



THE BULLSHEET

Official New Bulletin of the
Texas DX Society
An ARRL Affiliated Club

2002
Month
Issue

The Texas DX Society, P.O. Box 540291, Houston, TX 77254-0291

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ANNOUNCEMENTS

The monthly Meeting will be Thursday, September 12th. Dinner 6PM at a restaurant TBA. Program after at Tracy Gee Center. See **Meeting Notice** on page 2 and **The Prez Sez** for details.

How to Reach Us:

On the World Wide Web <http://www.tdxx.net>
On 2 Meters: 147.96/36 MHz (100 Hz)
On 70cm: 447.00/442.00 MHz (103.5 Hz)
On Packet: Connect to **K5DX** direct or via **TDXS71**
on 145.71MHz.
email address: k5dx@tdxx.net
TDXS Reflector: To subscribe to the TDXS reflector, go to
<http://moonbounce.n5iq.org/mailman/listinfo/tdxx-list>

The Prez Sez - de Buzz, N5UR

The next 4 meetings will be held at the Tracy Gee Community center at 3599 Westcenter Drive which is one block inside beltway 8 off Richmond south about 2 blocks on the East side. A projection screen has been reserved for our speaker Marty Kirkland of Channel 8 who will be speaking on HDTV. I wish I could join you, but some lawyers in New Orleans have requested the honor of my presence at a deposition that day and I doubt if I will make it back in time, maybe not even until the next day. Our Vice President Madison Jones, W5MJ will handle the meeting in my absence. He should be picking a restaurant in the area at which to meet at 6PM.

Thanks to Joe Staples, W5ASP for arranging the meeting place. Some of you old timers will remember this place as TDXS meetings were held there in the early 90s.

Jim Carmody is working hard to arrange our meeting to thank Outback Steakhouse for their support of our men in uniform. If all works as planned, we will be meeting at noon September 21 at the Outback in the Carillion Center on Westheimer just inside Beltway 8. Details to follow when it is all firmed up.

(Continued on page 7)

TDXS Meeting Notice - Madison W5MJ

The September meeting of TDXS will be held at the Tracy Gee Center this Thursday, September 12, 2002. At 7:00 PM. This month's program is a presentation about digital TV by Marty Kirkland WA5TNM, an old timey TDXSer, now with Channel 8. The Tracy Gee Center is on the east side of Westcenter Street, which runs south from Richmond and is the first street inside Beltway 8 at Richmond.

For the pre-meeting dinner, there are a number of restaurants at the intersection of Westheimer and Gessner. My heart tells me to go to Hooters, but perhaps common sense will prevail by supper time Thursday. Let's talk about it on 147.36+ Thursday afternoon.

September Program - Digital TV is Coming

This month's program will be presented by Marty Kirkland, WB5TNM. Marty is Chief Engineer at KUHT Channel 8.

For the past several years the television industry has been in the process of changing over from the old NTSC analog system to a new and hopefully improved digital one. All the major stations here in Houston have made the change over and are currently simulcasting on their newly assigned digital channel in the UHF portion of the television band. Channel 8 is an exception. They are simulcasting analog on channel 8 and digital on channel 9. These stations will continue to simulcast until the complete industry change over is made in the next few years.

Another component of digital television broadcast signal is High Definition TV, HDTV. You may have seen these sets in the stores. They are long and narrow (16X9) similar to wide screen movie projection. These sets are very expensive and very few programs are being produced at this time in HDTV. I have seen plasma screen TV's hanging on a wall like a picture.

The broadcasters have objected to this move because of the cost involved. The cost is about \$5,000,000.00 to make the conversion. Antennas, towers, transmitters, feed line and studio equipment have to be replaced. Another complaint is that the station receives no more revenue to recoup this cost. The VHF TV (Ch 2- 13) spectrum they now use will be sold at auction by the FCC to the communication industry for billions of dollars.

Come and listen to Marty's very interesting presentation about the Ch 8 change over and what the TV industry is doing about this new digital domain.

Bill Denton W5SB

DX Report by Ken – AB5A

Hello TDXS'ers. Lots of exciting news in the DX world. 10M is coming alive again. The first JA's of the FALL season have been heard in TX. DXCC has announced the new single band award for 30M. A 30M Endorsement for 5BDXCC will also be offered. 30M will now be counted in the DXCC Challenge Award program. This is exciting and long awaited news for the DXCC program

JT, Mongolia While the discussion of 30M is fresh. JT1KAA is active on 30M CW at around 0600utc. For those of you working on your 30M totals, this is a good one. QSL via CBA.

