



# The Bullsheet

The Official News Bulletin of  
The Texas DX Society  
An ARRL Affiliated Club

The Texas DX Society, Houston TX K5DX@tdxs.net November 2011

## Cable 101

*Thursday, Nov 10, 7:00 PM, TDXS Meeting Night:* Tracy Gee Center, 3599 Westcenter Dr, Houston. Pre-meeting dinner get-together starts around 5:30/6PM at Pappas BBQ on S. Gessner & Westheimer. Program by Jeffrey Grubbs and Michael Mascucci of Belden Wire and Cable. They will discuss the basics of cable, shielding, why cables fail, and new Belden products. Come and



learn from the experts how to make the best use of coaxial cable. This should be an informative and interesting meeting!

## Editor's Note by Jim N4AL

This month's issue continues the very informative article by Bob W5UQ on preparing a good lightning ground. Bob had a career as an engineer in commercial broadcasting. He has seen big antennas melt and wither from lightning strikes, so this is our opportunity to learn from his unpleasant experiences. From reading this, I know that I have some work to do at my shack.

Thanks, Bob, for offering this article to us. Paul W5PF has agreed to take over the "Member Spotlight" column. Paul served TDXS for many years as Bullsheet editor, so he is a good writer and understands the importance of deadlines. Be nice to Paul, and he may make you famous! Welcome on board, Paul! Please thank the Bull-

sheet authors for the work they do for all of us. And, as always, if you have something you want to share, send it along next month.. Please keep W9DX informed of any changes in your DXCC totals. They are shown on the TDXS web page, and he is diligent about updating them. But he depends to us to keep him informed.

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# The Prez Sez by Doug WB5TKI

As I write this the temperature is in the 80's, propagation is up, 10 meters is open, and ZD7FT is working big pileups. Hey, I said something similar last month! Last weekend during the CQ WW Phone contest 10 meters was alive with strong signals from below 28.400 to above 28.800.

I'm listening to a fellow on AM at 29.010 talking about the tubes in his plate modulator. Now that brings back fond memories. When I was a kid my Dad and I had a surplus TCS transmitter running 75 watts from a pair of 1625s. He had built a plate modulator from another pair of 1625s and boy, did that audio sound good! I still think that there is no better sound than a fully plate modulated AM signal.

At the November meeting we will hold elections for club officers for 2012. If you would like to run for an office you can let Mike K5UO or me know ahead of time, or have someone nominate you from the floor on Thursday. After that we will hold the election for any contested seats.

I was able to lock in all of our second Thursday meeting nights for 2012 at the Tracy Gee Community Center. This will give us the flexibility to be able to choose when during the year to have a dinner meeting or other special meeting. The dinner meetings that we had this year and the joint meeting with BVARC were a nice break and I hope that we continue them next year.

The November meeting will feature Jeffrey Grubbs and Michael Masucci of Belden Cable & Wire. I'm sure that we will find this program interesting and enlightening. As usual, the pre-meeting dinner get-together will start around 5:30 p.m. at Papas BBQ on S. Gessner. The meeting will be at 7:00 p.m. at the Tracy Gee Center. Guests are always welcome, so come on down!

73 es gud dx,

Doug WB5TKI



## From the Bullsheet Archives by Steve W9DX

**Ten years ago this month November 2001:** The monthly meeting was held at the Spaghetti Warehouse in downtown Houston. TDXS President Buzz Jehle N5UR said band conditions during CQWW were phenomenal, and he worked 30 new prefixes - something he wasn't able to do in the WPX contest. An A5 was even coming through on 75m longpath. Ducie Island was about to become the newest DXCC entity, with a major DXpedition scheduled to start November 16<sup>th</sup>. W9DX published a list of equipment for sale from the estate of K5DX. Allen Briener N5XZ was asking for member help in writing their representatives in Congress to address the concerns of the amateur radio community when restrictive covenants ban antennas.

