



Scuttlebutt

October 2009

Issue 200

Next Meeting:
Sunday October 11th, 2009 – 11:30AM to 2PM
Nutmeg Hamfest – Wallingford, CT

Captain's Cabin

Hello all!

Next meeting will be held at the Nutmeg Hamfest in Wallingford, CT. Please make the effort to come and enjoy a fun time as we kick off the 2009/2010 contest season. One of the interesting topics planned for this particular event is awarding the winner of the \$100 Station Improvement as described on the YCCC web site. Plan to present your idea along with a cost breakdown and comment on either how this improved your score last year or what you expect to see as a score enhancement for the coming season.

Sure, we won both CQ WW and the ARRL DX Competition last season (wow, thanks folks, nice job one and all). As most learn in contesting, we all try to tweak the station year after year to get as much out of the time you put into the contest weekend. Score production comes from many areas – time in the chair, the receiver, amplifier and obviously, the antenna farm. All working together to maximize your score. Nothing beats the on-air experience to drive your score up and up. Couple this with the variability of the radio conditions and suddenly, it becomes the challenge we all seek!

I am hoping many of you were able to execute on the plans you put together last spring (before all the summer rains hit!). That alone has made it very challenging to do any serious station upgrade but we still have time and the fall weather is always great for antenna work. Keep pressing to get those projects completed – ask for help from your follower YCCers too.

My spring project list got seriously re-directed when a lightning bolt struck nearby. Lots of equipment and rotors and other items were affected but I am happy to report that the station is close to 95% ready. Just recently managed to put up one additional cannon, a 6 el. 20 M yagi fixed on EU to fill in a gap at my station. We'll see if it makes a difference in the coming season.

So now we wait for the next meeting to get the juices flowing for another successful contest season as well as more sun spots! CQ WW SSB is just around the corner – get you station ready to rock & roll!

73, Mark, K1RX
President, YCCC 2009/2010

YCCC Takes 1st Place in Club Competitions

2008 CQ WW DX	Yankee Clipper Contest Club	264,245,977
	Frankford Radio Club	260,356,679
2009 ARRL DX	Yankee Clipper Contest Club	281,979,798
	Frankford Radio Club	262,170,432

Yankee Clipper Contest Club

President (603) 778-1222	Mark Pride, K1RX President@YCCC.org
Vice President	Richard Feola, W1STT VicePresident@YCCC.org
Activities Manager	Mark Watson, W1MAW mark@w1maw.com
Secretary	George Harlem, W1EBI Secretary@YCCC.org
Treasurer	Ed Parish, K1EP YCCC-Treasurer@YCCC.org
Scuttlebutt Editor (413) 593-6554	Steve Rodowicz, N1SR Editor@YCCC.org
Scuttlebutt Publisher	Ken Miller, WB1DX Publisher@YCCC.org
Webmaster (315) 829-5291	Mike Gilmer, N2MG Webmaster@YCCC.org
Scorekeeper (978) 443-3603	Dave Hoaglin, K1HT Scores@YCCC.org
W1 QSL Bureau Manager	Art Holmes, W1RZF W1QSL@YCCC.ORG
Technical Assistance Manager	Dave Jordan, K1NQ YCCCTA@YCCC.ORG
New Members Manager	S. Khrystyne Keane, K1SFA K1SFA@ARRL.ORG

Directions to Nutmeg Hamfest.

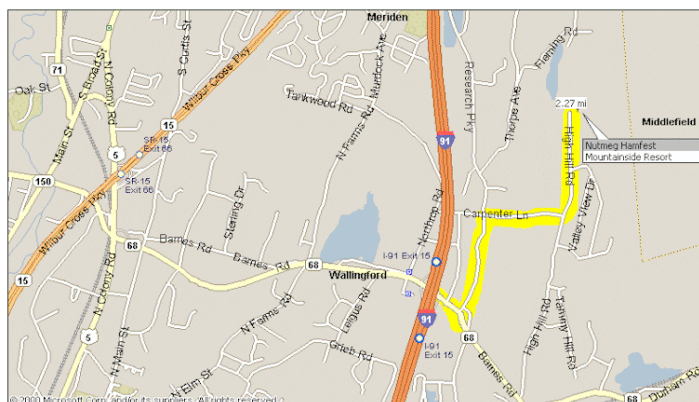
MountainRidge Resort is a few minutes away from exit 15 on Interstate 91 at 300 High Hill Road in Wallingford, Conn. Sturbridge Host Hotel & Conference Center is located on Route 20.

From I-91 Southbound --

Get off at Exit 15 (CT Route 68). Left at the end of the ramp onto Rt. 68 East. Left at 2nd traffic light (appx 2/10 mile) onto Research Parkway. Right at 1st stop sign (appx 3/4 mile) onto Carpenter Lane. At the end of Carpenter (appx 1/2 mile) turn left onto High Hill Road. The entrance to MountainRidge is straight ahead appx 1/2 mile.

From I-91 Northbound --

Get off at Exit 15 (CT Route 68). Right at the end of the ramp onto Rt. 68 East. Left at 1st traffic light (appx 1/10 mile) onto Research Parkway. Right at 1st stop sign (appx 3/4 mile) onto Carpenter Lane. At the end of Carpenter (appx 1/2 mile) turn left onto High Hill Road. The entrance to MountainRidge is straight ahead appx 1/2 mile.



