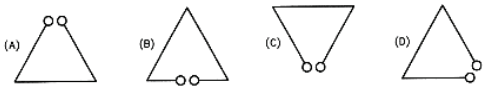
The Messenger

Volume XIII, Issue 4 **April 2010**

A Delta Loop will not only give you "The Sizzle" but also "The Steak"!

In my forty three plus years as a Radio Amateur, nothing has given me more homebrew satisfaction than antenna construction. Contrary to popular belief, you do not need any more horizontal real estate for a Delta Loop than you do for a half wave dipole. As a matter of fact, about one third less. The other two thirds are vertical real estate—and that's forty five degree angle real estate. You do not even need tremendous height. My 17 meter Delta Loop works incredibly well with the bottom nineteen feet only three feet off the ground at the lowest point! It is not even a perfect triangle either.

Horizontally polarized Delta Loops (See below A, B & C) are fed from either the bottom or the top. You can vertically polarize one (D) by feeding it from one base corner. A bottom center triangle feed point will yield a high angle of radiation while a top feed point or inverted Delta Loop bottom feed point will yield a moderately high angle of radiation. A "corner at the base" (D) feed point generally yields a low radiation angle.



You will need a 4:1 current balun at your selected feed point. I used a W2DU 4:1 current balun (P/N UNADW2AU4) at the feed point and qty 2 END-sulator Shatter-Proof end insulators (P/N UNADENDSULATOR) for the corner apexes. RG8x coax works well as the feed line into the shack. Be sure to wind about 6 turns of coax in a 6" circle at the base of the balun to keep RF out of the radio room.

To determine wire length for your desired band, divide your resonant frequency in MHz into the constant 1005. An example would be:

1005 / 18.075 = 55.6016 Feet (total).

A representative chart can be as seen below. As you can see by the frequencies, I am an ardent CW operator. Again, please note that these measurements are a TOTAL of copper antenna wire needed. Flexible stranded works the best:

1005 / FREQ. = FEET

7.005 = 143.4689 FEET
7.050 = 142.5531 FEET
10.105 = 99.4557 FEET
10.115 = 99.3083 FEET
18.075 = 55.6016 FEET
18.125 = 55.4482 FEET

Inside this issue:

I never split hairs when designing an antenna to resonant frequency for lowest VSWR. The reason is because of antenna tuners!! These are the greatest inventions since hydraulic cement was given to us thousands of years ago!

I based my 17 meter Delta Loop on approx. nineteen feet per leg. Without a tuner, I was at about 2.6:1 @ 18.070 MHz. My trusty Drake MN-2000 quickly brought it down to 1.0:1 on the 15 meter setting.

The results? First "hit" was an EA5 on 18.077 for a 599 plus 20 db with 100 watts. From there I racked up the same reports from a CO8, PY1, IK2, and a N6. The antenna has only been up 6 days as of this writing.

If you think the band is dead and you did something wrong, once you have loaded into the antenna with an acceptable VSWR, call CQ! The problem with thinking a band is dead even in these times, is that other people are doing what you are doing–l-stening! Test the waters! That is how I snagged that EA5.

Total assembly and installation time was 3 hours. One hour and fifteen minutes of that was trying to get the line up into the tree! The power behind the throw was there but not the aim. That is evident by the fact that at one point, the head came off of the hammer I was using to weight the line. I said to myself (after a few expletives about mating), "That's gone for good"!

I found it while raking the shrubbery in front of the house, 150 feet away! I am lucky it didn't go through a window, DUH!

A Delta Loop provides much lower noise and relatively good gain over a dipole, on any band. As they said to Mikey, "Try it. You'll like it"! 73 es GUD DX. *Peter Dehman WA1ISA*

FROM THE PRESIDENT'S DESK

I guess it's ok now to put away the snow shovels and snow blowers. Winter is officially gone away, but then again, strange things have happened in the past, but we will not think about them and move ahead to greener grass.

It's nice to hear the birds singing instead of the sounds of snow plows and ice choppers; more pleasant I think.

It is time to start on the "to do" list for this year or perhaps the list from last year that didn't get completed. I know you all have one, right? Every year my list gets bigger, but I manage to check off a few items.

We want to add another raised planting bed. They are easy to build and no digging required; just four pieces of wood, some good soil, and the most important item, fresh fertilizer from your local dairy farm. It's free for the taking just bring your own buckets. The cows don't mind you taking it; they are glad to help.

I'm sure you will find your own garden projects to do. It's fun and looks good too.

Don't forget to start thinking about Field Day. We will be needing help in many areas. More information will be at the next meeting on the 26th. See you then. 73 *Bruce W1BRU*

UPCOMING EVENTS

May 16th - FLEA AT MIT - Albany and Main Street in Cambridge, MA. Free parking. Third Sunday April thru October. For more info call Nick at 617-253-3776.

