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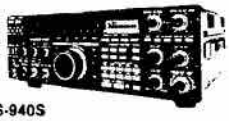
The Canadian Amateur
Radio Magazine
La Revue des Radio
Amateurs Canadiens

JUNE 1986

Ravenscroft Appeals!

Raymond VE3ORT in the radio room, HMCS Haida, copies message from flagship.

KENWOOD



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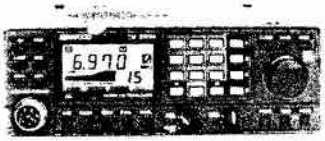

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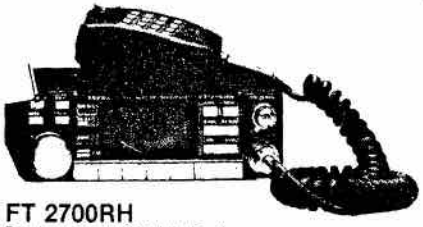

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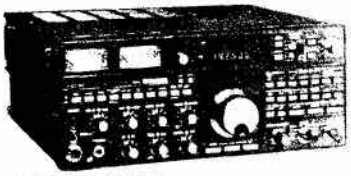

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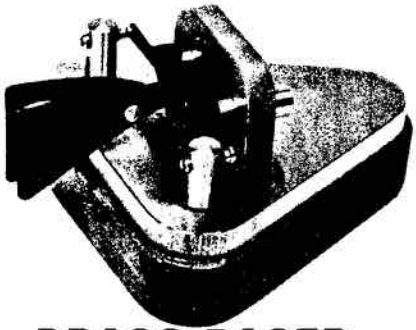

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Second Class Mail Registration Number 5073

CARF Executive

C.A.R.F. President
Ron Walsh VE3IDW
10 Nicholson Cres.
Amherstview, Ont.
K7N 1X1
(613) 389-3301

Past President
Don Slater VE3BID
RR 1 Lombardy
Ont. K0G 1L0

Vice President
Bill Carew VE3MEW
RR 6,
589 Ashburnham Dr.
Peterborough K9J 6X7
(705) 748-2499

General Manager
Lorna Hill VE3IWH
154 Colborne St.
Kingston, Ont.
K7K 1E2

Secretary
George Sansom
VE3LXA
786. Selkirk Rd.
Kingston, Ont.
K7P 1A5
(613. 389-5108

Treasurer
Ollie Schijns VE3LXO
730 Dempster Dr.
Gananoque, Ontario
K7G 2E7
(613) 382-3867

Legal Counsel
Gary Warren
157 McLeod St.,
Ottawa, Ontario
K2P 0Z6
(613) 236-0852

Mid West Director
Norm Waltho VE6VW
Box 1890
Morinville, Alta.
T0G 1P0
(403) 939-3514

Ontario Directors
John Iliffe VE3CES
387 Selby Crescent
Newmarket, Ontario
L3Y 6E2
(416) 898-4875

Geoff Smith VE3KCE
7 Johnson Rd.,
Aurora, Ontario
L4G 2A3
(416) 727-6672

Quebec Director
Michael Masella VE2AM
19 Pheasant Street,
Dollard des Ormeaux,
Quebec H9B 2T4
514-683-7785

Pacific Director
J.L. (Jim) Voight VE7CWC
46542 Pine Ave.
Chilliwack, B.C. V2P 2C5
604-795-5208

Atlantic Director
Nate Penney VO1NP
P.O. Box 10
Shoal Harbour, Nfld.
A0C 2L0

Interim Director
(Manitoba/Northern Ont.)
Louis Curtis VE4AEM
665 Munroe Cres.
Winnipeg, Man. R2K 1H9

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CARF Contests
Norm Waltho VE6VW
Box 1890
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CARF Awards
John Brummel VE3JDO
P.O. Box 880
Stittsville, Ont.
K0A 3G0
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Reciprocal Licencing & International Affairs
Francis Salter VE3MGY

TRC-24
Bill Roork VE3MBF

Affiliate Clubs
George Morgan
VE3JQW
687 Fielding Dr.
Ottawa, Ont. K1V 7G6

Publications Committee
John Iliffe VE3CES

C.A.R.F. QSL Service
Jean Evans VE3DGG
P.O. Box 66,
Islington, Ont.
M9A 4X1

CARF Head Office
Debbie Norman,
Office Manager
Lise Nault Boislard
(613) 544-6161

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

TCA's Progress

QUA CARF

BY FRANK HUGHES
VE3DQB EDITOR

Summer is i-comen in, and in July, *TCA*'s big summer issue. This is the time of year when I look back, to see where we've come from; and forward, to see where we're going to.

We say goodbye— au revoir, we hope— to Doug Griffith VE3KKB, who has been our DX editor since 1981. Greater responsibilities at work have made him hand over his column to Paul Cooper VE3JLP, whose new column appears in this issue. Thank you, Doug, for your first-class contributions and welcome, Paul!

The March issue came in a new format, designed by Nancy VE2GFN, which pulls the issue together artistically. Something we've needed for a long time! Thank you Nancy, for a job well done.

Another new column this month is QRP, with Moe Lynn VE6BLY as editor. Moe has contributed to *TCA* before, and I was glad to receive his letter volunteering a column. Those who haven't built and used a simple low-power rig don't know half the fun of Amateur radio!

Those two columnists join our regular team. *TCA*'s columnists are the backbones of the magazine, and they deserve our thanks and support: yes, our support— please write to them if you operate in the fields they cover.

Last year we published an excellent article by Marshall Killen VE3KK on the first G-ZL QSO; this March, we published the first instalment of a memoir by George Reynolds VE4AG: 'The life and death of the first CRRL.' It is vital that Canadian Amateurs get these historical reminiscences recorded. We don't have much longer to do so!

TCA is usually 48 pages now, not big enough to publish all the excellent articles the editor receives. Indeed, there are several three-ring binders full of contributions, waiting for space. Fortunately our circulation is increasing steadily and satisfactorily. It cannot be long before the treasurer tells me I can go to 56 pages to relieve the congestion.

The space problem is compounded by the 'must go ins' at the moment, the input by CARF members to the DOC, on their proposals. These take a lot of space, but remember this is the first time in the near-century of Canadian Amateur radio that such a discussion of our affairs in print has been achieved.

There always seem to be 'must go ins.' Last year's Pope's visit stories took a lot of space, but enabled any CARF member to tell his MP what Amateurs do with the spectrum allotted to them. Similarly the disaster stories— though we wish there were none to print— must be published, to inform and instruct those newcomers who may not have been indoctrinated into the great traditions of service we follow. YOU might have to handle the next disaster. Are you sure you'd know what to do?

The next improvement to *TCA* should be a better paper. However, a bigger magazine should precede this, don't you agree?

Of course, we could go to smaller type and that would let us put up the content of the magazine by nearly a fourth at the expense of readability. However, I'd like your advice. Would you like the entire magazine set like this, in exchange for more content?

During the year to come we can expect a bigger, better *TCA*. As always the content will be Canadian, though as the magazine expands more international news can be put in.

Technical content is increasing, and is of high quality. Look particularly at Bill deCarle VE3OBE's contribution last month— a first-class tutorial on the receiver of the future. *TCA* can use more technical input. Remember, we pay competitive rates for technical articles, competitive to other North American magazines.

Please keep the letters coming!

LETTERS

SILENT KEY
Arthur Jackson VE7FAP passed away on Feb. 21, 1986.

AMAZING!

Was really amazed in a QSO this AM that three Alberta Amateurs did not realize that *TCA* had so much Canadian content!

Ernie VE7CGF

Debbie sent each of them a copy of TCA— *Editor.*

TRUE NORTH

I read with interest the articles on obtaining an indication of true north using the sun. I have a simpler way of calculating true north on any sunny day requiring minimum calculations: Look in your local paper and find the times for sunrise and sunset. Calculate the time exactly halfway between. Set your alarm clock to alert you two minutes before this time. At the precise halfway point between sunrise and sunset your tower will cast a shadow true north. Run out and pound a peg in the garden in the middle of the tower shadow. This method is usable any sunny day regardless of the time of year.

George VE3DGX

THE CODE AGAIN

Well here we go again! Every time a new Amateur licence class is proposed that has a no code provision, we have the same old 'die hards' on their soap boxes preaching to the world about CB takeovers of the Amateur bands. They seemingly care little about the merits of these proposals and are only intent on running them down because of the no code clause. Most of these jokers seldom if ever use code either. It's the same old story from these hypocrites. I, personally, am totally sick and tired of all their b.s. That's all I have to say on the subject. Thankyou.

73 Gord VE3EYW

PACKET IN THE SOO

Thanks for your productive efforts to provide Canadian hams with such a fine magazine as *TCA*. It is a monthly pleasure to read its fine contents thanks to volunteers like you who so unselfishly donate time and effort for the benefit of all. Keep it up!

A brief description of the packet radio scene in Sault Ste. Marie. Active stations are VE3CRD, VE3GF, VE3MON, VE3BPS, with soon to join: VE3JIE. TNCs used are: VADG converted to AX-25, HD4040. AEAPK-64. Interest is rising rapidly with possibility of linking with Sudbury by mid-summer.

Would club statistics and news be of interest? Our club, Algoma Amateur Radio Club, publishes a monthly magazine from which articles have already been taken from and reprinted in *TCA*. AARC exchanges bulletins with six other organizations already and wishes to expand our exchange with those who would like to join.

73, Gerard VE3GF

Yes, Gerard— club news is always of interest. Drop a line to George VE3JQW, our From the Club editor. He'd love to hear from you!— Editor.

CORRECTION REQUESTED

Larry Price W4RA
President ARRL
Dear Sir,

This refers to 'DOC News' in 'Canadian News Fronts' of the April, 1986, issues of *QST*.

I had always thought that ARRL wished to help Canadian Amateurs in their relationship with our Department of Communications. Yet you see fit to print in *QST* an article which impinges on the integrity of Canadian Radio Inspectors, who were, and still are, responsible for the conducting of Amateur examinations. The article, in part, states: "Oh, for the good old days when the fee for an entire examination was 50 cents and *the radio inspectors never bothered to collect!*" (Italics are mine.)

In those 'good old days,' all radio operator certificates were issued from DOC Headquarters in Ottawa. When the results of an examination was submitted to Ottawa it had to be accompanied with an accounting of the collected fee. No fee, no certificate!

The statement quoted above implies that Radio Inspectors and other DOC officers were derelict in their duties and inclined to disregard rules and regulations. It does a disfavour to the DOC and all Radio Inspectors, both past and present.

It is believed that a correction to this misguided disinformation should be published together with an apology to DOC Radio Inspectors.

73 A.P.Stark VE3ZS

AND WHAT DO YOU THINK

Re March 86,page 30 George VE3JQW

I do not make a habit of letters to the Editor but somehow this one got to me. According to the gentleman if you can't make it and repair it you shouldn't own or operate it.

Does this apply to Amateur radio? To me it says if you can't make and repair a car you can't have one. This covers all trades involved— silly? You bet it is.

I'm not much of an operator because I can't hear the code very well and I get frustrated when someone comes back to me with lousy code at 20 wpm. But they have as much right to be there as I and I try like a good Ham to let good manners prevail. I thought I sent a good code till I got a computer and then I found that 90% was rejected (not only me, but especially code sent by those who try and create a 'fist' by short dits and long dahs. One has to be deaf to know what it's like to be deaf: a hearing aid is useless to me.

Electronics are Greek to me but I can design machinery and a major machine Co. has made parts to my modification. I can weld three different ways. I operate machine tools with aplomb. I am 66 and still fly when I can afford it. I'm building my own metal A/C and my redesigns have been accepted by the aeronautical engineer. I have a grade eight education, 1936 vintage. I cannot repair my own rig. I don't intend to and I'm stupid? Oh, I forgot, I also have a steam ticket of some consequence.

I learn something everyday, sometimes that people are narrow minded enough that they see nothing except what they wish to see. There are so many intelligent people that one can learn from. There are others that may benefit from something *you* may know; that is if you are willing to part with it.

Try teaching sometime— it may make a man of you.

By the way, who taught you to build the things you drive? Maybe you are one who is eight to ten kc wide. Maybe you send lousy codes. Maybe you are in a little world and as a result a little dumb. Have a glance in the mirror and see if maybe a longer look wouldn't help!

As mentioned I have a hearing problem and code has been hard for me, very hard as it is a frequency thing. I can hear voice fine but I'd still like to see code as a required item. Heavy on regulations and a lot lighter in Electronics as most stuff on the market does require special skills and equipment to repair i.e. static proof soldering etc. And if you buy good

stuff you should not have to tinker with it. If it works leave it alone!

Bill VE7EJB

P.S. I realize that George is only the medium and this is not directed at him personally, maybe he could make sure 'the source' gets the message.

THE MERGER

Dear Ron,

I am writing in reply to several letters which have appeared in *TCA* concerning a possible merger between CRRL and CARF to try to correct some of the inaccurate statements made by some of the authors. As an elected CRRL director, I naturally have a strong personal interest in a possible merger! First, I should set the record straight with regard to CRRL's position. The minutes of our Board meeting held last July, as printed in the September 1985 issue of *QST* record the following:

"17) The Board also discussed the state of organized Amateur Radio in Canada. Moved by Mr. Perrin, seconded by Mr. Kremer, the Board VOTED to adopt the following resolution: Whereas the CRRL Board is in sympathy with the expressed wishes of many Canadian amateurs to have a single national Amateur Radio organization in Canada, CRRL resolves to work toward that goal".

I believe that this motion is quite clear and doesn't require any amplification!

The underlying theme of some letters has been a misunderstanding of CRRL's relationship with Amateur organizations from other countries and a general lack of appreciation of how dependent we all are on the rest of the world. As you know, all radio services and the radio frequency spectrum itself are ultimately controlled by the International Telecommunications Union (ITU) which, as an arm of the United Nations, has some 160 member countries. The frequencies we have and, indeed, the very existence of the Amateur Service itself, are within the purview of the ITU.

As you know, in 1979 the ITU held a general World Administrative Radio Conference (WARC) which, over a period of some ten weeks, reviewed the various regulations, services, and frequency allocations to these services. Canada, as a member country of the ITU and a signatory to the Final Acts of WARC-79 cannot act in a vacuum and ignore the ITU regulations.

Recognizing that the Amateur Service transcended national borders and was, like all services, dependent on the international community and also recognizing that Amateurs around the world have so much in common, Amateurs formed the International Amateur Radio Union (IARU). Canadians have always had their own vote in IARU, separate from the U.S. vote, through their elected Canadian League representatives since we joined IARU in the 1920s. IARU worked diligently to protect Amateur interests at WARC-79 and manned an office throughout the whole conference. IARU continues to work for the benefit of all Amateurs through activities such as developing voluntary band plans and easing reciprocal licencing arrangements for visiting Amateurs in addition to monitoring and supporting ongoing ITU activities.

All of this work costs a lot of money which is provided by one IARU member society in each country, including CRRL for Canada. CRRL will continue to support Canadian interests in IARU and our representatives have no hesitation to vote with or against any other country to meet our needs. I hope this information will assist Amateurs in understanding our international activities and will, above all, encourage a positive attitude toward Amateurs in other countries since we must all work together toward the common good.

The other recurring theme is the lack of understanding as to our relationship with ARRL. Some Amateurs seem to believe that ARRL had some ulterior motive when it expanded to include Canadians in 1920. There were several editorials printed in *QST* in the early 1920s giving the same message. Perhaps the best one is the editorial titled "The 'C.R.R.L.' " from the November 1923 issue of *QST* (CRRL is not a new name!) and I am enclosing a copy of it for your information. The following excerpt pretty well sums it up:

"The A.R.R.L. is operating in Canada at the request of leading Canadian amateurs, who realize that Canadian amateurs were not sufficient in number to maintain a relay organization thru their own stations alone, nor could they finance a successful organization. The A.R.R.L. therefore has created Divisions in Canada, under Canadian Division Managers, exactly as in the States. A Canadian General Manager, Mr. A.H. Keith Russell, 9AL, supervises all their activities. The A.R.R.L. has no territorial ambitions and does not for a moment presume that Canada always will remain a part of A.R.R.L."

"By request it is doing what it can to help the amateurs of a country until they attain numbers sufficient to insure the success of an independent organization. ... When the C.R.R.L. comes it will be by the A.R.R.L. turning over all its activity and organization in the Dominion to a group of all-Canadian amateur officers, and the A.R.R.L. organization, see it safely started, and withdraw from Canada, whenever the majority of Canadian amateurs indicate they so desire."

Several years ago, believing that the majority of Canadian Amateurs wanted a separate organization in Canada even though they had enjoyed an excellant relationship with ARRL, elected Canadian League representatives put the wheels in motion to form the CRRL, as anticipated by ARRL itself decades before. As you know, CRRL was incorporated in Canada and its Board consists of a President, Vice-President, and five Regional Directors, all elected by the individual members. In addition, the field organization is lead by seven Section Managers, also elected by the individual members. In addition, the field organization is lead by seven Section Managers, also elected by the individual members.

Further, on 1 January 1986, complete financial autonomy was obtained and dues from CRRL members are kept in our London Ontario office to support our Canadian services, IARU dues, and *QST* magazine, which is purchased in bulk from ARRL. We also support certain other ARRL services such as W1AW code practice. CRRL maintains its own membership records and sends labels each month for the mailing of *QST*.

In order for there to be a productive discussion by Canadian Amateurs on the possible merger of our two organizations, they must have an appreciation of the international regulation of the Amateur Service and the necessity for our continued liaison with national societies in other countries and the IARU. Further, there must be an understanding of CRRL's organization as being politically and economically independent. Above all, there must be a positive attitude that all Canadian Amateurs can work together!

On that subject, as you know, I have enjoyed a good working relationship with your former Atlantic Director, Leigh Hawkes VE1ZN and with Barc Dowden VE3TT, on cable television interference problems. I have also worked closely with your EMI committee chairman, Ralph Cameron VE3BBM, on the Jack Ravenscroft RFI case. We both submitted affidavits to the court in Jack's defence. I assisted them in

Page 6 ►

preparing a line of questioning for Jack's lawyer and we both appeared as witnesses in defense of Jack and, indeed, all Radio Amateurs. I consider Ralph to be not just a colleague, but also a friend.

There is no sense arguing about the past. What is required is a positive and trusting attitude to bring the best of our two organizations together. Some of the letters printed in *TCA*, even from our own members, displayed a great lack of knowledge as to the organization of CRRL and I am deeply saddened that, in spite of our own best efforts, here and there we still haven't succeeded in getting the message through. Nevertheless, in my view, printing these letters in *TCA*, without any editorial comment to correct statements which we both know are false, is counter-productive to our goal of greater co-operation culminating in our eventual merger.

I am taking the liberty of sending a copy of this letter to the *TCA* Editor and, given the great importance we all place on this subject, I hope he can find the space to print it in its entirety.

Yours Sincerely

Raymond W. Perrin
Director-Ontario

Dear Ray

I am in receipt of your letter of 86-04-07. I am certain that no deliberate attempt was made to misrepresent CRRL. If you will note my reply to a letter from Nova Scotia, I stated CRRL now kept its funds in Canada, etc. I also made no comment re: ARRL, except to say we would work on any matter on a joint, equal basis.

We have received many letters in favour of a merger including some from elected CRRL officials.

I am aware of your structural changes and applaud your efforts. I feel you will have this mistaken idea in many minds, for some time. As a member of CRRL, I attempt to clarify your official position on occasion. I realize you are moving away from ARRL. Be certain, I am making no criticism of CRRL or its officials.

However, as long as your logo is almost identical to ARRL, your news is broadcast first over W1AW, your only written voice is in the ARRL official magazine, and your representatives sit on the ARRL Board, you will have trouble convincing a lot of Amateurs that you are Canadian. Perceptions are hard to change when there are signs people can see even if, as I know, they do not represent the true intentions of CRRL.

People still have the perception we are enemies of each other. This is not true. People may think C.A.R.F. is anti-American! This is not true! We are pro-Canadian!

Ray, you are also heading towards a position C.A.R.F. is already in. I see no reason why C.A.R.F. and CRRL cannot move quickly towards a merger in a very positive manner. Your 1923 article states the ARRL is here until the Canadian Amateurs can form an organization of their own. Heavens, we have formed two! Why not form one? After 63 years we sure can!

I also note that I have received no comment, written or verbal about the letters you mention from Tom Atkins *(president CRRL— Ed.)*. We have talked and corresponded many times.

I look forward to the day when your talents and those of other Amateurs

EDITORIALS
de AMERICAN RADIO RELAY LEAGUE

The "C.R.R.L."

Times without number the success of the A.R.R.L. in fostering and supporting its magazine QST has excited the cupidity of individuals who think how beautiful it would be if they could start some kind of an amateur organization which would get behind their magazine and push it to $U¢¢E$$. Bad cases of getting the cart before the horse, all right, but you can't expect a publisher always to perceive that the organization must come first and develop its need for an organ, and that that organ then must be owned by the association and not by the publisher if either are to succeed.

In Canada we have right now a similar case, where the publisher of a really excellent amateur magazine feels that urge to foster a Canadian Radio Relay League. It seems desirable to repeat in these columns, more particularly for the Canadian amateurs, the position of the American Radio Relay League in the Dominion:

The A.R.R.L. is operating in Canada at the request of leading Canadian amateurs, who realized that Canadian Amateurs were not sufficient in number to maintain a relay organization thru their own stations alone, nor could they finance a successful organization. The A.R.R.L. therefore has created Divisions in Canada, under Canadian Division Managers, exactly as in the States. A Canadian General Manager, Mr. A.H. Keith Russell, 9AL, supervises all their activities. The A.R.R.L. has no territorial ambitions and does not for a moment presume that Canada always will remain a part of A.R.R.L. By request it is doing what it can to help the amateurs of a sister country until they attain numbers sufficient to insure the success of an independent organization. When the Canadian amateurs elect to separate and maintain their own association, the A.R.R.L. will withdraw from Canada and turn over the present organization to them. In the meantime the A.R.R.L. considers that it has a sacred trust in Canada and it proposes to safeguard that trust with all its ability. It would be false to its trust if, in these days, of the relatively tender growth of Canadian amateur radio, it withdrew in favor of an amateur organization formed by or fostered by a publishing company for pecuniary motives; or in fact if it yielded on any other basis than at the request of the Canadian amateurs themselves.

So beware of being misled, Canadian amateurs. There is not the slightest excuse for a counter-organization to 'buck' the A.R.R.L. When the C.R.R.L. comes it will be by the A.R.R.L. turning over all its activity and organization in the Dominion to a group of all-Canadian *amateur* officers, and the A.R.R.L. stands ready to create this independent all-Canadian organization, see it safely started, and withdraw from Canada, whenever the majority of Canadian amateurs indicate that they so desire. A.R.R.L. in Canada means a safe and sound C.R.R.L. when the time is ripe. Meanwhile, "beware of false prophets."

Our thanks to Ray for including with his letter a copy of this important historical document for publication in TCA.

can efficiently support one Canadian Amateur Organization. Perceptions then will be clear as there will be only one stated from one source.

I thank you for your letter and I have taken the liberty of sending my reply to Harry McLean, hoping he can print it in its entirety!

Sincerely,

Ronald E. Walsh VE3IDW
President, C.A.R.F.

We read, with interest, your column in the 1985 issue of *TCA* concerning relations between CARF and CRRL, and the consideration of a proposed merger of those two organizations.

Our Club, with a membership of 50 licensed Amateurs, discussed this matter at our December meeting, and wish to go on record as follows:

1. We support the idea of having Amateur Radio in Canada represented by one organization. This would allow Canadian Amateurs to speak with one voice in matters that affect their hobby— both its present and its future— particularly in representations made to DOC. This organization would also keep Canadian Amateurs fully informed on all matters of interest to them.