Area Managers

ME	Mike Russo, K1EU	(207) 883-9524	k1eu@maine.rr.com
ENH	Glen Whitehouse, K1GW	(603) 673-6290	glenw@pinnaclewireless.com
WNH/SVT	Ed Sawyer, N1UR	-----	Sawyerred@earthlink.com
NE MA (978)	Scott Andersen, NE1RD	(978) 263-9617	bsandersen@mac.com
SE MA (508)	Greg Cronin, W1KM	(508) 428-4205	w1km@capecod.net
Boston (617/781)	Joe Fitzgerald, KM1P	(617) 325-6767	jfitzgerald@alum.wpi.edu
WMA (413)	Tom Homewood, W1TO	(413) 743-7342	w1to@arrl.net
CT (860)	Dick Pechie, KB1H	-----	kblh@arrl.net
CT (203)	Dave Arruzza, W1CTN	-----	Darruzza@adelphia.net
	& Mike Loukides, W1JQ	(203) 458-2545	MikeL@oreilly.com
RI (401)	OPEN	-----	
NNY	John Bradke, W2GB	-----	W2gb@n2ty.org
NYC/LI (718)	Tom Carrubba, KA2D	(631) 422-9594	ka2d@arrl.net
SNY/NJ/PA (914)	Hank Kiernan, KF2O	(914) 235-4940	hankkier@aol.com
NVT (802)	Al Frugoli, KE1FO	(802) 893-8388	frugoli@worldlinkisp.com

Articles in the Scuttlebutt (except for those separately copyrighted) may be reprinted, provided proper credit is given. The editorial deadline for the Scuttlebutt is the 10th of every odd month.

Flotsam & Jetsam

Barnacle Jack (BJ) Schuster, W1WEF w1wef@arrrl.net

Ahoy Maties! Hope everyone has had a good summer with all kinds of improvements ready for the Fall contest season. At W1WEF there is one less antenna on the tower, but the 40-2CD fixed South was rarely used and will be replaced with a wire antenna still to be determined, along with a vertical that isn't doing any good in my shed. Fortunately I caught a problem that developed outside of a contest with a two foot length of 9913 between the stack match and was remote antenna switch; I've said it before, but worth repeating: save yourself the grief; 9913 was a Belden mistake IMHO. I thought I had gotten rid of all the 9913 already.

Thanks for all the input in the last few months:

Mark K1RX found something interesting in the last ARRL CW DX Test. He had put up a fixed Eu 2 el 40 at 80 ft about 10 ft under his 4 el 20. During an afternoon snow storm, the higher 40 4 el yagi at 105 ft was wiped out by snow static but the lower 2 el 40 was quiet. It appeared that the 4 el 20 shielded the 2 el 40 from the static discharge. What was surprising was that in the past Mark always thought the shielding effect was from similar antennas on the same band, e.g. a 20M yagi with another 20M yagi above it was quieter than the higher antenna. In this case the 20M antenna shielded the larger 40M antenna. "Makes one wonder- how small could the shield be and still get the same effect?"

This year's Kansas City Contest Club pileup test in Dayton used laptops for logging for the first time. Paper had always been used previously and generated a lot of work for a few Ks club members. Despite the computer logs, it took longer to determine the winners than ever, with many already in bed by the time the winners were announced. Yuri, VE3DZ won the IC7600! Perennial top scorers W9WI and K4BAI were second and third.

Doug K1DG told BJ about a great come along he found recently on EBay. The "Lug ALL" was much better built than the run of the mill hardware store types.

N1IX found a neat way to strip coax, using a copper tubing cutter.

Before putting up my new XM240 Cushcraft 2 el 40 at 116 ft, I spoke to several others who already had them..I am very pleased with the construction but I made a couple changes while still on the ground. First, I pop riveted all the elements except the smallest diameter tip pieces. Although the balun supplied with the antenna looked quite nice, I decided to go with the sleeve balun I had used before, eliminating a few extra potential connection failures. I also adjusted the min SWR frequency to 7065 instead of going for CW only.

W2RE mentioned a good idea for boom stays that BJ hadn't seen before. Instead of turnbuckles on two separate boom stay cables, run a single cable (phyllystran is good) from one boom support clamp to the other, leaving some slack in the cable. While the boom to mast clamp is loose on the mast, clamp the center of the stay to the mast and lower the boom until the stays are taut and the boom is level.

K5NA has several XM240's stacked (I think 4) but Rich cautioned that he found that all of the baluns were not wired the same, so if planning to phase multiple antennas with the CC balun , open the box and check the wiring! Now that MFJ has bought out CC it will be interesting to see what changes are made, if any.

At the June K1RX barbecue this year I noticed a neat sidearm scheme on one of Mark's towers. Mark used a short section of Rohn 25 clamped to the side of his Rohn 45 tower. The short section (about 2 ft) had a flat top plate with a thrust bearing. What was previously the top of the top section is located below that section. The rotor sits on a rotor shelf in the area where there is open space just below the pointed top section. Both pieces of the Rohn 25 modified top section (actually cut in half) are supported with a 3 ft. length of angle iron (2 per section, total of 4 used) and the beams are supported with a short pipe are off the vertical mast that is just long enough to reach around the tower to provide 300 degree rotation. The side mount rotary system covers 30 degrees through south to 330 degrees and currently supports a middle 5 element 10 M yagi in a stack of 3. The bottom 5 el. is fixed south, the upper 5 el. is fixed NE. The middle antenna (on the side mount rotary system) can provide a 5 over 5 combo either to EU or SA. In years past, this setup supported a dual band 6 el 15 and 4 el. 20 yagi which proved pretty effective too. The rotor is a Yaesu G800 SDX.

