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Canada's Amateur Radio Magazine

La Revue des Radio Amateurs Canadiens

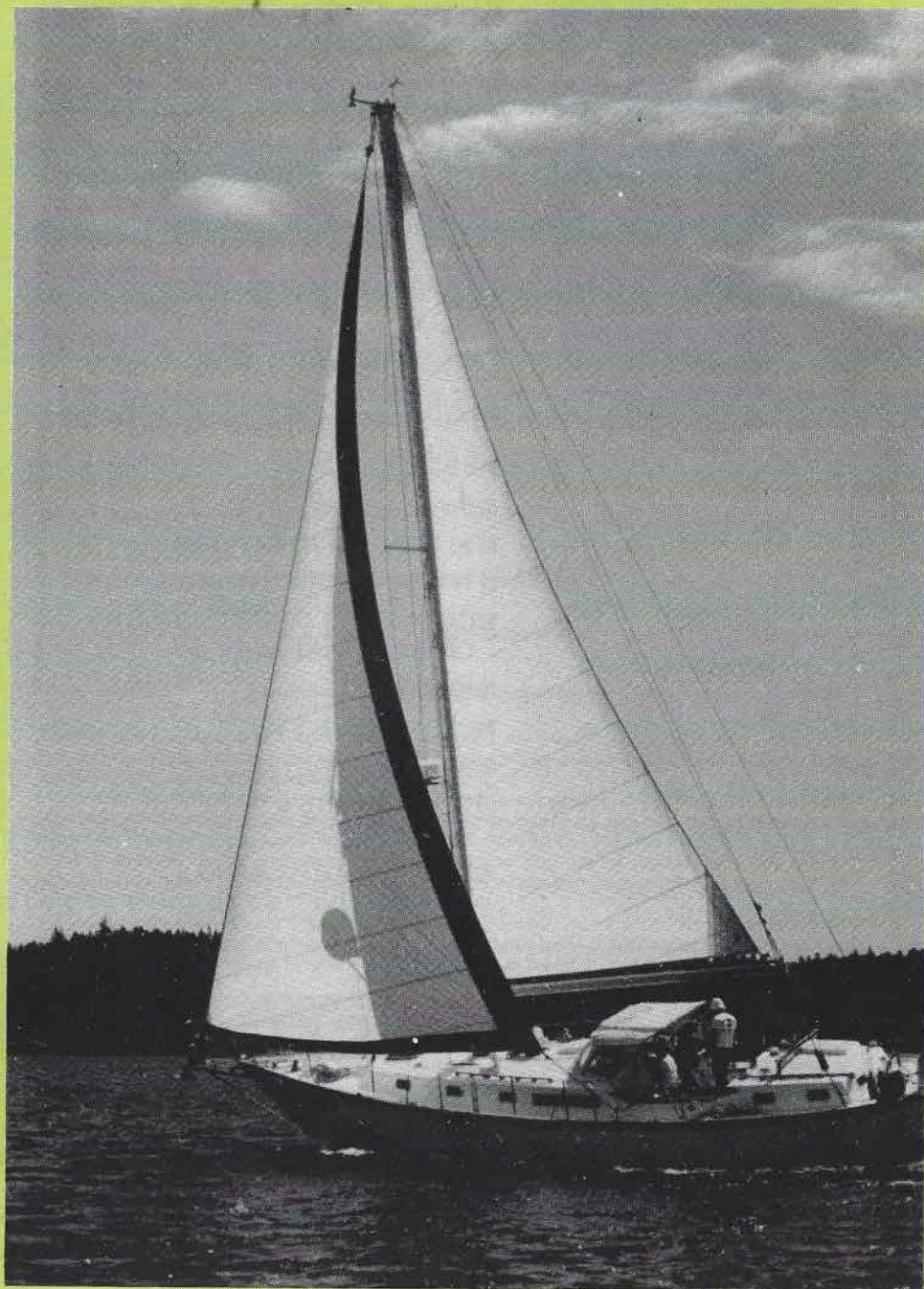
MAY 1987

Securing the Shack

— Page 14

*VE0CX (VE7GDX)
remarks on his
involvement in the
Canada Winter Contest:
"It was fun to operate
from my WHKBY 42
Sailboat DX (right) and
my new M/M call was in
demand!"*

*More comments on the
contest appear on
Page 18.*





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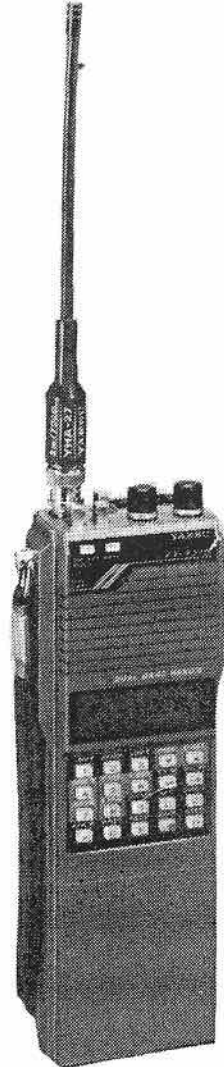
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THE CANADIAN AMATEUR

Canada's Amateur Radio Magazine

May 1987

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

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

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EDITORIAL

Preparing for the Future

BY BILL BOOTH VE3NXX

Are you awaiting the real explosion of interest and enthusiasm that will come next year with the changes in licences? Finally, with code out of the way, it will bring new members to our clubs. The new Amateurs will bring some much needed shot-in-the-arm blood to the club activities, and renewed activity on the bands.

Boy, will the bands be crowded. Maybe it will force the Old Guard out of their DX sheds! About time they took stock of what's going on around them. Can't you picture it now... All these mouth-service members appearing at meetings. What a laugh to see this poor fellow showing up at the Old Meeting Room, at the wrong time to boot. He frantically tries the local repeater to find out the frequency was changed, and then upgraded to tone access. Then, when all is said and done, he finds out that he sees none of his familiar guard at the meeting.

Now, with the shoe on the other foot, you are introduced as a guest. When you ask what happened, where am I, you are classed as a Morse code freak. Finally, in a real dilemma, you go to the local watering hole to ponder your fate. Quickly you check your driver's licence to see who you are. Great news, they didn't change your name. Where do you go from here? To start with, better read and comprehend all those newsletters and periodicals you pay good money for. Voice your opinion and attend ham functions, including that club you pay dues to. Too far-fetched, you say?

Well, I don't think so. What do you really see at local hamventions and club meetings. Here hams of every weight, every brand of cigarette, every proof of liquid, flaunt their attitudes. Most show no regard for the new ham. Proof of this is in the inability of the club programme directors to get hams to talk of their experiences, direction of experiments and general operations. The real speakers are the commercial people telling us what's happening out there

and what we can expect to see filter into our new equipment. What a complete reversal from years back. Bet the commercial vendor, who is rubbing his hands at the thought of new changes, never refuses to talk at ham functions.

While the new ham, with the no-code licence, works as a communicator, he still dreams of experimenting, and that great DX. Have you ever tried assisting him in achieving that goal? Sure... no more lip service. Who helped you with your antenna last year? Bet you used lots of Bengay that day. Why not ask... yes, I said ask... that new-blooded ham to help you? By having him use some of his brawn, some of your gray matter information will be passed to him. Maybe you can impress him with your old station. Maybe show him how easy it is to communicate with that straight key or paddle.

Remember last year when you were building that linear? Doctor told you not to lift that way. Well, bet old Butch there, with his computer jargon, would have jumped at the chance to do some of the panel work or wiring. Probably would have learned what a linear is all about and, more importantly, realized what consequences it will have, on the crowded bands.

Think these comments are too far-fetched? Don't you believe it. If the Amateur community soon does not stand up and fly right, then the new hams and their fancy no-code gear will steamroll right over us. Let's get into high gear and attend those club meetings and ham functions. Let's show those new recruits what Amateur radio is all about. Participate and share those experiences. Let's put the Amateur radio operator up front where he belongs. If we don't we will probably be banished to the 11 metre band to complain about the way General Radio Service (CB) operators treat us.

The Canadian Amateur welcomes contributions to this column of opinion.

LETTERS

HOW NOT TO COMMUNICATE?—

I'm prompted to write by the article in *CQDX* in the January issue in which Paul Cooper quotes comments on 'DXing' by a VE2 ham. The article should have been titled: 'How Not to Communicate Anything', or 'Maybe Stamp Collecting Is Better!'

Now, there's nothing wrong with stamp-collecting... or collecting butterflies for that matter... or even DX 'Calls'. I guess it all depends upon where you get your kicks. But I must admit I have been labouring under the delusion that Amateur Radio is a kind of 'communication'. After reading the VE2's comments about what he DOESN'T want to hear, I wonder!

He says: "The DX station knows his or her call. Don't bother sending it." And: "The DX station knows his or her QSL info. Don't bother sending it." And: "I just sent my call one or two QSO's back."— so why should THIS guy want it? He says he has made as many as 40 QSO's per month! Wow! From this, I gather that DX awards are made by weighing the log books. Or do they throw them down a flight of stairs to see which one goes the farthest down? I'll bet that VE2's got the fastest gun (oops... keyer) in town! I'll bet his trigger finger is already sending while he's tuning up with the other hand! And, he says he even runs out, cooks his supper and eats it during incoming transmissions! Now, that's something! He's FAST!

And here I always thought that Ham Radio was a mode of communication.
Don Edwards VE7AKU

TRANSCEIVER TUNING —

Would you please draw attention to the fact that a number of Amateurs still adjust the tuning of their transceivers on the air.

Would you suggest that these people check with nearby fellow Amateurs to find out what frequencies their carriers occupy when they do their 'tuning up'?

All transceivers automatically go into the USB mode when they are put in 'tune' position.

If AM position is used for tuneup, the same effort is created. The USB is occupied.

If such a transceiver is adjusted on the air a few kHz lower in frequency from a 75 metre net on LSB, the whole net is interrupted by the carrier.

This problem is nationwide and requires attention urgently. A good many Amateurs do not realize that

they are causing trouble, and would no doubt correct their practices if they could but realize that a problem exists.

John Lester VE3MB

OLYMPIC TORCH RUN —

It is with regret that I have to inform you that Petro-Canada, the sponsors and organizers of the Olympic Torch Run, have decided to provide their own communications for the Run. The Amateur Community is thanked for the offer of assistance but the Sponsors feel that it is unnecessary and that a mixture of commercial UHF and Radiotelephone Systems is adequate.

For my part, I wish to thank all of you who provided me with coverage in your publications and offers of help. The communications for the three-day trial run in British Columbia were augmented by four experienced Calgary Hams who did an excellent job, working up to 20 hours a day, but this was not enough to persuade the Sponsor of our value.

The Hams of Calgary hope to see many of you here for the 1988 Winter Olympics— or any other time— and you can be assured of a great welcome.

Don Cole VE6EY

TO THE HON. HARVIE ANDRE, P.C., M.P., MINISTER OF CONSUMER AND CORPORATE AFFAIRS —

A certain legal matter, which is now at the appellate level; has been brought to my attention and I believe that the ultimate remedy lies in legislative action through your department.

I refer to the 'Jack Ravenscroft' case in which an Amateur radio operator, who met all the requirements specified by the Department of Communications, was fined \$2,500 by a court and ordered to cease his transmissions because a neighbour's electronic equipment was susceptible to Mr. Ravenscroft's radio signals.

After reviewing the case, I have come to the conclusion that the real solution must come from legislative action on the part of Consumer and Corporate Affairs. The case itself will probably not even address the real problem of consumer electronic equipment which fails to adequately protect against strong (but permissible) radio signals.

It seems that this government is waiting for the results of the Ravens-

SILENT KEY

Murray W. Doull VE1EE, Dec. 4, 1986.

James O. Ramsay VE6JY, Oct. 2, 1986.

Laurence G. Little VE6CI, July 14, 1986. (His son, Don ex-VE6ACT has taken over his call.)

GEOFF H. HARVEY VE3ATM

Feb. 12, 1987— Geoff was an active Amateur since 1939 when he was first licensed. After serving overseas as an officer in the signal corps he worked for the International Nickel Company in Copper Cliff for 45 years. As an Amateur, he was particularly concerned with promoting public service through emergency communications. In his role as the local ARES coordinator, he actively promoted Amateur radio participation in emergency exercises and provided liaison with the Red Cross.

As treasurer of the Sudbury ARC, Geoff's most recent crusade was fund-raising to replace the club's existing 2M repeater with a new commercial unit. During 'free' moments he found time to help new Amateurs and to keep up with the latest technical developments in Amateur radio and managed to work satellite and get on packet radio.

In 1967 he was awarded the Confederation of Canada Medal and, in 1972, was honoured for his community service. Many will miss his guiding hand and soft-spoken encouragement.

croft appeal before any action is taken. In light of the many types of electronic items that can be affected, I suggest that we move, without further delay, to introduce legislation which will set the necessary specifications for the manufacturers of susceptible electronic equipment.

The positive results are obvious. 1) The chances of another 'Ravenscroft case' are much less likely. 2) All manufacturers will build to proper design specifications, thereby increasing overall quality throughout the industry. 3) Amateur radio operators will not have their frequencies encroached upon by various types of non-immune electronic equipment. 4) And finally, Canada will be a world-leader in the creation of new law that addresses this particular and fast-growing problem

With respect, please instruct departmental officials to investigate the matter and take the necessary steps in order to introduce the appropriate legislation as soon as possible.

Albert Girard, M.P.,
Restigouche

THE REPLY

Dear Albert:

Thank you for your letter of Jan. 14 concerning radio interference with consumer electrical products.

I have received a number of letters on this subject occasioned by the Jack Ravenscroft case. It appears that my Department does not have the legislative authority to set standards for shielding electronic equipment against radio interference, and that the matter may more properly lie within the mandate of the Department of Communications.

However, officials of this Department and from the Department of Communications are currently studying the issue and I will write to you again when I have their final report.

Harvie Andre,
Minister of Consumer
and Corporate Affairs

ON COOPER'S BEEFS

Many thanks for the information on band management, to which the Canadian Amateur Reference File *The Amateur Bands* refers. Let's hope most Amateurs are aware of this "gentlemen's agreement" and are fair in its application.

A word on linears: Cooper's Beefs (March *Canadian Amateur*) and GW3ANN—DXCC Honour Roll, QRP (March *QST*, Page 65) are indeed appropriate and timely.

I'd like to take Cooper's Beefs another step.

Who always works close to net frequencies (some can work as far as 10 kHz and still pin the S meter hard over)? Who always seems to find a 'clear' frequency close to you when you're trying to run a patch? There are 'clean' linears, I have heard the rare one. I know it's a worldwide problem, but people who live in glass houses shouldn't throw stones.

Mel Lever VE1VX

Continued on Page 7

Due to our printing schedule and the usual expedience of Canada Post, permission to reprint the February *QST* article, re: the merger, was received late.

We regret any misunderstandings this may have caused. Thanks to Harry MacLean for his co-operation.



Government of Canada
Department of Communications
300 Slater Street
Ottawa, Ontario
K1A 0C8

Gouvernement du Canada
Ministère des Communications

Mr. Ron Walsh, VE3IDW
President, C.A.R.F.
10 Nicholson Cres.
Amherstview, Ontario
K7M 1X1

Dear Mr. Walsh:

It gives me great pleasure to advise you of the progress that is being made to improve the amateur examination program. The changes are designed to improve service and yet reduce administrative costs to the Department.

The question banks have been stocked with multiple choice format questions for all exams, except the Digital exam, and we have begun using those questions. We will be forwarding to your organization and CRRL a copy of all our questions currently in the banks. As previously agreed, the amateur associations, CARF/CRRL, will be consulted prior to changes or adding questions. We would appreciate it if you could encourage your members to suggest their changes through your organizations. A replacement question is preferred rather than a simple comment on a question's validity.

One of the immediate changes is that the present scheduling of four examinations per year will be discontinued as of June 1, 1987. After that date, scheduling will be done at the discretion of the District Manager based on demand. This will permit more exam sittings per year where required, give greater flexibility to the candidates, and will present fewer logistic problems in ordering booklets and scheduling. Exam booklets will be re-used by more than one candidate and will be replaced at regular intervals saving printing and distribution costs.

In addition, the Department is going to study the certification of private examiners to give amateur examinations on behalf of the Department. From this study, various options will be explored, guidelines and responsibilities of examiners will be developed. As usual, your input as well as that of individual amateurs is invited. A formal review will take place with you to evaluate the various options proposed. This is expected to take place in the fall of 1987.

It is hoped that you will be able to distribute this information to your membership and to all interested amateurs. If I can be of any help please call.

Yours truly,

P.A. Carrey
Chief, Authorization,
Spectrum Management
Operations Divisions.

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Please look at your label! Debbie rubber-stamps it in red when your CARF membership has expired. (If you have paid next year's dues recently, please ignore the notice.) Paying dues is easy— just take the last page of *The Canadian Amateur* out of the magazine, and send it to the office with your cheque or credit card details.

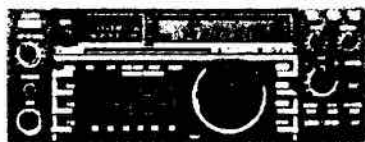


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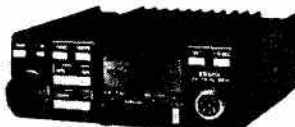
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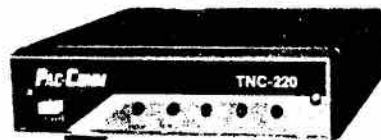
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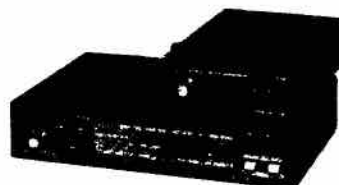


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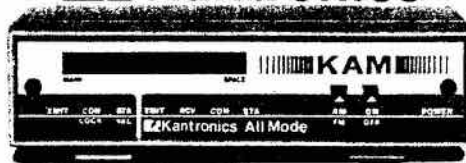
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+4 INFO NEEDED

May I request some help... Any information concerning an interface or programme for Packet, RTTY or CW for a '+4' Commodore personal computer would be most welcome.

All replies to the Secretary, South East Queensland Teletype Group, P.O. Box 184, Fortitude Valley, QLD 4006, Australia.

73, David Brownsey VK4AFA P.S. We would assist with any expenses incurred, but please write first with details.

NWT AND YRS CALLS

Does anyone recall or have access to the call signs that were used on the Northwest Territories and Yukon Radio System? They started with VEA Dawson, VEB Mayo, VEC Fort Simpson, VED Edmonton and through to VEZ plus VEI and possibly others beginning in 1925.

There was an incident in Hay River, NWT where a military radio operator lost his life after breaking through river ice while on an urgent message delivery assignment. Does anyone have the details of this peacetime dedication to duty or others of a lesser degree?

I intend to compile a record of Canadian radio operator related stories on computer disk where it would be available for eventual publication.

Please send your story, or one from someone else provided it is 'first hand', by letter, telephone, audio cassette, floppy disk, hard disk or computer telecommunications, etc.

Moe Lynn VE6BLY
10644-146 St.
Edmonton, AB TSN 3A7

Today I attended the Radio Club meeting here in Bangkok, Thailand, and operated the club station HSOB. Here is the dope:

Only the club station, HSOB, is operating at the moment, using a TS930S, 100 watts, and TH6DXX antenna for 10-15-20M. A 40 metre beam is now going up. 80 metres is a dipole antenna.

