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Number 5073

TCA

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EDITOR
Gary Honeywell VE3ARS
1082 Apolydor Ave.,
Ottawa, Ont. K1H 8A9
(613)-521-2386

ASSISTANT EDITOR
Dave Nessman VE3GEA
10 Fallow Court
Ottawa, Ont. K1T 1W8

DESIGN & PRODUCTION
Steve Campbell
RR#2 Bloomfield,
Ont. K0K 1G0
(613)-399-2209

ADVERTISING REPRESENTATIVE
Don Slater VE3BID
3 Kirkstall Ave.
Ottawa, Ont. K2G 3M2
(613)-226-8686

TECHNICAL EDITOR
Ed Hartlin VE3FXZ
P.O. Box 356, Kingston
Ont. K7L 4W2

CRAG COLUMN
Hugh Lines VE3DWL
P.O. Box 192, RR#3 Belleville
Ont. K8N 4Z3

CONTEST SCENE
Dave Goodwin VE2DZE
4 Victoria Place
Aylmer, Que. J9H 2J3

COMPUTER COLUMN
Charles MacDonald
P.O. Box 6132, Station J
Ottawa, Ont. K2A 1T2

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Contents

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

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

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THE NEW OMNI-SERIES C

The best of TEN-TEC. OMNI-C—with all 9 hf bands, new 3-mode offset tuning, new optimized bandwidth with 7 response curves, new built-in noise blanker, new "hang" AGC and all the features that have made this impressive series famous throughout the amateur world. And with all 9 hf bands, OMNI-C is ready to roam the entire amateur hf world from 160 through 10 meters including the three new bands, 10, 18, and 24.5 MHz (all crystals included excepting 18 and 24.5 MHz).

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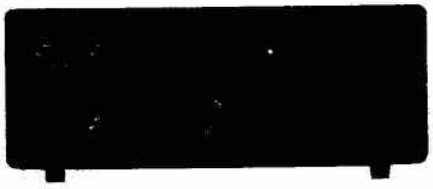
And OMNI-C offers **7** response curves, four for SSB, three for CW, with new easy switching of all i-f and audio filters. See the new OMNI-Series C at HAM TRADERS. **Only $1579.**



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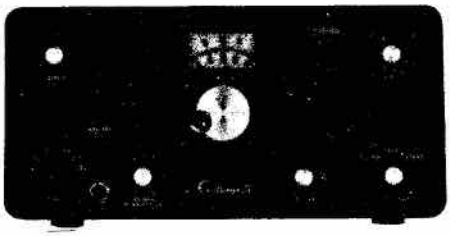

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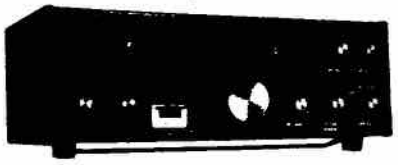

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3003	4.25	3019	4.75	3037	4.00	3052	4.50
3004	4.50	3020	5.00	3038	4.50	3053	4.50
3005	3.50	3021	4.50	3039	3.75	3054	4.50
3006	3.75	3022	5.00	3040	4.00	3055	4.50
3007	4.25	3023	5.00	3041	4.50	3056	5.00
3008	4.50	3024	5.50	3042	3.75	3057	5.00
3009	3.75	3025	9.00	3043	4.00	3058	4.75
3010	4.00	3026	9.00	3044	4.50	3059	5.00
3011	4.25	3027	9.00	3045	4.00	3060	5.50
3012	4.50	3029	10.25	3046	4.50	3061	9.00
3013	3.75	3030	10.50	3047	4.50	3062	9.50
3014	4.00	3031	10.50	3048	4.50	3063	10.00
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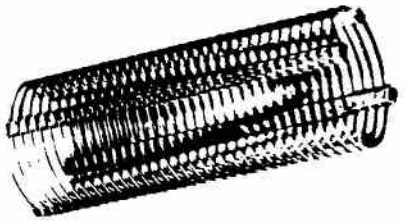

Part Number	Coil Diameter	Turns per Inch	Coil Length	Wire Size	Inductance (μH)
3001	1/2"	4	2"	18	0.18
3036		6		18	0.40
3002		8		18	0.72
3037		10		18	1.10
3003		16		20	3.0
3038		24		22	6.75
3004		32		24	12.0
3005	5/8"	4		16	0.275
3039		6		18	0.620
3006		8		18	1.10
3040		10		18	1.70
3007		16		20	4.50
3041		24		22	10.0
3008		32		24	18.0
3009	3/4"	4	3"	16	0.620
3042		6		18	1.40
3010		8		18	2.50
3043		10		18	3.90
3011		16		20	10.0
3044		24		22	23.0
3012		32		24	40.0
3013	1"	4		16	1.0
3045		6		18	2.40
3014		8		18	4.10
3046		10		18	6.60
3015		16		20	17.0
3047		24		22	38.0
3016		32		24	68.0
3017	1-1/4"	4	4"	14	2.30
3048		6		14	5.0
3018		8		16	9.0

Part Number	Coil Diameter	Turns per Inch	Coil Length	Wire Size	Inductance (μH)
3049		10	4	18	14.0
3019		16		18	36.0
3050		24		22	81.0
3020		32		24	145.0
3051	1-1/2"	4		14	3.10
3052		6		14	7.0
3053		8		16	12.5
3054		10		18	20.0
3055		16		20	50.5
3056		24		22	110.0
3057		32		24	200.0
3021	1-3/4"	4	4	14	4.20
3058		6		14	9.40
3022		8		14	16.50
3059		10		16	26.0
3023		16		18	67.0
3060		24		22	150.0
3024		32		24	270.0
3061	2"	4	5	12	15.0
3025		6		12	33.0
3026/3900		8		14	59.0
3027/3907-1		10		16	92.0
3062		16		16	238.0
3063	2-1/2"	4		12	22.5
3029/3905-1		6		12	51.0
3030/3906-1		8		14	90.0
3031		10		16	140.0
3064	3"	4		12	32.0
3033		6		12	71.0
3034		8		14	125.0
3035		10		16	198.0

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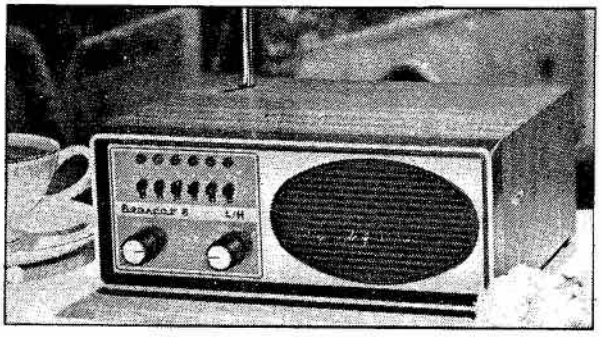

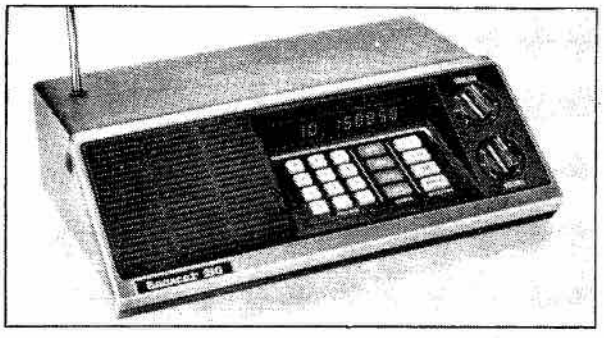

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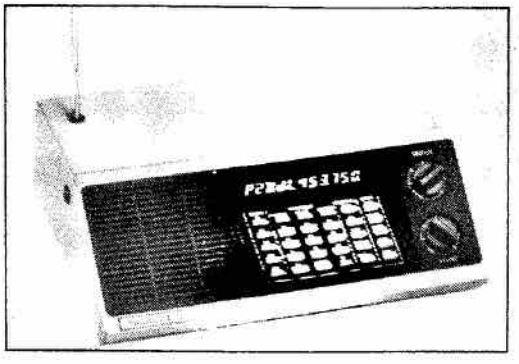

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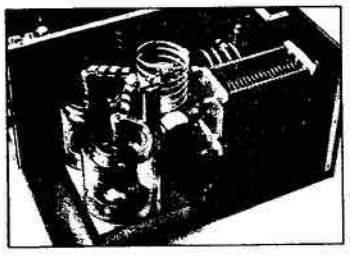

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- Computer grade capacitors for maximum reliability.
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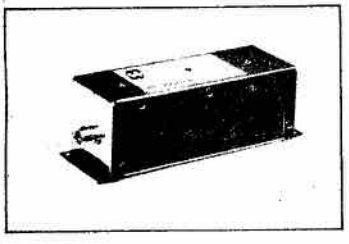

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- Power capacity 2000W PEP SSB.
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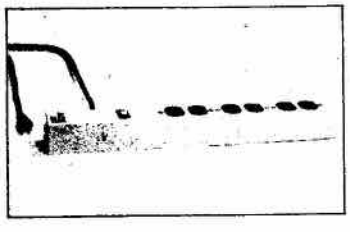

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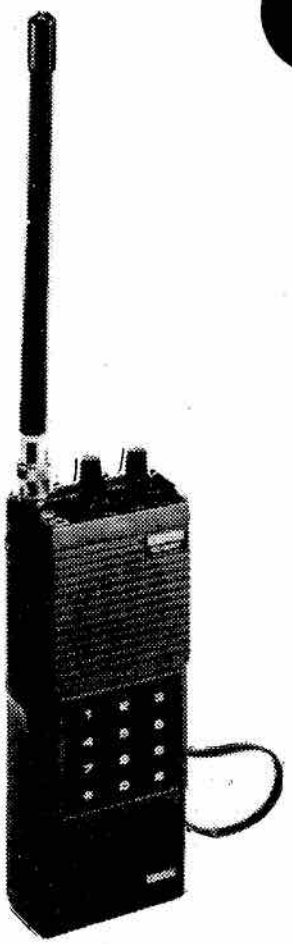

ICOM waited while the others scrambled to put out their synthesized Handie Talkie. ICOM looked at their bells & whistles, their digital displays, high power consumptions and [illegible] prices. Then ICOM quietly built a handheld that people [illegible] would like and use.

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- Separate built in speaker and microphone for extended audio
- BNC 'Rubber Duck' antenna

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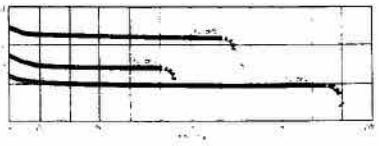

BATTERY PACK MODEL	HEIGHT	CHARGER REQUIRED	BATTERIES	VOLTAGE	TYPICAL DUTY CYCLE WASTE BATTERIES	REPLACEABLE BATTERIES	NOTES
IC-BP2	39mm	BC-30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IC-BP3	39mm	BC-25 or BC-30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IC-BP4	49mm	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		BC-30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IC-BP5	60mm	BC-30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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IC-BP5 Battery Pack
High Voltage / High Capacity.

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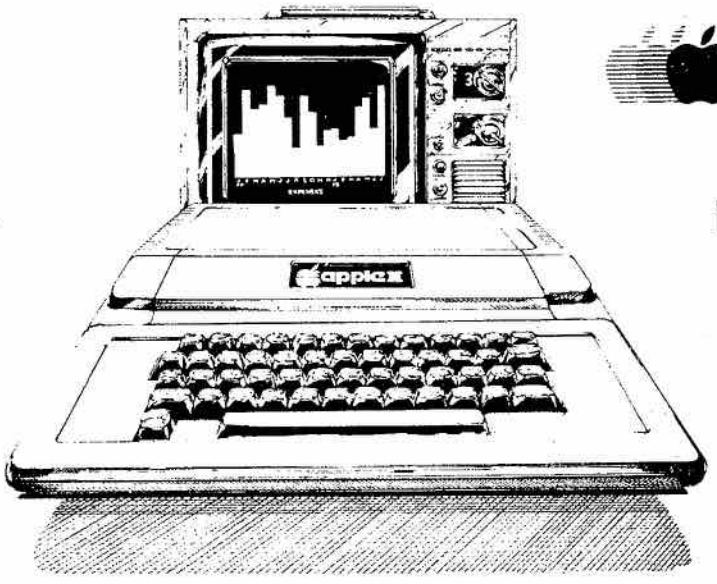

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Kenwood's remarkable TR-7800 2-meter FM mobile transceiver provides all the features you could desire for maximum operating enjoyment. Frequency selection is easier than ever, and the rig incorporates new memory developments for repeater shift, priority, and scan, and includes a built-in autopatch DTMF encoder.

FEATURES

15 multifunction memory channels, easily selectable with a rotary control

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M14 memorize transmit and receive frequencies independently for nonstandard offset.

M0 priority channel, with simplex, ±600 kHz, or nonstandard offset operation.

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All memory channels (including transmit offset) are retained when four AA NiCd batteries (not Kenwood-supplied) are installed in battery holder inside TR-7800. Batteries are automatically charged while transceiver is connected to 12-VDC source.

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143.900-148.995 MHz, in switchable 5-kHz or 10-kHz steps.

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For frequency selection, transmit offset selection, memory programming, scan control, and selection of autopatch encoder tones.

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Entire band (5-kHz or 10-kHz steps) and memories. Automatically locks on busy channel; scan resumes automatically after several seconds, unless CLEAR or mic PTT button is pressed to cancel scan.

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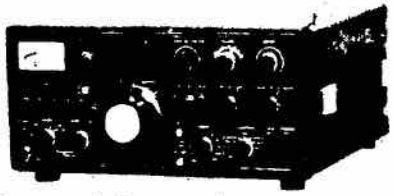

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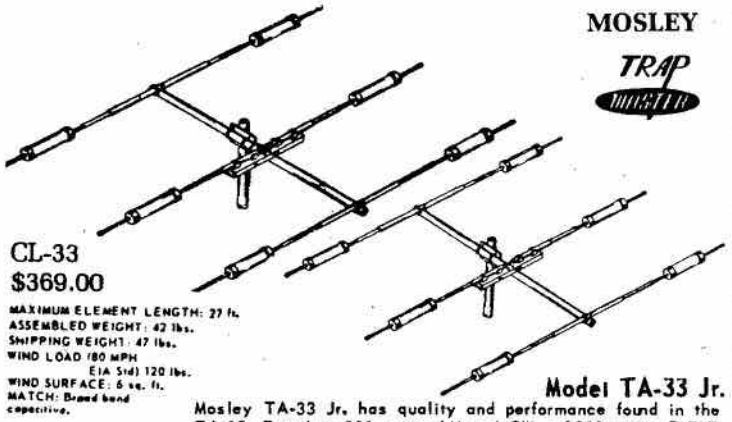

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WIND LOAD (80 MPH EIA Std) 120 lbs.
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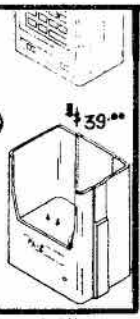

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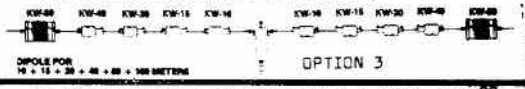

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Butternut's HF5V-III outperforms conventional five band verticals of comparable size—*regardless* of price!

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M34 MOBILE

OPTION 2

FEATURES

- Covers 10, 15 and 20 meters standard.
- Add 40, 80 or 160 meter coil.
- Rated for 200 watts PEP

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Our new M34 mobile antenna gives you all three bands — 10, 15 and 20 meters. For a fourth band, add our optional 160, 80 or 40 meter coil and top section.

You end up with full capability 4-band mobile antenna requiring no coil change or adjustments after initial tuning.

The new 200 watt PEP mobile antenna features low standing wave ratio at resonance; independent resonance adjustments on each of the four bands, exceptional bandwidth and a neat, clean, low wind resistance profile. It is also ideal for trailer parks, motor homes or apartment mounting.

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M34/160	Center Loading Coil (160 meters)	33	2
M34/80	Center Loading Coil (80 meters)	33	2
M34/40	Center Loading Coil (40 meters)	33	2

40M 160M 80M

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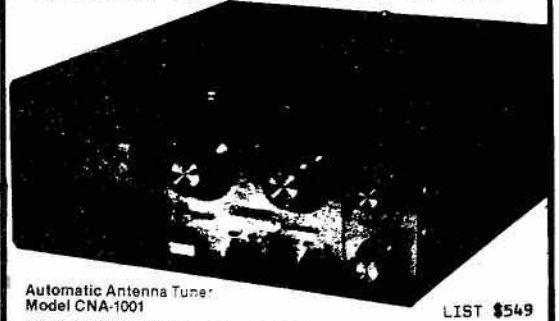

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Model CNA-1001

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Frequency Range: 3.5-30 MHz (including WARC Bands)
Power Rating: 500 Watts PEP
Internal Dummy Load: 50 Watts
Impedance Matching: 16-300 Ohms Resistive
Input Power Required for Automatic Tuning: 5W to 500 Watts PEP
Tune-up Time: 45 Seconds Max.
Power Requirement: 13.8 VDC @ 2 Amps

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Check these state-of-the-art specifications

- Power Input: To 2500 W PEP.
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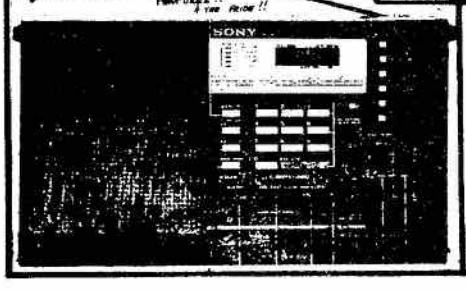

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ALL 707 ITEMS IN STOCK, CALL FOR CHEQUE WITH ORDER PRICES

Automatic Antenna Tuner
Auto-Track Model AT-2500

Letters:

BASIC COMPUTERS

Keep up the good work. I really enjoy TCA and look forward to better and bigger things in the future.

