

# the canadian amateur



Volume Three

February 1975

Number Two

## Special meeting: CARF plans future

Your executive committee met on 1 February 1975, in Ottawa, for a special meeting, to discuss policy and future plans for your Federation.

The meeting had significance, in view of the proposed change to an individual form of membership, which was endorsed by all Federation Executive present.

A list of suggestions was tabled dealing with the needs of the individual Canadian Amateur and the means by which your National Federation can cope with Canadian Amateur problems and serve Canadian Grass Roots needs.

During discussions of the suggestions, it became evident that membership in the IARU was of minor importance to the individual Canadian Amateur, when compared with the many other activities requiring the Federation's attention. By comparison, relationships with the DOC, particularly as they affect the upcoming 1979 ITU Frequency Convention were of immeasurably greater importance than seeking membership in Region II IARU, as (ARRL approved) Canada's national amateur organization. It was realized that so long as the ARRL maintained an ambivalent stance on its recognition of your National Federation as Canada's national voice in IARU, considerable federation effort was being ineffectively expended in seeking IARU membership. In fact, such membership promised little, if any Canadian National status in the International Regulatory Body, ITU, for the main body of Canadian Amateur opinion. Consequently, your executive decided to relegate IARU membership to the lowest item on its priority list.

Those Federations' efforts which up to now had been heavily committed to this objective, would be diverted to more urgent grass roots objectives consistent with individual membership, and to support of our DOC in preparatory work for the 1979 ITU Frequency Conference.

At a meeting with ARRL Canadian Division

Representatives, later in the day, the Federation announced both its change in priorities regarding IARU and disengagement from the formalized and time consuming negotiations with the league in pursuit of this now deferred objective. The league officers were assured of the National Federation's good wishes in their stewardship of their Canadian members' interests. The National Federation will continue to cooperate with any organization or group of Canadian Amateurs, including the Canadian division, in any projects in the interests of all Canadian Amateurs.

With the league proper, the Federation will maintain a friendly, "hands across the border" relationship, as befits two neighbouring, but independent, National Amateur organizations.

It is hoped that this shift in priorities will enable your National Federation to knit together the talents of individual amateurs, local clubs, and provincial societies in a concerted drive for the protection and growth of Canadian Amateur Radio.

### INDIVIDUAL MEMBERSHIP REQUESTED BY R.S.O.

At the Executive meeting of The Radio Society of Ontario, Inc., held in Toronto on Monday, 30 December 1974, the following motion was passed unanimously:

"The Canadian Amateur Radio Federation replace the present voting societies with individual voting members at the earliest opportune time."

This motion will be put before the provincial Delegates at the 1975 Annual meeting of your national Federation.

### BCARA VOTES TO REJOIN CARF

The British Columbia Amateur Radio Association has voted to rejoin the Canadian Amateur Radio Federation at a general meeting held in Vancouver Feb. 16. Further details will appear in the March issue of The Canadian Amateur.

# the canadian amateur



Vol. 3 Feb. 1975 No. 2

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## MEMBER SOCIETIES

- Society of Newfoundland Radio Amateurs
- Nova Scotia Amateur Radio Association
- Amateur Radio League of Prince Edward Island
- New Brunswick Amateur Radio Association
- Radio Society of Ontario, Inc.
- Amateur Radio League of Alberta
- Amateur Radio League of Manitoba
- Saskatchewan Amateur Radio League

## From the Front Office

"How must the Federation develop to be accepted as the national Amateur society by the Amateurs of Canada?"

That was the question put before a special meeting of the national executive that was held on the morning of February 1.

A lively discussion took place and many ideas for future development were brought forward. One item was CARF's membership in the International Amateur Radio Union as Canada's representative. It was agreed that this membership would come but that it should be obtained as a result of strong pressure exerted by the Amateurs.

All agreed that Canada needs a strong national voice in Amateur affairs, both nationally and internationally. To fill this role your national Federation must actively function on behalf of the Amateurs, must provide services of benefit to all, and must develop areas of future activity. Certain changes in our administration and general philosophy must be made to accomplish this. To attract the individual Amateur it will be necessary to give the individual a more direct voice and control than he or she has a present and this can only be done through a voting class of individual membership. (Our Legal Counsel is now at work to furnish a solution that will be satisfactory to the individual Amateur, the provincial societies and the Minister of Corporate Affairs.)

The Aim of CARF will be to give responsible, mature and controlled leadership and to keep the Amateurs fully informed of all work and effort on their behalf. The elected Board of seven Directors will have a greater responsibility in this regard with the Officers of the corporation functioning under their direction. The Area Directors, elected by the membership, will play a more active role in the areas they represent, conveying to the Board the wishes and desires of the members they represent.

The evolution of the national society will take financing and a preliminary estimate gives \$15,000.00 per year as a target figure. The income of the Federation for 1974 was over \$6,500.00 and it is estimated that this will increase to \$10,000.00 in 1975. Representative strength at end of 1974 was well over 4,000 - an increase of 27 per cent from the previous year - making your national Federation the largest Amateur organization in Canada.

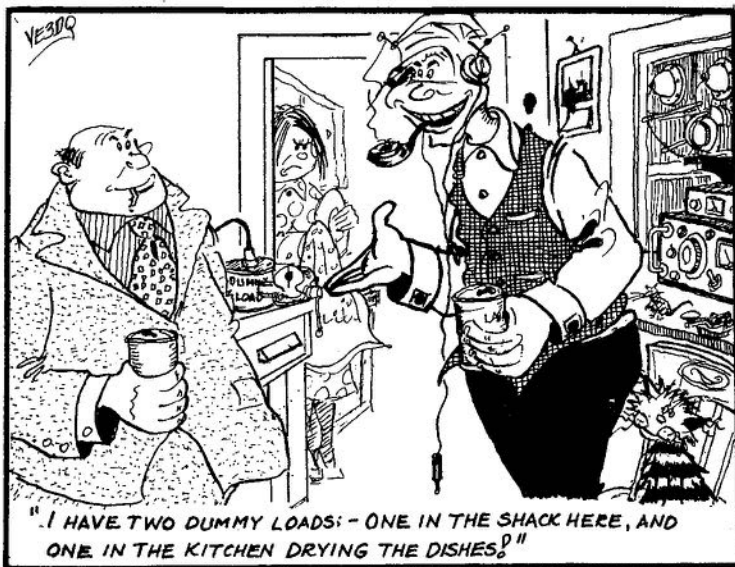
The future poses many problems and a first step to deal with these is the call of a special meeting of the Board of Directors in Toronto early in March. This will be a two-day meeting with the first day being a 'think tank' session and the second the formulation of policy and progress.

The Federation will welcome ideas and comments on what YOU want Canada's national society to do on YOUR behalf and how YOU think it can best be accomplished. Jot your thoughts down and send along to: C.A.R.F., Box 356, Kingston, Ontario K7L 4W2.

