



# MORE ON D-STAR

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D-STAR Admin / Reflector Admin



**HamX** - The Northeast **HamX**position  
August 21-24, 2025

# WHY D-STAR



- D-Star was designed for Amateur Radio with networking in mind and supports routing and name services
- Other modes: DMR, System Fusion, P25, NexEdge
  - DMR - 2 voice paths per channel, better fidelity, no GPS, repeater owner sets channels/talkgroups, not field programmable
  - Fusion – better audio/error correction, single manufacturer
  - P25 – “original” digital, limited connectivity options
  - NexEdge – similar to DMR in capabilities

- ▶ TIP #1 –Kenwood provides FREE programing software their D-STAR radios!

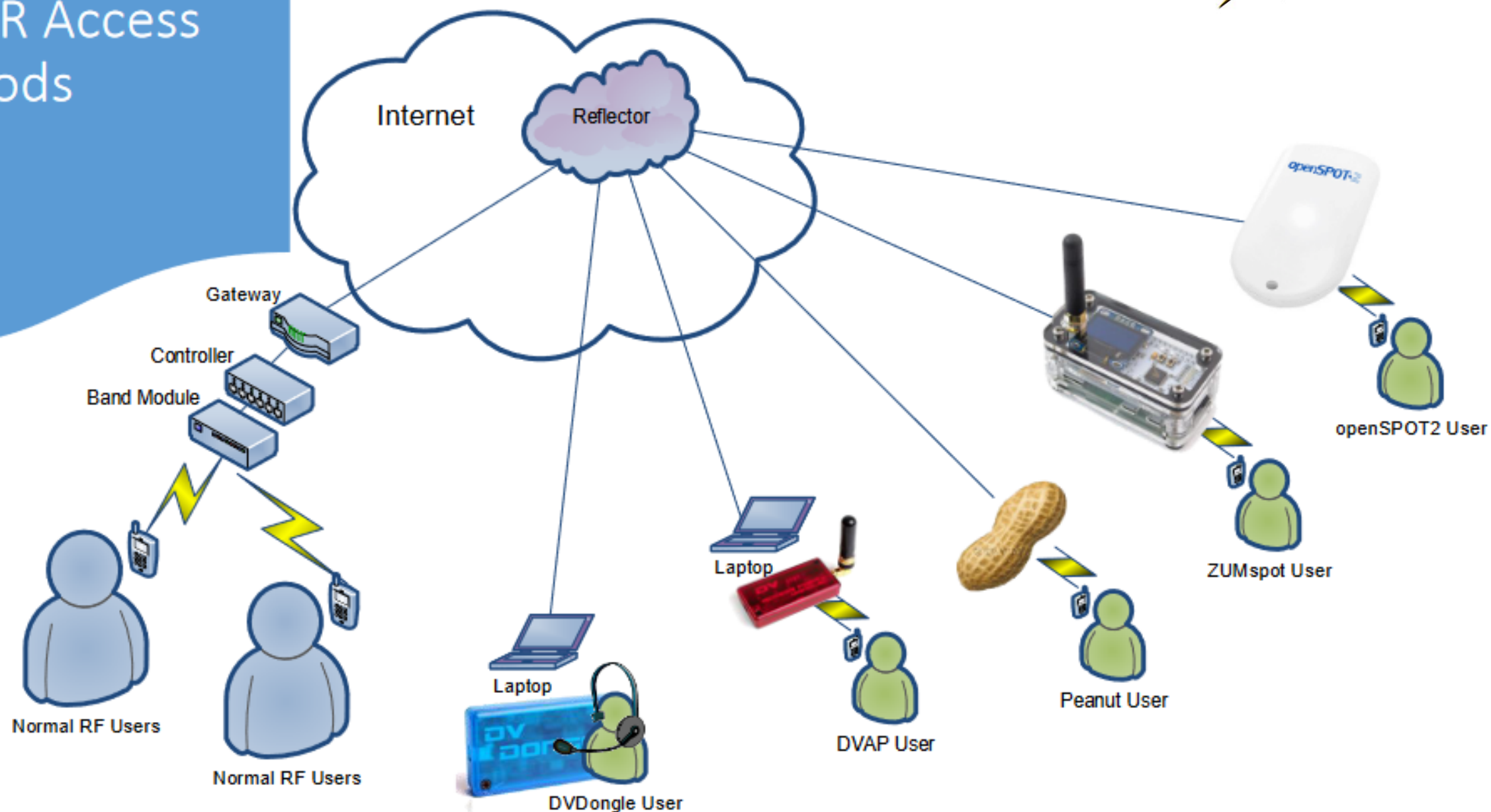


- ▶ Kenwood (search for your model number, TH-D74A, TH-D75A, etc.)
  - ▶ [https://www.kenwood.com/i/products/info/amateur/mcp\\_d74\\_e.html](https://www.kenwood.com/i/products/info/amateur/mcp_d74_e.html)
  - ▶ [https://www.kenwood.com/i/products/info/amateur/mcp\\_d75\\_e.html](https://www.kenwood.com/i/products/info/amateur/mcp_d75_e.html)
  - ▶ Look for “Memory Control Program” usually part number begins with “MCP”
- ▶ TIP #2 - First thing you should do is make get a copy of what is pre-loaded on your radio and save it to our computer

## GETTING STARTED – KENWOOD RADIOS



# D-STAR Access Methods



# ➤ HF Transceivers, V/UHF Mobiles and Handhelds

- For local RF coverage

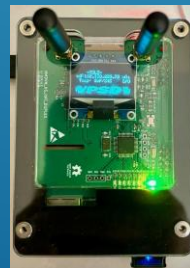
# ➤ DVAP, DVDongles, DV4mini

# ➤ HotSpots

- RPi based
- Based on G4KLX software