9Q, Democratic Republic of Congo This one threw me for a loop. I thought 9Q was Zaire. Well the operative word is "WAS". Seems a war with 2M deaths only resulted in a name change for this entity. Now there are 2 Congo's: Republic of Congo,(TN) and Democratic Republic of Congo,(9Q). No very original. 9Q1A is active on 6, 10, 15, 17 & 20M. QSL via FY2T

IOTA AN-012 Graham Land West (Palmer Archipelago) Group Skip, KC4AAC has been running huge pile-ups to NA from Palmer Station from 0100-0200utc. QSL to K1IED

IOTA EU-172 Jylland East & Fyn Group Five operators from the South Flanders DX Activity Group will be active as OZ/ON6JUN/P from Aro Island (IOTA EU-172, JY-003 for the Danish Islands Award) from 30 August to 7 September. QSL either direct (P.O. Box 41, 9400 Ninove, Belgium) or via the bureau to ON4AFU.

IOTA EU-093 Alicante/Murcia Province Group DK5IM will activate EU-093 between Sept.9.-Sept.11 on holiday. CW only Operations. 30-10 Meters, Callsign: EA5/DK5IM/P QSL via DARC.

IOTA OC-138 QLD State (Torres Strait) Group VK6LC/P will be active on Thursday Island. QSL via CBA.

OY, Faroe Island IOTA EU-018 While this entity is not rare it is not often heard on RTTY. OY4TN has been printed on RTTY on 15M RTTY around 1600utc. QSL direct

6F, Mexico In recognition of the 70th anniversary of the membership of FMRE (Federacion Mexicana de Radio Experimentadores) in the IARU. Mexican radio amateurs are allowed to use their prefix 6J during DX QSO's. The FMRE club station, XE1LM will be on as 6F1LM

C3 Andorra This is another non-rare entity on heard on RTTY. Archey, C31BO is heard on 20M RTTY & PSK31 around 0700utc & 2000utc for short spurts. I think he avoids big pile-ups by working a few and shutting down before it is no longer fun. QSL direct.

OJ0, Market Reef EU-053 The QLF DX Team will be active from Market Reef from 31 August to 7 September. The callsign will be OJ0LA all band and all modes QSL OJ0LA via LA9VDA, QSL OJ0/LB1NE via CBA, QSL OJ0RJ via OH0RJ

6M Trans Equatorial (Te) As we approach the FALL Equinox, the chances for this mode of propagation increase. HC8GR was worked in EL29 and most of the SE USA on 7 SEP. Look for this to continue.

A Hundred others, DX These are the one that I failed to mention for lack of omniscience. You can help me with these. I most likely to mention stuff I'm chasing so keep me posted of what your chasing and I'll be certain to share it. DX is out there!!! Go get it, wrangle it and tell me about it.

73,
Ken Eckel, AB5A

Mini-80 Meter 4 Square on a City Lot - Bob, K5WA

For years I've tried all kinds of dipoles, verticals and loops to get a decent signal on 80 meters from my city lot, but without much success. While a full wave horizontal loop hung about 40 feet in the trees was my best effort to date, it still didn't seem to do as well as I had hoped and was never competitive in contests, my main focus. I tried the Comtek 80 meter 4 square in a vertical dipole configuration (ends of 4 dipoles attached at top and bottom of tower with center insulators pulled away from the tower in 4 equally spaced directions) off my 60 foot tower, but my tower was too short and there was too much interaction between the 4 square and other antennas. Another failed attempt to radiate well on 80 meters, but these experiences have allowed me to compare and contrast another variation of the 4 square for you by writing this article. This article is not meant to be a detailed technical write up, just some of my observations while building this version of a 4 square that may give other city lot dwellers hope for gain and directivity on 75/80.

Recently, I was fortunate enough to have a spreader arm break on my upper quad and it got me motivated to take everything (high and low quads and a 2 el 40 beam) down, rebuild/re-fiberglass both quads and add a third element to the upper one. The lower quad got 12 and 17 meters added to it as well. I also added 20 feet of tower to make the total tower height 80 feet of Rohn 25G. I really shouldn't go over 60 feet with the amount of land I've got, but hey, as K5NZ says, "if it's worth doing, it's worth over doing". Both quads and 2 element 40 went back up and played like never before, but now what could I do on 80?

Joe, W5ASP, lent me ON4UN's book on low band DXing so I could build an antenna for our ZF1A contest trip. While plowing through the book, I found an adaptation of the 4 square that looked very interesting because it only required a single elevated radial (rather than the 30-120 normally required on the ground) and was built around a shunt fed 160 tower with no interaction. Since I had just shunt fed my new 80 foot "beast" for 160, I thought I'd give it a try.