## CANADA'S OLDEST AMATEUR PASSES

Fred Bath, VE1LG, of Middleton, N.S., died early in January at the age of 99. Fred, who was known throughout the Maritimes on the air and off as "Mr. Bath" had been on the air since the thirties and continued as an active operator until just recently.

# SHORT-CIRCUITS



## FEDERATION ACCEPTED ON ADVISORY BOARD

As a measure of the success of the Federation is attaining in its recognition as the national society for Canada it is announced that the Federation has been accepted as a member in the Canadian Radio Technical Planning Board.

The objectives of this non-political, not-profit Board, made up of representatives of large user and manufacturer's associations are to advise Government concerning the development and regulation of radio services in Canada, all in the public interest. The main work of the Board, started in 1944, is confined to technical considerations, although policy matters concerning licensing and type approval procedures, and economic factors fall within its interests.

Each member appoints a main representative and an alternate. The Federation has appointed Art Stark, VE3ZS, a retired DOC official as representative and Doug Burrill, VE3CDC, as alternate. The representatives, together with chairmen of the various technical committees, the annually elected Executive Committee and the Secretary Manager form the General Council which normally meets each December.

The Executive Committee, elected annually consists of the President, the past President and four Vice-Presidents, chosen as far as possible to represent a broad geographical coverage of Canada.

From time to time the Board originates planning studies, specifications and recommendations which are submitted to the Department of Communications, but the most important part of its work is in the review of and comments on, draft specifications and procedures proposed by DOC.

Membership on the Board gives an opportunity to contribute to the realistic management of the radio spectrum, policy on licensing, regulations and standards. The appointment of Art Stark as the Federation's representative should provide the Board with inputs on regulations and other matters which Art has dealt with over the many years he spent with DOC.

## LICENCE RENEWALS

It will soon be time to renew your Amateur station licence. However, don't send in your money right away. The D.O.C. prefers you to wait until you have received a renewal notice from them. Then send your payment With the return portion of the renewal notice. This way it simplifies the bookkeeping and the processing and dispatch of your new licence or receipt.

This year Ontario Amateurs will be receiving a new licence. Be sure to post it "in a conspicuous place in the station".

The main volume of licence renewal notices are handled in the D.O.C. by computer processes. In order to avoid, as far as possible, the individual manual handling of renewals for recently issued licenses, the renewal notice action is postponed until late in March. This may mean that your renewal notice does not reach you in time to send your payment before April 1. Don't panic! Wait a reasonable time - even two or three weeks - before taking alternative action. In the meantime you may continue to operate your station. The D.O.C. will not take action to cancel your licence or to close you down if you are prompt with your payment once you have received your renewal notice.

## Letters to the Editor

Dear Editor:

Have just finished reading the December 1974 issue of the Canadian Amateur.

I always knew that C.A.R.F. was first everywhere, but that visit to the Moncton Convention (Page 2) must be something of a super first, since that Convention won't be held until the summer of 1975.

The 1974 Maritime Convention was held in Fredericton. Tell VE3CDC Doug, that I now know where that missing case of wine went. He sure must have tied one on. Also on page 6 there are references to "St. John", that's Doug's hometown!! There must be more to that wine story.

VE1TC Leo  
President

Fredericton Amateur Radio Club  
P.O. Box 412  
Fredericton, N.B.

Rest assured that VE3CDC was hung by his thumbs until he admitted to his crime. He still wouldn't disclose where he hid the rest of the case, though. — Editor.

(another letter appears on page 12)

(Shown approx. 1/2 size)

**A SPECIAL OFFER FROM THE "AMPS" ... PERSONALIZED ADDRESS LABELS WITH YOUR CALL LETTERS ON THEM**

Packaged 100 to a pad, moisten and apply, as simple as a postage stamp.

**NOW YOU CAN PERSONALIZE YOUR LETTERS AND ENVELOPES WITH THESE HANDY LABELS**

For a donation of \$1.00 or more we will send you your personalized labels containing your call letters. Print your name, address and call letters on a plain piece of paper and send it to us along with your donation. Space limited to a maximum of 4 lines deep and 23 letters and spaces per line.

**DONORS OF \$5.00 OR MORE WILL RECEIVE OUR OFFICIAL RECEIPT FOR TAX PURPOSES ... THANK YOU!**

**THE WAR AMPUTATIONS OF CANADA**  
140 Merton St. Toronto, Ontario M4S 1A5



Canadian Repeater Advisory  
Group

VE3CDC

Reports from Fredericton state that VE1GT now has an autopatch. New Brunswick Amateurs are warned by VE1IN in the LCARC bulletin that some stolen portable low-power 12 channel 2 meter rigs may be offered for sale in southern N.B. If offered such rigs from dubious sources check the serial numbers with the RCMP.

If you have purchased the "FM Repeater Atlas For The Entire World" from "73 Magazine" you can update the Canadian section from the following:

Add Shilo, Manitoba, 6.25-6.85 (call not known) sponsored by VE4QI; Bathurst, N.B., 6.22-6.82, owned by VE1PL, who is seeking an eventual site across the Bay of Chaleur in Ve2; Yarmouth, Ve1GM, 6.34-6.94; Brampton, VE3MHZ, 6.28-6.88; Ramore, VE3TIR, 6.46-7.06; Wawa, VE3WAW, 6.34-6.94; and Charlottetown, P.E.I., VE1AIC, 6.10-6.70. Change Ottawa-Hull to VE2CRA; Alma, VE2SP is 6.34-6.94; Chicoutimi, VE2IU, is 6.16-6.76; Kamloops call is now VE7KAR; Victoria VE7BEL is now 6.25-6.85.

News from Saskatchewan is that Prince Albert will have a machine on 6.46-7.06 this summer.

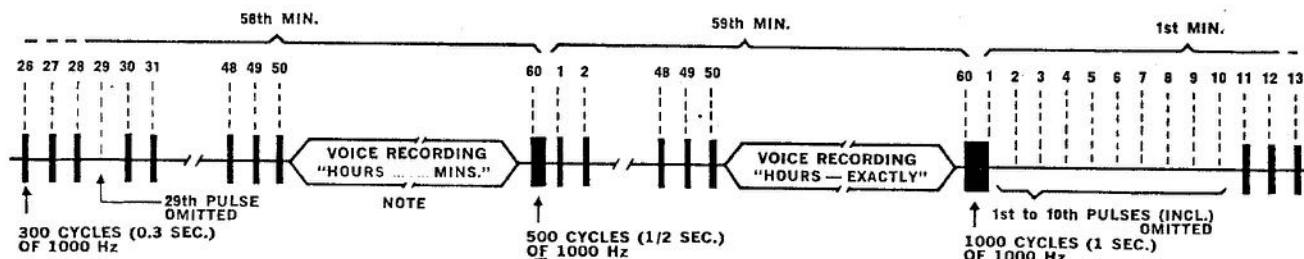
With the advent of more repeaters in a number of areas, the original Canadian plan of five primary repeater channels has to be expanded to suit conditions in congested areas and where wide area repeaters are being put on the air. The few replies to a CRAG query and a look at new repeaters seem to indicate that the following five repeater channels have found some favor as a second "set" of channels for the Canadian plan. These are:

6.01-6.61	6.10-6.70
6.04-6.64	6.25-6.85
	6.37-6.97

So far only VE1SMT is on 6.01-6.61. VE1LHR, also a wide area repeater is on 6.04-6.64, as is VE7CNR. Two Charlottetown stations, VE1ATN and VE1AIC input on 6.10 and the latter outputs on 6.70. For 6.25 and 6.85, there is VE3BOR and VE3OCR. On 6.37 and 6.97 are VE3KSR and VE3WXR.

