D-STAR Info Newsletter

A publication of
Georgia D-STAR, Inc.

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Xbox and the Last Heard list?

Ray Novak N9JA

The year was 2005. It was a mid-August Monday morning. Nothing seemed different than any other Monday morning. I was starting my morning commute to the office, and decided it was still early enough to call my #1 D-STAR enthusiast, Jim McClellan. Nothing out of the ordinary, just normal what did you do over the weekend that was fun. Jim told me the things he and Bill Moore, N5ZPR, had done over the weekend, which usually included soldering, coax, and projects, it came my turn. I explained that I had purchased a Xbox 360 for my boys and I to play with over the weekend, and that we tied it into the internet to interface with their Xbox Live. I proceeded to explain to Jim how this Xbox live was cool as we could see all the different gamer tags, gamer profiles, and other fun stuff through our '360.

As I continued my commute, my conversation with Jim continued to go over the fun my boys and I had on the game, which allowed me to explain to them how we did things similar to this to spot DX for HF operation. My boys laughed and said, "Dad, we do that on IM all the time with our buddy list!" Oh well, my tale of how Amateur Radio was the first to do this was lost as dad is this old guy and there is no way he did something like this before the internet.

Then my conversation took a rather interesting turn when I explained to Jim that this was something that was missing from D-STAR. That with so few systems, and the callsign routing, it was tough to "See" who was on what D-STAR system, and worse yet, what band. That I wish I knew some programmers who would be interested in creating such a user interface for D-STAR. Jim's comment, "well we know how the starship is built!*"

Well, I had no clue how true Jim's statement was! About two weeks later, I received a phone call from Jim and all he said was "pull up your browser, and go to www.dstarusers.org." After a brief moment of silence, Jim asked if that is what I had envisioned when we were talking about my gaming experience.

While I had voiced my wish to Jim, the real magic came from two programmers whose enthusiasm for the new technology was the driving force behind the "Last Heard". Pete Loveall, AE5PL, wrote the Monitor software package that resides on every participating D-STAR Gateway system. The user interface, or website, is that of Gerry Dalton, N5MAY. It is my understanding that their enthusiasm for the new technology was the driving force to make this wish become a reality!

While there have been several revisions to the last heard page, this is how it got started…almost a napkin at a diner scenario!

* Actually, we learn more about the starship everyday!

New Features at DSTARInfo.com

www.DSTARInfo.com is the online companion to the D-STAR Info Newsletter. One of the biggest draws at the website is the D-STAR Calculator. The D-STAR Calculator has recently been updated to include all of the Japan repeaters. While you can't link to the Japan repeaters, we can callsign route to them.

Much of the latest work has been in creating repeater lists. This section is still going through some enhancements, but as of this writing, there are a number of files that can be imported into the software for the new IC-80AD and ID-880H.

In the not too distant future, look for live maps of repeaters around the world. The details are still being worked out, but we expect to have easily to use maps so that you can visually see all of the repeaters near you.

D-STAR Tips and Tricks

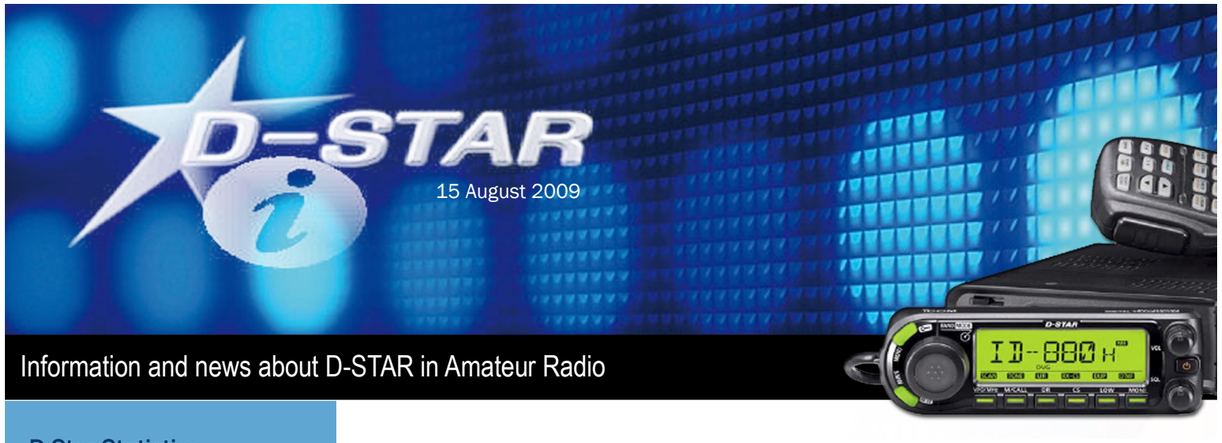
Repeater Status Pages

Ever wondered what stations have been on your repeater lately? DPLUS Repeater Dashboard provides the ability to see this information.
On a repeater, if enabled, you can go to the repeater's web address. For example
https://w4doc.dstargateway.org/.

Reflector Status Pages

Ever wondered what repeaters are connected to a reflector? DPLUS Reflector Dashboard provides the ability to see this information.
To see a reflector' s status head to
http://refXXX.dstargateway.org/
where XXX is the reflector number.

Status and other informational links are published with the repeater and reflector lists at www.DSTARInfo.com



D-Star Statistics

- Over 1200 Users Active Each Day
- Over 9000 Registered Users
- Over 450 Repeater Systems

Inside this issue:

Welcome to D-STAR Info We're All About D-STAR

Welcome back to the second edition of the D-STAR Info Newsletter with our new look for the front page and new features. A special thanks to Curt Kundred, W6FQ, and the graphic artists of his PR firm, for the new design and look. This month's centerfold contains a complete US D-STAR Repeater listing from the www.DSTARInfo.com website as a handy reference.

There is a lot happening across the country and around the world with D-STAR, but we can't share it without your help. If you have D-STAR news in your area, a special operating event or can contribute some D-STAR knowledge and tips to other users, please let us know.

As always, your feedback is encouraged. Please send your news stories, photos, D-STAR tips and anything else D-STAR to us at info@DSTARInfo.com.

