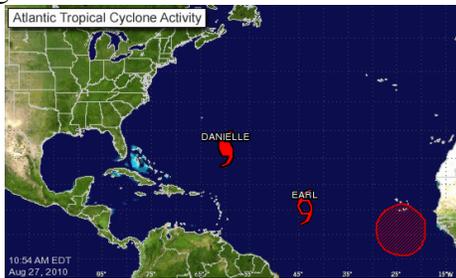


**The Central Texas Amateur Radio Club
 meets the first Tuesday of each month at 7:00 PM at the
 Bell County Communications Center, 798 West Avenue O, in Belton**

President's Corner

Kenneth Watkins, KE5ISN

August has not been the usual hot summer; it has been a record breaking summer. Waco recorded 25 consecutive days of 100 plus degree temperatures. The all time record of 40 days of 100 plus degree temperatures was set in 1980. Record highs were set on the 16th at 106, the 23rd with 107 and the 24th was 105. Not only were the days hot, but the nights too, with a record high night time low of 81 set on the 14th.



In other weather news, the Atlantic is beginning to become active with tropical cyclones. As of August 27th, there was one category 4 hurricane, one tropical storm and one tropical low in the Atlantic Basin that bear watching. Hurricane season appears to just be getting started. Those with interest should keep abreast by checking the National Hurricane Center website at: <http://www.nhc.noaa.gov/index.shtml>

The FCC Report and Order 10-124 was published in the Federal Register on August 3, 2010 with an effective date of September 3, 2010. The August issue of

the *Wavelength* covered the changes to the rules on exceptions for prohibited transmissions by amateur radio operators. You may want to review these new rules. If you no longer have a copy of the August *Wavelength* newsletter and would like to review the article, go to: <http://www.ctarc.org/data/pdf/newsletter/August2010.pdf> and scroll down to Page 3.

Congratulations to Preston, KF5EVV, on upgrading to General Class. Enjoy the new privileges! Two area hams have applied for and received their new vanity call signs. Gil Rymer, ex-KE5OAV is now **W5GLR** and Adam Cuker, ex-KE5ETU, obtained **WX5VTX**.

We have started the process of selecting candidates for club officers for 2011. If you would like to be an officer or know of some one that you think would make a good officer, contact Joe W5VEX, Gil W5GLR or Walter KE5DPS, of the Nomination Committee. They would appreciate your help in identifying potential officers for your club.

School has started and the school busses are out and about. Please exercise caution in your early morning commutes as sunrise becomes later and later each day making school kids harder to see.

See you at the next CTARC monthly meeting on September 7th. *73 de KE5ISN*



The Central Texas Amateur Radio Net
meets every Thursday at 8:00 PM
on the W5BEC repeater,
on 147.140(+) PL 123.0
Join Us!

September NCS & Back-Up NCS Schedule:

September 2 nd :	September 9 th :
Net Control: AD5SK	KE5ISN
Back-Up: KE5ISN	K6WXA

September 16 th :	September 23 rd :
Net Control: K6WXA	KF5LNX
Back-Up: KF5LNX	K5KFH

September 30th:
Net Control: K5KFH
Back-Up: W5VEX



ARRL September VHF QSO Party

Contest period is from 1800Z, Sept. 11 to 0300Z, Sept. 13th on all authorized amateur frequencies of 50 MHz and up.

For complete information on this event visit: <http://www.arrl.org/september-vhf-qso-party>

Texas is more than soil and boundary lines. Texas is a living, breathing, growing, evolving entity. - Janna Zepp



Texas QSO Party

The Texas QSO party is sponsored each year by the Northwest Amateur Radio Society - W5NC - to encourage contacts between Texas amateur radio operators and amateur radio operators throughout the world. This event is also an excellent opportunity for county hunters to add to their list of Texas counties worked.

Operating times are from 1400Z, September 25th to 0200Z, September 26th with then a break and again from 1400Z to 2000Z on the 26th.

For more info, see: <http://www.txqp.net>



Free to a good home... nearly like new, galvanized aluminum & brass roof-top antenna tripod mount. This was donated by KB7UNA and KD5RCS.

If interested, contact Rick - K6WXA, at (254) 690-1303 or via email at: k6wx@yahoo.com to arrange for pick-up and/or delivery.



