



The Bullsheet

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

The Texas DX Society, Houston TX K5DX@tdxs.net December 2015

**TDXS Meeting Night: Thursday December 10th
7 PM at the [Tracy Gee Center](#), 3599
Westcenter Dr, Houston, TX 77042.**

**John Firey W5ZG will present his annual
program on vintage ham radio. Don't miss it!**

**Pre-meeting dinner get-together usually meets
at Pappa's BBQ on S. Gessner, just south of
Westheimer Rd. Come join us! Visitors are
always welcome.**



Editor's Note by Allen N5XZ

It's December and band conditions are just mediocre. However, this coming weekend is the ARRL 10 meter contest, and from what Mike, N5MT says, band conditions should be pretty good. Due to some unforeseen family matters, I will not be able to participate full time, but maybe I'll get some time to make some contacts. Hope to see you there.

You may have heard that Ten-Tec has been sold again, to a single buyer from what I hear. I hope we can continue to support another American ham radio equipment company, beside Elecraft and Flex.

Sadly, I must report the passing of Rich Strand, KL7RA "Radio Alaska" who's station was active in many, many contests over the years. I had the privilege of working several contests from his station, which is located up on a hill in Kenai. Very sad indeed.

Speaking of great operators, in the recent CQ WW CW contest,

N6MJ operated at ZF2MJ and made 10,223 QSO's and over 17M points in 48 hours! You can watch him on youtube at <https://www.youtube.com/watch?v=no8nGGa99cE>. He was running on both bands...just incredible!

I also want to commend Nizar K0NM for working hard to increase his CW speed. He has been practicing for 3 years and doing a lot of contesting and has got his speed well into 30/35+ WPM. Goes to show you what you can do when you set your mind to it.

On the antenna front here at my QTH, progress is slow getting my 18HT installation finished, but I do have the RFC-600 (same as LMR), connector, radial plate, switching relays, loading coil, etc. ready to go. So it should be soon (relatively, hihi).

DX worked from my station in November includes: 3D2AG, T88ZE, TT8AMO, 9M6XRO, E51EAQ, D4C, BX4AG, 3B8CF,

YJ0BJ, VK9WA, ZD7FT, TF3IG, SV2ASP/A, XT2AW, S9TM, 9J2HN, C92ZO, 3DA0NJ, 9X0NH, SV5BYR, T2TT, SU90IARU, ZD8G, ZD8W, FR/OH2YL, CE0Y/R4WAA, A71EM, B1Z, JY9FC, E2X, TK0C, ZA1WW, 3V8SS, A93JA, 9M6NA, V6A, B4T, JW7QIA, BV1EL, E50A, VR2XAN, BV1EK, HS0ZAR, 9M2YAA, V73NS, 3D2KM. Not too bad of a haul.

The BIG DX news coming up in January is the South Sandwich VP8STI/ South Georgia VP8SGI DXpedition. South Sandwich is the last one I need for Top of the Honor Roll! Go to www.intrepid-dx.com for more information. I have already made a personal donation to the DXpedition.

Don't forget the TDXS Annual Banquet which will be January 16th, 6PM at Brady's Landing again. See tdxs.org for details.

Thanks and 73,
73, Allen N5XZ

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The Prez Sez by Bob, W5UQ

Prez sez for December 2015.

Hi all. Happy Holidays. It's that time of year again. Time to "get off the air some" and spend time with family. Of course all I am hearing is, "it's contest time again"... lots of them. Good luck in balancing them with the time others want to spend with you too.

Well, here is the list for our 2016 Officers as elected at the November meeting.

President: Bob Hardie W5UQ

Vice President of Membership: Keith Dutson, NM5G

Vice President of Programs: Robie Elms, KJ4F

Secretary: Doug Seyler, WB5TKI

Treasurer: Mike Bragassa, K5UO

The committee chairpersons for 2016 are:

Contest Chairman: Willis "Cookie" Cooke, K5EWJ, with Co-Chair: Glenn Anderson, WB5TUF

Field Day Chairman: Mike Davidson, N5MT

DX Chairman: Orville Burg, K5VWW

Repeater Chairman: Glenn Anderson, WB5TUF

Communications Chairman: Al-

len Brier, N5XZ

Webmaster: Scott Patout, K5DD

Outgoing QSL Manager: Scott Patout, K5DD

We really hate to see Steve Smothers, W9DX, leave the Webmaster's chair. He has been so diligent and accurate with it. However, Scott has been doing it for a few months now with Steve's guidance and I hear he is doing a great job. Looking good Scott.