And visit **www.DSTARInfo.com**

D-STAR Systems Hit 500!

As we were getting the data for this issue of the DSTAR Info Newsletter ready, the export of all the repeaters in the database showed an important benchmark. The last line was number 500.

Yes, that's right; we've got 500 repeater systems listed in the D-STAR Info database used by the D-STAR Calculator!

We've come a long way and continue to grow!

Non-Icom Repeater Joins Network

D-STAR has always been touted as an open standard and has been evidenced by the development of software and applications such as DPlus, D-RATS, DSTARMONITOR and others. Now, an effort is underway to develop a D-STAR repeater package based on non-Icom hardware and Gateway software. David Lake, G4ULF, and members of the Ashdown Forest Repeater Group in the UK have the GB7MH repeater and prototype software on the air and operating.

The hardware is a modified Tait T800 repeater operating in full GMSK mode with the D-STAR standard 6.25 KHz bandwidth. The repeater uses the GMSK Node Adapter developed by Satoshi Yasuda of Japan. With the cooperation and support of the Trust Server Team in Texas, the repeater is connected to the G2 network and is running popular software including the DPLUS module developed by Robin Cutshaw, AA4RC, and Pete Loveall's DSTARMONITOR code unmodified.

The system is capable of full callsign routing to and from the live G2 network, provides station updates and includes a self-service registration page similar to the Icom registration. The system is undergoing rigorous testing to ensure the integrity of the worldwide G2 network. The software will not be made available until testing has been completed. The repeater is usually connected to REF005A.

David would like to acknowledge the hard work of many who are working on this project including Satoshi Yasuda, Robin Cutshaw, Jim McClellan, Darren Storer, Pete Loveall, Iain Phillips and members of the Ashdown Forest Repeater Group. This effort represents an exciting step in the evolution of the D-STAR technology and is worth following closely as development continues.

The evolution of D-STAR repeaters began with the commitment of Icom to implement the JARL standard on not only radios, but repeater infrastructure and software. The tremendous growth of D-STAR has opened the door for developers and other experimenters in Amateur Radio to implement new features and capabilities on the digital platform.

You can follow the developments of the GB7MH D-STAR repeater project at http://g4ulf.blogspot.com.

Notes from the Trust Server Team - Return of the Future

Jim McClellan, N5MIJ—Trust Server Admin Team (with apologies to real authors)

Not so long ago, on a small green planet not far from here, there was great wailing and gnashing of teeth. A new technology had been eagerly adopted by a small group of enthusiasts, and was growing rapidly. It was growing so rapidly, in fact, that it was being implemented by some experimenters who had not taken time to fully understand what they were doing. As a result, some of these newest experimenters made a dramatic negative impact to the overall system. The problem was so pronounced that the only cure was to shut down the entire network, delete all information from every participating node, make the corrections at a central site, and then re-populate every node with the updated information. But every node synchronized data with every other node, so the problem was hard to cure. If even one node failed to participate fully, it would re-infect the entire network with the problems. Such was "G1".

The technology vendor came to the rescue by providing a new version of the system that enabled all of the experimenters to talk to each other. This helped the problem of nodes being completely unable to get data, but did not eliminate all of the other symptoms. But the situation was much better, and the community of enthusiasts grew even more rapidly than it had before. Publicity was prolific, and the technology caught the attention of even more experimenters. These new experimenters thought that "if I had this tool, I could (insert 'imagination' here)". These experimenters had good ideas and were technically capable, and proceeded to implement parts of their imaginations. But they, too, were not completely aware of what they were doing, and caused many problems.

Unfortunately, the community had demanded much more autonomous control very early in the sequence, and the cures attempted in "G1" were no longer available. The responsibility for system integrity now rested with the administrator of each individual node. If that administrator chose to be protective of the system as a whole, things went well. If an administrator chose to allow experimenters to do whatever they wanted, things did not go so well. Errors and problems were re-introduced by the experimenters, and there was again great wailing and gnashing of teeth. Such was "G2".

About that time, there arose many independent thinkers, who all knew that they had "a better way". Each decided to implement their own Trust Server, and run things their way. There were discussions online, many arguments, and very little cooperation, because many were convinced that their way was not only better, but right. But once they committed to this path, they discovered that by establishing their own networks, they had limited themselves to working only with people on their own network. They were unable to work with others on the main network. Additionally, administrators on the main network who chose to remain on the main network, but to allow the experimentation, caused many problems for themselves and for the rest of the network. This was the Dark Period of Chaos, which would last for much longer than anyone wanted.

From the darkness arose a small band of warriors, who were committed to solving the problem. These warriors had an interesting mix of technical capabilities, experience, and strong egos. But they also had one common trait that ensured their success – they were willing to cooperate. They designed a new Gateway, which provided a foundation for the technology to move forward once again. This new Gateway provided redundancy, a tiered hierarchy, and autonomous control. Most importantly, it was a platform which could be modified to allow new features or functions to be added. It also provided for security by maintaining a list of participants who had agreed to abide by a basic set of rules, so as not to negatively impact the efforts of others. Such was "G3".

From "G3" arose an Age of Enlightenment, and the technology grew even more rapidly than it had before. Experimenters could do whatever they wanted. If they chose to build their own networks, they could. If they agreed to follow some basic rules, they could exchange information with other networks and fully participate with each other. The information necessary to exchange the information was documented and published, and Life was Good.

Back here on good old Earth, D-STAR is rapidly approaching the Dark Period of Chaos. There is much disagreement about how things "SHOULD" be. There are multiple groups developing Gateway software. Some are testing offline against the ICOM Gateway. Some are testing on the main network, and not following the standards. The standards are not published and readily available, so there is much confusion. We are rapidly approaching an unavoidable fragmentation of the network, with many problems. We had hoped that establishment of a D-STAR International Coordination Council would provide us an opportunity to move forward more rapidly, but that idea has not yet gained full acceptance by the vendors.

Even so, there are already some developers cooperating to build us a new Gateway, which is hoped to be a better opportunity to carry us into the future. It may or may not be compatible with the existing ICOM Gateway. Nobody knows, yet. But until that arrives, we can still enjoy D-STAR. Learn your Gateway. Every Gateway has the capability to refuse connections from rogue users. We can also refuse connections from other Gateways known to cause problems. The stability and functionality of the network is not the responsibility of the Trust Server Team; it is the responsibility of every system administrator. As repeater trustees and Gateway administrators, we need to each take full responsibility for what occurs on our own systems.

