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THE CANADIAN AMATEUR

Canada's Amateur Radio Magazine

La Revue des Radio Amateurs Canadiens

FEBRUARY 1988

Memories of 40 Squadron — *Page 30*

ANNOUNCING

THE CANADIAN AMATEUR RADIO

HALL OF FAME

— *Page 15*

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WHAT IS CARF?

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

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

EDITORIAL

How we are killing Amateur Radio

BY ROBERT SMITS VE7EMD
Courtesy BCFMCA Bulletin

As Amateur radio operators we are faced with serious and growing threats to our very existence. We are faced with a regulatory environment in which we are 'tolerated' as long as we don't cost the government any— or at best hardly any— money to maintain our existence; an extremely valuable radio spectrum eyed ever more greedily by commercial interests; an Amateur radio service that is doddering along into its twilight years— along with most of its operators.

How do I justify such a strong statement? Like this....

Since I have been an Amateur, I have watched the average age of Amateur radio operators climb steadily. Attendance at hamfests and club meetings reveals not hordes of eager young technical types discussing the latest advance in circuitry or communication, but a majority of 'old duffers' anxious only to get a 'real bargain' on a new piece of Japanese gear or moan about how dropping the CW requirement will ruin Ham radio.

While some of the most active Amateurs I know are 'retired' (and make some of the biggest contributions to Amateur radio) many old hams have already done their share, and want to retire, leaving the field to younger Amateurs. While they do exist, and are carrying more than their share of the load, they are spread pretty thinly.

In no area of Canada can you pick up the telephone book and find a listing of Amateur radio clubs. In fact, it is almost impossible for the average citizen who does not already know a ham to find one.

In short, Amateur radio is rapidly becoming a fairly exclusive 'clique' with its head stuck firmly in the past, and one that will become increasingly irrelevant to society and governments that have allocated us scarce spectrum.

Do you really imagine that we can rest on our laurels of past service and retain all our frequencies because we're such a bunch of nice guys? (If you think so I know a guy who's got a bridge for sale!)

"But what about our role in emergency communication?" you ask. "Doesn't that count for anything?" Well it probably does, mostly because few people understand how poorly prepared most hams are to communicate in a major disaster. Heck, the Amateur Emergency Coordinators are lucky to get 5% of the ham population to participate or even REGISTER for emergencies. Considering the age and waistlines (me too) of the average ham, I expect that quite a few of us are not going to be helping when the quake comes, we're going to be victims.

Look fellows (and not nearly enough gals), we're about to preside over the demise of Amateur radio. It won't happen tomorrow but it won't take that many years. Unless we change things around, every year we're going to have fewer and fewer hams, most of whom will be talking to themselves, recruiting fewer and fewer newcomers into the hobby.

As the numbers of hams decline, and their relevance diminishes, the DOC will take away more and more of our spectrum. The really valuable stuff (like 220 MHz or 430-450 MHz) they'll give away first— to land mobile, to citizens band, to anybody that has a real use for the spectrum and not five repeaters with three guys on each.

CAN IT BE CHANGED?

Of course it can. But you're the guy who has to do it. Not him over there, or the other guy down the log. You. And only you. A whole bunch of you need to decide to do the following:

1. Throw out any officer of either national Amateur radio organization that still can't see the forest for the trees. I.e. he/she insists on:
a) Extra ways to 'filter out' 'those guys' (usually means not like us) from becoming hams.
b) Wasting all his/her time plotting and scheming how to merge CARF and CRRL so it'll end up with 'his' side in control.
c) Has his head firmly in 1960 and claims repeaters and/or packet are either evil, perverted or just a flash in the pan anyway. (Real radio uses CW.)

2. Publicize Amateur radio and make local contacts available for those interested in Amateur radio. Make sure local radio clubs are listed in telephone and community directories. Invite local Cable TV outlets to film some club activities. Put together a demonstration about packet radio or Oscar 10 for local high school science classes, and get stories into the local newspapers— it's not hard to do.

3. Ensure that all those interested can find competent and interesting instruction courses in Amateur radio. Put together training courses for instructors, perhaps on video tape, to assist interested hams who lack teaching experience. In addition, let's get a video-taped Amateur radio course, and offer it via the provincial educational Cable TV outlets, so that people interested in becoming hams aren't shut out because no hams live in their community.

4. Hound the DOC to make whatever changes are necessary in the licensing structure to attract more hams, even if it means deleting CW requirements on some or all bands. The initial reason hams needed CW was because it was the only means of communication at the time. In this day of computers, RTTY, SSB and packet radio, surely CW has become less relevant. After all, we don't prevent people from driving because they prefer cars with automatic transmissions to manually shifted ones. We even let them drive on the same roads as those who still know how to use a clutch!

5. Go and VOLUNTEER to help do something at the local club. Every club needs more help, and if YOU don't help, it sure as heck won't get done.

Continued on next page ►

LETTERS

CARF LETTER TO DISTRICT MANAGER, DOC

Dear Mr. Neufeld:

This letter is written to you as a result of discussion, at the highest level, within the Canadian Amateur Radio Federation.

We have received correspondence from Mr. Norman R. Hutter, Amateur radio operator VE6KG, which enclosed a copy of a suspension order signed by you on Sept. 20, 1987. The effect of this order was to suspend operation of Mr. Hutter's station.

Your letter to Mr. Hutter dated Aug. 8, 1987 indicated his compliance with previous Departmental instructions and that, "no interference was attributable to his station". Full operating privileges were subsequently re-instated, effective that date.

The Canadian Amateur Radio Federation considers your suspension of Mr. Hutter very seriously. On the advice of our honourary counsel Mr. Timothy Ray, we would suggest that this suspension is both arbitrary and contrary to the intent stated in Chapter R-1 of the Radio Act, R.S.C. 223, s.1, Section 4 (2)(a) and (b) which states:

(2) No licence or technical construction and operating certificate shall be revoked or suspended under this section.

a) except with the consent of the holder thereof; or

b) in any other case, unless notice of intention to suspend or revoke the licence or certificate has been given to the holder and he has been given a reasonable opportunity to be heard 1967-68, C.25, S.48.

The Canadian Amateur Radio Federation would insist that you confirm assurance that the action taken is not representative of current departmental policy.

Mr. Hutter to our knowledge has complied with the Department's wishes and has fully cooperated with this present restriction and previous requests. It is apparent that inconsistent policy has been applied to attempt a resolution of this case.

From the material at hand and a copy of the complainant's letter, it would appear the lack of complainant cooperation has been due to the Department's failure to resolve the issue quickly. It is much more apparent that both the Amateur and the Department are being placed in a position where legal recourse may be necessary to effect a permanent solution. It is obvious too, that the garage door opener, while not under the direct mandate of the Department must be considered as a major contributor to consequent action taken by the complainant. There is, of course, the question of why it has taken seven years to reach the present conflict.

The lack of a clear consistent Departmental initiative is one which by default places Amateur radio operators at the mercy of complaints resulting from owners of electronic equipment which may or may not be covered by the Radio Act. Our interpretation of Section 6 of the Act, under which Mr. Hutter was suspended, is that no interference occurred. The circumstances leading to the Ravenscroft case were identical to this one and he was at no time suspended by the Department.

Your Mr. M. Hanna has been in contact with the Chairman of our EMI Committee, Ralph Cameron, and a course of action was discussed which would involve the Department with the complainant and the dealer. Mr. Cameron has offered any assistance and use of personal contacts needed, at any time, to help resolve this issue to the satisfaction of all concerned. He has also discussed the technical and social aspects of EMI with Mr. Hutter, and secured the latter's agreement to cooperate with your personnel.

Mr. Hutter has been advised to retain legal counsel and cooperate fully with the Department. We believe his suspension should be rescinded immediately and a verbal request made to refrain from transmitting, while the Department coordinates modification of the complainant's appliances with local dealers.

Mr. Hutter has the support of the Canadian Amateur Radio Federation in this issue and will pursue its satisfactory resolution to the benefit of both the spectrum user and those who become unwitting victims of the compatibility problem.

Your comments will be appreciated.

John Iliffe VE3CES
President, CARF

EDITORIAL *(cont'd)*

At this point in time, we still have the ability to revitalize the Amateur radio service, and to display all the wonderful facets of Amateur radio to large numbers of young people. We can infuse our ranks with large numbers of technically qualified people. Our clubs will grow and become able to do many things they cannot currently afford. With numbers (and only with numbers) we can maintain our privileges and combat raids on our frequencies by Cable TV and commercial interests.

We must, however, ACT NOW!!!

Bob Smits VE7EMD in the role of communications co-ordinator for the 1984 Papal Visit.

Robert Smits VE7EMD is currently President of the British Columbia FM Communications Association, the provincial VHF society. He is also Secretary and Two Metre Coordinator for the Pacific Region Amateur Radio Frequency Coordination Association and Deputy Provincial Coordinator for the Provincial Emergency Program Amateur Radio Service. An emergency services and communications consultant, Bob is also an avid motorcyclist and photographer. He can usually be found on VHF FM or packet radio when time permits. Your comments to Bob and The Canadian Amateur *are most welcome... Ed.*

ON CANADIAN LICENSING

It was a pleasure reading a letter on Amateur Radio licensing that hit the nail on the head (Bill Roork VE3MBF's 'Amateur Radio Licensing in Canada'). I have attempted to pass the advanced test twice, and each time it has been questions from who knows where, and the very technical nature of some questions, that has been my downfall. I have diligently studied the 'recognized' study material, which should have put me in an appropriate position to pass, but questions of too technical a nature and/or questions

Continued on next page

LETTERS *(cont'd)*

on material not even mentioned in the study material were prevalent.

I only assume that it is electronic experts who write the questions. Maybe the people who look upon Amateur radio as a hobby, and not a profession, should have some input. Our hobby should not be easy to enter, but entrance should be based up on fairness. 52% failure is not fair.

Wayne Drury VE7EQA

FROM A DISCOURAGED PROSPECTIVE AMATEUR

In the December issue, the editorial caught my attention. I am presently one of those prospective Amateurs. I had attended classes on Amateur radio and morse code. Presently I am still very interested in Amateur radio, but did not follow through after the course to obtain my certificate.

The friend that took the course with me continued on, taking the exams at the DOC, and failed. He was greatly discouraged. We came to the realization that the courses we took from a Toronto Amateur club were far from adequate in preparing us to pass a DOC theory exam.

I later purchased a Canadian Amateur Question Book, and only then did I begin to realize the degree to which this course had wasted both my money and my time. It failed to provide us with the necessary knowledge to pass the novice exam.

I am curious to know if there are any clubs which stick with their prospective Amateurs both before and after exams. The club I was involved with seemed only concerned with the annual fees, the latest news on packet radio and the specs on the latest Yaesu or Kenwood rigs.

My friend and I are not 'bozos' when it comes to electronics or Amateur radio. We only want a club that will take a genuine interest in its prospective Amateurs. We have read a lot about it, but have not seen too much of it!

A discouraged prospective Amateur,
Mike Weir

An unfortunate incident but one which happens far too often! I don't want to sound like I'm just selling books, but I expect the new CARF Study Guide will help. It is now possible to base 'The Guide' on the actual DOC exam bank. Prior to mid-1987 clubs and other instructors were at a real disadvantage since they had only a vague idea of the contents of any Amateur exam. With the exam bank now in the public domain, CARF has taken the initiative and has published a Certificate Study Guide more in line with the actual requirements. Hope to hear you on the air soon! Editor.

PERILS OF REPAIR

I am writing you this evening about a fellow Amateur who is damned if he does and damned if he doesn't.

This fellow purchased a three month old, dual band Yaesu FT-2700. The radio worked well for about a month, when the owner discovered that it had become intermittent when transmitting on 450.

Suspecting a minor problem with his radio, he proceeded to our local radio technician, who after a few weeks could not resolve the problem. Proceeding onward, he then took the radio to a Toronto Yaesu dealer, where the radio sat for four months. Numerous telephone calls yielded the usual, "It will be ready next Tuesday," which I have discovered is the only day that radios (or anything else for that matter) are returned.

Having rescued his radio, our fellow Amateur then proceeds to send the radio, by an express parcel delivery service, to Yaesu Canada. Six months later, and over $80 worth of long distance calls to both Yaesu Canada and Yaesu America has resulted in an assortment of promises (for guess which day) and the latest, that it needs a new circuit board for a paltry sum of $300.

Now, I don't know about the rest of you, but to be without my radio for almost a year would have led me to write to CARF, or seek legal counsel or, possibly, apoplexy. Unfortunately, our fellow Amateur can't; because Pierre Mainville VE3LPM is a Director of CARF.

Long you have heard it told that good guys finish last, but must they also be without their radios?

John Langtry VE3NEC

PACKET PROBLEMS

The following letter was sent to Brett Delmage, Packet Radio columnist for The Canadian Amateur. *It has been forwarded to CARF Executive for their action... Ed.*

Dear Brett:

I'm fairly new on packet, and even newer on HF packet. Recently I have been listening around on HF packet and have heard much activity on 7093, 14.110, 21.100-21.110 and 28.100-28.110. I am also aware that we need special authorization to operate in the 14.100-14.110 portion, so I wrote to DOC asking for authorization for 7.050-7.100, 14.100-14.110, 21.100-21.110 and 28.100-28.110. My reply was prompt and gave the desired authorization for the 14.100-14.110 band, but denied the other requests.

My very first day on 20M packet, I connected to a BBS in the U.S. and saw a proposed band plan for 1200 baud packet. All the proposed frequencies were above 29.000 MHz, which are off limits to Canadian packet operators. I have also discovered that the established packet bands on 7, 21, and 28 MHz are off limits, since my request to DOC was denied.

It seems that these standards, or band plans, are being defined by hams who are not familiar with the Canadian regulations and are leaving us out! We should be contacting CRRL/ARRL to make our position known. I believe that CARF has a louder voice than I, and so suggest that CARF should make the initial contact.

Bill Cosburn VE3BUU

WIRELESS NO. 1

George Vosper is a veteran living in Kingston, Ont. He has a long record of Naval Service, and served for several years as a city alderman. George related the following story to me at a recent Mess Dinner at the Royal Military College's Officers' Mess.

Somewhere, recently, he acquired an old Canadian Marconi 'Wireless' set. Upon closer examination he found a wide arrow enclosed in the letter C. Most old timers will recognize that mark. It was stamped very clearly on every piece of equipment issued to the Armed Forces.

It also bore the usual serial number, only this one was 'No. 1'. This means it was the first wireless set ever to be issued to the Canadian Army. One might suspect that the Royal Canadian Signals got it, but not so. At that time all army signalling, except the visual telegraph work of regimental signallers, was done by the Engineers. The Royal Canadian Signals came along a little later.

The Canadian Infantry units got their first radio transceivers in 1939 and '40.

The National War Museum is now aware of the existence of this set, and will probably inherit it some day, unless a collector comes along with an offer too hard to turn down.

Like many other Ham operators, I am now 75 years old but I used to be a regimental signals instructor. Samples of all the equipment I used are now found at the Signals Museum in Kingston. These include the morse flag, semaphore flags, lucas lamp, D5 telephone, seven-line switchboard, fuller phone and heligraph.

Bert Hovey VE3EW

The Canadian Forces Museum of Communications now resides in the Farde Building at Canadian Forces Base Kingston. Exhibits include communications devices and memorabilia from the Canadian Army, RCAF and RCN. It is open to the public on a daily basis. Ed.

The Merger

'The Merger' has been a major topic of discussion among Canadian hams for some time now. The history of the latest attempt began in 1985, at a meeting in Toronto. At that time, Presidents Ron Walsh and Tom Atkins agreed that a merger of the two national organizations (CARF and CRRL) was viable. As a result Art Blick VE3AHU and Bill Loucks VE3AR were enlisted to explore the possibilities. The result was a Position Paper which also made several well-qualified suggestions. The rest was up to the respective Boards of Directors! The following letters will provide some insight, for our readers, as to the state of negotiations.

THE CANADIAN RADIO RELAY LEAGUE, INC.

LA LIGUE CANADIENNE DE LA RADIO AMATEUR, INC.

MEMBER SOCIETY OF THE INTERNATIONAL AMATEUR RADIO UNION

P.O. BOX 7009, STN. E LONDON, ONTARIO N5Y 4J9 CANADA TEL. 519-451-3773

1987 October 14

Mr. John Iliffe, VE3CES
President, The Canadian Amateur
Radio Federation, Inc.
387 Selby Crescent
Newmarket, Ontario L3Y 6E2

Dear John:

The CRRL Board of Directors, at its 1987 Annual Meeting, unanimously voted to adopt the following resolution:

WHEREAS the CRRL Board resolved on 1985 July 13, and again on 1986 May 24, that CRRL should work for the creation of a single national Amateur Radio organization for Canada, but

WHEREAS the CRRL Board still has reservations about many aspects of a possible merger with CARF, the Canadian Amateur Radio Federation,

MOVED that representatives of the CRRL Board continue discussions with their counterparts in CARF, with a view to merging the operations of CRRL and CARF into a single national Amateur Radio organization.

I believe that, from your discussions with CRRL President Atkins, the nature of some of the CRRL Board's "reservations" are known to you. It will be difficult to make progress until CARF publishes an independently audited financial statement.

73.

Sincerely,

Harry MacLean, VE3GRO
Vice President and Secretary

CANADIAN AM
FEDERATION

Mr T Atkins, VE3CDM,
President, CRRL,
55 Havenbrook Blvd,
Willowdale, Ont.,
M2J 1A7.

Dear Tom,

I have been directed by the CARF board to enquire into the CRRL status with respect to the proposed CARF/CRRL merger.

It was our understanding in the spring that the before you could proceed further the agreement of your board was required and that they would be voting on this at your annual general meeting in August.

To this end the CARF board voted at our annual meeting in June to advance discussions with CRRL at all possible speed.

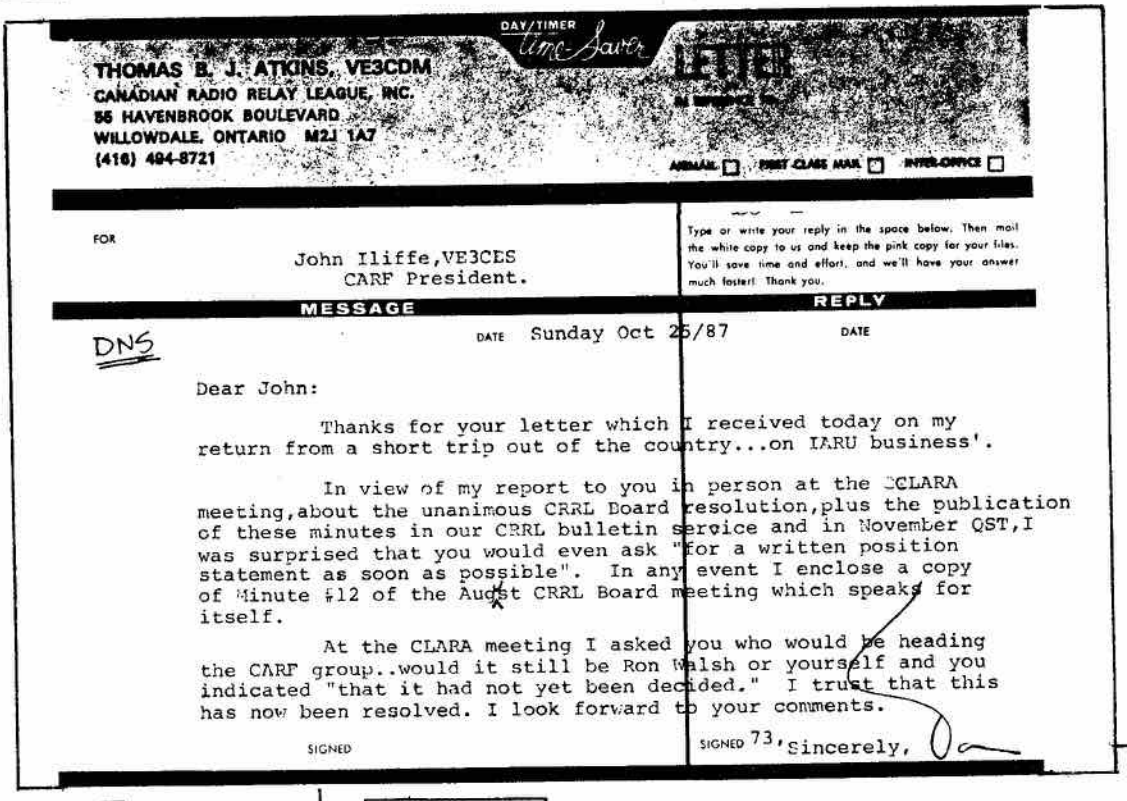
In the absence of any written word from your organization, as you may appreciate, our board is reaching the conclusion that you have not voted in favour of continuing.

I recall the discussion we had at the CLARA meeting some weeks ago, however one of your directors has made statements which are at variance with what you said at that time. Recent actions by Ray Staines also do not indicate an atmosphere of mutual respect.

May I please have a written position statement as soon as possible which I can circulate to the board.

Yours sincerely,

John Iliffe, VE3CES,
President.



DAY/TIMER Time-Saver LETTER

THOMAS B. J. ATKINS, VE3CDM
CANADIAN RADIO RELAY LEAGUE, INC.
55 HAVENBROOK BOULEVARD
WILLOWDALE, ONTARIO M2J 1A7
(416) 494-8721

AIRMAIL ☐ FIRST CLASS MAIL ☐ INTER-OFFICE ☐

FOR John Iliffe,VE3CES
CARF President.

Type or write your reply in the space below. Then mail the white copy to us and keep the pink copy for your files. You'll save time and effort, and we'll have your answer much faster! Thank you.

MESSAGE

DNS

DATE Sunday Oct 25/87

Dear John:

Thanks for your letter which I received today on my return from a short trip out of the country...on IARU business'.

In view of my report to you in person at the CCLARA meeting,about the unanimous CRRL Board resolution,plus the publication of these minutes in our CRRL bulletin service and in November QST,I was surprised that you would even ask "for a written position statement as soon as possible". In any event I enclose a copy of Minute #12 of the August CRRL Board meeting which speaks for itself.

At the CLARA meeting I asked you who would be heading the CARF group..would it still be Ron Walsh or yourself and you indicated "that it had not yet been decided." I trust that this has now been resolved. I look forward to your comments.

SIGNED

REPLY

DATE

SIGNED 73, Sincerely,

CRRL ANNUAL BOARD MEETING
Toronto, Ont.
August 29th 1987.
Minute #12:
MOVED by Mr Brunet, seconded by Mr Perrin, the Board voted unanimously to adopt the following resolution:

WHEREAS the CRRL Board resolved on July 13 1985, and again on May 24 1986, that CRRL should work for the creation of a single national amateur radio organization for Canada, but

WHEREAS the CRRL Board has reservations about many aspects of merger with CARF, the Canadian Amateur Radio Federation,

MOVED that representatives of the CRRL Board continue discussions with their counterparts in CARF, with a view to merging the operations of CRRL and CARF into a single national amateur radio organization.