2. While we appreciate the value of the support available to the hobby through the resources of CRRL (ARRL), and would anticipate continued access to their information services through this proposed new organization, we would not favour an organization whose viewpoint is totally dominated by American interests. Canadian Amateurs have their own interests, problems, and must abide by their own legal regulations. Such Canadian matters must be adequately addressed by this new organization.

We hope that our thoughts on this question, and support for the idea of a merger, will be helpful to you as you deal with this matter; and we wish you success in future negotiations.

Yours truly
Burt Amero VE1AMA
President
Slemon Park Amateur Radio Club,
Box 398
Summerside, Prince Edward Island
K0B 2A0

The Algoma Amateur Radio Club and I would like to thank C.A.R.F. for the two 'Certificate of Thanks' which you issued to our two instructors.

They were most appreciated and came as a surprise to both the recipients.

Thank you again.
Sincerely
Norbert Lussier VE3MOL
President,
Algoma Amateur Radio Club

A COST EFFECTIVE APPROACH TO AN EQUITABLE TAXATION SYSTEM FOR RADIO AMATEURS

Editor TCA:

We VE radio Amateurs have received an enclosure with our billing for licence renewal. This enclosure states that an increase in fees to $20 is applicable in keeping with the Government's initiatives to reduce the federal deficit.

This is a commendable objective to be praised by the majority of Amateurs. However, this increase across the board to $20 is somewhat primitive, comparable to the first approach to income tax levied by the federal government many years ago.

To the inquiring mind, there is a large degree of unfairness built into this fixed increase, i.e. no differentiation between rich and poor radio Amateurs. No compensation for being below the poverty level.

The tax experts and MBA's in Mike Wilson's department might consider a fairer tax system which could greatly increase the amount received from the licence fees. A sliding tax scale, value added tax, etc. To be fair, this would not be based upon financial income but only on the type of equipment and a few other factors.

A baseline would have to be found for the poverty level. This might be the Hot-Water Twelve or similar equipment. Obviously, some ham with push-pull 245's and a two-tube regen receiver would be below the poverty line and would not receive a minimum tax charge and perhaps some kind of refund. On the other hand, radio Amateurs with the latest high priced plastic box communicator could be expected to pay a much higher tax. Several such boxes, including HF and VHF equipment with 5-element beams could— and should— pay more tax. Other refinements are possible. An extra tax is charged for high-power linears. However, a special reduction could be applied if the linear is made in the U.S.A., in the interests of Canada-U.S. relations.

Packet radio would be looked upon as an idle luxury and a special 'redundancy surtax' would be imposed. In view of the Government's commitment to Hi-Tek, home-computers would be tax-exempt, even if used in RTTY.

Special tax credits would be given to Amateurs whose equipment is home-brew. These Amateurs help to reduce the out-flow of Canadian dollars and thus stabilize the dollar.

A separate tax form would be provided for mobile Amateur equipment. This would separate the sheep from the goats. A rig installed in an Edsel automobile would obviously not be taxed at the same level as a rig mounted in a private yacht or Lear jet.

These suggestions have only scratched the surface of this untapped source of taxation revenue. Tax accountants can readily uncover other taxable branches of the main tree and this I leave to their well-known expertise.

Yours faithfully,

H.H. Wood VE2JD,
Mont St. Hilaire, Que.

POLAROID INTRODUCES INSTANT VIDEO FILM RECORDER

Polaroid Corporation is introducing an instant film recorder designed and developed jointly by Polaroid and Toshiba Corporation. At the touch of a button the new Instant Video Film Recorder delivers high quality instant color prints or slides from video images. The recorder features digital freeze field capture, advanced raster fill technology, color preview capability, NTSC signal acceptance and RGB computer input. Polaroid will begin distribution of the Instant Video Film Recorder through industrial video dealers in the United States in mid-1986.

THE ARRL ANNUAL MEETING

Tom Atkins VE3CDM, director, Canadian Division, attended the ARRL's annual meeting. He nominated Mr. Olson for International Affairs Vice President. He nominated Mr. Turnbull to serve on the Executive Committee. He seconded an amendment by Mr. Olson. He presented a brief report on the strengthening of CRRL. He seconded a motion by Mr. Carey. He was appointed as alternate Chairman of the ARRL Administrative and Finance committee. He seconded another motion by Mr. Carey. He voted for an amendment to item 60, and abstained on the final vote. He moved the adoption of Item 64. He seconded a motion by Mr. Turnbull. He seconded another motion by Mr. Olson. He abstained from voting on item 103. — from the minutes of the meeting. (Tom is president of CRRL).

Our new treasurer's first name is Olive, not Oline, as published in March *TCA*. Sorry, Olive!

The Ravenscroft Decision

DISTRICT COURT OF ONTARIO
BETWEEN:
TIMOTHY HOUGHTBY and DALE HOUGHTBY
Plaintiffs
and
JOHN RAVENSCROFT and HELEN MAY RAVENSCROFT
Defendants

Appearances:
M. Angela Henry for the Plaintiffs
J. Ronald Scott for the Defendants
THE HONOURABLE JUDGE W.T. HOLLINGER:

REASONS FOR JUDGMENT

This is an action for damages for nuisance caused by the transmission of radio signals and for an injunction to restrain the Defendants from transmitting radio signals from their land, or in the alternative, damages for injuries and expenses incurred by the Plaintiffs as a result of such radio transmissions.

The Plaintiffs, a married couple, have resided at 39 Laurie Court in Kanata for more than ten years. They have two children, Cheryl, aged 13 and Cindy, aged 7. Both children attend school. Timothy Houghtby, a bus driver, is on shift work and his wife works for the federal government. The Plaintiffs have an electric organ, a colour television set and a stereo in their living room; a microwave oven and a radio in the kitchen; a television set in each of the children's bedrooms; a radio in their bedroom; and a television set and furnace in the basement. The organ was purchased in the late summer of 1984 and all of the other appliances are several years old and are used by all members of the family. The organ is used by Mrs. Houghtby and Cheryl, who takes lessons and practises either in the morning before school or in the afternoon after school. The Plaintiffs have testified, and I find as a fact, that no unusual problems were experienced in connection with the Plaintiffs' equipment prior to the Spring of 1984.

The Defendant John Ravenscroft and his wife purchased 34 Binscarth Crescent in July of 1983. Prior to that time they had lived in the Province of Quebec where he worked and operated his own amateur radio station which he set up in 1956. The City of Kanata appealed to him for various reasons but mainly insofar as he was concerned, because it had cable television, the telephone and power lines were buried and the city was prepared and did grant him a licence to erect a 50-foot tower. The licence from Kanata was obtained before the purchase of his house. Exhibit 1 shows the location of the Ravenscroft residence with its two radio aerials and residence of both O'Grady and the Plaintiffs. As well it shows a north south line. The testimony of Ravenscroft is that on the 12th of October, 1983 he set up a low power station with a vertical antenna, transmitter and receiver and since that date, except for the date of the injunction, he was on the air on a daily basis or 3 to 4 times weekly. His testimony is that all his radio activities are shown in his logs filed, with this very important exception, that the logs do not show the times during which he transmits but does not make contact. The 48 foot tower with a 4-element rotary antenna on top was erected and came in to operation on September 6th, 1984. Ravenscroft's current licence to operate is filed as Exhibit No. 18. The licence authorizes the licensee to establish and operate a radio station as described in the approval application. The application however is not filed. A clause on the back of the licence stated: "The Department may, at a future date, require the licensee to install filters, tone coding devices, reduce the effective radiated power and/or antenna height as appropriate." Apparently no action was taken by the Department under this clause. The Defendant's transmitter, licensed at 1,000 watts, has a maximum radio frequency power of 800 watts.

The Houghtby's evidence is that in the spring of 1984 they began to have problems with their microwave oven which was lighting up by itself. Sears, the seller, was advised and made a service call costing the Plaintiffs $41.68 (Ex. No. 2) the oven was then taken by Sears and some modifications were made and a new control panel installed. Insofar as Sears is concerned, the unit at May 8th, 1985 was in full working order. No other charges were made for this service. I am unable to find on a preponderance of credible evidence that the problem of the microwave was caused by the Defendant's transmissions. In my view, it could have been caused by a faulty control panel. The report from Sears is filed as Exhibit 17.

In the fall of 1984 the Plaintiff's Yamaha organ began to emit a high pitched squeal and John Brennan, an electronic organ technician employed by the seller, attempted to rectify the complaint. His report is filed as Exhibit 15. Certain steps were taken over the course of several service calls and these are listed on page 2 of his report. He concluded that the procedures reduced the interference by about 75%. He reported that his company had very few R.F. interference problems in the Ottawa area and that this was the worst he had encountered. He testified that the Plaintiffs called off further attempts at suppression although he thought more could be done.

At or about the same time the Plaintiffs' furnace began to activate by itself and the Department of Communications (D.O.C.) and a furnace technician installed a Torroid collar. Although this seemed to correct the problem, I accept the Plaintiffs' testimony that even during the tests conducted by D.O.C. they heard the furnace go and off although it did not start up. As well, the Plaintiffs noted the interference in the stereo and a black and white television set in a child's bedroom not on cable. Interference continued on radio and television sets and the Plaintiffs testified that the interference experienced on July 18th 1985, damaged one set and the cost of repair was $112.73 (Exhibit 4). Because of the fear of the microwave oven activating itself, the Plaintiffs took out further insurance at a cost of $32.00 yearly. (Exhibit 7). Long distance bills on account of this problem in the sum of $26.66 are filed as Exhibit 8.

At the request of Defendants, the Department of Communications conducted tests to determine which electrical devices in the Plaintiffs' residence were affected by the radio transmission from the Defendant's amateur radio station, the subjective level of impairment to the operation of each of the electrical devices which is affected by the said transmissions, and the operational parameters of the amateur radio station at which each of the electrical devices is no longer affected. The report is filed as Exhibit 14. The findings show that the microwave oven was not activated at any azimuth or on either antenna. Tests were conducted on the electronic organ. Using full transmitter power with the beam antenna and rotating it in 30-degree steps the results showed that with the antenna pointing between 243 and 70 degrees there was nothing heard on the organ. From 70 degrees, the strength of the signals being heard increased in intensity until a maximum level was reached at 145 degrees (beam antenna pointed at the Plaintiffs' residence). At this point the Defendant's voice could be heard reasonably clear at a volume that was equivalent to that of an average conversation. As the beam was rotated further, the level of the signal diminished until at 243 degrees it disappeared altogether. The report further states: "With the beam at 145 degrees (worst case) the transmitter power was reduced in steps to determine at what level the signal would disappear with the following results:

800 watts - conversation level
100 - loud whisper level
50 - whisper level
25 - soft whisper level
10 - strain to hear but still objectionable

"The vertical antenna produced approximately the same result. The power had to be reduced to under 10 watts before the sound of the Defendant's voice through the organ was at its minimum level." The report further states that: "Throughout these tests, adjustments of the volume controls did not have any significant affect on the level of the defendant's signal as heard through the organ's amplifier."

The tests on the 21" colour television set with Philips Cable Converter disclosed that when the antenna was rotated away from the Plaintiff's house to azimuths of 175 degrees and 115 degrees, the impairment was reduced to a point where it was just perceptible on a few television channels. The signals were most noticeable on the screen when the antenna was pointed at 145 degrees. The pattern seen consisted of light wavy diagonal lines that were perceptible on several channels when viewed from a distance of 3.5 feet. At 10 feet, the normal viewing distance, trans-

mitter power was lowered by steps and at 10 watts the wavy line disturbance disappeared. With the vertical antenna and power at 500 watts a faint diagonal line was just perceptible on one channel and disappeared when the power was lowered to 200 watts. The tests on the Sears 12" television set, tuned to Channel 13 showed that when the radio antenna was pointed at the Plaintiff's house (145 degrees) and the transmitter at full power, both the picture and sound were totally blocked out. With power reduced to 5 watts and Morse code being sent, the effect was barely noticeable. Using the same power but sending voice signals, the video was disrupted by black horizontal bars and tearing of the picture with the voice being heard in the sound. The vertical antenna produced the same results as the beam at 145 degrees. Patterns on the television screen caused by the radio signals could be seen with this antenna at all power levels. The test on the Philips 21" television connected to the cable, showed that when the transmitter antenna was at 145 degrees the problem appeared as light perceptible diagonal lines at least on one channel until the power was reduced to 50 watts. At 500 watts using the vertical antenna no patterns were visible and the sound was not impaired. The tests on the 21" Sears television set (connected to the cable) produced no evidence of the Defendant's radio signals on any channel with either antenna at any power. The tests on the console stereo using the beam antenna and full power the azimuth could be changed from 205 degrees to 70 degrees with no impairment. Outside this range the radio transmitter signals were perceptible with the strongest ones when the antenna was pointed at 145 degrees. Reducing transmitter power to 50 watts all but eliminated the transmitter signals. Using the vertical antenna at 500 watts, the radio signals could be heard but barely audible when transmitter power was lowered to 25 watts. The tests on the Juliette AM table radio showed that radio transmitter signals could be heard at full power and the beam pointed towards the Plaintiffs' residence. When power was reduced to 400 watts and moving the antenna away to 115 or 175 degrees, the signal no longer affected reception and the vertical antenna power had to be reduced to 25 watts before the Defendants' signals could no longer be heard in the background. The Realistic AM clock radio was tested with the transmitter operating at 800 watts and the beam antenna set at 145 degrees. The signals could be heard in the background of one distant AM station near the lower end of the dial. When the power was reduced to 100 watts reception was not impaired. Using the vertical antenna the signals could be head over local AM radio stations. Only when the transmitter's power was reduced to 25 watts did the signals no longer affect operation.

The conclusion states as follows: "The tests indicate that several electrical devices in the Plaintiffs' residence are affected by the operation of the Defendant's radio station. The tests also indicate that the radio station can be operated without affecting the Plaintiffs' electrical devices by limiting the azimuth of the beam antenna or reducing the power of the transmitter.

"The tests did not involve any determination of the extent to which further modifications to the Plaintiffs' electrical devices would reduce or eliminate the interference. Past experience in similar interference problems indicate that a resolution is feasible by the addition to the filtering components to the electrical devices affected by the radio transmissions."

I am satisfied on the evidence before me that it would be difficult and probably impossible to completely suppress the Plaintiffs' equipment from interference caused by the Defendant's radio station. As well, the attempts at suppression could well occupy a fair amount of time and would cause a good deal of inconvenience to the Plaintiffs and loss of use of the equipment, while further suppression was attempted.

The Plaintiffs contend that it is the transmission from the Defendant's radio station that interferes with the electrical appliances in their home while the Defendants submit that they are operating the amateur radio station properly and within the terms of the licence granted to them and that the electrical appliances in the Plaintiffs' residence malfunction in that they do not adequately reject the radio transmission signals.

The Minister of Communications in his letter of June 13th, 1985 filed as Exhibit 13 appears to address himself to the problem as follows: "The malfunction of various devices in your residence is not the result of any improper operation of the amateur radio station but rather the inability of these devices to adequately reject the amateur's transmissions. Manufacturers in Canada and abroad are aware of the need to design any items using solid state electronics to operate satisfactorily in the presence of radio waves but often have chosen to modify affected units as a lower cost alternative to including the added protection in all units sold."

Section 64.4 of General Radio Regulations, Part 11 states as follows: "Where interference to the reception of radiocommunications is caused by the operation of an amateur station, the Minister may require that such steps be taken as are necessary for the prevention of the interference, and the operator of the station shall comply immediately with any such requirement." In the case before me, the Minister took no action. In fact the Plaintiffs got relief only by way of an interlocutory injunction granted after the action was commenced.

Salmond of the Law of Torts, 16th ed (1973) at page 56 states: "The damage to proprietary interests which is sufficient to found an action of nuisance may consist either in (1) some interference with the beneficial use of the premises occupied by the Plaintiff, or (2) some physical injury to those premises, or to the property of the plaintiff situated thereon. Any substantial interference with the comfort or convenience of persons occupying or using the premises is a sufficient interference with the beneficial use of them within the meaning of this rule."

Flemming, Law of Torts, 4th ed (1971) at page 346 states: "The paramount problem in the law of nuisance is, therefore, to strike a tolerable balance between conflicting claims of landowners, each invoking the privilege to exploit the resources and enjoy the amenities of his property without undue subordination to the reciprocal interests of the other ---. Legal intervention is warranted only when an excessive use of property causes inconvenience beyond what other occupiers in the vicinity can be expected to bear, having regard to the prevailing standard of comfort of the time and place."

Linden, Canadian Tort Law (3d) at page 465 states: "Where an activity is authorized by legislation, no strict liability is imposed unless the defendant is found to have been 'negligent'. --- Consequently courts have distinguished between one group of activities which may subject an enterprise to strict liability, and another group of legislatively authorized pursuits, which do not import liability except where some fault is proven. The main rationale for this partial immunity is the old standby of the intention of the legislature. It is pretty obvious that no intention with regard to civil liability is usually articulated in the statute. It is therefore up to the courts to determine the best way to treat these legislatively authorized activities." He goes on to state: "The common law courts have sought to preserve the protection afforded individuals by its principle of strict liability, and have stoutly resisted the invasion of the defence of legislative authority.---

One court has proclaimed that grants of legislative authority are not "charters to commit torts", nor do they grant a "carte blanche" to create nuisances ---. The philosophy that emerges from the cases is that if legislatures wish to immunize certain activities for the public good, they should do so expressly and provide for alternative compensation to the victims of this exercise of public power. If they do not do so expressly, the duty of tort law is to protect the private rights of the individuals damaged as long as this can be achieved without doing violence to the legislation."

Accordingly, in *Walker et al v Pioneer Construction Co. (1967) Ltd.* 8 O.R. (2d) at page 35, Morden J granted an injunction to alleviate a nuisance arising from the emanation of noise which constituted a real interference with the comfort or convenience of living according to the standards of the average person.

In *Nor-Video Services Ltd. v. Ontario Hydro* 19 O.R. (2d) 107, as a result of the defendant building an electric power installation close to the plaintiff's cable television operation, the plaintiff was forced to stop supplying one television channel to its subscribers. The plaintiff alleged nuisance resulting from negligence. The question to be answered by the court was: (1) Was the plaintiff's interest which had been invaded or interfered with one which the law would protect? and (2) Was the conduct or activity of this defendant of such a nature that it should be subject to legal liability? The basis of the plaintiff's claim was its inability to use and enjoy property to the same extent and with the same result before the defendant's intervention.

At page 114 Robins J stated: "The notion of nuisance is a broad and comprehensive one which had been held to encompass a wide variety of interference considered harmful and actionable because of their infringement upon or diminution of an occupier's interest in the undisturbed enjoyment of his property. I can see no warrant for refinements in approach which would preclude from protection the interest in TV reception even assuming it to be a

recreational amenity. In this day and age it is simply one of the benefits and pleasures commonly derived from domestic occupancy of property; its social value and utility to a community --- cannot be doubted. The category of interests covered by the tort of nuisance ought not to be and need not be closed, in my opinion, to new or changing developments associated from time to time with normal usage and enjoyment of land." He held that television reception is an interest worthy of protection and entitled to vindication in law.

Accordingly I find that an interest entitled to protection has been unreasonably invaded by conduct which forms a basis for liability and the tort of nuisance has been established. Not being convinced that the radio transmission damaged the microwave oven or a television set, I disallow the Sears Service call of $41.68 and the TV repair bill of $112.73 (Exhibit 4). I intend however to allow increased insurance costs of $32.00 (Exhibit 7) and long distance telephone calls of $26.66 (Exhibit 8).

A permanent injunction will therefore issue restraining the Defendants from transmitting radio signals from their home and land at 34 Binscarth Crescent, Kanata, Ontario, that interferes in any way with any electrical equipment situated on the Plaintiffs' land, municipally known as 39 Laurie Court, Kanata, Ontario. I assess special damages in the amount of $58.60 and general damages in the amount of $2,500 for inconvenience and interference with the enjoyment of their various pieces of electronic equipment. There will therefore be judgment to the Plaintiffs for the sum of $2,558.60 together with costs and interest in accordance with the Rules from 1st December, 1984.

DATED AT OTTAWA, ONTARIO, this 7th day of April, 1986.

(Signed) Judge W.T. Hollinger

RAVENSCROFT APPEALS

Jack Ravenscroft's lawyer filed notice of appeal against the above judgment in Toronto on May 6.

He still needs help. Send your donation to the JRSD Fund, Box 8873, Ottawa K1G 3J2.

LEGAL LIABILITY INSURANCE

Due to lack of participation from C.A.R.F. members, the Legal Liability Insurance Policy has had to be cancelled.

The Kingston office is in the process of preparing refund cheques to be sent to all members who made application. They will be in the mail shortly.

We regret any inconvenience this may have caused; however, as it was a group policy, a certain percentage of our membership was required to participate before Travelers Insurance Company could underwrite such a policy.

NO FUZZ?

Metro Toronto police chief Jack Marks wants to stop the public from listening to police radios.

He says the media, truck drivers and criminals monitor police radios and sometimes interfere with police operations. — The Toronto *STAR*

CARF ANNUAL GENERAL MEETING

Our AGM will be held June 13-15 at St. Andrew's College, Aurora, Ontario.

INTERNATIONAL NEWS

Congratulations to New Zealand Association of Amateur Radio Transmitters— 60 years old in 1986!

INTERFERENCE

VE3BBM's correspondence with Health and Welfare Canada about an interference-prone intravenous pump has caused the Health Protection Branch to carry out a case study to evaluate RF interference for medical devices.

The QSL Curse

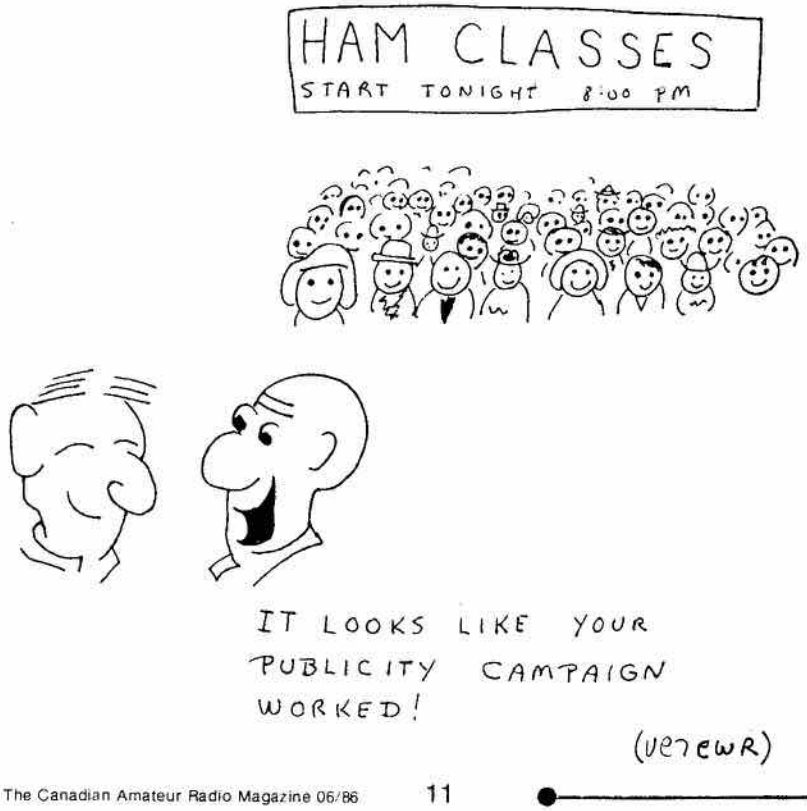
Cliff Hawkins P29CH/ZL1BXX, of the Papua New Guinea ARS, presented an interesting paper at the IARU Region III conference last November.