April 30th & May 1st - NEAR-Fest VII - The New England Amateur Radio Festival (NEAR-Fest VII) will be held at the Deerfield, NH fairground. Ross Hochstrasser W1EKG has advance sale tickets.

Lee Smith K1LRS

MEETING MINUTES

Monday, March 29, 2010

The meeting was called to order at 19:30 hours. President Bruce Wood W1BRU presided.

The Treasurers report was presented and read by Bob Jones WB1P and accepted by voice vote of all members present. Our balance at the end of the month of March 2010, after all expenses for the month were settled, was $1,560.60.

The minutes of last month's meeting, as they appeared in the monthly newsletter, were voted on and accepted by unanimous voice vote.

Bob Jones announced that he located a new supplier and that he ordered new club patches; delivery expected in a few weeks, approximate cost will be $2.00 each.

Web site additions were discussed; Field Day and lighthouse visits were also discussed.

A presentation by Peter Deham WA1ISA on satellite communications was presented. Peter was well prepared, and did an excellent job in his presentation. He sparked interest in satellite communications by many of the members present.

VE exams were given last month, three people took them and all passed.

Possible Satellite communications for Field Day were discussed and we will try to establish them for Field Day.

A total of 15 members signed in for tonight's meeting. The meeting was adjourned at 21:30. *Jim O'Leary WA1ZDY Club Secretary*

AMATEUR RADIO POEMS AND SAYINGS COLLECTED OVER THE YEARS BY WA1ISA

Original sources not researched

di dah dit - The only Roger Beep you'll ever need.
Let your fingers do the talking—Morse code.
My designated driver is a 12BY7A.

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I have come up with the perfect LID Filter. It will only allow tuning up to 3800 MHz on any radio!

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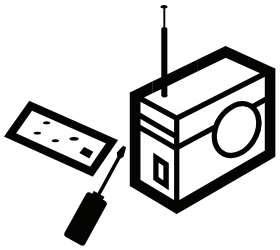
Two antennas met on a roof, fell in love and got married.
The ceremony wasn't much, but the reception was excellent.
Since they were a perfect match, soon they generated harmonics.
Wrapped the harmonics in dipoles.



But later the harmonics turned out to be parasitic elements.

The true story—she was a tri-bander and he felt trapped, so they went on separate beam headings.

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EINSTEIN ON RADIO

"I am often asked how radio works. Well, you see, wire telegraphy is like a very long cat. You yank his tail in New York and he meows in Los Angeles. Do you understand this? Now, radio is exactly the same, except that there is no cat."

Attributed to Albert Einstein

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I love the smell of generator exhaust in the morning—It smells like Field Day!

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Dit- a diddle dot dit.

A friend forwarded this interesting story.

Back when the telegraph was the fastest method of long-distance communication, a young man applied for a job as a Morse Code operator. Answering an ad in the newspaper, he went to the office address that was listed. When he arrived, he entered a large, busy office filled with noise and clatter, including the sound of the telegraph in the background. A sign on the receptionist's counter instructed job applicants to fill out a form and wait until they were summoned to enter the inner office.

The young man filled out his form and sat down with the seven other applicants in the waiting area. After a few minutes, the young man stood up, crossed the room to the door of the inner office, and walked right in. Naturally the other applicants perked up, wondering what was going on. They muttered among themselves that they hadn't heard any summons yet.

They assumed that the young man who went into the office made a mistake and would be disqualified. Within a few minutes, however, the employer escorted the young man out of the office and said to the other applicants, "Gentlemen, thank you very much for coming, but the job has just been filled." The other applicants began grumbling to each other, and one spoke up saying, "Wait a minute, I don't understand. He was the last to come in, and we never even got a chance to be interviewed. Yet he got the job. That's not fair!"

The employer said, "I'm sorry, but the last several minutes while you've been sitting here, the telegraph has been ticking out the following message in Morse Code: 'If you understand this message, then come right in. The job is yours.'" None of you heard it or understood it. This young man did. The job is his.

CW IS!

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POSSIBLE SPECIAL EVENTS STATIONS
(All Real Places)

Big Rock Candy Mountain, VT
Bird-in-Hand, PA (power measurement contest)
Black Gnat, Ky (Ky inputs from Lloyd Curry NA4D)
Bumble Bee, AZ
Castaway Cay
Chicken, AK
Combined locks, WI
Chugwater, WY
Cut and Shoot, TX -- From Hal K4HB
Davidson Ditch, Alaska
Dinosaur, CO
Duckwater, NV
Eighty Eight, Ky
Embarrass, WI
Enigma, GA
Experiment, GA
Fish Haven, ID
Ft. Dick, CA
Fort Neccessity, LA
Gnaw Bone, Indiana - From Gary V. Smith KD6RXT
Ham Lake, Minnesota
Happy Camp, CA
Hell, Michigan