CARF

CANADIAN AMATEUR RADIO FEDERATION INC.
FEDÉRATION DES RADIO AMATEURS DU CANADA INC.

Mr T. Atkins, VE3CDM,
President,
The Canadian Radio Relay League,
55 Havenbrook Blvd.,
Willowdale, Ont.,
M2J 1A7.

Dear Tom,

Thank you for your letter of 25 October 1987.

With consideration to the comments in Harry MacLean's letter of 14 October 1987, the CARF board has concluded that there is no point at the present in continuing with merger negotiations with the CRRL.

As you and Harry and your board are aware, CARF's accounting and auditing procedures are acceptable to both the Income Tax and Consumer and Corporate Affairs Departments of the Federal government. Under these circumstances we see no reason to expend the money for an additional audit unless there is some concrete prospect for immediate success. A full audit would, in any event, be a done at the date of merger and would be required of both organizations. It would probably be necessary to do a valuation of the current market value of balance sheet assets at that time as well.

CARF believes that a single National organization is in the best interests of all Canadian Amateur Radio Operators and remains willing to consider any concrete proposals you may present in the future.

We anticipate full cooperation between our two organizations in all matters of common concern to Canadian Amateurs that may arise in the future.

Yours sincerely,

John Iliffe, VE3CES,
President.

CARF forms Government Relations Committee

BY JOHN ILIFFE VE3CES

With the increasing incidence of regulatory changes, CARF has felt a need for improved presence in the Ottawa area.

We are proud to announce that a new standing committee has been formed. Called the 'Government Relations Committee', its mandate will be to deal directly with the DOC in all matters of interest to Canadian Amateurs; to provide information and analysis on DOC actions; to provide material for both *The Canadian Amateur* and the bulletin service on current and pending government activities.

The membership of the committee is expected to vary with need and the chairman is empowered to obtain the best possible assistance for each problem.

The initial chairman is Dan Holmes VE3EBI, CARF Ontario Director.

CARF MEETING WITH DOC

On Oct. 30, 1987, the President, John Iliffe VE3CES, and the chairman and members of the CARF Government Relations Committee met with the Department of Communications at the DOC Headquarters in Ottawa. The meeting lasted for most of the day and was considered to be very satisfactory, both from CARF's and DOC's points of view. The CARF representatives were pleased with the positive attitude towards the Amateur Service indicated by the officials present.

The meeting was chaired by Maurice Nunas, Acting Director, Spectrum Operations, and was attended by ten of his officials, specialists in the various topics under discussion.

GENERAL WARC

DOC informed the CARF committee that the next General WARC, the World Administrative Radio Conferences which review and reassign the various frequency bands, is expected around 1995. This is of particular interest to Amateurs due to the world-wide interest in the VHF/UHF Amateur bands by the mobile radio community.

RESTRUCTURING OF THE AMATEUR SERVICE

DOC advised that this is proceeding satisfactorily, in their opinion. A proposal will be available for public comment in the near future but changes will be two years away at the earliest.

AMATEUR EXAMS

In response to CARF's report that the Toronto Office was discouraging Amateurs from writing the Advanced exam as a result of restructuring, DOC stated there is no reason for this. Steps will be taken to correct this. DOC also explained the method used to evaluate the effectiveness of Amateur exams. This will be covered in a future issue of *The Canadian Amateur.*

CATV LEAKAGE AND BP-23

CARF expressed a strong objection to doubling the leakage limits over those found in the old BP-23. DOC explained that this is only a quality control method. Since the October meeting there was further DOC action on Nov. 23. A report will be in *The Canadian Amateur* in the near future.

ANTENNA TOWER REGULATION

The DOC is trying to find some way to enable municipalities to make regulations regarding towers and antennas that would satisfy property owners' concerns about safety and appearance so long as they do not frustrate radio communications.

A paper is being prepared which would be the basis of public consultation on this matter and should be out by the time you read this. DOC does not seem to be pushing this matter. If the majority objects, then no action will be taken. If it is accepted, then the DOC may move to prepare a paper setting out what a municipality may or may not regulate. The DOC stated that municipalities cannot set a limit on tower height.

DOPPLER RADAR FOR WIND SHEAR STUDIES

A long discussion took place, based primarily on the work of a Toronto Amateur committee. The CARF committee was unable to convince the DOC that this radar should be assigned outside the 70 cm Amateur band. An update is found elsewhere in this issue.

CALGARY AMATEUR EMC PROBLEM

CARF made clear its disappointment with the way VE6KG, an Amateur in Calgary, had been treated by the DOC office there. He was shut down without a hearing as required by the Radio Act.

CARF stated that it considered the Department's role to be to bring the various parties together to resolve EMC problems rather than to act as it had in Calgary. DOC was informed that the Minister had been written about this.

DOC pointed out that, as yet, they had not information about the problem nor why the local inspector had acted as he did. CARF asked the DOC for a commitment that this would not happen again but none was given. (For more details, see the Letters page this issue.)

ELECTROMAGNETIC COMPATIBILITY

CARF asked when the DOC would reply to the Radio Advisory Board of Canada letter and recommendations on this topic. DOC stated that these recommendations were part of a review preparatory to a new Radio Act.

CARF was also shown a new DOC Bulletin soon to be released on 'Radio and Television Interference'. This bulletin is much less technical than past bulletins and more oriented to the homeowner. It outlines the steps the homeowner can take to resolve problems himself. It does not deal with EMC problems.

SPECTRUM UTILIZATION POLICY 30-890 MHz

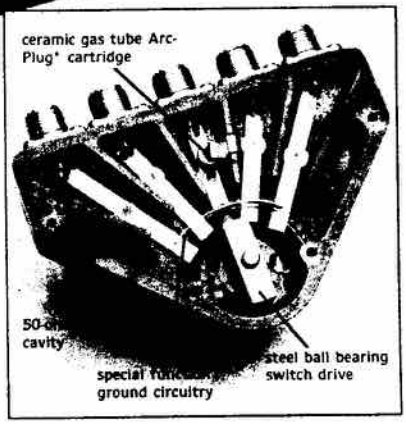
DOC pointed out that this policy review was being carried out as a matter of routine. It follows similar reviews carried out in past years of segments higher in the spectrum. In response to CARF's questions, DOC stated that it did not have any particular new technologies in mind in conducting this review. From CARF's viewpoint, there did not seem to be any apparent coordination between the Spectrum Policy and Radio Management branches of DOC regarding the future development of the Amateur Service.

DOC advised that the decisions of the WARC Mobile Services just concluded in Geneva did not affect the use of bands by Canadian Amateurs and that the closing date of their enquiry would not have to be adjusted for that reason.

Alpha Delta Model DELTA-4 Lightning Surge Protected 4-Position RF Coax Switch

equipment protection for amateur, military and government communications stations.

- Exclusive center "off" (ground) position internally disconnects and grounds all antenna circuits for maximum protection when operator is away from the station — **an Alpha Delta first!**
- Incorporates the famous replaceable Arc-Plug* cartridge for continuous protection of the active antenna circuit. Unused antenna circuits are automatically grounded — **an Alpha Delta first!**
- The Model DELTA-4 Switch features a custom designed cast housing with constant impedance micro-strip cavity construction for outstanding performance through UHF. No lossy wafer switches are used.
- Positive detent ball bearing switch drive tells you which position you're in . . . without guessing . . . without looking.
- DELTA-4 handles full legal power.
- Designed and produced in the U.S.A. by Alpha Delta.



Model DELTA-4 (UHF connectors, 500 MHz)
Model DELTA-4/N (N-type connectors, 1.3 GHz)

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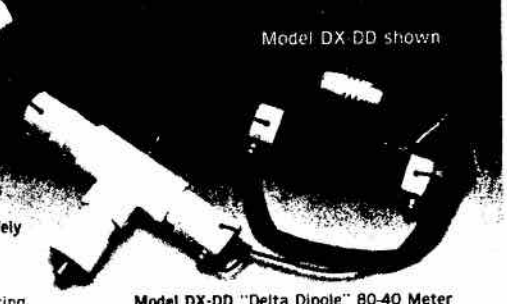
THE SOLUTION TO 160-80-40 METER OPERATION IN SMALL AREAS!



- **No trap design. Unlike trap antennas, there are no capacitors to break down under high RF voltages, and a tuner may be safely used for multi-band operation if desired.**
- **Direct 50 ohm feed.** Tuners usually not required when operating in resonant bands.
- **Full power operation.**
- **Uses "ISO-RES" inductors.**
- **Stainless steel hardware.**
- **Fully assembled.**

Model DX-A 160-80-40 Meter Quarter Wave Twin Sloper —
- The premier low frequency DX antenna.
- Combines the tremendous DX firepower of the quarter wave sloper with the wide bandwidth of the half wave dipole.
- One leg is 67', the other 55'. Installs like an inverted-V. Ground return through tower or down-lead $84.95

Model DX-DD "Delta Dipole" 80-40 Meter Electrical Half Wave Dipole —
- Also covers 80-10 meters with a wide range tuner.
- Only 82' overall length

Model DX-SWL Commercial shortwave band sloper —
- Provides world-class reception on AM broadcasts, tropical bands and 60 thru 13 meters.
- Only 60' overall length

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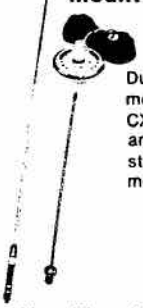
- State of the Art designs
- Full line of amateur, two-way - commercial - cellular Antennas & Accessories
- 100% American made . . . because it matters!
- The best kept secret, just got better

Here are just a couple models

DUAL BANDER

Model	Frequency	Gain
*PA270	144-148 MHZ. VHF	Unity
	440-450 MHZ. UHF	3db

2 Meter Combo Magnetic Mount Kit



Model CX5814
Dual combo magnetic mount kit includes one CX144, one PAQ3820 and one 301 utilizes standard 3/8-24 mounting.

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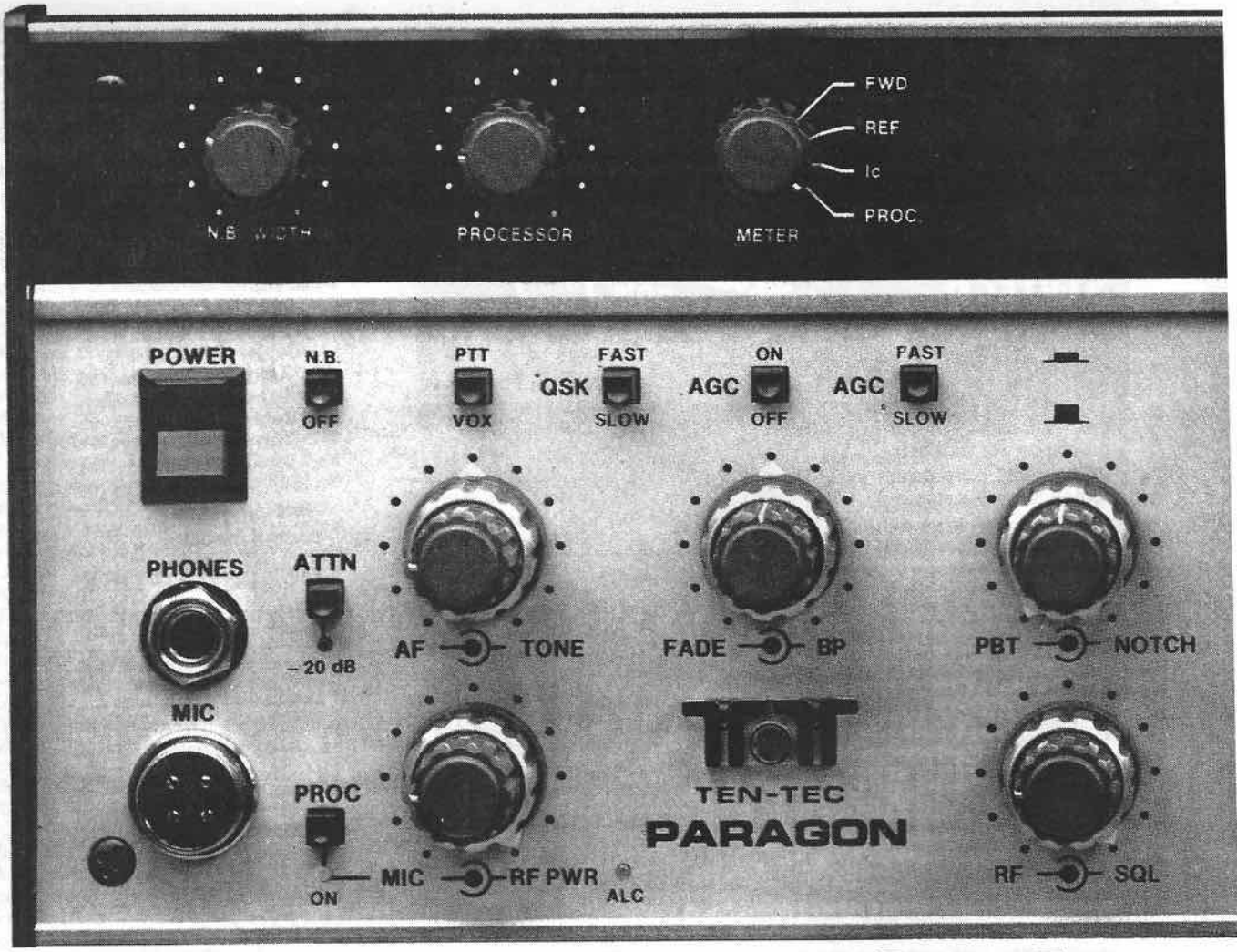

You're face to face

Meet America's Newest, the Ten-Tec Paragon, Model 585

PARAGON HF TRANSCEIVER, Model 585

The Paragon Model 585 is a full featured, synthesized transceiver. General coverage all mode receiver tunes from 100 kHz to 29.999.99 MHz. Transmit at 100 watts output on all authorized frequencies from 1.8 to 29.999.99 MHz. SSB, CW, FSK and optional FM. Noise blanker and speech processor are standard equipment. Dual VFOs, RX offset, TX offset, QSK with a changeover time of less than 30 ms, five i-f filters (standard 6 kHz AM and 2.4 kHz SSB, optional 1.8 kHz, 500 Hz and 250 Hz) that are front panel selectable independent of mode, selectable tuning rates with automatic speed-up at rapid tuning knob rotation, passband tuning, audio bandpass filtering, tone control, squelch, notch filtering and more!

Sixty-two programmable memories that include frequency, mode, filter selected, channel number and a 7 character alpha-numeric tag for entering a net name, call sign or I.D. of your choice. As the memory channels are scanned, all of the information is displayed (what a light show!) and the receiver automatically sets up mode, filters, tag and frequency as stored in each channel. Channels scanned are totally controllable with global lock-out, global reset and individual lock-out and reset.

The construction is impressive too. All circuit boards are glass epoxy (G-10) and all of them can be removed without desoldering. The front panel is hinged to provide access to all sections of the chassis. All aluminum construction keeps the weight of the rig reasonable too. And of course, the front panel is a spacious arrangement which makes the critical controls easy to use.

Frequency selection can be made using the main tuning knob, keypad direct entry or up/down buttons that can shift one MHz or to the next ham band. Frequency readout is selectable to display to 100 Hz or 10 Hz. Front panel clock is in 24 hour format. Rear panel input and output provisions keep the all-mode operator in mind too. Fixed level audio out and FSK keying (170 Hz shift), auxiliary dc jack, amplifier control circuits plus all the other connections that you could possibly need, including RS-232 computer interface option.

The Paragon is the end result of a three year engineering effort. Much of that effort was invested in improving the receiver performance and controlling the phase noise inherent in a PLL oscillator. We are proud of the performance of the Paragon and we think it has set new standards of excellence in synthesized rigs. All we ask is that you take the time to check it out. We think that you will share our pride in the Paragon.

GENERAL SPECIFICATIONS

Frequency Range: Receive: 100 kHz to 29.9999 MHz. Transmit: 1.8 to 29.9999 MHz.
Frequency Control and Readout: Microprocessor controlled digital PLL synthesizer. 10 Hz resolution.
Frequency Stability: Worst case, 1 PPM per degree C. at 29.999 MHz
Frequency Accuracy: ± 100 Hz @ 25 degrees C.
Tuning Rate:

	Normal	Normal Shifted
CW/USB/LSB/FSK	10 Hz 4.8 kHz per turn	20 Hz 9.6 kHz per turn
AM/FM	50 Hz 24 kHz per turn	100 Hz 48 kHz per turn
	Fast	**Fast Shifted**
CW/USB/LSB/FSK	20 Hz 9.6 kHz per turn	50 Hz 24 kHz per turn
AM/FM	100 Hz 49 kHz per turn	500 Hz 240 kHz per turn

Antenna Impedance: 50 ohm unbalanced.
PC Boards: 14 double-sided, 9 single-sided .062" glass-epoxy
Power Required: Receive = 1.5A Transmit = 20A. 12 - 14 VDC*
Dimensions: HWD 5¼" x 14¾" x 14¼" 13 x 37 x 36 cm.
Net Weight: 16 lbs. 7.25 kg

...America's Best Kept Secret!

TEN-TEC

Shown actual size.

with the Paragon.

MADE IN USA

TRANSMITTER

Modes: USB & LSB (J3E), CW (A1A), FSK (F1A); FM (F3E) optional (Model 256).
DC Power Input: Typical 200 watts.
RF Power Output: ALC stabilized, adjustable, 10 to 100 watts (into 50 ohms) with front panel RF OUT control.
Microphone Input: Low impedance, bias voltage for electret provided.
CW Sidetone: Internally generated, adjustable tone and volume independent of AF GAIN control.
SSB Generation: 9 MHz, 8-pole crystal ladder filter. Balanced modulator.
Carrier Suppression: Greater than 60 dB.
Unwanted Sideband Suppression: Greater than 60 dB at 1.5 kHz AF input.
Harmonic Emissions: Greater than 45 dB below peak power output.
Spurious Output: Greater than 50 dB below peak power output.
Third Order Intermod Products: -30 dB from two-tone at 100 watts PEP.
Metering: Switchable forward power, SWR, collector current or audio processing level on SSB.
CW Offset: 750 Hz automatic.
FSK Shift: 170 Hz.
Transmit Offset Tuning Range: ± 99.9 kHz.

RECEIVER

Modes: USB, LSB, CW, FSK, AM, (FM optional).
Sensitivity:

	.1 - 1.6 MHz	1.6 - 29.999 MHz	
SSB/CW/RTTY	5 uV	15 uV	10 db S/N @ 2.4 kHz
AM	3.5 uV	10 uV	10 dB S/N @ 6.0 kHz
FM	.10 uV	3 uV	12 dB S/INAD @ 15 kHz

Selectivity:

	-6 dB BW	-60 dB BW	Shape Factor
Standard AM	6.0 kHz	11.25 kHz	1.875:1
Standard SSB	2.4 kHz	3.36 kHz	1.87:1
Opt. 1.8 kHz SSB (Model 290)	1.8 kHz	2.9 kHz	1.60:1
Opt. 500 Hz CW (Model 285)	500 Hz	1.4 kHz	2.80:1
Opt. 250 Hz CW (Model 282)	250 Hz	.85 kHz	3.40:1
Standard FM	15 kHz	30 kHz	2.00:1

Attenuator: -20 dB for 1.6 to 29.999 MHz, -10 dB for .1 to 1.6 MHz.
I-F Frequencies: 1st = 75 MHz, 2nd = 9.0 MHz, 3rd = 6.3 MHz (FM 3rd = 455 kHz).
Image Rejection: Greater than 80 dB.
I-F Rejection: Greater than 70 dB.
Noise Blanker: Switchable on/off with adjustable width.
Dynamic Range: 100 dB.
Blocking Dynamic Range: + 16 dBm for 1 dB compression of an S9 signal, frequency offset = 50 kHz. -2 dBm for 1 dB compression of an S3 signal, frequency offset = 50 kHz.
Third Order Intercept: + 18 dBm.
Noise Floor: -132 dBm @ 2.4 kHz BW.
Squelch Sensitivity: Less than .5 uV.
Receiver Recovery Time: Less than 27 ms.
Receiver Offset Tuning Range: ± 99.9 kHz.
Pass Band Tuning I-F Shift: ± 1.2 kHz.
Audio Output: 1.5 watts @ 8 ohms, 5% distortion max.
Notch Filter: 250 Hz to 2.2 kHz, greater than 50 dB notch depth.
Audio Bandpass Filter: 4 pole, variable center frequency 220 to 1.7 kHz, 35% bandwidth @ -6 dB.
Tone Control: Variable 15 dB rolloff @ 5 kHz.

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HF Linear Amplifiers

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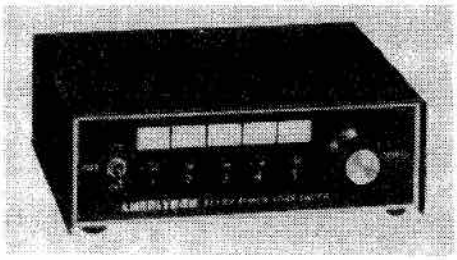
AL-84 with 4 6MJ6 tubes - 600 watts PEP output.
AL-80A with 3-500Z tube - 1000 watts PEP output.
AL-1200 with 3CX-1200A7 tube - full legal output with 100 watts drive.
AL-1500 with 8877 tube - full legal output with 65 watts drive.

RCS-4
FOR CONVENIENT INSTALLATION

No control cable required.
Selects one of four antennas.
VSWR: under 1:1 to 1 from 1.8 to 30 MHz.
Impedance: 50 ohms.
Power capability: 1500 watts average, 2500 watts PEP maximum.

Remote COAX Switches



RCS-8V
FOR SPECIAL APPLICATIONS

Selects up to five antennas.
Loss at 150 MHz: less than .1 dB.
VSWR: under 1.2 to 1 DC to 250 MHz.
Impedance: 50 ohms.
Power capability: 5 kW below 30 MHz, 1 kW at 150 MHz.

GREAT PRODUCTS BY HEIL SOUND HEARING IS BELIEVING

The Key Element

SSB clarity starts at the microphone . . .

If you are not satisfied with the "sound of your station" - it's no wonder-most "communication" mics you use were designed for industrial paging or p.a., not for the sophisticated SSB techniques. The HC-3, 4 and 5 response gives maximum articulation for getting through DX pile-ups and has set the new standard for all.

You can easily install this small, advanced Heil element into your present old mic.

HC-4 $39.95
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You've earned your Ham ticket. Now What?

