15 November 2009

Information and news about D-STAR in Amateur Radio


### D-Star Statistics

- Over 1500 Users Active Each Day
- Over 10,000 Registered Users
- Over 500 Repeater Systems

### Inside this issue:



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

Welcome back to the next edition of the D-STAR Info Newsletter. This month's centerfold contains a complete listing of D-STAR Repeaters outside of the United States. Complete listings are available from www.DSTARInfo.com.

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**

## Georgia D-STAR Receives Grant to Cover State!

The Georgia Department of Homeland Security/Georgia Emergency Management Agency has allocated $165,000 in Federal funding to build the Georgia Emergency Digital Network. The network will consist of nine fully equipped D-STAR repeaters providing near statewide digital voice and data coverage on Amateur Radio. Two of the D-STAR repeaters are already in operation at Pembroke, Georgia near Savannah and atop Stone Mountain in the Atlanta metro area.

It began in 2005 with a vision for Amateur Radio emergency communications in Georgia. Georgia Public Broadcasting's former Director of Engineering Mark Fehlig, WA6NGC, seized an opportunity to fund and install two Amateur Radio antennas on each of nine tall television towers that provide statewide Public Television coverage as a part of the required conversion to Digital Television. Fehlig designated Georgia ARES to control the use of these facilities for emergency communications and John Davis, WB4QDX, was appointed as District Emergency Coordinator to create a network.

"After considering several technology options and modes for creating a statewide Amateur Radio network, the D-STAR technology made the most sense", Davis said. "D-STAR's simultaneous voice and data capabilities, repeater linking and high speed data transmission brings new capabilities for emergency communications."

The network is being built utilizing the nine television towers of Georgia Public Broadcasting (GPB). These nine towers are strategically located to provide near statewide Public Television coverage. They will also provide similar Amateur Radio coverage from two antennas located between 500 and 600 feet above ground and connected with 1 5/8" transmission lines. GPB will also provide indoor equipment space with protected backup power at each site. Connectivity on GPB's robust DS-3 data network will be provided with Internet access to allow flexible linking of repeaters using the D-STAR technology.

The funding also provides 20 dual-band D-STAR radios for installation at EMA offices around the state. A portable UHF D-STAR repeater will be constructed for emergency deployment. The complete Georgia D-STAR network should be in operation by early 2010.

The Georgia network will complement other D-STAR systems planned or in operation in neighboring states of Alabama, Florida and South Carolina creating regional capabilities in the Southeast. Weather systems approach Georgia either as severe thunderstorms and tornadoes from the West or tropical systems from the Gulf or the Atlantic. Having flexible statewide communications will provide new capabilities to support emergency communications.

## US Trust Server Hits 500 D-STAR Systems!

This month the number of D-STAR systems connected to the US Trust Server passed 500. On Sunday evening Oct 11, 2009 the 500th system was added to the US Trust Server.

So who's taking bets on when we hit 1,000!

# D-STAR for Everyone!

Been looking for an easy way to climb aboard the D-STAR express? Let the new IC-80AD and ID-880H be your tickets to ride! With an improved user interface, smart new look, and free programming software included you can't go wrong!

***Get on track and join in on the D-STAR fun today!***

3G | D-STAR

## NEW IC-80AD

**THIRD GENERATION 2M/70CM DUAL BANDER**

- 5/2.5/.5/.1 Watt 2m/70cm
- AM, FM, WFM
- RX: 0.495-999.990MHz**
- Improved User Interface
- Li-Ion Power
- **Free Programming Software!***

**www.icomamerica.com/amateur/DSTAR*
*for details about free software*

## NEW ID-880H

**VERSATILE 2M/70CM DUAL BAND MOBILE**

- 50 Watt/VHF/UHF
- AM, FM, DV
- RX: 118-999.99MHz**
- 800 Alphanumeric Memory Channels
- **Free Programming Software!***

3G | D-STAR

**www.icomamerica.com/amateur/DSTAR*
*for details about free software*


# No matter where you go.

**Frequency specs may vary. Refer to owner's manual for exact frequency specs.



ICOM®

# Notes from the Trust Server Team - Third Party Gateways

Jim McClellan N5MIJ

There are thousands of us using our D-STAR network every day, accessing it through hundreds of independent Gateways. Yet very few of us are aware of the details that enable us to have this capability. Even many of us who understand portions of the process make erroneous assumptions. This month, we'll try to clarify the picture, and illustrate some of the things that can happen.

The best way to approach this subject is from the perspective of a new user, with no existing Gateway. Let's begin the process. We know we need a Gateway to access the network. Today, the only real option is ICOM's D-STAR Gateway. While there are at least 5 different groups working on "alternative" Gateways, most have chosen not to test and validate their efforts on the test network, even after being invited to do so. The one author who did go through that testing phase has multiple Gateways on the network, but has not yet released his product to the public. That testing becomes important in just a few steps.

Assume that the new Gateway has been built following the instructions provided by ICOM, and the additional instructions provided at the "Joining the Network" link at WWW.DStarUsers.Org. When a new Gateway first boots, it attempts to contact the Trust Server and retrieve its initial database. In order to provide a minimal level of security for the network, this new Gateway is initially set to "connection refuse" status at the Trust Server until administrators can assure that all patches are up to date.

When the "connection refuse" flag is cleared, the new Gateway asks the Trust Server for a copy of the entire database. At this point, the local Gateway Administrator can license the Gateway and begin adding users locally. From there, the new user is ready to use the network.

Now that we have the new Gateway in the network, we have to keep it up to date. In the previous version of the Gateway, every Gateway attempted to synchronize with every other Gateway. Unfortunately, a few Gateways being unavailable would cause the entire process to fail. The current version of the Gateway program synchronizes only with the Trust Server. Each Gateway submits a request that says "send me all updates since I last synchronized." The Trust Server then examines ALL the update requests, and selects the oldest timestamp. It then creates an update, pulling all changes to the database since that oldest timestamp. That update is then sent to every Gateway. Hence, the data exchanges are much larger than expected.

Today we have several Gateways on the network which are no longer running the ICOM Gateway. Some of these programs work very well. Some work less reliably. We have had several instances of problems being propagated throughout the network from unexpected data exchanges. These problems don't happen because anyone is being evil. Nor do they occur because these authors are technically incompetent. These errors occur because the programmers make assumptions, and then skip the important step of validating their assumptions in an isolated environment.

