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ABOUT THE COVER



The Inter-Provincial Amateur Radi Network (IPARN) Ontario earth station with UHF Yagi for links to local terrestrial networks. (VE3NGT photo)

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

Local Clubs...the Ties that Bind Us

Most of you belong to one. It's where you meet and get to know your fellow amateurs face to face. It's where many of you learned how to pass the tests that brought you into this absorbing hobby. Above all, it's where you experience first hand the "spirit of Amateur Radio" with an outstretched hand always ready to help you technically, physically or personally.

Some of you, for one reason or another, may not be able to attend club meetings to enjoy the socializing or the learning from guest speakers. For those of you in this situation, the club newsletter or magazine fulfills a key role in keeping you in touch.

Club Newsletters

These newsletters and magazines vary a great deal. The most important thing is the information they contain about the club, its activities and its members, as well as the more general material reflecting Amateur Radio interests.

Very important too is the way all this is presented. The *ARNS Bulletin* is a monthly publication of the Amateur Radio News Service (ARNS), an organization for Amateur Radio newsletter editors that helps them improve their publications and promote Amateur Radio. There are articles of advice on writing

editorials, technical articles on use of programs like Pagemaker, and suggestions on how to get people to read your paper.

ARNS runs an annual publication contest open to all Amateur Radio organizations. This is a valuable opportunity for clubs, providing them with a detailed evaluation of their newsletters by a panel of experienced judges. Each judge rates the newsletters on a host of criteria including editorial balance, quality of writing, grammar, technical, humour, coverage of club events and much more.

A glance over the many club papers received by CRRL shows a generally high standard. With sometimes limited resources, both human and technical, newsletter editors do a good job of informing and helping to hold a club together. But there are a few areas in which an ARNS evaluation might bring about some improvements.

Some club papers do not identify themselves properly or date their issues clearly. Some fail to list their officers or spell out their conditions of membership. A number apparently have trouble getting enough input from their members, creating a tough job for the editor. But they all help to hold their clubs together and provide the friendly "ties that bind us".

—David Adams, VE3HBF



Federal Minister of Communications Perrin Beatty addresses radio amateurs across Canada via the IPARN network during Field Day, 1992 June 29. In the back, from left to right, Jim Cummings, VE3XJ (DOC), Ray Perrin, VE3FN (CRRL), and Dan Holmes VE3EBI (CARF). (DOC photo)

All letters are considered carefully. Letters are edited for clarity 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.

DON'T ALLOW SHIPBOARD QSOs FOR DXCC

The Breton DX Group (VE1DXX) of Sydney, Nova Scotia, has urged the ARRL DX Advisory Committee (DXAC) not to allow relaxation of the rule prohibiting contacts with ships and boats, anchored or under way, from counting towards DXCC.

In a letter to the DXAC Chairman, the group asked ARRL to maintain the "integrity and pre-eminence of the DXCC Award", pointing out that part of its distinction is that it is not easy to get.

"Getting to within sight of a rare

DXCC island country or even tying up to the dock is not 'being there'. In our view, allowing DXCC credit for shipboard operation makes things too easy. It also opens a veritable Pandora's Box of potential problems and controversy. How close does the operation have to get to the island to be valid? Does the boat only have to be in territorial waters? What defines territorial waters? Three, 12, 200 miles?

"There is also the question of licensing of Maritime Mobile stations. There might be no need for an official licence from the stated 'country' for a shipboard operation. How

would the DXAC determine legitimacy if no official document existed giving permission to operate from the 'country'?" —*Jack Columbus, VE1XT, Sydney, NS* ■

As the World Turns—continued from page 9

remains unchanged. Only more detail has been provided with respect to the political and distance questions.

Am I surprised at the recent decisions of the DXAC? No! Do I agree? Yes! The DXCC Countries List may function by recognizable rules, as well as some not so easily understood. Is this a problem? No! Hugh Cassidy, WA6AUD, of *West Coast DX Bulletin* fame would say, "This DX enigma will be revealed to those that believe, in the fullness of time." Professor Cass would also say, "DX Is!"

Season's Greetings and Good DX! ■

VHF-UHF—continued from page 14

cavities using the venerable water-cooled 2C39. Once Dick gets his amplifier finished, look for some very loud signals from Toronto.

1296 MHz: Clarke, VE3WCB, reports good activity on 23 cm during the September contest. Contacts included W2SZ1 (FN32), WA2TLM (FN20), and W4IY (FM08). Clarke is indeed happy with that DX! Meanwhile, Dick, VE3FAC, had a close one with KC4YO on September 16. The Tennessee station (EM75) was 20 over 9 on 144 and 432 MHz. Moving up to 1296 MHz found KC4YO copying VE3FAC solid, but Dick could not hear KC4YO! Dick runs 200 watts and four loop yagis. KC4YO was running ten watts and two loopers.

Meanwhile, during the September contest, Dick reports working AF9Y (EN52) near Chicago, a good long haul for 23 cm! Look for more from Dick in the spring tropo.

Microwaves: According to ARRL, WB5LUA and W9ZIH set a new DX record on 3456 MHz, spanning 736 miles between Allen, Texas and Malta, Illinois. Roger, VE3RKS, sent us a copy of his 10-GHz Cumulative Contest logs for 1992. Roger runs a homebrew wide-band FM system: five milliwatts to a 25-inch dish borrowed from Steve, VE3SMA. I'm not sure if it was the dish on the cover of our November issue or not, hi. Contacts included VE3MNA, VE3EZF, VE3SMA, VE3TJD, VE3OIK, VE3PFC, and VE3OCY. I did speak to Steve prior to the contest, and it sounded as if they were really going for gold during the weekend. By the way, Roger's best DX was 74.9 kilometres.

JANUARY ARRL VHF SWEEPSTAKES

Don't forget to scrape the ice off the antennas, send the family to the Caribbean for the weekend, and get in on this annual VHF contest, 1993 January 16-18. Send one copy of your log to ARRL, 225 Main Street, Newington, CT 06111, and another copy of your log to Dana Shtun, VE3DSS, 500 Willard Avenue, Toronto, ON M6S 3R6. We will then tabulate the scores for the Toronto VHF Society certificates.

That's it for now. Remember that this is *your* column. We appreciate construction notes and commentary as well as VHF/UHF activity reports. With RAC, we anticipate appearing in *TCA* shortly, and we plan to conduct a big push for VHF/UHF in 1993. So give us a call or drop us a line. Season's Greetings. Best Wishes for the New Year. —*Dana Shtun, VE3DSS, CRRL President* ■

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



The Canadian Radio Relay League (CRRL) 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.

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

CRRL is the Canadian member-society of the International Amateur Radio Union (IARU). "Of, by and for the Canadian Radio Amateur", CRRL 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 CRRL Headquarters, Box 56, Arva, ON N0M 1C0 Tel (519) 660-1200.

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IPARN: The Inter-Provincial Amateur Radio Network

East meets west—22,000 miles above the equator!

By Adrian Stimpson, VE7CGL
12259 206 Street
Maple Ridge, BC V2X 1T8

Remember the first time you sent CQ in Morse code and heard your callsign coming back over the crackle of the air waves? How about your first QSO on your local VHF repeater? Or the first time you provided emergency communications for someone in distress?

These are all magic moments in your life as an amateur. When you first get your licence everything is intriguing, different, a new experience. After a while these things become second nature. If we are not careful, the "experimenter" part of Amateur Radio can be forgotten, leaving only a "radio operator". Before you know it, you are no longer having fun with Amateur Radio. This is particularly true for operators of VHF/UHF FM where you don't have the mysterious variables of the ionosphere to make each day's activity a little unpredictable.

This is the story of how a group of amateurs got back into the "experimenter mode", culminating in what was once unthinkable: handheld-to-handheld communications across Canada.

Throughout the late 70s and early 80s, amateurs on the VHF bands decided to expand the range of their repeaters through linking. This was soon enhanced to a more sophisticated topology using "trunks" and hubs to allow full-mesh networking over large-coverage areas.

Networks began to grow throughout Canada, allowing amateurs to communicate over hundreds of miles from their local repeater. Human nature makes us strive for new goals as soon as previous ones are attained. This was the case for many amateurs who hungered to cover greater and greater distances with the networks. Meetings were held and talk began of a single network covering the four western provinces. It became clear that there were some physical limitations to be dealt with. Depending on the accessibility of repeater sites, a failure might mean loss of communication between entire sections of the network. Indeed, many repeater sites in British Columbia and Alberta are inaccessible throughout the winter months.

At this point it would have been easy



Official IPARN opening net on roof of CTV Headquarters, Toronto. From left to right: Al Vanderburgh, VE3ARV (TFMCS); IPARN Secretary Adrian Stimpson, VE7CGL; Terry Darling, VE3CAB (ULRRA); Randy Neals, VE3RWN, and IPARN President Bill Blake, VE7CQ.

to accept this limitation and forget our "experimenter role". Thanks to some creative thinking, a group of people got together around the coffee pot one night in Langley, British Columbia, and approached the problem. They emerged with the name for a new organization: "IPARN—the Inter-Provincial Amateur Radio Network"—and a solution to the problem: satellites.