We have all seen problems in every technology we have ever used. We have also found ways to reduce or eliminate those problems, and to get the most benefit from the technologies. We have found ways to adapt and improve. That's what amateur radio enthusiasts do. Don't get caught up in the complaining and negative uproar. Participate to your fullest, and where you can, contribute to the efforts. It's worth the effort!

Get the most from your radio with the right linking method

Ron Shaffer, W4VM

Since the introduction of the DPlus utility, linking repeaters has become the most popular method for talking beyond your local repeater. It requires the minimal setup of your radio. But what about all those other methods we heard about when D-Star was young? There is a growing group of users who use those methods along with the new ones to get the most from their radios in any given situation. Let's look at it from the user's perspective to see how it's done with the examples below.

	Situation	Method	URCALL
1	QSO with local or Dongle User	Simple CQCQCQ memory	CQCQCQ
2	Multi-Repeater Ragchew	Link to reflector	CQCQCQ
3	Regional Net	Hard Link to Reflector	CQCQCQ
4	Call between two repeaters	Gateway "Port Call" Soft Link	/Repeater C
5	Call Station in unknown area	Gateway "User Call" Soft Link	User Call

Since DPlus is installed on most repeaters, you always want to send your voice to the Gateway so that Dongle users and stations on linked repeaters can hear you and you are displayed on repeater Dashboards and Last Heard on the DStarUsers website. This is accomplished by programming the local repeater callsign with a "G" in the eighth position (ex. WD4STR G).

The first three examples use the same radio or memory setup with CQCQCQ in UR, the local repeater and module in RPT1, the local repeater with "G" in RPT2. It is local until someone establishes a D-Plus link to somewhere in the world (Examples 2 and 3). This is the basic minimal setup that new users need to get them going. It works great for most users and even better if someone performs the linking. If you live in an area where the system administrator allows user linking (most do), then get busy programming your radio to set them up (visit the D-Star calculator at www.D-STARInfo.com).

If your local repeater does not allow user linking, consider examples 4 and 5 above to communicate beyond your local area. These are the original methods developed by Icom that are always available on any Gateway enabled D-Star repeater. As it turns out, savvy users have discovered some advantages in these methods which have been called "callsign routing" or Soft Links.

Let's say you are driving from Huntsville to Atlanta and you want to let someone in the Atlanta group know you are on the way. Using example 4, you can quickly reach anyone on the Atlanta repeater and not have to worry about unlinking the two repeaters as you drive out of coverage. This disadvantage is that any stations on the destination repeater must program the "reverse" path or press the R>CS key to be heard by the originator.

The fifth situation is the "user roaming" feature which locates a user in the network for you. This is also a "Soft Link". This is handy is you don't know the repeater callsign or city where the desired station is located.

These examples can provide a taste of the diversity available to us in the D-Star Linking world. You'll need to spend a bit more time programming your radio to get more out of it regardless of whether you chose to focus on Hard Links or Soft Links. Don't be afraid to experiment with the different methods available. You can also find a command line scripting tool called "D-Star Dit-to" (www.qsl.net/w4vm) which can be used to re-configure a radio file from one originating repeater to a new one.

D-STAR at Dayton

D-STAR in Connecticut

Fran Miele, W1FJM

HAMS in Connecticut are fortunate to have four D-STAR systems in operation, AA1HD, W1IXU, W1ECV and W1VLA. AA1HD and W1IXU have gateways. It is hoped that in the not too distant future both W1ECV and W1VLA will install gateways

REF010 is also located in Connecticut. It was established, and is owned, by Bill Unghire (N1CNV) to be used as the New England reflector, although not restricted to connects by just New England repeaters, with hopes that other systems in New England or perhaps the north east, would link to port "C" on a regular basis, if not permanently. Today AAIHD and W1IXU are linked on permanent basis via their "C" modules to REF010 port "C". Occasionally N1HIT and K1HRO, both in New Hampshire, link to module "C".

AA1HD is part of the Pioneer Valley Radio Association (PVRA). The system is owned by Bruce Marcus (N1XG), current president of PVRA and was put on line in the summer of 2008. It has both 440 (B module at 442.150) and 2M (C module at 145.260) modules. Due to its high location, AA1HD provides coverage for a major portion of the state, south to the shore line, east into parts of Rhode Island, west to the Waterbury area and north to the Massachusetts northern border.

W1IXU was established in March 2008 and is owned by Jim Ahrens (WA1IXU) the trustee and Bill Unghire (N1CNV). The system is part of the Connecticut Digital Repeater Association and is located in Bristol Connecticut. It has both 440 (B module at 448.375) and 2M (C module at 145.140) modules. W1IXU provides coverage for a most of central Connecticut, a good portion of the western and south western part of the state as well as portions of western Massachusetts. The south east part of Connecticut also enjoys some coverage from this system.

With AA1HD and W1IXU linked to REF010, D-STAR covers a good part of the I-91 and I-84 corridor, north through Massachusetts, south to the CT. shoreline, east to near the Massachusetts border, west to near Danbury, CT.

Without question these systems linked together could provide a huge coverage for emergency communications.

W1ECV which is part of the Southington Amateur Radio Association is located on Meriden, CT. It went on line last fall and has both 440 (B module at 444.250) and 2M (C module at 145.490) modules. It services a good portion of the south central part of Connecticut.

W1VLA is privately owned by the Michael A Lentini Memorial Station and is located in Rocky Hill, CT. It went on line in November of 2007 and has both 440(B module) at and 2M(C module at 145.270) modules which serve a portion of central Connecticut

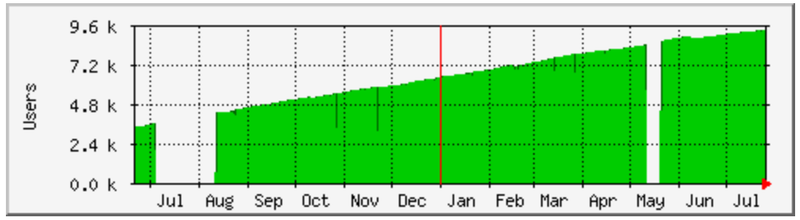
What the future holds is anybody's guess. There are new systems always being talked about, especially in the surrounding states. If it all comes to fruition and more systems join the New England Reflector, HAMS traveling throughout the area could have a very nice means of communication on the D-STAR platform.