Joe Dorn, W5VEX

WinLink2000 is an amateur radio resource, i.e. you must be a licensed ham to become a user; the software is excellent and the cost is right, FREE. "WL2K" is a system that allows radio access to the internet for email and transfer of the more common attachments (Excel, MSWord, PDF's etc.) though it does not support web browsing.



The system was developed to allow blue water sailors and RV's to gain access to their email via HF and Pactor modems. The system was then enhanced to use VHF via packet TNCS and sound cards.

The ARRL in 2004 encouraged the deployment within the ARES of e-mail via amateur radio as exemplified by WL2K, to meet the needs of served

agencies and others involved in providing disaster communications. Amateur radio volunteers responding to help in the wake of Hurricane Katrina utilized WL2K with great success.

I immediately saw it as an excellent tool to replace or supplement the long-in-tooth National Traffic System and included the capabilities in the Central Texas Trauma Council Radio Network, now consisting of 16 hospitals in Bell and 6 other adjacent counties. I now refer to the network as 'The Central Texas Amateur Radio Network' since it includes other emergency responder locations such as the Bell and Milam County EOC's.

The support is excellent for helping you get through the start-up overload of acronyms, terms and programs. I will probably go through it again if sufficient interest is shown so that I can



get back up to speed since WL2K is an evolving system. The packet backbone is in place on 145.070 and I have an active RF interface into the system via W5VEX-10, west of Belton.

I am planning on having a couple of workshops for the CTARC members as soon as the weather cools down a bit (most of my WinLink/Packet resources are in my naturally air conditioned shop, hot in the summer, cold in the winter, tolerable in the spring and fall).

If enough interest is shown, I will invite Tom Whiteside, the ARRL South Texas Emergency Manager and WL2K expert, to give a presentation at a joint session of TARC and CTARC.

For more information on WinLink2000, visit: www.winlink.org. On that site is a pointer to 'WL2K for the "Digitally Challenged', an excellent step by step guide for installing and making a node operational. You can get there via:

<http://www.winlink.org/GetStarted>.

For more info, contact the author at: jbdvex@gmail.com

Amateur Radio Operators Aid Government Communications During Emergencies

Corey McKenna, Government Technology

Amateur radio operators, who use various types of radio communications equipment for nonprofit purposes, can provide a valuable resource to state and local governments during disasters. In Oregon, about 1,800 Radio Amateur Civil Emergency Service volunteers are authorized to work in state and county emergency operations centers (EOCs) facilitating communication during disasters. For example, during the Great Coastal Gale of 2007 that knocked out communications to the state's Columbia, Clatsop and Tillamook counties, ham radio operators used a radio frequency messaging system called Winlink to transmit the counties' requests for assistance to the state's Office of Emergency Management.



Oregon Governor Ted Kulongoski

Monday morning the governor came in and we were briefing and later on he called amateur radio operators 'angels' because that was the only source of communication we had to the coast," said Marshall McKillip, the Emergency Management Office's communication's officer.

Following the storm, Oregon Gov. Ted Kulongoski funded improvements to the state's amateur radio infrastructure with a \$250,000 grant for Winlink systems in each of the state's 36 county-level EOCs. "We bought the appropriate equipment and then organized the delivery, the set up, the training and everything with amateur radio resources," McKillip said.

"It was quite a task for the amateurs to take on, but they did a great job."

Amateur radio operators can play a variety of roles that allow public safety officials to maximize their resources, including facilitating communications; providing emergency managers with on-scene situational awareness; and helping manage large-scale events, such as state fairs and marathons.

Earlier this year as blizzards blanketed Delaware, Radio Amateur Civil Emergency Service members manned ham radio stations at the Sussex County EOC, and 60 ARES members drove around the county's 958 square miles reporting what they were seeing and confirming reports from the National Weather Service. "While [the police and emergency medical services] were moving around, they had better things to do than stop and measure the snow," said Walt Palmer, public information officer for the American Radio Relay League in Delaware. "So that's where amateur radio's guys were coming in."

At one point during the storms, the county set up two shelters for approximately 70,000 residents, all of whom were without electricity, and deployed an amateur radio operator to the larger shelter to facilitate communication with the EOC. "We were able to get good information back from the shelter as to how many people were there, were they making out OK and that kind of thing," said Sussex County EOC Director Joe Thomas.