  - Pi-Star <https://www.pistar.uk/>
  - WPSD (new) <https://w0chp.radio/wpsd/>
- Use your own WiFi service
  - In your car
  - portable



# ON THE ROAD





- ▶ TIP #1 –Icom provides FREE programming software their D-STAR radios!
  - ▶ Icom (search for your model number, ID-51A, IC-7100, etc.)
    - ▶ [https://www.icomamerica.com/support/firmware\\_driver/](https://www.icomamerica.com/support/firmware_driver/)
    - ▶ [https://www.icomjapan.com/support/firmware\\_driver](https://www.icomjapan.com/support/firmware_driver)
    - ▶ Look for “Cloning software” usually part number begins with “CS”
      - ▶ CS-7100, CS-52, CS-52PLUS, ID-51A PLUS, ID-51E PLUS, ID-51A Icom 50th Anniversary Limited Edition, ID-51E Icom 50th Anniversary Limited Edition, ID-51A PLUS2, ID-51E PLUS2, ID-51A, ID-51E
- ▶ TIP #2 - First thing you should do is make get a copy of what is pre-loaded on your radio and save it to our computer



## GETTING STARTED – ICOM RADIOS



REFRESHER ON  
DR MODE



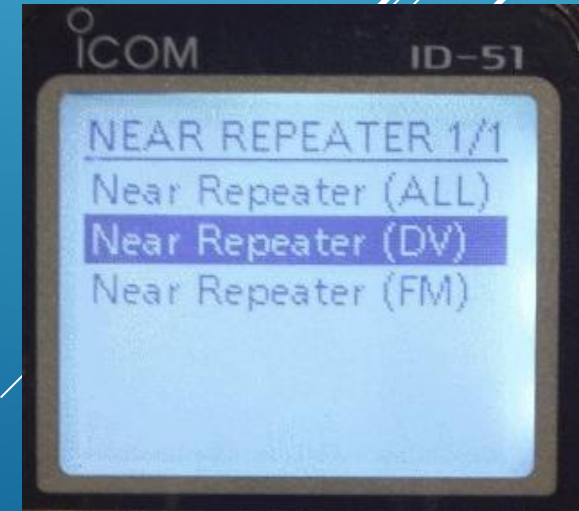
## Using DR Mode

- DR Mode (Digital Repeater Mode) allows quick selection of repeaters and using linking commands
- Uses stored database of repeaters in memory and on SD card
- Press and hold DR button to activate DR Mode
- FROM – Sets local repeater you are using
- TO - Determines what you want to do with your signal



## Selecting the Repeater

- Highlight From and then press blue center button
- Repeater List – Select repeater (DV or FM) based on region
- Near Repeater – Select nearest repeater
- Press blue again to select