The effect on repeater congestion of the recent FCC proposals for restructuring the U.S. rules and permitting non-code licensees on 2 metres and above has not yet been assessed but it will probably not improve the congestion in Canadian-U.S. border areas.

#### CHU DATA TRANSMISSION SEQUENCE



#### NOTE: VOICE RECORDINGS ALTERNATE IN FRENCH AND ENGLISH:

"CHU CANADA, EASTERN STANDARD TIME ..... HOURS ..... MINUTES ..... HEURES ..... MINUTES" (EVEN MINUTES)  
 "CHU CANADA, HEURE NORMALE DE L'EST ..... HEURES ..... MINUTES ..... HOURS ..... MINUTES" (ODD MINUTES)  
 "CHU CANADA, EASTERN STANDARD TIME ..... HOURS EXACTLY" HEURES PRÉCISES" (ON THE HOUR)

## CHU: Canada's Time Service

The National Research Council of Canada radio time signals are broadcast over station CHU which is located on the south west outskirts of Ottawa at 45 degrees 17' 47" N, 75 degrees 45' 22" W.

Continuous transmission is made on three frequencies, 3330, 7335 and 14670 kHz. Transmitter power output is 3 kW on 3330 and 14670 kHz, and 10 kW on 7335 kHz. Vertical antenna systems are employed.

The three transmitter frequencies and time signals are derived from a cesium frequency standard which is referred daily to the Canadian cesium primary standard.

The seconds' pulses consist of 300 cycles of a 1000 Hz tone. The beginning of the pulse marks the exact second. The zero pulse of each minute is one-half second long, and the zero pulse of the hour is one second long. The pulses occur at the rate of one each second with the following exceptions:

1. The 29th pulse of each minute is omitted.
2. The 51st to 59th pulses inclusive of each minute are

omitted. During this interval station identification and time is announced by voice.

3. The 1st to 10th pulses inclusive are omitted on the first minute of each hour.

A voice recording of the time occurs each minute in the ten second gap between the 50th and 60th second. It refers to the beginning of the minute or hour pulse that follows. The announcement is on the 24 hour system, alternating in French and English.

The station supervisor is VE3BCL, Sid Sheard.

#### AVAILABLE FROM CARF

This service is open to all Amateurs.  
 CARF members may have the emblem added at no extra cost.  
 Good variety of distinctly Canadian designs and color schemes.  
 Can be printed in lots from 200 up.  
 For package of samples, send 25 cents in stamps to: C.A.R.F. QSL DEPT., P.O. Box 356, Kingston, Ont. K7L 4W2

QSL  
CARDS

# FCC Docket 20282 and the Canadian Amateur

The FCC of the United States has recently issued Docket 20282 which outlines a proposal to restructure the US Amateur Radio Service. A brief article on the major changes suggested in the Docket was given in the January issue of T.C.A. However, a close perusal of the Docket indicates two changes that will seriously affect the operation of the Amateurs of Canada. The first change will permit their Advanced class similar phone frequency privileges as are now allocated to their Extra class operators; the second is the proposal to permit their Novice class the use of transmitter power inputs of 250 watts.

Canadian Advanced Amateurs, who number approximately 10,000, now use the frequencies 3725-4000 kHz on 75M and 7150-7300 kHz on 40M for phone operation, with nets and general intercommunication requirements handled on the sub-bands 3725-3800 kHz and 7150-7200 kHz due to the strong interference existing above 3800 and 7200 kHz. Interference is also experienced from the US Extra class from 3775-3800 kHz and 7150-7200 kHz and the US Novice class from 3725-3750 kHz.

The US Extra class numbers 12,849 and the proposal will permit an additional 60,649 US Advanced Amateurs to use 3775-4000 and 7150-7300 kHz. The influx of this large number of stations will create a very high level of interference and effectively reduce Canadian phone operations to 3725-3775 on 75M and NIL on 40M.

The US Novice class, using 250 watts and VFO control, will greatly increase the interference level on 3700-3750 and 7100-7150 kHz and effectively reduce Canadian phone frequencies on 75M to 3750-3775 kHz.

As the DOC Referendum of 1973 demonstrated that the majority of Canadian Amateurs desired re-allocation of phone sub-band frequencies on 75 and 40m, your national Federation has pressed for action be taken. This further proposal by the FCC has been brought to the attention of the Department of Communications with the request that the original request of the Federation, made at the direction of the provincial members, be followed. This request was that the Advanced Amateurs be given phone privileges on the sub-bands 3650-4000 kHz and 7075-7300 kHz.

As the initial step in the implementation of such a request is the publishing of a Notice of Proposal in The Canada Gazette, Part I, with comment invited from interested parties, your national Federation has also requested that a suitable dead-line for comment be given to enable full publicity to be given.

Any comment that you, as an individual Amateur, or after discussion at the local club, or other organizational level, may make, will be most welcome and enable CARF to enter discussions with the Department with evidence pro and con. Please forward comment to CARF, PO Box 356, Kingston, Ontario K7L 4W2.

AVAILABLE FOR

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Kenwood  
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- others.**

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● Interchangeable input module to match your present or next rig.

**SPECIFICATIONS**

- 20 IC's, 4 Transistors, 4 Diodes
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- Non-Blinking Display
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- 120 Vac, 60 Hz - 12 Watts Operation
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- 1 Meg Ohm, 20 pfd Input Impedance
- Regulated Power Supply

**FRONT PANEL SWITCH OR CONTROL**

- Power OFF/ON
- Normal/Opposite, VFO Tune
- Input A and B
- Calibrate Control

**REAR PANEL CONNECTIONS**

- Input Jack A and B (RCA)
- 12 Vdc EXT PWR Jack (RCA)

**PACKAGING**

- Rige case, Black Cover
- Size: 2 3/4H x 5 1/8W x 8 1/4D
- Shipping - 4 lb.

