availability of the call sign VE7ZZZ and it was agreed to make this the club call. Mike had a club record book ready to go. In this we listed personal equipment that would be lent to the club. This night we also decided to purchase some antennas which were listed on the local swap and shop net and to also buy three new 5 element mono-banders manufactured in BC by Chippendale Antenna Products. With all the serious stuff out of the way, the next order of business was posing for the camera. We needed pictures for a QSL card and as anyone who has received one of the ZZZ cards will know, we all had a taste for beer that night. At this stage of the game we were all feeling very good about the new organization. Frank acted as treasurer and collected the cheques for the shares issued. We agreed amongst ourselves that shares should be sold back to the club for book value. This is a neat feature, and some of us with XYL's have been able to state truthfully "I haven't spent any money dear. I've just agreed to loan the club some money without interest and I can get it back anytime I want". The organizing meeting ended at 4:00 a.m. in the morning, right after the five of us devoured enough Chinese food for eight people.

We got terrific support from Prince George Amateurs when the time came to put up the big antennas. Our requests for assistance never went unanswered. Most of our work parties were picnics. Lynx Lake is such a fantastic place that hams would bring their families to the work parties and spend a whole day at the site. After the work was done, the grub would be heated on the wood burning stove and the fun would begin. Some days the kids would bring their kites and you could see a half a dozen of them being flown at once. VE7SK was always the biggest kid in the kite flying sessions. He is a real kite nut and when in Vancouver one of his favourite stops is the kite shop in Gastown. Bob's dream is to fly a 20 ft. tall kite with a two thousand foot long wire fed with a KW transmitter during a 160 meter contest.

Before we knew it we had the main ingredients of the contest station in place. Five element rotatable monobanders on 10, 15 & 20 — all on sepatate towers, two phased verticals on 40, dipoles on 80 & 160 and a long wire to boot. Our normal power source is Bob's 5 KW Onan 2 cylinder gasoline generator. In the summer we can drive up to the generator shack and slide a hose into one of our vehicle gasoline tanks. In the winter we haul the fuel and other gear with Bill's skidoo. A 48 hour contest in the single transmitter category consumes approximately 20 gallons of gasoline. In larger multi transmitter operations running linears, we have to supplement the generating capacity with an additional unit, consuming approximately 30-35 gallons of fuel in a weekend. We find that it is imperative to run separate power lines to the linears from the generators. Large conductor cable is also a must. A 150 ft length of number 16 cable to a KW station does not work very well.

The VE7ZZZ call sign started hitting the airwaves during the 1980 contest season. It's amazing how many compliments we get on our call sign. VE7ENF can attest to that since Bill has the job of answering the QSL cards that come in by the hundreds. The only Amateur that we know of that is not so keen on our call is VE7ZZ who also likes to work contests from his lower mainland BC QTH. Some DX operators become confused and think that VE7ZZ & VE7ZZZ is the same station, resulting in a few lost contacts for both of us.

Contest operating from this kind of station is sure fun. Lots of contacts with the good antennas and no worries about neighbours TVI or audio rectification. The good

The VE7ZZZ Gang — L/R: VE3CRD, Ken; VE7VX, Mike; VE7SK, Bob; VE7ENF, Bill; VY1DD, Frank; VE7ENI, Lorne.

company, good food (Bill makes a fantastic stew that no one can resist), lots of QSO's and always a good supply of beer makes it all well worthwhile. Our philosophy is to keep contests fun while still trying to remain competitive. A short QSO here and there during the slacker periods or Frank practising his Dutch with some PA0 is not unusual. No doubt the fun aspects have resulted in slightly reduced scores, but so what! The scores have been gradually improving and some of them have even been getting into sight of the scores of the established contest elite. A forty meter beam is now in the works and should be in operation by fall. Watch out you guys!

It has become a tradition to serve a large bottle of Canadian champagne following each contest. After the toasts and a quick estimate of the contest score, we all chip in, clean up the site and pack up the radio equipment. An hour or so later after the work is done, we get back together to split the expenses of the weekend, discuss the contest, equipment,, propogation etc. and solve all the problems facing amateur radio over the remaining 807's. Several hours later, the good-byes are said until the next contest weekend.

The Prince George Contest Club is truly indebted to the Strom family, especially Carl, VE7BXC, for making it possible for our group to utilize the Lynx Lake property. Without their permission to use the site, all of this would be just a dream. Also many thanks to the regular visitors and supporters for giving us a hand.

Want to try a contest from Central BC? — That's easy. Just contact one of the VE7ZZZ gang and make the arrangements.

Announcing: The Canadian Constitution Certificate

In commemoration of the patriation of the CANADIAN CONSTITUTION to Canada in April, 1982 by Her Majesty Queen Elizabeth II, the radio club VE3LSS is awarding an attractive Canadian coat-or-arms diploma to amateurs who fulfill the requirements for presentation of this award.

1. Canadian Amateurs must QSO a minimum of 25 other Canadian Amateurs.
2. Foreign Amateurs must QSO a minimum of 10 Canadian Amateurs.
3. Special seals will be affixed if 10 Canadian contacts are made and/or all 10 provinces are contacted.
4. All contacts must be made during April and May, 1982.
5. Contacts with stations using VE, VO, VY, VC, CY, and CK can be counted.
6. Send certified log data, $1.00 or 3 IRC's to cover return air mail postage to:

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Listowel Secondary School
155 Maitland Avenue
Listowel, Ontario
Canada N4W 2M4

Garry V. Hammond, VE3GCO
Head of Geography Department,
L.D.S.S.

CARF Objects to FCC on U.S. Phone Expansion; ARRL Endorses Expansion

Based on comments from hundreds of Canadian Amateurs received over the past few weeks CARF submitted a detailed brief to the U.S. Federal Communications Commission, strongly objecting to the proposed expansion of some of the U.S. Amateur phone bands set out in its Docket 82-83.

The letters and copies of individual briefs sent direct to the FCC received by CARF included arguments which CARF endorsed and enlarged upon in its letter. Earlier, the DOC wrote to CARF that if it determined "that representations to the FCC are necessary, you may be sure that they will be made". To assist the Department in a decision to do so all of the letters and petitions received by CARF were forwarded to DOC.

The outcome, despite foreign and some U.S. objections, may well be influenced by the decision of the American Radio League's recommendation of U.S. phone band expansion on all H.F. frequencies except 40 metres. At the July meeting the ARRL Board of Directors proposed expansion down to 3750 kHz, to 141.50 MHz, to 21.200 MHz and to 28.300 MHz. This information, gleaned from 'Westlink Report' did not make any mention of the position of the Canadian director, who is also the president of the CRRL.

Here are the details as published in 'Westlink Report' of July 30, 1982:

Band	Extra & Above	Advanced & Above	General & Above
80/75	3.750 - 3.775	3.775 - 3.850	3.850 - 4.000
40	No change prop.	No change prop.	No change prop.
20	14.150 - 14.175	14.175 - 14.225	14.225 - 14.350
15	21.200 - 21.225	21.225 - 21.300	21.300 - 21.450
10	28.300 - 29.70*	28.300 - 29.70*	28.300 - 29.70*

* No Novice or Technician privileges between 28.300 - 28.500 MHz.

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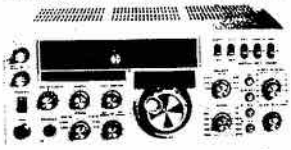

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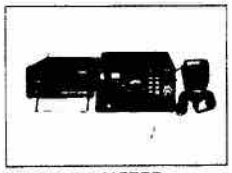

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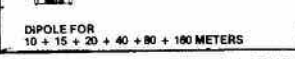

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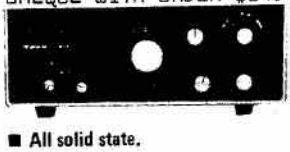

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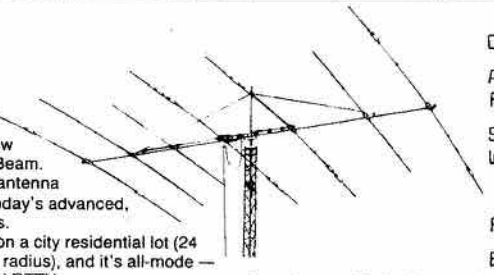

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25th Jamboree-on-the-Air, 1982

The 25th (Silver Jubilee) Jamboree-on-the-Air will take place over the week-end of 16/17 October 1982. The official starting time will be 00.01 hrs. LOCAL TIME on Saturday, 16 October and the event will end at 23.59 hrs. LOCAL TIME on Sunday, 17 October 1982, but stations are, of course, at liberty to select their own operating hours.

The Jamboree-on-the-Air is NOT a contest and the only rule is that your national radio regulations must be strictly followed. Any authorised mode of operation and frequency band may be used.

This 25th J.O.T.A. forms part of the worldwide celebrations of the 75th Anniversary of the Scout Movement and it is the World Committee's hope that as many member Associations as possible will participate, with the object of giving as many boys as possible the opportunity of linking up with their brother Scouts in other countries and locations. 25 plus 75 equals 100. Why not aim for 100 (at least) countries taking part this year? If your own Association has never participated in J.O.T.A. before, why not start this year? The World Bureau would be happy to help you.

A special commemorative participation card has been designed and copies of the artwork will shortly be sent to assist in your own publicity. Quantities sent will be the same as in 1981 unless we hear from you to the contrary by 31 March, as on that date we must confirm our order to the printer. Please let us know immediately if you want your order increased this year.

I am happy to inform you that Len Jarret, formerly VE3EWE will continue to act as the World Coordinator for J.O.T.A. for the time being. Correspondence should be addressed to the World Bureau.

Laszlo Nagy
Secretary-General

How Canadians can participate

INTRODUCTION

In relation to the total membership very few members are lucky enough to attend the World Jamborees which take place every four years. The less fortunate majority miss this wonderful and enlightening experience and are often too old to attend by the time the next one takes place. With the ever increasing expense it also becomes more and more difficult to send a large number to these events.

The Jamboree-on-the-air has none of these disadvantages, it costs but little, has no limit to the number taking part and almost any member of the organization may join in without leaving his own home town. It enables youth members throughout the world to talk to each other on an equal footing irrespective of colour, religion, politics, rank or even length of service.

The details below explain how you can take part in the event. Unfortunately in some countries no members are allowed to speak over the air unless they are also a licensed Radio Amateur but in Canada the members themselves can speak. Nevertheless as the operators in these countries have a genuine interest in the organization they ask the same sort of questions that you yourself would ask if you were permitted to do so and it is very exciting to listen to these exchanges.

Usually thousands of stations in over 70 countries take part and it is possible to contact a fairly wide selection of these during the weekend. Often contact is made with members in very remote parts of the world such as Antartica, Ascension Island, Christmas Island, Gough Island, Seychelles etc. This is an event you cannot afford to miss!

DATE AND DURATION OF THE EVENT

Jamobree-on-the-Air takes place on the third **full** weekend in October each year. The actual dates are published by the world Bureau and information is always available from National Office.

It commences at 0001 hours on the Saturday and closes down at 2359 hours on the Sunday. The amount of time given to the exercise must be governed by circumstances and must largely rest with the Radio Amateur.

HOW TO TAKE PART

If you know the names and addresses of your local Radio Amateurs or Radio Club, approach one or more of them to see if they will be interested in cooperating with you. If you do not know who or where they are, write to your National Organizer or to the Canadian Amateur Radio Federation Inc., P.O. Box 356, Kingston, Ontario, K76 4W2, for information.

Remember, it is up to you to make the initial approach. Radio Amateurs are very enthusiastic about their hobby and you should find most of them are willing to help.

However, should you be approached first, remember that this is a wonderful opportunity and if you do decide to take part you should support it with enthusiasm. You will find the event an exciting and enlightening experience.

RADIO AMATEURS

Any Radio Amateur with an in-

terest but not necessarily active association with the organization can help by having youth members visit his station for any period during the weekend or by setting up a station at a local Scout headquarters or camp.