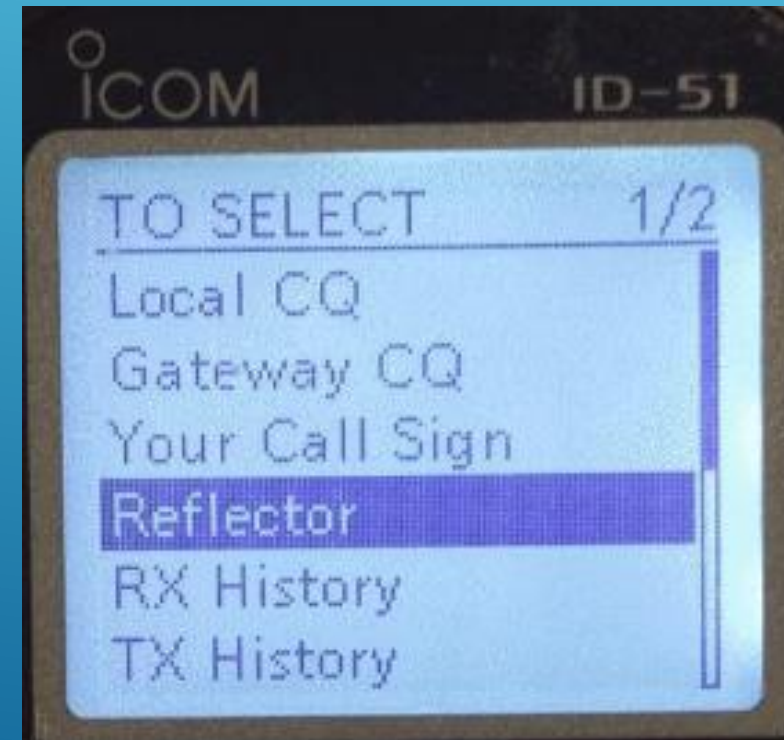
## Selecting the Repeater

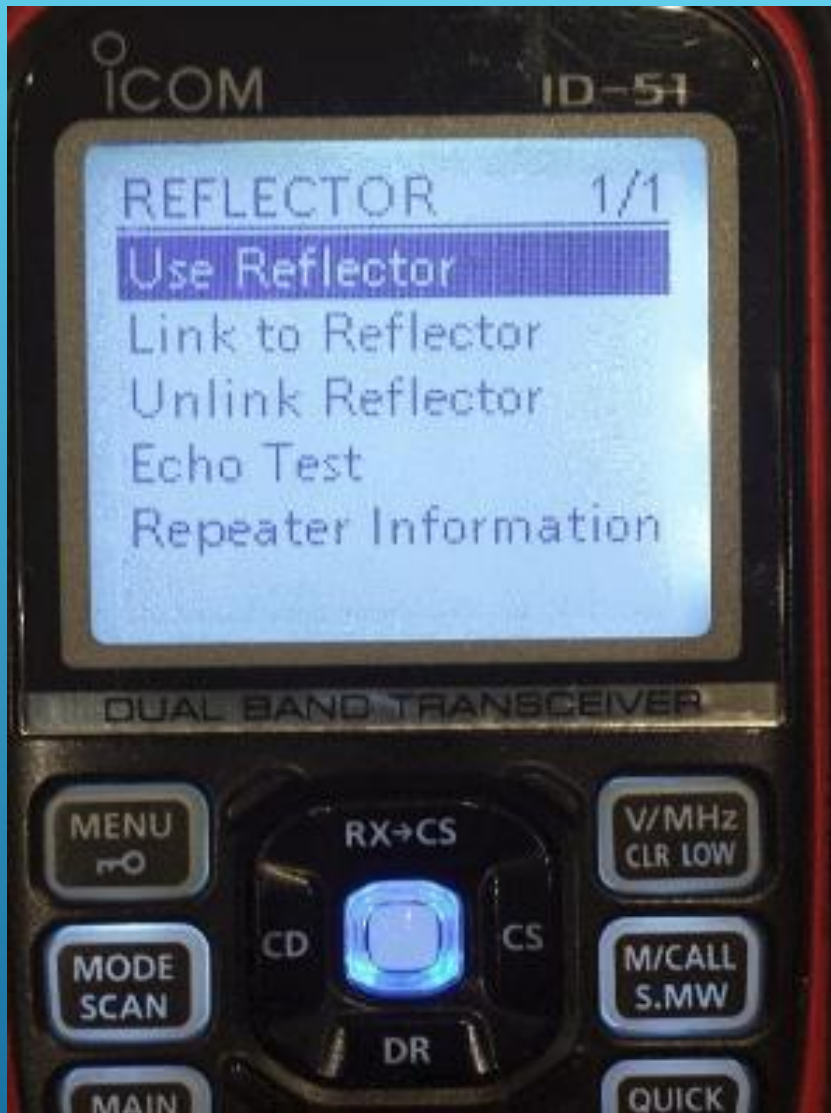
- Near Repeater – Select nearest repeater or scroll to your repeater choice
- Press blue again to select



