

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



HAPPY NEW YEAR!

I hope that 2011 finds you and your family doing well. One of the traditions is the making of New Year's resolutions. What are yours? Here are some that you may want to put on your list.

- Check-in to the weekly net.
- Attend the club meetings.
- Join an amateur radio club.
- Pay club dues
- Join the ARRL.
- Attend SKYWARN Training; Basic and Advance.
- Attend Field Day.
- Work a special event.
- Upgrade your license.

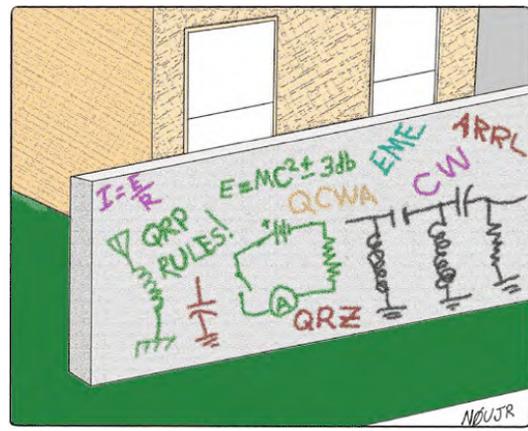
The above is a partial list of goals for 2011 that you can set.

SKYWARN training will be starting in January. Coryell, Falls, Limestone, Milam and Hamilton Counties have training scheduled in January. Go to www.srh.noaa.gov/fwd and click on the link for 2011 Spotter Training Class Schedule to obtain the exact date, time and location for your area. Bell County will be having their basic and advance SKYWARN class at Temple College on Saturday, February 12th. Be sure to mark your calendar for this event.

On a sad note, CTARC sends it's condolences to the Steven Richmond family. Steven was the brother of Gerald (N5ZXJ) Richmond. Steven passed away on December 19, 2010. Our thoughts and prayers go out to the Richmond Family.

Have a safe, healthy and prosperous New Year.

73 de KE5ISN



Ham Graffiti

I am forced to conclude that God made Texas on his day off, for pure entertainment, just to prove that all that diversity could be crammed into one section of earth by a really top hand. - Mary Lasswell



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!

January NCS & Back-Up NCS Schedule:

January 6 th : Net Control: AD5SK Back-Up: W5VEX	January 13 th : KE5ISN K6WXA
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January 20 th : Net Control: K6WXA Back-Up: KF5LNX	January 27 th : KF5LNX AD5SK
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North American QSO Party

Contest period is from 1800Z Jan. 15th to 0600Z Jan. 16th on 160, 80, 40, 20, 15 and 10 Meters SSB.

Complete rules and further info can be found at:

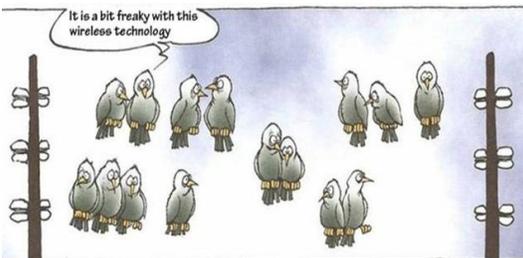
<http://www.ncjweb.com/nagprules.php>



Free! **Free Stuff!** **Free!**

Free to a good home... 250 feet of hard-line coax, plus a 40 foot tower. Contact Joe Dorn – W5VEX, at (254) 939-5918 or via jbdvex@gmail.com.

Nearly like new, galvanized aluminum & brass rooftop antenna tripod mount. Contact Rick Murray - K6WXA at (254) 690-1303 or via: k6wxa@yahoo.com.



Confederate Heroes Day



January 19th



Skywarn Training



Coryell County (*Basic Spotter Training Only*) Monday, January 10th from 7:00 PM to 9:00 PM, Copperas Cove Police Department, 202 South 4th Street in the Community Room.

Falls County (*Basic Spotter Training Only*) Tuesday, January 11th from 7:00 PM to 9:00 PM at the Chilton Volunteer Fire Dept., located on Highway 7 in Chilton.



