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THE CANADIAN AMATEUR

Canada's Amateur Radio Magazine

La Revue des Radio Amateurs Canadiens

SEPTEMBER 1988

CARF's National QSL Bureau

— Page 14

Guides On The Air

— See YL News & Views, Page 36

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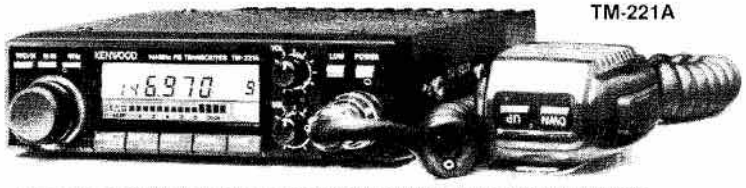

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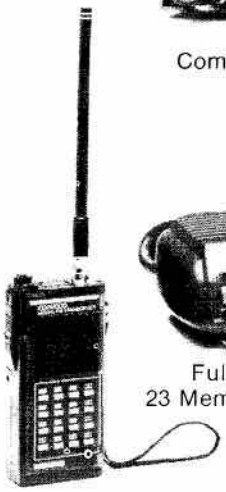

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Canada's Amateur Radio Magazine

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WHAT IS CARF?

The Canadian Amateur Radio Federation, Inc. is incorporated and operates under a federal charter, with the following objectives:

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

EDITORIAL

The Canadian Amateur talks!

BY GEORGE SANSOM
VE3LXA

About six months ago, an idea was introduced in CARF which I believe will do more to make us all feel worthwhile than anything we have collectively taken on before. We decided to record *The Canadian Amateur* in Talking Book Format for our blind members.

It was great in theory, but suddenly we were confronted with the 'how' of it. Readers are no problem, since we have a couple of broadcasters on the Kingston Advisory Board of the CNIB and plenty of other volunteers who are willing to help out. Steve Cutway VE3GRS, Manager of CRFC Radio at Queen's University, arranged for free studio time and does the production himself. This fact in itself is pretty spectacular, since Steve is totally blind, but that's another story, one which will be told later.

The crunch came when we found out that there was virtually no production time available at the CNIB duplicating studio in Toronto, or at any of the others which we were able to locate. It seemed like the project was doomed, until Eric Blackwell VE3PLA showed up at the CARF office and made us an offer. Eric works for Canatron, an Ottawa-based company whose main service is the mass duplication of audio tapes for the recording industry and other clients who require audio cassettes in volume. Canatron was able to offer CARF a price which is much lower than anything we could find elsewhere. With the current membership rate of $25 per year, a blind ham will pay for his tapes himself. Not much to spare, but paid for! (To include the whole magazine we will require two tapes). Things began to look brighter.

Now we fight the tax battle! We will probably end up paying 12% Federal tax plus the Provincial sales tax (8%) on all material purchased (tapes, labels, labour, etc.). This will take us over the estimated outlay and makes it less than cost effective. Suddenly things look a little bleak again...

Here is where we hope our regular members will offer assistance.

Spread the word among your blind Amateur friends. We need their memberships to continue. If you can help financially, please do so! The White Caners of Canada will thank you! The volunteers who have put many, many person-hours into the production of the master tape thank you, as do I. Any amount will help. Please indicate on your cheque or money order 'CARF Talking Book Fund'.

Guest Editorial

BY DAN HOLMES
VE3EBI

An old adage of the "Mother's knee" variety says, "if a thing is worth doing, it is worth doing well."

Without preaching to the converted, I might say that Amateur radio is a hobby worth doing well, and doing very well.

It was in this vein that the CARF Executive meeting, held in conjuction with the Annual General Meeting, discussed ways and means to maintain or increase the high standard of service to our members.

It was obvious that to do this, there was an urgent need for a new computer capable of handling all of the office requirements. As with all voluntary organizations, urgent needs run headlong into the budget. A multi-task computer of the size required is upwards of $5,000 and, let's face it, the budget creaked.

A solid headquarters organization is one of the assets which CARF possesses, but the dedication of its members is the most valuable one.

How evident this is was forcefully brought home to the meeting by long-time DOC liaison chairman, Art Stark VE3ZS. Art has worked hard for CARF for 18 years and, to top it off, made a very generous donation toward the purchase of a computer as above.

What can one say to that kind of generosity of both time and money? I'm sure Art feels it was a worthwhile investment in Amateur Radio. Perhaps we can't all do the same as Art, but perhaps we can increase our involvement a notch or so, to make CARF truly 'The Voice of the Canadian Amateur'.

LETTERS

SILENT KEYS
VE7ANA Bill Winter, Maple Bay B.C.
VE1PI Jack Nowlan.

DEAR EDITOR?

There seems to be a paucity of editorial discipline in *The Canadian Amateur* regarding letters to the editor, particularly on the subject of licence requirements. Far too many letters get no comment from *The Canadian Amateur* at the time they are published. Is the reader to assume *The Canadian Amateur* has no opinion regarding letters published?

Most of the letters equate the difficulty of the Amateur examinations with the lack of numbers in our ranks. The statistics show otherwise, here and in the rest of the world. Far too many letters show very little respect for the work ethic; anything worth working for is worth having. How long does it take to become proficient in any hobby? A six or ten week course of two hours a night, once or twice a week does not even approach 'proficiency'.

Myself, and I suspect many others, are tired of the thumbsucking syndrome pandered to in letters to *The Canadian Amateur*. There are no valid arguments to substantiate lowering the licence requirements. As leaders in the electronics world, Canadians have a reputation to uphold if they expect to survive in the global communications hobby!

One of your recent letters is authored by a yet-to-be licensed person who writes "cut out the morse code if you wish and I'd lose no sleep." Morse code, my friend, in case you did not know, is the backbone, the foundation of Amateur radio. It is not spark-gap technology for grey-haired grandads. It's the hi-tech mode for satellite beacons, AMSAT ops, QRP buffs, slow-speed traffic nets, moonbounce specialists, weak signal VHF enthusiasts, to mention a few areas where morse code does it all. Once learned properly, it becomes a second language, never forgotten.

I suggest that editorial content of the kind shown in letters denigrating morse code should not be published, as they do nothing to enhance the hobby.

Joe Caberlin VE3ABG

I agree, however it is The Canadian Amateur's *policy to present the letters as a 'forum of discussion' among Amateurs and interested parties. My opinion is only one, yours are many. Besides, this way I get to stir the pot without getting in the middle too often. Nice position eh! Want the job? George.*

WRITE TO THE CANADIAN AMATEUR

ANOTHER VIEW

For the past three months I have studied for my Amateur certificate and, to date, have been rewarded with a pass in all areas, except 'code receiving', which has not been tried. I have found that the questions asked on the respective exams were fair and at times challenging. For the most part, they were not obscure, nor of too technical a nature. They simply sought to ascertain whether I knew the general radio theory— only fair, considering I could be using the airwaves shortly.

I have put pen to paper because of the number of letters, comments and rumours that I have come across, suggesting that someone is out to discourage prospective Amateurs. Let me say, I think no such thing is happening. Rather, it is my opinion that we all have a tendency to pass the buck, to throw dirt at someone else, to blame others rather than accepting our own limitations, attitudes or disappointments.

We ought to accept the limitations of any study material and realize that we, as students, have the responsibility to seek the knowledge, rather than expecting it from qualified Guru on a golden platter. If we fail at our attempts to be licensed, it's not the DOC's, Zabarsky's or CARF's fault, but ours alone. Perhaps we did not dig deep enough, study long enough or realize that what was in 'the book' was not complete.

In these days, perhaps a balanced approach is a rare phenomenon. It seems to be a characteristic of our minds, that we find it easier to grasp half-details as shortcuts than to grasp whole concepts in the pursuit of understanding. The consequence is that we become lopsided and often fail. I am convinced that fairer exams, new study books, no code requirements are not the sole answers to improving the pass percentage or lowering the average 'Ham' age to below 55 years, but rather the learning of effective study skills combined with a supportive, nurturing, Amateur community.

As a prospective Ham, I see a bright future, but only if we plug in, tune up and radiate out.

N. Parker VE7???

By Jove, I think he's got it! George.

TRAVELLERS' BLUES— HAM STYLE

Earlier this year I took a holiday. I have always said to friends, in my airy fashion, that in an emergency any Amateur radio operator could find me at any time. While this remains theoretically true, the following details how it works in practice. Many readers will suggest faults on my part; I merely note the well-known accuracy of hindsight.

First: how does the man in the street go about finding an Amateur operator? Unless you have tried to do this in a strange city, without benefit of hand-held, you have no idea of how impossible the task is.

Organizations for users of travel trailers publish a list of 'Standby Sams' who make themselves available to members with a problem. Perhaps we need something similar.

Second: The person who was looking for me did manage to find a list of operators. He proceeded to telephone them. Most were, of course, out of town. The few he reached were quite puzzled by the problem. They didn't have HF, they didn't have a good antenna, they couldn't imagine what frequency I'd be monitoring: NOBODY mentioned the traffic handling nets. What is going on here? Surely the first thing that would occur to any Amateur faced with this request would be to take the message, and hand it over at an appropriate net.

Of course, this is a specific case of a very general malaise in Amateur radio: another is that we constantly hear complaints of operators who violate "gentlemen's agreements" concerning frequency utilization. No doubt there are intentional violations: but I would lay long odds that the majority of Amateurs have no idea of what these agreements are. We have no set procedure for informing newcomers of that body of agreement which we all take for granted. Sometimes the new operator finds out by trial and error— sometimes not. We really are not very good communicators!

Meanwhile, I was careful to check into local repeaters each day, and make myself known at nets. Anyway, that was the plan. You know which of the repeaters in your own town find little use: you know which repeaters are miles out of town. The visitor does not! I often spent a day without raising a single response. On two occasions I failed to access a net because the repeater was out of town and out of range. I could hear them perfectly!

This presents a very difficult problem, because repeater use varies so drastically from year to year. I do suggest that if a club specifies a frequency to be used for calling— which is an excellent idea— that someone ought to listen to that

frequency, on a formal rota basis. I note that the Amateurs in St. John's have managed to get frequency information on the tourist map for that city. Now if one could add the locations of the repeaters, or even that of the prime repeater, visitors would be greatly helped.

British Columbia has a truly admirable system of tourist offices. Where such a network exists, could we not make available a single-sheet information bulletin for visiting operators? Better still, we might include information for the general public on how to access messaging services by Amateur radio.

The above suggestions are not made in a carping manner; I wish only to draw attention to the problem and to make a start upon improving the situation.

Name withheld by request

MORE ON NEW LICENSING STRUCTURE

I am writing in response to the challenge given in your May issue from the column entitled 'Looking Around', by Art Blick VE3AHU. Amateurs and would-be-Amateurs were asked to comment on the column, which gave an overview of the DOC's licence restructuring proposal. I am a would-be-Amateur who is very interested in the DOC's restructuring proposal. I realize I do not have the same insight that a veteran ham would have, but I hope my proposed suggestions will encourage interaction and possibly help the formation of a new licensing structure.

The first area I would like to comment on is the proposed 40-45 hours of class instruction. I would see it to be beneficial if the DOC was to provide class instructors with a course outline. This may give instructors across Canada solid direction in regard to course content. The proposal to decrease the code requirement to 5 wpm for a B certificate appears to be a step forward. I am not in favour of eliminating the code altogether, but a 5 wpm requirement allows more Canadians who are interested in Amateur Radio to see a goal which is 12 wpm seems to be a considerable increase from the 5 wpm B Class certificate. A suggestion would be to have a C certificate requiring 8 wpm and the D certificate requiring 12 wpm. This would appear to be a more well-balanced progression.

Another area I see that needs to be commented on is the term 'Commercial Equipment'. I would like to see the DOC more clearly define this term. What is, and is not, commercial equipment? Are we going to be permitted to install PL259's on coax? I think it would be an unfortunate blow to the hobby of Amateur radio if 'home brewing' were banned until one acquired his or her D certificate. I understand that the DOC has the safety of the Amateur in mind and possibly the 'Ravencroft Case' has put them on pins and needles in regards to eliminating any possibility of interference which some home brewing could entail. But to swing the pendulum in the extreme conservative direction only but stifles the talent of the Amateur and prospective Amateur. I would like to leave the veteran Amateur and the beginner alike a challenge to write to *The Canadian Amateur* with their suggestions on how home brewing can be preserved.

I was puzzled to see that 75 metres was the only band to be allotted to a holder of a class B certificate. It would mean that most daylight operations would be extremely limited except for possible ground wave. I am not opposed to 75 metres, but I would like to see the addition of a second band introduced. For example, 40 metres as a second band would give the Amateur operator greater operating hours. The 40 metre band for a class B certificate holder could be restricted to morse code only, so that the Amateur has the opportunity to improve on their code and upgrade to a higher certificate. Also, 40 metres, along with 75 metres are some of the bands which are least likely to cause interference trouble such as TVI.

The final area I would like to comment on is the idea of call prefixes for each class as to stop or limit illegal operations such as a class A operator transmitting on the HF bands when their licence only entitles them to bands above 30 MHz. Canadian Amateurs have earned a great deal of respect and subsequently have been entrusted with many responsibilities. The exceptional operating practice of the Canadian Amateur has reaped a 'clean' and well-maintained (policed) frequency spectrum. To issue call prefixes would be to only ignore the proven track record of veteran hams. To say to the newcomers "we do not trust you" is to forget that all of you at one point were newcomers and wanted to gain trust as responsible Amateur radio operators.

Let's face it— if someone wants to operate illegally they will probably do it anyway; whether or not they get away with it is the responsibility of each individual who holds an Amateur radio licence. One cannot lean on the DOC to do all the enforcing to keep the bands clean. It is a group as well as an individual effort by each and every ham.

Mike Weir
Mississauga, Ont.

WITH GRATITUDE

To all Ham Radio Operators and Clubs

Please accept my heartfelt thanks and gratitude for all you have done for my husband, Jack Ravenscroft, and in your support of the JRSD Fund.

When Jack retired, we settled in Kanata. He could now have his Ham Radio and continue DXing.

It was so wonderful for me to have Jack home as, at times, I am disabled with arthritis and need his help on a daily basis (physio, trips to doctors, etc.).

Ham Radio has been important to both of us and we've been so grateful for phone calls, encouraging letters and all the little thing humans do to comfort each other.

We still need your help, your love and concern to keep us going. I marvel at the Miracle of the Air Waves— it will always intrigue me.

Thank you, everyone.

Helen Ravenscroft XYL VE3SR

CARF KUDOS

Just a line or two to tell you how much I enjoyed the June issue of *The Canadian Amateur*. It blows the socks off other magazines which seem to be more concerned with political issues rather than items of general interest to hams. Your treatment of the Ravenscroft issue is the kind of political issue that is of interest to us.

By the way, this is my very first fan letter to anyone, so you really motivated me!

Enclosed is my cheque for some CARF items and a subscription to *Ham Radio*. Keep up the good work. I must admit that I am a staunch CARF fan.

G.A. Funnel VE4FP

MORE ON AMATEUR LISTS

I have read a couple of letters in the April 1988 issue of *The Canadian Amateur* about the DOC discontinuing the release and publication of Radio Amateur Operator Listings. I agree with their action. After all, it is legal.

I read a letter by Norman A. MacLeod VE7KY stating, first of all, that telephone companies charge for not listing a subscriber's name, address etc., ($2.15 in B.C.). I do think this particular charge could be challenged in a Court of Law. After all, the Canadian Constitution, as signed in 1982 by Her Majesty the Queen, would prevail, and these charges would be dropped.

If, for any reason, I do not want my address listed, I should be able to NOT have it listed in any published releases, except with my written permission. I do not think any Court of Law would stand in the way of that one. It was also mentioned that if someone did not want their name published they should pay for that privilege. Belly-wash! Please, think again. How many times do we have to pay for a privilege we already possess under the Human Rights Statutes? I may have personal security

Continued on next page

LETTERS *(cont'd)*

reasons for not wanting it printed. There are some cases where it might become an unintended breach of a Security Programme which one has laid out. I recently saw a Letter to the Editor of *Radcom* magazine (RSGB) asking the Society not to print his name on just those grounds.

There is one final reason for withholding this type of information— unscrupulous selling of lists including names, etc. to Mail Order Companies.

I trust all of us will re-think our ideals, and match them up with our Canadian Human Rights Statutes before finding fault with the DOC because they recognize our personal rights.

Name and Call Sign Withheld.

DISGRUNTLED HAM

In reference to your article: Looking Around: December issue of *The Canadian Amateur*—

Dear Mr. Blick,

I am a Ham of seven weeks and a member of CARF for just two days!... It was at the 14th Central Ontario Amateur Radio Fleamarket that I joined CARF. I had to join something or die of loneliness. I was given some back copies and, of course, I read your article.

The theory exam has not changed... in fact, I got so desperate with the confusion from my instructor that I went home and decided that the only way to pass the exam was to memorize all 386 questions and their respective answers, right or wrong. I passed with 86%... not proudly, because I didn't always understand what I was being asked and certainly not the answers.

Out of a class of 27, I was the only one (other than an old Class 2 Certificate holder) to pass. Mr. Blick, when I saw the look of confusion and hopelessness on the faces of my fellow students, I was angry. There has to be a better way... better teaching, and a more responsible and intelligent exam procedure.

To date I have made 73 QSLs— England, Norway, Brazil, Gaspé and so on. What amazes me is the deplorably low standard of sending. My class received no instruction... I could go on, but I wanted you to know that someone read your article and perhaps your 'Personal Opinion' is shared by many.

Thank you for listening to me

Name Withheld

STUDY GUIDE

I would like to commend you and your associates for the excellent 'Certificate Study Guide.' The material is a quantum leap ahead of its nearest rival guide. The material is clearly presented in a easily understood manner. The chapters progress in a logical order where the student can learn the theory as well as the usefulness of each subject. The diagrams are simple but very efficient. The questions at the end of each chapter are a great review as well as being an indication of how in-depth the subject must be known. The proof of the quality of the CARF Amateur Study Guide is the percentage of passes. The Peace Country Amateur Radio Club went from a 30% pass to an 80% pass in one year due largely to the guide. On behalf of the instructors and students, I thank you.

Rob Smith VE6ARE
Amateur Class Coordinator,
Peace Country Amateur
Radio Club

INFRACTION ACTION

We, as Amateurs, have had to work hard for our licences. As a group, we tend to protect and police the privileges allowed by our licence class.

When violations occur, it reflects not only on the violator, but on the whole Amateur Fraternity.

In the event that a violation is noted on the Amateur Bands, the following steps are suggested:

1. Tape the infraction.
2. Log the time, data, band and transmission type and length.
3. Report the incident to Communications Canada for processing.

John VE3MGR
ARES, London

RESTRUCTURING

I am writing to express my views and concerns regarding the proposed Restructuring of the Amateur Radio Service. I am particularly concerned about the proposal to restrict the use of home-built transmitters to the class D level only. The experimental aspect of Amateur Radio has always been an important part of it, and I believe it should continue to be.

I think that the use of home-built transmitters of up to 100 watts should be permitted on at least 1 or 2 of the other class levels besides class D, as long as the required standards are met.

I think it would be especially unfair to those who presently have home-built transmitters in use, to force them to discard them and buy commercial transmitters

Gordon Crayford VE6EI

Nominations for Regional Directors for 1989 required

All Regional Director's positions will become vacant, Summer 1989. The term of office has historically been two years, with elections every other year.

At the 1988 AGM, it was voted to stagger the Regional Directors' terms so that half the positions change each year.

The 1989 terms of office of the Regional Directors will be:
Atlantic Region (1) - one year
Quebec Region (1) - two years
Ontario Region (2) - one for one year, one for two years
Mid-West Region (1) - two years, and
Pacific Region (1) - one year

Nominations are required from full voting (Canadian residents with Canadian licences) CARF members for the Director(s) in their Region. Each nomination must be supported by signatures of five CARF full members, and the acceptance signature of the nominee. (NOTE: In the Ontario Region, nominations should not specify which vacancy. The candidate with the most votes will be for two years, the next for one year).

The deadline for receipt of nominations is Nov. 30, 1988. Please address all nominations to: Secretary, CARF, Box 356 Kingston, Ontario K7L 4W2. Send by Registered Mail.

The position of Director is the most important office within the Federation. Directors represent YOU, the voting member. They set policy, vote on all major decisions and appoint the Executive to carry out YOUR wishes. Exercise your right! SELECT AND VOTE.

Eric Ilott VE3XE,
Secretary

TOAST AND JAM

Sales of a British military radio system that cannot be jammed by an enemy have topped the $200M mark— and a new addition to the Jaguar radio family makes the system's communications capability now available to front-line troops. Jaguar— a name derived from Jamming GUAded Radio— was designed to overcome the most severe electronic countermeasures. The manpack-size system is claimed to be the world's first frequency hopping ECCM (electronic counter-counter-measure) combat radio.

JRSD FUND

Donations to the JRSD Fund should be sent to Box 8873, Ottawa K1G 3J2.

MFJ TUNERS

The world's most popular 3 KW roller inductor tuner with cross-needle meter gives you the widest range matching network available for coax, balanced lines and random wires *plus* you get antenna switch, dummy load and balun – all at a super price . . .

The MFJ-989B is a compact 3 KW PEP roller inductor tuner with lighted Cross-Needle SWR/Wattmeter that handles the highest power of any MFJ tuner! Its roller inductor allows you to get your SWR down to the absolute minimum. And you get other outstanding features like an antenna switch, dummy load, balun and more -- all at an outstanding price.

At only 10¾x4½x15, the MFJ-989B matches the new, smaller rigs.

Why can you get your SWR down to minimum every time? Because the MFJ-989B has a roller inductor with 3-digit turns counter plus a spinner knob for precise inductance control. And because it has the widest range matching network available for coax, balanced lines and random wires. And it covers 1.8 to 30 MHz continuously.

MFJ-989B

The MFJ-989B's 2-color, lighted Cross-Needle Meter not only gives you SWR automatically with no controls to set but also forward and reflected power at a glance!

Plus . . . 6-position antenna switch, 50 ohm dummy load, 4:1 balun for balanced lines, ceramic feed-through, and flip-stand for easy viewing. Meter light requires 12 V.

MFJ's Best VERSA TUNER II

MFJ-949C

MFJ's all-in-one Deluxe Versa Tuner II gives you a clutter-free shack and all the features you could ever want at a super price. Here's what you get: coax/balanced line/random wire 300 watt tuner for 1.8-30 MHz, Cross-Needle SWR/Wattmeter, 50 ohm dummy load, 4:1 balun and 6-position antenna switch . . . all in a compact 10x3x7 inch cabinet that matches the smaller new rigs.

You can tune out SWR on dipoles, vees, long wires, verticals, whips, beams and quads.

A lighted Cross-Needle meter gives you SWR, forward and reflected power -- all at a glance. A 6-position antenna switch lets you select 2 coax lines, direct or through tuner, random wire/balanced line and dummy load. 1000 volt capacitors, efficient airwound inductor, heavy duty switches.