That's right. If you used a geostationary satellite as a Canada-wide "hub repeater", networks could be joined from all regions, and a failure in one network would not impact on the others. Perfect! Additional benefits became readily apparent. A satellite network could be used for packet forwarding, a variety of nationwide nets, emergency communications, and bringing amateurs in small

northern communities with just one or two repeaters into contact with thousands of fellow amateurs in the south.

There have been many milestones reached since that late night session in Langley. First, IPARN registered as a non-profit society, and then secured a dedicated satellite channel exclusively for amateur use from Telesat Canada, the operators of the Anik satellites. Then some satellite equipment was built and tested during a "proof-of-concept" test which was held in January, 1990. During this test, amateurs in Alberta and British Columbia had the opportunity to speak to each other using nothing more than handheld radios and their local repeaters. Activity was almost non-stop, and due to strong membership support, the connection returned to become permanent in

June, 1990—just five months later.

Then, on June 14, 1992, it happened: after a lot of planning and hard work, the first handheld-to-handheld QSO between a VE3 and a VE7 took place. Casey Coley, VE3NGT, IPARN's Toronto Regional Coordinator, spoke with Don Auld, VE7FKX in Vancouver, their voices travelling over 45,000 miles through space. IPARN was now operational in Ontario! An opening net took place at noon EDT with guest speakers on the roof of CTV Headquarters in Toronto and check-ins from British Columbia, Alberta and southern Ontario.

The work that enabled all this to happen should not go unrecognized. The essential ingredient was cooperation. The people of the Toronto FM Communications Society (TFMCS) and VE3ULR Repeater Association (ULRRA) deserve much credit for their work in building two of the best networks in Ontario. The leadership shown by Terry Darling, VE3CAB, and Al "Van" Vanderbergh, VE3ARV, in adapting their networks to communicate through a common IPARN hub was a perfect example of the cooperation that made the project possible. Terry and Van were well supported by a team that included John, VE3POJ; Randy, VE3RWN; Chuck, VE3HHZ, and Harold, VE3WHO. Everyone jumped

into the project with their area of expertise and became an important contributor to the success of the installation.

A special mention should go to Don, VE7FKX, who developed IPARN's measurement and control system (MACS). MACS represents the culmination of many years of work, and Ontario is the first IPARN site to have a MACS module installed. (There are now plans to retrofit the Alberta and BC terminals with MACS controllers as soon as Don has recovered from the round-the-clock work he did on the Ontario MACS boards.)

MACS provides complete control over the satellite-earth-station and terrestrial-network interface, handling seamless network configurations via DTMF translations and regeneration. Details of the functions that the MACS perform could fill pages, but in short, Don's work has made it easy for anyone to use the network. Users simply enter the DTMF code for the repeater they wish to reach and MACS looks after everything, negating the need for complicated network maps and multiple DTMF sequences. This will be invaluable when the network grows to include every Canadian province and territory.

For many people, the excitement of having Ontario on the IPARN network has rekindled the enthusiasm they had for

Amateur Radio when they first got their licence. Since June 14, many friendships have been made, and many informative nets and special events have been held, events like the address given by the Minister of Communications during Field Day, and communications with underwater divers on Canada's west coast.

This is only the beginning of this new dimension of Amateur Radio. As amateurs, we must continue to expand the network to new regions and include new applications. IPARN's goal is a *nation-wide* network. This will not be completed until every province and territory has a satellite terminal. At the same time, there are plans for mobile earth stations for emergency communications, a Canada-wide packet channel, additional voice channels to handle busy periods, and much more. Even the idea of international communications has been suggested by some network users.

The enthusiasm with which IPARN members embrace these concepts is very encouraging. Letters from members are received from all over Canada. Some have been members since IPARN was founded in 1989, and although they may not yet have an earth station in their province, they enjoy following the project through updates in IPARN's regular publication, *Network*. Of course, the key to IPARN expanding into new regions is membership support.

IPARN would like to thank everyone who contributed to the expansion into Ontario. We look forward to continued support from around the country as we plan the next phase of expansion. There are many things that Amateur Radio has to offer. We hope that we have shown the amateurs of Canada that "the sky is no longer the limit".

For more information about IPARN or IPARN membership, please write to Box 3156, Langley, BC V3A 4R5. ■

Join IPARN Today!

- *The Inter-Provincial Amateur Radio Network's objective is to expand into every Canadian province and territory. Membership support is the key to making this happen.*
- *As a new member, you will receive an operating guidebook and DTMF access codes. You will also receive IPARN's popular publication, Network, every other month.*
- *Membership is just \$36 for one year, \$95 for three years and \$150 for five years. To join, send your name, call sign, and cheque or money order to IPARN, Department 9212, Box 3156, Langley, BC V3A 4R5.*

IPARN—Canada's National Network...

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WANTED: Old Marconi wireless telegraph keys. Murray Willer, VE3FRX, 557 Spadina Road, Toronto, ON M5P 2W9.

WANTED: Old QSTs and AM spoken here. Please don't dump your "boat anchors"! I actually use them on the air, and appreciate them! Write to Peter Swynar, VE3CUI, R. R. 8, Newcastle, ON L1R 1L9.

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FT-2400H



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15 DECEMBRE 1992

HF Full-wave Loop Antennas

By Paul M. Dunphy, VE1UK
3351 Highway 7
Lake Echo, NS B0J 2S0

Amateurs have been using loop antennas for over fifty years. A loop antenna is just that—a closed loop of wire. Practical transmitting loops must be at least a full wavelength around. Smaller designs are inefficient and hard to feed. There are two basic types of loops commonly used by amateurs: the full-wave quad and the full-wave delta loop. (Actually, a folded dipole is a full-wave loop, but it does not share many of the properties of the quads and deltas).

Loop antennas offer several advantages when compared to half-wave dipoles. Loops exhibit a wider bandwidth. They tend to be quieter—they have a better signal-to-noise ratio. An ideal loop has about 2 dB of gain over a dipole. Even when they are mounted close to the ground they can have a very low angle of radiation. Depending on the design, this angle can be as low as 20°. This 20-degree configuration is of particular interest to DXers because it can extend the first skip zone to over 1500 kilometres. On the other hand, loops are a bit harder to match than half-wave dipoles when fed with coax. They are also larger and are more prone to weather damage. Low-band loops, particularly for 160 metres, are difficult to construct because of their size. A 1.8-MHz vertically mounted loop would require supports in the order of 45 metres!

In this discussion we will deal primarily with single-element antennas. One or more parasitic elements can be added to either quad or delta loops. This will give the antenna gain and directive characteristics similar to that of a traditional beam. Such configurations exhibit forward gain, front-to-back ratios and side rejection that is usually better than a comparable yagi. Unfortunately, however, multi-element loops require constant maintenance because of the wind and ice associated with winters in the northern latitudes.

Quads vs Delta Loops

The ideal loop antenna is a perfect circle. This cannot easily be constructed for HF operation. A circular loop requires the conductor to be a rigid material such as tubing, or a wire with an infinite number of supports. Even for ten metres, this would not be practical, because the loop would be about 35 feet in circumference and 11 feet in diameter.

Fortunately, the loop can be constructed as a square or triangle with only a small loss in performance. Square loops

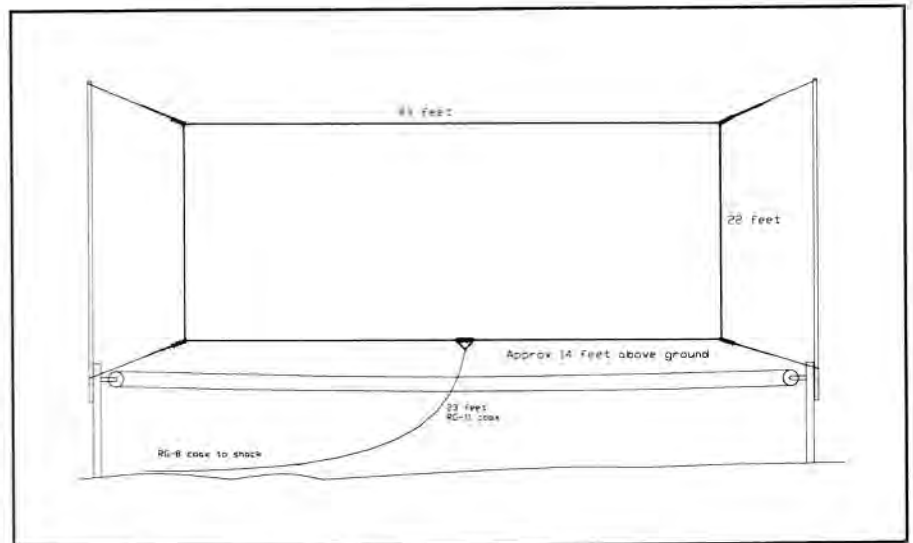


Fig 1—40-metre quad located at VE1UK.

are known as quads, and the triangle configuration is called a delta loop. The quad has about 0.5 dB gain over the delta loop. This is because the wire angles on the triangle are sharper. Near the corners, the sides of a delta loop are closer than the sides of a quad and energy cancellation is increased. It is important that all three sides of a delta loop be the same length, to minimize this effect.