To all of our officers and committee chairs, for volunteering your time to further our club and help run it, A BIG THANK YOU!!!! We need more dedicated hams like you to step up.

We will be having a Board of Directors meeting as soon as I can find a date that will work.

Probably try for a Saturday morning breakfast if we can.

Let me know if you have any other ideas. I will try to make it in December this year, or January 2016. I may have to be in February. Trying to get as many that can attend tends to make it hard to find a Saturday that doesn't conflict with Christmas, parties, etc. It just ain't easy to find one.

Speaking of Saturday. January 16th, Saturday night at 6 PM is NOW our NEW date for our TDXS Annual Banquet. I had to change it due to conflicts. Please put this on your calendar. It will be at Brady's Landing again this year. I could not get the same room. However, the room we are getting looks just as good.

We need for you all to RSVP with advance payment. I have put down a large deposit to guarantee our reservations and payment. FULL payment has to be made at least one week in advance. Like January the 8th. It is required. So please send Mike Bragassa your dinner payment with number of people in your party attending.

Accompaniments:

Chef's Fresh Vegetables
Fresh Baked Rolls and Butter
Coffee and Tea Service

Chef's Dessert:
Cheesecake with Strawberry
Sauce

(Continued)

The Prez Sez by Bob, W5UQ

Other drinks can be bought at "the bar" like last year.

Have a GREAT HOLIDAY SEASON!

Again, PLEASE RSVP to MIKE BRAGASSA at: K5UO@tdxs.net and send him \$34 per person attending.

73,
Bob Hardie W5UQ

Note: If something happens and you can't make it as long as we come out okay on the bill, if you so request, then we may be able to refund your money.

NOTE: If you do not RSVP and want to show up at the last minute, then they said they would prepare for about 3 or 4 extra persons to do that. Plus, usually 2 or 3 don't show up as well. However, when someone pays for this dinner, they usually show up. :-)

LAST NOTE: Please REMEMBER TO PAY YOUR DUES this month. Send to Mike Bragassa at: K5UO@tdxs.net

See you all at the December 10th, 2015 TDXS regular meeting at 7pm. Meet with us at Papa's BBQ at 5:30pm or 6pm... as you can make it.

John Firey is the program this month. It will be interesting as always.

TDXS October 2015 Meeting Minutes by Doug Seyler WB5TKI

TDXS September 2015 Meeting Minutes

Date: November 11, 2015

Location: Hickory Hollow Restaurant, North Houston, TX

Attendance: TDXS Members: Doug WB5TKI, Curt WG5H, Keith NM5G, Mike K5UO, Paul W5PF, Orville K5VWW, Steve W9DX, Lance WD5X, Cookie K5EWJ, Bob W5UQ, Robie AJ4F, Cal WF5W, Mike N5MT, Bill K5WAF, Leslie AD5WB, Gerald K9GEM, Ken KD2KW.

Guests: Lynn Seyler (XYL of WB5TKI), Beth Dutson (XYL of NM5G), Janice Muller (XYL of K9GEM), Kaye Mitchell (XYL of KD2KW), Elva Hardie KG5HIE (XYL of W5UQ)

The November meeting was held at the Hickory Hollow Restaurant in North Houston, near the racetrack. There was an abbreviated business meeting. Items discussed:

- President Bob announced that we have 3 new members. They are Leslie Bartosh AD5WB, Gerald Muller K9GEM, and Ken Mitchell KD2KW.
- Bob recognized Cal White WF5W, who was in attendance for the first time in a great while after some medical challenges.
- Mike N5MT announced that the combined Field Day effort of TDXS, BVARC and ECHO had placed #1 worldwide in 8A. Well done!

The next meeting will be at Tracy Gee Community Center. It will feature our regular December speaker, John Firey W5ZG, with another of his fascinating presentations on vintage radio equipment.