MFJ's smallest VERSA TUNER

MFJ-901B

The MFJ-901B is our smallest -- 5x2x6 inches -- (and most affordable) 200 watt PEP Versa tuner -- when both your space and your budget is limited. Matches dipoles, vees, random wires, verticals, mobile whips, beams, balanced and coax lines continuously 1.8-30 MHz. **Excellent for matching solid state rigs to linears.** Efficient airwound inductor. 4:1 balun.

144/220 MHz VHF TUNERS

MFJ-920

MFJ-921

MFJ's newest VHF tuners cover both 2 Meters and the new Novice 220 MHz bands. They handle 300 watts PEP and match a wide range of impedances for coax fed antennas. MFJ-921 has SWR/Wattmeter.

MFJ's Fastest Selling TUNER

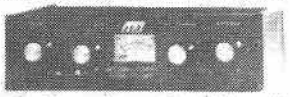
MFJ-941D

The MFJ-941D is MFJ's best selling 300 W PEP antenna tuner! Why? Because it has more features than tuners costing much more and it matches everything continuously from 1.8-30 MHz.

It matches dipoles, vees, verticals, mobile whips, random wires, balanced and coax lines.

SWR/Wattmeter reads forward/reflected power in 30 and 300 watt ranges. Antenna switch selects 2 coax lines, direct or through tuner, random wire/balanced line or tuner bypass. Efficient airwound inductor gives lower losses and more watts out. Has 4:1 balun. 1000 V capacitors. 11x3x7 inches.

MFJ's Mobile TUNER



MFJ-945C

Don't leave home without this **mobile** tuner! Have an uninterrupted trip as the MFJ-945C **extends your antenna bandwidth** and eliminates the need to stop, go outside and readjust your mobile whip.

You can **operate anywhere in a band and get low SWR.** You'll get maximum power out of your solid state or tube rig and it'll run cooler and last longer.

Small 8x2x6 inches uses little room. **SWR/Wattmeter and convenient placement of controls make tuning fast and easy while in motion.** 300 watts PEP output, efficient airwound inductor, 1000 volt capacitors. Mobile mount, MFJ-20.

2 KW COAX SWITCHES

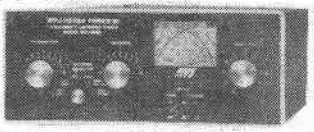
MFJ-1702

MFJ-1702, $19.95. 2-positions. 60 dB isolation at 450 MHz. Less than .2 dB loss. SWR below 1:1.2.

MFJ-1701

MFJ-1701 6-positions. Unused positions grounded. For desk or wall mount.

MFJ's 1.5 KW VERSA TUNER III



MFJ-962B

The MFJ-962B lets you use your barefoot rig now and have the capacity to add up to a 1500 watts PEP linear amplifier later. Its **small size** -- 10¾x4½x15 inches -- matches the new compact rigs.

A lighted Cross-Needle SWR/Wattmeter makes tuning a snap and gives you SWR, forward and reflected power -- all at a glance.

6-position antenna switch handles 2 coax lines, direct or through tuner, wire and balanced lines. 4:1 balun, efficient airwound inductor with heavy duty ceramic switch, 6 KV capacitors. Flip-stand tilts tuner for easy viewing.

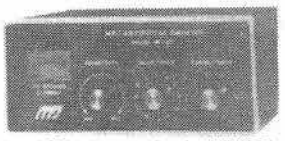
MFJ's Random Wire TUNER

MFJ-16010

You can operate all bands anywhere with any transceiver when you let the MFJ-16010 turn any random wire into a transmitting antenna. Great for apartment, motel, camping operation. Tunes 1.8-30 MHz. Handles 200 watts. Ultra compact 2x3x4 in.

MFJ Artificial RF ground

MFJ-931



You can create an artificial RF ground and eliminate RF "bites", feedback, TVI and RFI when you let the MFJ-931 resonate a random length of wire and turn it into a tuned counterpoise. The MFJ-931 also lets you electrically **place a far away RF ground directly at your rig** -- no matter how far away it is -- by tuning out the reactance of your ground connection wire

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  - 10 Memories
  - BNC Antenna Connection
  - 16 Button DTMF Pad
  - Easily Accessible Dip Switches For Encoding Sub Audible Tones
  - Battery Save Draws 15mA For Extended Battery Life
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  - 144.00 MHz to 147.995 MHz
  - CAP and MARS Modifiable - Simplex only
  - Standard Battery, EBP-9NAZ Has DC/DC Converter Built In
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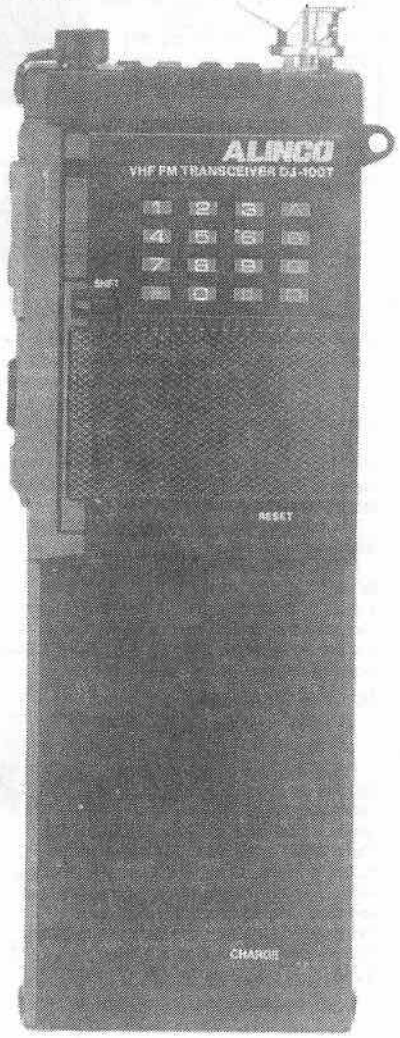
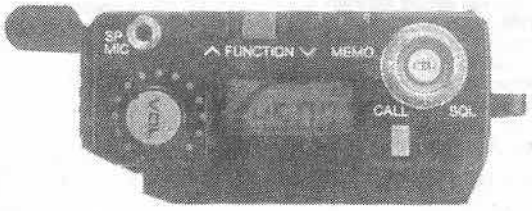
  - Full Range of Accessories
  - 220 MHz and 440 MHz To Follow Shortly





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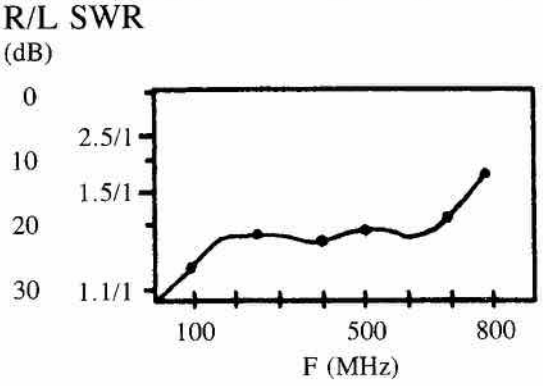

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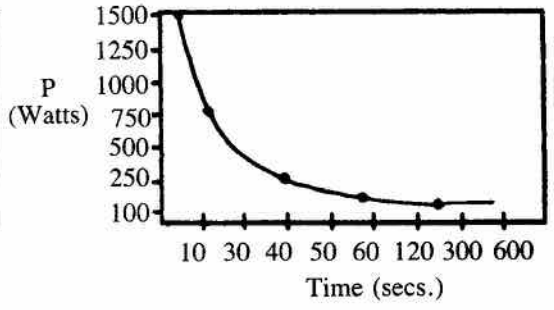

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Minutes of 1988 CARF Annual General Meeting

June 18, Aurora, Ontario

In attendance were: John Iliffe VE3CES, Francis Salter VE3MGY, Art Stark VE3ZS, Earle Smith VE6NM, Dan Holmes VE3EBI, Nate Penney VO1NP, Hoppy Hopwood VE7AHB, Ron Walsh VE3IDW, Olive Schijns VE3LXO, Eric Ilott VE3XE, George Sansom VE3LXA, Bernie Burdsall VE3NB, Ivor Nixon VE3IHN, Jean Evans VE3DGG, Debbie Norma, Bill Wilson VE3NR, Tony Pattinson VE2KN.

Also in attendance: Representatives from the General Membership of CARF, as well as Assistants to VE3DGG other than those introduced by the President.

1. INTRODUCTION BY PRESIDENT

The meeting was opened by the President, John Iliffe VE3CES, at 09:10 hrs. He welcomed all those in attendance and explained that he wanted to close the meeting at about 11:30 hrs. so that anyone who wished would be able to take up specific points with members of the Executive over lunch. Also, several others of CARF's many volunteer helpers were present and were available for discussions.

Jean Evans VE3DGG, the Manager of the CARF QSL Service, introduced other members of the Bureau: Judy MacDonald, John Harrison and Basil Gould, who were thanked for the outstanding work they continue to do for Canadian Amateurs.

Others introduced to the audience by the President were: Ivor Nixon VE3IHN, Chairman of the CSA Committee, who was a founder of CAROA, a predecessor of CARF; Bill Wilson VE3NR, replacing Art Stark VE3ZS as Communications Canada Liaison, and Bernie Burdsall VE3NB, Chairman of the News Service. Ralph Cameron VE3BBM, though not in attendance, was named by the President for his outstanding work in connection with Electromagnetic Interference problems and their solutions.

2. MINUTES OF THE 1987 AGM

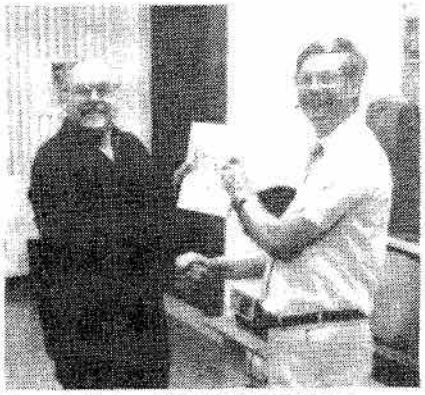
These had been prepared by the then-Secretary, George Sansom VE3LXA, and were read by Eric Ilott VE3XE, the incumbent, who made a motion that they be adopted as read. The motion was seconded by Francis Salter VE3MGY, and carried.

3. THE GENERAL MANAGER/ TREASURER'S REPORT

Ollie Schijns VE3LXO read her report and moved that it be adopted. It was seconded by Nate Penney VO1NP. After a brief discussion, the motion was carried.

4. PRESIDENT'S REPORT

The President said that one of CARF's many achievements in the year had been the preparation and issue of the new Certificate Study Guide. This was done because the previous one did not cover about 15% of the questions in the latest Question Bank. The production involved a tremendous number of volunteers, headed up by Francis Salter VE3MGY, and in recognition of his work the President presented him with a copy which included an appropriate bound-in letter from the President. Many thanks were also in order for Geoff Smith VE3KCE and Wayne Warren VE4WR.



Francis Salter VE3MGY receives a special copy of the Certificate Study Guide from CARF President John Iliffe VE3CES.

Another activity which the President highlighted was the participation in the Spectrum Allocation Advisory Committee which had been formed to try to help DOC come up with a decision on what frequency the Wind Profiler Equipment should be authorized to use. It had been rumoured that it might go in the Amateur 70 cm band where we are secondary users, and Amateurs are extremely concerned about the possible interference to our already-in-place activities in the band from equipment which is high power and wide band.

The President invited Terry Darling VE3CAB to run the 16-minute video which had been produced by Barrie Lennox VE3AIC and Terry with the help of many others. It had required 160 man-hours over ten days to produce the video alone and probably as many as 500 if one counted the Committee members' time as well. He said it was one of the best co-operative activities he had ever encountered, some half-dozen groups being involved

After the showing, Terry received a substantial round of applause.

CARF has a few copies of the video for sale at $17.45, post paid.

Bill Wilson VE3NR said he thought that the presentations which had been made by the Committee were very well received by DOC and gave DOC a solid basis from which to ask the right questions of the right people.

5. FINANCIAL STATEMENTS

As the Financial Statements for 1987 had been distributed, Francis Salter VE3MGY moved that they not be read. Seconded by Nate Penney VO1NP. Carried.

Hoppy Hopwood VE7AHB wondered why the interest income had dropped. Ollie Schijns VE3LXO, Treasurer, said that it was largely due to the lower interest rates in 1987.

Hoppy asked why the publications income was also lower, and Ollie replied that this was due to suspending sale of the old Study Guides until the new one was ready, thereby missing the heavy selling season in the fall, as explained by the President earlier.

5. MOTION NO. 1: STAGGERING THE TERMS OF OFFICE OF REGIONAL DIRECTORS

It was moved by the President and seconded by the Secretary that 'the terms of office of the Regional Directors shall be staggered so that, as nearly as possible, half of the number of Regional Directors shall be changed in even years and half in odd years'.

Ron Walsh VE3IDW spoke in favour of the motion adding that voting should be for the idea of the motion, not the administrative procedures for accomplishing it. Nate Penney VO1NP said that he was concerned with the mechanics of the motion and was not in favour of the motion. The motion was put to the vote and was carried.

6. MOTION NO. 2 INCREASING THE NUMBER OF REGIONAL DIRECTORS

The following motion, duly submitted to the Secretary, was made by Norm Waltho VE6VW, and seconded by Earle Smith VE6NM: 'that the CARF Executive should include Directors as follows: one each for Newfoundland/ Labrador; Prince Edward Island; New Brunswick; Nova Scotia; Quebec; Manitoba/Saskatchewan; Alberta/ Yukon/Northwest Territories; British Columbia; and two for Ontario, and that as membership increases to a reasonable number in Manitoba, Saskatchewan, the Yukon and the Northwest Territories, the number should be increased there also.'

In speaking to the motion, Earle Smith VE6NM said that it was necessary to improve the representation in the large, less populated provinces.

Hoppy Hopwood VE7AHB did not like seeing Manitoba and Saskat chewan joined as one area when P.E.I., with fewer Amateurs, had its own Director. He did not like the increased costs to be borne for the AGM, and though that it should be studied more and referred to the Board of Directors first.

Ron Walsh VE3IDW felt that CARF had to proceed in the direction of increased numbers of Directors and felt a date should be added. He moved that 'by 1990' be added ahead of 'one each for...' The amendment was duly seconded, put to the vote and carried.

The amended motion was discussed further. Points raised were: (a) possible use of Assistant Directors; (b) a study should be made to see if it would be more cost-effective to improve representation by increasing the number of Directors or by increasing the amount of local travel by Assistant Directors; (c) could we not use Ham bands better for Directors communications; (there is a real need now for Directors and Assistant Directors to get together; (e) lack of information on costs.

LETTERS TO THE EDITOR

All *signed* letters to the Editor are eligible to be printed, space permitting. The Editorial staff reserves the right to omit libelous and slanderous material and make spelling and grammatical corrections. Please make an effort to type, print or write very neatly.

The motion was put to the vote and failed.

7. MOTION NO. 3 PRE-AGM MEETINGS OF DIRECTORS ENVISAGED FOR MOTION NO. 2

This motion was not acted upon because it became redundant due to the failure of Motion No. 2.

8. PRESIDENT'S CLOSING REMARKS

The President thanked those in attendance for their contributions to the meeting, reminded them to publicize that the new Study Guides, updated to cover the latest DOC questions, were not available at the old price of $15. Also, *Ham Radio* magazine was available to members at a discounted rate. He said the difficult but successful year had been accomplished only because of the participation by very large numbers of CARF members right across Canada. He made a motion that the AGM thank all those who had contributed. This was seconded by Francis Salter VE3MGY and carried unanimously.

9. BUSINESS FROM THE FLOOR

Hoppy Hopwood VE7AHB made a motion that deep appreciation be expressed for the years of energy and sincerity that Art Stark VE3ZS has put into working for CARF. About four seconders vied to be identified as such, which honour the President finally claimed. The motion carried unanimously.

Francis Salter VE3MGY said that he had been working recently in the Kingston Office on its computer programming. He had often worked from 7 a.m. to 11 p.m., and expressed his thanks to Ollie Schijns VE3LXO, GM/Treasurer, and Debbie Norman, Office Manager, who had helped immensely during this time. A hearty round of applause was given to Ollie and Debbie.

Nate Penney VO1NP came up to the podium saying that he had something for the President. Nate indicated that on his way to the AGM he had visited clubs in Newfoundland, P.E.I. and New Brunswick, and was asked by the President of the Fredericton Amateur Radio Club, Murray Gordon VE1TE, to present Murray's 'CBC New Brunswick' mug to our President. John gratefully accepted it as a reminder of the upcoming Atlantic Hamfest '88 in Fredericton.

A motion to adjourn the meeting was made by Nate Penney VO1NP, carried, and the meeting ended at 11:45 hrs.

Eric Ilott VE3XE
Secretary

MINUTES OF A SPECIAL MEETING CALLED BY THE PRESIDENT AURORA, ONT. 19 June, 1988 APPOINTMENT OF AUDITORS

The meeting convened at 11:30 and the President confirmed that there was a quorum. He wanted to correct an oversight in the AGM on June 18, 1988 in that appointments of next year's Auditors had not been made. Francis Salter VE3MGY moved that the Special Meeting be convened, seconded by George Sansom VE3LXA. Carried.

It was moved by Art Stark VE3ZS, seconded by George Sansom VE3LXA, that Bernie Burdsall VE3NB and Wilfred Hill VE3ICQ, be re-appointed as Auditors for the 1988 Financial Statement. Carried.

Moved by George Sansom VE3LXA, seconded by Bernie Burdsall VE3NB, that the Special Meeting adjourn. Carried.

The meeting ended at 11:35 hrs. ■

Eric Ilott VE3XE
Secretary

New Amateurs in P.E.I.

Again this year, the Charlottetown Amateur Radio Club offered instruction toward the Amateur Radio Certificate of Proficiency. Fifteen people showed an interest; nine completed the course. We are pleased to announce that all nine passed the theory and regulations. While some are still working on the CW, we do have five new calls and expect more in the next few weeks.

The course was supervised by Darrell MacArthur VE1BIG. Janet Barwise VE1ARB taught the CW and regulations and Jim Thompson VE1AEQ looked after the theory.

The new Amateurs are: VE1TEN Wendell Ellis, VE1GRT Reg Doyle, VE1OFR Bruce MacLean, VE1GAR Garfield Creamer and VE1PAR Paul Sheridan.

New Advanced Amateurs are: VE1BKP Teresa Giersdorf, VE1BZO Brian Gorveatt.

It is our club's policy to encourage new Amateurs to get on the air as soon as their resources will allow. To this end, we offer assistance including a group of wire measurers and tower climbers called 'The Antenna Committee'. So there is new activity from P.E.I. and log books are being filled.

We wish these people much success and satisfaction as they pursue their activities in Amateur Radio. ■

— Jim Thompson VE1AEQ

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Before You Pick Your Rig— Pick Our Brains!

We are all radio amateurs — some with 20 years of experience. All of us keep up with the latest technology and we enjoy talking about it! So, whether you are an experienced amateur, or just a beginner, you'll find that we will be happy to take the time to explain anything you want to know. **AND,** since we carry **ALL** major lines of amateur radio equipment you will get an unbiased opinion! Pick our brains before you pick your rig!

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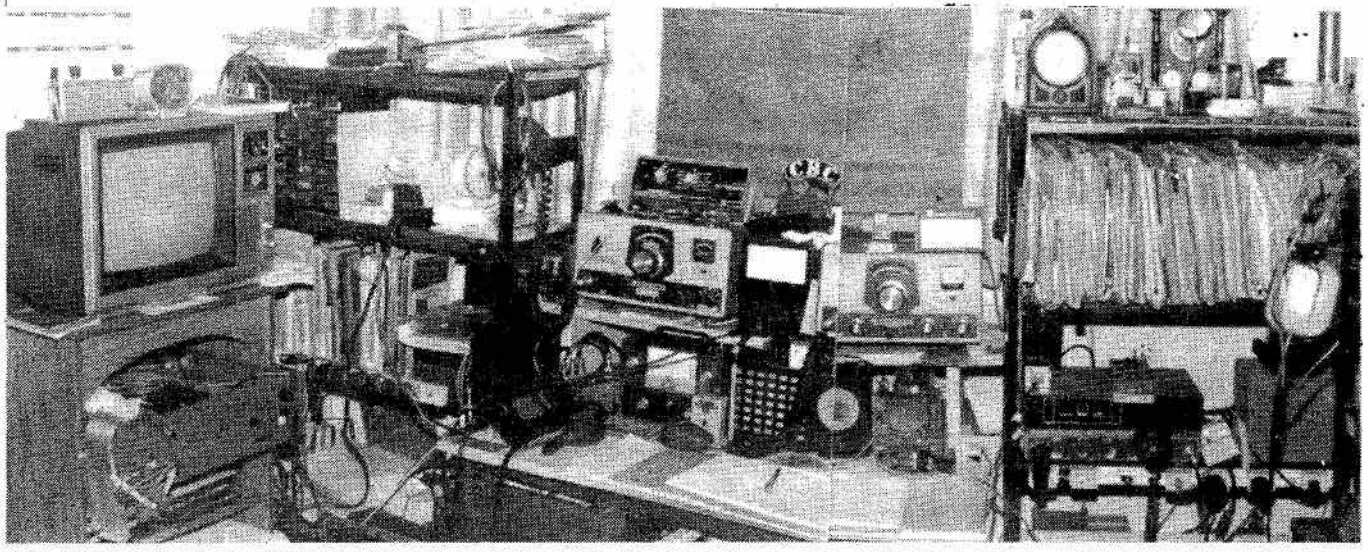
Shack of the Month



Cliff VO1II calls this the "worst looking shack in Canada". Any takers? How about it? Debbie is busy knitting CARF hats for the winners!

SOCIAL CALENDAR

Aug. 17-Sept. 5: VE3CNE, CNE grounds, Toronto.
Sept. 3-4-5 Smithers Hamfest, Smithers, B.C.
Sept. 10-11 Shuswap Mini-Hamfest, Sunnybrae Park, Tappen, B.C.
Sept. 10-11: Ham Happenings 88, Sidney, British Columbia
Sept. 17: Packet Radio Symposium, Georgian College, Barrie, Ont.
Sept. 17: Calgary Ham Radio Flea Market, Parkhill Comm'y Centre, Calgary.
Oct. 23: London Amateur Radio Club Fleamarket, Pot O'Gold Bingo Palace, Hamilton & Gore Roads, London, Ont.
Publicize your get-together here. Write the Editor, P.O. Box 356, Kingston, Ontario K7L 4W2. Please let us know about your events three months in advance to list them in the Calendar.

REQUEST FOR TECHNICAL ARTICLES

The Canadian Amateur is always looking for technical articles. If you don't feel you can write a finished manuscript, just rough out your ideas and we will do our best to complete it for you.

We would also like your suggestions for technical topics for future articles. Technical questions are also welcomed and we will attempt to answer them in these pages.

Please send all contributions to the Technical Editor, whose address appears at the beginning of the Technical Section.

Development Day

BY GINA WATSON

The students, chattering, crowd the radio set. Behind them are local reporters and members of the public. The ham radio operator fiddles with dials and knobs while the set crackles with static. A call sign is repeated on the air until finally a voice replies. Is it from Zimbabwe or Senegal, Jamaica or Columbia?