Flag Day

January 24th

What's New?



The WonderFILE

David Coursey, N5FDL

Here's something that I found at Staples: It's a folding portfolio that opens to 34 x 27 inches, features eight pockets, and costs \$14.99, called the "WonderFILE."



This "portable workstation" is touted as being able to turn "any space into an organized workspace" and is similar to commercial public safety designs that cost \$150 or more.

Of course, as a go-kit item for your ICS forms and emergency plans, the *WonderFILE* hopefully won't get too much of a workout. The clear pockets can be used to keep reference information visible for easy reference and a small laptop or notebook can even fit inside one of the larger pockets, though I wouldn't keep mine there.

The *WonderFILE* might also be a useful item to fill and leave at operator locations, such as hospitals or schools, ahead of the emergency. It could hold forms, pads, and small plans. A loose leaf notebook could be added and used for radio manuals and longer documents.

You can view more info on the *WonderFILE* and/or order it online (...for slightly more...) at: <https://www.buywonderfile.com>

75th AREC Anniversary Patches

David Woolweaver, K5RAV

During the ARRL's celebration of the 75th Anniversary of ARES, several West Gulf Division Members noticed there was no 75th Anniversary commemorative patch offered by HQ. This decision was reached by HQ because of the limited celebratory lifespan and a desire not to over saturate the market with ARRL patches. Because of the interest expressed by West Gulf members and by special arrangement with the ARRL, the West Gulf Division has secured the exclusive right to produce a LIMITED EDITION 75th Anniversary ARES Patch.



You may order as many Anniversary Patches as you wish by going to: www.tarefund.org/anniversarypatch.htm Order online and pay through PayPal or download an order form and mail your order and payment to the address listed on the order form.

The deadline for ordering your limited edition Anniversary Patch is December 31, 2010. Once this deadline passes and the current supply is exhausted, there will be no more Patches produced, by direction of the ARRL.

Division members in Texas who order the patch will be raising money for the Texas Amateur Radio EmComm Fund.

Texas Amateur Radio EmComm Fund

David Woolweaver, K5RAV



To ensure all of the Texas Department of Emergency Management's Rapid Response Task Force ARES contingents were equally equipped and could be identically trained, the ARRL was persuaded to pre-position eight of the ARRL's HF Go-Kits to the West Gulf Division.

An HF Go-Kit is enclosed in a water resistant Pelican case, weighs 65 lbs and is composed of an ICOM HF radio, power supply, antenna tuner, headset and cables.

Seven of the West Gulf Go-Kits have been distributed to the Amateur Radio operators within the TDEM RRTFs and one Go-Kit is held in reserve. The West Gulf Division is the only Division in the ARRL with pre-positioned Go-Kits.

The Texas Amateur Radio EmComm Fund was created due to the need to supply standardized and specialized equipment to the Amateur Radio responders of the Texas Rapid Response Force Task Forces. Each team received one to two West Gulf Go-Kits which were augmented by SCS Pactor III modems provided by the Texas National Guard. After fielding the Go-Kits, it became apparent that significantly more equipment was needed to complete these packages. Recognizing the need to be fully prepared for emergencies, local Amateur Radio clubs and individual members of the Task Forces funded additional items such as laptops, power supplies and antenna items.

Most clubs are already challenged to fund their own projects. There needed to be a better process to fund critical equipment to supplement or complete Amateur Radio EmComm infrastructure projects within Texas. As some projects benefit a much greater area than a local Amateur Radio EmComm organization would serve, it would be unreasonable for local organizations to fund equipment intended to be deployed elsewhere in the State. TAREF was created to raise money to fund these wide-area projects.

TAREF was founded in July 2010 as a 501(c)3 organization (pending) to raise money and fund Amateur Radio emergency communications projects in Texas. TAREF does not support any particular section or organization. To be considered for funding, requests must detail how the result of the project will support Amateur Radio EmComm within the entire State. As the Texas Rapid Response Forces potentially help citizens anywhere in the state that a disaster occurs, TAREF seeks similar projects to support.