Before organizing a station, Amateurs are strongly advised to satisfy themselves as to the degree of interest within the local Scout groups. This may best be done in the first instance through the District Commissioner. In the past, some Clubs have operated large stations and staged full-scale exhibitions only to be disappointed at the response shown by the Scout membership. Participation can vary from being on the air for an hour or two with one member present, to operating for the whole forty-eight hours with a large number of members present.

It is assumed that all Radio Amateurs taking part in the event will have an interest in the organization. They will, with the co-operation of local members, be expected to talk about Scouting and indulge in friendly and informative exchanges.

It should be remembered that Jamboree-on-the-Air is **not** a contest. The intention is definitely **not** to work as many stations as possible within the time set.

BASIC RULES

a) Radio Amateurs enter the event by calling 'CQ Jamboree' or by answering other stations heard using this call.

b) Any authorized amateur frequency and mode may be used.

c) All participants must strictly observe their license regulations.

PUBLICITY

Organizers are particularly requested to avoid misleading publicity such as newspaper reports and photographs conveying the impression that the Radio Amateur concerned has infringed his licence conditions in any way.

If the Station Organizer can write his own report for submission to the local press so much the better. Where they exist it may be best to leave this task to the District Public Relations Person.

RADIO CONDITIONS

Radio conditions, like the weather, vary from place to place, hour to hour and from year to year. If your station hits a bad patch be patient for conditions can change quite suddenly.

Usually the period between midnight and 4 a.m. is rather uneventful and stations intending to keep an all night watch might well have a skeleton crew on duty during this period. Others can sleep but remain on call should any interesting contacts arise.

SOME SPECIAL STATIONS

HB9S - World Scout Bureau, Geneva
LX1JAM - Boys Scouts of Luxembourg
LA1JAM - Boy Scouts of Norway
GB3BPH - Baden-Powell House, London
K2BSA - Boy Scouts of America
XE1ASM - Boy Scouts of Mexico
DU1BSP - Boy Scouts of the Philippines
JA1YSS - Boy Scouts of Japan
ZS6JAM - Mafeking Boy Scouts

LATE NEWS

Late information will be available over the air during the event by request from the stations listed above. Stations having information regarding overseas Jamboree Stations, frequencies and times etc. are requested to pass the details to these stations to enable such information to be passed on to others and to the World Bureau.

REPORTS

BEFORE THE EVENT

When your arrangements are completed please notify the **National Organizer** (see name and address at the end of this circular) preferably **before the end of September,** giving the details of your group and the call sign of the Radio Amateur who has agreed to help you.

AFTER THE EVENT

At the close of the Event please **send your completed report** to the National Organizer giving the details of your group and the calls sign of the amateur who helped you. Also give a note of the call signs of the other **Jamboree** Stations to whom you spoke especially overseas stations. Reports should not include details of non-Scout Stations contacted. Unusual or very interesting contacts should be reported in detail. It is only by reports of this nature that the overall success of the Event can be judged on a world-wide basis.

Reports and photographs (if available) should reach the National Organizer by the end of October. Members appearing in photographs should be seen wearing correct uniform.

SHORT WAVE LISTENERS

Reports of Jamboree Stations heard (especially overseas stations) giving call signs, signal strengths, locations and group names and numbers etc. will be welcomed by the National Organizer/World Bureau.

PARTICIPATION CERTIFICATES AND QSL CARDS

Participation certificates will be sent to all those forwarding reports.

Short Wave listeners will also receive a certificate if they forward a report.

Many groups taking part prepare their own QSL cards some of which are most original and colourful. It is hoped that this practice will continue to grow for these cards make a wonderful souvenir for the youth members. These cards should always show an addres for correspondence.

Please note that QSL cards should be sent direct to the station worked or via a QSL Bureau (your Amateur Radio operator can give you the address) and NOT via the World Bureau or National Office.

As the rules of this event alter only slightly from year to year please retain this handbook. In future copies will only be issued on request but the National Organizer will however issued information regarding minor changes etc., annually prior to the event.

Local regulations must be strictly adhered to. It is suggested that you look for stations around the official World Scout Frequencies.

	Phone	C.W.
80 metre band-	3,740	
40 metre band-	7,090 Khz.	
20 metre band-	14,290 Khz.	
15 metre band-	21,360 Khz.	
10 metre band-	28,990 Khz.	
3,940 Khz.		3,590 Khz.
		7,030 Khz.
		14,070 Khz.
		21,140 Khz.
		28,190 Khz.

Listen **before** you can "CQ Jamboree" to ensure that the frequency is not already in use.

National Organizer
NATIONAL ORGANIZER
J.O.T.A.
Scouts - Canada
P.O. Box 5151, Station "F"
Ottawa, Ontario
K2C 3G7

SCOUTS CANADA

RADIO SCOUTING
SCOUTS CANADA

Reflections

The March 1982 issue of TCA seems to be a welcome departure from its usual tenure. Our President, Don Stater, VE3 BID, has entered the political arena. As an "average Ham", interested in a pleasant QSO and seeking DX, I feel the interests of Canadian Amateurs have too often taken a back seat to international pressures. I also belong to CRRL and can see and understand the benefit of association, negotiation and representation at the present ARRL level. However if I understand the organization correctly, Canada forms but one division of the ARRL — ie one out of sixteen representatives on the Board of Directors. Clearly exerting a monority influence on policy decisions.

That input is still valid and desirable. CARF on the other hand has traditionally been a behind the scenes advisor to DOC and a representative of Canadian Amateurs with input into both official and informal discussions and policies. Recent events make me feel it is important to realize CARF is the only forum divested of the overwhelming non-Canadian influence that must exist in CRRL. A case in point would be the issue of reciprocal operating agreements as recently proposed. I understand CRRL did indeed rate for this change at the ARRL level. Later this necessitated a negative vote aginst extending phone band privileges for U.S. Amateurs. A vote against what I supsect most or all other Directors will support.

The foresight of CARF in this regard is certainly appropriate and appreciates for those of us who do feel the "thin edge of the wedge". Your vociferous outcry is indeed not offensive but rather long overdue. I hope and suspect many amatuers feel this way and will add both verbal and written support to the CARF mandate.

Bud Belby VE3 HRR

SEE YOU AT THE RSO CONVENTION Oct. 1 - 3, 1982 in Kitchener-Waterloo

Gerry King — 20 db and 90 feet over S9

by VE3ARS

I first met Gerry King while working on an emergency corps project, around 1966. My area of activity was 6 metres, and most of us in ARES at the time were either working 75 metre or 6 metre phone operation. We had just arrived at the central meeting point, in Alta Vista, a suburb of Ottawa, when Gerry drove up in a little Austin Mini wagon flying an enormous antenna, and pulled into the parking lot beside us. Within seconds, Gerry had extricated himself from behind the wheel and was starting to fiddle with something in the back of the wagon. By the way, if you have ever met Gerry, you will realize how odd it was to watch him pulling himself out of a car the size of an Austin Mini. I wandered over and introduced myself to him and asked what sort of rig he was running. "A homebrew transceiver and a kilowatt amp", was his reply. "In a mini?"

Gerry King was first licenced in 1951 as VE2WK in Danville, in the eastern townships of Quebec. He had obtained his ticket with the help of Mac McBurney, VE2AIE of Sawyerville, Quebec, about 70 miles from Danville. Gerry had to drive every Friday night to Mac's (for 8 weeks) to obtain 1 hour of code practice and 1 hour of theory. After 8 weeks, Gerry was able to pass the exam and obtain his licence.

Not every homebrew artist started off building his own equiment. Gerry's first station consisted of a Hallicrafters SX-71 receiver and an HT-9 transmitter.

This permitted reasonable operation when you consider that this was recent equipment at the time. When he was able to operate phone, the rig provided for 100 watts in class 'A': that is, 100 watts R.F., 100 watts audio. On 10 mtrs it resulted in 100 watts of TVI on channel 2; over a distance of 3 miles no less. Later on in the story, I will tell you of an even more severe case of TVI that plagued Gerry.

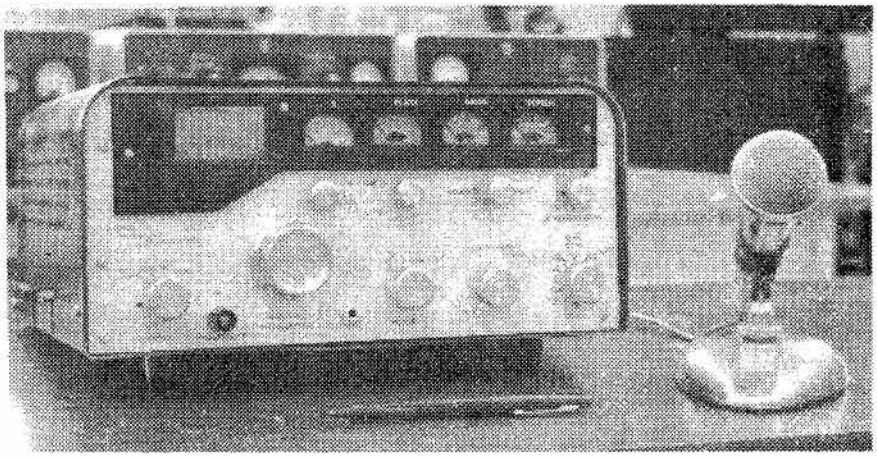
In 1956, Gerry left 'Danville for Ottawa, Ontario. He obtained the call sign VE3BST and at this point in time, he became interested in SSB. Now for those of you who remember the days when SSB was just beginning to appear on the bands, you will remember how violently most Amateurs reacted to a SSB signal. To be experimenting in SSB was just as great a sin. It wasn't until the mid 60's before SSB was an accepted form of communications. There was a time when SSB was restricted, by gentlemans agreement, to certain obscure parts of the band. There was even a thing called "The Sideband Dinner" held each year in Ontario for those Amateurs using that mode. (It seems the shoe is on the other foot now.) Gerry was in the middle of the SSB activity. In 1958, his first rig was an Edmands exciter. It didn't even have a balanced modulator to suppress the carrier. Instead Gerry used a notch in the crystal bandpass filter. Soon he acquired a mechanical filter and proceeded to build his first SSB exciter. This rig used a pair of 4CX250B's in the final. (photo a)

Not long after that, Gerry saw a promo for the new Collins 75S1 receiver. The dial on the receiver attracted him so much that he made one and built an SSB transceiver around it. (photo b). This rig used a pair of 6146A's in the final. Using this rig, mobile, Gerry managed to work a ZS6 in Capetown on 75 metres. Not bad for a homebrew mobile SSB transceiver, in 1963.

Gerry's battle with TVI renewed itself shortly after this. In 1960, Ottawa gained a new TV station, CJOH. Gerry managed to land a part time job working at the transmitter site, in Hazeldean, west of Ottawa. At the site, Gerry erected a dipole so that he could work his set whenever there was a slack period. (Having worked at a transmitter site for several years myself I can attest to the fact that there is plenty of slack time to fill). After setting up the rig, Gerry proceeded to go on the air. I do not doubt that many people may have wondered at the time what sort of test CJOH was performing. Gerry's signal was following a direct path to the transmitter audio circuit. Roy Baker, VE3AXC, who was in charge of the station at the time, hastily called Gerry and ended his brief career as a TV announcer. Gerry challenges anyone to beat this case of TVI with one worse than that.

