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OPERATING AIDS

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Satellite Experimenter's Handbook	16.00	14.50	540	.75	<input type="checkbox"/>

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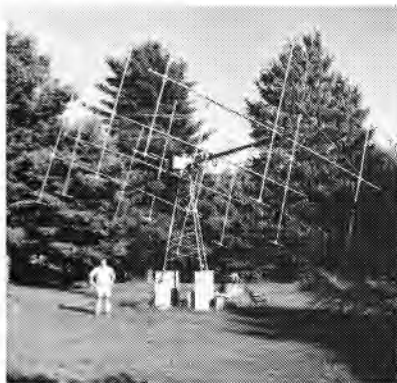
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ABOUT THE COVER

Twelve 14-element Jr Boomers! It's Don Waters, VE2DFO's 2-metre EME array. Thirty feet wide and twenty feet high, this "monster" puts out a potent signal from FN25. (Photo courtesy VE3DSS)

It Seems to Us... /Il nous semble...

Amateur Radio's Biggest Threat?

Over 40 years ago, a group of non-profit organizations identified the benefits of forming a single organization to advise the government on the technical issues associated with radio communications. They got together and formed the Canadian Radio Technical Planning Board (CRTPB).

Over the years, the CRTPB's membership grew to include associations representing virtually all those interested in radio. Member-associations generally fall into two groups: users of radio such as broadcasters, telephone companies, utilities, land mobile operators and radio amateurs, and manufacturers of radio and other electronic equipment. A few years ago, the CRTPB changed its name to the Radio Advisory Board of Canada (RABC).

RABC works through various technical committees to address current issues such as use to be made of various radio frequency bands, radio equipment standards, and electromagnetic compatibility (EMC). These committees also prepare replies to *DOC Gazette* notices that solicit comments on various issues.

The EMC Committee is concerned with interference matters. It deals with methods of controlling unwanted radiation from products that can cause interference to radio communications. It also deals with susceptibility of products—especially consumer products—to strong electromagnetic fields created by nearby transmitters including amateur.

The EMC Committee is of great interest to us and, for the past several years, Bill Loucks, VE3AR, and I have participated in its activities on behalf of CRRL. Following the decision of the trial judge in the Jack Ravenscroft case, RABC formed an Immunity Subcommittee of the EMC Committee to make recommendations. After considerable work, its report suggested that the Minister of Communications should promulgate a regulation requiring that, if a device malfunctioned in the presence of a nearby transmitter, the manufacturer of the device would have to repair it, replace it, or refund the purchase price to the consumer. I point out with some pride that this recommendation was based on my suggestions. Repair, Replace, or Refund became known as the 3R policy and, over a year ago, it was approved by RABC without dissent and forwarded to the Minister.

A few months ago, I exchanged letters with the Minister and her officials, encouraging them to adopt the RABC's recommendation. Unfortunately, they seemed unwilling to do so. They argued

that the Minister did not have the power to control non-radio equipment such as audio amplifiers, intercoms, control equipment, etc. Their position was to wait until legislation was changed to give the Minister this authority. They ignored my pleas for the Minister to implement the 3R policy only for radio receivers and tuners (including VCRs) over which she clearly has authority. Unfortunately, they still seemed to favour waiting until legislation was changed, susceptibility standards were in place and regulations were developed to make them mandatory.

I wrote a letter to the RABC President, David Garforth, explaining the Minister's reluctance to act and urging him to apply pressure on behalf of RABC. In reply, he noted that new legislation had just been introduced which, when passed, would give the Minister the explicit authority to control the susceptibility of non-radio equipment. David suggested that we could discuss this issue at the annual meeting of RABC, which has since taken place.

Ralph Cameron VE3BBM and I attended the recent RABC EMC Committee meeting. I informed those present that interference, or the increasing susceptibility of home electronic products, was the biggest single threat to the existence of Amateur Radio. I pointed out that electronic components were now being used in many products, such as telephone sets, which were traditionally made without them. These products are often very susceptible.

Further, traditional electronic products, such as radio and television receivers, are more susceptible than ever. I pointed out that we used to have a chance of avoiding interference to a television set if it was connected to cable and only asked to function as a closed circuit monitor, rather than a receiver. We don't any more. We have to get along with our neighbours. But, if we set up virtually any kind of a station in a typical suburban home, interference is inevitable. Unfortunately, the cooperation an amateur (or consumer) is now likely to get from the manufacturer or importer of the susceptible appliance is just about nil. As a rule, they don't understand and they aren't interested. At best, one is lucky to get a schematic diagram.

At the EMC Committee meeting, Ralph Cameron identified the steps taken to clean up the interference problems at the Houghtby's (plaintiffs in the Jack Ravenscroft case) home. They were all pretty simple—and 70% of the appliances

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All letters will be considered carefully. Letters are edited and may be condensed in order to have more information and readers' views presented. The publishers of *QST Canada* assume no responsibility for statements made by correspondents.

VE1 CALLSIGNS

A funny thing happened on the road to Confederation. Somewhere, three provinces lost their individuality, at least where Communications Canada was concerned. All the provinces in Canada, the two territories, Labrador, and Sable and Saint Paul's Islands were issued distinctive, individual prefixes. DX stations could pinpoint the province or territory of a station by simply noting the prefix of the callsign.

But what happened to New Brunswick, Nova Scotia and poor little PEI? Were we not equal provinces under Confederation? Did the cultural and economic differences that made each province an identity unto itself make no difference? No! We were lumped together as VE1!

We have been told that we can't have distinctive prefixes because the individual

provinces don't have a large enough amateur population. But what about VY1, VE8 and VO2? Latest figures show that we have a larger amateur population than found in any of these callsign areas, even on little PEI, let alone Nova Scotia and New Brunswick. We are asked to have reasons for distinctive prefixes. How about clarity of communication? As mentioned before, in every other part of Canada, the province or territory of the station can be determined from the prefix. How about provincial self-esteem? It would be great to know that the government recognized the individual status of each Maritime province.

Here are some ways to work it. The VO series of prefixes could be extended to include VO3 for PEI and VO4 for Nova Scotia, leaving the present VE1 for New Brunswick. This could parallel a

possible VY1, VY2 and VY3 to cover the Yukon and a future split of the Northwest territories into two political regions. The East would have the VO series and the North the VY series. Another suggestion is to use VB1, VC1 and VE1, the second letter in each prefix corresponding to the first letter of each province's postal code.

At a January meeting, 100% of the members of our Charlottetown Amateur Radio Club (CARC) endorsed a proposal for distinctive prefixes for each Maritime province. It will probably be necessary to draft a petition to lend weight to this proposal. We would welcome your ideas on the proposal and ideas on how the proposal might be handled. We want to draft a proposal acceptable to all. Please write to CARC, Box 2056, Charlottetown, PEI C1A 7N7. —David Hunter, President, Charlottetown Amateur Radio Club ■

The Canadian Radio Relay League, Inc La Ligue Canadienne de la Radio Amateur, Inc



The Canadian Radio Relay League (CRRRL) is a noncommercial association of radio amateurs organized for the promotion of Amateur Radio communications and experimentation, for the establishment of networks to provide communications in the event of disasters or other emergencies, for the advancement of the radio art and the public welfare, for the representation of radio amateurs in legislative and other matters, and for the maintenance of fraternalism and a high standard of conduct.

CRRRL is incorporated under the Canada Corporations Act. Its affairs are governed by a seven-member Board of Directors elected every two years by the CRRRL general membership. CRRRL is noncommercial, and no one who could gain financially by the shaping of its affairs is eligible for membership on its Board.

CRRRL is the Canadian member-society of the International Amateur Radio Union (IARU). "Of, by and for the Canadian Radio Amateur", CRRRL numbers within its ranks the vast majority of active amateurs in the nation and has a proud history of achievement in amateur affairs.

A bona fide interest in Amateur Radio is the only essential requirement for membership. An Amateur Radio licence is not required, although full voting membership is granted only to licensed amateurs in Canada.

Membership inquiries and general correspondence should be directed to CRRRL Headquarters, Box 7009, Station E, London, ON N5Y 4J9 (519) 660-1200.

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Calendar



Attention: Deadline for items is the 1st of the second month preceding the month of publication. For example, information would have to reach *QST Canada* by January 1 to be included in a March issue.

Bangor, ME: Hamfest, June 10 at Hammond St Campground near I-95. Sponsored by Pine State ARC. Doors open dawn to 5 pm. Swapshop (bring your own tables), meetings and VEs at nearby school. Talk-in on 146.34-94 MHz. Admission: \$2 (children 12 and under free). Camping: \$8.50. Contact Ed Richardson, NQ1L, RFD 2, Box 627, Orrington, ME 04474, Tel (207) 825-4417.

Halifax, NS: Amateur Radio and Computer Flea-market, May 27 at Nova Scotia Winter Fair Exhibition Park, Prospect Rd (Route 333) just west of Halifax. Sponsored by Halifax and Dartmouth ARCs. Open 9 am to 3 pm. Vendors set up at 6 am. Tickets available at the door. Talk-in on VE1NZ, 146.85-146.25 MHz and VE1DAR, 147.15-147.75 MHz.

Kitchener, ON: Central Ontario Amateur Radio Flea-market, June 10 at Bingeman Park, Highway 7. Sponsored by Guelph and Kitchener-Waterloo ARCs. Southwestern Ontario's premier flea-market. Contact Ray Jennings, VE3CZE, 61 Ottawa Cr, Guelph, ON N1E 2A8, Tel (519) 822-8342.

Namao, AB: Hamfest, May 26-28. Sponsored by Northern Alberta ARC. Doors open at 10 am. Flea-market, commercial displays, demos and ladies' program. Admission: \$5 (\$4 if pre-registered), ladies' program: \$5, students under 18: free. Saturday banquet: \$13 (2 for \$25). Sunday pancake breakfast: \$3.50. RV parking available May 26, 6-9:30 pm. No tent pads or hookups. Contact Bill Gillespie, VE6ABC, 9628-69A St, Edmonton, AB T6W 1W3, Tel (403) 438-9205.

Red Deer, AB: Annual Picnic, June 16-18 at Burbank Campsite. Sponsored by Central Alberta Radio League (CARL). From Highway 2, take Blackfalds turnoff east on Secondary Road 597 to Joffre and follow the CARL signs. Bunny hunt, barbecue and fun. Talk-in on VE6QE, 147.00-146.40 MHz, 147.33 MHz simplex. Registration: \$15. Private campsite: \$5. Contact P Fitzgerald, VE6QT, 2 Odstone Green, Red Deer, AB T4N 5J1, Tel (403) 746-2621.