The new Heil Ham Radio Handbook was written by the 1982 Radio Amateur of the Year-Bob Heil, K9EID. Bob heads his own electronic manufacturing company and is respected world-wide for his sound systems, microphones and equalizers.

Bob's new book fills the gap that often makes the difference between sitting there watching the dial lights and actually making contacts that are the real joy of amateur radio.

ONLY $14.95

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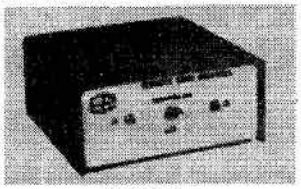


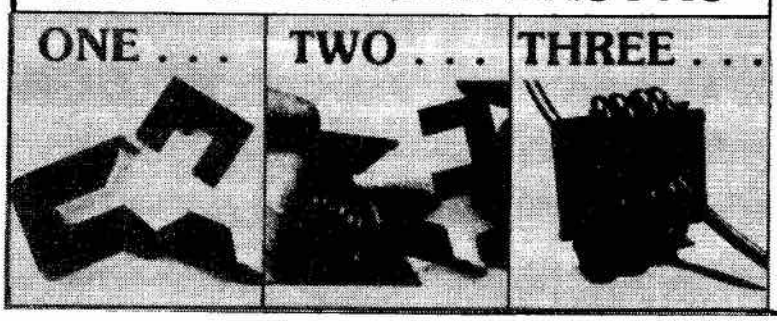
MODEL RB-1

The RB-1 allows the easy interconnection of two transceivers for the purpose of remote base operation. For instance, a 220 or 450 MHZ rig can be interfaced to control a fixed station connected to regular hi gain yagi or dipole antennas. This provides tremendous coverage from a UHF portable or mobile. By utilizing the squelch circuits of the new TS 430, IC-730, etc., the RB-1 allows the HF bands to be worked with the interfaced UHF portable.

Since there are actually two carrier operated relay systems in the RB-1, it can also be used as a simple, but effective repeater control

RB-1 $84.95

SNAP ON CHOKE-EASY AS



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BEST OF MFJ

MFJ, Bencher and Curtis team up to give you America's most popular keyer in a compact package for smooth easy CW

The best of all CW worlds - a deluxe MFJ Keyer using a Curtis 8044ABM chip in a compact configuration that fits right on the Bencher iambic paddle!

This MFJ Keyer is small in size but big in features. It features iambic keying, adjustable weight and tone and has front panel volume and speed controls (8-50 WPM), dot-dash memories, speaker, sidetone and push button selection of semi-automatic/tune or automatic modes. It's also totally RF proof and has ultra-reliable solid state outputs that key both tube and solid state rigs. Uses 9 V battery or 110 VAC with MFJ-1305, $9.95.

The keyer mounts on a Bencher paddle to form a small (4 1/8 x 2 5/8 x 5½ inches) attractive combination that is a pleasure to look at and use.

America's favorite paddle, the Bencher, has adjustable gold-plated silver contacts, lucite paddles, chrome plated brass, and a heavy steel base with non-skid feet.

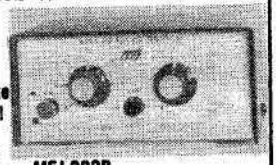
You can buy just the keyer assembly, MFJ-422BX,

MFJ's best selling TUNER

The MFJ-941D is MFJ's best selling (and probably the world's best selling) 300 W PEP antenna tuner! Why? Because it has more features than tuners costing much more and matches everything from 1.8 to 30 MHz for your solid state or tube rig: dipoles, inverted vees, random wires, verticals, mobile whips, beams, balanced and coax lines.

New dual-range SWR wattmeter reads forward and reflected power in both 30 and 300 watt ranges. Convenient **front-panel mounted** 6-position antenna switch lets you select 2 coax lines, direct or through tuner, random wire/balanced line or tuner bypass for dummy load. New, larger, more efficient airwound inductor gives lower losses and more watts out. **Plus** . . . built-in 4:1 balun for balanced lines. 1000 V capacitor spacing, brushed aluminum front panel on all-metal cabinet. 11x3x7 inches.

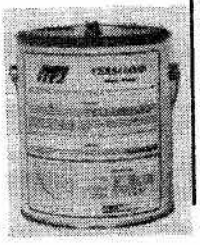
RX NOISE BRIDGE



Make your antenna perform like you know it should! MFJ-202B tells whether to shorten or lengthen antenna for minimum SWR. Also measure resonant frequency, radiation resistance and reactance.

Exclusive features: individually calibrated resistance scale, expanded reactance range, built-in range extender for measurements beyond scale readings. 1-100 MHz. Uses 9 V battery. 2x4x4 in.

1 KW DUMMY LOAD MFJ-250

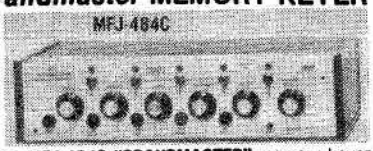


Tune up fast, extend life of finals, reduce QRM! Rated 1KW CW or 2KW PEP for 10 minutes. Half rating for 20 minutes, continuous at 200 W CW, 400 W PEP. VSWR under 1.2 to 30 MHz. 1.5 to 300 MHz. Oil contains no PCB. 50 ohm non-inductive resistor. Safety vent. Carrying handle. 7½x6¾ in.

INDOOR ACTIVE ANTENNA

"World Grabber" rivals or exceeds reception of outside long wires! Unique **tuned** Active Antenna minimizes intermode, improves selectivity, reduces noise outside tuned band, even functions as preselector with external antennas. Covers 0.3-30 MHz. Telescoping antenna. Tune, Band, Gain, On-off bypass controls. 6x2x6 inches. 9V battery, 9-18 VDC or 110 VAC with MFJ-1312, $9.95.

Grandmaster MEMORY KEYER



The MFJ-484C "GRANDMASTER" memory keyer is **THE** choice of CW contesters. Why? Because it's so easy to use, it's second nature . . . you don't have to learn complex commands . . . **and** it has all the features you'll ever need for easy CW.

Features like these . . . store up to twelve 25 character messages **plus** a message of up to 100 characters. Or use a switch to combine 25 character messages for up to three 50 character messages. Repeat any message continuously or pause between repeats and change or insert into a playing message by simply sending. And you don't lose your settings when you lose power.

The MFJ-484C is RF proof, sends 8-50 WPM and measures just 8x2x6 inches. It uses 12 to 15 VDC or 110 VAC with MFJ-1312,

POLICE/FIRE/WEATHER 2 M HANDHELD CONVERTER

Turn your synthesized scanning 2 meter handheld into a hot Police/Fire/Weather band scanner! 144-148 MHz handhelds receive Police/Fire on 154 -158 MHz with direct frequency readout. Hear NOAA maritime coastal plus more on 160-164 MHz. Mounts between handheld and rubber ducky. Feedthru allows simultaneous scanning of both 2 meters and Police/Fire bands. No missed calls. Crystal controlled. Bypass/Off switch allows transmitting (to 5 watts). Use AAA battery. 2¼x1½x1½ in. BNC connectors.

MFJ's smallest VERSA TUNER

MFJ-901B

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

RTTY/ASCII/CW COMPUTER INTERFACE

MFJ-1224

Free MFJ RTTY/ASCII/CW software on disk and cable for VIC-20 or C-64. Send and receive computerized RTTY/ASCII/CW with nearly any personal computer (VIC-20, Apple, TRS-80, Atari, TI-99, Commodore 64, 128 etc.) Use Kantronics or most other RTTY/CW software. Copies both mark and space, any shift (including 170, 425, 850 Hz) and any speed (5-100 WPM RTTY/CW, 300 baud ASCII). Sharp 8 pole active filter for CW and 170 Hz shift. Sends 170, 850 Hz shift. Normal/reverse switch eliminates retuning. Automatic noise limiter. Kantronics compatible socket plus exclusive general purpose socket. 8 x 1¼ x 6 inches. 12-15 VDC or 110 VAC with adapter, MFJ-1312,

RECEIVER ANTENNA TUNER/PREAMPLIFIER

MFJ-959B **$89.95**

Impedance match your antenna to your receiver to increase your signal strength with this MFJ-959B and you may hear signals that you didn't even know were there. A 20 dB preamplifier with gain control boosts weak stations and a 20 dB attenuator prevents overload. It has switches for selecting between two receivers and two antennas. Covers 1.8 to 30 MHz. 9x2x6 inches. Uses 12 VDC or 110 VAC with MFJ-1312,

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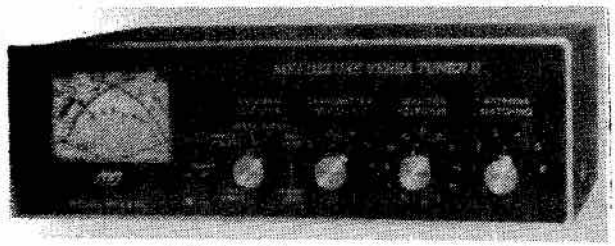
MFJ ACCESSORIES

MFJ's BEST 300 WATT TUNER HAS A CROSS-NEEDLE METER THAT READS SWR, FORWARD AND REFLECTED POWER – ALL AT A GLANCE



MFJ-949C **MFJ's best 300 watt tuner is now even better! The MFJ-949C all-in-one Deluxe Versa Tuner II** gives you a tuner, cross-needle SWR/Wattmeter, dummy load, antenna switch and balun in a compact cabinet. You get quality conveniences and a clutter-free shack at a super price.

A cross-needle SWR/Wattmeter gives you SWR, forward and reflected power -- all at a single glance. SWR is automatically computed with no controls to set. 30 and 300 watt scale on easy-to-read 2 color lighted meter (needs 12 V).

A handsome black brushed aluminum cabinet matches all the new rigs. Its compact size (10 x 3 x 7 inches) takes only a little room.

You can run full transceiver power output -- up to 300 watts RF output --and match coax, balanced lines or random wires from 1.8-30 MHz. Use it to tune out SWR on dipoles, vees, long wires, verticals, whips, beams and quads.

A 300 watt 50 ohm dummy load gives you quick tune ups and a versatile six position antenna switch lets you select 2 coax lines (direct or thru tuner), random wire or balanced line and dummy load.

A large efficient airwound inductor -- 3 inches in diameter -- gives you plenty of matching range and less losses for more watts out. 100 volt tuning capacitors and heavy duty switches give you safe arc-free operation. A 4:1 balun is built-in to match balanced lines.

Order your convenience package now and enjoy.

MFJ 12/24 HOUR LCD CLOCKS

MFJ-108 **MFJ-107**

Huge 5/8 inch bold black LCD numerals make these 24 hour LCD clocks a must for your ham shack. Choose from a dual clock that displays UTC and local time or the single unit that displays 24 hour time.

Mounted in a brushed aluminum frame, these clocks feature 5/8 inch LCD numerals and a sloped face for easy across the room reading. Both also feature easy set month, day, hour, minute and second functions that can be operated in an alternating time-date display mode. MFJ-108, 4½x1x2 inches; MFJ-107, 2¼x1x2 inches. Battery included.

MFJ-962B VERSA TUNER III

MFJ-962B

Run up to 1.5KW PEP and match any feedline continuously from 1.8 to 30 MHz: coax, balanced line or random wire.

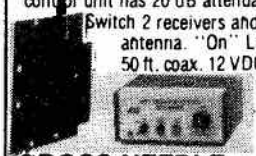
Lighted Cross-needle Meter reads SWR, forward and reflected power in one glance. Has 200 and 2000 watt ranges. 6 position antenna switch handles 2 coax lines, random wire and balanced lines. 4:1 balun. 250 pf, 6 kv variable capacitors. 12 position ceramic inductor switch. Smaller size matches new rigs: 10¾ x 4½ x 14 7/8 inches. Flip stand for easy viewing. Requires 12V for light.

MFJ RANDOM WIRE TUNER

MFJ-16010

MFJ's ultra compact 200 watt random wire tuner lets you operate all bands anywhere with any transceiver using a random wire. Great for apartment, motel, camping. Tunes 1.8-30 MHz. 2x3x4 inches.

REMOTE ACTIVE ANTENNA



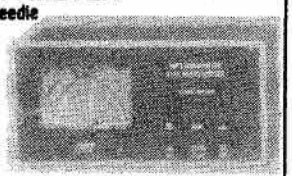
54 inch remote active antenna mounts outdoor away from electrical noise for maximum signal and minimum noise pickup. Often outperforms long-wire hundreds of feet long. Mount anywhere-atop houses, buildings, balconies, apartments, ships

Use with any radio to receive strong clear signals from all over the world 50 KHz to 30 MHz. High dynamic range eliminates intermodulation. Inside control unit has 20 dB attenuator, gain control. Switch 2 receivers and auxiliary or active antenna. "On" LED. 6 x 2 x 5 in 50 ft. coax. 12 VDC or 110 VAC with MFJ-1312, $9.95

MFJ-1024

CROSS-NEEDLE SWR/WATTMETER

MFJ-815



MFJ's cross-needle SWR/Wattmeter gives you SWR, forward and reflected power -- all at a single glance! SWR is automatically computed -- no controls to adjust. Easy-to-use push buttons select three power ranges that give you QRP to full legal limit power readings. Reads 20/200/2000 W forward, 5/50/500 W reflected and 1:1 to 1:5 SWR on easy-to-read two color scale. Lighted meter needs 12 V. ±10% full scale accuracy. 6½x3¼x4½ inches.

COMPACT SPEAKER

MFJ-280

Mobile speaker. Tilt bracket on magnetic base. 3½ mm phone plug. Use with 8 and 4 ohm impedances. Handles 3 watts audio.

HANDHELD TELESCOPING ANTENNAS WITH BNC

MFJ-1710, $9.95, 3/8 wave 2 meter. Pocket clip. 5¾" - 24½".

MFJ-1712, $14.95, ¼ wave 2 meter; 5/8 wave 440 MHz, 7¼" - 19".

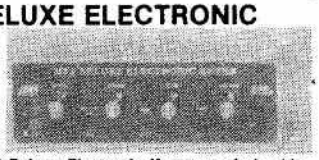
MFJ-1714, $16.95, ½ wave 2 meter. End-fed halfwave dipole. Shorter, lighter, more gain, less stress than 5/8 wave mounted on handheld. When collapsed it performs like rubber duck.

MFJ "DRY" DUMMY LOADS

MFJ's "Dry" dummy loads are air cooled -- no messy oil. Just right for tests and fast tune up. Non-inductive 50 ohm resistor with SO-239. Full load to 30 seconds, de-rating curve to 5 minutes. **MFJ-260 (300 watt),** SWR 1.1:1,1-30 MHz, 1.5:1, 30-160 MHz, 2½x2½x7 inches. **MFJ-262 (1 KW),** SWR 1.5:1.30-160 MHz. 3x3x13 in. Alum. housing.

MFJ DELUXE ELECTRONIC KEYER

MFJ-407B



MFJ-407B Deluxe Electronic Keyer sends iambic, automatic, semi-auto. or manual. Use squeeze, single lever or straight key. Plus/minus keying. 8-50 WPM. Speed, weight, tone, volume controls. On/Off. Tune. Semi-auto switches. Speaker. RF proof. 7x2x6 inches. Uses 9 V battery. 6-9 VDC or 110 VAC with AC adapter, MFJ-1305, $9.95.

ANTENNA CURRENT PROBE

MFJ-206

MFJ Antenna Current Probe lets you monitor RF antenna currents -- no connections needed! Determine current distribution, RF radiation pattern and polarization of antennas, transmission lines, ground leads, building wiring, guy wires and enclosures.

- **Determine if ground** system is effective.
- **Pinpoint RF leakage** in shielded enclosures.
- **Locate best place** for mobile antenna.
- **Use** as tuned field strength meter.
- **Indicate transmission line radiation** due to high SWR, poor shielding, antenna unbalance.
- **Detect re-radiation** from gutters, guy wires that can distort antenna field patterns.

Monitors RF current. 1.8-30 MHz. Has sensitivity, bandswitch, tune controls, telescoping antenna for field strength meter. 4x2x2 inches.

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The Canadian Amateur Radio Hall of Fame

The Canadian Amateur Radio Federation proudly announces the institution of The Canadian Amateur Radio Hall of Fame. The purpose of the Hall of Fame is, first, to give permanent honour to those among us who make major achievements in Amateur radio in Canada, and second, to further raise a conscious awareness amongst Canadian Amateurs that we are proud of our achievers, we honour them and list their names and record of achievement in a permanent memorial.

An independent Board of Trustees will direct the affairs of the Hall under the terms of a Constitution recently approved by the Canadian Amateur Radio Federation's Board of Directors. Each Province and Territory of Canada is represented in the election process through the appointment of one person to the Board of Trustees. The two levels of achievement awards of **Member** and **Award of Honour** will embrace a wide spectrum of accomplishment and service over the diverse fields and interests of Amateur radio. The Hall of Fame will be located in Kingston, Ontario.

The granting of Honours is a gracious and tangible way for the Canadian Amateur radio service to pay tribute to those who exemplify the highest qualities of dedication and achievement and whose contributions have advanced the art and science of Amateur radio and enriched the lives of their contemporaries and communities.

Other than the right to use the insignia and/or display the designation of membership or award of honour, investiture or achievement awards bring no special privileges and no monetary reward. It is a fraternity of merit, not a society of the elite. Those who strive for the advancement of the service and the betterment of their immediate community or devote their talents to technological achievements stand with people who have gained high distinction on the national or international scene.

Investiture as a member or the reception of an award of honour is open to every licensed Canadian

Amateur radio operator, although in practice members of the Executive/ Board of Directors of CARF and the Hall of Fame Board of Trustees are excluded and may not be appointed while holding office. Members of the Executive/Board of Directors of CARF are excluded from appointment as members of the Hall's Board of Trustees.

The number of persons to be appointed is limited by the Constitution. The total of those honoured as Members may not at any time exceed twelve. No more than one Member and five Award of Honour recipients may be appointed in a given year. By restricting membership and awards in this way, high standards of admission are maintained and the prestige of the Hall of Fame is safeguarded.

The Sole Custodian of the Hall of Fame is the Canadian Amateur Radio Federation, Inc. CARF appoints the Board of Trustees to preside over the affairs of the Hall. The Trustees, in accordance with the terms of the Constitution have the task of assessing the relative merits of the persons who are nominated for membership or an award of honour, and of conferring the appropriate honour on those considered especially worthy of appointment.

The continued success of the Hall of Fame depends on Canadian radio Amateurs everywhere sharing their interest and support by participating in the nomination process. Any Canadian citizen licensed Amateur radio operator or any Canadian Amateur radio organization may propose the name of a deserving Canadian radio Amateur as a candidate for appointment. Those wishing to do so are asked to address nominations to the Board of Trustees, The Canadian Amateur Radio Hall of Fame, P.O. Box 356, Kingston, Ont. K7L 4W2.

Each nomination should be accompanied by a biographical sketch setting out in some detail the Amateur radio career and achievements of the nominee. It is especially helpful to the Board of Trustees to have the personal testimony of close associates. The sponsors may choose to include all the relevant information in a letter, however a convenient nomination form is available and may be obtained from the Board of Trustees on request. Every name proposed goes before the Board of Trustees which confers once a year to consider nominations.

Licensed radio Amateurs other than licensed Canadian citizens may, with the approval of the custodian, be appointed as Honourary Members or as Honourary Award of Honour recipients. Such appointments will be, however, extremely rare.

PANTHEON DES RADIO-AMATEURS CANADIENS

La Fédération des Radio Amateurs du Canada Inc. (CARF) est fière d'annoncer la fondation du Panthéon des radio-amateurs canadiens. Il s'agit par cette création d'immortaliser les hauts faits de nos Membres au service de la radio amateur d'une part et, d'autre part, de promouvoir chez les radio-amateurs canadiens une fierté pour les succès des meilleurs d'entre nous dont les actions valeureuses y resteront gravées pour toujours.

Une Commission indépendante sera chargée de gérer les affaires du Panthéon aux termes d'une constitution récemment approuvée par le conseil d'administration de la Fédération des Radio-Amateurs du Canada Inc. Chaque province et territoire du Canada prendra part au vote par la voix d'un(e) représentant(e) siégeant à la Commission. Les deux grades de distinctions prévus, MEMBRE PLEIN et MEMBRE D'HONNEUR, récompenseront une

Continued on next page

LE PANTHÉON *(cont'd)*

large gamme de hauts faits et d'actions méritoires dans divers domaines et intérets des radio amateurs. Le Panthéon sera situé à Kingston, Ontario.

L'intention qui a présidé à la création de cette distinction honorifique se veut une marque gracieuse et tangible de l'hommage rendu par le Service Radio-Amateur à tous les dévouements exemplaires à l'art et à la science, à l'enrichissement de la vie personnelle et collective.

A part le droit au port de l'insigne de Membre plein et de Membre d'Honneur, les nominations et distinctions pour faits exceptionnels n'entrainent pour les titulaires l'octroi d'aucun privilège particulier ou d'ordre financier. Il s'agit d'une fraternité du mérite et non d'un corps d'élite. En effet, ceux qui oeuvrent pour le progrès due Service et pour le bien de la collectivité ou qui consacrent leur talent à des percées technologiques ont droit à des distinctions comparables à celles honorant les héros de la scène nationale ou internationale.

Tout amateur canadien dûment licencié peut être élu Membre du Panthéon ou bénéficier de la distinction de Membre d'Honneur. Les dirigeants et administrateurs de la CARF et de la Commission du Panthéon sont toutefois inéligibles durant leur mandat. Les dirigeants et membres du conseil d'administration de la CARF ne peuvent siéger à la Commission du Panthéon.

Le nombre des récipiendaires de ces distincitons est limité, aux termes de la constitution. Le nombre total des Membres pleins est limité à douze (12). Il ne sera pas nommé plus d'un (1) Membre Plein et plus de cinq (5) Membres d'honneur par année. En restreignant ainsi l'accès au Panthéon, on en préservera le prestige contre tout abus et contre le risque de dévaluation des qualifications requises.

La seule responsable du Panthéon est la Fédération des Radio Amateurs du Canada Inc. qui nomme la commission chargée de présider aux destinées du Panthéon. Aux termes de la constitution, les commissaires sont chargés de l'instruction de dossiers de propositions pour les grades de Membre plein et de Membre d'honneur et de la nomination à ces grades des candidats qu'ils en estiment dignes.

Le succès durable du Panthéon dépend de la participation des radio-amateurs de tout le pays au processus d'interessement et de soutien à la sélection des candidats. Tout citoyen canadien titulaire d'une licence de radio-amateur ainsi que toute organisation canadienne de radio-amateurs peut proposer le nom d'un radio-amateur méritant. Les mémoires de propositions devront être adressés à: Commission du Panthéon des Radio-Amateurs canadiens, P.O. Box 356, Kingston, ON K7L 4W2.