Check SEANET at 1200Z, 14,320 kHz for check-ins from HSOB. Frequent operation, when members available, and bands open are: Friday 1000Z-1500Z, Saturday 0300Z-1600Z, Sunday 0500Z-1600Z, CW

and SSB. Other stations will be licensed when examinations are held for regular operations. To date HS stations were operating by arrangement with the club, Radio Amateur Society of Thailand. Now it will be formalized, as in other countries.

The club address is RAST, P.O. Box 2008, Bangkok, Thailand.

I will be on HSOB during the next week, mostly on 15 and 20, moving on then to Singapore, Indonesia and China and will be on from there also.

Roy Parrett VE7TG



Roy VE7TG operating HSOB, Bangkok, in March.

AMATEUR RECOGNITION

Harry Woodmore VO1JU of Grand Falls, Nfld., was recently presented with a plaque in appreciation of his help in passing traffic when telephone communications failed during the 1986 fires in Central Newfoundland. The plaque reads:

"To Harry Woodmore in appreciation of your assistance during the forest fire emergency in May 1986.

Nate Penney VO1NP and VO1CE received a certificate from the National Parks Commission for their help during the Canada Parks Day and Amateur Field Day this past summer.

Cliff VO1II & CARF News Service

CARF Annual General Meeting

CARF will hold its 1987 Annual General Meeting in Kingston, May 29-30-31. All Amateurs are invited to attend.

The meeting will be held aboard the icebreaker *Alexander Henry*, an exhibit of the Marine Museum of the Great Lakes at Kingston.

Accommodation— bed and breakfast— is available aboard the vessel. Reservations from The Marine Museum, 55 Ontario Street, Kingston, Ont. K7L 2Y2, 613-542-2261.

So come to Kingston in May. Meet the CARF officials, CARF office staff, contributors to *The Canadian Amateur*. See the CARF offices, take a turn at operating VE3VCA, watch *Viewstar* working!

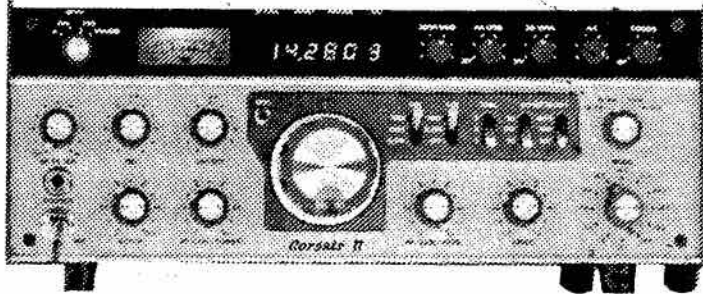
Look over the Marine Museum. See Sir John A. Macdonald's home. Enjoy a visit to Canada's first capital city!

We're all looking forward to meeting you in Kingston, May 29-30-31!



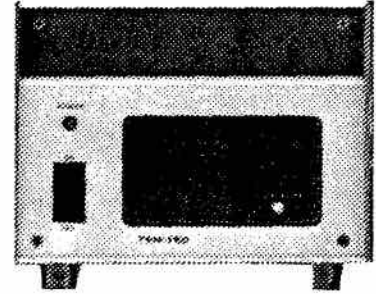
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Receiver performance that only a permeability tuned oscillator can deliver . . . superb signal to noise ratio, outstanding adjacent signal rejection. QSK with a changeover time of 30 ms or less for superior CW or AMTOR operation. Twelve position band switch for operation on all nine HF bands, from 1.8 to 30 Mhz, plus 40 KHz overshoot on band edges.

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Notch filter: Greater than 50 dB notch, adjustable from 200 Hz to 3.5 kHz.

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Built-in speech processor, with level control, standard. Variable ALC.

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POWER REQUIRED: 13.8 VDC, Base or mobile at 22A.

Size: HWD 5.25" x 15.25" x 15".

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TWO ...

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- PA. SYSTEMS
- TELEPHONES
- VIDEO RECORDERS
- TEST EQUIPMENT
- BURGLAR & FIRE ALARM
- MODEMS
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DUE TO:

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- RADIO TRANSMITTERS (COMMERCIAL, HAM RADIO, CB)
- INDUSTRIAL MACHINERY
- CORDLESS TELEPHONES
- SWITCHING SYSTEMS
- COMPUTERS
- DOES NOT VOID EQUIPMENT WARRANTY

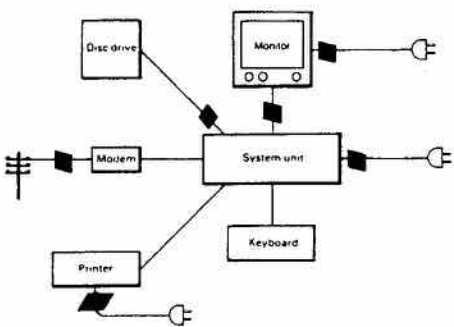
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APPLICATION

In the diagrams shown the symbol denotes the recommended place to install a SNAP-ON CHOKE.

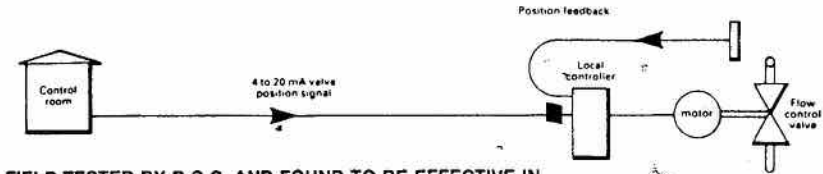
• COMPUTERS

Emission may cause interference to broadcast and communication radios and television receivers. The Susceptibility of the computer to outside interference may also result in data errors (particularly at the time of operation of switches or contactors). Long cables that may act as antennas - particularly telecommunications and LAN cables - are the prime candidates for Snap-on chokes. Cables to VDU's and disc drives handle high data rates and may radiate and cause problems to other devices.



• PROCESS CONTROL

Process conditions have been distributed by hand-held radio transmitters used to commission or maintain plant because of inadequate common-mode rejection by the local controller electronics. A Snap-on choke should cure this problem. Interference from switches, contacts and commutators in electrical machinery may often be reduced by a Snap-on choke around the "AC line".



FIELD TESTED BY D.O.C. AND FOUND TO BE EFFECTIVE IN ELIMINATING COMMONMODE INTERFERENCE

• WINDING DETAILS:

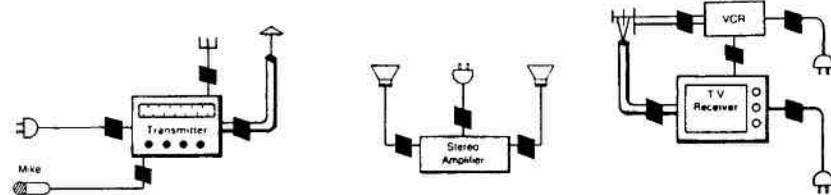
Max. cable diameter (mm)	9.9	7.2	5.4	5.2	4.3	3.6	3.0	
Max. number of turns	1	2	3	6	8	10	12	14

• LOW-FREQUENCY PARAMETERS

Permitted unbalanced current flow: 8 ampere-turns (balanced current within the cable will not contribute to this limit, which is set by saturation of the core).

• GENERAL

Power cables will not only act as antennas but also conduct interference directly from other equipment.

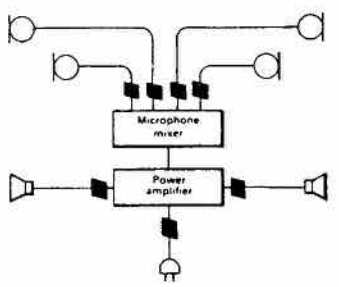


• RADIO TRANSMITTERS

Interference may be caused by CB or amateur radio transmitters because of poor transmitting antenna balance or from radiation by interconnecting cables and the AC line. "FEEDBACK" to the microphone of a transmitter may give trouble if the operator is close to the antenna or has poor RF grounding. A choke on those cables will help cure these problems.

• AUDIO AMPLIFIERS, TELEVISIONS, RADIO AND STEREO SYSTEMS

The usual symptoms are breakthrough of mobile or broadcast radio, thermostat clicks etc. If the induced signals are sufficient to overload the amplifier they will be rectified and any amplitude modulation thus made audible. The longest cables are generally the most vulnerable to pick-up. These will be the loudspeaker connections coaxial antenna or interconnecting component cables. For public address or stage sound systems the microphone cables should also receive attention and Snap-on chokes installed.



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The Ravenscroft Appeal

BY RALPH CAMERON
VE3BBM

Borden & Elliot, solicitors for Jack Ravenscroft, deposited the necessary Factum and Appeal documents and received a certificate of Perfection which indicates Jack's defence material has been officially deposited with the Supreme Court of Ontario.

It is now a matter of waiting for a copy of the Factum from the Plaintiffs which will represent their cross appeal. A tentative date for the Appeal to be heard in Osgoode Hall, Toronto should be known by mid-March.

There are three primary issues and arguments detailed in the Factum and extracts supporting these issues and arguments have been taken from the trial transcripts. (Yes, they were finally received after 10 months.) The Appeal raises the following issues:

- 1) The regulation of the transmission and reception of radio communication is within the exclusive jurisdiction of the Federal Parliament and cannot be affected by Provincial law;
- 2) The conduct of the defendants does not amount to an actionable nuisance;
- 3) In the alternative, even if the defendants' conduct amounts to an actionable nuisance, the defence of statutory authority applies.

In expanding on item 1) it is stated, "The Parliament of Canada has exclusive jurisdiction to regulate and control radio communication, including the transmission and reception of signs, signals, pictures and sounds of all kinds by means of Hertzian waves, and including the right to determine the character, use and location of the apparatus employed. In the *Radio Reference*, the Privy Council made clear that both the transmission and reception of radio communications was exclusively within Federal jurisdiction:

"Parliament has exclusive jurisdiction 'to enact legislation in relation to radio communication and broadcasting' by virtue of the power granted to it by Section 91 of the BNA Act to enact legislation for the peace, order and good government of Canada and Section 92 (10) which excepts radio communication and broadcasting from the classes of subjects that fall within provincial jurisdiction."

There are additional reference cases and texts cited to support this argument. There are four cases cited which support the statement, "Further, provincial law cannot affect a federally licensed undertaking to the extent that it is sterilized in its

functions and activities or its status and essential capacities are impaired in a substantial degree."

In support of item 2) above, there are numerous cases cited and legal references quoted which have little meaning when quoted out of context. One statement worthy of note is the following, "The law of nuisance makes a distinction between situations in which there is actual physical injury to the property of the plaintiff, and situations in which there is no physical injury but rather an interference with beneficial use and enjoyment of the property. In the absence of physical injury, the plaintiff bears a heavier burden of proof, and must show that the interference is serious and substantial and of such a nature that it is clear according to the accepted standards of the day that it should be an actionable wrong."

In determining whether or not the RF interference amounts to nuisance, the factors used for evaluation are the same as those argued previously and are still relevant:

- (i) The type and severity of the harm.
- (ii) The abnormal sensitivity of the plaintiffs.
- (iii) The character of the locale.
- (iv) The utility of the conduct.

"The defence of statutory authority is well established in the case law. In *Allen v. Gulf Oil Refining Limited*, Lord Wilberforce described the defence in the following items (at p. 1011):

"Where Parliament by express direction or by necessary implication has authorized the construction and use of an undertaking or works, that carries with it an authority to do what is authorized with immunity from any action based on nuisance... To this there is made the qualification, or condition, that the statutory powers are exercised without 'negligence'—that word here being used in a special sense so as to require the undertaker, as a condition of obtaining immunity from action, to carry out the work and conduct the operation with all reasonable regard and care for the interest of the other persons."
ALLEN v. GULF OIL REFINING LIMITED, (1981) A.C. 1001 (H.L.)

The other case cited relative to the defence of statutory authority is, "In the *Royal Anne Hotel* case, McIntyre J.A. (as he then was) quoted with approval the following statement of the principle by Viscount Dunedin in *Manchester v. Farnsworth* (at P. 465):

"When Parliament has authorized a certain thing to be made or done in a certain place, there can be no action

for nuisance caused by the making or doing of that thing if the nuisance is the inevitable result of the making or doing so authorized. The onus of proving that the result is inevitable is on those who wish to escape liability for nuisance, but the criterion of inevitability is not what is theoretically possible but what is possible according to the state of scientific knowledge at the time, having also in view a certain common sense appreciation, which cannot be rigidly defined, of practical feasibility in view of the situation and of the expense."

ROYAL ANNE HOTEL CO. v. ASHCROFT, (1979) 2 W.R.R. 462 (B.C.C.A.)

In the use of the above case law as an issue or reference the Appellant's (VE3SR) solicitor will argue the following to prove the defence of statutory authority:

"(i) Has Parliament by express direction or necessary implication authorized the the undertaking?"

(ii) Is the damage complained of an inevitable result of the statutory authorization?"

(iv) Was there any negligence in the exercise of the statutory authority?"

Arguments then appear for each of these above issues.

"In conclusion, it is submitted that to the extent that an actionable nuisance is found, Mr. Ravenscroft is entitled to invoke the defence of statutory authorization."

Part IV of the Appeal Factum describes the 'ORDER REQUESTED'— "It is submitted that this appeal should be allowed with cost both in this Court and below, and the action of the plaintiffs dismissed.

"All of which is respectfully submitted."

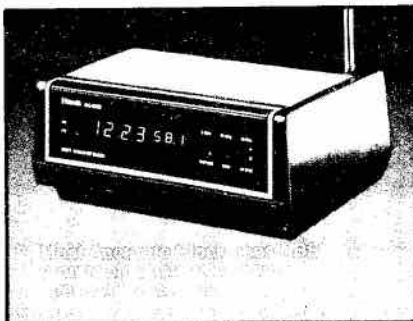
SIGNED

J.D. Hylton, Q.C.; C.D. Bredt
of counsel for the appellants

Note: The above extracts have been taken from the Factum, Court file No. 274/86, filed with the Supreme Court of Ontario, Court of Appeal. The entire document comprises 24 pages and includes all necessary legal references. To this document is attached the Appeal Book which includes 64 pages of extracts from the trial transcript along with copies of relevant Court exhibits. Copies of the Factum book are available to any parties which may have interest in this Appeal. These documents are now in the Public domain.

Contact Borden & Elliot, 250 University Ave., Toronto, Ont. M5H 3E9, Attn: Mr. Christopher D. Bredt.

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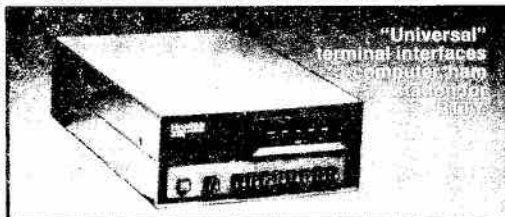
See all of these products and many more at Heath/Zenith Computers and Electronics Centres located in Vancouver, Calgary, Edmonton, Winnipeg, Mississauga, Ottawa and Montreal.



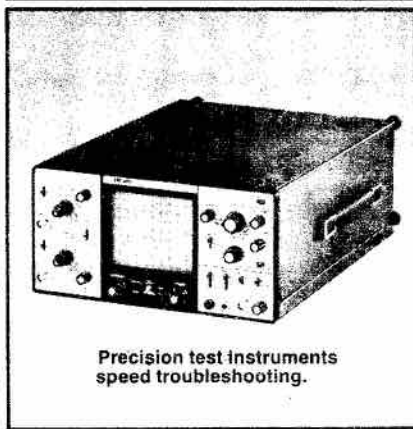
Microelectronics make the HW-9 QRP CW transceiver small and light.



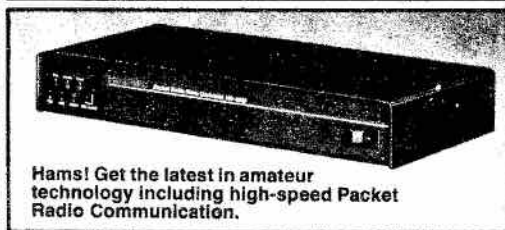
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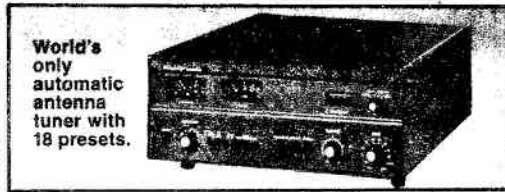
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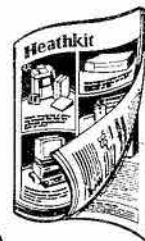


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Japan-Canada Reciprocal Amateur Operating Agreement

BY BILL WILSON VE3NR

The Department of Communications invited representatives of the CARF and CRRL to attend a meeting with representatives of the Japanese Posts, Telephone and Telegraph Department and of the Japanese Amateur Radio League (JARL) on Feb. 4, 1987 in Ottawa, to discuss the implementation of the recently signed Reciprocal Operating Agreement.

The Japanese were surprised to learn that all they had to do to get authority to operate in Canada was write or go to the nearest District Office and show DOC a copy of their Japanese licence, state where their station was to be located and the

duration of their stay. The District Office would then give them a letter authorizing them to operate in accordance with one or more of the Schedules annexed to the Canadian Amateur Regulations that relate to their Japanese qualifications. Japanese Amateurs could get copies of the Canadian Regulations from that same or any other DOC Office.

There are two categories of Japanese Amateurs: In the first are those that could be called senior Amateurs. They comprise about 3-4% of all Amateurs and can be further divided into first class Amateurs who have full privileges and second class Amateurs who are limited to 100

watts maximum power. There are about 680,000 Amateurs in the second category of Junior Amateurs which is further divided into two groups: radiotelegraphy and radiotelephony. Both are limited to 10 watts and frequencies above 21 MHz or below 8 MHz when they are in Japan. The total Amateur population at the end of 1985 was about 703,200!

Some Canadian Amateurs have been quite concerned about the problems that might be posed if Amateurs from this second category of 'novice-novices' were to be able to get operating privileges while visiting Canada. Because of this, it took quite a while to work out an agreement which took into account the disparity between Japanese and Canadian qualifications. The result has been that Japanese Amateurs in the first category will get advanced Amateur privileges while in Canada. CW-only Amateurs of the second category will get ordinary Amateur privileges while phone-only Japanese Amateurs in this second category will get Digital Amateur Privileges only.



Left to right: Masao Hamada, Editor of JARL's 'CQ'; Yoshihiro Nagamurie, P.T. & T., Japan; Yataka Kashara, International Director, JARL; Yoshio Arisaka, Senior Director, JARL; Shiro Namura, Kenwood.



Maurice Nunas, Manager, Spectrum Management Operations, Radio Regulations DOC; Lucien Villeneuve, International Branch DOC; Ron Walsh, CARF President; Harry MacLean, CRRL Vice-President.

OSCAR 10 QRT

As of Nov. 2, 1986, AMSAT OSCAR 10 was still QRT. Earlier, radiation had damaged the on-board computer, making the satellite impossible to control. Now it appears the batteries are depleted. However, UoSAT OSCAR 9, University of Surrey's experimental satellite, is alive and well and recently celebrated five years aloft.