(Editor's Note—Since this article was submitted, Connecticut has added another repeater, W1NLK in Norwalk. The repeater should be at its final site when you read this and has one module, 446.1000.)

D-STAR Continues to Grow

D-STAR continues to experience tremendous growth increasing from around 8,000 registered users in April, 2009 to over 9,200 in three months.

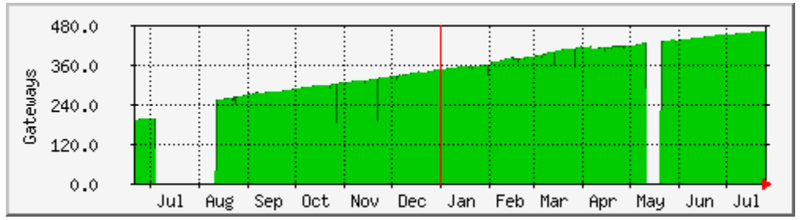
Registered D-STAR Users—Courtesy of DStarUsers.org



D-STAR Continues to Grow

The number of D-STAR Gateways has also grown from around 430 systems to 460 in the last three months. Each Gateway may have from one to four repeaters connected.

Registered D-STAR Gateways (multiple repeaters are usually registered under one gateway)



US D-STAR Repeaters

26 July 2009

www.DSTARInfo.com

www.DSTARInfo.com

Callsign	Country, State, City	Gateway	Module C (MHz)	Module B (MHz)	Module A (MHz)	High Speed Data
N4RON	US, Alabama , Alabaster		145.4400 -0.6000	442.0750 +5.0000	1293.0000 -20.0000	1248.6000 RPS
KI4SUF	US, Alabama , Anniston		145.2000 -0.6000	443.3500 +5.0000		
WB4GNA	US, Alabama , Anniston	Gateway	145.3000 -0.6000	442.4250 +5.0000	1285.0000 -12.0000	1251.0000 RPS
K4DSO	US, Alabama , Birmingham	Gateway	145.4100 -0.6000	443.2000 +5.0000	1283.4000 -12.0000	1250.0000 RPS
KI4RYX	US, Alabama , Guntersville		145.1400 -0.6000			
KI4PPF	US, Alabama , Huntsville	Gateway	145.4300 -0.6000	443.3750 +5.0000	1284.0000 -12.0000	1251.8000 RPS
KI4SAZ	US, Alabama , Magnolia Springs	Gateway	145.3100 -0.6000	444.3000 +5.0000	1285.0000 -12.0000	1251.0000 RPS
KI4SAY	US, Alabama , Mentone	Gateway	145.4400 -0.6000	443.3250 +5.0000	1285.0000 -12.0000	1251.0000 RPS
KI4SBC	US, Alabama , Mentone			443.4250 +5.0000		
W4IAX	US, Alabama , Mobile		145.3900 -0.6000	444.9000 +5.0000		
W4AP	US, Alabama , Montgomery	Gateway	146.9200 -0.6000	443.9750 +5.0000	1284.0000 -12.0000	1251.0000 RPS
W4WBC	US, Alabama , South Huntsville	Gateway	145.3600 -0.6000	443.4250 +5.0000		
W4KCQ	US, Alabama , Tuscaloosa	Gateway	146.6050 -0.6000	444.0750 +5.0000	1284.4000 -12.0000	1249.0000 RPS
KL7FF	US, Alaska , Ketchikan	Gateway	147.3800 +0.6000			
WL7CWI	US, Alaska , Wasilla		147.0000 +0.6000			
N7CI	US, Arizona , Globe	Gateway		445.8500 -5.0000		
W7KDS	US, Arizona , Kingman	Gateway	145.1350 -0.6000	445.9000 -5.0000	1284.0000 -12.0000	1299.0000 RPS
KE7JFH	US, Arizona , Mesa	Gateway	145.1250 -0.6000	445.9750 -5.0000	1285.6500 -12.0000	1297.5000 RPS
W7MOT	US, Arizona , Phoenix	Gateway	145.1350 -0.6000	440.8125 +5.0000	1283.9000 -12.0000	1299.5000 RPS
KF7CUF	US, Arizona , Scotsdale	Gateway		445.9500 -5.0000		
W7SVD	US, Arizona , Sierra Vista	Gateway		449.7250 +5.0000		
K7RST	US, Arizona , Tucson	Gateway	145.1150 -0.6000	445.9000 -5.0000	1284.2500 -12.0000	1298.2500 RPS
KR7ST	US, Arizona , Tucson	Gateway	147.4100 -1.0000	445.9500 -5.0000	1284.7500 -12.0000	1298.7500 RPS
W7DIN	US, Arizona , Yuma			445.9750 -5.0000		
WU5PIG	US, Arkansas , Clarksville	Gateway		442.6000 +5.0000		
W6HRO	US, California , Anaheim	Gateway	145.6150 -0.6000	447.8000 -5.0000	1282.5500 -12.0000	1299.5000 RPS
W6CPAR	US, California , Blueridge		145.5850 -0.6000	446.8700 -5.0000		
WB6IRC	US, California , Blueridge		145.5850 -0.6000	446.8800 -5.0000		
K6CHO	US, California , Chico	Gateway	144.9200 -0.4000		1286.5250 -12.0000	1299.3500 RPS
KS6HRP	US, California , Folsom		147.6750 -0.6000			
WD6SJV	US, California , Fresno	Gateway			1285.3000 -12.0000	1250.0000 RPS
K6SOA	US, California , Laguna Beach	Gateway	146.1150 +0.6000	445.6600 -5.0000	1282.6000 -12.0000	1299.9000 RPS
K6VO	US, California , Laguna Niguel	Gateway			1283.0000 -12.0000	1299.1000 RPS
KE6LE	US, California , Los Angeles			449.8200 -5.0000		
KI6JKA	US, California , Los Angeles	Gateway		447.2000 -5.0000		
WA6IRC	US, California , Los Angeles		145.6050 -0.6000	447.2700 -5.0000	1282.6500 -12.0000	1299.7000 RPS
KF6BQK	US, California , Malibu	Gateway		449.0800 -5.0000		
K6LRG	US, California , Mt Allison	Gateway		446.6875 +5.0000	1286.6250 -12.0000	