In the aftermath of a disaster, amateur radio operators are often the first to report what happened to emergency managers so they can start formulating a response.

HamEXPO!



Sponsored by the Temple Amateur Radio Club -W5LM, the *Belton Hamfest* returns to the Bell County Exposition Center in Belton, **Saturday, October 2nd** from 7:00 AM to 2:00 PM.

Getting there is easy; from U.S. Highway 190 take the exit for Loop 121 and follow the signs to the Exposition Center. Plenty of free parking!

Talk-in frequency is 146.820(-) PL 123, and call for W5LM.

General admission for the public is \$5.00 at the door. Admission price includes one free raffle ticket for various door prizes raffled off during the event. Winners must be present to collect their winnings.

For more information, please visit: <http://www.tarc.org/hamexpo>



Ham Expo Amateur Radio Test Session

The Temple Amateur Radio Club sponsored Ham Expo will be on October 2nd at the Bell County Domed Stadium; in conjunction with the Expo, amateur radio tests will be given at the Belton Police Station sponsored by the Central Texas Amateur Radio Club.

The police station is located at 2nd and Birdwell (about a block west of the Belton Burger King hamburger joint). The testing will begin at 11:00 AM and end when all applicants have been tested, usually around 1:00 PM.

Since the test session is in conjunction with the very popular Ham Expo, we expect between 25 and 50 people taking the tests. This requires at least 10 Volunteer Examiners to properly staff the event. The VE's participating should be on site by 10:30. Both General and Extra VE's are needed since all test levels are made available. Directions will be available at the Expo registration desk.

This is a 'Ham Community' effort and all area VE's are needed and most welcome to participate. If you will be able to participate, please send an Email to Joe-W5VEX, at: jbdvex@gmail.com.

People taking the test do not need to register before hand, just show up at test time. For potential new hams, be aware that the 'Technician Test' pool has changed and the most current study materials are recommended.





The 110th Anniversary of the **Galveston Hurricane of 1900**

Heidi Lutz, *Galveston County Daily News*

Before the storm... In the years before the great storm, Galveston had grown from a small settlement on the Texas coast into one of the wealthiest cities in the country. Its natural deepwater channel made Galveston the most important seaport in Texas. Trains carried cargo to and from the port, and some 1,000 ships called on the port annually. More than 70 percent of the country's cotton crop at the time passed through the port of Galveston. The city was home to about 37,000 people. Galveston, with its wealth and prosperity, was home to numerous firsts for the state, such as first electricity and first telephones.

September 8, 1900... From atop the National Weather Service bureau, which was at 23rd and Market streets, Cline watched storm swells rise, gulf water creep over the low ends of the island, the barometer drop and the winds grow stronger. According to his memoirs, he knew at that moment of impending danger. He rode up and down the beach on his horse urging visitors to go home and residents within three blocks of the beach to move to higher ground. In 1900, higher ground was a relative term. The highest elevation was between 8 and 9 feet.

Throughout the day, Cline sent telegraph warnings to the Weather Service's central office in Washington, D.C. But by midafternoon, lines went down, and he could no longer send messages.



Dr. Isaac M. Cline, Director Galveston Weather Office



Mother Nature's fury... Cline estimated that the winds exceeded 120 miles per hour. But with information available today, and using the knowledge learned from all of the hurricanes since, the National Weather Service estimates that it would take winds between 130 and 140 miles per hour -a Category 4- to produce the extreme tide and storm surge of the 1900 Storm.

The 15 1/2 -foot storm surge rolled over the island from gulf to bay. In reality, there was no island, just the ocean with houses standing out of the waves which rolled between them. Houses collapsed, and as the surge continued, a wall of debris described as at least two-stories high pushed across the island destroying everything in its path. The terrific hurricane winds and storm-tossed wreckage lasted from 8 p.m. until near midnight.

The struggle to live continued through one of the darkest of nights with only an occasional flash of lightning which revealed the terrible carnage.

An island washed away... The area from First Street to Eighth Street and from the beach to the harbor was destroyed, as was the area west of 45th Street to the end of the city. Between those two areas, the destruction stretched at an angle from Ninth Street to 45th Street. Houses were bulldozed flat for up to 15 blocks from the beach. Pictures taken after the Storm show empty streets. No people. No trees. No animals. No personal belongings. Only piles of debris that buried families beneath the remains of their homes.