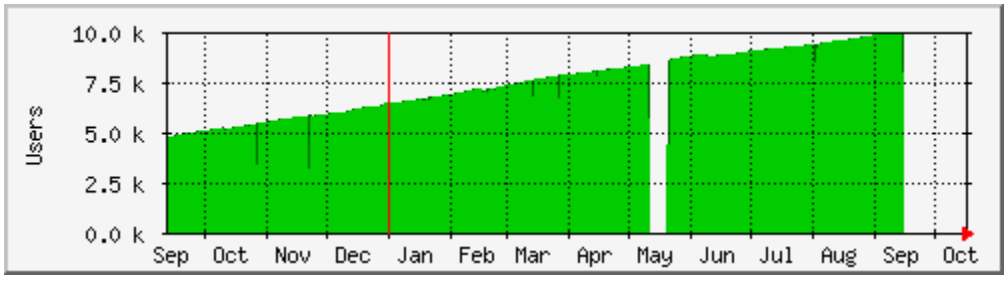
We're all amateurs, and we all want a more robust system. We won't be able to achieve that until we cooperate and create a viable alternative to what we have today. The Trust Server Admin team is enthusiastic about testing with anyone who will behave responsibly, and work with us in a professional manner. If you have any questions, we'll be happy to answer – just check the references from developers who asked and behave responsibly. For those who choose to berate us and make irresponsible accusations without researching the facts, we reserve the right to decline to assist you.

D-STAR is still the most exciting thing to come to amateur radio in many years. If we can cooperate just a little bit, we can make it even more fun. Here's your chance to contribute to the hobby – what are you going to do?

## D-STAR Continues to Grow

D-STAR continues to experience tremendous growth increasing from around 9,200 registered users in April, 2009 to over 10,000 in three months.

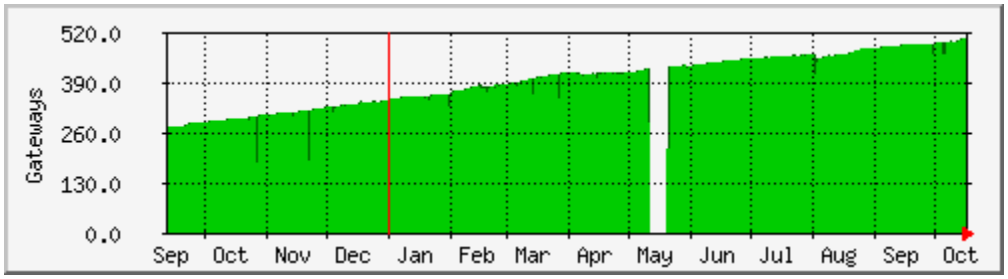
**Registered D-STAR Users**—Courtesy of DStarUsers.org




## D-STAR Continues to Grow

The number of D-STAR Gateways has also grown from around 460 systems to 520 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)