Would like to see a more elementary, down to earth introduction to computer language, using Basic, assuming the reader knows absolutely nothing about computers.

J.A. Marshall

QUALITY OR QUANTITY?

I refer to VE3CZI and VE3MJD's articles in October TCA, 'Quality or Quantity'.

Creation of a novice class in Canada would certainly bring a group of undisciplined people into already crowded bands.

I do not see any reason to lower our Canadian Amateur standards. I had no background in electronics and studied pretty hard to reach the 70% mark, as well as morse code. I am proud to have reached that goal and to be among a group of people who respect each other.

Lowering the pass mark will be close to the equivalent of walking into an electronics store, buying a CB rig and plugging it into the wall outlet.

Marcel Gingras VE2ESI
Pointe Claire, Que.

Saskatchewan Youth Parade

Presented by Saskatchewan Clubs of Optimist International to kick off 'Youth Appreciation Week', a parade was held on Saturday morning November 8 through downtown Regina.

Communications were provided by members of the Regina Amateur Radio Association. With VE5RN as control station, the parade was formed up in sections using VE5's AAD and ACN as portable stations and VE5's TH, ABF, BW and WM as mobile units assigned to each section.

Though the day was cool and cloudy, the parade went off without a hitch and communications were maintained along the parade route on 146.520 MHz simplex. A special thanks to Gerry Schiller of the Optimist and to VE5BW for their co-operation and assistance and to the rest of the participating radio Amateurs in making this public service venture the success it was.

- Bill VE5WM

Short Wave Listeners

I am writing in response to Cyril Youll's comments about the short wave fraternity in Canada. I am a member of the Radio Society of Great Britain, the Canadian Shortwave Listeners International (the largest SW club in Canada) and, of course, CARF.

I do a lot of shortwave broadcast listening and a fair bit of Amateur band monitoring. My best catches so far are VP2MFU, A7XD and 9M6BE. As far as broadcast listening goes, I have logged 270 stations in 70 countries using a Yaesu FRG-7000 to a 4-element dual polarity quad at 60 feet and a 100' longwire at 30'.

If anyone requires any information about the Canadian Shortwave Listeners International, they can write to Box 936, Yellowknife, NWT X0E 1H0.

Craig Stoodley.
Yellowknife, NWT

P.S. I also QSL Amateurs in return for their card.

XM 26972

YZF 972

CRAIG STOODLEY
BOX 936
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NORTH OF '60

73 A.H.F. B&W COLLECTOR # 1269 88

Readers reply!

Members comment on the recent proposed merger by CARF to CRRL. First are two editorials from different parts of the country, followed by individual letters.

It is just great that Mitch and Bill have exchanged these initial observations. However, it looks to me that they have both stated the worst, or best, however you look at it, positions. The challenge now is to get down to some serious discussions.

My observations are that sooner or later ARRL in the U.S. are going to say. "Just a darn minute now, it is totally unfair to continue spending much more money on the Canadian Division than on any other division." This will mean that our dues will go up or the services will be cut. That is just simple logic, it must be or I wouldn't understand it. It would then seem to me to be to the advantage of everyone to have only one organization, to which ARRL would contribute, both money and services, in proportion to what they do for other divisions, then get on with the job of representing the Amateurs in the best possible way.

At the moment, the proposals of both Bill and Mitch make Pierre Elliot and the Premiers look like the amateurs. However, they are at least writing to each other, they may even get around to talking.

- QSO Newsletter
Saskatchewan Amateur
Radio League, Inc.

Printed in the latest edition of The Canadian Amateur is a letter from the President of CARF to the Officers and Directors of the CRRL. In his letter, Mr. Wilson raises the question of a merger of the two organizations and opens the matter by putting forth a specific proposal for consideration.

Received too late for printing was the reply from Mr. Powell in which one can only read a flat rejection of the CARF proposal.

This paper believes that the representation of the interests of all Canadian Amateurs by a single strong Canadian organization is long overdue and the adversary position that has developed between CRRL and CARF weakens any position we may wish to adopt.

CARF's opening proposal is quite strong. One never enters into any negotiation by revealing a fall back position. Before rejecting the approach outright, we believe the officers and Directors of CRRL should learn a bit about the art of negotiation.

An open invitation to enter into meaningful discussion has been made. The fact that negotiations are sought obviously implies that the CARF proposal is a re-opening move in what heretofore appears to have been a stalemate.

Mr. Powell's reply is hardly worthy of a person in his position and we hope that mature afterthought will lead to an honest search for a meeting of minds between the two organizations to the benefit of Canadian Amateurs.

- Editor, Ottawa Mobile
Club 'Rambler'

Beginning on Page 18 of the October issue of TCA you have an article on the merger of CARF and CRRL.

Personally, I am very much in favor of this union, and would like to see it brought to reality.

Ed Leahey VE3CF
Windsor, Ont.

I applaud CARF efforts to initiate a merger with CRRL. It takes a 'big' group to make such a proposal.

However, in all fairness and objectivity, it'll take an even 'bigger' group to accept your proposal. You have cast the CRRL executive in a position of minor flunkies.

Sure, I would like to see a single Canadian national Amateur organization. But I think it demands more equal participation.

Phil. Washburn VE3HAA
Ajax, Ont.

I congratulate you on your proposed merger of CARF with CRRL, as outlined in the October issue of TCA. I wish you and all Canadian Radio Amateurs full success in founding a national organization embracing all Canadian Amateurs!

As an ex-DL, I arrived here in Canada in 1954 and was surprised and somewhat disappointed to find Canadian Amateur radio divided and without nation-wide leadership representing all VE's.

Now after 26 years in Canada ... I see the beginning of one organization for all VE Amateurs without the parental guidance of Radio Relay Leagues and Radio Societies, and with a substantial publication by and for all Canadian Amateurs.

Naturally we should co-operate and consult with the Amateur radio organizations of other countries -- especially with the ARRL -- but on an equal footing.

E. Kirchner VE3CTP
Agincourt, Ont.

We have been a member of the Canadian Amateur Radio Federation since its founding in Alberta. But at no time have I given you or CARF my authority to use my membership as agreeable to such a proposal. My membership for all these years is to support a Canadian organization, and also to keep me informed as to what they are doing for us in Canada...

I do not support you in any way and wish you not to use my membership as a figure (for the proposal).

Ernie Savage VE7FB
SCM for B.C.

...As far as many Amateurs are concerned we already have a national society in the CRRL. As the Canadian Division of the ARRL we also derive the many services and benefits of that organization and the financial backing of a much larger organization with a strong international voice. Why should we abandon all this?...

It seems that CARF is counting my membership as a vote of confidence in their attempt to suppress the CRRL. If that is in fact so, please cancel my membership and return the dues which I so foolishly paid.

Fred Dennert VE7HPT
Richmond, B.C.

...Although only having been an Amateur for less than three years, it is still clear to me that Canada is not being ideally served with two national organizations. Perhaps we are even being penalized internationally because of the dual internal representation. A merger between CARF and CDARRL / CRRL would certainly be to every Canadian Amateur's benefit...

Mike Shacklock VE3LAR
Ottawa, Ont.

"I applaud CARF's efforts to initiate a merger with CRRL..."

...It has been my opinion, up to now, that CARF is a somewhat weak sister to CRRL but upon reading the letters concerning the merger, I now understand why I had that impression. I do not intend to be negative about CARF, I am merely giving a little background. I am a CARF member, and proud and happy to be one. The proposals put forward by Bill Wilson appear to me to be fair and offer an honourable way out for the League, and both this club (Canadian Coast Guard College A.R.C.) and I support them...

Phil Irons VE1BVD
for Canadian Coast Guard
College ARC VE1CGC

...I have always assumed that, being a member of the ARRL, this automatically would make me a member of CRRL as well. However, I have yet to see anything official about this. My experience in October 1980 has led me to believe that CRRL is certainly not a truly Canadian organization as such. At that time, when my membership in ARRL expired, I had the audacity to send Ca. $20.00 to Newington Ct. as no address for the payment of dues was listed in Canada. The cheque was promptly returned with a notification that Canadian dollars were unacceptable and would I please remit the dues in US funds!! I did this, but am not planning to renew my CRRL (or ARRL if you will) for 1982... I feel that any organization that represents the Canadian Amateur should accept its dues in Canadian funds!!!...

Tom Van Den Elshout VE3LNT
Aurora, Ont.

They do now, Tom. You must have received the CRRL membership drive material by now. You send your money to London, Ont. and they will convert it to U.S. funds and send it down to the States.

...I find your proposal ludicrous and predict that CRRL will reject it outright. I also fancy that the blame for the failure of the proposal will be put where it belongs, at the feet of the CARF executive.

Frank Rosseter VE3LIY
Oshawa, Ont.

I agree with the merger with CRRL in that one voice speaking for all Amateurs regarding any new Rules or proposals would have more effect, for instance the U.S.A. 40 and 20 metre expansion. Regarding Officers and executives, positions are balanced for both parties, CRRL - CARF members.

Reg. Argyle VE3OTU
Minden, Ont.

P.S. Enjoy the new TCA better than ever.

...The ARRL cannot, by definition, represent Canadian hams, and my reading of TCA and 'Canadian Newsfronts' convinces me the CRRL is organizationally under firm U.S. control...

Chuck Hooker VE3CQH / 2
St. Bruno, Que.

...Frankly, I was disturbed by the tone of your original proposal. It sounded more like a takeover than a merger...

There is certainly no room for blasting the competition in either QST or The Canadian Amateur. These publications are intended to foster good will within the Amateur fraternity, not create problems which we have to live with for years...

Lou Beaubien VE7CGE
Burnaby, B.C.

Re President Wilson's letter to CRRL dated Aug. 11, 1980. I would like to know CRRL's response before forming an opinion. The thought occurred to me however that if as stated this is a merger proposal rather than a take-over the least CARF could do is suggest that Mitch Powell assume the Presidency of the merged organization.

Graham G. Williams VE2WA
Pointe Claire, Que.

...I suggest that this reply is that of the CRRL President and does not represent, in actual fact, a policy decision of the CRRL Board! This is borne out by the extensive use of "I" in Powell's reply and no where, in this reply, have I noted where it has been a decision of the **CRRL** Board of Directors...

We are simply back to the old system of autocratic "rule-by-one" insofar as Canadian League activities and policies are concerned.

Ron J. Hesler VE1SH
Immed. Past Pres.
CRRL, Inc.

Editorial

Although total and overwhelming support for the CARF / CRRL merger proposal was not expected, we were pleased with the results. Some Canadian Amateurs put pen to paper and wrote in expressing their views. It would be impossible to include all the comments, or even complete letters, however we have tried to pick out the gist of the comments, trying not to put our own bias into the editing.

I would like to thank those of you who did write in, whether you agreed with the proposal or not. To those who wrote complete articles on the subject, I also express thanks. We cannot print them due to the space limitations. I suggest that you submit them to your local club bulletin. From the comments I read in most club journals they can use the material. I could too, but it is my intention to cease beating the issue to death in the pages of TCA. This publication is for the reading enjoyment of all Amateurs and not just those who agree with the policy of any organization. This is not a political forum, rather a source of news for our fellow Amateurs. When it becomes the front line for a battle between organizations, it loses its ability to be objective.

TCA supports CARF fully. I, as editor, chose to publish both the proposal and the reply. I also chose to run the resignation letter from Ron Hessler. This was intended to put the organization of CRRL into proper perspective. CRRL had been formed as a national organization capable of standing on its own with only loose ties with ARRL. On the change of the Canadian director, the organization was returned to complete dependent status on ARRL. The CRRL has effectively disappeared. Only the name remains.

To those of you who observed that the slant of the proposal was to eliminate the CRRL / Cdn. Div. ARRL, I submit that the complete opposite is more likely. If past performance is any indication, once the merger is completed, the CRRL forces, or force, will move immediately to eliminate the independent status of the organization, and we will once again be only a small cog in a large ARRL corporate wheel. CARF, and all it has stood for, and all it has worked for, will disappear forever leaving Canadian Amateurs at the mercy of one man rule. CARF has had more to lose from proposing merger than CRRL, yet they went ahead with the hope that the Cdn. Div. ARRL would not interfere with the negotiations between two autonomous national societies. What CARF did not know at the time was that one of those organizations had already ceased to function as an autonomous entity.

It is my own opinion that we cease to try to obtain the impossible and pursue the possible, that being the effective representation of Canadian interests to a Canadian government.

That is it. That is all. This is the end of it here.

This editorial expresses the opinion of an individual... me. It in no way expresses the opinion of anyone else or any other organization although their own opinion may or may not agree with mine.

Cary Honeywell VE3ARS

International Friendship Games

The story of a communications network established by Amateur radio operators to assist officials at the International Friendship Games at Sault Ste. Marie, Ont. and Saginaw, Michigan.

By K8CQF and VE3EUI

THEY'RE OFF!!!

The scene in the early morning light was much more impressive than I had imagined. I glanced quickly at all of the approaches to the high school parking lot and each was filled with cars. Shining lights flooded the area where a row of school buses curled past the power plant over to the west wall of the school and continued south to its edge.

All together, more than 2500 people would travel from Saginaw, Michigan, to Sault Ste Marie, Ontario (commonly known as the Soo), for a weekend of fun, athletic contests and adventure known as the Friendship Games. The young lions among them would bring back medals of victory; older athletes would compete more for jokes, libation and good times.

This year, as always, the excitement pervaded the crowd as anxious parents watched eager youngsters scrambling through the rain for their assigned buses.

A call from Bill WD8RIN on the 84 / 24 machine brought my attention back to locating him amid the confusion. As he directed me to our meeting place by a yellow school lamp, I wheeled through a parking lot across the street to squeeze into the line of cars heading in this direction.

While the activity at the staging area was not all for a departing delegation to the games, it was the beginning of the climax of months of volunteer effort by the hams of the Algoma Amateur Radio Club and the Saginaw Valley Amateur Radio Association.

Ten months ago, club members had begun discussing what ham radio could do to make the games run more smoothly for officials co-ordinating them. First the ARRL was contacted to confirm permissible types of traffic between these two countries. Then a proposed operating network was developed and drafts were forwarded to each organization, to determine if they would be able to supply the necessary manpower to support the games activities generated from 150,000-plus residents of the two cities.

Once the club endorsements were given, Friendship Games personnel were approached. John WD8POK and I made the presentation to the Saginaw Games Committee and Larry VE3BWL took care of the Soo.

When WD8POK took out his hand-held and dialed up the phone in our demonstration room, the committee began to realize that reports from remote sites could be made more easily with our help than in the past, when officials had to leave the competition sites to find a phone.

After setting up a low band SSB installation at Saginaw City Hall Emergency Operations Centre, our groups met weekly to become acquainted and prepare for our transmissions.

Ken WB8ZYN cleaned out his shack and delivered a complete RTTY station to both groups, and then travelled the 500-mile return trip to the Soo to help Ben VE3BPS and the boys get their new equipment up.

After experimenting with the equipment and antenna systems, an inaugural message was sent via 40 metre RTTY from the Saginaw Games Chairman, Judge Joseph G. DiFranscesco, to the Soo on June 21.

After that our workload gradually increased and the final weeks were hectic. Weekly trans-

missions became daily transmissions. Together the Canadians and Americans had 5500 pieces of information in the six weeks on 40 metre RTTY. Paper copies of each transmission were delivered to Soo officials and contained pertinent information regarding billeting, finding those parents with whom the 700 youngsters under 18 would live for the three days of the games, team rosters, rules, regulations and more.

As soon as I delivered some material to them, Bill and Ernie WD8JEK were going to lead the buses carrying the entourage to a rest stop just south of the Soo, where all the buses would regroup for a brief ceremony and an orderly procession through customs and then the town. A few minutes after that, we would be providing continuous communications in both cities until closing ceremonies and Sunday's departure.

Pulling out of the high school parking lot, I settled in for the trip. 40 metre contact was established with Joe K8GQF at city hall and the usual statistics back and forth began and continued with John and Dick K8EU until our first stop at the rest area.

There three of the games people approached the car. They were tense, and explained that they had a problem. It seemed that they had left behind some award medals, flags and other material which would be used for the competition. Could we contact Saginaw?

We immediately turned around and filled Saginaw in on their request. Within minutes Saginaw confirmed that a call had been placed and the materials were being picked up by a late departing contestant. Relief and realization that our communications system would work told on the three officials' faces.

The rest of the trip was uneventful and we shortly pulled into Queen Elizabeth Park, where Ernie noted the guy with the handheld. After introducing ourselves to Ben VE3BPS we began our work.

THE CANADIAN SECTION

After many weeks of planning, the day finally arrived. Members of the Algoma Amateur Radio Club met at the John Rhodes Centre, the Soo's brand new sports complex. Geoff VE3FGT, Ben VE3BPS and Sid VE3AUD were hard at work in the communications centre (the furnace and meter room -- converted into a ham shack) when Larry VE3BWL arrived.

