QUINTE AMATEUR RADIO CLUB INC. Q. R. M.
P. O. Box 23039, Belleville ON K8P 5J3

M E E T I N G

DATE: Wednesday, Sept 15, 1993

TIME: 7:30 p.m.

LOCATION: Room P1 Pioneer Building
Loyalist College

PROGRAM: At the meeting we will discuss the scope of the Directory. Should we keep it as it or restrict it to just Hams in the local area.

PRESIDENT'S MESSAGE

I would like to take this opportunity to welcome each and everyone of you to a new year in Quinte Amateur Radio Club Inc.. We have a new executive to serve you, and I hope that you will be happy with the new ideas that we will be bringing to you.

We had our first executive meeting at my cottage at Schawenegog Lake. All were able to find the cottage without too much grief, they all saw new country which they had not seen before and even some saw country which not even I have seen.

We have proposed a new committee (yet to be named) headed by Tim (VE3UO) be formed to deal with any complaints members may have in relation with the Executive.

Other matters were discussed, which will be dealt with over the next year. It is my hope that we will see all members attending our meetings and we welcome your input.

See you this fall..

IVAN VE3GTH

"A woman's preference is often
the deciding factor in
major expenditures."

October Meeting

Al Taylor VE3WV will talk about the Installation of the antenna system at the CN tower.

PACKET NEWS

On Saturday Aug. 28th we moved VE3BEL from the QTH of the late Ross Dryden VE3AUU to the QTH of Jim Eadie VE3DCX. The nodes were shut down about 10am until about 5pm when we got them going at the new location. The antennas are about 20 ft. higher than they were before. Still to be done is to remove the old tower and fine tune the nodes.

Those who assisted were Gerry VE3APF, Jim VE3DCX, Al VE3OX, Ralph VE3PBR, Tony VE3TDT Tim VE3UO, and John VE3YAD. Thanks for the HELP!! Al VE3OX

AMATEUR DIRECTORY

The following are the corrections to the June directory.

VE3AIL Remove George Miluck Silent Key

VE3BEL Change Po Box and Postal code to Box 23039 K8P 5J3

VE3BHW Add Jack Erwin 41 Smith Cres. Belleville Ont. K8N 4K3
613-968-5800

VE3DAU Add David Backer 586 Hayden Cres. Cobourg Ont. K9A 2V2
416-372-0318

VE3EDG Add Ed Gareau 37 Parkview Heights Trenton Ont. K8V 5M1
613-394-5900

VE3MFK Remove moved

VE3JV Add Ed Gareau same address as above.

VE3KHP Change address to 13 B Belleirving Ave. Trenton Ont.
K8V 1E9

VE3LGC Change call to VE3WS Ted Vacey RR1 Maysville KQ2W0 396-6431

VE3LGI Remove moved

VE3LYA Change address to 48 Forchuk Cres. Trenton Ont. K8V 6N2
613-394-6409

VE3MPY Change address to 10 Catherine Cres. Brighton Ont. K0A 1H0
613-475-3237

VE3OBB Change address Box to 158 Foxboro Ont. K0K 2B0

VE3OPC Change phone number to 613-968-4214

VE3OKK Remove Silent Key.

VE3RL Change address to Box 23039 Belleville K8P 5J3

VE3SQF Add Robert Townsend More to follow

VE3UCH Change address to 18 Tracey Park Unit 39 Belleville Ont.
K8P 4R5 613-967-3978

VE3UNU Add Brian Heath 135 Chandos St. RR 5 Havelock Ont. K0K 1Z0
705-778-7272

VE3VJ Remove wrong call

VE3VRQ Add Mike Hiltner 14 Lewis St. Trenton Ont. K8V 1E6
613-392-4890

VE3VTJ Add Dave Sharpe 444 Dundas St. E. Belleville more to follow

VE3WSG Add Madeline Towsend more to follow

VE3XEO Add Max Ivany Box 607 Havelock Ont. K0L 1Z0 705-778-2758

VE3XY Add Doc MacKenzie 19 Bleeker Ave. Trenton Ont. K8V 5Y3
613-394-0615

VE3XZA Change address to 13 Reverse Dr. Trenton Ont. K8V 1B3
613-394-6948

VE3LYN Add Casandra Chapman 13 B Belleirving Ave. Trenton Ont.
K8V 1E9 613-392-5670

Change Phone number for Brighton OPP to 613-475-1313

969-9902
CP

Change of frequency Tweed Repeater VE3RNU from 147.135 up 600 to 147.120 up 600

DOOR PRIZE

The door prize for the September meeting will be a Variac donated by our President Ivan VE3GTH. The prize for October will be a flashlight.

