



L.A.R.A. Newsletter March 2017

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IN THIS ISSUE

From the Prez

Spring is already here and we have our first community service event – St. Patrick’s Day at Wayne Ferguson Plaza on Saturday March 18, 3:30 until 8:30 PM. We need folks to sign up, bring your HT’s out, and man some gates. These events can be fun so come on out; it would be great to see some new faces helping out. Sign up [here](#).

I would like to challenge each one of you to invite a friend to the business meeting, a day in the park, or any other event. Your guest does not have to be a Ham.

It’s always good to see guys and gals at breakfast it would be great to see more folks coming back to breakfast which is another great place to bring a friend.

In a few months we should be back to teaching classes and testing new hams.

Do forget nominations for officers are due on March 22 so please get them in. See the following article.

March Business Meeting at Central Fire Station, 188 N. Valley Pkwy. Come on out; let’s fill the room.

Officer Nominations

In accordance with the Lewisville Amateur Radio Association (LARA) bylaws, article XV, it’s time once again for the annual election of club officers to serve for the period beginning May 2017 thru April 2018.

Officer nominations will be accepted from current membership of LARA via submittal of a nomination form from March 1, 2017 thru March 22, 2017 (11:59 PM local time) for six positions serving in the capacity of President, Vice President, Treasurer, Secretary, Technical Director, and Operations Director. These are responsible positions, these individuals are charged with seeing that the work of the organization (membership) is carried out.

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1093 W Main St, Lewisville, TX 75067
 Phone: (972) 219-7333

10 percent discount to LARA members

Officer Nominations (continued)

You may nominate individuals for all six positions or as few as one if that is your desire. At a later time, as long as the nomination window is still open, you can elect to fill out and submit additional nomination forms.

Following closure of the nomination period all club members will receive an election ballot with the names nominated for each position. You will have the opportunity to vote for the candidate of your choice for each office in which a nomination was received. Final results will be reported at LARA April 2017 club meeting.

Click [here](#) for nomination form. Follow the instructions inside, and submit.

Information and Tips

By: Jim, WB8YWA

Why I value my monitor scope.

Years ago (1975) when I was just starting into this wonderful world of Ham Radio I didn't have much money to put into it. So I would go to ham fests, find ham gear that was cheap but a lot of times not working, buy it, take it home, fix it, clean it and then either keep it for a while or take it back to next ham fest and sell it for some profit. After a few years of doing this I built up a good reputation that what I sold was what I said it was and with the profit money built up my ham radio station.

During this time I acquired a Model 15 RTTY Teletype machine and built a homebrew terminal unit for it. To tune in a RTTY signal easy, a scope was needed to view the mark and space tones of the RTTY signal. Remember this was before digital computers and sound cards. So at the next ham fest I purchased a non-working Heath monitor scope. After fixing the scope I realized it was also very valuable to watch the transmit signal and have not been without a scope on my home station since.

Types of scopes:

Monitor Scopes:

1. Heathkit HO-10, SB610 and last one they made SB-614
2. Yaesu YO-100, YO-101 and YO-300 & YO301
3. Kenwood SM-220, SM-230

These scopes will allow the monitoring of the IF (Intermittent Frequency) along with monitoring your transmitted signal. For monitoring your IF the radios need to match the monitor of the radio, (Kenwood with Kenwood radio etc.). Thus allowing you to see the waveform of the station you are receiving. This is cool and can be useful, but unless station is a close friend or is so bad it is distorted it is best not to say anything. It is like telling someone they have bad breath, you do it with caution.

Monitoring your transmit signal is as simple as running your signal through the scope like a watt meter. Most scopes have

connections for your exciter (transmitter) along with a connection for your linear amplifier. When both are hooked up you can see a trapezoid waveform showing that the amplifier is tuned linear. Again this is not needed if you become familiar with your transmitted waveform.