Chaque mémoire de proposition devra être accompagné d'une notice biographique du candidat et d'un exposé detaillé des mérites qu'il s'est acquis au service de la radio-amateur. La Commission serait particulièrement reconnaissante de pouvoir entendre les témoignages personnels émanant d'associés proches du candidat. Les auteurs des propositions pourront consigner dans une lettre tous les détails pertinents. Un formulaire de mémoire de proposition préparé par la Commission pourra être expédié sur demande. Toutes les propositions reçues seront introduites devant la Commission qui les examinera en conseil une fois par an.

Sur avis favorable de l'organisme responsable du Panthéon, des radio-amateurs non citoyens canadiens, titulaires d'une licence, pourront être nommés Membres pleins honoraires ou Membres d'honneur honoraire. Ces nominations garderont un caractère très exceptionnel. ■

Traduction VE1BQL

Increase CW Speed

Operating CW at high speeds or even just increasing your speed for purposes of upgrading is easy. It's just a matter of practice, practice, practice. What's the best way to practice? That's up to you.

There are several methods of practice: CW tapes, W1AW, computer programs, etc. I have found the best way to increase speed and competence is by getting on the air! There is nothing like being in a QSO for incentive. Get on the air for at least two QSOs per day. That gives you much practice in the format of the examination and also gives you an incentive to copy what is being sent.

Spend part of your practice time, whether on the air or with tapes, copying faster than you can! I cannot overemphasize the importance of trying to copy faster than you can! Even if you only get 50 or 60% copy at first, spend about 10 minutes a day trying to copy faster than you can. Your percentage of copy will increase daily.

Practice skipping letters you miss. Don't try to copy everything. If you linger over a missed letter, you may miss the next five or six letters. But if you leave a space on your paper for each letter you miss and go on to the next letter, missing a letter here and there won't much matter.

Don't copy every single word on paper. If you hear 'receiver,' write 'rcvr.' If you hear 'rcvr,' write 'R'. You'll know what the word is, and you can use the extra time for a rest, or to determine what the receiver is, rather than to copy down the word 'receiver'.

Remember, practice is the name of the game. Practice daily. If you can't spend 20 minutes a day, spend 10 minutes. If you can't spend 10 minutes, spend 5, but do it daily.

You can improve your code speed easily. Let us summarize the steps you need to take: get on the air (it gives you more incentive to copy); practice copying faster than you can for part of your practice period; don't write everything down; use personal abbreviations; leave spaces for missed letters; train yourself to continue with the text when you miss a letter rather than struggling to figure it out. Follow these helpful hints and you'll be surprised at how quickly your CW speed increases. ■

—M. D. Zimmerman W3GXK in *CQ*

CARF NEWS SERVICE

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

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FL32A	103.50
FL33	54.00
FL34	107.50
FL44A	144.50

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Why Two National Associations?

BY BILL WILSON VE3NR

While I was President of CARF and since, I have been occasionally asked, "Why do we have two national Amateur Radio associations in Canada?" I think the answer should receive wider circulation now that there have been discussions regarding a merger of the two organizations. It is interesting, too, to recall this wee bit of history now that our relations with the United States are under the microscope for other reasons.

Each of our two organizations was formed at a different time in history when Canadians had very different feelings about themselves and very different views of the United States. In each of those widely separated periods of history, however, Canadian Radio Amateurs were representative of most other Canadians and the way in which they viewed our relations with United States. Their actions under the set circumstances were predictable.

During the First World War, Canadians and Americans, both being big spirited, adaptable and egalitarian, found they could related more easily to each other than to the class-ridden and less adaptable British. Afterwards, Canadians and Americans, living side-by-side, grew to enjoy a relationship of trust and intimacy that was never equalled before or since.

It was natural therefore, in 1920, for Canadian Amateurs to ask to form a Canadian Division of the ARRL and for the ARRL to agree. It is said that this request was made because Canadian Amateurs had to rely on American Amateurs to relay messages from one side of the country to the other. The Canadian Amateur population was so small and the technology of the day did not permit trans-Canada radio communications. However, there were two other reasons— comradeship counted for a lot in those days and there was no real competition for spectrum.

Bill Wilson VE3NR is Retired Director General, Telecommunications Regulations, Department of Communications, and Retired President, Canadian Amateur Radio Federation Inc.

By 1945, just over a quarter of a century later, Canadians were a very different people— a new generation was on the move. They remembered the desperation and destitution of the depression. They had just fought through another World War under their own flag and come out of it as winners. They were fully convinced that they were better fighters than the Brits or the Yanks and that they could do anything to which they put their minds. It was natural, then, for Canadians to turn to the task of making Canada the best country in the world in which to live— they wanted a better life than their parents had.

By the late 1950s this 'can do anything' attitude of Canadians had been supplanted by what Richard Gwyn calls (in his book *The 49th Paradox)* the spirit of 'gentle patriotism and economic nationalism'. By the early 1970s, this patriotism had become 'passionate'. The inactivity of the Canadian Division, especially with regard to the growing competition for spectrum, did not satisfy the wishes of Canadian Amateurs and CARF was formed by the provincial societies at a meeting in Winnipeg in 1967. Shortly afterwards, membership in CARF was thrown open to Amateurs across Canada and CARF was really on the move.

It was inevitable that there would be 'high feeling' between the two organizations founded under such very different conditions— the first by 'continentalists', we did not use that word then, the second by 'nationalists'. It was also inevitable, then, that the Canadian Division would use the CRRL name and proceed to emulate CARF but it was surprising that it would take 10 years before it would start to do so. Now that the two organizations are more or less on an even footing, Canadian Amateurs can no longer allow the competition between these two national associations to frustrate the development of Amateur Radio in Canada.

Canadian Amateurs, clubs and provincial societies must now push for the merger of these two organizations just as strongly as they pushed for the formation of CARF in 1967. They should also tell these two organizations the kind of new organization that should be formed and the kind of relationship that it should have with the Amateurs of the United States and the rest of the world.

DEUX ASSOCIATIONS NATIONALES, POURQUOI FAIRE?

BILL WILSON VE3NR

(traduit par VE1BQL)

Aussi bien du temps de ma présidence de la CARF que maintenant, on m'a parfois demandé: "Pourquoi deux associations de radio-amateurs au Canada?" Au moment où l'on discute de la fusion éventuelle de ces deux organismes, il me semble que la réponse à cette question mérite une large diffusion. Il convient à ce stade de rappeler quelques points d'histoire dans le contexte national actuel qui voit nos relations avec les Etats-Unis, pour d'autres raisons, examinées au microscope.

Les deux organisations furent en effet fondées à des époques distinctes, alors que le sentiment de l'identité nationale des Canadiens était fort différent d'aujourd'hui et que les Etats-Unis étaient perçus sous un tout autre jour. Au cours de ces deux périodes de notre histoire, largement séparées l'une de l'autre, la conception qu'avaient les radio-amateurs canadiens de nos rapports avec les Etats-Unis concordait sensiblement avec celle de la plupart de leurs compatriotes. Dans ces conditions, leur attitude était prévisible.

Rapprochés par la première guerre mondiale, Canadiens et Américains, partageant un esprit optimiste, égalitaire et adaptable s'aperçurent que leurs relations mutuelles étaient bien plus faciles qu'avec les Britanniques, moins souples et imbus de préjugés de classe. Par la suite, vivant côte à côte, Canadiens et Américains créèrent des liens étroits de proximité et de confiance, jamais connus auparavant et jamais retrouvés depuis. Dans ce contexte, la proposition de constitution d'une simple section canadienne de l'ARRL en 1920 parut aussi naturelle pour les

Canadiens que pour l'ARRL de l'accepter. On a prétendu que cette démarche procédait de la dépendance des amateurs canadiens de leurs collègues américains pour le relais de messages d'une extrêmité du pays à l'autre. Le nombre d'amateurs canadiens était encore minime et la technologie de l'époque ne permettait pas les liaisons radio transcanadiennes. On peut néanmoins faire valoir deux autres raisons: la camaraderie comptait beaucoup en ce temps-là et la bataille pour les fréquences n'était pas encore vraiment engagée.

Un quart de siècle plus tard, en 1945, les Canadiens avaient beaucoup évolué, une nouvelle génération montaint, marquée des jours douloureux de la grande dépression. Ils revenaient des fronts d'un conflit mondial, victorieux après avoir combattu sous leur propre drapeau, certains de posséder de meilleures vertus militaires que leurs frères d'armes américains et britanniques. Tout leur paraissait maintenant possible, une fois la décision prise. Dans un telle ambiance, n'était-il pas naturel que les Canadiens s'attaquent à la tâche de transformer le Canada pour en faire le pays du monde où il ferait bon vivre, sans les malheurs connus par leurs parents?

Vers la fin des années 50s, le "rien d'impossible" des Canadiens avait fait place à ce que Richard Gwyn appelait dans son livre *Le 49ème paradoxe*: "une esprit de patriotisme aimable et de nationalisme économique". Mais au début des années 70s, ce patriotisme était devenu "ardent". L'inactivité de la division canadienne de l'ARRL, en particulier dans la concurrence de plus en plus vive pour les fréquences, ne satisfaisait plus les amateurs canadiens qui décidèrent de fonder la CARF à partir de sociétés provinciales d'amateurs, au cours d'une assemblée tenue à Winnipeg en 1967. Peu de temps après, tout amateur canadien put librement adhérer à la CARF qui prenait alors réellement son essor.

Dans ce contexte, il devenait inévitable que des "sentiments mitigés" naissent entre les deux sociétés issues de circonstances si différentes, la première fondée par des "continentalistes" (même si cette expression n'était pas encore usitée) et la seconde par des "nationalistes". N'était-il pas aussi inévitable que la division canadienne de l'ARRL se serve du prestige de la Ligue pour concurrencer la CARF même s'il est permis de se montrer surpris qu'elle ait attendu dix ans pour commencer? En raison de leur situation actuelle de relative égalité, une concurrence fratricide entre les deux organismes de nature à gêner le développement de la radio-amateur au Canada ne saurait être plus longtemps tolérée par les amateurs canadiens.

Par conséquent, autant les amateurs canadiens à titre individuel que leurs clubs et sociétés provinciales doivent dorénavant s'efforcer d'obtenir la fusion des deux organisations avec autant d'initiative qu'ils en montrèrent lors de la fondation de la CARF en 1967. Ils doivent faire connaitre leurs préférences pour la forme de l'organisation à fonder et préciser les rapports qu'elle devra entretenir avec les amateurs américains aussi bien qu'avec le reste du monde.

VE3NR est: Ancien directeur général de la Direction de la Réglementation des télécommunications au DOC; Ancien président de la Fédération des Radio-Amateurs du Canada Ltée. ■

RESONATING CAVITY

An enclosed space within which an electromagnetic wave of extremely short wavelength (VHF and above) becomes resonant. As the wave strikes the sides of the resonating cavity, the resulting reactions encourage the wave to continue its variations. The resonant cavity is the same as a parallel LC resonant circuit at VHF and UHF frequencies. As the dimensions of the resonating cavity become smaller, its resonant frequency increases. These things are often referred to as 'cans' and are used in multicouplers and duplexers. It works similar to a beer bottle resonating at a particular audio frequency when you blow across the top of it.
— *The Algoma Amateur*

New Allocation paves way for mobile satellites

Communications Minister Flora MacDonald has announced that successful negotiations concluded at the recent World Administrative Radio Conference (WARC) in Geneva have resulted in the allocation of new spectrum for land mobile satellite services, removing a major obstacle facing the MSAT (mobile satellite) program.

"For the first time, spectrum has been set aside globally to be used specifically for land mobile satellite services," she said. "The Department of Communications played a key role in negotiating the international arrangements, and I am pleased with the outcome. This marks a major breakthrough for the development of MSAT, Canada's mobile satellite service scheduled for operation in the early 1990s."

Now, in addition to the two 4 MHz bands exclusively allocated to land mobile satellite service, two 3 MHz bands are allocated to maritime mobile satellite service *and* land mobile satellite service (formerly maritime only). Two other allocations in the 1500-1600 MHz range will also be useful for other facets of MSAT service, such as aeronautical and maritime services.

MSAT will bring two-way mobile radio and telephone service to Canadians across the country, using a satellite as a relay station in space.

MSAT will be used primarily in land vehicles, but will also be effective in planes and boats. MSAT voice and data transmission services will benefit, among others, fire fighters, ambulance services, shipping and construction companies, forestry, oil and gas industries, governments and those who live in remote areas, beyond the reach of the public telephone network.

The allocations are listed by Frequency Band (MHz) and Service(s).

1555-1559 & 1656.5-1660.5— Land Mobile Satellite Service exclusively (aeronautical and maritime terminals may also be used in conjunction with this service);

1530-1533 & 1631.5-1634.5— Maritime Mobile Satellite Service and Land Mobile Satellite Service;

1533-1544 & 1634.5-1645.5— Maritime Mobile Satellite Service (Secondary) Land Mobile Satellite Service, data only;

1545-1555 & 1646.5-1656.5— Aeronautical Mobile Satellite Service (Safety and Regularity of Flight) and Aeronautical Public Correspondence, subject to the condition that safety services have priority.

The next international WARC conference dealing with mobile satellite services has been tentatively scheduled for 1992. ■

The Old Rumour Mill

BY BILL WILSON VE3NR

Rumour has it that DOC is now consulting its Regional Offices on a proposal to restructure the Amateur Radio Service. At the lowest levels it appears to be a more relaxed version than that published in *The Canadian Amateur* for September '86.

Here, very briefly, is a comparison of the rumour versus published proposals.

The first class in the rumoured proposal would be no code, commercial gear only and all modes on frequencies above 30 MHz, 200 watts maximum and a very easy exam. The published proposal allowed both commercial and home-made gear, all modes above 30 MHz, 100 watts max and the exam would be based on 40 hours of study.

The second class would require 5 wpm code, no technical exam and allow all modes, all bands 200 watts max but only commercial gear. Published proposed: 7 wpm, commercial and home-made gear, 250 watts max all modes except CW only below 28 MHz, this level to be obtained by endorsement after passing code test.

For the third class, DOC is said to be considering 12 wpm, an easy technical exam, all modes, all bands, 1 kW max and commercial gear only. No equivalent published proposal.

Both DOC and the published proposal are the same for the fourth class as the present Advanced Amateur level, i.e. 1 kW, all modes, all bands, commercial or home-made gear, etc. We do not know how one would progress from DOC third class to fourth class— presumably, some sort of technical exam.

— VE3NR

Selon certaines rumeurs, le DOC aurait entamé des consultations avec ses bureaux régionaux au sujet d'un projet de réforme du Service Amateur. Sous ses aspects les plus ordinaires, ce projet parait moins strict que les propositions parues dans le TCA de septembre 1986.

On trouvera ci-dessous une comparaison sommaire entre les éléments du projet attribué au DOC selon nos informations et les textes:

La première classe de licence prévue par le DOC n'exigerait aucune aptitude à la lecture au son du code Morse mais ne permettrait d'employer que du matériel commercial. Après passage d'un examen très simple, l'émission serait autorisée sur toutes fréquences supérieures à 30 MHz, en tous modes avec une puissance maximale de 200 W. L'examen pourrait être affronté après quarante heures d'étude.

La deuxième classe de licence DOC exigerait la lecture au son du Morse à 5 mots/minute mais sans examen technique. L'émission serait autorisée avec matériel commercial seulement, sur toutes les bandes avec 200 W. Pour sa part, le projet prévoyait la lecture au son à 7 mots/minute, le choix de l'usage de matériel commercial ou de construction privée, une puissance de 250 W sur toutes les bande mais en mode télégraphie uniquement en dessous de 28 MHz. Cette classe de licence serait obtenue après passage d'un test de lecture au son.

Pour la troisième classe de licence, le DOC envisagerait la lecture au son à 12 mots/min, un examen technique facile. Le titulaire aurait droit à 1 kW sur toutes les bandes dans tous les modes d'émission mais avec matériel commercial seulement. Aucune proposition de cet ordre n'avait été faite.

En ce qui concerne la quartrième classe de licence, les propositions respectives du DOC et nos informations seraient identiques et reflèteraient le statut actuel de la classe Amateur Avancé, c'est-a-dire 1 kW tous modes et toutes bandes, matériel commercial ou de construction amateur au choix. Nous ne connaissons pas encore la manière de progresser de troisième en quatrième classe retenue par le DOC qui consistera probablement en une formule d'examen technique.

(Traduction VE1BQL)

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Wind Shear Detection Radar— Egbert, Ont.

BY RALPH CAMERON VE3BBM

About mid-September last year, CARF became aware of the dilemma faced with the proposed operation of a wind shear detection facility to be located North of Toronto.

The proposed facility consists of a doppler radar transmitting a vertical beam estimated to have an effective radiated power of 2 to 4 megawatts. As of press time the definite power output has not been finalized, nor has the actual width of the spectrum to be used.

The radar will illuminate a conical-shaped area of the atmosphere such that some catastrophic interference is expected to occur at locations presently requiring fairly weak signals to accomplish linking.

DOC selected a frequency of 430 MHz according to Garth Roberts from the Department's Electromagnetic Compatibility Committee, although the resolution of final frequency was left to the Toronto Regional Office of DOC.

Mr. Roberts has explained that frequency was chosen in order to protect the SARSAT satellite, which is a position-locating satellite in constant orbit. Sarsat operates in a very sensitive detection mode looking for crash position indicators ejected by downed aircraft. The Russian COPAS series of satellites perform a similar role. Interference to these satellites is of primary concern to Canada, hence the choice of frequency made for radar.

In the U.S., similar wind shear radars operate in the vicinity of 402 MHz. The reason for this is that 420-450 MHz is allocated to U.S. military as primary users. Amateurs are given secondary use. No other radar frequencies were available in the U.S. so a scheme has evolved which would mute the U.S. radars when within the 'footprint' of interference to SARSAT. It has been calculated that the area subtended by + and -30 degrees from vertical could interfere with an orbital pass of Sarsat. During this period, radars would be muted. A considerable logistics problem occurs with this approach because the ephemeris or orbital constants to determine muting times need to be continually updated. Also, the exact launch times of COPAS satellites is never given, so a fair degree of uncertainty exists as to how viable this frequency sharing will continue to be.

The SARSAT frequency of reception is 406-406.1 MHz. The U.S. radars occupy 4 MHz of band and present the problems associated with overload or masking of weak signals. Reception of the latter is vital to be effective as a life-saving service.

CARF does not have sufficient information and input and can not speculate on the present tentative agreement to assign 441 MH to the radar site to be located in Egbert, Ont. There is a further meeting scheduled with DOC and all relevant users affected. I believe the radar sponsor, Atmospheric Environment Services, has shown considerable concern and sensitivity to the subject— the situation has yet to be cast in iron.

As Chairman of the EMI Committee, I was brought into the middle of a situation that appeared to demand locating a frequency for a service that had potential for considerable interference to the Amateur service. Two considerations were made to base a judgement on the choice of frequency, assuming it had to be located in an Amateur assignment. A frequency was required that would interfere with the least number of users.

Based on studies done by a competent CRRL consultant, it appeared one or two repeater links would have been affected, should it be located high in the band. There was also the concern that ATV and weak signal work would be virtually eliminated in Southern Ontario, should it be located at the low end of the band. The proposal to locate several such radars from Toronto throughout Western Canada had already been decided. Obviously, future interference would rear its head.

It now appears there is need for additional discussion among those affected by this transmitter siting. It is hoped some lessons may be learned from this experience. Of primary importance is the need to speak with one voice. A way has to be found to make this new voice representative of the majority of those affected; otherwise, confusion may result in achieving the effect opposite to that desired. There can only be one solution when all parties affected agree.

Band plans and sharing in Canada have largely followed those of the U.S. to date and with just reason, for avoiding cross-border interference. We may have to give further thought to a Provincial frequency coordinating policy, rather than the Regional system used now. There may be many more workable systems to resolve problems such as this.

There may be the possibility of providing protection in the form of antenna lobe nulling in the direction of the potential interference. Let's hope the viability of a reasonable and rational approach solves the problem with the least inconvenience to all concerned. This may be the first test of many more to come in band sharing, on a non-interference basis. ■

AMATEUR STUDY GUIDE

You will have noticed by now that CARF did not advertise the Certificate Study Guide this Fall. When the Amateur question bank was released by DOC in June, a comparison of the questions to the study guide disclosed that about 15% of the questions in the bank were not addressed by the text.

The Certificate Study Guide has been completely revised and is now being reprinted for availability early this year. The chapters have been completely revised to form a good self-study course, with sample DOC questions at the end of each one. For the course instructor, the book now contains 18 chapters, appropriate to the typical 20 week course, although the material in a few chapters would be best taught in two or three weeks to most classes. CARF is proud of the new Study Guide and is sure that every aspiring Amateur will benefit from this new and complete material.

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Shack of the Month

This month the shack is in the home of Richard Moore VE3LRB in London, Ont.

Richard writes: "As is evident I enjoy older stuff as well as QRP. If you can find them in the picture, there is: a Bendix TA12G from a Canadian Lancaster bomber, an R1155 from a British Lancaster bomber, a CSR-5 from a Canadian destroyer, a 19 set from WWII which I put on the air each Remembrance Day, a Hallicrafters S-20-R, an Argonaut 509, an ICOM 2AT, a Kenwood 820, and none of it is as old as I am!"

Thanks Richard, your CARF hat will look good on top of that 19 set!

AMATEUR EXAMINATIONS

If you think that the development of the Amateur Examinations finished when the DOC released their current bank to the Amateur community in June of 1987, you are wrong! Both CARF and the CRRL have active committees checking the questions, preparing new questions, and considering if, in the light of current technical and operational standards, some new topics are needed. For CARF, Earle Smith VE6NM, CARF Vice President, Education, has discussed many aspects of the examination with George Spenser VE3OZW, his CRRL counterpart.

When new questions are submitted to the DOC, one may be sure that they will have been examined and tested by both national organizations to be sure they are fair and appropriate.

If you have any comments on either the existing questions or potential new questions or topics, please write Earle at the address in the front of this magazine.

Please note: a photocopy of the DOC bank is available from CARF for the cost of $4... another service to the Canadian Amateur from CARF!

NEW CARF NUMBER!

CARF has installed a new phone system to serve you better! Note the new number, effective immediately: **613-545-9100.**

CARF News Service

Dino Moriello VE2FSA recently requested comments on the effectiveness of packet radio distribution of the CARF News Bulletins. Replies have been received from Ottawa, Sherbrooke, Toronto, Michigan, Victoria, Nova Scotia and Rhode Is. The following excerpts are from those replies:

Dear Dino: I am glad to see you on Envoy 100. We used to edit the *QUA Manitoba Amateur* monthly for hams of Manitoba (for almost 10 years!)— still produce the VE4 Manitoba *Blue Book* callbook, and also edit *AD ASTRA*, the bi-monthly journal of the Atari Microcomputer Network, which meets every Sunday at 1600 UTC on 14.325 SSB. If any of your readers have an Atari computer, and wish to know more about our net and publication, they can write to Gil Frederick VE4AG, 130 Maureen St., Winnipeg, MB R3K 1M2, or contact us through the weekly net.

