



Squelch Tales

Newsletter from the Merrymeeting Amateur Radio Assoc. for September 2000

Hex-Beam or X-Beam

By Bruce Randall, W1ZE

If any of you were at the Union Hamfest two years ago you may have seen a demonstration put on by Traffie Technology of their portable HF beam antenna. The Hex-Beam, as it is called, is a wire and fiberglass antenna in the shape of a hexagon. The model that was brought to the event was a 20-meter mono bander. The working section is basically a two element beam with the director and reflector in the shape of the letter "W", with the reflector up side down over the driven element. There is no boom and the feed-point center of the driven element is just a few inches away from the center of the reflector element. The antenna was quite small and very light weight because the W shape compacts the overall size of the antenna making it ideal for portable use or for folks that want a low profile antenna that can be turned with a small TV antenna rotor motor.



HF 5-band (20-10m) Hex Beam

At the demo the Hex-Beam was mounted on a portable push-up mast about 30-feet off the ground. A Ten-Tec 555 50-watt transceiver was used so that people could get on the air and give it a try. I witnessed Steve Hanks, WZ1J get on the rig, point the antenna to the west and right off the bat get a 5-9 signal report from a station in the south Pacific. Pretty impressive for what I considered to be a 2-element yagi.

Several months ago Lou McCoy, W11CP (SK) gave a product review of the Hex-Beam in CQ magazine. I have heard Lou give a good review but seldom hear him go the extra mile and highly recommend it with glowing comments. On this antenna he did just that. The results Steve Hanks had are what Lou experienced. Lou rated the antenna as good as a 3-element yagi on sky-wave signals and as quiet as a quad. Now that is saying something.

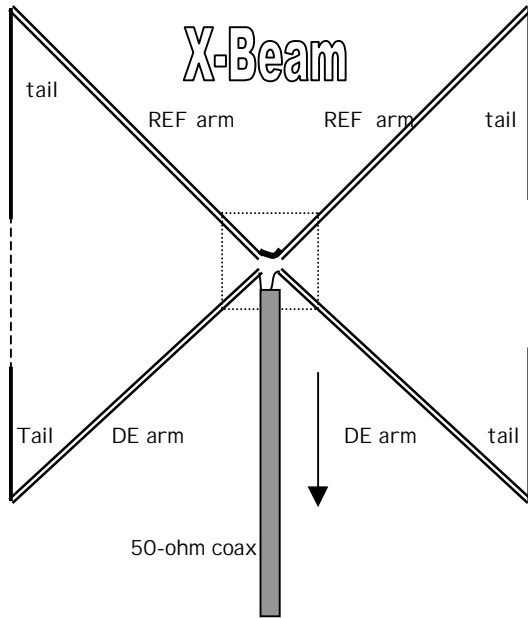
Now my interest was really peaked. I dropped Traffie Technology an e-mail with a couple of questions. A few days later I got a phone call from the owner and inventor of the Hex-Beam and we had a long pleasant chat about his demo at the Union hamfest and how he came up with the idea for the antenna. He stated, for some reason the "W" shape of the elements must have some beam forming function that increases the gain over what would normally be expected of a two-element yagi. He said his tests showed that the ground wave radiation patterns and gains figures were what you should expect with a two element yagi, but the sky-wave gain figures were more like a 3-element yagi or quad.

If you want more information about the Hex-Beam I recommend you check out the Traffie Technology web site at:

<http://www.hexbeam.com>

After thinking a while, I remembered an antenna described by Brice Anderson, W9PNE in the ARRL Antenna Compendium Volume 1 called the X-Beam. The difference between the X-beam and the Hex-Beam is the shape of the elements. The Hex-Beam elements are in the shape of a "W" and the X-beam has elements in the shape of a "M". The X-beam uses metal tubing and wire rather than lightweight fiberglass rods and therefore it is not as portable, but it is just as small. The Hex-Beam can be made up into a multi-band package but the X-Beam does not lend itself to that design easily. However, the performance of the X-Beam seems to be the same as the

Hex-beam. In the words of Bruce in his conclusion in the Compendium article, "The actual performance of the simple X-Beam is amazingly similar to that of a 3-element Yagi. Put one up and challenge the "Big Guns.""