Test bench Oscilloscope:

1. Can be any brand as long as it is 20 MHz or higher.
2. They can be expensive (more than monitor scope above).
3. They can be larger in size making it hard to put on your station desk.
4. They can also be used as a test scope making it more valuable to you.
5. You need to make up a way to obtain your transmit signal out of the coax.
 - a. A simple coax T connector with a banana plug into center connector with a .01 1KV disc capacitor and hooking your 10X probe to the other end of the capacitor along with attaching the ground lead to the shield of the connector will accomplish this.
6. They have full solid state scopes now that are small and very nice, but again can be pricey.

Now you have your scope how do you use it? This is based upon monitoring your own signal. By using it you will learn what to look for. Here is a list of things I watch:

1. SSB
 - a. I key my radio to transmit, without talking and look to make sure background noise is not present. Trace of scope will be flat line (near flat) without any peaks. This is very important for having clean audio while transmitting. Yes, a watt meter can also be used, but a scope will show a lot lower signal than a watt meter will detect.
 - b. When talking I make sure that my peaks in the waveform are not flat topping (which means it is distorted). Caused by having mic settings too high or too much compression. NOTE: I always talk close to my mic which allows me to adjust mic gain down thus dropping off background noise.
 - c. Another benefit for having a scope is it is much faster acting than a wattmeter and shows peaks instantly.
 - d. When tuning your amplifier it will show harmonics if present. You will see two shades of brightness in the waveform. Harmonics are multiples of frequency and the older tunable amps can be adjusted for a harmonic and not the desired frequency. This is hard on your equipment not to mention it is illegal.

(Continued on next page)

(Information and Tips Continued)

2. AM
 - a. All of the above except with no audio you will only see the carrier wave.
 - b. When speaking you will see your audio on the carrier and can adjust for 100% modulation, which means you are using 100% of the carrier to transmit your audio.
3. CW
 - a. You can see the wave shape of your CW signal making sure it is a sharp form and does not have roll off or chirps. Again by watching you will become familiar with how the wave should look.
4. Digital
 - a. Each mode has a different type wave form. I check for any harmonics.
 - b. Scope will detect background noise if you are using an open mic (meaning it is not wired and can hear other sounds).

A monitor scope is not needed by any means and by careful adjustments and watching your own meters on the radio (ALC, Compression and Power Out) you can have a great signal with clean audio, but the use of a monitor scope can become a very important item in your shack and when you become familiar with it you will feel lost without it.

Various Tidbits

The city is looking for about 6 volunteers to be gatekeepers at the St. Paddy's Day event on Saturday March 18th, from 3:30-8:30. (Just like we did for KTA last spring) Gatekeepers would just be required to make sure that no one leaves the venue with alcohol. This is one of the events we do to pay back the city for our free booths at other events, so it would be great if we could fill the 6 spots they are asking for. Click [here](#) to sign up.

Texas State Parks on the Air

The Lake Area Amateur Radio Klub (K5LRK) is organizing the Texas State Parks on the Air event this year. The event will take place on April 8-9 2017.

The event website is <http://tspota.org>. On the website can be found the rules and list of Texas State Parks designators.

Special Events

The Navajo Code Talker Special Event
August 13 – 16, 2017
Check out N7C on QRZ.com

Sunday, April 16, Rookie Roundup (SSB) is a contest aimed at Amateurs licensed for three years or less. This six-hour event is

held three times per year (April, August, and December). Rookies can contact anybody, while "Old Timers" make contact with only Rookies. Mentoring is a big part of this event! If you qualify and would like to participate but are not equipped contact the Newsletter Editor and we'll get you setup with a station and mentor. Check the ARRL web site [here](#) for more info.

Upcoming Events

Go to the L.A.R.A. web site – [click here](#)
Scroll down on the home page to reach the Upcoming Events Calendar



Have you been cleaning out your shack and have some items you would like to sell? Post them here and give other club members the opportunity to enjoy your goodies. Send the description, price and contact info to rfavcon@verizon.net.