This is an Amateur radio contact with the Third World on the First Annual Development Day, Oct. 3, 1988.

The children are thrilled. They have been studying the Developing World in geography class, countries that are oceans away. This contact makes those oceans wash away: the Third World, it seems, is close enough to talk to.

The Canadian Amateur Radio Federation is collaborating with the Canadian International Development Agency (CIDA) to establish the network of radio contacts with the Third World on Development Day. The contacts will take place in schools and shopping centres in various Canadian cities. The radio operator will attempt to make a scheduled contact with a Third World country, while local school children, media people and members of the public observe.

Development day is designed to focus public attention on International Development and the role Canadians play in it. Earlier this year, External Relations and International Development Minister Monique Landry named the first Monday in October 'Development Day' and, to highlight the day, CIDA is sponsoring a number of events, including ham radio contacts.

The radio transmission will establish another bridge between Canada and the Developing World, bringing a new dimension to partnership which CIDA sees as the key to creating better links. International organizations, voluntary movements and grass-roots community groups all play a vital role in this partnership.

Charged with administering Canada's Official Development Assistance (ODA), CIDA works to help those in developing countries build a brighter future. Last year alone, CIDA distributed $2.2 billion to a wide variety of projects in Africa, Asia and Latin America. These projects include health care, family planning, nutrition, education and employment for the poorest people in the poorest of countries. CIDA also helps in crisis situations, providing food aid and emergency assistance.

Ham radio operators are usually called upon during crises and natural disasters to provide communication links when other means of communication have broken down. On Development Day, they will be strengthening and reflecting the continually growing partnership between Canadians and people of the Third World. ■

Canada's National QSL Bureau gives and takes with the best of them

Above— Stan Williams VE3AZD and Ken Rolison VE3CRL run the 'pony express'. From 1975 to the present, these two continue to clear and relay all mail from Box 66.

Below— Jo Persad VE3IMS/GW4DWR, a sorting whiz, can sort 18 pounds per hour.

BY JEAN EVANS VE3DGG

Our time is the most valuable commodity we can give. It does not matter how little or how much. If a man has an hour to spare and gives half to someone, or to some cause, he has given 50% of his spare time. If he has a full day to spare and gives half a day to a good cause he has still given 50%. Both represent the same percentage contribution, and equal effort.

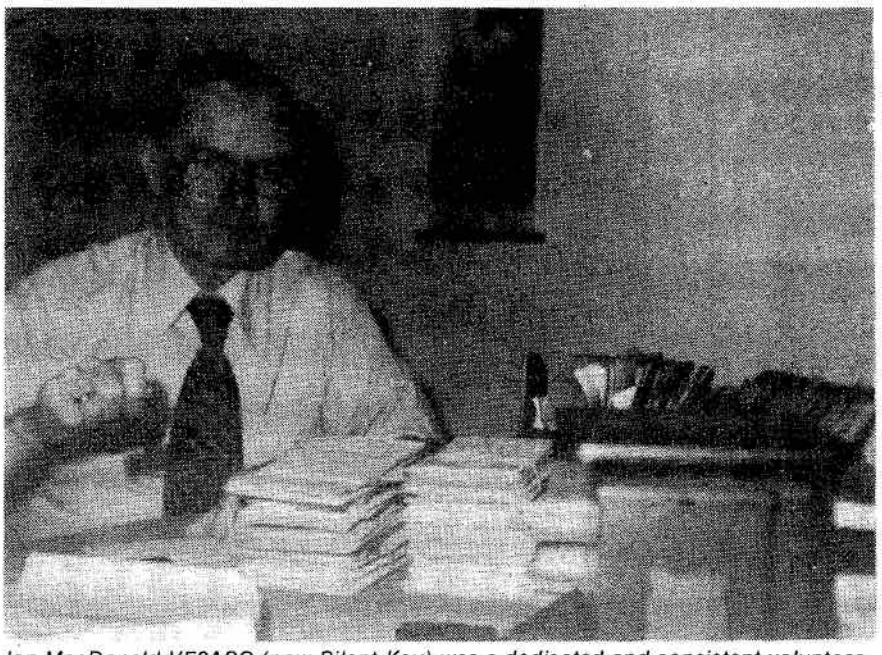
Years ago I became acquainted with a very intelligent blind man. I still keep in touch with him. After he successfully passed the DOC exams, he thanked me for the time spent in helping him with his studies. I told him, rather than thanking me, better he should convey similar help to another.

He asked, "What can I do for anyone else?" My reply was, "Somewhere ahead, perhaps around the next corner, another may be needing help that is within your ability to give." This indeed came to pass. The white caner in question is Gord VE3GIN, with whom we all have enjoyed a pleasant and productive association over many years.

Our association with Gord goes back to 1965, when the newly formed Trilliums became the first Amateur radio club to participate in conducting classes at the CNIB, and to provide financial support for the purchase of teaching materials. The Trilliums also established a fund for the purchase of radio equipment for the newly licensed white caners. Later the RSO, with our concurrence, took over the administration of the fund.

In 1971, the Ontario Trilliums were again the first club to contribute financial help for the purchase of teaching materials required by the Sunnybrook Hospital veterans' classes in Amateur Radio. The founding of station VE3SBH was the result. At Sunnybrook I first met Wally Judd, who had mobility of his head only. His mental ability and outlook, however, were an inspiration to us all. His philosophy on life was also remarkable. I can hear him yet, as he expounded it to me: "Jean, life is negative and positive— action and reaction. The scales must balance."

In 1975, the Trilliums were asked by the American Radio Relay League if we would assume responsibility for operation of the VE3QSL Bureau. Four of us had been helping with the backlog of the bureau, and we realized that to operate it in an efficient manner, so as to



Ian MacDonald VE3ASC (now Silent Key) was a dedicated and consistent volunteer, giving one or two days a week to keep CARF QSL Bureau clearing mail to world bureaus.

be less labour-intensive, we would, of necessity, have to reorganize its operation. If we were to end the massive backlogs, it would be necessary to deviate from the ARRL's suggested organization and procedures and to operate in a manner suitable to Ontario requirements and to Canadian needs.

We accomplished what we intended. We proved that the *friendly way* is the best way to accomplish any objective.

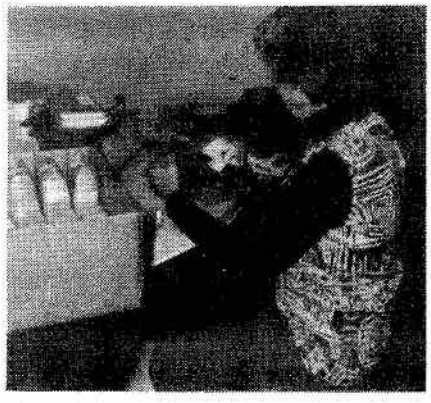
To illustrate the volume of work undertaken by Jean and her crew, here are some excerpts from her 1988 report to the CARF AGM.

Totals: 1987 total— 749 pounds of cards sorted; 1988 total (to June)— 634 pounds. (168 cards per pound!)
Monthly average now 70,000 cards.
Priorities: 1. Processing QSL cards; 2. Answering letters
Postal: Cards mailed by the Kilo, once per month.
Unclaimed QSLs: Returned through CARF outgoing packages.
Booths/Flea Markets: Thelma Woodhouse VE3CLT is Assistant Manager who, along with several volunteers, attends many functions. Wherever there is a Flea-Market there is usually someone to attend.
Consultants: Gail Murray VE3GSQ, Jo Persad VE3IMS/GW4DWR, Judy MacDonald, Antonio Salvadori VE3NXQ, Jacob Santos VE3LAJ and many others have given their opinions and suggestions. We appreciate the co-operation and interest shown by this team of dedicated hams, led by Jean VE3DGG, CARF's 'Darn Good Girl'!

The backlogs were cleared! When we started, there were about 50 callsigns in each of only six active files for VE3-A, B, C, D, E and F calls. The bureau's business has increased over the years to about 475 active callsigns in each of 17 files, and some scattered callsigns, at the end of the alphabet, so that the bureau's services now cover all callsigns from VE3-A to VE3-Z.

That we have been able to cope with the increased load was due to the fact that volunteer help was always available when needed, alerted by word of mouth, on and off the air, and by our welcomed presence at various Amateur gatherings.

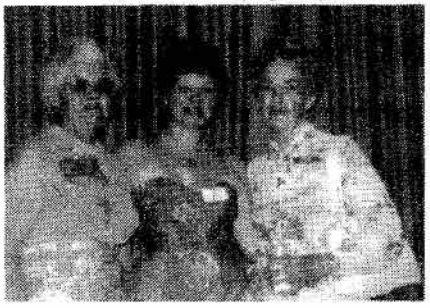
Since 1975, the Canadian Amateur Radio Federation has been quietly contributing some assistance towards defraying mileage costs, so that I can cover the hundreds of miles driven each year in the service of the VE3 bureau. In addition to CARF's support re mileage, the Federation has showed continual support and trust in the Trillium's bureau operations. They have repeatedly told me that whatever we propose for the general good of Canadian Amateur Radio will have their support. For instance, they have permitted us to use their outgoing Bureau for the return of unclaimed QSLs, a service otherwise open only to CARF members.



Jean Evans VE3DGG loads packages into boxes for mailing.

Many people and organizations, including both Amateurs and non-Amateurs, have assisted the Trillium Bureau with the donation of materials, ideas, and most importantly, TIME. Now it seems unfortunate that, at the beginning when we were so busy, we did not think to create a diary of helpers and help received, so that at a later date the full story of the Trillium bureau could be written, complete with full acknowledgements.

In January 1986, I had medical problems, which interfered with my Trillium activities. As many of you appreciate, I was also responsible for the CARF National Bureau, as manager, and the combined load proved to be a real burden at that time. Doris Cody took over as Treasurer of the CARF QSL Bureau, as well as continuing in that capacity for the Trilliums. Basil Gould undertook sorting duties for both bureaus, and several volunteers from each bureau assisted without regard for organizational boundaries. In addition to the Trillium helpers, CARF supporters, such as Ferd Schijns VE3CPB, Thelma Woodhouse VE3CLT, Basil Gould, Doris Cody VE3BBO and Ken Rolison VE3CRL continue to assist with the CARF bureau specifically, and whenever possible or appropriate, with the Trillium bureau.



Thelma VE3CLT, Joan VE3FVO and Jean VE3DGG often attend clubs to give talks on how to QSL.

The whole operation of both bureaus exemplifies the spirit of co-operation and the willing and unconditional gift of time as expressed at the outset of this precis.

At this time, I would like to express my thanks to CARF and to the Trilliums, as well as to the members of both bureau teams, past, present and future. ■

K.A.R.C.

(Kingston Amateur Radio Club)

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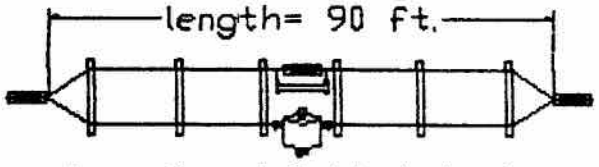

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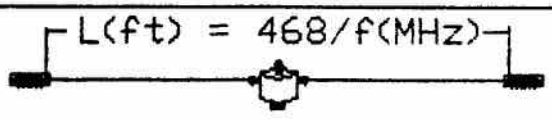

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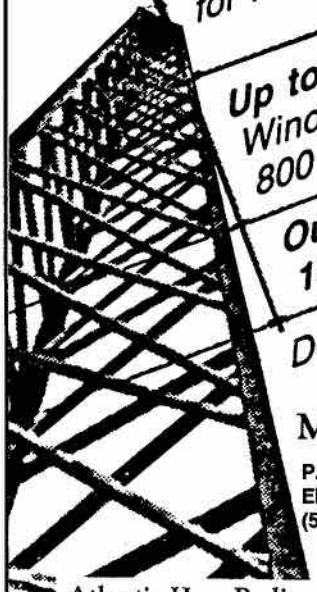

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Charlottetown ARC aids in relay race

BY TOM ARSENAULT VE1GB

The Charlottetown Amateur Radio Club was pleased to once again provide communications for the annual Red Cross Multi-Sport Relay race. The marathon course is completed in five parts, by six member teams.

There were 162 teams for a total of 972 individual participants. The first team member runs 5 miles, then passes the wristband/relay to team member #2 who then cycles along the very hilly Route 235 for 10 miles, where he/she then passes the relay on to team member #3. This member runs through a rough, hilly terrain on a seldom used clay road stretching for four miles through a heavily wooded area. Upon arriving at Bonshaw Provincial Park, this member passes off to team members 4 & 5, who then get in their canoe and paddle furiously down the Bonshaw River for four miles. Arriving at St. Catherines Bridge (Dunedin), the wristband is passed to the sixth team member for the final burst of speed, cycling the final 10 miles to the finish line at Simmons Arena in Charlottetown.

Amateurs were positioned at all five checkpoints to pass the information necessary for the next team member to 'ready up' for accepting the wristband and take part in his/her leg of the race.

There was an Amateur stationed with the Mobile First Aid Unit which followed the racers from start to finish. Unfortunately the ambulance which was scheduled to be on hand for the event did not show. As luck would have it, Jim Thompson VE1AEQ was following the events at home— so when a call went out for an ambulance, because a runner was down, Jim was in a position to make a quick call by telephone to a local service which immediately dispatched a unit to the site. The runner was treated at the scene and transported by ambulance to the Queen Elizabeth Hospital.

As the day wore on, no further emergencies arose and the necessary 'traffic' was passed continuously until the last person crossed the finish line at about 1410 hrs local time.

The following Amateurs assisted in passing traffic throughout the day:

Checkpoint 1: Terry Jones VE1APC, Izz Kandel VE1CIS, Edgar Doucette VE1ABF. Checkpoint 2: Wilf MacKinnon VE1ART, Robin Creelman VE1VAR, George Crosby VE1AQE, Wallie MacKenzie VE1BZX. Checkpoint 3: Dave Hunter VE1CIT, Jim Lacey VE1AWX, Tom Arsenault VE1GB. Checkpoint 4: Bill Sargent VE1BIJ, Brian Gorveatt VE1BZO, Doug Murphy VE1BII. Checkpoint 5: Richard Burke VE1BUN, Don McQueen VE1CEN, Allen Ramsay VE1CHR. Photographer, Albert Brynton VE1BPW; Mobile First Aid Unit, Mike Morrison VE1CCO; Follow-up, Harold Bellamy VE1VBL, Exercise Co-ordinator, Janet Barwise VE1ARB.

All traffic was passed on the VE1HI repeater (34/94). The Charlottetown Amateur Radio Club wishes to thank Stewart Smith VE1ZM for permitting us to use his repeater, which worked without a hitch throughout the exercise.

This event is the largest of its kind in Atlantic Canada. In all, with 162 teams, the local city police, the RCMP, the Red Cross volunteers and co-ordinators, friends, relatives and spectators, the crowds were estimated to number between 1500 and 2000.

Twenty Amateurs participated for a total of 140 man-hours of community service. It was a beautiful sunny day on the 28th of May... imagine what it would have been like had it been pouring rain!

Exercises such as this are highly recommended to assist both new and inexperienced Amateurs in acquiring good operating techniques when passing traffic. It is preparation for the 'real thing'!

By the way, the winning team, aptly called 'the burn-outs', and which was captained by Don Walters, beat the previous record (also held by the same team) of 2 hours 35 minutes.

This year's time was 2 hours 28 minutes. Two full hours ahead of the last place team. Think you could do it? ■

WALLACEBURG ARC INSTRUCTORS

CARF certificates of appreciation have been sent to the Wallaceburg ARC Education Chairman for presentation to the following Amateurs:

Jim Dixon VE3IIN
Nick Dykema VE3OEN
George Linley VE3OEQ
Aaron Boak VE3PCT
Al McPherson VE3PJC
Rita Thomas VE3NGU
John Walton VE3DTR

A successful course in theory and code was taught by these proficient hams. Congratulations and thanks from CARF.

Wind Profiler Update

BY PAUL A. SMITH VE3PS

In a continuing effort to resolve the Wind Profiler frequency allocation problem, representatives of the DOC and the Radio Amateur Community met May 19 and again July 6.

During the first of these two meetings, the various concerns of both sides were expressed, and it was agreed that a second meeting would be held to discuss in depth the technical details of the two proposals— the Amateurs' for Wind Profiler placement at 404.37 MHz, and the DOC's for placement within the 70 cm band.

During the second meeting's technical discussions, DOC presented some additional data on AES resolution requirements for the Wind Profiler. This data will have a direct bearing on the choices for frequency allocation, and the Amateur representatives will review it with their respective organizations before issuing recommendations to the DOC by mid-September.

The organizations represented at these meetings are:
Canadian Radio Relay League, Canadian Amateur Radio Federation, VHF/UHF Advisory Committee, Spectrum Allocation Advisory Committee, VE3ULR Repeater Network, VE3RPT Repeater Network (TFMCS), Ad Hoc Committee on UHF Utilization.

We anticipate a joint DOC/CARF/CRRL communiqué will be issued when the review is completed and final recommendations have been made. ■

Polar Bridge Expedition

The following is a transcript of the words of welcome from Ambassador Alexey A. Rodionov to the group invited to the June 10, 1988 reception at the Soviet Embassy.

"It is a great pleasure and a great privilege to welcome the participants of the historical expedition, and all guests, here today. I admire the courage and strong will of the representatives of the Soviet Union and Canada... enthusiasts, who challenged the Arctic.

The SKITREK, no doubt, is the most outstanding event of Soviet-Canadian relations. It helps to strengthen mutual understanding and friendship between our two countries. We are neighbours you know, but for the first time, the U.S.S.R. and Canada shook hands directly across the North Pole. But, the expedition goes beyond our bilateral relations. The SKITREK is actually an example of how people from different countries, and different political situations can work together.

As Mr. Gorbachev, in his message to participants of the expedition, said, "It is of benefit to international relations. It is a contribution to better understanding, between east and west."

"I sincerely congratulate the participants of this historical expedition with their remarkable success. Thank you very much for coming, on this occasion, to the Soviet Embassy."

On Tuesday, June 7, 1988, I received an offer in the mail I did not want to refuse. For the first time in my life, I was personally invited to a reception at an Embassy, on June 10. Short notice, yes... but I was able to make the arrangements. Now, come and share a few moments which my camera captured!

Above: Garry V. Hammond VE3XN (left) receives a hearty handshake of welcome from Alexey A. Rodionov, Ambassador to Canada from the U.S.S.R. VE3XN was CI8C and CI8XN between April 5-16 while at Resolute Bay.

WHAT WAS INVOLVED THAT P.M.?

Welcome, Presentations and introductions, Speeches, Fine Food and Beverages, Fun and Fellowship.

The principals of the SKITREK team lined up across the one end of a meeting room, with Red Square showing in the background.

Right: Amateur radio provided the key link between the skiers & the outside world. These two Ottawa OM's, Stan White VE3FKD and Ron Belleville VE3AUM, monitored 14.125 and 14.121, faithfully passing traffic and position reports to and from the 'moving group' as the 13 skiers were known.

Above: No doubt you worked CI8C at Resolute Bay! Beaming broadly is the CI8C, QSL manager David Adams of Sutton, Ont. Once the cards arrived courtesy of VE3HC, David began the task of dispatching 6000 QSLs via the bureaus. He had received about 600 requests direct. If return postage was included, he QSLed direct... if not, look for your card via the bureau too. Yes, he's up-to-date on CI8C QLSing. FB job David!

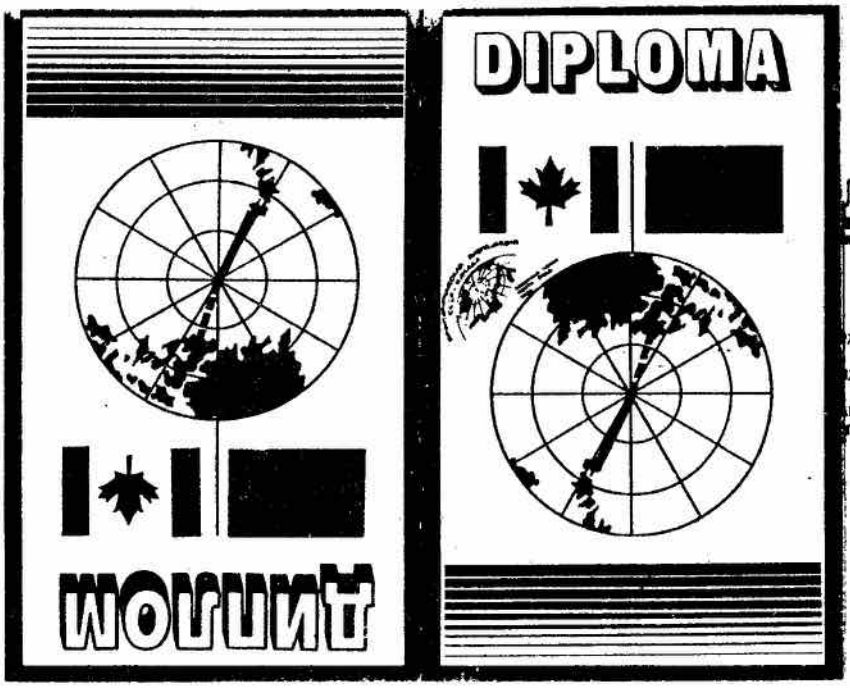
Other CI8 Calls used by Resolute operators included:

CI8CDX QSL Via VE3CDX
CI8UA QSL Via VE3CDM
CI8GW QSL Via VE3ICR
CI8JH QSL Via VE3CKF
CI8TZ QSL Via VE3MFP
CI8CR QSL Via UA3CR
CI8CW (opr. VE1ASJ, VO1QF, VO1SA) QSL Via VE1DH
CI8HO QSL Via VE3HO (VE3EUP)
CI8COP QSL Via VE3COP
CI8LVW QSL Via VE3LVW
CI8CPU QSL Via VE3CPU
CI8XN QSL Via VE3XN (VE3GCO)
CI8GZ QSL Via UW3GZ

Above: Leonid Labutin UA3CR (left) presents VE3XN with one of the certificates of gratitude from the SKITREK expedition members. All Canadian radio operators who worked from Resolute will receive one of these attractive blue, red, and white bilingual diplomas courtesy of SPUTNIK, one of the Soviet sponsors.

Expedition leader UA3AJH (not really an active DXer Amateur), Richard Weber, Canadian team leader EX0VE operator Anatoly and UW3GZ, Alex or Sasha Tenjaksev all signed XN's certificate on 10/6/1988.

Right: VE3HO's XYL Dora Hamilton, Sasha/Alex UX3GZ and Garth Hamilton VE3HO (ex 5H1LV & 5H3LV) enjoy food and drinks which were part of the UA reception. Not only did Garth take the first CI8C operator stint due to the unexpected hospitalization of VE3EFX, but he handled a lot of traffic on 14.125/21 for the expedition. UW3GZ was in charge of the air-drops and was postmaster at the North Pole.