The "Mini" part of this antenna's description comes from an idea in the Comtek instruction manual that mentions Spi-Ro (<http://www.spiromfg.com/index.html>) "Antenna Shorteners" which allows dipoles and verticals to be 40% shorter than normal. I got 4 pair and used them to make 4 shortened verticals and 4 shortened radials. I put these together with a center insulator. I then used 15 feet of 1¼" PVC pipe as the upper support for each vertical element. ON4UN suggests this length to allow a 20 degree slope, toward the tower, of each vertical when the elevated base of the vertical is 34.5 feet from the tower. Since I used shortened verticals, my angle is a little more than 20 degrees. With the shortened verticals, my top support is only about 65 feet and the bottom is about 15 feet off the ground.

Each of the 4 equally spaced elevated verticals is fed with an electrical quarter wave of 75 ohm coax. I know the drawing shows RG-8, but the description says you get lower wasted power with 75 ohm coax. The quarter wave lines are fed back to the Comtek switching box on the tower. The Comtek box requires a 50 ohm dummy load to absorb mismatched power. This power indicates exactly where the system is tuned best; i.e. when the power is lowest, that is the point where the system has the best match and performance. In order to monitor this power from the shack, I have run coax to a wattmeter in the shack so I can see what is going on at the antenna in addition to the SWR I see on the main feed line to the system. The system shows good operating SWR over the whole band, but the mismatch power tells you where the antennas actually "works". You can leave a 50 ohm dummy load plugged directly into the Comtek box and just periodically check for problems if you don't want to bother running another coax to the shack.

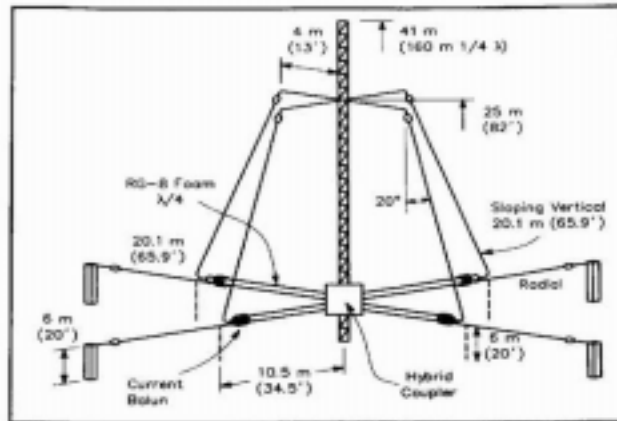


Fig 11-78—Four-square array made of four quarter-wave sloping verticals with a single sloping radial. The slope angle was kept at 20 degrees in order to minimize the horizontal radiation component. This requires two 8-m (26 ft) cross-arms to be mounted on the supporting tower.

ON4UN's book shows the verticals cut for phone (3795khz) and then switching in a tuning stub at the base of each vertical to move it down to CW. He STRESSES: don't tune the vertical element, tune the radial to the right frequency. There are all kinds of issues around mutual coupling to get the tuning right, but I tuned up each vertical with my MFJ-259 as I installed them and it seems to work OK. I haven't yet added the relay controlled CW tuning stubs, but hopefully I'll get that done soon so I can switch between SSB and CW from inside the shack. My only variance (other than shortened elements) from the picture shown is that I had to route my SW and SE radials TOWARD the tower, rather than away from the tower. ON4UN makes a point that with raised radials, the signal is strongest in the direction of the radial. In my case, I'm usually trying to work NE or NW, so having that radial in the "wrong" direction won't hurt me too badly. That was a concession I was willing to live with. If you have the room (or a friendly neighbor) to put the radials in the "right" direction, switching the array to SW and SE will be more dramatic than mine.

So far, I've only gotten to play with this antenna during the August NAQP SSB contest where it felt much stronger than anything I've ever used before on my city lot. Switching between NE and NW often proved to be a 15-20 db change. F/B was quite interesting as well at around 20 db. Remember, this antenna will work best at 30-40 degree take off angles, so you won't see much F/B or F/S if you are working Dallas, but as the signals get closer to being DX distances, the better it seems to play. During some random evening operating I worked an LU, LZ and OK who were calling CQ on 75 for a couple of hours. I was able to check F/B and F/S over that time period and it felt like I was swinging a 2 element beam. Things peaked up where they were supposed to and dipped where they were supposed to. Even the LU's signal peaked at the right spots. I was not expecting this since the SE and SW radials are in the "wrong" direction due to limited lot space. I'm sure his signal would have been better if the radial was right, but it wasn't bad for an August evening. I don't work much 75 SSB, but I sure haven't heard signals that clearly with my other 75/80M antennas. Another advantage of a 4 square is that they are relatively quiet. I may not need a receive antenna even though my next project is the K9AY receiving loops for 160. I'm still looking for comparison checks with you guys that have 4 element 80M quads at 185 feet (W5KU) so I can tell if I'm in the ballpark or not, so give me a call when you're on.