Sorel, PQ: Le Hamfest Provincial du Québec au Club de Curling de Tracy le dimanche 28 mai 1989 à 0900 (0700 pour les exposants). FM soirée rencontre le samedi 27 mai à 2000. Admission: 5\$. Table extérieure: 7\$. Table intérieure: 10\$. Quantité limitée. Prière de réserver avant le 15 mai. Écrire à CRA Sorel-Tracy, CP 533, Sorel, PQ J3P 5N6. ■

Amateur Radio in the Soviet Union

Part 1: The history of Soviet Amateur Radio, early days to the present.

By Yury Zolotov, UA3HR
Box 345
Moscow, USSR 125502

The first Soviet radio broadcasting station went on the air in Moscow in 1922 and was one of the most powerful in the world at that time. Regular broadcasting, then carried out on long and medium waves only, began on October 12, 1924.

At about the same time, a movement of radio enthusiasts and radio amateurs sprang up in the country. Many began to build their own radio sets. In those years, more than eighty percent of the sets operated by the population were homemade.

On August 7, 1924, the Society of Radio Amateurs of the Russian Federation, later renamed the Society of Radio Friends, was set up. In 1926, with the establishment of similar societies in other republics, the first nationwide congress of such societies met. At that time, there were over 200,000 radio amateurs and enthusiasts in the country. The congress decided that the main tasks of the society were the installation of radio units, the spreading of knowledge about radio among the population, and the training of radio specialists for the economy.

In 1922, radio amateurs in the US, France and Britain and Germany began using short waves—then considered useless for radio communication. But the intercontinental link between US amateur station 1MO and French amateur station 8AB was a sensation, and soon after, Soviet amateurs took up shortwave activity with enthusiasm. The first man to build a shortwave radio receiver in the Soviet Union was Fedor Lbov, an accountant by profession. On January 15, 1925, he and a friend, V Petrov, went on the air in the 96-metre band. They sent Morse code: *CQ, CQ, CQ de RIFL pse KKK*. Then they gave their address.

The callsign had been invented by them. It stood for Russia First Fedor Lbov. The transmitter had a capacity of

only 15 watts and there was no receiver at all. Still, two days later, Lbov received a telegram from G5HS, an English amateur working in Iraq, who had picked up the signals of the first Soviet shortwave amateur station.

Soon after, to attract more radio enthusiasts to the short waves, the Soviet government passed a decree on private radio stations. Radio amateurs were given the official right to build and operate their own shortwave stations.

In 1927, the first nationwide competitions in shortwave communications were held, mainly in the 20-metre band. In 1928, the first international radio communications competitions were organized. In those competitions, Soviet and Spanish amateurs established links on short waves. Since then, such contests have



Yuri Zolotov, UA3HR/RA3AZ at his station in Moscow. Yuri is one of many Soviet amateurs who communicated with the Soviet-Canadian Polar Skitrek expedition last year.

become popular among Soviet amateurs.

The late 1920s was also a time when Arctic exploration began on a wide scale. Amateurs introduced shortwave communication to Arctic development. Soon, the value of this work was proved in practice.

On May 25, 1928, the airship Italia crashed in the Arctic while carrying the Umberto Nobile expedition to the North

Pole. For a long time, no evidence of the expedition could be found because the disaster's coordinates were not known. It was not until June 3 that an SOS was picked up by the Soviet shortwave amateur N Schmidt. He immediately passed on to Moscow the coordinates of the survivors's camp. The Soviet icebreaker, Krasin, went in and rescued seven expedition members who were still alive. By providing reliable communications during these relief operations, Soviet radio amateurs acted nobly.

In 1937, Ivan Papanin led the first Soviet scientific expedition to land on the North Pole. This expedition consisted of four men including the well-known polar radio operator Ernst Krenkel. The callsign of their drifting station, UPOL, won unusual popularity around the world.

Later on, for his services in saving crew members from the ice-crushed steamer Chelyuskin, Krenkel was allowed to use the Chelyuskin call letters, RAEM, which he had employed at the time of the rescue, for his own Amateur Radio activities. Krenkel became a national hero and many thousands of youths and girls followed his example, taking up radio and studying the Morse code.

The Krenkel Central Radio Club of the USSR has a working memorial station of this legendary shortwave enthusiast, outstanding polar explorer and public figure.

In the early 1930s, Soviet amateurs began using the ultrahigh frequency band [UHF was 30–60 MHz in those days]. Several dozen articles on UHF equipment and UHF activities were published.

The Second World War disrupted peaceful pursuits and the development of Amateur Radio all over the world. In the autumn of 1939, amateur stations in Britain, France, Poland and Canada went off the air. They were followed by stations in

Continued on page 9

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CRRL Responds to Deregulation Proposals

CRRL has responded to DOC's proposals on deregulation. In its submission, CRRL indicated that the deregulation would meet many present and future needs of the Canadian Amateur Service. However, CRRL had some concerns:

1) The proposal specified a 6-kHz maximum bandwidth for the 10.100–10.150-MHz band. This would allow SSB operation which could interfere with FIXED stations that are primary users of this band. Such interference could cause amateurs to lose the band worldwide. CRRL asked DOC to specify a maximum bandwidth of 1 kHz.

2) DOC's proposal allowed an amateur to establish home, portable and mobile stations under one call, but not to operate these concurrently. CRRL asked DOC to continue to permit this so amateurs operating computer-controlled bulletin board stations while, say, operating mobile, would not have to get a second station licence and a second call.

3) CRRL asked DOC to continue VE0 calls for stations on ships in international waters.

4) CRRL noted that deregulation, specifically deregulation of mode subbands, could upset the equilibrium between the Canadian and US Amateur Radio communities. If Canadian amateurs came to understand that, under deregulation, they were free to operate any mode on any frequency in the amateur bands—without regard for the international Amateur Radio community—there could be reaction in the US which would result in, say, expansion of US phone subbands. CRRL asked DOC to emphasize to amateurs the importance observing voluntary band plans developed by IARU, the International Amateur Radio Union.

For readers with good eyesight, excerpts from the CRRL submission appear in the sidebar on the right.

DOC NOTES

□ There's a new procedure for requesting special amateur call sign prefixes to commemorate anniversaries or promote special events. Requests should now be sent to a DOC district office. Actual decision to grant a special prefix will be made by staff at a DOC regional office. DOC Ottawa will no longer be involved.

□ A notice in the February 4 *Canada Gazette, Part I* advises that DOC proposes to make public names, addresses and technical information pertaining to radio licensees—unless that information is classified for national security reasons or protected for public safety. Implementation

Excerpts: CRRL Response to DOC Deregulation Proposals

1. CRRL believes the proposed amendment will meet many needs of the Canadian Amateur Radio Service... Deregulation of emission subbands will permit Canadian amateurs to experiment with and make practical use of new communication technologies without first having to receive special permission from the Department or to wait for changes to the Radio Regulations. Elimination of the six-month and one-year endorsements—while conferring privileges given by these endorsement to all holders of the Amateur Radio Operator's Certificate—will make this certificate more attractive to prospective amateurs. Privileges extended to visiting amateurs are generous and reflect the spirit of Amateur Radio. These will resolve many ambiguities and problems associated with reciprocal licensing, particularly between Canada and the United States. The present requirement to identify in voice or Morse code at the end of an F1 transmission has long been an irritant and its elimination will be welcomed.

2. CRRL does have a number of concerns. The Department specifies a maximum bandwidth of 6 kHz for 10.100–10.150 MHz. This band is unusual in that it is FIXED primary and AMATEUR secondary on a worldwide basis. Amateurs use this band with the understanding that they could easily lose it if they began to interfere with FIXED operations. To date, this has not happened because regulations, in Canada and in other countries, limit operation to A1 and F1 emissions. A3A, single-sideband radiotelephony, for instance, is not permitted. Under the proposed regulatory text, which specifies only a maximum bandwidth and not emissions, single-sideband radiotelephony would be permitted. It would be very easy for an amateur using single-sideband or other wideband emission to inadvertently interfere with a FIXED station somewhere in the world. Such interference would bring the continued existence of the 10.100–10.150-MHz band—worldwide—into question.

CRRL believes the problem can be overcome by revising the proposed regulatory text to specify a maximum bandwidth of 1 kHz for this band. This is the preferred solution because it is consistent with the Department's stated objective not to restrict emissions...

3. A second concern has to do with Section 57.1(2) of the proposed regulatory text. Present regulations allow each radio amateur to operate a home station, a mobile station and a portable station, all under one licence and one call sign. There is no requirement that these stations not operate concurrently. This has given amateurs the freedom to operate computer-controlled bulletin board stations, or voice or packet repeater stations from their homes while still operating mobile from their cars. The proposed regulatory text would force these amateurs to obtain a second station licence with a distinct call sign for each concurrent operation. CRRL believes this constitutes an unnecessary hardship and is inconsistent with the Department's desire to encourage new communications technologies. CRRL requests that Section 57.1 (2) be deleted from the proposed regulatory text, or, if there is a concern that doing so will not permit the Department to distinguish between various stations that operate concurrently, that Section 57.1 (2) be reworded to read as follows: "When stations established in accordance with subsection (1) are operated concurrently, mobile and portable stations shall identify using the call sign of the licensee followed by (a) the words "mobile" or "portable" if transmitting by radiotelephony, or (b) the character for an oblique stroke, that is "/", if transmitting by radiotelegraphy"...

4. The last concern is related to a statement in the *Canada Gazette*: "Elimination of emission restrictions permits the Canadian amateur to enjoy equal privileges on a par with other radio users in the international radio environment and particularly those privileges extended to US radio amateurs." CRRL recognizes that voluntary compliance with good operating practice is the approach taken by the majority of the world's telecommunications authorities. However, with regard to privileges extended to US amateurs, the Department's statement is incorrect. Canadian amateurs already enjoy considerably more freedom to use the most popular high-frequency mode, single-sideband radiotelephony, than do their US counterparts. In every one of the high-frequency bands, regulatory limits on US radiotelephony operations are far more restrictive than those in Canada. The Department's statement may serve as a red flag to US amateurs...