NORTH POLE DIPLOMA— If you had been one of the about 200 people who were at the April 26 90 degree North party, this is the diploma you would have received as a souvenir. The inside text of this folder/diploma was done bilingually by the Soviets.

Right, bottom: Team leader Richard Weber and his happy XXL. Richard was assigned VE8RW but chose to use EX0VE. When I asked professional adventurer Richard what was next, he said that Chris Holloway and their wives would like to hike the Great Wall of China in 1990. I let him know that BY1XN finally had the opportunity for an eyeball QSO with skier and Anglican priest Rev. Laurie Dexter and his XLY, Sheena. QSOs were on 40M with Laurie and on the landline with Sheena.

The warmth and gratitude shown by the skiers to the Amateurs was really appreciated, I'm pleased to say that the Soviet invitation arrived in time for me to get to Ottawa 600 km from my Listowel QTH. Below is the Canadian invitation for June 8. Don't look for any pictures from that reception... the invitation was mailed from Ottawa on June 6. I received it on June 9, the day after it happened. Hihi.
73, de VE3XN/UA/VE3

Left: Hero of the Soviet Union, Dmitry Shparo UA3AJH, expedition leader, polar explorer and mathematics professor, greets VE3XN.

CANADIAN SKITREK MEMBERS.. FB OMs

Below is Chris Holloway, 31 a computer programmer. He shows signs of frostbite, wind and sun burn!

Left— Laurie Dexter and family with VE3XN.

Below: Dr. Max Buxton, 31, and his bride to be, 34-year-old Nancy Burton. Max proposed to Nancy while skiing. She said 'yes' to the proposal, but XN was the CI8C op who relayed 'no' to the North Pole place of marriage. Hi.

CROSSWAVES

Ralph Cameron VE3BBM
30 St. Remy Drive
Nepean, Ont. K2J 1A3

Ralph Cameron VE3BBM has been involved with the Ravenscroft case since the very early days. Ralph has been a source of technical expertise, manager of the JRSD Fund, a witness, a good friend to Jack and his XYL and an excellent example of how hams help hams. (Hall of Fame candidate, anyone?) The executive of CARF take this opportunity to thank Ralph for all his hard work. Ralph's final wrap-up of the case will be published over the next few months in place of the regular 'Crosswaves' column. A copy of the entire report is available to members for $2 p.pd.

RAVENSCROFT-HOUGHTBY APPEAL COURT'S ORDER PROLONGS AND CONFUSES LEGAL SETTLEMENT OF THIS CASE

The Jack Ravenscroft interference case, in which grounds for nuisance were found, continues to seek an end to the victimization of both parties. A recap of events occurring after the Appeal heard on Feb. 28, 1988 follows:

PRIORITIES TO ESTABLISH

The first 30 days from the rendering of the judgment at appeal were spent trying to determine who was responsible for what. The judgment made assumptions which will confound the final resolution of this case. The assumptions which contributed to these complications were:

a) The Court assumed all appliances could be suppressed, This may not prove to be the case. What is the alternative?

b) The Court assumed the Department of Communications had standard levels of suppression to which the devices could be suppressed. It does not. Can the Court order a Federal Department to make a judgment for a responsibility it does not have?

It does not require much imagination to know who is going to pay to find the answer to these questions. The question may also be raised about the Court's ability to judge competently cases involving complex technical issues. Can there be reasonable exceptions to the Laws of Nuisance which exclude activities concerning technical progress? Some day this question may be answered. In order of need, it was found that no progress could be made in meeting the Appeal Court's order unless these priorities could be established:

a) Agreement from solicitors to appoint liaison.

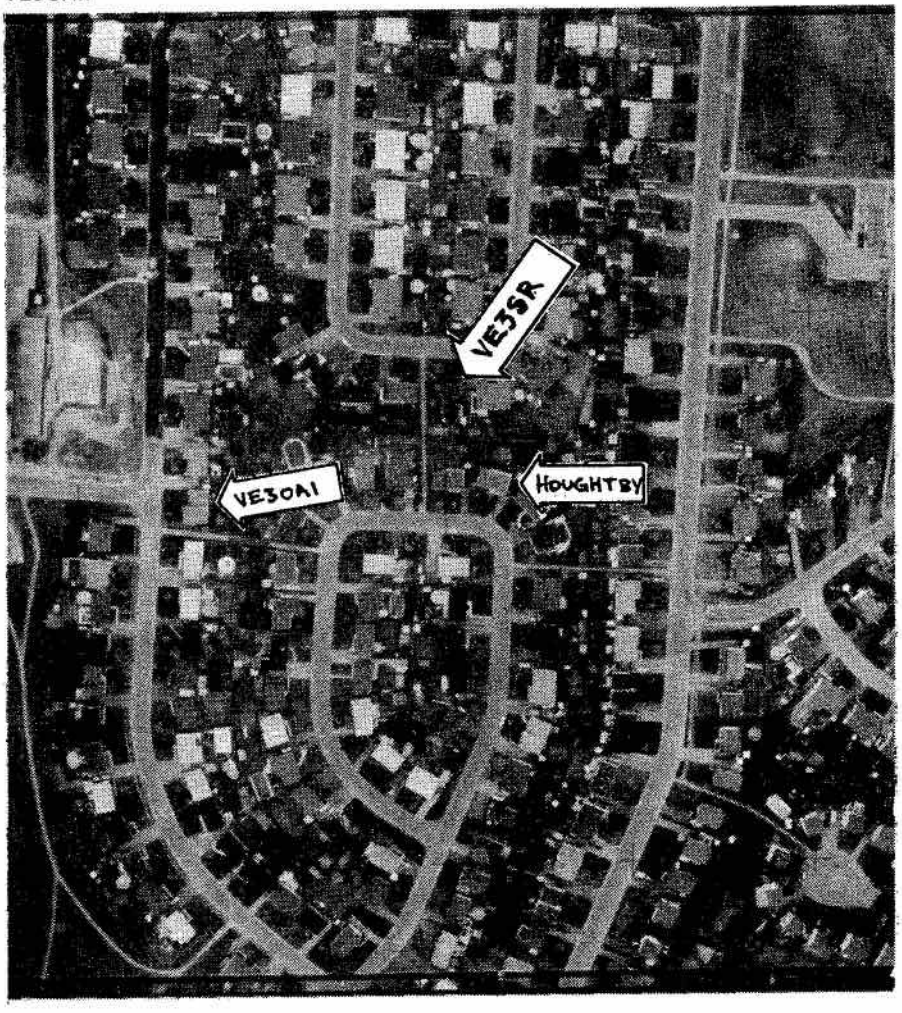
Since I had been associated with the case prior to it becoming a legal issue and because attempts at a technical resolution had been co-ordinated with DOC, I became a 'voluntary' technical focus to act as liaison and did so with the written permission of both counsels. It has proven to be a challenge.

b) Test Procedure

There must be a mutually agreed test procedure before any progress can be made. It was realized that in Jack's immediate area a power reduction would provide a 10 dB reduction in the levels needed to achieve suppression. This was felt to be an onerous but wise move. It is probably one of the most significant steps taken which exemplified a willingness to voluntarily assist the suppression activity. For reasons thought to be lack of technical understanding, this suggestion was initially met with opposition. In fact, there was a suggestion that testing and suppression would not occur unless the

Above— Jack Ravenscroft VE3SR, Hubert Pambrun, Reg. Mgr. DOC, John Simpson VE3NJU, Gerry Jewers, DOC, Mike McLarty, DOC after two days of testing in QTH of VE3SR in April, 1988.

Below— Aerial view of VE3SR showing proximity to neighbour and relation to VE3OAI.



tests were run at the same power level as prior to trial. (i.e. 1 kW). DOC intervention assisted in acceptance of the power reduction. For Jack, this of course means he has voluntarily given up use of his linear amplifier, at this location, for the foreseeable future.

c) Manufacturer Contact

Prearrangement of contact was made with manufacturers of some of the affected appliances. This is an absolute necessity because of the need to obtain circuit diagrams and if needed, the permission to install suppression devices on the appliances. Contact was made with Yamaha, Radio Shack and an authorized TV Service dealer. In the case of Nameless brand equipment there were problems reaching anyone who wished to talk technically about that particular appliance.

A lot of excuses were encountered along the way and it proved to be essential to have some knowledge of the consumer industry as well as technical skill to be believed. Some of the verbal responses are well worthy of being preserved as cartoons.

Early during the suppression phase, John Simpson VE3NJU volunteered to help in this undertaking. Again, I was most fortunate in having John help and do the suppression because as a 'Representative from the other side' I was not permitted to work on the equipment. Without John's experience as an Electromagnetic Compatibility design engineer with Northern Telecom, we would not have achieved the successes to date. John accompanied me during all visits to the complainant's, but two. One exception will be discussed later.

d) Arrange Tests and Coordinate with DOC

During all phases of testing and suppression it was necessary to establish a communication path with VE3SR, Mrs. Houghtby, John Simpson, appliance service representatives and DOC. This path is another essential element so that all the objectives can be attempted which will satisfy legal, personal, timing and technical requirements. Suppression devices also need to be obtained prior to installation, even though the inside of the appliance has not been seen. This is a very important area of concern for future suppression incidents. Read on.

Other considerations which were made into objectives to satisfy a legal/technical need were as follows:

i) Obtain a witness during every entry to test or suppress.

ii) Obtain Model and Serial Number of all affected appliances.

iii) Observe and record all visual/audible effects and ensure that DOC witness these effects as an impartial authority.

iv) Try external toroids, filters on appliances-listen to organ.

v) Set up discussion meeting with Yamaha representative.

vi) Maintain log of all contacts and content.

vii) Under no circumstances void any warranties or CSA approval on appliances.

viii) Have DOC approve level to which appliances are suppressed.

This then was the procedure followed and proved to be workable but very time comsuming. With the exception of two appliances and one to be tested, all suppression has been 100% effective. The details of suppression follow later.

COMMENT

Readers may wonder how such a matter as this case could endure for almost four years. There have been many elements of the case reported in drips and drabs because we still do not have that instant contact which conveys items of interest to all Amateurs in a timely fashion. It amazed me that so many Amateurs do not even subscribe to a national Amateur radio magazine or belong to any organized group for that matter and are simply poorly informed about facts surrounding this case and other major Amateur issues.

At certain critical stages before trial and before Appeal it was imprudent to discuss contentious issues over the air. While Amateurs may have differing views of responsibility, the Court has decided otherwise and it is a condemning judgment. The legal issue of 'res judicata' prevents this judgment from being overturned based on the same arguments.

Even the defence of 'Statutory Authority' which had not been argued at trial and could not be argued at Appeal, is not thought to have application to the Amateur Service. It is believed to apply to those transmitting undertakings which are obligated to provide a service rather than a permissive, experimental service. This is an informal legal opinion obtained from a non-Amateur.

ELEMENTS OF THE CASE

SOCIAL

Quickly escalated.

The furnace control leads suppressed by a DOC-installed toroid reduced some concern. An intermittently operating microwave oven was associated with operation of VE3SR's station and within a period of 5-6 weeks escalated to receipt of a legal letter accusing nuisance.

Abrasive language

Phone calls during, before and after operation and sometimes when no operation occurred were anti-social in nature.

Low patience factor.

The complainants sought an immediate recourse. There was none.

Lack of an option.

Created frustration and anxiety.

Balance of Convenience.

Nuisance demands a look at how easy it would be to prevent the nuisance by stopping transmitting or forfeiting the enjoyment of one's appliances. Purely technical reasons are not necessarily considered because of the lack of immunity regulation.

Perceived Hazards

The perception that the microwave oven could operate and cause a fire as well as a stated furnace malfunction raised anxiety and was used as justification of a medical condition in Court.

Monitoring.

The use of a small black and white TV to determine whether VE3SR was operating was evident.

Borderline Harassment.

Many unanswered phone calls were received by VE3SR during all hours of the day and night, just prior to the Appeal and for ten days after. No one was ever on the other end. These calls were traced legally. Similarly, the complainant's phone was changed to an unlisted number due to the same type of call, of which there were many.

Isolate the Parties

In the case when continuing dialogue cannot be maintained, a technical arbitrator should be used with consent of both parties. This needs to be done legally.

LEGAL

Nuisance is Onerous

Few Amateurs would be equipped to handle the allegation of legal nuisance; moreover, it is apparent a highly technical issue such as this needs legal interpretation and guidance not easily found in your average family lawyer.

Court imposed technical solutions and ambiguous conditions.

The suggestion of suppressing the appliances was made without full discussion of feasibility. This was perhaps made in this way because there were no other options in the circumstances. The Court followed this recommendation without questioning its universal validity. The DOC 'standard levels of acceptance' imposed by the Court were without foundation. What will happen when both parties insist that DOC accept the appliance?

DOC failed to intervene on technical grounds.

Independent legal opinion differs from the Department's stance. The DOC believes it should not involve itself with a civil issue. It is obvious that technical grounds for similar nuisance charges are imbedded in the nature of the operation of the Amateur Service.

Should it be expecting too much to legally recognize the technical reality of susceptibility and why it has happened for over 60 years— long before the current wave of electronic 'dum dums' hit the market? We have technical references of EMCAB I & II and all the accumulated statistics of the spectrum regulators.

The Radio Act needs a new dentist as well as a new set of teeth to deal with the immunity issue. The present Radio Act is inequitable because all spectrum users do not have equal responsibility. Licensed transmitter owners must abide by technical regulations. There is no reasonable obligation on suppliers of devices which malfunction due to proximity of device and transmitting source. i.e. no legal option.

CSA and Safety Considerations

Any suppression activities that require removal of parts enabling access to the inside of the protective enclosure will invalidate CSA certification. What this means in layman's terms will be difficult to assess because no one is quite sure what happens when service personnel perform the same operation. The express requirement of manufacturers to meet CSA approval is that they comply with minimum standards for safety as stated in the applicable standard and can pass inspection. The issue of a legal requirement to maintain CSA approval when an appliance is purchased and delivered to a consumer appears to be one of those 'grey' areas which will be argued long and loud.

Then again, the suggestion has been made that even wrapping the line cord around a toroid core, externally, could fray the line cord. What is needed here for direction of those attempting to do the suppression is some realistic and practical direction; otherwise we may need to have a special on-site CSA certification made every time an attempt is made to suppress a device. (Can we expect an answer in 10 or 15 years?)

There is valid concern on the manufacturer's part when unauthorized personnel work on their appliances. There is a great difference between the notion of qualified and authorized.

CONTINUED NEXT ISSUE

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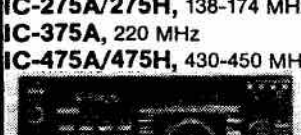

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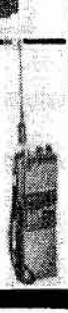

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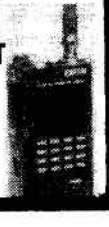

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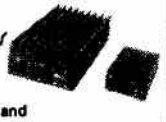

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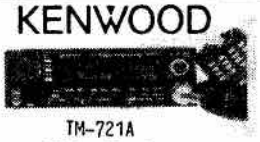

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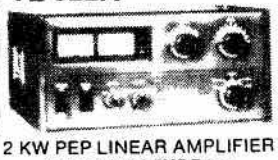

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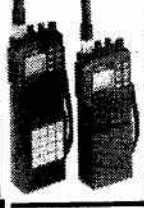

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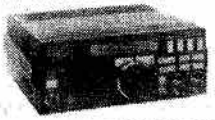

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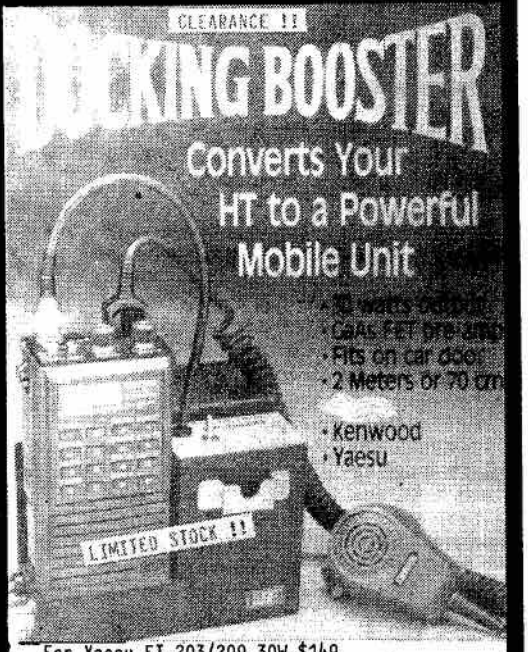

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CONTEST SCENE

John Connor VE1BHA
18 Deerfield Dr., Apt. 1112,
Nepean, Ont. K2G 4L2

With the approach of the fall contest season, the Amateur bands will soon be playing host to contesters of all stripes once again. In the autumn, almost any weekend is an ideal time to study the contester in his native habitat. To help you in this study, we present a Feild Guide to Contesters, to help you recognize the various members of the genus Contestus, order Hamus.

Contestus Novicis can be recognized by its generally confused behavior. It has a poor sense of timing and will often call in pile-ups at precisely the wrong time, getting bruised or crushed by the crowd as a result. Often small and weak, Contestus Novicis can frequently be found on inappropriate bands, e.g. 20M when 10M is wide open. Usually has a small score. Best found high up in the band, and often quite numerous in late June, Novicis has a worldwide range.

Contestus Hyperus is noted for its frenetic behavior. When found on CW, Hyperus can be mistaken for Hamus Specialitus Radioteletypus. On phone, his rapid fire delivery may remind you of Personas Normalis Auctioneerus, but do not be fooled. Contestus Hyperus is often bashful about signing his call, and when he does, you may miss it if you are not paying careful attention. Hyperus may be a challenge to catch, and it is almost impossible if you are using VOX. Frequently has a big score, and is often found in tropical climates and throughout the States.

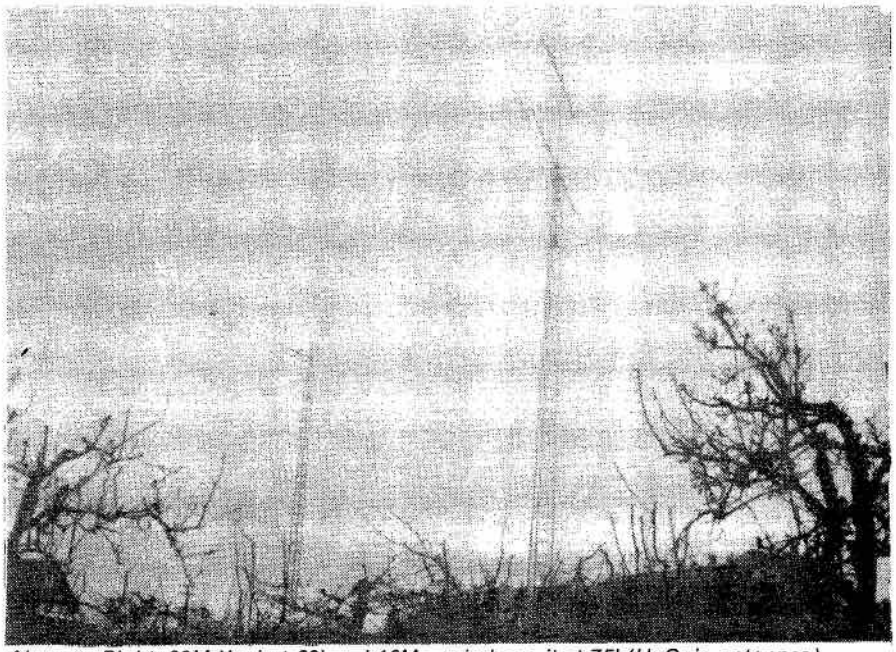
Contestus Addictus can be found most any weekend. Frequently noted in Eastern Europe, Japan and the U.S. Addictus has scores of varying sizes, and a stunted family life.

Contestus Frustratus is best recognized by his repetition of "I'm not in the contest, but...". Frequently valueless to you in any given contest, he often needs the rules explained. Does not usually have a score. An irksome but harmless member of the Contestus genus, commonly found in the States.

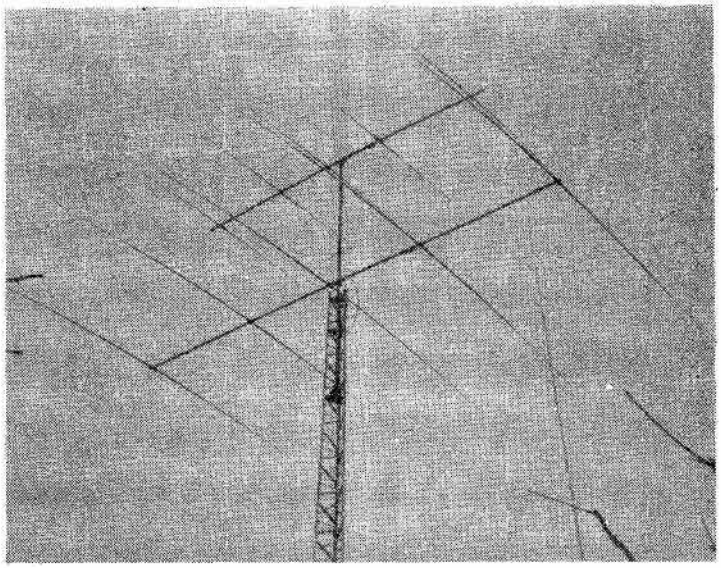
Contestus Laconis is a curious creature. Generally has a good signal and knows the rules; he's just simply not in a hurry, and may take a good 45 seconds in signing his call. Most often found in the southern States. (On those occasions when Laconis encounters Hyperus, it is often not a pretty sight, certainly not suitable for young children or those with a delicate nature.)

Contestus Alligatorus is noted for his big mouth and small ears. Easily spotted with his big signal, he will steadfastly ignore you despite all attempts to attract his attention. Generally does not have a big score. Found worldwide.

Contestus Superus is a rare species, and always a treat to see. Recognizable by his smooth operating, Superus is always on the correct band, with a good signal. Superus is noted for frequent call sign displays and keen hearing. He will almost always respond to your call quickly, despite the fact that you are running 20 mW to a wire in the basement. Contestus Superus has a big score, distinguishable by its large QSO total and prominent multiplier. He is noted for remarkable demonstrations of ability, such as making 3M points in the CQ WW CW Contest without a CW filter. Found worldwide, but less commonly in the Pacific and Africa.



Above— Right, 20M Yagi at 66' and 10M yagi above it at 75' (HyGain antennas). Left, back, 15M HyGain yagi at 56'. Left, front, Being pushed by the wind and leaning to the northeast is the Butternut 40/80 vertical.



Closer look at the 10/20, yagis and 40/80 vertical.

Contestus Contestus is the common garden variety contester. He can be found in large numbers during any major contest. Contestus is a staple of Contestus Superus' diet, and is essential to a well balanced contest ecology. Usually exhibits a medium to large score. Numerous throughout the world.