For the next few years, Gerry continued to homebrew his rigs. The mobile transceiver required an amplifier, so Gerry built one, extra small, using three 4x150's in parallel. In all, Gerry made a total of 8 transceivers. All of these, by the way were tube sets. His pride

PHOTO A



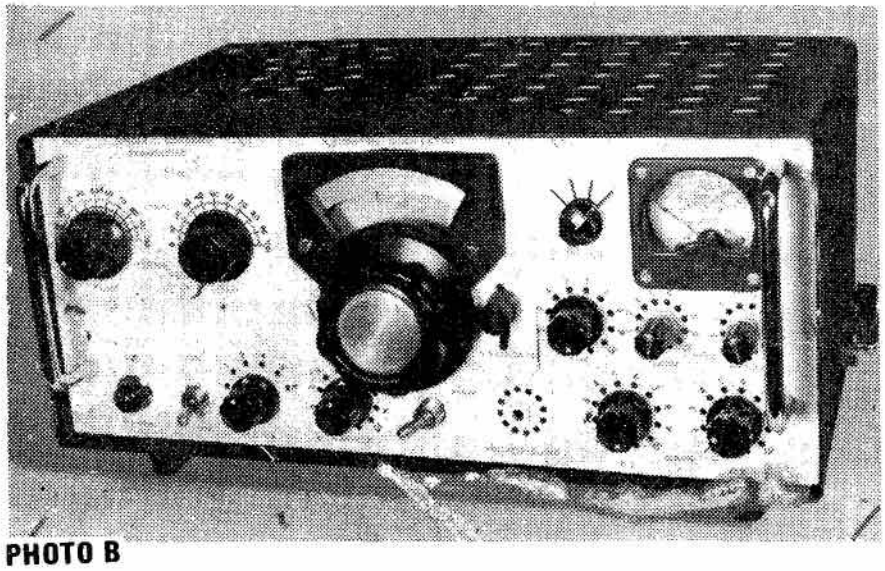


PHOTO B

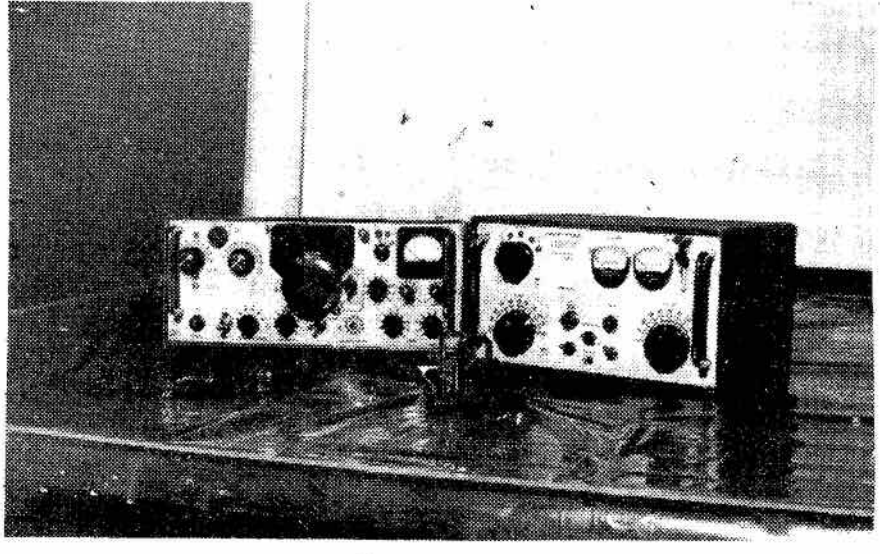
and joy was an all band transceiver utilizing 2 VFO's and using a single 4x250B in the final. He also produced a matching 4CX1000A amplifier. (photo c). Soon he had also built a transceiver and a matching PL172 amplifier and incorporating a VFO and power supply in one cabinet. (photo d). He was prolific in building amplifiers (18 in all), which might explain why he was using the call VE3LX in the early 1970's. LX used to be an abreviation for linear amplifier. He admits to enjoying the construction of equipment more than actually using the equipment.

I suppose once you have gone as high as you are permitted in R.F. output, your next thought should be how to get the R.F. into the ether. In 1970, Gerry stopped building amplifiers and began building antennas. It would appear that Gerry has yet to quit doing that. For the 1975 RSO convention in Ottawa. Gerry authored an updated version of "The 20 Metre Gain Game". This booklet outlined Gerry's experimentation in the development of high gain antenna systems for Amateur use. It is worth reading if you can get your hands on a copy. Antennas have their own series of problems, one of which is directly concerned with neighbourhood opinion. When Gerry tried to erect a 6 element antenna, he was forced to obtain a building permit. After getting this monster up, Gerry's interest was even more enhanced. It was a challenge to see what sort of antenna he could put up, and resulted in a 5 over 5 stacked array, with a total boom length of 84 feet, one antenna at 40 feet, the other at 92 feet on a rotating tower. (Take that, neighbour!)

Gerry, by profession, is a teacher. He holds a specialist certificate in Technical education and a certificate in special education. In 1963, he took a position as part time electronics instructor at The Ontario Vocational Centre (now Algonquin College. In 1965 he started teaching at Highland Park High School in Ottawa. It was evident by the antenna structure that appeared on the roof of the high school (VE3HPH), that Gerry took his Amateur Radio with him. In 1969 VE3HPH came third in Canada in the CQWW scoring over 1 million points. In 1970 Gerry initiated the first Amateur Radio class at Algonquin College. The success rate of this first class was 100%. During the next eight years, Gerry's class produced over 600 calls in the Ottawa area. Among them were several people who went on to achieve recognition in Amateur Radio (Don Slater, VE3BID and XYL VE3KEH). Gerry maintains that the success rate was due in part to the super people who took the time and energy to study for the course, but still managed **to have fun.** These people are easy to teach. Gerry's life is devoted to special education for people with learning difficulties, and he has learned how to use all the facilities at his disposal. It cannot be said that a great number, or even a relatively small number, of people who took the course were slow learners. On the other hand, who among us did not have trouble learning the code? Gerry's comment: "When it comes to the code, most people seem to act like slow learners. During the fifteen week course, 90% of the people were up to 5 WPM after the second week. I remember Art Stark, VE3ZS, coming into the classroom and observing the fifty plus students that I had copying 5 WPM code and shaking his head."

When you start something that turns out successfully, there is always someone around who thinks there is something wrong.

PHOTO C

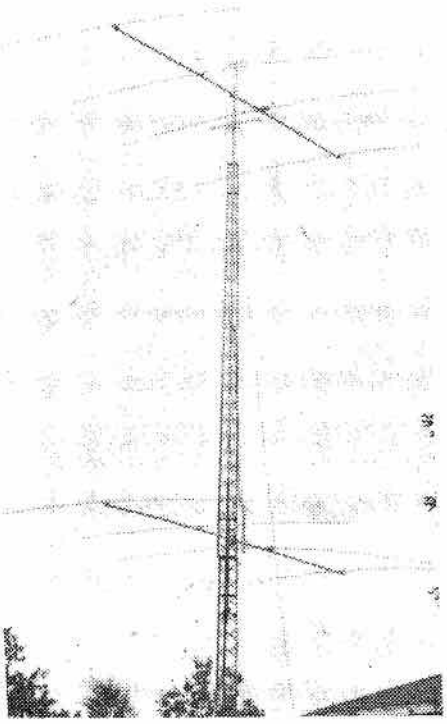


Gerry's success was no exception. There were those who thought Gerry's course was too easy and should have been tougher. Again, Gerry's comment: "The course **was** tough. No doubt about it. The difference was that I got them fired up and they worked their butts off. If I arrived early for the class, they would be there. If I stayed late, they would be there. I had to hide at break period.

"The students were beautiful. They were made to feel important and that they were really needed in the Amateur community."

Gerry maintains that a teacher of Amateur Radio must be active in as many facets of the hobby as possible. He must also be able to enjoy it. "I remember talking with Father Morin, 9N1MM in Nepal and recording his welcome to my class. You cannot teach a subject if you are not totally in love with it. You should be active on the HF bands. I know some people will take me to task for this, but I firmly believe the philosophy that you need CW at 10 WPM to separate this hobby from a 'Mickey Mouse', 'easy come, easy go' exercise."

Versatility identifies Gerry. Recently, he began another series of experimentation in Amateur Radio; he started operating his HF station remote control by VHF and UHF. In brief, he inputs on 2 metres, via VE3RGK, and outputs on 70 CM. (440 MHz). The control operates on a separte frequency. The link consists of a Yaesu FT208R hand held and the downlink is a FT708R handheld. The base is an Icom IC720A. He can move the 720 up and down the band and he is able to call up any of 8 different beam headings that are pre-set to certain T.T. codes. The system can be controlled up to 4 miles away with the hand helds, and up to 15 miles away with the 100 watt amp, and a 5/8 whip for the FT708R 70 CM hand held in the car. "This operation has been super fun and I have had many contacts. A W6 said, after he had given me a +40 db signal report and then found out that I was walking the dog and operating with a 2 metre handheld, 'You must have one hell of a long arm.' It is fun to sit in your car about a mile away from home and watch the antenna rotate at a touch tone command." Gerry plans to extend the operation to allow the signals to be received at a remote location in the Gatineau Hills, and linked back to Ottawa. (Imagine, no city QRN or QRM). (Take note apartment dwellers.)

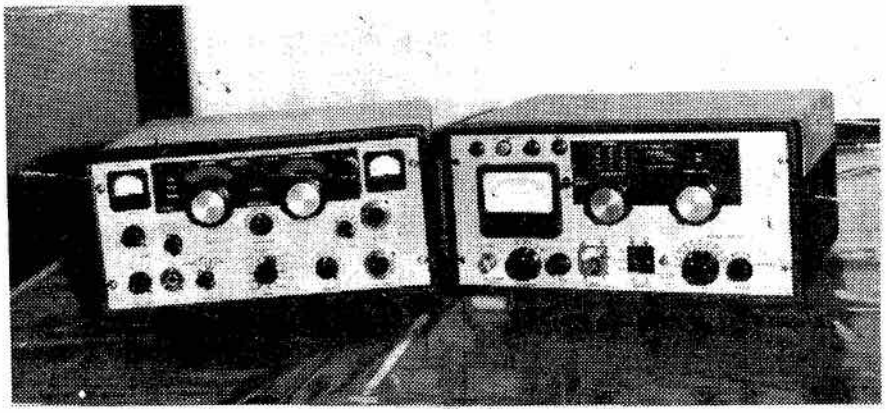


A 4 over 4 array. Typical of Gerry's antennas. It can be seen very clearly 2,000 feet up.

In order to research this article. I paid Gerry a visit several weeks ago and saw first-hand what he was up to. As I drove into his laneway, I narrowly avoided hitting about 2.5 tons of steel sitting in his driveway. This is his next project. He is constructing a homebrew 'Skyneedle'. As anyone in the Ottawa area can attest Gerry's atenna farm is quite imposing. It is imposing when viewed from 2000 feet up in a light aircraft as many Ottawa area pilots will agree. Due to its size, it is both awkward to maintain and hard on relations with the neigbors. To try to correct this situation, Gerry decided to make the tower a little less ominous. A 'Skyneedle' was the ideal thing. Have you ever tried pricing the commercial item? Gerry did, and decided he could do better. We will wait and find out. He hasn't finished it yet. The needle, according to Gerry, will rest at 28 feet, and crank up to 107 feet; it will be guy-less and rotatable. It will also support about 35 square feet of antenna in a stacked array configuration. Gerry has offered to keep us informed as to the progress of this project. I, for one, look forward to that.

It is hard to keep up with a man like Gerry, and it seems like he always has a project on the go. Well, he does. It is equally hard to end a story about Gerry, because he manages to keep ahead of the typewriter. Nonetheless, this story is at an end. Gerry is giving, or has already given a speech at the Maritime convention in Charlottetown, PEI, so I am sure the folks down there will understand what I am saying. I guess in a year or so, the title of this article could be "Gerry King — 40db and 107 feet over S9". So be it then.

PHOTO D



JA/VE Reciprocal Agreement:

Who needs it?

Earlier this year Japan asked DOC and eleven foreign administrations to enter into negotiations leading to reciprocal operating agreements. At last word, Canada was the only country to respond. The request brings up a number of questions due to the restrictive nature of Japanese regulations both for its nationals and for foreigners.

First, off who wants the agreement?

CARF has no knowledge of any Canadian Amateurs asking for it although it is aware of a group of aliens in Japan, the Tokyo International Amateur Radio Association (TIARA) composed of about fifty members, a large number of them U.S. ops, which has expressed approval of DOC's action because a Canada-Japan agreement might set a precedent for better terms for visitors.