W6HHD	US, California , Mt. Bullion	Gateway	144.9400 -0.4000	444.1125 +5.0000	1284.1000 -12.0000	1249.2250 RPS
K6MDD	US, California , Mt. Diablo	Gateway	145.0200 -0.4000	444.1375 +5.0000	1284.2000 -12.0000	1249.0750 RPS
W6CO	US, California , Napa	Gateway		440.0500 +5.0000		
W6YYY	US, California , Oakland	Gateway		440.0375 +5.0000		
K6IFR	US, California , Palm Springs	Gateway		447.1400 -5.0000		
KI6MGN	US, California , Palomar Mtn.	Gateway	145.5850 -0.6000	445.8600 -5.0000		
K6PIT	US, California , Pittsburg	Gateway	145.4400 -0.6000			
W6UUU	US, California , Pleasanton	Gateway		444.0375 +5.0000		
W6DHS	US, California , Sacramento/Volcano	Gateway	144.9600 -0.4000	440.6000 +5.0000	1284.5000 +12.0000	
KD6SAC	US, California , Sacremento	Gateway			1284.5000 -12.0000	1299.5000 RPS
KE6RYZ	US, California , San Bernardino		145.5950 -0.6000			
KI6KQU	US, California , San Diego	Gateway		447.8400 -5.0000		
KW6HRO	US, California , San Diego	Gateway		446.9800 +5.0000		
KI6JUL	US, California , San Jose	Gateway	144.9200 -0.4000		1286.5250 -12.0000	1299.3500 RPS
KI6JUM	US, California , San Jose			444.3125 +5.0000		
K6ACS	US, California , Santa Rosa	Gateway		442.1125 +5.0000		
WB6YES	US, California , Temecula			445.8600 -5.0000		
K6VIS	US, California , Visalia	Gateway	145.5500 -0.6000	440.0500 +5.0000	1286.3250 -12.0000	1255.0000 RPS
W0CDS	US, Colorado , Denver	Gateway	145.2500 +0.6000	446.9625 -5.0000	1283.9625 -12.0000	1299.9000 RPS
W0TLM	US, Colorado , Monument	Gateway		446.8875 -5.0000		
W1IXU	US, Connecticut , Bristol	Gateway	145.1400 -0.6000	448.3750 -5.0000		
W1ECV	US, Connecticut , Meriden		145.4900 -0.6000	444.2500 +5.0000		
W1AW	US, Connecticut , Newington				1284.1250 -12.0000	1295.0000 RPS
W1NLK	US, Connecticut , Norwalk	Gateway		441.6000 +5.0000		
W1VLA	US, Connecticut , Rocky Hill		145.2700 -0.6000	444.1500 +5.0000		
AA1HD	US, Connecticut , Vernon	Gateway	145.2600 -0.6000	442.1500 +5.0000		
W3AGB	US, Washington DC		147.3600 +0.6000	444.1625 +5.0000		
K4FWB	US, Florida , Crestview		145.1300 -0.6000	444.6000 +5.0000		
W4BUG	US, Florida , Ft Lauderdale	Gateway	145.3400 -0.6000	442.2000 +5.0000	1291.6000 -20.0000	
KJ4ACN	US, Florida , Lakeland	Gateway	147.3750 +0.6000	444.7750 +5.0000	1293.5500 -20.0000	1253.4500 RPS
KG4NBB	US, Florida , Naples		145.4900 -0.6000	441.5000 +5.0000		
K1XC	US, Florida , Orlando	Gateway	146.8200 -0.6000	443.2750 +5.0000	1285.0000 -12.0000	1255.0000 RPS
KJ4MMC	US, Florida , Orlando	Gateway	145.2900 -0.6000		1291.3000 -20.0000	1251.3000 RPS
W4AES	US, Florida , Orlando	Gateway		443.6250 +5.0000		
KI4VKC	US, Florida , Panama		145.6100 -1.3000	444.5250 +5.0000		
N4CLL	US, Florida , Plant City	Gateway	147.2000 +0.6000	442.0250 +5.0000	1292.1000 -12.0000	1251.4000 RPS
W4CLL	US, Florida , Plant City		146.4450 +1.0000	442.9750 +5.0000		
KJ4BYI	US, Florida , Port Richey	Gateway		442.7625 +5.0000		
NI4CE	US, Florida , Riverview	Gateway		444.4250 +5.0000		
K4WAK	US, Florida , Tallahassee	Gateway		443.9500 +5.0000		
KJ4ARB	US, Florida , Tampa	Gateway	147.0100 +0.6000	444.6750 +5.0000	1293.0000 +20.0000	1253.0000 RPS
NI4M	US, Florida , Tampa		146.9400 -0.6000			
W4RNT	US, Florida , Tampa	Gateway		444.8125 +5.0000		
W4TTR	US, Florida , Tuscaloosa	Gateway	145.3500 -0.6000	442.9000 +5.0000		
W4DOC	US, Georgia , Atlanta	Gateway	145.3500 -0.6000	440.6000 +5.0000	1282.6000 -12.0000	1297.6250 RPS
WJ4FD	US, Georgia , Braselton	Gateway		440.5875 +5.0000		
K3RCB	US, Georgia , Brunswick	Gateway		440.5625 +5.0000		
KJ4BDF	US, Georgia , Buford	Gateway		440.7250 +5.0000		
KI4SBA	US, Georgia , Cumming	Gateway	145.2000 -0.6000	444.3500 +5.0000	1284.4000 -12.0000	1250.0000 RPS
KJ4DWC	US, Georgia , Cumming	Gateway			1284.5000 -12.0000	1249.5000 RPS
WB4HRO	US, Georgia , Doraville	Gateway		440.7125 +5.0000	1284.4500 -12.0000	1297.8750 RPS
KJ4KLF	US, Georgia , Fort Mountain	Gateway	145.0800 +1.4000	440.6500 +5.000		1299.5000 RPS
WD4STR	US, Georgia , Lawrenceville	Gateway	145.0600 +1.4000	440.5500 +5.0000		1298.0000 RPS
