

2005 CQWW CW DX Contest on Topband from VY2ZM

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Every now and then the propagation gods smile on us and bless us with fabulous lowband conditions to enjoy during a major DX contest weekend. This past November 2005 was just such a moment on 1.8 MHz and, since I was asked to write about this past weekend in an article for the *NCJ*, I accepted and was grateful for the chance to share this special time with my fellow contesters.

By now, I think most folks are aware of the fact that in September 2000 I first journeyed to Prince Edward Island (PEI) in Maritime Canada to look for a parcel of land. During the summer of 2001, my family and I built a retirement home there and also began the simultaneous construction of a major contest station—with *special* emphasis on 160 meters (or Topband, as it is often called). For more details about the evolution of this contest station, check out the March/April 2003 and July/August 2005 issues of *NCJ*.

Today the station is replete with 10 towers in all, stacked Yagis for 40-10 meters, a 4-Square for 80 meters and a complete suite of 300-meter beverages for the 60/80/170/210 and 300 degree headings. All of this is located directly on saltwater on the northeastern shore of PEI with a clear shot over the water from 320 to about 85 degrees. All of the aforementioned antennas are first-class systems but, without question, the *coup de grace* is the Topband array designed by Peter Hutter, WW2Y and Rob Flory, K2WI, *on a napkin* one day down in Princeton, New Jersey in 1997 (I think).

Some think of it as a 4-Square array (because that is what it looks like in the photos), but clearly it is not, as it is a far better antenna than a classic 4-Square system which offers only 5.68db gain in four principal directions. The WW2Y/K2WI design is a two-by-two driven array that develops gain approaching 8 dB in the most favored directions. It also can be operated with the main lobe split, which can produce simultaneous gain at 6.0 dB in multiple directions at the same time to optimize performance in a major contest. Try doing that with a 4-Square—you can't, or at least not very easily because the spacing between the elements will not allow it.

In addition to the advantages of a directional antenna with meaningful gain right at the salt water's edge, there is also a highly-specialized receive antenna at VY2ZM (also designed by WW2Y and K2WI) that is a miniaturized version of the transmit array—but with 6 active ele-

ments. It is known around the 'ZM shack as the "Rx six-pack"—not to be confused with the more commonly known WX0B Sixpack SO2R antenna switch!

This six-pack Rx antenna sits about a half mile from the transmitting array on 8 acres of land specifically cleared for this purpose. This configuration is wholly within existing contest rules as it sits on land I own, which is now around 115 acres or so. It is positioned off to the side of the transmitting array when it is beaming towards Europe, which presents some interesting opportunities for nulling. When nulled, it is actually possible to transmit on the transmitting array and then tune the band for other stations and multipliers during a major contest, all without too much *splash* from the transmit signal being picked up on the sixpack. But these techniques were not employed during this specific contest. They have been used, from time to time, at the station during previous multioperator 160-meter contest entries, however.

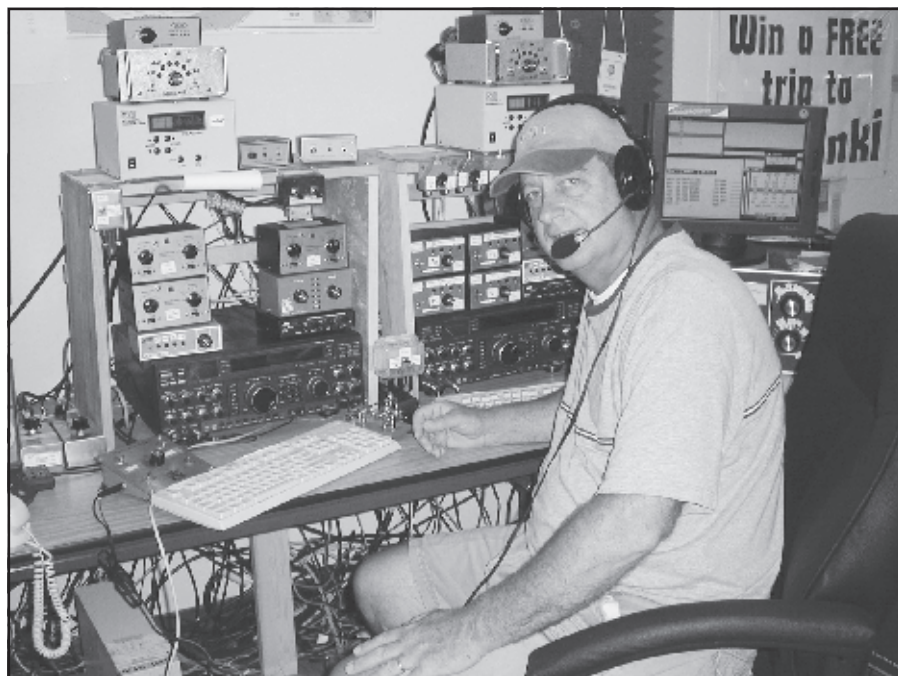
Inside the station, an FT1000D and an Acom amplifier are typically used on Topband in most contests, with some manually tuned amps sitting on "hot standby" in backup mode, if needed.