After a quick orientation of the shack and the equipment, I took over the two-metre communications with Bill W8RIN so that Ben could get away for some lunch.

As the rest of the Algoma Amateurs arrived on the scene, Bill gave me a call: troubles on the highway, there would be a short delay. How could we help get the buses, all 17 of them, into the rest area before customs. Not only were the buses held, they were lined up and a State Police escort was standing by for escort duty at the Bridge, after a call for a Sault Ste. Marie, Michigan station brought George W8LQX and Ron W8JQM to the rescue. From this point it was smooth sailing for a while.

On arrival in Canada, officials of the city of Sault Ste. Marie met the large group from Saginaw, welcomed them to Canada and to the City, and then the city police took over escort duty. It was an impressive sight at the John Rhodes Centre as the buses and cars arrived, complete with sound effects from the sirens.

"It's a great day for Friendship," were the words of Gerry Worley and Joyce Martin, both of Saginaw. This reflected the feelings and sentiments of everyone involved in this weekend. Gerry and Joyce were real pros when they sent back reports via Amateur Radio to Saginaw.

During the afternoon of Friday, all day Saturday and until noon Sunday, Geoff VE3FGT manned the two-metre base and attempted to keep track of the city and games officials.

The hams in the field also kept track of results and reported the competitions to the communications centre, tried to acquire all kinds of necessary information for the visitors and, once or twice, called for help, either for themselves or others who were having problems. Geoff certainly had his work cut out running the 2-metre base.

I maintained contact continually on 40 metres, the Drake twins, with Saginaw and ran the sked so that Gerry and Joyce could get their reports through. These reports were being supplied to the Saginaw area media.

Two other members from Saginaw who helped in Sault Ste. Marie were Linda W8JNR and her OM Bill W8JNQ, who was competing in the shooting event. Linda kept track of the events and called in results, as well as trying to keep track of Bill, her children, other people's children, and taking photos of the hams.

On Saturday evening the comm. centre was manned by Gerard VE3GWN, Bill W8RIN and myself, while others took a break or left for the evening. At 9 p.m. Dave VE3EGC left for the Memorial Gardens, the site of the other events, while Stan VE3AYG attended the under 18 dance at Mt. St. Joseph's College. The rest of us relaxed either at home or around the centre. The hams provided communications between both dance sites and base control. Both dances were well-managed and a good time was had by all.

Sunday morning saw the final competitions and the closing ceremonies, and the tearing down of the communications centre.

It was three days of friendship for sure, not only for the games participants and officials but the ham radio operators from two countries as well. After many long

weeks of planning and three long days at the game site, many new friendships were formed and new lines of communications laid.

We are grateful to Norm VE3DX, the regional supervisor of the DOC, for his support and advice. We also acknowledge the help of John VE3DCY, Uwe VE3GEX, Bob VE3JIE, Fraser VE3KOF, Bob VE3KOY, all of Sault Ste. Marie, and Bill VE3JIW and John VE3KOD of Bruce Mines.

Without the support and effort of all the Amateurs from both sides of the international border, the communications network could not have functioned.

CONCLUSIONS & BENEFITS

Rubbing elbows sure helps. This public service communications network has become more important than any of us could hope. It was a time for personal growth, a time to depend on each other and a time for 'honour', hidden in all of us, to come out.

Many of us had been in a rut; working our favorite bands and modes of operation, ignoring others. During this period, we all learned new areas of communications: handling traffic, net operation, RTTY, exposure to new equipment and new modes of operation.

Interaction was the key. Most of us knew little about RTTY but everyone got a shot at using it, except me. Perhaps the most remarkable aspect of these efforts was that, by helping others, we vastly increased our knowledge of Amateur Radio.

The city of Saginaw and the city of Sault Ste. Marie, together with the Saginaw Valley ARA and the Algoma ARC, are already looking at plans for the 1981 Friendship Games. This time the roles will be reversed; Sault Ste. Marie will be visiting Michigan.

Amateurs have shown once again the positive aspects of international communications and friendship through their skills.

Are you prepared for emergencies?

The Mississauga train derailment last year provided an excellent opportunity for local Amateurs to test their emergency skills and, while they more than excelled, it still served to highlight the fact that a lot of us were caught in situations that were a compromise, at best. While operating skills cast little doubt, I feel the equipment situation could be improved. Here are just a few points to ponder:

1. Do you have a truly portable antenna? While a lot of us have magnetic mount antennas, not everyone does. Why not consider building something that could easily be set up anywhere? After all, without the antenna you might as well forget about everything else. You can't always depend on the other guy to have the antenna.

2. Do you have any extra feedline? It is too optimistic to think that your operating location will also be a good antenna site. A length of spare coax is easily stored and the extra flexibility could make the whole difference as to whether your signal is heard.

3. Is your power supply easily transportable? I personally found mine to be too awkward and heavy and have since built another one to be as small and light as possible. As well as having the power plug to match my rig, I also included a set of binding posts to allow easy hook-up to anyone's rig.

4. Do you have emergency power at home? While we can't all afford a gas generator, it is possible to run your VHF rig off a car battery for quite a while, especially if you use low power. I managed to secure an old one, at no cost, and I keep it in my ham shack, periodically charging it up (they do discharge eventually, even if not used).

5. Is you hand-held ready to go? These units are excellent for emergency use, but a dead battery doesn't put out much of a signal. A spare battery pack would be a good investment. Since the usual HT antennas aren't the best, it's also wise to have an adapter to allow you to connect up to a better antenna that may be available.

These are just a few of the points that I have looked at to increase my emergency preparation. Each individual who intends to participate in any future incidents should look at his own resources and ask himself, "Am I as well prepared as I could be?".

Vic Henderson VE3FOX
Peel Amateur Radio Club News

TRANSATLANTIC QSO

Andy McLellan VE1ASJ of Saint John completed what is believed to be the first Transatlantic QSO, crossband 50 to 70 MHz via F-layer propagation. G4BPY in Staffordshire was on the European end of the path when contact was made on Nov. 17. The day before, Andy heard ZB2BL on 70 MHz, but no QSO resulted. Andy also recently earned the Canadaward for 6 metre work.

Canadaward Report

The contests and awards committee of the Federation has administered the Canadaward since its inception in July, 1977. It has been more than two years since a complete list of those entering the award has been published, and in that time there has been a great number of changes.

The number of awards issued has more than doubled, and awards have been issued for 6-metre work, as well as for Garry Hammond's work on all five HF bands. As yet there have been no awards issued for 160 metres, nor for any satellite mode.

The award requirements are simple, requiring one contact be made with each province and territory. All contacts must be made on any one band, that is there are no mixed band awards, and the award can be endorsed for any mode if all 12 necessary contacts are made with the same mode. As the award was created on July 1, 1977, all contacts must be made on or after that date to be valid for the award.

Peter VE7BBQ, CARF's Pacific Director and chairman of the committee, was the original administrator of the award but, due to other commitments and some severe problems with his post office, he turned over the job to Dave VE2DZE. The address for award applications now is P.O. Box 2172, Stn. D, Ottawa, Ont. K1P 5W4. Application forms can be had through Dave or through the Kingston office for the price of an SASE.

The award itself is free to CARF members, but non-members should enclose 2^{00} with their submissions. Funds for return postage of your QSL cards, or simply an SASE, should be included as well.

One of the most surprising aspects of the Canadaward is that there are only two awards issued for 21 MHz, and one for 7 MHz! When compared to 14 and 28 MHz, this seems very strange. The Canadaward is also offered for satellite work, but in the past the rules have called for all contacts to be made by any one specific mode of satellite operation. As a few of those who are active on the satellites have told me that the degree of difficulty under these rules is extreme, I would be willing to accept applications for any satellite work, regardless of transponder mode, and make the mode an endorsement. Hopefully this will entice a few applications from these people.

I will try to publish a list like the one here at least once per year, and supplement it with announcements of additional awards issued. This way, those earning the award can bask in the glory and adoration of their peers, without sounding like braggarts. If anyone has any suggestions, complaints or other comments on the award, do not hesitate to write me. Incidentally, I will take this opportunity to apologize for the delay in answering some applications. In some cases it has been as long as two months. For me it is simply a metter of settling into a regime of administration.

-- VE3DZE

"I would be willing to accept applications for any satellite work, regardless of transponder mode..."

Here is a list of awards earned as of Nov. 18, 1980.

CANADAWARDS

3.5 MHz

1. VE3GCO	SSB
2. VE7IX	SSB
3. VE3XK	SSB

7 MHz

1. VE3GCO	Mixed

14 MHz

1. VE3ET	SSB
2. VE3GCO	SSB
3. VE2QO	SSB
4. W9VWV	SSB
5. W6BZ	CW
6. K6UY	CW
7. WB8YXT	Mixed
8. WD8CYR	CW
9. VE3IUE	Mixed
10. WD9ACQ	Mixed
11. DA1HO	SSB
12. VE6PW	SSB
13. W3TUB	CW
14. VE7CNE	CW
15. VE3IIU	Mixed
16. VE3JIJ	Mixed
17. VE3DMC	Mixed
18. VE3IPR	Mixed
19. WA8VDC	Mixed
20. VE3JPJ	SSB
21. VE3HLL	SSB
22. WA4SKE	Mixed

23. VE2DZT	SSB
24. EP2LI	SSB
25. VE7IX	SSB
26. VE3KK	CW
27. 7X2LS	SSB
28. VE7DEN	SSB
29. VE7MH	CW
30. PI1PT	CW
31. VE7BAK	SSB
32. I8YRK	SSB
33. JH1VRQ	Mixed
34. OE5AHL	CW
35. VO2CW	Mixed
36. VE3CZJ	Mixed
37. HI8XGF	SSB
38. HI8XJO	SSB
39. K8EK	SSB
40. VE3DIJ	SSB
41. DL7CS	CW
42. VE3YE	SSB
43. VE3OCU	SSB

21 MHz

1. VE3GCO	SSB
2. 9H4G	SSB

28 MHz

1. VE3GCO	SSB
2. WB9WFZ	SSB
3. VE1BNN	SSB
4. VE6KQ	SSB
5. WB7UCK	Mixed
6. WB0WAP	Mixed
7. WB2RLK / VE1	SSB
8. VE7CER	SSB
9. VE3KXE	SSB
10. WA4QMQ	SSB
11. VE6BEU	SSB
12. WB5RQM	SSB
13. VE3KIF	SSB
14. PA0PCA	SSB
15. DA1QR	SSB
16. VE3DAX	SSB
17. VY1BR	SSB
18. VE7DRI	SSB
19. DA1MH	SSB
20. VE3HOM	Mixed
21. VE7CUF	SSB
22. VK2NSE	SSB
23. VE3KRX	SSB
24. VE1BNN	CW
25. VE7DOG	SSB
26. JA7GB	SSB
27. WA2FUM	SSB
28. VK2NOG	SSB
29. VE1BBS	SSB
30. VE4AFO	SSB
31. W2JBZ	SSB
32. K8IXU	SSB
33. VK2NYI	Mixed
34. PA0SMU	SSB
35. N6BOI	SSB
36. N4BBY	SSB
37. WB3DKY	SSB
38. VY1AL	SSB

50 MHz

1. VE1AVX	SSB
2. KA4AOK	SSB
3. N3AHI	Mixed
4. VE1ASJ	SSB

Five-Band Canadawards

1. VE3GCO	Mixed
Total Awards Issued:	92
SSB Endorsed:	62
CW Endorsed:	11
Mixed SSB / CW:	19

Ten Commandments of electronics

1. Beware of the lightning that lurketh in an undischarged capacitor, lest it cause thee to be bounced upon thy buttocks in a most ungentlemanly manner.

2. Cause thou the switch that supplies large quantities of juice to be opened and thusly tagged, so thy days may be long on earthly vale of tears.

3. Prove to thyself that all circuits that radiateth and upon which thou worketh are grounded, lest they lift thee to high-frequency potential and cause thee to radiate also.

4. Take care thou useth the proper method when thou taketh the measure of high-voltage circuits so that thou doth not incinerate both thee and thy meter; for verily, though thou has no account number and can be easily replaced, the meter hath one and, as a consequence, bringeth much woe unto the Supply Department.

5. Tarry thou not amongst those who engage in intentional shocks, for they are surely non-believers and are not long for this world.

6. Take care thou tampereth not with interlocks and safety devices, for this will incur the wrath of thy seniors and bringeth the fury of the safety officer down about thy head and shoulders.

7. Work thou not on energized equipment, for if thou doeth, thy buddies will surely be buying beers for thy widow and consoling her in other ways not generally acceptable to thee.

8. Verily, verily I say unto thee, never service high voltage equipment alone, for electric cooking is a slothful process. Thou might sizzle in thine own fat for hours on end before thy Maker sees fit to end thy misery and drag thee into His fold.

9. Trifle thou not with radioactive tubes and substances, lest thou commence to glow in the dark like a lightning bug, and thy wife be frustrated nightly and have no further use for thee except thy wages.

10. Commit to memory the works of the prophets, which are written in the instruction books, which giveth the straight dope and which consoleth thee, and thou cannot make mistakes, sometimes, maybe.

KENYA STATION

For those of you who need a Kenya station for your list of stations worked, Rob Bareham 5Z4YW (VE3ACY) monitors 28.52 MHz USB continuously and can be found around 21.235 at 1830 UTC Mondays.

Canadian Amateur Radio Federation

Phone Commonwealth Contest

1981

When From 1200z Saturday 21 March to 1200Z Sunday 22 March, 1981. Operators may use the full 24 hour period.

Eligible entrants: Radio Amateurs licensed to operate within the Commonwealth or British Mandated Territories.

Contacts: SSB (A3j) only, in the 3.5, 7, 14, 21 and 28 MHz bands. Suggested frequencies are plus or minus 20 kHz of 3600, 3780, 7080, 14180, 21200 and 28480 kHz. Only one contact may be claimed with a specific station on any one band, and duplicates must be clearly marked as duplicates without claim for points. Contacts may be made with any station using a Commonwealth call sign except those within the entrant's own call area. UK stations may not work each other for points.

Exchange: A Contact consists of an exchange and an acknowledgement of an RS report and a three figure serial number commencing with 001 and increasing by one for each successive contact throughout the contest period, irrespective of the band in use.

Scoring: Each completed contact will score five points. In addition, a bonus of 20 points may be claimed for the first, second and third contacts with each Commonwealth call area on each band. All U.K. stations count as one call area. See the accompanying table for a list of Commonwealth call areas.

Logs: Separate logs are required for each band. Each band log should be separately totalled and should include a check list of call areas worked on that band. Logs should include time in GMT, callsign of station worked, exchange sent and received, and points claimed. Separate band totals should be added together and total claimed score entered on a summary sheet.

Entries: Entries may be single or multi-band. Single-band entries should show contacts on one band only; details of contacts made on other bands should be enclosed separately for checking purposes. Only single operator entries will be accepted. A single operator station is one manned by an individual

who receives no assistance whatsoever during the contest period. Multi-band entries will not be eligible for single-band awards. Points are deducted for errors in the logs. For unmarked duplicate contacts, for which points have been claimed, additional penalty points may be deducted.

Each entry will consist of the separate band logs, including call area checklists, a summary sheet and Dupe sheets. Each entry must also be accompanied by a signed declaration that the spirit and rules of the contest were observed, as well as the terms of the contestant's licence.

Entries should be addressed to CARF Contests and Awards Committee, P.O. Box 2172, Station D, Ottawa, Ont. K1P 5W4, Canada. Under NO circumstances should entries to the CARF Phone Commonwealth Contest be sent via RSGB, nor should logs for the CW event be sent via CARF. The closing date for entries will be June 1, 1981.

Awards: The CARF Phone Commonwealth Contest Trophy will be awarded to the top scoring entry in the Multi-band class. Certificates will be awarded to the top scoring entry in each Commonwealth Call Area in each entry classification.

The following areas are recognized for the purpose of scoring in the CARF Phone Commonwealth Contest, 1981.