The X-Beam tube elements can be mounted to a center plywood plate that is weatherproofed with spar varnish. The antenna can be built for any band and should prove to be a good antenna for 20 through 10-meters. Here are the dimensions for a full-size mono-band X-Beam:

MHz	ARM	DE Tail	DIR Tail	Tail Difference
14.1	13' 10"	7' 6.5"	6' 6.6"	1'
21.1	9' 3"	5' .5"	4' 4.5"	8'
28.2	6' 11"	6' 9.5"	3' 3.5"	6'

73, Bruce

BREAKFAST ANYONE?

Mark Saturday September 30 on you event calendars. That will be this months MARA Breakfast meeting at the Cook's Corner Denny's restraint at 9AM. The August meeting met with such success that we are going to do this type of meeting again. We hope to see you there.

Upcoming Maine Events

Date	Time	Event
SEPTEMBER (Sat.) 9th	8 AM	Windsor Hamfest, Fairgrounds (ARRL Exam given, POC Bill Crowley, K1NIT 623-9075)
SEPTEMBER (Tue.) 19th	6:30 PM	ARRL Exam, NMTC Augusta Charity Bldg., Presque Isle, POC Wilburn Scott, WA1YNZ 455-8333
SEPTEMBER (Sat.) 22nd	8 AM	Lincoln Hamfest: Ella Burr School, Lincoln, ME (Exams given)
SEPTEMBER (Sat.) 30 th	9 AM	MARA Breakfast Meeting, Cook's Corner Denny's.
OCTOBER (Thur.) 5th	6 PM	ARRL Exam, Winslow Elementary School, POC Don Smith, AE1Q 293-2935
OCTOBER (Fri-Sat.) 6-7th		Hosstraders Hamfest, Rochester, NH Fairgrounds
OCTOBER (Sat.) 14th	9 AM	ARRL Exams, Knox Co. Courthouse, Rockland: POC Dick Baldwin, W1RU, 521-5781
OCTOBER (Sat.) 14th	9 AM	ARRL Exams, Bangor Community Center, POC Bill Sullivan, K1AG 947-4051
OCTOBER (Sat.) 21st	10 AM	ARRL Exam, Bath Health Care Facility, POC Robin Walls, N1NFK 725-5135
OCTOBER (Sat.) 28	9 AM	MARA Breakfast Meeting, Cook's Corner Denny's
NOVEMBER (Wed.) 15th	6 PM	ARRL Exam, Togus V.A. Center. POC: Don Smith, AE1Q 293-2935
DECEMBER (Sat.) 2nd	10 AM	ARRL Exam, Bath Health Care Facility. POC: Robin Walls, N1NFK 725-5135

TWO AUGUST BIKE RIDES A SUCCESS

Many many thanks to Mark (N1JIM), Bob (N1VVF), Gay (N1XBN), Woody (W1WEW), Loren (W1LHD), Jean (N7BMU), Bryce (K1GAX), Dean (N1GLV) and Bruce (W1ZE) who turned out on nice days in August to help make the Morris Farm, Tour De Farm and Dan Michoud Century and Half-Century bike rides a whopping success.

The officials of both events were very pleased to have us help make their events a whopping success. Both groups stated they couldn't have done their events without our help. Well done MARA team!

New licensees and upgrades in New England

The figures below show the number of newly licensed hams by month for each New England ARRL Section. The figures come from a scan of the FCC database.

July new license and upgrade totals in New England were up over the totals in July of a year ago, but the big rush of upgrades as a result of license restructuring has ended.

New licensees in New England

	99->						00->						
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
CT	4		4	14	17	11	8	13	23	12	13	18	8
EMA	12		15	6	11	13	7	14	6	19	12	49	16
ME	7		3	12	2	14	1	1	4	12	15	22	9
NH	5		6	9	16	22		6	3	14	4	16	2
RI	4		3	2		6	1	5	6	2	2	1	2
VT	3		3	15	7	8	1	4	16	1	2	4	4
WMA	4		4	1	7	4	1	7	4	12	2	21	8
Nov	5		5	2	1	3	1	3	3	6	1		
Tech	32		26	47	50	58	16	38	54	56	43	123	44
Tech+	1		4	7	8	15	2	7	5		5		
Gen	1		1	3	1	2		2			2	7	3
Adv			2							1		1	
Extra													2
Tot	39		38	59	60	78	19	50	62	72	50	131	49

