

DStar Call routing.

When Icom introduced DStar Digital Radio to the Amateur world it included the ability to call directly to another user anywhere on the network either locally or globally. What this means for a user is, your callsign information and which repeater you last used is recorded and distributed across the DStar network, so if another distant DStar user wants to call you the system will automatically route their call to the repeater you last used.

As you move between different repeaters, a call through the next repeater on your journey will update the database on the DStar network and another call from your distant contact will be redirected to the next repeater on your journey.

This sounds ideal in theory, but in practice one of the failings of the Icom Gateway software is the ability to record & redistribute the routing information quickly enough.

So another alternative that works in conjunction with the Icom gateway software is ircDDB

What is ircDDB ?

ircDDB is a system that instantly updates a database which can track DStar users and route calls quickly and correctly. The software is installed on the Repeater Gateway computer only.

How does callsign routing work?

Presently there are two ways to use callsign routing, ircDDB and the Icom system. The Icom system is very similar but it's use will not be described in this guide and a search on the internet will result in further information if you wish to use it.

Firstly which ever system you use, make sure that your callsign is registered on the DStar network otherwise your calls will be ignored by the local repeater gateways, contact your local DStar Repeater Group for further details.

Now that you are registered and you want to route an ircDDB call to another DStar user via your local ircDDB enabled repeater, in your DStar transceiver you would set the information in the YOUR: field in the callsign menu.

For example, if I wanted to call Don M0FHM using my local ircDDB enabled repeater GB7WF, then the settings in my DStar radio's callsign menu would look like the example below,

```
YOUR:M0FHM  
RPT1:GB7WF B (B in the 8th position)  
RPT2:GB7WF G (G in the 8th position)  
MY:G1ZRN
```

I don't have to know which repeater Don last used because when I call via GB7WF with Don's callsign in my YOUR: the ircDDB Database would look for the repeater that Don last used, GB7SY for example, and direct my call there.

Because of the clarity of the DStar transmission, unlike analogue internet linked repeaters, there is no noticeable difference in the audio between a transmission through a repeater or from the Internet so during my call I announce that I'm using calling through GB7WF and using Call Sign Routing which would indicate to Don for him to press his One Touch Reply button on his radio (R>CS on 2820, RX-CS on 92's)

By pressing the OTR button on his radio, my callsign, G1ZRN, is then automatically placed into YOUR: on Don's DStar radio as below,

```
YOUR:G1ZRN  
RPT1:GB7SY B  
RPT2:GB7SY G
```

Now when Don replies, his transmission is automatically routed back to me via GB7SY & GB7WF. We

do not have to link our local repeaters to any reflector to establish and continue our QSO, the routing is automatically taken care of by the ircDDB system. Also as the transmissions are routed directly between the two repeaters and not via any Reflector server, lost transmissions are virtually eliminated.

For the replying station, all this takes place after the press of "one" button.

Another aspect of callsign routing using ircDDB, CQ calls can be made on a distant repeater even if it is already linked to a reflector.

For example, to put a CQ call from GB7WF through to GB7ZI, your callsign menu would look like the example below,

```
YOUR:GB7ZI B (B is the 70cm port letter which needs to be placed in the 8th position)
RPT1:GB7WF B
RPT2:GB7WF G
```

Your CQ will now be heard on GB7WF & GB7ZI only, and importantly remember to announce you are using call sign routing if you want some one to reply so they can press their OTR button on their radio.

If you are in front of a computer with internet access you can check your call sign routing settings to see if they are correct by viewing <http://www.ircddb.net/live.htm>

The format is,

```
UTC MYCALL URCALL RPT1 RPT2 DEST
```

The destination column will tell you if your call is being routed correctly, as an example to put a CQ call on GB3IN a 2M dual mode Repeater from the 70cm repeater GB7WF the format will be as the line below,

```
UTC MYCALL URCALL RPT1 RPT2 DEST
1230 G1ZRN GB3IN C GB7WF B GB7WF G GB3IN C
```

The destination column now contains GB3IN C which means that my call is now being routed and transmitted via GB3IN port C on 2M.

To return to "normal" use make sure you select CQCQCQ in YOUR:, (single button press) or switch to a different memory, if you are in memory mode, as you would do after linking or unlinking from a Reflector. If you do not return to CQCQCQ any transmission you made earlier using any other call in YOUR: will continue to be routed to that user or Repeater.

Altering your privacy settings.

By default any new user on ircDDB has their callsign hidden, if you go to

<http://www.ircddb.net/live.htm>

you will see other users and routing information live.

When you transmit and where your callsign should be displayed there is a line of stars ***** then you might want to switch off the privacy mode which is default ON for new users.

To disable privacy mode so that your callsign will be displayed, set the call parameters as below in YOUR: and transmit through your local ircDDB enabled repeater, You only have to do this once or until you can see your callsign clearly displayed.

```
YOUR:VIS ON (capital letter O in the 7th position and N in the 8th)
```

YOUR:VIS OFF will hide your callsign again.

Frequently Asked Questions.

Do I have to switch VIS ON and lose my privacy to use callsign routing via ircDDB ?

No, but as you will not be "listed" on the live or last heard pages on the ircDDB web site contacts with other users will be limited to only those who already know you and not to all users who could become future regular contacts and possible new friends.

With ircDDB on my local repeater, will I still be able to link to reflectors?

Yes, reflector linking/unlinking is unaffected, but if you are about to make a route call then it is recommended to unlink your repeater first otherwise others might only be hearing one side of the QSO on the reflector and wonder what is going on.

Can you call another repeater ?

Yes, just put the call of the repeater including the port letter in YOUR: i.e. to make a CQ call to another ircDDB enabled repeater GB7WF

YOUR:GB7WF B (B in the 8th position)
RPT1:your repeater callsign & port letter
RPT2:your repeater callsign & Gateway letter

Port letters A= 23cm, B=70cm, C=2M

To use ircDDB call routing to contact a friend, would their local repeater have to have ircDDB software installed?

Yes, but until they install it you can call route using the Icom format if your repeater and the distant repeater are both Icom units or other digital repeaters support the Icom routing system.
i.e.

YOUR:/GB7WF B

^ Icom call routing uses a slash before the target call in YOUR: ircDDB doesn't require the slash.

Without the computer amateurs would not know how to call a repeater in Australia?

Look at the ircDDB Gateway lists on <http://status.ircddb.net/cgi-bin/ircddb-gw> and perhaps print a copy to keep with you when mobile or away from a computer as you might with a list of Repeater frequency and location details. If you know some-one who hasn't got a computer or internet access then offer to print a copy of the list for them.

Looking at the last heard list <http://status.ircddb.net/cgi-bin/ircddb-log> can I call the stations that have CQCQCQ in the YOUR column? I tried this but did not get any replies

They may have replied, but did you announce that you were using call sign routing and ask them to press their "One Touch Reply" button (R>CS on 2820, RX-CS on 92's) so that their reply would be routed back to you?

To aid a reply, consider transmitting a text message similar to "Press R>CS to reply" so if they see this on their displays then they might realise that OTR is required.

In the days before we had dplus linking, contacting a distant station would have meant using the Icom call routing system and distant stations would have pressed their "One Touch Reply" buttons without thinking.

But now, most people on DStar who have only joined in over the last 2 - 3 years think that the *dplus* reflector linking is the establish method of distant communications and that callsign routing, whether Icom or ircDDB, is a new method which of course it isn't.

Additional information and amendments welcome, please send to admin@wfrg.net

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