

NORTH SHORE AMATEUR RADIO CLUB INC.

P.O. BOX #171, OSHAWA, ONT., L1H 7L1

January 1991

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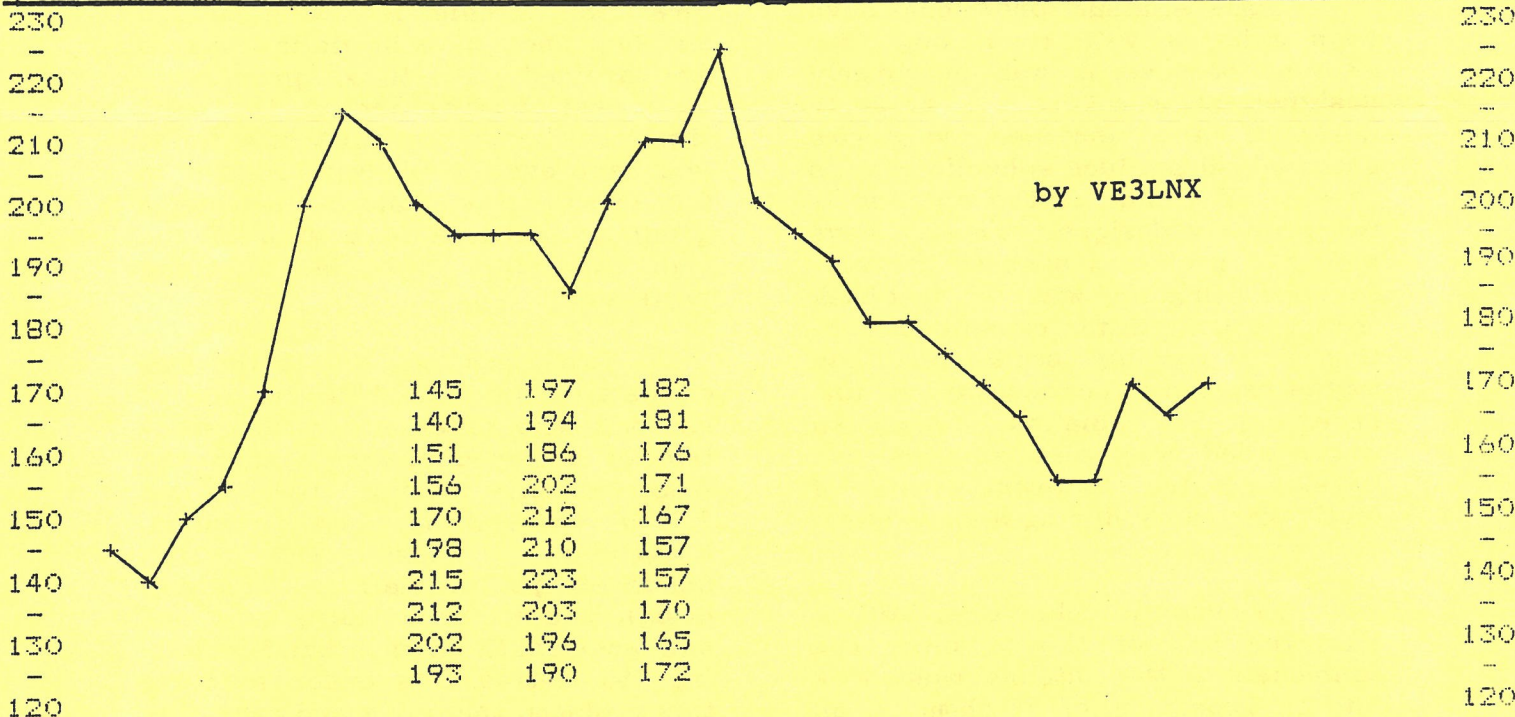
2-meter NET CONVENES EVERY THURSDAY AT 7:30 pm ON THE CLUB REPRATER, VE3ORH. AS PART OF THE NET, CODE PRACTICE IS PROVIDED BY BERNIE VEJATI BEGINNING AT 8:30pm.