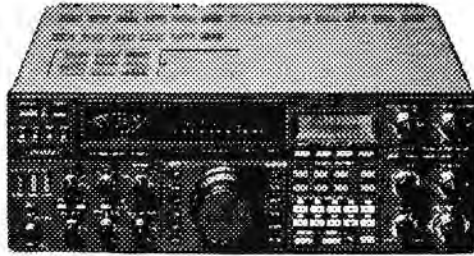
The Department cites changes in US FCC regulations (expansion of US radiotelephony subbands) as having at least partly precipitated its proposals. We would note that in the past, ARRL, the national organization of US radio amateurs, has exercised restraint in seeking additional radiotelephony privileges for US amateurs, largely in recognition of the known desires of amateurs in countries like Canada. For instance, when Canada created a voice subband at 7.050–7.100 MHz, a move which was not requested by CRRL or any other national Canadian Amateur Radio organization, ARRL was under considerable pressure to ask the US FCC to follow suit, but did not.

CRRL is concerned that deregulation of emission subbands will upset the equilibrium between the Canadian and US Amateur Radio communities. The key to maintaining this equilibrium is how Canadian amateurs will respond to deregulation. CRRL is confident that that Canadian amateurs will act responsibly if they are informed and given guidance. Since deregulation of emissions subbands was proposed by the Department and not by CRRL or any other Canadian Amateur Radio organization, and since only the Department has contact with all Canadian amateurs, CRRL believes that the Department has a clear responsibility for providing guidance—*emphasizing the supreme importance of amateurs observing the voluntary band plans developed through the representative mechanisms of the International Amateur Radio Union (IARU)*. Without the Department's support, there may be serious consequences ahead. —Tom Atkins, VE3CDM, President, CRRL ■

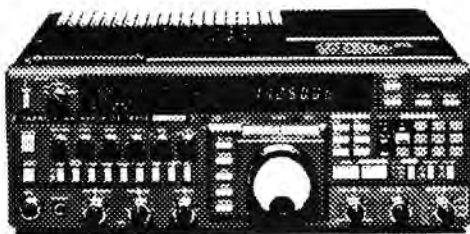
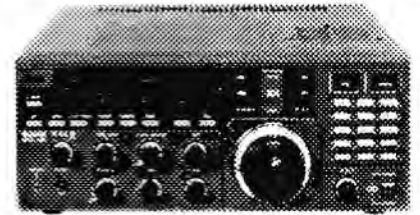
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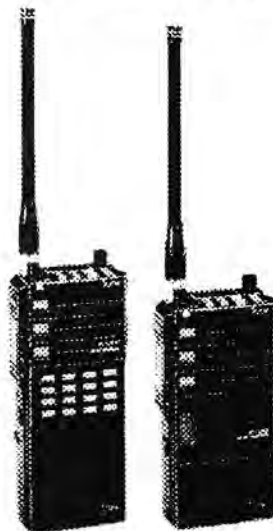


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of the proposal would formalize current DOC policy. CRRL has sent a note of support.

DOC says it may increase licence fees as early as 1990—but not for radio amateurs. Amen.

April 3 was the 20th Anniversary of DOC, the Department of Communications (before, management of the RF spectrum was the responsibility of the Department of Transport). The event was marked by the opening of the new DOC Ottawa club station, VY9CC. At the opening, Marcel Masse, Minister of Communications, spoke to Amateur Radio set up at DOC's five regional offices: VY9CCA in Moncton, VY9CCQ in Montreal, VY9CCO in Toronto, VY9CCC in Winnipeg and VY9CCP in Vancouver. Representing CRRL at the opening: CRRL Ontario Director Ray Perrin, VE3FN, and CRRL Quebec Director Bruce Balla, VE2QO. We'll have a full report—with photos—next month.

AWARDS AND SCHOLARSHIPS

Congratulations to Jonathon Dursi, VE1CBP, who recently received a grant of \$US 500 from the ARRL Foundation to promote Amateur Radio at St Patrick's High School, Halifax. Jonathon, who wrote the thought-provoking letter that appeared in 1988 December *QST Canada*, received the grant under the Vic Clark (W4KFC) Youth Incentive Program sponsored by the Foundation.

Once again, FAR, the Foundation for Amateur Radio (ARRL-affiliated, but not to be confused with the ARRL Foundation) is sponsoring scholarships for radio amateurs engaged in full-time studies beyond high school. Canadian amateurs attending Canadian community colleges and universities are eligible for many of the scholarships which range from \$US 500 to \$US 2000. For more information and forms, write to Hugh Turnbull, W3ABC, FAR Scholarships, 6903 Rhode

Island Ave, College Park, MD 20740.

US NOTES

Support for a no-code amateur licence is gaining south of the border. Recent US newsletters indicate that no-code is now supported by TAPR, the Tucson Amateur Packet Radio group, AMSAT and even Barry Goldwater. A special-interest group has been formed to pursue a no-code licence, and ARRL has formed a committee (CRRL President Tom Atkins, VE3CDM, is serving on this committee as a resource person) to study the matter.

Amateurs everywhere will be saddened to learn of the passing of Bill Eitel, W6UF. Bill, along with Jack McCullough, W6CHE, founded the EIMAC Company (now a division of Varian) which built power amplifier tubes found in amateur, broadcast and other commercial radio stations around the world.

The US 17-metre (18,068–18,168 MHz) band has only been open since January 31, but Chris Merchant, KA1LMR, has already achieved the first-ever 17-Metre Worked All States.

INTERNATIONAL NOTES

The Tenth General Assembly of IARU Region 2 (North and South America) has been rescheduled. It will now be held in Orlando, Florida, September 4-8. High on the agenda: preparations for a World Administrative Radio Conference (WARC) with power to reallocate our amateur frequencies, expected in 1992-1994.

The International Telecommunications Union (ITU) has designated May 17 as World Communications Day. This year's theme: International Cooperation.

Once again, Bad Bentheim, West Germany, is seeking nominations for the Golden Antenna Award for outstanding humanitarian achievement through Amateur Radio. For details, contact CRRL.

URA, Unio de Radioaficionados Andor-

rans has announced the Andorra 5-Band Award. Work five C31 stations, one each on 80, 40, 20, 15 and 10 metres, to qualify.

Glastnost may be coming to Albania. A group of Greek amateurs are trying for a ZA1 operation later this year.

Bermuda now has a Novice licence. Holders operate CW in portions of the 3.5, 7, 21 and 28-MHz bands using VP9N calls. The "N" drops out when holders upgrade.

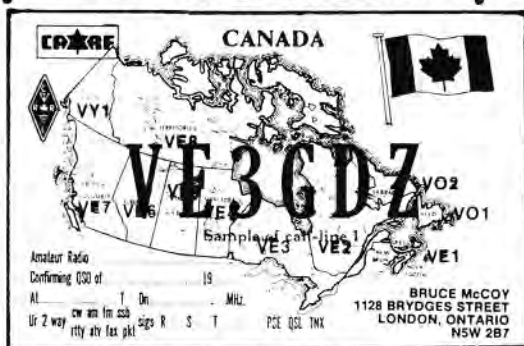
NOTES FROM ALL OVER

At press time, Lawrence, G4DMA, and Morag Howell, GM1LL, were expected to be on Canada's Ward Hunt Island to provide communications for a British polar expedition that started in March. They planned to keep contact with expedition members on commercial frequencies in the 2-4-MHz range—and with the outside world on the amateur bands. To keep things interesting, they hoped to experiment with VHF. Look for G4DMA/VE8 and GM1LL/VE8 on 14.345, 28.885, 50.110, and 144.123 MHz, on other frequencies, and on the AMSAT OSCAR 13 satellite.

South Pickering Amateur Radio Club now offers the Ontario Provincial Award. Earn 50 points by working VE3 stations (2 points each) SPARC members (5 points each) a VE3 special-event station (5 points each) or the SPARC club station, VE3SPC (10 points). Send application, log data and \$2 for postage and handling to SPARC Award Manager Peter Schuyffel, VE3JPP, Box 53, Pickering, ON L1V 2R2.

Travelling this summer? If you are planning a trip to any foreign country other than the United States, you must apply for a licence, even if Canada has reciprocal operating privileges with that country. It's wise to apply early. CRRL has information and application forms for most countries. Write to CRRL, Box 7009, Station E, London, ON N5Y 4J9. ■

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Decibels without Logs

Removing the confusion about a confusing term.

By George Spencer, VE3OZW
RR 1
Jordan, ON L0R 1S0



Two of the physical senses we possess, sight and sound, have to respond to a tremendous range of intensity without causing damage to eyes or bursting eardrums. In terms of units of measurement, the range to be covered is extremely large. Our eyes have to adjust to everything from moonlight to brilliant sun at the beach: a range of about ten thousand to one. Normal hearing range is from less than the proverbial "pindrop" to the threshold of pain, a sound intensity range of about ten trillion to one.

One mathematical device used to cover such large ranges is a graph that uses a logarithmic scale—a scale in which successive sections occupy the same space, but each section represents ten times the amounts found in the immediately preceding section. For example, we might have a graph with five sections, each section five cm long for a total of 25 cm (approximately 10 inches). The first section might represent quantities from .1 to 1, the second from 1 to 10, the third from 10 to 100, the fourth from 100 to 1000, and the last from 1000 to 10,000. In this way, we can show significant changes over a range of .1 to 10,000 without using graph paper as long as a parking lot. A change of one unit will easily be seen in the section of the scale from 1 to 10 where such a change would be significant. It would not be noticeable in the section of the scale from 1000 to 10,000 where such a small change would not be significant.

If we relate this kind of scale to sound, or to corresponding electrical sound power, this means that a change in sound level must be a significant percentage of that already in existence in order to be noticeable. Thus, on a logarithmic scale, we could hear a pin drop on a hardwood floor in a quiet room, but it would not register if a radio were playing. Similarly, a flashlight would be helpful in a dark room, but its beam could not be seen outdoors in normal daylight.

The logarithmic scale which closely approximates the effect of various sound levels in our ears is the decibel scale. It is important to understand that a decibel is not an absolute unit of measurement such as those used for length, volume, electric current or power. It is an indication of the intensity of sound or power—compared

to an already existing level of intensity.

This point is not always well understood. We often hear or read a statement that a sound level was so many decibels without the statement mentioning the reference level with which this level was being compared. In all fairness, it should be explained that there are sound level meters that are calibrated in decibels. The reference level in this case is an internationally accepted standard: a sound pressure level of .00024 dynes per square centimetre, also called .00024 microbar. Engineers who write specifications for equipment which is inherently noisy often quote the maximum noise level permitted in decibels to meet environmental requirements. In such cases, the reference standard should be given to prevent unscrupulous suppliers from playing games with the reference levels to make a machine appear to be quieter than it actually is.