QSL cards are a burden on National societies. Japan ARL is handling 16 million cards a year. Papua New Guinea finds that Amateurs stay in the country some three years before leaving. Since the average time for a card to go through the bureaus is two years, PNGARS finds itself with cards for which the recipient has left no forwarding address or postage.

PNGARS suggests a revision of the 'social duties' of QSL's:

- There is no longer any case for sending QSL's as the 'final courtesy' of the QSO. (If you need one, ask for it during the QSO.) Have your cards printed please, thanks, and 'not required.'
- There is no social duty to reply to a card received as a result of a contest contact. If you want a card, you should be prepared to pay for a direct reply.
- Could awards be issued if the originator's cards were returned rubber-stamped: "correct as claimed?"

Cliff's complete paper can be obtained. Send a stamped, self-addressed envelope marked 'The QSL curse?' to the editor, TCA.



DOC News

More comments on the DOC proposals

FROM VE7CLZ

I can appreciate the need to attract more Amateurs to our ranks, but the proposal for a 'Code free' Class 'A' Certificate is the last idea I would entertain. As for the 'utter mayhem' on the 2 metre band as foreseen by VE7GPX in the March '86 *TCA* Magazine, I find it difficult to comment on this, as I am strictly a CW and RTTY Operator and do not own or operate a 2 metre rig, but I can imagine how that band could deteriorate. The proposal for a 5 wpm 'A' Class Certificate seems feasible and should attract aspiring Amateurs.

I am 75 years old and have been an Amateur for 8 years and I cherish this hobby very much having made over 9000 CW contacts and some RTTY. I have voice endorsement but find CW very professional and interesting and after all that is what 'Hamming' is all about down through the years.

I am also very disturbed about the proposed changes to the power limitations of 500 watts maximum DC input power to the final stage for Class 'B' (Operators Amateur Class) in relation to the 1000 watts DC input power to the final stage for Class 'C' (Advanced Amateur Class). We pay the same licence fee, operate our station under the same DOC Rules and Regulations and through the years develop certain skills, technology and maintenance of our stations, therefore I would like to see our DC input power to the final stage left as it is now.

FROM VE3AZA

Briefly, I am opposed to a 'no-code certificate' for a number of reasons, among which is the condition now prevailing in England and Japan where easy access to Amateur Radio has resulted in utter chaos. This is similar to the non-Amateur use of the 11 metre band (GRS), where but a few moments listening will convince you this is not the way we wish it to go.

Except for those individuals technically interested, holders of a no code type of certificate would most likely never advance to a higher grade to enable the use of our 'HF' allocations, and would contribute very little to the hobby other than the purchase of expensive commercial gear and increase the numbers available from which a 'fee' can be collected so that they may 'use radio.'

The basic thrill a newcomer to Amateur Radio gets is when he makes that first long distance contact, and with Morse code and International Q signals is able to convey points of interest with some foreign land.

In an emergency situation, where only simple kinds of apparatus is at hand, communications can only be provided or exchanged by those able to use Morse code, or even to understand that a condition exists where help may be needed. No action is taken because the person hearing the signals cannot read the code, or well enough to know the importance of it.

It is my suggestion that at the very least a code handling ability of between 5 and 10 wpm be maintained. This would enable International working, and intercourse of language with many lands and peoples.

Most if not all, bulletins transmitted by one or other Amateur facility; such as the ARRL are sent at the rate of 18 wpm, which suggests that the code speed for our top grade of certificate should be at 20 wpm.

I believe that we, as Radio Amateurs, should continue to build and work with transmitting circuits, limiting the power to 50 watts input would continue to hold the interest of new Amateurs, if this is deemed of benefit. I agree that complicated commercial equipment would best be serviced by the maker or his agent since all necessary test gear is at hand. But in no way should the fact the gear is 'commercial' inhibit bonafide Amateurs from 'trouble shooting' or locating a simple fault such as blown 'front-end' due to static discharges and similar which is presently affecting these 'rice boxes.'

Given the nature of the proposed changes to the licencing structure, I believe that no particular improvement will result, but rather a deterioration since the requirement to handle the code will no longer be a challenge.

The thrust of interest in Amateur Radio is to build things electrical, test them and operate them. For this reason I think any Amateur must be able to construct and work home-built gear at any level of competency.

The proposed structure would I think, accommodate special interest groups, probably the main reason for the change. I can see no particular advantage to retention of special certificates such as the Amateur Digital Radio Operator's Certificate.

The introduction of a 'Novice' licence would not in my view be of any benefit. If a certificate for any grade requires the use of a particular Amateur band, he or she can operate on that mode. In other words, operate in all portions set forth by regulation

DOC REGS

DOC intends to introduce regulations requiring prior approval before cable TV undertakings may use frequencies from 108 to 136 MHz and from 328.6 to 335.4 MHz.

RAISING OUR PROFILE

The recently affiliated Côte St. Luc Amateur Radio Association will be presenting an exposition on Amateur radio on April 19 in hope to raise the profile of our glorious hobby at the Cavendish Mall in Montreal, Quebec. The president Mark Macpherson VE2JT has coordinated more than nine exhibits that will give the community an informative cross section of what Amateur radio is all about. CARF will be represented by the Quebec Director, Mike Masella VE2AM.

Thanks to them and other clubs across the country, Amateur radio continues to gain more recognition in the community. But it must not end there, we must never forget to publicize Amateur radio in any way we can! (ed.)

with limitation as to power and/or frequency determination or its control.

I concur with the Department's liberality in the licencing of the handicapped people who may not be able to manipulate a key, keyboard or similar device, but who demonstrate an ability to set-up and operate a station to the best of their ability and to enjoy this 'window to the world' by Amateur Radio. This defeats my comment in the paragraph above but many 'handicapped' are very good at handling the code.

One hears that young people today are interested only in computers and not too keen on spending time trying to handle the 'tediousness' of learning Morse Code. It has been my experience that young people pickup the code very quickly, memorizing the letters, numbers and even some punctuation in the space of one evening's work. There is however the daily stint at practice to improve one's level of competency. I am aware also of candidates who at 84 years of age were able to master the code, get their ticket and can be heard almost daily using the code with others around the world. Some people will be quite nervous when confronted by a D.O.C. official when taking his test but at 7 wpm chances are these people will pass and then improve with practice.

FROM VE3ISD

With respect to the DOC proposals for the changing of the regulations for certification as an Amateur radio operator, I would like to consider the following suggestions.

1. The Department should use as a basis for the theory section questions from one particular text book written solely for that purpose. This is done in every university course that I have taken and every subject that I have taught. At one time one could study 'Ham Handbook for Beginners' by Morton Biback and, assuming a good understanding of that book, one could pass the examination. This is no longer true (unless you offer the 'Handbook' as an example!!) giving rise to frustration as to what to study and in what depth. It matters little which book as long as it is written to cover the syllabus of the examination.

2. The code requirements should be left alone. The effort required to learn the code is by no means as much as that required to learn the theory... assuming that the student knows nothing of either to begin with. One must presume that Amateur radio exists as a hobby for all who wish to pursue it and not simply for electronics whiz kids and for whom the code is too much trouble to learn. Give me a student who knows nothing of the theory or the code and I will have him reading 15 wpm before he has mastered the theory for the Amateur examination.

Regarding the first suggestion, I have been given reasons like "The Department could not endorse any particular book"!!! Then how does one study for a driving licence? ... or a stationary engineer? ... or even the Amateur radio regulations themselves? Or ... "It's all in the Handbook"!!! or ... "Then all a fellow would have to do is to learn the book"!!! ... these by DOC inspectors!

Regarding suggestion '2' ...this is surely up to the Amateurs themselves to learn how code is learnt. The learning process for code is totally different from theory and unless this basic fact is understood by the code teacher then disaster faces the student. This is NOT the fault of the code but rather how the code is taught and learnt.

Yours sincerely,

Eric Stabler VE3ISD

In putting **TCA** *together, it is frequently necessary for the editor to shorten contributions. This has been particularly so with the DOC proposal comments. The editor has attempted to extract from each comn.ent the novel, the thoughtful and the unusual contribution to the debate. These appear to be the factors which would best help readers to make up their own minds.*

One contributor, VE7DDF, would like the final three sentences of his excellent DOC comment (TCA April), cut by the editor, published. The sentences are: **My gratitude to you for a move toward improving the situation. Please be gentle. We love Amateur Radio.**

A statement with which we will all agree.

Bud Theriault VE1CI receives his award from Phil Irons VE1BVD.

Bud Theriault VE1CI

The membership of the Sydney Amateur Radio Club honoured their president, J.B. 'Bud' Theriault VE1CI by presenting him with the S.A.R.C. Amateur of the Year Award for his many contributions and service to the club and the community. Bud has served as the president of the Sydney Amateur Radio Club for two and a half years and has seen the installation of the club's fourth and fifth repeaters, the growth of the UHF linking network for the Cape Breton repeater system, the formation of the S.A.R. Seniors Charitable Trust and a planned Marconi Memorial Station at the Marconi Museum site at Tablehead, as well as acting as liaison for many public service events. It is with reluctance and with best wishes for the future that the club bids farewell to Bud and his family as they depart for a two year stay in Fort MacMurray.

Shown presenting the award is Phil Irons VE1BVD, former vice-president and new president of the Sydney Amateur Radio Club for the remainder of the 1985-86 term.

The Life and Death of the First CRRL

PART 3

BY GEORGE F.W. REYNOLDS VE4AJ

In Parts 1 and 2 we learned that the few hundred Amateurs in Canada in 1920 were hard hit by problems with interference and officialdom. Some then approached ARRL for support, and received it. The story continues:

January, 1920, *QST* announced that Canada would have four operating divisions analogous to the U.S. system. They were St. Lawrence (Quebec, New Brunswick and Nova Scotia); Ontario; Winnipeg (Manitoba and Saskatchewan) and Vancouver (Alberta and B.C.). Division managers were to be appointed as well as division superintendents for the various stations of each division.

As of April 1, 1920, there were only 281 licensed Amateurs in Canada. How many Canadian hams subscribed to *QST* and joined the ARRL in 1920 is not known; it is unlikely that they numbered more than 70, that is one-quarter of the licensed operators. Don't forget that in 1920 there were several magazines other than *QST* competing for the Amateur's dollar including the U.S. 'Radio Amateur News' and the English 'Wireless World' both available at magazine outlets across Canada. At least 11 positions as division manager or superintendent were open for appointment; it looked like a classic case of too many chiefs and too few Indians.

In August, 1921, *QST*, Warner stated that, "The division managers are Canadian and always will be... these managers will direct their divisions in complete accordance with their own peculiar local conditions." This was true of three of the four divisions but the first manager of the Winnipeg division was Boyd Phelps 1HX, who was on the ARRL HQ staff. Phelps had formerly been the 2nd op to the legendary Don Wallace 9ZT of Minneapolis, Minnesota (latterly W6AM). 9ZT had often been QSO Winnipeg so Phelps at least knew where Winnipeg was. He served as manager until May, 1922, when J.A. Gjelhaug 9ZC of Baudette, Minnesota took over. The first Canadian to be appointed manager of the Winnipeg division was P. Socolofsky 4BV of Loreburn, Saskatchewan; the date was April, 1923. The fact that no Canadian would assume the duties of manager of the division for three years would indicate that interest in the ARRL in Western Canada was minimal.

A major overhaul of the Canadian branch of the ARRL took place early in 1923. The number of Canadian hams had risen to 1,440 so that ARRL Directors, on the advice of Warner, decided to appoint an official with the rather grandiose title of Canadian general manager. Quebec was made a separate division bringing the total to five. Division superintendents were called assistant division managers in future to correspond to U.S. terminology. Division managers would continue to send message counts and similar data to the traffic manager at ARRL HQ but the Canadian general manager (who automatically became a member of the board of directors of the League) was to be in overall charge of Canadian operations and would liase with secretary Warner. In theory, Warner should have had a continuous overview of the Canadian scene. More about that later.

Now switching back to the founding of the first CRRL. Shortly after Lowry started his anti-Amateur campaign in January, 1923, Winnipeg Amateurs began to meet informally to consider what options might be open to them to combat his attack. As months went by and there was no move on the part of the Canadian general manager of the ARRL to offer even token support, it was decided to investigate the feasibility of forming an organization on a national scale for the protection of Canadian Amateurs.

On Tuesday, Aug. 14, 1923, a meeting was held at which the decision was made to proceed with this project. Among the items discussed was the possibility of affiliation with either the ARRL or the Radio Society of Great Britain. Formal affiliation was voted down but it was hoped that the ARRL would co-operate with the new Canadian association. Twelve of the more active Winnipeg hams were present at the meeting including E. Dusang 4EA, S.G. Paterson 4DY, E. Nicolon 4CO, B.G.Jones 4CR, Tom Goodmanson 4CN, A.J. Simpson 4DK, R.J. McClean 4FZ and G.F.W.Reynolds 4AG. The meeting was held in the evening in the office of *The Radio Bug* in downtown Winnipeg.

Because of the conspicuous role played by *The Radio Bug* in future events, its background will be examined in some detail. The first issue of *The Radio Bug* was that of June, 1923, with V.T.T Thomas 4CE as editor and publisher. He was the owner of a small radio store and was the assistant division manager of the Winnipeg division of the ARRL. He had no previous experience in the print medium. *The Radio Bug* was the first radio magazine in Western Canada. The first in all Canada was the *Canadian Wireless Magazine* which appeared in Montreal in June, 1921; its last issue was that of June, 1932. Why Thomas embarked on such a risky enterprise in the very limited Winnipeg market is a mystery.

Below the title, *The Radio Bug*, on the front cover was the sub-title, The All-Canadian 'Amateur' Magazine. The word, Amateur, was in quotation marks. Why was this? In the 1920s, Amateur referred to a broad spectrum of people interested in radio including Amateur radio ops and broadcast listeners; the term 'Amateur broadcasting station' was a good illustration of this point. *The Radio Bug* was the official organ of the Manitoba Radio Association, a hybrid radio Amateur-b.c.l. club. Unlike *QST*, *The Radio Bug* was never "devoted entirely to Amateur radio". In the early editions, the linage of *The Radio Bug*, which ran from 20 to 30 pages, was usually split half-and-half between radio Amateur and b.c.l. content. As time went on it tilted more and more to the b.c.l.s. By the issue of January, 1924, only nine of its 28 pages were of interest to hams. In November, 1924, there was one full page of Amateur material plus a few scattered references. The June-July, 1925, issue is 100% b.c.l.

No complete file of *The Radio Bug* is known to exist. The Public Archives of Canada has in its repository the issues from Vol.1, No. 3, August-September, 1923, to Vol.2, No.5, November, 1924. No Manitoba

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library has any copies. A search in several libraries in Canada and the U.S. has also proven negative. The writer has either the original or photocopies of some of the issues on file at the P.A.C. and in addition a photostat of the July, 1923, issue (partial) and a photostat of the complete June-July, 1925, Vol. 2, No. 12. This does not have the cover subtitle, The All-Canadian 'Amateur' Magazine. It may have been the last issue of *The Radio Bug*. Hopefully, some of those missing will eventually turn up in some old time radio op's attic.

After producing two issues of *The Radio Bug*, Thomas decided he had had enough of the publishing business and moved to Los Angeles. Taking his place in the editor's chair was J. Kelvin Maxwell. He had been a stenographer at Dawson, Richardson Ltd., a Winnipeg printing firm. Like Thomas, he had no previous editorial experience. Thomas had left on Aug. 5, 1923. Maxwell managed to get out issue No.3, a joint August-September effort, by mid-September. He was not a radio Amateur. He told his readers, "he had a general interest in radio."

At the Aug. 14 meeting, once the decision was made to proceed with the formation of the Canadian Radio Relay League, a *pro tem* committee made up of 4CR, 4DY and 4DK was nominated to draft a constitution and working rules for the new association. At a second general meeting, which was held on Sept. 1, the committee recommended that: The headquarters of the League be in Winnipeg; that Canada be divided into five divisions corresponding to the Amateur districts then in force (1 was the Maritimes, 2 Quebec, 3 Ontario, 4 the Prairie Provinces and 5 B.C. and the Yukon); that the Board of Directors be composed of two members from each district and that annual membership dues for the League be 50 cents. These suggestions were voted on and adopted.

It was also ratified that *The Radio Bug* would be the official organ of the CRRL as it was of the Manitoba Radio Association. Maxwell offered to insert an application form in each issue of *The Radio Bug* for membership in the CRRL. The yearly subscription to *The Radio Bug* was $1.50 and 50 cents would be remitted to the secretary of the League on behalf of those subscribers who signed the application form. This link-up between the CRRL and *The Radio Bug* was to have unexpected consequences.

An article in the October number of *The Radio Bug*, by acting secretary 4DY, explained the rationale behind the founding of the League:

"The need for a Canadian radio relay league has long been felt here. Its organization will mean the drawing together of Amateur interests in Canada into a strong body which will have some political say, whereas at present, in the absence of any national organization, they are helpless to prevent any curtailment of their privileges.

"It is not the purpose of the CRRL to break away from the ARRL, as in any case, the great majority of members of the CRRL will also be members of the ARRL.

"But if there ever came a time in Canada when the Amateurs were seriously threatened with extermination, a Canadian organization would have more power to prevent this than an American one; hence the need for a national association of Canadian Amateurs, which will act in harmony and in conjunction with the ARRL... and we trust they will co-operate with us."

As will be seen later, the CRRL was due for a rude shock.

Meanwhile the new league was getting an enthusiastic reception right across Canada. In addition, there were many inquiries from U.S. Amateurs. An information booth at the Toronto Exhibition signed up several members. There was no problem in obtaining recruits for the position of district manager. The Winnipeg gang was particularly pleased when A.H. Keith Russell 3AC agreed to become manager of District 3, Ontario, for the CRRL. He was one of the best-known Toronto Amateurs and was division manager of the Ontario division of the ARRL. The October number of *The Radio Bug* carried a full page of reports from the five district managers of the CRRL.

Now for a brief trip backwards in time. The trans-Canada relays in mid-April, 1923, marked the first time that traffic had been handled coast-to-coast via an all-Canadian route. It was the finest achievement to date by Canadian Amateurs. On 200 metre spark it would have been out of the question, but the availability of 5 and 50 watt transmitting tubes, such as those manufactured by Northern Electric, made it possible on CW.

Canadians waited patiently for three months for a report on the relay to appear in *QST* but nothing happened. Finally, on July 20, J.V.Argyle 2CG and some prominent Montreal Amateurs got together and drafted a letter to secretary Warner of the ARRL asking why the Canadian feat had been ignored in *QST*. Warner promptly sent a senior ARRL official, A.A.Hebert, to meet with Argyle and the Montreal group and with Keith Russell in Toronto, to find out why the Canadian general manager, W.C.C. Duncan 3AB of Toronto, had not advised ARRL headquarters of this operation.

At a meeting in Montreal on Aug. 2, 1923, Hebert told Argyle and his fellow hams, according to an article in the October issue of *The Radio Bug*, that, "Not until the Board at Hartford received a letter dictated by a meeting of the local members of the ARRL and written by Mr. Argyle, were the Board aware of the exploit of the Canadian Amateurs in relaying 65 messages by an all-Canadian route. Mr. Hebert expressed his own and the Board's anxiety to publish this splendid

achievement and promised full publicity in an early issue of *QST.*"

"Hebert suggested a Canadian Radio Relay League as a future possibility, but those present said they preferred to remain in the American association for at least another year *or until such time as the status of the Canadian radio Amateur should be definitely established and recognized by the Canadian government beyond all doubt* and until a satisfactory camaraderie be developed between Western and Eastern Canadian Amateurs which those assembled felt was not the case at present."

At a get-together in Toronto, chaired by Keith Russell, there was general agreement with the opinions voiced at Montreal. The Montreal and Toronto meetings took place only a week or so before the founding of the CRRL in Winnipeg but it is obvious that there was no connection between the two.

True to Hebert's pledge, the September 1923 *QST* had a long article by Keith Russell which described the trans-Canada relay in great detail. The most significant part of the article was an editorial signed by Warner that was placed in a large box at the top of the page which read: "The glorious accomplishment of Canadian Amateurs in putting over the real trans-Canada relays in middle April had received but the scantiest mention in *QST.* We have been keenly aware of this and while offering our humble apologies to our Canadian members we must say in our defence that heretofore we simply have been unable to secure a connected account of the affair. The Canadians shall have their credit in *QST* for this job if it takes to Domesday to get it in; we only regret the unconscionable delay."

One result of this fiasco was that the Canadian general manager's resignation was requested and A.H. Keith Russell 9AL (he now held a 9 call for a special experimental station) was appointed in his place (Oct. 1923 *QST).* Warner's statement demonstrated beyond the shadow of a doubt that ARRL headquarters had been completely in the dark regarding events in Canada. But there was more to come.

A search of the voluminous Lowry 1923 radio correspondence (File RG-11 /Box 3) in the Public Archives of Manitoba failed to uncover any evidence that Duncan, the then Canadian general manager, had registered a protest over Lowry's attempt to decimate the ranks of Manitoba Amateurs. The assistant division manager of the Winnipeg division of the ARRL, Vic Thomas 4CE, the publisher of the first two issues of *The Radio Bug* and a leading opponent of Lowry, would certainly have reported all the facts on the serious situation in the province to the Canadian general manager. In addition, copies of *The Radio Bug* were circulating among Toronto Amateurs. The inescapable conclusion is that the Canadian g.m. must have known what was going on out West but, as in the case of the trans-Canada relay, did not advise ARRL headquarters. Certainly there was never a word in *QST* about the state of affairs in Manitoba.

The November 1923 *QST* had a leading editorial by Warner captioned: THE 'CRRL'. The name of the league was in quotation marks indicating that this was a distasteful subject to Warner. The editorial is too long to quote in full but here are some significant excerpts:

"Times without number the success of the ARRL in fostering and supporting its magazine *QST* has excited the cupidity of individuals who think how beautiful it would be if they could start some kind of an Amateur organization which would get behind their magazine and push it to $U¢¢E$$. (What Warner's hieroglyphics meant is obscure)... In Canada right now we have a similar case, where the publisher of a really excellent Amateur magazine feels the urge to foster a Canadian Radio Relay League... The ARRL has no territorial ambitions and does not presume that Canada will always remain a part of the ARRL... When the Canadian elect to separate and maintain their own association... the ARRL stands ready to create this independent all-Canadian organization, see it safely started, and then withdraw from Canada... In the meantime the ARRL considers that it has a sacred trust in Canada and proposes to safeguard that trust with all its ability. It would be false to its trust if, in these days of the relatively tender growth of Canadian Amateur radio, it withdrew in favor of an Amateur organization formed by a publishing company for pecuniary motives... So beware of being misled, Canadian Amateurs, there is not the slightest excuse for a counter-organization to 'buck' the ARRL."

Warner's editorial was a mixture of innuendo and misinterpretation of facts accompanied by gratuitous and unappreciated advice to Canadian hams. No mention was made of the reasons that prompted the formation of the new league. One wonders if Warner ever saw a copy of *The Radio Bug.* Presumably, Russell told him of the existence of the Canadian organization when he assumed the post of Canadian general manager.

Regarding Warner's reference to *The Radio Bug* as a "really excellent Amateur magazine," as previously pointed out it was never exclusively an Amateur periodical. The few articles that were of Amateur interest were written by local hams; the b.c.l. articles were usually reprints of advertising brochures or hand-outs by manufacturers. In the mid-1920's, there were as many radio magazines as there are computer magazines today, all vigorously contending for readers. They were professionally produced in the U.S.A. with plenty of advertising revenue; they had experienced writers and a staff of technical specialists. *The Radio Bug* simply could not compete with these sophisticated imports. It was not, by any standard, a "really excellent magazine," Amateur or otherwise.