10-meter NET - A GROUP OF LOCAL HAMS MEET SUNDAY ON 28.200 mc USING CW FROM 9:00am TO 10:00am, THEN SWITCH TO SSB PHONE UNTIL EXHAUSTED OR HUNGRY.

CO-ORDINATORS

NONQUAN CANOE RACES	GLEN COSLIN, VE3LIZ	725-1545
RIDE FOR THE HANDICAPPED	RAY ZAMBONELLI, VE3JUB	723-2467
	RALPH DAY, VE3CRK	576-8738
	RALPH DAY, VE3CRK	576-8738
SANTA CLAUSE PARADE	GORD McCUAIG, VE3NZS	683-4054
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CLUB INVENTORY	GREG SCHATZMANN, VE3GJS	576-4655
VE3CNE & FIELD DAY		

CLUB STATION.....	VE3NSR	
CLUB REPRATER.....	VE3OSII ..	147.72mc IN ... 147.12mc OUT
HARRY'S REPRATER.....	VE3NAA ..	448mc IN ... 443mc OUT



by VE3LNX

AVERAGE SOLAR FLUX NUMBER FOR THE MONTH OF NOVEMBER IS 193.1

Dec. 10th Meeting: The annual Christmas meet went off very well. Over 50 people attended, many bringing their wives. There was a good spread put on by Velora Gibson and friends. Crackers n' Cheese and punch were plentiful and Mrs. Sherba contributed some very tasty short bread cookies. Many thanks to all those who assisted in making the meet a great success.

NEXT MEETING, according to program director Peter Johns, VE3WWZ, we will have a very interesting talk by VE3DKW about antenna tuners. Now this is something of interest to every amateur and most are capable of building one. I am sure this meet will be well attended.

TARIFF ITEM: VE3DKW sent along the following. If you plan on importing gear into Canada then these tariff item numbers will assist you. With these magic numerals you will not be liable for custom duties but you will pay Sales tax and the dreaded GST.
 Receivers: Tariff Item #85.27.39.10.00; Transmitters: Tariff Item #85.25.20.10.00.
 Transceivers are presumably covered by the use of both numbers. Accessories and Aerials are under Tariff Item: #85.29.90.10.10

Due to heavy travel over the next few months, your newsletter may be extra early or extra late.

Some Thoughts On Long-Wire Antennae

by Farncomb Le Gresley, VE3BHQ

Name the simplest, least expensive, easiest to erect and effective antenna which will allow an SWR = 1.0 on any HF band? The answer is a long-wire antenna over one wavelength long!

Some amateur operators have been unhappy with their long wire antenna because it was improperly designed or erected. A properly designed and installed long-wire antenna will produce splendid results on any HF band. If the antenna is not properly designed one may have plenty of problems, such as the microphone being hot with RF, feedback from the transmitter causing distortion and possibly oscillations and maybe exposing the operator to unnecessary RF radiation. Also, an ungrounded long-wire antenna can develop a few thousand volts of static electricity during a snow storm or heavy rain.

In order to achieve an SWR of 1:1.0 the end of the 50 ohm coax connected to the antenna must look into an impedance of 50 ohms on all bands being used. A high impedance will result in a high SWR and the transmitter shutting down or damage to the final amplifier, as well as everything in the shack lighting up with RF. In order to feed a long-wire successfully, the connection between the coax from the transmitter and the antenna must occur at an antenna current node, which is a low impedance point. In a long antenna the low impedance points occur every half wavelength along the antenna. The easiest way to obtain a current node at the antenna feed point is to make the length of the antenna a multiple of odd quarter wavelengths OR ground the long-wire at the far

end and make the length of the antenna a multiple of half wave lengths for any band to be used. Grounding the far end automatically makes this end a low impedance point and thus, a current node. It also has two other important benefits. First, the antenna is now grounded and any snow or rain static charges are drained off, thus, preventing equipment damage and at the same time resulting in the quietest antenna you have ever heard with regard to QRN due to static buildup. Second, a grounded antenna is a step in the right direction towards lightning protection.