DX Corner

CQ CQ DX de "Kilo Fox 5 Oscar Mike Hotel"

A Busy Weekend

What kind of equipment do you need to make DX contacts? Some might say a powerful radio, an amplifier, various monitoring instrumentation, a tall tower with numerous antenna configurations at varying heights and monitoring software that helps find activity on the bands. A couple of weeks ago I found that not to be true.

My "shack" is located on the corner of my office desk and consists of an ICOM, IC-746PRO (100 watts max), and a Heil Pro Set Elite headset. The antenna situation consists of an 82 foot long wire running from the tree at the front of my property, over the house to a tree on the back of the property. At its highest point it is 35-40 feet above ground. This wire antenna is oriented east/west. There is also a Hustler 5-BTV vertical antenna on the north side of the house which caused some funny looks from the new neighbor who just moved in next door.

The International DX (phone) Contest took place on the weekend of March 4-5 (48 hours in length). I'm not a "contester" by any stretch of the imagination but decided that after breakfast on Saturday I would see if I couldn't make a few contacts. It didn't take long to get hooked. The bands were hopping with traffic and it didn't take long to get my first DX contact. What started out to be a short trial ended up as a daylong project even to the point that when the XYL called me for dinner I didn't hear her with the headset on and trying to fight through various pile ups for the contacts. Yep, dinner was cold by the time she finally got my attention but, it was worth it in my opinion.

Following our Sunday morning activities I was back on the air again until the contest was over at 2400 UTC. How did I finish up? 20 countries and 27 contacts made on 15 or 20 meters, all on 100 watts or less. Following is the list of countries contacted:

Antigua and Barbuda
Aruba
Bahamas
Bonaire
Brazil (2)
Canada (3)
Cayman Islands
Costa Rica
Cuba
Curacao (2)
Dominican Republic
French Guiana
Hawaii (3)
Italy
Jamaica (2)
Martinique
Montserrat
Puerto Rico
U. S. Virgin Islands
Uruguay

So, with all this said, do you really need a lot of equipment and a big antenna farm? In my opinion, absolutely not. BTW, all of the above contacts were made on the long wire antenna except for the Italy and Bahamas which were on the vertical. It can be done relatively cheaply as long as you have a couple of good friends that were willing to help erect and tune the antennas – couldn't have done it without them.

Cross Word Puzzle of the Month

All puzzles are published with the permission of the author.

Answers on latter page.