Warner neglected to say where in the scriptures he found the passage which granted the ARRL the sacred right to save Canadians from such youthful indiscretions as founding their own Amateur radio association.

The charge that Maxwell, the publisher of *The Radio Bug* "founded and fostered" the CRRL "for pecuniary motives" in anticipation of making Warner's mythical $U¢¢E$$ dollars, thereby demonstrating his "cupidity," is utterly ridiculous. When the CRRL was founded there were about 1,400 licensed Amateurs in Canada. But according to *The Radio Bug,* the total number of CRRL members was 189. The 189 dollars a year collected from these members would assist in paying the production expenses of *The Radio Bug.* How much of this 189 dollar bonanza would accrue to Maxwell after these accounts were settled is unknown. It surely would not be enough to satisfy his alleged cupidity i.e. inordinate desire for wealth. As a matter of fact, he had to run what he called the Maxwell Service out of *The Radio Bug* office to help pay the rent. This offered stenographic, publicity and reportorial services.

Warner's dictum was that the ARRL, and only the ARRL, could create a real CRRL, safely see it started (that is, spoon-feed it for as long as necessary— in this case, 63 years) and then withdraw from Canada leaving a quasi-independent organization. The inalienable right of Canadians to form their own native-born association, without any external coaching, was ignored in the editorial.

How do Canadians react to this? Will Canadian Amateur radio thrive? Look out for the concluding instalment next month.

Long Delayed Echoes

BY DOUG BURRILL
VE3CDC

40 YEARS AGO— XTAL MAGAZINE, JUNE 1946

With WW II over for less than a year there was still a huge amount of military communications equipment in the country and the editor devoted a long article on how to shake some of it loose for Amateur use through Amateur organizations. This foundered on the problem of raising advance cash and in finding volunteers to handle the handling and accounting.

Trying to get it direct from government storehouses was an exercise in futility unless somewhat direct methods were evolved. I remember seeing one six-foot high transmitter, the Army C-33, or AT-3 as the fly-boys termed it, gracing a VE1 shack. It had been smuggled out of a stores depot in Halifax in the back of a truck. The huge stores dump at Scouduc, near Moncton, provided a fruitful source for the larcenous.

The trick was to gain entry through the gates on the pretext of looking over the sheds full of stuff, nip a piece of communications gear into the trunk, drive up to the gate, get out of the car, divert the bored, careless civilian guard with small talk, say you couldn't find what you wanted and then drive off with a new transmitter in the trunk. It was simpler for the disposal organization, the Crown-owned War Assets Corporation, to dispose of the equipment in large quantities to dealers, rather than to sell to individual Amateurs and that's the way it ended up.

Regular ham activities were starting to pick up and the first post-war Field Day was recounted with delight in these pages. This is an exercise, which after five years of using No. 19 and No. 22 sets in summer and winter in the back of trucks, fox-holes and mud, fighting off various bugs, etc., had been steadfastly avoided by your writer. I can only conclude that the participants in that first post-war event, most of whom probably had been in the forces, must have had a masochistic streak in their make-up to again spend 48 hours under similar conditions!

Today, however, the trailer and motor home has replaced the tent for most clubs and this has doubtless made the event more comfortable, if not enjoyable... but I still have to be convinced!

35 YEARS AGO— SKYWIRE MAGAZINE, JUNE 1951

An article on soldering irons featured pictures of some on the market at the time... they resembled some sort of medieval torture instrument... what their 100, 200 and 300 watt tips would do to a modern circuit board can only be imagined. I still have my 1945 model which is just dandy for plumbing jobs. The tips were a round 4' copper bar about 5 /8" in diameter which fitted into a heating element. I made a variety of shapes by hand cutting and filing a length of streetcar overhead trolley wire scrounged from VE1IZ, who salvaged a number of feet when his power company dismantled the decrepit Saint John street car system.

VE NEWS FOR JUNE 1971

The pickings from this particular publication are usually rather meagre as it had only 12 small pages of typed copy but it usually commented on the important issues of the day. This issue explored further the FCC proposal to expand U.S. phone and novice bands. Both CARF and the ARRL Canadian Division (now the CRRL) after consultation sent their briefs and objections to the DOC for its forwarding to the FCC.

ARRL had little heeded the objections of its Canadian Division or those of CARF and the publication noted "...ARRL is not concerned with the well-being of the Canadian Amateur (re the Novice band expansion). This isolationist viewpoint reflects little credit to those members of the ARRL Board who approved this proposal in spite of the valiant attempts of the Canadian director of the ARRL to obtain a solution that would be acceptable to Amateurs of both countries." A letter to the FCC from the IARU Region 1 also was dead against the expansion and a report on Region 2 South American members by Noel Eaton, the ARRL Canadian director, made it clear that they too, were very unhappy with the FCC.

That organization, however, had, according to the *News*, just received a new Chief of its Amateur and CB Division, a Mr. Prose Walker,.W4BW. Prose had a nice Rambo approach to such objections. I called him one day about the phone expansion and said that if it went through the FCC then we would ask DOC to expand the Canadian phone sub-bands... like go lower on 80 which would unfortunately be into the U.S. novice bands. Not noted as much of a diplomat, Prose shot from the hip, his voice rising as he growled, "You do, and WE'LL SMOTHER YOU!" End of phone call.

TCA MAGAZINE FOR JUNE 1976

History, even in the Amateur world, has a way of repeating itself. The 1985 DOC proposal for re-structuring the Amateur Service had its 1976 counterpart as this issue of *TCA* reports. DOC's proposal then was for two new tickets: the "Experimenter Amateur Radio Operator's Certificate" and the "Novice Certificate". The first one proposed to meet the requirements of 'experimenters,' had no code but required an 'in-depth' knowledge of radio greater than that for the Advanced ticket, allowed operation over 50 MHz for six months and then 1000 watt limit on all bands. The other one proposed a 5 wpm morse test with a non-renewable ticket for two years only and allowed 90 watts on CW on slices of 75, 40 and 10 and 15 metres. The closest these proposals ever came off was the adoption of the Digital Operator's Certificate in 1978.

De-regulation of the phone sub-bands, again being contemplated, was also included in the proposal, with the idea of making them administrative guide-lines such as we have for repeaters. As such they are more easily amended than the locked-in legislated regulations. Finally, the economy must still have been good ten years ago as the Ottawa ARC presented the Eastern Ontario Childrens' Hospital with a $1,200 cheque for medical equipment... the profit from the 1975 Radio Society of Ontario convention.

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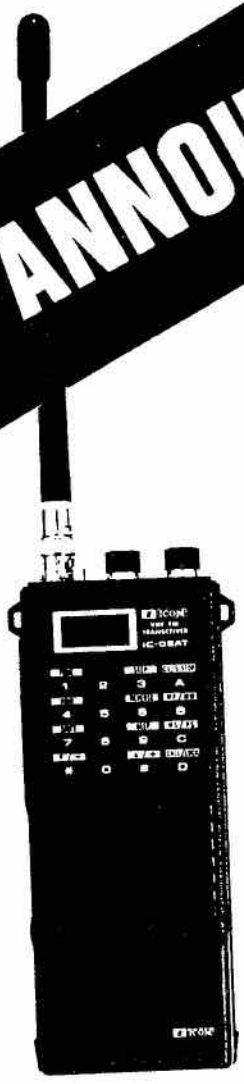

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CROSSWAVES

MICROWAVE OVENS

This month we continue our look at microwave ovens.

Two types of oven are available; those offering conventional microwave cooking and those combining microwave with convection. In the latter case convection produces browning of meats, etc.

Generally ovens operate on 2450 MHz using magnetrons, which deliver considerable power. Since many ovens are fused for 10-15 A, you get an idea of input power involved. An examination of several oven circuits shows a certain amount of commonality. The microprocessor controller is variously called 'Control Assembly' or 'Digital Programmer.'

Power output from more expensive convention microwave ovens is in the 700-800 watt range. I wonder what enterprising Amateur will harness this RF energy to drive a high level mixer or multiply it to some experimental band? It should be quite easy.

At least one top-of-the-line oven, Panasonic 'Genius,' Model 993OC uses a surge absorber, surge resistor combination from the hot side of the line to ground to limit common mode surges. A varistor is used in the same oven across the power transformer primary, to limit differential spikes or surges. These are excellent protective devices for microprocessor controlled appliances. They prevent conducted spikes from falsely triggering sensitive circuits.

Designers have even incorporated an RC network across the heater fan motor to prevent EMI!

If you've ever wondered why your microwave oven emits a low grunt when going through its cycle it's because high voltage is applied to the magnetron in one of two ways. In one case the micro pulses a relay 'ON' for four seconds and off for 18 seconds (during combination cooking). If this on /off ratio did not occur, a fuse would blow.

In the second case AC is applied through a Triac directly through the high voltage transformer primary. Here is where we come to an 'if' situation. If we have any type of microprocessor problem that would command the relay to close (type 1) in a lockup situation we would blow a fuse. In type 2 either a microprocessor problem or a line transient to the Triac could cause a similar problem. A leaky Triac would be susceptible to a line transient.

If we assume several volts of conducted RF arrive at the input to the AC line to the oven, there are advantages in feeding AC only to the control board. AC transformers are lossy devices and chances are good most of this RF will disappear due to the low impedance AC windings. The advantages of relay control of power vs. Triac control are obvious. Unless the RF affects the microprocessor, the relay is immune to RF. Not so with the Triac— it may or may not misbehave. Chances are it will if no effort has been made to suppress it.

It is wise not to tamper with ovens while powered and before the more venturesome remove the rear panel— bear in mind extreme caution is necessary. My advice is don't attempt it! The H.V. transformer secondary voltage averages 2.0-2.8 kV at 500 to 700 mA.— Hands Off!

To give you some idea of percentage power output, as a function of setting on the oven indicator, based on 22 seconds representing one complete 'ON' and 'OFF' cycle of the relay controlling high voltage (when in straight cooking cycle). Look at this:

HIGH	22 /22 (100%)
M. HIGH	20 /22 (91%)
MED	15 /22 (68%)
M.LOW	11 /22 (27%)
WARM	2 /22 (10%)

This means for Medium power the magnetron oscillates for 15 seconds and is off for 7 seconds. (15 + 7 = 22 seconds.)

It is interesting to note that microwave ovens pass a stringent CSA test for fire and electrical safety. Part of the test for fire safety involves placing a container of popping corn saturated in cooking oil in the oven and applying full microwave power for two hours. The outside of the oven, wrapped in cheesecloth, may show no signs of scorching after this test.

It appears extremely unlikely that much RF could ever penetrate the electronics of the oven because of the extensive shielding.

TALKING WATERBED

Barrhaven, Ontario was the home of the talking card table. We now lay claim to the only talking waterbed. Recent changes to a local B.C. antenna array within 700 feet of residences caused this phenomenon. One wonders whether the waterbed should identify as marine mobile. B.C. station personnel have voluntarily reduced power to one half until several EMI problems can be resolved. During a recent frequency change, railway wig-wags started to operate! Barrhaven Amateurs have this, together with CHU's three transmitters and four local B.C. stations, within a five mile radius.

A B.C. station in Quebec had so many EMI complaints after increasing power the station owners are now seeking another location for the TX.

SWAP SHOP

ESTATE SALE: Kenwood TS430S, including: 'FM,' 14 poles 2.4 Hz Cascade, 1.8 Hz narrow SSB, 6 kHz AM, filters $1350.00. Kenwood PS430: $175.00 Kenwood MC85 Mike $125.00. Dentron Amplifier 1200L & antenna tuner DTR-3KA, matched pair: $800.00. Kenwood TU-79 tone unit $55.00. Heathkit power meter HM-102 $45.00.. B&W phone patch 3002 $125.00. Heil Mike equalizer EQ200P & Carthridge HC-3, $55.00. VE2OU, 2785 Valcourt St., Ste Foy, Quebec G1W 1W2.

FOR SALE: Yaesu FT101ZD Ser/21310 286 with DC DC converter and AM board installed. Kantronics Interface II with Hamtext for Vic 20. Vic 20 Computer. VE3LZT, Telephone No. 1-519-578-3582.

FOR SALE: Complete Hustler mobile system, 80 through 10 metres with bumper mount, resonator spring, quick disconnect, resonators. $125. John Benson VE3JJH, 234 Third St. N. Kenora, Ont. P9N 2L7.

FOR SALE: Marconi FJ85 solid state, 30 watt VHF repeater with manuals, excellent condition, $200.00; Motorola Motran solid state 30 watt repeater with manual, $150.00; Drake T4X, R4B, AC4, manuals, Sartori mods, 160 Xtals, excellent condition, $450.00; **WANTED:** Inoperative linear amplifiers, D104 & Shure444D mics. VY1CW, Site 20, Comp. 63, RR 1, Whitehorse, Yukon, Y1A 4Z6.

FOR SALE: Two Element Gem Quad Antenna. Dismantled, complete, good condition. $150.00. Richard Mann VE6BAX, Box 479 Viking. Alta. T0B 4N0 (403) 336-2274.

FOR SALE: Kenwood TS 830S. Rig in excellent condition. $600. U.S. For further details write Ed VE3NHA, Box 220, Callander, Ont. P0H 1H0.

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, 91 Varley Drive, Kanata, Ont. K2K 1H5.

WANTED: Good 3" C.R. Tube #3DEP1 for Eico Scope #430. Lloyd Cunningham, 1218 Gordon Ave., West Vancouver, B.C. V7T 1R2. (604) 922-8787.

FOR SALE: FOXX Transceiver kits available from $40; Box 855, Hawkesbury, Ont. K6A 3C9.

Social Events

VE7EXPO up and running

BY J.F. HOPWOOD VE7AHB

By the time you read this, VE7EXPO will be up and running at EXPO 86 in Vancouver. The VE7EXPO Amateur Radio Society, under the able leadership of Bob Smits VE7EMD, has been scrambling to fit all the last minute pieces together.

Our thanks to the Canadian Government for invaluable assistance, both in financial aid and in the spirit of generosity, in helping Canadian Amateurs to proudly participate in EXPO 86 for Canada. Our thanks to CARF for their great support and assistance through President Ron Walsh VE3IDW, who stood ready with a positive response to our need. And last, but not least, to *TCA* editor Frank Hughes VE3DQB for his efforts and skill in giving us the necessary publicity and news coverage. CARF's unique Canadian spirit of generosity is stamped on VE7EXPO.

Operations Committee Chairman Larry Reid VE7LR is preparing a policy and procedures manual for the station. Visiting hams from round the world are welcome to operate the station provided they carry proof of their national certification as a licensed Amateur and are familiarized with DOC regulations. The station will seek QSO's with hams in foreign countries on their special assigned country day at EXPO 86.

It should be quite an experience operating at the other end of a DX pile-up for many hams. Amateurs will be anxious to obtain the rare four-letter suffix QSL card. VE7EXPO's QSL manager Dennis Pekrul VE7CXN will QSL every logged QSO via CARF's national outgoing QSL bureau. CARF's QSL Bureau chief Jean Evans VE3DGG is going to need help!

The Vancouver area clubs are supplying most of the scheduled operators. The ever generous Burnaby ARC is manning the station for one week each month. The Vancouver and Richmond clubs have committed large segments to help fill in the two-shift 165-day period. The many independent volunteers are being organized and co-ordinated by Bill Williams VE7FHV, who took on the demanding overall scheduling job.

We are told that 5 million Canadians, or one out of five, will attend the projected 13 million visitor world's exposition. Come on out and join us. We would love to see you at VE7EXPO!

VE7EXPO PROGRESS

The VE7EXPO gang has been working against time to get the station ready for its May opening.

Each nation with a display at B.C. Expo has a day allotted to it. So, VE7EXPO will look our for calls from each nation on its National Day.

Those from June on are: June 9 Kenya, 12 Philippines, 14 Italy, 18 Australia, 20 Czechoslovakia, July 1 Canada, 4 U.S.A., 7 France, 8 U.K., 14 Japan, 15 Ivory Coast.

VE7EXPO will also look out for Canada's Provinces and Territories on this schedule:
June 21 N.W.T., 25 Quebec, July 1 Canada Day, 11 Ontario, 27 Yukon, August 2 Nova Scotia, 3 B.C., 8 Saskatchewan, 10 New Brunswick, 17 Alberta, Sept. 7 Manitoba, 22 P.E.I., 28 Newfoundland and Labrador.

Contesters— remember that a QSO with VE7EXPO on July 1 counts 20 points bonus!

NOT COMMEMORATING WAR, BUT HONOURING FREEDOM

Special event station ON4CLM (Canadian Liberation March) will be on the air again from the Scharpoord Hall in Knokke. A magnificent six-colour award is available: this year, it honours the Royal Winnipeg Rifles. Cost of the award is $5.00 or 10 IRC's, proceeds to a welfare fund.

Work ON4CLM Oct. 27-Nov. 2, 1986 on 3.685, 7.045, 14.145, 21.245, 28.545, 144.250 SSB and 3.515, 7.012, 14.020, 21.020, 28.020, 144.020 CW.

Limited quantities of the 1983, 1984 and 1985 awards available. Write Radio ON4CLM, P.O. Box 140, 8300 Knokke, Belgium.

PACKET RADIO SYMPOSIUM

Sept. 20, 1986, Barrie, Ontario, Canada

The Hex-9 Group of the Barrie Amateur Radio Club is holding its second Packet Radio Symposium Sept 20, 1986, with flea market in the morning. Co-sponsored by and held at Georgian College, Barrie, Ontario. Guest speakers Harold Price NK6K, a director of AMSAT, and Ed Jackson of Buffalo. Talk-in frequency 146.25 / 146.85 VE3LSR; admission $5.00. Inquiries Hex-9 Group, Box 151, Orillia, Ontario, Canada L3V 6J3.

NSARA GOLF TOURNAMENT

The Fourth Annual Nova Scotia Amateur Radio Association Golf Tournament will be held July 5, 1986, 11:30 a.m. at Eden's Golf Country Club, Bridgetown, N.S.

All Amateurs and families welcome! Trophies, prizes, dinner. Contact is John Andersen VE1JW.

JUNE DOC EXAMINATIONS

Aspiring or upgrading Ontario Amateurs will have a choice between two English examination papers this month. One paper is standard essay questions, the other, the multiple choice. This is a pilot project by DOC to help them change to the multiple choice format. ■

CALENDAR

May 2-Oct. 13: Visit VE7EXPO at Expo 86's Canada Pavilion, Vancouver, B.C.
June 17: Annual Old Timer's Reunion, Orillia, Ont. Details April issue.
June 18: DOC licence examination.
June 20-22: Central Alberta Radio League picnic, Red Deer, Alberta.
July 12-13: International hamfest Boissevain, Man.-Dunseith, N.D.
July 12-13: Maple Ridge ARC Hamfest, Maple Ridge, B.C.
August 16: Brantford ARC flea market, Brantford, Ont. Details May TCA.
Sept. 6-7: Nanaimo ARC annual Hamfest, Nanaimo, B.C. Details May issue.
Sept. 17: Applications for DOC licence examination.
Sept. 20: Packet Radio Symposium and Flea Market, Barrie, Ont. Details June issue.
Oct. 15: DOC licence examination.
Oct. 19-20: Jamboree on the Air, Scouts Canada.
Oct. 27-Nov. 2: ON4CLM award. Details June issue.
Publicize your get-together here. Write the Editor, TCA, P.O. Box 855, Hawkesbury, Ontario K6A 3C9. Let TCA know about your events three months in advance to list them in the Calendar.

Canada Day Contest 1986

1 July every year, 0000Z to 2400Z.

These contests are open to all Amateurs. Everybody works everyone on 160 metres through to 2 metres in both CW and Phone.

Classes:
Single operator, all bands.
Single operator, single band.
Multi operator, all bands.

Contacts: All contacts between Amateur stations are valid. The same station may be worked twice on each band, once in CW and once on Phone. No cross-mode QSO's allowed.

Exchange: Signal report, Consecutive serial numbers, Province.

QSO Points: 10 points for each Canadian station, 4 points for stations in other countries. VE0 counts as Canada and 1 multiplier. +20 points may be claimed for each contact with a CARF Official Station that uses the suffix TCA or VCA. Official stations are not eligible for awards.

Multipliers: Total of Canadian Provinces and Territories worked on each band on each mode, i.e. VO1/VO2, VE1-NB, VE1-NS, VE1-PEI, VE2, VE3, VE4, VE5, VE6, VE7, VE8, VE0, VY1. Total of 2 per band using both modes.

Frequencies, kHz:

1810/1840	21025/21250
3525/3775	28025/28500
7025/7070/7155	50040/50110
14025/14150	144090/146520

We suggest phone on the hour and CW on the half hour.

Entries: A valid log must contain log sheets, dupe sheets or statement, and a summary sheet showing claimed scores, QSO's, a list of multipliers and calculation of claimed scores. Summary and Multiplier sheets are available for a SASE. Entries must be mailed within one month of the contest, with your comments and photos, etc. to:

CARF CONTEST
c/o N. Waltho VE6VV
Box 1890, Morinville,
Alberta T0G 1P0

Awards: Certificates will be awarded to top scoring entries in each class in each province, territory, U.S.A. and DXCC country. Trophies will be awarded to the top single-op all band and Multi-op all band stations.

Results: Results will be published in *TCA* prior to the next contest. Non-members of CARF may wish to include a SASE with their entry for a copy of the results.

The decision of the contest committee shall be final in all cases of dispute.

CANADA CONTEST CONCOURS DU CANADA

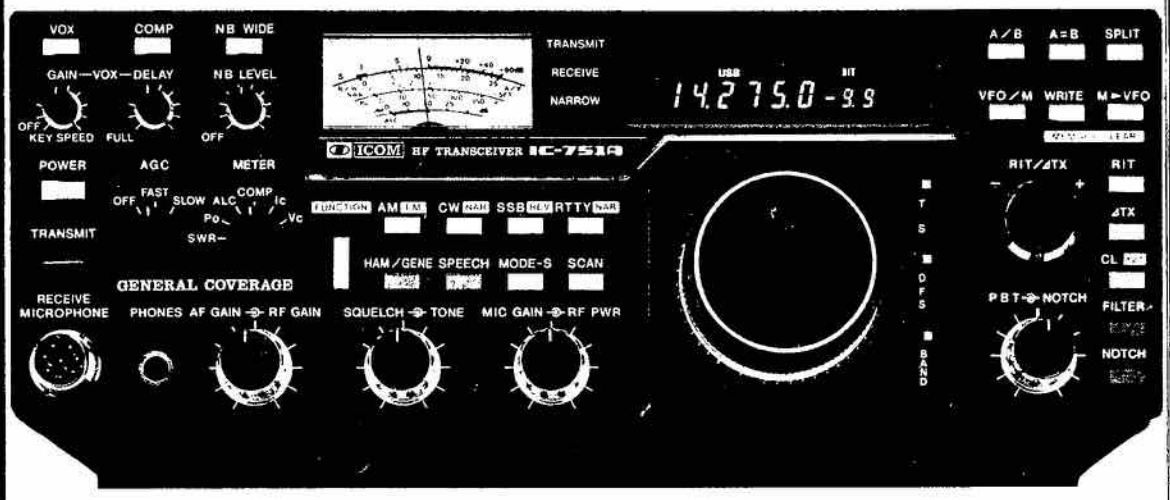
MULTIPLIER CHART CARTE DES FACTEURS DE MULTIPLICATION

Fill in QSO number sent of each new multiplier in the correct box
Entrez le numéro de QSO émis pour chaque multiplicateur nouveau dans le bon boîte

TOTAL MULTIPLIER =
MULTIPLICATEUR TOTAL =

Province Province Territory Territoire	VO1 VO2	VE1 NS	VE1 NB	VE1 PEI	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VY1	VE0	TOTAL
Band/Mode Bande/Emission														
1.8 cw														
1.8 phone														
3.5 cw														
3.5 phone														
7 cw														
7 phone														
14 cw														
14 phone														
21 cw														
21 phone														
21 phone														
28 cw														
28 phone														
50 cw														
50 phone														
144 cw														
144 phone														

NEW FROM ICOM !!