Two years ago, due to the loss of the tree which held the far end of my long-wire antenna and the erection of a guyed tower to take the place of the missing tree, I was forced to redesign my antenna. Previously, it worked well on all bands except 160 metres. The new design had to be a multiple of one half wavelength on each band including 160 metres. In order to solve this problem, the quick and easy way was to write a computer program in BASIC to do the job. It could also have been done using a computer spreadsheet such as LOTUS which is capable of "what-if" calculations. The computer program is written in Microsoft Quick Basic and can be modified for other BASIC interpreters or compilers, or provide a disk for me to supply a compiled EXE version which will run as a command program on any IBM or compatible computer, however, you will be unable to modify it.

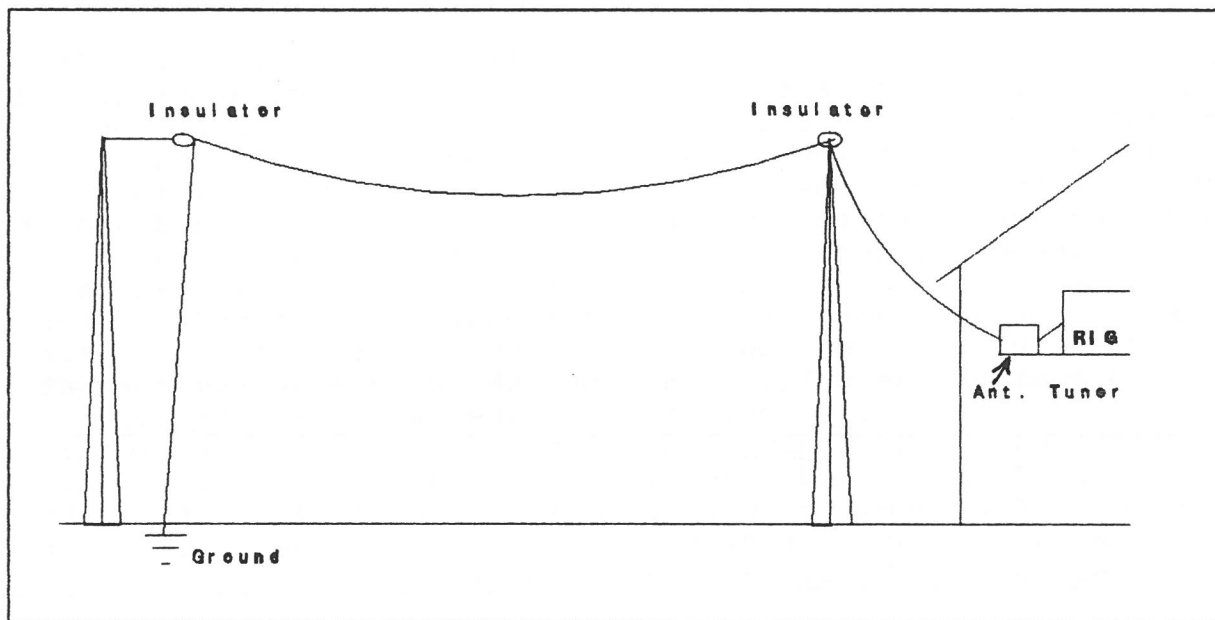
My antenna ended up 514' long with the last 66' at the far end vertical and grounded as shown in the

diagram. This turns out to be the best compromise for the various bands and frequencies which are of interest to me. It is one full wavelength on 160 metres, two wavelengths on 75 metres and etc. As the antenna increases in length, its radiation pattern produces lobes which eventually result in an end-fire antenna pattern, thus, the directional orientation of the antenna is quite important and a power gain results in the direction of the lobes and nulls occur between the lobes. The theoretical end-fire gain at 10 wavelengths is 7.4 dB! (from ARRL Antenna Book)

Since it is impossible to obtain an antenna length which is exactly a multiple of one half wavelength on all frequencies of interest, in order to get a perfect match on any band or

frequency, an antenna tuner should be used between the antenna and the coax to the rig. If the length of the antenna is close to one half wavelength or a multiple of a half wavelength on every band of interest and the far end of the antenna is grounded, a simple roller inductor and a variable capacitor along with an SWR bridge will allow the use of any frequency which is reasonably close to a multiple of one half wavelength.