by Chris Codella, W2PA

2/9/2008

Aerial View

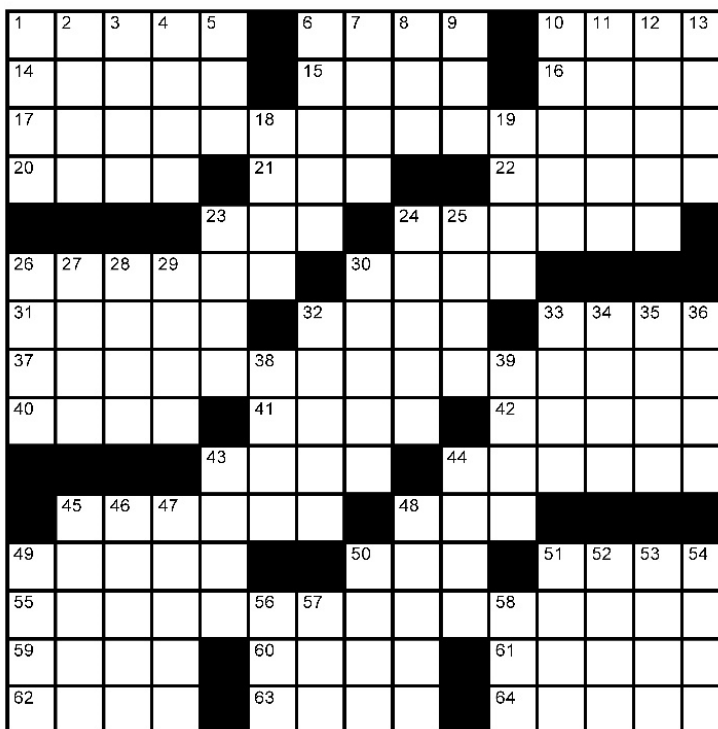
Across

1. 10 kilogauss
 6. UA parliament
 10. Kludge
 14. Kind of socket or tube
 15. Ancient OA-lander
 16. Competent
 17. Improbable dream
 VIIF/UIIF antenna
 20. Achy, as after an antenna project
 21. Transceiver knob label
 22. Part connections
 23. Ckt.between IF and AF
 24. Suffix with bio- or proto-
 26. Loud speaker
 30. Eye part
 31. US hams do it every 10 years, usually
 32. "That's great, friend", on CW
 33. Be next to
 37. What rural hams fancy themselves?
 40. Feedline badness
 41. Baseball stats
 42. Symbol in coax specs
 43. Go out of your cell area
 44. Unidirectional dipole
 45. Where all good signals go, eventually?
 48. Late summer contest
 49. Tribander parts
 50. Kind of FET
 51. They have replaced tuning dials in modern rigs, often.
 55. Improbable dream HF antenna
 59. K, on phone
 60. Elser-Mathes Cup target
 61. Look of disdain
 62. One meaning of V
 63. Switch type
 64. They deliver power

Down

1. Narrowest tower sections, often
 2. EME signal
 3. Sirius, for one
 4. Emit coherent light
 5. Draft pick
 6. One's self, on CW
 7. Ampere, for one
 8. Lots and lots of Hz in the old days
 9. Word to a doctor
 10. Bugs, Roger, Peter, et. al.
 11. Garfield's middle name
 12. Copper often does it
 13. Enables, as a transmitter
 18. Kind of hunter, in radio
 19. Word of regret
 23. "See you ____ the log"
 24. Univ. teachers
 25. Kilo follower
 26. Not written
 27. W7-land city
 28. What this puzzle is about, for short
 29. Connectors named for their shape
 30. Italian yagi?
 32. One C per V
 33. BBs, e.g.
 34. E, to a non-ham?
 35. Encourage
 36. Bygone UA leader
 38. It glows amber
 39. Part
 43. Sometimes causes antenna failure

44. Window part, where the feedline might come in
 45. Group of trees
 46. 5 wpm, 70 mph, etc.
 47. Eyeball benders
 48. Least good
 49. Gait faster than a walk
 50. QSLs often go via them (abbr.)
 51. Lead-ins to P
 52. Future ham, sometimes
 53. Became SK
 54. Switching semiconductors
 56. RX spec.
 57. Break, during a long contest, say
 58. Sig. src.



Technical Director's Corner

By: Erick, KOOM

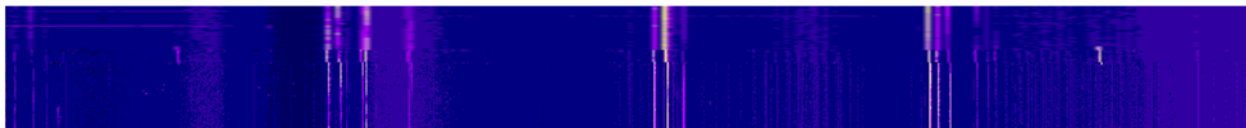
ROS Digital Mode Part II

Just for review: ROS uses multiple tones over either a 2 kHz or 500Hz bandwidth; the software has hardcoded information for each mode and bandwidth. ROS had three speeds, like some old cars, 16 baud, 8 baud, and 4 baud (remember those old computer modems?). There are some other special modes it has as well: 7db/100Hz for 136 and 502 kHz and 80m, an 'EME' mode for use on 2m and some of the other bands. It uses these modes for weak signal work as it has, according to the specs and the numbers, the capability to decode signals that have a signal to noise ratio (SNR) of -35dB...much lower than WSPR.