The next point is who would benefit? Few, if any of Canada's 20,000 Amateurs. On the other hand, there are about 900,000 operators in Japan of whom some 803,000 are no-code, 'simple' theory, so-called 'Amateurs'. One estimate places about 2,000 JA ops visiting Canada annually as against a probable handful of Canadian ops going the other way. It would appear to be pretty well a one-way street.

Another question is why have the other eleven countries (at last word, in May) not opened negotiations? Maybe they are smart enough to wait and see what happens in the current Canadian-Japanese parley.

A further point to consider is that DOC, like other federal departments, is committed to operate on a cost recovery basis (the buzz word this year is 'revenue dependency'). This means that it must recover the cost of the time spent on administrating each radio service by making license fees match the expenses. One look at the Japanese regulations shows that the problems involved in trying to get a truly reciprocal agreement . will cost a lot of time and thus expenses which will have to be paid out of Amateur license fees.

A look at the Japanese Amateur population and the regulations highlights the problems in any bargaining for a truly reciprocal agreement . . . and why should we settle for less? Dealing with the Japanese government can be difficult and time-consuming and usually rewarding . . . for the Japanese; just look at the stonewalling Canadian authorities met with when trying to get an equitable deal in the auto import business!

First off, the standards for certificates, with the possible exception of the first-class ticket are much lower than ours. Of the nearly million 'Amateur' operators there are only about 8,000 'first-class' licensees. Even then the morse requirement is only 12 words per minute although a pass in the Japanese character ('kana') code is also required. Along with a 'complex' theory exam. This might put this class close to our Advanced certificate.

The next class of 35,000 with nine words per minute morse and 'general' theory might be considered as close to, but below our Amateur class.

These two classes are the only ones which could even be considered as candidates for any reciprocal privileges. The other classes, including the no-code, 'simple' theory tickets held by about 800,000 and as rudimentary 'novice' with a 5 wpm are only a notch above our CB (General Radio) Service.

Bearing in mind that aliens operating in Canada or Japan are subject to both their own and the host country's rules and although both TIARA and the Japanese Amateur Radio League offer assistance in the translation and administration involved in any reciprocal procedures, the restrictions of the JA regs even on their two top classes would be irksome and clearly impractical to enforce on visitors to Canada and not palatable to Canadians visiting Japan.

Varying power restrictions and the very narrow frequency slots allocated to Amateurs in Japan are a further complication. As if that is not enough, the rules there require the landlord's okay and an official station inspection before getting on the air. How this would apply to a visitor's handy-talky could consume more expensive time in haggling. To top if all off, the bureauracy in Japan is vast, slow and naturally works in its own language. As an example, it is usual to wait months for an official inspection.

In short, in view of all of the problems and the expense involved with little hope of a really reciprocal agreement, as we asked, who needs it?

. . . VE3CDC

Going to Japan?

Although Canada does not yet have a reciprocal agreement with Japan, the Tokyo International Amateur Radio Association (TIARA) welcomes visitors to club meetings on the last Friday of every month. Meetings include speakers from Amateur equipment manufacturers, the Amateur community and friendly talk. TIARA is happy to handle requests about Amateur radio in Japan and to assist alien Amateurs (from those countries with agreements) to get on the air. The only ones with reciprocal agreements with Japan are the U.S., West Germany, Finland and Ireland, according to the club presidnet, Joe Speroni, AHOA.

VHF/UHF News

John Dudley VE5JQ

As with most VHF contests, conditions can vary widely depending on your location and the last running of the annual ARRL VHF contest proved to be no exception. Some U.S. stations felt that the bands were "just wild" while most Canadian participants were somewhat more reserved in their comments. VE3ONT (see story elsewhere this issue) did a fine job on multi-op, setting a new Canadian record I believe. Out here, six metres was the main band with only a few meteor bursts heard on two. For the first thirty hours of the contest the pickings were slim with only a few scatter QSO's and auroral contacts on 6 M. available. VE6IP, VE4ADK, VY1AU and VE8BY were welcome contacts during the Saturday night aurora. Unfortunately no 2M auroral signals were heard here but I believe other parts of the country fared better on 2M.

Sunday evening saw 6M come alive with the sporadic 'E' openings we had been waiting for all weekend. Double hop 'E' on 6M provided W1, W2, W3, W4, QSO's from this QTH. Later near the end of the contest VE2YU, VE2DFO and VE3CRD were worked on auroral 'E'.

All in all conditions were fair to good from information I have gathered but down somewhat from last year. It was good to see the level of Canadian activity up and hopefully our participation will continue to grow.

Sporadic E on 2M

July 12th was apparently good for sporadic E propagation on 2M. Although I missed this opening (still waiting for my first)VE5DX of Regina worked 9 states in the midwest with 10 watts and a collinear antenna. I would appreciate reports of other Canadian stations working 2M DX during this opening.

1296 Gear

Parabolic of Sweden has a line of 1296 transverters and a 125W amplifier for 1296 now available. Information and pricing is available from Parabolic, P.O. Box 10257, S-43401 KINGSBACHA, SWEDEN.

VE3ONT, at it again

Yes there is more than just FM VHF/UHF activity in Canada.

The weekend of June 12th was the annual ARRL sponsored VHF contest. As in the past, the familiar call of VE3ONT was heard throughout the bands above 50 MHz.

The boys of VE3ONT have broken all previous Canadian records with over 150,000 points in their contest score. The station consisted of ICOM multimode 50, 144, and 432 MHz equipment and Microwave Modules (TM) converters/transverters for the other bands with, of course some 8877 based amplifiers for each band as extra support.

Included in their 1100 contacts were over 36 CW/SSB contacts on 2 meters, 13 contacts on 6 meters, 4 contacts on 220, 9 contacts on 432, and 2 contacts on 1296 MHz with Canadian Hams. Aurora activity led to some good VHF DX including the working of a station in South Carolina. Towards the end of the contest, 6 opened up and contact was made with 47 states and into Manitoba.

It must be pointed out that most activity during these contests is on CW as SSB is corrupted by Aurora and FM does not have the detection capability for very weak signals to maintain contact.

Bob VE3KZ's local is a difficult QTH to match, being atop of a high outcropping of the Niagara escarpment near Milton, Ontario, and having three 70 to 95 foot towers to play with. On a clear day one could see Lake Erie from the tower.

The VE3ONT gang are truly dedicated contesters as monoband HF beams were removed from the towers on the Friday and replaced with VHF/UHF antennas (the 6 metre boom was 43 feet long) with new heliax coax and then swapped back after the contest. Anyone who has struggled with a fairly large beam on a guyed tower knows the effort and coordination required for such a task.

Yes there is more to VHF than FM repeaters and the number of Hams with SSB and weak signal work capabilities is on the increase.

VE3HWN

VHF/UHF Amateur Radio Activity from the Log of VE3ONT

VHF Contest June 13,82

50.100 MHZ
VE3's ESE, BQN, CRD, DMF, KZL, FDP,
VE2's FMK, AEJ/3
VE1YX VE4ADK, VE4ADQ
(2others)
RIG: ICOM ICC551D with 8877 AMP.

144,100 MHZ SSB/CW

VE3's AQG, LPP, CPU, NTX, VA, FHM, LCW, RL, BZE, BPU, GNR, BFM, FGN, DTQ, MCY, BYO, IST, EYR, KBT, FQE, BAS, DUA, LLZ, FOB, KPH, JUG, HD, LIZ, LNX, ISE, JTJ, UOT.
VE2's NI, DFO, AMB/3, AS/3
RIG: ICOM

220.100 MHZ
VE3's EMS, DFO, ADJ, AIB
MICROWAVE MODULES
8877 AMPLIFIER

432.100 MHZ
VE3's FGN, FHM, LNX, ASO, FDP, KXF, AIB, UOT
VE2DFO uWAVE MOD.
8877 AMP

1296.100 MHZ
VE3's BFM, LNX (8 CONTACTS ON CW DURING CONTEST)
RIG: MICROWAVE MODULES AND 2C39 PA

AS OF SUNDAY AT 7:30 local time PM

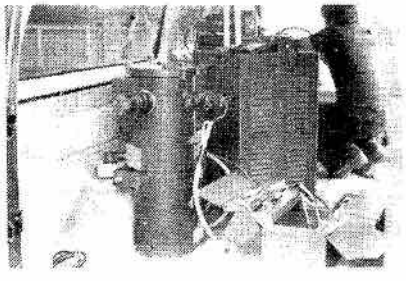
THE VE3ONT CREW: BOB VE3KZ, DANA VE3DSS, HANS VE3CRU, VE3ABG, VE3AIA, VE3CVX.

ANTENNAS:
6 11 el 43'boom Yagi
2 ?
220 15 el home brew the nite before
432 4 - 11 el phased
1296 42 el loops (1 wavelength loop circ polar)

(1)

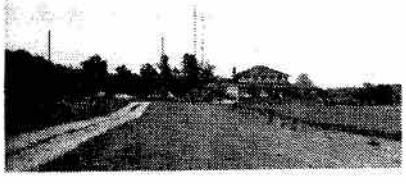
(5)

(3)

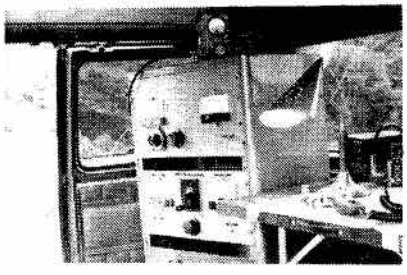


(6)

(4)



(2)



(7)

(1)
"The VE3ONT operators; L-R, Hans VE3CRU, Vic VE3AIA, John VE3CVX, Paul VE3FIB, Dana VE3DSS and Bob VE3KZ. Absent Joe VE3ABG."

(2)
"Extra Support"

(3)
"John VE3CUX and Paul VE3FIB at the 6 Meter Station"

(4)
"Last minute changes on 220"

(5)
"Dana VE3DSS at the 2 meter station"

(6)
"A Hams dream, the QTH of Bob VE3KZ"

(7)
"Nothing below 220 here!"

Teaching Ham Radio effectively

by Philip Gebhardt, VE3ACK

Part V -
Reinforcing Your Teaching

Most people agree about the need for planning ahead and for an effective delivery when it comes to teaching. The situation is not so congenial when the topic of homework is raised.

Generally speaking, people are either strongly in favour of or violently opposed to homework. That is understandable, because during our school days so much homework has been completed, yet so few people realize why it was assigned or how teachers derived the questions.

First, let's tackle the question: 'Why assign homework?' From your viewpoint as an Amateur Radio instructor, homework questions can fulfil any of the following functions.

1. Introduce new material

As pointed out in Part I of the series, there is no way you can cover a topic completely in one evening. Therefore, part of a homework assignment can be questions which require the students to uncover additional information.

2. Recall

These are straight factual questions. You teach about antennas; you ask questions directed specifically at the information you presented.

3. Reinforcement

These questions are closely related to recall questions, but are used to zero in on specific details you wish to emphasize. For example, you might ask the students to list the characteristics of the various classes of amplifiers. By writing the information down, they reinforce the points which you brought out in class and at the same time re-establish in their own minds which characteristics belong with which class of amplifier.

4. Practice

Very few people can solve Ohm's Law problems; power formula problems; resistance, reactance or impedance problems by watching you do one or two questions on the board. They need practice; give it to them.

5. Make them think

Less frequently see, but sometimes worth considering are questions which force the students to piece together ideas discussed in class to discover a fact you have not yet introduced.

In addition, the assignment helps the students by pointing out areas of weakness in their understanding, and it helps you to ensure that everyone in the class has grasped the material.

So much for why you assign homework, now for what to assign. A major reason why people hate homework is that it is dull and tedious; they are faced with the same thing over and over again.

The following list suggests various types of questions you can incorporate in your assignments in order to relieve the monotony. By using several types you can provide variety, interest and challenge. For the students, it relieves the 'pain' of the standard homework.

1. Essay format

This is the type which appears frequently. It becomes tedious very quickly and discourages further study. There's no way around it though, because the DOC exam is an essay type exam. Both the questions and answers appear in sentence form.

e.g. What is the purpose of a dummy load?