## What to Do (TO)

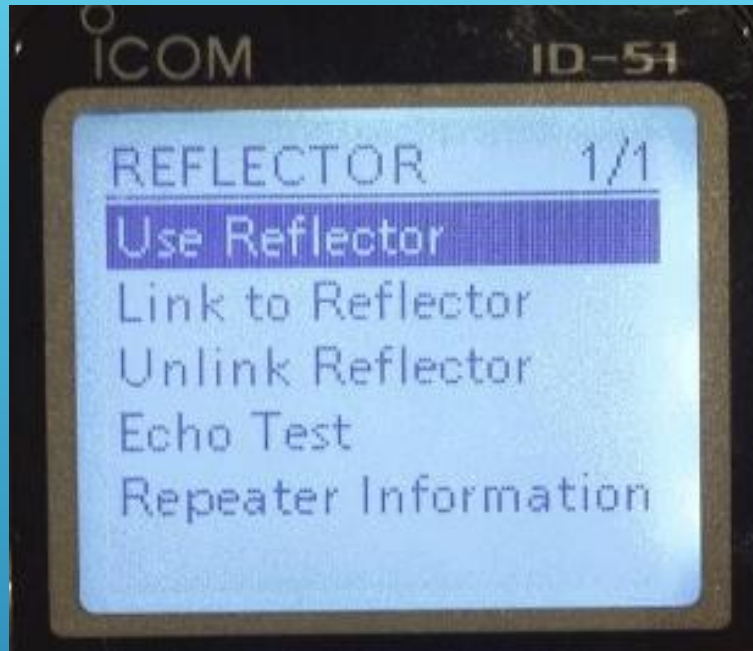
- Select TO field by pressing RX+CS button
- Most often, select Reflector





## What to Do (TO)

- **Use Reflector** to use a reflector already connected to on the local repeater
- **Link to Reflector** – select to choose a reflector to link
- **Unlink Reflector** – select to unlink the local repeater from a connected reflector (you **MUST** do this first before linking to a new reflector choice)
- **Echo Test** – plays back your transmission
- **Repeater Information** – causes repeater to announce it's call and text to show connection status



# Simple Rules for Linking and Unlinking

- If a repeater is already linked to a reflector, your radio will be heard by all on the local repeater and the connected reflector
- You must unlink before linking to another reflector
- Once a **Link** command is issued, go back to **Use Reflector** to talk





|                      |
|----------------------|
| FM Radio Memory      |
| DTMF Memory          |
| Digital              |
| Your Call Sign       |
| Repeater List        |
| Group Name           |
| 01: Africa           |
| 02: Asia             |
| 03: Australia        |
| 04: Canada           |
| 05: Europe - Eastern |
| 06: Europe - Norther |
| 07: Europe - Souther |
| 08: Europe - Western |
| 09: Germany          |
| 10: Islands          |
| 11: Italy            |
| 12: Japan            |
| 13: Latin America    |
| 14: Oceania          |
| 15: Sweden           |
| 16: United Kingdom   |
| 17: USA Midwest      |
| 18: USA Northeast    |
| 19: USA Southeast    |
| 20: USA West         |
| 21: Hotspots         |
| 22:                  |
| 23:                  |
| 24:                  |
| 25:                  |
| 26:                  |
| 27:                  |