A2	Botswana
A3	Tonga
A5	Bhutan
C2	Nauru
C5	Gambia
c6	Bahamas
G	United Kingdom
H4	Solomon Is
J3	Grenada
J6	St. Lucia
J7	Dominica
P2	Papua New Guinea
S2	Bangladesh
S7	Seychelles
T2	Tuvalu
T3	Kiribati
VE1	Maritime Provinces
VE1	Sable Is
VE1	St. Paul Is
VE2	Quebec
VE3	Ontario
VE4	Manitoba
VE5	Saskatchewan
VE6	Alberta
VE7	British Columbia
VE8	Northwest Territories
VK1	A.C.T.
VK2	New South Wales
VK2	Lord Howe Is
VK3	Victoria
VK4	Queensland
VK4	Willis Is
VK5	South Australia
VK6	Western Australia
VK7	Tasmania
VK8	Noethern Territory
VK9	Christmas Is
VK9	Cocos Is
VK9	Norfolk Is
VK0	Heard Is
VK0	Macquarie Is
VO	Newfoundland
VP1	Belize
VP2A	Antigua, Barbuda
VP2E	Anguilla
VP2K	St Kitts, Nevis
VP2M	Montserrat
VP2S	St Vincent
VP2V	British Virgin Is
VP5	Turks & Caicos Is
VP8	Falkland Is
VP8	South Georgia
VP8	South Orkney Is
VP8	South Sandwich Is
VP8	South Shetland Is
VP9	Bermuda
VQ9	Chagos
BR1	British Pheonix
VR6	Pitcairn Is
VS5	Brunei
VS6	Hong Kong
VY1	Yukon
VU	India
VU	Laccadive Is
VU	Andaman & Nicobar Is
YJ	New Hebrides
ZB2	Gibraltar
ZC4/5B4	Cyprus
ZD7	St Helena Is
ZD8	Ascension Is
ZD9	Tristan da Cuhana Is
ZE	Zimbabwe
ZF	Cayman Is
ZK1	Cook Is
ZK1	Manahiki Is
ZK2	Nuie
ZL1	New Zealand
ZL1	Kermandec Is
ZL2	New Zealand
ZL3	New Zealand
ZL3	Chatham Is
ZL4	New Zealand
ZL4	Auckland & Campbell Is
ZM7	Tokelau Is
3B6/3B7	Agalega & St Brandon Is
3B8	Mauritius
3B9	Rodrigues Is
3D2	Fiji
3D6	Sawziland
4S7	Sri Lanka
5H	Tanzania
5N	Nigeria
5W	Samoa
5X5	Uganda
5Z4	Kenya
6Y5	Jamaica
7P8	Lesotho
7Q7	Malawi
8P	Barbados
8R	Guyana
9G1	Ghana
9H	Malta
9J2	Zambia
9L1	Sierra Leone
9M2	W Malaysia
9M6/9M8	E Malaysia
9V	Singapore
9Y4	Trinidad & Tobago

Note: All calls operated from Commonwealth controlled areas of the Antarctic count as one call area.

Report on Hamfest 80

By Bob Riley VE7CMU

On July 5 and 6, the Maple Ridge Amateur Radio Club hosted Hamfest 80 at the Maple Ridge Fairgrounds. The activities started on Friday evening with a work crew setting up and trying to get organized for the main events on Saturday and Sunday.

To our surprise and pleasure, several Amateurs arrived on Friday to camp at the fairgrounds. These earlybirds pitched in and helped the crew set up.

Bright and early Saturday, everyone was back at the fairgrounds to start the day's events. The weather was not cooperating but the occasional shower did not seem to dampen anyone's spirits. Amateurs, XYLs and friends started arriving early and seemed to keep coming all day.

The many commercial displays received much attention and the main exhibit building seemed to be a common 'meeting, brousing and keeping out of the rain' building.

The seminars that continued most of the day were well attended and of such a variety that all found something of interest.

A packed house sat down to enjoy dinner and to listen to Bob Eldridge VE7BS, our main speaker. His fascinating, informative and humourous presentation was appreciated by all.

The bunny hunt Sunday went well, plus other seminars and brousing at the swap shop.

The Maple Ridge Amateur Radio Club would like to extend thanks to all those who attended Hamfest 80 and the exhibitors and speakers who helped make it a success. - BCFMCA Bulletin

40 Metres, Another View

By Wayne Warren VE4WR

This article is written in response to Bill Wilson, VE3NR's September TCA artricle 'Our 40 Metre Phone Band'. Basically I agree with most of the points Bill makes about our 'phone use of the segment 7050 to 7100 kHz'. I take issue, however, with the contention that **all** nets ought to be discouraged from using any portion of this spectrum.

In the late '60s, I and others initiated the Canadian 40 metre AURORA net. This net centred around 7188 kHz LSB and handled Canada-wide CW and phone traffic, permitted contacts between stations across the country etc. The net lasted into the early '70s before giving way to increased QRM from broadcasters and U.S. operators having extra-class phone privileges below 7200 kHz.

With experience on the original Aurora net and as a result of propagation experiments below 7100 kHz I was particularly interested in our recent access to the new phone band. Coincidental QSOs with interested VEs this spring led to the rebirth of the present Canadian 40 metre Aurora net which meets each evening at 02:30 GMT on or near 7062 kHz, USB. The time, frequency, mode and procedures were determined after extensive discussion with VEs in many provinces.

While I am not an official spokesman for the Aurora net and individual net members may disagree with certain opinions – I believe several pertinent points should be made on behalf of the net:

1. CARF should take a leadership role in promoting the Aurora net or a similar one because it meets several small 'n' nationalistic criteria on behalf of Canadian radio Amateurs. Most important of these is that a net in this spectrum permits almost consistent short haul/long haul contacts between VEs. This permits trans-Canada message handling, station contacting and emergency traffic operations during prime evening hours – a vital supplement to the TCN on 14140 kHz.

2. The selection of 7062 kHz, USB mode and 02:30 GMT net time minimizes QRM to DX phone, U.S. and VE CW, VE/VE phone QSOs VE/DX phone QSOs. This judgment is based on the following observations:

–DX to VE phone QSOs tend to cluster between 7075 and 7100 LSB

–DX to U.S. crossband tends to go 7075/7100 to 7175/7200, LSB

–DX to DX QSOs tend to be scattered and float across 7050/7100

–U.S. and DX CW nets and CW specialists tend to operate below 7060

–a Powerful (Albanian?) AM broadcaster monopolizes 7060 to 7065 and 'muscles' an opening into which USB stations can zerobeat

–VE to VE QSOs tend to occur above 7065 kHz, LSB

–VE phone operation in evening hours is difficult above 7150 because of W/K ARM

–between 02:00 and 03:00 GMT propagation tends to be lightly used or closed into Europe and not yet open to Asia/Oceania while definitely favouring east/west and north/south VE contacts

–the vast majority of Central/South American DX stations converse in Spanish or Portugese and tend not to acknowledge calls from English/French speaking VEs and 'seem' not to be bothered by VE/VE phone.

3. Forty metres is a very desirable band for an every-day trans-Canada net for these and other reasons:

–the band tends to be 'open' across at least three or four provinces virtually every day during some prime evening hour. In fact many recent sessions of the new Aurora net have had

check-ins from coast to coast and north in VE8/VY1

–a useful mix of short haul/long haul contacts are possible with the added bonus of a ground wave/short skip that is superior to 20 metres. This prevents stations in close proximity from inadvertently QRM-ing one another.

–background QRN is almost always less bothersome than is the case on 80 metres, especially so in summer. although CW QRM is worse.

–small lots and apartment roofs can more easily accomodate 40 metre dipoles, inverted Vees and even rotary arrays – than on 80 metres.

–modest power (approx. 100 watts at VE4WR) is normally adequate for both long and short haul VE contacts.

–after establishing contact, etc. on 40 metre, stations can and do move to 75/80 metres, 20 metres and 2 metres for extended QSOs, 'patches.

–a national calling frequency (preferably 7062 kHz) on this band may have greater reliability than and would truly augment 14140 kHz.

4. The U.s. American Radio Relay League is an active and successful lobbyist for U.S. Amateurs and is especially protective of W/K operating privileges. It cannot be expected to 'protect' VE interests that conflict with W/K interests. A VE4 recently published a series of articles on ARRL activities, over the years on our 'behalf', which makes interesting reading.

In recent years ARRL's lack of help during U.S. phone expansion below 3800 kHz and below 7200 kHz did considerable harm to VE interests. The proposed expansion by U.S. phone operators below 14200 kHz surely is not in the interests of VE Amateurs.

Lest it be concluded that I am rabidly anti-U.S., 't'aint so! Roughly half my log entries are with W/K operators on all bands and I do enjoy many friendships with Amateurs and others in the U.S. I've subscribed to QST periodically since 1957 (hence receiving an unasked-for membership in ARRL as the price paid for a mailed-out subscription) and exercised my ARRL franchise until CARF came of age.

While I admire U.S. technical prowess and organizational abilities, I do not appreciate being pressured off various phone bands. Nor do I advocate exerting the same kind of pressure on 40 M CW operators. The Aurora net is a rational user of this very useful spectrum.

It seems quite consistent with CARF's objectives to encourage and promote one national net and susequent calling frequency below 7100 kHz. I recommend that 7062 USB be that frequency and mode. Furthermore if some eastern group were to promote Aurora-east on 7062 convening at 02:00 GMT while Aurora-west/central/north continues at 02:30 GMT then VEs would have a reasonably certain method of daily, coast-to-coast, all-year contacts. This would be a tolerable departure from the present operation and would compensate VE1s/VOs because the net occurs so late according to local time. □

–Wayne Warren VE4WR

Use the Local Media

Following up on our articles on Advertising, here is an excerpt from the London (Ont.) Amateur Radio Club Bulletin:

While there is no secret to good public relations, one can increase the amount of media coverage by a few simple rules. The media does not instantly appear at events. They have to be notified... well in advance and preferably in writing.

Don't try to sell them Amateur radio as a hobby. People, not hobbies make the most interesting stories. So we tell the news reporter about the people involved in the facets of Amateur radio. Has a particular Amateur built a satellite ground station at his home? Is a local Amateur running dozens of phone patches to our Armed Forces in Alert, NWT to keep in touch with their families back home? Good stories.

So for a Club to increase public awareness of Amateur radio via the media, we must tell them our story in people-related terms.

Send a short note outlining the event, what's involved, and names to the media. Don't worry about creative writing, the media will take care of that. They are interested in who, what, where, why and when.

Any people related event involving Amateur radio is a natural.

At least one month's notice to the media is required. For magazines and periodicals at least three months notice is needed to make their deadline. So the earlier the better.

Don't think only emergency stories will get press coverage. Most events make good news and feature stories. Sure we all know a lot of Amateurs who are doing the same thing. But the media – and through it the public – didn't know it. That makes news.

Marshall Postnikoff VE3JGT

VE7LPC on-the-air

In December 1979, I received a call from the Lester B. Pearson College asking if I knew a home where one of the students from a distant place might be accommodated during the Christmas break, since the facilities at the College would be closed for a brief period during the holidays.

After conferring with Mrs. King we agreed to have a student stay with us, and Raphael Niakra from the Island of New Britain, Papua New Guinea became our guest. He was a very bright, delightful person who spent much of his time studying and watching basketball, his favourite sport.

He also expressed an interest in radio and television, and since I had recently developed an interest in Amateur Radio and become a 'Ham' (VE7FBK) we talked quite a bit about it and I introduced him to my shack and had him talk with one of the local enthusiasts on 2 metres.

That night a thought struck me 'wouldn't it be wonderful if the students at Pearson College could talk to their families and friends in the many and various contries from which they come, through Amateur Radio.

All we needed was the equipment and the trained personnel. If the equipment could somehow be provided, surely personnel could be trained from the resources at the college.

I phoned Jack Matthews, Director of Lester B. Pearson of the Pacific, in January and asked him if he would be interested in such a project. He said he would, so I approached the Downtown Kiwanis Club of Victoria. They were looking for some good projects since many of theirs were now complete.

I also asked George Banfield VE7DIC, an 'old pro' in DX who had helped me with the morse code, if he could give me some idea of the cost of setting up such a station. I also got in touch with Charles Ryan VE7BFT, to find out the regulations required.

I presented this information to a meeting of the Board of Directors of the Kiwanis Club and I was asked to present the proposal to the General Meeting.

In the meantime I asked Raphael to contact someone in Kimbe, near his home, who had an Amateur licence and station to find out if he was able to establish contact with Amateurs here. Raphael received a letter from Greig Collins stating that a friend of his ran a DX net and was in constant contact with Amateurs in Canada. I gave George a copy of Greig's letter and he tuned in to the net and had very good contacts.

A few days later, Roy Parrett VE7TG phoned me at 0830 to say he had established contact with Chuck Hall, Canadian Embassy in Hong Kong who was very interested in the Kiwanis project to establish the College Station. He wanted to know more about the college and I did my best to describe the history and purpose of the school to him.

These contacts with 'remote' part of the globe, convinced me that similar contacts throughout the world would be quite easy and that the project was a valid and practical one.

At the general meeting, the Kiwanis passed a motion "that the Downtown Kiwanis Club of Victoria provide the resources necessary to set up an Amateur Radio Station on the campus of the Lester B. Pearson College of the Pacific". Needless to say, I was overjoyed with this and was given the authority to proceed on behalf of the Club, it being understood that I keep in touch with them for guidance and approval.

After several tests it was established that the area around Max Bell Auditorium was the best location. Radio contact was made in Las Cruces, New Mexico; Newington, Conn; Fort Collings, Colorado; and several other stations.

It was decided to erect a 70' self-supporting tower on a rock plateau behind the Auditorium with the radio equipment housed in a room on the top of that building.

Chas Ryan received an Amateur Radio Club licence for the School with the call VE7LPC. The temporary officers of the

club are Jack Matthews, President, Scott Campbell, Vice-President, and Steve Baillie, Treasurer.

The necessary equipment was ordered from Dollard Electronics, Vancouver and was received in August. Meanwhile George Banfield was installing the ground system and assembling antennas. Leo, Maintenance Supervisor at the College, was building a suitable cabinet to stow the equipment, and Gary Pearson was erecting the Trylon tower.

George Banfield, Chas Ryan and Louis Fortier set up the equipment and got the station operating on September 19. The first contact was made on that occasion with a station in Ontario.

On September 23, Gloria Horner VE7DAD and Roy VE7TG were on hand to show interested students the capabilities of the station, and explain the requirements for certification as an Amateur Radio Operator.

Four Advanced Amateur operators have been chosen to assume responsibility for the station until such time as Lester B. Pearson College's personnel become qualified. They are Chas Ryan, George Banfield, Gloria Horner and Al Wilson. Al has agreed to teach morse and help with regulations, and we are hopeful that the teaching staff in the Physics Department will give instruction in the theory of radio and electronics. Roy Parrett has agreed to go to the College on an occasional weekend to make radio contacts in the Far East.

VE7LPC is a station of which we can all be proud and I am sure it will set a very good example for other colleges throughout the world who wish to explore and use the new and exciting developments in distant communications.

Bert King

Unusual requests for the DOC

Want to send a telegram, get a radio licence for a duck, register to vote? What do some people do? Call the Department of Communications, of course.

DOC has been asked for all of these services and more. Some people are confused about the division of government responsibilities, others just want to blow off steam.

Recently, 'Modulation' asked a number of DOC personnel around the country for examples of unusual requests they've received over the years. Here's a selection:

The Department was asked to issue a radio licence for a trout, and did!...to help a University of New Brunswick experiment on underwater trout tagging.

They have also, on various occasions, licensed a dog, radio transmitters for use on ducks, been asked for information on how to get a radio licence for a carrier pigeon, and okayed the idea of licensing a remote-controlled, underwater bulldozer for contruction work.

Inland Waters asked DOC to use radar to monitor its radio-equipped buoys. A prisoner asked for and received detailed information on how to become a radio inspector, then caused some embarrassment by posing as an inspector in hotels and restaurants and leaving a trail of unpaid bills behind.

People have asked about how to set up radio systems for use while travelling in the Far East. One man asked for permission to hoist his radio antenna by balloon in order to get better reception.

One man thought the 13^{50} he had paid (for a General Radio Service licence) was a bribe, entitling him to a job.

DOC district and regional offices often receive complaints about radio or TV interference or unusual electronics problems. Sometimes, even though a complaint sounds unlikely, the radio inspector finds it has some basis in fact.

For example, a woman complained about hearing voices in her closet every evening. The inspector found that there really were voices; metal under the plaster was picking up a local radio station. In another case, a man who heard voices in his head was quite right. His bridgework was picking up a radio station.

Another woman complained about hearing voices. A radio inspector found that her hearing aid was picking up transmissions from a General Radio Service operator next door.

Other interference problems are often caused by small electrical appliances whose switches have become defective with use, such as doorbells or Christmas lights. Or heating pads. In some cases, the person may have even forgotten there's one in the house. But the inspector traces the problem to a heating pad that has become well-worn comforting newborn puppies, keeping a pet monkey warm or fermenting wine at just the right temperature.

The list goes on and on. Now, let's see ... who should I call about...?

'In Search' via the
'Trans Border'

THE CANADIAN

Contest Scene

Dave Goodwin VE2DZE, 4 Victoria Place, Aylmer, Quebec J9H 2J3

CONTEST CALENDAR

January
10-11 ARRL VHF SS
17-18 73 Int'l 160 Metre Phone
23-25 CQ WW DX 160 CW
24-25 REF CW
February
1-10 ARRL Novice Round-up
See QST
7-8 RSGB 7 Mhz SSB
21-22 REF SSB
21-22 ARRL DX CW
28-1 Mar RSGB 7 MHz CW

73 INT'L 160 METRE PHONE

This is the second running of this contest, and proved very popular in its first running. Canadian participation was high, but entries in the form of logs were low. Now with Amateurs able to use 160 SSB on the strength of the endorsement, and the rules change, we should see more Canadians on this one. Remember, no Canadaward has yet been earned for 160.

Period: 0000z 17 Jan to 2400z 18 Jan

Band: 160 metres only, SSB only, all stations should respect the DX Window (1825-1830) or risk disqualification.

Classes of Entry: Single op or multi op.

Exchange: Canadians send RS and Prov. or terr.; USA will send RS and state; DX will send RS and DXCC country.

Points: 5 points per QSO with any station.

Mult: 1 pt. per continental US state (48), Canadian Prov / terr, and 3 pt per DXCC country excluding Canada and the USA.

Final Score: QSO pt times mult. pt.

Entries: If more than 100 QSOs are made, Check sheets should be included. Entries should be sent by 21 Feb to Dan Murphy WA2GZB, P.O. Box 195, Andover, NJ 07821, USA.