Quad antennas are a little harder to construct because they require more supports. They only real advantage is the theoretical 0.5 dB of gain over the delta loop. Many amateurs, especially DXers looking for every bit of gain possible, choose the quad for exactly this reason. The author has used delta loops for 10, 12 and 17 metres and is now using a quad for 40. Both configurations perform well. In the author's opinion, ease of construction gives a slight advantage to the delta loop.

Both quads and delta loops are bidirectional, similar to dipoles. Their main radiation lobes are broadside to the plane of the loop. They have very strong nulls off the edges, more pronounced than those off the ends of dipoles.

Construction

Both quads and delta loops are cut to the same length. The number 1005 divided by the operating frequency in MHz gives the length in feet. In contrast to a straight wire antenna, this is longer than two half wavelengths. An 80-metre loop, cut for CW at 3.5 MHz would be about 278 feet. Loops are not as susceptible as

dipoles to interaction with surrounding objects. They can also be mounted closer to the ground before a capacitive effect causes a significant shift in the resonance point. Nonetheless, do not expect to cut a loop using the formula and have it resonate at exactly the desired frequency. As with all antennas, it should be cut a little longer to allow for tuning.

As mentioned above, delta loops should be equilateral triangles. Quads should be as square as possible. Rectangular quads perform well provided the shape is not too distorted. If you build a rectangular quad, make sure the parallel sides are the same length. The *ARRL Antenna Book* warns that a rectangular quad may take on the characteristics of a folded dipole if the vertical sides become too short.

All antennas perform better as you get them higher into the air. Loops are no exception. However, in many cases, lack of towers or other tall supporting structures mean that the loop must be mounted relatively close to the ground. The *ARRL Antenna Handbook* describes a 40-metre quad loop that is only 7 feet off the ground. The vertical sections are 27 feet long. The horizontal ones are 44 feet. The author has built one similar to the *ARRL* design except that it is about 14 feet above ground and it is a slightly more pronounced rectangle. This antenna resonates at 7.080 MHz and performs exceptionally well. The VSWR is 1:1 at resonance. At 7.000 MHz the VSWR is 1.2:1. It reaches 2:1 at 7.300 MHz, allowing

almost full use of the 40-metre band with this single antenna. See Fig 1.

Feedline Matching

Full-wave loop antennas have a characteristic impedance of about 100 ohms. When a loop is fed with 52-ohm coax such as RG-58 or RG-8, the best VSWR that can be achieved is 2:1. The *ARRL Antenna Book* suggests using a quarter-wave matching transformer made from 75-ohm coax. The length is computed by dividing 246 by the operating frequency. The antenna at VE1UK was cut for 7.080 MHz, so the matching transformer was $246/7.080 = 34.75$ feet. This was an electrical quarter wave, but we had not compensated for the velocity factor. For my foam RG-11, the velocity factor was 0.66, so the actual physical length was $34.75 \times 0.66 = 22.9$ feet. This was rounded off to 23 feet, and as mentioned above, provided a near-perfect match.

Another method of matching the loop is to feed it with two equal lengths of 52-ohm

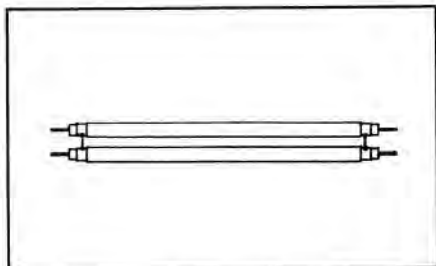


Fig 2—Two lengths of 52-ohm coax are used to make a 100-ohm balanced feed.

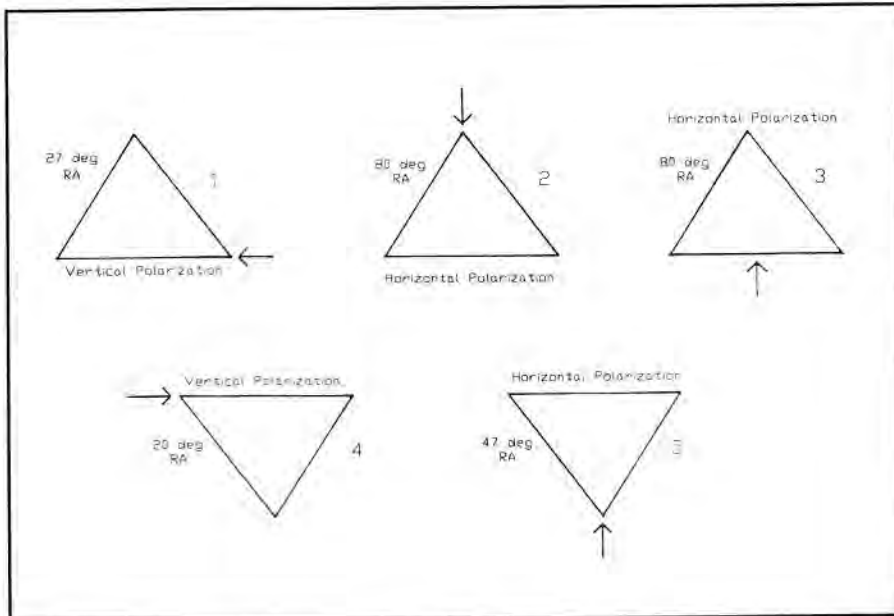


Fig 3—Arrow indicates feed point, RA is radiation angle of main lobe.

coax as shown in Fig 2. This creates a balanced transmission line of 100 ohms that can easily be matched to the transceiver with a transmatch. In his book, *Practical Wire Antennas*, John Heys, G3BDQ, suggests this as a method of avoiding matching transformers or tuning stubs.

Polarization and Radiation Angle

Both polarization and the angle of radiation can be controlled by a loop's design. Fig 3 shows five combinations of orientation and feed points for delta loops.

The feed point is assumed to be matched by either a balanced feedline or a coax transformer. As the diagram shows, there can be profound differences. Clearly the DXer will choose configuration 4 because it provides both vertical polarization and a low angle of radiation. Amateurs wishing to participate in short haul QSOs and local traffic nets will choose configuration 2 or 3, whichever is easier to construct. Configuration 5 is a compromise giving an acceptable DX radiation angle while retaining horizontal polarization. ■

Great Radio Amateurs of the Past...

"GOOD KING WENCESLAS"

...By Stan Simpson, G4ITM

Good King Wenceslas looked round
To check his installation.
He saw his dipole on the ground
Which caused him consternation.

"Hither page, come stand by me.
Just pull aside the curtain.
And you will see the 5RV
Gone for a Royal Burton.

Bring some tools and bring some wine
And make your heart feel gladder.
For you will climb the prickly pine
And I shall hold the ladder."

Page and monarch faced the storm
To deal with this disaster.
The page was keeping himself warm
By carrying his master.

"Sire, the tree seems higher now
And my hands grow colder.
Please cover up thy royal brow,
For I have dropped the solder."

"Mark my words, O careless page,
Don't act with bad intention.
Or thou shalt find thy monarch's rage
Reflected in thy pension."



One of a series by Stan Simpson,
G4ITM, reproduced from VITAL
SPARK, journal of HERC, Hastings
Electronics and Radio Club, England

"Sire, I feel much warmer now,
That you are transmitting.
Thy kilowatt ignites the bough
On which I was just sitting."

Page and monarch to the shack—
Outside the snow was falling.
The wire was hanging far too slack,
The standing waves appalling.

"Page, we must go out again,
Though the frost is cruel.
I see a peasant in the lane
Who's knocking off our fuel."

Therefore Christian hams, take care.
When wires are re-erected,
And you are talking on the air,
Leave not your logs neglected.

A DXer's Dream

'Twas the night before Christmas, When all through the house, Not a creature was stirring, Not even my spouse...

The moon on the breast of the new fallen snow,
Danced on the tri-bander, sparkling below.
The winds played a tune on the G5RV;
Bolton (Ontario) was sleeping, for all I could see...

Down in the shack the rig's LEDs were dim;
My old chair was comfy, and so was the gin.
I slipped on the earphones and adjusted the key;
And tuned through the bands, most carefully.

Forty was open, 'twas such a delight.
The world talking to each other, in the still of the night:
Then in a twinkling came a weak CQ call;
It was thin and fluttery, hardly copyable at all.

With trembling hand I answered real quick—
Hope against hope it was really St. Nick.

"One-M-NIK/air-mobile," he stated.
A long ragchew followed, and I was elated!

He talked of the wonders of things great and small,
Children, love, antennas and DX in the fall.
With "Hi! Hi!" he chuckled in signing with me
"De Dasher, Dancer, Prancer, Vixen, Comet and Cupid—GL 73."

A pileup exploded, 'Twas a thing to behold.
For a contact with Santa is worth more than gold!
I heard David and Steve, Bill and Garry; in the clear,
John, 3IPR, and our club packeteer.

As I recall on that memorable night,
Many a CW contact on his yearly flight.
I heard him exclaim, as he went QRT
"Season's Greetings to all from Ms. Claus and me."

DX ADVISORY COMMITTEE

The ARRL DX Advisory Committee (DXAC) recently voted *not* to pursue the following items:

- Consideration of a DXCC rule revision to permit participation by stations on board docked ships in ARRL awards programs (3 yes, 13 no).
- Changing DXCC country status of former USSR republics (2 yes, 14 no).
- A study of an advanced DXCC award (3 yes, 12 no).
- Changing DXCC country status of 4U1VIC (3 yes, 12 no).