# Worldwide D-S

Excluding US -

www.DSTARInfo.com

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Seenland | | | | | | |
| DB0ADB | Germany, Bavaria, Bamberg | Gateway | | 439.5500 -7.6000 | | | |
| DB0DON | Germany, Bavaria, Donauwoerth | Gateway | | 439.46875 -7.6000 | | | |
| DB0ESS | Germany, Bavaria, Allgaeu | Gateway | 145.7625 -0.6000 | 439.5125 -7.6000 | 1298.4250 -28.0000 | 1242.4500 RPS | |
| DB0FEU | Germany, Bavaria, Feuchtwangen | Gateway | | 439.5000 -7.6000 | | | |
| DB0FWS | Germany, Bavaria, Schweinfurt | Gateway | | 439.5375 -7.6000 | | | |
| DB0NU | Germany, Bavaria, Bamberg | Gateway | | 439.5000 -7.6000 | | | |
| DB0RDH | Germany, Bavaria, Steinach/Straubing | Gateway | 145.7625 -0.6000 | 439.4750 -7.6000 | 1298.4500 -28.0000 | | |
| DB0RKB | Germany, Bavaria, Kreuzberg/Rhön | Gateway | | 439.5875 -7.6000 | | | |
| DB0TVM | Germany, Bavaria, Muenchen | Gateway | | 439.5750 -7.6000 | | | |
| DB0VOX | Germany, Bavaria, Nuernberg | Gateway | | 439.5250 -7.6000 | | | |
| DB0WUN | Germany, Bavaria, Marktredwitz - Haingruen | Gateway | | 439.5750 -7.6000 | | | |
| DB0WZ | Germany, Bavaria, Würzburg | Gateway | 145.7250 -0.6000 | 439.4750 -7.6000 | 1298.3250 -28.0000 | 1298.5500 RPS | |
| DB0WZB | Germany, Bavaria, Veitshöchheim | Gateway | | 439.4875 -7.6000 | | | |
| DB0WZC | Germany, Bavaria, Veitshöchheim | | | 439.4812 -7.6000 | | | |
| DB0ZB | Germany, Bavaria, Schneeberg / Fichtelgebirge | Gateway | | 439.5625 -7.6000 | | | |
| DB0DF | Germany, Berlin, Berlin | Gateway | | 439.4625 -7.6000 | | | |
| DB0LY | Germany, Brandenburg, Lychen | Gateway | | 439.5625 -7.0000 | | | |
| DB0BHN | Germany, Bremen, Bremerhaven | | | 439.5375 -7.6000 | | | |
| DA5SAT | Germany, Hamburg, Hamburg | | | 439.5000 -7.6000 | | | |
| DB0FS | Germany, Hamburg, HH Lokstedt | Gateway | | 439.5625 +7.6000 | | | |
| DM0HMB | Germany, Hamburg, Hamburg-Mitte | Gateway | 145.7875 -0.6000 | 439.4500 -7.6000 | 1298.7250 -28.0000 | 1297.5000 RPS | |
| DB0BOS | Germany, Hesse, Boellstein | Gateway | | 439.5125 -7.6000 | | | |
| DB0HRF | Germany, Hesse, Gr.Feldberg/Frankfurt | Gateway | | 439.4500 -7.6000 | | | |
| DB0HRM | Germany, Hesse, Hoher Meissner/Kassel | Gateway | | 439.5250 -7.6000 | | | |
| DB0HRR | Germany, Hesse, Rimberg / Bad Hersfeld | Gateway | 145.7000 -0.6000 | | | | |
| DB0SIF | Germany, Hesse, Giessen | Gateway | | 439.4875 -7.6000 | | | |
| DB0WK | Germany, Hesse, Wasserkuppe/Fulda | Gateway | | 439.4625 -7.6000 | | | |
| DM0PX | Germany, Hesse, Frankfurt | Gateway | | 439.46875 -7.6000 | | | |
| DB0FHW | Germany, Lower Saxony, Wolfenbuettel | Gateway | | 439.4875 -7.6000 | | | |
| DB0SAT | Germany, Lower Saxony, Hamburg | Gateway | 145.7875 -0.6000 | 439.4500 -7.6000 | 1298.7000 -28.0000 | | |
| DB0SN | Germany, Lower Saxony, Göttingen | | | 439.5000 -7.6000 | | | |
| DB0SZS | Germany, Lower Saxony, Osnabrück | Gateway | 145.6375 -0.6000 | 439.5000 -7.6000 | | | |
| DB0XPO | Germany, Lower Saxony, Hannover | Gateway | | 439.5500 -7.6000 | | | |
| DB0ZO | Germany, Lower Saxony, Osnabrück | Gateway | | 439.5625 -7.6000 | | | |
| DM0XX | Germany, Lower Saxony, Hepstedt / nr. Bremen | | | 439.5125 -7.6000 | | | |
| DB0BS | Germany, North Rhine-Westphalia, Bochum | Gateway | | 439.4500 -7.6000 | | | |
| DB0DBN | Germany, North Rhine-Westphalia, Bonn / Köln am Rhein | Gateway | | 439.53125 -7.6000 | | | |
| DB0DDE | Germany, North Rhine-Westphalia, Essen | Gateway | | 439.5375 -7.6000 | | | |
| DB0DDO | Germany, North Rhine-Westphalia, Dortmund | Gateway | 145.7250 -0.6000 | | | | |
| DB0DDS | Germany, North Rhine-Westphalia, Dortmund | Gateway | | 439.4875 -7.6000 | | | |
| DB0DZ | Germany, North Rhine-Westphalia, Düsseldorf | | 145.6875 -0.6000 | | | | |
| DB0ERK | Germany, North Rhine-Westphalia, Erkelenz | Gateway | | 439.45625 -7.6000 | | | |
| DB0HAA | Germany, North Rhine-Westphalia, Hagen | Gateway | | 439.5875 -7.6000 | | | |
| DB0HSK | Germany, North Rhine-Westphalia, Meschede | | | 439.5063 -7.6000 | | | |
| DB0NG | Germany, North Rhine-Westphalia, Marl | Gateway | | 439.5750 -7.6000 | 1298.5750 -28.0000 | 1242.5750 RPS | |
| DB0RKN | Germany, North Rhine-Westphalia, Rhine Kreis Neuss | Gateway | | 439.2500 -7.6000 | | | |
| DB0RWK | Germany, North Rhine-Westphalia, Windeck - Sieg | Gateway | | 439.5438 -7.6000 | | | |
| DB0SEN | Germany, North Rhine-Westphalia, Senden,Westf | | | 439.5438 -7.6000 | | | |
| DF0MHR | Germany, North Rhine-Westphalia, Mülheim | Gateway | | 439.4625 -7.6000 | | | |
| DB0MYK | Germany, Rhineland-Palatinate, Gaensehals nr Mayen/Koblenz | Gateway | | 439.5625 -7.6000 | | | |
| DB0WIM | Germany, Rhineland-Palatinate, Herxheim | Gateway | | 439.5625 -7.6000 | | | |
| DB0IKS | Germany, Saarland, Goettelborn | Gateway | | 439.4625 -7.6000 | | | |
| DM0MW | Germany, Saxony, Mittweida | Gateway | | 439.5500 -7.6000 | | | |
| DB0SLH | Germany, Schleswig-Holstein, Norderstedt / Hamburg | | | 439.5250 -7.6000 | | | |
| DF0HHH | Germany, Schleswig-Holstein, Hamburg | | | 439.5750 -7.6000 | | | |
| SV2F | Greece, Thealonika | Gateway | | 439.4250 -7.6000 | | | |
| SV3G | Greece, Tripoli | Gateway | | 439.4000 -7.6000 | | | |
| SV8S | Greece, Zante Island | Gateway | | 439.4250 -7.6000 | | | |
| SZ1HAG | Greece, Athens | Gateway | | 438.4250 -7.6000 | | 1240.7250 RPS | |
| SZ1SV | Greece, Athens | Gateway | | 439.4250 -7.6000 | 1270.0250 +28.0000 | 1240.6250 RPS | |
| SZ2PRO | Greece, Thessaloniki | | | 439.4250 +7.6000 | | 1240.7250 RPS | |