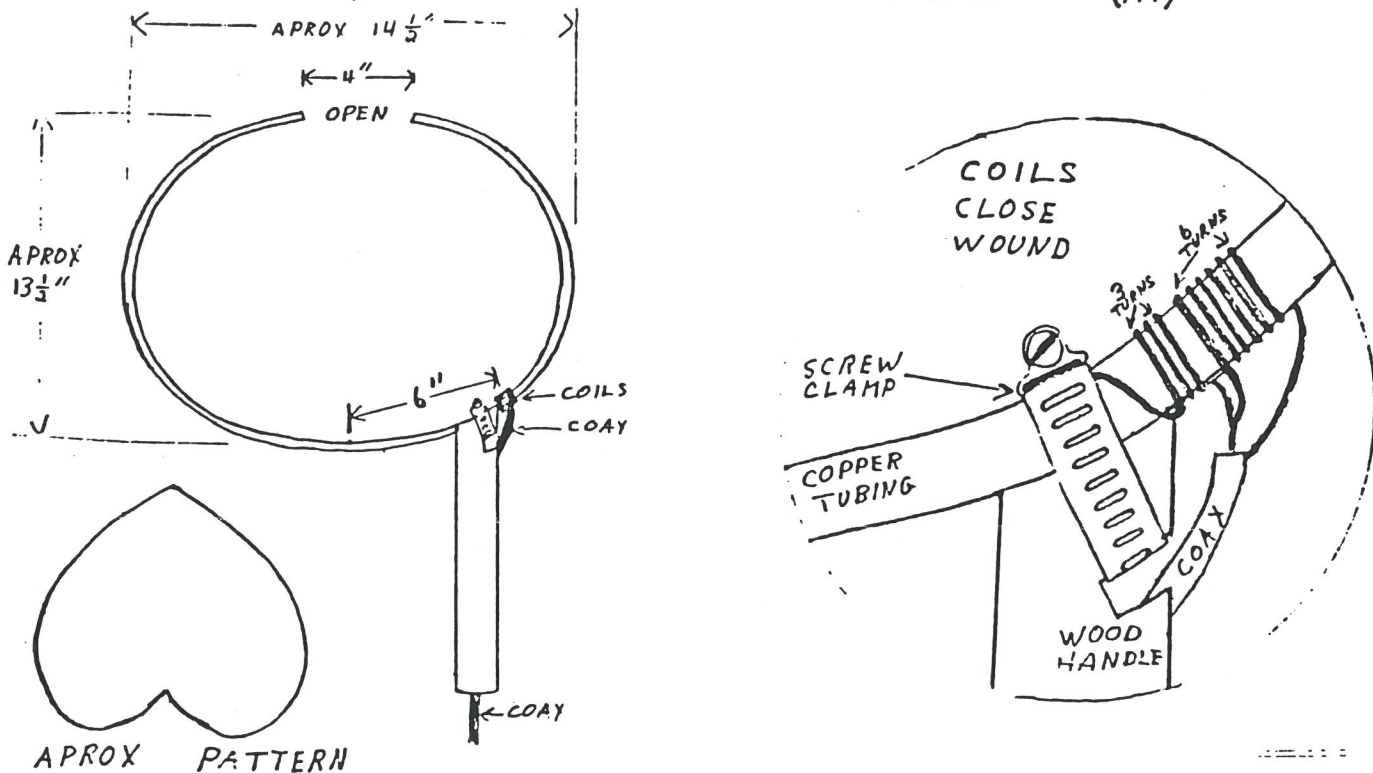
Unfortunately, very few city lots are large enough to erect a long-wire antenna, however, for anyone with sufficient space, a long wire is a very effective antenna which is probably the simplest, easy to erect and least expensive of all HF antennae.