You may not know it, but your bulletin service is very useful to me for its 'non-Ham' news; such as the selection of the Motorola C-QUAM system for AM radio; also the new version of the RS-232-C to 'D'.

Here is a bit of news: the VE4MAN repeater is back again on the air from Starbuck. It had its first test on Sept. 12, and from all reports is working very well. Linking is now operational with other Manitoba repeaters, giving wide coverage over all of southern Manitoba.

Dino, if I can be of help to you in reports from Manitoba, please advise. Fraternally, Gil VE4AG.

In response to your request Dino, I rely almost solely upon packet bulletins to keep up to date with CARF news, so read your bulletin relays regularly. Thanks for a great service. 73... Richard VE3OAR

Hi Dino. Yes we still read you loud & clear hr in Sherbrooke with your CARF bulletins. Keep it up, it feeds us with the news— Pierre VE2BLY.

I would concur to place that Doppler as high in the band as possible. We in the Detroit area have already lost our ATV input frequencies due to Canadian land mobile acquisition in the 430 band. Another affront to our bands is in reality intolerable. Our 440 repeater service is utilized for many public service and community action activities. Good Luck— maybe you can get them to go to 800 MHz— Jay N8FTY sysop N8FTY BBS Michigan Emergency packet network.

Read your bul. on N8FTY BBS here in Mi. on the UHF freq. share this is to let you know we did read it and hope that you are able to get them to move it to 448 MHz area so as not to cause to many problems. Good Luck. 73's Mike from Jackson Mi. W8EHH

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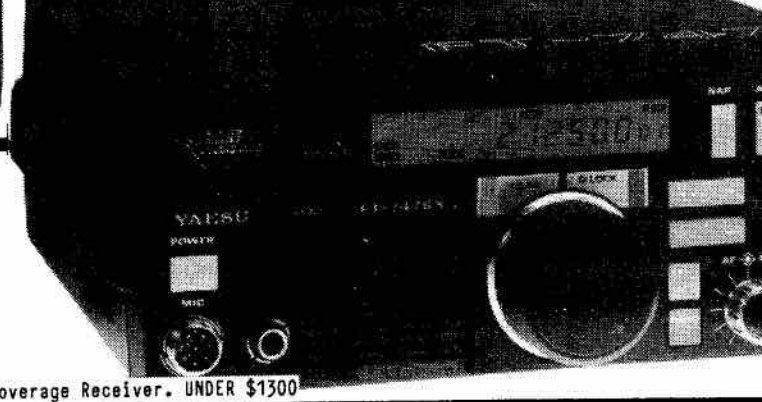

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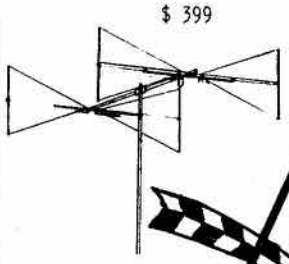

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Scotia Jamboree '87

BY VE1CJW

From July 4 to 11, 1987, the Boy Scouts of Nova Scotia held their second provincial jamboree, Scotia Jamb '87. The camp was held at Dollar Lake, the location of Nova Scotia's newest provincial park, about 20 km east of the Halifax International Airport. It was here that 1800 Scouts, leaders and staff experienced a week of sunny weather and exciting activities. Those activities included Amateur radio.

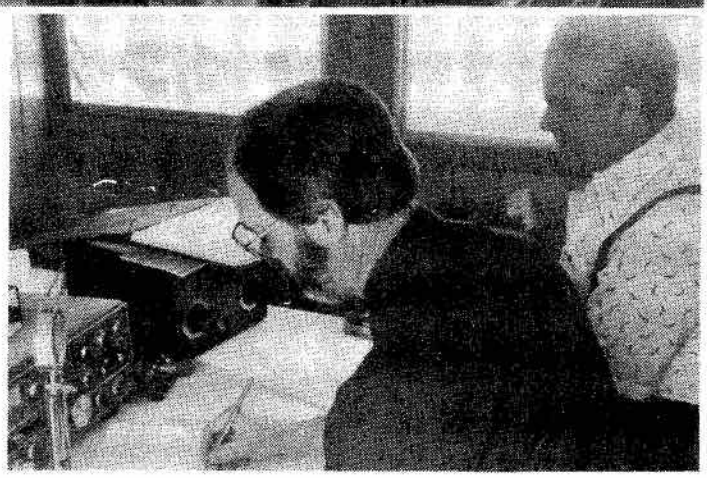
Long before the jamboree took place, Harley Grimmer VE1MX, Director of Communications for the entire event, contacted the Halifax Amateur Radio Club (HARC) and asked if the club would organize an on-site Amateur radio station/display. The club agreed to do so, with the result that VE1SNS (for 'Scouts Nova Scotia') operated from the Dollar Lake camp for the duration of the jamboree. Equipment was loaned by many individual hams and several organizations. The HF station consisted of a TS-520S, with both a 10-15-20 metre vertical and a G5RV for antennas. On VHF was an FT-221R with a reflected pyramid antenna. Besides CW and voice communications, packet operation was carried out on 145.01 MHz using a KPC-2 and the Nova Scotia Amateur Radio Association's Commodore 64 computer. The Nova Scotia Department of Lands and Forests loaned a large trailer to the HARC for the duration of the jamboree, and this vehicle proved an ideal location from which to operate.

The display consisted of more than just radio equipment. Plenty of information pamphlets along with donated issues of *The Canadian Amateur, QST* and other magazines were handed out to interested visitors—these items were supplied by the Halifax Club's 'New to Amateur Radio' committee. A battery powered code oscillator was available for Scouts and Venturers to try. The DOC supplied a number of copies of RIC's 24 and 25 and a few copies of TRC-66. Various posters showed information on such things as upcoming ham classes and a large world map was

Right: "MASH-COM", home to VE1SNS at Scotia Jamb '87.

Left: Scout at his campsite receiving a message from home.

Below: Paul VE1BZB and Scout filling out message forms.



Right: Bob VE1PQ (left) and Herb VE1ADA operating VE1SNS.

dotted with coloured pins denoting the locations our station had contacted.

The first on-site preparations for VE1SNS began on Friday, July 3. While Bob VE1PQ and I (VE1CJW) were stringing wire and cables we had a visit from Al 'Scotty' Bowman, a Scouter from Gloucester, Ont. Scotty gave us a hand with some of the wiring, and while talking with him, we learned that he is very involved with preparations for the 7th Canadian Scout Jamboree to be held in P.E.I. in 1989. One item planned for that jamboree is a low-power, FM broadcast station. As Scotty explained, however, a DOC-approved transmitter has yet to be found. If anyone reading this article has any leads for locating such a beast, please contact me so that I can get the information to Scotty.

Saturday morning saw Bob back at the jamboree site (I tented at the Dollar Lake camp for the entire week). The vertical antenna was put on the roof of the trailer. Radials were tied outward to nearby tentpoles. Hoisting the G5RV proved to be a problem. While there was no lack of tall trees from which the antenna could be hung, the trick was to get ropes over the high-up limbs. At a Scout jamboree of this size, however, one is never delayed for long. Soon the resident archers arrived on the scene, ready to shoot arrows (which were tied to light cord) over whichever tree limbs we desired! With the antennas up and the transmission lines routed neatly into the trailer, the station was ready to go.

Visitors began arriving almost immediately. One of the first guests was Al KA1CFA, a Scouter from Connecticut. During the jamboree Al dropped in several times to operate the station and explain ham radio to other visitors.

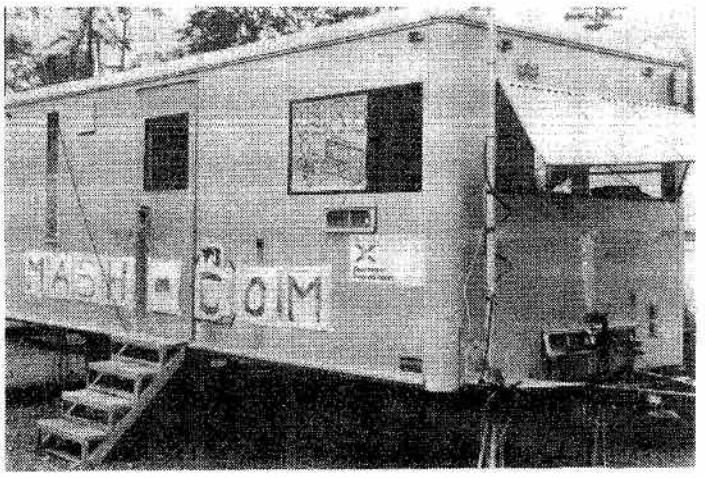
The week progressed pretty much as scheduled. From Monday to Friday, numerous ham arrived to man the display. This spread out the workload quite nicely. On Monday evening, as part of the Scout leaders' program, we gave an hour-long talk on what Amateur radio is and how it can be incorporated into a Scouting program. (I was surprised at the number of Scouters who had never heard of the Jamboree-on-the-Air.)

On Wednesday, Jim VE1CHI brought his whole HF station to the camp and set up shop in the open air beside his van and along the main thoroughfare. Having the gear outside like this caught the interest of many passers-by who might not have taken the time to stop into the trailer. Short-wave listening was something that the Scouts found very interesting (especially upon learning that they didn't need a licence to do it). We also passed messages— 25 of them were sent out to parents and relatives. Most of the out-of-province and out-of-country traffic was posted on the local VE1EI packet bulletin board, to be automatically forwarded to its destination. The Scouts' faces really lit up at the sight of the four incoming messages which we received and delivered to the boys at their campsites.

Several newspaper and television reporters visited the camp, and two of the papers did special stories on VE1SNS. The jamboree's own newspaper (which was printed on-site) ran several articles concerning our Amateur radio activities.

In all, 160 visitors signed the guest book. Most encouraging were the Scouts and leaders who dropped in repeatedly, some every day of the week. Over 200 contacts were made with various countries (one of the rarest being Equatorial Guinea, which Harley snagged only about half an hour after the DX group had gone on the air). VE1SNS proved very successful, and I was really encouraged by the genuine interest that many of our visitors expressed. I would certainly recommend the experience to anyone.

The following VE1's made Scotia Jamb's Amateur radio station possible. Many thanks to all of them: Herb ADA, Don AMC, Eddie BEW, Andrew BHO, John BIR, Stu BKM, Bernie BLM, Tom BSM, Fred BSY, Gord BXD, Paul BZB, Wayne CBK, Jonathon CBP, Tom CES, Jim CHI, Rob CHW, Dave EI, John FH, Brit FQ, Peter JI, Harley MX and Bob PQ. Special thanks go to Bob, who's assistance was vital to the success of the whole project. ■



Below: Bernie VE1BLM (far left) and Jim VE1CHI (seated at radio) demonstrating Amateur radio to passers-by.

Amateurs assist Canada Preparedness College

BY VE3ZS

For over a year now, Amateurs in the Ottawa area have been helping out at the Canada Preparedness College, Arnprior, Ontario. Arnprior is some 70 km west of Ottawa on the trans-Canada Highway and the college, or training centre, is located at an old WW II training airport at the edge of town where an old hangar has been transformed into a training establishment of lecture rooms, large training areas and offices. Adjacent barracks can accommodate some 100 students and instructors in comfortable individual rooms, while an excellent mess and lounge area takes care of them all.

Initially, members of the Ottawa-Carleton Emergency Measures Organization Amateur Group were asked to provide Amateur Radio services in simulated disaster exercises. As the activities, which take place in mid-week, developed, it soon became obvious that many Amateurs who had volunteered could not take part because of work commitments. This problem was soon solved by employing retirees— mostly ex-military or government employees with many years of communications experience.

Amateurs are assisting in courses that involve Emergency Operations and Emergency Site Management which are attended by 20 to 45 students each. Students are selected from across Canada— from St. Johns to Whitehorse and Windsor to Yellowknife, and are normally senior city and municipal officials (mayors, city managers, township reeves, etc. and senior police, fire department and public works, ambulance and health personnel).

Amateur activities primarily consist of handling written messages on two separate VHF circuits between three bases. These three simulated bases are each located in separate classrooms within the main hangar building and thus very short range— only a few hundred feet at the most.

Initially, CPC handheld transceivers were used but were found to be inadequate due to excessive power output resulting in intermodulation and cross-talk between the Amateur circuits and other transmissions simulating police and fire communications on adjacent frequencies— as can well happen in real life. Naturally the Amateurs all had their own 2-metre handhelds with them, so true Amateur operations were quickly put into effect with quiet, interference-free communications!

Amateurs are not considered as students at these courses but as members of the CPC instructional staff. They are expected not only to perform communication activities normally carried out by Amateurs in emergencies by passing written messages filed by students, but also to provide guidance to students on correct preparation of messages and the capabilities of Amateur Communications.

At present Amateurs are involved in 10 courses a year with activities taking place on Wednesdays and Thursdays. Usually Amateurs spend Tuesday night at the college to avoid an early morning drive from Ottawa, and return home on Wednesday evening. Comfortable accommodation is provided at the college or an adjacent motel. Meals— breakfast, lunch, dinner and a 10 p.m. night snack— are served cafeteria-style in the college mess— delicious all-you-can-eat meals. Coffee, tea and juice are available all day in the training area. A generous mileage allowance is paid for travel from and to the college.

Normally seven Amateurs are employed at each course. This provides adequate relief since some exercises run from 7:30 a.m. to 6 p.m. with an hour's break for lunch.

To date the following Amateurs have provided their services: VE3ANL, VE3CUR, VE3FM, VE3HZR, VE3KMR, VE3QA, VE3AUM, VE3CV, VE3FT, VE3JLC, VE3NT, VE3TL, VE3BAD, VE3EBI, VE3GIR, VE3JPC, VE3OWY, VE3YK, VE3CDC, VE3ELQ, VE3GUW, VE3KKU, VE3PAP, VE3ZS.

Many others have volunteered but have not been available at specific course times. ■

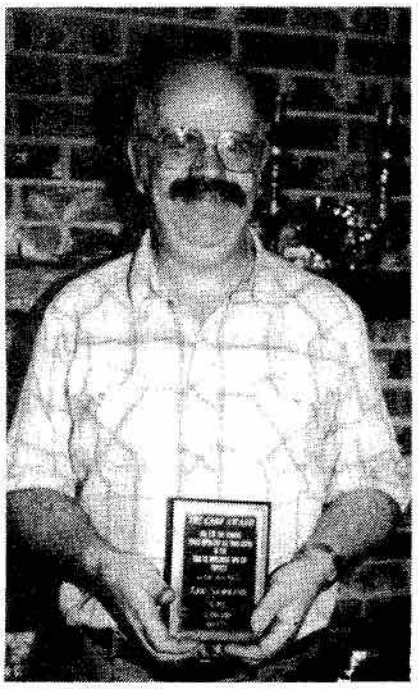
1986 CQ WW WPX Canadian Winner

Lee Sawkins VE7CC won the 1986 CQ Worldwide WPX CW Contest Canadian 'Single Operator All Band Entry' trophy award in the *CQ Magazine* event with a whopping score of 3,398,598 points. As trophy sponsor, CARF is proud to honour Lee (who used special prefix 'XL7' for his singular accomplishment. We apologize for not publishing this trophy award information sooner, but we had difficulty in making contact with Lee.

GAGNANT CANADIEN 1986 'CQ WW WPX'

Lee Sawkins VE7CC fut le gagnant du concours mondial '1986 CQ WPX CW' - Opérateur seul de toutes les bandes. Il s'est mérité le trophé gagnant du *CQ* magazine avec le résultat extraordinaire de 3,398,598 points.

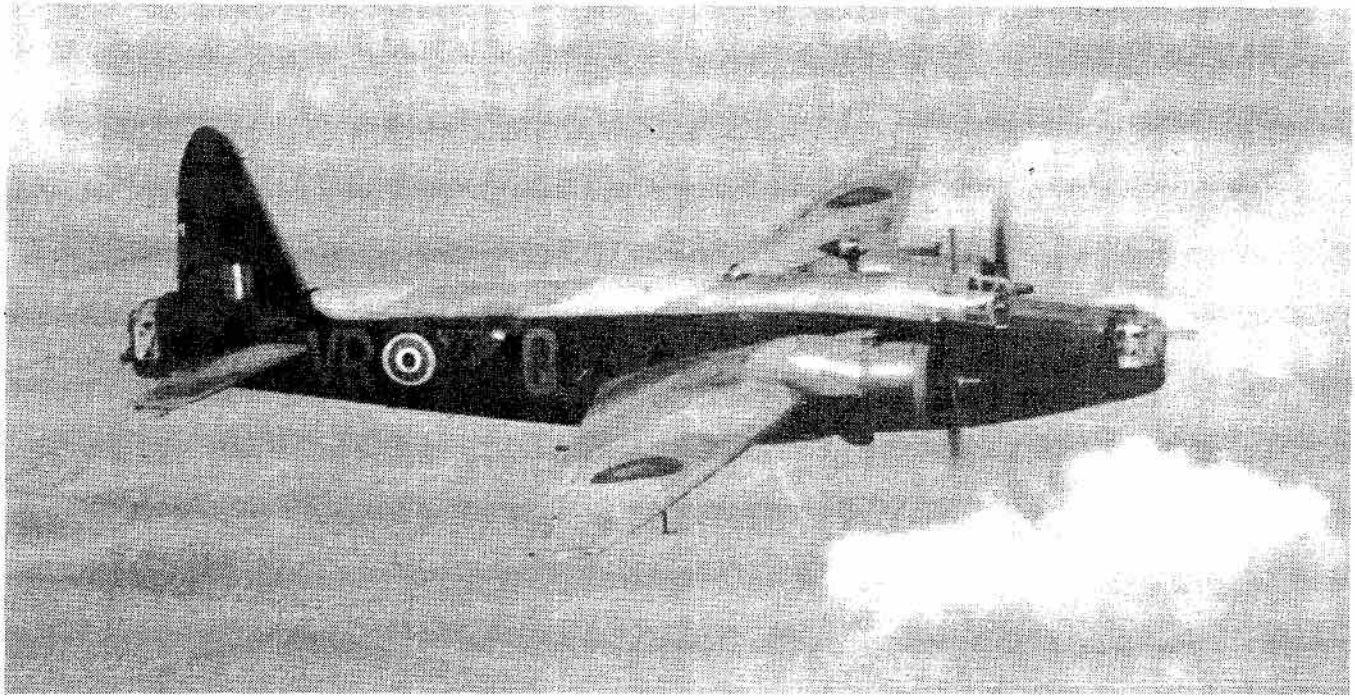
CARF, étant le commanditaire, est très heureux de féliciter Lee (qui utilisa les préfixes spéciaux XL7) pour sa réalisation singulière. On s'excuse de ne pas avoir publié cette information plus tôt, mais nous avons eu de la difficulté à rejoindre Lee. ■



Lee Sawkins VE7CC

Memories of 40 Squadron, 1944

Part 1



▲

VICKERS WELLINGTON MK III
No. 419 Sqn. RCAF
The Wellington served the Royal Air Force in many roles from the time of its introduction into the Service in October 1938, through the entire war period and on until 1953 when the last Wellington T10 trainer was withdrawn. Employing the geodetic form of construction, developed for aircraft use by Dr. Barnes Wallis, the Wellington was the backbone of Bomber Command in the early years of the 1939-45 War.
Wellingtons made their last operational flight with Bomber Command on the night of 8/9th October 1943, but continued to operate as bombers in the Middle and Far East until 1945. Many saw service with Coastal Command, while others were used for transport and photographic reconnaissance.

BY B.H. BURDSALL
VE3NB

F/S Hall and crew landed at Celone, Italy, airfield on March 10, 1944, having flown from El Aouina, Tunisia, in a Wellington that they were delivering from England via Gibraltar, Rabat, El Aouina, taking four days. The airfield at Foggia was under water, the landing at Celone was also a bit damp, it was raining and the mountains to the west looked forbidding. A truck picked us up with a few other crews and drove us to Foggia. This must have been an early evening arrival at the Sergeants Mess as we were told that supper was over, but we did get something to eat, I think it was cold soup.

On enquiring where our beds were, the Mess Sergeant had a hearty laugh and led us into a large classroom in a school. It was quite a large building but the centre has taken a bombing and only one side was usable, if that is the word. No facilities, no windows, a cold water tap and buckets for toilets.

"Take that section of floor fellows," this was for us Sergeants. The F/O, Doug Dovey, went someplace else, just as bad. Well, there were about 30 bodies in this place, some had rough beds or had pinched furniture from the empty houses in the town of Foggia. The heating was a 45-gallon drum with a pipe going out of a window, the others being boarded up. We burnt wood and had lots of fun pulling down window blinds and breaking up fittings for firewood. Other crews lived (?) in various rooms around. It was hard living and the floors were hard. I made a mattress out of a flying suit stuffed with anything soft. Alick Bridge found a nice sofa in one of the houses but found that a leg was missing so the front was propped up with a brick. It became fun to kick it when he was asleep and watch it collapse.

Food was chopped bacon and fried bread for breakfast, with tea. We would put on our flying boots, greatcoats (in lieu of dressing gowns) and get our food and go back to bed. No parades, just be there to fly. The airfield was about two miles from town. Don't remember washing much, I guess you stay warmer when dirty. The town was deserted, but slowly the Italians came back, hungry and suffering from pellagra and lack of

Continued on next page ►

vitamins. We did some trading using cigarettes, but we weren't that much better off.

Evenings when we weren't flying were spent sitting around keeping warm and talking, helped by a bottle of vino. There was a system for using the wood stove for making toast. We used to keep some bread from meals for this. We would sit in order, like waiting in a queue, and move up a seat at a time until we had our turn. This would take some time but what else was there to do?

Sometimes we would be rudely interrupted by some drunks coming back full of vino which was drunk like beer with sickening results. The crews would generally look after their own, get them into bed, water them, and act like mothers.

The living conditions weren't that good when you flew ops at night. The last food was supper time— 5-6 p.m.— and unless you made toast there was an empty gut feeling made worse by smoking too much. The thermos flasks on the Wellingtons had long since been stolen and I don't think we ever had any food or drink while flying. A big difference from Ops in England. No flying supper but we did get an egg and the usual fried bread and bacon after returning when we moved to the airfield in late April or May.