Normally on Topband, as Jack Leahy, VE1ZZ, will tell you, it is possible to hear Europe quite early from the Canadian

Maritimes, but this does not necessarily mean you will do well in a 160-meter contest. Case in point: I recall entering CQWW CW single-band 160-meters in November 2001 and getting my doors blown off by most of the better-equipped European stations. So, you do not always do well even when operating from a place as favored as VY2. Nevertheless, I have always felt that the place had major contest potential if the right conditions occurred in a contest.

The Contest is Underway!

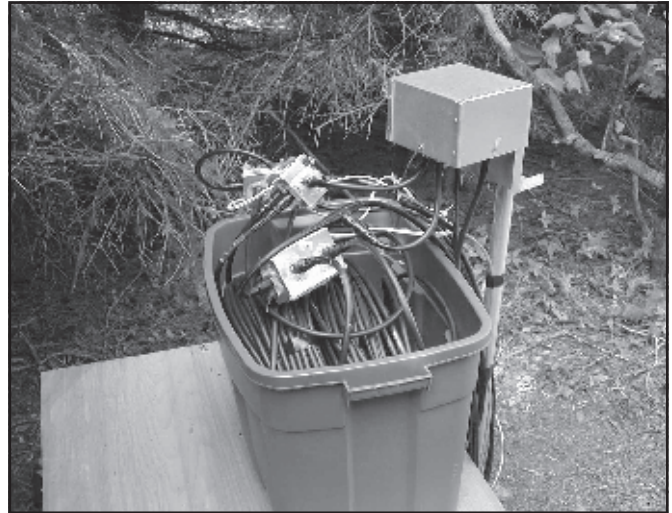
I should first note that Scott Robbins, W4PA, from Ten-Tec came up to operate SOAB during CQWW Phone and, at the time of this writing, it is beginning to look like he will finish at #3 in the world, which is simply amazing from North America. While Scott was here, he managed a 200-hour effort on Topband—on phone no less—which we actually managed to record on tape. It is an astonishing hour with all kinds of overseas DX interspersed with well-known US call signs. Scott will never forget that experience as long as he lives. I listened to him do it and even I was impressed with what was going on. With that in mind, Scott and I both secretly hoped the CW weekend conditions would offer similar opportunities on 160 meters for me—and they did!



Jeff, K1ZM, at the VY2ZM station for CQWW CW 2005.



Looking towards EA8 from the 120-foot level of the SE 160-meter radiator at VY2ZM.



View of the 160-meter array phasing control system.

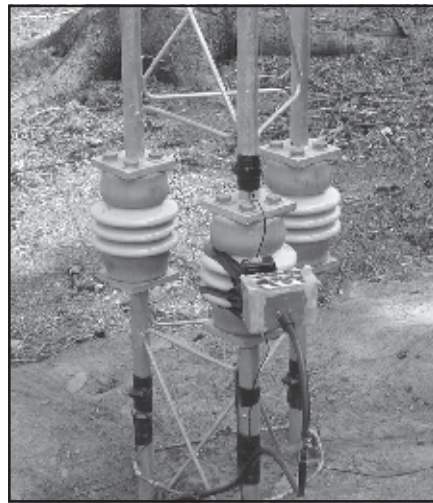
At the start of the contest, Europe was boiling in already with most signals well over S9. The only problem was the QRM level I was beaming into in Europe. It is often so bad that those folks simply cannot hear North America until their sunrise approaches. Fortunately, I found a hole and got a good run going, with stations like OH0Z, 3V5A and LZ9W being logged in the first hour.

The second hour on Friday night included TZ5A, R1MVC, IH9P and RW2F. Hour three was also a good one with C4M, 4X4DK, 9H3MR, OY9JD, OJ0J, RX9FM and TE1W making it into the log. Hour four included TF4M, ES5QX and lots of other European and W/K stations.

Here is a quick look at the first night's breakdown shows these hourly rates and new mults on Topband:

00Z	151/38
01Z	96/14
02Z	77/11
03Z	134/06
04Z	140/03
05Z	134/04
06Z	56/09
07Z	46/06
08Z	28/01
09Z	31/00
10Z	17/01
11Z	25/00

Interestingly enough, Europe stayed in until 1011Z on Friday night when I worked my last G (G0HSU) and even managed to work Clive, GM3POI, as late as 1201Z, which is not the first time we have managed contacts at his local noon time. I believe this is possible because of the lowness of the sun in the sky in November, the lack of sunspots at the moment and the fact that each of us is sitting at the edge of the ocean with first-rate 160-meter transmitting antennas.