Lastly, there is a recently recognized species, Contestus Diminus, a close cousin to Contestus Frustratus. He is recognized by his inability to display a proper call sign. Instead, when under stress (as in a pile-up), he repeatedly displays a truncated callsign, usually

only the last one or two letters. When prompted, he will display a full call. Thought to be a recent mutation, this species is becoming more common worldwide. Some experts feel that he may pose a serious threat to the Hamus Contestus ecology. (The interested reader may find a comparison to the species DX Listus instructive.

SCORES, ETC.

Okay, so all of that was a bit silly. I'm sorry, it's hot. It's okay, though, a small dose of lithium and I think I'll be okay for the rest of the day.

It has been suggested that I ignore VHF contests in this column, and that is true. There are two main reasons for this. First, I don't know enough about VHF contesing to comment on it, although I have done a little bit of it at one time or another. Second, while contesting appeals to a small audience, VHF contesting has an even smaller audience. One has to draw the line somewhere. There are several HF contests that I also ignore which I think are very good contests.

Anyway, I will try not to neglect the VHF contests entirely. If there are any VHFers out there who want to give me a hand and send scores, records, etc., and/or contribute to my education in this area, please do so.

So, all four entries in the CQ WPX VHF contest from Canada last year placed first in their respective categories, being the only entries. VE3LAR led the pack, with 107 QSOs and 16038 points in the portable class, while VE5LY made 108 QSOs for 5940 points in the single operator, single band high power class. In single operator, single band low power, it was VE3VET with 107 QSOs and 4280 points, while VE1MUF was the top multi-operator, multi-band entrant.

In the VHF SS, VE3DSS made 169 QSOs for 15008 points, good for first place, while the top multi-op was VE3LNX with 116,116 points and 552 QSOs.

In the ARRL Ten Metre contest, the top score went to Reg VE1BNN with 1610 QSOs and 405,720 points phone only. Second place was taken by VO1QU with 1536 QSOs and 261,120 points. The number one mixed mode entry belonged to VE5UF with 180,400 points, while the top CW only was VE3KP, garnering 118,800 points.

Finally, in the multi-operator category, a new up and coming university multi-op effort, VE3UOW at Waterloo rolled up 28,380 points.

Well, that's about it for another month. In closing, I offer a look at VE7EIK's antenna farm. George has a good crop of five element HyGain yagis on 10, 15 and 20, as well as a good crop of cherry trees. I wonder what the effects of continual exposure to RF are on cherries? Maybe during contests they start glowing cherry red? Maybe not.■

HALL OF FAME TRUSTEES

The following Amateurs have volunteered to act as Trustees for the Canadian Amateur Hall of Fame:

Geoffrey Smith VE3KCE/1, Chairperson and Trustee for Maritimes/VE1.

Eric Salter VO1KR, Trustee for Nfld/Lab/VO1/VO2.

Evan Herriott VE3IND, Trustee for Ont/VE3.

Hal Garvie VE7AEI, Trustee for BC/VE7.

The Hall urgently requires persons to fill the other vacancies (Que/VE2, Mid-West/VE4/VE5/VE6, VE8/VY1). Please send names of volunteers or nominees to:

Geoffrey Smith VE3KCE/1
King's Edgehill School
Windsor, NS
B0N 2T0

Contest Information

—Courtesy Frank Anzalone & CQ Magazine

CONTEST CALENDAR

Aug. 27-28 All Asian CW Contest
Sept. 4 Bulgarian DX Contest
Sept. 7-9 YLRL 'Howdy Days'
Sept. 10-11 European SSB Contest
Sept. 10-12 ARRL VHF QSO Party
Sept. 11 North American CW Sprint
Sept. 17-18 Scandinavian CW Contest
Sept. 17-18 CRRL Can-Am SSB Contest
Sept. 18 North American SSB Sprint
Sept. 24-25 Scandinavian SSB Contest
Sept. 24-25 CRRL Can-Am CW Contest
Sept. 24-25 CQ WW DX RTTY Contest
Sept. 24-25 Italian YLRC Contest
Sept. 25-26 Classic Radio Exchange
Oct. 1 AGCW-DL Straight Key Party
Oct. 1-2 VK/ZL/Oceania SSB Contest
Oct. 1-2 California QSO Party
Oct. 1-2 Fernand Raoult F9AA Cup
Oct. 8-9 VK/ZL/Oceania CW Contest
Oct. 8-9 IRSA Radiosporting Contest
Oct. 8-9 Pennsylvania QSO Party
Oct. 8-9 ARCI QRP Fall CW Party
Oct. 9 RSGB 21/28 MHz Phone
Oct. 9-10 Illinois QSO Party
Oct. 15-16 Boy Scout Jamboree
Oct. 16 RSGB 21 MHz CW Contest
Oct. 29-30 CQ WW DX SSB Contest
Nov. 5-7 ARRL CW Sweepstakes
Nov. 11-13 Japan International DX
Nov. 12-13 European RTTY Contest
Nov. 12 ALARA (VK YL) Contest
Nov. 19-21 ARRL Phone Sweepstakes
Nov. 26-27 CQ WW DX CW Contest

-Courtesy Frank Anzalone & CQ Magazine

EUROPEAN DX CONTEST

SSB: Sept. 10-11, 1200Z Saturday to 2400Z Sunday

This is the 33rd annual contest sponsored by the DARC. The activity will be between European countries and the rest of the world on all five bands, 3.5-28 MHz. (IARU Region I regulation of frequencies for contest operation.)

Only 30 hours of operating time out of the 36-hour contest period are permitted for single operator stations. The 6-hour off times may be taken in one, but not more than three, periods any time during the contest and must be indicated in the log.

Classes: (a) Single operator, all band. (b) Single operator, high bands, 14, 21, and 28 MHz. (c) Multi-operator, single transmitter. Only one signal on any band at the same time. (d) SWL.

Exchange: RS(T) plus a progressive QSO number starting with 001.

Points: One point per QSO and 1 point for each QTC reported.

Multiplier: The multiplier for non-Europeans is determined by the number of European countries worked on each band (see WAE country list).

Europeans will use the ARRL country list of non-European countries. A quick band change to work a new multiplier is permitted. However, activity on the originating band must not be interrupted for at least 15 minutes.

Bonus Multiplier: Multiply your multiplier on 80 metres by 4, on 40 by 3, and on 10/15/20 by 2.

Final Score: Total QSO points plus QTC points times the sum total multiplier from all bands.

SWL: Only (a) single operator, all-band class may be used. The same call sign, European or non-European, may only be logged once per band. The log must contain both call signs and at least one of the control numbers. Each QSO logged counts 2 points, each complete QTC 1 point (maximum of 10 per station). Multiplier is determined by the DXCC and WAE country lists.

QTC Traffic: Additional point credit may be earned by making use of the QTC traffic feature. A QTC is a report of a confirmed QSO that took place earlier in the contest and was later sent back to a European station. It can only be sent by a non-European station back to a European. The general idea is that after a number of Europeans have been worked, a list of these stations can be reported back during a QSO with another station. An additional, one point credit can be claimed for each station reported.

A QTC contains the time, call, and QSO number of the station being reported (i.e., 1300/DL2DN/134, which means that at 1300Z you worked DL2DN and received #134).

A QSO can be reported only once and not back to the originating station.

A maximum of 10 QTCs to a station is allowed. The same station may be worked several times to complete this quota. Only the original contact, however, has QSO value.

Continued on next page

CONTEST *(cont'd)*

Keep a uniform list of QTCs sent: 3/7 indicates that this is the third series of QTCs sent and that 7 are being reported.

If more than 100 QTCs are claimed, a check list must show that the maximum quota of 10 per station is not exceeded.

Awards: Certificates to the top scorers in each class in each country. Each participant with at least half the score of the continental leader will also receive a certificate. Plaques will go to continental winners in the single operator class.

Disqualification: Violation of the rules of the contest, or taking credit for excessive duplicate contacts, will be deemed cause for disqualification. Each duplicate QSO or QTC will result in penalty of 3 QSO/QTC points.

Logs: It is suggested that you use the official DARC or equivalent log form. Figure 40 contacts to the page and use a separate sheet for each band. Submit a dupe sheet for each band. Submit a dupe sheet for each band with 200 or more contacts. A summary sheet showing the scoring and a signed declaration are also required. (Sample log forms are available— SASE or IRCs.)

WAE Country List: C31, CT1, CU, EA, EA6, EI, F, G, GD, GI, GJ, GM, GM Shetland, GU, GW, HA, HB, HB0, HV, I, IS, IT, JW Bear, JW Spitsbergen, JX, LA, LX, LZ, OE, OH, OH0, OJ0, OK, ON, OY, OZ, PA, SM, SP, SV, SV5 Rhodes, SV9 Crete, SY Athos, T7, TA1, TF, TK, UA1346, UA2I, UZ2F, UA1 Franz-Josef-Land, UB, UC, UN/UA1N/UZ1N, UO, UP, UQ, UR, Y2, YO, YU ZA, ZB2, 1A0, 3A, 4U1 Geneva, 4U1 Vienna, 9H1.

Mailing deadline is Sept. 15 for CW entries and Oct. 15 for SSB to: WAEDC Contest Committee, P.O. Box 1328, D-8950 Kaufbeuren, Fed. Rep. of Germany.

YLRL 'Howdy Days'

1400Z Wed. to 0200Z Fri., Sept. 7-9

This activity is for YLs, and scores will be based on contacts between YLs only. All licensed female operators throughout the world are invited to join the party.

All bands and modes, 10 through 80 metres, may be used. A station may be worked once on each band and mode for QSO points. Crossband or net contacts do not count. Use only 24 hours out of the 36-hour contest period, and indicate the breaks in your log.

Score 2 points for each YLRL member worked, 1 point if it's with a non-member. Therefore, members should identify themselves in the exchange.

There is no multiplier; just add the QSO points.

Suggested Frequencies: CW— 3555, 7055, 14055, 21135, 28195, SSB— 3955, 7255, 14265, 21395, 28395 (plus or minus 15 kHz). Look for DX YLs in other parts of the bands, especially on 40 and 80 metres.

The top-scoring YLRL member will receive her choice of a YLRL pin, charm or stationery. The non-member winner will receive a one-year membership in the YLRL.

VK/ZL OCEANIA DX CONTEST

This is the 53rd year of the VK/ZL contest. The following rules are for overseas stations.

A maximum of 12 hours operating time is permitted in the 24 hour contest period to be taken in one-hour blocks based on the 'even hour to even hour' (1000Z to 1100Z/1300Z to 1500Z, etc.)in minimum periods of one hour. (SSB and CW are separate contests.)

Use all bands, 1.8-28 MHz, except WARC bands.

Oceania stations can work anyone. The rest of the world can work VK,ZL and Oceania stations only. The same station may be worked on each band for QSO and multiplier credit.

Exchange: RS(T) plus a three-figure QSO number starting with 001.

Points:Two points per QSO for everyone.

Multiplier: Each VK/ZL/O prefix worked on each band.

Awards: Special large, colour certificates to top scorers in each country and to each continental winner. A participation certificate to all on request (1 IRC, please).

There is an SWL section. Only VK/ZL/O stations are logged. Call of station being worked and RS(T) being sent must be reported. Scoring same as above but both SSB and CW scores are combined for final score (maximum total of 24 hours).

Use a separate log sheet for each band and underline each new VK/ZL/O prefix as it is worked on each band. Include a summary sheet showing the scoring and other essential information, and the usual signed declaration that all rules and regulations have been observed

This year logs go to the new NZART Contest Manager, John Litten ZL1AAS, 146 Sandspit Rd., Howick, New Zealand. They must be received no later than Feb. 15, 1989.

BULGARIAN DX CONTEST

The Bulgarian Federation of Radio Amateurs holds this activity the first Sunday in September each year. It's on CW only, all five bands, 10-80 metres, using the IARU Region 1 band plan.

Classes: 'A'— Single operator, all band. 'B'— Single operator, single band. 'C'— Multi-operator, all band, single transmitter. 'D'— SWL.

Exchange: RST and ITU Zone.

Points: QSOs with LZ stations, 6 points. With other stations in the same continent, 1 pt. In other continents, 3 pts. SWLs must show calls of both stations heard. Score 3 points if both exchange numbers are copied; 1 point if only 1 is copied.

Multiplier: Total ITU Zones worked on each band.

Final Score: Total QSO points from all bands times the sum of the multiplier from each band.

Awards: Classes 'A' and 'C'— cups and medals to the three top world scorers and medals to the three continental leaders in each continent. Class 'B'— medals to the top three scorers on each band in the world. Class 'D'— medals to top three.

Logs: Use a separate sheet for each band, a summary sheet showing the scoring, and the usual signed declaration.

Mailing deadline is 30 days after the end of the contest to: Central Radio Club, P.O. Box 830, 100 Sofia, Bulgaria. Logs may also include applications for the many BFRA awards: NRB, W-100-LZ 5 Bands LZ, W-28-Z, Black Sea, and Sofia awards.

NORTH AMERICAN 'SPRINT'

This is the fall edition of the 'Sprint' run by the National Contest Journal. As the name implies, it's a shorty, only four hours long.

North Americans will be contacting other North American stations as well as stations in other countries, single operator only. North American boundaries are as defined by the rules used in the CQ WW DX Contest.

Exchange: Call, QSO no., name, and QTH (state, Canadian area or country).

Scoring: Multiply total QSOs by the sum of states, Canadian areas, and other North American countries worked for your final score.(U.S. and VE not countries; KH6 not a state.) There are eight Canadian mulitpliers: VE1/VO1/VO2, VE2-VE7, VY1/VE8. Non-North American countries do not count as a multiplier.

Frequencies: Three bands only: 80, 40 and 20 metres. CW— 3540, 7040, 14040. SSB— 3850, 7225, 14250 (plus or minus QRM).

Awards: A trophy to the highest scoring entrant. Certificates to the top scorer in each U.S. call area, Canada and other North American country. Also to the ten top scores, to each member of the winning team, and the highest scoring entrant on each team.

Team competition is limited to a maximum of 10 operations as a single unit. Pre-contest registration is required for each team before the start of the contest— with WN4KKN for the CW and K7GM for the SSB.

There are other detailed rules, a special QYS rule, disqualifying penalties, etc. I suggest you write to WN4KKN or K7GM if you do not have a copy of the Contest Journal.

Entries must be received no later than 30 days after the end of each 'Sprint.' The CW go to: Trey Garlough, WN4KKN, 7609 Hardy Drive, Austin, TX78757. The SSB go to: Rick Niswander, K7GM, 910 W. Claremont, Phoenix, AZ 85013. ■

1989 REPEATER DIRECTORY

We are in the process of updating the CARF Repeater Directory for 1989. We need your help to ensure its accuracy. Please send changes, additions, or deletions before Nov. 12th, 1988 to:

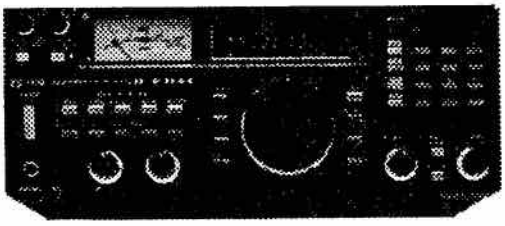
P. Mainville VE3LPM
23 Chatsworth Dr.
Brampton, Ont.
L6X 2L8

or

CARF
P.O. Box 356
Kingston, Ont.
K7L 4W2

Hobbytronique Inc.

Canada's Ham Radio Store



ALPHA-DELTA
ALINCO
AMERITRON
B & W
BEARCAT
BENCHER
BUTTERNUT
CLEAR-CHANNEL
COAXIAL DYNAMICS
EAVESDROPPER
FANON
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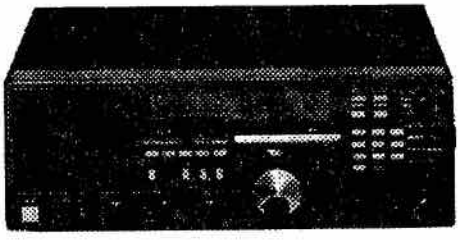
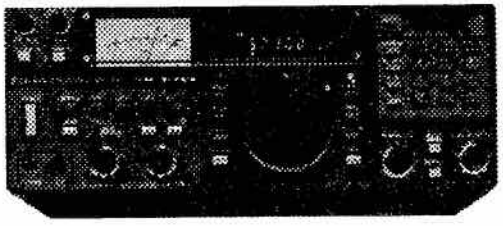
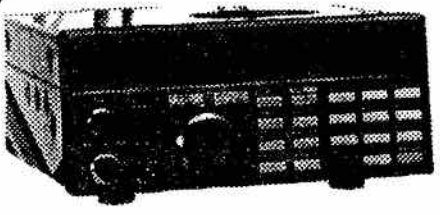
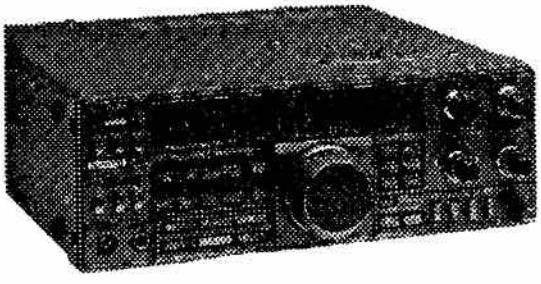








Business Hours	
Montreal	
Mon	Closed
Tue-Thu	9-5
Fri	9-9
Sat	10-2
Toronto	
Mon	Closed
Tue-thu	10-6
Fri	10-9
Sat	10-3

MONTREAL
8100-H Trans Canada Hwy,
South Service Rd.
St. Laurent, Que. H4S 1M5
(514) 336-2423

TORONTO
Applewood Village Mall
1077 North Service Rd. #34
Mississauga, Ont. L4Y 1A6
(416) 897-7125

·CQ DX·CQ DX·

Paul Cooper VE3JLP
RR 2 Metcalfe Ont.
K0A 2P0

NEW DX COUNTRY?

Ever heard of Malyj Vysotskij Island? No, I hadn't either but the DX Newsheets are now full of details of this obscure, uninhabited island in the Baltic Sea leased to Finland in 1962 by the U.S.S.R. If you have an atlas, look in the Bay of Vyborg 60 degrees 10 minutes North, 28 degrees 34 minutes East. The island is separated from Finland by both the mainland of the U.S.S.R. and some Russian Islands.

It turns out that, some 18 years ago, its potential DXCC status was reviewed by the ARRL's assistant Communications Manager, R.L. White, who announced on behalf of the ARRL Awards Committee that, "At such time as operation takes place... we will make an official announcement of its addition to our Countries List." That sounds pretty positive doesn't it? The whole question of its status must now be confirmed by the DXAC as there was a successful operation from the island in early July. Three Finnish and three Russian hams made a joint DXpedition to the Island and put it on the air for 100 hours using a single transmitter. The call sign they used, 4J1FS, is from a block of call signs issued by the ITU to the Soviet Union and used by that country for operations outside the borders of the U.S.S.R.

I gather from reports in *QRX DX* that the operation was pretty successful and that they made lots of contacts in spite of "... jamming, verbal abuse, profanity and over zealous policeman on 4J1FS's transmit frequency." Sadly this sounds like typical behaviour one encounters these days in a major pile-up.

I wonder how many readers spotted this poorly advertised DXpedition and managed to work them. Dave VE2ZP heard them but I gather didn't make a contact. Your scribe vaguely remembers tuning across the 20 metre band a week ago and finding a major pile-up that he had hoped was the 4W operation. When I realized that it wasn't, I moved on. In retrospect this was a mistake; I might have got through and worked another new country. Ah well, here's hoping there is another DXpedition to Malyj Vysotskij Island, better advertised this time, in the not too distant future.

THE END OF THE 'NELLA DAN'

Those of us who take an interest in working those Antarctic bases claimed by Australia have probably often heard of the supply ship *Nella Dan*. For more than 26 years now she has been shuttling men and materials back and forth to places like Macquarie and Heard Islands and Casey, Mawson and Davis bases on the Antarctic continent.

The muscular crew who put Market Reef on the air last July. 22,000 plus QSOs with 150 DXCC countries in 39 zones, a new record for a single expedition here.

It turns out that the tiny ship (she was only 2186 tonnes) was actually Danish registered and was under charter to the Australian Government for all this period. She made 91 voyages 'South' covering close to a million km and during this time she became something of a legend in her own right, and an old friend to the many hams who travelled on her.

It is sad to report that the *Nella Dan* is no more, as she sank just off Macquarie Island last year. My fellow columnist Moe Lynn VE6BLY kindly passed on an article from *The DX Bulletin* of March this year written by Jim Smith VK9NS which gives all the details.

We haven't enough room in the column to quote verbatim but, to cut a long story short, the old ship was caught in the middle of pumping fuel oil ashore and found herself dragging her single anchor as she was driven ashore and badly holed by a sudden change of wind direction and a rising sea. Everyone was taken off safely and later all her valuable scientific equipment and the rest of the fuel oil was removed while she was surveyed to see if she was worth saving. Sadly, the decision was made that it just would not be economical to patch her up and so it was agreed that she should be scuttled in deep water off the island. The *Nella Dan* had the last word, however, as she caught fire on the way to her final resting place, had to be hurriedly abandoned and finally sank on Christmas Eve 1987.

COOPER'S BEEFS

It's not too often that I get feedback on my 'beefs', so I was surprised to hear from Nora VE2HAX, who had some beefs of her own about "Cooper's Beefs".

The June column raised her blood pressure a bit as she rushed straight to her word processor and sent me a page and a half of well-reasoned comments on a couple of my items.

You may remember I complained about a VO1 and a VE4 who were holding a CW QSO on 14.139 MHz instead of using a frequency in the traditional CW portion of the band between 14.0 and 14.1 MHz. Nora directed me to RIC-25, that portion of the Radio Regulations that deals with Amateur Radio. She pointed out that it is not CW that is restricted in terms of sub-bands but phone operation. In other words, the radio regulations allow CW anywhere in the Amateur bands while phone has certain sub-bands where it may not be used.

Nora is absolutely right, as far as the law of the land is concerned in Canada. However, and it's a very big 'however', we Amateurs are part of a worldwide community of enthusiasts sharing a precious resource, 11% of the HF radio spectrum. Many administrations throughout the world have decided that they will not legislate on sub-bands within those bands allocated for Amateur use leaving the Amateurs themselves to decide how the various modes of operation will share the resource. Since phone and CW are pretty uncomfortable bed-fellows, we long ago came to "gentlemen's agreements" on splitting up the bands between phone and CW.

These agreements are honoured by the vast majority of operators to everyone's benefit. In the case of the 20 metre band, this means, of course, CW in the first 100 kHz only. So, while I acknowledge the legal right of those two Canadian stations to operate CW on 14.139 MHz, I believe they were in violation of that "gentlemen's agreement" that the worldwide community of Amateurs follows and that their QSO was an example of thoughtlessness.

Nora also had a suggestion for the right response to a station whose carrier is drifting. She reminds me that there is a perfectly good Q code for this situation, 'QRH' which is short for "Your frequency varies". I knew about this code and I've used it many times in the past, mostly when in QSO with Eastern European and Russian stations. I, like Nora, have found that it doesn't seem to be readily understood at the other end, although the station you are working can always look it up after the QSO has ended.