TAREF is not an affiliate of the ARRL, nor is it financially supported by the ARRL. To learn more about TAREF or to make a donation to its mission please visit their website at <http://tarefund.org>.

You can also contact TAREF through the following:

Texas Amateur Radio EmComm Fund
P.O. Box 4095
Austin, TX 78765

Tel: (512) 814-8926

Email: treasurer@tarefund.org



2011-2015 General Class Question Pool Released

James Cope, KE5OVE

The Question Pool Committee of the National Conference of Volunteer Examiner Coordinators has released into the public domain, the 2011-2015 General Class, Element 3, Question Pool. This pool becomes effective for all Element 3 examinations to be administered on July 1, 2011 and remains valid until June 30, 2015.

The following link is to the 94-page question pool file in PDF format:
<http://www.ncvec.org/downloads/2011%20General%20Pool.pdf>

Also, Section G7A requires the use of one illustration, a schematic drawing identified as G7-1. This figure for the 2011 pool differs from that of the previous pool and can be found at:
<http://www.ncvec.org/downloads/2011%20G7-1.pdf>

Users of the pool documents are free to correct minor typographical and punctuation errors, including obvious minor omissions. Such corrections must not cause a change in the meaning of a question or any of the proposed answers to the questions. Also, since rule citation references are not part of the question itself, but are included only to assist instructors and students when looking up the applicable section of the rules, errors in the reference identifiers are not considered adequate reason for removal of a question from the pool.

Members of the Question Pool Committee:
Perry Green, WY1O
Mike Maston, N6OPH
Larry Pollock, NB5X
Jim Wiley, KL7CC
Roy Anders, K3RA Chairman,
NCVEC QPC

FROM THE EDITOR'S DESK



What I “normally” like to do is send out the newsletter at least a couple of days prior to what would be the next club meeting. In the case of what will be the **February** issue of the *Wavelength*, that means that I would normally send it out between the 29th and the 31st of January.

However, we have an important meteorological event occurring on February 2nd and it just wouldn't be right to report it a month late or not at all.

Therefore, I won't be sending out the February issue of our newsletter until say, around noon-ish on February 2nd.



Thunderstorm as seen from the International Space Station.

Educational Opportunities



This past month FEMA introduced several new courses to its' independent study program: IS-101.a *Deployment Basics*; IS-102.a *Deployment Basics for FEMA Response Partners*; IS-212 *Introduction to Unified Hazard Mitigation*; IS-395 *FEMA Risk Assessment DataBase*; IS-552 *The Public Works Role in Emergency Management*; and IS-890.a *Introduction to the Interagency Security Committee*.

For a complete list of all the courses available through FEMA, please visit:

<http://training.fema.gov/IS/crslist.asp>



Winter Arrives

...well, kinda sorta

First off, during the late evening hours of December 20th, if you happened to have done any sky-gazing, you might have observed a Moon Halo with two stars within the circumference of the halo and one in the halo itself. Folklore has it, that if you count the number of stars within the halo – in this case three – that is an indication of the number of days until the onset of “*unsettled*” weather.



Once again the folklore proved accurate as we had three days of unremarkable weather followed by a few rain showers on the fourth day.



Roughly two hours later on the 21st, sky watchers were given a total lunar eclipse; the first such total lunar eclipse in almost three years since the one on February 20th, 2008. The eclipse was the first total lunar eclipse to occur on the day of the Northern Winter Solstice since 1638, and only the second in the Common Era.

The next December solstice total lunar eclipse won't be until December 20, 2029.

The New Year will bring two more total lunar eclipses; the first will be on June 15th and the second on December 10th.

Roughly three hours after the total lunar eclipse at right around 4:30 AM, came the Winter Solstice and the first day of winter.

Here in North Central Texas, this first day of winter arrived in true Texas style with record breaking highs across the region. All across our area the 3:00 PM recorded average temperature was 86 degrees, while a reading of 94.6 was unofficially observed in Killeen.

It reminded me of my next-door neighbor, who is always quick to point out that, “If its 105 degrees with 85% humidity and a 20% chance of rain, just remember that means there’s still an 80% chance that it just might snow...”