AMATEUR RADIO COURSE

The Quinte Amateur Radio Club will be conducting a Basic Theory and Code class again this year. This course will be held at Centennial Secondary School on Palmer Road starting on September 13 at 7:00pm. At this time the room number has not been decided but there will be signs showing the way. The course director will again be Tim Pekkonen VE3UO.

Antenna directivity and front-to-back ratio

The following was taken from the Communications Engineering Design February 1992.

A directional or "beam" antenna's front-to-back ratio is simply a measure of its gain in the "forward" direction compared to its gain in the "reverse" direction--and usually expressed in dB. Thus, a Yagi antenna with an 11 dB front-to-back ratio has 11 dB more gain off of the "front" of the antenna than it does off of the "back" of the antenna. This is certainly simple enough, but how does it do it? How can an antenna have more gain in one direction than another, and what determines the ultimate pattern of the antenna?

The Isotropic model

In antenna theory, the concept of an isotropic antenna, a purely theoretical antenna to which all other antennas are eventually compared, is often used as a reference, and as an aid in the definition of antenna patterns. An isotropic antenna is one that radiates (or receives) equally in all directions, resulting in a radiation pattern that looks like a perfect sphere. No conductor of any physical size can really create such a pattern.

The problem with an isotropic antenna, besides the fact that you simply can't build one, is that, even if you could, it wouldn't be very practical, because it simply would not make very efficient use of the available RF energy. It would, in effect, transmit or receive signals from all directions equally poorly, including such impractical directions as straight up in the sky and straight down at the ground--directions that we aren't typically interested in for most communications activities.

But even if an isotropic radiator isn't a practical reality, it does help us to explain the performance of other, more practical antenna systems. If, for example, we were to break a conductor down into extremely small segments approaching the size of the conductor's molecular structure, we could think of each one of these segments as being a tiny isotropic radiator, each with the capability of radiating with equal strength in all directions.

In reality, however, when each of these small isotropic radiators is physically connected together to form the actual radiating element of a practical antenna, the element begins to take on some amount of physical length, with a resulting radiation pattern that is the vector sum of each of its individual tiny isotropic radiators. A practical conductor with therefore exhibit some type of non-isotropic radiation pattern.

One way to envision why this is true is to remember that any conductor has a finite propogation velocity, and as a result, each theoretical isotropic radiator within the conductor is radiating with a slightly different phase from each of the other radiators. This is true, of course, because as RF energy begins to excite a small section of the antenna's conductor, this energy must then propogate down the conductor. This propogation takes a finite amount of time, and as a result, each tiny segment along the electrical length of the antenna is radiating slightly out of phase with every other segment.

The resultant pattern of the overall conductor, will be the vector sum of each individual pattern created by each of these tiny quasi-isotropic radiators within the conductor and will be a radiation pattern that is not spherical, but is a function of the physical geometry (length and diameter) of the conductor, as well as the operating frequency. Whew!

For example, a simple Yagi antenna can be constructed by mounting some number of identical elements in the same plane, and driving them such that the rear-most element is attached directly to the down lead, or feedline. An additional length of feedline, introducing some precise amount of phase delay, is then use to connect that element to the next adjacent element, ans so forth down the line until all elements are connected by these additional lengths of feedline.

If the phase delay of each shore segment of feedline interconnecting each element is chosen such that the energy feeding each element via the feedline is in phase with the energy arriving via the air from its neighbour to the rear, then we can begin to see that as the signal propogates from back to front in the transmit mode (or from front to back in the receive mode), its signal level is increased as it passes each element in the array. On the other hand, energy arriving (or being transmitted) off of the back or side of the antenna is not offered this same relative gain advantage because the phase relationship between the elements is not correct for any other angle except directly in front of the antenna.