Readers of the June column will remember that I was reporting on a frustrating contact I had with a VU. The reason I hadn't thought to use QRH during our exchanges was that a drifting signal was the least of his problems. The thing that doomed our QSO was dying tubes in his rig, at least I think that's the most likely reason his signal slowly died while simultaneously spreading across several KCs. Very odd effect which I've not encountered before and which, by the way, was not QSB!

Nora's letter ended with an admonition to "work more CW; it's good for you"! I can't let this go by without a response. I've just checked the last few pages of my log book, 142 phone contacts, 245 on CW.

PROPAGATION PRIMER

I have just received the July-August issue of *The Canadian Amateur* and read VE5TX's Contest winning article on "The Sun's Effect on Short Wave Radio Communication". Had I known that this two-part article was in the works I might have delayed the start of this section of CQ DX. Never mind, D.J. Kelly's text covers much of what I had planned to talk about in some of the future columns, so I shall await his second part and then see what else should be said about the subject that isn't a duplication of what you have just read in Kelly's text!

BITS AND PIECES

4W Yemen— In contrast to the 4F1OFS DXpedition, which came off but was little advertised, the 4W operation was very heavily advertised and today (mid-July) seems very unlikely to get on the air. The rumour mill talks of mislaid passports, courtesy of the Yemen consulate in Paris. Even if and when those passports turn up, many of the operators who had planned to operate 4W0EA have now had to drop out due to personal and business reasons. What a shame if this otherwise well-planned operation by the Lynx DX Group has been torpedoed by some bumbling bureaucrat in Paris!

P4 Aruba— A note from Carl AI6V that P4OA will be on the air from Aruba for this year's running of the CQ WW SSB contest in the multi-multi class. All contacts will be QSL'd via the bureau without the receipt of a QSL card. If you manage to contact the station on four bands or more and send a QSL card and return postage to AI6V you will receive a special certificate.

EK Soviet Union— QRZ-DX reports that EK3DXU was a special event station celebrating '1,000 years of Jesus Christ in Russia'. All QSLs to UZ3DXU. Truly Glasnost is impacting in strange ways in the officially atheist U.S.S.R.!

20 METRE INTRUDER

Anyone else been annoyed to find a strong RTTY signal on 14.023.4 MHz recently? It's been on so often that I think it must be a commercial station camping out on our band. I swung my beam back and forth and, as far as I can tell, it seems to bear about 320 degrees from here; Asiatic Russia perhaps? I spoke to our Ottawa expert on these things, Art Stark VE3ZS, and he was pessimistic about getting anything much done about the intruder. He tells me that DOC no longer monitors the HF bands on a regular basis and long ago dismantled the fine set of HF DF stations they used to have to pinpoint signals on these bands.

The Department's radio inspectors are much too busy responding to complaints of interference on the commercial VHF bands to worry about a bit of interference to radio Amateurs on the HF bands. However, he recommended that I chat to our local radio inspector and pass on the details. Perhaps if enough of us complain they might even drop a line to ITU. I think it's worth a try anyway.

Thanks are due to the following sources for some of the material appearing in this column: *QRZ DX*, VE2ZP, VE2HAX, VE3ZS, VE3JDO (for last month's photographs of the VE3XDX repeater), AI6V, VE6BLY, VK9NS and *The DX Bulletin*. ■

SWAP SHOP

FOR SALE: HOME in Nakusp, B.C., 733 Columbia Crescent. Nine yrs. young, 1450 sq. ft. plus 325 sq.ft. court-yard-sundeck. Beautifully fenced and landscaped. Double garage, Sauna with pool. Underground wiring, sewer, street lights, side walks. EXCELLENT DX-Location. Curling, fishing, golf, Hot Springs, Ski Hill. Contact VE7EHD, 604-265-3175.

WANTED: Wireless set no. 19 equipment and accessories. Especially looking for power amplifier and pocketwatch. I am willing to buy and/or trade equipment. Please write to Chris Bisaillion VE3CBK, RR#1 Old Carp Road, Kanata, Ont. K2K 1X7.

FOR SALE: FOXX transceiver kits are available from Frank Hughes VE3DQB, RR 2 Green Lane, Hawkesbury, Ont. K6A 2R2. Diode tuner kit $40, variable capacitor tuning $50. Either kit $5 postage and packing.

FOR SALE: HF Linear Amp. Late Model Amp Supply LA1000A. 4 New GE 6MJ6 Tubes as spares. Originals still FB. Used only a few hours. Replaced by home made PR 813's. Barrie Coates VE7AQK, Box 3463, Langley B.C. V3A 4R8 (604) 581-0924.

FOR SALE: HAL CT 2200 RTTY/CW/ASCII/RS232 Communication Terminal. Includes KB2100 keyboard, message ROMs and manuals. Add a monitor screen and enjoy. $500. John Leonardelli, VE3IPS (416) 745-0491.

FOR SALE: HW 101 transceiver, HP23A power supply, Drake TY42 low pass filter, Mike Electrovoice 638, Manual for HW101. $275 or will trade for more up to date transceiver or just trade. Forbes Simpson, 66 Bertha Ave., Scarborough, Ont. M1L 3M2.

FOR SALE: MFJ 1229 computer interface for RTTY, CW or AMTOR. Tuning indicator built in. Software for Vic or C-64, can be used with other computers also. Call (613) 543-3925, or write John Baynham VE3GOX, RR 2 Ingleside, Ont. K0C 1M0.

FOR SALE: Swan SS-200 solid state transceiver, 80-10m, 16 pole crystal lattice filter installed, brailled VFO; PS-20 power supply/speaker. With JCU Electronics DD1 'Talking' Digital Dial/Frequency Counter. Ideal for whitecaner. Includes braille & print operating manuals. $500 or best offer. VE3GRS Steve Cutway, 506 Johnson St., Kingston, Ont. K7L 1Z8 (613) 549-2280.

FOR SALE: Yaesu FT-401B transceiver, 560 watts PEP SSB, 430 watts CW, 120 watts AM, mint condition, $480; FV-401 external VFO, $90; SP-401P speaker/patch, $70; Ken Product KP-12 RF speech processor, 6 dB improvement, $50; specs on request; serious offers considered on part or all. Bruce Smith VE6BS, 5835-142 Street, Edmonton, Alberta, 403-438-0630.

FOR SALE: Yaesu FT7 low power 80-10 transceiver, mint condition in original box. $250. B.L. Lapier VE3CTZ, Hilton Beach, Ont. P0R 1G0, 705-246-2839.

Please send your 'Swap Shop' notices to the The Canadian Amateur Swap Shop, Box 356, Kingston, Ont. K7L 4W2. Single insertion is $1.00 minimum (10 words) and $1.00 for each additional 10 words. To renew, send copy and payment again. Please TYPE OR PRINT CLEARLY! and put your membership number and call (not counted) at the end of your ad. Include your full address with postal code; if using a phone number, include the area code. The Canadian Amateur accepts no responsibility for content or matters arising from ads.

QRP

Moe Lynn VE6BLY
10644-146 St.
Edmonton, Alta. T5N 3A7

ABU BEN ADAM

Abu Ben Adam, may his tribe increase,
awoke one night from a deep dream of peace.
and saw, standing in the confines of his fold,
an Angel, writing in a book of gold.

What writest thou? He said,
The Vision raised its head,
and with a look made of all sweet accord, replied,
the names of those who love the Lord!

And is mine one? Nay, not so!
I pray thee then, write me as one
who loves his fellow men.
The Vision wrote, and vanished.

The next night he came again,
and showed the names
of those whom God had blessed.
And Lo, Ben Adam's name led all the rest!

Author Unknown

Above is an item 'Abu Ben Adam', author unknown, but shared with us by Al Williams VE6AXW, and old-time QRPer. We both thought it might be appropriate if adopted as the present day Amateur Creed. Who knows what may become of your name even if you don't belong to a club that is always looking for their name in the book.

Received a disk from MegaSoft Canada of Perry Sound, Ont., entitled 'Total Security 64/128' which is, as the title suggests, a security system that works out of the joystick port. It will dial one of two telephone numbers with your modem and if no answer then dials the second one. A User's Report should be ready for the next issue of *The Canadian Amateur* if for no other reason than to answer their request for feedback.

QRP & IONOSPHERE

The subject is not new to a lot of today's Amateur radio enthusiasts, but how many know how a computer prediction program is put together? Bob VE7BS wrote on more than one occasion in an endeavor to straighten out my errors in using IONPRED which is for the C64 or C128 in 64 mode and a printed listing of the program fills nine pages.

Then along came a book written by our friend Bob NM7M from his residence on Guemes Island near Anacortes, WA. The title, *QRPers BASIC Propagation Tool Kit*, is certainly well-chosen when you first open what he calls his pamphlet. On page one he states, "If you turn your hand to DXing at QRP power levels, it really pays to know what the sun is doing and the state of the geomagnetic field." Then he goes on for some 30 odd pages explaining in layman's language just what everyone wants to know about propagation.

Rather than put a few programs on disk for one computer and tell everyone they have bought the ultimate, he proceeds to build a program with Distance/Heading, Number of Hops, Solar Zenith Angle, Intermediate Lats & Longs, D-Region Loss, MUF with Mid Points & Critical Frequencies, F-Layer Algorithm and finally the Signal Strength module, being eight in all, and can be adapted to any computer with a minimum of effort. First he introduces everyone to a program called "QRPer's Propagation Predictor" which in itself is a lot of fun. Mine is now set up to run on C128 in 80 column and is reproduced here.

It can be used without a computer simply by following the line statements after injecting Solar Flux and A-Index, but you will probably need a calculator. Guided by instructions in the book and typing in an appending program for C128 from a magazine, it was possible to put together the 'Modest Propagation Program' merging six of the eight modules. The end results show my figures disagreeing by 1.3 MHz with those in the book and, being a poor mathematician, it will take me a while to find the error.

Elmer VE6BLO spent some time at home getting the eight modules to run in C64 mode and tells me they do very well but did not merge them as yet. Bob has provided examples where necessary, to use in proving to yourself they have all been typed in correctly after making changes for your particular DOS (Disk Operating System).

What better way to learn about the make-up of the ionosphere, how it affects HF signals, than to homebrew a propagation program like a good QRPer does his equipment! The book at $6.50 U.S. is available through the 'QRP Candy Store', Bob Spidell W6SKQ, 45020 N. Camolin Ave., Lancaster, CA. U.S.A. 93534. The store is operated for QRP ARCI which receives all proceeds from the book after expenses, an SASE will bring you a list of all the goodies in their store.

QRP Quarterly #3 for 1988 addressed to myself arrived the first week in July, and it is noted Paula WB9TBU is now Editor. She is to be congratulated for taking on this new venture among her other trials and tribulations. The cover shows a picture of Harry Blomquist K6JSS at his operating position, who was the founder of ARCI in 1961 and used membership #1. A few well-known tributes were included on his passing away April 4 as advised by his wife, Jean. She said, "He was always proud of his QRP Club, though unable to participate lately".

Fred K6MDJ may have spoken for all QRP affectionados with his closing remarks, "My world is very definitely a better place for his having stayed here a while"! As advised by Ham Clark KG6JII, the station equipment of K6JSS was donated to the Santa Clara Emergency Service station at the San Jose, CA. Red Cross House.

Other topics include a Milliwatt QRP TX using Digital ICs by KB1MJ, DXing

```
10 SCNCLR :PRINT:PRINT:PRINT
12 PRINT"                          QRPERS PROPAGATION PREDICTOR":PRINT
15 PRINT"                            BY BOB NM7M & JACK KR7R":PRINT:PRINT
20 INPUT"          SOLAR FLUX AT 1818 UTC";SF:PRINT
30 PRINT:INPUT"                    MAGNETIC A-INDEX";AA
35 PRINT:PRINT:PRINT
40 A(1)=121.34: A(2)=96.94: A(3)=68.36: A(4)=49.79
50 B(1)=22.9: B(2)=30.4: B(3)=28.7: B(4)=30.9
60 FOR K=1TO4
70 C(K)=A(K)*EXP(AA/B(K))
80 NEXT K
90 IF SF>C(1)THEN 100:ELSE120
100 D$="FANTASTIC": E$="GO GET 'EM TIGER!"
110 GOTO220
120 IF SF>C(2) THEN 130: ELSE 150
130 D$="'FAR OUT!'": E$="TRY TO WORK A NEW ONE!"
140 GOTO 220
150 IF SF>C(3) THEN 160:ELSE 180
160 D$="FAIR": E$="THERE OUGHT TO BE SOMETHING WORTH WORKING."
170 GOTO220
180 IFSF>C(4) THEN 190: ELSE 210
190 D$="FOUL": E$="DON'T GET AN ULCER!"
200 GOTO 220
210 D$="FRIGHTFUL": E$="THERE'S ALWAYS DR. DX!"
220 PRINT"FOR A SOLAR FLUX OF" SF; "& A-INDEX OF"; AA
230 PRINT"YOU CAN EXPECT "; D$; " DX CONDITIONS ON THE BANDS."
240 IF SF<C(3) THEN 250:ELSE 280
250 PRINT"BUT IF MAGNETIC ACTIVITY DECREASES,"
260 PRINT "CONDITIONS MAY IMPROVE
270 GOTO 300
280 PRINT"BUT IF MAGNETIC ACTIVITY INCREASES,"
290 PRINT"CONDITIONS MAY DETERIORATE!
300 PRINT"IN ANY EVENT, ";E$
```

Program for QRPers Propagation Predictor

with Loop Ae by KV7X, Propagation & DX by NM7M, Classified Ads, Filter Mods for the HW9 by N6GA, Preamp and Filter Mods for the HW9 by KR0U, Ham Radio from a Condo by VE7DCI, Product Review of A&A Engineering MOuSeFET TX by KR0U, Product Review of Neophyte Receiver Kit by K4BNI, Contests by K5VOL, Spring 1988 QRP ARCI QSO Party where Thomas VE3KKO placed first in Canada followed by Peter VE5VA, David VE3OOL, Adeoda VE2ABO, Paul VE7DHM, Al VE1AGZ and Bill VE3EFC for a total of seven participants from Canada, A Rare Moment With Some RARE DX by WB4BBH, My Three Year DXpedition to Okinawa by KB8N/7J6CAM, What's a Watt by W9SCH, Awards, To Russia with Love by NM7M, Operating the IC-735 as QRP Rig by W5VBO/7, Power Reference Chart by W5VBO/7, Daytona Pictures by K3TKS whose Net News Column did not make the deadline, Idea Exchange by W3TX, Wire Length for Toroids by WA8MCQ/3, two pages of Member News by W5QJM, Letters to the Editor, Net Schedules, Upcoming Contests, First Sunday QSO Party Schedule, inside back cover is a membership form and a Candy Store reminder.

Readers are reminded to advise our editor-in-chief if a certain article strikes their fancy and we would especially welcome those readers' input who have constructed any item of Amateur equipment whether QRP or not.

MAGAZINES FOR AMATEURS

At least those of the glossy type appear to have cut back on their QRP section, although Michael WB8VGE still writes a very good column for *73 Magazine*. You may recall Michael is custodian of the ARCI QRP disk library but they have discontinued the C64 and Apple lines due to lack of reader input. He sent me the last C64 disk in the library which was the Universal Grid Locator by Wayne Oberbeck N6NB, written up in the December 1986 issue of *QST*. It is a *menu-driven program* and runs in either C128 or C64 mode with a menu to guide you through the various features and operting modes one step at a time.

A more detailed description of the worldwide locator system as it applies to North America was covered in an earlier *QST* article for January 1983. Wonder how this varies from the four-letter, four-figure GEOREF system we used when flying? It is an especially useful program for those QRPers interested in how far they have worked, just by plugging in what little can be gleaned from an ordinary map.

First you enter your own lat and long or that of a known reference on the map along with the map scale then measure the vertical and horizontal distances (in inches) from there to the QTH of the unknown lat and long. The program will compute both the co-ordinates and the six character locator, accuracy of course depends on how carefully you made the measurements.

Not having spent too much time with the program as yet, it is hard for me to be too critical or complimentary, but for a public domain program available to anyone's adaptation, use or modification it appears to be of superior construction. There is even a built-in contest scoring system which you can modify for either European, ARRL, G-land 'radial ring' and continental raw distance system for VHF contests. Besides all the lat, long, locator conversions and the map pinpointing, you can keep running totals of points and distances as you enter the locators of stations worked in contests.

GLEANINGS

Have yet to hear from Jack N5JD who promised a QRP report from his sailboat back in November 1986. Wonder if the keel fell through? Al VE6AXW tells me he has a reply to his 'info only' letter from his local MP on the RFI subject. Seems Bill VE6ABC, the local SM for CRRL, told him Canadian communication technology is number ONE around the world yet we have no RFI legislation to protect consumers from purchasing faulty equipment.

Earle VE6NM called to say "hello, how are you?", asked about things in general and dropped a compliment toward the last QRP column. Just goes to show what reader input will do when least expected!

Back issues of ARCI *QRP Quarterly* were received from Joe WA1WLU as very prized additions to my reference shelf as they are not available at the City Library yet. Another welcome letter from Jim VE1AEQ who not only passed along greetings to Joe VE6BIG from all his friends in Charlottetown but also included a run-down on QRP-DX worked since May this year. Actually quite an impressive effort when, in less

Continued on next page ►

WWV.....UTC Month.....Year.....

Day:																															
Solar Flux																															
A-Index																															
K-Index																															
0000/0300																															
0600/0900																															
1200/1500																															
1800/2100																															
	Last 24 hours Solar Terrestrial Conditions																														
Solar Activity																															
Geomagt Field																															
	Next 24 hours Solar Terrestrial Conditions																														
Solar Activity																															
Geomagt Field																															
	Sudden Ionospheric Disturbances, flares, protons.																														
Start Hour UTC																															
Key																															

F=Flare. G=Geomag Storm. P=Satellite Proton Event.
S=Sudden Commencement. C=Polar Cap Absorption.

Geomagnetic Activity Level			Solar Flux Range & Expected Propagation	
Range	K	A	90 - 130	130 +
Quiet	0-2	0-7	Above/High Normal.	Above Normal.
Unsettled	2-3	7-1	High/Low Normal.	High Normal.
Active	3-4	15-3	Low/Below Normal.	Low Normal.
Minor Storm	4-5	30-50	Below Normal/Disturbed.	Below Normal.
Major Storm	5+	50+	Disturbed.	Disturbed.

Generally speaking a RISE in K-Index is bad news for operating. Especially related to propagation on paths above 30° North, and is next best thing to current radio conditions.

The A-Index level indicates yesterdays conditions. When charted regularly will indicate recurrence of geomagnetic disturbances that often take place every four weeks, (27 days).

See *QRPer's BASIC Propagation Tool Kit* by Bob Brown NM7M.

QRP *(cont'd)*

than two months, he worked nine YB & YCs, eight JAs as well as AX9NKG, JW6WDA, 5B4ES, 5B4TI, A4XKP, UA0FF, D44BC, 9H1GP and VU2GI with a report from DU1EIB who didn't copy his name so, to quote Jim, "It is hard to really count it." Plus two computer printout designs for a QRP logo reproduced here.

CANADIAN AMATEUR
VEQRP
RADIO FEDERATION

CANADIAN AMATEUR
VEQRP
RADIO FEDERATION

His Canada Day Contest log was also included but will be forwarded to John VE1BHA in case he wants to start a QRP section. Jim managed one contact short of 100 with 12,128 points by his calculations and asks for more participation from the 'flat part' of VE land! Bob N8RT of International Radio Inc., 751 South Macedo Blvd., Port St. Lucie FL. 34983 sent me their April 1988 IRI Brochure along with three recent issues of their ICOM newsletter. Subscription rates were also included, being $12 U.S., Canada and Mexico for one year, list of back issues & rates, IRI User's Supplements & prices. He strongly suggests that anyone interested first apply for their INDEX ($4 U.S.) which can be applied to purchase of back issues within 30 days of receipt of index. They also cover Kenwood at the same price and Yaesu index at $2 having just started the latter within the last three years.

NET & OTHER ACTIVITY

Quite a few 599 reports again out of the contest on the last weekend in May like VE7ZZZ, Y3HL, C30LFC, JH7MKQ and even afterward 599 from AA200SB. N6MQL gave me 559 as did UA6HSD/UA0Q. But all the packeteers sent back QRL to my attempts at a connect with the IC-761 including XE1GGO. Had one connect to Les N6HAX. Jim JG2FDF was busy with his 100W but took time to work my 5W as did Paula WB9TBU, Lori KE9HA, Bud NV5Y, Tom W7OOF, Cathy W7JVI, Steve W7ZA and Bob W6SKQ.

Second Sunday in July brought Patricia WA6UBE from San Jose on our net. Very few other readable signals and none were QRP. First weekend in July my old standby Rick WL7BDK gave me 539 for 5W out of my IC-745. The IC-761 packed it in for the second time leaving me no CW but all the other modes so it's back at ICOM Canada.

NM7M includes a sheet of millimetre graph paper when ordering the QRPer's BASIC Propagation Tool Kit and explains the use.

The form included here is one for use in the meantime or alltime if you so desire. The WWV time slot is blank as is the column headed 'Day:' so you can start using it in the middle of any week or month, at whatever time suits your schedule. The K-Index slot is designed so you can enter one broadcast per day or eight, depending on your scientific leanings.

The layout is such that all the information you hear from WWV at H + 18 will fit neatly on the form in the order it is broadcast. Then with the little QRP program we listed earlier you can decide your fate before turning on the rig.

Those who study propagation to any depth must certainly agree that VE5TX won hands down with his article in the Technical Section last issue. Another reminder, don't forget the QRP QRGs, 1810, 3560, 7030/40, 10106, 14060, 18106, 21060, 24906, 28060, 24 hours per day and 14060 on Sunday at 1900 UTC for VE QRP gathering. ■

Ronnie Scott VE7GRS, left, with Gary VE7GJA and brother Michael VE7MRS.

Brothers youngest hams in Canada?

BY J.F. HOPWOOD VE7AHB

Ronnie Scott VE7GRS (age 10) and brother Michael Scott VE7MRS (age 12) of Ucluelet B.C. are definitely among the youngest of Canada's new hams. The boys' stepfather, Gary Anderson VE7GJA, is, of course, very proud of the boys who worked so hard and sacrificed many hours of play to learn morse and theory. The boys are rarities in Ham radio with our operator age averaging about 55 years old.

Congratulations to Gary VE7GJA for training the boys. Gary serves as Deputy Amateur Radio Co-ordinator for the B.C. Provincial Emergency Program (PEP) and as secretary/treasurer of the newly formed Ucluelet Amateur Radio Club. Ucuelet is a small community in a beautiful setting on the west coast of Vancouver Island at the Pacific Rim National Park. ■

Bob Boyd VE3SV
P.O. Box 356,
Kingston, Ont. K7L 4W2

ARES AMATEUR RADIO EMERGENCY SERVICE

It is hoped that this column, which is being submitted to both The Canadian Amateur *and to* QST Canada, *can become an ongoing source of news and information for members of both organizations on ARES activities across Canada. ARES members and particularly ECs are invited to send along information on what they are doing and on any developments they would like to share with other ARES groups. Yours truly will pull this together in future columns, all with the objective of increasing our collective ability to serve our community and our nation, should disaster strike.*

When disaster strikes, as it will, sooner or later, ARES members will be notified by the means set forth in their Emergency Communications Plan, and will be instructed as to where and to whom they should report. This is no time for a conscientious ARES operator to start thinking about the equipment and supplies he should take along with him. Many ARES groups have prepared a suggested list of what should be in each operator's emergency kit so he can approach as closely as possible the ideal of just loading the kit into his car, and getting on his way.