**Model 22**

- Drake TR-4
- Drake TR-3
- Heathkit SB Series
- Heathkit HM-100; HW-101
- Hallicrafter FFW-300
- Kenwood TS99; R599
- Galaxy V, GT550
- Others w/5 - 5.5 MHz VFO

**Model 22C**

- Collins S-Line
- KM-2

**Model 22D**

- Drake T-4 Series
- Drake R-4 Series

**Model 22S**

- Swan

**Model 22X**

- Specials, Contact Factory

\*Some equipment may require connection to the VFO internally if rear panel VFO jacks are not available.

**HOW TO USE**

The following illustration indicates the convenience and accuracy the numerical display will bring to your present equipment.



**CONNECTION TO EQUIPMENT**

Connection data is supplied with each Digital Dial Assembly Booklet. Parts with instructions are supplied for the rig your Model 22 is to be connected to. Special orders for rigs not mentioned will be accompanied by special connections information. (ONLY ONE (1) WIRE HOOK-UP)

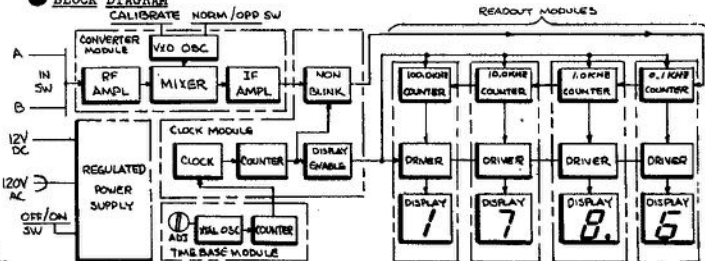
**CALIBRATION TO EQUIPMENT**

Turn on your rig and zero beat a 100 KHz crystal calibrator signal. Turn on the Digital Dial, Model 22 and select the front panel NORM (or proper band for Swan) position. Turn CALIBRATE knob until the digital readout just switches from 999.9 to 000.0. The Model 22 is now calibrated for the entire tuning range on that band. If the mode of operation or side-band is changed re-calibration is necessary.

**PORTABLE OPERATION**

The Model 22 has the feature of going - fixed, portable, mobile or emergency. The crystal time base provides a stable reference for the unit for any mode of operation. 800 ma drain is no problem for a car or motorcycle battery (12Vdc).

**BLOCK DIAGRAM**



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**MODEL 22K (KIT)..... \$179.95**  
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# canadian capsule comment

## VE1 AND VE3 STATIONS AID IN LOCKEPORT FIRE FIGHT BRIT FADER VE1FQ

On Monday evening February 3 around 6.00 PM, a bad fire broke out in the South Shore town of Lockeport, 150 miles southwest of Halifax. The fire burned out the toll cable going to telephone company office, thus cutting off all communications with the outside world.

Ben Pooley, VE1AHX, of Allendale, 4 miles northwest of Lockeport, the only amateur in the immediate area, was alerted by a CB operator, that communications were required to the outside. VE1AHX cranked up on 75 metres and put out a call for Halifax or Liverpool, stating that it was an emergency. VE1CT of Dartmouth picked up the call and established a link with AHX. The first word to Halifax was a request to the RCMP at Halifax, asking if they would contact their Liverpool detachment, and inquire if the Liverpool Fire Department were on their way to Lockeport. Word had already been passed to Liverpool requesting this assistance, prior to this radio link being established. (How this request got through we have not been able to ascertain.) VE1CT got the word back from the RCMP in a matter of 5 minutes and thus started an evening of handling traffic from the stricken area.

As the evening progressed, other stations came in on the circuit, including stations from PEI and Ontario.

Traffic was handled to the CBC TV Station as well as the broadcast stations in Halifax and Dartmouth, the local office of the EMO and the EMO officer in Kentville.

Skip conditions on 75 metres progressively deteriorated during the evening, and it became necessary to get relays from the stations in Ontario, in order to keep the ball rolling. The following stations in Ontario came to the rescue; VE3AUM--Ottawa; VE3AND--Don Mills; VE3IG Sarnia; and VE3FZM--SMithfield.

A two-metre link was established later on in the evening, between VE1AHG in Shelburne and VE1FV in Liverpool.

The following Nova Scotia stations took part in the operation; VE1AFU, VE1UT, VE1AHG, VE1ABT, VE1PX, VE1CT, VE1EY, (White Cane Operator), VE1FV, VE1AGX, VE1JW, VE1KE, VE1WY, VE1AHX, VE1SE, and VE1ADV from PEI also pitched in.

By ten o'clock the fire was under control, and there was no further need of communications, as by this time, the RCMP had moved in, and all was taken care of.

A good job done by those who took part, despite the bitterly zero cold weather and thirty m.p.h. winds.

## SPECIAL CALL SIGNS REQUESTED FOR OLYMPIC YEAR

A joint submission from the national Federation and the A.R.R.L. (Cdn Div) has been made to the Department of Communications requesting that special prefix call signs be allotted for use by Canadian Amateurs during Olympic Year July 1, 1975 to August 1, 1976. The request suggests that the prefix "XO" be allotted for use by Newfoundland and Labrador and the prefix "XJ" be allotted for the rest of Canada, with the special call "CZ2 O" having been designated already for use by the official Amateur station located at the Olympic Games site in Montreal.

Note that, if this request is granted, that the use of a special prefix will be voluntary on the part of any Canadian Amateur.

## D.O.C. NEWS

The Editors of "IN SEARCH", the Department's quarterly magazine of information and opinion on Communications, are considering a series of brief articles on Canadians who have made significant contributions to the advancement of the field in Canada.

Your national Federation has been requested to suggest the names of individuals, living or dead, who, either by a single act, discovery or series of events, with which he or she was associated, made an important contribution or contributions to communications. The Editors of "In Search" are particularly interested in hearing about little-known individuals and note that, over the years, Amateurs have made many contributions to the communication field.

Discuss the above with your club, on-the-air, or over a couple of 807's, and let's have some leads and information. An outline of accomplishment and a photograph (if available) forwarded to CARF, PO Box 356, Kingston, Ontario K7L 4W2, will get prompt attention.

## ONTARIO NEWS SUDBURY ARC

ONTARS - This net provides a unique service to amateurs of Ontario being operational 365 days of the year, from 7 am to 6 pm. It has been running continuously on 3.755 KHz since January 8, 1972. This contact net has been extremely successful in getting hams together and providing a base for any possible emergencies. Eleven Controllers take specific one-hour slots from Monday to Friday and the week-end Controllers are basically a different group for the 22 one hour slots involved. White caners and Wheel-chair hams comprise more than one-third of these controllers - and they do a marvelous job. (Listen and participate as you have opportunity).

The CNIB Amateur Radio Club, conceived, organized and financed by RSO in February 1967, has had a total membership of 263 to September 1974, including 25 women. The rate of growth has averaged over 40 each year since 1969 and this is likely to continue, as dozens are in training in classes held in CNIB offices in many cities from Halifax to Vancouver, with individual tutoring in many other locations. Over 265 SSB transceivers are on loan to White Caners. There are fantastic details, omitted for lack of space. (S.A.R.C., last November, made a memorial donation to CNIB-ARC to honour the memory of Silent Key, Dr. Ken Ward, VE3CAN).