Many thanks to Farney for this fine article, it is easy to see he did his homework before producing the computer program which accompanied his submittal. If you would like a copy of the five page manuscript that will tutor your computer to assist you in constructing or designing the above antenna to your parameters, then write VE3FRM. He will send you a copy. Edwin Taylor, VE3FRM, Box 1031, Port Perry, Ontario. L9L 1A8.

Free of Charge!!!!!!!

GROUNDHOG SPCL (H1)



The GROUND HOG SPECIAL was produced by Eric, VE3HMG but submitted by VE3DKW.

Cut a piece of three eighth or five sixteenth inch copper tubing 38" long. Put a mark or a piece of tape half way on tubing. Form an oblong loop 13½" high and 14½" wide with an opening of 4" on top. Six inches from the bottom center, make a coil of three turns out of hookup wire. Put one end under the clamp. The other end goes to the coax center conductor. Then wind six more turns, one end goes to the coax shield and the other end goes to the coax center conductor. Both coils are close wound. A hole can be drilled through the center of the wooden handle for the coax or it can be taped to the handle. I put some auto body filler around the coil and the top of the handle to cover up the mess. Don't route the coax through the clamp as tests show this to foul up the null. Don't put the handle or the coax at the center of the loop as this also fouls things. The SWR! Well its foul too. I tried a Gamma Match and another thing that made my junk box go dry and I got the SWR down but performance and sensitivity went down as well. I would suggest a coax switch and transmit from your mobile antenna. Also if you have been hunting for a while, could it be possible you don't know where to point the thing to be heard? Happy Hunting, Eric, VE3HMG.

Well, its a brand new year and we have a few changes on the executive list. Fred Bengel VE3TIG is leaving the position of CNE Representative. That position will be filled by Greg Schatzmann VE3GJS who will also continue to be Field Day Manager. The club would like to give a hardy WELL DONE to those who gave so freely of their time to club activities and who are now leaving their positions. These are: Ray Zambonelli VE3OUB; Fred Bengel VE3TIG, Greg Schatzman, VE3GJS, who isn't really leaving, just changing hats. Thanks Guys!! A **BIG WELCOME AND THANKS** to Vice President Margaret Jeffery VE3BNN and VE3WWZ Peter Johns, Program Director. These are not easy chores you have assigned yourselves. Good luck in the new year!

INTERNATIONAL 6 METER BEACON LIST

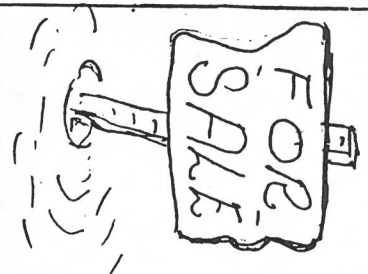
This is a list of all known six meter beacons. I am sure there has been more added since I received this list last year, but this is all that is available at this time.