A similar problem comes up in advertisements which state that an antenna has a certain db gain without specifying the reference level, or worse still, based on a non-standard reference level. This is why QST does not accept advertisements which claim a specific db gain for antennas.

Calculation of db gain or loss—in sound, power or antennas—is complicated by the need to find the logarithm of a number. This requires the use of log tables, a slide rule or a fairly elaborate and expensive calculator. What follows is a method of finding db gain or loss without using any of these things.

First, the formula. It is assumed that the two power levels being compared are known, or can be calculated from known voltages, currents and resistances. Then

$$db = 10 \log P_2/P_1$$

where P_1 is the power input and P_2 is the power output. If there is a power gain, P_2 is larger than P_1 and P_2/P_1 is greater than one. If P_2 is less than P_1 , P_1/P_2 is less than one, the logarithm is automatically negative and there is a power loss.

But we are not going to use logarithms. We will, however have to find P_1/P_2 using long division or a simple four-function calculator. And it will be

necessary to memorize these two items:

a power ratio of 2 = 3 db

a power ratio of 10 = 10 db

The first item above is commonly used to express the width of a selectivity curve in a receiver, or the radiation pattern of a beam antenna. Three-db down (-3db) is the "half-power point" on a selectivity curve and the width of the radiation pattern of a beam antenna at its half-power points. The second item above is the normal gain of our most common linear amplifiers. These have often have 1000 watts output for 100 watts input, a gain of 10 to 1 or 10 db. Incidentally, the 10 db point is the only point where the ratio and the db number are the same.

With a sheet of lined paper and pencil, proceed as follows:

Make a vertical column headed ratio, and leave a blank line under it. Then, under the heading, write the numbers 2, 4, 8, 16, 32 and so on downward, leaving a line under each number.

From the information above, you know that each time the power ratio doubles, the db increases by 3, so opposite the 2, in what will be your db column, write 3; opposite the 4, write 6; opposite the 8, write 9, and so on.

Notice that we still have one line space between the numbers in the columns and that there is no 10 in the ratio column. Insert a 10 between 8 and 16 in the ratio column, and also a 10 in the db column.

Now go back down the ratio column and, in each empty line after 16, write the numbers; 20, 40, 80, 160 (you're doubling here) and so on. Opposite these in the db column, write 13, 16, 19, 21 (you're now adding three each time) and so on. Now start at 10 in the ratio column and go upward, filling the blank spaces with 5, 2.5 and 1.25 (you're halving the numbers). Then go up the db column. Opposite 5 write 7; opposite 2.5 write 4; and opposite 1.25, write 1 (you're subtracting three each time).

You now have a fairly complete list of ratios and corresponding db levels. Of course, you can extend this list for as far as you want to go. For power loss (P_2 less than P_1 , you know that the db number is negative and the ratio is less than 1. We

don't have ratio less than 1 on the chart, so we just take the reciprocal, that is $1/\text{ratio}$, and divide: $1/0.2 = 5$. Back on the chart, opposite 5, we find 7. But because this is for 0.2 which is less than 1, to express the loss we write -7db .

If the procedure is continued to a ratio of 8192 and a corresponding db level of 39, the numbers become awkward and need to be rounded. That's when we should hop in steps of 10,000, 100,000, 1,000,000 and so on. These ratios are very simple to translate into db. Count the number of zeros in the number to obtain the first figure. Then add a zero. For example the number of zeroes in 10,000 is 4, and by placing a zero after it, yields 40 db.

On a multiple-choice question on an Amateur Radio exam, there may be a decimal number which is not given on the chart. However, the number will fall between two numbers on the chart and there should no trouble using the chart to pick a correct answer. All values on the chart are also accurate enough for any practical use.

Next time you're doodling, try one of these ratio-db charts for practice. ■

Decibels without Logs

Ratio	db	Ratio	db
		1.25	1
2	3	2	3
		2.5	4
4	6	4	6
		5	7
8	9	8	9
		10	10
16	12	16	12
		20	13
32	15	32	15
		40	16
64	18	64	18
		80	19
128	21	128	21
		160	22
256	24	256	24
		320	25
512	27	512	27
		—	—
		8192	39
		10000	40
		100000	50
		1000000	60

Ratio = P_1/P_2

Initial values are on the left. Additional values have been included on the right. This chart may be continued as far as you wish. It's a useful chart that you can easily reproduce from memory (say while writing a DOC exam!) by just remembering that doubling the power increases the db column by 3, and that a ratio of 2 corresponds to 3 db while a ratio of 10 corresponds to 10 db.

Purists will know that the log of 2 is actually 0.30103 and $10 \log 2$ is actually 3.0103 db. The difference is not significant and can be ignored in practice. ■

Amateur Radio in the Soviet Union Continued from page 3

Australia, New Zealand, India, Belgium, Norway, Sweden and many other countries. Soviet amateurs remained active until the summer of 1941 when the attack by Nazi Germany on the Soviet Union forced Soviet radio enthusiasts to interrupt their activities.

When the Soviet Union entered the war, thousands of radio amateurs joined the Red Army, becoming officers and soldiers in communications units. After the war, as a tribute to radio amateurs who were defenders of the country, veterans of the war were allowed to use call signs that had only one letter in the prefix: for example, U3HB instead of UA3HB. Unfortunately, there are very few of these call signs left, all in all only about 500.

On May 2, 1945, on the eve of victory, the Soviet government instituted Radio Day as an annual holiday. This was done to publicize the need to develop radio electronics and to recognize Amateur Radio activities as one of the most significant and effective forms of public work.

In March, 1946, in Moscow, the Central Radio Club of the USSR was set up in Moscow as a centre for amateur radiosport and design. This marked the beginning of the post-war period for the Soviet Amateur Radio movement.

In the next decades, radio amateurs joined in intensive scientific research and technological progress in radio electronics. New components and new technologies not only helped to upgrade amateur equipment, but gave rise to new activities,

The launching on October 4, 1957, of the first artificial earth satellite, carried out in the Soviet Union, heralded the future use of satellites for amateur communications, including the RS-1-RS-11 series.

On October 8, 1959, the USSR Federation of Radio Sport (RSF) was set up. Its presidium has committees and commissions on various radio amateur and radiosport activities. To carry out its work, the Federation draws extensively on the Krenkel Central Radio Club of the Soviet Union.

Now, other parts of the Soviet Union, as well as the autonomous republics, territories and regions are setting up radiosport federations which base themselves on local clubs and help to organize and conduct local Amateur Radio activities.

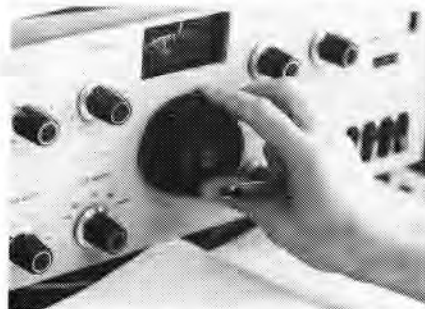
Soviet amateurs make all contact (exchanging of QSL cards, diplomas, etc) with Amateur Radio organizations in other countries through the Federation of Radio Sport and the Central Radio Club of the USSR. Since 1962, the Federation of Radiosport has been a member of the International Amateur Radio Union (IARU) and has taken an active part in the work of IARU Region 1.

The USSR Federation of Radio Sport, the Krenkel Central Radio Club and the magazine *Radio* hold several nationwide shortwave competitions annually. There are three USSR championships, and the international CQ-M Contest whose motto is "Peace to the World". CQ-M competitions were first conducted in 1957,

attracting more than 1200 participants in 85 countries. These competitions have now become traditional and take place every year in the second week of May. There are special certificates for winners and all foreign participants get souvenir badges.

Also, once every three years, to contest the cup of the first cosmonaut, Yuri Gagarin, the USSR Federation of Radio Sport, holds international competitions in shortwave telegraphic communications on behalf of the Executive Committee of IARU Region 1.

In Part 2, UA3HR describes the requirements for Soviet Amateur Radio licences, privileges accorded, how Amateur Radio is encouraged in Soviet schools, awards offered by the RSF and the Soviet RS-series satellites.



UA3HR tunes in a station on equipment which he built himself. (All photos courtesy of the Soviet Embassy, Ottawa) ■

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BP8	Battery Pack 8.4V 800mAh	\$119.00
HM46L	Speaker Microphone	\$ 49.00
LC39	Case (BP70, BP5)	\$ 34.00
LC40	Case (BP7, BP8)	\$ 34.00
UT40	Tone Squelch & Beep Unit	\$ 65.00



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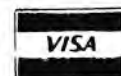
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The CRRL Field Organization Forum

SECTION MANAGER ELECTION NOTICE

To all CRRL members in the British Columbia Section: you are hereby solicited for nominating petitions pursuant to an election for Section Manager. Nominations will be received at CRRL Headquarters until 1989 June 10. For further details, consult 1989 April *QST Canada* or contact CRRL Headquarters. —*Jack Strangleman, VE3GV, Field Services Manager*

SECTION MANAGER ELECTION RESULTS



Congratulations to Bill Gillespie, VE6ABC of Edmonton, who was recently re-elected Alberta Section Manager. Bill, well known for his work in emergency communications, as editor of Alberta Amateur Radio League's *Emitter*, and as manager of the Alberta Tube Bank, ran unopposed, eliminating the need for a balloted election. ■

REPORTS FOR FEBRUARY 1989

Alberta: SM, STM, DEC: Bill Gillespie, VE6ABC, ASM: VE6AMM, SEC/TC: VE6AFO, OO: VE6TY. Amateurs in the Peace River area provided communications for a fund raiser in the Fairview area in February. The program was very successful. Those assisting were VE6NN, VE6TFC, VE6EVE and Heinz, VE6AND, reporting. Northern Alberta Amateur Radio Club (NARC) is gearing up for hamfest north of Edmonton, May 26–27. Plans are for talks, demonstrations, fleamarket, banquet and more. NARC is still manning the Amateur Radio station at the Edmonton Space Sciences Centre. Look for packet, HF, 2-metre and slow scan television activities. VE6VIP starts his 2-metre technical net on Thursdays at 1900 local time, through the VE6HM repeater. It's very well attended.