## NORTH BAY ANNIVERSARY CERTIFICATE

The North Bay A.R.C. has obtained the "XO" prefix for use by the Amateurs of the North Bay, Ontario area to commemorate the 50th anniversary of the city. An attractive certificate will be presented to all Amateurs who contact fifteen (15) NBARC members during the year 1975. Stations located outside of continental Canada and the U.S.A. need only five confirmed contacts to quality.

Applicants should send a copy of the log, or a log sheet entry, to the North Bay A.R.C., PO Box 624, North Bay, Ontario P1B 8J5, together with S.A.S.E. (at least 10 x 12 size) or one IRC. DXstations should forward two IRCs and SASE with their application.

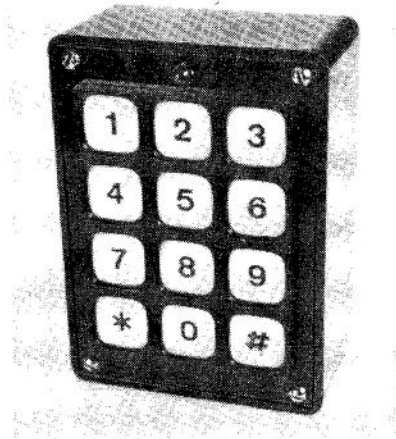
Additional information can be obtained from Dick Scheeringa, VE3HDJ at the above address.

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H A N D H E L D T O N E E N C O D E R S Y S T E M



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- \* MODERN TOUCH PAD  
& HYBRID CIRCUITRY
- \* EASILY HAND HELD

- \* LED ON-OFF INDICATOR
- \* EASY INSTALLATION
- \* 5-35 VOLT OPERATING  
RANGE

The TEKNEl TONE ENCODER was specifically designed for mobile applications requiring tones compatible with the standard telephone system. Of primary concern was the access and operation of repeater auto patch services commonly found in North America. The encoder can also be used for any function requiring tone control.

To design a low cost, yet versatile unit required the use of a thin film Hybrid circuit which uses thermally compensated integrated circuits. This accounts for the low power drain, light weight and accuracy, which is within 1.5% over the entire voltage and temperature range. Packaging the encoder in a case which was small enough to be hand held, yet large enough to allow for options like private line and fast dial was accomplished using a good looking black phenolic case of high durability.

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## NEWFOUNDLAND NEWS EMERGENCY TRAFFIC HANDLING

The Newfoundland Amateur

The role of Ham Radio in an emergency bears a little study. For years Hams contended, and with some justification, that there was an important place for our services in the event of civil emergency or disaster. Today the picture is different - many areas, (the whole of Newfoundland has no Amateur Radio Emergency Corps) are unprepared for emergency operation - indeed 80 to 90 per cent do not know traffic handling procedure and an equally high percentage would be totally helpless in a power outage.

This may sound gloomy - especially when you consider that the EMO organization had beds, food, desks and everything to keep an operating crew of Hams for a substantial period in the Emergency Headquarters, set up, albeit on paper, in the basement of the Sir Humphrey Gilbert Building. There was half a ton of paper back and forth a year or so ago. I still have several dream books on the matter.

Nobody ever considered equipment for this fantasy operation; nobody ever considered that in a severe emergency a Ham just may not be anxious to leave his family in fear; what was even more interesting nobody ever thought to discuss what transmitting antennas on the roof of one building - can you picture it, cross modulation interference, RF in the telephone system, GRS radio getting into the broadcast equipment, ham radio blocking the GRS equipment, six or eight VHF channels de-sensitizing each other - police, fire, ambulance, ham, EMO, etc.

The latest chapter in this exercise advises that EMO will no longer co-ordinate emergency communications - now the Department of Communications will reorganize the effort.

The most useful way Ham radio could be employed would be to equip several in a major area - less in a smaller area, with emergency power equipment which could run existing equipment and use VHF to intercom with a central headquarters. Once so equipped, the onus would then be on the individual to develop his traffic handling skills. But then all this creates employment!

## NOVA SCOTIA NEWS

N.S. UHF Association

Barry Mouzar was the recent winner of the CBC amateur radio club's Annual Technical Achievement Award Contest.

The hunt was a great success. VE1AAC Gerry Harris located the first transmitter operated by VE1DO Bob Chambers Jr. The puzzle which was the next step was handed out by Bob. The puzzle revealed a clue to where the final transmitter was hidden. The clue was Exit 5 Highway 103. After reaching the exit the last transmitter was heard.

After much hunting by all, Ve1AZX Barry located the transmitter in a briar patch near a home at Indian Point N.S.

Post mortems were held at the home near by which was owned by Frank Milne.

## SPECIAL CALL FOR TRURO BI-CENTENNIAL

According to the Halifax ARC Bulletin, Truro stations can use the prefix "CH" in celebration of Truro's 200th anniversary of its incorporation.

## AC-DC RESULTS ANNUAL CLARA DAY CONTEST

FIRST PLACE Bill Flynn VE5WF who received an engraved trophy and certificate.

second place--Malcolm Timlick VE4MG who received a certificate.

third place--Gordon Samson VE2DKK who also received a certificate.

Top CLARA score went to Cathy Hrischenko VE3GJH who received a CLARA pin and certificate.

Honourable mention--Diana VanDerZande VE8NN who received a CLARA jacket crest.

The mini-draw from all the logs sent in, was won by Chris Davino VE3GVE, which was \$5.00.

Thanks to all those that took part and we'll be looking for you next September.

## ALBERTA NEWS ABOUT SIGNING YOUR STATION ON THE AIR

VE6, Howard VE6ZM

I wonder how many hams realize that there is no regulation stating you must give your call sign at the start of a transmission. I have heard round tables of 4-8 hams working UNDER GOOD CONDITIONS where each ham, when coming on in turn, gave the call signs of all stations involved and then his own call sign before continuing with the subject under discussion. This, in my opinion, is monotonous repetition and a waste of frequency time. I broke the sign on habit after 14 years on C.W. - (no high line power) when I got on phone - and I consider myself an old timer as I started back in 1936 and have held my present call sign for 25 years. Old habits are hard to break so am directing this to the newer crop of hams especially those working mainly 2 meter mobile. The sign on appears particularly fruitless when one hears 3 or 4, 2 meter mobiles on repeater kicking it back and forth with each station signing on as outlined above and meanwhile the repeater is running out of its set re-transmit time.

One more thing which could prove very helpful. If your station is located in a large town or city and you have a patch give your Q.T.H. each time you sign over as there may be some ham trying to give a message or patch through to your Q.T.H. This often staves off an interruption in a Q.S.O. by a station asking where you are located.

## STRANGE PROPOGATION IN 1982

It seems that two scientists have predicted that the earth may face a series of events in just eight years. In 1982 all of the nine planets of our Solar system will be aligned on the same side of the sun. This occurrence like the sunspot cycle happens only once every 179 years.