K4USD	US, Georgia , Morrow/Stockbridge		145.6100 -1.2000	442.1750 +5.0000	1292.1000 -20.0000	1253.1000 RPS
KJ4GGV	US, Georgia , Pembroke	Gateway		440.7000 +5.0000		
WX4GPB	US, Georgia , Stone Mountain	Gateway	144.9600 +2.5000	440.7000 +5.0000	1282.7000 -12.0000	1297.1250 RPS
WH6DIG	US, Hawaii , Honolulu	Gateway	147.1800 +0.6000	444.9250 +5.0000		
WH6DHT	US, Hawaii , Pearl Harbor		145.4500 -0.6000	442.7000 +5.0000	1293.0000 -20.0000	1253.0000 RPS
W7VOI	US, Idaho , Boise	Gateway		444.3500 +5.0000		
W9CEQ	US, Illinois , Batavia	Gateway	145.2700 +0.6000	442.1062 +5.0000		
W9NE	US, Illinois , Batavia				1291.9000 -20.0000	1241.9000 RPS
W9YR	US, Illinois , Champaign	Gateway		443.48125 +5.0000		
NS9RC	US, Illinois , Chicago	Gateway		442.0938 +5.0000	1292.2000 -20.0000	1242.2000 RPS
WA9ORC	US, Illinois , Chicago	Gateway		443.7500 +5.0000		
KC9OKW	US, Illinois , Lake County	Gateway		440.98125 +5.0000		
W9PIA	US, Illinois , Peoria	Gateway	145.1050 -0.6000	443.46875 +5.0000	1292.4000 -20.0000	
WR9AND	US, Indiana , Fishers	Gateway		441.8000 +5.0000		
W9ICE	US, Indiana , Indianapolis	Gateway	147.3900 +0.6000	444.1250 +5.0000		
W9ARP	US, Indiana , Lafayette	Gateway	146.7300 -0.6000	444.3000 +5.0000		
KD0IAN	US, Iowa , Des Moines	Gateway	145.3500 -0.6000	443.1750 +5.0000		
W0SCI	US, Iowa , Des Moines	Gateway	145.3500 -0.6000	443.1750 +5.0000		
K0HAM	US, Kansas , Louisburg	Gateway	145.1200 -0.6000	442.1250 +5.0000	1287.0000 -12.0000	1257.0000 RPS
W4DSI	US, Kentucky , Lexington		146.9400 -0.6000	444.1250 +5.0000		
KD5CQB	US, Louisiana , Baton Rouge		146.8800 -0.6000			
KE5UKL	US, Louisiana , Carencro		147.0000 +0.6000			
W5GAD	US, Louisiana , New Orleans	Gateway	146.9250 -0.6000	444.9250 +5.0000	1285.0000 -12.0000	1251.0000 RPS
W5SHV	US, Louisiana , Shreveport	Gateway	147.3600 +0.6000	442.0000 +5.0000	1293.0000 -20.0000	1253.0000 RPS
WA1ARN	US, Maine , Sanford		145.4800 -0.6000			
W1KK	US, Massachusetts , Feeding Hills	Gateway	145.1500 -0.6000	449.1750 -5.0000	1282.5000 -12.0000	1248.5000 RPS
AA1KK	US, Massachusetts , Holyoke			447.3750 -5.0000		
W1MRA	US, Massachusetts , Marlboro		145.1600 -0.6000			
W1DSR	US, Massachusetts , Milford		145.1400 -0.6000			
K8ETN	US, Michigan , Charlotte	Gateway	145.2000 -0.6000	444.2750 +5.0000		
NM8ES	US, Michigan , Elmira		145.3200 -0.6000	444.1125 +5.0000		
WI0OK	US, Michigan , Glen Arbor		145.3600 -0.6000			
WX8GRR	US, Michigan , Grand Rapids	Gateway	147.2900 +0.6000	442.5500 +5.0000		
K8LCD	US, Michigan , Hell	Gateway	147.2100 +0.6000	444.0625 +5.0000	1294.4800 -20.0000	1254.4800 RPS
WD8MKG	US, Michigan , Holton	Gateway	145.3600 -0.6000	444.0125 +5.0000		
W8LIV	US, Michigan , Howell	Gateway	145.3200 -0.6000	444.0375 +5.0000		
W8SHI	US, Michigan , Owosso	Gateway	145.2400 -0.6000	444.3000 +5.0000		
K0UW	US, Minnesota , Bloomington		145.2500 -0.6000	443.4500 +5.0000		1299.7000 RPS
K6ZC	US, Minnesota , Fairmont		146.9700 -0.6000	443.9250 +5.0000	1284.5000 -12.0000	1249.0000 RPS
K0FVF	US, Minnesota , Golden Valley		145.1500 -0.6000	442.9000 +5.0000		
W0YC	US, Minnesota , Minneapolis	Gateway		443.4250 +5.0000		
K5RKN	US, Mississippi , Brandon	Gateway	145.1700 -0.6000	444.8250 +5.0000		
W5NRU	US, Mississippi , Ellisville	Gateway	145.4800 -0.6000	441.8125 +5.0000		
KI4TMJ	US, Mississippi , McHenry	Gateway	145.1700 -0.6000	444.4750 +5.0000	1284.0000 -12.0000	1250.0000 RPS
W0CW	US, Missouri , Kansas City	Gateway		443.0000 +5.0000	1285.0500 -12.0000	1253.0500 RPS
W0OMD	US, Missouri , Springfield / Branson	Gateway	146.7750 -0.6000	442.2250 +5.0000		
K0MDG	US, Missouri , St Louis	Gateway	147.0375 +0.6000	442.5750 +5.0000	1285.0000 -12.0000	1251.0000 RPS
W0MAO	US, Nebraska , Lincoln	Gateway	145.2500 -0.6000	442.1500 +5.0000		
KD0CGR	US, Nebraska , Omaha	Gateway	145.1750 -0.6000			
N7ARR	US, Nevada , Las Vegas	Gateway		446.8000 -5.0000		
W7AES	US, Nevada , Las Vegas	Gateway	145.1450 -0.6000	449.5750 -5.0000	1282.3900 -12.0000	1299.3900 RPS
N1HIT	US, New Hampshire , Fremont	Gateway	145.4000 -0.6000	448.8750 -5.0000		