The DX Advisory Committee also voted to recommend the following additions to the DXCC countries list:

Country	Prefix	Vote
Croatia	9A (was YU2)	15-1
Slovenia	S5 (was YU3)	15-1
Bosnia-Herzegovina	YU4	13-3
Macedonia	YU5	12-4

The DXAC intends that the entity of Yugoslavia continue on the list. It is composed of Serbia (YU1), Montenegro (YU6), Vojvodina (YU7), and Kosovo (YU8).

Recommended starting dates for these potentially new DXCC countries: Croatia and Slovenia: 91.06.26; Bosnia-Herzegovina: 91.10.15; and Macedonia: 91.09.08.

All recommendations now go to the ARRL Awards Committee for consideration. Do *not* send QSL cards to the DXCC desk for these countries until they have been officially added to the DXCC Countries List, and a date of acceptance has been declared. —QRZ DX

LETTERS

Congratulations to Jack Columbus, VE1XT, and the Breton DX Group. Rule 8, Section 1 of the Basic Rules of the ARRL DXCC Awards remains intact. No doubt, Jack's letter, which is published in part on page 2 of this *QST Canada*, carried a lot of weight with the DXAC group.

COUNTRIES LIST ENIGMA

Clinton DeSoto, W1CBD, writing in 1935 October *QST*, stated a rule unique in its simplicity: "Each discrete geographical or political entity is considered a country". Following long debate, the ARRL Countries List was announced in 1937 January *QST*. The DX Century Club (DXCC) was born in September of that year. That was over 55 years ago, and the popularity of the program has never been greater. The rules established by the founders were consistent with the times. As technology advanced, rules also changed in step, thus assuring continued interest and competition.

World War 2 put the program on the back burner. The world changed. Following the war, and after much debate, the first postwar DXCC rules were published in 1947 March *QST*. Contacts were valid from 1945 November 15, the date when the FCC allowed US amateurs to return to the air.

The DXCC rules of today represent the aggregate of experience gained from administering postwar DXCC. Some countries on the DXCC Countries List do not meet the present criteria. This includes countries "grandfathered" from the World War 2 era or those that met the criteria

that existed at the time but were not subject to deletion. Section 3 of the DXCC Rules outlines grounds for deletion.

Membership in ARRL's DXCC has been a mark of distinction among radio amateurs the world over. This high regard is a testament to the integrity of the program's administration, and the continued maintenance of high standards.

The DX Advisory Committee (DXAC) is made up of one member from each of the 15 ARRL divisions, and one member from CRRL, for a total of 16. All members are experienced DXers and volunteers. They are a committee with a chairperson and rules of procedure. DX matters are considered and voted upon. Their recommendations are then forwarded to the ARRL Awards Committee.

The ARRL Awards Committee has a complement of eight staff members, all of whom work at ARRL Headquarters in Newington, Connecticut. They are all active DXers and members of DXCC. This group makes the final decisions on all matters related to ARRL contests and awards, including DXCC. This committee *may not* add or delete a country from the list without prior agreement of the DXAC.

Of interest is that, if the DXAC denies a new country request, the Awards Committee takes no action. In nearly all cases, DXAC recommendations are passed as presented.

Clinton DeSoto's definition has been expanded to over 1000 words of DXCC country criteria, and over 400 words of deletion criteria. But the original concept

As the World Turns—continued on page 2

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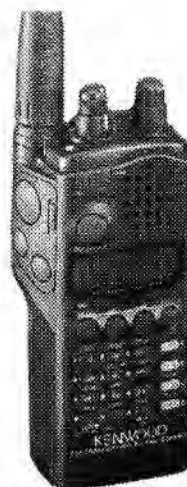
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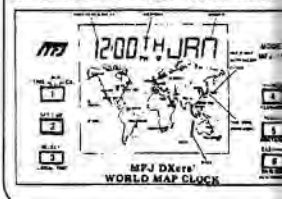
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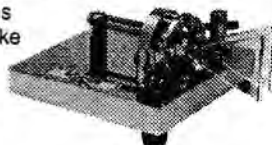
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Challenges to our Collective Future

It seems that every time I turn around lately, there are new challenges facing the Amateur Service. To date, we have been on the receiving end of confused and contradictory tower installation requirements, confusing and poorly presented RF field-exposure requirements, and the threat of unlicensed low-power devices (LPDs) that will create RF pollution. While many amateurs may not be directly affected, the VHF-UHF DX fraternity stands to lose big, as the rules for much of the above can easily be misapplied or misinterpreted. Many of us cringe at the thought of subjecting the enjoyment of our hobby to bureaucratic delays, of being at the hands of some faceless administrator, or worse, of being in the hands of some irate neighbour with a politician friend.

As an example, LPDs would not only pollute our bands, they would destroy our ability to detect weak signals. This would impair our ability to work DX or satellites, and otherwise enjoy our bands. On the other hand we would have to suffer the ire of our neighbours whose LPDs were interfered with by our radio signals. Try pointing out to a neighbour that the sticker on their LPD states that he or she "must accept interference". Next thing you know, you're the bad actor on the block, and your neighbour is screaming to your member of parliament.

Towers are another problem. If left unchallenged, who knows what might happen if your local municipality is allowed to write by-laws that restrict what you can do. Where do you draw the line? Is a 60-foot free standing tower and a small H-frame reasonable? Is a messy rusty 70-foot guyed tower on the front lawn reasonable? To date, no one will define what is reasonable.

RF fields are yet another issue. We know that no sensible radio amateur is going to install a tower and an antenna array that exposes anyone to high RF fields. Most of us know enough to make sure that the main lobe of our antennas never points into a neighbour's home or yard. Yet, if that same neighbour doesn't like what you are doing, he or she could make your life miserable by alleging that your RF fields are in excess of Health and Welfare guidelines. (These guidelines only consider body heating effects of RF, and strangely enough, do not apply to handhelds.) You would then have to be prepared to prove otherwise, and that would likely take a lot of time and effort on your part.

We forgot one thing in our discussion above, and that is the DOC. Can we rely

Canadian Radio Relay League Band Plan: 1240-1300 MHz

(Revised March 1992)

Status: Amateur Secondary

MHz		Recommended Utilization
1240 - 1246		ATV CHANNEL 1
1246 - 1248	ooo	NB FM LINKS, DIGITAL, DUPLEXED TO 1258-1260 MHz
1248 - 1252	...	HIGH RATE DATA (≥ 4800 Baud)
1252 - 1258		ATV CHANNEL 2
1258 - 1260	ooo	NB FM LINKS, DIGITAL, DUPLEXED TO 1246-1248 MHz
1260 - 1270		SATELLITE UPLINKS (PRIMARY)
1260 - 1270		WIDEBAND EXPERIMENTS (SECONDARY)
1270 - 1276	+++	FM REPEATER INPUTS (25-kHz SPACING)
1276 - 1282		ATV CHANNEL 3
1282 - 1288	+++	REPEATER OUTPUTS
1288 - 1294		WIDEBAND EXPERIMENTAL
1294 - 1295		NBFM SIMPLEX, DIGITAL (1)
1294.5		NATIONAL FM CALLING FREQUENCY
1295 - 1295.8		SSTV, FAX, ACSSB EXPERIMENTAL
1295.8 - 1296		RESERVED FOR EME/CW/SSB EXPANSION
1296 - 1296.05		EME EXCLUSIVE
1296.1		NATIONAL CW/SSB CALLING FREQUENCY
1296.4 - 1296.6	:::	CROSSBAND LINEAR TRANSLATOR INPUT
1296.6 - 1296.8	:::	CROSSBAND LINEAR TRANSLATOR OUTPUT
1296.8 - 1297		EXPERIMENTAL BEACONS
1297 - 1299		DIGITAL (≤ 2400 Baud)
1299 - 1300	...	HIGH RATE DATA (≥ 4800 Baud) (2)

Footnotes

- (1) 25-kHz channelling, 1294.025-1294.175 MHz
- (2) 100-kHz channelling, 1299.05-1299.95 MHz crossband duplexed to 430.55-430.95 MHz as required

on DOC for support if we face irate, irrational neighbours, or neighbours with hidden agendas? Or will DOC walk away from the mess? Does DOC have the resources—time, money and personnel—to deal with a flood of complaints? Can we look for equal treatment from one DOC region to another? Given today's climate, I am dubious. In today's society, once the damage is done, it's hard to find anyone who will take the responsibility for it, and it's harder still to find anyone who is willing to clean it up.

I personally don't want to suffer the agonies. It would be so much easier if DOC were to adopt the concept of "federal preemption" in matters related to towers, and ensure that LPDs stay out of our bands. This approach would be easy and cheap to administer, and spare all of us needless aggravation and hardship. RF field limits need detailed clarification before we can go along with them. We need to see what the curves look like when developed for a SSB signal, and we need some detailed procedures for assessing side lobe radiation levels. I hope that DOC will be able to support us on this, in

light of our varied operating situations and the services we offer to the public. I hope that DOC will not allow our weak-signal subbands to be invaded and destroyed. I'd be interested in hearing from readers across Canada on these issues. What do you think?