2. Multiple choice

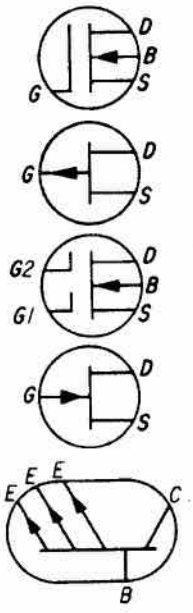
The advantage here is that if they calculate incorrectly or do not know the correct answer, it is obvious immediately and they can find out the information necessary before returning to class. The Regulations portion of the DOC exam falls into this category.

3. Fill in the blank

Here you format the question, therefore you control the situation so there is only one possible answer. e.g. The impedance of a parallel resonant circuit is at resonance.

4. Matching

These provide a quick check and a fast marking time. e.g. Match the transistor symbol in the left hand column with the correct name in the right hand column. One has been completed for you.



Dual gate MOSFET

NPN bipolar transistor

N-channel MOSFET

P-channel JFET

N-channel JFET

5. Practice

These questions relate mainly to Ohm's Law, the power formula, reactance, etc.

e.g. A 45-ohm resistor is connected in parallel with a 90-ohm resistor. What is the total resistance?

6. Diagrams

There are a number of possible approaches here.

(a) You present a diagram and pose questions related to it.

(b) You ask the students to draw a standard diagram.

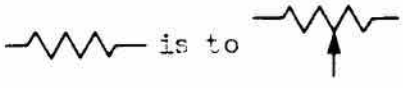
(c) You present a partially completed diagram and have them finish it.

(d) You draw the diagram and have the students label the various components.

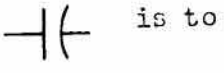
(e) You provide simple instructions and the students gets to use his newly acquired knowledge to 'design' a circuit. There is no single correct answer to these. e.g. Design a resistor network using three resistors to provide a total resistance of 60 ohms.

7. Comparisons

These can be simple (example 1) or can solve several stages in the solution (example 2).
e.g.



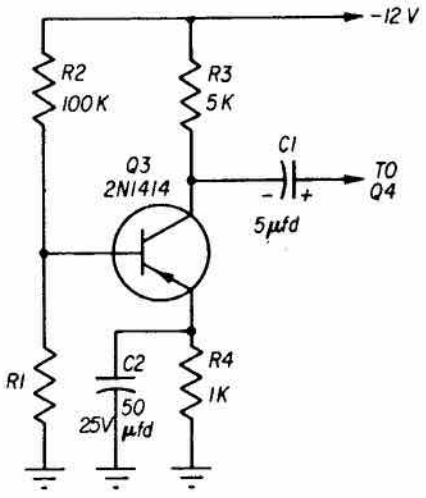
as



e.g. Which resistor will dissipate more power: a 10-ohm resistor with 2A flowing through it, or a 15-ohm resistor with 20V applied across its leads?

8. Thinking questions

In this type, the student uses information discussed in class to solve a problem not discussed in class. e.g. Refer to the circuit below. Is the output greater when R1 is 100 ohms or when R1 is 10k? Why?



How many questions should you assign? Keep in mind that the students may not have time to complete 20 or 30 or 40 questions per week. Also, you have to make up the assignments and that is time consuming. Finally, the homework is only valuable if it is checked. That means using class time or using more of your free time at home. You might start with ten questions per week and then adjust accordingly. Even at ten questions per week, over 20 weeks of theory classes you will have targetted 200 possible concepts which could appear on the DOC exam.

When you distribute the assignments to the class, make certain that the class understands why you are doing it. If they are aware that they can help themselves by completing the questions, that they can help you to help them, and that you can also learn from their answers, then it will be less of an uphill battle.

When you assign legitimate homework, everybody benefits; when you don't assign homework, you deprive the class of the opportunity to increase their potential to pass the DOC exam.

Part VI - Preparing for the Exam

All the advance planning, the effective presentations, and the homework assignments are methods to increase the students' chance to complete the course, understand the theory and code, and to pass the DOC exam. There remains however, one major stumbling block - the exam itself.

The primary reason that the exam is so difficult is that most of your students have been out of school for quite a few years. As a result, they have forgotten what it's like to write an exam and how to approach it. In addition, there is the apprehension associated with knowing that the certificate which you have worked toward for half a year, depends totally on your responses to ten questions during a 1 1/2 hour period. Since the class has no one else to turn to, it is up to you to guide them over the exam difficulties, just as you would over difficulties with the theory.

There are several problems to resolve - each has a solution. The first problem is that people panic at the thought of an exam. To overcome this anxiety, you simply need to give them practice 'to get the hang of it'. When do you practise? Referring back to the course outline in Part I of this series, you will notice several weeks missing. It is at these times that you administer the tests.

Because nothing depends on the results of your tests, the students can take a more relaxed approach than they would with the DOC exam. By the end of the course, the class will have completed enough 'dry runs' that the DOC exam will be just another one in the series.

There are added benefits to this system. People usually leave studying and review until the last possible moment and then they cram - that's what causes part of the panic over exams. By having tests at regular intervals, you are adopting a method of enforced review. The more they review and the more often they review, the easier the exam will be.

There will be some pressure on the students because you will be asking them to recall material without their books and in a timed exercise. They should however be reminded that this is a learning experience. It's an opportunity to correct errors which would otherwise cost them marks on the DOC exam.

Obviously, one problem would be insufficient knowledge of the theory. The test will point out

weak areas on which they can concentrate before the next test. A second associated problem is the inability to express the answers in written form. Since the sought after certificate depends on written answers, it is important to correct these difficulties before attempting the exam.

Some problems are self-inflicted. For example, students should be encouraged to write neatly. An answer which the examiner cannot read will gain very few marks. Similarly, diagrams should be neat. Have the students draw with pencil so corrections can be made easily. Another self-inflicted problem is the failure to read instructions and questions carefully. When you review the test with the class, point out words in the instructions, such as 'briefly', 'list', 'compare'. Examiners deliberately put these words on tests to act as guidelines, not simply to fill up space.

You can also help by pointing out ways to attack the exam. Suggestions such as reading over the whole test and then trying the easy questions first. Or point out that all questions do not require sentence answers.

They might use a chart or a diagram, if one is appropriate.

When you make up each test, try to match the type of question currently being used by the DOC. This way the students will begin to have a feeling for the type of question to expect. Also, after the test, provide the class with a set of written answers. This familiarizes them with the extent and scope of a good answer.

To be of any value, from a content standpoint, the tests must be marked. (Yes, more marking!) But whether you grade the tests is a point for debate. You might leave the decision up to the class, either on a class basis or on an individual basis. If you decide to grade, remember that those who receive high marks will be encouraged to carry on. On the other hand, those who receive low marks might get discouraged and quit - and that's not the idea of testing in your course.

Even you benefit from the test. If everyone answers all the questions, you've done a good job. But if you find there is a question which no one was able to answer, then you can go back over that material to try and establish an understanding. Again this is simply a means to plug the gaps which could cause problems on the DOC exam.

As with the homework assignments, you must emphasize to the class why you are testing. You must tell them the reasons the week before each test, and again just before you hand out the test questions - you have years of unhappy experiences with tests to overcome.

In a future issue of TCA, an article will appear dealing with aspects of writing the exam from the candidate's point of view. The points presented in that article may help you to help your class.

It was mentioned at the end of Part V, but it is just as relevent here: when you institute a system of regular testing, everybody wins; when you don't, you deprive the class of the opportunity to increase their potential to pass the DOC exam.

Armed with the information contained in the six parts of this series, you will be able to approach the teaching of Amateur Radio in a successful manner. As the years go by, you will be able to add to your store of knowledge and the procedures will become more and more refined until you have a top rate course to offer. Talk to other instructors; exchange ideas. You'll be surprised how much easier the test will become.

RSO Convention Oct. 1, 2, 3, 1982

The 1982 edition of the RSO convention is being held in Kitchener-Waterloo Ontario. This is the second year in a row that the Kitchener club has held this event. Last year's convention was such a success that the RSO decided to hold it in the same place this year. There will be Forums, Displays, prizes, a dinner, and much more to be offered. This year the flea market will be held on Saturday from 8 a.m. to 3 p.m. There will be two new draws added to the convention. The first is for those who pre-registered. The other is for RSO members only. Find out about the prizes at the Convention.

This year the committee has a special telephone number for registrations. It is (519) 745-3866. You may pre-register for the convention by calling this number. A special feature of this service is that you may use your VISA card to register. Only the VISA card will be accepted for pre-registration. The Waterloo Motor Inn is the setting once again and they have doubled their capacity to 130 rooms. These will be available on a first come first served basis.

Address of the committee is "RSO Convention Committee, P.O. Box 226, Station B, Kitchener, Ontario, N2H 6M2."

See you there.

TCA: Technical Section

Studying for the Digital Amateur Ticket — Part II

For those studying for the Amateur Digital Radio Operator's Certificate, here is another set of problems with solutions.

(1) Describe what modulation means.

Modulation is the process whereby information such as speech, pictures or digital data is impressed upon a carrier with the intent of storing or transmitting that information. Without modulation, information would have to be sent directly over wires, or be recorded on tape or paper. Modulation makes it easier to convey information even if wires or tape is used. Typically, a radio frequency carrier is modulated by varying its amplitude (AM) or frequency (FM), or by keying it on and off (CW) (FIGURE 1). For laboratory use, instrumentation tape recorders use frequency modulation of an audio carrier tone to record data accurately.

(2) Describe two error control techniques that can be used to combat transmission errors of digital data on radio channels.

The checksum technique takes the block of data and forms the sum of all the bytes. This sum is compared with the checksum word (typically one or two bytes) sent with the data. A disagreement implies an error in the received data or checksum. For example suppose the following seven bytes of data were to be transmitted over the radio channel:

Byte No.	Character	ASCII (Decimal)
1	A	65
2	M	77
3	A	65
4	T	84
5	E	69
6	U	85
7	R	82
		....
		checksum527

Summing up the ASCII (American Standard Code for Information Interchange) codes representing the letters in the word AMATEUR, we get 527. This number requires two bytes to represent it, 2 and 15, where 2 is the most significant byte also represents all the overflows that occur when the sum is done, and the least significant byte represents the remainder of the sum. In our example, we wish to transmit one checksum byte, the least significant one, or the 15. Thus we transmit the group of eight bytes 65 77 65 84 69 85 82 15. At the receiving computer, the first seven bytes are added together and the remainder is compared with the eighth byte. If there was no error in reception, there will be agreement, otherwise an error will be detected. Note that there is no way to correct the error with the information available.