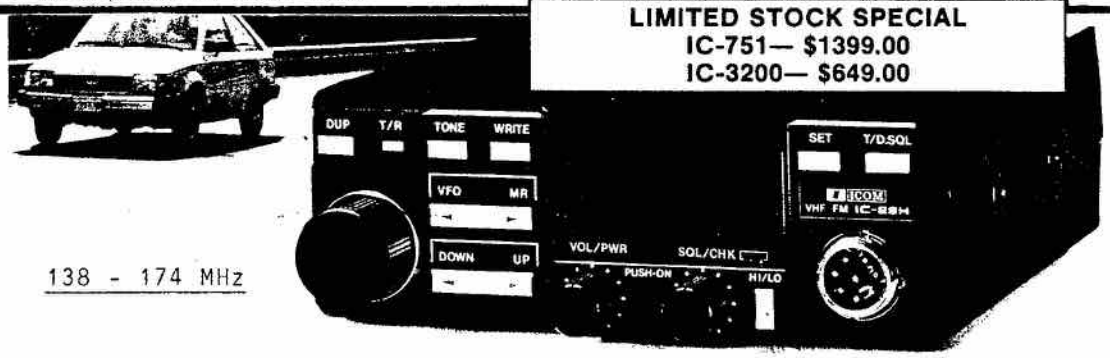
ICOM IC-751A

CAN YOU HANDLE THIS MUCH TRANSCEIVER?

The NEW IC-751A HF Transceiver carries with it all the Famous IC-751 Features as well as these new items:

- standard electronic keyer unit rated QSK up to 40wpm.
- standard FL-32A 9MHz CW Filter (500Hz).
- LED annuciator for switching functions.
- new 9MHz notch filter to reduce QRM.
- new compressor for better audio.
- CW sidetone to monitor code in RX and TX modes
- new velvet smooth tuning knob.
- thermal sensor for more stability.
- new AGC system.
- new AF Gain control.

LIMITED STOCK SPECIAL
IC-751— $1399.00
IC-3200— $649.00



138 - 174 MHz

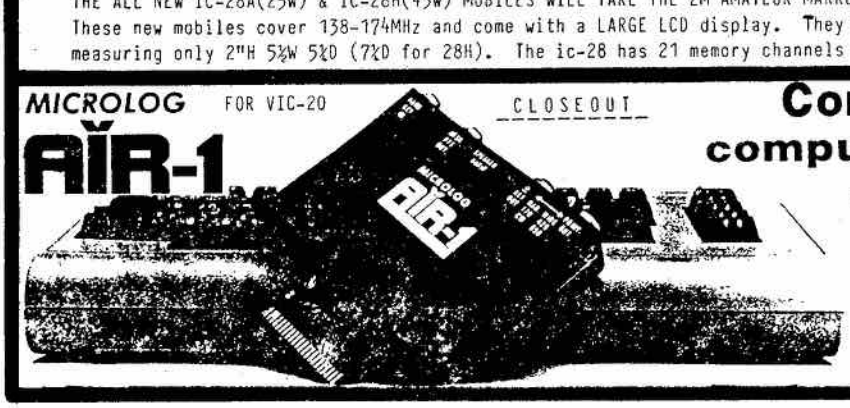
ICOM IC-28H

THE ONE FOR THE ROAD

THE ALL NEW IC-28A(25W) & IC-28H(45W) MOBILES WILL TAKE THE 2M AMATEUR MARKET BY STORM THIS SUMMER. These new mobiles cover 138-174MHz and come with a LARGE LCD display. They are extremely compact measuring only 2"H 5½W 5½D (7½D for 28H). The ic-28 has 21 memory channels that allow lock-out.

MICROLOG FOR VIC-20 CLOSEOUT

AIR-1



Connect your computer to the air!

AIR-1 Interface with built-in software. Nothing else to buy. NOW ½ PRICE. $229.00 SORRY FOR VIC-20 ONLY !! Has CW, RTTY, ASCII and AMTOR.....

Several A.E.A. MAP-64/2 left for COM-64 @ $199.95.....

NEW FRO

FT-767GX CAT Transceiv
150kHz-30MHz
power supply. New ite
are: an automatic ante
board, 430,440 board.
standard built-in feat
approaches the size of

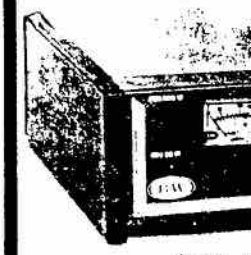
FL-7000 SOLID STATE LI
antenna tuner and powe
CW key down. The line
trolled and offers QSK

MODE

NEW ECONO KEYER

CMOS design for low c
9vdc battery will las
Fully iambic and come
Adjustable speed from

TREMENDOUS INTRODUCTO



$179.0

VS 30

The Barker & Williamson VS 300
transmitter or transceiver in the
300 watts RF power to almost ar
verticals, mobile whips, beams,
balanced lines or a single wire.
lines.

The TUNER switch, on the fron
antennas (direct or through the
The BYPASS (BYP) position all
connected coax antenna. In the
the tuner is bypassed, but not t

The wattmeter of the VS 300A
modes. The wattmeter is betwe
switch is in the COAX 1 IN, CO
output power, set the wattmete
on the 300W scale. To read the
30W and read the reverse powe

YAESU !

- this new transceiver comes with built-in available on this unit tuner, 6M board, 2M retains all of the s of the 757. The size FT-980.

R AMPLIFIER with auto-upply. Output is 500W is microprocessor con-d is Amtor compatible.

CC-1

C-1
ent drain, built-in
er 2 years.
th all cables.
-3wpm.
SPECIAL $69.00

USED GEAR.

FT-707 HF XCVR	$699
FT-77 HF XCVR	$699
TR-4 HF XCVR+PS	$399
FRDX-400 RCVR	$149
FV-901DM VFO	$199
SP-901P PATCH	$ 99
FT-207R 2M HT	$199
FT-208R 2M HT	$299
LC-208 LEATHER	$ 39
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SM-6 DESK MIKE	$ 49
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CHECK WITH US, IT CHANGES ALL THE TIME

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Tailtwister	$779	$599
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Antennas		
TH2MK3S	499	395
TH3JRS	539	429
Explorer-14	899	699
TH5MK2S	1129	899
TH7DXS	1299	1049
105BAS	389	309
153BA		199
153BAS		239
155BAS	589	469
204BA		499
204BAS	739	589
205BAS	999	799
7-2 2EL 40M	929	739
64BS	189	149
66BS		269
23BS	60	55
25BS	75	69
28BS	105	95
214BS	125	115
V2S	125	115
GPG2A	69	65
OSCAR PACK	TBA	TBA
BN-86S	59	45

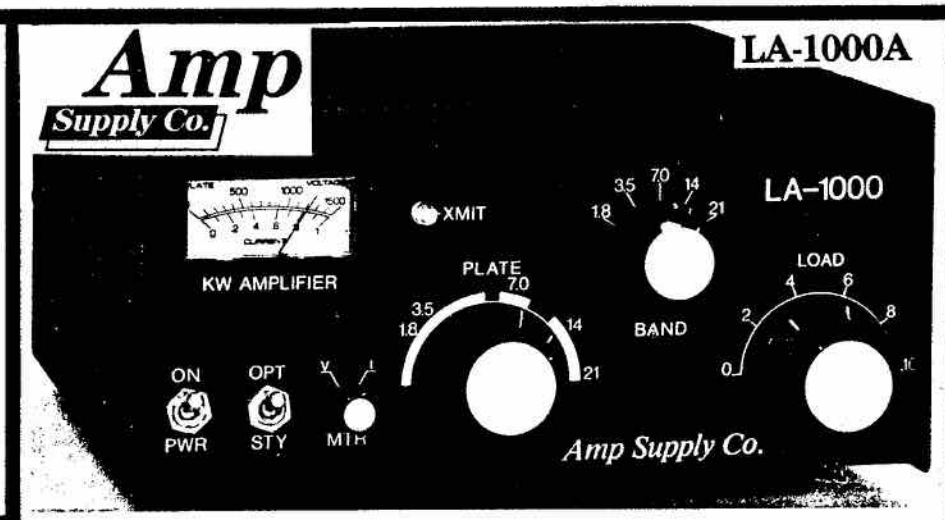
B&W
BARKER & WILLIAMSON

A Transmatch

smatch is designed to match virtually any receiver, 10 meter range (1.8 to 30MHz) with up to enna, including dipoles, inverted vees, n wires and others, fed by coax cable, alun is built in for connection to balanced

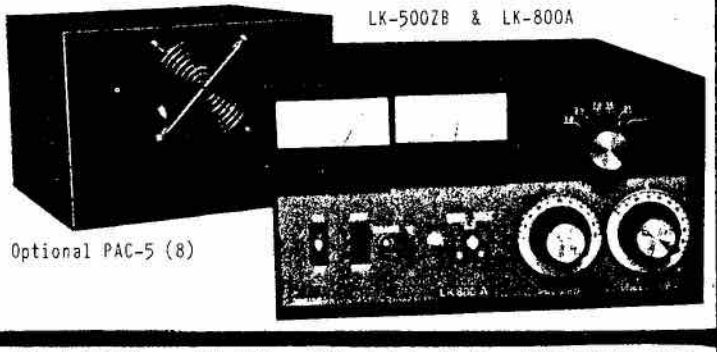
el, provides switching to one of two coax fed), and either a balanced line or wire antenna. switching to a dummy load or a direct ASS, COAX 1 OUT or COAX 2 OUT positions, ter circuit.

e used with the tuner or when in the direct transmitter and the tuner when the TUNER IN or WIRE positions. To read the transmitter ch to FOR 300W and read the forward power se power, set the wattmeter switch to REV he 30W scale.



ATLANTIC HAM RADIO has decided to import the AMP SUPPLY CO. line of HF linear amplifiers. The people at AMP SUPPLY have been designing and manufacturing amplifiers since 1974 and have been respected for their product. The lineup consists of 3 amplifiers each with several versions.

LA-1000A	$ 849.00	Plate power input 1200W SSB, 700W CW, 400W RTTY, 160-10M Uses (4) inexpensive 6MJ6 tubes. Covers 30M on 40M. (tubes supplied)
LA-1000NT	$ 999.00	No tune-up version of LA-1000A.
LK-500ZBN	$1895.00	Like LK-500ZB but without QSK feature.
LK-500ZB	$2099.00	RF Output 1.5kW CW SSB, 1kW RTTY SSTV Average. Covers 9 bands (WARC) 10-160M. Uses (2) 3-500Z tubes (supplied). Beautiful 'B' design.
LK-500NTB	$2595.00	Like LK-500ZB with NO tune-up required.
LK-800A	$4299.00	RF Output 1500W+++, 9 band 10-160M 1.8-2.4 & 3-30MHz Continuous. Uses (3) CX-800A7 Triodes (supplied), AB_2 ground grid, QSK,
LK-800NT	$4799.00	No tune-up version of LK-800A
PAC-5 (8)	$ 725.00	External power supply for 500 or 800 continuous operation. (Optional)



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M.F.J.

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PLEASE SEND 2 - 34¢ STAMPS FOR CATALOG & INFO REQUESTS.....
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CANADA CONTEST
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CALL
INDICATIF _____

☐ single operator, all band
operateur simple, toutes les bandes

☐ single operator single band ____ MHz
operateur simple, une bande

☐ multi operator all band
operateurs multiples, toutes les bandes.

SCORE CALCULATION

Total QSOs *QSOs totaux*	☐			
Canadian QSOs *QSOs avec le Canada*	☐	× 10 =	☐	points
Other QSOs *Autres QSOs*	☐	× 4 =	☐	points
Bonus QSOs *QSOs bonis*	☐	× 20 =	☐	points
QSO points *Points de QSOs*		=	☐	points
Multiplier *Multiplicateur*			☐	(see over for chart) (regardez au verso)

Total Score = QSO points X multiplier =
Points totaux = points de QSOs X multiplicateur = ☐ points

name
nom _____ call
indicatif _____

address
adresse _____

_____

TX/RX
EMITTEUR/RECEPTEUR _____ POWER
POUVOIR _____

antennas
antennes _____

OPERATORS:
OPERATEURS: _____

NATIONAL VOICE OF THE CANADIAN AMATEUR
VOIX NATIONALE D'AMATEUR CANADIEN

Date: _____

Signature: _____

Paul Cooper VE3JLP
RR 2 Metcalfe Ont.
K0A 2P0

·CQ DX·CQ DX·

QSLs! QSLs! QSLs!

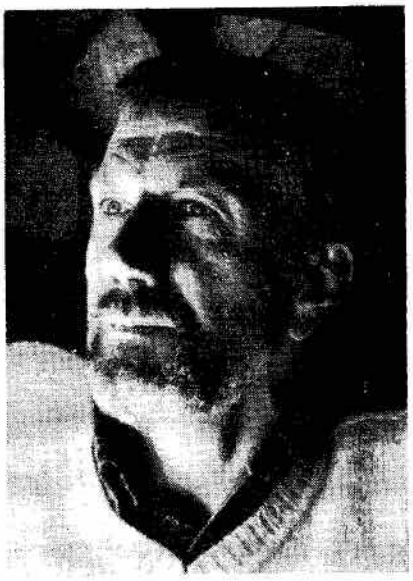
It's one thing to work a DX station, perhaps fighting your way through a pile-up to do it, but it often seems to be even more of a challenge getting a QSL card back to confirm the contact. Knowing how important those cards are to most of us I thought I'd devote a few paragraphs to this much vexed subject in the hope of shedding a little light here and there.

I should start by warning you that I have no magic formula that will guarantee you a card back from the other side of the world by return post. This does happen occasionally but on the whole QSL cards seem to take a long time coming even when you have followed all the obvious rules.

First of all what route should you choose for your card? For those who don't have to count the pennies, sending your card direct to the DX station or, better still, his QSL manager if he has one, is the preferred method. However there is a price to pay when we use this route and that is providing the DX station with the equivalent of funds for the return postage to your QTH. "Oh that's easy," I hear you say. "Just enclose an IRC and an addressed envelope and that should cover his costs." Pitfall number one, this covers his return postage costs for surface mail only. Any idea how long surface mail takes from some of the more remote parts of the world? A long time, and in some cases there are strong indications that surface mail just evaporates enroute! No, if you are going to QSL direct send your card by air mail and be prepared to pay for its return by air. This is where the costs start to climb and where you need some special information so that you send enough International Reply Coupons (IRCs) to pay for the return of a QSL by air.

The only readily available source of this information that I know of is in the front pages of the Call Book. Here you will find a handy table with a listing of most countries in the world together with the number of IRCs needed to pay for an air mail letter back to North America. If you haven't looked at this table before, be prepared for a shock. The number of IRCs required will be a minimum of two and in a number of cases you will have to send five to guarantee return by air. IRCs currently cost $1.05 each in Canada (they went up on April 1, 1986) so you are looking at a total cost for that QSL from Singapore, for example, of nearly $6. A new ham in a hurry to get well up the DXCC ladder could find himself spending perhaps half the cost of a new HF rig just to get the cards back quickly!

A neat way of getting airmail



Paul VE3JLP.

postage to a DX station is to send him unused 'Mint' stamps of the appropriate value to put on his return envelope. We are talking, of course, of stamps issued by the DX station's post office and these are available in North America through a 'DX Stamp Service' or perhaps through your local stamp collector's shop. In the latter case you will have to do some detective work to ensure that you send stamps of the right value to cover air mail to Canada. If I had a DX stamp service just down the road I think I'd use this method all the time. Unfortunately, like the vast majority of Amateurs, I can only contact the Stamp Service via the mail which means that another letter must be sent and an answer received before you can send off your card. "Too much of a hassle," I hear you say? I have to agree with you.

A popular alternative to IRCs, particularly with U.S. Amateurs, is a 'Green Stamp' which is, of course a U.S. one dollar bill. I don't like this method at all. To start with, one should never send cash through the mails, it only invites pilfering. But there is a much more serious reason why you should avoid this alternative. Many third world countries have tight currency restrictions, they are not allowed to receive foreign currency except, perhaps, officially through their own banks. Your apparently harmless dollar bill in an envelope breaks this rule and could get the DX operator into very serious trouble including losing his ticket or worse. Rule of thumb here, no green stamps no matter where the destination. If you want to send funds, beyond the cost of air mail postage, this can always be done by enclosing a few more of those expensive IRCs.

I mentioned the risk of your card getting stolen and this reminds me that there are a few simple steps you can take to minimize the chance of this happening. Make sure the enclosures in your envelope cannot be detected by holding up the envelope to a strong light. We don't want to give the third world postman the idea that there may be something of value inside. Don't make the mistake I made in my early days of QSLing when I thought my friend at the other end would appreciate an envelope covered with different Canadian stamps. My envelope certainly looked colourful but I'd forgotten that third world postman who also thought it looked attractive, so attractive in fact that he took it home himself! If you have the complete address of the DX station including the operator's name I suggest you do not put his call sign on the envelope, why draw attention to the fact that your letter is on the way to a radio Amateur?

Back to those colourful stamps. Why not put in your envelope some used Canadian stamps, in many cases these will be appreciated as quite a few Amateurs also collect stamps. Even better what about enclosing a photograph of yourself, preferably in the shack? This is a nice gesture which will certainly help to make your request for a card stand out from the others. I know I always get a kick out of receiving a personal photograph with a QSL card. It has often triggered a further pleasant exchange of letters

Page 28

quite apart from helping to get that vital card.

There are a few dos and don'ts in filling out your card. Write carefully or rather print everything clearly. I've received so many cards over the years that were scribbled or scrawled so that I couldn't read the date or time and hence had great difficulty in finding my own log entry.

Always use UTC for the time of the QSO, your local time could create great confusion at the other end. The date of the contact needs particular care since some countries write it out in the form 'Day-Month-Year' while others use 'Month-Day-Year.' This means that when you pick up a card from Lower Slobovia with the date filled in '2-10-82' you don't know whether the contact was on the second of October or the tenth of February!

I think the best way around this problem is to place the month in the middle using Roman numerals thus the second of October becomes '2-X-82.' This convention seems to be recognized throughout the world so I suggest you get in the habit of using it. If you make a mistake in filling out your card, and you pen in a correction, you have ruined the card, at least as far as the DXCC desk at the ARRL is concerned; they are unbelievably picky about changes on QSLs. The moral here: if you make mistake on your card tear it up and start again.

You wouldn't think there was anything tricky about placing your card and the carefully addressed return envelope inside the outside envelope addressed to the DX station, would you? Well there is one mistake you can easily avoid as far as that folded return envelope is concerned. Make sure the open end of the folded envelope is pointed towards the flap of the outside envelope. What we are trying to avoid is a minor disaster at the other end when the enthusiastic DX operator, delighted to see an envelope from Canada and wondering what might be inside, sticks his knife under the envelope flap to open the letter, cuts through the flap and at the same time neatly slices your return envelope in half.

Before I leave the subject of direct QSLing and specifically the use of IRCs, there is one other pitfall. The IRC is universally accepted by all member countries of the International Postal Union which means almost every country in the world. However there is one important exception which you should know about and that is South Africa. This country was expelled from the United Nations some years ago and in consequence has also dropped its membership in all UN agencies including the IPU. The result is your IRC is useless to an Amateur in ZS unless he uses it to send on to another DX station somewhere else in the world. This applies to all the ZS calls including ZS3, the protectorate of Namibia, which of course is still under South African control despite UN resolutions to the contrary.

I'm not sure about the situation in those two independent countries entirely surrounded by South Africa namely Lesotho (7P) and Swaziland (3D6). There may be a problem here with IRCs since these countries are rather closely linked with South Africa in many ways. I suggest you query the DX station on whether IRCs are acceptable and be guided by his reply.

I have left until last that old standby in QSLing, the ubiquitous 'Bureau.' How many times have we all heard that phrase coming back to us from the other side of the world "My QSL om sure via buro"? I assume that most of you know how to use the Bureau system, keep a supply of stamps and envelopes at the CARF bureau and regularly receive bundles of cards from all over the world. The bureau system has much to commend it and we all owe a vote of thanks to those tireless workers all over the world who sort and package our cards for nothing.

The main snag with the system is that, for some countries anyway, it can be very slow. I have had several cards from the USSR for contacts made five years ago and the average card I get from them is about two years old when I receive it. On the other hand cards from the UK, for example, take only a few months. From a cost-benefit point of view, assuming you can live with the delays, the bureau is the way to go. I particularly get a kick when I sort through the 30 or 40 cards that come every month from the Bureau and there amongst them I find a jewel, a card from a country I have not had confirmed before. How nice to tick that country off the list without having to invest dollars in QSLing direct! However as your DXCC score rises you will find this happy event occurring less and less frequently until you may eventually conclude, sadly that a QSL bureau is "An organization that exists to send you cards you don't need"!

Writing about the business of QSLing has taken more space than I had originally planned, however I hope you will agree that such an important topic deserves our careful attention. I may well have left out something you feel is important to the success of exchanging cards with a DX station. If you think I have missed a point, drop me a line or write to *TCA* direct. Lets try to plug all the gaps and make our QSLing as effective as possible.

QSL INFORMATION

Callsign	QSL Via	Callsign	QSL Via
A35EA	ZL1AMO	SW2UA	SV2UA
A35ZK	JJ1TZK	TU2NG	N5GAP
CU1CB	N2NUR	TR8SA	F6FNU
D68WS	DJ6QT	TR8DR	W2PD
EL2AY	N5GAP	V3GAT	KØRWL
EL2EF	KM6E	VK2EVP/LH	JA1WSA
FOØBRS	W2GBX	VP8CBO	GØBAU
HL9EP	KØVZR	VQ9QM	W4QM
JJ4HN	N6LHN	3D2JA	JJ1TZK
J87A	N4PN	5T5SL	DL8DF
KX6DS	N4NO	7PØBE	VE3FXT
PQ8ZZ	PY4AG	8P9AG	K6ZM

BITS AND PIECES

ZA, Albania— The rumour mill seems to be working overtime these days as I scan various DX news sheets to keep readers abreast of what may be coming up on the bands. On just about everybody's most needed country list is Albania and lo and behold it looks as though we may get a chance to work it later this year. 'QRZ DX' reports that a group of 5 Czech operators are planning to put ZA on the air for nine days this fall, starting about Sept. 23. They even quote a call sign, ZA2ACP, so perhaps this exercise will be successful... fingers crossed everyone!

FOOX, Clipperton Island— Look out for this operation, planned to start early in May and to run for five or six days. The operators, all West Coast DXers, are led by W6SZN and they plan to concentrate on those parts of the world that had difficulty in working the last Clipperton DXpedition in April 1985. The areas they are thinking about include Europe, Africa, the Middle East and the USSR.

YK, Syria— The UN peace keeping force on the Golan Heights has a new operator from Quebec, VE2PAB /4U. Look out for him on 14.209 MHz at 1300 UTC.

ET, Ethiopia— ET3PG is reported to be active again. He has been heard on 21.233 MHz at 1518 UTC, 21.195 MHz at 1430 UTC and 14.201 MHz at 1215 UTC. QSLs to Box 22976, Addis Ababa.

3C1, Equatorial Guinea— 3C1MB is reported to check into the INDEXA net almost every day on 14.236 MHz at 2300 UTC. QSLs go to EA7KF.

