



John Davis, WB4QDX
EC – Gwinnett County, GA
DEC – Georgia ARES
Georgia D-STAR
wb4qdx@arrl.net

BASIC RADIO PROGRAMMING FOR D-STAR

Getting on the Air

⦿ FM Repeater

- Mode - FM
- Frequency
- Offset
- CTCSS / TSQ
- Tone frequency

⦿ D-STAR Repeater

- Mode - DV
- Frequency
- Offset
- UR (You Are)
- RPT1
- RPT2

*MYCALL set once initially
and done*



The Big Three

- *MY or MYCALL is your own callsign and is set once in radio*
- **UR** or URCALL: Where do I want to go?
- **RPT1**: The repeater and module I am transmitting to (ex. WD4STR C)
- **RPT2**: Where I want my transmission to go (normally to “G”, the Gateway)



DPLUS adds more functions

- ◉ *DPLUS is a program developed by Robin Cutshaw, AA4RC, which adds linking functions and the use of DV Dongles, DV Access Points and Hotspots to D-STAR. DPLUS is active on most gateway-equipped repeaters.*
- ◉ Characters used with DPLUS
 - G – Gateway
 - E - Echo Test
 - I – Identification
 - L – Link Repeater
 - U – Unlink Repeater



RPT1, RPT2 Format

- Normal format (xxnxxx m)
 - Callsign is left justified
 - Module is always in 8th position
 - C=VHF
 - B=UHF
 - A=1.2 GHz
- Examples (*"■" represents a space*)
 - WD4STR■C
 - W4DOC■■C
 - W4GR■■■C



Basic QSO

◎ Sample for KJ4BDF Repeater 440.725 MHz +5.0 MHz Offset

- MY WB4QDX
- UR CQCQCQ
- RPT1 KJ4BDF ▪ B
- RPT2 KJ4BDF ▪ G

"▪" represents a space

Used for talking on local repeater. If repeater is linked, you are also heard on any of the linked repeaters



Linking to a Repeater

- Sample for KJ4BDF Repeater
440.725 MHz +5.0 MHz Offset

- MY WB4QDX
- UR WX4GPBAL (or W4DOC▪CL, W4GR▪▪CL)
- RPT1 KJ4BDF▪B
- RPT2 KJ4BDF▪G

"▪" represents a space

Key once, gateway responds with voice prompt "Remote System Linked".
Change to CQCQCQ in UR for QSO.



Linking to a Reflector

- Sample for KJ4BDF Repeater
440.725 MHz +5.0 MHz Offset

- MY WB4QDX
- UR REF002AL
- RPT1 KJ4BDF▪B
- RPT2 KJ4BDF▪G

"▪" represents a space

*Key once, gateway responds with voice prompt "Remote System Linked".
Change to CQCQCQ in UR for QSO.*



Unlinking

- Sample for KJ4BDF Repeater
440.725 MHz +5.0 MHz Offset

- MY WB4QDX
- UR ■■■■■■U
- RPT1 KJ4BDF■B
- RPT2 KJ4BDF■G

■■ represents a space

Key once, gateway responds with unlinked voice prompt. Change to CQCQCQ in UR for QSO.



Identify the Repeater

- Sample for KJ4BDF Repeater
440.725 MHz +5.0 MHz Offset

- MY WB4QDX
- UR ■■■■■■I
- RPT1 KJ4BDF■B
- RPT2 KJ4BDF■G

"■" represents a space

Repeater responds with "Not Linked" or Repeater or Reflector callsign in data line on radio



Echo Test

- Sample for KJ4BDF Repeater
440.725 MHz +5.0 MHz Offset

- MY WB4QDX
- UR ■■■■■■E
- RPT1 KJ4BDF ■ B
- RPT2 KJ4BDF ■ G

"■" represents a space

Gateway plays back audio of last transmission for audio check



Review

- ⦿ UR – where I want to go or what I want to do
- ⦿ The 8th character defines the function
- ⦿ DPLUS function characters
 - G – Gateway
 - E - Echo Test
 - I – Identification
 - L – Link Repeater
 - U – Unlink Repeater