Because *this is* Texas.”



On a last wintry note...

The Winter 2011 edition of the *Texas Thunderbolt* is now available online at:

<http://www.srh.noaa.gov/images/fwd/pdf/ThunderboltWinter2011.pdf>

Radio Amateurs Supply Best Flooding Information

Cy Ryan, Las Vegas Sun

Amateur radio operators working alongside county officials supplied the best information on last week's Las Vegas-area flooding to the state's emergency operations center, a state official said today.

Frank Siracusa, director of emergency planning for the state, and Public Safety Director Jerry Hafen briefed Gov.-elect Brian Sandoval on emergency preparedness. Sandoval toured the \$12 million emergency operations center, which has a multitude of television sets and two weeks of food and supplies to help local governments in the event of an emergency.

"They (the amateur radio operators) are right on the spot," Siracusa said.



He said amateur radio operators volunteer to come into the center and help gather information during emergencies, adding that Clark County provided "tremendous information" to state officials.

Clark County spokesman Dan Kulin said officials in Carson City received regular updates through e-mails and conference calls about conditions in the county.

"The amateur radio operators are important to all of us. That's why we have them in our emergency operations center," Kulin said. "During this crisis we had emergency management, forestry, police, fire and other officials with the state of Nevada and Clark County working side by side."

The agency is geared to handle man-made or natural disasters. It has also developed a plan for recovery if a nuclear detonation takes place.



Although most of the valley is seeing rain and not snow, the weather is causing problems throughout Southern Nevada. Continuing storms have closed roads throughout the Las Vegas Valley and prompted a second day of closures at the Red Rock Canyon National Conservation Area. NV Energy has said it could take up to 72 hours to restore service in the Mt. Charleston area, which lost power on Tuesday.

The National Weather Service reported flash flooding east of the Hoover Dam on U.S. Highway 93 — an area where heavy rain was expected through much of the afternoon.

A flash flood watch has been in effect for Southern Nevada. Flash floods had been occurring sporadically throughout the region on Wednesday. Although the heavy rains have moved east of the area, weather officials said the runoff from previous rain would likely continue to cause flash flood problems.

Who's Who in Amateur Wireless



L.W. Hatry, 5XV

L.W. Hatry is the fellow who brought radio to Port Arthur, Texas, the town "where the oil and water mix." That he is a radio man, there is no question, for look at the crease in his coiffure, where the headphones fit!

Previous to 1918, his life was uneventful and playing Indian and cowboy were the main methods of relieving the monotony. Also a bicycle. In 1918 the general placidity ended and chaos began, for radio bit him that year. The trusty bank was pried open, the six months savings taken out and eighty cents worth of "No. 14 hard-drawn" was ordered. Thus in an honest manner did station 5XV have its beginning. Since then Mr. Hatry has worked at several radio and electrical stores, sold the bicycle, and joined the A.R.R.L. In 1919 he bought one of the old familiar Audiotrons with the double filament and the easily broken connections. Upon hearing old 8ZG he became determined to build a transmitter for himself. After a lot of spark-coil work which was work and

usually did not work, he tried his hand at an Amrad quenched gap and a half-kilowatt transformer.

When Mr. Hatry became interested in C.W. transmission, "try it and see" was his motto. He is therefore a born experimenter. His experiments with a 5-watt tube transmitter as chronicled in his articles, "How to Make a 5-Watt Tube Reach Out" and "Some C.W. Experiments and Results" in past issues of *QST* contain a wealth of information on this subject that has been invaluable to many amateurs. As a result of these experiments he now has a transmitter that is regularly heard throughout the greater part of the country. His station, transmitting on a 75 meter wave, is one of the best of the chain of A.R.R.L. Broadcasting Stations. Mr. Hatry holds a first grade commercial license and has operated commercial and broadcast land stations.

Regarding his viewpoint on amateur radio, "I hope I will always stay in this delightful trance." he was heard to remark at the Second National A.R.R.L. Convention. Attending that convention was the biggest event in his life, he says.