The new planetary linup will cause a great increase in magnetic activity on the sun. This will create huge storms of sunspot and solar flares. Like all bursts of solar activity these episodes will severely affect the upper parts of the earth's atmosphere, disturbing radio communications and creating such effects as the Northern Lights.

More important, there will be a great disturbance in the weather patterns around the globe, principally by altering wind directions in the upper atmosphere. As the winds shift, they may modify rainfall and temperature patterns in various parts of the world.

Hams around the world should expect to experience many strange propogation effects during this phenomena.



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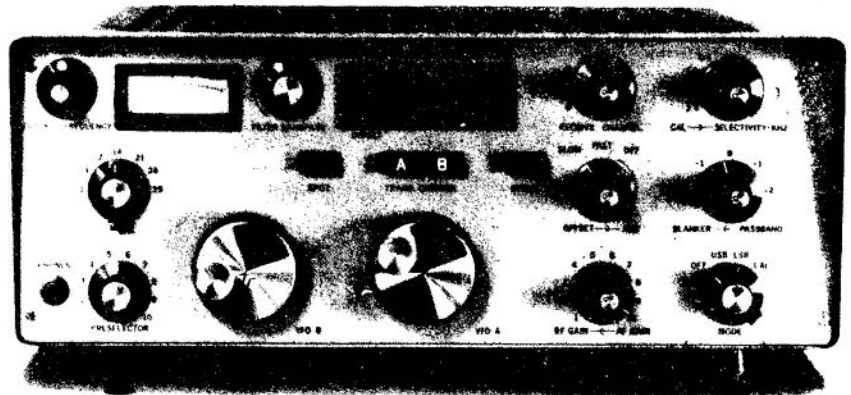


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# IARU Region One (Europe/Africa) News

The Region I Division of IARU is the means of achieving co-ordination on many important activities. The Intruder Watch (IARU Monitoring System) is an important organization where close liaison is essential. Other matters of common interest are the HF and VHF beacon stations, contests, fox hunting, and band plans. However the primary function of the IARU is the maintenance of the frequencies allocated to the Amateur service and it is to this work that the greatest amount of time and effort must be given.

The IARU is an international organization entitled to attend the conferences of the International Telecommunication Union which regulates the use of the frequency spectrum. In 1979 there will be a World Administrative Radio Conference at which all frequencies from 10 kHz to 2750 MHz will be considered. The Amateur service must prepare a plan, acceptable in principle to societies throughout the world, for the expansion of Amateur service allocations. The Region I meeting in Warsaw, April 14, 1975, will consider this plan and the methods to be used to obtain acceptance by national administrations.

The weekend of October 4/5, 1975 has been reserved for the organization of a World Radio Amateur Convention to be held within the framework of ITU "TELECOM 75" and the World Telecommunication Forum, in Geneva, Switzerland.

The following call sign series have been allocated provisionally:

C5A-C5Z Gambia (Republic of the); C6A-C6Z Bahamas (Commonwealth of)

## AEROSAT AGREEMENT IS SIGNED IN WASHINGTON

An agreement to establish an aeronautical satellite capability (Aerosat Space Segment Program) for use in an intergovernmental aeronautical satellite experimentation and evaluation program was signed in Washington December 2 by European Space Research Organization (ESRO), Comsat General Corporation and the Government of Canada.

The agreement was signed by Roy Gibson, Acting Director General of ESRO, John A. Johnson, President of Comsat General and Dr. John Chapman, Assistant Deputy Minister, Space, Canadian Department of Communications.

The Aerosat Space Segment Program covers the design, development, procurement and operation of two satellites over the Atlantic ocean. The first satellite is planned for launch in 1978 by a Delta 3914 vehicle.

A memorandum of understanding (MOU) covering the intergovernmental aeronautical satellite program was signed earlier this year by ESRO, USA Department of Transport/Federal Aviation Agency (DOT/FAA) and the Government of Canada. In addition to calling for the establishment of a space segment capability, the MOU includes a coordinated program comprising the design, manufacture and operation of user ground facilities, avionics, the preparation of the test program and the operation of suitably equipped aircraft. These activities are the responsibility of ESRO, DOT/FAA and Canada.

Under the agreement signed, ESRO, Comsat General and Canada will furnish the space segment capability for the intergovernmental program.

The stations XV5AA, XV5AB, XV5AC and XV5DA have been authorized to operate with other Amateur stations located outside the Republic of Viet-Nam.

Region III (Asia/Australasia/Oceania) will hold a Conference at Hong Kong between March 4 and 10, 1975.

A new low power beacon is now operating on 28,150 MHz with the call WA1IOB, with CW identification. Reports should be sent to: L.J. Umina, Chestnut Street, HOPKINSON, MA 01748, USA.

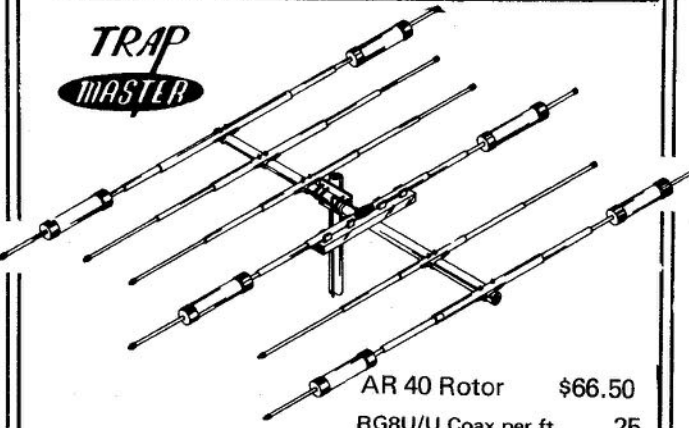
## Transcan RTTY Net

One of the facets of increasing development of the Canadian Amateur Radio Federation Inc. is to develop a communication organization. At the 1974 Annual Meeting of the National Federation, Frank Merritt, VE7AFJ, was appointed chairman of an ad hoc committee to investigate the creation of a Trans-Canada Traffic Net capable of handling large volumes of traffic (in case of large scale emergencies) and page copy traffic.

After considerable research, the most logical approach would be to have a Net Control Station (NCS) in or near Ottawa. A very sensible use of the Provincial Amateur societies would be to have each society responsible for at least one station on the net, using the existing provincial and area nets both HF and VHF to disseminate and collect traffic for the TRANSCAN RTTY NET.

It is suggested that the Net meet once or twice a week during the evening hours on 40M.

All provincial societies have been contacted for comment and interest in the TRANSCAN RTTY NET.