Speaking of rotors...when I recently had to replace a cracked clamshell mast clamp on a Yaesu G1000SDX, I bought a pair of clamps and thought I'll have one left over as a spare. Turns out the new clamps were a bit taller than the SDX clamps so the bolt holes between clamps didn't line up and I had to replace both halves. At least the clamp to rotor bolt holes were the same

Eric needed an RJ45 connector to parallel a voice keyer with his mic while on his FP/KV1J Miquelon contest operation. He had an extra network cable with RJ45 connectors on both ends, and solved the problem cutting the cable to the length he needed. (Eric...going by memory on this one because your email is 200 miles away but think I got it close! BJ)

Remember this contest season...Work 'Em Fast

73 Barnacle JACK W1WEF

Alpha Radio Purchased by RF Concepts New Owner, Lower Prices!

Effective September 1, 2009, lowered pricing on all Alpha products:

- * The Alpha 9500 Amplifier reduced from \$10,150 to \$7,950.
- * The Alpha 8410 Amplifier reduced from \$5,895 to \$4,995.
- * The Alpha 2100 Dummy load with its integrated wattmeter reduced from \$1,950 to \$1,495.
- * The Alpha 4520 Wattmeter reduced from \$1,195 to \$995, the Alpha 4510 Wattmeter reduced from \$1,095 to \$945; its front-panel-less computer-connected cousins, the Alpha 4505 and 4515, reduced to \$545 and \$595 respectively.

. All customers who have orders pending with Alpha Radio Products will receive their new Alpha amplifiers from RF Concepts at the new, lower price. Any deposits made at Alpha Radio Products will be applied as discounts to your RF Concepts invoice. For instance, if you ordered an Alpha 9500 at \$10,150 and sent Alpha Radio Products a \$5,000 deposit, RF Concepts will deliver your Alpha 9500 for \$7,950 - \$5,000 = \$2,950, plus any applicable shipping and taxes.

. Original owners who received an Alpha amplifier from the factory during the period between March 1, 2009 and August 31, 2009, RF Concepts will give you a credit equal to the difference between your original purchase price and our new price. This effectively retroactively reduces the price you paid for the amp you've already received to match the new, lower price. This non-transferrable credit can be applied toward any RF Concepts product (including any Alpha-branded product), through August 31, 2010. Use it today to buy anything in the product line, or save it and use it later on one of the upcoming products. Please understand that the credit can be redeemed only at RF Concepts and has no cash value. It's our way of saying thanks for being an Alpha Radio Products customer.

We will focus on shipping our backlog of Alpha amplifiers and building sufficient product to ship from stock. No more waiting for delivery while your amp is being built. When you're ready to place an Alpha amp at your operating position, give us a call.

We will continue to operate from the existing Boulder, Colorado factory, use the same phone number and retain the www.alpharadioproducts.com URL along with the new www.rfconcepts.com URL. We will honor our existing customer commitments, including warranties, customer and technical support, and repairs, and keep our extensive parts inventories to support the more than 10,000 Alpha amplifiers in the market.

CATV Transformers: Matching 50 to 75 ohms

Tony Brock-Fisher, K1KP

Final Revision August 11, 2009

-The Problem

I have a long run of very low loss 7/8" diameter 75 ohm CATV hardline between my shack and my tower top. It is used to feed a KT36-XA triband beam on 10, 15 and 20 meters. The length is tuned to 6 wavelengths on 10 meters to provide as close a match as possible at the tuned frequency. The tuned frequency was chosen as a compromise between CW and SSB, and actually came out around 28.1 MHz. Using a tuned length of 75 ohm CATV feedline in an otherwise 50 ohm nominal system can provide a very low loss system at reasonable cost, especially if the hardline was obtained as a donation from the cable companies. However, when moving away from the frequency at which the feedline is tuned, any SWR at the load end becomes magnified at the feed end. In my case, the SWR at 28.5 was approaching 3:1. While I am not normally an SWR freak, I did want to improve the system so that I would not have to retune my amplifier as often when QSYing across 10 meters.

I posted a request for info on matching transformers that would match 75 to 50 ohms on the YCCC reflector. While I did receive a lot of useful info on various tuned transmission line matching approaches, none of the replies described how to make your own broadband matching transformers. This short note is a description of the solution I came up with.

-Make or Buy?

Broadband matching transformers specifically for this purpose are available commercially, from Array Solutions, Balun Designs, and perhaps other suppliers. They were also expensive – the cheapest I could find was \$65 each. As I had gone to the trouble of installing very low loss CATV hardline, I was very concerned about introducing additional loss with transformers – but none of the vendors had loss specifications published for their products. I have a copy of Dr. Jerry Sevick's book, "Transmission Line Transformers", which includes several designs for this impedance ratio. Armed with this, I decided to build my own transformers, and purchased the parts for the transformers from Amidon. Parts for two transformers, including cores, wires, and polyimide tape, cost less than \$40. You could add about \$10 to that for a nice weatherproof plastic box from Home Depot and a pair of SO-239 connectors, to get an equivalent to the commercially available units at less than half the cost.