The move to the airfield at Foggia was anticipated. The Town was getting full of Italians and Americans. The Yanks had a wonderful PX with lots of goodies to drink and eat (but not for us RAF types).

So load up the truck and off we go to tent life. We took a school desk, wooden doors, tins, rolls of telephone wire, sounds like life in a POW camp, but they were needed. The tent held four men, one in each corner. As there were no beds or sheets issued we made a wooden frame and wrapped it around with telephone wire to make springs, and used a stuffed flying suit as a mattress. The results weren't bad. As the summer progressed it was often too hot to sleep when you had been flying at night and had landed as the sun was rising. What with debriefing, having a meal and trying to relax, it was hard sometimes to get enough rest.

The doors were used as a raised platform down the centre of the tent to keep our things off the ground, which was often wet from the sudden heavy rainstorms. Many a tent collapsed as the ropes tightened and pulled out the pegs, always to the amusement of others. The school desk was used to sit at while shaving and a 'Tin helmet' was used as a wash basin. There was no electricity available so I made oil lamps out of vino bottles. The bottom was removed by tying a petrol soaked string around the bottle at the point where you want, lighting it and then plunging it into cold water. If you were lucky there would be a clean break. A can of petrol and a wick and that is it... a smoky light which often got broken by a crew member coming home from a drinking party with other crews. Those tent ropes were a hazard to a drinking man.

The Foggia airfield was shared with other squadrons and also the American B17s, the 15th Airforce. I believe there were about nine Squadrons in the RAF 205 Group in and around Foggia (104 & 150 Squadrons).

Generally where the Yanks went in the day raids, the RF went at night. The Yanks used to visit us and looked in wonder at the scruffy fabric of the oil-soaked Wimpys— no way they would fly in a thing like that. We used to visit them and looked at the beautiful Flying Forts, lots of room, lots of guns, sure we would fly in them. Still we liked the Wimpy, it flew well, took a lot of hard knocks, caught fire very easily, but that is all we had... no choice.

WASHING

From a cold water tap in the school at Foggia we went to three jerry cans of drinking water in the tent brought around every couple of days by a water bowser. This was all and had to do for the four Sergeants. It was difficult to keep it cool during the hot summer. We rigged up a crude shower and were able to keep our shirts and shorts clean enough.

For a good shower we had to walk a couple of miles to Foggia which had a municipal shower and bath building for the public. I am sure most of the Italian houses did not have a bathroom. We would get washed and then have a cup of tea and a bun at the WO & Sgts. Mess. We got most of our clothes washed by the daughters of an Italian family where we would share a bottle of vino and try our language on them. Payment for washing (or sex) was with soap, cigarettes and any other goodies we might get from home. The Australians got some lovely fruit cakes and I would get some good Canadian stuff— but I think that cigarettes were the main item of exchange. The winter and spring diet gave many of us boils— big, bad ones— so bad I went to hospital for treatment as did the rear gunner, Terry. Finally we swapped our liquor ration with the Yanks for decent food. Summer brought fruit and nuts, but the RAF issue food was nothing special. We were issued 50 free cigarettes a month, in addition we could buy 'V' cigarettes (made in India— tasted like cow dung).

We had day trips to the Adriatic at Manfredonia for sand and swimming and a week's R&R at Sorrento across the bay from Naples. We stayed in hotels by the beach and swam in the warm sea when we weren't drinking and chasing women. There were many women with no incomes, husbands dead or POWs, destitute and with hungry children or older folk, all glad to do something or other to get food, soap and cigarettes. They would sing for the drinking troops at the cafes; it was a rough time for everyone.

THE HOODO TENT

I must tell you about the 'Hoodo tent', a sad story but it shows the fears of many men on ops.

Very close to our tent was another similar one and we would visit the crew living there. Now the first five ops are the worst for mortalities, after that one learns a lot and you can relax and look around and think more clearly. The last few are bad as you really are uptight about staying alive.

Well, this particular tent had about five crews who, one after another, failed to return, some died and others made it back via the partisans in Yugoslavia. This was bad for squadron morale, so a match was put to the tent and away it went, taking its curse with it.

Now I am not superstitious so, before the burning, I looked around the tent and saw a folding metal bed, a primus stove and a new pair of desert boots... no point in letting them go to waste so, as the pilot Jack Hall needed a new bed, we surprised him by setting up this new one. I put on the new boots and we had a primus stove for cooking. I thought it was great until Jack returned and learned the truth. Out went the bed and the stove. "No dead men's belongings here," he thundered. I kept quiet about the boots and wore them on many operations, telling the crew only when our tour was over and expounding about the nonsense of superstitions. Jack became very violent toward me and had to be restrained by the other crew members.

It was well known that many aircrews took mascots with them on ops and would not fly until they rushed back to their billets to retrieve the missing talisman. Not that I was fearless by any means. I have had 'Ring Twitter' and many a cold sweat... but to each his own.

MORALE

Morale, as I remember it, was okay, we didn't fear going out at night too much. I think that surviving in the poor living conditions kept us so

Continued on next page

MEMORIES *(cont'd)*

preoccupied that we had less time to worry than aircrews in the U.K., where living conditions were comfortable and the large numbers in the messes for NCOs and Officers made one aware of other people's fears.

Our crew, Jack Hall's, was a happy one, few irritations and we went on leave and partied as a unit. The one problem, which the RCAF tried to eliminate, was that of mixed crews— officers and NCOs. This caused problems for us, not in the air, but as a unit, as Doug Dovey was an F/O and later Jack Hall was commissioned as a P/O, so going into clubs as a group was difficult at times.

However we were saddened by crews we knew failing to return and of course we said, as many have, "this won't happen to us," and that attitude was a must.

We didn't have any parades on the Squadron in Italy so we dressed any way we liked. Going in to big city of Foggia or Bari, Naples & Sorrento on short leaves we tended to smarten up a bit and wore our wings and rank, but our job was to fly and that was it.

GOING ON OPS... THE CREW

Pilot: Jack Hall F/Sgt Commissioned on Squadron, RAAF; Navigator, Doug Dovey F/O, RAF; Bomb Aimer, Alick Bridge F/Sgt Commissioned on Squadron, RAAF; Wireless/Air Gunner, Bernard Burdsall (aka Bern) Sgt., F/Sgt, commissioned on Squadron, RAF; Rear Gunner, Terry Briggs Sgt, RAF.

We were on 40 Squadron from March to September 1944 and completed 37 or more operations, depending on crew member. The Wellingtons operated very well. We had few mechanical problems, a defective tail wheel, probably due to crews pissing on it too much, the odd engine failure.

The success of our crew was due to luck and training. The skill of the navigator must be of a high order when lying at night with very little in the way of radio aids and weather forecasts. This was the case across the Balkans and Doug Dovey was excellent. Jack, the pilot, had complete faith in Doug (as we all did). He was 'bang on' every time. A former bank employee, he had failed as a pilot and was in hospital from a crash and then remustered as a navigator.

Jack the Pilot was calm and collected. Some of his landings made us wonder, but he assured us he was a pilot.

Alick Bridge, the bomb aimer was also a skilled map reader and would sit in the co-pilot's seat and help with landings and take offs. He did not go into the front turret, as did some bomb aimers. That was useless as night fighters approached from the rear and once you were locked into the turret the only way out in a hurry was to bail out, probably into the propellers.

Bernard Burdall (Bern) was the Wireless/Op gunner. Trained in RCAF schools, he was a 'washed out' pilot from U.S. flying schools. He had the advantage at wireless school as he was an Amateur Radio Operator or 'Ham' and he knew radio and morse code from pre-war.

MY DUTIES AS A WOP/AG ON 40 SQUADRON WELLINGTONS

Monitor the base radio frequency for any messages or recalls. (Sent in morse code at around 15 wpm.)

Take radio bearings of the Navigator from various beacons.

Set up the beam on the meter for the pilot in his cockpit.

Relieve the Gunner in the rear turret, generally on the way home.

Keep an eye on the 24 Volt battery charger.

Man the Astrodome and keep a good look out. This seemed to be the main and most important job.

Drop 'nickels' or leaflets through the flare chute. The packets of leaflets were larger than the diameter of the flare chute so we had to rip them apart to throw them out, otherwise the packet would have got out unopened and a lot faster.

Keep an eye on petrol gauges which were on the starboard side near the radio operating position.

The radio was a Marconi T1154 transmitter and a R1155 receiver with a motor generator power supply. The antennas were a fixed wire which ran from a short mast to the tail, and a long trailing steel wire with lead weights on the end which was used mostly with the long wave DF station.

That was another job to do before landing— reel it in, otherwise who knows what might get caught up in it.

In the early days it was necessary to throw out parachute flares to see what was below on the ground to get a target fix. This necessitated unstrapping the flare from the main spar, dragging it to the flare chute, unscrewing the top cap, removing the time deadly fuse and making sure it was set correctly, then replacing the fuse, putting on the cap and attaching the lanyard. When given the word I would throw it out of the chute and the lanyard would pull off the cap allowing a small propeller to spin and activate the firing pin. We hoped it would be far away before 250,000 candle power lit up the night sky. The photoflash was done the same way over the target when the cameras were in operation. Later the photoflash went out automatically when the bomb aimer operated the cameras.

Sometimes the engines ran low on oil and the WOP got to man the manual pump until the red warning light went out. I can remember going back to the petrol tank valves which were near the main wing spar and waiting until the engines quit one by one as the main tanks went dry, closing them off and opening up the emergency nacelle tanks, giving us about a half hour or so to land somewhere.

The flare chute was a round pipe about 12 inches in diameter that could be extended out from the starboard side of the aircraft into the slip stream. It was not left out in case of damage and also it affected the handling of the plane a little (as did the moving of the rear turret which acted as a small rudder).

Had we had tea, coffee or food on any of these trips (and we never did as all the thermos flasks had long since been stolen and the cook house was closed) I am sure the WOP/AG would have been serving it to the crew on a 'Tray RAF Aircrew for the use of...'

Oh Yes... get rid of that box of four lb. incendiaries over the target area as quickly as possible— dangerous things. I always felt better when they and the bomb load had gone, especially when we were carrying that thin-cased 4,000 lb. bomb.

Terry Briggs, the Rear Gunner, was trained only for this job which he did very well. This was a cold lonely spot but a very important one.

The most important thing when flying, even in peace time, is to keep your eyes open and look and look, and this is what was done by this crew. The Navigator lived inside at a table with the necessary lights, but the rest of the crew looked out into the night. After take-off, the W/OP AG would connect the radio receiver output, which was tuned to the base frequency, to the intercom system and then he would go to the Astrodome, face to the stern, hang on the hand ropes, feet on the oil and other tanks and look from port to starboard covering 180 degrees. This, together with the Rear Gunner's view and that of the Pilot and Bomb-Aimer up front, gave fairly good coverage.

CONTINUED NEXT ISSUE

TECHNICAL ARTICLES

The Canadian Amateur welcomes technical articles. Please send them to the Technical Editor, Bill Richardson VY1CW, RR1, Site 20, Box 63, Whitehorse, YT Y1A 4Z6.

Department of Communications Roles and Responsibilities

The activities undertaken by the Department of Communications relate to the following objectives: the development of policies, programs and cooperative arrangements that achieve Canada's social and economic objectives for communications and culture; the fostering of the orderly development and operation of communications and culture for Canada in both the domestic and international spheres. In this regard, the department's activities may be divided into two main spheres or sectors: policy information and radio frequency spectrum management.

More precisely, with respect to its regulatory responsibilities, the department seeks to improve and extend communication services available to Canadians and to increase the availability of and access to Canadian cultural products and activities.

The policy sector of the department, through its Telecommunications Policy Branch, develops policies for achieving optimum utilization of the radio frequency spectrum to meet the varying and conflicting needs of users, and develops policies for affecting the structure of the telecommunications industry in Canada.

Through its International Relations Branch, the sector develops policies to project national objectives into the international telecommunications fora in order to establish an international regulatory environment compatible with those objectives.

The Broadcasting and Cultural Industries Branch develops policies, legislation, strategies and programs in the area of broadcasting and associated delivery technologies including new content services. In the areas of film, video and sound recording, its responsibilities include the formulation of policies, strategies and programs with emphasis on production, distribution and marketing of cultural products. In the publishing field, it develops policies, formulates objectives and design and administers programs with special regard for measures to encourage the creation, publishing, marketing and distribution of Canadian authored books, periodicals and electronic publications.

The spectrum management sector, through its three branches and the Department's Regional/District Offices, plans and implements the regulation of the radio frequency spectrum.

The Broadcasting Regulations Branch analyzes, evaluates and certifies the technical aspects of broadcast and cable TV applications, and regulates the technical operation of all approved broadcast spectrum with neighbouring foreign countries. In addition, in consultation with the Canadian Radio-television and Telecommunications Commission, other departments, the broadcasters, the electronic manufacturing industry, and domestic and international agencies, it assesses the needs of the broadcast and cable TV industry, develops technical standards, procedures and broadcasting regulations, and promotes technological developments.

The Radio Regulatory Branch develops radio licensing regulations, policies and certain radio standards and procedures. It processes all applications for General Radio Service (GRS) radio licences and, except for broadcasting stations, issues licences and collects renewal fees for Amateur, coast, earth, land, mobile, and private receiving and space radio stations. It coordinates proposed radio frequency assignments with foreign administrations, processes applications and issues licences for certain space radio services, national and government requirements. It also notifies all Canadian radio frequency assignments requiring international protection to the International Frequency Registration Board, a permanent organ of the International Telecommunications Union (ITU), a specialized UN agency. The branch participates in the development of the ITU Radio Regulations through preparation for and attendance at ITU World and Regional Administrative Radio Conferences.

The Engineering Programs Branch is responsible, in cooperation with other sectors of the department, for the development of technical standards, procedures, policies, frequency plans and sub-allocation plans for radio systems for all types of non-broadcasting radio systems (land, marine and aeronautical mobile, satellite, microwave, radar-radio navigational and remote control devices). Equipment standards, procedures and frequency plans ensure that the radio spectrum is used efficiently, that 'state of the art' technology is employed and that telecommunications systems used to provide different services operate without causing interference to each other. The branch participates in the development of international standards and regulations in international fora such as the International Telecommunication Union, and negotiates spectrum sharing and other necessary bilateral or multilateral arrangements with other countries, principally the United States.

Additionally, the branch, through the work of the Terminal Attachment Program Advisory Committee, a provincial and federal government industry carriers' and users' working group, revises voluntary technical standards and procedures for the testing certification of telephone terminal equipment to be attached to the public switched-telephone networks where permitted by regulation.

The primary legislative authorities for departmental activities are to be found in the Radio Act, the Broadcasting Act, the Department of Communications Act, the Telegraph Act, the National Transportation Act, the Telesat Canada Act, the Railway Act, Part II and III of the Broadcasting Act in relation to the Canadian Radio-television and Telecommunications Commission and the Canadian Broadcasting Corporation, the Canada Council Act, the National Library Act, the National Arts Centre Act, the National Museums Act, the Public Archives Act, the National Film Act, the Cultural Property Export and Import Act and the Canadian Film Development Corp. Act. ■

JRSD FUND

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

·CQ DX·CQ DX·

Paul Cooper VE3JLP
RR 2 Metcalfe Ont.
K0A 2P0

THE PERFECT QTH?

Readers may remember my musings on this subject in the November issue of *The Canadian Amateur*. There must be one DXCC country in the world which would be the best place to operate from in terms of minimum distance to all the other DXCC countries. I suggested that someone might like to write a program to grind through all the number crunching necessary to come up with the answer. Imagine my delight when fellow columnist John Connor VE1BHA, who writes 'Contest Scene' for *TCA*, approached me at the last meeting of the Ottawa ARC with an envelope full of background material and calculations and the definitive answer to my question.

John obviously has a good memory, as he recalled some relevant material in the April and June 1984 issues of *The DX Bulletin*. It all started with the complaints of KL7Y that nobody appreciated the difficulty of working DX from Alaska. He had done some rough calculations based on how many countries were within one, two and three 'hops' of Alaska versus the one, two and three hop figures of L.A., New York, Chicago and London, England. A 'hop', by the way, is considered to be 4000 kms. Alaska showed up very badly, proving his case rather effectively.

The idea was picked up by VK3QI who wrote a program to calculate the number of countries within 1, 2, 3, 4 and 5 hops of all DXCC countries. This was a pretty massive listing that filled nearly three pages of the *DX Report*. The editor, in his introduction to the tables, wondered if someone might not take the final step of assigning point values to each of the ops and thus calculating the best and worst locations for working DX, on a worldwide basis. Strangely enough it looks as though nobody bothered to take this last step, so an overall ranking was never published. Never published until now, that is! John Connor has taken the final step and passed on to me the highlights of his mathematical analysis.

For those of you who are interested, John allocated 5 points each for 1 hop countries, 4 points for 2 and so on to 1 point for a 5 hop country. While these values might be the subject of argument (is it twice as difficult to work a country 4 hops away as one only 2 hops distant?), I think there should not be any argument about the general validity of the approach.

So what do the calculations show? Let's start from the very bottom and look at the ten worst locations in the world:

ZL8— Kermadec Island,
A3— Tonga,
ZL7— Chatham Island,
ZL— New Zealand,
ZK1— Cook Islands,
VK9 & VK0M— Norfolk and MacQuarie Islands,
ZL9— Aukland and Campbell Islands,
FW & KH8— Wallis & Futuna Is. and American Samoa,
FK— New Caledonia,
3D2— Fiji.

The interesting thing here is that I'll bet many readers would instinctively plumb for some remote Pacific Island as the ideal place for a DX QTH. The call sign might very well attract a lot of attention but in terms of working everywhere else in the world you would actually be in one of the worst possible geographic locations!

Well what about the other end of the list, where we would all want to locate our shack? The list below continues to ascend, so the very last country listed is the ultimate location, and there will be a few chuckles when you see which one it is!

EA9, YA, 3A— Ceuta, Albania and Monaco,
C3, DL, HB, HBO, HV, I, SV and 1A (You all know where these are!),
LX, T7— Luxemburg and San Marino,
4U— ITU, Geneva,
FC, SV/A— Corsica and Mount Athos,
EA6— Balearic Islands,
IS— Sardinia,
3V, 7X— Tunisia and Algeria,
9H— Malta,
5A— Libya.

Ironic, isn't it, that the head of the list should be occupied by a country that has been lukewarm, to say the least of it, towards Amateur radio. Of course there was the very successful QRP operation from Libya last year. However I got the impression, from the reports in the *DX Newsheets*, that not many North Americans were fortunate enough to get through to him. 5A remains pretty high on most people's wanted country list and it's likely to remain that way until Colonel Kaddafi has a change of heart!

Before leaving this fascinating subject, John also passed on to me a more detailed listing showing the figures for seven Canadian cities. Here they are, again in ascending order of merit:

Vancouver
Reginia
Edmonton
Winnipeg
Montreal
Quebec City
Halifax

I'd always wondered why those Maritime DXers seemed to do so well, now I know the reason.

DX NET LIST

Last September I mentioned a very comprehensive listing of DX Nets which was available from Dieter Konrad OE2DYL. He has just dropped me a line to let me know that the 7th edition of his publication is now available. It contains information on more than 100 nets, neatly arranged in groups covering daily nets and weekly nets, in the latter case arranged by the day of the week. If you find DX nets useful in your search for the rarer ones, I can certainly recommend Dieter's publication. The price is $3 (U.S.) or 9 IRCs. Do *not* send cheques or money orders; they cost an arm and a leg to cash in Austria! Order with a SAE to 'Dieter Konrad, Bessarabierstr. 39, A-5020 Salzburg, Austria.'

BAND ACTIVITY

Reg VE1BNN wrote to me in November with some useful comments on band activity. He has been spending quite a bit of time on two of the new WARC bands, 18 and 24 MHz, which he says are lots of fun. He points out that almost everyone is operating barefoot using wire antennas. This means that you are on an even footing with most other stations, there is little QRM, the QSOs are friendly and there is even some DX on. A friend of his, VE1YX, reports 50 DXCC countries in two weeks on 24 MHz. He calls the present situation on these bands "a well kept secret" as very few VEs seem to have discovered them yet.

He has also been very active on 28 MHz where he reports DX galore! He is surprised at the number of DX stations he has heard calling CQ with little or no pile-up. How about these easy pickings: KH6JEB/KH7, 3X0HBR, FR4DL, 9Q5NW, T26BKY, TA3C, OD5, SV5, J28, SV9, VP8, ST5, ZC4, T30, KH3, A35, H44, 9J2, TJ1 and 3B8.

I'll quote Reg's letter on 10 Metre conditions now: "What makes it easy is the lack of 20M lids, the lack of the gross, unruly pile-ups that 20M is famous for. Being barefoot is much less of a drawback. Openings tend to be narrower in scope. When 5H3 is loud on the East coast often it's one or two hours later before it peaks inland, meaning you compete against a smaller group in the pile-up. So don't

forget 28 MHz where you indeed get more for less."

DXCC GOLDEN ANNIVERSARY AWARD

Talking to fellow DXers over the last year I've found a lot of interest in the ARRL's special award for 1987 only. You will recall that the idea was to work 100 DXCC countries during the course of the 12 months. Not too difficult a challenge when you realize that friend VE2ZP worked over 120 countries in the course of one weekend recently, during the CQ WW Phone Contest.

Recognizing this, a number of the Northern California DX Club members decided that they would shoot for as many countries as possible during the year.

Their magazine has reported on the leaders, so far anyway, who are AE6H with 267 and K6DT with 213 respectively. I think I'll draw a veil over how my own life-time DXCC total compares with these figures for 12 months only, and at the bottom of the sun spot cycle too!

9 BAND DXCC

Another item from *The DXer* the magazine of the NCDXC: The club has instituted a new club award, work 100 DXCC countries on each of the nine HF bands. The club has decided that no QSLs will be required and any mode is acceptable. In this way they are putting a new challenge before their members without violating the present gentlemen's agreement that these bands should be kept free of contests and the normal verification of QSOs by means of a card. It makes good sense to me.

Club members will be actively chasing contacts on the new bands but the casual listener will never realize it! Using an honour (or should I say 'honor' in this case?!) system for contacts is an old favorite of mine. All those frantic postal perambulations just to get a pretty card for your collection, to say nothing of the expense involved with IRCs. How much better to rely on the basic honesty of the average ham. Anyway, what possible satisfaction can the cheater get from his inflated claims, he knows which ones he really didn't work.

DX STAMP SERVICE

Since we seem to be stuck with the current system of having to get a card for proof of a contact, a good way of getting a reply to your QSL requests is to enclose a stamped and addressed envelope. Easy when it's going to another VE, not too difficult if it's going to the States, if we remember to buy some stamps each time we are down in the U.S. However what about

The VE4ZN QTH. The extension on the house contains the new ham shack. Frank did all the work except the foundations.

