

# **Setup-Instructions DStar-DD**

This instruction describes how to setup DStar-DD-mode for usage with the G4KLX ircDDBGateway.

## Hamnet/AmprNet

At DBOMYK DStar-DD-mode allows users to access the "Hamnet", which is the high speed part of the amprnet in Europe.

## The worldwide amprnet is our own closed network used for amateur radio only! For me it really makes sense to use it for DStar Digital Data.

You will find more information on amprnet and Hamnet in different languages on the web:

<u>http://en.wikipedia.org/wiki/AMPRNet</u> (English language) <u>http://db0fhn-i.ampr.org/doku.php?id=projects:wlan:hamnet</u> (English language) <u>http://www.amateurfunk-wiki.de/index.php/Kategorie:HAMNET</u> (German language) <u>http://de.wikipedia.org/wiki/HamNet</u> (German language)

.. and many more.

## DHCP

DBOMYK provides all necessary network information by DHCP.

The big advantage of DHCP is that users without any network knowledge may use it easily. It is as easy as connecting a PC to a usual DSL- or WLAN-router. Not all OMs are network and internet specialists.

A disadvantage of DHCP is a changing IP address which makes peer-to-peer routing more complicated.

I personally do not think that P2P routing is the main purpose of DStar-DD. Most users do not run any services on their PC that might be connected from the net; a standard Windows installation with firewall enabled will not even answer a ping by default.

Servers should be connected to the network by a faster link, however, they could also get fix IPs.

But anyway, I have built a little web-tool which shows the actual users from the DDMode.log of ircDDBGateway with the current IP address from DHCP-leases. Users can see on a webpage of the gateway who is on air in DD and what the actual IP address is.

There is much room for improvement at that place; dynamic IP addresses should not be an unsolvable issue!



Hans-J.Barthen, DL5DI



#### 1. Setup of the ID1 transceiver:

- Tune the ID1 to the frequency of your local DD-mode repeater.
- Select DD-Mode.
- Activate the correct repeater mode. The ID1 offers RP+, RP- and RPS. Most DD-mode repeaters work simplex, note that you have to set RPS in that case! Without any repeater setting DD-mode won't work.
- After that you need to enter your own callsign, destination, repeater 1 and repeater 2. This works exactly in the same way like setting it up for digital voice:
- Set destination to "CQCQCQ",
- Set repeater 1 to the callsign and ID that your local repeater uses for the DD-module. Usually it is the ID "A" at the 8th position, like "DBOMYK\_A".
- Set repeater 2 to the gateways' callsign. Usually it is the repeaters' callsign with the ID "G" at the 8th position, like DB0MYK\_G.

If you have installed the remote control software on a PC, settings should look like this:

m [DL5DI D/ID1] Untitled - ID-1	
File(F) View(V) Option(O) Help(H)	
UHF DIGITAL TRANSCEIVER ID.1	CD CS LOW
1297.225 04 TX-F 1297.22500 MN SQL SKIP MSG	RP DSQL MW PRIO SCAN MN
MHZ TS V/M CALL MODE SET MONI	BK AFC F.INP
📼 Select CallSign	×
YOUR CO REPEATER G RPT2 V Enable MY	
CQCQCQ VOK DB0MYKA V DB0MYKG VOK DL5DI D	





## 2. Setup of the PC

- If you are using a Windows PC and have not done any changes to the settings of the Ethernet interface yet, you have nothing to configure.
- If you did manual changes to the network settings, take care, that the Ethernet interface has to be activated and set to DHCP mode.

## 3. Connect the devices and start working

- Connect your PC and the ID1 by using a network cable.
- The transmitter of the ID1 is deactivated by default. Activate your ID1 by pressing "TXinh".

"TXinh" should now have disappeared from the display and you should immediately see some traffic going back and forth.

Your PC will send out a DHCP request as soon as the interface gets connected. The gateway will supply the IP and some other necessary network settings.

You are now ready to work!

Try a ping to a known IP address. Ask your local admin for information. If the gateway is connected to the amprnet try 44.225.73.2!

You should see your callsign in ircDDB-live now (if VIS=on). It will appear only once every 2 minutes.

#### 4. Some samples of my local DD-repeater:

The webpage that I get from the local gateway is the dashboard of the ircDDBGateway:

Firefox  DB0MYK - ircDDBGateway Repeater a	DLSDI D/ID1] Untitled - ID-1
♦ ♦ http://44.225.73.34/	File(F) View(V) Option(O) Help(H)
Norton - G Safe Web - G Identity Safe -	
Site URL: http://dl	
Description: Gaense Mayen	POWER DD RPS Z5K VFO TX inh PD DCS LOW
ircDDB Server: group1	1297.225 04 SQL SKIP BOOL MW
DPlus: Enable	TX-F 1297.22500 MN MSG PRIO SCAN MN
DEXTRA: Enable	MHZ TS V/M CALL MODE SET MONI
D-RATS Port: Enable	
Echo Command: Enable	Select CallSign
Info Command: Enable	YOUR CO REPEATER G RET2 V Enable MY
APRS Server: Enable Reporting	
Stations Heard DB0MYK A	6
Station Dest	lime Heard
DL5DI D/ID1 CQCQCQ 2	2011-09-17 19:40:22 CEST
DB0MYK B	
Station Dest	Time Heard
DF4PM P/IC92 CQCQCQ	2011-09-17 19:27:07 CEST