6T, Sudan— 6T2MG can sometimes be found on 14.196 MHz at 2300 UTC. We understand that he is running only 20 watts to a dipole 7 metres off the ground so working him looks like being a real challenge!

VP8, Falkland Islands— Fred VP8PTG at Walker Creek can often be

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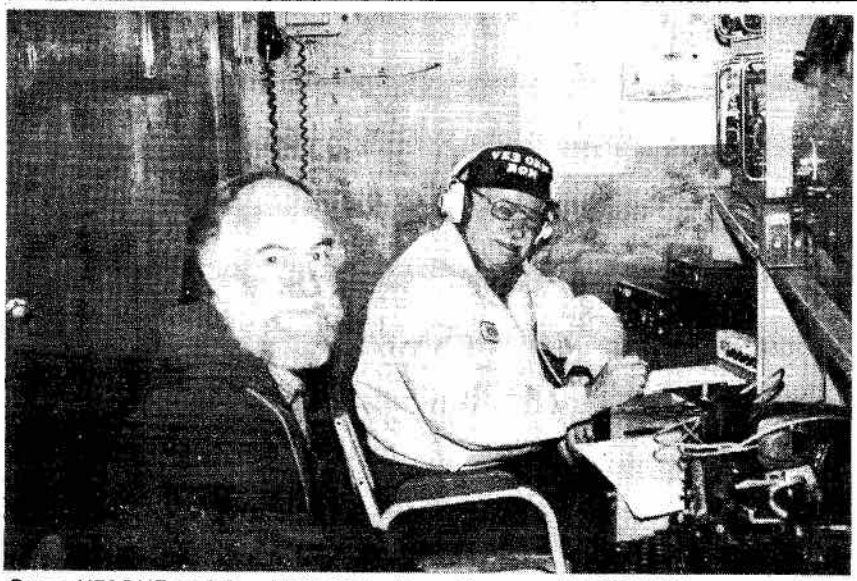
George Morgan VE3JQW
687 Fielding Dr.
Ottawa K1V 7G6

From the Clubs...



Bruce VE3OUZ and Ron VE3ORN in the radio room, HMCS Haida.

Our thanks to Ken Wren VE3MCN for the following article in *Nortopics*, the magazine of the Nortown ARC.

Well, the Nortown ARC is on the move again! During 1985 the main project of the club was the restoration of the radio room aboard the WW2 destroyer HMCS Haida.

Commissioned in 1943, she had an enviable wartime record. In 1947, Haida was recommissioned into the RCN and in 1948-49 she cruised Hudson Bay. In 1952 Haida served on two Korean tours.

In 1964, the Royal Canadian Navy, through the Crown assets Disposal Corporation, sold Haida to 'HMCS Haida Inc.' and she was towed to Toronto harbour.

In February, 1985, Bill Thomson VE3NSS of the Nortown ARC contacted Commander Frank Stockwell, M.M.M., C.D., the retired naval officer in charge of HMCS Haida. The Commander welcomed Nortown's offer of help with the restoration of the main radio room on board the ship and permission was then obtained from the current owners, Ontario Place Corporation, to proceed with the project. Bill presented the idea to the Nortown club for approval and a committee was established to assess what had to be done and how much work would be involved. Mark Johnson VE3DJU and Gary Wilson VE3ENQ headed up this group and began by taking an inventory of all the radio, direction finding, radar, and other associated equipment on board. A restoration proposal which would restore everything to working order and to its original place in the radio room was agreed upon.

On the weekend of May 4-5, 1985, members of the club participated in a special events station to commemorate the 75th anniversary of the founding of the Royal Canadian Navy. The call sign CF3NAR was used and many contacts were made on 80, 40 and 20 metre phone and 40 and 20 metre CW. Club members' equipment was used and connected to the ship's existing vertical and 'flat-top' antennas.

During the summer of 1985, Bill VE3NSS approached P. Wheatley, President of Canadian Marconi, with a request for assistance in restoring that company's radio equipment aboard the ship. Mr. Wheatley agreed and arrangements were made with Ontario Place Corporation to ship the equipment to Bill Caldwell at Marconi's Thorold, Ontario, plant. New transformers and power supplies were required and, with the assistance of Fred Hammond VE3HC, these are being prepared. Bill Ford VE3KHB of Smiths Falls, who operates a surplus electronic equipment firm, was able to provide manuals and a power supply for the equipment. It is hoped that the restored units will be back aboard Haida in time for the next tourist season.

On the weekend of Nov. 16-17, the Nortown club again operated from HMCS Haida in the ARRL November Sweepstakes contest using the call sign VE3NAR. For this contest it was decided to erect two multiband dipoles rather than use the ship's antennas. This eliminated the use of an antenna tuner and made operating a little easier.

HMCS Haida is now closed for the winter and will re-open to the public in late May. Work aboard the ship is more or less at a standstill, but there has been the occasional visit by club members to 'Radio Room 1' to either do some work or operate the station. Anyone who may want to donate their time or knowledge, or who has any Canadian naval radio equipment that may enhance the ship is encouraged to contact the writer.

Note: During the past month we have had mail for the St. Maurice Valley ARC in Trois Rivieres, PQ, and for Bruce Rattray in Saskatoon, Sask. returned marked: Moved— Address Unknown. Both have been temporily removed from the mailing list awaiting notice of change of address.

I still have not heard from any of the affiliate clubs. If you are an affiliate and have not been receiving the CARF News Service Bulletins or other announcements, please send me your correct mailing address so that we can get you back on the list. Also, if your club publishes a bulletin, put me on your mailing list so that we can hear about your activities. Bulletins should be sent to me direct rather than through the Kingston office or to the *TCA* editor in order to save postage. ■

DX CONTINUED

found on the Royal Signals Amateur Radio Society (RSARS) frequency of 14.0654 MHz from 2000 UTC on. QSLs: a possible route is via VE3AX who is the RSARS QSL manager for Canada and who may be able to handle your card.

The big airport construction project underway in the Falklands has brought in a number of British Amateurs who are active on HF from VP8. These include VP8WTW, VP8BGO, VP8BGX, and VP8BJR.

CE9, South Shetland Islands— CE9AM has been reported in a list operation on 14.210 MHz around 2300 UTC. QSL via CE3EEO. Another station active from this bleak location is CE9BCI who was noted on 7.009 MHz at around 0500 UTC.

Thanks are due to the following sources for some of the material appearing in this column: *CQ Magazine, QST, QRZ DX, Globe and Mail, Sailing Canada* and *W6PHF*.

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Loads of new material on hand. Partial listing only follows. Please refer to the extensive listings which appeared in past issues of "TCA", especially Jan., Feb. and Mar. All dimensions are in inches. Items not stocked in depth, majority one-of-a-kind. All items used, surplus, unless indicated otherwise.
Computer experimenters, DEC PDPII/40 units loaded with pcb's, muffin fans, power supplies, etc. including assorted manuals. Only $75.00. At this price suggest pickup and save shipping costs. Can supply the same computer system mounted in a very nice 6' rack on casters with power distribution box and exhaust fan for only $100.00.
Digital multimeters, Fairchild Model 7000A. Six digit display, reads ACV, DCV, Ma and ohms. AC operated, size 8x5x12 deep. $80.00.
Electric furnace, Thermoline Model 1500. Fire brick lined oven size 4 1/2x3 1/2x9 deep. Weighted hinged door. Temperature meter 0-1200 c. Overall size 15x11x16 deep. $200.00.
HP instrumentation tape recorder Model 3960B. Size 16x15x7 high, wt 50 lbs. With rack mounting ears (removeable) and manuals. Speeds 15/16, 15 and 3 3/4 ips. Four channel, 3 FM and 1 DC. Solid state circuitry. $250.00.
For the experimenter, distance measuring equipment, Tellurometer Model MRA3. Size 12x12x12. Ant. on rear of case under fibreglass dome. Built-in tuneable cavity oscillator in vicinity of 7GHz. Built-in receiver and modulator to allow speech on M/W measuring beam. Battery operated internal or external batteries. Aluminum cabinet with carrying handle. $90.00.
Similar type of unit except Model MRA-2. This is an older version but also contains small CRT monitor. Antenna is external and is stored in lid. $90.00.
Power amplifier, 50 watt low distortion audio amp, 20Hz to 20KHz. Krohn-Hite Model UF101AR. Rack mounting, size 19x9x14 deep. $85.00.
Bridge, General Radio precision Capacitance/Dissipation bridge. Model 1615A in case with GR Model 1311A oscillator, GR Model 1232A tuned amplifier and null detector and GR 1232P2 preamplifier. Uses nitrogen filled capacitance standards. Accuracy in the order of 0.01%. $500.00.
Audio oscillators, HP Model 200CD. Covers 5Hz to 600KHz in 5 ranges. Size 7x11x14 deep. Wt. 22 lbs. Table cabinet with carrying handle. $85.00.
Aduio oscillators, HP Model 201C. Covers 20Hz to 20KHz in three bands. 3 watts output. Size 7x11x12 deep. Table cabinet with carrying handle. $95.00.
Military transmitter/receiver Type C42. These units are in waterproof cases and cover 38-60MHz. Complete with separate 24VDC power supply, antenna tuner, base insulator for vertical ant., distribution box, base tray and shockmount tray, earphones, microphone and assorted cables. Units designed for mobile installations. Price $75.00.
Inductance bridge, Boonton Model 63C. Reads directly series L and series R. Size 19x10x11 deep. Built-in oscillator source. $150.00.
Wave analyzer, Gr Model 1900A. Range 20Hz to 54HKz. Accuracy in the order of 0.5%. Built-in quartz crystal filter adjustable for 3 bandwidths. Direct reading dial. Size 19x15x16. $700.00.
DC recorder, GR Model 1522 with Gr Model 1522P1 preamplifier unit. 15 ranges of voltage, 2MV/in to 100V/in and 18 ranges DC current, 0.2uA/in to 100Ma/in. 18 chart speeds with 65 in/sec max. Size 19x7x17 deep. $250.00.
Electronic counters, HP Model 5245L. Basic range DC to 50MHz 8 digit display. Size 16x5x18 deep. Wt. 32 lbs. $400.00.
Heterodyne converter for use with 5245 series counters. Extends range to 50MHz to 512MHz. HP Model 5253B. $100.00 when purchased with HP 5245L counter.
Heterodyne converter for use with 5245 series counters. Extends range to 3GHz to 12.4GHz. HP Model 5255A. $250.00 when purchased with HP 5245L counter.
Tone burst generator, GR Model 1396B. DC to 2MHz. Signal attenuated more than 60db between bursts. Size 8x5x10 deep. Wt. 8 lbs. $190.00.
Voltmeter, Ballantine peak to peak Model 305. range 0.01 to 1000 volts in 6 ranges. 4" square meter (glass cracked). Size 12x7x5. $16.00.
Power meter, microwave. Marconi Model 6598. Built-in battery charger. Reads 0.01MW to 10MW in 7 ranges. With X band head 8-12.4GHz. 5x4 mirror scale meter, size 11x6x7 deep. $125.00.
Electronic counters, HP Model 5246L. Basic range DC to 50MHz 6 digit display. Size 16x5x18 deep. Wt. 32 lbs. $290.00.
Time interval unit for use with 5245/46 series counters. HP Model 5267A. $90.00 when purchased with HP counter.
Interactive digital plotter Tek Model 4662. Microprocessor based, 4 character fonts and RS232C compatable. Drawing area 10x15. Fully resident internal character generator. $450.00.
Signal generator, HP Model 608FR, 10MHz to 455MHz in 5 bands. Built-in calibrator, calibrated attenuator. Size 19x16x21 deep. Wt. 63 lbs. $200.00.
Oscilloscope plugin for Tektronix 500 series scopes, Type R, transistor rise time. $125.00.
Signal generator, Clough-Brengle Model OCA, 100KHz to 30MHz in 5 bands. 400Hz modulation. Output attenuator, size 11x6x7 high. This model may be of interest to collectors. $25.00.
VU meter, Simpson Type R18568B. Covers −40 to +20 in 31 steps. 4" meter. Facilities for 600 ohm load and 60Hz filter. In wooden case with hinged lid and carrying handle. Size 6x6x9. $25.00.
Card reader, HP Model 326OA, 8 channel optical mark sense card reader, will detect pencil marks or punched holes. Built-in power supply and card motor driver. With 5 ft. cord and plug for ASCII HP bus connector. Size 5x3x11 deep. Wt. 8 lbs. $28.00.
Transceiver RF tuner for Collins 618S-1 or Military ARC-38. This subassembly contains 1st & 2nd RF amplifiers, 1st & 2nd receiver mixers, 1st & 2nd transmitter mixers, IF etc. Tuning by moving slugs, gear driven. Freq. 2-25 MHz. Size 8x7x6. Wt. 10 lbs. $10.00.
Stabilized RF oscillator for Collins 618S-1, Military ARC-38. Contains Collins PTO assembly Model 70E22 and PTO assembly Model 1A7A1. Motor driven with gears & electrical clutches. Gear driven piston assembly for tuning coils; interconnections by means of miniature coax cables and plugs. Size 10x6x7. $16.00.
HF transmitters, Military URT-17 very similar to TMC GPT-750A2. Covers 2-30MHz, CW with built-in VFO. Switch for converting PA to linear operation. Output CW power 1000 watts. Pair of 4-250's in final, variable vacuum capacitor, mil spec transformers, fully metered. Slide out decks for service. Operates 115/230 volts 60Hz. Since 56x39x31 deep, wt. 1100 lbs. $300.00.
SSB exciter, TMC Model SBE-3, Military 0-672A/URA28. Covers 2-32MHz, LSB, USB or any degree of carrier insertion. Size 19x8x15 deep. With separate power supply PP1769/URA23. $110.00.
Diesel power plant liquid cooled, skid mount 5KW. Gov't. overhauled, crated. 5 hrs. on meter since overhaul. Electric start, complete control panel. $2700.00.
Controlled master oscillator, TMC Model CMO3/41. Military 0-716/URA31. Covers 1.75 to 3.75MHz Mechanical digital readout of frequency. Oscillator oven controlled, dual tuning meters. Rack mount, size 19x10x17 deep. $30.00.
Digital recorder, HP Model 5050A, 18 column BCD printer. Size 16x18x8 high. $70.00.
UHF power amplifier, Microwave Cavity Labs 1 KW amplifier. Covers 225 to 400MHz using 6942 in silver plated cavity. All circuits fully metered using total of 11 meters. This includes meter for power output and SWR plus a meter for power input and SWR. Two units, RF deck 23x19x18 and power supply deck (3 phase plate xmfr) 20x19x18. With manuals. Two units available, one with tube @ $275.00 and one less tube @ $200.00.
Dual floppy disc drives, Dec Model RX01BA complete with manual. $130.00.
Telenote handwriting system, Telos Model 75A. Modem with built in telephone acoustic coupler and writing pad. Size 12x4x16 deep. No data, appears to send and receive written messages, charts etc. $75.00.
Here's an interesting item, Telidon user terminals. Full of components. Plugs on rear for RS232 interface and keyboard. Size 23x3x14 deep. Controls on front include switch to disable T.V. $70.00.
Dual floppy disc drive system, Zilog Model 05-6013-05. Size 19x10x15 deep. $100.00.
Terminals, Volker-Craig Model 404 consisting of separate keyboard 8x16x3 high with 68 keys plus space bar and video display unit 16x13x14 deep with 12" diag CRT. $95.00.
Square wave generator, HP Model 211A. Covers 1Hz to 1MHz. Cabinet style, size 9x15x14 deep. Wt. 26 lbs. Two outputs, 3.5 V @ 75 ohms & 27V @ 600 ohms. $50.00.
Hard disc drives, Dec Model RK05. These use the disc packs type RK05K-11. Supplied with six discs. Supplied with rack mounting disc file container. $50.00.
Frequency counter, Weston solid state Model DR0302. Six segmental display units. Freq. coverage 1Hz to 100KHz, adjustable averaging period and time base. AC or DC input. Size 17x3x17 deep. $80.00.
Centronics Model 779 printer, friction feed. Table top size 18x6x18 deep. Dot matrix mechanism. $90.00.
Thermal printer, HP Model 5150A, alphanumeric 20 columns. Character print 5x7 dot matrix. Prints 3 lines per second. Size 8x7x14 deep. Wt. 16 lbs. $110.00.
High power amplifiers with useful parts for builders. These units have 12 sockets and ceramic air chimneys plus anode clamps which fit the 4x150/4CX250 series tubes. Comes with 12 type 4X150 tubes plus three 0-150 AC voltmeters, relays etc. Very heavy due to many transformers. $100.00.
DC power supplies, 110/220 input with regulated output of 48VDC @ 25 amps. Current limited and with separate breakers on AC and DC lines. Size 18x14x16 deep. Lots of filtering. $75.00.
Cavity filters, Military Model F5014A/GR. Twin filters ganged together and tuneable over 225-400 MHz. Outside measurement of cavities is 14x6. Also includes 0-200 watt RF power & SWR meter. Overall size 19x7x21 deep. $45.00.
Antenna tuners, RCA Model AAT 1000 rated at 1 KW. Components mounted in gasket sealed aluminum box 12x16x18 for mounting at tower base etc. Contains electric driven switch for band changing, tapped Air-Dux coil with link coupling and various loading capacitors. Coax fittings and twin lead feedthrus installed. $85.00.
Signal generator, HP Model 620A covering 7 to 11 GHz. Direct reading frequency dial; FM, CW, pulsed or square wave modulation, Cabinet style, size 17x14x19 deep. $125.00.
Auto transformers, Hammond 170C, 300VA. 110 to 220 volts. New, boxed. $15.00.
Northern Radio T/T converters Model 107. Built-in monitoring scope using 2AP1. Also 2" square meter 15-0-15 Ma. Dual channel with two tuneable UTC filters. Built-in power supply. Rack mounting size 19x5x12 deep. $15.00.
Ultra low frequency oscillator, Krohn-Hite Model 410A. Covers 0.02Hz to 20,000Hz in six bands. Square and Sine wave outputs. Cabinet style, hinged lid, carrying handles. Size 21x10x15 deep. $50.00.
Integrated circuit tester, Spectrum Dynamics. VL & Vcc adjustable. Built-in power supply, switches for all IC pins. 3" square meter. Size 12x12x3. $50.00.
Oscilloscope camera, HP Model 197A with polaroid back. Electronic shutter & speed controls. Internal ultraviolet graticule illumination. Remote or local operation, all solid state. Size 14x10x7. Wt. 10 lbs. $95.00.
Level recorder, Bruel & Kjar Model 2307. With 50dB log pot installed. $140.00.
Oscilloscope camera, Bolsey Dumont Model 296. 35mm film with cable release. Wollensak Raptar f2.8 lense. $25.00.
Reflectometer bridge, Siemens Model R132. Covers 0.03 to 15Mhz. In fitted case with manual and accessories. Case size 9x7x2. $75.00.
Magnetic test set, GR Model 1670A with test yoke GR Model 1670-P1. Table top sloping front cabinet with built-in power supply, zero centre galvanometer. Size 18x15x10 (max) high. $55.00.
Military night vision sight, Model MX7833A/PVS-2A. In fitted aluminum carrying case 9x5x20. Solid state power supply, battery operated. Focusing eyepiece with rubber eye protector. Mirror objective lense 3 1/4" in diameter. $500.00.
Microphone, a classic, "Golden Eagle" desk stand with press to talk switch bar. Made by Astatic. $150.00.
Note: This listing is correct at time of submitting ad to printers which is never less than 40 days before the 1st of the month of publication date. All shipments FOB Smiths Falls, Ont. and may be by rail, bus, post, truck or courier at purchasers option. Ontario residents please add 7% Sales Tax. When writing please ensure that a postage stamp is INCLUDED if a reply is desired or expected.

John Connor VE1BHA
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CONTEST SCENE

Summer is here at last, and this can only mean one thing to the dyed-in-the-wool contester— Field Day!

Yes, before you know it, Amateur radio's annual battle with weather and insects will be here again. Though not really a contest in the strict sense, Field Day is something that every ham should be involved in at one time or another. So find out where the nearest Field Day operation will be, and volunteer some help. If you really don't want to do that, then you can at least go out and tell the other people how to operate and what they are doing wrong. That's a Field Day tradition, too!

The other major operating event of the summertime for the past several years has been the IARU Radiosport Championship. This year, it has been renamed the IARU HF Championship, and there are a few minor rule changes. The contest period is now 24 hours. Also, IARU member-society headquarters stations count as additional multipliers. Full rules are given at the end of this column.

FIENDISHLY DIFFICULT CONTESTER'S QUIZ

Aha! You thought I wouldn't remember. But you were wrong. It is time for the second annual Fiendishly Difficult Contester's Quiz. Ready? Here we go.

1. How many IARU zones are there in Canada?
2. What is the oldest record in the CQ WPX SSB Contest?
3. Which callsign does not belong to a Canadian University station? VE2CUA, VE2UN, VE5US, VE2BTW, VE3OCU, VE1UNB
4. You visit Akimski Island in James Bay for Sweepstakes? What call area are you in?
5. Who holds the 160M world record in the CW WPX SSB contest?
6. How many DXCC countries have prefixes beginning with the letter 'C'?
7. What country was the 1M prefix used for?
8. Who holds the all-time low power record in the WCW Sweepstakes?
9. How many Canadian Single Operator records does VE3BMV hold in the CQ CW DX Contest?
10. How do you say 5-9 in Russian?

Okay, we are going to give you a break this year and only ask ten questions. Now that wasn't so hard, was it?

ANSWERS TO THE FDCQ

1. Five
2. 9E3USA, 1969 Africa Multi-Multi with 2,398,192 points
3. VE2BTW 4. VE8 5. CG3MFA
6. Seventeen; C2, C3, C5, C6, C9, CE Antarctic, CE, CE0A, CE0X, CE0Z, CM, CN, CP, CT, CT2, CT3, CX.
7. Minerva Reef
8. VE4VV, now VE3VN
9. Six of a possible seven
10. PYAT DYEVYAT

I am already cooking up questions for next year's quiz, so start studying now.

I'll get out of here quickly, before anyone decides that drastic action is required to prevent the third annual FDCQ. Don't forget the Canada Day contest!

RULES IARU HF CHAMPIONSHIP

DATE: July 12-13, 1986

TIME: 1200Z Saturday until 1200Z Sunday

CATEGORIES: Single operator; phone only, CW only or mixed mode. Multi-single, mixed mode only.

EXCHANGE: Signal report and ITU zone. IARU member-society headquarters stations send signal report and member-society abbreviation.

POINTS: Contacts within your ITU zone count one point. Contacts with IARU HQ stations count one point. Contacts within your continent, but different zone, count three points. Contacts with a different continent count five points.

MULTIPLIERS: Total number of ITU zones plus HQ stations worked on each band. (HQ stations do not count for zone multipliers.)

MISC: Same station may be worked once per band /mode. Logs must be postmarked within 30 days after the contest.

THE CANADA CONTEST 1985

Another excellent contest; By looking at the entrants from the other countries in these results, this contest is sure turning into a world class event. A very nice turnout in this contest with 77 entrants that entered. I added the power used and the antennas used just to show everyone that you don't need a lot of power or elaborate antenna systems to work a contest and get a good score.

Some changes that are coming up for the next Canada Day Contest on the 1st July 86 are that the special events station VE7EXPO will be operating from EXPO 86 and this one will count in the contest as a bonus station. That's an extra 20 points for this station, the same as the VCA /TCA calls. The third class of entry should be Multi-multi and for the 10 point VE stations are the ones that operate inside Canada and all other stations operating outside of Canada will count for 4 points.