Hell's Half Acre, Alabama
Henscratch, FL
High Point, NC (is it high enough?)
Hog Eye, AR
Lake Chargoggagoggmanchauggagoggchaubunagungamaugg, Webster, Massachusetts (longest place name in the US)
Mars, PA
Mexican Hat, UT
Mexican Water, AZ
Monkey's Eyebrow, Ky
Mudville, LA (Lots of QRM, QRN)
No Name, CO
Notrees, TX (Good place for a tower)
Old Joe, AR
Parachute, CO
Paradise, PA (no local QRN)
Pie Town, NM
Plain Dealing, LA
Podunk, MI
Poker Flat, Alaska
Possum Trot, Ky
Purgatory, CO
Rabbit Hash KY. (Near Covington)
Sandwich, MA
Signal Hill, NF -- (where the first amateur operation took place)
Show Low, AZ
Smackover, AR
Social Circle, AR
Static, TN
Suprise, AZ
Tombstone, AZ
Tortilla Flat, AZ
Truth or Consequences, NM
Two Egg, FL
Uno, Ky
Waterproof, LA
Whiskeytown, CA
Why, AZ
Zap, NC
Zigzag, OR

Peter Dehman WA1ISA

SHACK OF THE MONTH

Here is a picture of my shack. It's a cool 58 degrees all year long down in the basement.

Top left to right: PC AMD Phenom II 3.2GHz 4x, OS XP Pro, 20" LCD monitor, Palstar AT2K tuner, Flex 5000A

Bottom left to right: Kenwood TS570S w/ desk mike, Astron 30 Amp DC switching supply, Kenwood commercial VHF FM, TK-780 speaker. *Spencer Borden AB1HO*

CHARLIE'S WHISTLE

All of Charlie's regular readers know that springtime is when he carefully checks all of his antennas and repairs any damage inflicted over the winter. DX Hill has enjoyed some very warm weather this spring and that made Charlie and Mary quite happy. It isn't every year that they can work outdoors in late March and early April, dressed in summer clothes. But, in 2010 they surely could and could hardly believe that DX Hill was covered in snow just a few weeks earlier.

As they have done in past years, Mary helps Charlie pull wires, tie ropes and send tools up the tower to Charlie who is working 80, 90, or 100 feet above the ground. He's getting a little old for doing this climbing and has promised Mary that he will get one of the younger club members to climb next time. But, he never seems to do it. Maybe it's foolish pride or just being stubborn. But, he admits that his knees cannot take the climbing much longer and maybe by next year, he will be forced into letting younger knees make the climb to do antenna work.

"...CHARLIE HAD QUIET TIME TO RECOGNIZE HOW MUCH A NEW HAM COULD LEARN IF HE OR SHE WERE WORKING WITH HIM ATOP THE TOWER."

In return for Mary's help in doing antenna work, nothing that she is especially fond of doing, Charlie has agreed to help her with gardening. He digs up weeds, spreads top soil, mulch and fertilizer and makes runs to the nursery to pick up supplies and flats of flowers. It's funny how it works out but Charlie's antenna work is usually finished in one or two nice days but Mary's gardening takes several times more days. Mary certainly has negotiated favorable terms. Charlie realizes that but doesn't mind a bit. He loves to help Mary regardless of any terms of equality.

In all, Charlie spent about four hours at the top of his tower. He found an old wasp nest in his balun junction box and some impacted soil and grass left behind by a large family of red ants between and under all the terminals on two terminal strips. How ants find their way to a junction box one hundred feet above the ground at the top of a tower to build a family winter home is impossible to understand but the little critters really do it. This dirt and other material shorts out the rotator and switch control connections and must be removed. His rotator was still functioning properly but obviously was about to fail because of his resident ant colony. This is why Charlie and all good engineers believe in regularly doing preventative maintenance like this before a problem occurs. He had to dismantle and clean the terminals with denatured alcohol and then reassemble and test everything. It's a tedious job but one that must be done carefully. Experience has taught Charlie how to perform this sort of work without causing any damage or degrading of the connections.

While working alone up the tower, Charlie had time to reflect on what he did in the club last month. The last Charlie's Whistle article detailed an instructional program for newer hams and not so new hams who realize that they failed to learn very much when they studied material in preparation for their licenses. They learned how to recognize the correct answers in the multiple choice exam but acknowledge now that they don't understand a great deal of fundamental material about antennas, transmission lines, propagation, transmitters and even simple power supplies. Some of the packaged training material that promises that you will earn your license in a weekend are built on teaching people how to pass the tests but very little on understanding anything. This is why we find hams in all license classes who cannot tell you what a dipole antenna is or what an antenna tuner's function really is. Charlie has found that most new hams either have no idea what the answers are or they are completely misinformed.