CQ WW DX 160 CW

Period: 2200z 23 Jan to 1600z 25 Jan.

Band: 160 metres, CW only. North Americans should respect the DX Window (1825-1830). Europeans will transmit there and tell you what frequency they are listening on. (ie. CQ TEST DE GD4BEG QSX 03 means GD4BEG is listening on 1803 for replies.)

Classes of Entry: Single or multi op.

Exchange: Canadians will send RST and Prov / terr; USA will send RST and state; DX stations will send RST and serial number.

Points: 1 pt per QSO with station in your own Prov / terr; 5 pt per QSO with stations elsewhere in Canada and USA; 10 per DX QSO.

Multiplier: 1 pt per Canadian prov / terr, US state, and DXCC country excluding Canada and USA.

Final Score: QSO pts times mult. pts.

Entries: should be postmarked before Feb 26 and sent to CQ WW 160 Contest, 76 N. Broadway, Hicksville, NY 11801, USA.

REF CONTESTS

Sponsored by the French national society, REF, the rules have been altered so that HB, ON, VE2 and the independent Francophone states of West Africa are no longer considered for multiplier credit.

Period: CW: 0000z 24 Jan to 2400z 25 Jan; SSB: 0000z 21 Feb to 2400z 22 Feb; maximum 36 hours of operation for single-op stations.

Bands: 80 through 10 metres.

Classes of Entry: Single or Multi op.

Exchange: RST plus serial number. Stations in Metropolitan France, French Overseas territories and French forces in Germany (ie. DA1 or DA2 signing / FFA) will send their department number if applicable.

Points: 1 pt per QSO with French stations in North America, 10 pt per QSO with French stations elsewhere.

Multipliers: French Departments (95) including overseas territories per: FB8W, FB8X, FB8Y, FB8Z, FG, FS, FH, FK, FM, FO, FP, FR / J, FR / E, FR / T, FW and FY. Also, first QSO with DA / FFA. Multipliers are counted once per band.

Final Score: QSO pts times total of multiplier points on each band.

Entries: Should include multiplier lists for each band, summary sheet, and be sent to: REF Contest, Square Trudaine 2, 75009, Paris, France. Although no closing date was available, entries should be sent off as soon as possible (within one month of contest).

ARRL NOVICE ROUNDUP

The NR was set up as a training ground for USA novice licensees, to help them with code speed, and developing proficiency as operators. As well, it is a good introduction to CW contesting for neophyte Amateurs. Canadians are welcome in the contest, although in a non-competitive manner. The contest is spread out over 11 days, so you can allocate time to it as you please. Rules will appear in QST.

RSGB 7 MHZ CONTESTS

Period: SSB: 1200z 7 Feb to 0900z 8 Feb; CW: 1200z 28 Feb to 0900z 1 Mar.

Band: SSB: 7.05 to 7.1 MHz; CW: 7.0 to 7.04 MHz.

Classes of Entry: Single op only.

Exchange: RST plus serial number.

Points: 15 points per UK station worked.

Multiplier: Number of UK prefixes worked (ie. G2, G4, GM3, GU3, etc. *excluding GB stations*) for a maximum of 42.

Final Score: QSO points times multiplier.

Entries: Must include a list of prefixes worked, a summary sheet containing a signed declaration that contest rules and radio regulations were observed. Closing date for entries: SSB: April 4; CW: April 26. Entries should be sent to RSGB HF Contests Committee, P.A. Miles, 28 Scotch Orchard, Litchfield, Staffs., WS13 6DE, U.K.

SATELLITE NET

The satellite net which will connect eastern and western packet radio experimenters through the upcoming ANIK B space station will be known as the TransCanada Amateur Radio Packet Network. The interest in packet radio Digital Operator's Certificates seems to be falling off or has reached a saturation point as only seven people wrote the DOC October exams. Sadder still, only three made it.

At the time of writing, the CQ WW CW is a week away, and if conditions are as good as they are now, everyone had a good time. I found the CQ WW SSB was a bit disappointing in terms of condx on 160, where I was, and I gather others were somewhat dissatisfied as well on the other bands. As many of the experts say that we are past the sunspot cycle peak, this winter may be the last truly good one we see for many years, at least on the higher bands. Unless you can wait ten years, now is the time to set that 10-metre record.

DX News

Seychelles: The Seychelles are reported to have returned to the bands after being off since November. One active station, S79MC tries to make an appearance at 1700 UTC every weekend on or about 21.270 MHz.

South Orkneys: With VP8SO now shut down and gone, another station has shown up. Look for VP8ZR on 14.265 MHz around 1900 UTC. He goes by the name of Dennis and plans to be there for two years.

-World Radio

The bands have been reasonably good during the past few weeks. Dave VE3IAE is reporting lots of activity on 10 metres especially with the XL3 prefix, and in conversation with Richard VE3JEV, 10, 15 and 20 were all doing very well.

5V7HL Togo -- Ted is looking for VE contacts. List operation with N5ADC as net control. List taken on 21390 at 2100Z and working at 2130Z on Wednesdays and Sundays. QSL via 5V7HL.

H5ADX Bophuthatswana -- (South African Homeland) -- There are two operators, Diana (QSL via ZS6GH) and Irvine (QSL via ZS6JO), 14200 around 0100Z. 3 IRCs?

D4CBC Cape Verde Is. -- heard on 14205 at 0200Z and 21295 at 2030Z, worked 28625 at 1908Z.

XT2AW Upper Volta -- worked on 21455 at 0011z.

The following have been heard or worked:

Caribbean Net -- 14175 at 1000Z. ZK2PD Niue, 9V1UL Singapore, 3D2CM Fiji, FM0FJE Martinique, EA9IE Ceuta, FK8DH New Caledonia, GJ3LFJ Jersey and OY9R Faroes.

W7PHO -- Family Hour at 1500Z on 14255. 9M8PW West Malaysia, 9M2GZ East Malaysia, S83T Transki, A22FA Botswana, N4ADJ / KH2 Guam, VQ9TT Chagos, VS6DD Hong Kong, FB9XY Kergerlen.

YO9WL -- Round Table 14175 at 1930Z (CT2CQ takes control at times). J28AZ Djibouti, 5B4JP Cyprus, TR8CR Gabon, VU2IF India, 3B8DB Mauritius.

Hugh VE3WM
LARC Bulletin

DX COUNTRIES HEARD AND WORKED

1430Z	EA9GT	28.015	Ceuta
1030Z	VP2MM	14.030	Montserrat
1132Z	3B8DB	14.029	Mauritius
2045Z	EA6FD	21.027	Balearic Is.
1850Z	DF4GV / HB0	21.030	Leicht.
1500Z	OH2VY / OH0	21.021	Aland Is.
0504Z	9X5LE	14.027	Rwanda
0320Z	3B6CD	14.023	Agalega Is.

Thanks VE3ILE

Amateur News at CRTPB meeting

Amateur radio operators will be interested in some of the items affecting them which appeared on the agenda of the Canadian Radio Technical Planning Board's annual meeting held in Ottawa on Dec. 11.

First off, the Board which is composed of radio industry and user representatives, and which acts as an advisory body to the DOC, approved the appointment of CARF President Bill Wilson VE3NR as a vice-president on the Board's 1981 executive.

Good news for Amateurs was the DOC's statement that, during this year, it is hoped to re-write both the Amateur and GRS regulations in easier-to-understand language. Some de-regulation will be undertaken by the deletion of obsolete rules. The proposed new edition of the regs will follow a number of the recommendations of the CARF-sponsored national symposia held in Montreal in 1979 and in Hamilton last spring.

An earlier announcement by the DOC minister that once again a new Communications Act will be introduced into Parliament was complemented at the Board meeting by the statement that DOC is planning new regulations governing antenna structures.

That was the good news. The bad news was that the DOC representatives told the meeting that it hoped to initiate a study of the possible recovery of all regulatory service costs through increasing licence fees. Such an increase would take place in April 1982. No specific figures or the services which might be affected were quoted.

CARF participates fully in the work of the Board on technical matters such as interference. Our representative on the important interference committee is Barc Dowden VE3TT.

A matter of concern in this area is the FCC clampdown on interference from digital equipment and appliances such as light dimmers and programmable thermostats, which may result in the dumping of such equipment in Canada. DOC was urged to rush new standards into effect to protect Canadian radio users from such a move.

Another piece of poor news was that the method of propagation known as 'spread spectrum' could affect Amateurs because its technology is such that it could enable regulatory authorities to superimpose another level of radio communications on existing systems. Two metres and the 450 MHz band could be prime targets for commercial systems using this new technology.

Although CARF was the only official spokesman for Amateur radio at the meeting, a large number of those attending are Amateurs, and the Board's annual meeting provides a welcome opportunity for eyeball contacts.

News Briefs

ITALIAN EARTHQUAKE

Reports indicate that the Amateur radio operations in the Italian earthquake disaster have been rather frustrating. VE3AUM reported that only a few Italian stations were on HF and, with little or no direct contact with the stricken areas, they had no way of passing traffic from the 'quake region to specific addresses in Canada.

Even though there was no objection to third party traffic under the circumstances, the same lack of communications made it impractical to accept enquiries from this end. Although a net was set up in Canada on 14170, it could do little to provide any help with welfare traffic.

BANNED COUNTRIES

DOC has issued an updated list of banned countries and those with which Canada has third party and reciprocal operating agreements. Due to what appears to be an oversight, the usual sentence which made blanket provision for reciprocal privileges with consenting Commonwealth countries was omitted.

The Commonwealth list, as published, shows only Barbados, Botswana, Bermuda, India, New Zealand and the United Kingdom as having agreed to reciprocal operating. CARF has asked DOC to correct the omission.

Negotiations for reciprocal privileges are under way with Bolivia, Cuba, Ireland and Italy.

The banned countries list has been changed with the addition of Zaire and the replacement of the former Khmer Republic by Kampuchea. Turkey is still on the official no-no list. As a belated outcome of the wars in Southeast Asia, station XU1AA has finally disappeared from the list.

A third party agreement has been concluded with Paraguay and negotiations are under way for similar agreements with Australia, Ecuador, Haiti and Nigeria.

MEMBERSHIP OKAY?

The expiry date of your current membership appears in the second block of the first line of your address label (year / month).

Updating your membership in advance saves your national Federation time and money. Such savings assist in the further development of **TCA** and CARF.

Sydney Hamfest successful

"Celilidh 80". the Sydney hamfest was beautiful. It went off without a hitch and there was no sign of the thousands of hours of hard work needed to build a hamfest. The food was good, the weather was good, and the music was something else.

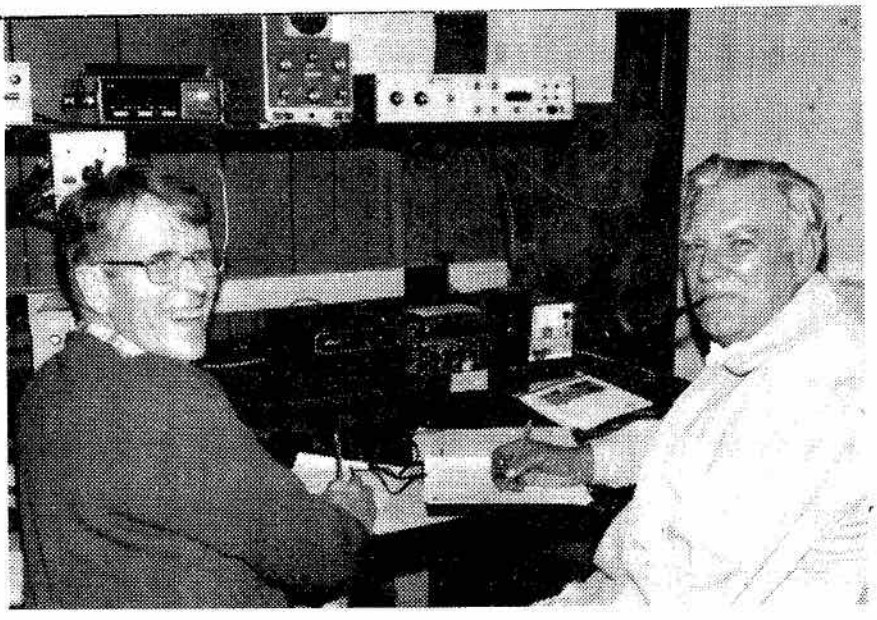
A vote was taken by P.E.I. Amateurs present and a majority voted to have the next hamfest in P.E.I., sometime in 1982. The exact date and place has not been decided, but about 500 people will be coming.

This is a huge undertaking and dozens of Amateurs will be needed who are ready, willing and able to put in hundreds of long hours of hard work. The Amateur population of the Island is not large and time will fly. Amateurs, especially those who voted to have the hamfest here, will be expected to do a lot of hard work.

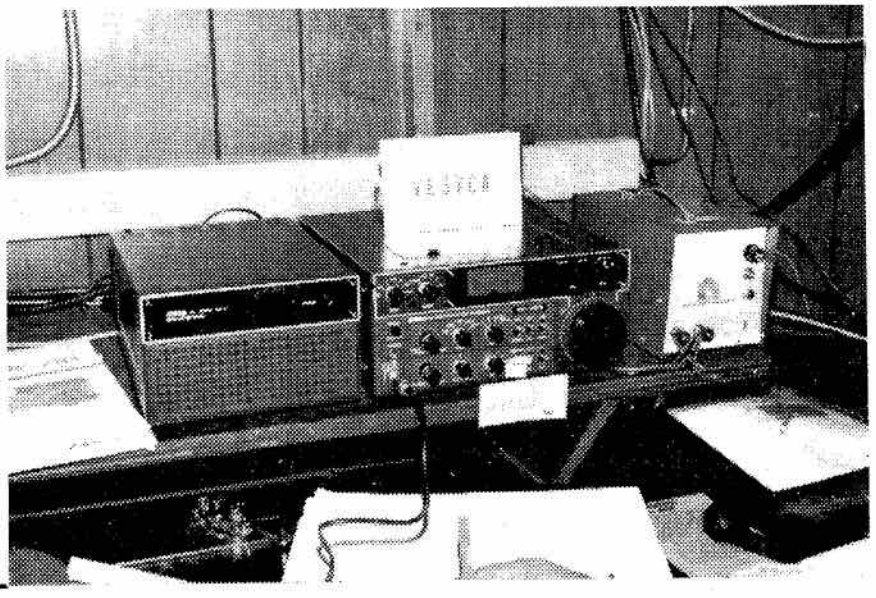
VE1FO, Britt Fader was named Amateur of the year by the N.S.A.R.A. Britt has put in more hours of work for Amateurs than will ever be realized and in a lot of different functions. Just one of his jobs, handling all of the QSL cards for the Maritimes through the QSL bureau is more of a job than most could or would handle, and he has been doing it for years. □

VE3 VCA

During October, while attending the C.A.R.F. Publications meeting in Kingston, Ontario, Bill Wilson VE3NR, President of CARF, was able to visit VE3VCA, the home station of the Canadian Amateur Radio Federation. V.P. Don VE3BID had his camera along and took the accompanying photos.



VE3NR and VE3AHU pause while making contacts during the Boy Scout Jamboree on the Air.



VE3VCA, the station of the Canadian Amateur Radio Federation, Inc. The equipment, an Icom IC701 / PS20, was donated by Hugh Dollard of Dollard Electronics. Although not used as a bulletin station (VE3TCA handles that job), VE3VCA acts as a link to the CARF headquarters and as backup for VE3TCA.

TCA: Technical Section

Vertical Radials

J.G. Coulombe VE2HY

The word 'radial' has probably generated more questions than any other in relation to a vertical antenna. A radial is defined as a line radiating outward from a central point. When there are two or more we have radials. Whether they are straight or of equal length for our purposes, we still call them radials.

A ground mounted vertical usually has its base 12 inches above the earth. The ground attempts to create a mirror image of the antenna erected above. However, since the earth is an extremely poor conductor, and tends to act like a large resistance, something has to be added to overcome this hinderance. You can maintain the earth surrounding the antenna constantly wet or treat it chemically with salts, workable but cumbersome. To assist the completion of the circuit, return path or lower the earth resistance we add wire radials, spoking or radiating outward from the base mount.

With the largest concentration of current or RF energy being close to the vertical, the umbrella pattern emitting from the top now has a direct return to source. An analogy is: if you constructed a power supply and omitted the ground on either the filter capacitor or bridge rectifier, its efficiency would be zero.

The vertical will perform with one or more ground rods, but its efficiency is between 10 to 15%. To increase this figure, the addition of radials can bring this efficiency rating to around 85%.

As a result of previous articles in **TCA** there have arisen a few questions. I'll answer these and also give you some disadvantages of a vertical. The first question is usually "How many?". The answer is simple, as many as possible, or whatever you can lay in the space available.

What length should they be? Again a simple reply: the longer the better. If, however, they must vary in length, you can make up the difference in the volume you lay.