CARF News Service

NASA SHUTTLE

Thursday, Feb. 18, 1988, has been established by NASA as the date when shuttle flights will start again. Per White House policy, NASA will no longer launch commercial and foreign payloads. There will be five launches during 1988. Ten shuttle launches are scheduled for 1989— 11 in 1990.

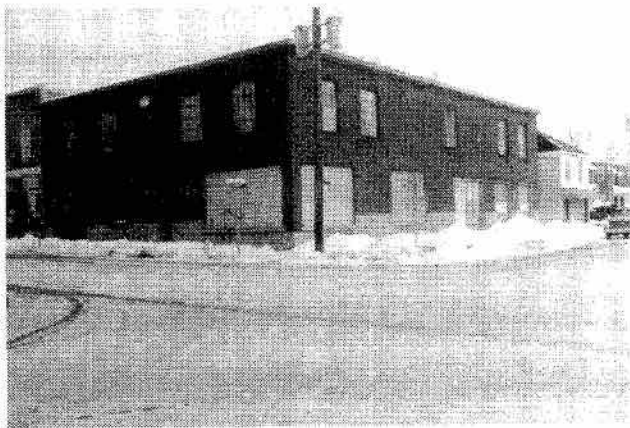
From W5YI Report

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WATCH FOR OUR MOVE TO BE ANNOUNCED LATER THIS YEAR
 (April issue of TCA contained more details on the coming move)



Future Home of Surplus Enterprises
 More details next month

Many items just received including the following:

Here's an interesting item for the experimenter, Heath CB units, Model GW14. These are all solid state and were used by the military for some obscure purpose. Built in spkr., couple of miniature xtals. Front panel has controls including switch marked CW/AM, tuning meter, etc. Plug-in transistors, dip switch, etc. At our low price cannot guarantee units are complete. Only \$5.00

Power supplies, Military Type CPP-2. Rated at 12VDC at 22 amps or 24VDC at 11 amps. Filtered with chokes and capacitors, latter consisting of 2200MFD's. With copy of schematic. \$45.00

Should be noted that these are heavy units weighing 96 lbs. and are approx. 18x9x11 inches.

Scanning electron probe microanalyzer. Made by GEC-AEI (Electronics) Ltd., Model SEM2A. This unit produces X-Rays to bombard a specimen and obtain quantitative elemental analysis. Comes complete with cables, manuals, dwgs, spares, vacuum pumps, gas gauges, optical binocular microscope, camera, spectrometer and many other pieces. Technical data available on request. \$3500.00

Printed circuit board milling/drilling machine. Table mounted made by Graphic Precision Works Ltd., Model C101. Drilling unit motor is by Rockwell rated at 35000 rpm. Foot-operated solenoids for vertical movement, adjustable speed control and rpm meter, air controls. \$600.00

Fax units, transmitters/receivers, solid state, floor models made by Daycom California. These are Securafax units, Model 412A. \$175.00

Military WWII tank compass, liquid filled, approx. 7"x4" dia. Made by Pioneer Model 1829-2A. \$38.00

Receiver, Squire-Sanders Model SS-1R. Covers 7 bands each of 500KHz width plus 2 additional bands of 500KHz depending on xtals used. Three selectivities of 5, 2.5 and .35 KHz. For CW/AM and USB/LSB reception. Separate speaker cabinet with IF noise silencer option Model SS-1S built in. \$200.00

Receiver, Nems-Clark Model 1306A. Continuous coverage 30-260MHz. Choice of 4 IF bandwidths, 6 IF video bandwidths, two tuning meters, built-in speaker. Covers CW, AM and FM. Rack mounting. \$135.00

An odd item for someone. Gasoline powered wheelbarrow, forward and reverse, dumping tray. Powered by single cylinder rope start engine. Appears storage wear only. \$250.00

Keyboard printer, Dec Model LA36 Decwriter 11's with floor stand @ \$150.00

As above but with Accelwriter option @ \$180.00.

Printer, Model T5103 made by National Scientific Labs. Solid state, dot matrix head, RFI shielded, table model. Used for secure operations. \$125.00

General Radio Synchronometer (clock) rack mounting, less glass dial front. \$75.00. Model 1103A.

General Radio Model 691C constant temp. xtal standard, rack mounting. \$50.00

Rotary converters, Carter 24-28VDC models. 115V at 60Hz output 2.25 amps \$12.00

Same as above but larger. Output 6.3 amps. \$20.00

All items are used surplus unless indicated otherwise. Ontario residents add 7% sales tax. All items FOB Smiths Falls. All queries answered, please provide postage stamp for reply.

Securing the Shack

BY CRAIG D. DELMAGE
VE3KKU

Before you start your next antenna project, or before you begin a 50-hour new rig building project, why don't you spend just one Saturday protecting what you have already from your relatively good chances of experiencing a break-and-enter crime? The work is easy, the number of hours needed few, the general cost can be very low, and the rewards are too great to mention. And best of all, once this project is done, it is done, and you will be able to go DXpedition after DXpedition having full peace of mind about your shack back at home.

As Amateurs, we stand to lose a lot should our homes be broken into. Some of the electronic equipment we keep is not replaceable at any cost. And the miserable half of a break-in is the vandalism aspect; look around your shack right now and picture it as if it had been attacked by an upset burglar, because he did not find what he wanted.

If I am upsetting you, I am sorry. But I mean to, as I have found over the years that's what it takes to convince people to spend one afternoon of their lives to protect their home and family members. One good point about a break-and-enter as far as Amateurs are concerned: DOC has officially told me that should someone break into your home and then get on 20 metres to ragchew with another burglar on another continent, you will not likely be charged for not securing your gear and not being in control of your station. But this leads me to the third aspect of a break-in, other than financial loss and problems related to the vandalism: Psychological Damage.

Your insurance company will not likely pick up the tab for visits to the Psychologist to help you overcome the fear of having your castle invaded again. Unless it has already happened to you, I cannot properly explain how it feels to know that someone you do not know has picked apart your home.

So do something next Saturday to protect yourself. You can greatly increase your odds of having a crime-free house, if you follow the steps below.

Remember: the average Canadian burglar is not a professional thief. He

is only using household tools to gain entry to your home, because your home is that easy. Take away the vulnerability, and he will want to choose an easy target, such as your neighbour down the road. Criminologists call this 'Crime displacement'. Burglars, although not professional, usually are also not stupid. As they want fast access to the inside of a home when no-one is home, they choose their targets accordingly. Don't let your home be one of those targets. So how do we do it?

First, keep in mind that everything you do, no matter how small, is additive in protecting your home. The more the better. At the same time, your home does not have to look like you are the one inside a prison. That job can be left for the burglar.

A rough rule of thumb I have used over the years is "Spend, in monetary costs, 1% of the value of the assets you are trying to protect." So, if your home is worth \$100,000, spend \$1,000 on your security. If you are handy, and can raid your hardware junkbin for parts, you should be able to put proper locks all around your house, physically secure all ground floor windows and second floor windows, place window bars on your basement windows, install a local wired-in perimeter and space alarm system, purchase an engraver, buy two 24-hour timers, increase the lighting around the outside of the house, all for under \$500. Five-hundred dollars for an extremely well-protected home that costs over \$100,000 is very inexpensive protection for what you have slaved for all your life. Peace of mind does not come any cheaper. And security costs are recouped when you sell your home; in fact, this is now becoming a selling feature.

Divide your security program into three parts:

- 1) Physical protection
- 2) Procedure protection
- 3) Electronic protection

PHYSICAL PROTECTION

Step 1— Purchase keyed-alike locks, preferably double-cylinder (but keep in mind the fire-hazard: while at home, leave the key in the lock), for all exterior doors and the shack door. Don't forget the garage in/out doors. Spend at least \$45 for each lock and buy ones with at least these three

features: Non-drillable face plate, rotating collar and solid interior parts. Mount only on solid doors, without hollow or cardboard interiors. For metal frame/solid door— buy one inch throw deadbolt locks, otherwise buy jimmyproof locks. Reinforce deadbolt locks with an extended strike plate and replace all screws with larger, longer screws that bite into the first stud. Patio doors need a special \$15 patio keyed lock. You may want to put locks on a door going to the basement and one closet door that will act as an interior safe. Overhead garage doors need a padlock placed through the hole in the track when you are away.

Step 2— Replace hinges on exterior doors with non-removal hinges or else 'pin' existing hinges. Install wrap-around strike plates on all exterior doors. Install five evenly spaced screws in top track of patio doors so that the opening door slides just underneath the screws. This helps prevent crowbar attack. Install 180 degree viewing peepholes on all solid doors. Install 1/4-inch plexiglass in front of any glass in doors or within one metre's reach of the door (ie. side-light). Or install window film, 7mm or thicker, on top of glass, extending inside the glass frame. Install a \$20 two-unit intercom system, one unit on each side of the front door.

Step 3— You generally do not have to worry about solid glass windows, but if you are terribly concerned, you can place clear or tinted window security film on top. (The tinted also reduces your heating bills.) For sash windows— drill through the two window frames and place a nail in the hole. Pearson windows— use screws in the upper track like the patio door trick and then place snug fitting dowelling in the track. Drill two holes at either end through the dowel into the track and then place a nail into each hole.

Other windows can be secured by inexpensive hardware such as nails and screws, or window bars if you insist. Window bars should definitely be placed on basement casement windows. Use spare copper tubing from your J antenna project, placing the greased copper into 1/4-inch-thick steel bars, the total length being two inches wider than your window. Use as many bars as are needed so that the

height of the bars is never more than six inches between bars. Drill one-inch holes in the frame for each side of the bar. The one side should be drilled first at a 45° angle, then straight into the frame so the bar will go into the holes easily. When the bars are in, drill a hole through the frame, through the bars, so that a nail can hold the bars in place. This leaves a fire escape route.

Step 4— Ensure the shrubbery around the home is trimmed so that your house is visible from the street. Maintain your fences. Physically secure your shed. Put away tools and ladders. Chain your gas outdoor cooker to something solid.

PROCEDURAL PROTECTION

Step 1— Purchase a \$20 engraver which will last you the rest of your life. Engrave all valuables, in two places if you can, with your SIN. Then go to your Police Station and fill out the Operation Identification form, and bring home two Op Id stickers. Put one on the front door and one on the rear. These tell the burglar your home is 'Tough' and stolen goods out of this home will command less money from the burglar's 'Fence'.

Step 2— Take inventory of all your goods. Record serial numbers, model numbers and date purchased. Photograph the entire house showing interior possessions. Place a ruler beside jewellery, coin and stamp collections and photograph them. Then place pictures and lists in your safety deposit box. Remember: You have to prove you owned something in order to have the insurance company pay for replacement.

Step 3— Form a Neighbourhood Watch group on your street. Once you become a bonafide member, you will get a Neighbourhood Watch sticker for your doors. Put them on.

Step 4— Review your insurance policy. Buy replacement cost insurance if you can. Make sure you know exactly what losses are covered by a burglary. In some cases, additional premiums are needed to properly cover coin, stamp and other collections. There may be some rules for safeguarding these. Some companies insist that your house be inspected periodically while you are away. You will get an insurance break for your security efforts.

Step 5— Purchase two or more timers and set them to go on during normal living hours and go off at usual bedtime (I realize this does not apply to DX chasers and contesters but do it anyway). Put a strong light on one and audio such as the television or your rig on the other.

Step 6— Replace your outside-light switch with a timer-switch.

Step 7— Use this checklist when you leave your home for a vacation:

- a) Set all timers.
- b) Have a neighbour check the house periodically and give the neighbour your travel plans. Have neighbour pick up mail and newspapers every day. (If not gone for long, keep the paper going.)
- c) Find a spare car and park it in your drive, right up against the garage door. Or have a neighbour park in your driveway. If gone for long, have the neighbour move the car once in awhile.
- d) Put as many valuables as you can in the safety deposit box.
- e) Have your neighbour look after your lawn or snow problems.
- f) Never hide keys outside the house.
- g) Don't talk about your planned vacation if possible, excepting the trusted neighbour.
- h) Advise the police of your vacation dates.
 - i) Avoid packing the car in full view.
 - j) Don't leave addresses and names on the outside of your luggage.

"The average Canadian burglar is not a professional thief. He is only using household tools to gain entry to your home..."

Step 8— Don't leave notes pinned to your door advising someone when you will return.

ELECTRONIC PROTECTION

This is the fun part, since most Amateurs are electronically inclined and look forward to such a project. Lighting around the outside of the house should be increased so there are no dark areas in the yard at night. Check to see if you need a licensed electrician to do the final wiring.

I could write a complete book on electronic surveillance of a home, but here I will give the basics, and important points to keep in mind when designing your own alarm system. A complete alarm system could keep you busy for a day or two and they are best installed with a buddy. However they are relatively simple to wire. A control can be purchased from your alarm dealer for

about \$150. Other peripherals will cost between \$50 and \$150. Stay away from the wireless systems as they present a multitude of problems for Amateurs.

ALARM COMPONENTS NEEDED

Control— preferably one that accepts open and closed circuits, has self-contained DC power inside, and has four zones.

Switch— Either a keypad or a key-switch used to remotely control the alarm.

Wire— The most useful is four conductor 'Bell' cable.

Annunciator— This can be a siren, a bell or a strobe light. Mount the siren near an attic vent if you can.

Detection Devices—

a) *Perimeter devices:* Contacts, magnetic or reed, are the best devices. They can be concealed if you want. Contact switches are placed on doors and windows that open. A low false alarm advice. Don't use pressure mats. They rust and they are an open-type circuit. Also hard to install. Don't use window bugs or vibration detectors as these are prone to false alarms in most cases. Alarm screens are good but expensive and not usually worth the cost for the homeowner.

b) *Interior devices (space protection):* Don't use microwave or ultrasonic devices as these are very false-alarm prone. Infrared, pulse-infrared, or infrared/ultrasonic, infrared/microwave are my favorites in that order. Mount at least one in the main hallway, not pointing at a window. Can't use with pets.

c) *Point Protection devices:* This category includes safe contacts, interior vault room devices and the like.

d) *Other sensors:* To most alarm systems you can also add smoke and heat detectors, water detectors, panic buttons and, if the system is monitored, police, fire and ambulance buttons.

My overall advice for alarm builders is to keep it as simple as possible. A control, a siren, a key-switch, door and window contacts and one infrared is just about all that any home really needs. Use closed loops always.

LOCAL OR MONITORED?

A local alarm will usually scare the burglar away, which was your original intention in installing the system in the first place. Chances are that the burglar will see the alarm warning sticker, the neighbourhood watch sticker, the Op Id sticker, the window bars, the good locks on all

Continued on next page ▶

SECURING (cont'd)

exterior doors and just simply walk over to your neighbour's unprotected house and burgle it.

If you want monitoring, be warned the police are not always happy about auto voice dialers. And if you go the commercial route, you may be looking at licences soon to do so. Also, some municipalities provide false alarm fines of up to \$1000. Be careful of the monitoring contract that you sign. Insist that your lawyer see it first. And definitely shop around for all alarm services. Call the Better Business Bureau.

My best advice is to purchase an auto voice dialer which dials three numbers without fail. Program three friends' numbers and produce a tape that states your name and instructs the listener to call the police to check out your home.

This security checkup for your home isn't by any means conclusive. Have your local police do a checkup. It's free. Read library books on the subject. But whatever you do, do it! Don't keep putting it off. I've seen literally hundreds of people put it off until they were burglarized. Then they did it. And if you still have doubts

about how to go about something with security in mind, then write to me and send an SASE.

Make your plans today, set your tools aside and purchase what you will need tomorrow, and then on Saturday...

Craig D. Delmage is the Chairman of the Crime Prevention Council of Ottawa Task Force, and President of Canadian Security Consultants Limited.

SWAP SHOP

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

SHACK CLEANING: 50 years old-timer stocking parts, meters, transformers, tubes, sockets, instruments, phone patch. Mobile antennas, Central Electronic 200 V first transceiver. QST's, 73's, pre-1930 old radio magazines, interested? Send SASE for listings. VE2OU, 2785 Valcourt St., Ste Foy, Quebec G1W 1W2.

FOR SALE: FOXX transceiver kits are available from Frank Hughes VE3DQB, Box 855, Hawkesbury, Ont. K6A 3C9. Diode tuner kit \$40, variable capacitor tuning \$50. Either kit \$5 postage and packing.

FOR SALE: Yaesu 400 Hz CW Filter XF-30C for FT-101 except ZD series. \$22. PL-172 Tetrode, \$49 with guarantee. Transceiver Duplexer model DB 4055, 166.62 tx 171.15 rx, \$84. Shipping and handling included on all items. Ed Leahey, 54 Clairmont St., Thorold, Ont. L2V 1R8.

SWAP: My Pointer ELT for two Fullers-phones in working order. Moe Lynn VE6BLY, 403-455-7694.

FOR SALE: Yaesu FT207R 2 metre handheld. Mint. Complete outfit, leather case, 2 batteries, mobile, wall, desk chargers (3) duck mic, Fields carry case, instruction manual, service manual, battery adapter, \$225. Packet digital tuning indicator, August 86 73, \$55. Complete QRP station. Heath HW8-HWA7-1 power supply, MFJ frequency standard, cwf2 filter, antenna coupler, Sentry SWR bridge. Mint, \$325. Shipping included. Monty Hart VE3TA, 55 Highland Ave., Barrie, Ont. L4M 1N2. 705-737-2252.

FOR SALE: Zimbeam—4 el. all driven 20M homebrew beam; 4 section anodized aircraft quality elements; brackets, clamps, everything aluminum or zinc-plated, very heavy duty. Must sell, \$350.00 (cost) Gary Van Overloop, 4444-33 St., Red Deer, AB T4N 0N4 403-342-2862.

WANTED: IC271-A or -H Service Manual (or Copy). Please phone collect or write Ralph Porter VE3CAA, RR #3 Frankford, Ont. K0K 2C0 613-398-8331.

FREE: 8 years of QST 1976/83. No Ship. Can deliver to Kingston Area. Jerry Bradley VE3HXV, Meaford, Ont. Ph. 519-538-2654.

FOR SALE: Microlog Air-1 for Commodore 64, \$200; Commodore 64 \$100. Also Kenpro KK60 Heavy Duty Key, \$50. A. Jones VE6BSA, 204 Cardinal Drive, Fort McMurray, Alta. T9K 1H6. (403)791-6706.

FOR SALE: CW Transceiver HW-16 (80, 40, 15 mtrs), VFO HG-10b \$60. Michel VE3SDM, Ottawa, Ont. 613-236-1629.

FOR SALE: Viewstar PT-2500A HF Linear Amplifier (Excellent condition); Ham III Rotor and control box; KLM 14 element 2 metre beam (new); Yaesu MD-1bb Desk Microphone; Astatic D-104 Desk Microphone; Hustler bumper mount antenna c/w 20-40-80 metre resonators, etc.; Kenwood HS-4 Headphones (new) Reasonable offers will be considered. Wil. Donohue VE5ZJ, 27 Delaronde Rise, Saskatoon S7J 3Z4, 374-8919.

WANTED: Addison Two-tone radios up to \$150, 1920 Battery Radios up to \$300. Radio magazines/tubes. A. Noll, 539 Kastelic Place, Burlington, Ont. L7N 3R5. 416-639-4768.

FOR SALE: Yaesu FT101, Drake 2-C with 2-CQ Q Multiplier, Johnson Viking Adventurer. First \$500 cash takes all. Manuals, spare tubes, mike etc. all included. Pick up only. Steve VE3NYT, Hamilton, 525-4323.