Few buildings escaped without damage, and according to newspaper accounts from that week, no one escaped loss of property or family. For all practical purposes, the island was destroyed that night.



The early aftermath... Historians contend that between 10,000 and 12,000 people died during the storm, at least 6,000 of them on Galveston Island. More than 3,600 homes were destroyed on Galveston Island and the added toll on commercial structures created a monetary loss of \$30 million, about \$700 million in today's dollars. The Great Storm reigns today as the deadliest natural disaster in U.S. history.

Galveston's Finest Hour... Sunday morning, the day after the disaster, began with the sound of bells from the ruined Ursuline Convent calling people to worship. It was a fitting beginning.

What makes the story of the nation's greatest natural disaster so unusual is the incomparable optimism of its survivors. For the most part, residents chose to remain in Galveston and rebuild the city they so loved.



It's not only important because 6,000 people died Saturday night in Galveston, but because 31,000 others stayed. It was those who stayed who built the city that survives today. Almost immediately after the storm, a committee of residents was convened to plan for the future. Committee members developed the plan to clean up the debris, bury the dead and rebuild the city. These city leaders set out not only to rebuild but to make a better city. The city was determined not only to survive, but to grow.



The History Channel created a feature-length special based on Erik Larson's book *"Isaac's Storm"*. In this special presentation, Larson, along with weather experts, historians, and descendants of those lucky enough to have survived the violent storm, guide us through the events of that horrific day. To view this 90 minute commercial-free presentation, please visit: <http://video.google.com/videoplay?docid=5738477727172072633#>

Tales of the Texas Rangers



Tales of the Texas Rangers was an old-time western adventure radio drama, which originally aired on July 8, 1950 and was carried by the NBC radio network.

The shows were re-enactments of actual Texas Ranger cases and starred Joel McCrea as Texas Ranger Jayce Pearson.

Its' last episode, the 95th in the series, was entitled "Drive-In" and aired on September 14th, 1952.

You can listen-in again to this 30 minute final episode, by going to: http://www.olderadioworld.com/shows/Tales_of_The_Texas_Rangers.php



The Texas Rangers are most likely the only law enforcement body in the United States – probably the world – to have a city named in their honor. Down in Cameron County, in the lower Rio Grande Valley, is a small community called Rangerville. Nowhere in Texas, though, has there ever been a community named Police, Sheriff, FBI, Royal Canadian Mounted Police or Scotland Yard. – *Mike Cox*



Getting Your Texas Radio Operator Plates



Maybe you've just moved here or maybe you've just earned your amateur radio license, and now you're interested in getting call letter license plates for your car.

You may apply for Radio Operator specialty plates if you hold an amateur radio station license issued by the Federal Communications Commission and operate receiving and transmitting mobile amateur radio equipment in a passenger car or truck. A specialty plate fee of \$2.00 initial issuance and a \$1.00 renewal fee are charged in addition to the regular registration fee.

An application form for obtaining call letter license plates can be found at: <http://www.txdot.gov/txdotforms/GetForm?formName=/VTR-53.xdp&appID=/VTR&status=/reportError.jsp&configFile=WFServletConfig.xml>

A complete fee schedule can be found at: <ftp://ftp.dot.state.tx.us/pub/txdot-info/vtr/rtb/2007/042-attach2.pdf>

What's New?



The Texas Department of Public Safety, Division of Emergency Management, now offers a free online course entitled, NE-TOP200-2 *Texas Emergency Management Familiarization Course*.

Registration to take the course is required, and a certificate of completion is presented at the end of the course.

The course can be accessed through: <https://www.preparingtexas.org>

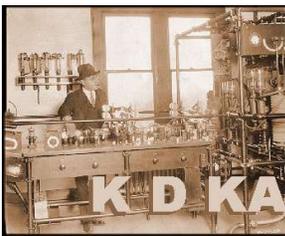
Who's on First?