| SZ4SRM | Greece, Volos | | | 438.4250 -7.6000 | | 1240.7250 RPS | |
| IQ0VT | Italy, Viterbo | | 145.9750 +1.1000 | | | | |
| IQ2GM | Italy, Gallarate (Varese) | Gateway | | 431.6125 +1.6000 | | | |
| PA2RA | Netherlands, Nijverdal | | | | 438.8000 -7.6000 | | |
| PI1DSA | Netherlands, Amersfoort | Gateway | | | 439.8250 -9.4000 | | |
| PI1HGL | Netherlands, Delft | | | | 439.9000 -9.4000 | | |
| PI1HWB | Netherlands, Breda | Gateway | | | 430.9250 +7.6000 | | |
| PI1NYM | Netherlands, Nijmegen | | | | 439.8500 -9.4000 | | |
| ZL2OA | New Zealand, Masterton | Gateway | | | 443.8250 +5.0000 | | |
| LD1OT | Norway, Oslo | Gateway | | | 434.5750 -2.0000 | | 1291.9000 RPS |
| LD3DV | Norway, Drammen | Gateway | | | 434.5250 -2.0000 | | |
| CQ0DAH | Portugal, Angra Heroismo (Azores Terceira isl.) | Gateway | | | 438.4500 -7.6000 | | |
| CQ0DCH | Portugal, Chaves (Leiranco) | Gateway | | | 438.5750 -7.6000 | | |
| CQ0DFO | Portugal, Algarve (Foia) | | | | 438.5750 -7.6000 | | |
| CQ0DLR | Portugal, Leiria (Candeeiros) | Gateway | | | 438.5250 -7.6000 | | |
| CQ0DLX | Portugal, Lisbon | Gateway | | | 438.5500 -7.6000 | | |
| CQ0DRO | Portugal, Coimbra (Roxo) | | | | 438.4750 -7.6000 | | |
| CQ0DSA | Portugal, Arrabida (Setubal) | Gateway | | | 438.4750 -7.6000 | | |
| CQ0DSM | Portugal, Portalegre (S. Mamede) | Gateway | | | 438.5000 -7.6000 | | |
| RU3AWW | Russian Federation, Moscow | | | | 434.8060 +5.0000 | | |
| OM0OIC | Slovakia (Slovak Republic), High Tatras | | | | 438.5250 -7.6000 | | |
| S55DGO | Slovenia, Nova Gorcia | Gateway | | | 438.5000 -7.6000 | | |
| S55DLI | Slovenia, Ljubljana | Gateway | | | 438.2000 -7.6000 | | |
| S55DMX | Slovenia, Maribor | Gateway | | | 439.2000 -7.6000 | | |
| EA3RCC | Spain, Castellar/ Barcelona | Gateway | | | 438.4750 -7.6000 | | |
| EA5A | Spain, Valencia | Gateway | | | 438.2000 -7.6000 | | |
| ED2YAJ | Spain, Zaragoza | Gateway | | | 438.3500 -7.6000 | | |
| HB9AR | Switzerland, Geneva | Gateway | | | 439.3250 -7.6000 | | |
| HB9AW | Switzerland, Rickenbach | Gateway | 145.7875 -0.6000 | | | | |
| HB9BO | Switzerland, Mt. Schilthorn | Gateway | 145.6125 -0.6000 | | 439.5250 -7.6000 | | |
| HB9F | Switzerland, Bern | Gateway | | | 438.3250 -7.6000 | | |
| HB9HD | Switzerland, Kyburg (Winterthur) | Gateway | 145.5875 -0.6000 | | | | |
| HB9IAC | Switzerland, La Barillette | Gateway | 145.7625 -0.6000 | | | | 1258.0000 RPS |
| HB9RF | Switzerland, Zug | Gateway | | | 439.4625 -7.6000 | | |
| 9Y4TTL | Trinidad And Tobago, Arima | | 146.2500 +0.6000 | | | | |
| GB7AD | United Kingdom, England, Thornbury | Gateway | | | 439.9125 -9.0000 | | |
| GB7AU | United Kingdom, England, Amersham | Gateway | | | 439.7000 -9.0000 | | |
| GB7DB | United Kingdom, England, Millbrook | Gateway | | | 439.6625 -9.0000 | | |
| GB7DS | United Kingdom, England, Herne Bay | Gateway | | | | 1290.1500 -20.0000 | 1253.0000 RPS |
| GB7DV | United Kingdom, England, Lymm | Gateway | | | 439.6125 -9.0000 | | |
| GB7DX | United Kingdom, England, Ashford | Gateway | | | 439.7000 -9.0000 | | |
| GB7FK | United Kingdom, England, Folkestone | Gateway | | | 439.6000 -9.0000 | | |
| GB7GL | United Kingdom, England, Edge Hills | Gateway | | | 439.7125 -9.0000 | | |
| GB7HD | United Kingdom, England, Huddersfield | Gateway | | | 439.4500 -9.0000 | | |
| GB7IC | United Kingdom, England, Herne Bay | Gateway | | | 439.4500 -9.0000 | 1290.6500 -20.0000 | |
| GB7JF | United Kingdom, England, Northhampton | Gateway | | | 439.6375 -9.0000 | | |
| GB7JH | United Kingdom, England, Worthing | Gateway | | | 439.7125 -9.0000 | | |
| GB7MH | United Kingdom, England, Turners Hill | Gateway | | | 439.6375 -9.0000 | | |
| GB7MM | United Kingdom, England, Wimborne | Gateway | 145.7000 -0.6000 | | | | |
| GB7NB | United Kingdom, England, Norwich | Gateway | | | 439.6875 -9.0000 | | |
| GB7NM | United Kingdom, England, Manchester | Gateway | | | 439.7625 -9.0000 | | |
| GB7PI | United Kingdom, England, Cambridge | Gateway | | | 439.9125 -9.0000 | | |
| GB7SF | United Kingdom, England, Sheffield | Gateway | 145.7375 -0.6000 | | 439.7375 -9.0000 | | |
| GB7SS | United Kingdom, England, Hockley | Gateway | | | 439.7375 -9.0000 | | |
| GB7SY | United Kingdom, England, Shrewsbury | Gateway | | | 439.7000 -9.0000 | | |
| GB7WC | United Kingdom, England, Warrington | Gateway | | | 439.7875 -9.0000 | | |
| GB7WF | United Kingdom, England, Bewdley | Gateway | | | 439.7875 -9.0000 | | |
| GB7WP | United Kingdom, England, Wirral | Gateway | | | 439.9125 -9.0000 | | |
| GB7YD | United Kingdom, England, Barnsley | Gateway | 145.6750 -0.6000 | | 439.5125 -9.0000 | | |
| GB7ZI | United Kingdom, England, Cannock | Gateway | | | 439.6875 -9.0000 | | |
| GB7WT | United Kingdom, Northern Ireland, Omagh | Gateway | | | 439.6000 -9.0000 | | |
| GB7DD | United Kingdom, Scotland, Dundee | Gateway | | | 439.6625 -9.0000 | | |
| GB7DE | United Kingdom, Scotland, Fife/Edinburgh | Gateway | 145.6375 -0.6000 | | 439.6000 -9.0000 | | |
| GB7DG | United Kingdom, Scotland, Glasgow | Gateway | 145.7750 -0.6000 | | 439.9000 -9.0000 | 1234.0000 +20.0000 | |
| GB7DK | United Kingdom, Scotland, Stranraer | Gateway | 145.6875 -0.6000 | | | | |
| GB7DW | United Kingdom, Scotland, Ayrshire | | 145.6125 -0.6000 | | | | |
| GB7GD | United Kingdom, Scotland, Aberdeen | Gateway | 145.6875 -0.6000 | | | | |
| GB7CD | United Kingdom, Wales, Cardiff | Gateway | | | 439.7000 -9.0000 | | |