-First Try

For my first try, I followed Dr. Sevick's recipe 7-8a exactly. This was 6 quintifilar turns on an FT-240-61 core. I terminated the secondary with a 75 ohm noninductive resistor, and measured the input SWR with my miniVNA. I found that the transformer did a reasonable job of converting the 75 ohm impedance to 50 ohms. As measured by the minivna, the SWR was rather high at the upper frequency limit – it was 1.3:1 at 30MHz. Also, the loss was rather high at .3 db. I was concerned about the performance at 10 meters, and I was not sure of the accuracy of my minivna, so I took the sample to my workplace where I was able to get it measured on an HP Network Analyzer. I found that the SWR was 1.25:1 and the loss was 0.18db. I was more concerned about the loss, as .18 db per transformer represented 63.5 watts dissipation in each transformer at the maximum legal limit. I would have two transformers in line, one at each end of the 75 ohm hardline. This was unacceptable both from a loss as well as a dissipation perspective.

I made a second transformer, and connected it back-to-back with the first, so it would look like 50 ohms in and out. I tested the pair, as Dr. Sevick recommends, by running 1500 watts through it for a 1-minute power soak. After 1 minute of this at 10 meters, the wires were too hot to hold my fingers on for more than a few seconds. The cores did not warm up until the heat from the wires transferred to the core. This meant that the loss was due to resistive losses in the wire, with skin effect accentuating the resistance.

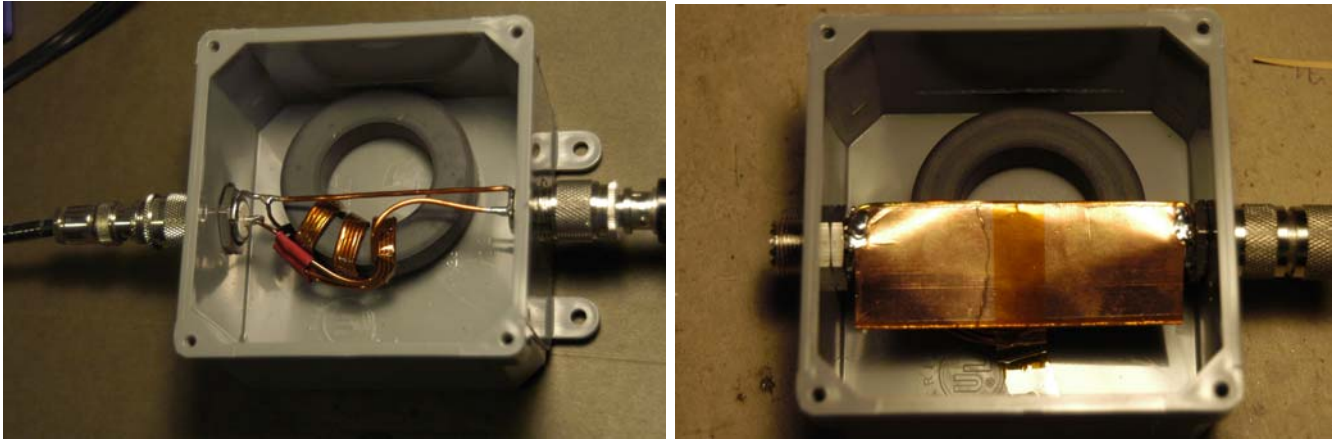
-Second Try

I also reviewed Dr. Sevick's book, and identified what I thought was the problem causing the higher SWR. The transmission line windings should each have a characteristic impedance of $Z_0/4$ or 12.5 ohms. However, the transmission lines formed by close spaced #16 wires is more like 50 ohms. Dr. Sevick also indicates in the text that shorter transmission lines will have better high frequency performance. Based on this, and the fact that I did not need the transformer to perform well below 20 meters, I decided to reduce the number of turns from 6 to 3. When I tested a 3-turn version, I found the loss was .068db per transformer. The SWR did not improve much, and it was still 1.28:1 at 30 MHz for two back-to-back transformers. Loss at 20 meters was .034db. The transformer still had acceptable performance at 3.5MHz, with a loss of .033db. In the 1500 watt soak test, each transformer would dissipate 24 watts when handling full legal limit. As all of the materials are capable of handling in the neighborhood of 200 degrees centigrade, this design should be sufficient for my intended power levels.

-Final Packaging

The transformers were installed in Carlon plastic electrical work boxes. A discovery was made in the late stages of assembly, that if a large piece of sheet copper is added to the ground path between the connectors, and positioned close to the

transformers, the SWR can be reduced considerably. The final SWR for a pair of back-to-back transformers was 1.08:1. A low-impedance ground connection between the grounds of the coax connectors is essential to prevent inductance from being introduced. Also, some capacitive effect is useful in reducing the SWR. Perhaps a weatherproof metal box would have been a better choice.



Another post-installation discovery was that despite their sturdy appearance, the Carlon boxes were not reliably weatherproof. If the screws for the cover are over tightened, the cover distorts gradually and the gaskets fail to contact the box. Additional weatherproofing such as layers of tape is recommended.

-Conclusions

While at first I debated whether to make or buy the transformers, my decision to make them resulted in the benefits of my learning how to tune them for my specific application. I'm sure the transformers I would have bought would be straight out of W2FMI's book. The losses of this type of transformer are almost exclusively due to skin effect/resistive losses in the wire, and making the wire shorter will result in significantly lower loss and better performance at higher frequencies. I also learned that my miniVNA, while a wonderfully useful instrument in the shack, is not accurate at measuring very low losses.

Acknowledgements

Grateful thanks to Art Pizer, NF1A, for his help in measuring the transformers.

Station Improvements at K8PO in Maine

I looked for property in Maine in 2004 with a couple of requirements:

1. Near an airport for business travel
2. Ten acres or more of flat land for towers
3. On a lake since I love to kayak and enjoy sailing

Other than those constraints, I was pretty flexible.