WANTED: 1 RV75 Remote VFO for the Drake TR7. Eric Salter VO1KR, 13 Rosscornon Pl., Wedgewood Park, St. Johns, Nfld. A1A 3C7. 709-753-2466.

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

INTERNATIONAL AMATEUR RADIO NETWORK

The IARN is a private organization formed to improve Amateur response to emergencies. It aims to remain independent of politically oriented radio organizations yet to interface with these and other organizations where appropriate.

If interested, check into one of their nets, held on odd Saturdays, presumably the first and third of every month, SSB 14.160 MHz/14.275 MHz, RTTY 14.090 or 14.332 MHz. They monitor 14.313 and 14.332 MHz. Tnx Worldradio.

HIGHLIGHTS FROM THE IARU 9th General Assembly of Region 2

Oct 20-25 1986

The top 10 kHz of 15 and 20 metres will be the initial meeting place for Amateurs in time of international emergency.

No phone operations on the 10 metre band.

Contacts on the 10 metre band will not count for contests and awards.

April 18, the anniversary of the founding of IARU in 1925, will become World Radio Amateur Day.

June 17 will become World QRP Day.

AX.25 will be the international preferred protocol for Amateur packet radio.

IARU Region 2 with ARRL will establish a packet radio network for North and South America.

CARF News Service

DOC NEWS

A Professor of Law is doing a year's sabbatical at DOC. He's doing a thesis of 'case comment' on the Ravenscroft affair. This will be circulated to law societies across Canada.

He plans to publish in December.

He has just returned from a visit to the F.C.C.

—VE3BBM

BILL VE7CIM

TONY VE7CPW

TOM VE7DQ

ROLAND VE7ACI



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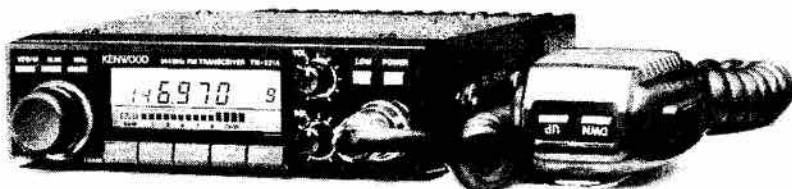
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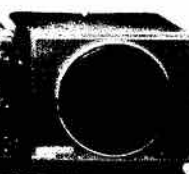
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The Canada Winter Contest 1986

BY NORM WALTHO VE6VW

Well, here we are doing the results of yet another contest, one that has been the best yet of the CARF Contests.

There were 79 entrants of which seven were the CARF official stations. There was good representation from all classes except the multi-multi class in which there were no entrants. There seemed to be quite a few entrants from Europe and the U.S.A. which says that this one is getting to be known around the contest circle. The exchange with the name seems to be very favorable and appealing to most of the entrants. A few Amateurs seemed to think that it was too much. We are going to leave the name in the report because it seems to make the contest truly Canadian in nature. After all, a change in the report is as good as a rest.

Don't forget that the next contest sponsored by CARF will be on July 1, 1987 and that the logs will be going to my helper John Clarke VE1CCM, 16 Keefe Ave., Sydney, Nova Scotia, Canada B1R 2C7.

COMMENTS

VE2RQ— It's getting better with each contest; G4LQI— Thanks for a good contest, my fourth Canada contest in a row. Conditions on Eastern Canada on 80 were great, on 20 fair, on 40 atrocious, on 15 non-existent and is there life west of the Lakehead? My greatest ambition is to work a VY1, maybe on 1/7/87; OH3AC— Poor conditions, couldn't get any VEs; VE3OXX— My first Canada contest, I won't miss the next ones; VE3OZB— My first all-band contest, lot's of DX on 80M; VE1DX— Don't like the name exchange; YU7SF— this is my 1099th contest and fourth Canada Winter (1981, 1982, 1985, 1986); OH3GD— Canada contest is a great chance for low power operators to compete; VO1SA— Would have been nice to have worked a N.S. station; VE6GK— My first contest in 10 years, had a good time, will give it another go in July; WSFO— Enjoyed it (as usual), giving the name was a good touch.

VE0CX— It was fun to operate from my WHKBY 42 Sailboat DX and my new M/M call was in demand. It appears that I may have been the only VEO in the contest. VE3LQJ— Fun contest but wish there were more people on CW; VE3IDW— A strange call from the Eastern sector. VE3VCA

did not compete due to TVI problems. Next year we will mount a 24-hour operation; NOCLV— Your contest gets better each year, would like to see more SSB VEs above 14.150 MHz.

VE2AHC— Encore une fois très heureux d'avoir participé au concours du Canada 1986. Très déçu de la participation des stations VE. Cependant heureux d'entendre VY1TCA et VE8AW sur 20M. Personnellement je suis en désaccord avec l'échange de prénom car cela allonge inutilement l'échanges entre les stations et peut induire des erreurs sur l'essentiel; VE2FQX— Je suis toujours emballé, malgré le manque de participation des VEs a leur contest. ps: Les maritimes est-ce un DX rare? VE2FOT— Toujours un aussi beau concours. J'aimerais une plus grande promotion de ce concours auprès des autres club,

association et revue de radio amateur. Je suis également contre l'échange de prénom. Félicitations a tous ceux qui ont participé encore une fois au seul concours Canadien.

VE3SPC— Operators: Dave VE3CLL, Eddy VE3CUI, Howard VE3DAX, Sal VE3HFX, Dennis VE3HYJ, Tony VE3IAT, Peter VE3JPP, Jim VE3KQJ, Tom VE3KZE, Pat VE3MKK, Clem VE3MVD, Ray VE3NBE, our graveyard shift was rewarded with KN4BPL/KH3 on 80M; VE7BS— The habit of sending operator's name developed during the contest. That is a pleasant touch.

That about wraps it up for another Canada contest. Maybe in a few years this one will be really popular. We seem to have improved the contest scene with the revamping of the classes. If there are any comments, feel free to drop me a line.

CARF Contest All-time Records

	CALL	SCORE	MULT	YEAR
CANADA DAY CONTEST				
SINGLE OP ALL BAND	XJ3XN	384,414	79	1985
ALL BAND CW				
ALL BAND SSB				
SINGLE OP 160	VE3INQ	297	3	1982
SINGLE OP 80	VE2CUA	22,872		1981
SINGLE OP 40	CY1CCM	13,266	18	1983
SINGLE OP 20	CJ5RA	54,820	20	1982
SINGLE OP 15	DF6VE	3,015		1980
SINGLE OP 10	VE1BUG	1,970		1979
MULTI SINGLE	VE7ZZZ	368,412	66	1985
MULTI MULTI	VE?	0	0	1900
CANADA WINTER CONTEST				
SINGLE OP ALL BAND	VE5DX	876,000	120	1981
ALL BAND CW	NOCLV	12367	17	1987
ALL BAND SSB	VE3XN	146188	46	1987
SINGLE BAND 160	VE7BS	2,464	7	1985
SINGLE BAND 80	VE3MRX	18816	16	1987
SINGLE BAND 40	VE6JO	13,200	15	1987
SINGLE BAND 20	VO1SA	964,480	22	1987
SINGLE BAND 15	VE3NOS	7,952	13	1982
SINGLE BAND 10	VE6CKW	39,160	22	1980
MULTI SINGLE	VE1ASJ	687,095	131	1981
MULTI MULTI				

**CANADA WINTER CONTEST
CLASS— SINGLE OP 40 METRES**

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.R	TOTAL
VE6JO	52	65	5	880	15	13,200
VE1CGV/NB	71	39	2	906	12	10,872
AH2W	11	7	1	158	4	632
W2UIU	4	0	1	60	3	180

CLASS SINGLE OP 20 METRES

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.	TOTAL
VO1SA	210	526	9	4,384	22	96,448
VESFX	192	227	6	2,948	26	76,648
WSFO	90	184	7	1,782	18	32,076
VE7EIK	125	25	6	1,470	18	26,460
VE1TE	97	145	4	1,630	15	24,450
VE3MKM	62	28	7	872	15	13,080
VE3EVZ	61	42	5	878	11	9,658
VE3LQJ	32	6	6	464	16	7,424
VE6VW	24	29	3	416	12	4,992
VE6GK	25	16	3	374	12	4,488
VE6BST	25	71	1	554	6	3,324
OH3GD	9	80	0	410	7	2,870
E8BAKN	22	0	3	280	9	2,520
E41ATQ	20	0	0	200	7	1,400
VE1AEQ	12	2	1	148	7	1,036
OH3JF	11	17	0	178	5	890
GM4AWEW	11	0	1	130	4	520
VE0CX	5	0	1	70	5	350
SP6DVP	5	0	0	50	4	200
ON8WN	2	1	0	24	2	48
OK2ABU	2	1	0	24	2	48
OH6YF	1	2	0	18	1	18
YU7SF	1	1	0	14	1	14

CLASS A— VCA CLASS

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.	TOTAL
VE2VCA	132	70	9	1,780	32	56,960
VE4VCA	112	92	7	1,628	25	40,700
VE7TCA	103	6	6	1,674	24	40,176
VE3TCA	85	37	5	1,098	30	32,940
VE6VCA	87	51	5	1,174	24	28,176
VE1TCA	68	1	4	764	23	17,572
VE7VCA	49	10	6	650	19	12,350

CLASS— MULTI OP SINGLE TX ALL BAND

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.	TOTAL
VE2FOT	177	108	11	2,422	60	145,320
VE3SPC	93	166	6	1,714	24	41,136
VE3KAR	24	5	6	380	10	3,800
VE8RCS	29	13	1	362	6	2,172

CLASS— SINGLE BAND MIXED MODE 160 METRES

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.R	TOTAL
VE3INQ	11	8	1	162	5	810
VE7BS	2	2	0	28	2	56

CLASS— ALL BAND MIXED MODE CW SSB

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.R	TOTAL
VE3OZB	298	458	22	5,252	77	404,404
W3ARK	72	22	10	1,008	22	22,176
VE6DZ		35	10	830	26	21,580
VE3FGU	56	18	5	732	24	17,568
VE1DX/PEI	62	18	3	752	23	17,296
VE4AJE	79	10	4	910	13	11,830
VE3OXX	36	13	10	612	17	10,404
G4LQI	54	11	0	584	14	8,176
VE1BEI/NB	32	47	0	508	15	7,620
VE3DJ	30	20	3	440	15	6,600
VE2LRB	16	2	11	388	13	5,044
NOFFZ	28	0	2	320	13	4,160
WSEY	20	0	1	220	10	2,200
VE3DQB	11	7	2	178	7	1,246
KA9SDO	18	19	2	296	4	1,184
VO2AC	9	2	1	118	7	826
KJ4WH	2	10	0	60	2	120
OH3AC	0	4	0	16	0	16

CLASS— ALL BAND SSB

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.R	TOTAL
VE3KN	199	247	10	3,178	46	146,188
VE7HAM	51	9	11	766	21	16,086
WK4F	28	3	3	352	14	4,928
VE3ACY	14	4	4	236	10	2,360
C6AER	17	1	2	214	8	1,712

CLASS— ALL BAND CW

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.R	TOTAL
NOCLV	40	67	3	728	17	12,367
VE2BIF	42	65	1	700	17	11,900
NOFMR	40	44	3	636	15	9,540
K4FHQ	33	27	1	458	13	5,954
VE2RO	29	56	4	584	10	5,940
VE6BMX	28	53	2	532	10	5,320
NOFFZ	28	0	2	320	13	4,160
KA7FEF	18	16	2	284	10	2,840
A6GEE	9	10	0	130	5	650
VE3IDW	CHECK LOG					

CLASS— SINGLE OP 80 METRES

CALL	VE QSO's	OTHER QSO's	BONUS QSO's	QSO POINTS	MULT.R	TOTAL
VE3MRX/W3	94	44	3	1,176	16	18,816
VE6GUS	104	67	5	1,408	13	18,304
VE1BZV/PEI	79	32	2	958	14	13,412
VE1CCM/NS	59	20	1	690	17	11,730
VE7DLM	67	37	7	958	12	11,496
VE7GDM	50	25	3	660	9	5,940
VE3LRB	20	7	3	286	9	2,592
VE2RQ	26	23	3	412	5	2,060
VE2RQ	26	23	3	412	5	2,060
VE6APY	16	3	3	232	8	1,856
OZ1IZB	1	12	0	58	1	58

1987 CLARA Contest

Sponsored by the Canadian Ladies' Amateur Radio Association— Starts 1700Z Tuesday May 26, 1987; Ends 0500 Wednesday, May 27.

The contest is open to all, but is primarily a reunion of old and new friends on the air, plus an opportunity for those working for CLARA certificates. (Note: New Certificate Custodian is Cathy VE3GJH.)

Each station may be worked once on each of the five HF bands, either on phone or CW. More points will be given for CW contacts, as an encouragement for those on the first licence and those who may not have free access to the phone frequencies. Licensed CLARA family members are being asked to participate as a special feature of this year's contest and there will be bonus points for working them. Associate members compete on the same footing as members. Exchange consists of name, serial number starting with OOI, RS(T), QTH, and if a CLARA member or family member.

Suggested frequencies: Phone— 28.488, 21.300, 14.125-135, 7.085, 3.775; CW— 28.035, 21.035, 14.035, 7.035, 3.690. All contacts must be made in accordance with operator and station regulations. No net, list or cross-mode contacts.

Scoring: For Base Score, calculate as follows— Each phone contact with a member counts 2 points; each CW contact with a member counts 5 points. In addition, members will receive one point for each non-member contact on phone, 2 on CW. All contestants will receive one 10-point bonus for each CLARA Family Member worked.

For Final Score multiply Base Score by number of Canadian provinces and territories worked (12 possible).

Awards: Highest scoring member, trophy; Highest scoring non-member, trophy; Highest score from each DX country, certificate; Highest score from an SWL, certificate. A special prize will be awarded to the CLARA

family member whose callsign appears most often in logs submitted, whether or not that family member has actually entered the contest.

Each log entry must show Date, Time UTC, Band, Mode, Callsign Worked, Report and Serial Number Sent, Report and Serial Number Received, Name and QTH of Operator Worked, and Points Claimed. Please include friendly contacts which may not count for you, in order to help give a true picture of contest activity. Logs also to show full name, callsign and address of operator, and full score claimed. No carbon copies. No logs will be returned. Contest manager's decision will be final. Logs must be received by July 15, 1987. Results will be published in November *Clarion* or non-members may send SASE. Any comments would be appreciated.

Contest Manager: Susan Harvey VO1OI, P.O. Box 17, Lark Harbour, Newfoundland, Canada A0L 1H0.

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- BP-4 Alkaline Battery Case
- BP-5 425mA 10.8V Battery
- BP-7 425mA 13.2V NICAD Battery
- BP-8 800mA 8.4V NICAD Battery
- HM-9 Speaker Mic
- CP-1 Cigarette Lighter Cord
- DC-1 DC OP Pack
- Leather Case for IC-2AT
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2M and 70CM



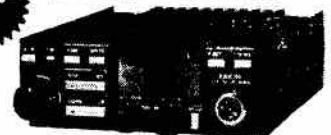
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The Prolific Spectrum

A recent issue of *Technology* magazine draws attention to what happens when a really big source of radio energy transmits in an area where some physical structures are able to 'absorb' some of the local field. Not many Amateurs have this problem, but resonant effects account for many of our problems of re-radiation in close proximity to any nearby resonant metallic conductors (including clothes lines).

It seems in Riyadh, Saudia Arabia, the local B.C. transmitter operates on 585 kHz. This is quite usual except the power output is 1.2 Megawatts. An international stadium is being constructed close to radio Riyadh and the enormous size of the stadium roof is posing some interesting technical design challenges. The roof is 290 metres in diameter and is supported, tent fashion, by 20 kilometres of steel wire placed on 24, 60-metre-high tubular steel masts.

The local transmitter induces a voltage gradient of 4 volts per metre in the metal work. It has been noted that current phasing throughout the structure causes unpredictable levels of voltage to appear. There have been reports that sparks have been seen to leap from cranes to metal girders, causing ionization of the surrounding air. Some workers have been burned by the arcs, but most are apprehensive to be working in such close proximity.

Many fluorescent tubes have activated before connection to the AC line. In some cases the lights perform their own 'Son et Lumiere', much to the consternation of the local populace. Almost all the observed effects have at one time or another been experienced in this country on a much reduced scale. Much progress has been made in minimizing the disastrous effects of these common phenonema called mutual coupling and resonance. This must be the granddaddy of EMC problems. Many of the remedies suggested call for isolation of the affected conductive paths and novel approaches have been used. Even the water supply lines to the stadium have been buried and sections insulated by use of rubber hose.

EMC IN THE AUTO INDUSTRY

The Society of Automotive Engineers has taken note of the fact

that moving vehicles become exposed to a very great variety of spectrum emitters. The common use of micro-processor control and monitoring functions in motor vehicles has resulted in a specification being developed for grading devices for their susceptibility to RF emissions. Sounds familiar, doesn't it?

Internally, motor vehicles of all types contain internal generators of electromagnetic energy: ignition systems, alternator/regulator systems, brush type D motors and high current power distribution. Look at the fuse ratings on that rear window defogger for example.

A standard known as SAE Standard J551 (1) specifies the limits and test methods for radiation from vehicles, over the range of frequencies from 20-1000 MHz. The standard originated in the late 1940s to address the problem of ignition interference to television receivers. This is really a case of TRUE interference because both the desired signal and the undesired signal compete for the same spectrum.

In the U.S. The American National Standards Institute and the International Special Committee on Radio Interference (CSPR) have been the coordinating bodies. It is interesting to note that the role of the automotive engineer is to ensure that the components comprising the electrical system within the vehicle must be

compatible with each other, before the outside sources of radio energy are considered. This reality somewhat parallels the experience of the television industry and their necessity to shield those circuit areas most likely to radiate.

Remember how the radio industry went through a similar experience with the radiation from early receivers based on the principles of regeneration?

DESIGN CONSIDERATIONS

The concern of the automotive EMC design engineer is identical to the concern expressed in resolving the problem of susceptibility of electronic entertainment and control appliances: design for safety by eliminating the possibility for equipment malfunction which could result in a hazardous situation. If a device within the vehicle malfunctioned in the presence of a nearby source, what protection would the vehicle owner have? Designing in EMC is just common sense let alone a moral obligation. One must only conclude that ignoring the potential for compromising safety, by omitting EMC measures, could constitute negligence. Certainly a search of all the available literature provides a mountain of data and indisputable evidence that shows the interactions really occur.