In the meantime, CRRL continues to work with CARF as it prepares to merge into Radio Amateurs of/du Canada (RAC), with the Radio Advisory Board of Canada (RABC), and with DOC, on all these issues.

BANDPLANS

While we are now deregulated and can operate any mode anywhere we like within our bands, provided we do not exceed DOC bandwidth limits, we must observe voluntary bandplans if we are to operate without interference due to mode incompatibilities. Also, observing voluntary bandplans sends a strong message to regulatory agencies like DOC that we do keep our house in order and utilize our spectrum efficiently. See the sidebar above for the current CRRL 23-cm bandplan. As you can see there is lots of room for weak-signal work, packet radio, FM repeaters, satellites and ATV. Try it!

SEPTEMBER VHF QSO PARTY, WESTERN STYLE...

We received lots of contest reports this time. The best comes from Larry, VE6KC, who writes that, with the demise of Novatel Club, Calgary Amateur Radio Association has taken on the twice yearly trip to Plateau

Mountain, Larry writes, "This flat-topped mountain is about 65 miles southwest of Calgary, 8200 feet above sea level. It is about the best VHF radio site that we have ever heard of, but it is also known for its strange and often violent weather. This year was no exception. It was snowing when we got there, and overnight about 18 additional inches fell, with strong winds causing drifts up to four feet in places. We got snowed in, and were rescued by a daring group of amateurs from Calgary—off-road, four-wheel-drive types! We had to abandon our vehicles and all our equipment and walk one and one-half miles through knee-deep snow to reach them. Visibility was so poor they could not find the road! We returned on Sunday to retrieve our vehicles. By then, all the snow had melted." The Calgary group included Russ, VE6KZ; Les, VE6CA; Larry, VE6KC; Bruce, VE6HDO, and John, VE6XT. We don't know about the rest of our readers, Larry, but we think that you and your group exhibit the attributes of true adventurers and true VHF contesters. I guess we in the east shouldn't complain about conditions in the January VHF Sweepstakes, eh?

ON THE BANDS

50 MHz: Mike, VE1MQ (FN65), writes that on September 11, he heard CX4HS ragchewing with XE1GE for about 10 minutes on 50.110 MHz. Mike notes that he is running a beacon on 50.073 MHz. We do not have much to report on six at this time, but we anticipate some DX and Es during December. Keep an eye on 50.110 MHz and 50.125 MHz.

From the *50-MHz DX Bulletin*, Russia has been active on six thanks to OH1ZAA, OH6DD and OH2BC, who made a DXpedition to Vyborg (KP40) on July 5-10. Using the call sign UX1A, they were worked on six metres in Malta and Jersey Island. UA3PW (KO84) is located 175 miles south of Moscow and is reported to be active. In Poland, the first official six-metre activity took place on June 5-15. The call used was 3Z4PAR, a special experimental station authorized by the Polish PTT. The group, which included SP4KM and SP4TKK, operated 15 watts to three- and four-element yagis and worked 888 stations in 28 European countries! Lets hope that Poland continues to be active on six metres!

Looking for a six-metre rig? Icom has replaced the IC-726 with the IC-729. Both radios cover 50-54 MHz.

144 MHz: Mike, VE1MQ, also writes that he did

well during the Persids this year, making a QSO with K5UR (EM35). This is a good example of the long-haul DX that can be worked via meteor scatter without the need for a kilowatt. Mike says that he was running 25 watts at the time to a 16-element F9FT yagi. Look for VE1MQ/B on 144.297 MHz. In Ontario, Peter, VE3VD (FN02), snagged some tropo DX on August 22. This tropo was widely reported by amateurs who succeeded in making DX contacts all the way up to 3456 MHz. Peter worked a lot of DX that evening, starting at 0030 UTC. Among the 14 contacts were WR0G (EN31) Iowa, N0KLT (EN10) and N0IYY (EN11), both in Nebraska, NN9K (EN41), and N9HF (EN52). Signals were typically 59-plus during the opening. Peter also heard WA90/M (EN63) on 1296 MHz. On August 24, he worked AB4OR (EM78) in Kentucky. On September 5 at 0115 UTC, Peter again caught a tropo, working WB0CQO (EN31) with signals weak but still Q5.

Kevin, VE3KDH, has revised his plans for VHF activity and now plans to concentrate on two-metre EME. Look for the big new array in the spring. Stan, VE3DSQ, is now QRV on 144-MHz SSB after being away from the low end of the band for 20 years. He notes the big changes that have gone on in technology for weak-signal work since earlier days. He certainly made full use of the new stuff during the September contest. Stan runs a Yaesu FT-736R and a Henry Radio 2002 amplifier with a pair of 8874s sending 1200 watts PEP to a single Cushcraft 215WB at 45 feet, all from Fonthill, Ontario. Stan's QTH is one of the highest spots on the Niagara Escarpment, and is strategically located between the east coast and the central US states. Results during the September contest were something beyond belief! Stan worked eight US call areas, including 12 W5s, and 20 W0s. His best DX was FN42 in the east, EN12 in the west, EM30 in the southwest, and FM18 in the south. Among his contacts were K5YVP (EM54), K3ZO (FM18), KB5NPG (EM44), WB4LHD (EM55), N0KNI (EM38), W0JS (EN42), WA4GVH (EM66), and many, many more. Congratulations to Stan. We hope that he continues to go after DX on two metres.

From the *Northeast VHF Bulletin*, the Side Winders on Two (SWOT) group is sponsoring a VHF/UHF county award for working 100 counties on 50 or 144 MHz, or 50 counties on 220 or 430 MHz. For information, drop a note to Len Parsons, W5AL, 3316 Edenburg Drive,

Amarillo, TX, 79106.

220 MHz: Yes we still have the whole 220-225-MHz band in Canada. The band is, and has been since 1979, AMATEUR EXCLUSIVE. Still, I hear reports of packet operators and FMers selling off their gear as if we were going to lose the whole band. A panic like this happened in the US a few years ago, and the only ones who profited were the guys buying gear! This chunk of exclusive spectrum is there for you to use. No intermod, no pollution, no QRM. Many of the weak-signal crew have been on the band for decades. VE3VD has earned Worked All States (WAS) on this band—from Elliot Lake, Ontario, some 300 miles north of Toronto. Propagation is often better than on 144 MHz. I challenge readers to use this band. Your editor has been on 220 MHz since 1971, and is still surprised by the excellent band conditions! We do need others in Canada to get on the 220-MHz bandwagon.

432 MHz: Well I guess the big news is the VE3ONT operation using the Algonquin Radio Telescope, all 150 feet of it! At time of writing, the guys plan to run a kilowatt to the dish. This should make for some very loud echoes off the moon, easily heard with simple antennas at the other end. We will have more on this from Dennis, VE3ASO; Peter, VE3VD; Hans, VE3CRU; Bob, VE3BFM, and Don, VE2DFO, in the future.

Three cheers for Dennis, VE3ASO, for his superb effort to contact the right people and build a case for Amateur Radio operation! Apparently those responsible for the dish were astounded by our capabilities! This is a good time to mention that Dennis has done a great deal to promote VHF activity in Canada, including being among the first to work WA6LET off the moon back in the early 1970s, promoting contesting, and helping others get on VHF. Thanks, Dennis, for all your efforts.

902 MHz: Stu, VE2XX (FN25), reports working into the Rochester, New York-area during the September contest from his QTH west of Montreal running just 13 watts. Stu advises that he has broken his old DX record on 33 cm. Congratulations to Stu, and let's hope we get more activity on 33 cm from around the country.

Speaking of 33-cm activity, Dick, VE3FAC, has almost completed the first of a number of 33-cm amplifier

VHF-UHF—continued on page 2



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Finland's 75 Years of Independence Anniversary Contest

The Finnish Amateur Radio League (SRAL) is sponsoring a contest to mark the 75th year of Finland's Independence. After 700 years as part of Sweden and 110 years under Russia, Finland declared its independence after the Russian revolution in 1917.

Contest period: 0000–2400 UTC, Finnish Independence Day, Sunday, 1992 December 6.

Bands and modes: 80, 40, 20, 15, and 10 metres, CW and SSB. Finnish stations will operate close to the following frequencies: 3525, 7025, 14025, 21025 and 28025 kHz for CW, and 3775, 7075, 14225, 21325, and 28525 kHz for SSB.

Categories: a) single-operator, multi-band, b) single-operator, single-band, c) multi-operator, single-transmitter, d) QRP stations multiband (five watts maximum), and e) SWL.

Contest exchange: RS(T) and serial number starting with 001. OH/OG stations give RS(T) and a three-digit OHC (Finnish county) number.

Points: Each valid QSO—one point. A station may be worked once on CW and once on SSB on each band. CW and SSB contacts must be made on appropriate subbands.

Multipliers: Each OHC number (Finnish county) is a multiplier once in the contest. Ten special FIN-suffix stations (OG1FIN, OG2FIN, etc) give five extra multipliers on each band.

Scoring: QSO points x multipliers = final score

Logs: All times must be recorded in UTC. Multipliers (OHC numbers and FIN-suffixes) must be indicated once per band. Entries with over 300 QSOs must include a dupe sheet.

Awards: Certificates and special prizes will be awarded to top scorers in each category. Each DXCC country and each US and Japanese call-area winner will be awarded a special certificate.