**Twenty-five years ago this month November 1986:** The 1986 CQWW-SSB test was now history. Contest Chairman Steve "Hose" Nace KN5H (now AA7V) reported that the NR5M gang wracked up 5.88M points (3655/159/485) with 15m being the big QSO band, and good long path openings on 10m both mornings. Solar flux was in the mid 90's. Bob Evans N5DU (now K5WA) took top TDXS honors in the 1986 Sweepstakes CW effort with 1029/74. TDXS (K5DX) also took the Number 1 USA spot in the 1986 ARRL Field Day results in the 3A category! DX Chairman Steve

WA9VLI (now W9DX) reported activity from South Georgia (VP8AQT), South Shetlands (HF0POL), and Bhutan (A51PN). KH6JEB/KH7 was still working the masses from Kure Island on 20m SSB. Bill K2TNO wrote a good "how to" article on attaching PL-259 connectors. With all the recent lightning strikes at cigar smoking Chuck K5LZO's (SK) QTH, Steve WA9VLI (now W9DX) presented a cartoon on Chuck's new "cigar lighter". Volume 1, Issue 7 of the Armadillo Press was published with a hilarious article by "Ralph Opurnockity VQ9RRR & XYL's" visit to Houston, getting a local license, operating from the hotel room, the ensuing madness, and the XYL's response to the mayhem. (For a good laugh, visit this article again!)

**Twenty years ago this month November 1991:** President Jim Lane N5DC announced that the monthly meeting would be held at the Sheraton Crown Plaza during the 14<sup>th</sup> Annual Houston Com-vention '91. Sid Leach K5XI was successful in getting Martii Laine OH2BH to attend our DX & Contest forums. Other special guests included UV3AM, UW3AX, W6OAT, K7JA, and W5UN. Bill K2TNO and Mike AA7NK (now K5UO) were in charge of the hospitality suite and the pressure was on to sell raffle tickets. Sharp K5DX was collecting QSL cards for our famous DXCC QSL card display. Bob AK5B (now

N5ET) and Ken KE5IV (now W5AAC) gave reports on the first annual W5-DX Bash at W5KFT's ranch near Austin. Kenny NZ5I mentioned in his contest column about his weekly schedule with Frank Moore KE4GY (SK) who had moved from Houston to Alabama.

**Thirty years ago this month November 1981:** The monthly meeting was held at the Chimney Rock Medical Plaza where CW Sweepstakes tales were swapped, cheap shots taken, and team captains were increasing their bets. President Wes Whiddon N5WW wrote a moving and heartfelt article about stirring up more member participation in club activities and making everything we do a group effort. Certainly worth reading again! Grady Ferguson N5CDO (now W5FU) also wrote an editorial about member participation in various activities of TDXS, what makes us a "cut above", and getting new members more involved. Dave Evans K5SOR, who had moved out of the area, suggested a weekly 80 meter net to give members a chance to keep in touch and rag-chew instead of just the quickie contest exchange.

## TDXS Meeting Notes by Mike K5U0

Date: October 6, 2011

Location: Los Tios Restaurant, Houston

Attendance: Members: 19

Visitors: 7

### TDXS Business:

1. President (Doug, WB5TKI):  
Discussed 2012 officers election. Current officers have agreed to serve during 2012. Bob, W5UQ, Program Chairman asked to have an assistant as he will be travelling a lot next year and will need some help. Keith, NM5G offered and agreed to be his assistant.
2. Membership (Bob, WB5IUU) Not present
3. Repeater (Glen, WB5TUF) Not present

### Program:

Jacek Marczewski, SP5EAQ, who was in Houston for a technical conference gave a presentation on his DXpeditions with a focus on having a competitive signal while travelling light.

Jacek's presentation was timely in that he gave his DXpedition history from the time when Po-

land was a communist nation and no travel was allowed nor was there much in the way of good equipment to be had. Later, after the end of communism, better equipment became available and international travel became available.

He talked about station antenna layout with more than one operator to avoid interference with the radios of twenty years ago and the radios of today.

His Dxpeditons use of verticals is almost exclusive. Extendable "Spiderbeam" fibreglass tubes are available and travel light. Also, a Polish built multiband vertical, the "GP5" designed similar to the Cushcraft "R7".