Typical 160-meter radiator base insulator and feed/matching system.

At the end of the first 24 hours, I recall having 1118 Qs with about 20 zones and 87 countries in the log. I was delighted because I was already ahead of the existing North American record score set in 1998 by Yuri at VE1ZZ (under the call sign VA1A). I figured at the time that if the conditions held up, I could make a big score, so I pressed ahead and ran Europe whenever I could.

Quirky Paths to Europe

I should note in passing that while I had worked GM3POI at 1201Z (just before the band closed), I was able hear Europe again around 1500Z. In fact, as I am typing these lines at 1630Z on December 01, 2005, I am hearing a European pileup on 1834.9 kHz calling a Southeast Asian station I cannot hear. That's the way it works around here in the winter. I cannot always

VY2ZM CQWW CW 2005 Single Op 160-Meters

Countries Worked By DXCC Entity (Call of First Station Worked)

3DA0NW	DJ6YX	HC8N	OH0Z	TZ5A
3V5A	EA5HT	HI3/SP9XCN	OJ0J	RK3DK
4K7Z	EA6IB	5J1W	OL1C	RW2F
4X4DK	EA8ZS	IU2R	OM7M	RX9FM
C4M	EI3GQ	IH9P	ON4WW	UU7J
5R8FU	ER5AG	IS0U	OY9JD	V26K
6W1RW	ES5QX	IT9INO	OZ0XX	V31TM
6Y7A	EW1CQ	JA4DND	P40W	VO1UL
7X0RY	F5BAR	W4ZV	PA0MIR	VK3ZL
8P5A	FG5BG	KH6ZM	PJ2T	VP2E
8Q7DV	FP/K8DD	KL7HBK	PV8DX	VP5W
9A3RE	G3RTY	KV4FZ	PZ5C	VP9I
9H3MR	GD6IA	WP4G	R1MVC	XE2TG
9Y4AA	GI4VIV	LN8W	S58Q	YL2VW
C6AQQ	GJ2A	LR2F	SM5DQC	YR7M
XQ6ET	GM3OXX	LX7I	SN2N	YZ5C
CO8LY	GW0GEI	LY2MM	SZ1A	YW4D
CT1FJK	HA80IARU	LZ9W	T91ALM	Z37M
CT3EN	HB9MM	OE4A	TF4M	ZF1A
CU2A	HB0/DL6CX	OH3BU	TE1W	ZL3IX
				ZS4TX

be heard in Europe at this hour, yesterday I did work SM6DOI at 1828Z and I have worked other similarly equipped stations even earlier than that under good conditions.

On Sunday morning in the contest, while eating breakfast, I wrote down a few calls I copied very early at 589 or better: LY2IJ at 1537Z, RA6AX at 1538Z and SM5CEU at 1543Z, for example. But these folks do not usually hear me in a contest environment until around 1900Z or so.

The Second Night

As the second night began, conditions remained superb and I worked some additional goodies like 4K7Z, LX7I, Z37M before 2400Z (which is normal). As the second night progressed, some nice multipliers appeared and were logged including KL7HBK at 0155Z, 3DA0NW (K9NW

operator), ZS4TX, LR2F, 7X0RY, an HB0 two hours after his sunrise time, XQ6ET and ZL3IX. Europe was again still in until 1011Z (G4ERZ was the last) and then back in again by 1445Z on Sunday morning. The QSO count at 1200Z on Sunday seems to have been 1576 Qs, 26 zones and 96 countries.

As sunset approached again on Sunday afternoon, I could tell conditions were still excellent, and in the final three hours of the contest I managed to log 8Q7DV and JA4DND (on the long path SE) for double-doubles and three additional multipliers, as well to wind up with 1710Qs/28Z/101C for a final claimed score of 564,891 points. An additional 130 QSOs were logged between 1900Z and 2400Z on Sunday afternoon when the contest ended.

VY2ZM Epilogue

This running of the CQWW CW contest will always be special to me because it was the successful culmination of more than four years of very hard work. When something like this comes along, one cannot help but feel how worthwhile all the hard work was, including the investment of time by WW2Y and K2WI, without whose help the antennas in use probably would never have come into being. I am also grateful for being in the right place at the right time to set a new World Record score for a single-band entry on 160 meters, and especially to have been able to achieve it from North America where all my USA QSOs are valued at only 2 points. I guess fortune does indeed smile on us all at some point. Many thanks to all my friends from around the world who helped me set this record score. I hope to see you all again soon on Topband.

NCJ