Submitted December 4, 2015

Doug Seyler WB5TKI

TDXS Secretary



DX Report by Orville Burg K5VWW

November was highlighted with some fall season propagation. The peak of activity was during the CQWW CW contest with lots of DX activity. This can be shown by the posted scores. Allen, N5XZ managed to work over 100 countries on 15M and a total of 226 countries on 20M, 15M and 10M. W5PR worked 10M only and managed 92 countries and 31 zones. Robie, AJ4F worked a total of 160 countries. I even managed to work the elusive K5GN! On 80M. There also were **several small DXpeditions which were active and provided some good QSO's for needed countries.**

One major activity was The S79C operation from Coetivy Island in the Seychelles. The dxpediton was the first IOTA operation from the island which is an active open prison and a rehabilitation center for Drug abusers. It is in the Indian Ocean Northeast of Madagascar and is 180 miles from nowhere.

9XØNH from Rwanda is still active as is 56R8IC from Madagascar. There is a SSB operation from Guinea Bissau, J52HF, which will be active until December 10th.

Kenneth Opscar, LA7GIA, is still planning on operating from Equatorial Guinea, 3C, sometime **in the first quarter of 2016, but the dates aren't set. 3C currently ranks as the 29th most needed entity from North America.**

There are several operations planned for December, including 8P9EZ from Barbados, 3D2AG/p from Rotuma, KH0/F4EHC from Mariana Isl., and VK2IAY/9 from Lord Howe Island. Just watch the TDXS DX Cluster for posts of activity.

We will certainly be looking forward to the New Year. Activity will be from Palmyra from January 11th through 26th. The long awaited operation from South Sandwich is planned to commence on January 17th and will be active for 8 days. South Georgia will have the same 14 operators and will follow the South Sandwich .

Mark your calendars for the A3, Tonga, operation by the team of W5MJ, VA7DX, ZS6RJ, VE7KW, K5DU, K5NA, W5PF and W5RF plan to arrive on February 17 staying for 11 days.

Good DXing!



Radiosport Items of Note for November—by Ron Litt K5HM

For a complete list of contests click the link below

<http://www.hornucopia.com/contestcal/contestcal.html>

State QSO Parties – An easy way to try a contest for the first time. If you happen to need these states for WAS, they are a great way to work states to work states you can't easily find on the bands otherwise.

State QSO Parties

No State QSO Parties in December

Mixed Mode Contests

ARRL 10 Meter Contest Dec 12-13

RAC Winter Contest Dec 19

World-Wide Iron Ham Contest Dec 26-27

SSB Contests

UK/EI DX Content, SSB Dec 5-6

WAE DX Contest SSB, Sept 12-13

CW Contests

ARRL 160 Meter Contest Dec 4-6^t

ARRL Rookie Roundup, CW Dec 20

Stew Perry Top Band Contest Dec 26-27

Digital Contests

Ten Meter RTTY Contest Dec 6

Selected Special Event Activities

Pearl Harbor Commemoration – Various Dec 3-12

Christmas, Various Dec 5-26

74th Anniversary of the Civil Air Patrol Dec 5th – NOC

72 Rag Chew New Years Special Event –Dec 31- Jan 2 – K1R, 7.272 KHz

And The Ever Popular . . .

Discovery of Pluto – The planet, not the dog - Dec 5-13, W7P

For details on every Special Event in December, go to

<http://www.arrl.org/special-event-stations>



Quarterly DX News ... by Mike Davidson N5MT

Mike Davidson N5MT

Welcome to the 2015 Winter DX season for another adventure into the world of DX. I hope all of you are ready for the ARRL Ten Meter contest in twelve days. The predicted solar flux for the contest is a flux of 115 with an A index of 8. You can operate both CW and SSB in your search for DX. Band conditions are expected to be below average this year but I do expect more than 135 countries/entities will be spotted on Ten using the packet clusters even with a solar flux of 115.

I introduced you to a website named www.bandconditions.com in my last article. This website made a major change by removing all Ten Meter info. So, I am now recommending using a site called: <http://www.hamqsl.com/solar1.html> !