K1HRO	US, New Hampshire , Salem	Gateway	145.3300 -0.6000	444.3500 +5.0000	1293.0000 -20.0000	1253.0000 RPS
KC2TGB	US, New Jersey , Atlantic City	Gateway		444.6500 +5.0000		
KC2VAC	US, New Jersey , Atlantic County	Gateway		442.0125 +5.0000		
KC2TPM	US, New Jersey , Brigantine Island		145.4500 -0.6000			
K2KJI	US, New Jersey , Caldwell		146.4450 +1.0000		1293.0500 -20.0000	
NJ2DS	US, New Jersey , Cape May Court-house	Gateway	146.7750 -0.6000	447.4750 -5.0000	1255.3000 +12.0000	1297.3000 RPS
W2DGL	US, New Jersey , Cedar Grove	Gateway	146.4450 +1.0000		1293.0500 -20.0000	
NJ2MC	US, New Jersey , Lake Hopatcong	Gateway	146.7150 -0.6000	441.6000 +5.0000		
NJ2DG	US, New Jersey , Martinsville	Gateway	145.1400 -0.6000	441.6500 +5.0000	1284.0000 -12.0000	1250.5000 RPS
WK3SS	US, New Jersey , Rockaway			446.6250 -5.0000		
NM5WR	US, New Mexico , Los Alamos	Gateway		442.4250 +5.0000		
K2PUT	US, New York , Carmel	Gateway		445.8750 -5.0000		
KD2STR	US, New York , Gasport	Gateway		443.6875 +5.0000		
K2DIG	US, New York , New York	Gateway		445.2750 -5.0000	1293.0000 -20.0000	1253.0000 RPS
AK4EG	US, North Carolina , Burlington	Gateway	145.3200 -0.6000	444.8875 +5.0000	1284.4000 -20.0000	1299.4000 RPS
KA4YMY	US, North Carolina , Charlotte		145.1400 -0.6000			
KI4WXS	US, North Carolina , Charlotte	Gateway		443.8625 +5.0000	1284.0000 -12.0000	1297.1000 RPS
KB4HG	US, North Carolina , Durham			442.5375 +5.0000		
W4GSO	US, North Carolina , Greensboro			442.8625 +5.0000		
K4ITL	US, North Carolina , Raleigh		145.2600 -0.6000	442.2125 +5.0000		
KR4RAL	US, North Carolina , Raleigh	Gateway		442.2125 +5.0000		
KD8DRG	US, Ohio , Akron	Gateway	146.9550 -0.6000	442.5750 +5.0000		
K8BIG	US, Ohio , Cincinnati	Gateway	145.3500 -0.6000	444.0000 +5.0000		
WB8THD	US, Ohio , Cleveland	Gateway	145.3500 -0.6000	444.4500 +5.0000		
W8DIG	US, Ohio , Columbus	Gateway	145.3900 -0.6000	442.6500 +5.0000	1285.0000 -12.0000	1298.0000 RPS
W8BI	US, Ohio , Dayton	Gateway	147.1050 +0.6000			
W8RNL	US, Ohio , Hamilton	Gateway	145.1600 -0.6000	442.6250 +5.0000	1293.0000 -20.0000	1253.0000 RPS
KT7APR	US, Ohio , Lima	Gateway		443.6250 +5.0000		
W5OKT	US, Oklahoma , Mooreland	Gateway		444.2750 +5.0000		
WD5AII	US, Oklahoma , Oklahoma City	Gateway	147.3450 +0.6000	442.6250 +5.0000		1251.0000 RPS
W7URG	US, Oregon , Hermiston	Gateway	147.3900 +0.6000	441.9500 +5.0000		
KE7MVI	US, Oregon , Medford	Gateway		443.7750 +5.0000		
W7GC	US, Oregon , Mt Hebo	Gateway	147.3900 +0.6000			
W3OI	US, Pennsylvania , Allentown	Gateway	147.1650 +0.6000	445.0250 -5.0000		
W4IHS	US, Pennsylvania , Bucktown					1297.8000 RPS
K3PDR	US, Pennsylvania , Philadelphia	Gateway		447.6250 -5.0000		
W3EXW	US, Pennsylvania , Pittsburgh	Gateway		444.3500 +5.0000		
W3EOC	US, Pennsylvania , Pocopson	Gateway	146.4900 +1.0000	445.0750 -5.0000	1255.5000 +12.0000	1299.4000 RPS
KR4AIK	US, South Carolina , Aiken	Gateway	145.1600 -0.6000	443.4125 -5.0000		
W4HRS	US, South Carolina , Charleston		145.1600 -0.6000	444.1125 +5.0000		
KJ4BWK	US, South Carolina , Columbia	Gateway	145.4000 -0.6000	443.2000 +5.0000		
KJ4FCS	US, South Carolina , Columbia	Gateway		442.7750 +5.0000		
K5ZOE	US, South Carolina , Leesville	Gateway		443.3250 +5.0000		
NE4SC	US, South Carolina , Myrtle Beach	Gateway	144.9800 +2.5000	442.7875 +5.0000		
KX4DOR	US, South Carolina , Summerville	Gateway	145.4000 -0.6000	442.7625 +5.0000		
W4PL	US, Tennessee , Chattanooga	Gateway	145.2900 -0.6000	443.1500 +5.0000	1291.0000 -20.0000	1251.0000 RPS
W4SAN	US, Tennessee , Crossville			440.5250 +5.0000	1291.5000 -20.0000	1251.5000 RPS
W4JYV	US, Tennessee , Nashville		147.1800 +0.6000			
K5PRK	US, Texas , Allen	Gateway		441.5750 +5.0000	1295.0000 -20.0000	1255.0000 RPS
K5BIT	US, Texas , Arlington	Gateway				1254.0000 RPS
W5KA	US, Texas , Austin		146.4800 +1.0000			
W5HAT	US, Texas , Bruceville	Gateway	147.2400 +0.6000	440.6250 +5.0000		
K5TIT	US, Texas , Dallas	Gateway	147.3600 +0.6000	442.0000 +5.0000	1293.0000 -20.0000	1253.0000 RPS
W5NGU	US, Texas , Denton	Gateway	147.4500 -1.0000	442.9250 +5.0000	1293.4000 -20.0000	1253.6000 RPS