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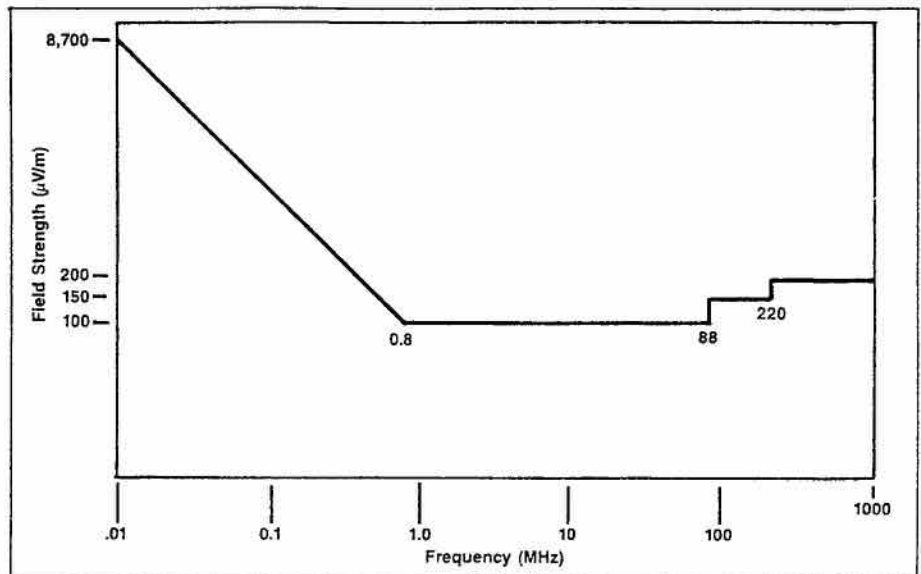


Figure 1. SAE proposed Electromagnetic Radiation (EMR) standard for vehicles and internal combustion engines.

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

Bruce Hildesheim VE3LPP writes from Cambridge about his 10 GHz activities:

"The pictures are from my contact #7 on Aug. 24, 1986. The distance was 3.3 km to Steve VE2BTW/3 (now VE3SMA) on the other side of the Grand River Valley. We generally use this path now for testing modifications, new rigs, etc. The picture shows the equipment at my end: Solfan Gunn oscillator (3mW), circulator, detector cavity, all mounted to a 22 dB horn antenna. Steve was using his homebrew 18-inch dish (estimated gain 29 dB). The frequencies were 10.270 GHz and 10.360 GHz for an IF of 90 MHz.

"Our farthest contact so far is 10.3 km from Chicopee Hill in Kitchener to Cambridge. The equipment is capable of much more but we ran out of warm weather to try. (I'm already dreaming of trying the 20 km path from Chicopee to Bayden hill in the Spring.)

FOWL DECEPTION

Since the tower has gone up I have been unable or unwilling to sit out in the yard. The birds were causing considerable mischief gathering as they will, it was mentioned that an owl placed well up on the tower would discourage them. Subsequently I purchased same and assisted by Jack VE3SR managed to get this bird properly installed.

Normally I would merely state the owl was effective but not so, the martins by this time had flown and the starlings couldn't give a hoot for my owl. The results nevertheless were quite spectacular. Every bird watcher in the neighbourhood showed up. Surprise! One young lad claimed his brother had seen the owl fly. I informed him his brother had been drinking his bath water.

The local bus stopped and the driver informed his passengers that the owl had been there since 9 a.m. and it was their migratory time. One well-dressed lady with binoculars leaped out of her car with her brood in tow and told the XYL, "You have a visitor." The missis informed her the owl, by this time named Hootie or is that spelt Hootbie? was available at a local emporium.

— VE3OAI (from OVMRC Rambler)

MICROWAVES

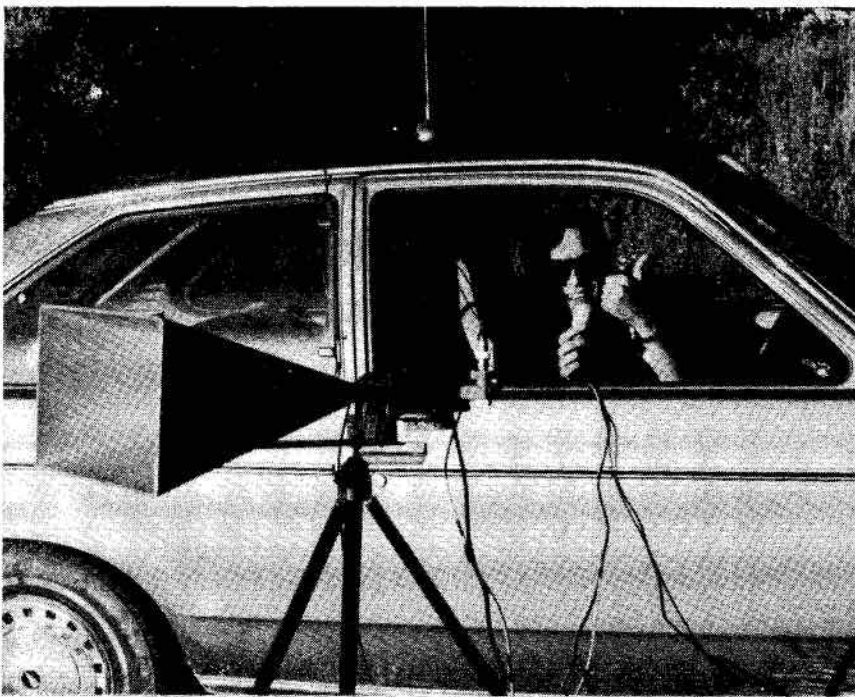
"My winter 10 GHz activity has been building a 30 MHz IF using the TDA 7000 chip and also getting some higher power diodes going. Chuck WB6IGP of the San Diego Microwave Group has been a great help in finding the parts.

"As it stands now, I can use an IF frequency of 10.7, 30 or 90 MHz and run power levels of 50 or 70 mW RF out at 10.250 GHz. I hope my back doesn't mind the extra weight of the

bigger batteries needed to power all this stuff!

"A big 24 dB horn is in the planning stages; I'm getting some practice getting a 19 dB one going first."

With Spring comes another season of mountaintop microwave expeditions. Dust off the equipment put away last Fall, put the finishing touches on the transceivers built over the Winter, and get ready to head to the hills with the arrival of the warm weather.



CROSSWAVES (cont'd)

Another specification called SAE J1113(2) contains recommended measurement procedures for susceptibility testing. One of the big three automobile manufacturers has invested considerable resources to perform necessary testing. A large anechoic chamber is used for 20 MHz to 18 GHz testing. A transverse electromagnetic wave (TEM) cell covering the range 60 Hz to 20 MHz is used for lower frequencies. RF power generating equipment up to 10 kW is used to radiate the vehicle and observe the effects. This is why some auto manufacturers specify exactly where a mobile radio may be installed in their vehicle. To change the location arbitrarily may be asking for trouble.

One of the present concerns of designers is the effect of low frequency radiations on the vehicle components. There is great difficulty

in simulating all possible combinations of field intensities and wave polarizations as well as antennas used and their orientations. It's almost like a hypothetical problem in four dimensions.

An article in the September 1986 issue of *RF Design* indicates reports of vehicular EMC problems are common. Looking at the ratio of motor vehicles to entertainment/control appliances, one can conclude the problems are there. Again, if no one takes the time to discuss these problems they lack visibility or simply do not exist. (I'm beginning to like this generalizing statement more and more.)

Figure 1 shows the proposed SAE electromagnetic radiation EMP standard for vehicles and internal combustion engines. I'm glad these generators are always moving.

Next month, more potential EMC from cable radiation.

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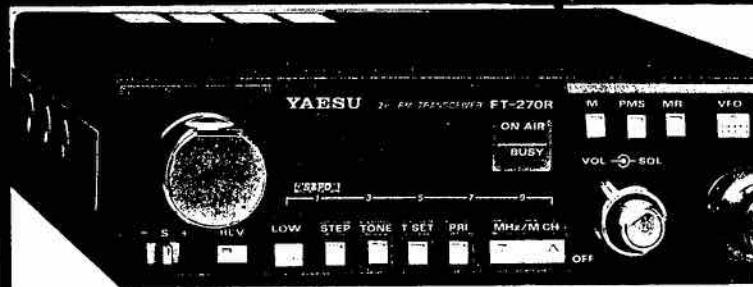
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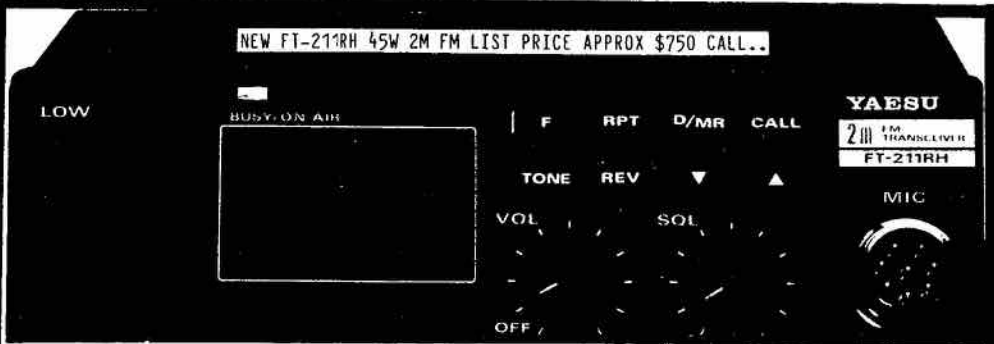
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DX VACATIONS? —————

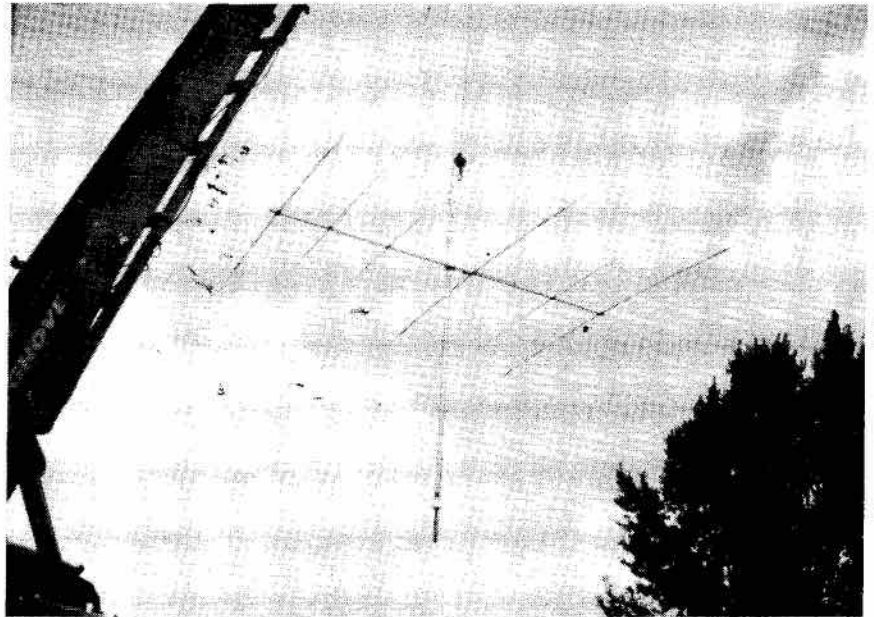
Getting down to the column this month has proved a little difficult as I have just returned from a pleasant week of sailing down in J8, the Grenadines to be precise. The contrast between the hot sun and warm seas of the South and the deep snow that still lies around in my fields made returning to the keyboard a real effort. The trip was uneventful, as far as the hobby was concerned, except that on the last day I discovered that the lady who manages the charter company we hired our yacht from is licensed with the call J8AM. Her name is Mary Barnard and she has had her ticket for about 10 years. Unfortunately she is so busy with her various business activities that she doesn't have time to get on the air at the moment. This is a pity as J8, while not a rare prefix, is not heard on the air all that often. St. Vincent and the Grenadines might be an excellent location for a DXpedition/holiday and Mary could probably suggest the ideal spot to stay too. Any takers?!

DX CONVENTIONS —————

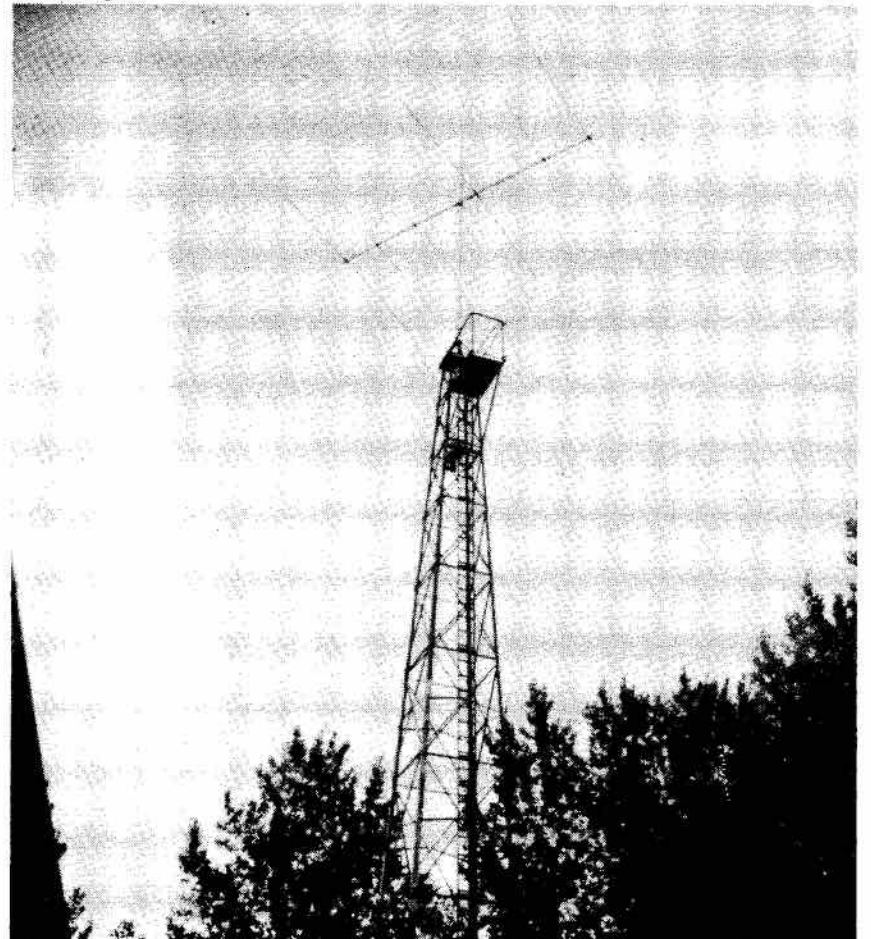
I see in the Northern California DX Club's magazine, *The Dyer* that the 38th Annual International DX Convention will be held this year on April 3-5 at Visalia, California. The star attraction will be Einar Enderud LA1EE/3Y1EE who will speak on his recent highly successful DXpedition to Peter 1st Island with LA2GV. Readers may remember that I attended this convention last year and devoted a column to some of the interesting papers I heard there. This year I have decided, reluctantly, to stay closer to home and will instead head down to Dayton with a group of local DXers from the Ottawa area. Of course the Dayton Hamvention, which covers every conceivable aspect of Amateur radio, does have a DX program and on previous visits I have spent time at several of their sessions. However I'm sorry to say that the facilities at Dayton for presenting papers are not good; they use areas temporarily screened off in an old hockey arena complex. The seating is makeshift and uncomfortable and the acoustics leave much to be desired. I think that the organizers should consider a more professional auditorium, there must be many of them in the city, and move the DX program there. The contrast with Visalia, where the hotel has a modern well-equipped hall, is marked.

3Y PETER 1ST ISLAND —————

Now that it's all over, it's perhaps



The DX Editor's TH-6 on its way up to its new home on top of an ex-CBC tower, 65 feet high.



The final installation at VE3JLP. The TH-6 is at 76 feet and the tip of the whip above it reaches 105 feet.

appropriate to take a final look at the Norwegian DX group's expedition which the NCDXF called "perhaps the most important DXpedition of the decade." First of all it was clearly a great success. The sponsors were hoping for about 15,000 QSOs but in fact the two operators, Kaare LA2GV and Einar LA1EE, made over 20,000 contacts in the 10 days they were there. It appears that the weather was reasonable, -2°C during the days, and at the end they were able to get all their equipment back on board the boat that took them down. Apparently the expenses for the expedition were about \$70,000, only part of which has been covered by the basic sponsors. This means that it is important for those of you who were fortunate enough to get through the pile-ups and work them to show your appreciation for their efforts by including a donation with your request for a card.

One of the Norwegian organizing group, Halvard Tøgersen LA2AD, wrote at some length to our former editor, Frank Hughes, after the DXpedition was over and I'm quoting from his comments which are as close to the "Horse's Mouth" as one could hope to get. He included a post script to his description of the trip. Apparently having packed almost everything and while waiting to be picked up, Kaare for fun made a last try on 80 metres with a simple wire antenna. He got excellent contacts with G stations and some others right from the beach! So far, March 11, the DXCC desk still hasn't announced its formal approval of Peter 1st Island as a new country. I can't imagine what the delay can be as the DX advisory committee has several times in the past said that Peter 1st would be accepted. Frankly, even if there were some doubts, I have a sneaking feeling that no one would dare to vote against its adoption. After the enormous effort to float this DXpedition and the tremendous interest it has sparked amongst DXers world-wide, I think the Committee and Don Street at the DXCC desk would be risking lynching if they turned it down!

INTERNATIONAL TRAVEL HOST EXCHANGE

Those of you who are also members of our sister organization, the CRRL, will have noticed in recent correspondence from the League that we are being asked to join an interesting international program. Called the 'International Travel Host Exchange' it is sponsored by the IARU and encourages Amateurs all over the world to sign up if they are interested in:

1. Exchanging vacations with foreign Amateurs.

2. Meeting foreign Amateurs visiting their country.

The various member organizations of the IARU publish lists of all the Amateurs, world-wide, who have joined the program. From then on it's up to individual hams to write to people on the list and make their own arrangements for visits, exchanges, etc. It seemed like a nice idea to me, I've always enjoyed meeting in person hams from other parts of the world and certainly I'd be happy to extend some form of hospitality to any of them passing through our part of Ontario. When I'm travelling overseas it would certainly be nice to have pre-arranged a stop-off at some local Amateur's home if only to meet him, have a chat and take a look at his shack.

In any event, I've signed up and last week the updated world-wide list arrived. It makes interesting reading. Members are spread across 24 countries with the largest numbers, not unnaturally, being in the U.S. and Japan. Canada is quite well represented with 31 entries while at the other end of the scale there are a number of countries with just one local Amateur listed; these include Sierra Leone, Syria, Lesotho, Kenya and Australia. I was little surprised to see that only one VK had joined when over the page I counted 12 ZLs.

I'm not sure what use my wife and I will make of the program but it's nice to think that, if we feel like it, we can get some introductions to fellow Amateurs in some exotic locations. Perhaps we could swap houses for a month with a ham from Jamaica?!

BITS AND PIECES

5A, Lybia— 5AOA is reported to be active on two bands, 20 and 40. Apparently several stations in the southeast U.S. worked Hubert on Feb. 16 on 14.005 MHz at 1415 UTC. On 40 metres look for him around 7.001 MHz at 0500-0600 and 1800-1900 UTC. The DXCC desk confirms that his documentation has been accepted so contacts will count for awards. Europeans report that he is only running 300 milliwatts to a dipole so he represents a real challenge to those of us on this side of the Atlantic.

VR6, Pitcairn Island— We understand from W5BOS that Tom Christian VR6TC underwent surgery on his leg and nose last Fall. Complications developed which were nearly fatal and it sounds as though it will be some time before he is pronounced fully recovered. He is currently resting on Norfolk Island and keeping in touch with his family on Pitcairn by radio. I'm sure readers will join me in

wishing Tom a speedy recovery. A bit of a DX legend, he has been keeping VR6 off the most wanted countries list for many years.