Also, remember that our side of the world has not really made up its mind about all the rules for this type of communication. ROS has a very unique sound to it; I describe it as "old Sci-Fi movie computer" (see video below to hear what I mean). It has a very old school sound to it and is, in my opinion, very LOUD. But, being loud is helpful to distinguish it from other sounds like JT65 and other such digital sounds out on the bands.

I'm sure you have been sitting on the edge of your seat waiting for the link to the software for this new digital mode. Well, you're going to need the following to get started; your HF radio, a PC, and a basic PC sound card interface like a "RigBlaster" or "SignalLink" device. Then you need to download the software from this link (<https://rosmodem.wordpress.com/>). The author of the website EA5HVK has some really interesting things on his site, one of which was that he apparently went to the site where they filmed "The Good, The Bad, and The Ugly". HOW FRIGGIN COOL IS THAT! Well, back to radio stuff; if you download the program from his site you want to only choose the ones with the British flag, (unless you understand Portuguese). Please, read all the documentation first. This is not something you can just move through without spending some time. It's not a lot of time but, I would advise you to read it none the less. You can get that guide here: (http://www.aripv.it/files/ROS_User-s_Guide_2.0_-English-.pdf).

Just as a side note if you don't have some of the above you can check this site out. The University of Twente has a Software Defined Radio you can use via the Internet, located here: (<http://websdr.ewi.utwente.nl:8901/>)

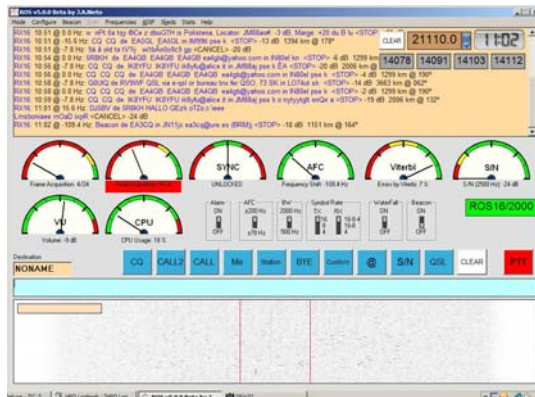


I played with their online radio and it was really cool what you can do remotely.

Another page I found which will also be helpful in identifying signals it located at this link (<http://www.sigidwiki.com/wiki/ROS>). It has some really cool graphics and information going into depth of ROS and its signal properties. This site has this frequency list as well, but for a quick reference here it is:

The HF frequencies currently used for ROS [v7-4-0] are: 1.840 MHz, 3.558 MHz, 5.367 MHz, 7.046 MHz, 10.130 MHz, 14.103 MHz, 18.108 MHz, 21.122 MHz, 24.192 MHz, 27.635 MHz [Citizens Band], 28.140 MHz, 50.245 MHz, and 144.980 MHz.

Here is a sample of what the software main screen will look like:



One question you're probably asking yourself is, can I use this with other pieces of software running as well? That depends on a whole lot of variables that are too numerous to discuss here. I will say that you have been granted the power and "*you're in charge of that research*". I have tried it with some and it seems to play nice and others not so much. So, your findings might be a bit different than mine. I have not tried to run them each in a virtual box setting and then share the digital signal across all the individual sessions. Partly due to the fact that you are going to have a lot of delay and that might mess up the timing of the decoding and transmitting. Could you make it work? Well, maybe, but, you're going to have to have a really fast processor and LOTS of ram to make it happen. Just my 2 cents.

Links and Good Things:

Brian Walker has a good tutorial page located here: <http://www.gsl.net/g0hdi/ROS.htm> and he speaks English. His examples are really good and he guides you through all the pitfalls you can get caught up in.