Deadline for submitting logs: All entries must be postmarked no later than 1992 December 31 and sent to Finnish Amateur Radio League (SRAL), Attention Jukka Kovanen, OH3GZ, Box 44, SF-00441, Helsinki, Finland.

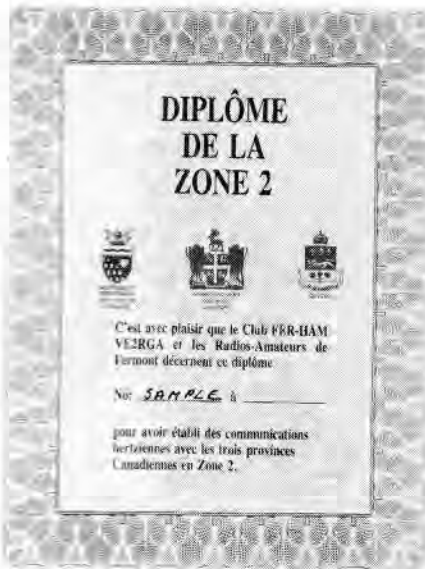
ZONE 2 AWARD

The Diplome de la Zone 2 is issued by Club FER-HAM VE2RBA of Fermont Quebec. It is available to licensed radio amateurs and SWLs. Contacts made since 1980 January 1 are valid.

Confirmed contacts are required with VE2, VO2 and VE8. Stations in Quebec north of 50th parallel are in Zone 2. VE8

stations east of 102° W and north of 50° N are in Zone 2. All VO2 stations are in Zone 2.

Do not send QSL cards. Instead, send a list showing details of contacts, certified by two licensed amateurs. Fee for this award is \$3 or eight IRCs. Send to Gilles Soucy, VE2GSO, Box 46, Fermont, PQ G0G 1J0.



HERITAGE AWARD

This award is sponsored by Heritage ARC of Cobourg–Port Hope, Ontario. Ontario (VE3) stations make two-way contact (or SWL heard), on any band using any mode, with 50 different Ontario (VE3) stations, ten of which must be located along Ontario's Heritage Highway—old Highway 2—from Toronto to the Quebec border.

If Highway 2 is in a city or town, the postal address will serve to confirm that a station there is indeed a Heritage Highway contact (e.g. Metro Toronto or R. R. 6, Cobourg, etc).

As the Heritage ARC meets at the Port Hope Yacht Club adjacent to Highway 2, all club members qualify as Heritage Highway contacts.

Other Canadian provinces and US states require 30 VE3 contacts with six along the Heritage Highway.

Outside North America the requirement is 15 VE3 contacts with three along the Heritage Highway.

To receive the award, send \$4 and copy of logged contacts including name and location, with alphabetical check list flagging Heritage Highway contacts, to Bill Turland, VE3MDE, President Her-

itage ARC, R. R. 5, Cobourg, ON K9A 4J8.

DXPEDITION TO INAUGURATE NEW THAI PREFIX

To inaugurate Thailand's new prefix, E28DX will operate from Koh Samui Island, 600 kilometres south of Bangkok, 9.5°N, 100°E, from 0800 UTC 1992 December 10 until 2400 UTC 1992 December 12, on the following frequencies: 14.030, 21.030 and 28.030 MHz on CW, and 14.195, 21.200 and 28.480 MHz on SSB. Also look for E28DX on RTTY.

Liaison for this operation is Ray, HS0/G3NOM. Donations in support of this DXpedition would be appreciated. QSL to HS1HSJ at Box 89, 10220 Bangkok, Thailand, or via the bureau. Please include IRCs with your self-addressed envelope. ■

HELP WANTED

Malcolm Hamon, VE3KXH, in conjunction with IARU, coordinates the Canadian Monitoring Service, and he needs your help. He is looking for Canadian amateurs to form part of a monitoring team to help combat the problem of intruders on our amateur bands. Please contact Malcolm at 5 East Bank Road, Newcastle, ON L1B 1B7, Tel/Fax (416) 623-0472. ■

Silent Keys

Conducted By Ray Staines, VE3ZJ

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

VE1AE, Willard Kelso, Sussex, NB
 VE3AKW, Miles "Slim" Crosby, Hamilton Beach, ON
 VE3AMM, Steve Znderic, Port Hope, ON
 VE3DOF, Clarence Fudge, North Bay, ON
 VE3HGK, Dan Arnoldi, Barrie, ON
 VE3RMQ, Wray Simms, Sarnia, ON
 VE6ARH, Jan Zaworski, Edmonton, AB
 VE7ABD, Irvin Bushwell, Lumby, BC
 VO1FN, Ben Collins, St. John's, NF
 VO1SV, Stan Matchim, Goulds, NF

Note: Silent Key reports sent to *QST Canada* must include name, address and callsign of the reporter. 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*. ■

The CRRL Field Organization Forum

REPORTS FOR SEPTEMBER 1992

Alberta: SM: Don Wilcox, VE6CG; STM: VE6AKY; SEC/TC: VE6AFO; OO: VE6TY. No report available.

British Columbia: SM/SEC: Ernie Savage, VE7FB. British Columbia Public Service Net (BCPS, 3729 kHz, 0130 UTC daily): Net Manager Jim, VE7JN, reports check-ins: high—206, low—86, total—4791. British Columbia Emergency Net (BCEN, 3652 kHz, 1900 UTC): Net Manager Ray VE7BCL reports QNI 1312, QTC 534. Newcomers are doing well and the net is growing every month. BCEN had an increase of five on the net, and QTCs were up. The BCEN *Newsletter* has a new editor: Ferdie, VE7EJU, General Delivery, Heffly Creek, BC V0E 1Z0. He will be going to press soon. If you have news or want the *Newsletter*, the two above nets will look after your enquiries. We in this office say "thanks" for all the newsletters we receive. Please keep them coming. 73.

Manitoba: SM: Bill Crooks, VE4JR; ASM: VE4IX; STM: VE4STU; SEC: VE4PN, NMS VE4FP, VE4LB, VE4TE and VE4TY. Notes from VE4: The Brandon Amateur Radio Club (BARC) held its Annual Flea Market and Auction on October 3 in their fair town. About 40 attended from all over VE4-land, with people from Winnipeg, Portage la Prairie and many other communities. Missing were several rural people preoccupied with their crops due to the late harvest. It was good to see Walt, VE4OO, and Mike, VE4OM, with their extra efforts in attending this year, and I thank Charlie, VE4LB, again for guiding us all in to VE4QB. This report was sent in by Bill VE4UX—Thanks, Bill. Now that September has come, fall training classes have started. Winnipeg ARC has 27 students under the guidance of Rick, VE4OV. Ages run from teens to seniors, and there are three YLs. Winnipeg Seniors ARC also has classes under way, with 15 students. Congratulations to Adam, VE4SN, in attaining 316 confirmed DX countries, with ten more cards to come. Gil, VE4AG, has accepted appointment as OBS, and has custodianship of the VE4QST call. No doubt you will be hearing more from Gil. I wish to thank Malcolm, VE4MG, for a job well done. He had to relinquish the OBS for personal reasons. Congratulations to Dave, VE4PN, our SEC, who was sent to Hawaii by the Canadian Red Cross to help with communications after recent hurricanes disrupted power and telephone lines.

Maritimes-Newfoundland: Acting SM: Carl Anderson, VE1UU; STM: Mel Lever, VE1VX; BM: Brent Taylor, VE1JH. No report available. The Maritimes-Newfoundland Section does need a Section Manager. Please contact the Acting Section Manager or CRRL for details.

Ontario: SM: Larry Thivierge, VE3GT @ VE3OSQ; A/SM and BM: VE3AV @ VE3JF; A/SEC: VE3GT @ VE3OSQ; STM: VE3CYR @ VE3KRG; TC: VE3EGO. Please note my change of packet bbs from VE3WQ to VE3OSQ. Congratulations to the incoming executive of RAC, Radio Amateurs of/du Canada. Let's all rally behind them to help

18 QST Canada

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.

make the new organization a success in representing Amateur Radio in Canada. VE3CNE held another successful Amateur Radio display during the run of the Canadian National Exhibition in Toronto, with a number of local clubs pitching in to help out. HF, VHF and packet radio displays were going pretty well full blast daily during the event. Two BPLs were earned for their traffic handling activities. VE3DDI is now VE3SS. The call sign at packet node LKBAYS:VE3MUS-9 has been changed to LKBAYS:VE3MUS. And, to reflect the change of management of the VE3RTR packet node site of the Toronto Packet Group, the call sign of that node has been changed to VE3EPG. Regrettably, I report that VE3AQY and VE3GCE have become Silent Keys. ECs reporting this month were VE3FS and VE3LPM. The volunteers of the Ontario Trilliums ARC, the Ontario Incoming QSL Bureau, do a terrific job of sorting and redirecting thousands of QSL cards each year. You can do your part by ensuring that you use maximum sized 5" x 7" envelopes and have at least \$2 in postage with them. The Toronto FM Society membership total has reached 652. VE3IIB is using a new FT-767GX. VE3MS continues to rack up the DX contacts. Congratulations to VE3CWE for his first place finish (Ontario, CW) in the ARRL 10-Metre Contest and first place in Canada (CW and SSB) in the WAE contest. And congratulations to VE3YBC on being named this year's winner of the Joe Norton Trust Award administered by the Ottawa ARC. The Heritage ARC of Cobourg-Port Hope is sponsoring the Heritage Award. Ontario stations must make two-way contacts with 50 different Ontario Amateur Radio stations, ten of which must be along that portion of Ontario's Heritage Highway (old Highway 2) from Toronto to the Quebec border. On behalf of the this Section's Field Organization, may I extend to each and every one of you the compliments of the holiday season, with best wishes for 1993.