A direct descendant of Fletcher Christian of *Mutiny on the Bounty* fame, he is a link with the past I felt it was a privilege to work with when I chatted with him first several years ago.

VU4, Andaman and Nicobar Islands— This rare location is currently (March 8) back on the air. VU4APR on the Andaman Islands has been put on the air by a DXpedition that plans an operation from Feb. 20 to the end of March. Most of the activity so far has been on 14.200 MHz. Transceive and split however have also been heard on 15 and 40. Apparently they are only running 100 watts to a dipole and with the generally poor propagation from S.E. Asia to North America they should present yet another challenge to work. The expedition also plans to put the Nicobar Islands on the air using the Call VU4NRO. I hear that some 20 operators will be there to keep both stations on the air round the clock including all the major contests during this period. This looks like an excellent opportunity to try to work one of the rarer DX prefixes.

ZD7, St. Helena— While not one of the rarest DX locations in the World, St. Helena is always an interesting place to work. You will remember its most famous resident, the emperor Napoleon, who spent the last six years of his life in frustrating exile there dictating his memoirs to a small group of dedicated staff. Working the island last year I was lucky enough to have the frequency all to myself so I had the opportunity to chat at some length and inevitably the conversation got around to Bonapart. I asked if my friend had visited his house, 'Longwood', which is virtually a French national shrine. Oh yes, he told me, he went there for dinner once a month as the guest of the French government's caretaker. The latter leads a rather lonely existence, tourists are not all that common, so he welcomes visits from friends he has made locally and apparently provides a sumptuous meal with the best of wines for my friend!

Last week I found St. Helena again, but this time there was the usual pile-up and I only had time to exchange a quick signal report with Patsy ZD7XL. Look for her around 2030 UTC on 14.127 MHz. I also heard ZD7AL at 1750 UTC on 21.278 MHz.

Thanks are due to the following sources for some of the material appearing in this column: QRZ DX, W5BOS, *The DXer*, CRRL, VE3DQB, LA2AD.

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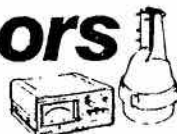
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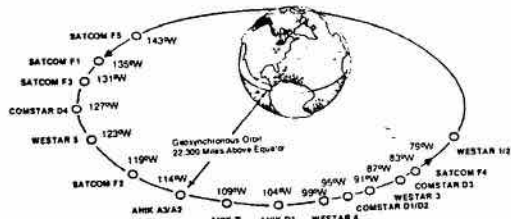


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From the Clubs...

George Morgan VE3JQW
687 Fielding Dr.
Ottawa K1V 7G6

Again this month we have had mail returned marked: 'Moved - Address Unknown.' We would like to have a correct address for both the CFB Petawawa ARC and Pierre Langevin, Club Rep for CRA CEGEP Limoilou.

And, in the same vein, by the time you read this you should have received a questionnaire seeking information to update our records, if you are on our affiliate club mailing list. If your club is an affiliate and you have not yet received a copy of the questionnaire, please let us know as soon as possible.

Incidentally, unless you are a Bulletin Station, you might consider having us use your club address in our mailings. It would avoid the problem of having mail returned whenever a club rep moves.

Last February, I announced in this column that we would keep track of those clubs becoming affiliates during 1986 and would select one to receive for club use a copy of the CARF Canadian Amateur Reference File. We would also select one of those clubs already affiliated to receive a copy of the File.

Well, the year is up, and we are about to select the winners. During the year 15 clubs requested affiliation: Lakehead ARC (Thunder Bay, Ont.), Manotick ARC (Manotick, Ont.), Quinte ARC (Belleville, Ont.), Brantford ARC (Brantford, Ont.), Shuswap ARC (Salmon Arm, BC), Baden ARC (Baden, Germany), South Pickering ARC (Pickering, Ont.), Blackfly Repeater Association (L'Amable, Ont.), Mississauga ARC (Mississauga, Ont.), Dufferin ARC (Grand Valley, Ont.), Brooks New Horizons RC (Brooks, Alta.), VE2RM Inc. (Pointe Claire/Dorval, PQ), Côte St. Luc ARA (Côte St. Luc, PQ), Halton ARC (Georgetown, Ont.) and WestCum ARC (Maclean, Cumberland Co., N.S.).

In a truly scientific manner, I shall assign, randomly, a number to each of the new affiliates and to each of the current affiliates and then randomly select one from each group. Next month, I shall let you know who will be receiving the Files.

NEWS FROM THE CLUBS

From the Windsor ARC's *Ground-waves*:

"To hold in trust for the club, Bill Craig VE3LFV was presented with a pewter plate given to the Windsor ARC in appreciation for the club's efforts with the Detroit Free Press Marathon. This year, the over 2900 runners raised in excess of \$100,000

U.S. for MS research, the recipient of funds raised by this event. The marathon has been rated as one of the top 15 of such events in the United States by *Runners' World* magazine, and is the ninth largest overall. Of course, Amateur radio communications are the vital link that ties it all together on race day."

From the Calgary ARA's *Key Klix* the following interesting letter from Cal Nixon VEOMGG/VE6BSN:

"...On behalf of my family and myself I would like to express our appreciation to CARA members Randy Park VE6CPO and Don Cole VE6EY. Last winter my son and I (along with Mike Brygger) sailed our 30' cutter *Whyac* to the South Pacific. We sailed 11,000 miles with three major ocean passages, each a month in duration. It was a winter filled with adventure; some wonderful and some more fearful! Each night throughout these adventures Randy and Don were on the air providing support. This included telephone patches so that we had daily contact with Valetta, my wife, and Christine, my daughter, back in Calgary. As well, Randy and Don showed their concern and friendship in many ways beyond the nightly contacts with phone calls to Val's parents when she and Christine were with us in February and March and with lots of good advice re: cars, etc.

"The daily contacts made an incredible difference to how our family managed during this time of separation. The trip would have been very difficult to make without Randy and Don's daily support. We also greatly appreciated all other help that came via hams all over North America and in New Zealand who helped us get messages through to each other.

"Our sincere thanks to all of you."

I know that Jack Ravenscroft must feel grateful for the financial support that he has received in his fight. Each month, I find articles in bulletins from one end of the country to the other commenting on the case and, in many cases, indicating that donations have been made. I recently received a letter bringing to my attention an article in *Circuit*, the journal of Le Club Radio Amateur du Québec Inc. written by Bertrand Leblond VE2GNY, the club's president:

"In order to stimulate the interest of our members in new technologies and, at the same time, to contribute to the Jack Ravenscroft fund, le Club Radio Amateur du Québec Inc., on the

initiative of one of its directors, M. Paul-Emile Durand VE2GWE, organized a seminar on satellite communications. This seminar was conducted by our friends Claude Vallée VE2ARU on Nov. 23 and 30, 1986. The club decided that the receipts from this seminar would go to the Jack Ravenscroft fund. Claude, for his part, waived payment and contributed his fees. As a result, the club sent a donation of \$400 through RAQI to the fund.

"Hats off to Paul-Emile and Claude. We had a good time studying OSCAR-11 while, at the same time, contributing to this important cause."

HELP!

I am way behind on sending out Affiliate Club Certificates, and the main reason is that I am no good with lettering. I spoil more certificates than I send out. I would like the Certificates to be something a club is proud to display, so I am looking for a volunteer, preferably in the Ottawa area but not necessarily (sounds like conscription), who would like to do the lettering. There is very little work involved— we don't get a large number of new affiliates. I can supply blank certificates and the club names for lettering.

CORRECTION

In the November *TCA* there is a diagram on page 42 for a linear amplifier by Bill VY1CW. The 0.01 capacitors are on the wrong side of the RF choke. They should be on the transmitter side of the choke.

CARF News Service

AWARDS MANAGER

Garry Hammond VE3XN is now manager for the CARF awards. CARF wishes to express its sincerest appreciation and thanks to the former manager, John Brummel for all his efforts in the past. Garry Hammond's address is: 5 McLaren Ave., Listowel, Ont. N4W 3K1.

CARF News Service

NEW LEGAL COUNSEL

Timothy Ray VE2KC has replaced Gary Warren as our legal counsel. CARF wishes to thank Gary for all his assistance in the past and welcome Tim to our organization. Timothy Ray's address is: c/o Hughes, Laishley, Barristers & Solicitors, 116 Lisgar St. Suite 600, Ottawa, Ont. K2P 0C2. 613-236-7333

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

MOTHER'S DAY SPECIAL

Pictured here are some YL Mothers with their daughters and sons who also have Amateur radio calls.

Here are some other Mother/daughter and son combinations we have collected:

Diane VE1CYT and her mother-in-law Amy VE1AMN. Amy has been licensed less than a year. I don't have the son's name and call.

Gertrude, better known as Gert, received her first licence as VE4AMS in 1938 and after WWII she became VE4GE— her initials. Her daughter Peggy grew up with radio, and became VE4PE in 1954.

Now for an impressive list: Margaret VE7BTC and daughter Marion VE7BQV; Audrey VE7DMQ— son VE7DVG and daughter Gloria VE6ATG; Evelyn VE6AQB and Diane VE6AYL; Stella VE7VF and daughter Lee VE6CLL; Hallie VE6AUP and son Tarus VE6BMW; Vin VE3HGA and Glenda VE3JOZ; Gerry VE6CBK and Marvin VE6APH; Elizabeth DK7BG and daughter Regina DK7BH; Mary VE3COH and Rick (rec. S.K.) VE3GJI; Evelyn VE3EPT and Chuck VE3AOJ; Fran VE7ACV and Donald VE5BZN; Aola ZL1ALE and Carol ZL1AJL; Noreen VE1AIB and Julie VE1BCD; VO8C (in 1920's) and Jean now VO1KV.

Then there's Thelma VE3ARG and daughter Joan VE3JGB and son-in-law VE3JGA and son Ken VE3GTT. I'm not sure if they are still licensed.

And Trudy VE3HTW, her daughter Sharon who was 14 when she received the call VE3IFO and son Randy whose first call was VE3IFN and later changed to VE3MLS. Bet you can't guess what he does for a living!

Well, there are many more out there, but I couldn't wait for confirmations. I hope you were pleasantly surprised by the number.

Happy Mother's Day to all... watch for a Father's Day column!

GOTA & CLARA

Guides On The Air was a great success. The feedback has been tremendous. I'll tell all much later.

Don't forget CLARA AC-DC (Annual Clara Day Contest). It's a new contest this year, so check the particulars on it.

The 87 Celebration Convention will be at the Sheraton Parkway Hotel Sept. 11-13. For a real funtastic weekend, come help CLARA celebrate her 20th birthday. For further info write: 87 Celebration, c/o Cathy Hrischenko at the address at the beginning of this column.



Gwen VE3AYL became licensed in 1930. I believe she was the first Canadian YL to be on RTTY. Shown here is Gwen with her daughter Corrine, then VE3DYL. The photo was taken around 1950; note the equipment!



Anne Rushford VE6AYR got her Advanced in 1976, and daughter Lori got her Amateur licence in 1978, and call VE6CLI.



Jean VE3DGG... I guess everyone knows Jean and immediately connects her with the QSL bureau. She received her call in 1961, and son Dave received his the same year as VE3CZL. After his Dad became SK, he took over the call and is now VE3BAR.



Audrey VE3KGS got her licence in 1978, daughter Karen VE3NRA in 1982, and brother Dave in 1983.



On the DX scene, we have Lia LX1TL. Lia is my birthday twin, and we met at the Philly YL Convention. Her daughter Patsy LX1TP is the proud new mother.

Jean, VE3BCP-VE111Y and then back again as VE3BCP, is pictured with her daughter Lynn, who got her call first in 1973; then Mom in 1974, and son Glenn, 1974. He was first licensed as VE3HIA, but is now VE2REV. Very fitting call for his profession.



More pictures next page



Evelyn VE3EDS, now SK (1984), was licensed in 1935. Her son VE3KKX and daughter-in-law Barbara VE3KKY became licensed in 1973. Ted and Barb also held VE2 calls.



In our family, I was licensed in 1965 as VE3GJH. Daughter Cathi was VE3DCH in 1968, then held VE3HYR, and is now VE3FBL. Daughter Dot followed in 1975 with VE3HUO. Both were 16 when first licensed.



Irene was first licensed in 1972 as VE3FQK and later VE3IRS. Her son Brian was first licensed with VE3ENM and later changed to VE3BS. People for years have been saying there's a lot of BS in the IRS. Actually, both changes have to do with their names, at least that's the story I was given.



Bubbles VE4ST became licensed in 1953 and got her Advanced in 1959. Son Malcolm VE4MG can be heard often on the bands.

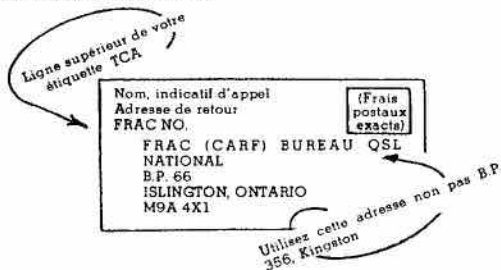
Le service QSL de FRAC

Le but de cette note est d'expliquer la procédure pour l'utilisation du service QSL international de FRAC. Veuillez consulter le Manuel de l'opérateur pour l'utilisation du service QSL en général. Voir le chapitre sur la façon de faire parvenir vos cartes QSL.

Le service d'envoi des cartes QSL de FRAC se charge de l'envoi de vos cartes QSL dans le monde entier. Ce service est gratuit à tous les membres de FRAC. Si vous envoyez beaucoup de cartes, les frais de votre souscription seront tôt récupérés du au coût élevé du service postal quand les cartes sont expédiées directement.

Veuillez observer les règles suivantes quand vous utilisez le service FRAC d'envoi des cartes QSL:

- 1 Classer les cartes (DX) alphabétiquement par préfixe.
- 2 Classer les cartes canadiennes par ordre numérique de préfixe.
- 3 Veuillez placer les petites quantités de cartes dans des enveloppes en papier épais et bien scellées. Envelopper les grosses quantités de cartes avec précaution de préférence dans du carton. N'utilisez pas de brocheuse!
- 4 Veuillez adresser vos envois comme suit:



5. **NE PAS RECOMMANDER** les envois de cartes. Cette pratique est plus dispendieuse et occasionne souvent des retards et par conséquent, n'est pas réellement nécessaire.

6. Si vous désirez recevoir une preuve que FRAC a reçu votre envoi de carte QSL, veuillez inclure une enveloppe

pré-adressée au une carte postale avec timbre avec le mot "RECEIPT" imprimé.

7. Si un colis était endommagé sur réception (très rare), FRAC vous fera parvenir une liste des cartes reçues de sorte que vous pourrez vérifier s'il y en a eu de perdues dans le courrier.

HELP!

CARF needs new addresses for:
Paul Wareham VE1CYL, 29
Victoria Rd. Sydney, N.S. B1P
2V4

T. Parkinson VE7CBL, RR1, Site
150, C.32, Port Alberni, B.C. V9Y
7I5.

Jan Lindstrom, 90 Elgin, #212,
Beaconsfield, Que. H9W 5Z7.

Robert Gordon VE3OPZ, 111-
355 Adelaide St. Thunder Bay,
Ont. P7A 7X3.

CFB Petawawa ARC, Box 4,
Petawawa, Ont. K8H 2X3.

L. Werner VE7CWA, P.O. Box
330, Slokan, B.C. V0G 2C0.

Peter Dreissen VE7AB, 1107-
5775 Toronto Rd. Vancouver,
B.C. V6T 1X4.

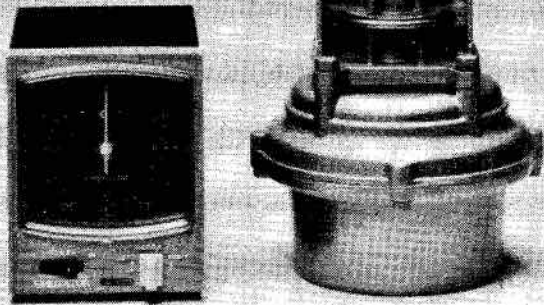
Joe Stanley VE7ESA, Box 899,
Nakusp, B.C. V0G 1R0.

Can you help? Call or write
Debbie at Box 356, Kingston Ont.
K7L 4W2, 613-544-6161.

CARF has been advised that Alaskan Fishing Vessels are again using Amateur frequencies **ILLEGALLY**. They have been reported on 7050, 3770 and 1824 kHz USB. CARF would like stations in western CANADA to submit reports to the DOC Regional Offices in British Columbia with a copy to the Pacific Director, Jim Voight VE7CWC.

Reports should include; date, time (GMT), frequency and details of transmissions.

CARF News Service

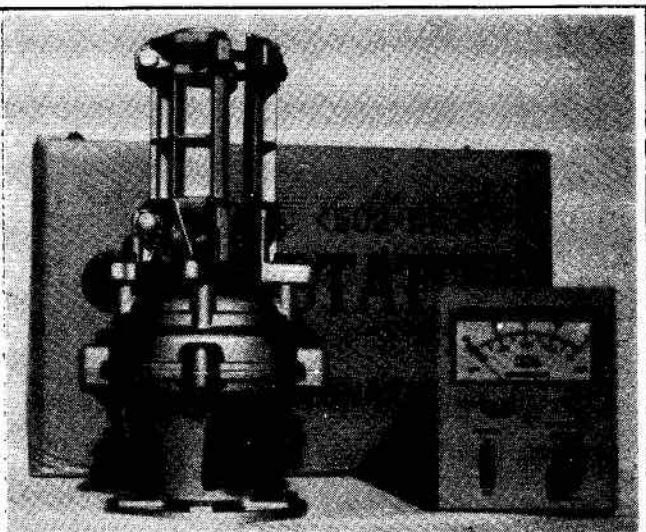


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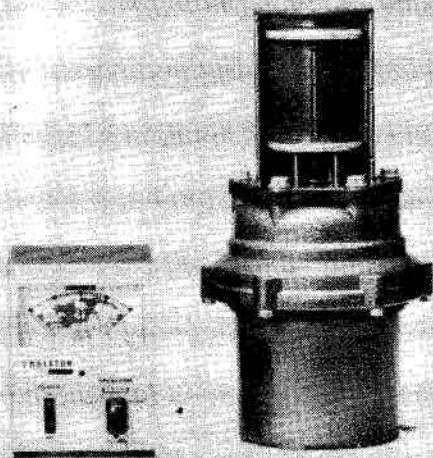
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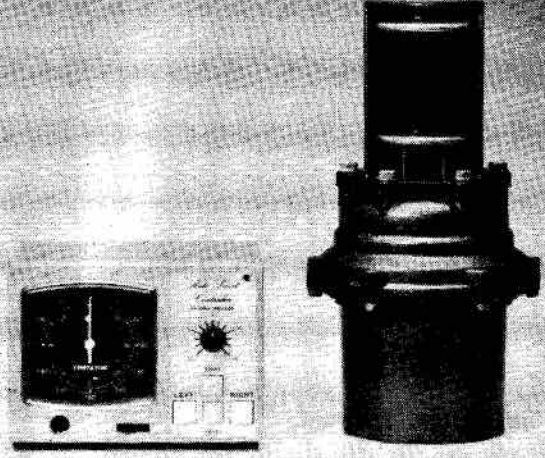
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QRP

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

QRP— Mobile

Wonder how many readers have gone out and 'bought' a homebrew mobile whip and ventured into the wonderful world of QRP? Take it from me, you can have a lot of fun and still take it seriously if such is your desire. Just use wire with no weak spots if you anticipate cranking up high power, 80 watts or more, to check in to some net along the way. Mine had a weak spot about one-third the way down and when it blew up at that point it was enough to burn the broom handle. Cleaning and joining the two ends, adding some heat-shrink spaghetti over this old joint, then coating the whole assembly with glyptal seems to have corrected the deficiency regarding high power.