QST May, 1924



A new lease on life for your inverted dipole.

Antarctica On the Air

The Hygain Antenna has been repaired and KC4USV - McMurdo Station Antarctica is back on the air. 14.243 on Sundays around 0000 GMT is the best time as that is the Hams only day off.

McMurdo Station is a U.S. Antarctic research center located on the southern tip of Ross Island, and is the largest community in Antarctica, capable of supporting up to 1,258 residents.



Emperor Penguins pose near McMurdo

The primary focus of the work done at McMurdo Station is science, but most of the residents (approximately 1,000 in the summer and fewer than 200 in the winter) are not scientists, but station personnel who are there to provide support for operations, logistics, information technology, construction, and maintenance.

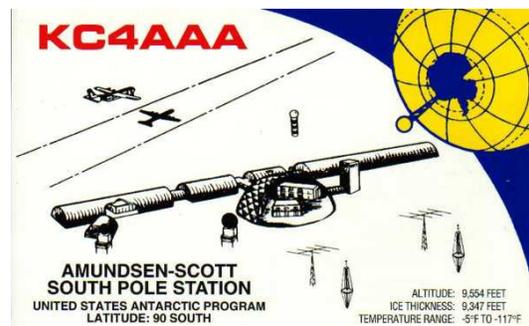


Along with Navy shortwave radio and teletype, the military MARS radio system, and ham radio McMurdo Station receives both Internet and voice communications by satellite through NASA's NPOESS Satellite. A satellite dish at Black Island provides 20Mbit/s Internet connectivity and voice communications. Voice communications are tied into the Raytheon headquarters in Centennial, CO., providing inbound and outbound calls to McMurdo from the U.S.

Also listen up for KC4AAA - the Amundsen–Scott South Pole Station, which is the American scientific research station on the high plateau of Antarctica. This station is located at the southernmost place on the Earth, the Geographic South Pole, at an elevation of 9,301 feet above sea level.

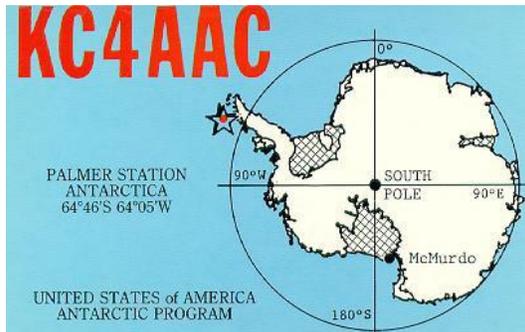
During the summer the station population is typically over 200 with the winter population around 50. Research at the station includes glaciology, geophysics, meteorology, upper atmosphere physics, astronomy, astrophysics, and biomedical studies.

Weather conditions here vary from 7.5 °F and -117 °F with an annual mean of -56 °F.



The low temperature and low moisture content of the polar air, combined with the altitude of over 9,000 ft, causes the air to be far more transparent on some frequencies

than is typical elsewhere, and the months of darkness permit sensitive equipment to run constantly for the Neutrino Observatory or for low-frequency astronomy experiments such as the South Pole Telescope.



Another big voice out of the frozen continent is KC4AAC, Palmer Station. Located on Anverse Island, it is Antarctica's only US station north of the Antarctic Circle.

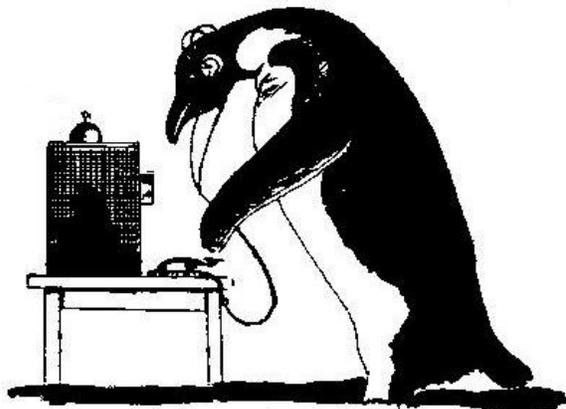
Palmer Station can accommodate up to 46 people, but the normal population is around 40. Palmer is staffed year-round, however, the population drops to between 15 and 20 people for the winter maintenance.