British Columbia: SM: Ernie Savage, VE7FB, British Columbia Emergency Net Manager Ferdi, VE7EJU, reports QNI 626, QTC 133 and QTR 571. We need more traffic to keep interest in the net. February was a short month and check-ins were also short. So was traffic. To keep a CW net active, we must have traffic, or like other CW nets, we could become a good thing of the past. British Columbia Public Service Net Manager Jim, VE7JM, reports

Reports invited: CRRL Section Managers (SMs) and their Section-level assistants coordinate traffic handling, emergency communications and bulletin service across Canada. Your SM (name and address appears on page 2 of this *QST Canada*) welcomes reports of individual and club activities for publication in this column. Activities do not have to be related to the CRRL Field Organization or to CRRL. ■

check-ins, high: 194, low: 166, total 4654. British Columbia FM Association (BCFMA) Annual General Meeting (AGM) elected Dave, VE7PKE, as president; Rick, VE7ARW, as vice president; and Allen, VE7DPM, as secretary. Com-West Radio donated a hard-cover 1989 *ARRL Handbook* as door prize, and the winner was Jack, VE7JJK. Also, Com-West is donating a handheld to the amateur who has the highest number of check-ins to the VE7RPT Net—and best attendance at meetings of BCFMA—at the next AGM.

Manitoba: SM: Jack Adams, VE4JA. It's been a long winter, but spring is just around the bend. Ham classes are over for 1988–89. Of twelve students who started in the Dauphin area, two dropped out. New amateurs include Eva, VE4EVA, Peter, VE4PD, Elizabeth (Betty), VE4LIZ, and Charlie, VE4CCO. Requiring Morse code only: Patti, Con and Orville. Keith requires both theory and CW, and Allan still has to write. Doris, VE4APL, passed her Advanced theory, but has to brush up on her 15 wpm code. My job of organizing classes was taken over by Stu, VE4STU, and Doris, who did a great job leaving yours truly to look after coffee. This was a good experience for Stu and Doris. Hopefully, they'll carry on in years to come. Sincere thanks to both. It takes a lot of time and effort to run an Amateur Radio class but it is very rewarding. I encourage others to try it. Who out there is active on nets and handles traffic and is a member of CRRL and would like to join the Manitoba Section organization as Section Traffic Manager? Let me know. I'll be happy to answer your questions.

Maritimes-Newfoundland: SM: Carl Anderson, VE1BQQ, ASM: Ned Mulrooney, VO1MN, STM: Mel Lever, VE1VX, BM: Brent Taylor, VE1APG, EC (New Brunswick): Brian Upton, VE1ZJ. Congratulations to Jack Columbus, VE1XT of the Breton DX Group on his fine article in March *QST* telling the fascinating story of their 1988 August CY9DXX DXpedition to St Paul Island. It was the first *QST* article illustrated entirely with colour photographs, and they are excellent. The story is well written and it lets all of us in on the adventure. Another Canadian featured in March *QST* is Doug Lockhart, VE7APU, who developed the first Amateur Radio packet TNCs over ten years ago. CRRL Ontario Director Ray Perrin, VE3FN, recently visited our Section and CRRL President Tom Atkins, VE3CDM, will visit Halifax in May. All amateurs are invited to join Tom and the Halifax and Dartmouth Amateur Radio clubs at 7:30 pm on Wednesday, 1989 May 17 (regular HARC meeting night) in the Nova Scotia Archives Auditorium, 6016 University Ave (corner of Robie St). The Seniors Amateur Radio Association (SARA) has put VE1CRS on the air from the Red Cross Building in Halifax. Look for details on this project in an upcoming *QST Canada*. Halifax and Dartmouth ARCs will stage an Amateur Radio and Computer Fleamarket, 9 am to 3 pm, on May 27 at the Nova Scotia Winter Fair Exhibition Park, Prospect Rd (Route 333) just west of Halifax. Sellers set up at 6 am. Tickets will be available just before doors open. Do you think this news column is too Nova Scotia-oriented? I do too, and I need news from the rest of the Section to broaden coverage. Send info on individual and club activities that you want amateurs in our Section and across Canada to know about. My address is on page 2 of any *QST Canada* or contact me PBBS VE1BQQ @ VE1E1

Ontario: SM: Larry Thivierge, VE3GT, STM: VE3CYR, SEC: VE3GV, BM: VE3GSA, TC: VE3EGO, VE3MEW provided an interesting presentation to the Peterborough ARC on his involvement with the 10-10 Club, a group of amateurs who promote the 10-metre band. Bill is anxious to start a

local chapter in the area. The 1989 executive of Champlain Regional Repeater Association is Pres VE3KLY, Vice Pres VE3AAT, Vice Pres and Secretary VE3JOW, Treasurer VE3BRT and Net Manager VE3DDN, with Past Pres VE3BHA. Lakehead ARC once again handled communications between Thunder Bay and Grand Portage for the third annual JEEP 500 snowmobile race. A total of 21 operators, and four students and friends assisted in the exercise. VHF communications were not "up to snuff" on race day so it was necessary to shift to 40 metres mobile—a saving grace. Many will be glad to know that the ARRL booklet, *Operating an Amateur Radio Station*, is once again available. It has been updated. It was the operating bible of many a neophyte amateur of yesteryear. The amateur population of the United States stands at 440,331. The Niagara Peninsula ARC (NPARC) Amateur of the Year Award went to VE3NCD, while VE3TGH was winner of the IC-3210 at the recent "Big Event". VE3KQN continues to enjoy working QRP. VE3WV has been issued call-sign VE3RRA for special and public-service events conducted by Renfrew-area amateurs. A QSL manager of the Niagara Frontier DX group reports that about 25% of the cards he receives are filled out incorrectly. Perhaps if we pay more attention to this, our returns will improve. Regrettably, I report that VE3FSH, VE3JAG and VE3WG are Silent Keys. After a long absence, the VE3EUK RTTY BBS is back on the air on 147.51 MHz during the evenings, using the call VE3NXX. Since repeater VE3LON, sponsored by London ARC was moved, it provides better coverage and phone patch use has increased dramatically. 1052 patches were made between the beginning of September and the end of December last year. In December, the average was 8.3 patches per day. VE3RDR is a new amateur in the Section, and VE3BSD, VE3OUB and VE3PYA have earned their Advanced... ■

Quebec: SM: Harold Moreau, VE2BP, STM: VE2EDO, SEC: VE2LYC, BM: VE2ALE. The Quebec Provincial Hamfest will be held on Sunday, May 28, at the Tracy Curling Club. See Hamfest Calendar for details. VE2 CAM (St-Hyacinthe) a participé au projet FACE, en maintenant des communications lors de l'arrivée de 244 étudiants en provenance de 12 pays. Avec regret, je dois vous annoncer du décès de Richard, VE2 LFL.

Saskatchewan: Bruce Rattray, VE5RC. It's March 7 and the weather is warming. Saskatoon has the Briar going and communications are being looked after by Syl, VE5YK, and crew. VE5AGM represented Saskatchewan on DTEN 32% for February. FB, Lorrie! The DOC is going full steam ahead with deregulation and restructuring. DOC is proposing to 1) eliminate restrictions on types of emissions used in the bands, 2) eliminate the 6 and 12-month endorsements, 3) permit foreign amateurs to operate the same frequencies/emissions as Canadians, 4) revoke outdated regulations on station identification, and 5) have amateur operation on board aircraft regulated by DOT. CRRL has recommended that we follow IARU bandplans. Overall, it should be good for Amateur Radio in Canada. In Regina, planning for the Provincial Hamfest, scheduled for August 11–13, is well under way with Bill, VE5EE, heading the crew. There will be technical and non-technical sessions, fleamarket, DX forum, ladies' program, and dealer displays—and a banquet and dance on Saturday night. Send pre-registrations to Regina ARA, Box 153, Regina, SK S4P 2Z6. Cost: \$25—for everything! Did you know that Capt F J Fournier, VE5AI of Connel Creek, was first licensed in 1938? So was Ed Pugh, VE5AP of Glenavon, Bill Green, VE5AV, Charlie Green, VE5GCG, both of Moose Jaw, and Ray Brown, VE5RB of Windhorst. Now you know! 73. ■

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We are always happy to answer queries by phone or mail. Don't hesitate to phone us any time at home or warehouse. If by mail, a postage stamp to defray the cost of a reply would be appreciated. Due to the nature of surplus very few items are stocked in depth and as a result it is impossible to prepare a catalogue or listing which would remain valid for even a short period of time.

For the month of May we would like to mention: (1) New stock of Simpson Model 635 VOM's, with leather case @ \$30.00 (2) Further shipment of Cardwell dual 250pf variable capacitors, new, boxed @ \$10.00 (3) Solid state signal generators, Marconi Models TF2002 (100KHz-72MHz) @ \$250; TF2002AS (100KHz-72MHz) with manual @ \$300 and TF2002B (100KHz-88MHz) @ \$350 (4) Marconi AM/FM signal generators Model 995 (1.5MHz-220MHz) @ \$150 (5) Several ex-govt Heathkit items including IM-17 VOM @ \$11.00; OP oscilloscope @ \$25.00; Impedance bridge @ \$75.00; Decade capacitor box DC-1 @ \$12.00 and capacitor checker IT-28 @ \$30.00 (6) Small 7x7x4 sloping front metal speaker cabinets, 5" spkr--part of intercom system, \$2.00 (7) Small table top (15x14x13H) Cybernex video display terminals. Good green CRT, screen size 10x8H with separate keyboard which is included. Mostly Model XLA-84. \$15.00 each (8) Swivel/tilting stands for above or similar units, Cybernex model STS-1 at \$5.00 each.

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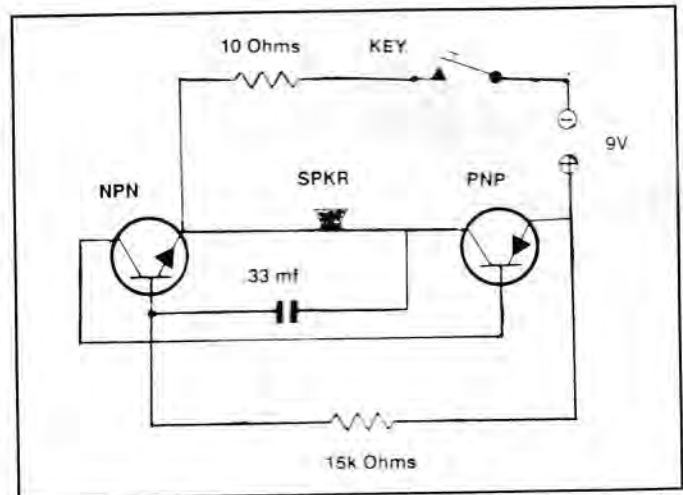
A Simple CW Oscillator

How's this for a simple CW oscillator from a confirmed phone man? I like oscillators and this is about as simple and reliable as an oscillator can get. It takes one NPN and one PNP transistor. The rest of the parts can be found in any good junk box.