| 18: USA Northeast (Remain 202 memories) |             |                  |          |                    |                   |                |
|-----------------------------------------|-------------|------------------|----------|--------------------|-------------------|----------------|
| No.                                     | Type        | Name             | Sub Name | Call Sign          |                   | Frequency      |
|                                         |             |                  |          | Repeater Call Sign | Gateway Call Sign | Operating Freq |
| 53                                      | DV Repeater | Towson           | Maryland | W3DHS B            | W3DHS G           | 442.112500     |
| 54                                      | DV Repeater | Brockton         | Massachu | KB1YAC B           | KB1YAC G          | 449.275000     |
| 55                                      | DV Repeater | Brookline        | Massachu | K1MRA C            | K1MRA G           | 145.210000     |
| 56                                      | DV Repeater | Fall River       | Massachu | K1RFI C            | K1RFI G           | 145.420000     |
| 57                                      | DV Repeater | Fall River       | Massachu | K1RFI B            | K1RFI G           | 449.525000     |
| 58                                      | DV Repeater | Fall River       | Massachu | K1RFI A            | K1RFI G           | 145.220000     |
| 59                                      | DV Repeater | Falmouth         | Massachu | KB1ZEG C           | KB1ZEG G          | 145.210000     |
| 60                                      | DV Repeater | Feeding Hills    | Massachu | W1KK B             | W1KK G            | 449.175000     |
| 61                                      | DV Repeater | Feeding Hills    | Massachu | W1KK C             | W1KK G            | 145.150000     |
| 62                                      | DV Repeater | Holliston        | Massachu | W1DSR B            | W1DSR G           | 447.075000     |
| 63                                      | DV Repeater | Marlborough      | Massachu | W1MRA B            | W1MRA G           | 448.225000     |
| 64                                      | DV Repeater | Marshfield       | Massachu | W1ATD C            | W1ATD G           | 145.390000     |
| 65                                      | DV Repeater | North Oxford     | Massachu | KC1ACI B           | KC1ACI G          | 447.275000     |
| 66                                      | DV Repeater | Norwell          | Massachu | AC1M C             | AC1M G            | 145.250000     |
| 67                                      | DV Repeater | Sutton           | Massachu | KC1AZZ B           | KC1AZZ G          | 442.850000     |
| 68                                      | DV Repeater | Walpole          | Massachu | WA1PLE B           | WA1PLE G          | 446.437500     |
| 69                                      | DV Repeater | West Bridgewater | Massachu | KA1GG B            | KA1GG G           | 449.987500     |
| 70                                      | DV Repeater | Westford         | Massachu | WB1GOF B           | WB1GOF G          | 442.450000     |
| 71                                      | DV Repeater | Westford         | Massachu | WB1GOF C           | WB1GOF G          | 145.330000     |
| 72                                      | DV Repeater | Auburn Hills     | Michigan | K8DXA C            | K8DXA G           | 145.130000     |

# MAKING CHANGES TO DR LIST USING CS-52

File Model Edit Program Tools Setup View Help

TH-D75

- ☒ Memory Channel
- ☒ Program Scan Memory
- ☒ Call Channel
- ☒ Weather Channel
- ☒ VFO
- ☒ Repeater List
- ☒ Callsign List
- ☒ Hotspot List
- Menu (TX/RX)
  - ☒ RX
  - ☒ TX
  - ☒ RX Filter
  - ☒ Scan
  - ☒ Repeater
  - ☒ VOX
  - ☒ DTMF
  - ☒ CW
  - ☒ Others
- Menu (Memory Channel)
- Menu (Audio File)
  - ☒ Recording File
  - ☒ Voice Message
- Menu (GPS)
  - ☒ Basic Settings
  - ☒ Track Log
- Menu (APRS)
  - ☒ Basic Settings
  - ☒ Beacon TX Control
  - ☒ QSY Information
  - ☒ SmartBeaconing
  - ☒ Waypoint
  - ☒ Packet Filter
  - ☒ Message
  - ☒ Notification
  - ☒ Digipeat