Quebec: SM: Joe Unsworth, VE2ALE; STM: Jean, VE2ED; OBS: Garnett, VE2GOP and Joe, VE2ALE. As per special bulletin by CRRL, all Quebec Section field organization positions are to remain as

they are at present. From NCS VE2ED: Les activités ont reprise sur le réseau QSN le mois de septembre. Les stations QNI sont VE2: YAT, ADD, QY, CUD, OPB, NM, SIM, GIW, EFE, LPS, IA et BMX; VE3: GT et ET; et W3OKN. Le réseau QSN opère en CW sur 3670 kHz du lundi au vendredi à 1930 heure locale. Tous sont les bienvenues. Over 1000 amateurs attended the Drummondville Hamfest on September 26—a very successful day for the organizers. CRRL officials seen there included VE2s IJ, DO, BP, and ALE. Recent amateur visitors to Montreal area include Eugen, RA9JW; VE6KRL and VE7CLC. Bill, VE2GK, is working on a list of amateurs who have been and are now active in the PL Net, at 0800 and 1600 local time, on 3787 kHz Monday-Friday. Tower power: VE2AUU is reactivated on the bands with new tower, antennas and equipment. From Ken, VE2EXC: The St. Lazare ARC, using VE2LZR, supplied the communications for the St. Lazare Horse Trials 1992. Participating were VE2s EXC, AFA, BOQ, DC, FRZ, KN, PTZ, SJA, TW, WHO, and YAK. Eighty horses and riders participated. Due to the very wet and slippery day there were only four casualties, all of which were minor with no injuries.

Saskatchewan: SM: Joan Lloyd, VE5JML @ VE5AGA. Congratulations to new amateur Cheryl, VE5CAP, and to Jim, VE5JS, formerly VE4WO of Creighton. We welcome to the CRRL team Todd, VE5MX, as AEC for the Weyburn Area. Executive and directors have been named for the Saskatchewan Amateur Radio League (SARL): President—Eric, VE5HG; Vice President—Bruce, VE5ND; Secretary—Ned, VE5NED; Treasurer—Joan, VE5JML; Directors: Saskatoon—Wayne, VE5PE; Saskatoon Area—Russell, VE5KA; Yorkton Area—Murray, VE5ACI; Regina—Jerome, VE5KZ; Prince Albert—Keith, VE5XZ; Battiefords and Area—Gordon, VE5YB; Moose Jaw—Al, VE5AQ; Swift Current—Harry, VE5HB; Melfort-Nipawin—Vic, VE5AE. A director is still needed for Saskatchewan Southeast. On September 29, Regina-area amateurs participated in a mock disaster at Regina Airport. A passenger aircraft "crashed" short of the runway, into cars on a busy expressway. The amateurs involved provided communication from the site to the hospitals, relaying information on the number of incoming casualties, and acted as communications liaison for the police, fire department and emergency measures organization. Thanks to all who participated in the exercise. Saskatchewan amateurs can look for a writeup in the next issue of *QSO* magazine. 73 to all. ■

Season's Greetings
to all our readers
Best Wishes for 1993

September Hurricanes

Joe Vanschagen, VE3NDX, Emergency Coordinator of the Niagara Peninsula ARC, covered September's emergencies in the October *NPARC Feedline*:

"Our American cousins have certainly had a busy September. Amateur Radio once again came to the rescue as hurricanes caused major communications failures in Florida, Louisiana and Hawaii. Amateurs provided local and state-wide emergency communications to rescue teams, and helped direct crews delivering emergency shelters, food and water to the affected areas. Storm nets were active on 14.268 and 14.285 MHz as well as 40 and 80 metres. Congratulations to all those who helped pass hurricane traffic and those who just listened and gave them a clear frequency. The effort was not without cost. A Florida amateur was killed when struck by lightning while helping unload relief supplies from a helicopter. Witnesses say he was carrying his hand-held when the strike occurred. Expect to read a lot of interesting first-hand reports in *CQ*, *QST* and *73* in the coming months."

YORK REGION ARES

York Region ARES, which has been inactive for several years, has taken a new lease on life under EC Rick Simpson, VE3LSZ. One of the accomplishments has been the creation of an 86-page emergency response plan, prepared by Rick and Brian Greiner, VE3SPZ, of York Region ARC.

During the past several years I have received and studied over a dozen emergency communications plans. When I opened the York Region Plan, I realized it had a number of unique features. The first part of this well organized plan is an overview of ARES and the services it can provide. It is intended for distribution to police, municipal authorities and other potential users of ARES services. The rest of the plan details the equipment and training required for each type of service the group can provide. It also covers net operations, handling of formal and informal traffic, etc. The format is very clear and contributes much to the effectiveness of the plan. Some of the features I particularly liked were:

- a checklist of the information that should be supplied by any agency that activates the emergency net,
- a short descriptions of the six types of communications that York Region ARES is prepared to provide. These are: voice traffic, data traffic, dispatch, surveillance, paging, and even amateur

television.

- details of the duties, equipment and skills of a National Traffic Service (NTS) operator in an emergency organization,
- an outline of the eight different types of skills and background that a qualified ARES operator is expected to have.

These include formal traffic handling, net control and operating experience in simulated or real emergencies, and Red Cross training. For each, the goals and requirements are listed, and

- information on how to calculate the number of battery packs required for any

Field Organization Reports September 1992

CRRL Section Emergency Coordinator Reports

Reports were received from the following:

Reporting	ARES Members
VE3GT	543
VE7FB	160

CRRL Section Traffic Manager Reports

Call	Orig	Rcvd	Sent	Divd	Total
VE1BTV	0	23	24	0	47
VE1YS	0	21	21	0	42
VE1ALU	0	6	6	0	12
VE1VAR	1	5	1	1	8
VE2ALE	54	77	338	0	469
VE2GOP	0	44	97	0	141
VE2ED	0	13	4	8	25
VE3CNE	144	7	131	0	282
VE3ORN	15	60	140	16	231
VE3HZQ	1	56	87	3	147
VE3BDM	0	50	60	2	112
VE3AJN	0	60	48	2	110
VE3CYR	0	79	16	0	95
VE3DVE	0	34	49	0	83
VE3GT	0	33	47	0	80
VE3PXR	8	19	25	3	55
VE3GNW	0	17	21	0	38
VE3WV	0	31	3	0	34
VE3AAU	0	8	13	1	22
VE3FS	0	2	11	9	22
VE3MNI	1	6	9	4	20
VE3LPM	0	3	7	3	13
VE3KZ	1	5	2	4	12
VE3NVJ	0	2	7	0	9
VE3BAJ	0	1	3	1	5
VE3GKB	0	2	2	1	5
VE3SB	0	1	0	1	2
VE4JR	0	47	7	10	64
VE5KZ	5	29	27	2	63
VE6XG	9	37	17	10	73
VE6CE	17	26	24	3	70
VE8CPP	1	10	10	0	21
VE6AKY	3	2	2	2	9
VE7BNI	27	211	319	45	602
VE7BCL	2	115	43	30	190
VE7ANG	1	74	67	5	147
VE7XA	0	34	32	13	79
VE7OM	2	24	31	2	59
VE7CCJ	1	29	27	1	58
VE7FME	0	30	10	0	40
VE7EJU	0	19	11	0	30
VE7FRZ	2	21	4	1	28
VE7BZI	8	10	9	0	27
VE7WI	0	18	9	0	27
VE7VO	0	19	6	1	26
VE7BUJ	0	23	1	1	25
VE7DKS	0	20	4	0	24
VE7EGM	1	16	4	1	22
VE7GKA	0	16	5	0	21
VE7BOP	0	14	3	1	18
VE7BCF	2	11	4	0	17
VE7DJ	0	14	1	0	15
VE7ALV	1	9	1	0	11
VE7CZW	0	6	0	0	6
VE7FB	0	2	3	1	6

National Traffic System

Net (Mgr)	Sess	QNI	QTC
APN (VE1YS)	27	107	n/a
QSN (VE2ED)	16	56	8
KTN (VE3AJN)	13	133	10
NPN(VE3NDI)	27	282	2
OLN (VE3POJ)	28	879	61
OPN (VE3AJN)	30	576	246
OQN-D (VE3ORN)	20	60	16
OQN-E (VE3CYR)	28	124	71
MEPN (VE4LB)	30	976	19
MMWX (VE4TE)	30	394	18
SEPN (VE5CJ)	28	1374	8
APSN (VE6AKY)	30	1064	11
ATN (VE6CPP)	30	134	53
BCEN (VE7BCL)	30	1231	534

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.