CONTEST COMMENTS

Nice to hear W1AW working the VE contest, at least I beat the record. VE7BS; Sorry I couldn't spend more time. WOCEM; Band sure flat, even got some sleep in. VE6CPE; Good contest, but there sure was slim pickins on 40 at times. VE3CWE; Conditions not too bad, but where were all the Americans? VE3OOS; This is my 991 contest and 3rd Canada contest. YU7SF; Enjoyed it again this year, hope I can enter your contest next summer; Good break during the holidays. W5FO; Glad to be part of Canada Day— poor condx. W4SNH; Very poor conditions. EA1AUI; It seems that none have heard of this contest on the 2 metre band here. OZ1IZB; By the way N2AIR /VP2V had his pile-up on your contest frequency 14025 that was a shame. OH3GD; The bands were so bad, I thought my antenna cables were cut. What I like was the friendly manner of the Canadian ops in this contest. VE4ZH; One QSO with a VE5— I forgot to say NFLD in the first exchange. He replied "what province are you in?" Come on, we're not that far off the coast. VO1QU; Never heard VE7ZZZ, my steady VE7 multiplier. VE3NYT; Keep a look-out for VE3SPC in the future because we plan to compete. VE3SPC; I really enjoyed participation in the CARF Canada Contest for the first time. VE1BIS, P.S. Some of the top scorers are only on CW. ed; Enjoyed the contest, conditions were not the best and what can one do with only 100 watts and a poor antenna. VE3MOL, P.S. look at the results. ed; This contest gets better every year. In the wee small hours Brain-tongue co-ordination went down the tube. Heard many more VCA /TCA stations than ever before. VE2KM; Good contest— seems to get better and better. VE2AM; Never heard so many VEs in my life. Will be back next year. KC2KK; Where were all the western stations and VCA /TCA stations??? VE3OXT; P.S. Point your beam west Jim? ed; Thank God for locals. Where was the propagation? Fun though. VE1CBF; And only on CW. VE6BST; Had fun and lots of VE activity. W9LNQ; Enjoyed the contest and when more bands open up it will even be better. KA7FEF; Thanks for a good contest KS7L; Always a fun contest. Worked 1st VE8 who called me. NOCLV; I fear that VE3XN did it to me again? VE5VCA / VE5FX; The Canada Contest lets you say "Happy New Year" to a lot of old and new radio friends. VE3XN; It seemed like all the Canucks hit their pillows about 1 AM EST. VE3NJM; No Comments but I did get over target. VE3DQB; Anyways— a fun contest— as always. C U Next July 1. VE1BEI.

Thats it for this year's contests. It seems like everyone enjoyed the contests again. I hope to see you in the July 1st Canada Day 86 Contest this summer and if you are planning to attend the EXPO 86 and are motoring through Edmonton then give me a call and I'll put the coffee pot on.
Norm Waltho VE6VW /VE6VCA

RESULTS OF CANADA CONTEST 1985 '

ALL BAND

CALL	QSOs	VE's	MULTIPLIER	TOTAL	POWER	ANTENNA
VE3XN	487	284	69	274,068	1 kw	Beam,vee
VE5VCA	410	253	50	168,900	1 kw	beam,slopper,vee
VE2KM	306	162	38	92,568	100	G5RV,vert,dipole
VE1CBF	164	149	49	79,870	120/600	Vee, U, vert, beam
VE3NJM	266	93	34	59,908	120	Beam , vee
K9HVT	157	126	26	38,584		
VE5QX	73	56	30	26,640	1 kw	Beam, vee, loop
KC2KK	128	72	23	25,944	100	Beam, vert, dipole
VE7ICA	141	58	22	21,472	100	Beam, Vee
VE1TE	74	64	27	19,980	150	Beam, Vee
VE6EST	128	60	19	17,784	110	Quad, Vee
VE3TCA	153	66	17	17,136	180	Dipole
VE3MOL	66	59	25	16,950	100	Dipole, Quad
VE6VCA	74	56	23	16,836	100	Beam, Vee
VE6ADK	156	51	16	15,520	100	Beam, Vert
HI8LC	118	52	16	13,184		
NK4Q	61	61	18	12,780	100	Vert
VE2TCA	50	38	21	10,668	100	Beam, Dipole
VE3NEE	89	34	18	10,440	500	Beam, Slopper, Vert
NC2V	51	39	20	10,360		
VE1BEI	88	40	15	9,780		
VE3DQB	52	37	19	8,930	50	Garrant
VE5BAF	100	43	12	8,376	100	Quad, Loop, Vee
VE3MGY	83	32	15	8,010	100	Vert
VE7IC	104	29	12	7,440		
VE3OXT	101	35	11	7,106	100	Dipole
KS7L	55	34	14	6,496	100	Beam, Dipole
VE3DXY	55	31	13	6,318	100	Longwire, Vert
W8MJG	60	49	10	6,070		
VE3PCP	66	28	9	4,068		
N9LNQ	50	40	8	3,680	100	Beam, Longwire
WK4F	27	24	11	3,212	500	Vert
N8CQA	34	23	10	3,100	2	Quad G5RV
W4SNH	32	28	10	2,520		
K6XO	31	18	8	2,256		
N0CLV	40	19	8	2,152		
W5NR	18	18	9	1,800		
XF1B	20	17	7	1,526		
WO1ZV	16	16	8	1,280	100	Beam, Vert
VE2LRB	21	14	5	940	100	Vee
G4LCI	13	10	8	896	100CW/400SSB	Vert Quad
WB8HLI	9	8	6	540		
VE7CBA	9	9	4	404	100	Dipole

20 METER RESULTS OF THE CANADA CONTEST 1985

CALL	QSOs	VEs	MULTIPLIER	TOTAL	POWER	ANTENNAS
VE3MFW RECORD	295	122	20	40,640	1KW	Beam
VO1CU	300	119	16	38,694	125	Vert
W5FO	283	119	18	35,388	1KW	Beam
VE4ZH	34	26	10	3,320	100	Quad
VE3ECH	16	15	10	1,940	150	Beam
VE8RCS	27	13	8	1,664	200	Beam
VE3NYI	26	18	6	1,332	50	Dipole
K7RJ	24	11	7	1,134		
VE3BXY	15	10	6	1,080	400	Beam
LU1EWL	22	9	5	810		
KA7FEF	23	7	5	720	75	Dipole
DF4QP	6	5	4	216		
JA8CAQ	6	5	3	162	300	Beam
CN3QD	34	0	0	136	100	1 wave ground plane
OK2BBU	3	2	2	48	110	Vee
YU7SF	5	1	1	26	100	Beam
OZ1IZB	4	0	0	16	50	Beam
EA1AUI	2	1	1	14	100	Quad
YU7MSU	1	0	0	4	25	Beam

40 METER RESULTS OF THE CANADA CONTEST 1985

VE3OOS R ECORD	80	51	15	9,990	100	Vert
VE3CWE	120	53	11	9,438	450	Longwire
VE3OGS	56	24	4	1,472		

80 METER RESULTS OF THE CANADA CONTEST 1985

VE7DLM RECORD	154	74	12	13,680	1 kw	Vee
VE6CPE	103	75	10	10,020	100	Vee
VE2DTI	100	73	9	7,902	500	Vee
VE3JGC/WA	83	44	8	5,120	1 kw	Vert
W0CEM	11	11	5	550		
VO1PJ	5	4	3	132		

1.8 METER RESULTS OF THE CANADA CONTEST 1985

VE7BS RECORD	57	12	7	2,234	500	Vee & L

MULTI MULTI CLASS RESULTS OF THE CANADA CONTEST 1985

VE2FOT	391	250	50	163,200	100	Beam , Dipole
VE3SPC	278	146	37	79,476	100	Vert, Dipole
VE1WN	311	163	30	70,260	1 kw	Beam, Dipole
VE6CAW	321	113	35	69,580	500	Beam , Vee
VE2CP	430	232	21	63,392	100	Quad, Beam
VE4VCA	90	55	24	17,712	250	Beam

QRP

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

Gather up those parts you have had on your mind during the past doldrums on our bands then prepare to plug in your soldering iron. Get that QRP project on the breadboard, test it out, and put it in whatever enclosure you selected for action!

This is the challenging side of our Amateur Radio Service not the arrogant use of high power or membership on a list to work DX. Instead, form a club of low power users and experience the ultimate high in accomplishment even if you just contribute to a reduction in QRM while working 'cross-town.' Not to mention the sense of achievement from building your own solid state equipment.

SKILL VS POWER

Power, least of all, is the lowest form of anything to use to replace ingenuity. Any QRP rig used with only the slightest degree of skill will provide more enjoyment than the maximum allowable power output on today's bands. To say nothing about the difference in your monthly power 'bill'! You don't have to go back to class to understand that an S6 report using 5 Watts would only be S9 using say, 300W. Or, if you normally run 100W and decide you MUST have a high powered output amplifier of 400W, your signal will increase 6 dB or 1 lousy S unit! Tell me now, the increased power bill, irate neighbours, and damage to your health is worth it! No one likes to hide his face outdoors on a beautiful day in any season or even during one's daily routine. Which reminds me, during a QSO with the net manager, after we had cleared the last message. He was skeptical my power had been reduced to just 7 watts from 40 on the net. His closing comment, "keep it up and you may make me a believer yet!"

POSITIVE THINKING

Instead of laying out hard earned bucks on an amplifier, consider half that amount for improvements to your antenna system. Why have mega-bucks tied up in a foot warmer if you are using the same antenna? Give yourself a pat on the back for the decision and apply yourself to the task where your positive thinking could turn into e.s.p. This change in attitude, going from high to low power, is a big hurdle and you should beware, for QRP might never let you go back!

Next, you will find yourself doing a lot more listening before calling, and the urge to send those incessant CQs will soon disappear. From your judicious 'tune and listen' routine you learn exactly when to answer a CQ or call someone just signing from a QSO. If you are interested in DX, brush up on propagation, study what the high absorption bands are and you may understand why so many of us are converting those 5 Watt 'chicken brain' rigs for use on the fun band!

HOME SATELLITE SYSTEM

Tandy/Radio Shack has introduced a 'do-it yourself' Realistic 2500 Home Satellite System for $1995U.S. Step by Step set-up is explained by a 30 minute video cassette manual!
— From W5YI Report, March 1.

ICOM IC-751A

CAN YOU HANDLE THIS MUCH TRANSCEIVER?

- **All HF Band Transceiver/ General Coverage Receiver**
- **New Design**
- **100% Duty Cycle Transmitter**
- **105dB Dynamic Range**
- **All Modes Built-In USB, LSB, AM, FM, CW, RTTY**
- **12 Volt Operation**

The new IC-751A top-of-the-line HF base station transceiver is designed for the ham operator who demands high performance. Whether contesting or QSO'ing for pleasure, the 100 watt IC-751A incorporates the best features of the IC-751, plus brings you to the forefront with the following most-asked for additions.

More CW Control. For the CW enthusiast, the new IC-751A includes an electronic keyer unit, QSK rated at up to 40WPM, standard FL-32A 9MHz/ 500Hz CW filter and CW sidetone to monitor your code in RX or TX modes... great for practice!

All Amateur Band Coverage. Plus general coverage reception from 100kHz to 30MHz. May be easily modified for MARS operation.

Improved Smooth Tuning. The IC-751A features a newly designed tuning knob for velvet smooth tuning.

Added LED Annunciator. For easily identifying if you're using the tuning speed, dial, or band switching functions.

32 Memories. Mode and frequency may be stored in any of 32 memories...all the memory capability that you'll ever need.

More Stable. Even in the receive mode, the IC-751A has a sophisticated thermal sensor to monitor the internal temperature. The sensor automatically activates the cooling fan which gives maximum stability ...critical for contesting.

Newly Designed Features. The IC-751A boasts a number of newly designed features for better performance ...new 9MHz notch filter to drastically reduce QRM, new AGC system, new compressor for better audio and a new AF gain control system to improve control of the CW sidetone volume.

Options Available. Options for the IC-751A include the IC-PS30 external AC system power supply, IC-PS35 internal AC power supply, IC-AT500 antenna tuner, IC-EX309 microprocessor interface connector, SM-8 or SM-10 desk mics, IC-2KL linear amplifier, RC-10 remote controller, SP-7 or IC-SP3 external speakers, IC-EX310 voice synthesizer, CR-64 high stability 30.72MHz crystal and GC-5 world clock.

Optional Filters. FL-52A CW 455kHz at 500Hz, FL-53A CW-N 455kHz at 250Hz, FL-63A CW-N 9.0106MHz at 250Hz, and FL-33 AM 9.010MHz at 6000Hz filter.

ICOM

First in

ICOM America, Inc., 2380-116th Ave NE, Bellevue, WA 98004 / 3150 Premier Drive, Suite 126, Irving, TX 75063

MICROWAVES

Michael Ross VE2DUB
988 Hudson, St. Bruno
Quebec J3V 3Y2

Last time we took a look at the block diagram of a full blown 10 GHz receiver IF. This month I have included the plans for a 10.7 MHz IF FM system and a simple receiver preamp to be used in conjunction with a microwave motion detector.

The circuit I have chosen is a combination of designs using the CA3089E chip. The circuit board layout is taken from the RCA spec sheet, file 561. The elimination of extraneous circuits minimizes the number of external components required, resulting in a simple yet 100% operational receiver using the board alone. There is enough audio to drive an earphone or small headphones straight from the board. Mount the components as shown in the illustrations. The only tuning required is the adjustment of the transformer core for best audio.

RECEIVER PARTS LIST

1 RCA CA3089E FM IF System
4 .01 uF
1 100 pF
1 1 uF polarized
1 51 ohm
1 3.9 K
1 5 K
1 10 K
1 3 K
1 100 K
1 22 uH
1 150 uA meter
1 10.7 Mhz IF transformer

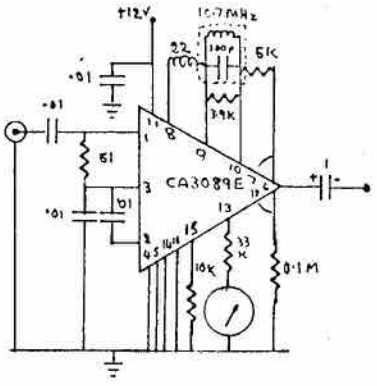
To increase the sensitivity of the receiver, a single transistor 10.7 MHz preamp can be constructed using a 2N2222A. Mount it right at the mixer diode and run RG-174 from the preamp to the receiver. It will give you at least 10 dB of gain from a minimum of parts. Future articles will describe a high gain preamp for those long hauls. If you can't get the ceramic filter right away, use a .1 capacitor in its place. It will be a little broad but will get you on the air.

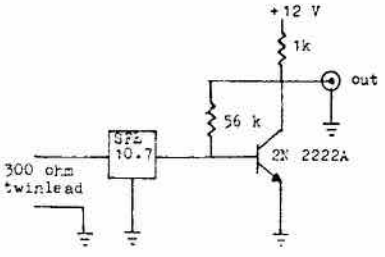
PREAMP PARTS LIST

1 2N2222A
1 1 K
1 56 K
1 Muranta Ceramic Filter SFE10.7 MA5

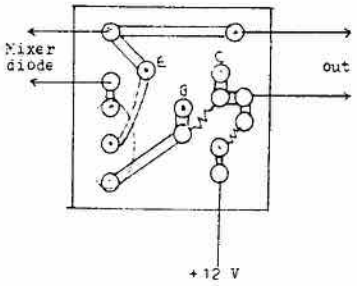
Thanks to VE2XL for supplying a copy of the 3089 spec sheet and to VE2HOT for the preamp circuit. Next month I will include the audio amp, a modified (smaller) version of the WB5MAP modulator and some other tips to get you on the air. I would like to hear from anyone who builds this and would welcome any modifications.

The receiver PCB has room for more parts than specified— don't worry about it.

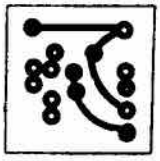




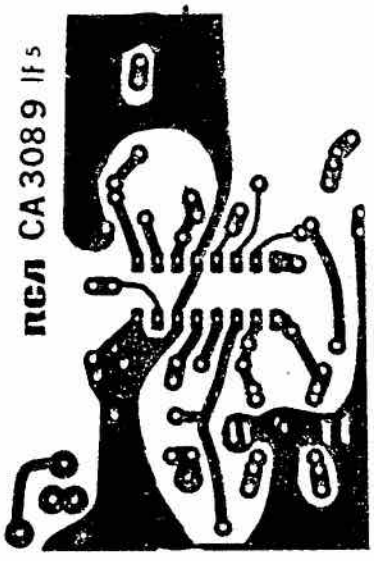
PREAMP SCHEMATIC



PREAMP TOP VIEW



PREAMP BOTTOM VIEW



BOTTOM VIEW OF PRINTED CIRCUIT BOARD

BROADCAST CONFERENCE

AM broadcast band ITU conference is scheduled for April 1 to May 2 in Geneva. How many new radio stations the 100 kHz expansion (to 1705 kHz) will accommodate will depend on the power limits and other technical parameters to be adopted. The U.S. and Canada said to be pushing for a 5 to 10 kW limit instead of the present 50 kW level now in effect. WARC-79 guidelines provide for 1605 to 1665 to be made available for broadcasting in 1988... the remainder in 1990.
— From W5YI Report, March 1.

NEW ANTENNA

Panasonic and Comsat have developed a flat plate (or planar) antenna for satellite broadcast reception that, when mounted on a roof, can be disguised as a chimney, window or skylight! They will manufacture the device as a joint venture. The plate is actually a rectangular box with one or more movable elements that do not have to face the satellite. It is easier to mount, esthetically more desirable and can be used for all types of satellite programming.
— From W5YI Report, March 1.

Introducing The New LK-500Z "B"

Legal Limit Amplifier

Thinking of buying a linear amplifier? You owe it to yourself to check out the new LK-500ZB.

The LK-500Z series of amplifiers were created to offer the best value you can buy in HF linears covering 160-10 meters. Last year, it was demonstratively the best value. It was the lowest priced, full feature pair of 3-500Z's on the market. It had the longest warranty and the only amplifier with a money-back guarantee. It's not surprising that the LK-500ZA, both the standard and "hipersil" version, became one of the most popular amplifiers on the ham bands.

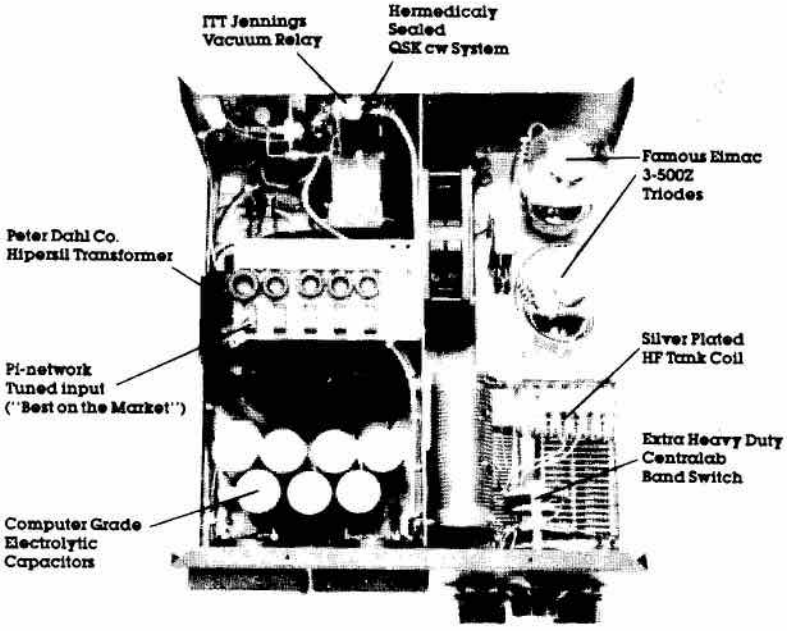
Now, Amp Supply engineers have taken this durable, dependable "rock crusher," fantastically improved it, and call it the LK-500Z "B" version.

Improvements include an ITT Jennings vacuum antenna changeover relay with a companion sealed relay QSK system which eliminates any signal attenuation between CW characters. The silver-plated HF tank coil and the extra heavy duty silver-plated Centralab bandswitch are the finest available.

The LK-500Z "B" version has all the outstanding standard features of the LK-500ZA; such as the Peter Dahl Hipersil power transformer, and a full-wave bridge rectifier system (we will not produce amplifiers using weak voltage doublers). Computer grade electrolytic capacitors are standard and the low-pass pi-network tuned input is the absolute best on the market. Oh yes, we only use Eimac 3-500Z triode tubes in the LK-500Z amplifiers.

NO RISK GUARANTEE

If you are not completely satisfied with the performance of your new LK-500ZB you may return it within ten days for a refund less shipping and repackaging. If you can get any of our competitors to give you the same guarantee, buy both and return the one you don't like. We know which one you'll keep.



The Amp Supply LK-500-ZB is a self-contained, high frequency linear power amplifier capable of amateur continuous operation at output power levels of 1500 watts. The LK-500-ZB is manually tunable from 1.8-2.4 and 3-29.7 MHz continuous.

LK-500-ZB	**$2,195.00**
LK-500-ZB Without QSK	**$1,895.00**
LK-500-ZB With PAC-5 external power supply	**$2,729.00**

Specifications

Frequency Range
160 meters 1.8 to 2.2 MHz
80 meters 3.5 to 4.5 MHz
40 meters 7.0 to 7.5 MHz
30 meters 10.1 to 10.15 MHz
20 meters 14.0 to 14.45 MHz
17 meters 18.0 to 18.2 MHz
15 meters 21.0 to 21.5 MHz
12 meters 24.8 to 24.9 MHz
10 meters 28.0 to 29.7 MHz

Drive Power
100 W Nominal for 1500 watt SSB PEP output
125 W Nominal for 1500 watt CW output

RF Output
SSB 1.5 KW to 1.8 KW PEP continuous
CW 1.5 KW Average continuous
RTTY, SSTV 1 KW Average 1.5 KW PEP

Plate Voltage
RTTY/AM/SSTV/CW/SSB 3.3 KV DC

Efficiency
60%

Input Impedance
50 ohms Resistive, Tuned input
Low Pass pi-net on each band.

Output Impedance
50 ohms SWR < 2.1

Harmonic Suppression
−50 db minimum

Intermodulation Distortion Products
−33 dB down minimum

General Information

Power Tubes
Two Eimac 3-500Z zero bias triodes

Circuit Type
Class AB_2 grounded grid

Type of Emission
SSB, CW, RTTY, AM, SSTV

Duty Cycle
Continuous duty in all modes at specified output.

Antenna Relay
Jennings Vacuum Relay

QSK System
Vacuum Relay and Hermedically Sealed QSK System

Metering
1 Meter measures plate current.
2nd Meter measures plate voltage, grid current

Output Circuit
Pi-network (Silver Plated Tubing HF Coil)

Input Circuit
Pi-network input for each band for maximum drive and linearity.

Power Requirements
115/230 VAC, 30/15 amps (230 VAC factory wired and recommended)

Power Transformer
Special Peter Dahl Co. Hipersil Transformer
1.2A ICAS
Separate Filiment Transformer

Dimensions
8" H x 14" W x 16" D (including knobs)

Weight
56 lbs.

COM-WEST Radio Systems Ltd.

8179 Main Street, Vancouver, B.C. V5X 3L2
(604) 321-1833 or 278-0423

YL News & Views

Cathy Hrischenko VE3GJH
56 Stockdale Cres.
Richmond Hill, Ont. L4C 3S9

DOT VE3QEH

In January Dorothy (Dot) Aldridge VE3QEH celebrated 60 years at the Queen Elizabeth Hospital.

Pauline McGibbon, former Lieutenant Governor of Ontario, was present along with MPP Tony Ruprecht, minister responsible for the physically disabled. Jean VE3DGG and Stella VE3NXG were also there for the party.