License upgrades in New England

	99->						00->						
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
CT	5		5			8	8	7		14	159	199	16
EMA	14		5			7	2	3		20	118	253	24
ME	3		4			9	1	5		9	95	77	5
NH	8					6		4		8	14	147	2
RI	1					1		3		5	33	58	3
VT	3		2				1			4	41	27	2
WMA	4		2			3				11	53	87	10
to Tech												3	1
to Tech+	10		6			14	9	13		34	13	5	
to General	15		4			6		4		8	269	516	43
to Advanced	7		3			10	1			11	3	1	
to Extra	6		5			4	2	5		18	228	323	18
Total	38		18			34	12	22		70	513	848	62

KS1R/R 444.4 MHz Repeater Up and Running

By Bruce Randall, W1ZE

On Monday, August the 21st Pete Russell, K1MJP and his able assistant Ed St. John manhandled the MARA's revitalized 444.4 MHz repeater up to the top of Cole's Tower building at Bowdoin College. They routed the new heliax up through a stuffing tube to the rooftop location. A new mast, with the repeaters collinear antenna attached, was clamped to the stuffing tube. After everything was connected Pete hit the on-off switch on the 35-amp power supply and the lights lit up and the transmitter came on and the ID generator sent out DE KS1R/R. The first time that has happened in many months.

The transmitter is kicking out about 60-watts into the duplexer and there is about 40 to 45 watts at the antenna. First coverage tests done by myself showed full quieting signals from Bath to Freeport. As time goes by we will have a better idea of the repeaters coverage. We can expect coverage of Sagadahoc, southern Lincoln and northern Cumberland counties. As least as good as we had before.

Hopefully by the time this issue of Squelch Tales hits the street, or your e-mail in-boxes, we will have the telephone line reconnected to the repeater so that we will have two radio paths to the autopatch.

The Tech Committee and the Board of Directors want to thank all of you for your support in bringing back our UHF repeater.

73, W1ZE



join forces

The week of August 14th had thousands of big motor homes from all over the country converging on the town of Brunswick and the surrounding communities. All these folks belong to the Family Motor Coach Association, FMCA and were gathering at the Brunswick Naval air Station for their Back to Maine 2000 convention, the state

where their association was founded 40plus year ago.

Of the thousands of those good folks many are ham radio operators. Months prior to the convention The MARA had conversations with the FMCA and we offered the use of our 147.21 MHz repeater for their use during the event. The FMCA followed up by asked us if we had VEs in our Association and would we be willing to help by conducting a testing session during the event. We agreed to do that. During the event the Hams in the FMCA invited the members of the Merrymeeting ARA, Groustown Repeater Users and ARRL Maine SM Bill Woodhead, N1KAT to join them for a late afternoon social hour. A good group of MARA folks joined the FMCA hams for Pizza, conversation and a good exchange of goodwill. Mark Rideout, N1JIM toured the area taking hundreds of digital photos of motor coaches, creative personalized license plates and mobile antenna installations during the event. We hope to have some of those photos on our web site (www.gwi.net/mara/) in the near future.

:Cue:Cat and Mouse

By W1ZE

If you have not been by your local Radio Shack store lately to pick up a pack of resistors or an AAA battery you may want to stop by. Why? Because their new 443 page catalog is out and if you are a frequent customer it is FREE. Also, when you get your catalog you can get a bar-code reader, It looks somewhat like a long mouse that is called a :Cue:Cat and it comes with an associated CD program that allows you a new way to access the Internet and get information and it too is FREE.

Say you see something in the catalog you want additional information on. All you have to do while connected to the web is swipe your :Cue:Cat over the bar-code next to the item in the catalog and off you go to the Tandy site. All the data for the item will appear on your screen with cost, physical information sale promotion, etc.

The :Cue:Cat is not restricted to Radio Shack. It works on other companies catalogs and TV and PC services.

If you want another gadget for your PC, stop by your local Radio Shack store.

Merrymeeting Amateur Radio Association

KS1R

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