Jacek has made Dxpeditons to Chatham Island (ZL7/SP5EAQ) along with ZL7/SP9BQJ, ZL7/SP9PT; Fiji Island, 3D2MJ along with 3D2KJ (SP5DRH); Western Kiribati, Tarawa Atoll T30AQ along with T30RH (SP5DRH).

The Chatham Island DXpedition was a very different sort of place. Chatham Island is situated where there is no land mass

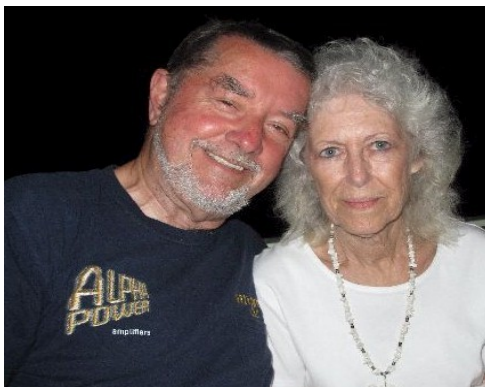
at all at it's latitude all the way around the world causing up to 100 km/hr constant winds.

This contributes to it's DX-rarity in that smaller sailing and power craft do not frequent this area due to the winds.



## Member Spotlight by Paul W5PF

This month's spotlighted member is Cal White, WF5W. Cal is now retired but had an interesting career first in the U.S. Navy and later in the U.S. Customs service. He was first licensed in 1957, and during his travels has held the calls K0IQY, VP9NP, G5EGB, and HL9EP.



While in the Customs Service Cal was assigned to South Texas. There he met his neighbor's daughter and made her Mrs. White. He and Patsy now have been married for over 50 years. He always was a smooth talker.

While in Korea Cal introduced Ten Tec radios to the Korean amateurs and worked closely with the Ten Tec folks in Sevierville, TN. He has had almost every rig Ten Tec has built. His current rig consists of

an Orion II, and a Centurion amplifier. His antennas are a SteppIR 3 el yagi on a 72 foot crank up fold over tower and a Hytower for the low bands. He also has a Kenwood TS480HX in his truck and several QRP rigs from Elecraft, Ten Tec and MFJ.

Since retiring Cal has made several Dxpeditions. He has visited many exotic locations including Yap Island, the Falkland Islands, Malta, San Andres Island, Mountain Home Arkansas, and his favorite, Mozambique.

His main operating interest is CW and DX. He has several keys and paddles from Begali, Bencher and others including a couple military keys. He always participates in Straight Key Night on New Year's Eve.

Cal has obtained the P-100 Oblast Award which he felt was more difficult than making the DXCC honor roll. One of his

favorite QSO's was one with VR6TC, Tom Christian, that lasted about 90 minutes while they discussed Tom's great grandfather Fletcher Christian and the HMS Bounty. Years later Cal had a chance to talk to Tom in person at the Dallas hamfest. Cal also has fond memories of his trip to visit Father Moran 9N1MM at his monastery in Nepal. He has some good stories about Father Moran's driving.



Cal was the TDXS Dxpediton Chairman for several years and put together several successful Dxpeditons for club members. Next time you see him at a meeting tell him that you appreciate his efforts for TDXS. And get him to tell you some of his stories. It won't be hard to get him going.

## From Earth to Ground (Part II) by Bob W5UQ

*(Continued from October issue)*

Now, and *this is very important*: Make sure that all of your other grounds are tied to the ground that is below your shack window. For example, make sure the power line ground, the telephone ground, the cable ground, and any other services that enter your house go to this ground rod. Remember the illustration from last month about measuring voltage between the hanger rods? Run a good size ground wire (like at least a #4 gauge stranded wire) between all of the grounds you have. Or as large a wire as you can. If you only have a #10 wire, then at least run it. It is *not* a good idea to ground to the water piping system. The ground wire can be insulated wire or bare wire. Unless it is buried, I prefer to use insulated wire.