In a further attempt to dispel the idea that radials have to be hundreds of feet long, or even 50 feet to be useful, here are a few calculations for quarter wave radials from the formula:

$$\text{L (length in feet \& inches)} = \frac{246000}{\text{f(freq KHz)}}$$

Freq	Length	Freq	Length
7000	35.1	14000	17.7
7050	34.10	14050	17.6
7100	34.7	14100	17.5
21000	11.8	28000	8.10
21050	11.8	28050	8.9
21100	11.7	28100	8.9

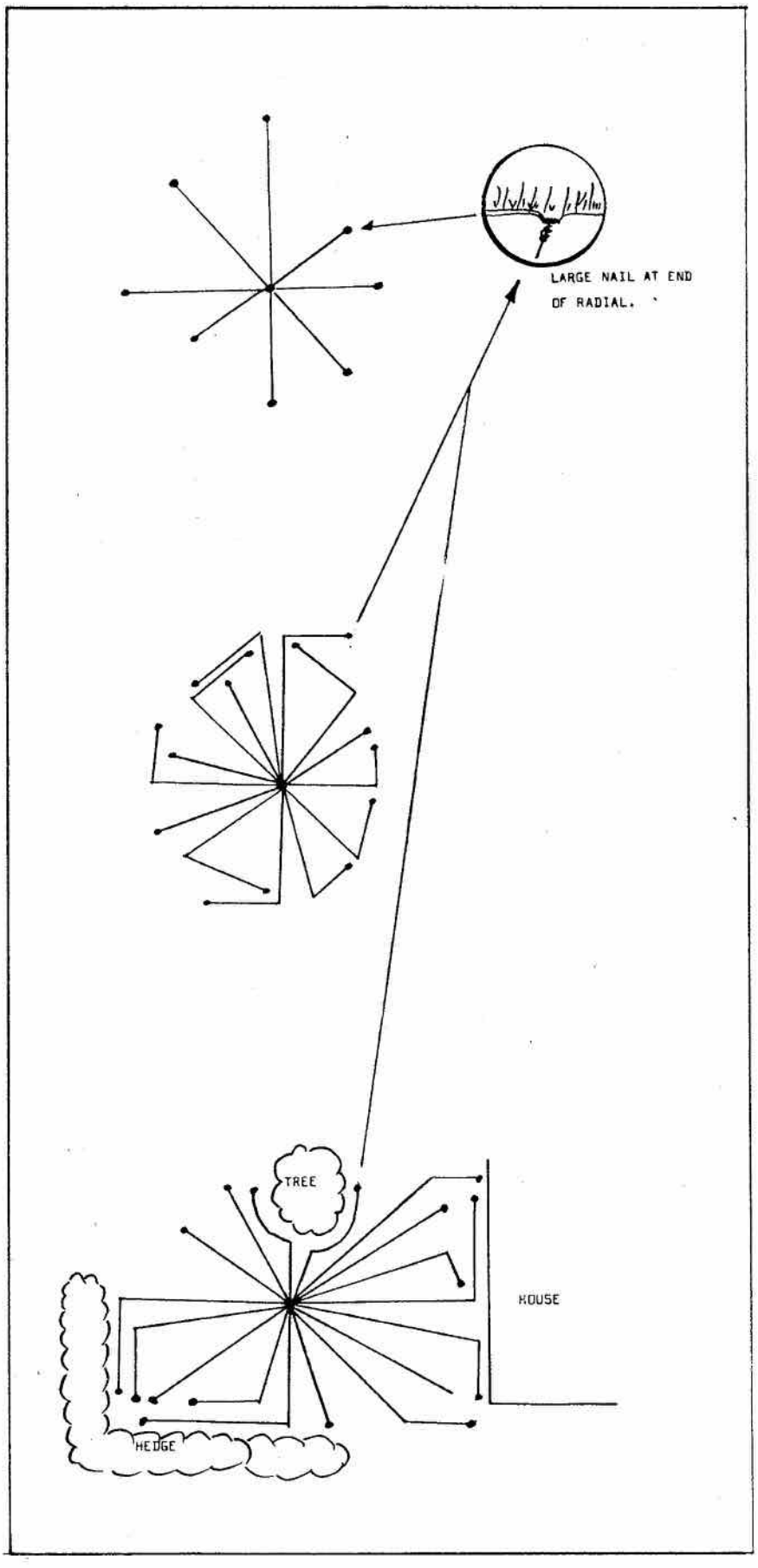
For similar frequencies on 80 metres, take the figures for 40 metres and double them. This first sentence was inserted for a reason. Look at the measurement chart and compare 40 and 20M; notice anything? The frequency is double and so are the radial lengths. From 20 to 10M the same condition exists. Between 20M and 80M, the 20 metre measurements are almost three times those of 80M, as it is between 15 and 40 metres. So finally, no matter how you play it, you derive a definite benefit from short and long radials.

Back to the questions: What size of wire is best? I usually will not use wire smaller than number 22, simply because this size and larger is easier to work with and will not break when being laid, stretched and pegged down. You can certainly use smaller gauge, but you have to be more careful. The wire does not have to be copper; if you have aluminum use it. Because of its stiffness it will be difficult to work with, but stranded aluminum would be ideal. One final answer: No you do not have to remove the insulation.

A fixed or definite pattern or layout of radials is difficult, since each lot or piece of land will vary in size. There will also be obstructions such as trees, flower beds, hedges, bushes and, I hope, a house. Nevertheless, I have sketched a few which may assist you in determining a pattern that will suit your needs.

Hopefully radials have been laid to rest (pun intended), so now let us discuss the vertical itself. It will certainly not suit all Amateurs. One thing is, the radiation pattern is a disadvantage. It is efficient in transmitting signals and receiving them equally well from all directions. Here you require a sharp filter or phase a pair and direct the energy to specific directions.

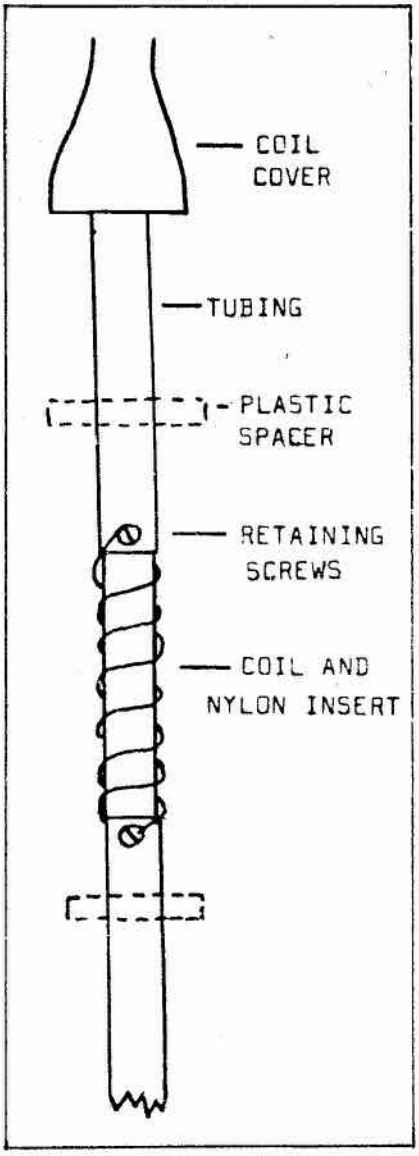
It will also absorb man-made and atmospheric noise quite readi-



ly. Due to its vertical polarization and low angle of radiation, it is extremely successful in inducting RF into telephone lines, power lines, cause TVI, BCI and raise havoc with stereo equipment, much more so than a horizontal or beam antenna elevated above lines and TV antennas.

Consider for a moment an area of homes built 20 to 25 years ago. The electrical system is of the two-wire variety and no third-wire ground. Long entrance lines bring power in from the street.

The internal wiring in the house acts like a predesigned receiving antenna. This is a definite headache for the vertical user.



Also the low radiation angle will probably cause fundamental overload on a TV antenna that has a twin lead along with loose or corroded connections. Some neighbours will not allow you to look at, modify, repair or replace anything that is causing the problem.

What is the solution? Very limited, I'm afraid. I live in such an area; luckily the majority of homes are on cable TV, thus no interference. This does not solve the power line dilemma. If you cannot erect a beam or other horizontal antenna, you become or attempt to be a diplomat. Stagger your operating times, or use reduced power. In some cases you may be forced to two metres.

Verticals do develop electrical problems, so here are several servicing notes. If your SWR has been normal and suddenly goes to full scale, do not despair, you probably have a loose connection.

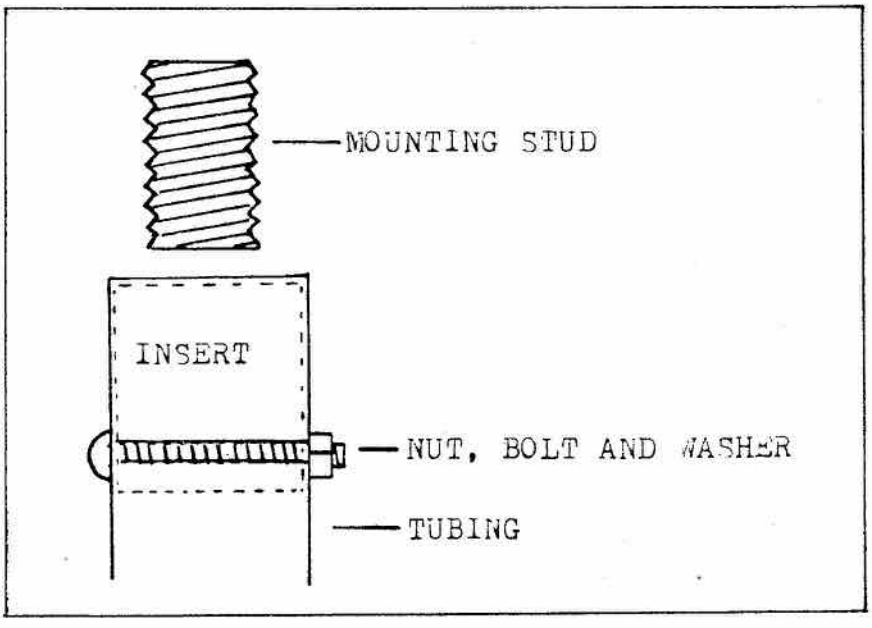
If your antenna is the trapped type, you may find the retaining screws holding the coil to the tubing have worked loose, through wind action. Remove the coil cover as shown by sliding it back along the tubing. Then tighten each screw on the coil; check all coils for this problem. Add a little locking solution to ensure it does not happen again. Also, where each section is joined, make sure each clamp is snug.

On the Hy-Gain 18AVT vertical, having the 80M resinator at the top and its associated whip, this can be another area of trouble. The insert which holds the whip and coil can work loose over a period of time, also through wind action. The solution is to drill a 1/8" hole through the tubing and the lower portion of the plug. Install a bolt, nut and lock washer to eliminate this problem. The insert is harder than the aluminum tubing and will gradually wear enough away to allow the coil and whip to droop over at a 20 degree angle. I suggest doing this even on a new antenna.

Since the threaded stud does not screw into the insert more than four or five turns, the bolt will not impede the mating. Just be sure to drill the hole as close to the bottom of the insert as possible.

For other information and servicing notes, refer to **TCA** for October 1979, pages 21 through 23.

If there are still any unanswered questions or information desired, an SASE will bring you anything I can do to help. Remember to radiate -- **use radials**.



Section

A Dirt Cheap

QRP Antenna Matcher

Tim VE5ADL

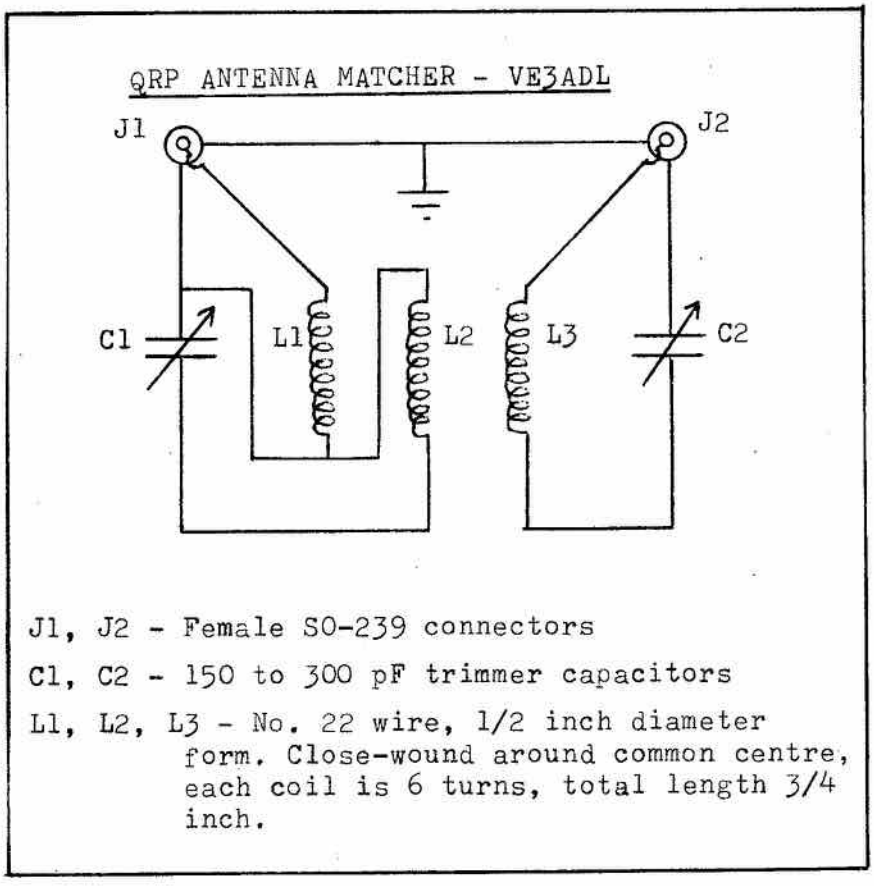
Amateurs build their own equipment for two reasons: 1) to save money and 2) just for the fun of it! However, both of these advantages can be lost if exotic or expensive components are needed.

An example of this is antenna matchers and tuners which require obscure toroidal cores (try to find those in Swift Current, Sask!) and special inductors, which often have to be ordered.

But no more! The schematic here is of a QRP Antenna Matcher using only four components and three 'roll-your-own' coils and the diagram explains it all.

I have been using a similar matcher for two months now, tuning a HW-8 (1.5 watts out) into a dipole cut 1 MHz off frequency and have had excellent results. The SWR is easily dropped to unity and a best DX of Baker Island (KB6) and first level QRP WAS is the result.

At a cost of 5^{00} brand new parts, it can't be beat.



J1, J2 - Female SO-239 connectors

C1, C2 - 150 to 300 pF trimmer capacitors

L1, L2, L3 - No. 22 wire, 1/2 inch diameter form. Close-wound around common centre, each coil is 6 turns, total length 3/4 inch.

TCA: Technical Section

Throw out your keyer relay!

When I use a relay to interface my electronic keyer to my transceiver, I often get burned contacts. In this space age, relays are obstacles to our tranquility of mind!

My idea was to connect an open collector transistor directly to the key input. The problem is that my keyer has a negative ground and my key input has a positive ground relative to its negative bias. Most transceivers have this unpleasant feature.

If you reverse the leads it works, but you get about 60 volts between the transceiver's ground and keyer's one. You can use an expensive isolated paddle, but I found the simple method that works safely and inexpensively. The relay is practically the most expensive item in an ordinary keyer.

Figure 1 shows a normal interconnection with a relay. Figure 2 shows what happens when you reverse the leads of an open collector. Figure 3 shows the simple modification to your keyer. It consists of changing the conduction point of an inexpensive audio power output PNP transistor. All you need is some cheap components and you have solved the relay problem forever!

Roger Coude VE2DBE
P.O. Box 782,
Alma, Quebec

FIGURE 1

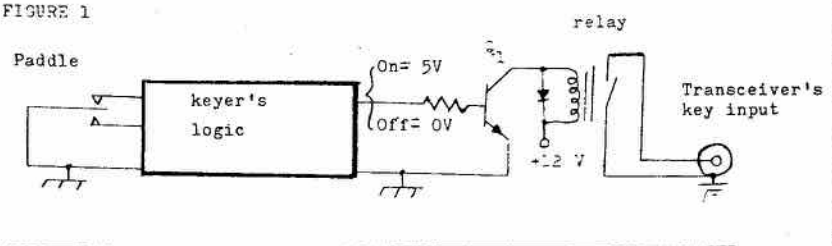


FIGURE 2

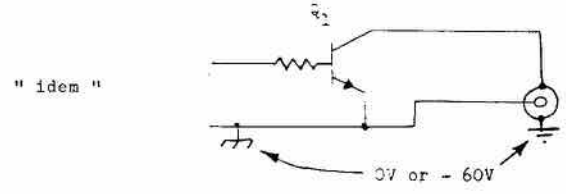
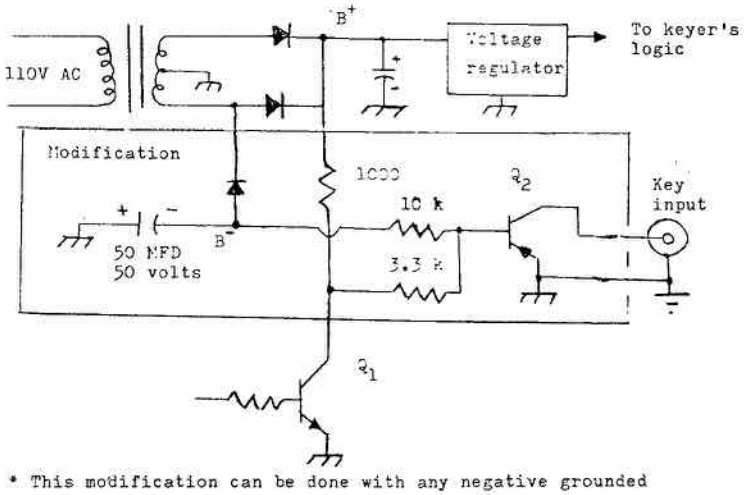


FIGURE 3



* This modification can be done with any negative grounded keyer with center tap power supply, and B^+ between 5V and 15V.