ON THE MOVE

Brian VE7BJ in Surrey did not complain about low power and gave excellent service in relaying a message to our friends there and included a reply. All this took place on 14064 kHz during the drive along Miracle Mile in Tucson afternoon traffic. *The Canadian Amateur* would like to hear from someone who has constructed a multiband mobile whip assembly along the lines suggested in an earlier column. Maybe all the replies are caught up in the Canadian postal system?

Bill W7GHT in Craigmont, ID, advised me on the air that the IMN newsletter he sent me (correctly addressed) had been returned with the envelope marked 'NO SUCH ADD' so he was forwarding it to Tucson in care of KN7B. It was there when we arrived and yes, the envelope was correctly addressed. Now all that remains is to bring the matter to the attention of the appropriate authorities and see if maybe other mail has been equally mishandled.

A postcard from Tom W7OOF in San Francisco mailed near the end of July addressed Moe, Radio Amateur Station VE7BLY, 10644 - 146th T5 NA2, Edmonton ALB arrived in seven days without any notations! So don't be discouraged, start writing CARF and we should soon boast a membership of sufficient size to support a larger Canadian Amateur magazine with features considerably expanded.

FIXED/MOBILE

In an attempt to have two bands

available just by trading feed lines, a 20-metre half-wave dipole was mounted on the pre-formed fibreglass roof of our motorhome. Plastic masts about six inches long were used for both legs but no amount of trimming ever brought the thing into tune inside the 14 MHz band.

An opportunity arose while north of Tucson toward the middle of December to extend both legs out at right angles to the feed point. Each end was supported about ten feet off the desert except when a wind storm lowered one end to the ground. It was then fastened there using an eight inch spike driven in the sand/gravel. Jack VE6BOX in Edmonton reported two S units over the 20-metre whip when we compared them one day on 14062 kHz. Would a single 16-foot wire down the centre line of the roof give as good results? Or maybe a 32-foot whip in the horizontal plane?

DESERT SAFARI

During the last two weeks before Christmas on all our trips the 20-metre whip was mounted in a 66-inch aluminum pipe. Its particular length was all my friend had available in his junk pile. It is not quite correct because the VSWR does not drop below 1.5:1 with any amount of adjustments. However, it is more readily interchangeable with the 80-metre whip for daytime operating.

Some signal reports obtained with it include 559 from Harry JELREU in Hochioji; Rick WL7BDK on Kenai Peninsula; Alex VE6CE in Wabamun and 59 on SSB from a VE3 in Toronto who was calling CQ DX above 14150. Then after over half an hour exchanging notes with VE6CE, Alex commented about fading signals so I told him the six watts indicated on the RF output metre feeding in to my homebrew whip could be partly to blame. He wants to borrow my homebrew one-watt rig to test it on his antenna system then he might become a believer!

SAGUARO CACTUS

Another Ae experiment on this trip involved a 32-foot length of wire wound on a three-quarter inch broomstick with a collapsible whip inserted in the top portion again. This assembly was interchanged with the 80-metre whip in the 48" mast using a screwdriver-adjustable hose clamp. None of the trees found so far in the

desert have been tall enough for overhead aerials. Nor has a way been found to use the saguaro as a mast even though they are easily as rigid in construction as any self-supporting steel tower. When moving around every three or four days it is far more convenient to use interchangeable mobile whips. A collapsible mast is being considered for use in the New Year to support the hot side of the roof dipole in a horizontal position between moves.

BEYOND EXPECTATIONS

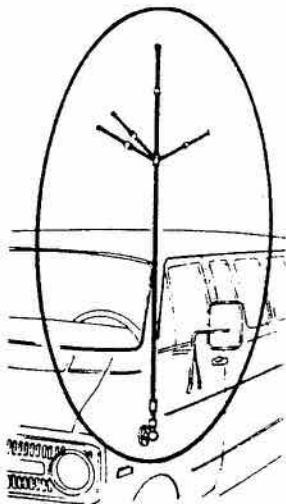
This 40-metre whip (32 feet of wire) has performed admirably and should have been installed first for the original trip south. There seems to be far more activity on this band than either of 80 or 2 metres. For QRP work especially, this homebrew effort need not even be adjusted for frequency as the SWR is an acceptable 2:1 or less at the six watt setting without a transmatch. Operations were conducted from a high of 7240 (Colorado High Noon Net) to a low of 7030 kHz (International QRP Frequency). Once again the weekend contest of Nov/Dec scrambled all efforts including my daily mid-morning sked with VE6BOX on 14062.5. Bob VE6AA in Priddis answered one CW call on 14140 and we moved up to 14152 for a chat about the weather on Saturday. It was not until Tuesday, Dec. 2 when reports came through that a VE3 multi-op group had won the Grey Cup!

GLEANINGS

Word has been received that Rick VE7FOU in Port Hardy has taken up miniaturizing his next QRP rig and we hope to hear him on the air with it soon. Jack K7ZR near Seattle surprised me one day on 14060 giving me 589 for 4W and told me he was running 8W into a two-element quad using a tuner and ICOM 745. Has anyone designed a transmatch for mobile operation yet?

CALLBOOK LISTINGS

To update your listing in the North American Listings of the 'Radio Amateur Callbook', send the information directly to:
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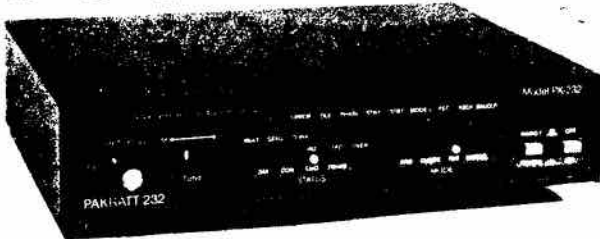
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THE COLUMN

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In answer to a couple of queries on financing and CARF Publishing Limited:

The finances of your national Federation come from three sources—membership fees, sales of publications and interest earned on investments—with membership fees amounting to about 90% of total income. Major expenses are the production and circulation of *The Canadian Amateur*, administrative costs, provision of services and holding of meetings. The Treasurer is annually elected by the Board of Directors as the chief financial officer and is directly responsible to the Board for the management of finances.

In consultation with the President and General Manager, the Treasurer prepares the annual Budget for the following year and submits it to the Board for approval. This takes several hours to prepare as estimated income rarely balances, or exceeds, estimated expenses and considerable changes in original budgeted expenses are required to achieve a balance. A rule of thumb followed is to estimate minimum income and maximum expenses based on the financial statements of previous years. It is then the function of the Treasurer to keep expenses within budget by notifying officials, from time to time, of amounts spent and budgeted amounts left.

To keep the Board and National Executive informed, the Treasurer prepares a monthly balance sheet and, at the end of each year, the initial financial statements. Note that the fiscal year of CARF is the calendar year. The financial ledger entries for the year, plus the Daily Cash Book entries (held by the General Manager), are submitted to an accredited accountant (firm) who then prepares the official Financial Statements. During the annual general meeting two 'neutral' auditors are appointed who are responsible for checking the Financial Statements, requesting additional information, if required, and then furnishing a written Auditor's Report to the following AGM that is considered by the meeting in conjunction with the Financial Statements of the period.

The above outlines how CARF finances are managed and a similar process is followed for the finances of CARF Publishing Limited, as the Treasurer of CARF fills this same position in the company. But the company is financed much differently...

To obtain Second Class mail

privileges for the circulation of *The Canadian Amateur*, it was necessary to set up an "arm's-length" company with a formalized agreement between CARF and the Company. The term "arm's-length" signifies that the governing body of CARF, the Board of Directors, do not have direct control of the affairs of the company as they do in CARF. This control is vested in the executive of the company that consists of the President, General Manager, Treasurer (all three officials hold these positions in both organizations) and Editor of *The Canadian Amateur*.

CARF Pubs Ltd. is a one-share company with the share valued at \$1.00 and held by the incumbent President. By the terms of the Agreement with CARF, 95% of annual membership dues are paid to the company and a rebate is made, such that, at the end of the fiscal year, the company shows no Profit on its Financial Statements. To meet the terms of the agreement, the General Manager monthly prepares a report for the Treasurer giving the membership figures at the beginning of each month of issue, times the amount of annual dues and divided by 11 to give the amount of financing to be forwarded to each company. This is deposited in the company's accounts and, at the same time, the Treasurer estimates the actual finances required by the company and rebates the difference to the accounts of the Federation. To reduce the amount of rebate, some items that are common to both organizations are paid through the company, such as the salaries of the office staff. This seems complicated but is necessary by the terms of the agreement that is required to obtain the mail privileges that do give fast circulation at less cost than First or Third Class rates.

The company has another major source of revenue resulting from the advertising in *The Canadian Amateur*. Advertising rates are determined by the Advertising Representative and approved by the executive of the company and are based on circulation figures. The importance of growth of membership is again brought to your attention for the continued development of your Federation and *The Canadian Amateur*.

However, the other publications of CARF are handled by the Publications Committee under the chair of John Iliffe VE3CES and the General Manager through the CARF Office. There is a possibility that production and publishing may be done by CARF Pubs Ltd. in the future

with an official of the company appointed by the CARF board to manage this with shipping and handling details still performed by the Office staff. I offer a reminder here that special discounts on CARF Publications are available to affiliated clubs, to instructors of Amateur courses, to libraries and to commercial distributors. For details, contact the CARF Office.

For the past 20 years the Federation has relied on its own resources and available finances to perform its executive, administrative and financial roles, to publish and circulate its national publications (a monthly newsletter until 1973 and *The Canadian Amateur* since then) and to provide services. CARF began with finances of \$85 in 1967, during the provincial membership years annual income never reached the \$1000 level, and today has an annual income approximating \$100,000. A modest reserve fund is held, derived from investment of life membership dues, with the interest gained paying the annual fees for such membership.

Additionally, the Federation has two major assets—*The Canadian Amateur* and the HQ Office—which have, over the years, necessitated much financing but have added immeasurably to the well-being of the organization. And how can the worth of the time and effort, given by the various Editors of *The Canadian Amateur*, the General managers and the Office staff in establishing and developing these assets, be gauged in terms of dollars and cents?

VX3

The Heritage Amateur Radio club has obtained permission from DOC to use the special prefix 'VX3' from June 22 to July 5, 1987, to commemorate Cobourg's Sesquicentennial. The station will be set up in a section of the art gallery in Victoria Hall in Cobourg. Special QSL cards have been printed and it's planned to exchange greetings with Cobourg, Australia, Cobourg, W. Germany, and Cobourg, Oregon. Look for them on SSB, CW, and RTTY on: 3550, 3800, 14050, 14143, 14200, 14180, 21025, 21250, and 146550 kHz.

MOVING?

If you're moving, please let Debbie know your new address. Write her at P.O. Box 356, Kingston, Ont. K7L 4W2.

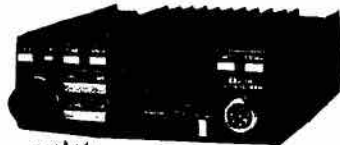
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Social Events

DOWN EAST FLEAMARKET

The Halifax & Dartmouth Amateur Radio Clubs are holding their 'Down East Fleamarket '87 on May 22-23 at St. Mary's University, Halifax, Nova Scotia.

Friday night there will be a Ceilidh (Pub night for those who don't speak Gaelic), free admission (cash bar). Bring your musical instrument, your good humour, and your drinkin' stein. Saturday, doors open at 0900 to 1330; NSARA annual meeting 1330 to 1530; transmitter hunt 1530 to 1730; Dinner and dance 1930 to 0100.

Talk-in stations are Gore 146.64, VE1NZ 146.85 plus links, and VE1DAR 146.15. Contact Jack Guilfoyle VE1OU, 6339 Almond St., Halifax, N.S. B3L 1V4.

SORT FLEAMARKET AND PACKET SYMPOSIUM

The Southern Ontario Repeater Team Inc. presents the 6th Annual SORT Fleamarket and Packet Symposium, Sunday, May 24, Medway High School, Arva, Ont. (just north of London). Admission \$3.00. Introduction to Networking Node Controller (NNC), BBS Systems, discussions for the Hex9 Symposium and Reports. Talk-in on VE3SUE 449.4/444.4; VE3TTT 147.78/18. More info from SORT Inc., P.O. Box 93, Hyde Park, Ont.

NAMAO HAMFEST

May 30-31, sponsored by Northern Alberta Radio Club, Box 163, Edmonton, AB T5J 2J1. 403-438-9205. Fleamarket, banquet, dance, pancake breakfast, demos, commercial displays, awards and prizes. Talk-in 147.060. Send SASE for registration form to NARC.

13TH ANNUAL ONTARIO HAMFEST

Sat, July 11. New location: Burlington Central Arena. Doors open at 8 a.m. Tickets: Ontario Hamfest, P.O. Box 836, Burlington, Ontario L7R 3Y7. More details next issue.

VE3CRC

The Chatham Kent Amateur Radio Club, Chatham, Ont., will operate VE3CRC from 1200-2200Z July 4 to help celebrate Chatham's Festival of Nations. Phone and CW on 80-10M, packet and phone on 2M. Certificates for a QSL card to Cliff Russell VE3NGG, RR 1 Chatham, Ont. N7M 5J1.

QUEBEC HAMFEST

The Quebec Provincial Hamfest will be held on Sunday, May 24 at the

Tracy Curling Club. Admission \$4., outdoor tables \$6, indoor \$8. Limited quantity, please reserve before May 15. Open at 0900 (0700 exhibitors). For more info: Sorel-Tracy ARC, P.O. Box 533, Sorel, Quebec J3P 5N6.

INTERNATIONAL HAMFEST

July 12 and 13, on the U.S. side at the International Peace Gardens. Inquiries to Dave Snyder VE4XN, 25 Queens Bay, Brandon, Manitoba R7B 1G1. 204-728-2463.

1987 CARF/DOC/CRRL NATIONAL SYMPOSIUM

Aug. 1 and 2, sponsored by the Saskatoon Amateur Radio Club.

1) Spectrum Management:

A. Deregulation of the HF bands, gentleman's band planning? Will it work?

B. Contests, RTTY, ATV, prefixes, should there be band segment limits?

C. Radio Spectrum utilization policy for the 30 MHz to 850 MHz bands?

2) DOC:

A. Administration— can we do that ourselves?

B. Regulations— should they be enforced more? Banned countries— should they be enforced more?

C. Examinations— how can we improve them?

3) EMI:

A. DOC involvement— can we help?

B. Industrial noise— can we do something about this?

C. Interference to and from electronic devices?

D. Political concerns to the radio Amateur?

4) The Future of Amateur Radio in Canada:

A. A National Organization— should there be one? What should it be like?

B. Liability Insurance for Amateurs?

C. 6 Metres— how do we add new life above 30 MHz?

D. 2 Metre Linking— should we link nationally? Should the repeater councils work together?

5) Selling Amateur Radio:

A. What can be done by everyone to promote the Amateur Radio Hobby?

B. To whom should it be promoted and how?

Please send any comments that you or your club have regarding the above workshops, or your own concerns, to: 1987 CARF-DOC-CRRL Symposium, c/o CARF, P.O. Box 356, Kingston, Ont. K7L 4W2 OR CARF Mid-West Director, Norm Waltho

CALENDAR

May 24: SORT Fleamarket & Packet Symposium. Details this issue.

May 24: Quebec Provincial Hamfest. Details this issue.

May 29-31: CARF Annual General Meeting, Kingston. Details April issue.

May 30-31: Namao Hamfest, Namao, Alta. Details this issue.

June 17: DOC licence examination.

June 22 - July 5: Cobourg, Ontario, sesquicentennial prefix VX3. Details March, letters.

July 11: 13th Annual Ontario Hamfest, Burlington, Ont. Details May issue.

July 12 & 13: International Hamfest. Details May issue.

July 31, Aug. 1 & 2: Saskatoon 1987 Hamfest and 9th CARF/DOC/CRRL National Symposium. Sponsored by Saskatoon ARC, Box 751, Saskatoon, Sask. S7K 3L7.

Sept. 4-7: RCCS 'Reunion '87. Details March issue.

Sept. 11-13: CLARA 87 Celebration. Details October YL column.

Sept. 19: Kingston ARC Third Annual Flea Market.

Applications for DOC licence examinations Sept. 23. DOC licence examinations June 17, Oct. 21.

Publicize your get-together here. Write the Editor, P.O. Box 356, Kingston, Ontario K7L 4W2. Please let us know about your events three months in advance to list them in the Calendar.

VE6VW, P.O. Box 1890, Morinville, Alberta T0G 1P0.

Please ensure that your submission arrives before June 1 1987 for copying.

NEW HANDIE


ICOM America has introduced a new 2-metre handie, the 2-AT (micro-2). This 1.5 W radio is fully synthesized and contains an LCD digital readout and S-meter. All in about the size of ICOM's BP8 battery pack. And it covers from 138 MHz to 163 MHz. It should be available early next year.

CARF News Service

14 MHz HARMONICS

G3VZP asks that Amateurs check their 14 MHz emissions for harmonics. He is getting tired of answering CQ's on 28 MHz and, on checking, to find that the signal is also on 14 MHz!


Get Results!



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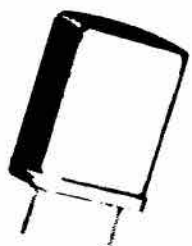
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Rebuilding the Hy-Gain TH3

BY KEN GRANT VE3FIT

A recent change of QTH to a modern, large home with a modern, small lot, forced me to part with my old TH6DXX tribander. It was just too big. A suitable, smaller substitute was found in the Hy-Gain TH3, Mk 3. This antenna has a boom length of 14' compared to 24' for the TH6, and turning radius is 15' versus 20' for the TH6. Past experience indicated that the TH3 performs well for its size, especially on 10 and 15 metres, my favorite bands. Unfortunately, the TH3 is no longer manufactured, but used TH3 antennas are fairly common.

The first step in rebuilding any yagi antenna that has been around for a while, is to replace all hardware with stainless steel pieces. These are available from Hy-Gain. Replace the old compression clamps with stainless steel hose clamps. Be sure the screws in these clamps are stainless. This can be verified by touching them with a magnet. Stainless steel is non-magnetic. These clamps are available from most automotive supply stores.

Before reassembly, clean all oxidation from the aluminum with fine steel wool. Smear a small amount of Burndy Penetrox between all telescoping pieces of tubing. This Penetrox is available from electrical supply houses. It inhibits oxidation formation and assures a good electrical connection.

I chose to use the CW dimensions for my antenna. This usually allows an SWR of less than 2:1 over the CW and DX phone portions of 20, 15, and 10 metres.

If you follow Hy-Gain's assembly instructions to the letter, as I did, you will find that the balun will not mount in the available space between the boom to mast bracket clamp and the driven element to boom clamp, as shown in Figure 1. At this point, most people decide to mount the balun further along the boom, just beyond the driven element to boom clamp, as shown in Figure 2. This also requires that the pigtail leads of number 12 wire joining the balun to the driven element, be at least 6" long and slope back from the balun to reach the driven element.