This oscillator will work with any voltage from 1.5 to 13.8 volts, but you might have to adjust the size of the 15k resistor to get a good tone. On 13.8 volts the volume can be overpowering. As shown, it works nicely with a 9-volt battery—with no chirp at all.

Almost any NPN and PNP transistors will work, but for good volume, the PNP should be a power transistor. Build and enjoy. —Ced Tanner, VE3BBI.

Now it's your turn. Send us your ideas for this column. We're mostly on the lookout for small projects—gadgets you can use around the shack, test gear, QRP transmitters and the like. Of course, antennas are always of interest. All we need are your ideas. We do the rest.



Silent Keys

Conducted By Ray Staines, VE3ZJ

It is with deep regret that we record the passing of these amateurs:


VE1BGC, Clarence A Thompson, Moncton, NB
VE2DZ, Marcel Henry, Laval, PQ
VE2EM, Lance McAteer, Montreal, PQ
VE3ABW, Leonard Thibadeau, Peterborough, ON
VE3AFH, John Conner, Abbotsford, BC
VE3DGC, Harry J Wood, London, ON
VE3JAG, John A Gervais, Kitchener, ON
VE6YW, Elsie Thompson, Barhead, AB
VE7HR, Ron Hough, Victoria, BC

Note: Silent Key reports sent to *QST Canada* must include name, address and call sign of reporter in order to be listed. To avoid unfortunate errors, reports are confirmed only through acknowledgement from the family of the deceased. Thus, those who report a Silent Key may not receive an acknowledgement from *QST Canada*.

Strays



George Elliott, VE3GTF, is Manager of the CANWARN Eastern Weather Service Net. Read all about the net in this month's Public Service column. (VE3SV photo)




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BREAKFAST (\$10.00 per person) # ___ at \$10.00 = \$ _____
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TH-25AT, 45AT

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1. TRYLON 48' TOWER, 12-FOOT MAST AND MAST BEARING, HYGAIN HAM IV ROTOR PLUS 100' 8-WIRE CABLE, HYGAIN TH3JR 10, 15, 20-METRE ANTENNA, BN-86 BALUN, FOUR PL259 CONNECTORS AND 100' RG 213u ANTENNA WIRE...

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2. TRYLON 48' TOWER, 12' MAST AND MAST BEARING, HYGAIN HAM IV ROTOR PLUS 100' 8-WIRE CABLE, HYGAIN EXPLORER-14 10, 15, 20-METRE ANTENNA, BN-86 BALUN, SIX PL259 CONNECTORS, 200' RG 213u ANTENNA WIRE...

(A) WITH ICOM IC-761 TRANSCEIVER AND ICOM IC-275H ALL-MODE

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(B) WITH ICOM IC-751A, PS-30 POWER SUPPLY AND ICOM IC-275H

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1278

MFJ 1270B, 1274, 1278

Dig Out Those Old Radios!

After a pleasant evening at the Metro Radio Club (VE3MRC), discussion indicated that many of the fellows wanted to operate 144-MHz SSB/CW but were unwilling to shell out \$1000 for a one-band multimode rig. Frankly, for most amateurs with new jobs, mortgages or fixed incomes, that is asking a lot. A transverter with an existing HF rig is an efficient and logical alternative if finances are tight, but an even cheaper option exists. It seems that many amateurs were on 144 MHz using CW and AM years ago and still have converters, tuneable cavity filters, and even whole rigs that are fully functional. A few have old SSB rigs and

yagi antennas. I'll bet there are lots of other hams in the country with the same collection of gear. Well, dust it off, get those yagis horizontally polarized again and get back on the air! Remember, those fancy new radios don't do anything different than those old rigs. They just look nice(r)!

Really, there's no time like the present to start making full use of all of our exclusive VHF bands and all available modes. Lets face it. FM has a good home on our 145 and 443 MHz bands and is secure and prosperous. Now, we need Canadians to put similar energies into other aspects of VHF/UHF operation to strengthen them as well (without weakening our FM opera-

tions). This will be particularly true when the new license structure comes into effect. After all, do we want all these new hams crowding our existing repeaters? We have lots of spectrum, so lets get everyone diversified enough so they will operate simplex FM, SSB, ATV, packet, satellite and even mountain-top linear translators!

This "diversified" type of operating will help preserve our RF spectrum into the next century. So get those club nets going again on 144 and 50 MHz SSB or AM, or start a club project building gear for 903 MHz. Think it over, and let's see if amateurs and Amateur Radio clubs in this country have what it takes. ■

ACTIVITY REPORTS

As of the start of this year, the maximum useable frequency (MUF) continues to push up into the 50-MHz band. With the estimated "peak" of sunspot cycle 22 still many months away, there is still time for Canadian amateurs to get on 50 MHz and catch some "DX of a lifetime".

Solar flux levels were running around 209 in the early part of January, but by January 9 had risen to 256/18/3 with a major flare occurring at 1926 UTC. By the 11th it was back up to 268/27/5. Such conditions were indicative of solar storm conditions, and sure enough, a phone call at 2315 UTC from VE3FAC brought the news of an aurora going strong on 144 MHz. Richard reported reception of VE1 stations, but little from the west. Most people reported aurora peaking to the northeast, with little movement to the west. Everyone was asking "where are those W0's?".

Meanwhile, on 6 metres, aurora signals were often severely distorted. Many Canadians were heard from Toronto with VE3CTT (FN07), VE3BGA (FN15), VE2DFO (FN25), VE3KKL (FN25), VE3ETQ (EN93), VE3FHU, VE3ACA and VE3OCX (FN03) adding to strong US activity from WB0WAO/8 (EN93) and W3EP/1 (FN31). Signals finally faded sometime after 0116 UTC on January 12. A check of the band the following morning at 1150 UTC found everything quiet to the north. However, while scanning to the south east a weak (S4), hauntingly familiar tone was heard on 50.038 MHz., the frequency used by FY7THF whom I had not heard in six years! (but whom everyone else had heard months ago...). Other indicators pointed to an opening to South America brewing and it was time to call CQ DX on 50.120 MHz. No reply to the CQ's led to more tuning, and I heard the DL3ZM/YV5 beacon (50.044 MHz) peaking at an S5 at 1355 UTC. Careful tuning around 50.110 revealed Gus HC2FG (FI07), calling CQ. Over the next 50 minutes, the following were worked by VE3DSS: HC2FG, HC5K (FI07), VP2MO (FK86), HP3XUH (EJ88) and HI7TE (EK72). Missed during the opening was a confirmed contact with KP2A on St. Thomas. John's signal was just not consistent enough into Toronto. However he did work a number of eastern Ontario VE3s and some VE1s.

January 13 brought the news that solar activity had reached a new peak for Cycle 22! Numbers of 291/25/3—with not one but three major flares over a period of a few hours—fuelled speculation

of more band openings on 6 metres and possible auroral fireworks for 144, 220, 432 and possibly 903 MHz and the ARRL VHF Sweepstakes. January 14 was a real surprise for many of us as the band literally "popped" open to the UK between 1615 and 1650 UTC, starting with a 20 over 9 signal from the GB3SIX beacon on 50.020 MHz. Activity was so high that many stations were heard operating at 50.3 MHz. Stations worked by many of the VE gang included GM8COX., G3USF, G0HNW, GM4UPL, G6YGP, G4PBP and a GI station. The band was also open to Denmark, Sweden, Switzerland and the Netherlands, with many contacts being made "crossband": we transmit on 50 MHz and listen for replies on 28.885 MHz. It's a real treat hearing your 6-metre SSB signal coming back to you via 10 metres, full duplex!

This year's January ARRL VHF Sweepstakes (VHF SS) was a resounding success and will probably go down as the best of the decade. Tropo conditions were above par on Saturday, with a scattering of aurora up to 220 MHz. It was great to hear lots of Canadians on 144, 220 and 432 MHz but our activity still tends to be spotty on 903, 1296, 2304 MHz and above. Sunday brought superb contest conditions, with the Europeans reporting Aurora on 50 MHz at 1700 UTC. Here in North America, the aurora arrived just in time to create an 50-MHz extravaganza of activity, again with stations spread out between 50.000 and 50.3 MHz.

(Incidentally, I noted a strong auroral carrier at 50.4 MHz throughout the opening. Has anyone else heard it?)

Doug, VE5UF, reports hearing "more Canadians on 50 MHz than ever before" from his QTH in Saskatoon. His contest contacts from Saskatoon included VE4ABE, VE5LY, VE5XU, VE6AFO and VE4CW, with best DX being WB0DRL (EM18), about 1600 km away. See you next time you're in town Doug!

Out Calgary way, Ken, VE6AFO (DO31), made excellent headway in the VHF SS with a total of 27 grids on 50, 144, 223, 432 MHz. He even managed a contact with N7ML (CN81) using an unusual form of CW; tapping on the mike! It seems that the auroral distortion was o-

bad that SSB was unreadable, and Ken's rig didn't have a CW position. Let's hope there aren't more rigs like that around!

On 432 MHz, Hans VE3CRU (FN03) spent the better part of two hours juggling a massive pile up of UHF stations calling via the aurora. When the smoke cleared he had worked 44 stations including W1XX (FN51) on Nantucket Island to the east, and W0RAP (EN42) in Iowa to the west, and had bumped his states total to 40 with two new ones: Rhode Island and New Hampshire. Hans noted that CW signals were very broadly smeared due to the aurora and were often doppler-shifted a couple of kHz. Similar



Ken Oelke, VE6AFO, is active from Calgary on ATV, FM, and SSB. Ken is a member of the CRRL VHF/UHF Advisory Committee (VUAC) and represents Alberta VHF/UHF users on issues like band planning and frequency coordination. If you have a problem, need help, or just want to get on the VHF/UHF bands, give Ken a call!

comments were received from the gang at VE3UOW, University of Waterloo ARC, the multi-operator group that made a number of auroral 70-cm contacts with just fourteen watts. I'll bet those contacts could also have been made on 903 MHz.

VHF SS contest weekend also was beneficial for Barry VE4MA's states and country counts on 432, 1296, and 2304 MHz. Barry worked IN3HER in Italy on 2304 MHz EME for grid number 16 and provided the Italian station with his first North American contact. Barry also picked up a new continent and his forty-sixth grid by working YV5ZZ on 1296 MHz. On 432 MHz he worked KB4WM for state number 49! Barry is

now planning to build a kw amplifier for 903 MHz using an EIMAC Y730--in his "spare" time...