Public Service Honour Roll

(1991 Revision) This listing is for amateurs whose public service performance during the month indicated qualifies for 70 or more points in the following eight categories (as reported to their SM). Maximum points per category: (1) Checking into a public service net, any mode, 1 point each, maximum 60; (2) Acting as Net Control Station (NCS) for a public service net, any mode, 3 points each time, maximum 24; (3) Performing assigned liaison between public service nets, 3 points, maximum 24; (4) delivering a formal message to a third party, 1 point each, no maximum; (5) Originating a formal message from a third party, 1 point each, no maximum; (6) Serving as a CRRL SM or field appointee, 10 points for each office, maximum 30; (7) Participating in a communications network for a public service event, 10 points each event, and (8) Providing and maintaining an automated digital system that handles messages in standard ARRL-CRRL format, 30 points. Those qualifying for Public Service Honour Roll 12 consecutive months, or 18 months out of 24, will earn a special certificate.

PSHR: VE2ED (104), VE3ORN (209), VE3AJN (130), VE3BDM (130), VE3GT (128), VE3CYR (122), VE3HZQ (112), VE3FS (102), VE3DVE (73), VE4LB (82)

Service and Specialized Nets

Independent Net Managers: Your monthly reports are welcomed. Please send your reports to CRRL, Box 56, Arva, ON N5Y 4J9.

Net (Manager)	Sess	QNI	QTC
ONTARS	31	11868	0
GBN (VE3WV)	29	83	8
GBSSN (VE3WV)	29	95	36
Manitoba Repeater	8	700	0
Aurora 1 (VE5ND)	26	1053	4
Aurora 2 (VE4FP)	26	1061	0
Prairie WX (VE5EX)	30	607	0
Sask ARES (VE5FY)	4	239	2
Sask 2-m (VE5HG)	30	986	0
MJARC 2-m (VE5JJP)	30	485	0
ARG 2-m (VE5EE)	27	943	0
Alberta ARES (VE6AKY)	8	269	4

handheld transceiver to be used in emergency communications. York Region's standard requires sufficient packs for one hour of continuous "key down operation".

This listing just scratches the surface—there's much more in this 84-page opus. Brian Greiner, VE3SPZ, is offering the plan to any ARES group. It is available on floppy disk for an IBM or compatible computer in WordPerfect 5.1 format. Just send him a disk and he will be happy to furnish the complete file. I highly recommend a review of this plan to any group that is revising its own plan, and looking for ideas for improvement.

This plan has had one good testing, in an exercise with the Red Cross held last May. As Brian reported:

"From the beginning, we have been in close contact with the Red Cross Emergency Services Committee, which acts as a coordinating group for all agencies offering emergency services in York Region. Since both ARES and the Red Cross have a large number of new people, it was decided that some sort of training exercise would be a good idea.

"Once this decision was made, a committee was struck to plan the event. A date for the mock disaster was set and the committee was faced with the daunting task of deciding what to do. It sounded simple at first, but then reality set in. What agencies would take part? How many people would take part? What would be tested? How would we evaluate responses, etc?"

"When the smoke cleared, it was decided that the Red Cross and ARES would take part in a four-hour exercise. Red Cross would test its callup procedures and its R and I (registration and inquiry) handling. ARES would test its callup and message handling procedures. To add realism, the three of the sites used, the Red Cross Headquarters and two community centres, were official evacuation sites. To add spice, the committee set up a schedule of simulated problems such as power failures, loss of repeaters, loss of antennas and equipment failures. As an unplanned 'bonus', two of the sites were 'communications-hostile'. One was in a basement and the other was in a steel-enclosed building.

"The day of the exercise dawned warm and sunny, and the 'disaster' was set in motion. ARES teams were dispatched to the various sites, which proved to be even more communications-hostile than anyone had imagined. An ARES command and control station was established in the Red Cross Headquarters, and was passing traffic within ten minutes of arrival. Unfortunately, traffic nets were already operating before the command and control nets were well established. This result-

ed in some control problems and message pileups. Most of the ARES personnel came with handhelds, which proved inadequate for reliable simplex operation. On the positive side, whenever there was any equipment failure, simulated or real, spare rigs were readily available!

"Solving the problems posed by site location proved to be a major headache, since they made communications difficult and ate up manpower. Both ARES and Red Cross experienced manpower shortages and operator fatigue.

"At the end, all participants were encouraged to fill out an exercise critique form. The overall feeling was that the test had been very worth while. The two groups went away with a better appreciation of their roles in an emergency situation. Enough went right to encourage people, and enough went wrong to make them think. And people were eager for another test in the fall!"

My sincere congratulations to VE3LSZ, VE3SPZ, and the other members of York Region ARES and York Region ARC. They have taken a well-organized approach to reactivating an effective ARES group which was badly needed to serve their major metropolitan area.

KINGSTON ARES OPERATIONS MANUAL

Here in Kingston we decided recently to create a separate manual to document our emergency operating procedures and net organization. Some of this material was previously contained in our Emergency Communications Plan, but it seemed to make more sense to assemble everything related to operations in a separate document. Our Operations Group, under AEC Don Southcott, VE3AGY, undertook this assignment, and decided on a two-part format: Part 1 to cover voice-operated networks and Part 2 to cover packet radio operation.

Art Blick, VE3AHU, who has had many years of experience in emergency communications, took on the creation of Part 1, comprising 28 pages. It is now complete and in the hands of all our ARES members. Part 2 is being prepared and should be ready this winter.

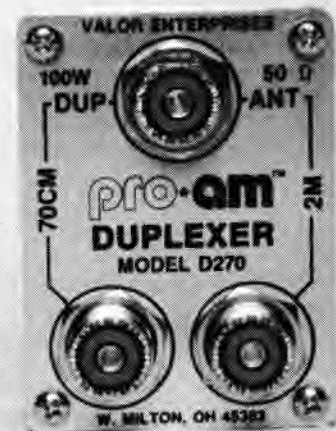
Part 1 pulls together everything an agency station operator or a net controller should know to provide effective voice communications. It covers how to establish an emergency net, the functions of the net control station, the operation of the OUT stations, arrangements for relay station operations, and the handling of interference by offers of help from well-meaning but untrained non-ARES amateurs. It also covers the handling by voice of radiograms,

including the fine points related to numbers and punctuation.

Please drop me a line if your group would like to receive a copy of Part 1 of the *Kingston ARES Operations Manual*. A donation of \$6 to our ARES group would be appreciated, to cover the cost of photocopying and mailing. That's it for this month. Seasons's Greetings to all. Keep those cards and letters coming. —Bob Boyd, VE3SV

New Products

PRO-AM D270 DUPLEXER



Pro-Am has announced a new D270 duplexer for 2 metres and 70 cm. This can connect a VHF/UHF dual-band antenna with a single feedline to separate 2-metre and 70-cm transceivers, or to a dual-band transceiver without a built-in duplexer. It can also be used in reverse to connect separate antennas to a 2-metre/70-cm dual-band transceiver with only one RF output connector.

The D270 is useful for crossband repeaters. It can be combined with a single 2-metre/70-cm antenna for dual-band mobile use. It covers 144–148 and 430–450 MHz. It has a wide bandwidth with low SWR. Insertion loss is claimed to be 0.3 dB on 2 metres and 0.4 dB on 70 cm. RF power rating is 100 watts.

For price or ordering information, contact PRO-AM, Valor Enterprises, 185 West Hamilton Street, West Milton, OH 45383.



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TS-140S .500-30MHz *w/HS-5	\$ 1 339.00	\$ 1 049.00
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TM-741A 2m/70cm *w/SP-50B	\$ 1 256.00	\$ 839.00

PORTATIFS

TH-26AT 2m w/ctcss *w/SMC-33	\$ 388.00	\$ 349.00
TH-28A 2m *w/SMC-33	\$ 533.00	\$ 429.00
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Today's most popular band, the best place for new hams to meet old hands, learn good operating procedures. Very friendly, thousands of open repeaters & autopatches everywhere. Great for on/off-the-road help. Crowded, though, especially in cities. Single-band mobile is easy to learn & use. No-Code friendly!

Multiple Band: 2 Meter/440MHz

The two most popular FM bands. A "natural" mix of high activity & special group channels, this is becoming the amateur's favorite mobile rig. Instant control of either band, and you can set up your station as a crossband full-duplex repeater. Gateway into advanced operating systems unavailable on 2M.

440 MHz

Next most popular band, less crowded with more high-tech, "smart" repeaters offering autopatch, remote base, linking, digital-voice recording. Some are limited-access (PL). Allows crossband repeating between singleband handhelds & dualband mobiles. 440 gives access to advanced technical info. This is where the pros hang out! No-Code friendly!

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For the unconventional, this combines the most popular & the least crowded bands. Gives access to the people & services on 2M, plus the privacy & open space of 220, plus the advantages of telephone-like duplexing. Valuable where privacy is a concern.

220MHz

Fairly quiet, less crowded than 440, with almost half as many repeaters and the same high-tech functions. Plenty of open channels for semi-private conversation. Great place to meet newcomers, youngsters. Ideal for ham family, since all classes have voice privileges on 220. No-Code friendly!

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If you live and breathe radio, these are the bands for you! They give you the activity, the expandability and the novelty. Particularly useful for advanced hams who work in the city and live in the suburbs.

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