This is a listing of the worldwide repeaters outside of the United States as of 23 Oct 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.

# D-STAR Repeaters

www.DSTARInfo.com

23 October 2009

| Call Sign | Country, State, City | Gateway | Module C (MHz) | Module B (MHz) | Module A (MHz) | High Speed Data |
|---|---|---|---|---|---|---|
| LU3AOC | Argentina, Buenos Aires | Gateway | 147.3450 +0.6000 | 434.9500 +5.0000 | 1282.0000 -12.0000 | 1248.0000 RPS |
| LU5FB | Argentina, Rosario | Gateway | 147.0300 +0.6000 | | | |
| VK2RAG | Australia, New South Wales, Gosford / Wyong | Gateway | 146.6375 -0.6000 | 438.3250 -5.4000 | | |
| VK2RDS | Australia, New South Wales, Wollongong/Sydney Region | Gateway | 146.7625 -0.6000 | 439.7500 -5.0000 | 1273.9500 +20.0000 | 1298.5000 RPS |
| VK2RWN | Australia, New South Wales, North Sydney | Gateway | 146.9625 -0.6000 | 438.4000 -5.4000 | 1273.7000 +20.0000 | |
| VK8RAD | Australia, Northern Territory, Darwin | Gateway | 146.7000 -0.6000 | 438.7500 -5.0000 | 1293.4000 -20.0000 | 1274.0500 RPS |
| VK4RDS | Australia, Queensland, Landsborough | Gateway | 146.7375 -0.6000 | | | |
| VK4RGC | Australia, Queensland, Gold Coast / Brisbane | | 146.8375 -0.6000 | 438.2250 -5.4000 | 1273.1000 +20.0000 | 1298.3000 RPS |
| VK4RWN | Australia, Queensland, Gold Coast | Gateway | 146.8375 -0.6000 | 438.2250 -5.4000 | 1273.1000 +20.0000 | 1298.3000 RPS |
| VK5REX | Australia, South Australia, Port Lincon | Gateway | | 438.2250 -5.4000 | | |
| VK5RWN | Australia, South Australia, Adelaide | Gateway | 146.9375 -0.6000 | 438.4000 -5.4000 | 1273.7000 +20.0000 | 1299.7000 RPS |
| VK3RBA | Australia, Victoria, Ballarat | | | 439.9875 -5.0000 | | 1298.7000 RPS |
| VK3RMM | Australia, Victoria, Melbourne | Gateway | | 438.0500 -5.4000 | | |
| VK3RWN | Australia, Victoria, Melbourne | Gateway | 146.9125 -0.6000 | 438.3000 -5.4000 | 1273.9000 +20.0000 | 1298.3000 RPS |
| VK3RWN | Australia, Victoria, Melbourne | Gateway | 146.9125 -0.6000 | 438.3000 -5.4000 | 1273.9000 +20.0000 | 1298.7000 RPS |
| VK3RWW | Australia, Victoria, Portable | Gateway | | 438.1500 -5.4000 | 1273.8500 +20.0000 | 1298.9000 RPS |
| VK6RWN | Australia, Western Australia , Perth | Gateway | 146.8375 -0.6000 | 438.3000 -5.4000 | 1273.9000 +20.0000 | 1298.3000 RPS |
| OE1XCA | Austria, Vienna | Gateway | 145.7500 -0.6000 | | | |
| OE1XDS | Austria, Vienna | Gateway | | 438.5250 -7.6000 | 1298.6500 -28.0000 | |
| OE3XWW | Austria, Moenichkirchen | Gateway | | 438.5500 -7.6000 | | |
| OE5XOL | Austria, Linz | Gateway | | 438.5250 -7.6000 | | |
| OE6XDE | Austria, Graz - Dobl | Gateway | | 438.9000 -7.6000 | | |
| ON0CPS | Belgium, Pont-a-Celles | Gateway | | 439.5625 -7.6000 | | |
| ON0DP | Belgium, Boom | Gateway | | 439.4625 -7.6000 | | |
| ON0DST | Belgium, Diest | Gateway | | 439.4500 -7.6000 | | |
| ON0LGE | Belgium, Jupille-sur-Meuse | Gateway | | 439.5875 -7.6000 | | |
| ON0OS | Belgium, Oostende | Gateway | 145.7125 -0.6000 | 439.5000 -7.6000 | 1298.1000 -28.0000 | |
| ON0TVA | Belgium, Brussels | Gateway | | 439.5120 -7.6000 | | |
| ON0ULG | Belgium, University of Liège - Sart-Til | Gateway | 145.6250 -0.6000 | 439.5250 -7.6000 | | |
| ON0WV | Belgium, Brugge | Gateway | | 439.5625 -7.6000 | | |
| ON3JVI | Belgium, Liege | | 145.6250 -0.6000 | 439.5250 -7.6000 | | |
| PY2KCA | Brazil, Americana | Gateway | 145.2300 -0.6000 | | | |
| PY2KEP | Brazil, São Paulo | | 146.6900 -0.6000 | | | |
| PY2KJF | Brazil, Campinas | | 145.2300 +0.6000 | 439.5500 -5.0000 | | |
| PY2KPE | Brazil, São Paulo | Gateway | | 439.9250 -5.0000 | | |
| PY2KPP | Brazil, São Paulo | Gateway | 145.4100 -0.6000 | 439.9750 -5.0000 | 1282.6000 -20.0000 | 1299.9000 RPS |
| PY2KRJ | Brazil, São Paulo | Gateway | 147.1800 +0.6000 | | 1286.6000 -20.0000 | 1299.9000 RPS |
| PY4RCR | Brazil, Belo Horizonte | Gateway | 147.0000 +0.6000 | | | |
| PY7DIG | Brazil, CARUARU | Gateway | 145.4500 -0.6000 | | | |
| VE6GHZ | Canada, Alberta, Calgary | Gateway | 147.0900 +0.6000 | 444.9500 +5.0000 | 1287.9750 -20.0000 | 1253.0000 RPS |
| VE6IPG | Canada, Alberta, Calgary | Gateway | 147.2850 +0.6000 | 444.9625 +5.0000 | 1275.9500 +12.0000 | 1248.0500 RPS |
| VE6KM | Canada, Alberta, Edmonton | Gateway | 145.4700 -0.6000 | 444.9000 +5.0000 | | |
| VE6WRN | Canada, Alberta, Calgary | Gateway | 146.8050 -0.6000 | 444.9250 +5.0000 | 1287.5000 -20.0000 | 1247.5000 RPS |
| VA7ICM | Canada, British Columbia, Vancouver | Gateway | 145.0400 +0.6000 | 442.0000 +5.0000 | 1247.0000 +12.0000 | 1293.1500 RPS |
| VE7RAG | Canada, British Columbia, Mt Seymour | Gateway | 147.0200 +0.6000 | 443.4000 +5.0000 | 1291.9400 -20.0000 | 1271.9400 RPS |
| VE7VIC | Canada, British Columbia, Victoria | Gateway | 145.0800 +0.6000 | | | 1291.5000 RPS |
| VE9SJN | Canada, New Brunswick, Saint John | Gateway | 145.2900 -0.6000 | | | |
| VO1ILP | Canada, Newfoundland, St Johns | Gateway | | 443.4000 +5.0000 | | |
| VA3NAG | Canada, Ontario, Niagara on the Lake | Gateway | | | 1282.5000 -12.0000 | 1299.1500 RPS |
| VA3ODG | Canada, Ontario, Ottawa | Gateway | 145.5300 -0.6000 | 444.8500 +5.0000 | 1282.0000 -12.0000 | 1299.2000 RPS |
| VA3YYZ | Canada, Ontario, Temporary | Gateway | 145.0000 +0.6000 | 441.1000 +5.0000 | | |
| VE3LSR | Canada, Ontario, Simcoe County | Gateway | 145.1900 -0.6000 | 444.3500 +5.0000 | | |
| VE3RPT | Canada, Ontario, Toronto (Uxbridge) | Gateway | | 443.2250 +5.0000 | | |
| VE3RTR | Canada, Ontario, Cobourg | Gateway | 146.8950 -0.6000 | | | |
| VE3RXR | Canada, Ontario, Little Current | Gateway | 145.3100 -0.6000 | | | |
| VE3SSF | Canada, Ontario, PeterBorough | Gateway | 147.3600 +0.6000 | | | |
| VE3TTT | Canada, Ontario, London | Gateway | | 442.3000 +5.0000 | | |
| VE3WIK | Canada, Ontario, Hamilton | Gateway | 146.7150 +0.6000 | 443.6375 +5.0000 | | |
| VE3YYZ | Canada, Ontario, Toronto | Gateway | 144.9300 +0.6000 | 442.7000 +5.0000 | 1287.5000 -12.0000 | 1250.0000 RPS |
| VA2RKA | Canada, Quebec, Montréal | Gateway | 144.9100 +0.6000 | 446.1500 -5.0000 | | |
| VA2RKB | Canada, Quebec, Saint-Calixte | Gateway | 144.9100 +0.6000 | | | |
| VE2LKL | Canada, Quebec, Trois-Rivières | Gateway | | 449.1750 -5.0000 | | 1246.0000 RPS |
| VE2RIO | Canada, Quebec, Montréal | Gateway | 144.9500 -0.6000 | 449.9250 -5.0000 | 1283.0000 -12.0000 | 1248.0000 RPS |
| VE2RMF | Canada, Quebec, Quebec | Gateway | 144.9500 -0.6000 | 449.9250 -5.0000 | 1283.0000 -20.0000 | 1243.0000 RPS |
| VE2RQF | Canada, Quebec, Sherbrooke | Gateway | 147.0600 +0.6000 | | | 1248.0000 RPS |
| VE2RTO | Canada, Quebec, Mont-Orford | Gateway | | 442.0000 +5.0000 | | |
| VE2RVR | Canada, Quebec, Mont-Saint-Grégoire | Gateway | | 444.2000 +5.0000 | | 1247.0000 RPS |
| OZ2REA | Denmark, Copenhagen | Gateway | 145.7875 -0.6000 | 434.9375 -2.0000 | | |
| OZ4RED | Denmark, Holbæk | Gateway | 145.6375 -0.6000 | 434.9125 -2.0000 | | |
| OZ9RET | Denmark, Hurup Thy | Gateway | 145.6625 -0.6000 | 434.9875 -2.0000 | | |
| F1ZPL | France, Courbevoie - Paris | Gateway | 145.5125 -0.6000 | 430.2625 +9.4000 | | |
| F1ZWD | France, Paris | | 145.5375 -0.6000 | 430.1500 +9.4000 | | |
| DB0COM | Germany, Baden-Württemberg, Friedrichshafen | | | 439.4750 -7.6000 | 1298.2250 -28.0000 | |
| DB0DJ | Germany, Baden-Württemberg, Karlsbad | Gateway | 145.7625 -0.6000 | 439.5000 -7.6000 | 1298.5750 -28.0000 | |
| DB0LBX | Germany, Baden-Württemberg, Ludwigsburg | Gateway | | 439.0000 -7.6000 | | |
| EA5BIV | Germany, Baden-Württemberg, Karlsbad | Gateway | 145.7625 -0.6000 | 437.9750 -7.6000 | 1298.5750 -28.0000 | |
| DB0AB | Germany, Bavaria, Arberg/Fränkisches | Gateway | | 439.4500 -7.6000 | | |