TCA: Technical Section

The Auto Alarm Revisited

By David Dice VE5BBD

Having had, on more than one occasion, little luck in getting assistance for minor roadside emergencies by using 2-metres, I became rather interested in the 'Auto Alarm' circuit of VE3GCU (TCA, November 1979).

However, not having a thermal delay relay prompted me to attempt to design a digital timing circuit which would accomplish the same thing, while at the same time avoiding the problems of false alarms and weak signals mentioned in the original article. The result is the circuit shown here. A 941 Hz tone which lasts for a total of four seconds out of five will trigger the alarm.

The circuit is not just useful for highway emergencies. Suppose that a major emergency resulted in the jamming of normal communications channels. Amateurs can and will willingly help in situations like this, but only if they know their help is needed. This alarm system would be a useful way to alert Amateurs that a need exists for emergency communications, at any time of day or night.

HOW IT WORKS

Audio is taken from the hot side of the audio gain control in the two-metre rig (if you don't want to get into the guts of your rig, you could use the external speaker circuit of VE3GCU and input at point A on the schematic). I brought the audio out through a standard phono jack mounted on the back of the rig. The 741 op amp acts as a high impedance input buffer amplifier so that the audio preamplifier of the two-metre rig isn't loaded, and together with the pot RV1 (100 k to 200 k circuit board pot) is used to set the input level to the 567 tone decoder to about 250 mV. The audio signal is fed to the 567 decoder, which is set to 941 Hz by RV2 (10 kohm) and C1 (.1 uFd polyester or mylar).

When the 567 detects a 941 Hz signal pin 8 goes low, and this is inverted by U1A (one gate of a 7400 used as an inverter). The output of U1A turns on one half of the 556 used as a clock set for about a 20 Hz pulse rate, as determined by the values of the 10 k and 390 k resistors, and C2 which is a .1 ufd mylar or polyester. This clock signal is present only when a 941 Hz tone turns on the 567, and goes to pin 14 of the first 7490 counter.

The .001 uFd capacitor and 1 k resistor with U1B generate a negative going pulse which triggers the second half of the 556 used as a 5 second monostable timer. R1 is nominally 1 meg, however if the 5 uFd capacitor is leaky, the monostable will stay on for more than 5 seconds. The value of this resistor should be adjusted until the monostable stays on for about 5 seconds. The output of the monostable is inverted by the third gate U1C and applied to the reset pins of the 7490's (pins 2 and 3) so that they can only count for five seconds, then are reset. On the 80th count, pin 5 of the second 7490 goes high which turns on Q1 (2N2222 or similar NPN transistor).

Since the clock frequency is 20

Hz, in four seconds the two counters will reach 80 counts. As the counters aren't reset for five seconds, a signal could drop out for up to one second and still trigger the alarm.

Although one counter counting eight lower rate clock pulses would work, two counters were used to provide noise immunity. The odds of 80 pulses at a frequency of 941 Hz occuring within a five second period are pretty low. So far the alarm has never gone off by accident.

When transistor Q1 turns on, relay K1 is energized and latches on, at the same time turning on a buzzer or any other signalling device you wish. My alarm is a surplus smoke detector horn adjusted to a higher pitch so as not to confuse it with a smoke detector. Once K1 has turned on, it will stay latched until the power is shut off.

The only part left is the 7805 voltage regulator. This is used to provide regulated 5 volts to the digital circuitry. The capacitors, which have not been described so far, are for bypassing and for adjustment of the bandwidth on the 567 tone decoder and their values are not critical.

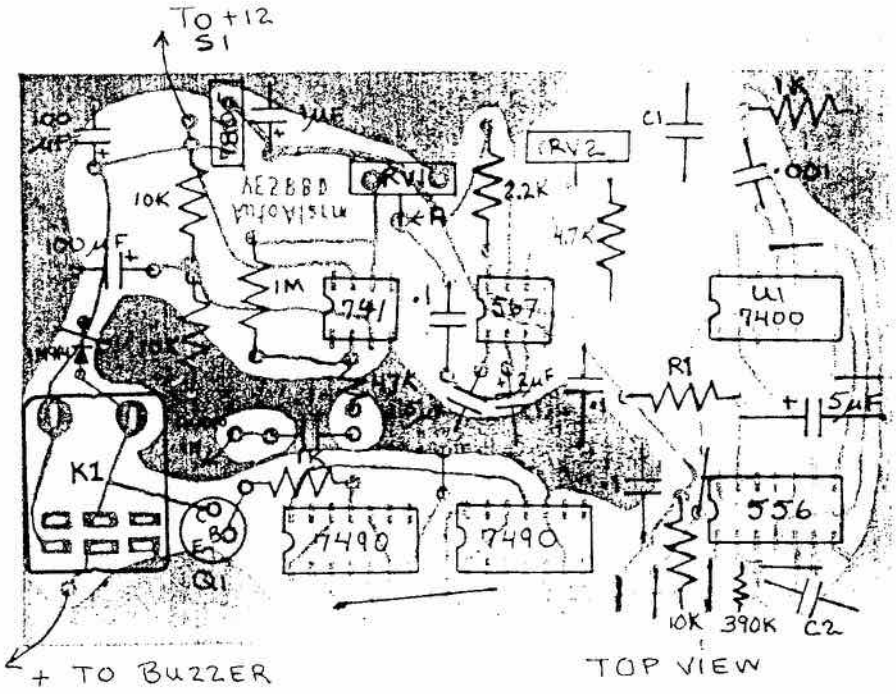
To activate the alarm, simply hold down any one of the bottom keys of a touchtone pad for a minimum of four seconds. Note: all touchtone pads do not generate a single 941 Hz tone when two bottom row buttons are depressed simultaneously. This does not matter since the decoder simply ignores the high frequency. Thus pushing any one bottom row key will work. However, since repeaters are more likely to use the # and * keys for control functions, it would be wise to use the 0 key. (If your touchtone pad **does** generate a single tone when you depress two bottom row keys simultaneously, use it this way and you won't accidentally turn off somebody's repeater).

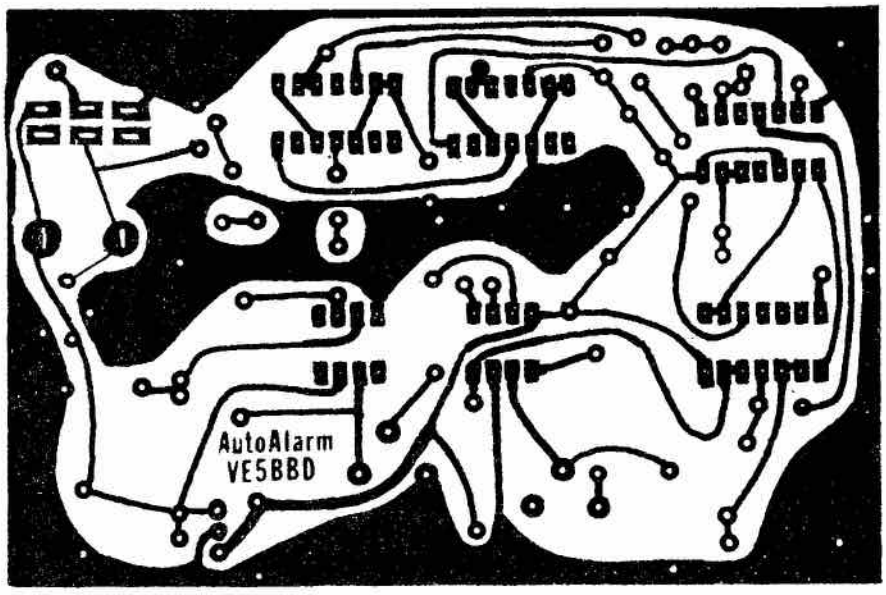
CONSTRUCTION

Construction is relatively straightforward. All the parts fit easily onto a 3 by 4.5 inch PC board. If you were to purchase all new parts, the price would likely be around $20, excluding a case. Make sure you use a low wattage soldering iron.

First step is to install all the wire jumpers, as these get harder to install as the other parts make the board more crowded. Make sure that all the ICs are oriented correctly and that you observe the polarity on the electrolytics. All the resistors are ¼ or ½ watt. The two uFd electrolytics should have a 15 VDC rating while the others only handle 5 VDC. Disc ceramics would be satisfactory for all but C1 and C2 which must be temperature stable capacitors.

Once the board is together, inspect it carefully to make sure that you have no solder bridges. Then





FOIL SIDE

connect a source of 12 VDC and check that you have 5V at the output of the 7805 regulator. Adjust the level of audio of the output from the 741 to about 250 mV with a signal present.

To adjust the alarm to frequency you may use one of two methods. The first requires a frequency counter. With no signal present, attach the counter to pin 5 of the 567 and then adjust RV2 until the counter reads 941 Hz.

If you don't have a counter, then use a source of 941 Hz signal (ie. a friend with a touchtone pad). Connect a VOM between pin 8 of the 567 and ground. With no 941 Hz signal present, pin 8 should be at +5 volts. With a 941 Hz signal present adjust RV2 to the middle of the range over which pin 8 goes to ground. While this isn't as accurate as the first method, it does work.

You now need to adjust the clock. Conect the VOM to pin 5 of the 556. Temporarily ground pin 8 of the 567 and you should notice a rapid fluctuation of the VOM needle. Now connect the VOM to pin 9 of the 556. When pin 8 of the 567 is briefly shorted to ground, pin 9 should go high for about 5 seconds. If it stays high for much longer than this, then decrease the value of R1.

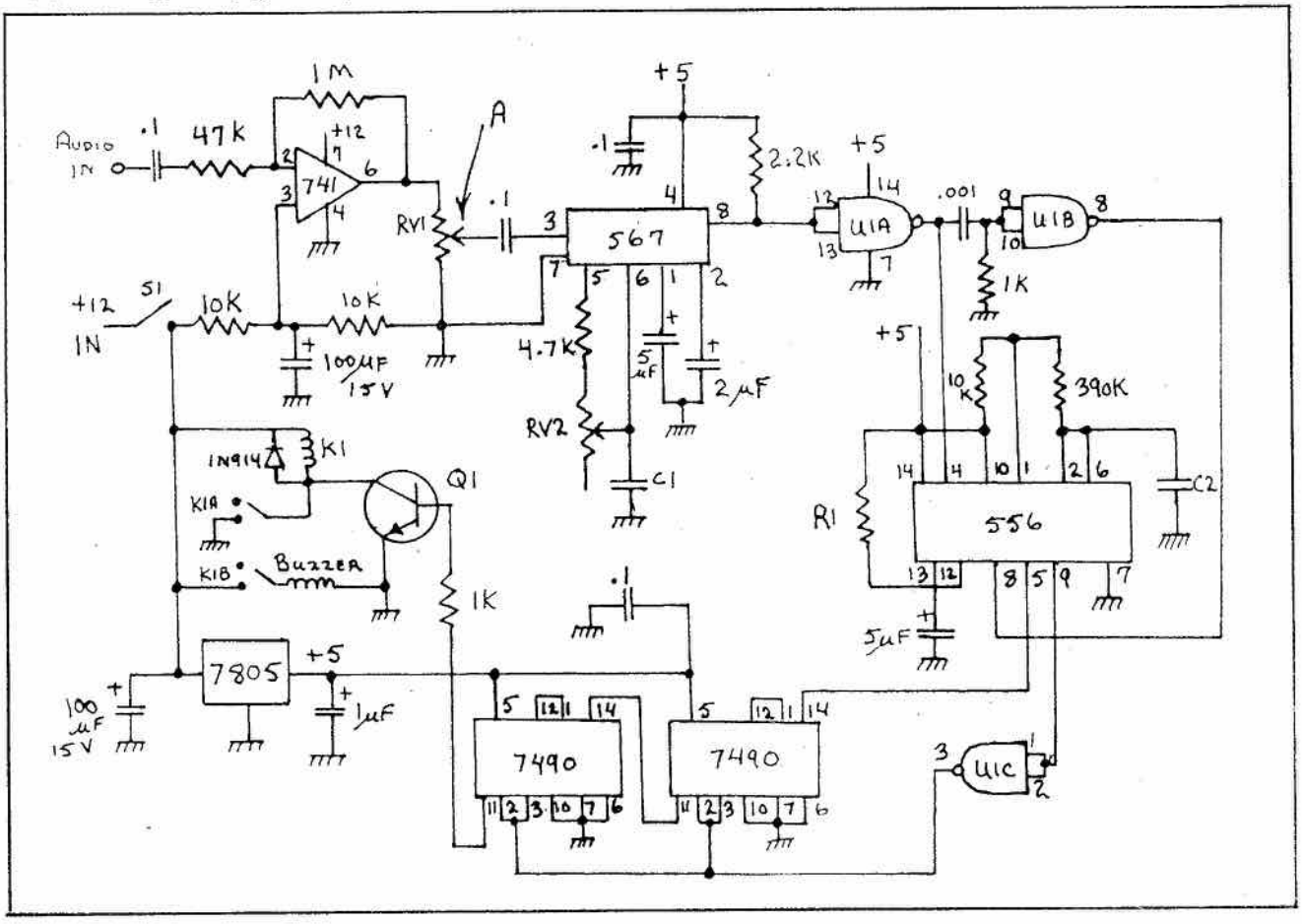
Now, a 941 Hz tone which lasts for longer than 4 seconds should cause the relay to latch which will turn on the buzzer.

One improvement which you might want to consider adding would be a further timer which would shut off the alarm after a certain period of time, say five minutes. That way if you left the house and forgot to shut off the alarm you might not come home to find a fried buzzer.

The use of 941 Hz for accessing alarm systems seems to be gaining some acceptance. Hopefully, several more Amateurs will see their benefit and install them in their shack.

PARTS LIST

Q1 - 2N2222 or equivalent (NPN switching transistor)
U1 - 7400 or 74LS00 Quad NAND gate
C1, C2 - 0.1 uFd temperature stable capacitor (mylar or polyester)
RV1 - 100 k to 200 kohm circuit board mount pot
RV2 - 10 kohm circuit board mount pot
R1 - 1 meg (see text)
K1 - DPDT relay
Buzzer - 12 V DC
S1 - SPST switch
1 - .001 uFd capacitor
4 - .1 uFd capacitors
1 - 1 uFd capacitor
1 - 2 uFd capacitor
2 - 5 uFd capacitors
2 - 100 uFd capacitors
1 - 1k resistor
1 - 2.2k resistor
3 - 10k resistors
1 - 47k resistor
1 - 390k resistor
1 - 1M resistor



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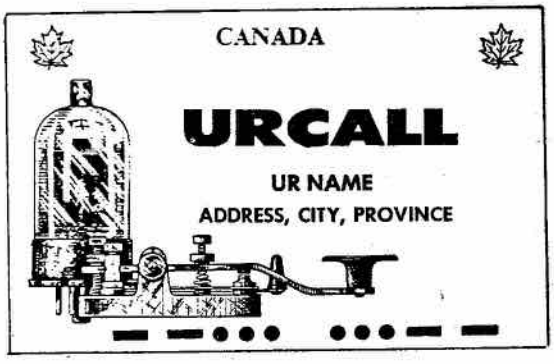
If your club did not receive affiliation information, please write CARF, Box 356, Kingston, Ont. K7L 4W2.

This service is available regardless of other affiliations.

Ron Walsh VE3IDW
Asst. Gen. Mgr.

QSL Cards

FEATURE OF THE MONTH



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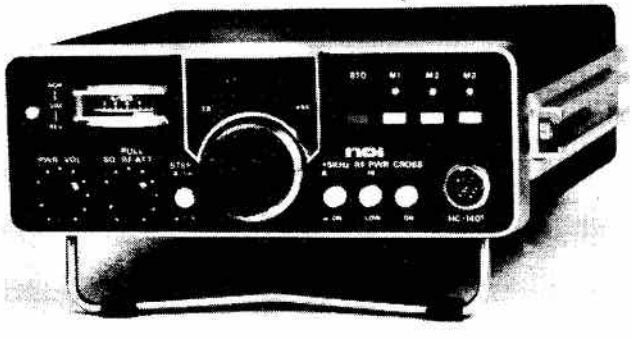

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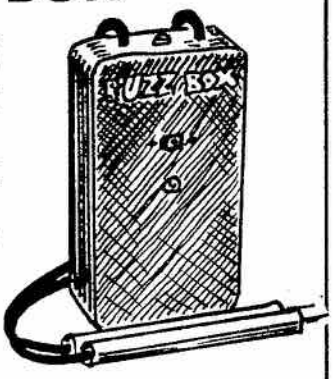

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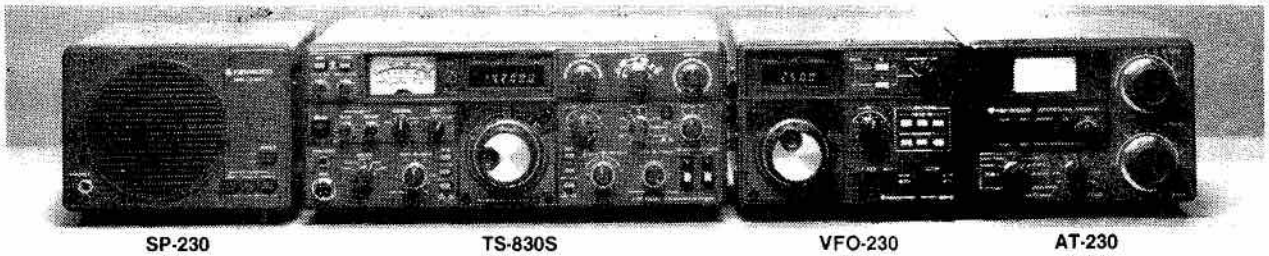

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Infosection

NEW CARF SCHEDULE

With the change from Daylight Time to Standard Time, slight changes in the CARF news schedules have been made. The winter newscasts will be at the following times and frequencies. Please note that all times are Zulu time:

Sunday: 1845Z, 14.140 MHz, SSB.