After a year long search, I decided to purchase a house and ten acres in Union, about 75 miles from Portland airport. In 2006 I added on to the existing house and had a two story garage built with attached radio room plus bath.

Before starting my station build with towers, I operated in contests using an inverted L for 160M up 35 feet with a dozen elevated radials, two inverted V antennas for 75 and 80M up 40 feet, a 40M V at 45 feet and a 20Mdipole up 25 feet. All these hung from trees. The 160M antenna would arc over to the tree if I put the Alpha 76 on so low power was the best I could muster on that band I was looking forward to having a much improved station.

The plan: Rohn 25 full size vertical for 160M
 Rohn 45 120 foot for 40M and 10M yagis
 Rohn 45 120 foot for 20M yagis
 Rohn 25 120 foot for 15M yagis

The first plan was to start in the fall of 2006 but that was postponed by a contractor who failed to clear the needed area to start towers. After a legal skirmish with him, a new contractor cleared the land in December of 2007 and poured the bases and ground points for four towers. Since we were clearing land with many trees and the ground was soft, we had to wait for frozen ground before pouring concrete. Since the ground was not stable enough for large concrete trucks, we used front end loaders to carry the concrete to the holes from the truck parked on the street. At one time there were three caterpillar tractors and two bulldozers on the property!

John W2GD and Mark K1RX came up during June of 2008 and the first tower to go up was the 160M vertical. All the towers are built on two foot wide by five foot deep Sonotubes bases and guy points of 2x4x2 foot concrete anchors buried five feet deep. The guys are Phillystran with galvanized guy wires at the guy points and tower connections. John was real pleased that I made up all the guy sets before he arrived. For those that are curious, it took a weekend with minimal breaks to make up 42 sets of Phillystran guys.

The 40M/10M tower was next to start. Very unfortunately, after we got the third section erected and were gin poling the fourth section of Rohn 45, the temporary guy stretched and John W2GD rode the tower to the ground. I called 911 and an emergency ambulance was there inside of 15 minutes which I am sure saved John's life. Also fortunate was the proximity of Penobscot Medical Center which provides first rate care. Later, John was transferred to Maine Medical in Portland where they operated and put him back together. The very good news is John is back climbing and operating. Lesson learned, use steel guys for temporaries.

Several months passed before I ventured back to the antenna field, which is through the woods and about 450 feet from the shack to the center. Later a combination of Don K4ZA, Mark K1RX and his son plus Doug K1DG got the Rohn 45 10M/40M, Rohn 45 20M tower and a few sections of the Rohn 25 15M tower up.

The 10M/40M tower holds four, five element Hy-Gain 105BA yagis modified from the ARRL Antenna Book plus weight balanced to make tramping possible. The two element 40M Cushcraft yagis were weight balanced but not modified. Don and I had no trouble tramping those antennas up using his capstan winch.

We did the 20M stack next and even though we weight balanced the Hy-Gain 205CA yagis in anticipation of tramping, Don decided to cork screw the yagis up the tower. I was quite amazed how easily Don manipulated the yagis around the tower and guys. All went up without a hitch.

Between travels and using various crews, we finished the 10M/40M and 20M stacks before the fall of 2008. My travel schedule is always packed after summer so I decided, by default, to concentrate on 160M, SS and perhaps some single band efforts during the contest season. I also managed to put up a very short 400 foot beverage for 160M toward Europe before the winter which turned out to be mostly ineffective. In addition, I put a pulley on the 160M vertical at 90 feet to enable putting up an inverted V for 80M SS.

Luckily we had a few days of good weather in October so I put up the remaining sections of Rohn 25 to finish the 15M tower. The weather turned bad and any chance of putting up the 15M yagis went south. I also missed any opportunity to put down

radials for the 160M vertical so I settled on four elevated radials about ten to twelve feet high radiating from the base in gull wing style.

During the fall contest season, I learned how to use WinTest and MicroHam's MK2R+. I was convinced that the devil had crept from my Orion into the MK2R+ box. After many late nights, and with some help from K1DG and VE3EJ I managed to get it right.

In the early spring this year, while the ground was still frozen, I put down 100, 300 foot radials under the 160M vertical. About half the radials go through the forest replete with roots, trees, rocks, and bush. The other half have to go through matted grass and some bush. I devised a large needle using a 8 foot ground rod with a hole drilled into the end. Tying a radial wire to the end, I pushed each radial through the forest, grass and bush. For those curious, that is another weekend job with minimal breaks.

This past summer, I put up the 15M yagis with my friend Jackie. Imagine that, a lady that will help put up antennas! The antennas are Hy-Gain 155CA, again modified using ARRL Antenna Book dimensions plus weight and wind balanced. Also we installed a 110 foot high 80M dipole broadside to Europe. We ran hardline to all the towers to keep losses to the stack matches at or below 1 dB. Each band has a separate feed line back to the shack. Number 12 direct burial cable was used to feed the rotors and direct burial CAT5 for signaling and switching.

Remaining on the build list is the 80M four square, four reversible beverages, installing the home brew stack match box for 10M, a few south facing yagis, shack grounding and some shack improvements. I built the stack matches with an auxiliary position to enable quick south yagi switching.

So there you have it, a short story on my station improvements. See you in the pileups.