This fall marks the 90th anniversary of the beginning of broadcasting. Or does it? Whenever broadcasters get together to discuss the beginnings of the industry, it soon seems to sound something like the famous Abbott and Costello routine. Trying to figure out "Who's on first?" often turns into a frustrating, even maddening attempt to put a label on a moving target. The question really is difficult to answer, even as one tries to define "broadcast." Was it operation on a regular schedule? A daily schedule? Was it continuous operation from some early date? Designed to be heard by the general public? Licensed by the US government? Depending upon the criteria, many stations have strong claims for being first. And like Lou Costello, you may find a straight answer is somewhat elusive.

KCBS, then KQW and airing as "*San Jose Calling*" calls itself "*the longest continually broadcasting station in the world.*" Built by Charles "Doc" Herrold in 1909. The University of Wisconsin claims WHA "*the oldest station in the nation*" while WWJ, promoted itself as "*WWJ Radio One, where it all began.*"



Charles "Doc" Herrold
at the mic of KQW



Then there is KDKA, originally 8XK. What is not in debate is that the Department of Commerce started issuing licenses for what would become the broadcast band as we know it in 1920. Experimental station 8XK in Pittsburgh, which was to become KDKA, was granted the first "*Limited Commercial*" license. During a delay in reception of the license, the station proceeded to

broadcast on 330 meters (909 kHz) on November 2nd, 1920 under Special Amateur license 8ZZ.

Enter now into the fray of the confusion of it all, is station WBZ out of East Springfield, MA. While KDKA became the first licensed "*limited commercial*" broadcast station, WBZ became the first to be fully licensed as a commercial broadcast radio station by the U.S. Dept. of Commerce on September 19th, 1921.



Irving Vermilya in 1954

America's #1 Amateur... When the United States finally got into the business of regulating and licensing amateur operators in 1912, history records that Irving Vermilya, *IZE*, went to the Brooklyn Navy Yard to take the test and was given Certificate of Skill #1. For the rest of his life, he would be known as America's Number 1 Amateur. Irv would go on to dedicate his life to radio, until his death in January of 1964.

And for the Ladies... Eunice Randall, at some point in 1919, became an announcer for station 1XE, which later became WGI. She also built her own amateur radio station and operated under the call of 1CDP – later to become W1MPP. Over the years she taught many young amateurs what they needed to know to get their license.



Eunice Randall in 1922

A Double Extended Zepp for 440

Rick Murray, K6WXA

Returning now to the politeful prodder who lurks in my background... I'm considering running these antenna articles every other month to see what interest, if any, they draw. For the next few articles to come, I'd like to spotlight some of the more "out-of-the-ordinary" antenna designs I've either designed or duplicated from other peoples' designs.

I remember some years back, visiting a ham friend of mine and in the corner of his shack, he had this small, odd-looking antenna which he had designed and built, leaning in the corner. He called it a "Double Extended Zepp" for use on 70 Cm., and claimed it put out 6 DBd of gain. I had never seen anything like it and poured over the details of it. In his design – with the exception of the tuning stub, all the elements were made from 1/2" copper pipe and related 1/2" copper plumbing hardware. The only change I made in my duplication of the antenna was to replace the "back" of the antenna – the untuned reflector, with 3/4" copper pipe, simply because I had a length of it lying around.

After visiting my local home improvement store for the rest of the required plumbing fixtures, I constructed the antenna and set it up for testing.

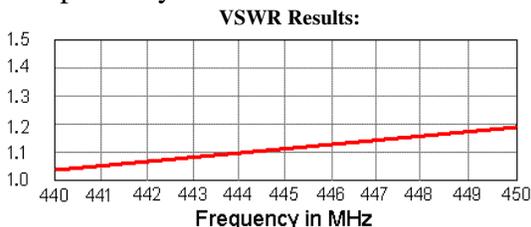
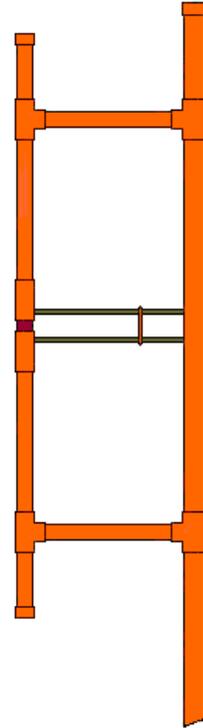
The VSWR results were as noted in the graph at lower left, as well as the broad-bandedness of the antenna. The next test was done using a stepped field strength meter, where the promised 6 DBd of gain was proved out. But the final test would be from the roof top.