Driven and parasitic arrays

Hence the antenna's gain (relative to isotropic) in the forward direction is much greater than its "gain" off the back or sides of the antenna--thus defining is front-to-back-ratio. This type of antenna is call a "driven" array, since each element is actually driven by (attached to) a feedline. Another type of array, called a "parasitic" array can also be used with the same result.

A parasitic array is one in which only one of the elements is actually connected to the feedline, while the rest of the elements pick up their energy by radiation from that driven element.

Phasing of each element, which was accomplished in the driven array by the length of the short interconnecting feedline between elements, is accomplished in the parasitic array by tuning (cutting to length) the parasitic (non-driven) elements to frequencies that are slightly different from that at which the antenna is designed to operate. Progressively shorter elements (tuned to a higher frequency), call "directors", are located toward the front of the antenna, and progressively longer elements (tuned to a lower frequency), call "reflectors", are toward the rear.

By Chris Bowick, Group Vice President¦Technology, Jones Intercable

THE CRAZIEST LANGUAGE

We'll begin with a box and the plural is boxes;

But the plural of ox is oxen not oxes.

The one fowl is a goose, but two are called geese.

Yet the plural of moose should never be meese.

You may find a lone mouse or a nest of mice;

Yet the plural of house is houses, not hice.

If the plural of man is always called men

Why souldn't the plural of pan be called pen?

If I spoke of my foot and show you my feet,

And I gave you a boot, would a pair be called beet?

If one is a tooth and a whole set are teeth

Why shouldn,t the plural of booth be called beeth?

Then one would be that, and three would be those,

Yet hat in the plural would never be hose.

And the plural of cat is cats, not cose.

We speak of a brother and also of brethern,

But though we say mother, we never say methren.

The masculine pronouns are he, his, and him,

But imagine the feminine, she, shis and shim.

So English I fancy you will agree,

Is the craziest language you ever did see.

Reprint from 418 Belleville Wing of the R.C.A.F. Association.

EXECUTIVE:			
President	Ivan Graham	968-4936	VE3GTH
Vice President	John Sanders	968-6159	VE3BPA
Secretary	Bryan Telford	398-8954	VE3ECJ
Treasurer	Minne Hovinga	478-5117	VE3VAO
Past President	Mike Papper	969-1744	VE3VMP
On Going Activities:			
Publicity	Bob Mitchell	968-3703	VE3RRM
	John Sanders	968-6159	VE3BPA
Property	Mike Papper	969-1744	VE3VMP
Newsletter	Don Dalrymple	968-9242	VE3DQN
Repeater Committee	Norm Moore	968-6265	VE3NFD
	Ron Hovinga	967-1318	VE3UGU
Packet Committee	Al Smardon	966-0668	VE3OX
	Jim Eadie	478-2296	VE3DCX
Emergency Coordinator	Ron Chapman	966-2910	VE3IVC
	Don Davenport	962-3167	VE3BPL
Field Day 1993	Dave Ward	966-9982	VE3BIP
Course Director	Tim Pekkonen	969-8012	VE3UO
Mall Display	Ivan Graham	969-4936	VE3GTH
	Joann Woods	968-3638	VE3MNL
	Bob Brain	962-7717	VE3GTD
2 Meter Fox Hunt	Ivan Graham	968-4936	VE3GTH
	Tim Pekkonen	969-8012	VE3UO
Refreshments	Bill Campbell	962-9813	VE3NFP
Complaints Committee	Tim Pekkonen	969-8012	VE3UO

Hams and Eggs, 8:00 am each Saturday at the Golden Griddle, North Front Street, Belleville, Ontario.

Q.A.R.C. 2 Meter Net every Thursday at 7:00 pm on VE3KBR. Swap net to follow regular net.

Regular meetings of **Q.A.R.C.** third Wednesday each month except July and August

Regular meetings of the **Prince Edward Radio Club** are held on the first Thursday of each month except July and August

PERC 2 Meter Net every Tuesday at 7:00 pm on 146.730

Regular Meeting of the **NRA** is held on the fourth Thursday of each month

NRA 2 Meter Net every Wednesday at 8:00 pm on 145.390

T.A.R.C. 426 Sqdn. Building South Side CFB Trenton 2nd Tuesday each month.

T.A.R.C. 2 Meter Net every Wednesday at 9:00pm on 147.015