Several QSO parties this past quarter allowed us to talk into Europe and Africa for the first time in six months. The ten meter QSO parties on CW and Digi were a busts for me as I had a conflict one weekend, and I had an equipment problem and could not send a Digi signal! I worked the 1010 Sprint contest on SSB and my club station got a first place certificate. The CQ DX CW contest at the end of November, had some excitement. Chuck W5PR, operated all weekend, found 92 countries on Ten as the band closed at 0000 UTC each day. Several east coast stations did work 100-118 countries on Ten.

Jeff Cantor **K1ZN**, has a DXing book called "Nifty E-Z Guide to Adventures in DXing". Website: http://www.niftyaccessories.com/DX_book.php.

Congratulations to Bob Allphin **K4UEE** for being awarded the Al Slater G3FXB Memorial Award. Bob was recognized this year as a "practitioner of the art of CW and for leading DXpeditions to rare locations."

Take a close look at the **Upcoming DX** section as you will see what could be first time events for you! **FJ** St. Barthelemy, **FT4** Juan de Nova group, **KP5** Palmyra Island, **VP8** S. Sandwich and Georgia, and **3D2** Rotuma, from Christmas into January 2016.

Upcoming DX & New Activity:

3D2 Figi. Paul **W7IV** and friends on Figi from December 3-10th, unknown call as yet.

3D2 Rotuma. Antoine **3D2AG** will be active from Rotuma from December 20th to January 15, 2016. This is another rare 10-10 spot so try to work him.

4U1 UN Geneva. The **4U1ITU** club station will use a special prefix call 4U0ITU the rest of 2015.

A3 Tonga. A friend Paul **W5PF** from the Houston area, will be on Tonga the last two weeks of February 2016 during the ARRL CW DX contest using call A35T. Website: <http://www.tonga2016.com>.

CR Azores. Norm **W3IZ/CR1IZ** will be on the air from September 9-15th. Mike **K1IU/CU7CRSA** and Brian **N5ZGT** from Sept. 11-14th.

CY9 St Paul Island. In August 2016, a group of ops will fly to St Paul Island for ten days using call sign CY9C. Look for Randy **NOTG** and Will **AA4NC** who are experienced operators.

E5 South Cook Islands. Haru **JA1XGI** will operate from the South Cook Islands as E51XGI from December 2nd-10th. LoTW.

EA8 Canary Islands. Andrea **IK1PMR** will operate from December 9th to January 10th.

FJ Saint Barthelemy. Bill **FJ/K2HVN** will be on the island from December 12-19th which will coincide with the Ten Meter contest. Jay **W9AEB** will be on the island from June 17-29th.

FP St. Pierre & Miquelon. Eric **KV1J**, will return for his tenth time to the island on March 17-29th 2016 mostly SSB and Digi. LoTW.

FR/FT Juan de Nova. A DXpedition to the Indian Ocean island of Juan de Nova will use call sign FT4JA, from March 31 to April 14, 2016. This well organized group goes on a DXpedition once a year. The only 10-10 member is Flo **F5CWU** who is a good operator. Web site: <http://www.JuandeNovaDX.com>.

FS St. Martin. Budd **W3FF**, Paul **KB9AVO**, Stephen **WG0AT** and William **W7ZT**, will be with friends on St Martin from February 2nd-10th on CW, SSB and Digi.

HH Haiti. Dale **N3BNA** will be working on a tower on his next trip to Haiti in December/January.

HP Panama. Jose **HP2AT** will use the special call H32AT all year during 2015.

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Quarterly DX News ... by Mike Davidson N5MT

KH5 Palmyra Atoll. A DXpedition to the 9th ranked most-wanted island group will happen January 11-28th 2016. The 10-10 members going will be: Ralph **KOIR**, Bob **K4UEE**, John **K6MM**, Mike **K9NW**, Glenn **W3OA**, and Hal **W8HC**. Web site: www.Palmyra2016.org. They will operate 5 stations 24/7 all modes all bands.

OZ/5P Denmark. Volker **DJ8VW**, will be on Romo Island from December 6-21st, using call sign 5P8VW on CW and SSB. LoTW.

PY0F Fernando de Noronha. Will **AA4NC**, will be operating portable PY0F/AA4NC from October 17-27th 2016, especially in the CQ DX SSB contest.