This shows a connect to the webserver 44.225.73.2:

Firefox Packet-Radio-Grupp	pe Mittelrhein e.V.	DLSDI D/ID	1] Untitled - ID-1	1.0	a particular	-		L.		
(+) http://44.225.73.2/		File(F) View(V	File(F) View(V) Option(O) Help(H)							
Nerton Safa Wah - O	Idantitu Cafa -		ଧ <u>∎</u> ାହୀ							
AFuPortal Mittalrhain	identity Sare +					VOI				
Arui ortai Aritten nem	D D	Сом	UHF DIGITAL	TRANSCEIVE	R ID-1			CD		
Unsere Einrichtungen: D-Star DB0MYK Server-Dienste DB0LJ Convers-Download-News-/ Mail-WPP-/Suchfunktionen	I		DD RPS 12C TX-F	97.22500 1297.22500 MODE	25k VFO 04 MN		). MUTE TX inh SKIP MSG	PRIO BK		
APRS-Server T2KOBLENZ		Received call rece	ord							
WX-Station DB0LJ-5	DX de	Caller /	Called	Rx RPT1	Rx RPT2	Status	Received date	e		
(APRS)	DX de	DB0MYK A	DL5DI D	DB0MYK A	DB0MYK A	UR?	18.09.2011 2	2:25:27		
DX-Cluster DB0LJ-6	DX de DX de									
Mailbox DB0LJ-8	DX de									
	DX de	Displays when a	new call sign signal is re-	ceived.			SaveAs	se		
RMS-Gateway DB0LJ-10	DX de m	NOVII. 1170	55.5 E32NO					EU		
and the second sec	DX de E	72U: 101	05.5 9A04JB	CW				9A		
Webmail-Zugang	DX de I	K6AWY: 101	41.4 LUSEKC	cq psk31				LU		
Diginaatar Kruft DB0LI	DX de H	B7CIN: 713	9.0 OX40K	SPLIT DO	wn			OX		
Digipeater Kidit DB0L3	DX de E	C7ABV: 210	00.0 SPAIN	CHAMPION	EUROBASKET	2001		SP		
FM-Relais/Echolink	DX de L	Y2BAW: 707	5.0 00370	EUROBASK	ET2011 fina	1 hour		UR		
DB0MYK/	DX de E	A1BKO: 368	7.1 EA1HT	DIPLOMA	SANTO ANGEI			EA		
1	DX de I	Z2SOG: 141	63.0 EG8LM	SPECIAL	CALL Fiesta	de Las	Mar	EA		
	T DX de I	Z100B: 140	26.0 T88GO	my tnx p	se up up			T8		

My local server 44.225.73.2 also allows to connect to the Packet-Radio network by using the feature "TCPIP-Connect" of the Windows Packet Program "WPP".

With this I am able to connect to packet-radio stations like the DX-Cluster DB0LJ-6 in this example:

were ein Windows Packet Programm	DL5DI D/ID1] Untitled - ID-1	
Programm Einstellungen Terminal Befehl <tcp ip=""></tcp>		
	rite(r) view(v) option(o) rieip(n)	I
	VOL	DIG/TAL
		CD CS LOW
	POWER DD RPS 25k (- ). TV inh	CD CO LON
		RP DSQL MW
1 DBOLJ-6 DXC Kruft/Koblenz		
DL5DI: V>DBOLJ C>DBOLJ-6	TX-F 1297.22500 MN	PRIO SCAN MN
DX de IT9YMM: 7177.0 I09GD		
DX de UV5E0Z: 28134.0 KG6DX	VIM CALL MODE SET MONI	BK AFC F.INP
DX de GOUWK: 28456.0 JE3SSL		
DX de RZ3FW: 24892.0 RZOAF	reived call record	<b>X</b>
DX de IK7BPV: 14345.0 R1FJA		
WCY de DKUWCY-3 (U8) : K=3 expK=	er / Called Rx RPT1 Rx RPT2 Status Received date	BK EMR A
	MYK A DL5DI D DB0MYK A DB0MYK A UR? 24.09.2011 10:19	):40
DX de OPOP: 7092.1 ON5JE/ DL5	DI D DL5DI D DB0MYK G DB0MYK A 24.09.2011 10:19	9:38
DX de DL3SG: 28465.0 9M2RDX		
DX de PB5X: 14240.0 ZB2JK/		· ·
DX de RV3ZN: 14082.8 UN1L		E.
DX de RA4HIT: 24920.9 TP50CE	Sevela	calact Close
DX de DUIFI: 28485.0 RZ4WZ	Isplays when new call sign signal is received.	Select Close
To ALL de DISMX: G30AG read http://gr	$r_{\rm com/db/5c^2n}$	
DX de US5MTJ: 28086.5 UZ2M	CO WW RTTY DX Contest 0819Z	
DX de F5NPS: 18145.0 0J0X	cq cq cq 0819Z JN29	E
DX de OH5MD: 28126.0 VK6DZ	KP20NG <f2>OF84UX WSPR -19 DB 0819Z</f2>	
DX de IT9LED: 24890.7 4W6A	up5 0819Z JM67	*
DBOLJ		
WinSock 2.0 Running		^
r:LUUP o.TCDID		
und ab		
ana ab		

Have fun!

Hans, DL5DI