### Repeater List

| Area |           |             |                 |                  |        | Details         |                |                          | Frequency       |       |
|------|-----------|-------------|-----------------|------------------|--------|-----------------|----------------|--------------------------|-----------------|-------|
| No.  | Name      | Sub Name    | World Region    | Country & Region | Group  | Callsign (RPT1) | Gateway (RPT2) | Lockout                  | Frequency [MHz] | Shift |
| 0366 | Bristol   | Connecticut | 4:North America | 51:USA           | 151:W1 | W1IXU B         | W1IXU G        | <input type="checkbox"/> | 448.375         | Minus |
| 0367 | Bristol   | Connecticut | 4:North America | 51:USA           | 151:W1 | W1IXU C         | W1IXU G        | <input type="checkbox"/> | 145.140         | Minus |
| 0368 | Enfield   | Connecticut | 4:North America | 51:USA           | 151:W1 | K1CDG B         | K1CDG G        | <input type="checkbox"/> | 444.9125        | Plus  |
| 0369 | Haddam    | Connecticut | 4:North America | 51:USA           | 151:W1 | KB1UHS B        | KB1UHS G       | <input type="checkbox"/> | 444.550         | Plus  |
| 0370 | Killingly | Connecticut | 4:North America | 51:USA           | 151:W1 | N1GAU B         | N1GAU G        | <input type="checkbox"/> | 444.100         | Plus  |
| 0371 | Meriden   | Connecticut | 4:North America | 51:USA           | 151:W1 | W1ECV B         | W1ECV G        | <input type="checkbox"/> | 444.250         | Plus  |
| 0372 | Meriden   | Connecticut | 4:North America | 51:USA           | 151:W1 | W1ECV C         | W1ECV G        | <input type="checkbox"/> | 145.490         | Minus |
| 0373 | Newington | Connecticut | 4:North America | 51:USA           | 151:W1 | W1HQ A          | W1HQ G         | <input type="checkbox"/> | 1284.125        | Minus |
| 0374 | Newington | Connecticut | 4:North America | 51:USA           | 151:W1 | W1HQ B          | W1HQ G         | <input type="checkbox"/> | 442.100         | Plus  |
| 0375 | Newington | Connecticut | 4:North America | 51:USA           | 151:W1 | W1HQ C          | W1HQ G         | <input type="checkbox"/> | 147.390         | Plus  |
| 0376 | Norwalk   | Connecticut | 4:North America | 51:USA           | 151:W1 | W1NLK B         | W1NLK G        | <input type="checkbox"/> | 441.600         | Plus  |
| 0377 | Salem     | Connecticut | 4:North America | 51:USA           | 151:W1 | KD1STR B        | KD1STR G       | <input type="checkbox"/> | 443.400         | Plus  |
| 0378 | Vernon    | Connecticut | 4:North America | 51:USA           | 151:W1 | AA1HD B         | AA1HD G        | <input type="checkbox"/> | 442.150         | Plus  |
| 0379 | Vernon    | Connecticut | 4:North America | 51:USA           | 151:W1 | AA1HD C         | AA1HD G        | <input type="checkbox"/> | 145.260         | Minus |
| 0380 | Westbrook | Connecticut | 4:North America | 51:USA           | 151:W1 | W1BCG B         | W1BCG G        | <input type="checkbox"/> | 444.000         | Plus  |
| 0381 | Biddeford | Maine       | 4:North America | 51:USA           | 151:W1 | KC1ALA C        | KC1ALA G       | <input type="checkbox"/> | 147.150         | Plus  |
| 0382 | Brunswick | Maine       | 4:North America | 51:USA           | 151:W1 | KS1R B          | KS1R G         | <input type="checkbox"/> | 447.575         | Minus |
| 0383 | Caribou   | Maine       | 4:North America | 51:USA           | 151:W1 | KA1EAR B        | KA1EAR G       | <input type="checkbox"/> | 442.200         | Plus  |
| 0384 | Cooper    | Maine       | 4:North America | 51:USA           | 151:W1 | W1SCV C         | W1SCV G        | <input type="checkbox"/> | 146.985         | Minus |
| 0385 | Hebron    | Maine       | 4:North America | 51:USA           | 151:W1 | KC1SBG B        | KC1SBG G       | <input type="checkbox"/> | 444.350         | Plus  |
| 0386 | Turner    | Maine       | 4:North America | 51:USA           | 151:W1 | KB1VFA C        | KB1VFA G       | <input type="checkbox"/> | 145.360         | Plus  |

Edit Repeater... Find... Sort... Move Up 1 Line Move Down 1 Line

Edit Area... Display Items... Import Repeater List from File... Export Repeater List to File...

# MAKING CHANGES TO DR LIST USING MCP-D75



# KENWOOD “TSV” FILES

You can drag and drop a TSV file into Excel or Google Sheets, and it will typically parse the data into columns