VP8S South Sandwich & South Georgia. A DXpedition starting January 17, 2016 on S. Sandwich, using call VP8STI, will be conducted by a team of fourteen operators. They will move to S. Georgia on February 1st using VP8SGI. Look for team leaders Paul **N6PSE** and David **K3LP** plus member Ned Stearns **AA7A**.

VP9 Bermuda. Steve **KU9C/VP9**, will be in Bermuda from December 9-14th.

S9 Sao Tome & Principe. Bruno **HB9BEI** has asked for call sign S9BK and to operate from February 25 to March 25, 2016, on SSB and Digi from Sao Tome.

T32 East Kiribati. Lee **N8LJ/T32LJ** and Stan **AC8W/T32WW**, will be with a group operating from East Kiribati from March 1st-16th, 2016. LoTW.

Miscellaneous Items & Notes:

Propagation forecast: <http://www.solen.info/solar/> and <http://ARRL.org/Propagation>.

More propagation: <http://dx.qsl.net/propagation/>.

DX Calendar: <http://www.dxwatch.com/>.

DX: <http://www.youtube.com/watch?v=k4dJcK-WVRw>.

Propagation: I expect the solar flux to range from 88-117 this next quarter, which is a slight reduction from the past six months. The Winter solstice is on December 21st and propagation will allow signals to reach farther east for the USA but expect to lose Europe by March 2016.

On December 1st the solar flux was 97, the A index was 19 and K index 2. The high solar flux in October was only 125. In the next four months, look for the best conditions: December 8-13th, 2016 January 4-9th, February 1st-5th, 28-29th, March 26-30th. For USA stations, expect a 35% chance of DX to Europe or Asia, for S. America and the S. Pacific, look later in the day or just at sundown. Listen to the beacons from **28.175-28.300 (especially 28.200)** so you will know which direction a beacon is coming from and where the DX path is open to.

DX IS! 73 Mike Davidson N5MT

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A Memorable QSO.... By Ron Litt, K5HM

A Memorable QSO

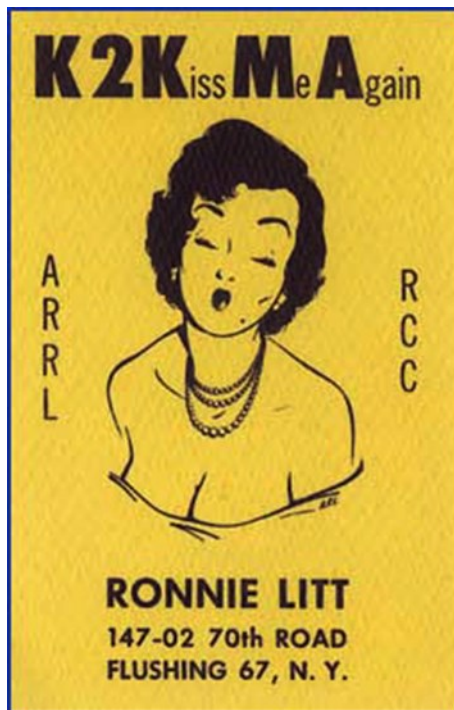
By

Ron Litt, K5HM

1957 - It was a time of uncertainty and fear. A time for college applications, of Sputnik flying overhead, Elvis registering for the draft, Jimmy Hoffa arrested by the FBI, Federal Troops sent to Little Rock and Nikita Khrushchev, the Red Menace in full bloom.

This latest session of the Saturday Night NERD net; the net for guys who couldn't get a date, spent the evening on its two favorite passions; chicks and radio. The comments ranged widely over the two topics; from boobs to tubes; high heels to high antennas. The net was unofficial; so was the frequency, usually around 14,230 KC.

We knocked off early this Saturday. It was around midnight in late September. I wasn't ready to QRT for the night, so I decided to see if I work the late night DX on twenty. .



We ran A3, full carrier, double sideband AM then. The low end of U.S. phone band began at 14200 KC but most of the DX existed below the great divide. In the 50's, the FCC had a rigorous enforcement program.

We worked "split". Sneaking our VFO as close as we dared to the edge of the band, without drawing a pink ticket and looking for a clear frequency. It was an art form and all about timing and luck. .

At night, the whole band edge from 14200 – 14207 was a wall of QRM. The screaming heterodynes on the west coast, running full gallons beating against each other sounded like prehistoric beasts in mating season. .