FREQUENCY OF BEACON OPERATION - C continuous, I intermittent

FREQ.	CALLSIGN	LOCATION	GRID	OUTPUT	ANT.	OPERATION
35.810	VK6RO	Western Australia		3watts	6el. yagi	I
41.750	VK6RO	Western Australia		8watts	6el. yagi	I
45.250	CH 1	New Zealand TV/VIDEO				I
46.250	CH 0	Australian TV/VIDEO				I
48.250	CH E2	Europ/African TV/VIDEO				I
49.750	CH R1	Europ/African Ironcurtain TV				I
50.005	ZS2SIX	Rep. of South Africa	KF25	25watts	Dipole	C
50.005	H44HIR	Honiara, Solomon Is.	Q100			C
50.008	KOGUV	Park Rapids, Minn.	EM26	10watts	Halo	C
50.010	ZS6PW	Rep. of S. Africa	KG44			I
50.010	JA2IGY	Mie(Nagoya) Japan	PM84	10watts	Grnd Plane	C
50.013	P29BPL	Port Moresby, PapuaN.G.	QI30	30watts	Dipole	C
50.015	ZS2DH	Athens Greece	KM18	10watts	5el. yagi	I
50.020	GB3SIX	Anglesey, England	IO73	25watts	3el. yagi	C
50.020	JE6ZIH	Miyazaki, Japan	PM51	10watts	2xSqualo	C
50.025	6Y5RC	Kingston, Jamaica	FK17	40watts	3el. yagi	C
50.028	JA7ZMA	Fukushima, Japan	QM07	10watts	6el. yagi	C
50.030	CT0WW	Joao Pesdueira	IN61	40watts	Dipole	C
50.032.5	ZDBVHF	Ascension Island	II22	50watts	5el. yagi	C
50.035	LU8YYO	Argentina				C
50.035	ZB2VHF	Gibraltar	IM76	50watts	5el. yagi	C
50.039	FY7THF	Kourou, Fr. Guyana	GJ35	100watt	Grnd Plane	C
50.040	CX8BE	Montevideo, Uruguay	GF15	10watts	4el. yagi	I
50.045	OX3VHF	Simiutag, Greenland	GP60	20watts	Grnd Plane	C
50.050	GB3NHQ	Potters Bar, Eng.	IO91	15watts	Dipole	C
50.050	ZS6DN	Irene, S. Africa	KG44			C
50.057.5	TF3SIX	Iceland	HP94	50watts	Vertical	C
50.060	GB3RMK	Rosmarkie, Eng.	IO77	20watts	Dipole	C
50.060	K4TQR	Birmingham, Alabama	EM63	1watt	Dipole @ 60'	C
50.060	WA9ONQ	Middletown, Ohio	EM79	2watts	Turnstile	C
50.060	W5VAS	Bohemia Louisiana	EL49	.5watt/vert	310'	C
50.061	K1NFE	Burlington, Conn.	FN31	15watts	Turnstile	C
50.062	PY2AA	Sao Paulo, Brazil	GG66	25watts	Grnd Plane	C
50.062	W3VD	Laurel, Maryland	FM19	10watts	Vertical	C
50.062.5	GB3NGI	Londonderry Eng.	IO65	18watts	Dipole	C
50.063	N4PZ	Sarasota, Florida	EL87	.4watts	Whip @ 70'	C
50.064	WD7Z	Yucca, Arizona	DM24	75watts	Squalo 50'	C
50.065	NB30/1	Rhode Island	FN41	100watt	5el. yagi	C
50.065	W9KFO	Eaton, Indiana	EN70	1.5watts	Vertical	C
50.065	KA0CDN	Aurora, Colorado	DM79	20watts	Vertical	C
50.065	WO1JR	Aurora, Colorado	DM79	20watts	Vertical	C
50.065.5	GB4HXJ	St. Helier Eng.	IN89	10watts	Halo	C
50.065	KL7WE	Anchorage, Alaska	BP51	1.5watts	3el. yagi	I
50.066	VK6RPR	Perth, Australia	OF78	20watts	Horizontal	C
50.067	WA10JB	Bowduinham, Maine	FN54	2watts	J-pole @ 15'	C
50.067	WB81GY	Loveland, Ohio	EM79	2watts	Vert @ 120'	C
50.067	N7DB	Boring, Oregon	CN85	8watts	Halo	I
50.067	W0BJ	North Platte, Neb.	DN91	5watts	Turnstile	C
50.067	W4RFR	Nashville Tenn.	EM66	2watts		C
50.068	W7US	Arizona				C
50.069	W4IHK	Collierville, Tenn.	EM55	1watt	Dipole @ 30'	C
50.069	K6FV	Woodside, Cal.	CM87	100watts	Various	C
50.070	KA4VEY	Harvest, Alabama	EM64	10watts	Vertical	C
50.070	KB4UPI	Birmingham, Alabama	EM63	4watts	Dipole	C
50.070	KOHTF	Des Moines, Iowa	EN31	3watts	Inverted-V	C
50.070	N4LTA	Spartanburg, S.C.	EM94	10watts	Halo @ 50'	C
50.070	WA7ECY	Troutdale, Oregon	CN85	10watts	Squalo	C
50.070	WBOCGH	Lewisville, Texas	EM13	1.5watts	Halo @ 130'	C
50.070	WB4GJG	Danville, Virginia	FM06	1watt	Ringo @ 70'	C
50.072	WA2YTM	Canandagua, New York	FN12	15watts	Turnstile	C
50.072	KW2T	Palmyra, New York	FN13	.25watt	Squalo	C
50.074	WB5DSH	Oklahoma City, OK	EM15	30watts	Halo @ 40'	C