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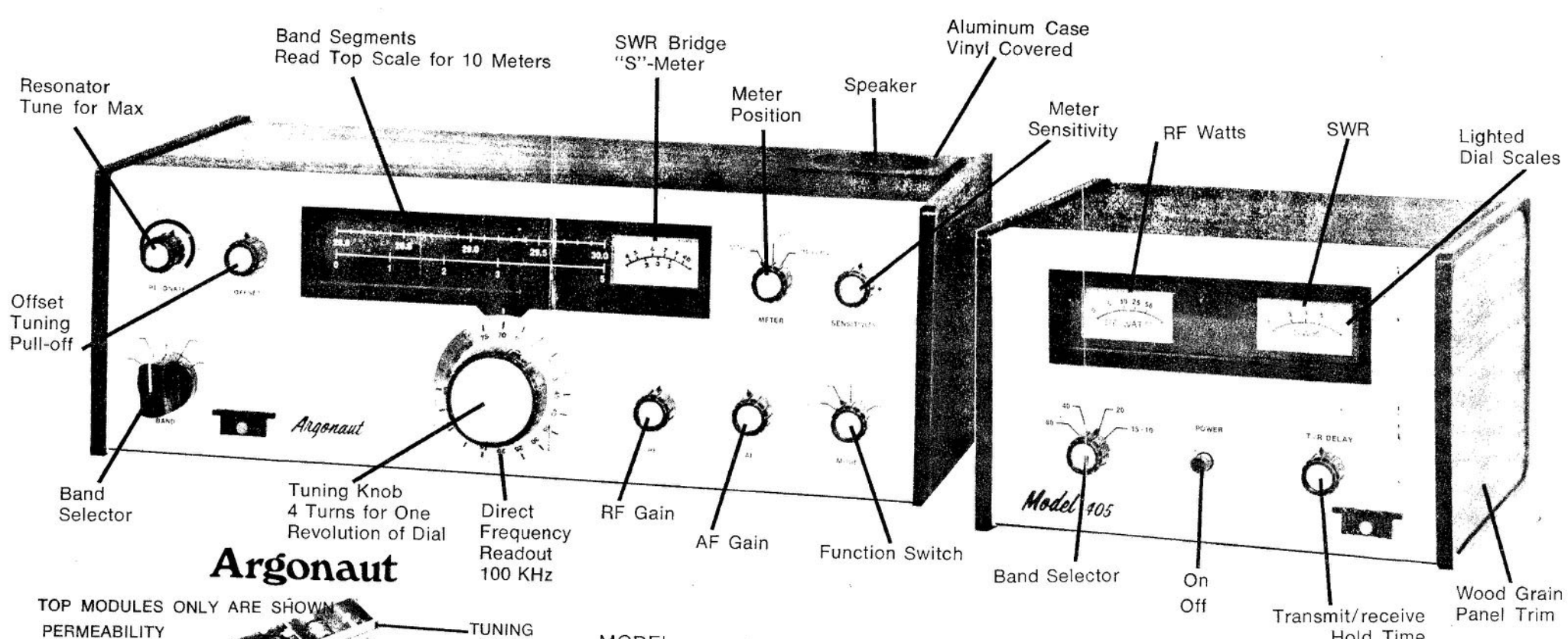
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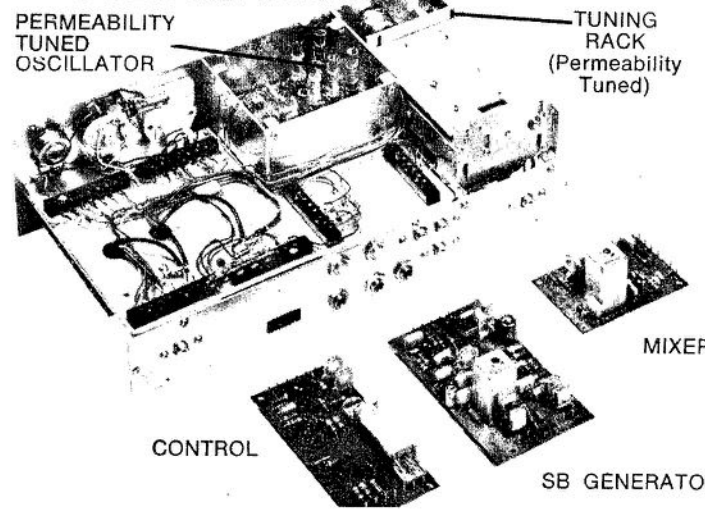
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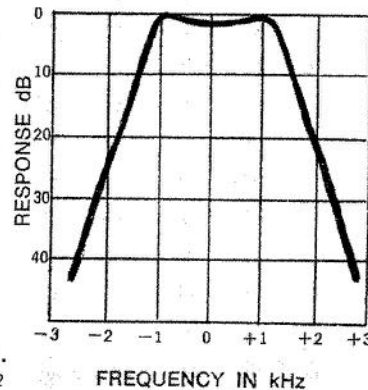
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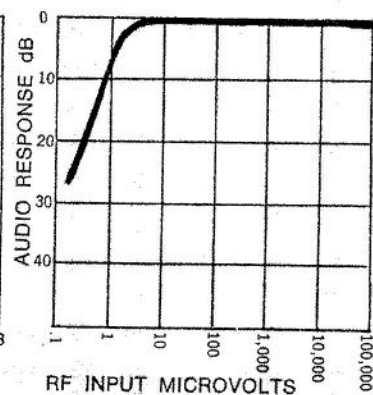
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# Letters to the Editor

## ■ Emergency ■ Operation

Dear Sir,

I hope you will publish this or a similar reply to the myopic editorial of October's "Canadian Amateur". It is regrettable that a federation that hopes to represent ALL Canadian amateur service operators would print an article by an unnamed author whose view obviously never rises beyond the nether regions of Ontario and Montreal. As examples of emergency operation I will cite this spring's Moose Jaw floods, and the Nicaraguan Earthquake of Dec. 22 1972 (see Q.S.T., April 1973), as occasions when Saskatchewan based amateurs provided a valuable back up communications service. It may surprise the author of the editorial that other countries have disasters, but I will return to that later. The fatuous admission of ignorance as to how to handle emergency traffic warrants the reply that the operator should bother to read his licence sometime. The operative phrase would seem to be 'self-training', i.e. it is the responsibility of the operator to obtain this skill himself. Unlike the F.C.C. the D.O.C. does not impose its interpretation of the purpose of the A.E.S. by licence restrictions. Hence the A.E.S. operators must define and develop the service themselves, and by their activities justify the existence of the A.E.S. in this country. With the 1979 conference approaching this principle would seem to apply on a world wide basis. On both these levels an efficient body of emergency operators would seem to me to be an important argument in favour of the hobby of Amateur Radio.