| Call Sign | Country, State, City | Gateway | Module C (MHz) | Module B (MHz) | Module A (MHz) | High Speed Data |
|---|---|---|---|---|---|---|
| IQ4GS | Italy, Monte Giogo | Gateway | 144.8625 +0.6000 | 431.5250 +1.6000 | | |
| IQ6PE | Italy, Monticchio | Gateway | | 431.5000 +1.6000 | | |
| IR0CD | Italy, Viterbo | | 145.9750 -1.1000 | | | |
| IR0UAC | Italy, Rome and Vatican City | Gateway | | 430.0250 +5.0000 | 1297.4750 -55.0000 | 1285.0000 RPS |
| IR0UEH | Italy, Civitavecchia (Roma ) | Gateway | | 430.9000 +5.0000 | | |
| IR1CJ | Italy, Turin | Gateway | 144.9875 +1.0000 | | | 1285.0000 RPS |
| IR1TB | Italy, S. Maurizio C.se | Gateway | | 431.5000 -1.5000 | | |
| IR1UDI | Italy, Casale Monferrato (AL) | Gateway | 145.6875 -0.6000 | 430.0250 +1.6000 | | |
| IR2BD | Italy, Milano | Gateway | | 431.5000 +1.6000 | | |
| IR2UDY | Italy, Milan | Gateway | | 431.4375 +1.6000 | 1297.2250 -0.6000 | 1297.5000 RPS |
| IR3CZ | Italy, Pordenone | Gateway | | 431.5250 +1.6000 | | |
| IR3DA | Italy, Chioggia (Venice) | Gateway | 145.9750 -1.1000 | 430.2125 +1.6000 | 1297.0000 +30.0000 | 1298.0000 RPS |
| IR3DB | Italy, Verona | Gateway | | 431.5000 +1.6000 | | |
| IR3UBH | Italy, Pordenone | Gateway | | | 1297.0250 -6.0000 | 1273.0000 RPS |
| IR3UEF | Italy, Monselice(Padova) | Gateway | 145.9750 -1.1000 | 431.4750 +1.6000 | 1297.2250 -6.0000 | 1298.0000 RPS |
| IR3UFP | Italy, Trieste | Gateway | | 431.5500 +1.6000 | | 1297.4750 RPS |
| IR3UGR | Italy, Monte Grappa (VI) | Gateway | | 431.9875 -1.6000 | | |
| IR4UBL | Italy, Piacenza | Gateway | | 430.5625 +5.0000 | | |
| IR5UH | Italy, Arezzo | Gateway | 145.6375 -0.6000 | | | |
| IR6UBM | Italy, Cupello | Gateway | | 430.1125 +1.6000 | | |
| IR7AZ | Italy, San Giovanni Rotundo | Gateway | 145.9750 -1.2500 | | | |
| IR7UBA | Italy, Bari | Gateway | | 430.3000 +5.0000 | | |
| IR8AW | Italy, Napoli | Gateway | | 430.4250 +5.0000 | | |
| IR8BT | Italy, Battipaglia | Gateway | | 430.4250 +5.0000 | | |
| IR8CA | Italy, Pompei /Napoli | Gateway | 145.6625 -0.6000 | 430.4750 +5.0000 | | 1295.0000 RPS |
| IR8UAF | Italy, Avellino | Gateway | | 432.2500 +1.6000 | | |
| IR9AC | Italy, Zafferana Etnea | Gateway | 145.7875 -0.6000 | | | |
| IR9G | Italy, Palermo | Gateway | 145.6625 -0.6000 | | | |
| IR9P | Italy, Piermo | Gateway | 145.6375 -0.6000 | | | |
| JP0YDP | Japan, Nagano Ueda-city | Gateway | | | 439.0300 -5.0000 | 1270.1250 RPS |
| JP0YDR | Japan, Niigata Niigata-city | Gateway | | | 439.1900 -5.0000 | |
| JP1YEM | Japan, Chiba Kisarazu-city | | | | 439.1100 -5.0000 | |
| JP1YFY | Japan, Chiba Funabashi-city | Gateway | | | 434.4600 +5.0000 | |
| JP1YIK | Japan, Ibaraki Koga-city | Gateway | | | 439.3900 -5.0000 | |
| JP1YIQ | Japan, Yokohama-city | Gateway | | | 439.2100 -5.0000 | |
| JP1YIU | Japan, Tokyo Chuou-ku | Gateway | | 1291.6900 -20.0000 | 434.4000 +5.0000 | 1290.1250 RPS |
| JP1YIW | Japan, Nishi Tokyo city | Gateway | | 1291.5700 -20.0000 | 439.3100 -5.0000 | 1290.6250 RPS |
| JP1YIX | Japan, Tokyo Cyofu-city | | | | 1291.5900 -20.0000 | 1290.1250 RPS |
| JP1YJJ | Japan, Tokyo - Ham Fair 2009 Aug 22-23 | Gateway | | 1291.3300 -20.0000 | 439.2500 -5.0000 | |
| JP1YJK | Japan, Tokyo Shinagawa-ku | Gateway | | 1291.6500 -20.0000 | 439.0700 -5.0000 | 1270.3750 RPS |
| JP1YJO | Japan, Tokyo Komae-city | Gateway | | | 439.2900 -5.0000 | |
| JP1YJP | Japan, Gunma Maebashi-city | | | | 439.0500 -5.0000 | |
| JP1YJQ | Japan, Chiba Chiba-city | Gateway | | 1291.4500 -20.0000 | 439.2700 -5.0000 | |
| JP1YJR | Japan, Chiba Nagareyama-city | Gateway | | | 439.0900 -5.0000 | |
| JP1YJT | Japan, Chiba Yachimata-city | | | | 434.4200 +5.0000 | |
| JP1YJV | Japan, Kanagawa Fu/Jisawa-city | Gateway | | 1291.4300 -20.0000 | 439.1900 -5.0000 | 1270.6250 RPS |
| JP1YJX | Japan, Kanagawa Ebina-city | Gateway | | 1291.4100 -20.0000 | 439.0500 -5.0000 | |
| JP2YDP | Japan, Aichi Nukata-gun | | | | 439.4100 -5.0000 | |
| JP2YGA | Japan, Gifu Kamo-gun | | | | 439.3500 -5.0000 | |
| JP2YGE | Japan, Aichi Nagoya-city | Gateway | | | 1291.6900 -20.0000 | 1290.1250 RPS |
| JP2YGG | Japan, Aichi Nagoya-city | | | | 1291.6700 -20.0000 | 1290.3750 RPS |
| JP2YGI | Japan, Aichi Nagoya-city | Gateway | | 1291.6300 -20.0000 | 439.3700 -5.0000 | 1270.1250 RPS |
| JP2YGK | Japan, Aichi Kasugai-city | | | 1291.6500 -20.0000 | 439.3900 -5.0000 | 1290.6250 RPS |
| JP2YGR | Japan, Gifu Gifu-city | | | | 439.4300 -5.0000 | |
| JP3YCV | Japan, Wakayama Arida-gun | Gateway | | 1291.2300 -20.0000 | 439.2700 -5.0000 | |
| JP3YHF | Japan, Osaka Osaka-city | | | | 1291.6500 -20.0000 | 1290.6250 RPS |
| JP3YHH | Japan, Osaka Osaka-city | Gateway | | 1291.6300 -20.0000 | 439.3900 -5.0000 | 1291.6300 RPS |
| JP3YHJ | Japan, Osaka Higashiosaka-city | Gateway | | 1291.6700 -20.0000 | 439.0100 -5.0000 | 1290.3750 RPS |
| JP3YHL | Japan, Nara Nara-city | | | 1291.6900 -20.0000 | 439.4900 -5.0000 | 1290.1250 RPS |
| JP3YHN | Japan, Wakayama Ito-gun | Gateway | | | 1291.5900 -20.0000 | 1290.1250 RPS |
| JP3YHT | Japan, Osaka Sakai-city | | | | 439.3100 -5.0000 | |
| JP3YHV | Japan, Kyoto Kyoto-city | Gateway | | | 439.3700 -5.0000 | |
| JP4YDU | Japan, Hiroshima Hiroshima-city | Gateway | | 1291.6900 -20.0000 | 439.4900 -5.0000 | 1270.1250 RPS |
| JP4YDV | Japan, Okayama Kurashiki-city | | | | 439.3300 -5.0000 | 1270.6250 RPS |
| JP4YDW | Japan, Yamaguchi Suou-Oshima | Gateway | | | 439.4700 -5.0000 | 1270.3750 RPS |
| JP5YCN | Japan, Kagawa Takamatsu-city | Gateway | | | 439.4300 -5.0000 | 1270.3750 RPS |
| JP5YCO | Japan, Ehime Matsuyama-city | Gateway | | 1291.6700 -20.0000 | 439.4500 -5.0000 | 1270.8750 RPS |
| JP5YCP | Japan, Kochi Kochi-city | Gateway | | | 439.4900 -5.0000 | |
| JP6YHL | Japan, Fukuoka Fukuoka-city | Gateway | | 1291.6900 -20.0000 | 439.4700 -5.0000 | 1270.1250 RPS |
| JP6YHN | Japan, Kumamoto Kumamoto-city | Gateway | | | 439.0300 -5.0000 | 1270.1250 RPS |
| JP7YEL | Japan, Miyagi Sendai-city | Gateway | | 1291.6900 -20.0000 | 439.3900 -5.0000 | 1270.3750 RPS |
| JP7YEM | Japan, Miyagi Sendai-city | Gateway | | | 439.0700 -5.0000 | 1270.1250 RPS |
| JP8YDZ | Japan, Hokkaido Sapporo-city | Gateway | | 1291.6900 -20.0000 | 439.4900 -5.0000 | 1270.1250 RPS |
| JP8YEA | Japan, Hokkaido Hakodate-city | Gateway | | | 439.0300 -5.0000 | 1270.1250 RPS |
| JP8YEB | Japan, Hokkaido Chitose-city | Gateway | | | 439.4700 -5.0000 | |
| JP8YEC | Japan, Hokkaido Obihiro-city | Gateway | | | 439.4500 -5.0000 | |
| JP9YEG | Japan, Ishikawa Hakusan-city | Gateway | | | 439.0300 -5.0000 | 1270.1250 RPS |
| JR1VF | Japan, Tokyo Shibuya-ku | | | | 1291.4700 -20.0000 | 1270.8750 RPS |
| JR3VK | Japan, Hyogo Kobe-city | Gateway | | 1291.0300 -20.0000 | 439.4100 -5.0000 | |
| JR3WZ | Japan, Shiga moriyama | Gateway | | | 439.4700 -5.0000 | |
| JR6YZ | Japan, Okinawa Ginowan | Gateway | | | 439.4500 -5.0000 | |
| HB9LU | Luxembourg, Luzern (Sonnenberg) | Gateway | | 439.5750 -7.6000 | | |
| HB9QT | Luxembourg, Grosswangen | Gateway | 144.8250 +0.6000 | | | |