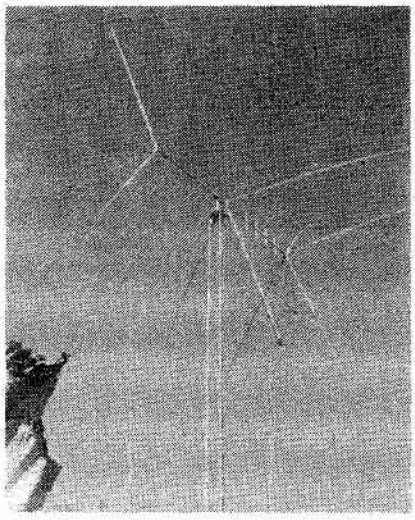
when it's going to Yemen or Turkey, for example? Most of us just look up the table in the Callbook and send IRCs. This can be very expensive with each IRC costing over a dollar now in Canada.

How nice if we could send the appropriate *local* air mail stamps on our return addressed envelope. Well this can now be arranged if you write to Ron Wolfgang WP2ADC, asking for his DX postage stamp price list. You should send Ron a 40¢ (U.S.) SASE and by return you will receive a comprehensive listing of all the stamps available. They are all a lot cheaper than buying IRCs and he has stamps for some quite exotic locations including places like Laos, the two Yemens and Angola. (We should all be so lucky!) Typical prices of stamps for places you are more likely to have worked includes D4— $1.20, OY— $1.40, P2— $1.30, T7— $1.30 and so on. Ron's address is 'DXers Postage Stamp Service', P.O. Box 8851, Trenton, N.J. 08650-0851 U.S.A.

BITS AND PIECES

YA AFGHANISTAN— The DX Column of *Sovjetski Patriot*, a magazine published in the U.S.S.R. (With a name like that where else could it be published?!) details three stations we can all look out for. YA1AA at 1800 UTC on 14.075 MHz (QSLs to RB4HA), UB5TCF/YA 1700 UTC on 20m SSB and YA1AP with daily skeds with UZ4FWA at 1930 UTC on 14.170 MHz. As Bob Winn says in *QRZ DX* WFWL!

SO, WESTERN SAHARA, RASD— Readers will remember the item in last month's column about the DXpedition to the Western Sahara. This is not, at the moment, a DXCC country



Well-known Winnipeg DXer Frank Lay VE4ZN's 3-element quad. There are two driven elements 135 degrees out of phase. That is a 5-element 2 metre quad on the bottom, too.

although my latest information is that the DXAC will be voting some time in the middle of December on whether to add it to the list. Two Ottawa area DXers, VE2ZP and VE3VN, had a frustrating time trying to work the SO group but some statistics in *QRZ DX* suggests that a lot of other enthusiasts were more fortunate. Apparently a total of 11,864 contacts were made with the geographic distribution looking like this:

AREA	QSOs
U.S.A.	4554
Europe	4764
Japan	1264
S. America	990
Others	292

Continued on next page

From the Clubs...

George Morgan VE3JQW
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Ottawa K1V 7G6

Slim pickings this month. Most of the bulletins I received were prepared early in the Fall and reflected the fact that most Amateurs and clubs had been enjoying well-deserved summer holidays. Things should pick up next month, however.

Here are a couple of items, though, that you might find of interest.

The October special illustrated issue of *Hot Bananas*, published by the Oakville ARC, is really impressive! It will bring back a lot of memories years from now.

Bill VE3LFV writes in the Windsor ARC's *Groundwaves* that there was "...a great turnout for the 1987 running of the Boy Scout Apple Day. This yearly event raises tens of thousands of dollars for the area Scouting movement, and enables hundreds of area Beavers, Cubs, Scouts, Venturers and Rovers to attend camps throughout the year.

"This year was a success again, with hundreds of boys from the Windsor District Scout Council taking part, and it was all brought together by Amateur Radio. This was the third time that we have provided communications, and again a big salute to the club comes from area Scout leaders.

"From the main distribution point and several regional depots, area Scouts went door-to-door and were stationed outside major retail outlets with their apples and tags. Amateur Radio was able to immediately report back to HQ any needed supplies and from there vans were dispatched with the necessary apples, donation cans, tags or other supplies. The apple 'day' was actually held on Thursday and Friday evenings, and all day Saturday, Oct. 15, 16 and 17.

"A big round of applause and thanks to all who participated during this event and an added thank you to those involved with the annual Jamboree-on-the-Air, which happened to fall on the same weekend. VE3WBS was on the air handling Apple Day traffic and also participated in JOTA on 40 metres."

EDMONTON TORNADO

If you recall, I mentioned that while I was out west I heard no mention on radio or TV of Amateur radio participation in the Edmonton tornado disaster. Well, as we all know by now, Amateurs did play an important role, even if they received little public credit.

In his report on Amateur activity, Dick VE4HK from Winnipeg writes that "... it was almost impossible to phone into the city (Edmonton) because of storm damaged and severely overloaded telephone lines... The Manitoba Red Cross decided to use alternate means of dispatching inquiries to Edmonton. One of the primary means was via Amateur radio... (It) was undoubtedly the best system since we were able to transmit an inquiry message to Edmonton within an hour of (its) being phoned in."

Dick also mentions that some publicity was received: "Two local TV stations and one local newspaper filmed, photographed and interviewed us. One interesting sidelight is that conditions were so good on Saturday, one television reporter interviewed the Director of the Edmonton Red Cross over 20 metres."

Dick adds that "...one crowning achievement was introducing the Edmonton Red Cross to Amateur radio. Apparently, they had never heard of hams." ■

DID YOU KNOW?

The abbreviation that Amateurs use for 'and', 'es', comes from the landline telegrapher's code which is different from the International Morse Code? (That is, in North America it's the same as in Europe.) The 'es' we use is actually a single 'spaced' character in the landline code, more commonly written '&'. It is sent in the same manner we use on the air.

Tnx NPARC

Send letters and comments to Box 356, Kingston, Ont. K7L 4W2.

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

WANTED: Wireless set no. 19 equipment and accessories. Especially looking for power amplifier and pocketwatch. I am willing to buy and/or trade equipment. Please write to Chris Bisaillion VE3CBK, 91 Varley Drive, Kanata, Ont. K2K 1H5.

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

FOR SALE: MFJ-752B Dual Tunable SSB/CW Filter Signal Enhancer $75. Please contact Sigi Bernhoff VE3IDA, 15 Sandwell Cres., Kanata, Ont. K2K 1V2. Tel. 613-592-0172.

FOR SALE: Johnson Viking Match Box with Directional Coupler and Manual. $30. Heathkit SWR Meter W/Manual $10. Heathkit VTVM W/Manual $50. ICOM 2 metre mobile Model IC 230 W/manual $200. Commodore 1526 Printer, hardly used, like new $175. Vic 20 Complete W/AC Adapter cables, etc. $30. V.H. Baker VE3ANX, RR4 Warkworth, Ont. K0K 3K0 705-924-2819.

WANTED: Drake RV7. Contact Barrie Greenwood VE3ADA, 416-253-0708 or 416-253-0709.

Please send your 'Swap Shop' notices to the The Canadian Amateur Swap Shop, Box 356, Kingston, Ont. K7L 4W2. Single insertion is $1.00 minimum (10 words) and $1.00 for each additional 10 words. To renew, send copy and payment again. Please print or type, and put your membership number and call (not counted) at the end of your ad. Include your full address with postal code; if using a phone number, include the area code. The Canadian Amateur accepts no responsibility for content or matters arising from ads. This feature is for the use of members wishing to trade, buy or sell personal radio gear. It is not open to commercial advertising.

DX *(cont'd)*

KH1, BAKER and HOWLAND ISLANDS— Something to look out for in March. Jim Smith VK9NS is planning a DXpedition to the American Phoenix Group, KH1. Planning seems well advanced although Jim is still looking for another four operators to join the group. They hope to stay on the island(s) for about eight days, which should allow them to whittle down the pile-ups! Jim reports that the islands are uninhabited, except for birds, and have little shade or cover. Living conditions are expected to be fairly unpleasant, but there should be all kinds of excitement on the bands, of course. Watch future columns for more information on this DXpedition.

Thanks are due to the following sources for some of the material appearing in this column: OE2DYL, VE1BNN, VE1YX, VE1BHA, KL7Y, VK3QI, *The DX Bulletin, The DXer, Long Skip,* VK9NS, VE2ZP, VE3VN and *QRZ DX.* ■

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LOOKING AROUND

Art Blick VE3AHU
P.O. Box 356,
Kingston, Ont. K7L 4W2

This column is the outgrowth of a statement made within the past few months to the effect that "CARF was an entrepreneural society until 1984 but, since then, has been run as a business."

Having been directly involved with the Federation during the period 1967 to 1984, I can quite frankly state that: I hope CARF will continue to be managed by entrepreneurs! The definition of such is 'a person, or person, who successfully organizes and develops a business or corporation'. The function of the Executive is to give initiative and leadership and that of the President to exercise arm's length control. Too much control stultifies the initiative and leadership of the Executive and can result in the organization becoming a 'one-man' type; too little control can result in chaos with each member of the Executive considering that he, or she, can go off on tangents without prior consultation and/or approval by the other members of the Executive.

The affairs of CARF, when it was founded, were entrusted to a temporary Executive consisting of Jim Roik VE4UX, President, and Jim Couprie VE4CS, Secretary, with the later addition of the late Jim Strain VE3BSG as DOC Liaison officer. This temporary arrangement continued until 1969 when the two Jims resigned for personal reasons. Not wishing to see the new Federation fold up, the Executive of the Radio Society of Ontario, with the approval of the other five provincial members of CARF, assumed trusteeship of the organization for two years and appointed myself as President, Len Herrington VE4QL as Vice President, Ken Rolison VE3CRL as Secretary, Bert Titmarsh VE3FPJ as Treasurer and Jim Strain VE3BSG as DOC Liaison. In 1971, CARF had the backing of nine provincial societies and the trusteeship ended. The next Executive had two changes— Peter Smith VE3DEX as Treasurer and Doug Burrill VE3CDC as DOC Liaison.

The Executive that I headed from 1969-77, and succeeding Executives, worked to establish and develop CARF as the Canadian national Amateur Radio organization with adequate personnel and financing to carry out this role, to inform the Amateurs of news and affairs concerning our hobby, and to provide services to members.

The total annual income of the Federation, in 1970, was less than $1000 and it was apparent that adequate financing could not be obtained from only provincial members. The main thrust was to reorganize CARF as an individual member society but this had to be accomplished in stages. In 1972 CARF was incorporated with a federal Charter and reorganized to admit individual Amateurs as Associate and Amateur Radio clubs as Affiliate members. In 1975 a second reorganization took place that gave a nine-person Board of Directors with six Regional Directors elected by the full individual members and three Directors-at-Large elected by the provincial members. The final reorganization occurred in 1981, when Bill Wilson VE3NR was President. It gave the Full members full control of the organization.

Until 1973, CARF produced a monthly newsletter for the information of the provincial organizations and that was reproduced in *VE News* published by Rowland Beardow VE3AML. To attract individual members, and to keep the Amateurs informed, the decision was made to publish a national magazine and the first edition of *The Canadian Amateur* was circulated to 260 individual members in January 1973 under the editorship of Gill Stevens VE3BBQ. Gill became a Silent Key in the summer of 1973 and was replaced by Steve Campbell, present production manager of *The Canadian Amateur*. Subsequent Editors were Doug Burrill VE3CDC, 1976-80; Cary Honeywell VE3ARS, 1980-84; Frank Hughes VE3DQB, 1984-87 and George Sansom VE3LXA, 1987-.

Individual membership grew from 260 to 1500 in 1975, 3000 in 1977 to 5000 in 1981 where it remained until 1984. By 1977 CARF had an established, manned, HQ Office (1976); was producing several publications (Regs Handbook, 1970; Certificate Study Guide, 1975; Advanced Study Guide, 1976); a Central QSL Bureau (1973) that developed the present CARF Outgoing QSL service; Contests and Awards; services to individual and affiliated members; and representation to DOC, FCC, CRTPB (now RABC) and CSA.

Up to 1977 the President also performed the function of the General Manager. With the increasing administrative workload, these positions were split with the provision that the General Manager and treasurer would be directly responsible to the Board of Directors, not to the President. John Henry VE2DNM was President; Fred Towner VE6XX, Vice President; Joan Powell VE3FVO, Secretary; Bernie Burdsall VE3NB, Treasurer; and myself as General Manager. This Executive initiated the meeting with the Minister of Communications where discussion took place on the need for control of importation and distribution of Amateur equipment to limit illegal usage, need for enforcement of Regulations (this was the period when GRS was skyrocketing!), the possible introduction of new classes of Amateur certificates, the inclusion of an Amateur in the Canadian delegation to WARC 79, and the need for a channel of communication between the Amateurs and the DOC.

This latter resulted in the first National Amateur Radio Symposium, convened by CARF at the request of the DOC, in Ottawa on Nov. 26 and 27, 1977. It was attended by representatives of 30 Amateur organizations, ranging from Newfoundland to British Columbia, plus briefs and papers from 30 sources. DOC was very pleased with its results and requested your national Federation to make this an annual affair with the location changed each year. This request was approved and National Symposiums have been a feature of the Canadian Scene for the past ten years.

John was unable to continue as President after a one-year term and was replaced by Bill Wilson VE3NR, who served for three years. Changes were made in the Executive during this period including Don Slater VE3BID, Vice President; Don Emmerson VE3KJW, Secretary and Lorna Hill VE3IWH, Treasurer. Highlights included working with DOC on the preparation of the Canadian Amateur position for WARC '79 and approval of the late Bud Punchard VE3UD as the Amateur member of the Canadian delegation; reorganization of CARF to individual membership control in 1981; the formation of CARF Publications Ltd.; the production of Administrative and Organizational Procedures of CARF; and the initial request to DOC that the Canadian Amateur Radio Service be restructured (1980).

Don Slater VE3BID became President in 1981 for a three year term that saw Walter Stubbe VE7EGR, Doug Burrill VE3CDC and Ron Walsh VE3IDW, selected as Vice Presidents and Dave Goodwin VE2ZP as Secretary.

Development of publications and services continued with strong

Continued on next page ►

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

CONTEST SCENE

Greetings for another month, fellow nuts— oops, sorry, I mean contesters. I know that we are all perfectly sane; it's just that I keep getting really strange looks from people when I try to explain this contesting business to them.

This month we have some preliminary results from the CQ CW Contest, a look at the upcoming ARRL DX Contest, and some news about the Commonwealth Contest.

First, four scores from last November's CQ WW CW Contest. VE1CYL went 20M monoband, and racked up 1720 QSOS, with 31 zones and 80 countries. Also on 20M, VE2ZP tallied 1100 QSOs with 30 zones and 87 countries. Out in St. John, Andy VE1ASJ put in a very strong performance, with 2178 QSOs and 122 zones plus 326 countries in the single operator all band category. That should be good for about 2.3M, just short of the record. Last but not least, the multi-single crew at VE2LJ rapped out about 2775 QSOs for about 2.5M points from the wilds of Zone 2. Look for VE2LJ next year in the single operator category. Kent's had enough of freeloading operators.

Mark your calendars for the upcoming ARRL DX Contest. As always, the CW portion will be on the third weekend of February, and the phone portion is on the first weekend of March. The rules are very simple. Work only DX stations, and count three points for each QSO. The multiplier is the sum of DXCC countries worked per band.

I have attempted to sort out some Canadian records for this contest, and they are presented here for reference. A few of these look like they wouldn't be too hard to better. In particular, no one has yet done a very serious multi-operator, two-transmitter effort since this category was introduced in 1983.

Lastly, in a brief conversation with Al G3FXB recently, we got to talking about the Commonwealth Contest. I am glad to report that it is alive and well, and is scheduled for the second weekend of March. This used to be a very popular and enjoyable contest, and I would encourage everyone to get on for an hour or two and make a few QSOs. Don't forget to show your support by ending in your log. The rules are reproduced in full here.

That's about it for this month. With the coming of Spring, I hope to do a little bit of travelling around VE3-land to take some pictures of some of the bigger antennas that are sprouting up in the area. If the owners don't set the dogs on me, I hope to have some pictures to share with you. Till next month, 73.

COMMONWEALTH CONTEST RULES

Date: 1200Z March 12, 1988 to 1200Z March 13, 1988.

Categories: Single band or multi-band.

Bands: 3.5, 7, 14, 21 and 28 MHz, using the lower 30 kHz of each band. CW only.

Exchange: Work other British Commonwealth stations, except those in your own call area. Send RST and a serial number.

Scoring: Five points for each QSO. In addition, a bonus of 20 points may be claimed for the first three contacts with a Commonwealth call area on each band.

Logs: Separate log sheets for each band. Show GMT, callsign, report sent and received and points claim. Unmarked duplicates for which points have been claimed will be penalized ten times the number of points claimed, and logs containing in excess of FIVE duplicates will be disqualified. Logs should be received by April 11, 1988. Send your logs to HF Contests Committee, Alan Gray G4DJX, PO Box 73, Lichfield, Staffs WS13 6UJ, England.

COMMONWEALTH CALL AREAS

The following call areas are recognized for the purpose of scoring in the Commonwealth Contest, 1988.

A2	Botswana
A3	Kingdom of Tonga
C2	Nauru
C5	Gambia
C6	Bahamas
G/GB/GD/GI/GJ/GM/GU/GW	UK
H4	Solomon Is.
J3	Grenada
J6	St. Lucia
J7	Dominica
J8	St. Vincent
P2	Papua New Guinea
S7	Seychelles
T2	Tuvalu
T30	W Kiribati
T31	C Kiribati
T32	E Kiribati
V2	Antigua, Barbuda
V3	Belize
VE1	Maritime Provinces
VE1	Sable Is.
VE1	St. Paul Is.
VE2	Prov. of Quebec
VE3	Prov. of Ontario
VE4	Prov. of Manitoba
VE5	Prov. of Saskatchewan
VE6	Prov. of Alberta
VE7	Prov. of Br. Columbia
VE8	North West Territories
VK1	Aust. Capital Territory
VK2	New South Wales
VK3	Victoria
VK4	Queensland
VK5	South Australia
VK6	Western Australia
VK7	Tasmania
VK8	Northern Territories
VK9L	Lord Howe Is.
VK9M	Mellish Reef

Continued on next page ►

► LOOKING AROUND *(cont'd)*

representations, made jointly by CARF and CRRL, to DOC on need for changes in the Canadian Amateur Service. A low point, for myself, was the unfortunate auto accident that occurred on return from the CARF Executive meeting in February 1984, that ended my direct involvement with CARF affairs.

The 'stamp' that these Executives left was the present organization of CARF, and establishment and development of services and the national publication.

One of the most frequent queries these days concerns the state of Restructuring of the Canadian Amateur Radio Service.

The latest information is that the Department of Communications expects to start work on this project early in 1988 and it should take at least six months, possibly 12 months, before the proposal would be published in *The Canadian Gazette*. No priority has been assigned as yet, and the lengthy period of gestation is required as regulations have to be changed, new RIC-24 and RIC-25 have to be published and new examination books have to be prepared. Quite probably, a series of meetings between officials of DOC and Amateur organizations will be held to review and amend those documents.

This column has commented several times on the proposed Restructuring of the Service. In my opinion, restructuring is needed to again stimulate growth in Canadian Amateur numbers and ensure our continued existence and well-being. As the Service is regulated internationally and federally, Amateurs will find it necessary to cope with the increasing pressure on the frequency allotments and to work with DOC, etc., on administrating the Service. ■

CONTEST *(cont'd)*

VK9N	Norfolk Is.
VK9X	Christmas Is.
VK9Y	Cocos (Keeling) Is.
VK9Z	Willis Is.
VK0	Heard Is.
VK0	Macquarie Is.
VK0/VP8/ZL5	Antarctic
VO1	Newfoundland
VO2	Labrador
VP2E	Anguilla
VP2K	St. Kitts, Nevis
VP2M	Montserrat
VP2V	British Virgin Is.
VP5	Turks & Caicos
VP8	Falkland Is.
VP8	S. Georgia.
VP8	S. Orkneys
VP8	S. Sandwich Is.
VP8	S. Shetland
VP9	Bermuda
VQ9	Chagos
VR6	Pitcairn
VS5	Bruni
VY1	Yukon
VU	India
VU7	Laccadive Is.
VU7	Andaman & Nicobar Is.
YJ	Vanuatu
Z2	Zimbabwe
ZB2	Gibraltar
ZC4	Cyprus (UK Bases)
ZD7	St Helena
ZD8	Ascension Is.
ZD9	Tristan da Cunha, Gough Is.
ZF	Cayman Is.
ZK1	Cook Is.
ZK1	Manihiki
ZK2	Niue Is.
ZK3	Tokelau
ZL0	New Zealand
ZL1	New Zealand
ZL2	New Zealand
ZL3	New Zealand
ZL4	New Zealand
ZL7	Chatham Is.
ZL8	Kermadec Is.
KL9	Aukland & Campbell Is.
3B6/3B7	Agalega & St. Brandon
3B8	Mauritius
3B9	Rodriguez Is.
3D2	Fiji
3D6	Swaziland
4S	Sri Lanka
5B4	Cyprus
5H	Tanzania
5N	Nigeria
5W	Western Samoa
5X	Uganda
5Z	Kenya
6Y	Jamaica
7P	Lesotho
7Q	Malawi
8P	Barbados
8Q	Maldives
8R	Guyana
9G	Ghana
9H	Malta
9J	Zambia
9L	Sierra Leone
9M2	W. Malaysia
9M6/9M8	E. Malaysia
9V	Singapore
9Y	Trinidad & Tobago

GB5CC RSGB HQ STATION

Packet Profiles Directory

BY MARSH JEANNERET VE3EMJ

Packet radio appeals to different operators for entirely different reasons, which is exactly as it should be. This is to announce preparation over last summer of a new kind of directory planned to facilitate identification of operators according to their various interests, whatever these may be. It should make possible more efficient use of air time (specifically, VHF packet) and add to the pleasure and usefulness of QSOs between operators who might not otherwise know they share common experiences and interests. Each entry in the directory will be descriptive, supplying wide-ranging information about participating operators (only) including their principal packet interests, their hobbies and interests apart from Amateur radio, personal data, normal operating hours and preferences, BBS checked regularly for mail (if any), equipment used, etc.

Who is invited to participate? Basically every last packet operator in Ontario who reads this announcement and is interested enough to follow the procedure for requesting and returning a questionnaire. Returns will also be welcomed from interested Amateurs in neighbouring states and provinces and from Amateurs who intend to join the packet ranks soon but are not yet operational. The directory may later be expanded to serve a yet wider area, but at this stage of packet development too extended a coverage could be more confusing than useful, especially on VHF. In short, the purpose of 'Personal Packet Profiles' is to answer the question, "Who is out there?" for the many operators who would like to know.