Tony Ruprecht MPP presented Dot with a pin and plaque from the province of Ontario. The plaque read: "To Dorothy Aldridge:

"As the member in parliament of Ontario for Parkdale and as the minister for the physically disabled in the government of Ontario, I extend my heartiest congratulations on your 60th anniversary of outstanding leadership and service in helping create a happier atmosphere for others at Queen Elizabeth Hospital and in recognition of your personal courage and achievement in setting an inspiring example of kindness and concern.

"Best wishes for continued success for many more years. Tony Ruprecht MPP Parkdale."

The QEH gave Dot a spring trip to Ottawa (tulip time). CN Hotels will contribute hotel accommodation. Doncaster Medical will provide medical paraphernalia. All transportation also provided.

I talked to Dot on the phone after hearing she had had a heart attack. She is doing just fine and looking forward to her 'Gift.' Also waiting for Barb VE3BFN and OM to return north, hoping they will get VE3QEH back on the air.

Dot VE3QEH with Pauline McGibbon.

JEAN VE3DGG

Jean is recovering slowly but improving every day. Energy coming back as the drug is cleared out of her system.

She actually had three reactions to three different drugs plus flu. At one point she was coughing constantly but that has eased and now she only coughs occasionally.

She received a B-12 shot and at the end of the month will receive another. Then they will see if she is ready to go in for a valve and by-pass operation.

VE3HGA

Viv VE3HGA, president of the Canadian Ladies' Amateur Radio Association, has had a heart attack. Send her a card at 365 Centre Street East, Richmond Hill, Ontario, L4C 1B5.

Amateur Grandmothers Club Award

The Grandmothers Club Award is being reactivated in Memory of Mary Meyer W9RUJ (silent key) which she started in 1958.

If you want a certificate send the following information. No cards:
Work 10 Grandmothers, obtaining their name, call QTH, the number and date of her Club Award.
Your name, call and QTH.

After receiving the certificate for working 10 Grandmothers, and when you send proof of working 5 Great Grandmothers, a gold seal will be sent. For the gold seal please enclose your SASE unless you send proof for the 5 Greats along with the proof of working the 10 Grandmothers. No SASE for the Certificate.

To help defray expenses, a contribution of one dollar ($1.00) is requested for each certificate.

Since reactivating this Club I started numbering the certificates, signed by me, for those who are Grandmothers with the letter 'A.' For those who are not Grandmothers or for OM's who earn the Award, I gave the letter 'B.' If and when you become a Grandmother, let me know the date and I will transfer you to the 'A' list with proper notation.

Martha J. Shirley, Custodian
W0ZWL
907 No. 7th
Rapid City, SD 57701 U.S.A.

MESSAGE FROM CARF NEWS SERVICE

We NEED more input from YOU! I would like to urge those clubs or organizations that receive the bulletin that I rely solely on your support for the material in these bulletins. I would like to hear from all of you. Let me know what you or your club is doing; many Amateurs would like to know. We are here for you; however we must hear from you in order to continue issuing these bulletins. Send your correspondence to our office or directly to Dino Moriello VE2FSA.

Lyndhurst Hospital Emergency

BY LIBBY VE3IOT

Around noon on Tuesday, Dec. 10, I received a telephone call from an Amateur Radio Store (Atlantic Ham Radio, formerly VE Sales). Harry Kiddie VE3LLR was working part time there and is a member of our local Thornhill Radio Amateurs' Club. He had received an urgent request from the Hospital Administrator of Lyndhurst Hospital asking for assistance from Amateurs to set up equipment for emergency phone-patching.

The Administrator of the hospital is Randy Swan. One of the ladies working in his office, a Mrs. Pearson, urged him to contact us as she was aware of Amateur radio and phone-patching capabilities. Incidentally Mike Pecore, a quadriplegic, VE3MZH, from North Bay, was at this time once again a patient in Lyndhurst Hospital and he had been urging the nurses on his floor ever since the phone lines went down the previous Sunday to contact Amateur Radio operators. (You may recall the controversy regarding Mike Pecore, being the first Amateur to contact the Columbia space-shuttle... but the contact was not recognized).

I was asked by Harry Kiddie VE3LLR to go down to Lyndhurst Hospital, to assess the situation and to ascertain exactly what was needed. I arrived at Lyndhurst Hospital with my handheld 2-metre rig, and demonstrated to them how phone-patching could be done. I then set to work to contact retired members of our Thornhill Club and was fortunate to have the first volunteer join me at the hospital with his handheld, I then returned to my home and picked up my KDK, 25-watt rig, power supply and 5 /8th antenna and recruited more volunteers.

Libby VE3IOT, who showed the staff at Lyndhurst Hospital how phone patching worked.

Although the hospital had been supplied with a cellular phone by Bell, during the day and peak periods, they did not find that system too reliable in the event that they might need to make more than one call should a dire emergency arise. They wanted us there for back-up. During the time we were there, we were used to contact doctors, obtain lab reports, order food for the hospital, arrange ambulance, etc. The hospital administration's greatest fear was for a possible fire and the need to contact the fire department.

We provided our services for a total, non-stop, 5½ hours. One volunteer even offered his services two nights in a row, from midnight until 7 a.m.

The staff at Lyndhurst Hospital expressed appreciation for our services and made us very comfortable. They supplied us with trays of food: crackers, cheese, fruit juice and thermoses of hot tea and coffee in addition to supplying all the volunteers with chits for the dining room. They located us in their very comfortable lounge /library and provided pillow and blankets for the overnight volunteer— who could ask for anything more?!

From the QSL Bureau

We all owe thanks to Jean VE3DGG, who heads CARF's QSL bureau. She has been in hospital recently, so send her a card, c/o Box 66, Islington.

While she is in dock, the QSL load has been taken over by volunteers. Jean says:

"Ken Rolison VE3CRL is doing all pick ups from Box 66 and is manager of Box 66, with 2 assistants if and when necessary. This is same as it's been for years.

"Basil Gould is in charge of all sorting and clearing of all mail from Ken.

"Doris Cody VE3BBO is interim treasurer. Doris has been in banking as far back as I can remember, and has been treasurer for the Ontario Trilliums and Treasurer for the VE3 QSL bureau. She is the best treasurer I've ever met in my life.

"They are in touch with me if there is something I can help them with. In VE3 work alone I go back to 1967. Too long a time to contemplate."

LES SERVICES DE CARTES QSL

Il y a plusieurs années, afin d'accélérer la distribution des cartes QSL sur le territoire canadien, FRAC créait le bureau national des cartes QSL. En 1976, on ajoutait un nouveau service à celui déjà existant: l'envoi de cartes QSL à l'extérieur du Canada sans frais pour les membres de FRAC. L'utilisation de ce service a permis des économies substantielles dans le coût d'exploitation des stations radio-amateurs. On a souvent rendu hommage à FRAC et au directeur du bureau, Jean Evans, VE3DGG, pour son travail efficace dans l'expédition et la distribution des cartes QSL.

Pour utiliser le service d'envoi de cartes QSL, il suffit de classer vos carte selon les préfixes des pays où vous voulez les envoyer et de les adresser au **Bureau national des cartes QSL, boîte postale 66, Islington (Ontario), M9A 4X1**, en indiquant, du côté gauche de l'envoi, le numéro de membre, que vous trouverez sur votre certificat. **N'envoyez pas vos cartes QSL à Kingston**, cela en retarderait l'expédition et augmenterait les coûts de manutention.

International Peace Garden

Hamfest & Computerfest

July 12-13

Manitoba-North Dakota (Dunseith, ND)— July 12-13
The third International Hamfest and Computerfest will be held July 12-13 at the International Peace Garden between Dunseith, ND and Boissevain, Man. Activities include transmitter hunts, mobil judging and CW contests. Lots of activities for kids and non-hams. Excellent camping facilities. Motels within 30 minutes. Free space for vendors and flea market. Talk-in on 52 simplex 146.25/85.

For more information, write VE4XN, Treas.,
25 Queens Cres.,
Brandon, Manitoba
R7B 1G1.

Tune-Up with Zero Radiation— Almost

BY MOE LYNN VE6BLY

Seems AO emission is heard for extended periods in the Amateur Service more and more these days. Use your VOM and this little gem to adjust your transmatch (if you own one) and avoid AO (which is illegal anyway). When using this unit you must still identify even when switched to 'tune' (dummy load) because some signal is being radiated. Your fellow ham and neighbour down the street could be using that frequency or one not too far away. Besides, we are obligated under the terms of our licence to identify all transmissions, yet it seems we still have those who are too ashamed of their call sign.

Usually you hear the tuner-uppers near some net, either CW or SSB because they intend checking in after their illegal activity, thinking no one has heard them anyway. When confronted about their thoughtless habit they invariably deny it was them and label you a clod for suggesting they might be the culprit. This in itself, to my way of thinking, is a revelation of their true colours! Whatever happened to the Amateur Creed?

PLAN AHEAD

We can all dispense with on-the-air adjustments of those so-called antenna tuners (how else except with AO do some people set these infernal contraptions?) by using a VOM and the circuit described here! My IC-745 has yet to look in to a transmatch but being old fashioned doesn't seem to have slowed down progress. The above unit was first built-in to a home-brew transmatch for a Heathkit HX-20 as an experiment some years ago so is known to work. If you are contemplating building your own transmatch then you should make provisions for this unit as a built-in accessory with separate meter or pin jacks for your VOM probes.

CONSTRUCTION

The schematic appears to be self explanatory but to simplify assembly use coax for long runs from connectors. Solder all components direct to each switch so that only one 3-terminal tie point is mounted near the DPDT switch.

When the unit is 'built-in' you are taking every advantage toward shielding without employing extra precautions except to maintain component leads as short as possible.

Any meter movement from 1mA down to 50uA is suitable, just be certain to have the shunt (R6) properly installed before powering up. Initial testing can be carried out using your VOM set on a high DC scale and switching down as you tune-up with more power. This is an especially good idea in the bread-board stage before laying out any cash for meters. The dummy load establishes maximum power rating and can be one you built from a past issue of *TCA* or any you had on hand prior to those articles.

TUNING

While in tune position, rectified RF is picked up by R5 and sent to the meter whose sensitivity control must be turned clockwise as the transmatch is adjusted for 'zero' reading on the meter. Be careful not to change the transmatch setting toward non-resonance while the meter sensitivity control (R6) is full up (no resistance in circuit).

PARTS LIST

C1— .01 ceramic 500 V
C2— .01 ceramic 50 V
D1— 1N60 or equiv.
M1— see text
R1— 1.5k 2W
R2-R4— 51 ohm 2W
R5— 1K ½W carbon
R6— 50k lin.w/sw.
S1— DPDT 5A 110V

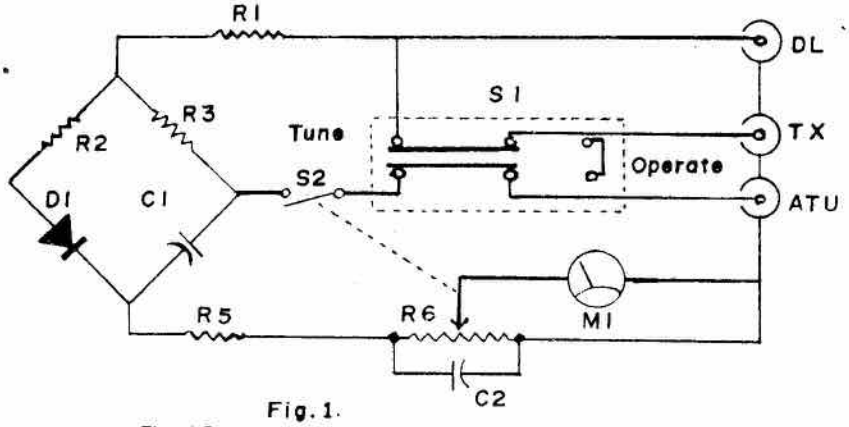


Fig. 1.
Fixed Resistors MUST be carbon.

POWER SUPPLY FIX

Commodore 64 computer Power supply fix. Originated by WA1WVD:

Power failure in the C64 power supply can be caused by a blown fuse located in the power supply, with part numbers 251052-01 or 251053-02. To fix, pry off the bottom cover with the power off. With the line cord on the left, measure up from the bottom edge 2.75cm and from the left edge 4cm. Start to chip away the potting compound at this location. The fuse is type 3AG and is one to two cm below the surface. Once fuse is found, chip it clear and replace with a new 3AG 1A. This is a soldered-in fuse so cleaning is a must.

— From NPARC

Maple Ridge Hamfest

July 12-13

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or phone (604) 467-4915.

V/UHF Coaxial Antenna

BY GREG HOLLINGER
VE3NXB

INTRODUCTION:

Do you enjoy simple, easy antenna construction projects? Do you need a simple VHF or UHF vertically polarized antenna that can be easily erected for portable or emergency use, or do you need an almost invisible antenna for an apartment window location? If you answered yes to any of these questions, please read on.

Because of the easy availability of the parts needed for this project, you can be happily building this weekend.

GETTING STARTED:

MATERIALS

- a length of RG-58 /U foam co-axial cable, or RG-8U, or equivalent
- cable termination connector
- half inch copper tubing
- #12 AWG copper clad steel wire or equivalent
- insulator (see text)
- 300 ohm twin lead stand-off insulator

TOOLS

- soldering iron
- small drill with bits
- file
- wire cutters
- tubing cutter or hacksaw
- knife
- 5 minute epoxy glue
- small bench vise
- pliers

PREPARATION:

(1) INSULATOR: The insulator can be made of hard plastic or wooden doweling. See Figure 1 for details. Dimension 'A' is found by filing down the material until you obtain a press fit with the copper braid of the co-ax firmly compressed against the inside wall of one end of the piece of copper tubing.

(2) TUBING: Carefully straighten a piece of half inch copper tubing. Measure and cut to a quarter wave length, less 3%. Remove all burrs from each end.

(3) WIRE: Carefully straighten a length of #12 AWG copper clad steel wire. Measure and cut to a quarter wave length.

(4) STAND-OFF: Remove the plastic insulator from the ring and place the insulator around the tubing. Using the pliers, spread the ring somewhat so that the insulator (with the tubing) can be inserted into the ring.

(5) CO—AXIAL CABLE: Prepare one end of the cable as shown in Figure 2.

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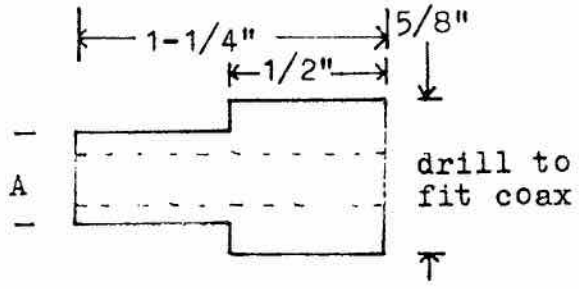

FIG. 1: INSULATOR

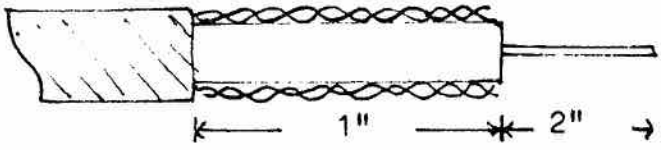

FIG. 2: CABLE PREPARATION

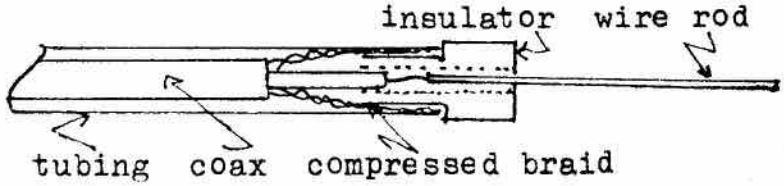

FIG. 3: ASSEMBLY

Basic design of this antenna is taken from the tenth edition of the ARRL ANTENNA BOOK, page 242.

For 144-148 MHz use, cut the rod to a length of 19.2 inches and the tubing to a length of 18.6 inches.

For other frequencies, use

$$L \text{ (feet)} = \frac{234}{\text{Freq (MHz)}}$$

ASSEMBLY:

See Figure 3 for a view of the assembled antenna.

(1) Feed the prepared end of the co-axial cable through the tubing.

(2) Place the insulator onto the end of the cable so that all of the centre wire protrudes from the hole.

(3) Carefully wrap the center wire from the cable around one end of the #12 wire rod. Solder in place.

Note: Make sure your connection will slide down into the insulator after soldering. If not, reheat and reshape the connection.

(4) Slide the connection carefully down into the insulator.

(5) Slide the tubing onto the narrow end of the insulator making sure that the braid is evenly compressed between the insulator and the inside wall of the tubing. Make sure that at least one half inch of the wire rod is within the insulator. Be careful not to damage the connection made in step 3.

(6) Position the antenna vertically. Using epoxy cement, fill the hole at the top of the insulator to mechanically bond the rod to the insulator. Epoxy may also be placed around the seam between the tubing and the insulator. Allow to set.

(7) When the epoxy has completely hardened, the antenna is ready to be placed on the stand-off insulator. The stand-off insulator, if positioned directly below the antenna insulator, will provide a firm mount. The ring of the stand-off should be compressed to provide a better hold. See Figure 4.

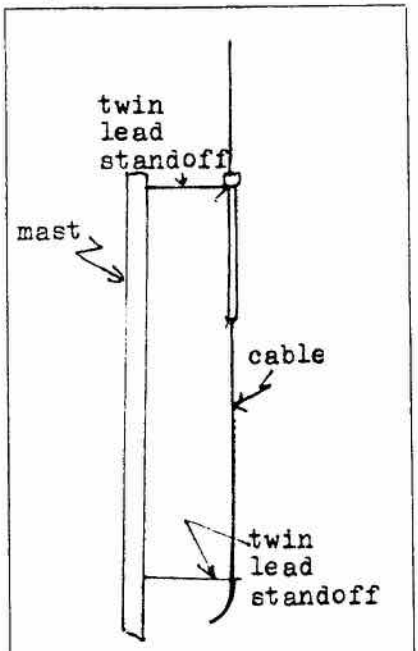

FIG. 4: INSTALLATION

CONCLUSION:

Methods for mounting the antenna to a support are as varied as there are different types of twin lead stand-off styles. When selecting a location for the antenna, keep it at least a quarter wavelength away from a metal support mast and allow the co-ax to hang at least one half wavelength below the tubing before a bend is made. Another stand-off may be used to keep the cable from blowing about in a wind.

This antenna provides reliable local omni-directonal coverage for mobile, simplex and repeater use. I built this antenna last year to use with a 2M hand-held and have found it effective for increasing usable range; but avoid long lengths of co-ax as losses may make the installation ineffective. Although I have not completed any SWR measurements so far, I did perform a side-by-side comparision with a quarter wave ground plane design and found performance to be similar.

NOTE: Keep the size (diameter) of the tubing as large as practical in relation to the co-ax diameter; e.g. use half inch tubing with RG-58 so that the antenna will be adequately decoupled from the feed.

From the Kitchener-Waterloo ARC Kilowatter

Senior Citizens TransCanada Net

Originated and sponsored by VE4WSC, this highly popular activity takes place every Wednesday on a frequency of 14130 MHZ on the 20 metre band SSB. The times are 2100Z or UTC (3.00pm CST) to 2299Z or UTC (4.00pm CST). This one hour all Canada sked is controlled by two of our members, both advanced hams, VE4GB Charlie and VE4ANY Bill.

Transmitting begins from the east to the west and then alternates. The variety of past occupations is diverse. We have ex-DOC radio inspectors, air traffic controllers, airline personnel, engineers, to cooks, bakers and the proverbial candlestick maker (truly one such does exist and checks in regularly from Sorel Quebec).

Contacts are regularly held and are consistently added to along with being a means of putting some of the regulars in touch with long lost friends.

In addition, radio liaison is maintained with other senior citizen radio Amateur groups such as those located in Windsor and Toronto, Ont., the Lakehead, Lethbridge, Alta., Burnaby and Penticton, B.C. Recently on another frequency (CW), greetings were received from such distant places as Gdansk, Poland and from a 'workers club' in Arles, France.

The Senior Citizens TransCanada Amateur Radio Net is truly an activity about which VE4WSC is most proud, and one which invites your participation, be it a veteran or ham neophyte or simply a shortwave listener.

You can hear us each and every Wednesday on 20 metres on a frequency of 14130.

73 and CU then...

Bill VE4ANY

TCA pays competitive rates for technical articles. Send them to the technical editor, Bill Richardson VY1CQ, Site 20, Comp. 63, R.R.1 Whitehorse, Yukon Y1A 4Z6.

NBARA NEWS

The New Brunswick Amateur Radio Association has been studying the possibility of linking VHF repeaters in New Brunswick. In their study they have been looking at the various linking systems now in use in Quebec, Cape Breton and Springhill to Charlottetown. They are looking for existing equipment available in the marketplace or surplus equipment to be used in the system. Among the various topics under study we find, the type of linking such as UHF radio; leased TELCO lines or Government Microwave System and who will pay for the system and its maintenance. If you can help in any way, contact the NBARA c/o Neil Lynch VE1UX, Comp. 7 Site 20, RR3, Fredericton, New Brunswick, E3B4X4.

REPEATER DIRECTORY

CARF's Repeater Directory is available from the office. Just send a stamped, self-addressed 6"x 9" envelope to Box 356, Kingston, Ontario, K7L 4W2. Mark it 'Repeater Directory,' or send 75¢.

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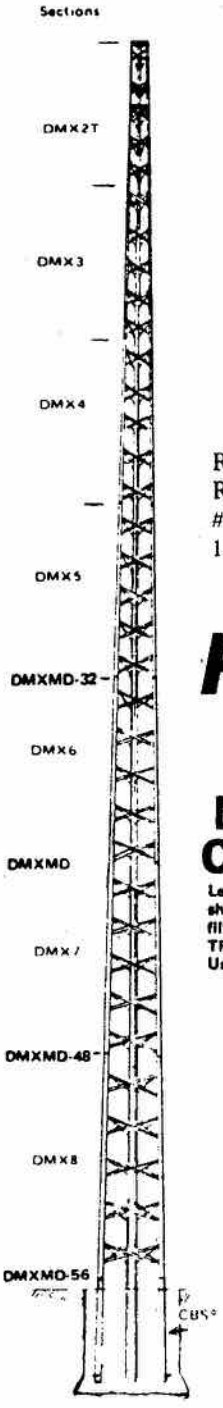

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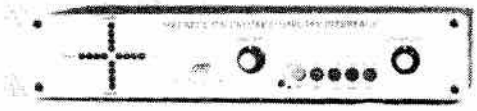

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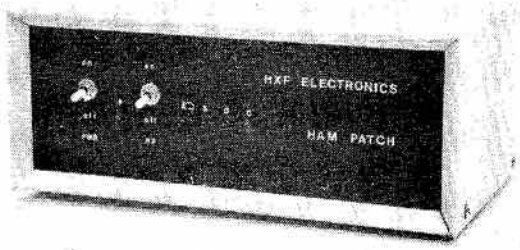

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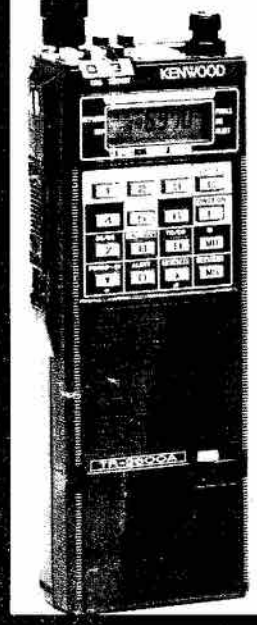

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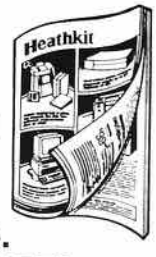

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