Welcome to the Novatel ARC, VE6NOV (DO21) who put in a great effort in the contest as well. Glad to see that great western spirit alive and well on our VHF/UHF bands.

January 16 was a peculiar day for DX, with solar flux hitting a Cycle 22 high of 299/30/2. This kind of solar activity should push the MUF to beyond 54 MHz on some paths. It sure opened a path to Galapagos Island with the HC8SIX (50.081 MHz) in at an S9 for at least forty minutes. The beacon runs four watts to a vertical and, unfortunately, is unattended, meaning HC8 operators were not around to work anybody. Believe me, Galapagos on 6 metres will be an easy shot from Canada over the next couple of years, so be prepared.

January 21 was a real corker here in Hometown. With the flux hovering around 245, Peter VE3EMS (FN02), was working them thick and fast on 50 MHz. By the time the band closed at 1635 UTC Peter had worked G4CVL, G3YYZ, GJ4JCD, G4HFO and G4GRA, and had heard FC1DUZ. At VE3DSS, the Brits were about 5X3, with the GB3SIX beacon audible at 5X2 for about one hour. Strangely enough, Peter was hearing the Gs 5X9 but did not hear the GB3SIX beacon. Ah, how fickle, that propagation path.

January 31 brought aurora, and Gord VE3KKL reported working more VE1s on 50 MHz than ever before. Contacts included VE1ASJ (FN75), VE1ALQ (FN65), VE1APA (FN65) and VE1APG (FN66). Then things quieted down as the end of January approached, but not for long!

On February 9, solar activity pushed the flux back up into the 277/14/3 range, and with a little bit of flare activity, the band popped opened from VE3EMS (FN02) to FY5AU (FI34) at 1420 UTC, followed by a genuine rare DX in the form of Atze 8R1AH (GJ06), a Canadian from BC down on a work assignment. Peter was his first Canadian, and Bob VE1YX was his second. The opening ended at VE3EMS with HC5K at 1429 UTC.

Friday, February 10 brought some transcontinental contacts between VE1YX and a number of Californians, and February 13 and 14 brought DX to Tony, VE3QF, who reported hearing the GB3SIX and FY7THF beacons at 1400 UTC on both days. He also worked HC5K at 1415 UTC on both days, and HK4EB on the 14th. The Columbian station was 40 over 9 for over an hour into the Toronto area and flux numbers were 258/15/1, with flares. Gord VE3KKL (FN25) called and reported contacting both HK and FY5, bringing his country total to 27 worked. Gord reports lots of South American chatter on commercial frequencies below the band every day with some unidentified Spanish activity on 50.525 MHz and FM Broadcasting (!) at 50.390 MHz from Columbia.

From New Brunswick, Brent, VE1APG (FN66), writes that he has picked up 59 grids and eight countries on 6 metres in his first seven weeks on the air, including contacts with Ireland, Northern Ireland, Norway, and the Isle of Jersey which he worked on February 11. On 2 metres Brent reports numerous contacts with U4MIR using 30 watts and 11 elements at 65 feet. Brent encourages others to work the cosmonauts when MIR is over Canada.

February 22 was a good one for Bob VE1YX (FN74) who worked 9H1BT and 9H1CG at 1300 UTC for DXCC country number 90 on 50 MHz! On February 26 Bob worked 67 stations in Western Europe plus ZS6LN at 1403 UTC. On the following day, he worked 40 stations including LA1ZE.

March 3 brought a spectacular aurora to the Saskatoon area and was the precursor for the best DX conditions Doug VE5UF has witnessed this cycle. The band opened for him at 1653 UTC

with LU9AEA literally pinning his S-meter! Contacts were made in rapid succession with LU3DCA, KP2A/KP5, HI8DAF, LU9EHF, CX8BE, LU4EJ, KG4SM, HH7PV, LU3DI, LU1DMA, LU3EX, HC5K, HC2FG and OA8ABT rounding things out at 1920 UTC. Doug also heard KH6IAA calling CQ on backscatter, but did not make a contact. Apparently the band was opened from VE4, VE5, VE6 and VE7. Congratulations to all who made the grade and I hope we will be reporting more good DX from the Western Canada throughout 1989. (Just at press time we received a fine report of doings in VE7. Next column!)



Here's why Barry, VE4MA, has a big signal from Winnipeg: eight 19-element K2RIW yagis, four vertically and four horizontally polarized for 70 cm, and a 12-foot dish for 23 and 13 cm.

March 6 heralded the arrival of the largest solar flare in five years. Quick checks of WWV verified that a flare had occurred at 1415 UTC with more flares at 1455, 1536, and 1700 UTC on March 7. These latter flares were heard as 20 over 9 noise at 50 MHz and were a certain indication that the sun was extremely active. The 1455 UTC flare lasted for over two minutes! Solar terrestrial indices were sitting at 210/13/2 during most of the day. J52US was copied weakly in the Rochester, NY, at 1510 UTC, but not heard in Toronto. Incidentally, viewing the solar disk using a telescope and projection screen revealed a major sunspot group on one edge, perhaps the harbinger of more activity in April.

March 8 was pretty quiet, with a solar flux of 206/10/3, except for VE1YX working ZS3E and J52US, that is. Everyone seemed to be waiting for the aurora that would be caused by a monster flare, and we were not disappointed. The buzz session kicked off at 2130 UTC. Clarke, VE3WCB (FN03), worked about forty stations on 144 MHz including N4VC (EM66) in Nashville, Tennessee, to the south, and W9JVC (EN41) to the west. VE3FAC managed to work about 43 stations including VE1—on 144 MHz.

March 9 brought increasing solar flux numbers of 230/26/4, more solar flares audible on both 6 and 2 metres, but little in the way of 50-MHz openings from Canada, although the LU's were working into the Pacific northwest.

On the moonbounce front, Hans, VE3CRU, completed a 432-MHz contact with RA3YCR in the USSR the evening of March 11. A sked with another station earlier in the day was almost nixed by incredibly strong (US?) RADAR, which filled the band from 430-440 MHz on a heading of 220 degrees from Toronto. We wonder if this has anything to do with inquiries being made regarding our operations at 432, 436, and 441 MHz by DOC, hi.

Local VHFers hosted Barry VE4MA who was in Toronto on March 12. We had a good visit and listened to moonbounce tapes made using a 75-foot dish in Sweden, plus various tapes of 1296 MHz contacts using a TVRO dish! While we were visiting, of course, the best aurora in many years was going strong on 50, 144, 220, and 432

MHz! The visual aurora was a spectacle of shimmering reds, greens and blues. Briefly, on 50 MHz at 0631 UTC March 13, VE3CTT in FN07 was working VE5LY, and WA7KHO (DN47) on transauroral E. K2OS was working into Alabama to the south and six metres was filled with stations on SSB/CW from far and wide. On 144 MHz, VE3FAC worked into Missouri, contacting KOTLM (EM29) and K0GGI (EM48). The solar flux and geomagnetic conditions were 249/20/7 so we were right to expect something. We'll give a full report in our next column.

That's it for now. If you have reports of activity on SSB, CW or FM, send them to me at the address above, or by FAX care of Ontario Hydro at (416) 592-8871, or via packet radio, VE3DSS @ VE3NUU.

RANDOM SCATTER

□ In FM repeater news, Alex, VE3MDY in North Bay, reports that the VE3NFM Repeater is now on 145.110 MHz and is linked to VE3MUS at Dwight. In the North Bay area, look for the following repeaters: VE3NHM, sponsored by VE3LGR on 147.180 MHz, and VE3NNZ, sponsored by VE3MDY on 147.000 MHz. Alex also reports that packet messages can now be passed through Sudbury via HF, VE3FPS, Cambrian College, on 7.093 MHz.

□ Recently, I had a QSO with VE3POJ via VE3SIX while John worked on that repeater's gear. I learned that Toronto FM Association (TFM, sponsors of VE3RPT) is offering its members a speed dial feature as a perk for its members. It certainly is useful for those times when you can't safely dial several digits. Membership in TFM is all you need. Incidentally, the RPT gang have received a second 223 MHz allocation, so look for more good repeaters coming to that band. I strongly support the efforts of those working to make Canada's premiere repeater shine. Now what about 906 MHz?

□ Did you know that you can work long point-to-point on 903 MHz SSB, FM, or full duplex packet with "full quieting" signals using only 10 watts and loop yagi antennas at each end? Come up to 33 cm be surprised by the excellent propagation. This beats cluttering up the 70-cm band for those new long haul repeater auxiliary links. CRRL has asked DOC to give us PRIMARY on this band via its response to DOC's 896-950-MHz paper.

□ Just at the end of February, DOC Ontario Region consulted CRRL regarding a 70-cm frequency request from the Fisheries Department for a radiolocation device. After a review of the situation, CRRL advised DOC that the device used lasers to produce positional data, and radio only to relay telemetry. Since this did not fit the definition of radiolocation specified by ITU, CRRL suggested that a frequency pair above or below the 430-450-MHz band be used. At press time, CRRL had not heard back from DOC. We'll keep you posted.

□ ATV News? ATVers, let's hear from you. Station descriptions and photos would be particularly welcome for use in this column.

JUNE ARRL VHF QSO PARTY AND MEETING

Don't forget this year's big event, the ARRL 1989 VHF QSO party set for June 10-12. The contest starts at 1900 UTC. Please be sure to send a copy of your logs to me, and make sure ARRL gets a copy! You'll get announcements and logsheets in the mail if you are on our VHF UHF Database! Look for superb DX conditions on 6 metres, with a high probability of sporadic E on 50, 144 and possible 220 MHz, and auroral openings during evening hours. Back in 1980 we had similar conditions generated by the high levels of solar activity. Don't forget that FM contacts count too! Check the rules in QST. Incidentally, the Toronto VHF Society meeting will be held at VE3FAC's QTH in Scarborough about two weeks after the contest. If you're in town, plan to attend. ■

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SPECIFICATIONS AND PRICES SUBJECT TO CHANGE

CANWARN Eastern Weather Service

Most ARES groups across Canada meet periodically, usually on VHF, to give members experience in net operation and to exchange information on emergency communications. A continuing challenge for many ECs is to find ways of making these nets more interesting and more meaningful for all members on a continuing basis. The Hastings-Prince Edward (Ontario) ARES group has accomplished this by establishing a daily weather information net known as CANWARN Eastern. Manager and co-founder of the net is George Elliott, VE3GTF, of Pictou. We asked George for some information and he replied as follows:

"There is a group of radio amateurs in the five Ontario counties of Hastings, Prince Edward, Lennox and Addington, Northumberland, and Frontenac that assist the Weather Forecast Centre at Canadian Forces Base Trenton (CFB Trenton). They have formed the CANWARN Eastern Weather Service which sponsors the 2-metre CANWARN Eastern Weather Net which meets each morning on the VE3KBR repeater. This net is considered an integral part of Hastings-Prince Edward ARES coordinated by EC John Lester, VE3MB. It would be activated in most emergencies. Any amateur station can call up the net. Each check-in reports his or her weather using terminology and standards laid down by the Weather Forecast Centre. The net controller collects reports of weather conditions at the QTH of each check-in, makes a synopsis and passes it to the centre. The five counties have been divided into 15-minute grid squares by the Forecast Centre, and the CANWARN Eastern Net controller can give conditions in each of the grid when he reports.