|      |   |               |    |     |     |    |          |          |     |           |             |            |     |         |     |     |
|------|---|---------------|----|-----|-----|----|----------|----------|-----|-----------|-------------|------------|-----|---------|-----|-----|
| 1322 | 4 | North America | 51 | USA | 151 | W1 | W1IXU B  | W1IXU G  | Off | Bristol   | Connecticut | 448.375 -  | 5   | Digital | Off | Off |
| 1323 | 4 | North America | 51 | USA | 151 | W1 | W1IXU C  | W1IXU G  | Off | Bristol   | Connecticut | 145.14 -   | 0.6 | Digital | Off | Off |
| 1324 | 4 | North America | 51 | USA | 151 | W1 | K1CDG B  | K1CDG G  | Off | Enfield   | Connecticut | 444.9125 + | 5   | Digital | Off | Off |
| 1325 | 4 | North America | 51 | USA | 151 | W1 | KB1UHS B | KB1UHS G | Off | Haddam    | Connecticut | 444.55 +   | 5   | Digital | Off | Off |
| 1326 | 4 | North America | 51 | USA | 151 | W1 | N1GAU B  | N1GAU G  | Off | Killingly | Connecticut | 444.1 +    | 5   | Digital | Off | Off |
| 1327 | 4 | North America | 51 | USA | 151 | W1 | W1ECV B  | W1ECV G  | Off | Meriden   | Connecticut | 444.25 +   | 5   | Digital | Off | Off |
| 1328 | 4 | North America | 51 | USA | 151 | W1 | W1ECV C  | W1ECV G  | Off | Meriden   | Connecticut | 145.49 -   | 0.6 | Digital | Off | Off |
| 1329 | 4 | North America | 51 | USA | 151 | W1 | W1HQ A   | W1HQ G   | Off | Newington | Connecticut | 1284.125 - | 12  | Digital | Off | Off |
| 1330 | 4 | North America | 51 | USA | 151 | W1 | W1HQ B   | W1HQ G   | Off | Newington | Connecticut | 442.1 +    | 5   | Digital | Off | Off |
| 1331 | 4 | North America | 51 | USA | 151 | W1 | W1HQ C   | W1HQ G   | Off | Newington | Connecticut | 147.39 +   | 0.6 | Digital | Off | Off |
| 1332 | 4 | North America | 51 | USA | 151 | W1 | W1NLK B  | W1NLK G  | Off | Norwalk   | Connecticut | 441.6 +    | 5   | Digital | Off | Off |
| 1333 | 4 | North America | 51 | USA | 151 | W1 | KD1STR B | KD1STR G | Off | Salem     | Connecticut | 443.4 +    | 5   | Digital | Off | Off |
| 1334 | 4 | North America | 51 | USA | 151 | W1 | AA1HD B  | AA1HD G  | Off | Vernon    | Connecticut | 442.15 +   | 5   | Digital | Off | Off |
| 1335 | 4 | North America | 51 | USA | 151 | W1 | AA1HD C  | AA1HD G  | Off | Vernon    | Connecticut | 145.26 -   | 0.6 | Digital | Off | Off |
| 1336 | 4 | North America | 51 | USA | 151 | W1 | W1BCG B  | W1BCG G  | Off | Westbrook | Connecticut | 444 +      | 5   | Digital | Off | Off |
| 1337 | 4 | North America | 51 | USA | 151 | W1 | KC1ALA C | KC1ALA G | Off | Biddeford | Maine       | 147.15 +   | 0.6 | Digital | Off | Off |
| 1338 | 4 | North America | 51 | USA | 151 | W1 | KS1R B   | KS1R G   | Off | Brunswick | Maine       | 447.575 -  | 5   | Digital | Off | Off |
| 1339 | 4 | North America | 51 | USA | 151 | W1 | KA1EAR B | KA1EAR G | Off | Caribou   | Maine       | 442.2 +    | 5   | Digital | Off | Off |
| 1340 | 4 | North America | 51 | USA | 151 | W1 | W1SCV C  | W1SCV G  | Off | Cooper    | Maine       | 146.985 -  | 0.6 | Digital | Off | Off |
| 1341 | 4 | North America | 51 | USA | 151 | W1 | KC1SBG B | KC1SBG G | Off | Hebron    | Maine       | 444.35 +   | 5   | Digital | Off | Off |
| 1342 | 4 | North America | 51 | USA | 151 | W1 | KB1VFA C | KB1VFA G | Off | Turner    | Maine       | 145.36 +   | 0.6 | Digital | Off | Off |

# REPEATER DASHBOARDS

**DPLUS Dashboard** | Gateway Status and Control

Registration | WB1GOF Repeater System | DPLUS version 2.2p

### Linked Gateways / Reflectors

| Module | Linked to |
|--------|-----------|
| A      | unlinked  |
| B      | REF050 C  |
| C      | REF038 D  |
| D      | unlinked  |
| E      | unlinked  |

← Connected Reflectors

### Remote Users

| Callsign | User Message | Last TX on | Type |
|----------|--------------|------------|------|
|----------|--------------|------------|------|

### Last Heard

| Callsign      | User Message         | Last TX on | Time                |
|---------------|----------------------|------------|---------------------|
| N1RHY         | JAMIE 51A TEWKSBURY  | B          | 2021/05/03 15:09:54 |
| <b>KA8SCP</b> | Terry - Westford MA  | B          | 2021/05/03 15:04:01 |
| <b>NQ1W</b>   | Brandon/Hamilton, MA | C          | 2021/05/03 13:03:55 |
| W1DYS         |                      | B          | 2021/05/03 11:47:10 |
| N1UBR         | DAN/D74              | B          | 2021/05/03 11:12:16 |
| <b>AA1HO</b>  | Art /MOBILE/VAN/5100 | B          | 2021/05/03 09:46:25 |
| <b>N1RCB</b>  | Gordon Lawrence, Ma  | B          | 2021/05/02 23:11:11 |
| K1SOB         |                      | B          | 2021/05/02 21:24:24 |
| K1VK          | Paul Bedford MA      | C          | 2021/05/02 21:10:01 |

← Last RF User Heard

Is the repeater Linked, if so, Where?