While working alone, Charlie had quiet time to recognize how much a new ham could learn if he or she were working with him atop the tower. Understanding the need for normal preventative maintenance like cleaning out the wasp nest and ant remnants is very basic to maintaining outdoor antennas. Students could learn by the practical application

of an old timer's experience and guidance. Actually doing the work with their own hands while listening to countless stories about what happens when such preventative measures are not taken is something that cannot be taught in a classroom. Nearly everyone will admit that" on the job training", better known as OJT, will deliver

the knowledge when it is being administered by a friendly old mentor like Charlie.

Tied to his tower, one hundred feet above his back yard, Charlie thought about how the club could deliver an OJT program that would drive home knowledge about all sorts of basic material such as antennas, transmission lines, tuners, power supplies, controls, and even best practices in operating their stations. While he worked on his cleaning and checking, he wished that he had a recorder so that he could dictate his thoughts. Years before as a working engineering manager, he could easily remember dozens of things every day while carrying out his duties but aging has taken its toll and he must now resort to making lists and making reminders, otherwise he'll forget things. Mary could tell from the ground that Charlie was mentally preoccupied and called up to him, "Do you need a notepad, dear?"

Charlie realized that he did but had no spare hands to take notes, so he replied, "No thanks Mary, but could you please remind me later to make up an outline for a hands-on class to cover antenna maintenance?" Mary called back that she would do so.

Charlie smiled and called, "Thank you dear. I really appreciate that". Yes, that's the ticket, he thought. Book learning is only marginally useful doing this tower work. They actually have to get their hands dirty to learn. How much can they learn in a classroom? Of course, talking to himself and silently asking rhetorical questions are strange in anyone's book but Charlie realized a large fact concerning why new hams don't seem to be learning very much basic knowledge without a hands-on training session. That leads one to wonder how many "Elmers" or mentors are picking up the duty. The answer is almost obvious…not nearly enough.

Some of the 20 and 30 something folks do not have much respect for older gray headed hams. That's some of the problem because the younger crowd is denying themselves of a treasure trove of practical hands-on knowledge. Surely, no one reading this column is among the company of these 20 and 30 something hams but I'm sure that we all can name a few of them.

As Charlie slowly climbed down his hundred foot tower, he was making plans for setting up a workshop series of sessions and invite the new hams around DX Hill and from the valley. He discovered that some older hams never learned the correct way to solder a coax connector. They need to learn the correct way to solder a coax connector also and should be invited. Only the bravest of the lot will come of course but that's OK. We want the bravest in the crowd to advance.

When he finally reached the ground, Mary had a comfortable chair waiting for him along with a cup of fresh coffee and a generous wedge of blueberry pie with vanilla ice cream. Charlie just smiled and gave Mary a kiss on her cheek. "Thanks sweetheart. I need this."

Then Mary picked up her note pad with all the things that Charlie asked to be reminded of. Mary asked, "Don't I make a good secretary, Charlie?" Charlie admitted that she would be a great secretary but that made him worry. Hopefully, she was kidding.

Learning practical, hands-on skills is essential for new hams to acquire. Many of them learned enough to pass their exams with Gordon West programs. Gordo's material is designed to guarantee that people will pass the FCC tests but not to teach any of them the skills or basic knowledge that they will need when they try to build upon what they know.

It is something that club programs must address. Start with the most general and obvious like the correct way to solder a PL-259 connector on small, medium and large coaxial cable. Then, consider building a small QRP rig or 2 meter Yagi antenna, explaining the half wave driven element and how parasitic elements focus the signal and provide gain and rejection to its rear. The need is there. The new hams really want to learn. It's the job that old timers, yes the gray heads, must face and carry out. The older hams have the knowledge and in most cases, the time. They only need to be asked. Please set up a program before we lose more of our resources. Don't wait for someone else to do it.

See you next month… *Bob Beaudet W1YRC*

The Messenger

A monthly publication of:
Blackstone Valley Amateur Radio Club, Inc.
Dave St. Onge (W1HW) Trustee
154 Patton Road
Woonsocket, RI 02895

QRN from the Editor

Thank you to Peter WA1ISA for his wonderful antenna article. Contributions like this are what makes our newsletter perhaps the best of the Rhode Island amateur radio clubs. Plus, the increase in the number of submissions makes my job as newsletter editor a pleasant treat. Keep up the good work!

With the arrival of spring, it is a great time to get outside and get some antenna work done. My spring project is to replace the 2m/70cm antenna and mount on my truck. The old antenna has served me well, but wear and tear over the years mean it is time for a replacement. Sounds like a good subject for a newsletter article :) 73! *Jim - WN1X*

NEXT MONTHLY MEETING

26 April - 7:30 PM

Landmark Rehabilitation Hospital

Route 146A

Woonsocket, RI