Back in California... atop the roof, the antenna was "pointed" in a northwesterly direction, where I found I could easily ker-chunk repeaters in Santa Barbara – a distance of roughly 150 miles away.

My concern though was in the radiation pattern (...note lower right corner of the following page...) with this radiation pattern, it suggests that the antenna is a directional antenna. This was found not to be the case, for although the antennas' radiation pattern has "directional properties" with the antenna still *pointing* northwest, I could still easily get into repeater systems in San Diego – to the southeast of my location – and at a distance of roughly 110 miles away.

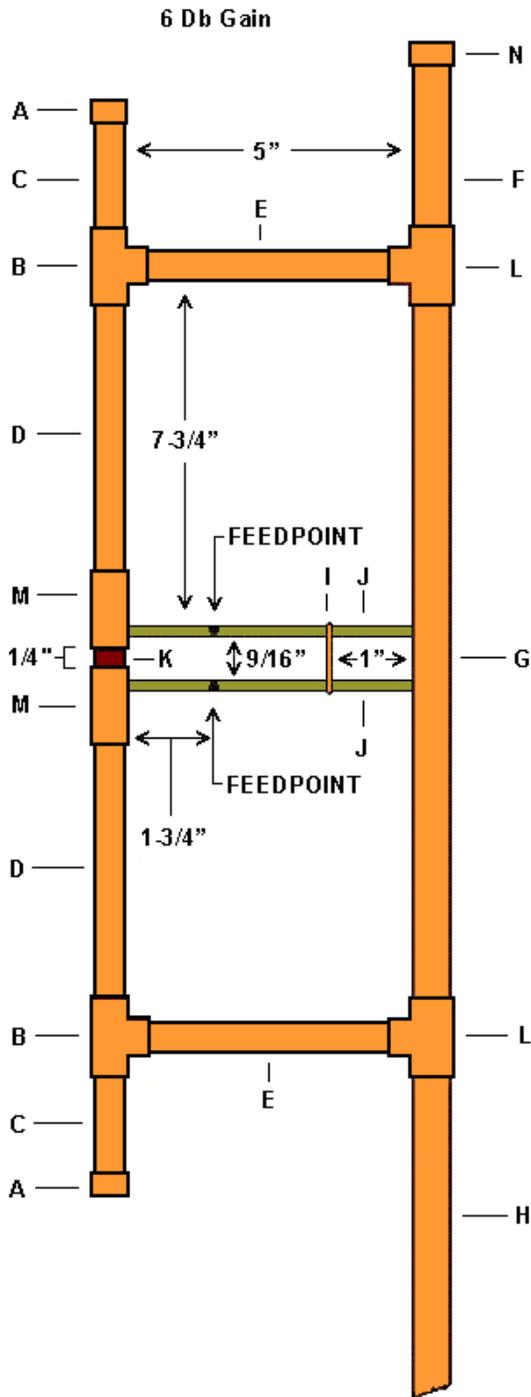
For the home-brew antenna builder, this is a great project! The necessary parts are available at any home improvement store, it doesn't cost much to put together, great VSWR results across the band, the broad-bandedness, 6 DBd of gain in the output signal and it's what I call "neighbor friendly" due to its' small size.

After constructing the antenna remember to weatherize all your electrical connections and protect your antenna from the elements with Pettit Marine Brand EASYPOXY.



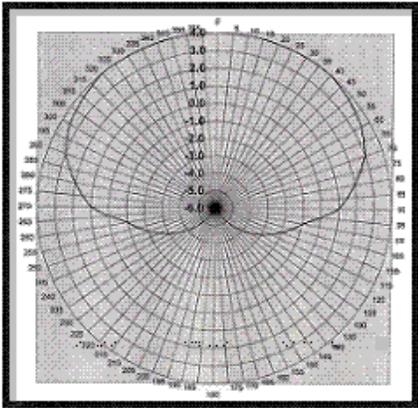
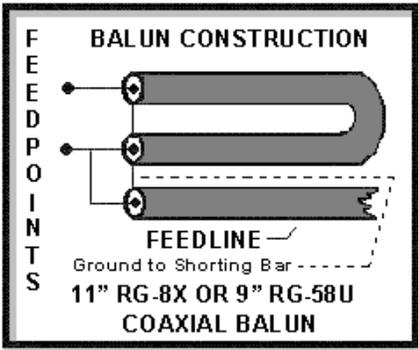
The following antenna design has had all the bugs worked out of it including the proper placement of the feedpoint, so the antenna doesn't need tuning. All measurements are "cut-to" lengths.