I'd been a ham for barely three years; a General for two, and the allure of reaching out to foreign places; places I had barely knew was and still is; magnetic.

I found a spot that was momentarily clear, set my VFO on it. Then with cramped fingers on the receiver bandspread knob I tuned slowly down into the stygian darkness, where the great DX lived. Then I heard him – "CQDX, CQDX, VR6TC, VR6TC standing by." Yikes! Before I could react, he called again. "CQDX, CQDX, VR6TC, VR6TC standing by."

A Memorable QSO.... By Ron Litt, K5HM

It's now about 1:30 Sunday morning. Everyone in the house is asleep. I flip from standby to transmit and I call him back from my side of the band. VR6TC, VR6TC, VR6TC, VR6TC, VR6TC, VR6TC, VR6TC, VR6TC, this is K2KMA, K2KMA, K2KMA, K2KMA, K2KMA, K2KMA, K2KMA, K2KMA, K2KMA, K2KMA, Kilowatt 2 Kilowatt Mexico America, Kilowatt 2 Kilowatt Mexico America, Kilowatt 2 Kilowatt Mexico America, Standing by for your call." I had to standby. I was out of breath.

I didn't know where that call sign came from exactly but I knew it was DX and I was not going to let it go. Yes, my technique wasn't exactly A-1 Operator style but I figured that I had zilch going for me, except repetition.

If someone parked on my transmit frequency, he might drown me out but if I repeated things enough, I might be heard when the other guy stopped sending. My Viking II transmitter gave all it had; about 90 watts out. The 2 element Mosely monobander pointed southwest, hopefully skirting the Kalifornia Kilowatts on the west coast. I held my breath.



My mind was hard at work telling me why he would never answer. "He's almost 5700 miles away. He might as well be on Mars. He probably is not listening for any stateside hams. You're not running enough power. You need a kilowatt. He thinks you're a lid anyway." Thanks, the mind was always ready to support me.

And then I heard him. "K2KMA, this is VR6TC. You don't have to repeat so much, I can hear you 57." It was if the Red Sea had parted. I took my trusty #2 Dixon Ticonderoga pencil and wrote the time in the log.

"Roger OM, the handle (we used "handle" then before it was usurped by the CB crowd) here is RON, Roger, Oboe, Nan. You're 57 too OM." And I turned it back, muttering a major prayer under my breath.

BAM! He comes right back. Roger Ron, nice to meet you. The handle here is Tom and the QTH is Pitcairn. My rig is a Heathkit DX-35 running 50 watts and an HQ-120-X. Back to you, K2KMA from VR6TC

Wait a minute! Did he say Pitcairn??? As in Island??? While he's talking, I grab my copy of the Callbook and look it up. On the next to the last page, there he was: Tom Christian, Pitcairn Island, and P.O. Box 1, South Pacific Ocean!



A Memorable QSO.... By Ron Litt, K5HM

On the next exchange, I describe my rig and then casually, I ask him if he is related to Fletcher. “Yes”, he says. “He was my great-great-great-grandfather. K2KMA from VR6TC.

I don’t know what to say at that point. Somehow, *Fine Business Tom*, did not quite do it. How can you make casual conversation about radio gear? I am talking to a piece of living history.

I fumbled through the next exchange trying to find appropriate things to say like, “How’s the fishing, Tom? I saw the movie and I knew that Bligh was trouble from the start.” Tom saved me by simply saying that he enjoyed the contact and wished me 73.

I was spent, the whole QSO lasted a few minutes but the adrenalin rush had done me in. I completed the log entry and went to bed.

Next morning at breakfast, I mentioned the contact to my parents. “That’s nice dear”, Mom said from her battle station at the stove.” Nice? That’s it? Mom’s knowledge of history was limited to what she read in Life Magazine. The old man said nothing, his nose was buried in the Sunday New York Times.

It didn’t matter. I knew. I was hooked. This ham radio thing really worked.

Tom and I traded QSL cards and a couple of months passed before Tom’s arrived. I still have it on the wall in my shack. It survived two divorces and a flooded basement.