Most of the station's personnel are seasonal employees of the US Antarctic Program's main support contractor, Raytheon Polar Services. The majority of the science research conducted at Palmer Station centers around marine biology. The station also houses year-round monitoring equipment for global seismic, atmospheric and UV monitoring networks. Palmer also hosts a radio receiver that studies lightning over the Western Hemisphere.

For those without HF capabilities, KC4AAC also has an IRLP node of 8838, which some hams have successfully communicated to folks on the ground who were using HT's while conducting research on the island.

Antarctic amateur communications aren't just limited to the land-based research stations on the continent. Two particular ice breakers, the R/V Nathaniel B Palmer and the R/V Laurence M Gould, service many of the bases and summer camps and carry amateur radio operators aboard as well.

Many operators report being able to easily work some of these stations on a mere 100 watts out and a wire dipole.



While this article has focused on just three U.S. Antarctic facilities, it is by no means all-inclusive. There are in fact several bases from several countries, operating on the continent and as with any "rare" DX entity; the trick is patience and the sheer luck of catching them on the air.

Some guidance for whom to listen for, may be found at:

http://en.wikipedia.org/wiki/Amateur_radio_call_signs_of_Antarctica

A Corner Reflector for 70cm

Rick Murray, K6WXA

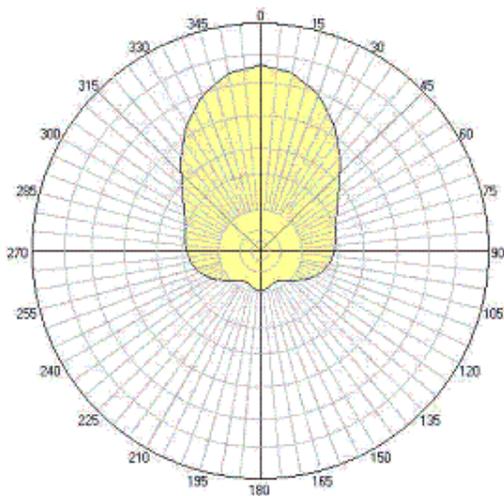
A few years back I stumbled across an advertisement from a major amateur radio antenna distributor, advertising a corner reflector for 70 Centimeters, with an asking price of \$129.00. I had made yagi's, j-poles, dipoles and even a quad, but never a corner reflector. That, and quite frankly, \$129.00 for a UHF antenna I thought was a little ridiculous, and so my project design was born.

The reflector measures a total area of 46" by 13" bent to 90° in the middle and is made from heavy gage aluminum screening; the kind pet owners put over their sliding screen doors. A like material similar to the type of screening that is used in garage or attic vents could be used. To keep its shape, the screen is surrounded by a "U" shaped aluminum frame and bolted at the corners. An additional cross member piece is bolted in place at the top and bottom of the reflector for additional support. The reflector screen is then secured to the support mast, a section of 3/4" PVC pipe, with hose clamps.

The dipole is constructed from elements of 1/2" copper plumbing pipe, tuned through an open "hair-pin" tuning loop and is mounted to a length of 3/4" PVC pipe as the support boom. The boom slides through a 3/4" PVC cross, the interior horizontal stops of which have been milled away to allow the boom to slide all the way through the horizontal opening of the cross. This is done to allow determining the focal point of maximum gain of the antenna while using a field strength meter.

One of the aspects of the advertised antenna was its broad-banded ness, along with its high gain capability. Set up and testing of the completed antenna found it to have 8 Dbd of gain across the entire 70 Centimeter Band, with an unchanging VSWR of 1.3:1 from 440 to 450 MHz. Additionally, the VSWR never exceeded 1.7:1 from 429 MHz, to 468 MHz.

At lower left is the computer predicted, theoretical radiation pattern of the corner reflector. During testing, no lobes coming off the back of the antenna were detected while using a field strength meter. It was also noted that the antenna had a roughly 45° radiation beam-width pattern while turning the antenna towards and away from, the field strength meter.