70cm Double Extended Zepp



DESIGN BY WA6ESC

- PARTS IDENTIFICATION**
- A. 1/2" COPPER CAP
 - B. 1/2" COPPER "T"
 - C. 5" OF 1/2" COPPER PIPE
 - D. 7-7/16" OF 1/2" COPPER PIPE
 - E. 4-7/8" 1/2" COPPER PIPE
 - F. 6-1/2" OF 3/4" COPPER PIPE
 - G. 16-1/4" OF 3/4" COPPER PIPE
 - H. 15" OF 3/4" COPPER PIPE
 - I. SHORTING BAR (#10 WIRE)
 - J. 6" OF 1/4" BRASS ROD
 - K. 1/2" X 1-3/8" FINALIC INSULATOR
 - L. 3/4" COPPER "T" WITH 1/2" REDUCER
 - M. 1/2" COPPER SLEEVE
 - N. 3/4" COPPER CAP



Now imagine taking the previous antenna design, modifying its' construction just a tad bit, then "doubling" it in a vertical stacked array. What you'd have is a Double-Double Extended Zepp.

The following two pictures and captions explain it better. Both pictures were taken back in southern California, in early January 2007 during an "antenna maintenance party" at the W6SBA / K6IUM repeater site. During the "party" both antennas were taken down, given a new coat of paint and the guy wires were replaced.



Photo Courtesy WB6MYD

Imagine building a Double-Double Extended Zepp for use on 222-225 MHz. This is how big the antenna would be. This is the antenna in use for the W6SBA repeater.

Pictured left to right are Denzel Dyer-KG6QWJ, Rick Murray-K6WXA and Bill Harper-WA6ESC, designer and builder of the antenna.

On the left in the picture, is the Double-Double Extended Zepp for the W6SBA repeater on 224.380 MHz. The antenna on the right, is a Double-Double Extended Zepp for the K6IUM repeater on 449.980 MHz.

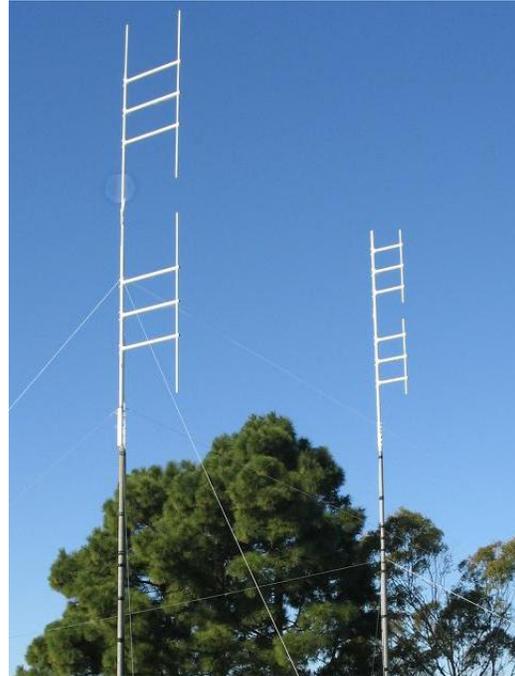
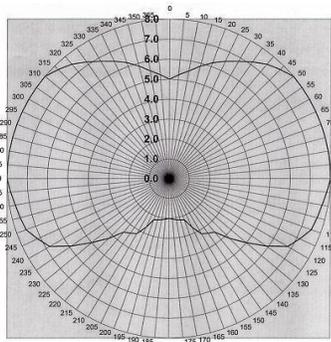


Photo Courtesy WB6MYD



Radiation Pattern of the Double-Double Extended Zepp

What about a Quadruple Double Extended Zepp? Quite frankly, it was too many syllables to pronounce so we just called it "*The Dragon Master*". We never actually got around to building the thing. Probably because nobody had any spare aircraft warning lights in any of their junk boxes. We did have the plans drawn up for it though!