Sadly, I never got to meet Tom in person. He was born in 1935 only six years before me. I knew that he made a couple of trips stateside but I dropped out of the hobby in the 70’s and did not get back to it until 2009. Tom passed away in 2013. According to a story in the Auckland Star-Times, “Tom Christian — along with the late King Hussein of Jordan — was the most popular contact in the ham radio world.”



If You Can Have Only One Antenna.... By Bill Crowell N4HPG

My journey into antenna design started in 2005 when I relocated to my wife's condo. This was quite a change from large suburban lots with a tower, beam and wire antennas.

Since we were on the top floor, we had access to the attic so I began to experiment with antennas that could be inside the attic. Compounding the limited space problem was the fact that the condo was situated between two major hospitals and the noise level was at least 20dB over S9.

Searching through the literature, I came across the TTFD antenna. TTFD or T2FD stands for Tilted Terminated Folded Dipole. I had seen only passing references to this antenna in the advertisement section of QST as B&W has sold them for many years and continues to sell them to government and military customers (at the new bargain price of \$825).

I ordered a 40m version from B&W and squeezed it into the attic and was QRV at low power. The noise level was about S8-S9 which was much better than other wire antennas. As an added bonus, a tuner was not needed.

In 2013, I relocated to Pearland, TX and found a house in a non-covenant community and planned to erect a tower. Unfortunately, the City of Pearland will not issue a building permit and I do not have funds to hire a lawyer. So, I deployed my B&W TTFD using a pine tree on one end and a section of military mast on the other.

Having used the B&W unit for over a year, I wanted to be able to run higher power and work DX. I found the B&W unit lacking in receive sensitivity and it was not rated for 1kW. Using my trusty band saw, I found out why. The 12:1 balun is made of 6 laminated iron bars and some magnet wire:

I wanted to build something better. Better receive signal and higher power handling.

There is very little in the way of thorough investigation into this antenna in the literature. The only book where I found a reference is in "Practical Wire Antennas" by Poole and published by RSGB. Other articles in QST and on the InterWeb are mostly restatements of prior articles with little new information or in-depth analysis. And there is an abundance of opinions against the design by self-proclaimed experts. Compounding this is the analysis of the circuit by EzNEC done by Cebik and others does not hold up to empirical measurement.

I respectfully submit that if a computer model does not hold up to empirical measurement, then the model is in question and must be revised. I would also submit that those who wish to speak authoritatively on a subject must first actually conduct experiments on which to base their opinions.

The TTFD is, in some ways, similar to a traditional folded dipole. The primary benefit of a folded dipole is noise rejection due to the fact that differential currents are in-play. Impressed noise tends to be in the common mode and thus cancels at the center of the antenna and center of the matching circuit. Folded dipoles tend to have broader bandwidth than standard dipoles and much has been written about them. Folded dipoles also have higher impedances than traditional dipoles. A standard dipole's Z_0 is about 72Ω which makes a 1.5:1 match to 50Ω coaxial cable. A standard, folded dipole's Z_0 is about 300Ω and thus necessitates a 6:1 balun to match to coax.



If You Can Have Only One Antenna.... By Bill Crowell N4HPG

In the days before solid state, hams didn't worry so much about SWR and often used impedances much higher than 50Ω. How 50Ω became the standard, I would refer the reader to Wikipedia. In the past, it is common to see 450Ω, 600Ω and even 800Ω designs. My research has indicated that 600Ω is the best impedance and that is the design that I'm presently testing in order to validate this hypothesis.

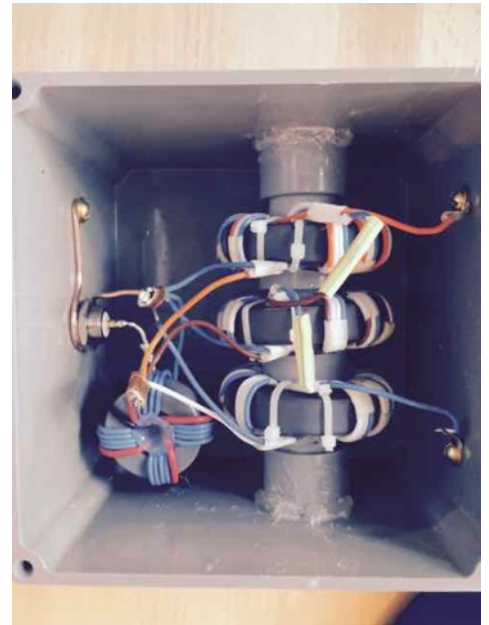
A standard, folded dipole is dimensioned for the desired band. At this point, the designs diverge. The TTFD makes use of a terminating resistor in the center of the top wire opposite the feed point. This is a non-inductive resistor and is the source of the most angst by those who rail against the TTFD on the InterWeb. Some feel a deep-seated emotional antipathy because of the resistor. For me, I just see the power theorem in action.