"The CANWARN Eastern amateurs got the idea for their net from two Essex County (Ontario) newspapers which carried pictures and stories describing the success of the Windsor Amateur Radio Club in creating a CANWARN weather service, back in 1988 in association with Environment Canada's Windsor weather office. The Essex amateurs modelled their weather reporting program on the US weather-spotter program called SKYWARN. Their objective was the creation of an Amateur Radio reporting network that could be mobilized quickly and tie in with the Windsor weather office during weather emergencies. During 1988, Windsor CANWARN was called up nine times to monitor severe weather conditions.

"In the eastern Lake Ontario region,

the nearest weather office is the Weather Forecast Centre at CFB Trenton. This centre—one of three across Canada—is responsible for all military weather forecasting in Ontario and Quebec. It is automated, modern and efficient, serving a wide range of Canadian Forces operations in Canada and around the world. The centre also provides weather information to the general public and has links to Environment Canada's Atmospheric Environment Service.

"The net began when a group of amateurs from our five counties met with offi-

cial of the forecast centre to review the Windsor effort and determine if it could be adapted to our region. We found that a daily 2-metre weather net—with emergency call-up, would be useful. The forecast centre would prescribe reporting format and provide net members with folders of information on weather recognition and terminology. Thus, CANWARN Eastern was formed.

"Net operation began on 1989 February 10 and, by early March, was averaging sixteen check-ins a day. Each net is called up at 0830 on the VE3KBR re-

Field Organization Reports February 1989

CRRL Section Emergency Coordinator Reports

Reports were received from the following SECs (DECs and ECs reporting to SECs are listed in brackets), denoting a total ARES membership of 795:

Reporting	ARES Members
VE3GV (VE3s EFX, FOB, FUN, GNW, HEP, ITT, JJA, KBU, LBU, LFV, LKI, LPM, LYW, MB, SV, and K6GMU/VE3)	563
VE6AFO	232

CRRL Section Traffic Manager Reports

Call	Orig	Rcvd	Sent	Divd	Total
VE1DLC	3	10	6	7	26
VE1ALU	2	8	8	0	18
VE1BKM	0	5	5	0	10
VE1BTV	0	2	2	2	6
VE2JN	3	36	33	3	75
VE2EDO	8	17	24	8	57
VE2BP	4	14	12	11	41
VE2EC	7	11	5	8	31
VE2WH	2	12	6	9	29
VE2ALE	0	7	5	1	13
VE3ORN	9	135	137	14	295
VE3GSO	1	84	79	2	166
VE3CYR	0	86	54	3	143
VE3GNW	0	54	75	0	129
VE3GT	0	50	51	0	101
VE3NVJ	3	17	18	5	43
VE3EAM	6	15	6	15	42
VE3IN	0	34	4	4	42
VE3KCZ	1	13	5	10	29
VE3KXB	0	5	17	0	22
VE3FGU	0	7	12	0	19
VE3MCO	3	5	3	5	16
VE3SB	1	2	5	1	9
VE3BDM	0	0	7	0	7
VE3AJN	0	4	2	0	6
VE3BAJ	0	0	2	0	2
VE3WV	0	0	1	0	1
VE4JA	24	28	43	24	119
VE4LB	0	28	5	5	38
VE4TE	0	28	8	0	36
VE4FP	0	15	15	1	31
VE4STU	6	5	10	10	31
VE4JR	0	15	10	5	30
VE7EJU	8	65	67	1	141
VE7ANG	5	47	52	5	109
VE7FB	1	24	21	9	55
VE7CCJ	11	14	11	2	38
VE7EGM	1	4	9	1	15
VE7BCF	6	0	6	0	12
VE7EIR	0	0	6	6	12
VE7EGA	0	0	1	0	1

National Traffic System

Net (Mgr)	Sess	QNI	QTC
KTN (VE3AJN)	15	107	12
OLN (VE3POJ)	27	504	39
OPN (VE3IN)	28	599	220
OQN-1 (VE3GSQ)	25	42	33
OQN-D (VE3ORN)	27	136	57
OQN-E (VE3CYR)	28	95	139
OQN-L (VE3GSQ)	23	62	26
MEPN (VE4LB)	29	1080	21
MMWX (VE4TE)	29	457	23
MTN (VE4IX)	15	227	46
SATN (VE5AGM)	20	134	4
SPN (VE5AE)	27	1500	0
APSN (VE6AKY)	28	1539	6
ATN (VE6CPP)	28	168	53
BCEN (VE7EJU)	28	626	131

Brass Pounders' League

This listing is available to amateurs who report to their SM a traffic total of 500 or a sum of originations and delivery points of 100 or more for any calendar month. All messages must be handled on amateur frequencies, using standard ARRL-CRRL form, within 48 hours of receipt.

BPL: None this month

Public Service Honour Roll

This listing is available to amateurs whose public service performance during the month indicated qualifies for 60 or more points in the following nine categories (as reported to their SM). Please note maximum points for each category: (1) Checking into CW nets, 1 point each, max 30; (2) Checking into phone/RTTY nets, 1 point each, max 30; (3) NCS CW nets, 3 points each, max 12; (4) NCS phone/RTTY nets, 3 points each, max 12; (5) Performing assigned NTS liaison, 3 points each, max 12; (6) Delivering a formal message to a third party, 1 point each, no max; (7) Handling an emergency message, 5 points each, no max; (8) Serving as an EC or NM for an entire month, 5 points max; (9) Participating in a public-service event, 5 points each, no max. Amateurs who qualify for Public Service Honour Roll 12 consecutive months, or 18 months out of a 24-month period, will be awarded a special certificate from CRRL Headquarters.

PSHR: VE4JA (130), VE4LB (111), VE6CHK (91), VE4STU (82), VE4IX (83), VE7EJU (75), VE7FB (73), VE4JR (62), and VE4KE (61).

Service and Specialized Nets

Independent Net Managers: Your monthly reports are welcomed. Send to CRRL, Box 7009, Station E, London, ON N5Y 4J9.

Net (Mgr)	Sess	QNI	QTC
ARES CANADA (VE3GV)	4	89	1
CRRL ONTARS (VE3BC)	28	12139	0
ARG (VE5EE)	28	535	0
MJARC (VE5MML)	26	326	0
SWX (VE5EX)	28	742	0
AARES (VE6AMM)	4	143	0

peater. Reports are recorded by 0845 and the synopsis is forwarded to the forecast centre by 0900. Recently, the net manager received a letter from the centre expressing satisfaction with the net's reports.

"Amateurs participating in this effort have learned a lot about weather since the net started. What about the future? Perhaps participation in the centre's Severe Weather Program—and, as amateurs in Windsor have already done at their weather office, permanent installation of a 2-metre transceiver, roof antenna and fail-safe power supply at the forecast centre in Trenton. Then, during a local weather alert, a radio amateur could make his or her way to the centre to provide instant contact between the centre and the net. Quinte Amateur Radio Club has made this their project.

"Partly with the weather net in mind, a new microprocessor-controlled 2-metre repeater is on order to replace the existing Pictou machine; VE3RAA. The repeater will have regional weather conditions updated daily and available by entering special touchtone codes. Weather alerts will be programmed for automatic transmission on the quarter hour, half hour and hour. The new machine will also be linked into the VE3ULR linked repeater system, allowing coverage to most of southwestern Ontario. With backup power, autopatch and reverse autopatch, the new VE3RAA—owned and operated

by Prince Edward Amateur Radio Club—should be a true all-condition machine for ARES and CANWARN Eastern.

"While it is still too soon to say that CANWARN Eastern is here to stay, we think it is. CANWARN Eastern participants are members of radio groups in Trenton, Pictou, Belleville, Napanee and Kingston. In addition to the obvious benefits, CANWARN Eastern has brought members of these groups closer together. And we are advised that the CANWARN net is being monitored by non-amateurs using VHF scanners to obtain local weather conditions."

Our congratulations and best wishes to George and his group for their fine initiative. We're sure that other areas of Canada could benefit from the creation of a similar service. Any group wanting additional information should contact George Elliott, VE3GTF, or John Lester, VE3MB.—*Bob Boyd, VE3SV*

It is hoped that this column, which also appears in The Canadian Amateur, will serve as an ongoing source of news and information about ARES activities across Canada. ARES members, particularly ECs, are invited to send information on what they are doing and developments they would like to share. Bob Boyd, VE3SV, will pull this together for future columns with the objective of increasing our ability to serve, should disaster strike. ■

"It Seems to Us..."—Continued from page 1

were suppressed with a few external components. He also pointed out that the measured field strength of Jack Ravenscroft's transmissions in their home was not that high; less than 1 volt per meter.

The next day Ralph and I attended the annual meeting of the RABC itself. A major item on the agenda was the presentation of reports by chairmen of the various committees. When I noted that the report of the EMC Committee did not include pushing the Minister to adopt the 3R program, I felt it necessary to speak. I repeated the words I had used the day before, EMC was the single biggest threat to our existence. The usual huge regulatory lags and delays in developing standards meant that we couldn't really expect any impact from the imposition of mandatory susceptibility standards this century. Something had to be done.

I was fortunate that one of DOC's senior executives was present to hear my message. In addition, many other RABC members, particularly the broadcasters, are very concerned about susceptibility. I am confident that all the RABC members got the message and that RABC will keep up the pressure to force action by DOC. The Ravenscroft case has taught us that we can't continue with the present environment.—*Ray Perrin, VE3FN* ■

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