50.074	PY2AMI	Sao Paulo, Brazil	GG67	5watts	Grnd Plane	C
50.075	KP4EKG	Bayamon, Puerto Rico	FK68	10watts	Vertical	I
50.075	VS6SIX	Hong Kong	OL72	30watts	Grnd Plane	C
50.077	NOLL	Smith Center, Kansas	EM09	21watts	2xHalos 40'	C
50.077	N5JM	New Orleans, La	EL49	3watts	Vertical	I
50.077.5	T12NA	San Jose, Costa Rica	EK70	20watts	Dipole	C
50.078	W6SKC/7	Nogales, Arizona	DM14	30watts	Vertical	C
50.080	KH6JJK	Honolulu, Hawaii	BL11	5watts	3el. yagi	C
50.080	WB400J	Tampa, Florida	EL87	10watts	Vertical	C
50.080	W1AW	ARRL, Newington, CT	FN31	50watts	6el. yagi	I
50.082	HC8SIX	Galapagos Island	EI59	4watts	Vertical	C
50.085	9H1SIX	Malta	JM57	25watts	5el. yagi	C
50.086	K7NV	Pahrump, Nevada	DM16			C
50.086	VE2STL	Val Belair, Que.	FN46	1.5watts	Dipole	C
50.086	VP2MO	Plymouth, Montserrat	FK86	10watts	6el. yagi	I
50.090	KJ6EZ	Johnston Island	AK56	10watts	6el. yagi	C
50.092	W5GTP	New Iberia, La	EM40	30watts	3el. yagi	I
50.095	K7IHZ	Mesa, Arizona	DM43	20watts	Squalo	C
50.100	HC2FG	Guayaquil, Ecuador	FI07	8watts	J-Pole	C
50.100	VP5D	Turks & Caicos Is.	FL31	6watts	Omni	C
50.100	KG6DX	Latta Heights, Guam	QK23	40watts	3el. yagi	I
50.110	KG6DX	Latta Heights, Guam	QK23	40watts	3el. yagi	I
50.110	JA2IGY	Mie, Japan	PM84	10watts	Grnd Plane	C
50.110	A61XL	United Arab Emirates	LL74	50watts	6el. yagi	I
50.120	457EA	Sri Lanka	MJ97	50watts	6el. yagi	I
50.321	ZS5SIX	Pietermaritzburg, RSA	KG50	10watts	Halo	C
50.490	JG1ZGW	Tokyo, Japan	PM95	10watts	Dipole	C
50.500	5B4CY	Zyghi, Cyprus	KM64	15watts	Grnd Plane	C
50.740	CH 1	Audio Auckland, New Zealand (WBFM)				I
50.750	CH 1	Audio Kaukapunake, New Zealand (WBFM)				I
50.760	CH 1	Audio Waukapunake, New Zealand (WBFM)				I
50.880	ZS4SA	Republic of S.A.	KG33			C
50.904	ZS1STB	Republic of S.A.	KF05	25watts	4el. yagi	C
51.020	ZL1UHF	Nihotupu, New Zealand	RF73	25watts	Dipole	C
51.030	ZL2MHB	Napier, New Zealand	RF80	10watts	vertical	C
51.225	ZL2VHT	Inglewood, New Zealand	RF71	30watts		C
51.740	CH 0	Audio Wagga, NSW, Australia (FM)				I
51.750	CH 0	Audio Brisbane, Queensland, Australia (FM)				I
51.760	CH 0	Audio Melbourne, Victoria, Australia (FM)				I
52.100	ZK2SIX	Niue	AH50			C
52.200	VK8VF	Darwin, Australia	PH57	20watts	Horizontal	C
52.250	ZL2VHM	Pahiatua Track, N.Z.	RE79	8watts		C
52.310	ZL3MHF	Aylesbury, New Zealand	RE66	50watts	Vertical	C
52.320	VK6RTT	Wickham, Australia	OG89	25watts	J-Pole	C
52.325	VK2RHV	Newcastle, Australia	QF57	20watts	Horizontal	C
52.330	VK3RGG	Geelong, Australia	QF21	10watts	Horizontal	C
52.345	VK4ABP	Longreach, Australia	QG26	10watts	Vertical	C
52.370	VK7RST	Hobart, Australia	QE37	20watts	Horizontal	C
52.420	VK2RSY	Sydney, Australia	QF56	25watts	Turnstile	C
52.425	VK2RGB	Gunnedah, Australia	QF59	5watts	Horizontal	C
52.440	VK4RTL	Townsville, Australia	QH30	10watts	1/4 Vert.	C
52.450	VK5VF	Adelaide, Australia	PF95	30watts	Turnstile	C
52.460	VK6RPH	Perth, Australia	OF78	20watts	Horizontal	C
52.465	VK6RTW	Albany, Australia	OF84	10watts	Horizontal	C
52.470	VK7RNT	Launceston, Australia	QE38	10watts	Horizontal	C
52.485	VK8RAS	Alice Springs, Aust.	PG66	25watts	Horizontal	C
52.490	ZL2SIX	Blenheim, New Zealand	RE68	10watts	Vertical	C
52.510	ZL2MHF	Mount Climie, N.Z.	RE78	4watts	Vertical	C