A second error control techni-

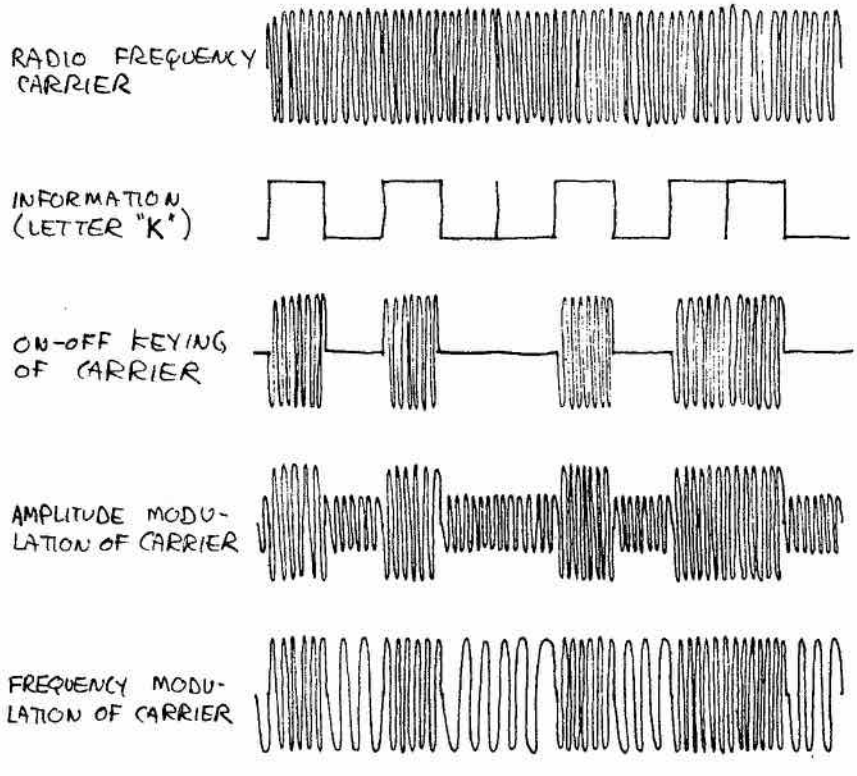


FIGURE 1

WAVEFORMS SHOWING TYPES OF MODULATION

ASCII	Binary pattern	Horizontal Parity bit
65	0 1 0 0 0 0 0 1	0
77	0 1 0 0 1 1 0 1	0
65	0 1 0 0 0 0 0 1	0
84	0 1 0 1 0 1 0 0	1
69	0 1 0 0 0 1 0 1	1
85	0 1 0 1 0 1 0 1	0
82	0 1 0 1 0 0 1 0	1
Vertical Parity	0 1 0 1 1 0 1 1	

que is parity. Consider the previous example again, with the bytes expressed using their bit patterns:

The vertical parity byte + 91 and the horizontal parity byte + 00 001101 + 13. Both bytes would be transmitted with the seven data bytes. To check the horizontal parity, the computer counts the number of one's in each data byte. If this number is odd, a one is written down, else a zero is. Vertical parity is computed likewise. These bytes should agree with the two transmitted. If not, expand the transmitted parity bytes into their one's and zero's. If one bit in each byte differs from the calculated parity bytes, locate the data bit at that row and column and invert it. This corrects the error. Otherwise the error cannot be corrected, because the parity method corrects single errors and merely detect multiple errors.

(3) Describe some possible sources of error on a fading radio channel.

A fading radio channel is one where the signal path is encountering significant attenuation. Whatever the cause might be, the usual effect is to decrease the signal to noise ratio. Any noise that is normally present becomes significant. High amplitude impulse noise can mask a weak signal and effect the automatic gain control of the receiver such that data 'drop out' occurs - an entire chunk of data is lost from the bitstream. Low level random noise inherent in receiver pre-amplifiers and in the atmosphere becomes sifficient to complement data bits with much greater probability. If there are strong transmitters nearby, their interference will be felt to a greater degree, and desensitization of the receiver may occur - reducing its ability to detect a weak signal. See FIGURE 2.

(4) Discuss diversity techniques that may be used to combat errors on a fading channel.

Frequency diversity permits one to use a different frequency on the channel. Presumably, the fading is selective and will not effect a slightly different frequency (FIGURE 3). Space diversity lets the station re-orient the antenna and work through a different station, one which will reroute the data to the destination. This scheme depends on a highly interconnected packet network (FIGURE 4).

(5) What is meant by a random access channel?

Random access implies that a channel user will simply broadcast on the channel whenever he has traffic to send. There is no way to predict which user will attempt to access the channel next. There may be no rules, or the user may

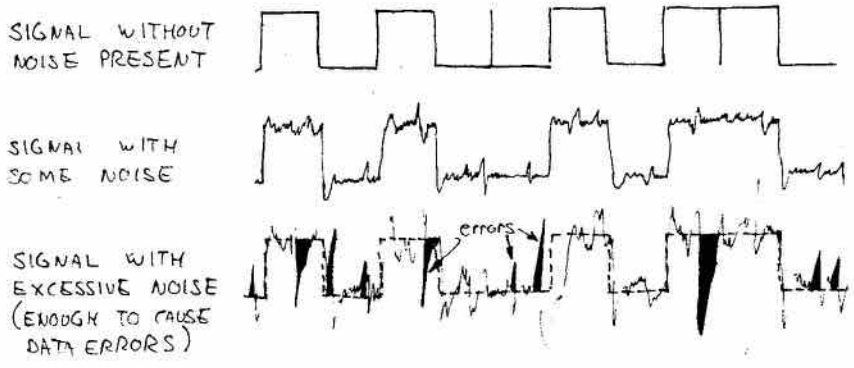


FIGURE 2

WAVEFORMS SHOWING NOISE ON A DATA SIGNAL

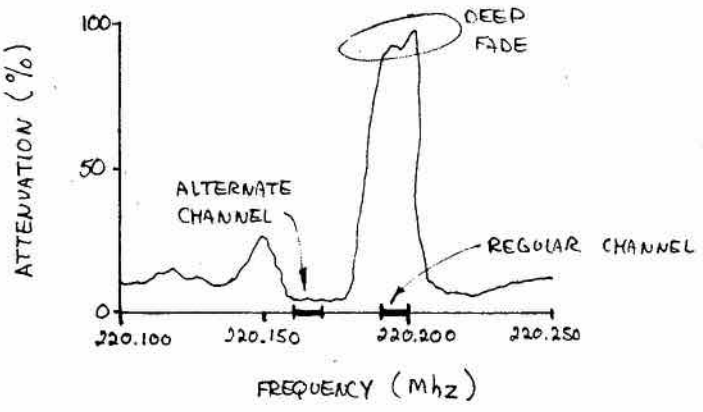


FIGURE 3

SELECTIVE FADING AT ONE FREQUENCY BAND AND NOT ANOTHER

wait until a time slot begins, or a user may sense the channel and transmit only if it is clear.

(6) What are the main characteristics of packet radio?

All users share one fixed frequency band and transmit at the same data rate. The packets of data are short and transmitted at pseudo-random times, i.e. the traffic is bursty. Because the channel is random access, there will be packet collisions, so stations do error detection on the data received and have some means for acknowledging (ACK) or not acknowledging (NAK) receipt of a packet.

(7) Consider a population of mobile digital terminals and a single base station. In what situation (s) is polling better or worse than a random access scheme?

Polling requires that the bast station be aware of every terminal on the air, and sequentially broadcasts a polling message to each. If a terminal has traffic to offer, it must wait until it is polled. In a low-traffic situation, where the probability of a collision is low and the number is terminals is high, polling overhead reduces the net throughput on the channel. At high traffic levels, polling's inherent collision-avoidance increases the channel throughput to nearly 100% compared with 36.8% for a slotted Aloha random access scheme.

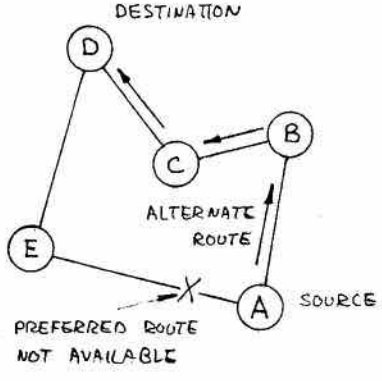
Polling permits a terminal to transmit any amount of data to the base station. Such a situation would be frowned upon on a random access channel because of the large number of collisions this would invite.

(8) Which methods do you know that will digitize voice signals?

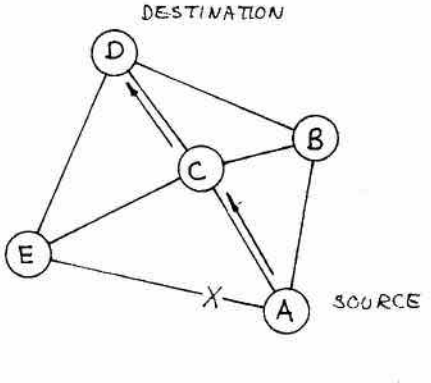
To retain fidelity, voice signals should first be low-pass filtered to 3000 Hz, then sampled at least twice this rate (say 7000 Hz). A standard successive approximation analog to digital (A/D) converter integrated circuit (IC) can be used to digitize voice samples. These digital samples are converted to a serial bit stream and transmitted on the radio channel. The voice signal is reconstituted at the receiver by converting the serial bit stream back into digital samples and using a standard digital to analog (D/A) converter IC to reform the analog voice samples. A 3000 Hz low pass filter then filters out all traces of the sampling frequency.

It is worth noting that the data rate (in bits per second) of the radio channel must exceed the sample rate of the digitizer, that is, sampling at 7000 Hz and digitizing eight bits per sample means 8*7000=56000 bits per second must be transmitted. The channel had better have this much capacity.

The following figures show in block form how a digital voice transceiver might be constructed. The function of the sample and hold block is to hold the analog voice sample while it is being digitized. The universal asynchronous receiver transmitter (UART) converts parallel data to serial data and vice versa. The modem transforms the serial bit stream into a form that can be transmitted via analog means over the radio channel. The frequency generator provides outputs to drive the A/D, D/A and the UARTS. See FIGURE 5.



THIS PACKET RADIO NETWORK OFFERS ONLY A MINIMUM REROUTING CAPABILITY



THIS PACKET RADIO NETWORK ENJOYS HIGH INTERCONNECTION AND CORRESPONDINGLY HIGH REROUTING CAPABILITY

FIGURE 4

HIGH INTERCONNECTABILITY ENHANCES A PACKET RADIO SYSTEM

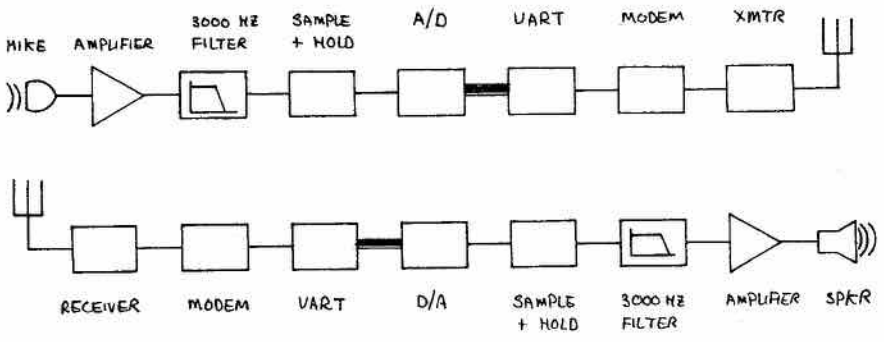


FIGURE 5

A DIGITAL VOICE PACKET RADIO TRANSCEIVER BLOCK DIAGRAM

NOTES ① TWO ANTENNAS ARE SHOWN FOR SIMPLICITY. ONE IS REQUIRED AND ASSOCIATED DUPLEXERS OR ANTENNA SWITCHES ARE NOT SHOWN.

② SIGNALS CONTROLLING THE SAMPLE RATE, BAUD RATE, NUMBER OF UART AND A/D & D/A BITS WERE NOT DRAWN FOR SIMPLICITY'S SAKE.

(9) Is it desirable to integrate onto the same mobile radio channel both analog voice and digital data? How could this be done?

Yes. If the digital data shares the total voice band it is desirable provided that the receiver audio is muted while digital data is being received. The data burst must be so short that this momentary muting is not detected by the human listener. If the digital data rate is sufficiently low, then analog voice and digital data may be transmitted simultaneously provided that mutually exclusive portions of the frequency band are assigned. Consider the spectrum plan in FIGURE 6:

Voice intelligibility is not seriously impaired by removing the spectral energy between 600 and 1500 Hz, and a low data rate FSK signal could occupy this gap.

In this 1500 - 600 + 900 Hz band, the data rate possible is given by Shannon's formula:

C = BW * LOG (1 + S/N)
C = data rate
BW = bandwidth
S/N = signal to noise ratio on channel
If we pessimistically allow S/N 5 1 then we can support a 900 bit per second data rate.

The author invites readers to submit in writing any questions they may have about this installment on Packet Radio directly to:
John Blommers, VE6BAA
17060-98 Street
Edmonton Alberta
Canada T5X 3G5
Replies will be made in a future installment of this series.