N5HDS	US, Texas , Houston	Gateway	146.4600 +1.0000			
W5HDT	US, Texas , Houston	Gateway			1293.2000 -20.0000	1249.2000 RPS
W5HDR	US, Texas , Houston TMC	Gateway	146.4700 +1.0000	440.6000 +5.0000	1293.0000 -20.0000	1248.2000 RPS
W5LM	US, Texas , Killeen	Gateway		440.6750 +5.0000		
KE5KAF	US, Texas , Laredo		147.3600 +0.6000			
KE5WFB	US, Texas , Laredo	Gateway	147.3600 +0.6000	440.6000 +5.0000		
KE5LFK	US, Texas , Magnolia		145.4500 +2.0000			
N5MDS	US, Texas , Magnolia	Gateway	146.4500 +1.0000	440.7125 +5.0000		
NE5R	US, Texas , Mesquite	Gateway	145.1500 -0.6000	443.0250 +5.0000		
NT5RN	US, Texas , Mesquite	Gateway	145.1500 -0.6000	443.0250 +5.0000	1293.5000 -20.0000	1253.8000 RPS
K5PLD	US, Texas , Pearland		146.4900 +1.0000			
K5MIJ	US, Texas , Portable Repeater			440.6000 +5.0000		
K5DIT	US, Texas , Rockwall			440.6000 +5.0000		
WA5UNH	US, Texas , San Antonio	Gateway		440.7000 +5.0000		
WD5STR	US, Texas , San Antonio	Gateway	146.4900 +1.0000	440.6000 +5.0000		
K5CTX	US, Texas , Temple	Gateway	147.3400 +0.6000	440.5250 +5.0000	1292.1000 -20.0000	1253.0000 RPS
W5ZDN	US, Texas , Waco	Gateway	146.8800 -0.6000			
KE5RCS	US, Texas , Walburg	Gateway	145.1300 -0.6000	440.5750 +5.0000		
WA7GIE	US, Utah , Salt Lake		147.3800 +0.6000	448.7250 -5.0000		
KF6RAL	US, Utah , Salt Lake City			448.0750 -5.0000	1287.0000 -12.0000	
W4HFH	US, Virginia , Alexandria	Gateway	145.3800 -0.6000	442.0600 +5.0000	1284.6000 -12.0000	1253.6000 RPS
N4USI	US, Virginia , Haymarket	Gateway	145.2600 -0.6000	442.4125 +5.0000		
W4OVH	US, Virginia , Manassas	Gateway		442.5125 +5.0000		
W4FJ	US, Virginia , Richmond		147.2550 +0.6000			
WW4EMC	US, Virginia , Spotsylvania		145.2400 -0.6000	448.4600 -5.0000	1282.4000 -12.0000	1254.0000 RPS
WS4VA	US, Virginia , Stafford	Gateway	147.3750 +0.6000	447.2750 -5.0000	1282.2000 -12.0000	1298.4000 RPS
NV4FM	US, Virginia , Tysons Corner	Gateway	145.3400 -0.6000	448.0350 -5.0000	1282.8000 -12.0000	1254.2000 RPS
W4BBR	US, Virginia , Virginia Beach	Gateway	145.3500 -0.6000	441.9000 +5.0000	1284.6000 -12.0000	
WD4HRO	US, Virginia , Woodbridge	Gateway			1293.0000 -20.0000	1254.0000 RPS
K7LWH	US, Washington , Bellevue		145.1300 -0.6000	443.0000 +5.0000	1290.0000 -20.0000	1247.0000 RPS
N7IH	US, Washington , Bellevue	Gateway	145.2900 -0.6000	443.5750 +5.0000	1294.0000 -20.0000	1248.1500 RPS
WC7SO	US, Washington , Bellingham	Gateway	146.7000 -0.6000			
WA7SV	US, Washington , Bellinham	Gateway	146.7000 -0.6000			
WD7STR	US, Washington , Bremerton (Gold Mountain)			444.5625 +5.0000		
KE7PDL	US, Washington , Camano Island		145.0600 +0.6000	440.4750 +5.0000	1293.5000 -20.0000	1250.5000 RPS
WA7FW	US, Washington , Federal Way	Gateway	147.0400 +0.6000	443.8500 +5.0000		
NR7SS	US, Washington , Snohomish			440.3250 +5.0000		
W7TFD	US, Washington , Tukwilla			440.4000 +5.0000		
WB9FDZ	US, Wisconsin , Baraboo		145.2550 -0.6000	442.5437 +5.0000	1292.2000 -20.0000	
KC9LKZ	US, Wisconsin , Milwaukee			442.4688 +5.0000	1290.0500 -20.0000	1298.0000 RPS
WI9RAC	US, Wisconsin , Racine	Gateway		441.81875 +5.0000		1298.0000 RPS
K9PAQ	US, Wisconsin , Richfield	Gateway	146.8500 -0.6000	443.8250 +5.0000		
W9BCC	US, Wisconsin , Wausau	Gateway			1282.1000 -12.0000	1298.0000 RPS

This is a listing of the US based repeaters as of 25 July 2009 from the www.DSTARInfo.com database. This listing includes gateway connected as well as standalone repeaters.
There may be repeaters that are on the air that are not on this list, or repeaters not on the air that are still on this list. We strive to keep this list as up to data as possible. If you find an error, please notify us at info@DSTARInfo.com.
If you are a repeater administrator and would like to update your repeater information, please check out www.DSTARInfo.com/update for instructions.
While it would be nice if there was only one database, there currently are two that we know of, one at www.DSTARInfo.com and the other at www.DSTARUSERS.org. Please keep both databases up to date with any changes.