Yaesu Hand-Held FT209RH 5 Watts, Two meter rig complete with charger, two antennas and manual. Perfect condition. Best Offer! Charlie Phillips, VE3-FIT. Phone: 852-3506 #10 1st Ave., Uxbridge, Ont. Apartment 309



The following list of 6 meter beacon frequencies was submitted by Victor VE3LNX. I am sure all you VHF DX types will find them useful to monitor before attempting to fathom the murky waters that lay beyond the horizon.

Busy 1996-97

CALLING ALL MEMBERS!

THE CLUB NEEDS YOU!

ENLIST NOW!!

THE 1991 DUES ARE DUE NOW!!

SIGN UP TODAY!

Time is Running Out!



Renew Your Membership

- Full membership - \$15.00 - Includes full voting privileges and monthly news letter for one calendar year. (Jan. to Dec., July&Aug excl.)
ASSOC. MEMBER \$10.00 - News Letter only, welcome to any meetins attended.
2nd FAMILY MEMBER-\$ 5.00 - Full voting privileges but no news letter.

TO JOIN SEND CHEQUE OR MONEY ORDER TO THE REGISTRAR AT HIS HOME: 298 Dover Street, Oshawa, Ontario, L1G 6G6. (preferably) or..... N.S.A.R.C., Box 171, Oshawa, Ontario, L1H 7L1

PHONE NUMBER

NAME:..... CALL:.....

QTH:..... ZIP:.....

MEMBERSHIP CLASSIFICATION:..... FEE ENCLOSED:.....

DONATIONS FOR REPEATER FUND (if you desire) AMOUNT:.....

You know, this club has been kicking around a long time now. Since 1947 I believe. Now that's almost as old as VE3AZT and thats old! The club has given a lot of people a lot of fun for very little money. Don't miss out in 1991, sign up now and let the good times roll!!! We need you, we need everyone to make it all happen! Think of lovely corn roasts and special meets. The Sermons on the mount and this fantastic snooze letter. Sign up today!