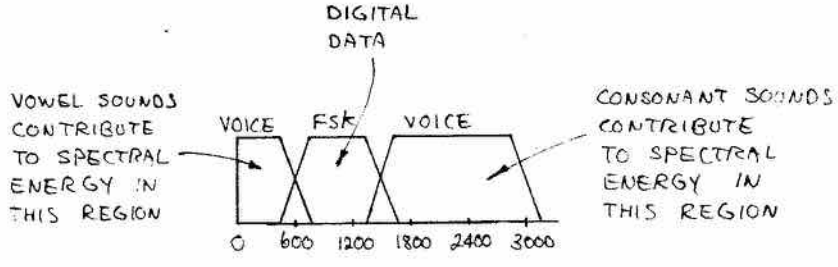


FIGURE 6

COMBINED FREQUENCY SPECTRUM OF VOICE PLUS DATA

Bandwidth

by Bill VE3NR

BANDWIDTH as defined by the International Telecommunications Union in the Final Acts of the World Administrative Radio Conference, Geneva, 1979.

"**Necessary Bandwidth:** For a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions.

"**Occupied Bandwidth:** The width of a frequency band such that, below the lower and above the upper frequency limits the mean powers emitted are each equal to a specified percentage / 2 of the total mean power of a given emission.

Unless otherwise specified by the CCIR* for the appropriate class of emission, the value of / 2 should be taken as 0.5 %"

Here is how these terms are used. The ITU's International Frequency Registration Board (IFRB), an organ of the ITU, evaluates proposals to use frequencies and registers them in the Master International Frequency Register on the basis, among other things, of necessary bandwidths. If interference develops between radio systems and the IFRB is asked to resolve such a complaint, among the things the Board looks at first are the frequency, the class of emission and the occupied bandwidth of each signal involved in the complaint. The offending station may have to reduce its occupied bandwidth to that which is necessary for the class of emission it was authorized to use.

*CCIR - International Consultative Committee on Radio - an organ of the ITU.

How to Locate Radio or TV Interference

1. Go to your main fuse or circuit breaker panel with a battery operated transister radio tuned between stations and listen to the noise. (if at night or in an enclosed room, be sure to have a working flashlight with you.)

2. If the noise is present and corresponds to the disturbing interference, shut off all power to your premises by opening the MAIN circuit breaker, switch or other service disconnect. (Don

DEVICES MOST COMMONLY FOUND on private premises that cause intermittent radio or television interference are:

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Electric Blanket Controllers
Home Thermostats
Tropical Fish Aquariums
Electric Clocks
Refrigerators
Antenna Amplifiers
(Butter Conditioners)
Well Pump Controls
Door Bell Transformers
Heating Pads
Flashing Decorative Lighting
Dimmer Switches
Motor Speed Controls

4. It is important for your own benefit to have the offending device checked and / or repaired to ensure normal safe operation.

Offending devices can be in violation of FCC of DOC rules, and can be a nuisance to yourself and your neighbors...

Courtesy..VERNE, VE1CU
Mel VE1BMV

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Activity on the Amateur Radio 160-10 metres

The charts on the following pages are intended to illustrate what type of activity goes on in different parts of the HF bands. Of course, any part of the band may be used for any type of activity; however. Amateurs have developed informal agreements to avoid conflict between different types of activity. By ancient tradition, CW is at the bottom and phone is at the top of each band, with a phone-CW dividing line somewhere in the middle. DX activity tends to concentrate in certain portions of the band, whereas general ragchewing and net operation can be found almost anywhere in the band. On CW, the DX activity generally takes place in the bottom 25KHz of each band; and on phone, the DX activity centres around 1820, 3790, 7090, 14200, 21300, and 28600 KHz, plus or minus a few KHz. General ragchewing and net operation can be found almost anywhere in the band away from the DX activity. Note that the chart shows DX and US activity separately. This is because US activity patterns differ substantially from those in the rest of the world (DX). Canadians generally follow both the DX and US patterns of activity, depending on who we want to work.

Amateur Band Bar Charts

These charts were obtained from a number of sources including a 1977 BCFM association bulletin submitted by Peter Driessen VE7AB. All of them have errors I am sure. Not everything that should be included **is** included. For instance, the 160 meter band is not included in the verticle band charts. but is included in the horizontal bar chart on the last page. That Bar chart is not correct. This is where you come in. Pencil in corrections or additions, or comments on this bar chart. After I have compiled all of the comments from reader reaction, I will create a corrected version, which I will publish in February, as a wall chart. Tear out the charts, make your corrections and mail them in to me "Editor TCA, P.O. Box 2610 Station D, Ottawa. K1P 5W7." Amateurs contributing to this will have their calls enscribed on the chart. By the way, the CARF membership form is on the opposite side of one of the charts. You can take this opportunity to renew your memberhsip.

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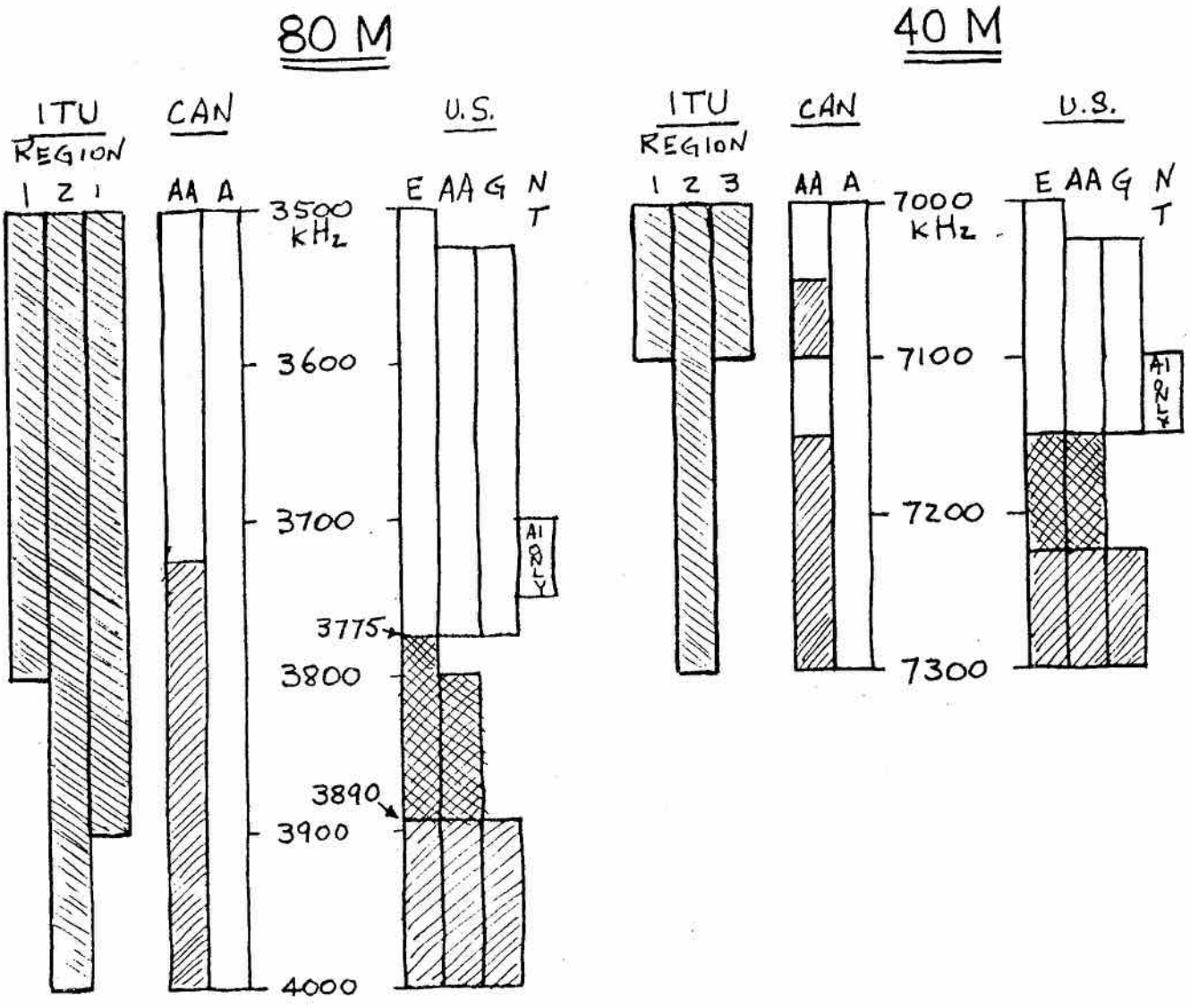
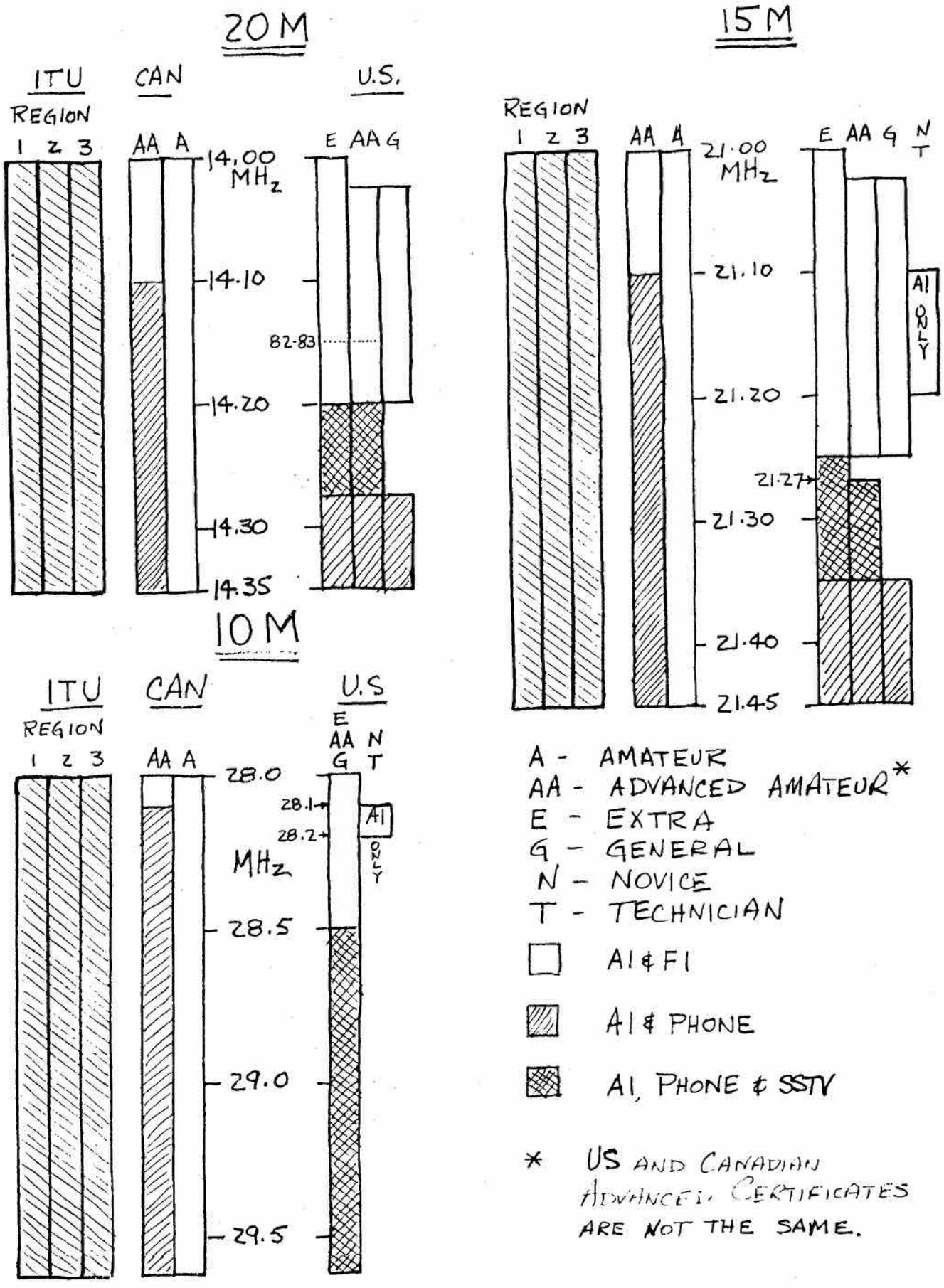


A - AMATEUR
AA - ADVANCED AMATEUR*
E - EXTRA
G - GENERAL
N - NOVICE
T - TECHNICIAN

A1 & F1
A1 & PHONE
A1, PHONE & SSTV

* US AND CANADIAN ADVANCED CERTIFICATES ARE NOT THE SAME.