PVRC WEBINARS

Have you seen PVRC's Webinar series? If not PVRC has them archived at <http://www.casadelcrappo.com/pvrc-videos/>

Here the list of the available webinars:

- Lowband Contesting & DXing - A Look At The Tajikistan Observatory Station Presented by Ken Claerbout K4ZW

- Design, Construction and Maintenance of Antennas and Towers for Storm Survival and Long Term Reliability Practical Checklists of Best Practices Presented by Frank Donovan W3LPL

- Contest Antennas - DX or Domestic, What's Your Pleasure Presented by Dean Straw N6BV

- Cycle 24 Presented by Carl Luetzelschwab K9LA

Collaborative Webinair from NCCC and PVRC!

Did you the webinar by N6BV? There was a live demo, step by step, on how you can download terrain for your station location and analyze the takeoff angle response of your HF antennas. W6YI's station was used as an example.

Here are the details on how to view the recording of this collaborative webinar from PVRC and NCCC:

Topic: Hints and Kinks for Using HFTA

Presenter: Dean Straw, N6BV

Recording: <http://bit.ly/n6bv-webinar> This file size is 137MB.

The recording is in .WMV format. This should make it easy to view, as most of you already have a .WMV player on your computer (i.e. Windows Media Player). The file should automatically start to play while still downloading. After the file has finished downloading, if you want to save it on your computer for future viewing, just go to the top of the Windows Media Player window, right click, select File, Save As, and type a filename with a .WMV extension (such as n6bv.wmv).

K1LI and the Beanstalk!

K1LI's XYL was sure surprised to see the beanstalk that sprang out of her greenhouse!

Like everything around here, this project took over a year to complete. After purchasing 80-ft of used Rohn 25G in the spring of 2008, I spent most of the summer saving a local business, so I was only able to get the base and anchor holes dug and concrete poured before the weather turned too foul for tower work.

Before the snow completely melted, I began erecting the tower. Being so far from almost all forms of "ham" life, I learned a lot about what not to do through trial and error - and more trials. Finally, it all came together in mid-July. But a tower alone does not a station make.

My original plan was to replace the 70-ft AB577 with a "climbable" tower so that I could experiment with endless antenna combinations. When it comes to my hobbies, I am about as cheap as they come, so I planned to homebrew stacks of Moxon rectangles. But as word of my efforts got around, I was given the hulks of three KT34XAs, in various states of disassembly - immeasurable thanks to K1QO, W1CX and N1IX. Wisely, the traffic on I-93 gave me a wide berth as I rocketed back North with a rat's nest of aluminum tied (securely?) to the roof rack of my VW Golf.

I know from searching the reflectors that many of you have rebuilt KTs. It is an "interesting" process ("interesting" is a euphemism for a huge pain in the @\$%^). By the time you have rebuilt ten of the twenty element halves for a two-stack, you have a pretty good idea of what you're doing and you have learned a couple of useful tricks. The most valuable trick I learned is that the machined aluminum clamps often slide more easily onto their element pieces the "long way" than the "short way;" I suppose that the swaging process increases the element piece's diameter sufficiently to violate the (tight) tolerances of the clamps.

Well, six or so weeks of spare time later, the rebuilt KTs were assembled and hoisted twenty feet up the tower for testing. After hearing of lot of loose pieces shaking around in one of the three baluns, my biggest concern was the ability of the two "quiet" baluns to take full power for extended periods. Luckily, the band conditions were so bad that I was able to spend hours CQing with 1500W on 10, 15 and 20 without disturbing anyone! So far so good.

I managed to seriously injure my knee in the mean time (NOT tower related!), so climbing became more of a risk that I was willing to take. In the end, I hired a 103-ft boom truck from a local crane service to help me install the rotor, thrust bearings (one inside the tower for maintenance support and one on the flat top section), mast, beams and cables. By planning and scripting every step of the operation, I was able to keep the active crane time to less than six hours; together with setup, teardown and travel time, the crane cost just under \$1,000. Not cheap, but incredibly easy.

I've been away most of time since then, but the few contacts to I've made with 100W to EU and US stations on 20m have produced very good reports. There's plenty more to do in terms of stack switching and switching the other antennas that will use the tower, but all should be in readiness for CQ WW SSB.

The proof of the pudding, as they say, is in the eating. See you in the pileups!

73 -- Brian -- K1LI



YCCC Regular Meeting

**April 5, 2009
Sturbridge, MA**

The meeting was called to order by K1RX at 1:00 pm at the Sturbridge Host Hotel in Sturbridge, MA, with a round of attendee introductions.

W1EBI gave the secretary's report. K1EP gave the treasurer's report. Both reports were accepted by the meeting attendees.

K1RX acknowledged the job done by W1MAW to update the Contest Cookbook and post it to the website. Mark also announced that he planned to have a meeting-plus-cookout at his QTH in NH the first weekend in June. At this meeting the club plans to recognize the contributions made to YCCC and to the DXing community by WA1S, who is relocating to W4-land.

K1ZZ spoke on "40 meters—It's a whole new world". Dave pointed out how the near-disappearance of QRM from broadcast stations in the 7.1-7.2 MHz space would benefit the contesting community.

W1STT modeled the new YCCC shirt, hat and jacket. Ordering information is on the website, and items will be available prior to Dayton.

K1RX unveiled the new 4' x 6' YCCC banner to be displayed at the Saturday Pizza Night in Dayton hosted by the club.

K1HT presented a scores update for ARRL 2009, which showed YCCC trailing FRC in claimed score by 155M to 159M, but those totals did not include a 4M contribution by W1FJ and partners at the W1KM station for ARRL CW.

Four new members were voted into the club:

W1DYH, Bill Droese, Amesbury, MA

W1LWH, Linn Hobbs, Belmont, MA

K1NYK, Dave Malley, Bolton, CT

WA1ZJE, Robert Feltrate, Taunton, MA (returning)

K1SFA was acknowledged as the winner of the BARTG RTTY contest.