"Technical investigations" is a further phrase in the A.E.S. licence. To some extent amateur operators are sufferers from their own history, in that the discovery of short wave communications has led to the belief that experimental work implies extending the frequency spectrum, or developing new modes of communication. Both these fields, as pointed out in the editorial, do not need amateurs today. However, as a scientist working in the field of ionospheric studies, I must point out there is much to be investigated about the more transient phenomena of the ionosphere, and if V.H.F. are included, lower atmosphere; for example, the Long Delayed Echoes, Villard, Q.S.T. February 1970, and V.H.F. ducting propagation, Q.S.T. November 1973. For these studies the equipment needed is that of the average amateur station, but the operator must keep a clear and detailed log when such events occur. The data thus collected has to be edited by some national or international body, such as the R.S.G.B. scientific studies committee, e.g. Radio Communication August 1973. This would be an excellent role for C.A.R.F. to undertake in Canada.

Returning to the subject I mentioned earlier, regarding amateur radio in and for other countries, it is sobering to consider that the 1979 conference will have a majority of countries for whom the service has little relevance. The irony is that these are the very countries who could gain the most from the development of the service. For the most part the developing nations, desperately need to train a corp of communications personnel, and to develop a network to handle the traffic resulting from the floods, famines, and pestilences that are sadly all to prevalent. For both these purposes the Amateur Service is ideally suited,

at little or no cost to the community, interested young people could gain the best type of training in basic communications technology.....self-training by experience. The value of such people in emergencies is obvious, time and again we hear of the lack of communications in famine stricken areas, where the amateur with a simple low power C.W. system could make a vital difference. I feel that if the Amateur Service was to be voted out of existence in 1979 we would only have ourselves to blame. May I suggest that C.A.R.F. consider that it could act as means of encouraging and organising Canadian amateurs in a project, via the I.A.R.U., to develop the service in the developing countries.

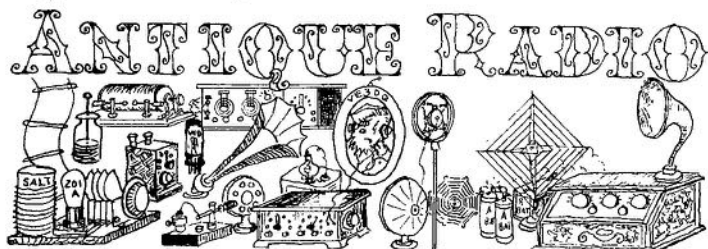
I will conclude this letter by saying that I fully endorse the concept of a bilingual, national, Canadian amateur experimental service organising body; but I feel that C.A.R.F. will not develop into that organization if the negative sentiments of the October editorial become prevalent. Imagination and enthusiasm are demanded if the hobby I have enjoyed for more than ten years is to thrive, and I am aware that my suggestions may be impracticable, but I am sure that complete resignation to governmental (decree) would ultimately poison the hobby as we know it today.

Yours truly,

David G. Stephenson Phd. BSc. F.R.A.S. F.B.I.S.  
VE5KQ

P.S.

It has been pointed out that I have made two errors in my reply to the October editorial and I wish to correct them. Firstly, I understand that the author was unable to sign the editorial for professional reasons, and if this had been stated, I would not have referred to the fact the editorial was unsigned. Secondly, I have criticised the author for the content of a quotation in the article, this of course was unjust and I should have exercised more care and referred to the author of the specific quotation. With these corrections I feel that both my criticisms and suggestions leading from the October editorial are valid.



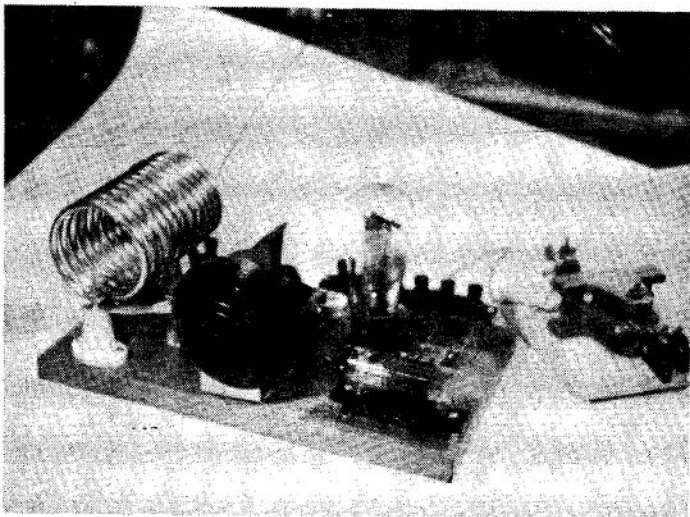
## The TNT—the early Amateur's Friend

Stan VE3DQ

In these current electronically sophisticated days of Amateur Radio, if you happen to mention TNT Transmitter, the average Amateur's countenance takes on a puzzled look; but in the era from about the mid-twenties up until the beginning of WWII, there were thousands of TNT rigs on the air, its popularity due mainly to its simplicity, efficiency and ease of operation. It was the beginning Amateurs' friend. TNT meant "tuned-not tuned"; let me explain.

One of the problems of the early beginner was the multiplicity of controls of the average transmitter then in vogue, and no adjustment to any control could be made without upsetting one or more of the other adjustments. The Hartley oscillator with its high-C tank in the grid circuit was hard to adjust because of the critical filament tap setting, and the Colpitts circuit was even worse because the two variable condensers in series made it impossible to change excitation without altering the frequency at the same time, and vice versa. The tuned-plate tuned-grid or Armstrong circuit was the easiest to adjust since the excitation and the output circuits were tuned separately with tuning condensers, and the two adjustments were relatively independent. The plate tank circuit controlled the frequency of oscillation, and the tuned grid circuit, while having some small effect on the frequency, mainly controlled the amount of excitation. Another advantage of the T.P.T.G. was that with one setting of the grid condenser, say in the middle of the band, this broadband grid circuit often did not need to be reset when the plate frequency control was tuned to any frequency within the band.

No one seems to know who came up with the proposition, but some Amateur, somewhere, got a bright idea. Since the grid control often only had to be set once and then left alone, why not eliminate the grid tuning condenser altogether? And so the TNT transmitter was evolved.



For fixed grid tuning, low resistance was not desirable, since the circuit had to be broad enough to hold over the whole band. Therefore the circuit inductance was made large, with small wire, and the necessary small amount of capacitance was provided by the grid to filament capacity of the tube, the distributed capacity of the grid coil, and the stray capacitance of the associated circuitry.

This transmitter was extremely antenna concious, so much so that the antenna was considered to be part of the frequency controlling plate tank circuit. Hence, the antenna had to be resonant at the operating frequency, otherwise the RF remained in the shack. Also the antenna had to be bar tight, otherwise a swinging antenna produced a swinging signal, and it had to be clear of blowing trees or you suffered the same result. You peaked the TNT and the antenna to a single "home" frequency and stayed put there; making your contacts by scanning the whole band with your receiver. The best antenna to match this rig was the Windom or off-center fed Hertz.

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#### **BANNED COUNTRIES LIST**

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

\* - Stations XV5AA, XV5AB, and XV5AC have been authorized to exchange communications with Amateurs of other countries.

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

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