Please note that *neither the questionnaire nor the resulting directory* will normally be distributed by packet radio. To procure a copy of the questionnaire please send an SASE (at least 9"x 4") to the following address (no covering letter needed): Marsh Jeanneret VE3EMJ, RR 1 KING CITY, Ont. L0G 1K0.

A copy of the questionnaire will be sent to you as rapidly as the mails permit, and the directory itself will be announced in various ways when it is published later this year. It will be issued in hard copy only, on a non-profit basis, priced to cover mailing and out-of-pocket costs, including future revisions. Filing a completed questionnaire now carries no obligation to purchase the directory later. Please watch for further announcements on packet radio; in the meantime it will not be practicable to acknowledge copies of questionnaires completed.

There will be no further effort to coax anyone to request a copy of the questionnaire, nor to complete one. Indeed, Amateurs not interested in a descriptive directory of this kind should NOT ask for the questionnaire now; the purpose is to produce a useful list, not just a big one. But those who would like to have access to this kind of directory and to participate in its development are warmly invited to request a copy of the questionnaire at this time by sending an empty SASE as explained above.

The University of Toronto conferred the degree of Doctor of Laws on Marsh Jeanneret when he addressed its convocation on June 17. Marsh has been an active radio Amateur for more than 30 years including packet radio recently. Until he retired in 1977, he was director of the University of Toronto Press, and was appointed an Officer of the Order of Canada in 1978. ■

CANADIAN RECORDS ARRL DX CONTEST

PHONE

CATEGORY	CALL	SCORE	YEAR
10M	VE3BMV	564,750	1981
15M	VE7IN	491,892	1981
20M	VO1SA	643,560	1987
40M	VE3MFA	9,963	1984
80M	VE2DZE	5,358	1981
160M	VE1YX	12,696	1984
MS1	VE6WQ	1,929,216	1978
MS2			
MM	VE3FHO	1,580,302	1969

CW

CATEGORY	CALL	SCORE	YEAR
10M	VE3KKB	94,185	1982
15M	VE3BMV	201,051	1982
20M	VE6CB	41,022	1985
40M	VE2ZP	38,613	1982
80M	VE1AXT	14,784	1981
160M	VE3INQ	1,596	1987
MS1	VE6OU	1,462,500	1981
MS2	VE1CR	43,281	1983
MM	VE5US	701,325	1970

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

QRP

Cancel that request for a CW rig for my motorcycle mentioned in an earlier column. Present plans being formulated in the hospital while recuperating include a 2M handheld which can be adapted for CW operation on my bike next summer. Mail during December has swamped me including Amateur radio-grams, cards and phone calls. As a result of an unfortunate encounter with an automobile while on my motor bike, I have been unable to answer all of your letters as quickly as I would like.

MORSUM MAGNIFICAT

From Tony G4FAI comes the latest copy of the above publication being volume 5 comprising 52 pages and can be ordered as mentioned in previous issues of *The Canadian Amateur.*

VE/QRP NET

Operations this past while have been curtailed on my behalf for obvious reasons. This did not stop Hart VE6BRY from installing a battery operated ICOM R71A in my hospital room less than ten days after the accident Nov. 13 (the luckiest Friday of the year.) Hart has also seen fit to leave his 2M handheld with me to continue my QRP activities. Reproduced here is the info contained with the antenna that Hart erected in my hospital room for HF. He used two of these in a horizontal configuration resting on the rails carrying the bed curtains. Prices start at $42 rising to $52 for the 80M whip.

BOOK REVIEW

Adrian W0RSP has sent me a copy of his recent book *History of QRP in the U.S. 1924-1960* being some 200 pages and will be reviewed in depth in the very near future. His generosity would indicate copies of his future endeavors will no doubt become available as they are published, and will also be reviewed here.

CERTIFICATES OF THANKS

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

MOVING?

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

GLEANINGS

Bob VE6AAO writes to say he has become interested in QRP to the point

he has joined the Australian group mentioned in an earlier column.

Also received a letter from Tom WB8UUT, who is the editor of *The Five Watter* which is the Michigan QRP Club Newsletter (T5W). Besides including their membership information, he has asked for news about the VE-QRP activities for publication in T5W. Now would be a good time for all those interested in a unique Canadian QRP logo design to submit their ideas to *The Canadian Amateur.* Remember the QRP ORGs 1810, 3560, 7030/40, 10106, 14060, 18106, 21060, 24960 and 28060, 24 hours per day plus 14060 and Sunday at 1900 VTC plus or minus QRM.

Hope you all received your new QRP gear at Christmas and will follow up with a full report of your activities. My column this month has been prepared by the staff at Neworld Communications in Edmonton and our son Murray. ■

TECHNICAL

Technical Editor:
Bill Richardson VY1CW
RR 1, Site 20, Box 63
Whitehorse, YT Y1A 4Z6

BLY QRP Transmitter

Quite a number of readers are wondering by now how to get on QRP when their transmitters do not tune properly under low power. Here is the answer to your prayers, will not cost you more than ten packs of coffin nails, and by radiating less wasted power (for you to absorb) may even extend your visit here so... Quick Reduce Power. This three transistor rig was built some years ago to supplement a 6146 driven by a 12BY7. It was constructed using a 3560 kHz crystal because of the QRP activity there. The less expensive colour burst crystal on 3.579545 can be used just as easily. Keeping the cost down may not give you the same satisfaction, but you can confirm it works then buy the other crystal or build a VFO!

PARTS LIST

A full kit of parts except crystal, was available at one time from Circuit Board Specialists, Box 969, Pueblo CO 81002. Most sources in Canada stock all items or will obtain them from their centrally located warehouses in a week or ten days. The following list is for an 80M transmitter and can be changed to 40M or 20M bands by eliminating C5 and consulting Table 2 for coil winding data and parts substitution.

CONSTRUCTION

Using the foil pattern shown actual size in Fig. 3 keeps our job at minimum effort yet simple (how could I manage otherwise?). If you choose breadboard or hodge-podge style just try to keep all leads short and don't bunch up the input and output of the amplifier transistor Q2. Pay particular attention to bypass capacitors that their leads are short and not crossing other components or are too close. Watch any RF leads and coupling capacitors, so that they too are direct and as short as possible. If you use toroid cores that do not have smooth rounded edges, be very careful when winding them that the enamel does not peel from the wire. Coils are wound as follows:

L1 - 43 turns #28 enamel on T50-2 toroid core.
L2 - 5 turns #28 on top of L1.
L3 - 21 turns #22 enamel on T50-2 toroid core.
RFC - 21 turns #28 enamel on FT37-61 toroid core.

THEORY

Looking at the schematic of Fig. 1,

TABLE 1
BLY QRP TX PARTS

C1— 400 pF mica trimmer.
C2— 100 pF polystyrene.
C3, C4— 820 pF silver mica.
R1— 39 ohm ¼W 5%
R2, R6— 4.7 K "
R3— 10K
R4, R5— 220 ohm "
R7— 1K "
C5— 200pF poly.
C6— 470 mFd 25v electrolytic.
C7 - C12— .1 mFd 50V disc ceramic.
Q1— 2N2222. Q2— 2N3553*
Q3— 2N4036
* See text for heat sink application.

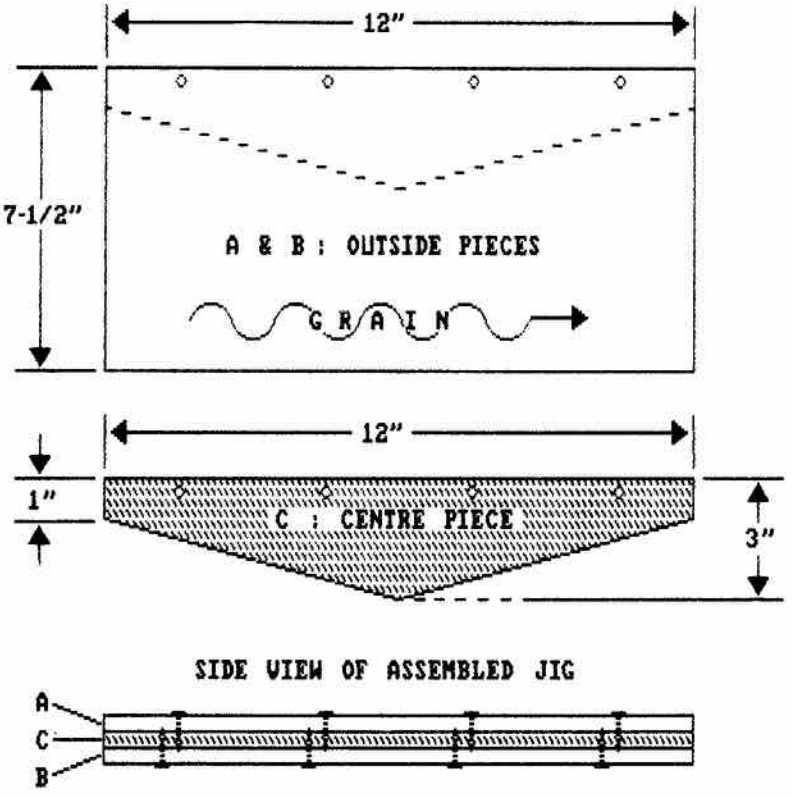
Tower work made easier

BY ROBERT DICK VE3BD

The following idea resulted when I had to repaint my tower. Standing on tower rungs for the time necessary to accomplish this painting is very uncomfortable and when discomfort reaches a severe enough level, can even be dangerous.

Brackets were built to the diagram shown. Dimensions might have to be changed for individual towers, but the idea is the same.

Material required for three jigs is as follows:
6 pieces - ¾ x 7½ x 12.
3 pieces - ¾ x 3 x 12.
The jigs should be nailed with spiral nails 1½" long.



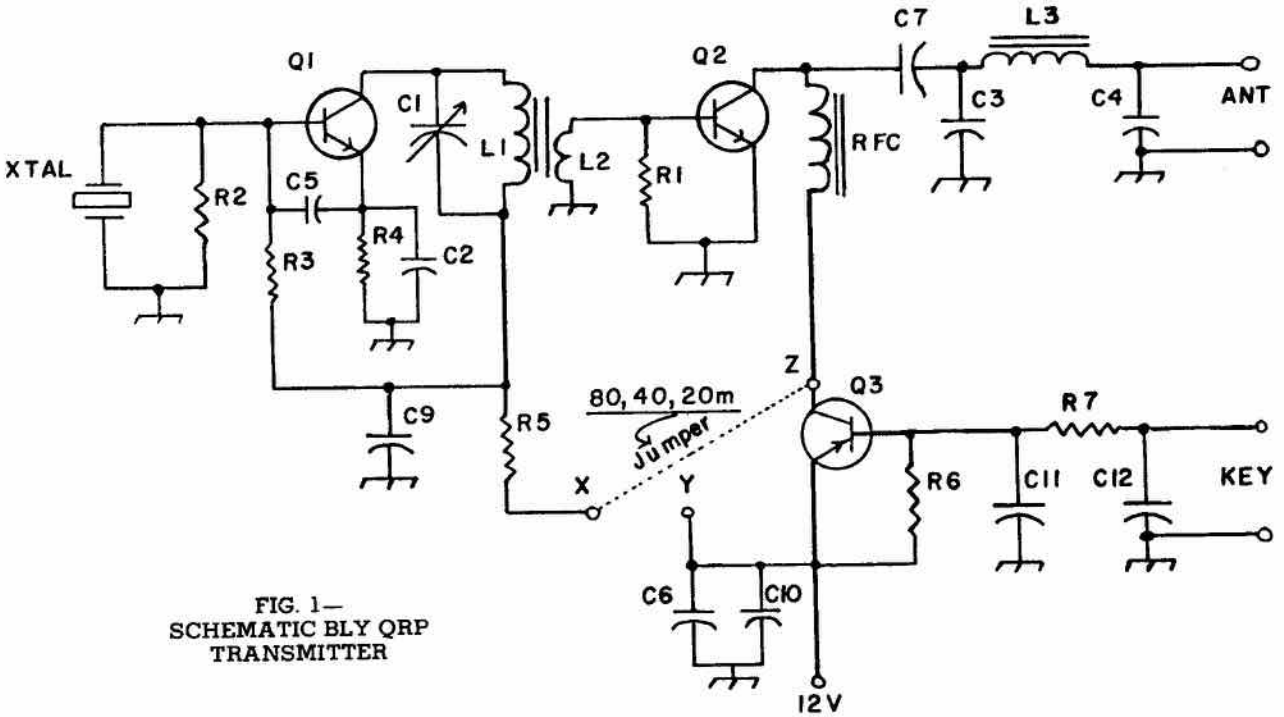
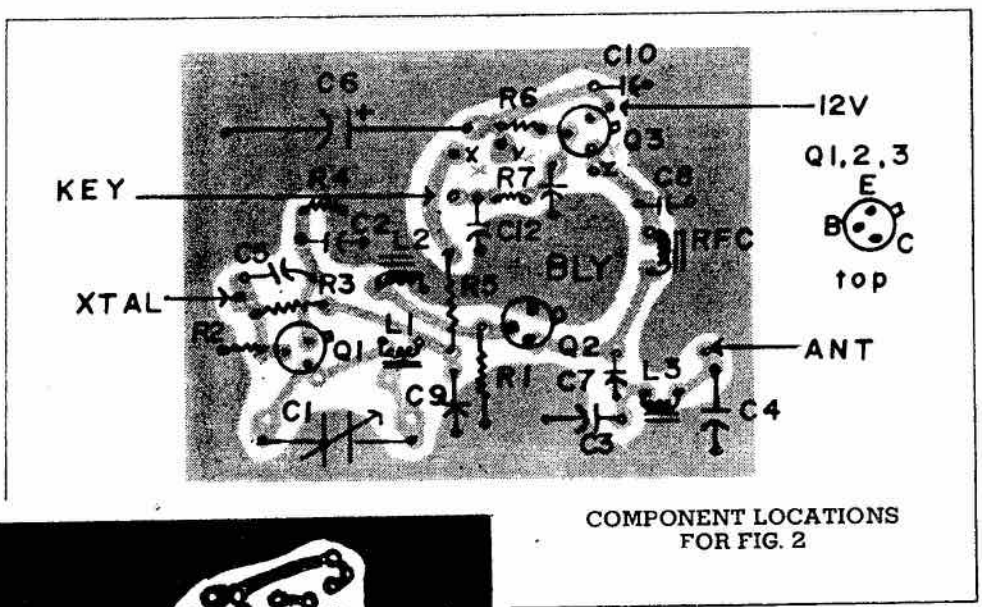


FIG. 1—
SCHEMATIC BLY QRP
TRANSMITTER



COMPONENT LOCATIONS
FOR FIG. 2

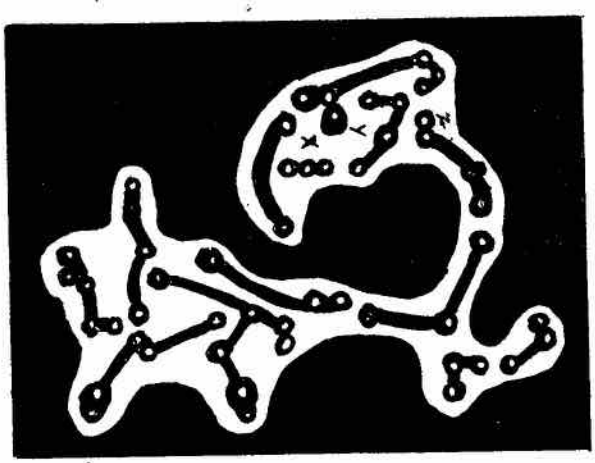
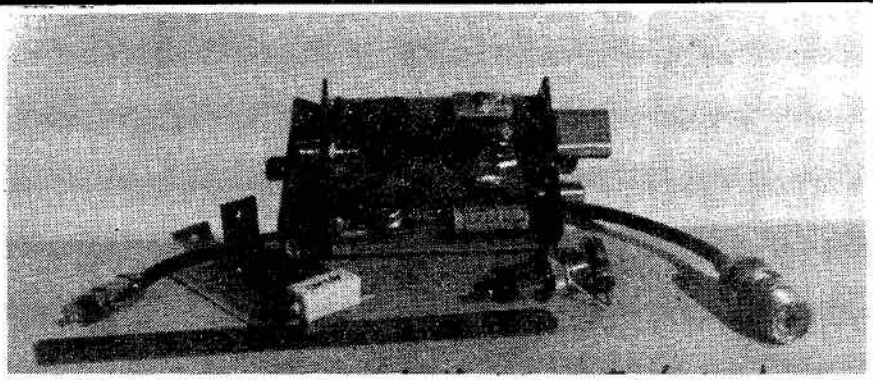
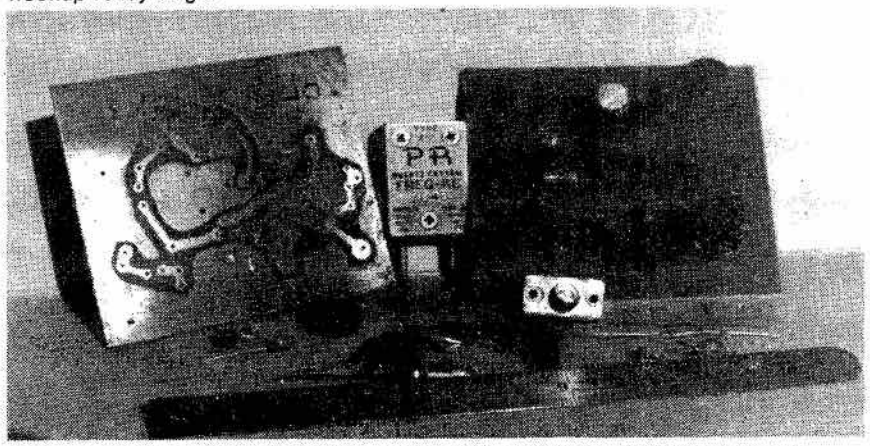


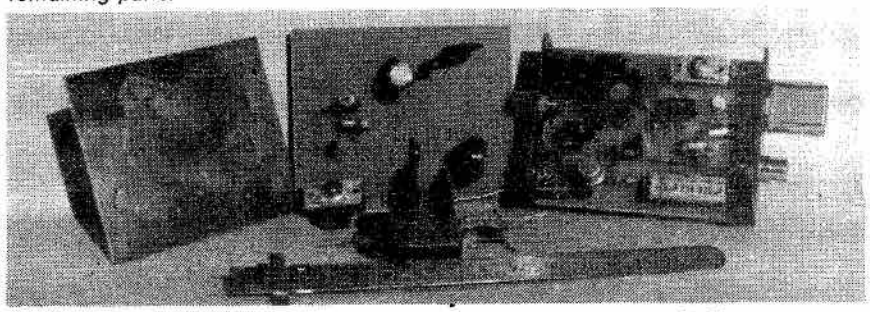
FIG. 2—
COMPONENT SIDE
BLY QRP TRANSMITTER



3560 kHz rig, tested okay, with PS regulator on left and DL lower right, with AC hookup ready to go.



Left, spare PCB; centre, 7040 kHz crystal; right, partially assembled PCB and remaining parts.



Left to right: Extra PCB, PCB and parts for 40M (7040), 80M (3560) Tx.

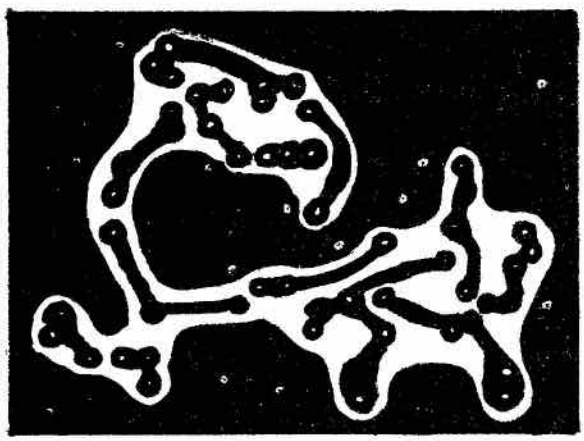


FIG. 3— FOIL SIDE, ACTUAL SIZE

we see an oscillator (Q1) with a tuned collector whose output feeds the amplifier (Q2) which in turn is coupled through C7 to a 50 to 70 ohm antenna. The pi-network C3-L3-C4 presents a low pass filter effect to reduce harmonics. DC is kept off of the oscillator and amplifier by Q3 acting as the switch. This way, until pressing the key and grounding the base resistor, no current is flowing from the battery.

TESTING

Use 6-8 volts (camera, lantern or flashlight batteries work fine) as your initial source of power— you may observe an error and not blow something. Remember, nothing works without smoke, but only if you don't let it get outside any solid state chip. Once you have established a green light in all systems, then and only then apply full 12 volts. If you anticipate running wide-open using the car battery of 13.8 volts it would be advisable to place a heat sink on Q2, using a strip of aluminum or store-bought type. Make certain your antenna is resonant for the QRP frequency before trying to work what you hear. Mine worked the first time using two instant-film type batteries into a 3560 vertical (no transmatch). The station worked was Pat KN7B in Mulino OR some years ago and he gave me 6529. If you think your output might be low or you have measured it to be under one watt then increase the number of turns on L2 and try some more.

FINAL RESULTS

For those of you selecting the 20M version, we would like to hear you on 14060 every Sunday at 1900 UTC. Listen for Des VE3ABT or Rick VE7FOU as net control or jump in if you don't hear them and be net control yourself. Then at 2300 UTC Sunday on the same frequency, listen for Roger W5LXS, NCS for TCN. See the last issue of *The Canadian Amateur* for other net listings, but don't stop there. Call CQ on any QRP frequency any time. ■

TABLE 2
BLY QRP TX 40M & 20M PARTS

	40M	20M
RFC	20 turns #28 enamel on FT37-63	30 turns #28 enamel on FT37-63
R1	39 ohms	47 ohms
C1	180 pF	60 pF
C2	100 pF	33 pF
C3, C4	470 pF	210 pF
L1	35 turns #26 enamel on T50-2	27 turns #24 enamel on T50-6
L2	4 turns #26 on L1	3 turns #24 on L1
L3	14 turns #22 enamel on T50-2	12 turns #22 enamel on T50-6

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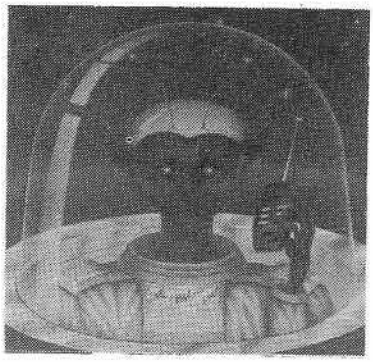

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