The result is an antenna that does not operate in the standing wave mode and that does not require a tuner.

There is no law that states that antennas must use standing waves as their method of operation. The Discone antenna certainly does not and neither does the log-periodic.

With the design impedance set to 600Ω, I needed to fashion a 12:1 balun. This is a very difficult undertaking when wanting to use transmission-line techniques

Starting from the left is the N-Female connector. This goes into a 1.5:1 UNUN to step up 50 to 75Ω. That feeds into a 9:1 Guanella and then out to the brass screws. The wire is 16AWG silver/Teflon except for the main winding on the UNUN (the red wire) which is 14AWG silver Teflon. For those who like brain-teasers, the UNUN is the design in figure 7-8 of Sevick's book. It's by a clever winding method that I was able to make the 4 transmission lines out of 1 spiral of wire and didn't need to cut and re-solder them. The UNUN's ferrite is K material and the Guanella's are 61 material.



The next challenge was constructing a terminating resistor capable of substantial heat dissipation. This is out of an abundance of caution as the amount of mismatch handled by the terminator is unknown. I fashioned the terminator out of 7 100Ω thick film resistors mounted on an aluminum bar. The bar is 2" wide and 1/8" thick. I drilled and tapped for M3 screws.

The resistors are encapsulated in epoxy and the termination bar is fastened to dogbone insulators.



If You Can Have Only One Antenna.... By Bill Crowell N4HPG

The finished antenna is shown here:



The top is at 50' with mast fastened to a tree. The feedpoint is 600 Ω ladder line that comes down from the antenna to the balun fastened to the railing on my deck. From there LMR-400 goes to the shack.

The spreaders for both the radiator and the ladder line are made from 5/16" fiberglass dowel (tomato stakes) drilled and glued. The radiator and the feedline is constructed of 2 sections of 14AWG MTW wire.

I've been using this antenna for a few weeks now and it is working very well. The VSWR is 2:1 or better across virtually all bands from 160m to 10m. Experimentation is ongoing and a 700 Ω terminator appears to be optimal for VSWR purposes. Another adjustment will be the addition of a feedline choke to the balun.

Noise on 40m is usually S3 and I've regularly run 700W using an AL-80B. I worked the VK9 on 15m and 40m CW as well as regional stations on 40m and 75m phone. I can change bands quickly because there's no tuner needed.

So, if you can have 1 and only 1 HF antenna, in my opinion, this one is hard to beat. It fits on my 65' x 100' lot.



If I Could Write The License Exam Part 2 By Ron Litt K5HM

This month's exam question are courtesy of Bill Garfield, WB9FOP

Question 1: What is a battery?

- A tree where bats live
- A park in New York City
- A tactical unit of military artillery
- A device for storing electrical energy

Question 2: How many syllables are in the word "LINEAR"?

- A: 3
- B: 2
- C: 1
- D: All of the above

Question 3: What is the correct pronunciation of the word "LINEAR"?

- A. Lin-ee-er
- B. Leen-yur
- C. Lain-yur
- D. None of the above

Question 4: What is an AL-811?

- The driver stage for a pair of 4-1000's
- A type of semi-automatic assault rifle
- A special antenna designed for 11 meter operation
- A 600-watt linear amplifier that you can overdrive and change transformer taps on to achieve close to 1000w output for several seconds

Help improve the FCC exam pool by submitting your own questions to K5HM@arrl.net

Reporting from the Dark Side,
Ron Litt, K5HM



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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 December

Please notify the Editor if I have missed anyone

Mike Young W5RRX
Sid Leach K5XI
Buzz Loeschman NI5DX