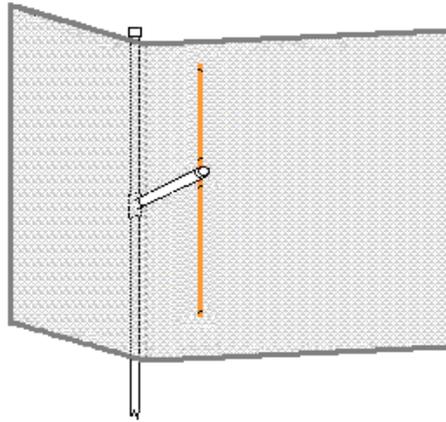
You can go out and purchase one of these antenna's from a reputable dealer for roughly \$129.00, or you can build it yourself, build it to perform just as well as a commercially made model, and you can build it for a fraction of the cost using simple materials readily available through any home improvement store.

As always, the following diagrams illustrate the completed antenna with all measurements indicated for maximum performance and an illustration for tuning the antenna.

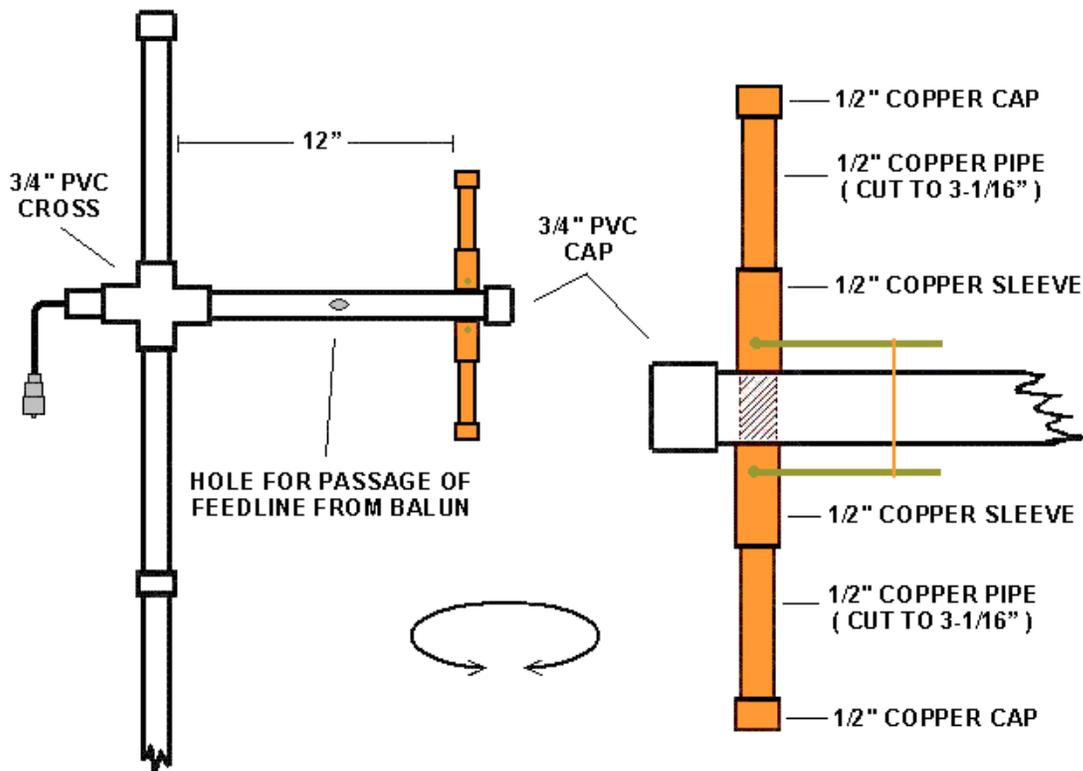
70 Cm Corner Reflector

8 Db Forward Gain

DESIGN BY K6WXA



ALL SUPPORT PIECES ARE OF 3/4" PVC



70 Cm Corner Reflector