1830Z, 14.078 MHz, CW 15 wpm

2130Z, 14.078, TTY 60 wpm Murray code followed by 110 baud ASCII. This follows the CARFNET.

2330Z; 3630 kHz, TTY again with 60 wpm followed by ASCII.

Thursday: 0030Z, 14.078 MHz, TTY with the same speeds as on Sundays.

Note that the Thursday Zulu time is late Wednesday afternoon and early evening in Canadian time zones.

Car Licences

The Alberta government has advised the Licence Plate Committee that new licence plates will **not** be issued in 1981.

Amateurs now in possession of call sign plates will receive application forms to renew their registration from the Motor Vehicle Branch in the usual manner.

Amateurs wishing to obtain call sign plates for the licence year commencing next spring should now contact L.A. Johnston VE6AL, c / o Northern Alberta Radio Club, Box 163, Edmonton Alberta T5J 2J1.

Upon receipt of special application form, it should be completed and returned to the same address, together with the necessary fee, as soon as possible.

- Northern Alberta Radio Club

Swap Shop

Single insertion is $1.00 (minimum charge) for 10 words and $1.00 for each additional 10 words. To renew, send copy and payment again. Deadline is first of month preceding publication (e.g. Jan. 1 for Feb. issue). Put your membership number and call (not counted) at the end of your ad. Print or type your ad and include your address with postal code. If using a phone number, include the area code. **TCA** accepts no responsibility for content or matters arising from ads. This feature is for use of members wishing to trade, buy or sell personal radio gear. It is not open to commercial advertising. Send to: TCA Swap Shop, Box 356, Kingston, Ont. K7L 4W2.

FOR SALE: Yaesu FRG7 triple conversion receiver. 30 bands .5 to 30 MHz. George Raynes, 56 Herchmer Crescent, Kingston, Ont. K7M 2V9. Phone 613-542-5862.

WANTED: Low cost transceiver ie. Argonaut or HW8. Contact Earl Andrews VE3ECJ. 401-1160 Merivale Rd., Ottawa, Ont. K1Z 6B5. 613-722-7802.

FOR SALE: H.D. 1416 Heath Code Practice Oscillator, mint condition. 25^{00}. Realistic DX160 Receiver 160^{00}, used very little. Bob Scott, Box 332, Melita, Man. R0M 1L0.

FOR SALE: Hammarlund HQ110C Receiver, 160-6 metres, with speaker 165^{00}. Des. Hill, 36 Sanderling Place, Don Mills, Ont. M3C 2J1. 416-447-1096.

FOR SALE: Mosley TA-33 Jr., Antenna, 135^{00}. Bill Begley, 416-621-7059.

WANTED: Service manual and schematic diagram for Trio 9R-59D receiver. Original or photocopies. Clark Forrest VE3BOF, Box 255, Hensall, Ont. N0M 1X0. 519-262-2202.

Canadian Amateur Radio First!

WHAT IS CARF?

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

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

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If you want to contact the Federation, write or call a Director in your Region or write to CARF, Box 356, Kingston, Ont. K7L 4W2.

VE7BBQ Peter Driessen, 1946 York Ave., Apt. 203, Vancouver, B.C. V6J 1E3. 604-732-3298.

VE6HO Jim McKenna, Box 703, Ft. McLeod, Alta., T0L 0Z0. 403-234-4068.

VE3FON Marv Nash, 43 Bruce Farm Rd., Willowdale, Ont. M2H 1G4. 416-223-5544.

VE3FTO Ed Sheffman, 182 Fenn Ave., Willowdale, Ont. M2P 1X9. 416-226-1701.

VE2SY Lionel Bonhomme, 22 Cinq-Mars, Hull, Quebec J8Y 6B7. 819-771-4953.

VO1NP Nate Penney, Box 10, Shoal Harbour, Nfld. A0C 2L0 709-466-2931.

BANNED COUNTRIES LIST

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

** Station XU1AA has been authorized to exchange communications with Amateurs of other countries. Note: The calls 7OA to 7OZ are assigned to the Peoples Republic of Yemen.

THIRD PARTY TRAFFIC AGREEMENTS

Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Guyana, Honduras, Israel, Jamaica, Mexico, Nicaragua, Peru, Trinidad/Tobago, U.S.A. (Territories and Possessions), Uruguay, Venezuela.

RECIPROCAL OPERATING AGREEMENTS

Austria, Barbados, Belgium, Bermuda, Brazil, Colombia, Costa Rica, Denmark, Dominica, Dominican Republic, Ecuador, Federal Republic of Germany, Finland, France, Guatemala, Haiti, Honduras, Iceland, India, Indonesia, Israel, Luxembourg, Netherlands, New Zealand, Nicaragua, Norway, Panama, Peru, Phillipines, Poland, Portugal, Senegal, Sweden, Switzerland, United Kingdom, U.S.A., Uruguay and Venezuela.

Note: As a general rule, DOC will consider licensed Amateurs of Commonwealth countries for reciprocal privileges in Canada if the other country does the same.

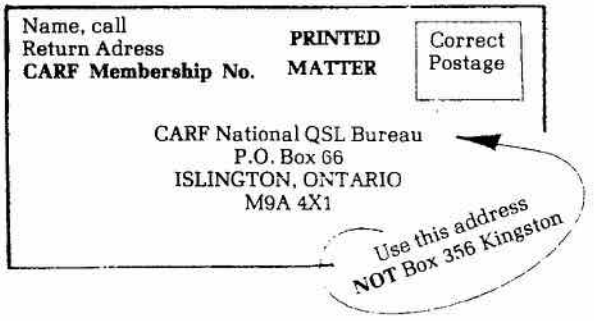
How to use the CARF QSL Service

The CARF Outgoing QSL Service will forward your QSL cards to anywhere in the world. This service is **free to CARF members.** If you send a lot of cards, a CARF membership will soon pay for itself in view of the high cost of postage when cards are mailed direct.

Please observe the following rules when using the CARF Outgoing QSL Service:

1. Sort cards alphabetically by prefix.
2. Sort Canadian cards numerically by call area.
3. Place small lots of cards in strong, heavy envelopes and seal securely. Wrap heavier packages in strong paper or put in cardboard box. Tie securely. Do not staple!
4. Address your package as shown in the diagram.
5. **Do not register the cards.** This only delays them, costs more and is not really necessary.
6. If you want proof that CARF received your cards, enclose a self-addressed, stamped postcard or envelope with 'Receipt' marked on it.
7. If a package should be damaged on arrival (very rare), CARF will send you a list of cards received so that you can check if any were lost.

(For an explanation of QSL Bureaus in general, see the CARF Regulations Handbook chapter on QSLing.)



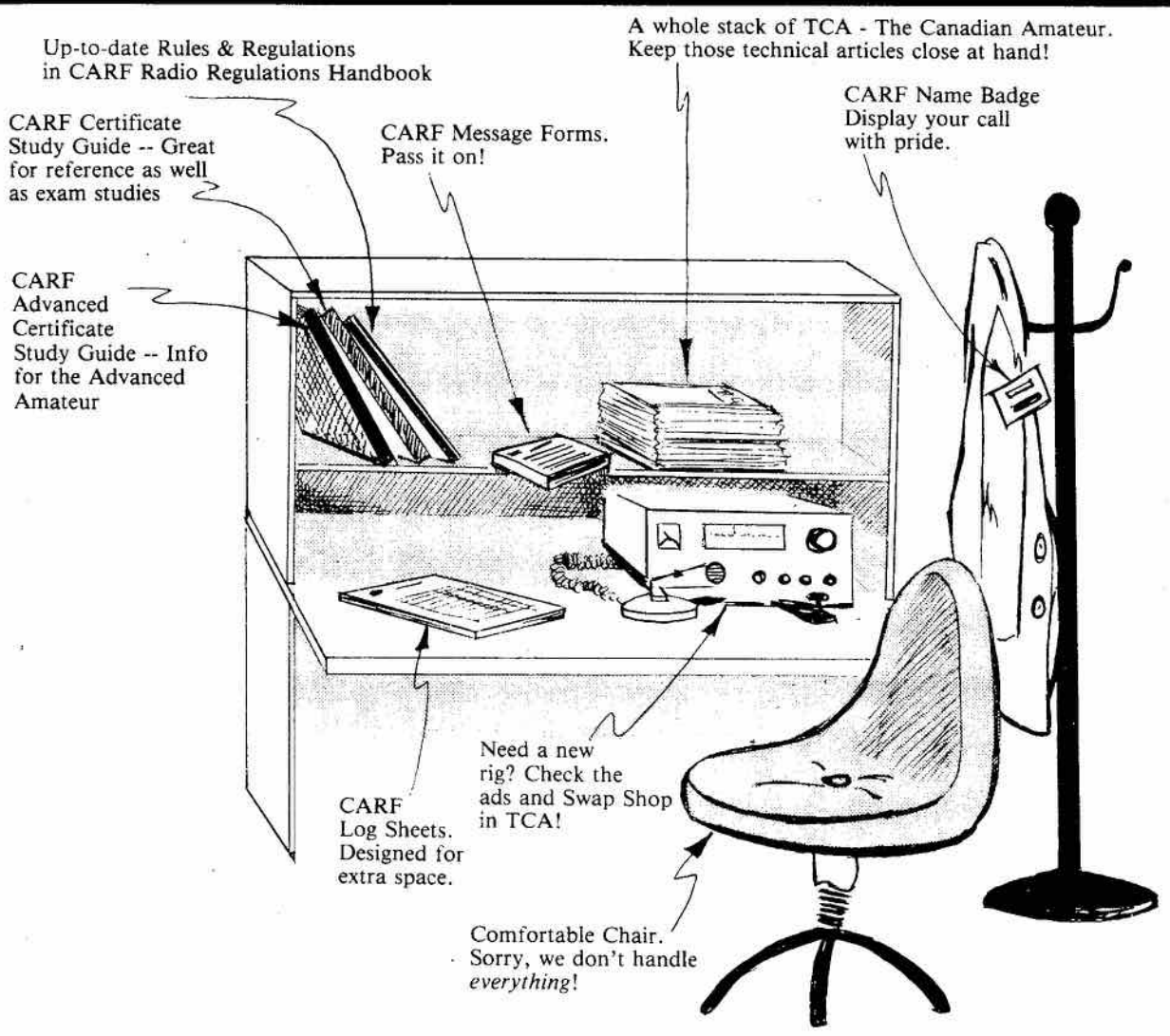
Le service d'envoi des cartes QSL de FRAC se charge de l'envoi de vos cartes QSL dans le monde entier. Ce service est gratuit à tous les membres de FRAC. Si vous envoyez beaucoup de cartes, les frais de votre souscription seront tôt récupérés dû au coût élevé du service postal quand les cartes sont expédiées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

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.
5. **Ne Pas Recommander** les envois de cartes. Cette pratique est plu 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 ou 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.

Traduisé par Jack VE2SF

CARF creates the *perfect* station!!!



Just check the prices on the handy order form (see next page) and send it off to CARF today!

Canadian Amateur Radio Federation

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CARF *is* Canadian Amateur Radio!!!

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Print name and call desired _____
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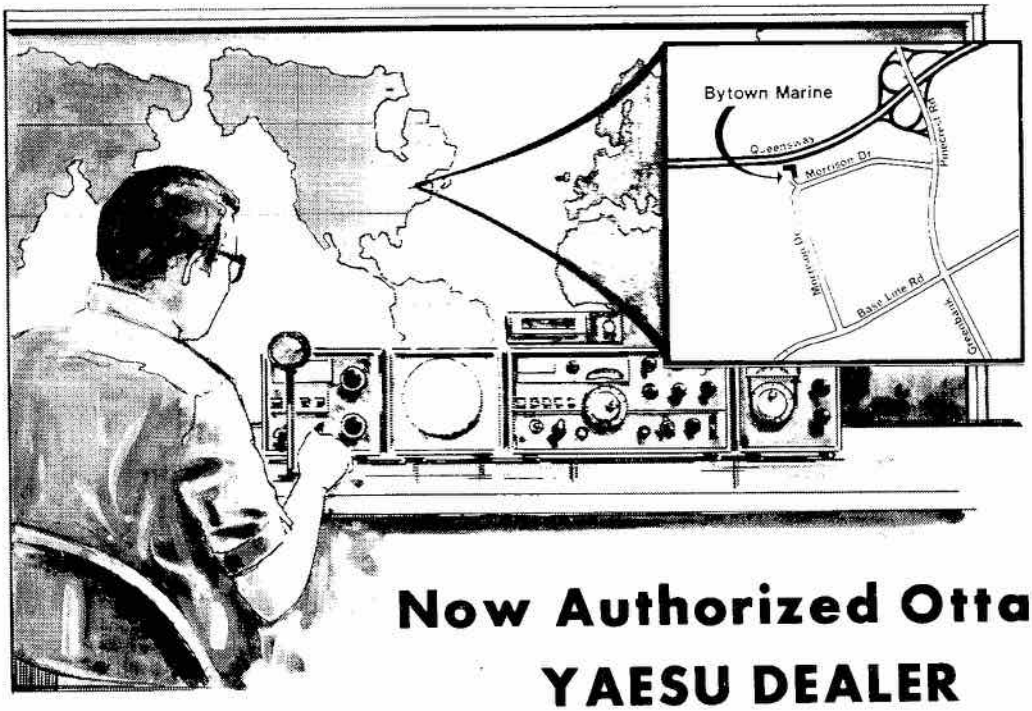

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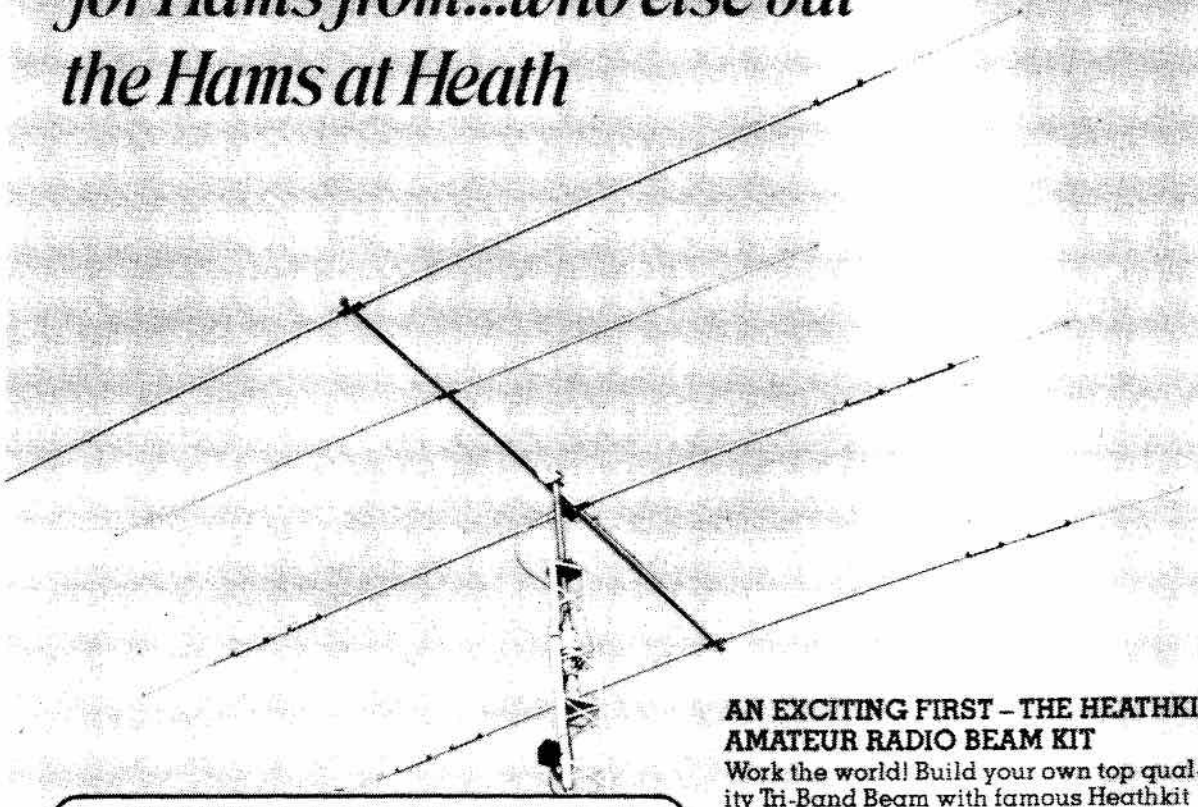

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