As to the ground rod I told you to put outside your shack window, this ground can be made in various ways. Some people prefer to use 10-foot or 12-foot ground rods, however even 2-foot rods will work in most soils. Here are the rules to follow: If using 10-foot rods, put them 20 feet apart; if using 12-foot rods, put them 24 feet apart; and if using 2 footers, then put them 4 feet apart. See the relationship? Anything closer does not enhance the ground system; it can actually do the opposite. Sending the charge to a ground that is already fully charged and trying to dissipate the charge doesn't work. This concept has worked on many good commercial grounding systems.

Bond the ground rods together with as large a wire as you can. Stranded or solid can be used, and 2-0 stranded wire is preferable. That is *not* a #2 gauge. It is called two aught wire. It's expensive though, so just use the biggest gauge you can. If you need to, you can use a #6 gauge stranded or solid wire, bare or insulated. A good way to make it better is to double up on the wire. Run two wires between the rods. If you can, however it is best to use the 2-inch copper strap between the rods. Another note here. Some believe the insulated wire works better too. If you cannot manage to get 2-inch copper strap, then two aught stranded will work good too. Some will want to run smaller wire, and a #6 wire is better than NO GROUND at all.

However, if you have a tower or vertical antenna, then you are asking for a lightning strike. A strike has so much power to bleed off that the #6 wire may not be large enough to handle the rapid flowing currents. So if you do have a tower, then you will need a good ground system to dissipate the charges picked up by it. Build a good ground system around it too, *and* marry this ground to your ground rod that's just outside your shack.

It is a good idea to spend a little money and buy the strap for entering the house. The strap will fit through your window better than a wire, and you will be happier. The idea is to keep the lightning outside of your house and to give a path for the charges picked up

by your antennas to discharge to ground *before* they go into the house.

Ground everything just before it enters the house. Note that even though even with a *good grounding system*, lightning can still hit so close or be a direct hit, that the wiring in the house can pick up magnetic charges. Surge suppressors help here, but may be destroyed, so they need to be checked regularly.

If you have one or more towers, then build good ground systems around each of them. Remember to *always* marry the ground systems together with as large a wire or copper strap as you can afford. Get a copy of the article by Ed Sutton Jr, KD7PEI,, "Obtaining Good Ground," which appears in the August 2008 issue of *QST*. It is excellent. Then visit W8JI's website at W8JI.com; he has some very good information there about ground systems as well. Tom's concepts on grounding are good ones to follow.

If you have a tower and bring coax feeds and control wires off it into your house, then take the lines all the way to the ground. It is best to even bury them between the tower and the house. Then bring them up to the bulkhead and ground them there. It is also very important to ground the shields of each cable to the tower at least every 50 vertical feet, along with grounds at the top and bottom. Shielded control cable is best to use, with MOV's to bleed the charges off of them.

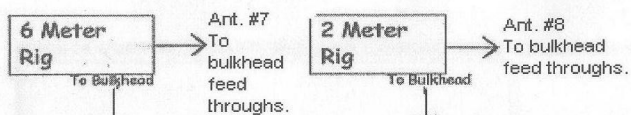
# From Earth to Ground (Part II) by Bob W5UQ

Also, a very important point to remember is that a ground system is always its best when first put in. From then on it will be deteriorating. Go back at least yearly and check and tighten, or make better, all your bonds. Sutton's article (identified above) describes how to renew the connections yearly. He recommends a chemical to help renew bonds and it should be used at least yearly. Also observe proper bonding of metals, which is another subject to cover someday.

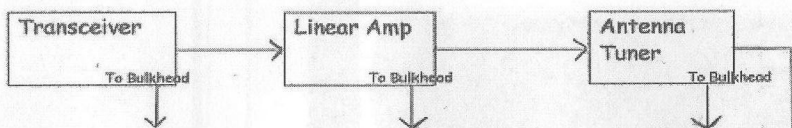
You can put a nice size ground strap behind your desk/rig table and use it as your station ground running equipment to it along its length. Take individual insulated wires from each piece of equipment to this common point. This is important to keep the lightning from going through your rig to get to a ground. Of course, run a good size ground strap from this ground to your nearest outside ground. This ground HAS to be part of the network of grounds you have all tied together. Absolutely DO NOT daisy chain your grounds.