After checking all measurements and connections, the antenna was raised and the SWR was plotted. In my case, 20 metres bottomed out below the bottom of the band and rose quickly to 2:1 at 14.150. Low SWR point on 15 was low in the CW portion and rose to 2:1 at 21.250. Ten metres also bottomed out below the bottom of the band and reached 2:1 at 28.400. These results have been experienced by several TH3 owners and appear to be typical. Clearly, the driven element is too long.

As a first step in retuning the driven element, it was decided to do something about the poor positioning of the balun. If the balun output terminals can be moved closer to the axis of the driven element, the pigtails can be shortened. This necessitates removing a portion of the balun housing, as shown in Figure 3. This allows it to clear the boom-to-mast bracket clamp. Additionally, it will be necessary to make a new U bolt and spacer to clamp the balun to the boom. This spacer is detailed in Figure 4.

The new U bolt is made from threaded 10-24 stainless rod, using the old bolt as a pattern. The new bolt should be 1" longer per side than the original. This rod bends easily without heating. The spacer can be made of plastic or hardwood. It should be epoxied to the balun between the mounting tabs for the U bolt. With the balun repositioned, the pigtail leads can be shortened 1" on each side. This moves the minimum SWR points upwards in frequency. The 10 metre minimum SWR point was now in the band.

The number 12 wire used for the pigtails will present enough inductance to alter the electrical length of the driven element and will also sharpen the tuning. For this reason, the pigtails were replaced with a pair of straps made from the shield from RG8 coax. See Figure 5 for the required dimensions. Surprisingly, the lowest SWR point on ten metres moved up to 28.300 MHz. This result gives further credence to my belief that a compact yagi tends to be more critically tuned than a full-size antenna.

Final tuning of the driven element

follows a procedure suggested by VE3FGU and requires several trips up and down the tower. First, disconnect the leads to the driven element feed points coming from the balun and the beta match. Next, loosen off the pinch bolts and the four innermost nuts and bolts which clamp the driven element bracket to the boom, until the driven element can just pivot about the boom. Pivot the driven element until it is vertical. This allows you to adjust the lengths of the various sections to allow placing the resonant point where you want them. Having adjusted one side, pivot the element through 180 degrees and adjust the other side.

Return the driven element to the horizontal position, slightly tighten the clamping hardware and reconnect the balun and beta match. Plot the SWR curves. Repeat this procedure until you have the lowest SWR points where you want them. At this time, tighten all hardware and weatherproof all electrical connections. You are now finished and probably exhausted from all that tower climbing.

As a guideline, I found that 3/8" of adjustment per side provided 50 kHz of change on 15 and 20, and 100 kHz on 10 metres. My final results were obtained by adjusting each 'I' section to 7.25" and each 'J' section to 2.75". These are Hy-Gain's designators for parts of the driven element. My final SWR plots are shown in Figure 6. These adjustments were made to the driven element only. Tuning the reflector and director requires different procedures which were not required in this case.

This exercise, although somewhat time consuming, has allowed me to operate a compact tribander with an acceptably low SWR over my favorite portions of 20, 15, and 10 metres. A so-called antenna tuner is not required (as it never should be with a resonant antenna with proper feed-point matching). I certainly learned a few things in the process and I hope this might ease the job for others.

I wish to thank my good friend Mike Toneri VE3FGU for his suggestions, and to all those who helped me with this installation.

FIGURE 1: TOP VIEW

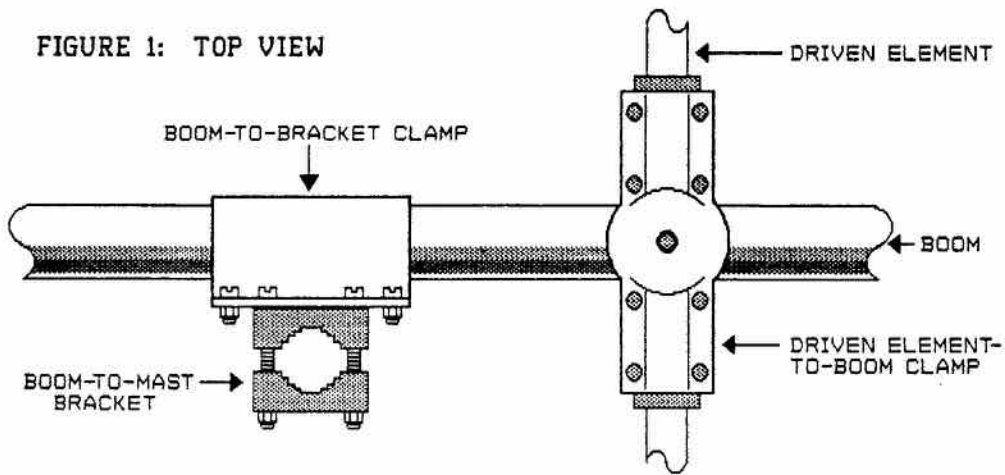


FIGURE 2: SIDE VIEW

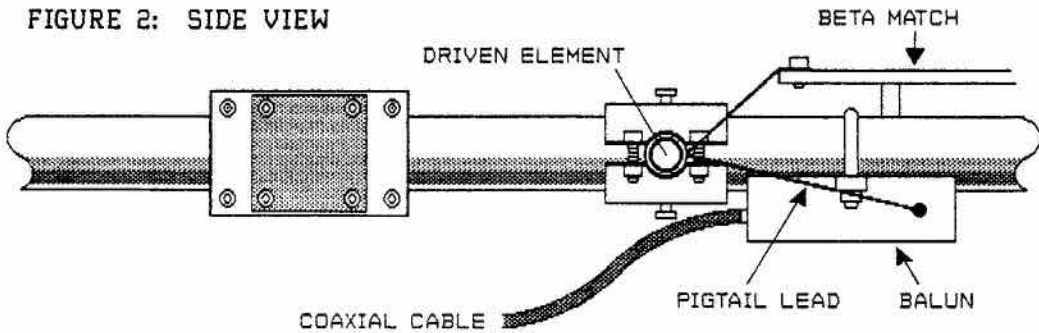


FIGURE 3: MODIFIED BN-86 BALUN

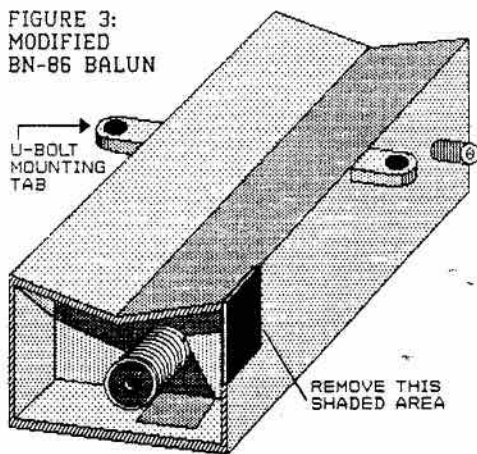


FIGURE 5: STRAPS

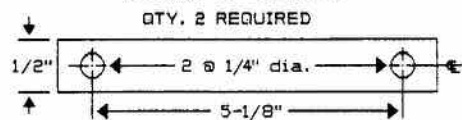


FIGURE 4: SPACER

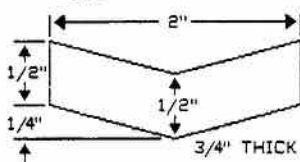
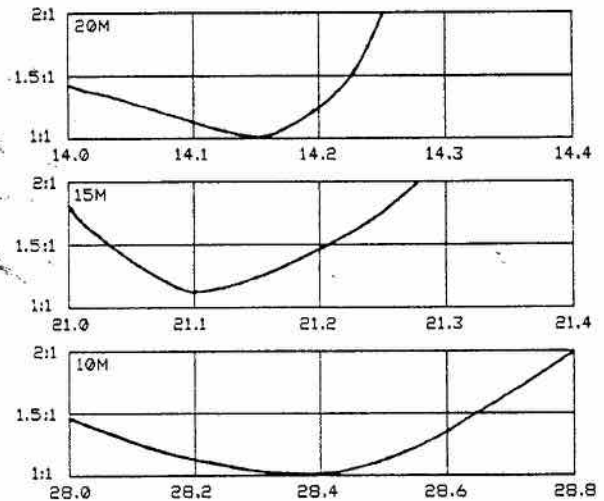


FIGURE 6: SWR CURVES

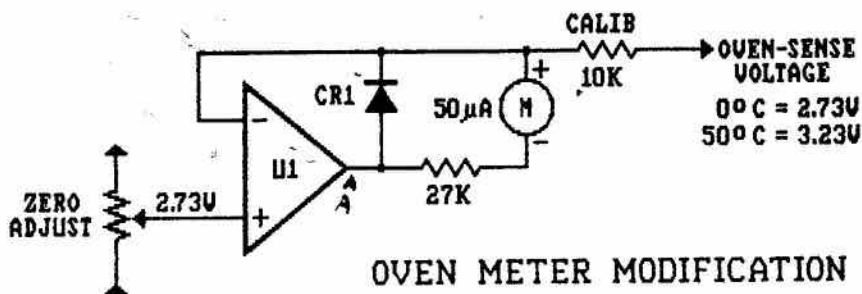


Meter Modification

BY BILL DE CARLE VE3OBE

This modification will be found useful where an expanded meter scale is required. Also, many 50 microamp meters show a very high internal resistance, which can provide erroneous meter indications. This circuit will compensate for this problem. It can also be applied to the oven temperature meter that appeared in a previous issue.

The solution is to put the meter in the feedback loop of a circuit. This way, it does not matter what the internal meter resistance is. The op-amp in the circuit will force the negative input (at point A) to be 2.73 volts, the same as the positive input. As much current as necessary to make this happen will be drawn through the 10K calibration resistor. Since the current cannot flow into the negative input terminal, all of it must flow through the meter.



The diode and 27K resistor could be eliminated but they provide cheap insurance for expensive meters. The 27K resistor, plus the fact the op-amp cannot get any lower than ground potential, limits the positive current through the meter.

It is easy to make an expanded scale

temperature indicator with this circuit. For example, if you want the meter to read between 45 and 50 degrees C, just change the 10K resistor to 1K. This yields 10 microamps per degree C. The zero offset pot is adjusted to 3.18 volts, making zero on the meter correspond to 45°C.

Modifying the Yaesu SP-102 Speaker

BY MURRAY BROWN VE7MAB

Long before I got into Ham Radio, I had been into designing and building speakers for stereo equipment. After getting my ticket and first rig it wasn't long before the small top-mounted speaker in the rig had been replaced with a unit of my own design. Years passed and new rigs were added to the shack inventory, along with more home-brew speakers. Although they worked very well, I somehow had the vague feeling that they didn't quite look like they belonged in a Hamshack.

During a moment of weakness, I ordered a commercial speaker unit from a dealer, feeling that at last I was going to add some class to the audio output in my shack. It looked great in the shack—fitted right in with my Kenwood and ICOM gear—but there the illusion ended. For an outlay of about a hundred bucks this unit produced about the worst audio that I had heard in many a year. A peek through the back panel, loaded with cutouts, revealed that the unit was nothing more than a tin box with a four inch speaker mounted at the

front. No attempt whatever had been made to provide acoustical correction to the enclosure.

With some difficulty I managed to remove the soft-metal screws which hold the top half of the shell in place. My intention was to shorten the chamber and provide a measure of dampening to correct the tiny sound of the speaker. A piece of very heavy triple corrugated was cut to fit upright just behind the filter circuit board. This was further braced with a strip running from the new partition to the inside of the rear panel. I then used 3/4-inch fiberglass batting (the pink stuff used in house insulation) fitted and cemented to the face of the partition and also to the inside of the top shell. When put back together, I was most gratified to find that the unit had lost its tinny sound and now produced a much more natural audio.

It still looks great in the shack, and I enjoy the features such as the input switching and the Hi and Lo filter system, but now it sounds like it just might have been worth the hundred buck expenditure.

WINTER GAMES

In 1988, Calgary will be hosting the Winter Olympic Games and prior to the opening a Cross-Canada Olympic Torch Relay will be held. This run will take almost three months to complete and pass through all provincial and territorial capitals as well as many other communities. Once again the services of dedicated Amateurs have been called upon to coordinate the communications aspect of the event. Hundreds of Amateurs across the country will be needed to help make the event run smoothly. This is a perfect opportunity for hams and clubs to raise the profile of our great hobby and show what we can do. Any Amateur or Club that would be interested in participating in the event please contact: Don Cole VE6EY, 923 Whitehall Way N.E., Calgary, Alta. T1Y 3G1, Tel: 403-280-4117 CARF News Service

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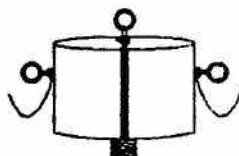
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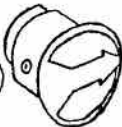
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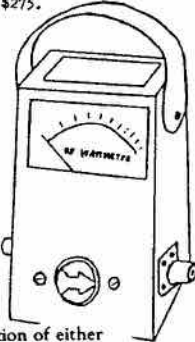


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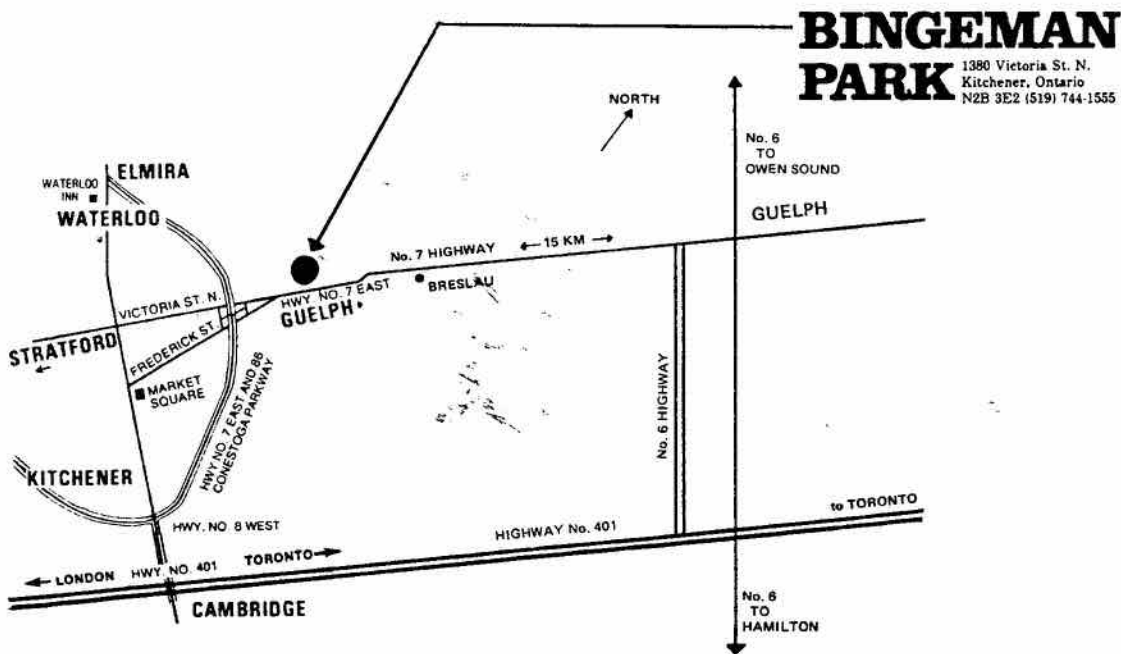
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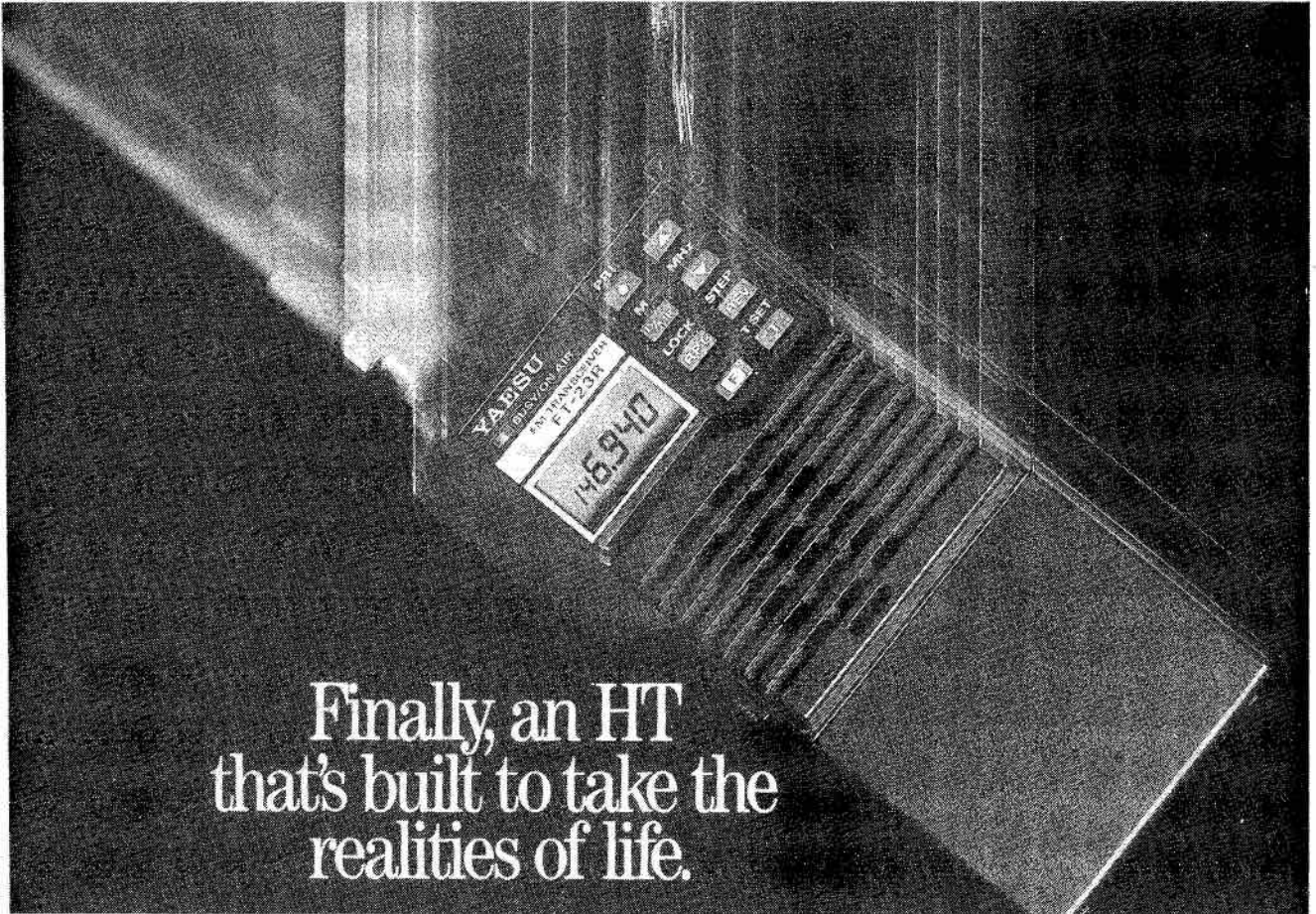
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