20M
ITU
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14.35
15M
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1 2 3
AA A
21.00 MHz
21.10
21.20
21.27
21.30
21.40
21.45
E AA G N T
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CAN
AA A
U.S
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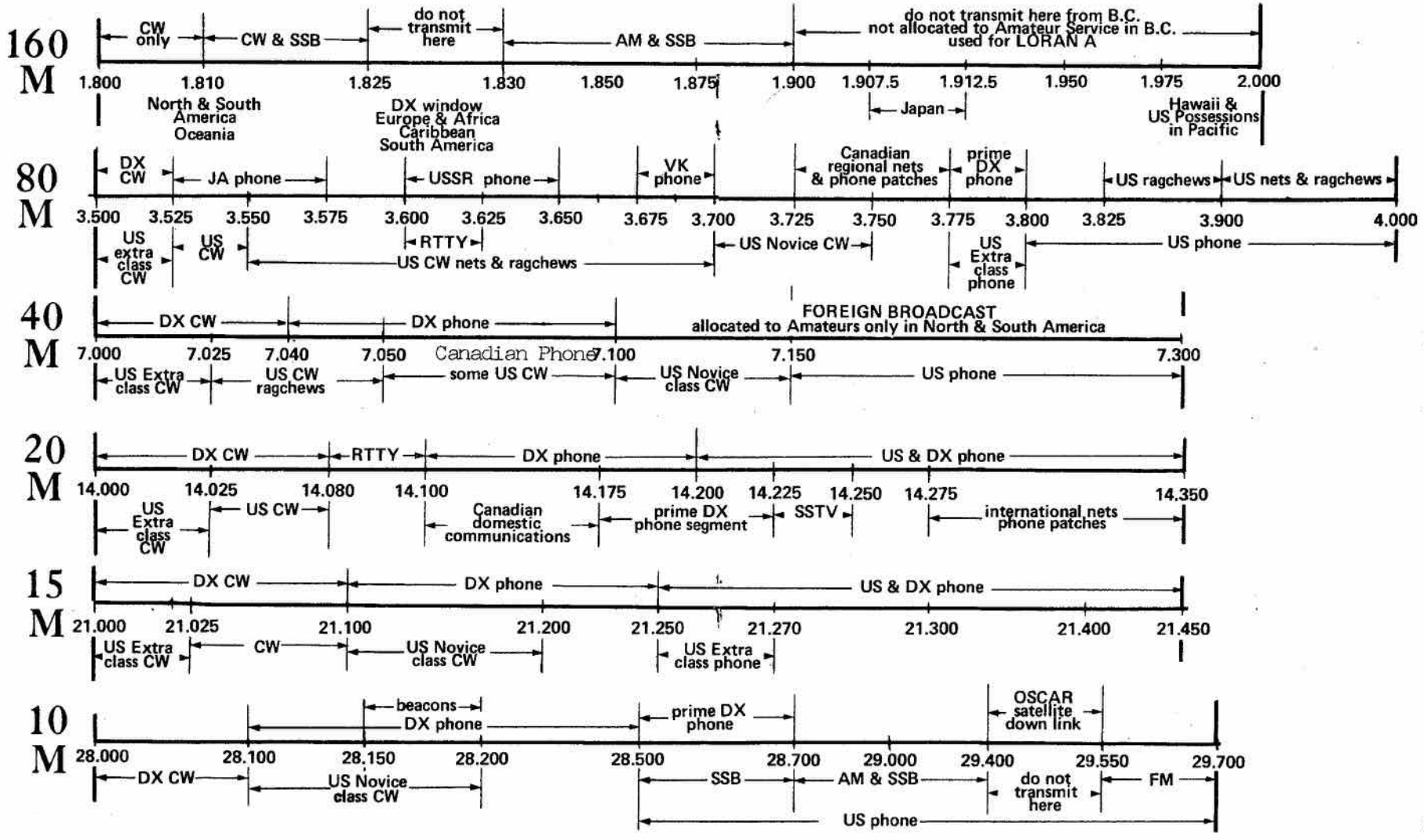
28.0
28.1
28.2
AI ONLY
MHz
28.5
29.0
29.5
A - AMATEUR
AA - ADVANCED AMATEUR*
E - EXTRA
G - GENERAL
N - NOVICE
T - TECHNICIAN
AI & FI
AI & PHONE
AI, PHONE & SSTV
* US AND CANADIAN ADVANCED CERTIFICATES ARE NOT THE SAME.

ACTIVITY ON THE AMATEUR BANDS 160 — 10 METRES

(Note: DX normally includes Canada)
Some of the dividing frequencies are approximate



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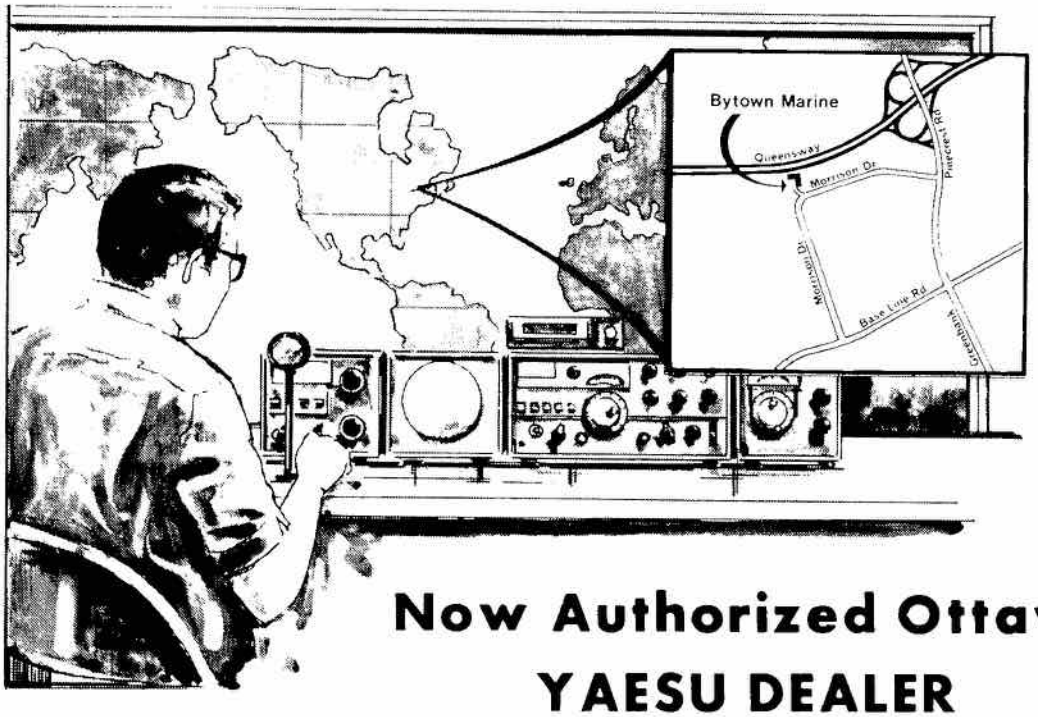

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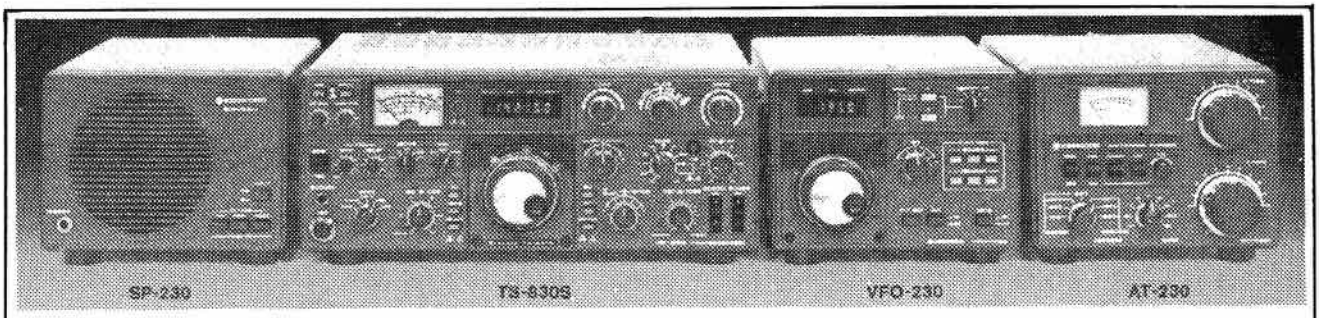

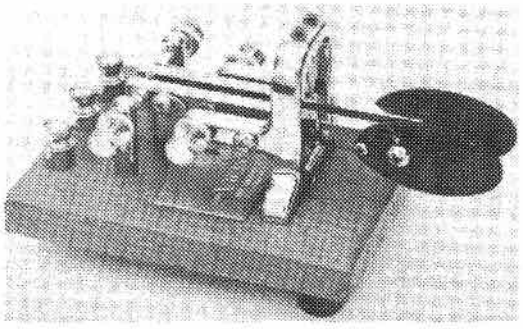

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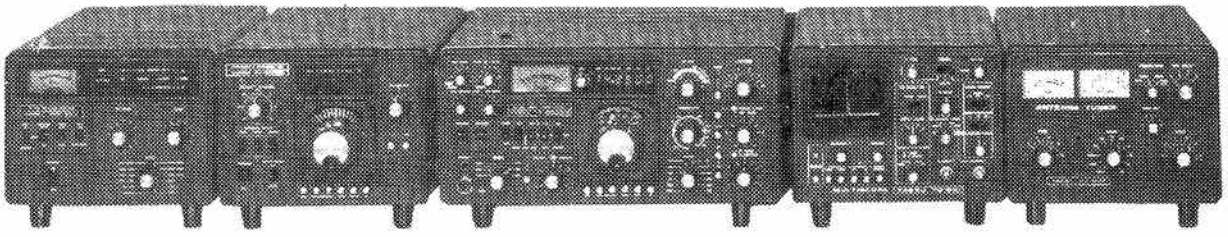

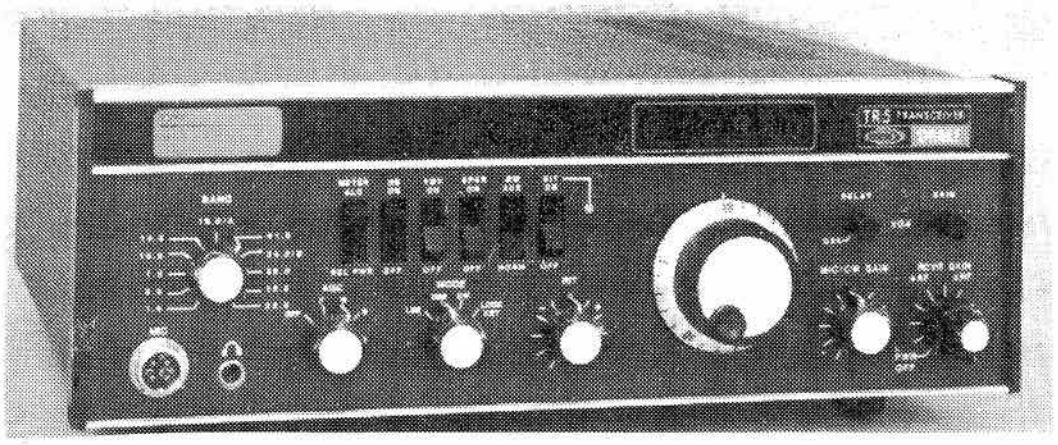

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