I wish a good 'grounding experience' for everyone. So build a good ground system and the time and money spent here will pay off in the long run. This I know, as I've had years of broadcasting towers that were hit by lightning, and we were replacing some really expensive equipment for weeks later. Some equipment may not fail immediately. It may be weeks or even months before it finally goes out.

Drawn by W5UQ  
Bob Hardie  
Last revised on  
29 December 08



Control cables should go through the bulkhead as well. If shielded cable, ground shield to bulkhead as cable goes through the hole. Or use terminal strips with each wire having an MOV to ground. Ground shield in both cases. Locate on outside part of bulkhead if possible. Make a cover for terminals and MOV's. Preferable to put any surge protectors outside as well. You can put inside as long as they are mounted ON the BULKHEAD. It is preferred to locate BULKHEAD and MAIN GROUND within a few feet of each other. Eg. Put Bulkhead two feet or so above the main ground.



Note:  
Large gauge wire preferred however, #6 or #8 is better than nothing.

Tie to grounds for Phone, Cable & Main Power Boxes or their ground rods. Do the same for any other cables that enter your home.

Use #4 gauge wire. Do not allow wire to touch each other. Individual HOMERUNS.

To Coax Feedthrus Number 1 to 6.

BULKHEAD or STATION GROUND. To rigs.

Antennas

Tower  
Best to Ground coax shields every 50 ft. & at top

Run all cables to bottom of tower, then up to bulkhead.

Coax cable runs up tower.

MAIN GROUND Rod or rods.

Two inch copper strap or better yet, four inch.

See text article for discription of GROUND SYSTEM.

Make bulkhead out of metal such as a copper or galvanized steel plate. Drill holes for feedthroughs and take all grounds to this plate. Make all ground cables from each piece of equipment, phone, cable & Main power boxes at least #4 gauge wire. Make all runs "homeruns". Bulkhead plate is now called the STATION GROUND and the copper ground rod(s) the MAIN GROUND.

If possible, place the bulkhead plate at a window entrance. This is considered the point where lightning stops and hopefully does not go into the house at a damaging potential. The ground rod system is then considered the drain to dissapate the lightning potentials. See text article for ground system.

Note: Not preferred, however, using parallel bare wires of #4 or #6 gauge will work in place of straps.

## Texas DX Society Boardmembers

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<b>VP Membership</b>	<b>Bob Mennell, WB5IUU</b>	<b>bmennell at consolidated.net</b>
<b>VP Programs</b>	<b>Bob Hardie, W5UQ</b>	<b>w5uq at att.net</b>
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<b>CQ WAZ Card Checker</b>	<b>Bob Walworth, N5ET</b>	<b>rwalworth at charter.net</b>

### How to reach US

On the World Wide Web <http://www.tdxs.net> email address: [k5dx@tdxs.net](mailto:k5dx@tdxs.net)

On 2 Meters: 147.96/36 MHz (100 Hz)      On 70cm: 447.00/442.00 MHz (103.5 Hz)

DX Cluster—On Packet: Connect to **K5DX** on 145.71 MHz or telnet via IP address 75.148.198.113

## **TDXS says "HAPPY BIRTHDAY"** to these members with birthdays in November.

Keith Huge - KA5F

Joe Staples - W5ASP

Charles Brues - N5AM

Robert McWhorter - K5PFE

Chuck Dietz - W5PR

John Davis - KN5T

Bill Eckenrode - W5SG

Jim Carmody - NN5O

Bob Chmielewski - N5PJI

Tom Ashworth - N5EA

Bruce Meier - N1LN

Ed Gerber - W5GCX

Chuck Hornburg - K5IX

Don Mayhall - N5DM

Don Daze - N5DD

Matt Thomas - WX5S

Willis "Cookie" Cooke - K5EWJ

Please notify the editor if I have missed any-one.