For some videos on the usage of ROS I have the following links for your enjoyment:

- <https://youtu.be/RjS-C2rPnw0> - This one is in Portuguese so understanding it might be hard for some but, if you turn down the sound you can follow along to what he is doing and get an idea as to what you can see.
- <https://www.youtube.com/watch?v=WORZjPqilzs> – This one is really good as it lets you hear what ROS sounds like and some of the software settings but, what I got out of it mostly was being able to identify sounds when I hear them.
- <https://www.youtube.com/watch?v=Wu8yGwD6OOQ> – Another for great sounds and some visuals.
- <https://www.youtube.com/watch?v=Pgv0l7rgBFo> – This is a ROS QSO; think old movie computer from some bad sci-fi movie and you will understand when you play this.
- https://www.youtube.com/watch?v=o_1Ok7rUIHg – Here is one more to listen to: I just think the sound is cool and really distinguishable from any other mode I have used.

Well, I think that about does it for ROS and where and what you can do with it. Now go my ham friends and light up the airwaves with your ROS machines and make some new friends. You never know who and from what country you will meet people on ROS. Especially since most of the people on this at this point are overseas.

Until next time 73's.

January Meeting Minutes

Recorded by Allyssa, KG5DAS

LARA Meeting Minutes 1/21/17

President Len Shipp, KC5MPX, called the meeting to order at 0810

Officers in Attendance:

- President: Len Shipp KC5MPX
- Secretary: Allyssa Shipp KG5DAS
- Treasurer: Sharon Howard KE5JUI

Attendance:

Members:

- Dale Chatham WA5WNI
- Lee Norup K5WXR
- Walter Logan AG5CF
- Jim Horton WB8YWA
- Brian Ulmer KC5MPY
- Mike Reitz W5EVT
- Tim Monk WZ5TM
- Ron Ford KF5OMH
- Clark Highsmith K5LGX
- John Lundy KF5FOX
- Marty Wells KM5OI
- Steve Kline W5JK
- Mike Beck KG5QIY

Guests:

- Dave Chatham
- Dan Bates KG5OIJ
- Bob Waldick KI5UB
- Jim Wright W5TCN

Meeting Minutes from Last Meeting: Past meeting minutes were approved as posted on the website.

Motioned by: Lee Norup K5WXR

Seconded by: Dale Chatham WA5WNI

Approved by the Members

Treasurer's Report was given by Sharon Howard KE5JUI: Current balance \$2069.83

Motioned by: Allyssa Shipp KG5DAS

Seconded by: Walter Logan AG5CF

Approved by the Members

Technical Report as given by Len Shipp KC5MPX:

Everything working good right now

Motioned by: Brian Ulmer KC5MPY

Seconded by: Jim Horton WB8YWA

Approved by the Members

New Business:

Officers Elections!

- Committee - Steve Kline W5JK and John Lundy KF5FOX
- Nominations must be submitted by the March Meeting
- Votes must be cast by the April Meeting and new officers will be announced at the April meeting
- Elected Officers take Office May 1st

Meeting and Day in the Park for March/April

Boy Scout JOTA in October

- Coordinators: Dale Chatham, Ron Ford, Mike Reitz, Dan Howard

Old Business:

- Junk Box Pass Off
- Event T-shirts
- Winter Field Day
- Skywarn Class February 25th

Presentation on NexRad/GRLEVEL 3 by Dale Chatham

Motion to Close Meeting Made by: Dale Chatham WA5WNI

Seconded by: Allyssa Shipp KG5DAS

All Members Approved

Meeting Closed at 9:40

L.A.R.A. Officers

Position	Name	Email
President	Len Shipp	kc5mpx@gmail.com
Vice President	Jim Lavin	jlavin@jimlavin.net
Secretary	Allyssa Shipp	allyssashipp@gmail.com
Treasurer	Sharon Howard	ke5jui@arrl.net
Technical Officer	Erick Guzowsky	zaphod1@swbell.net