K0TV is now the Area Manager for Eastern NH, succeeding K1GW.

K1IR handled nominations for the annual election of club officers for 2009-2010. The current slate of officers all agreed to stand for re-election. Accordingly, it was moved and seconded to cast a single ballot for the current officer group, who were re-elected by acclamation:

K1RX, Mark Pride, President

W1STT, Richie Feola, Vice President

W1MAW, Mark Watson, Activities Manager

W1EBI, George Harlem, Secretary

K1EP, Ed Parish, Treasurer

K1SFA, Khirstyne Keane, New Members Manager

W3UA proposed increased attention by YCCC to the WPX Contest and suggested that the club sponsor a plaque in WPX. N1UR proposed that the club sponsor a plaque for 40 meters single-band in recognition of K1ZZ's WRC contributions. K1XM moved that the club allocate \$50 annually to sponsor a WPX plaque, and that the officers review available sponsorships and make a recommendation. Paul's motion was seconded and passed by voice vote.

K2WR showed photos of his day at the brand new Yankee Stadium. While intriguing, no one was sure what this had to do with contesting.

N1BAA gave an excellent presentation on his ham history and the design and construction of his Amherst, MA, station.

K1XM gave an update on his SO2R box design and implementation, which would become a club project. Contributing team members are WW1M and WO1N.

K1DG gave a summary of the Dayton CTU curriculum and reviewed the 2008 CTU in the U.K. at the RSGB HF Convention, as well as a 2009 CTU in Italy. Other international requests for CTU have come from Australia, Brazil and China.

N9NC gave an excellent presentation on his ham radio experience as SU9NC and his involvement with EARA members during seven years in Egypt and on his contest operations in 2003-2004.

The meeting was adjourned at 4:30 pm.

Respectfully submitted,
George Harlem, W1EBI, Secretary

YAESU ROTOR CONTROL BOX MODIFICATIONS AVAILABLE

Sensor-Tech is now addressing the Yaesu Rotor product line with a series of modifications and performance improvements for the G-800, G-1000 and G-2800 line of amateur rotor control boxes.

Modifications include the following:

1. Higher voltage rated bypass capacitors on rotor control line. (OEM specified only 50 volt units.) Capacitor failures have caused slow rotation in one direction over the other. Large voltage spikes from nearby lightning strikes / EMP events have induced higher-than-normal voltage surges on the control line, resulting in dead shorts / disintegration of OEM capacitors.
2. MOV's added to each incoming rotor control line (behind the female line connector inside box).
3. MOV's added to the primary and all secondary windings of main power transformer. Provides silent lightning protection.
4. A distinctive marking is added to the Preset Control Knob for more precise azimuth control.
5. Azimuth calibration of dial pointer to actual rotator motor position.

A flat fee of \$100 per control box, regardless of model/type, is offered for this service. Shipping charges are separate. Estimated turn around time is 10 days.

General repair of these rotor control boxes provided for an additional fee. Repairs include:

Preset circuitry repair and calibration; "buzzing noises" in dial pointer motor; power supply damage; internal voltage regulator replacement; op-amp replacement; dial pointer bezel lamp replacement and replacement of faulty components on circuit boards, etc.

Mark Pride
Sensor-Tech International
Wireless Infrastructure Services
603-775-0220

Sensor-Tech International
Wireless Infrastructure, Antenna Installation, Maintenance
Mark S. Pride
President

New England Office
120 South Road
Kensington, NH 03833

Office: 603-775-0220
Mobile: 603-231-8965
mpridesti@yahoo.com
Commercial & Amateur Communications

WIN - \$100.00 YCCC Members Challenge

As contest season approaches, many are looking for ways to get their stations in order before the New England winter hits. Also, with the economy still in the tank, many don't have large budgets for station upgrades, but would still like to find innovative ways to improve their scores.

With YCCC members being a creative group, we thought it would be a good idea to see just how creative we can be.

With all that in mind, we will be having a contest of our own at the next general meeting (scheduled for 10/11 at the Nutmeg Hamfest). To participate you need to do the following;

The Question:

If you were only given \$100.00, what would make and/or purchase that would improve your station and your score for the upcoming CQ WW DX competition (Oct/Nov 2009)?

The guidelines are as follows;

1. Maximum expense is \$100 for the upgrade.
2. Open to all current and new members of the YCCC.
3. The upgrade shall address station improvements, changes, or new additions that can potentially add to your final score in the CQ WW DX competition (Oct/Nov 2009) over your last year's score.
4. Upgrade form: Can be Hardware, Software or Human Engineering
5. A power point slide (max of 4 slides) describing the upgrade and associated cost shall be the submittal format. The expected score increase shall be described as well, comparing to your last year's score. If you are unable to generate the Power Point slides, supply the content and the officers shall create it for you.

A vote taken from the membership attending the October YCCC General Meeting at Nutmeg Hamfest in Wallingford, CT shall decide the winner.

The contestant submitting the most innovative or point productive upgrade is the basis of the winning vote.

Should a tie occur the YCCC officers shall make the final decision.

The Winner will receive \$100 to complete the upgrade

I will be adding a signup for to the website for participants to register that they will be competing.