# ARRL to Appoint Narrowband Study Committee

From the ARRL Newsletter

www.arrl.org/announce/board-0907/

**Minutes of the 2009 Second Meeting**
**ARRL Board of Directors**
**Teleconference – July 17-18, 2009**

29. On motion of Mr. Sarratt, seconded by Mr. Frenaye, the following resolution was ADOPTED:
WHEREAS, there is current substantial amateur radio movement, activity, and innovation in the digital narrowband area; and
WHEREAS, the FCC has mandated that by 2013 commercial radio move to narrowband channels and Amateur Radio manufacturers normally follow commercial practices; and
WHEREAS, the VHF/UHF Amateur Radio band plan currently uses 15 and 20 kHz FM channels; and
WHEREAS, with the increasing use of narrowband across the country amateurs are placing and using narrowband equipment outside the repeater subband because there is no real place to fit the narrowband pairs; and
WHEREAS, for ARRL to remain a respected leader in technology, we must be actively involved in innovative solutions to problems by bringing about a productive discussion on a technical paradigm shift; now
**THEREFORE, the President shall appoint a study committee for the purpose of research and to consider developing a plan to move the US amateur community to narrowband channel spacing.**

You might wonder significance this has to D-STAR. It is actually very significant since in many parts of the country, the number of repeater slots in the 2M band plans have resulted in a lack of space for D-STAR 2M repeaters. This is even more pronounced in areas that are also impacted by the PAVE-PAWS radar project that has all but eliminated repeaters in the 440 band.

By changing, reallocating, or re-farming the existing repeater segments, we will be able to support a number of new narrowband technologies such as D-STAR or P-25.