T	E	S	L	A		D	U	M	A		H	A	C	K
O	C	T	A	L		I	N	C	A		A	B	L	E
P	H	A	S	E	D	D	I	S	H	A	R	R	A	Y
S	O	R	E		X	I	T			L	E	A	D	S
					D	E	T		P	L	A	S	M	S
O	R	A	T	O	R		I	R	I	S				
R	E	N	E	W		F	B	O	M		A	B	U	T
A	N	T	E	N	N	A	E	F	A	R	M	E	R	S
L	O	S	S		E	R	A	S		O	M	E	G	A
					R	O	A	M		S	L	O	P	E
					G	R	O	U	N	D		W	A	E
T	R	A	P	S				M	O	S		L	C	D
R	O	T	A	T	I	N	G	R	H	O	M	B	I	C
O	V	E	R		M	A	R	S		S	N	E	E	R
T	E	S	T		D	P	S	T		C	O	R	D	S

Area Repeaters

Courtesy: DCARA *EXCITER* Newsletter

Freq.	Shift	PL	Call	Name
145.1700	-.600	110.9	W5FKN	DCARA-Denton County EOC
145.2100	-.600	110.9	N5MJQ	Metrocrest ARA-Carrollton
145.4000	-.600	110.9	NETARC	Grapevine
145.4900	-.600	85.4	WD5U	Rosston Tower
146.9200	-.600	110.9	W5NGU	DCARA - Denton
147.300	+.600	114.8	N5ERS	Flower Mound
147.3800	+.600	110.9	K5LRK	LAARK - The Colony
224.000	-1.6	110.9	K5LRK	LAARK - The Colony
224.080	-1.6	110.9	W5LVC	LARA
224.920	-1.6	110.9	AF5RS	AF5RS
441.3250	+5.0	88.5	W5NGU	Portable DCARA repeater
442.7500	+5.0	110.9	KA5R	Trophy Club
444.5125	+5.0	123	KE5UT	Celina
442.1750	+5.0	110.9	NETARC	Southlake
442.6500	+5.0	110.9	N5MJQ	Metrocrest ARA-Carrollton
443.3000	+5.0	110.9	K5LRK	LAARK-C4FM only
443.5250	+5.0	118.8	WA5LIE	DCARA - Denton
443.7375	+5.0	141.3	N6LXX	Rosston Tower
443.8750	+5.0	110.9	NETARC	DFW Airport
444.0500	+5.0	110.9	W5NGU	DCARA-Denton County EOC
444.2250	+5.0	110.9	K5CFD	Coppell
444.7000	+5.0	110.9	NETARC	Southlake
444.8500	+5.0	110.9	N5ERS	Flower Mound
927.025	-25.0	D532	N5ERS	Flower Mound
927.4125	-25.0	432	N5LS	Denton
927.6125	-25.0	110.9	W5NGU	DCARA-Denton County EOC
927.1375	-25.0	131.8	W5FKN	Decatur
1253.6000	none	none	W5NGU-G	DCARA - EOC - D*Star "G"
1293.4000	-20.0	none	W5NGU-A	DCARA - EOC - D*Star "A"
442.9250	+5.0	none	W5NGU-B	DCARA - EOC - D*Star "B"
147.4500	-1.0	none	W5NGU-C	DCARA - EOC - D*Star "C"
1259.2000	none	none	KE5YAP-G	DCARA-Rosston- D*Star "G"
1293.2000	-20.0	none	KE5YAP-A	DCARA-Rosston- D*Star "A"
440.7125	+5.0	none	KE5YAP-B	DCARA-Rosston- D*Star "B"
147.4900	-1.0	none	KE5YAP-C	DCARA-Rosston- D*Star "C"
DIGITAL	====	====	=====	=====
144.9100	none	none	W5NGU-4	DCARA Digipeater-Denton
147.970	none	none	K5YX-10	WinLink Gateway
144.990	none	none	KC5GOI	DCARA Digipeater-Rosston
144.990	none	none	KD5EOC-10	DCARA WL Gateway