Any questions? mark@w1maw.com

Mark Watson (W1MAW)
YCCC Activities Officer

New Crew

At the April 5th Regular Meeting in Sturbridge, MA:

W1DYH, Bill Droese	Amesbury, MA
W1LWH, Linn Hobbs	Belmont, MA
K1NYK, Dave Malley	Bolton, CT
WA1ZJE, Robert Feltmate	Taunton, MA (returning)

YCCC CLUB RESOURCE INFORMATION

DUES AND MEMBERSHIP STUFF Dues are payable as of the April election meeting, which begins our club "contest year". The YCCC has adopted a multi-tiered membership format as follows: Please note that payment of dues IS NOT a prerequisite for contributing scores to the Club aggregate, but IS for the various YCCC Awards Programs

Full Member - \$20 (\$35/2 yr) (Eligible for YCCC awards programs and paper delivery of Club newsletter)

Full Member - \$15 (\$25/2 yr) (Eligible for YCCC awards programs and electronic "Ebutt" delivery of Club newsletter)

Family Member - \$0 (Grants full membership to all amateurs residing at one domicile on payment of one member's "Full Member" annual dues and entitlement to one Club Newsletter sent to one domicile or email address. All members of said family are eligible for YCCC awards programs.)

Student Member - \$10 (Grants full membership to students at a reduced level. Eligible for YCCC awards programs and paper or electronic delivery of the Club Newsletter.)

Subscription - \$** (A "friend of YCCC" - not a member but a possible candidate for future membership. Receives club newsletter only in paper or electronic form. Fee basis is \$20 for overseas paper delivery, \$15 for domestic paper delivery and \$10 for electronic "Ebutt" delivery domestically or overseas.)

Club members who move out of club territory and so are not eligible to contribute to club aggregate scores automatically become subscribers. New members who join at the February meeting are credited with dues for the year beginning the following April. You can tell if you owe dues by checking your 'Butt mailing label. **Mail your dues to the club treasurer, Ed Parish, K1EP, 9 Spoon Way, N. Reading, MA 01864**

SCUTTLEBUTT ARTICLES should be sent to the Scuttlebutt editor, Steve Rodowicz N1SR, preferably by E-mail at n1sr@arrl.net or on 3½" disk (in MS-Word format or text file) by snail mail to Steve Rodowicz, 809 Pendleton Avenue, Chicopee, MA 01020. The deadline for each issue is the 10th of the preceding month..

Scuttlebutt Advertising: Nominal Business Card sized ad, \$50 per year (6 appearances)

CONTEST SCORES should be sent to the club scorekeeper, Dave Hoaglin, K1HT, preferably by E-mail at scores@yccc.org. Please include details such as numbers of QSOs, QSO points (if appropriate), and multipliers (all types); entry category; and power.

CLUB GOODIES

BADGES YCCC badges are available from Ric, KV1W. Send \$2, name and call desired on the badge, and your mailing address to: Ric Plummer - YCCC Badge, PO Box 1158, Berlin, MA 01503-2158.

APPAREL Contact Bob Rogers KB1LN@yahoo.com

YCCC LOGO ITEMS <http://www.cafepress.com/n1ik>

QSL CARDS are ordered through Burt Eldridge, W1ZS. To order, send Burt an email at w1zs@arrl.net, detailing card information per "QSL Request" form available at http://www.yccc.org/members/yccc_qls.htm. You will receive a proof by email. Approve the proof, making any corrections, and return to Burt *with payment* (make checks out to Burt, not YCCC). Current price is \$50 (delivered) for 1,000 cards. Also available is the glossy version for \$70/1000.

MEMBERSHIP ROSTER is posed on the YCCC website. Updates are published in 'Movers and Shakers' when members move or change call signs.

COMPUTER STUFF INTERNET REFLECTOR There is an Internet mailing list for YCCC members. To subscribe, send mail to yccc-REQUEST@yccc.org. Insert only the word "subscribe" in the subject of the mail message. (Do not send messages to the reflector that have file attachments, HTML formatting, use boldface or other fancy fonts, etc.)

WWW HOME PAGE Come visit us at <http://www.yccc.org> Our Webmaster is Mike Gilmer, N2MG.

ADMINISTRATIVE STUFF The W1 QSL BUREAU is sponsored by the YCCC. Keep your account up to date by sending a check. Stamps are sold at face value, envelopes are 20 cents each. Address: W1 QSL Bureau, PO Box 7388, Milford, MA 01757-7388. Email address: w1qsl@yccc.org.

ARRL COMMITTEE REPS are:

CAC: New England Dick Green, WC1M Hudson George Wilner, K2ONP Atlantic Michael Gilmer, N2MG

DXAC: New England Bob Beaudet, W1YRC Hudson John Sawina, NA2R Atlantic Chris Shalvoy, K2CS

ARRL LIAISON: Tom Frenaye, K1KI.

Upcoming Meetings

Date	Type	Place
October 11	General	Sturbridge, MA

Ship's Log	October 2009	Issue 200
Captain's Cabin	Mark Pride - K1RX	1
Meeting Directions		2
Flotsam & Jetsam	Jack Schuster – W1WEF	3
50:75 Ohm Xfms	Tony Brock-Fischer- K1KP	4
K8PO Improvements	Paul Obert - K8PO	7
K1LI and the Beanstalk	Brian Machesney – K1LI	9
April Meeting Minutes	George Harlem - W1EBI	10
Yaesu Control Mods	Mark Pride – K1RX	11

Next Meeting:
Sunday, October 11th – 11:30AM to 2PM
Nutmeg Hamfest – Wallingford, CT

The YCCC Scuttlebutt
18 Bancroft Tower Road
Worcester, MA 01609

FIRST CLASS MAIL