Some suggested checklists provide recommendations for anticipated short term needs, or to cover a longer absence from home base, like 72 hours. The list that was developed by one organization is shown in the box.

Have you spotted any glaring omissions? Is there any item shown that you don't consider essential? Each individual will have a different idea of what he will need, and that's why it is called a suggested checklist. Some of the items listed can conveniently be packed in a small trunk or suitcase labelled 'ARES Emergency Kit'.

Some of the items on the list, such as perishable food items, will have to be rounded up at the last minute. Most of us are not sufficiently well equipped to have a transceiver set aside for emergency use, so it, too, will have to be packed at the last moment. Obviously, the fewer the items to be added at the last minute, the sooner the operator will be on his way to his assigned post.

One way to stimulate interest in emergency kits is to devote part of an ARES meeting to this subject. Encourage your members to bring along their kits and display them at the meeting. Perhaps a prize should be awarded for the most complete kit, or the one with the most innovative ideas.

Whatever you eventually decide to have on your group's list, creating the kits will be well worth the trouble when, as it eventually will, disaster strikes. Remember: IT CAN HAPPEN HERE!

Suggested Personal Checklist

1. ARES Identification Card and ARES armband.
2. a. Photocopy of operator's and station licence.
   b. Driver's licence.
   c. ARES Emergency Communications Plan.
   d. Road maps of local area.
3. Radio Gear
   a. 2m. transceiver with microphone and headphones.
   b. Power supply for above, with extra battery pack.
   c. Antennas with mounting gear.
   d. Spare fuses.
   e. Broadcast band receiver, battery operated.
   f. Power cord for transceiver with alligator clips to fit into battery.
   g. Patch cords and adapters (BNC/PL259/RCA phono).
   h. SWR meter.
   i. Extra coax cable.
4. Writing Gear
   a. Pen/pencil/eraser.
   b. Clipboard.
   c. Message forms.
   d. Log book.
   e. Note paper.
5. Personal Gear (Short duration)
   a. Snacks and liquid refreshment.
   b. Candy and throat lozenges.
   c. Personal medicine and aspirin.
   d. Extra pair of prescription glasses.
   e. Money, including quarters for pay phone calls.
   f. Foul weather clothing.
   g. Flashlight or lantern with spare batteries.
   h. Wristwatch.
6. Personal Gear (72 Hour duration)
   a. Foul weather clothing.
   b. Three day supply of drinking water.
   c. Three day supply of food in a cooler.
   d. Mess kit with cleaning supplies.
   e. First aid kit.
   f. Personal medicine and aspirin.
   g. Candy and throat lozenges.
   h. Sleeping bag.
   i. Toilet articles.
   j. Mechanical alarm clock.
   k. Flashlight or lantern with spare batteries.
   l. Candles and waterproof matches.
   m. Extra pair of prescription glasses.
   n. Money, including quarters for pay phone calls.
   o. Wristwatch.
7. Tool Box (72 hour duration)
   a. Screwdrivers, pliers and socket wrenches.
   b. Electric tape.
   c. Soldering iron with solder.
   d. Volt-ohm meter.
8. Other (72 hour duration)
   a. Vehicle with extra gas and oil.
   b. Jumper cables.
   c. Highway flares.
   d. 3/8 inch hemp or nylon rope.
   e. Siphon and gasoline container.

It is suggested that the non-perishable articles listed above be kept in a suitable container for ready retrieval when needed. ■

Ode to Code

It's more than dots and dashes
It's a place.
A sanctuary for those who've learned
To love the mysterious magic of
Thoughts arriving in mile-long strings
On roads of ether or wire.

Even more, it's peace,
A shield from the disordered sounds
Of traffic, angry people
And industrial clutter clatter;
Within its warm mantle
We find soothing respite.

And the sharp patter of bright ideas it is,
The sharp focusing of others' thoughts
From miles beyond our vision's range.
As in a dream we so still,
It floats in our ears and stirs our minds
With concern, remembrance, speculation and mirth.

And code is music,
From sounders to speakers it dances
In the shack to each senders inner clock;
And comes butter-smooth, deliciously swinging.
Or choppy staccato from a "fist"
Praising definition;
Or perfectly metered, flowing exquisitely
From the gentle hand of an artist.

A place,
And peace,
Intelligence and
Music.
Code is more than dots and dashes.

—York Region ARC *Splatter*

YL News & Views

Cathy Hrischenko VE3GJH
2 Dalmeny Rd.
Thornhill, Ont. L3T 1L9

GUIDES ON THE AIR 'THINKING WEEKEND'

Guides On the Air continues to grow, not just in numbers but with enthusiasm among the Radio Operators, Guiders and the girls.

This was the first year to use the Girl Guide Call— VE3 Girl Guides Canada AND, because it was a first-time call, we issued a certificate to each girl that took part at my QTH using the VE3GGC call.

These were presented to the girls by their Guider at meetings and one was presented at a Mother-Daughter banquet. The girls at my shack— Guides, Rangers and Pathfinders— were from Thornhill, Richvale and Richmond Hill, Ontario.

Over 100 Canadian stations participated, that I am aware of. All Provinces including the Yukon Territory, and a few countries. We hope to enlarge the global participation for the next year.

As before, an official message was sent from Girl Guide Headquarters of Canada from the Chief Commissioner. This was sent by me with call VE3GGC. The message read as follows:

"Thinking day is particularly special this year as we are celebrating the 60th Anniversary of the World Association of Girl Guides and Girl Scouts. What a great time this is to remember our friends in guiding all around the world.

"In July we are holding an international event for 2500 Canadian members and 500 guests from other countries.

"Thinking day will be a momentous opportunity to make new friends and learn about Guiding in other Countries.

"Enjoy Thinking Day and may it be a joyous and peaceful day for you."

Signed - Joan Howell, Chief Commissioner, Girl Guides Canada.

Greetings were received from England via Bermuda and later I picked up an official message from United Kingdom as follows:

"From the United Kingdom Chief Commissioner to the Canadian Chief Commissioner and all Girl Guides of Canada.

"Thank you Girl Guides of Canada for your Thinking Day message to Girl Guides in the U.K. We send you all and any other members of our World Association listening, our warm wishes for Thinking Day.

"23 of our members are looking forward to joining you at Echo Valley 88 camp in July."

Signed - Dr. June Paterson, Brown Chief Commissioner Girl Guides, United Kingdom.

Below— Bob Jones VE3ADJ with the 1st Manvers Guides and 2nd Manvers Pathfinders.

From Dusty Miller VE7YB— Hi, just a short note to thank you for another fun day. Enclosed article from paper. Whilst we did not work any DX as last year, I do think this year was more rewarding. Part of letter:

SARC Newsletter: By all communications standards GOTA 88 was a huge success. The 8 members of SARC who took part did yeoman duty for the 40 Girl Guides/Pathfinders and their supervisors who took part in this event. In excess of 50 contacts were made with all provinces except Newfoundland, Yukon & Northwest Territories. However, in lieu, QSOs were held with hams in the states of New York, Florida, Colorado and Texas. Conditions were not ideal. All HF bands plus 2M were utilized.

The 2nd GOTA was indeed a great success and, with improving band conditions, we should all enjoy more of the same next year. Club members: Vic VE7CON, Harold VE7BXT, Lloyd VE7FVQ, Mike VE7AVM, Brian VE7BJ, Bill VE7FVG and Fred VE7CJG.

Jim VE3DCX writes, "We had a great time again this year." Jim has been with us from the start. He got a great ½-page write up in the *Tweed News*.

From VE7DKC Margaret and Al VE7KC— After contacting the local Commissioner we made arrangements for the girls. Usually about six and their leaders at four different stations. The following took part: Phil VE7ALV, Larry VE7LVH, Don VE7BOR, Al VE7KC and Mary VE7DKC.

The girls returned a few days later in uniform to deliver home made thank-you cards. The girls signed their names using the standard ICAD phonetic alphabet.

A note of interest: During a contact with Kitimat, one of the guides gave her name in phonetics. It turned out she was studying for her ham ticket.

Jim VE7EYS at Pender Harbour mentioned he had a very successful operation. Jerry Daminato VE3IXS made sked with VK7RN. This one was from last year but felt his work should be publicly acknowledged.

From Elgin Amateur Radio & Jack VE3GDJ— He sent us our first video of GOTA. Lots of Newspaper and media. I don't have the figures for 88 but last year it read like this: 169 girls, 30 leaders and one liaison = 200. Plus 18 hams, six SWLs. I liked his Closing Comment— "In summary, Cathy, it was a lot of work. It wiped out weekend. We had a ball! See you next year.

I heard this comment from a station— "I didn't even know there were that many stations in Newfoundland!" The East Coast was well represented too. In fact the whole of Canada was Verbally Visible!

It was in many cases a 'family project' with YL/OMs working together. We have a great many Guiders as both XYLs and YLs. The interest has sharpened with GOTA. The girls have new pen pals— are exchanging ideas. Guiders also 'pen pal-ing' and exchanging ideas. Working on badges and it has created an interest in radio to both the girls and their guiders.

A scrap book has been started with all the letters and news articles and photos.

We're in contact now with the U.K. and making plans for February 89. If you have any suggestions or comments please have them to me by October 88. I'd like to thank all those that have participated in GOTA. We'll look for you next year.

I received a phone call from GG Headquarters regarding Echo Valley International Camp. Would it be possible to set up an Amateur Station? So I wrote to Bill VE5WN after checking *The Canadian Amateur* and seeing he was in the Regina Area. I asked if he would send my letter to Regina ARC asking if they would be interested, as a club project to set up a Station at Echo Valley International Camp. I received a letter from Eric VE5AFQ saying they would be happy to.

They did a fantastic job! An article will be forthcoming on the whole operation. Amateur Radio in Action; thanks for your support!

Above— Pathfinders on the air in Toronto.

Right— Cathy VE3GJH and Joan Howell, Chief Comm. of Canadian Girl Guides.

Continued on next page

The Japan Ladies Radio Society (JLRS) celebrated their 30th Anniversary with a convention. The new presidnet is JA1EYL. Photo is courtesy of Lia WA2NFY who attended. She received a beautiful Kimono. Some of the activities included a general meeting, a Kimono fashion show, a congratulatory dance by JA6WBC, Sugamofest, displays of beautiful handwork. The president of the Japan Amateur Radio League was present to congratulate JLRS JA1IAN. A good time was had by all.

Marilyn N8BFI— Marilyn has several designs with Name & Call on sweaters. Thought some of you knitters might like to try a similiar project. Marilyn is a Buckeye Belle— Ohio, U.S.A.

Help— I'd like some info on Canadian YLs having had their calls for 25 or more years.

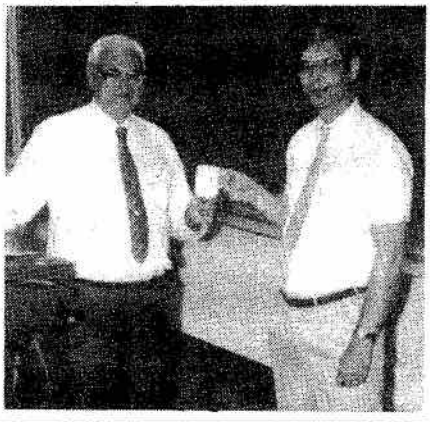
Latest news from our Irish friends Clare EI7CW and OM Ken EI9AB. Ken retired and they will be sailing. So keep an ear out for them. They're always on the outlook for Canadians and Clare looks especially for YLs. Clare was net control for the Clara 20 metre net one day not long ago. ■

Jeanne WA6UVF and Lia WA2NFY at the JARL Convention in Tokyo.

Nate gives Murray's mug to John

When Nate Penney VO1NP, CARF's Atlantic Director attended the June meeting of the Fredericton Amateur Radio Club, held on that occasion in the CBC building, it included guided tours of the studios. At refreshment time, each visiting member of the club received a souvenir (take-it-home) CBC mug. By way of promoting the forthcoming Atlantic Hamfest '88, Nate was requested by the President of the sponsoring Fredericton Amateur Radio Club, Murray Gordon VE1TE, to take Murray's presidential trophy of the evening to CARF President John Iliffe VE3CES, for presentation at the Federation's Annual General Meeting.

Following a humourous 'MUGGING!' at Aurora, Atlantic Director Nate spoke of the preparations being made by Murray's Executive Committee. He extended an invitation to attend the festivities at the Fredericton Campus of The University of New Brunswick, August 19 to 21, 1988. ■



Ravenscroft Update

This case is not yet closed, but all original appliances have been 100% suppressed. Only two new appliances remain to be done. At the complainant's request, further suppression has been halted until some yet undetermined obligations are met. The subject is unknown but is being handled legally.

Meanwhile, the fund is being re-activated to cover the anticipated short-fall. The appeal ruling has thoroughly complicated the resolution of the case by obligating parties to either unaccepted DOC 'approval' or failure to set down acceptance criteria for approval of suppression. The question of what is reasonable and what is achievable suppression requires technical acumen not used by the court. ■

de VE3BBM

OPERATION 'POLE JEUNESSE'

Le Docteur Jean-Louis Etienne, le marcheur solitaire du Pôle Nord, est reparti le 17 avril dernier pour traverser le Groenland du sud au nord.

Avec ses 5 coéquipiers (anglais, américain, russe, japonais et chinois), ils vont effectuer cette expédition afin de préparer la future 'Transantarctica' de 1989.

Cinq établissements scolaires vont suivre cette expédition et noter quotidiennement le positionnement donné par le satellite ARGOS.

Il s'agit des collèges de Vielmur s/Agout (81), Aiguevives (31) et les Lycées Ozenne et Déodat de Severac (31), Samatan (32).

Une expérience de liaison inter-établissement par satellite ARGOS est prévue courant juin entre le lycée Professionnel de Samatan, son système Samator de poursuite de satellites et les autres établissements équipés de balises Argos.

Cette expérience sera menée avec l'aide technique du CNES et de la société ARGOS.

- Radio-REF 05/88

CERTIFICATES OF THANKS

Do you know an Amateur who has contributed to our service in some special way? If you do, send Debbie his name and the name of his club. The CARF Certificates of Thanks should be presented formally, with due ceremony, at a club meeting. Debbie's address is Box 356, Kingston, Ont. K7L 4W2.

CARF NUMBER

CARF has installed a new phone system to serve you better! The office number is now: **613-545-9100.**

Antonio Salvadori VE3NXQ
17 Colborn St.,
Guelph, Ont. N1G 2M4

NYBLES AND BITS

BASIC PROGRAMMING PRINCIPLES

In the last couple of articles I talked about hardware and how you could set up a computer system. In this article I will touch on the basic principles of programming.

A program is a set of instructions to tell a computer what to do. These instructions or statements can be written in one of several computer languages, such as machine language, assembler, FORTRAN, BASIC, COBOL, C, Pascal, etc. Any of these languages may be used to write any program. The ones listed are some of the major languages and their historical order of evolution.

Machine language, as the name implies, is the most primitive language, consisting of ones and zeros. It is very difficult to use and learn and is not used by many people. However, it is the only language that the computer understands. Programs written in any other language have to be translated into this before a computer will run them. Luckily this translation process is done automatically by a special program called a compiler, which is available on all machines.

Most people tend to use one of the other languages mentioned above as they are relatively easy and efficient to use. Most professional programmers use FORTRAN for scientific programs; COBOL for business; C for system development and Pascal for education. You may be wondering why I have not mentioned BASIC. Professionals find many faults with BASIC which are too detailed to mention in this column. The supporting environment in most BASIC systems is also very primitive and good editors are not generally available. In the long run it can prove to be a harder language to use than say Pascal. However, most of the ham community seems to have latched onto BASIC and as a result we shall use BASIC in our articles in this column whenever possible.

MISSING

Missing from the storage room at CNIB Headquarters, 1931 Bayview Avenue, Toronto, Ontario:
3 Argosy Transceivers, serial numbers 2639, 2679 and 2478.
2 Argosy Power Supplies, serial numbers 1499 and 1515.
2 Ten Tec, model 700, Hand Held Microphones. No Serial Numbers.
6 Voice Synthesizers (or read-outs) no Serial numbers.

Fred Roberts VE3AFA
Manager,
Amateur Radio Program

Let us start by looking at a program that you may use to tell your European friend how high your antenna is in metres— as long as you know how high it is in feet. Hi! Hi! The complete program is shown in Fig. 1 and if you have a computer running BASIC, I strongly urge you to sit at your keyboard and type it in. Just turn on the machine and at the READY or] prompt start typing.

```
10 REM ANTENNA HEIGHT
CONVERSION PROGRAM
20 REM
30 FEET = 47
40 METRES = FEET / 3.048
50 PRINT "ANTENNA HEIGHT IN
METRES: "; METRES
60 END
```

My example is for a VIC-64 or Apple II computer. You may have to type it in slightly differently if you have another make since no two versions of BASIC are the same. Programs written for one machine cannot easily be run on another machine.

Each line is an instruction to the computer to do something. All instructions begin with a line number, i.e. 10, 20, 30, etc. This number is called label and is used by the computer to keep track of where it is. It may be compared to a house number telling the letter carrier what house he is at. The computer executes each of these statements in sequence going from one to the next.

Why did we number the statements as we did? So that at some later stage if we want to put in some more statements we can easily do so. E.g.

```
15 REM WRITTEN BY YOUR NAME
```

Lines of code can be added at any time by just typing them. If a line with the same line number already exists then it will be overwritten.

What does statement 10 do? The answer is nothing. All statements that begin with the REM(arks) command are ignored by the computer. They are put in a program to provide comments for the reader as sometimes programs are hard to understand and comments can explain what is going on better

Statement 30 is one of the most fundamental commands of programming. It is called an assignment statement. The explanation is as follows: take the box in memory called FEET and into it place the number 47. This box is created automatically by the machine to store values. If a number is already there it will replace the existing number with the new one. After execution of this statement, if we were to look in the box called FEET we would see the number 47. Suppose your antenna was at a height of 35 feet instead of 47, you would then type

```
30 FEET = 35
```

and the box would contain the number 35 representing your antenna height.

The arithmetic operators in BASIC are: + for addition, - for subtraction, * for multiplication and / for division. Hence

```
FEET / 3.048
```

means: take the number in the FEET box and divide it by 3.048. What is the computer to do with the results? Put it in the box called METRES by means of the statement

```
40 METRES = FEET / 3.048
```

What would the box METRES now hold? The value 15.4199 which is 47 divided by 3.048 (Try it on your calculator!). Hence we have got the computer to work out the height of our antenna in metres: the result is in the memory box called METRES. Having the result in the box called METRES is of little use to us. Since this is in the memory of the computer we cannot see it, feel it or touch it! We can see this value by telling the computer that we want the result displayed on the screen. This is done by statement 50.

Statement 50 has five parts to it: the statement number, 50; the PRINT command; the message "Antenna Height In Metres: "; the ; (semicolon); and finally METRES. We already know the meaning of the statement number. The PRINT command instructs the computer to display on the screen everything that follows to the end of the statement. The computer now looks at what follows and tries to display it.

Everything that appears between the " is displayed i.e. Antenna Height in Metres:. The next item is separated by the semicolon and does not have " around it. That means that the computer will go to the box in memory that has that label i.e. METRES, fetch its value i.e. 15.4199 and display this value on the screen. (The semicolon is purely used as a separator.) After execution of this statement, the screen should have

```
Antenna Height in Metres: 15.4199
```

The final statement in our program, namely END, tells the computer that you are now finished.

The final task is to run the program. Turn on the computer and when the READY or] prompt appears just type the program as shown. Be careful not to make any mistakes typing! As you will quickly discover, computers are really stupid and unforgiving. If you make a typing mistake they will be totally baffled and give you some crazy error like: SYNTAX ERROR. Make sure that you do not mispell any commands and that the punctuation is perfect!

When you are finished, just type RUN (followed by Enter) and the program should run as we have outlined above. Good luck. ■

LOOKING AROUND

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There was a letter from Michael C. Crowe in the May issue of *The Canadian Amateur* noting certain facts and figures that proved, in his estimation, that Canadian Amateur Radio was growing at a satisfactory rate and that only a small percentage of Canadian Amateurs progressed to the Advanced Amateur level. The figures used to demonstrate this indicated that a satisfactory growth had taken place in the past two decades and only one-third of our Amateurs possessed the Advanced Amateur certificate.

Looking back to 1945, when Amateur Radio was again authorized, there was a quick growth in the following few years and our numbers reached about 6,000. This was due, primarily, to the knowledge and skills gained by many Canadians during their WWII service and desire to continue with personal radio communications. Growth in the next 20 years was slow as, in most cases, the candidate for an Amateur certificate was left to his, or her, own resources to acquire the necessary technical knowledge and Morse code skills.

An additional reason was the introduction of television broadcasting and consequent increase of TVI using the unshielded, home-brew transmitters of the 40s and 50s. In fact, virtually all Amateurs of this period sought no publicity on the premise that, if neighbours knew an active Amateur was in the vicinity, all problems with TV reception would be laid at the Amateur's door. By 1973, our numbers had increased to about 13,000, an increase of 7,000 in around 15 years— an average of less than 500 Amateurs each year.

By 1973, the growing use of commercial Amateur equipment had overcome the TVI problem and large numbers of Canadians had become CRS (CB) operators using a former Amateur band for their communications. Many of these soon realized the limitations of the GRS, became acquainted with the extent of communications provided by Amateur Radio, and courses on Amateur Radio began to be provided as part of the night school programmes, locally and provincially. This caused a rapid growth of Amateur numbers— from 13,000 in 1973 to 20,000 by 1980 (an average of 1,000 new Amateurs per year)— and an analysis by DOC in the early 80s noted that 60% of Canadian Amateurs held the Advanced Amateur certificate as the growing number of new Amateurs saw the introduction of Advanced Amateur courses in most large communities. There is no reason to surmise that this percentage has dropped in the past seven years, judging from results of Advanced Amateur examinations published by DOC.

However, in late 1978, DOC introduced new technical requirements and examination procedures and, by 1980, growth in Amateur numbers declined rapidly so that the next eight years produced a growth of less than 4,000 new Amateurs. Courses held in the 70s were one semester long— around 15 weeks of instruction, one night per week— with an average course having about 75% success. Courses today take twice the instruction time (about 90 hours classroom time) and success rate is around 25%.

A recent course held by the Kingston ARC started with 22 candidates. That reduced to 10 after a couple of weeks of instruction, with three candidates qualifying on examinations held following the course, and two other candidates passing two of the three examinations. This course was held two nights per week, three hours of instruction each night, for a total of 90 hours of classroom instruction. Many candidates found that they could not find the spare time necessary to attend all the instructional periods and most complained that the depth of technical knowledge required appeared to be too high to demonstrate a candidate's ability to properly operate a station in the Canadian Amateur Radio Service.