Get with your ARRL Section Manager and let them know of your support for this action.

# New Features at DSTARInfo.com

www.DSTARInfo.com is the online companion to the D-STAR Info Newsletter. One of the biggest features of the website is the D-STAR Calculator.

A new addition to the website are D-STAR Maps. D-STAR maps allow you to display all of the repeaters in a region, country, or state. It even allows you to find all of the D-STAR repeaters within 100 miles of a specific location.

On each map, click on a repeater to show additional information such as frequencies, registration links or a website for the repeater.

# ARRL Technical Innovation Award

One of D-STAR's own, Dan Smith, KK7DS, of Hillsboro Oregon received the 2009 ARRL Technical Innovation Award for his programming contributions to digital communications.

Dan is the programmer behind D_RATS. He describes it as "A Communications Tool For D-STAR" A few days ago he released D-RATS 0.3.1. Dan doesn't rest and is continually working on updates .

Check out D-RATS at http://www.d-rats.com/

# If You Drop Your D-STAR Radio, You Have To Go After It!

Mark Meltzer AF6IM

When was the last time you went through an in-depth checklist before starting a QSO? That's what Mark Meltzer AF6IM does, at least when he's in an airplane at 14,000 feet and about to jump out of it! On Saturday Oct 10, 2009 Mark made what it suspected to be the first D-STAR Parachute Mobile contact. Here's the story from Mark.

I've been a skydiver since I was 18 years old and am now turning 60. I received my ham license about 18 months ago and began thinking about a way to combine jumping and amateur radio. My past jumps have typically been 70 second freefalls from 14,000 feet opening my canopy at about 2500 feet. In order to give sufficient time for QSOs, I decided to deploy my canopy at high altitudes and work radio comms on the long ride down.

I and fellow ham-skydiver Michael Gregg KF6WRW are planning to eventually make high altitude (18,000-24,000 ft) HF ham radio jumps using oxygen tanks and masks. I made two jumps from 24,000 feet in 2005 but they were freefall jumps and although I breathed oxygen in the plane, I did not carry supplemental oxygen during the freefall descent. We have been making weekend practice jumps from 14,000 feet without oxygen and getting ham radio mounting and operating kinks worked out using VHF gear (Icom IC 91AD and Alinco DJ G7). On October 10, 2009, on a practice jump over Byron CA, I opened my canopy at about 13,000 feet, completed my safety checks, reported "good canopy, safety checks complete, ready for comms" to my mission control ops K6OJ and KI6BEN and began working a number of 2M analog FM simplex conversations. I then worked a couple of analog FM QSOs (W6CYX and AE6RR) on 1.2 GHz through the W6CYX W6LRW linked repeater system on 1282.225.

I was carrying analog APRS gear (customized by N1VG and KI6QNZ) that not only reported GPS data (including altitude heading and speed) but also my blood oxygen level and pulse rate. (See www.parachutemobile.org for the telemetry data logged on the latest jumps and photos too). We used 144.330 for APRS to avoid clogging the main APRS frequency with our 5 second data report intervals. Our telemetry was received by KR6DD about 53 miles away without the use of digipeaters. My resting pulse rate is about 68. After 41 years of skydiving, I like to think that I am no longer terrified standing in a open airplane door looking down at the ground nearly three miles below. APRS, however, reported my pulse rate at 154-158 during most of the jumps showing that despite all the years of jumping, the adrenaline is still flowing big time. Skydiving never gets boring and the APRS data proves it.

As an electrical engineer, I am fascinated with new modes and the innovative features they bring to ham radio. I have used my Icom IC 91AD DSTAR HT to communicate with hams all over the world on VHF/VOIP. At about 8000 ft, I decided to try 2M DSTAR comms through the K6MDD repeater, but only heard a garbled "R2D2" reply. I was flying my canopy away from Mt. Diablo (site of K6MDD) which placed my body between the repeater and my IC 91AD HT antenna. As I turned towards Mt. Diablo, the distortion went away and was replaced by the clear voice of W6FO. I was able to work WF6O which I believe is the worlds first DSTAR parachute mobile QSO. I asked if there were any other stations, but heard none. I thanked WF6O and switched back to 2M FM simplex where I continued to work a pile up of stations at ranges up to about 80 miles.

I am looking forward to future parachute mobile DSTAR comms involving not only local hams, but ones far away as well .Check our website for upcoming events. I wish to congratulate WF6O for making the first DSTAR parachute mobile QSO and express my gratitude to Tim Barrett, K6BIV for making it all possible with his K6MDD repeater system.

To find out about this parachute mobile activity and others that Mark, Michael and their ground support team (K6OJ, W6RAR, KI6BEN, KC6TYD, KI6QNZ, N1VG, K6WX and KR6DD) have put together, head over to www.parachutemobile.org

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# Medtronic Twin Cities Marathon drops AX.25 in favor of D-STAR

Erik Westgard NY9D

After three years of flawless D-Star operation in 2007-2009, the Amateur Radio team supporting the Medtronic Twin Cities Marathon has officially retired AX.25 packet from the effort.

"We've used D-Star DD Mode now for three years, and we're no longer afraid of the technology" said one of the leaders of the project.

The five Icom D-Star RP-1D access points installed on Twin Cities building rooftops have been 100% reliable, including at the unusually warm 2007 race, where more than 50 runners were sent to area hospitals. The group uses Linux routers with DNAT co-located with the RP-1Ds to allow dozens of area Amateur Operators to have high speed access to applications in a central data trailer without use of the Internet.



"The low data rate, complexity of the character mode interface, and user training issues we have had with packet have put it on the back burner" said Erik Westgard, NY9D. "Again this year we can sit any available operators or even community volunteers in front of our web based missing runner application and they can be helping family members immediately."

One objective for the 2010 team is to start phasing in D-STAR digital voice, who also allows the concurrent use of low speed data.

For more details check out http://www.14567.org

# ICOM D-STAR Contest

During the week of July 25th, Icom had a worldwide D-STAR Contest. We'd like to recognize the winners.

Details can be found at http://www.icom.co.jp/world/d-contest

World Repeater Category
NU5D
WW6USA
HB9VAF

Japan Domestic Repeater Category
JH2DFJ
JH1MUW
JP3KPJ

# Late Breaking News

D-RATS 0.3.1 released at www.D-RATS.com

DVTool Beta 4 released at www.OpenDSTAR.org/tools

# D-STAR Tips and Tricks

## D-RATS and DVDongle work together

The DVDongle Software and D-RATS software have both been modified to work with each other. Now you can use D-RATS without the need for a radio.
This is an excellent configuration for your Emergency Operation Center where your EOC Liaison can now directly receive reports from the field.

## Is there a repeater near me?

A new feature at www.DSTARInfo.com allows for you to search for all of the repeaters within a 100 mile radius of any location that you desire. Enter a house address, a ZIP Code or even a city and find all of the repeaters near you, including the distance from you. Select "Nearest" from the drop-down box at http://www.dstarinfo.com/maps/Repeaters.aspx

If you have any Tips or Tricks, send them to Info@DSTARInfo.com