Bob Evans, K5WA

WAE Award Update - Don Daze, N5DD

I discovered the WAE (Worked All Europe) award program as I was collecting QSL's toward the DXCC and WAZ awards and their five band counterparts. WAE is great for me because I like working DX on multiple bands. I have trouble earning the low band counters for the five band awards because of my antenna-challenged QTH.

The WAE award is based on both the number of European countries and the number of band-country points. Each confirmed country counts one point per band, while 80 meter and 160 meter QSO's count two points. There are four levels of WAE, depending on country and band-country point totals. WAE III requires 40 countries and 100 points; WAE II requires 50 countries and 150 points; WAE I requires 60 countries and 200 points; and WAE Top is awarded for 70 countries and 200 points.

The WAE country list includes 72 European entities, mostly from the DXCC list. Variations from the DXCC list include counting Vienna International Center as a separate entity from HB; Bear Island as a separate entity from JW; and only counting the European part of TA.

WAE is administered by the German amateur radio society, DARC. US applicants can submit their cards to Floyd, N5FG, in Mississippi, for checking, then send just the application to Hajo, DJ9MH, in Germany. N5FG was very careful and prompt in handling my cards. I received them back from him two days after I sent them to him. DJ9MH is very responsive to emails, and his English is much better than my German.

Go through your QSL records and see how many countries and band-countries from the WAE list you have already worked.

For more information, including the complete WAE country list and a downloadable spreadsheet, see the DARC Awards web site <http://www.darc.de/referate/dx/fedd.htm>

BALLOTS TO GO IN THE MAIL - Madison W5MJ

Ballots will be in the mail during September on the application of Glenn Anderson WB5TUF for membership. All active members are entitled to vote.

In case there are those among you who have not met Glenn, read on. Glenn is from Richmond, Texas, and is strong into VHF/UHF bands. It will be nice to have an active VHFer in the active club again. We have been without since the departure of the Moroskos from the Houston area. Glenn holds DXCC and has confirmed 136 countries. Glenn works for Fox Communications in a technical capacity, and will be happy to answer all your questions about anything to do with any aspect of electronics, days, nights, and weekends. Glenn is also eager to climb your towers and cut brush to help you get your antenna projects completed. 'Way to go, Glenn!

Work the ISS

I worked Valery yesterday 59+ on a good pass at 2017Z. They are pretty easy to work with 50W and a Ringo or even a 5/8 wave on a car. 145.80 down and 144.49 up for voice. Packet is even easier if you like mail boxes.

QSL to : ARRL HQ., ARISS QSL, 225 Main St., Newington, CT 06111-1494.

Jim/nn5o

Want Ad

For Sale: W5EZ (sk) Estate Sale

Kenwood HF Transceiver TS-940SAT & 500Hz filter — Excellent operationally and cosmetically - \$700

Kenwood SP-940 Speaker with Filters — no blemishes, scratches, dings - \$90

Kenwood MC-85 Microphone - \$90

Heathkit Linear Amplifier SB-220 - \$450

Shipping not included. Contact Dale, KG5U, at 281-484-4465 or kg5u@hal-pc.org

The Prez Sez (Contd.)

Finally, it is time to plan our holiday dinner so as not to interfere with other dinners, football games, or more importantly contests. I suggest the first weekend or second in February. You contesters tell me the best one! My XYL missed our dinner as did I, so I hope we can agree on a date and have a great one this season.

Don't forget to get your cards in for DXCC before the 30th. Bob N5ET can check them for you if they are not over ten years old. He can also check cards for the new 30 meter DXCC that has just been started, as well as a 30 meter endorsement for the 5BDXCC. Remember it costs just as much to submit a P5 and VP6D card as it does another 100, so why not start or add to a new DXCC when you update your CW Mixed or Phone standings? Its fun collecting all that paper!

That's it from here. Hope you have a great meeting. See you all in October.

73 Buzz, N5UR

Editor's Corner

I want to thank all the contributors to this month's Bullsheet. In addition to the usual DX Column by Ken, AB5A, and Bill, W5SB's meeting announcement, Bob Evans, K5WA, has put together a very interesting article on his 80 Meter 4 Square antenna system. Quite a system for one that will fit on a city lot! Thanks to Don Daze, N5DD, for the WAE Award info and to Jim Carmody, NN5O, for the tips on working the ISS. The note from Dale, KG5U, prompts me to remind members that ham radio related want ads are welcome. And let us not forget Prez Buzz, N5UR, and his informative monthly column.

If you have any ideas, articles or other tidbits that will be of interest to the club, please send them in. I will be glad to put them in the Bullsheet.

73, Paul W5PF, Editor