There is an evident interest in Amateur Radio as more than 30 people attended the introduction night before the Kingston course started and 22 of these signed up for the course. It can be expected that higher numbers will finish courses held after the proposed Restructuring of the Amateur Radio Service is introduced in 1989. The original proposal of 1985 by DOC, based on the presentations made by your national Federation in 1980, the joint submission of CARF and CRRL, based on comments made to that proposal, and the new proposal by DOC all contain the aim that the initial Amateur certificate should be obtained, by a majority of candidates, after a one-semester course of around 40-45 hours of classroom instruction. This should again cause a growth in our numbers of a thousand, or more, new Amateurs each year particularly if the national, provincial and local Amateur organizations generate publicity about these changes and stimulate public interest in our avocation.

The point made in the Michael's letter, that the average age of new Amateurs is in the 40s, is accurate, judging from the age of candidates on the recent course we held. There is a need to stimulate interest in one group of citizens— technically trained young adults— and their interests would seem to be in the field of computer communications using Amateur Radio, the link-up and control of auto-repeaters and satellite communications. Possibly local clubs could publicly demonstrate these facilities with publicity made to local secondary schools, community colleges and universities when Restructuring is introduced.

Courses on Amateur Radio would have to be organized, as they were in the 70s, and your national Federation is planning to publish a new edition of the Certificate Study Guide. As well, a new edition of the CARF Instructor's Guide, giving details of the organization and administration of courses and a guide to Amateurs desiring to assist in the instruction of the technical, regulations and Morse code requirements, would be of great value.

As DOC and commercial interests have noted— there is very little Amateur activity on the bands above 150 MHz. The one way to encourage use of these bands is to stimulate Amateur growth so that the Two Metre band will become overcrowded and activity will naturally develop on the higher bands. Equipment for these bands is now readily available, at similar cost to that used on Two Metres, but, in most areas of Canada, there is no movement to obtain and use such equipment. Remember that, prior to the 70s, local communications and nets were a feature of the 75M phone band and the growth of Amateurs in the 70s was a major factor in opening up the Two Metre band and lessening the QRM on 75M. ■

SPECIAL CALLS

In response to a request concerning the assignment of special Amateur call sign prefixes to commemorate the International Development Day, with the cooperation of the Canadian International Development Association, the Department has made available the following prefixes—

Newfoundland	CK1
Labrador	CK2
Maritimes	CZ1
Quebec	CZ2
Ontario	CZ3
Manitoba	CZ4
Saskatchewan	CZ5
Alberta	CZ6
British Columbia	CZ7
Northwest Territories	CZ8
Yukon Territory	VX1

These prefixes may be used on October 3, 1988.

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Whitehorse, YT Y1A 4Z6

The Sun's Effect on Short Wave Radio Communication

BY D.J. KELLY VE5TX

CONTINUED FROM LAST ISSUE

THE MAGNETOSPHERE

The maximum ion density in the ionosphere occurs at about 300 km above the earth's surface. Above this height the concentration of charged particles drops off steadily and the total number of gas particles, both charged and uncharged, decreases at a much more rapid rate. This charge results in an increase in the proportion of charged to uncharged particles as the height above the earth is increased, even though the total number of charged particles actually decreases. This is possible because the high energy ionizing radiation increases in the upper atmosphere where there are fewer gas molecules available to absorb it.

In the layer of maximum ion concentration, about 1% of the gas molecules are ionized. At this altitude, atomic oxygen is the principal gas present. The maximum ionization at this level more than likely represents the removal of electrons from a small portion of these atoms. At heights above 800 km, first helium and then hydrogen become the principle gases present in the atmosphere; in these layers the gas conentration is so low and the high energy radiation from the sun so intense, that virtually all of the gas particles are ionized. (Fig. 7 & 8.)

Another property of these high altitude gases, with respect to those at the 300 km height, is their extreme mobility. At the lower levels ionized gases are much more liable to strike ionized gas particles of a different polarity and become neutralized.

However the ions and electrons of the much thinner helium and hydrogen layers can move great distances without bumping into other particles and losing their charge. This permits these charged particles to be strongly influenced by the earth's magnetic field and they travel great distances in order to align themselves with it.

Because of the strong influence of the earth's magnetic field on these ionized particles, the outer ionosphere above 500 km is known as the magnetosphere. The shape of the outer boundary of the magnetosphere or magnetopause is largely determined by the earth's magnetic field, but it is also affected by the charged particles (the solar wind) moving out from the sun.

The magnetosphere shows sharp boundaries at the outer edge because the earth's magnetism tends to repel the sun's charged particles away from the earth. However the pressure of the solar wind distorts and compresses the magnetosphere more on the sunlight side than the dark side of the earth. (Fig. 9)

Most of the magnetosphere's charged particles have little energy and are much like those encountered in the lower atmosphere, however, in the lower magnetosphere there is a belt of highly charged particles surrounding the earth. The charged particles in this area move very rapidly because they have much greater energy than most of the charged particles in the atmosphere. It is called the Van Allen radiation belt and is named after the scientist who first discovered it.

The distribution of charged particles in this belt, as in the rest of the magnetosphere, is controlled by the earth's magnetic field. Because of their high energy, these particles move very rapidly and tend to follow the earth's magnetic lines of force. At the poles they move vertically toward the earth where they are reflected back up by the earth's converging magnetic field which acts like a mirror. This reflective action forces the charged particles to move back and forth from pole to pole at very high speed. There are a number of theories as to the reason for this so-called radiation belt, but no satisfactory explanation has yet been given.

As in the lower ionosphere, the magnetosphere is strongly influenced by variations in the sun's energy output following a solar flare. When a flare occurs, in addition to increased electromagnetic radiation, the number of charged particles (plasma tongue)

Continued on next page

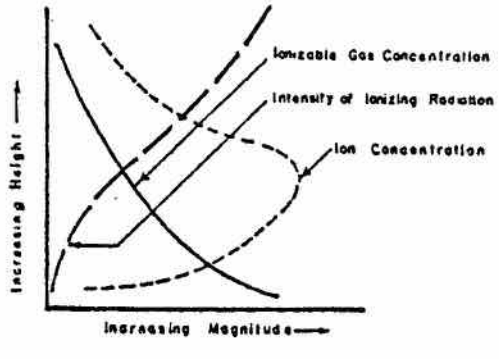

Fig. 7— Production of charged particles in the atmosphere.

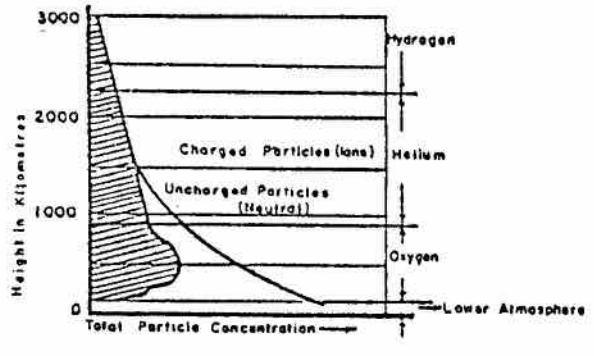

Fig. 8— Schematic showing proportional increase in charged particles in the thin gases of the upper atmosphere.

SUN *(cont'd)*

travelling outward in the solar wind also increases.

Travelling more slowly than the electromagnetic radiation wave, which travels at light speed, the charged particles of the solar wind reach the earth about 24 hours after the eruption of a solar flare. The increased pressure from the solar wind compresses the boundary of the magnetosphere which tends to increase the earth's magnetic field slightly, causing what is known as a magnetic storm.

Magnetic storms interfere, quite dramatically at times, with long distance radio communication, primarily in the 3 to 30 MHz frequency range. Because transmission of radio signals depends upon reflection from the various ionosphere layers, disruption of those layers by the injection of solar produced electrons can make communication extremely difficult and, under major storm conditions, impossible. Disruption is most severe in the higher latitudes where trapped electrons in the magnetosphere can more readily intercept the ionosphere due to convergence of the magnetic lines of force at the poles.

Earth currents are also related to magnetic storms. They are electric currents induced in the earth's surface layer by variations in ionospheric currents. They can at times be intense enough to cause large voltage fluctuations in electrical power transmission lines and transoceanic cables.

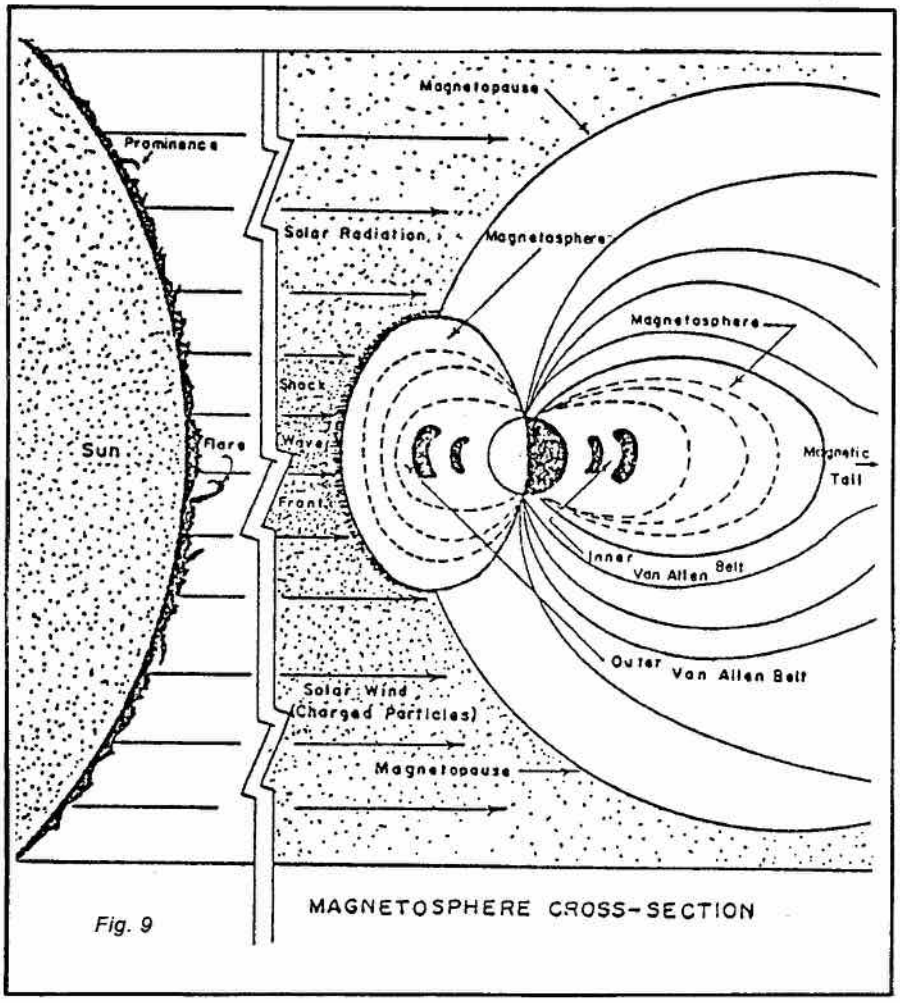

Fig. 9 MAGNETOSPHERE CROSS-SECTION

CORONAL HOLES, SOLAR WAVES & EARTH'S MAGNETIC FIELD

A relatively new name encountered in recent literature on solar phenomena is the Coronal Hole. Coronal Holes, which have been known under a different name for many years, appear almost continuously in the sun's polar regions but are also in evidence at lower latitudes, especially in the vicinity of sunspot groups.

It has also been shown that there is a connection between solar holes and the solar wind. Recent studies have shown that the solar wind is not constant but varies in intensity, in essence setting up waves similar in configuration to those encountered on the earth's oceans. Obviously solar flares will vary with the intensity of the solar wind but since wave patterns occur, even in the absence of flares, there is a strong probability that less spectacular but nonetheless violent outbursts on the surface of the sun affect the solar wind intensity. These outbursts, especially those associated with sunspot groups, must affect the corona due to the strong magnetic fields to form a closed loop with a field of opposite polarity. Instead the field remains open and permits a continuous stream of particles to flow out from the sun, lowering the density of the corona in that area.

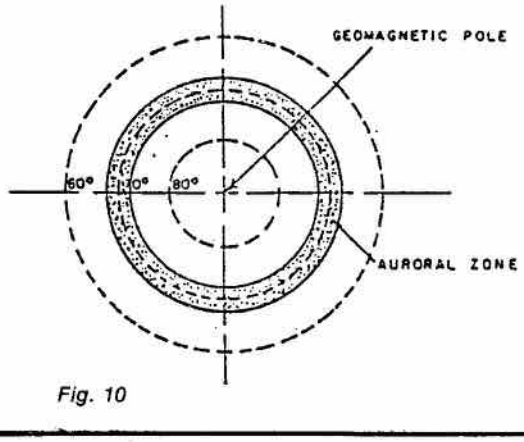

Fig. 10

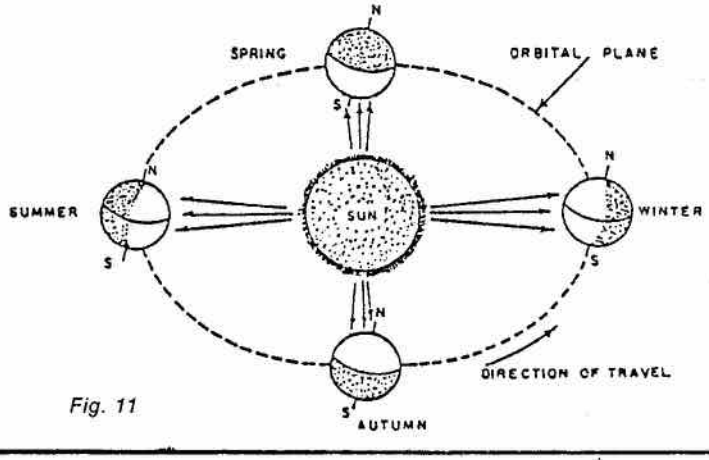

Fig. 11

The varying solar wind intensity, upon striking the earth's magnetosphere, alternately compresses and expands it. This in turn changes the intensity of the horizontal electrical currents flowing in the lower portion of the ionosphere on the sunlight side and the changing intensity of these currents changes the varying portion of the earth's magnetic field.

Interfering with the earth's magnetic field can cause geomagnetic storms which, depending on their intensity, can affect communication throughout the entire high frequency spectrum.

AURORA

The aurorae are closely related to the magnetosphere and occur primarily in the earth's polar regions. They are caused by temporary changes in the earth's magnetic field. These changes have been assumed to result from sudden violent reactions on the face of the sun (solar flares), causing the ejection of vast quantities of charged particle from its surface and eventual compression of the earth's magnetic field when they hit it.

This precipitates a change in the earth's magnetic field which can cause magnetic storms and often create the aurora. Aurorae occur most frequently in circular belts called auroral zones (Fig. 10) about 2400 km from the magnetic poles and may vary in height from about 100 km to 300 km above the surface of the earth. They are caused from the absorption of energy by oxygen and nitrogen molecules which are the major gases present in the 100 to 300 km altitude range where aurorae occur.

When molecules of these gases collide with electromagnetic radiation or high energy charged particles, they can give off visible light as they are raised to a higher energy level. This is the same principle on which fluorescent light is based. In that case an electric current is used to raise the energy level of a confined gas. When these gases are raised to a higher energy level, each one gives off a different wave length of light and consequently different colours. The red and green light of the aurora is due to the presence of atomic oxygen; the less common blue colours are due to the presence of molecular nitrogen. Other colours appear as a combination of these principal wave lengths.

It was originally thought that the aurorae were the direct result of excess energy spilling out of the radiation belt during a magnetic storm and exciting the molecular gases present in the upper atmosphere. Scientists now believe that the aurorae are distinct phenomena which are poorly understood products of the interaction between the magnetosphere and the solar wind.

Recent studies have postulated that the solar waves referred to in the previous section may provide the necessary fuel needed to keep the aurora functioning even when there has been no recent magnetic storm. These studies have shown that a majority of the auroral activity is closely connected to solar wave fluctuations. Consequently it has been concluded that most auroral activity occurs, not during the classic magnetic storm resulting from a rapid compression of the magnetosphere when hit by the results of a sudden burst of activity on the sun, but by a less intense wave-like motion of the solar wind, causing a slow pulsation of the magnetosphere.

This gradual compression and expansion of the magnetosphere varies the earth's magnetic field and permits charged particles to enter the upper atmosphere. They excite the molecular gas particles when they strike them and cause them to fluoresce.

Aurorae also affect radio communications causing signal flutter and permitting high frequency back scatter propagation. However, as auroral absorption usually lasts for only a few hours, the effect on radio communication is minimal.

POLAR CAP ABSORPTION EVENTS

Occasionally, in addition to ionospheric storms which follow a flare by 20 to 30 hours, disturbances of a different kind occur. These disturbances, which develop much more rapidly than ionospheric storms, are marked not by magnetic or auroral displays but by intense absorption of radio waves within the auroral zone.

These occurrences, known as Polar Cap Absorption events, are accompanied by a considerable increase in the density of the ionosphere's D Layer where radio waves are most easily absorbed. They occur over the entire region within the auroral zone.

PCA events appear to be caused by streams of protons which are ejected from the sun. When these protons hit the earth's magnetic field, they are guided by that field to the regions inside the auroral zone where, because of their speed, they penetrate to the D region of the ionosphere before giving up their energy by collision with air particles in that region.

Recorded PCA Events

Year	PCA Events	Remarks
1978	5	
1979	8	
1980	9	
1981	14	Solar
1982	14	Maximum
1983	3	
1984	4	
1985	2	
1986	5	Solar Minimum
1987	3	

PCA events can last for several days and occur most during sunspot peaks. They may happen up to 10 or 15 times a year. My records show that the yearly number of PCA events do, in fact, corroborate the occurrance rate referred to above.

Radio conditions are worse in the daytime than at night and poorer at higher latitudes than at sub auroral ones. Attenuations of 15 to 30 decibels are typical up to 30 MHz.

THE EFFECT OF THE SEASONS

Since the earth's rotational axis is tilted with respect to its orbital axis about the sun, the amount of radiation each part of the earth receives varies, with the portion of its surface closest to the sun receiving the largest amount.

Solar radiation travels out from the sun in a straight line and, because of this, much of it hits the earth at an angle. The angle of radiation depends on the earth location, where the radiation falls, and the tilt of the earth's axis. (Fig. 11.)

When the northern hemisphere is experiencing winter, it is tilted away from the sun so that the radiation angle is greater; consequently less radiation falls on this part of the earth than on the southern hemisphere which is tilted toward the sun. In the summer the reverse is true.

The tilt of the earth's axis also caused variations in the hours of daylight, with the northern hemisphere receiving less hours of daylight in the winter than in the summer. In the summer, because any one point in the northern hemisphere receives sunlight for a longer period of time and because the radiation angle is smaller due to the earth's tilt, more radiation falls on that point than is the case in the winter.

This radiation ionizes the various layers of the earth's ionosphere more intensely in the summer, permitting long range communication to take place on higher frequencies than is usually the case during the winter months.

ADDITIONAL CONSIDERATIONS

There are a number of other solar effects which should be considered when attempting two way radio communication on the high frequency (shortwave) bands.

1. A sudden increase in the solar flux level (solar flare) will initiate a large increase in the D region absorption of radio signals.

2. D region attenuation occurs much faster than F region reflectivity builds up. However if sunspot activity is sustained for several days, increased F region reflectivity will offset D region

Continued on next page

SUN *(cont'd)*

attenuation and conditions will improve.

3. The effect of solar flux variations on long range communication decreases with increasing latitude.

4. As the solar flux decreases to low levels, magnetic storms tend to increase.

5. When the Maximum Usable Frequency (MUF) is high and solar flux levels are increasing, magnetic storms can affect high frequency communication. The lower limit of usable frequencies is determined by ionospheric reflection and absorption. Both usually increase as the frequency is decreased.

6. Another problem is solar particle radiation; this phenomenon causes fading, flutter and increased noise.

CONCLUSION

This article shows how the sun affects all aspects of radio communication in the short wave spectrum (3 to 30 MHz) and how variations in the sun's activity over an approximate 11-year cycle improves and retards long range communication in direct proportion to that activity.

Obviously there have been some solar phenomena which have not been addressed in this article, but it is hoped that enough information has been included to help users of the high frequency radio spectrum to understand how these frequencies work and permit them to use the 3 to 30 MHz frequency spectrum to its maximum potential.

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La radiogoniométrie d'amateur: Un sport moderne pour tous les âges

7.–10. September 1988

La radiogoniométrie d'amateur est un sport très moderne alliant de manière idéale le goût de la technique à la condition physique. Il s'addresse aussi bien aux jeunes qu'aux hommes et femmes de tous âges.

Beaucoup connaissent les courses d'orientation où il s'agit de joindre le plus rapidement possible un point marqué sur une carte. La radiogoniométrie d'amateur y resemble beaucoup tout en exigeant davantage.

Entre le départ et l'arrivée, cinq petits émetteurs d'amateur sont cachés dans la forêt. Les participants doivent chercher et localiser ceux-ci au moyen de petits récepteurs de leur fabrication puis s'y rendre dans un ordre quelconque. Après avoir trouvé les cinq cachettes très dispersées, ils doivent se rendre le plus rapidement possible au point d'arrivée où se trouve également un émetteur. Une difficulté particulière réside dans le fait que les cinq émetteurs cachés (également appelés "renards") n'émettent qu'une minute à tour de rôle. Ensuite, le "renard" se tait pendant quatre minutes. Pour ne pas perdre un temps précieux, les participants doivent localiser ou trouver l'émetteur durant cette minute.

Après de nombreux championnats d'Europe, les premiers championnats du monde on été organisés en Pologne en 1980. Puis ce fut la Norvège en 1984 et enfin la Yougoslavie en 1986.

Dans ce sport également, les participants d'Europe de l'Est excellent. Cependant, les Suisses ont pu rapporter de Yougoslavie une médaille de bronze dans la catégorie individuelle et une médaille d'argent dans la catégorie équipe. C'est sans doute aussi une raison pour laquelle l'association internationale (International Amateur Radio Union) a chargé la Suisse d'organiser les championnats du monde 1988. L'Union suisse des amateurs sur ondes courtes a été chargée de l'organisation. On s'attend à recevoir environ 200 participantes et participants de plus de 20 nations. Le départ sera donné dans les catégories dames, anciens, seniors et juniors avec chaque fois un classement sur ondes courtes et un classement sur ondes ultra-courtes. Les championnats du monde auront lieu du 6 au 11 septembre 1988 dans la région de Berne, Thoune, Interlaken.

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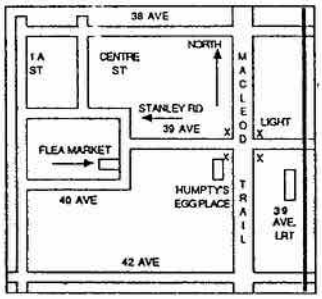

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