- I (Info) command from radio
- U (Unlink) command from radio before trying to link someplace else

**DPLUS Dashboard** | Gateway Status and Control

Registration | KA1EAR Repeater System | DPLUS version 2.2p

### Linked Gateways / Reflectors

| Module | Linked to |
|--------|-----------|
| A      | unlinked  |
| B      | REF039 C  |
| C      | unlinked  |
| D      | unlinked  |
| E      | unlinked  |

### Remote Users

| Callsign | User Message | Last TX on | Type |
|----------|--------------|------------|------|
|----------|--------------|------------|------|

### Last Heard

| Callsign | User Message | Last TX on | Time |
|----------|--------------|------------|------|
|----------|--------------|------------|------|

Status as of 2025/01/01 19:11:39



<https://wb1gof.dstargateway.org>

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D - S T A R   D a s h b o a r d | G3 Gateway Status



## Registration

## AA1HD G3 Repeater System

CentOS 7

## Gateway AA1HD

| IRC                                                                               | Ctry                                                                              | Gateway | Last In (UTC)    | Last Out (UTC)   | Last Act (UTC)   | QTH                      | Software-Rev                                  | Package-Rev                              | Upd Err | WD                                                                                | IRC Srv          |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------|------------------|------------------|------------------|--------------------------|-----------------------------------------------|------------------------------------------|---------|-----------------------------------------------------------------------------------|------------------|
|  |  | AA1HD   | 2023-08-25 03:50 | 2023-08-22 21:01 | 2023-08-25 11:28 | Lnk Rptr Sys Connecticut | CIRCDDB:1.2.4<br>linux:ircDDBGateway-20190402 | rpm:ircddbgateway-20190402.2-1-2 - DEBUG | 0       |  | Nuremberg.ircDDB |

## Repeater

| Nr. | RPT                                                                               | Repeater | Last Act (UTC)      | QTH                      | URL                                                                               | Latitude<br>Longitude   | QRG/Offset (MHz)    | Range AGL        | Software version |
|-----|-----------------------------------------------------------------------------------|----------|---------------------|--------------------------|-----------------------------------------------------------------------------------|-------------------------|---------------------|------------------|------------------|
| 1   |  | AA1HD B  | 2023-08-15 21:22:05 | Lnk Rptr Sys Connecticut |  | +41.80016<br>-072.45472 | 442.15000<br>5.000  | 40 km<br>300.0 m | icom_rp2c        |
| 2   |  | AA1HD C  | 2023-08-25 11:28:40 | Lnk Rptr Sys Connecticut |  | +41.80016<br>-072.45472 | 145.26000<br>-0.600 | 80 km<br>800.0 m | icom_rp2c        |

## Configuration

|                       |                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|-----------------------|------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>ircDDB-Net</b>     | <b>APRS-Host</b> | <b>CCS</b>                                                                          | <b>DCS</b>                                                                          | <b>DExtra</b>                                                                       | <b>DPlus</b>                                                                        | <b>D-Rats</b>                                                                       | <b>Info</b>                                                                           | <b>ircDDB</b>                                                                         | <b>Echo</b>                                                                           | <b>Log</b>                                                                            |
| group2-irc.ircddb.net | noam.aprs2.net   |  |  |  |  |  |  |  |  |  |

<http://aa1hd.dstargateway.org:8211>

# DASHBOARD REFLECTOR

DPLUS Dashboard | Reflector Status and Control

Registration

REF050 Reflector System

DREFD version 1.52

Linked Gateways

| Module A | Module B | Module C | Module D | Module E |
|----------|----------|----------|----------|----------|
|          |          | K1HRO B  |          |          |
|          |          | K1MRA C  |          |          |
|          |          | W1DSR B  |          |          |
|          |          | W1MRA B  |          |          |
|          |          | WB1GOF B |          |          |

Connected  
Repeaters

Last  
Heard



| Last Heard    |                      |            |                     |
|---------------|----------------------|------------|---------------------|
| Callsign      | User Message         | Last TX on | Time                |
| W2DAN         | DAVE - TIVERTON, RI. | C          | 2024/01/20 10:22:10 |
| <b>W1TG</b>   | Tom-Hampton, NH      | E          | 2024/01/20 10:04:29 |
| KO4PLT        |                      | C          | 2024/01/20 09:41:55 |
| W1AST         | W1AST Larry ID5100   | C          | 2024/01/20 09:34:09 |
| KD1UA         | KD1UA/Jack           | C          | 2024/01/20 09:04:57 |
| OZ1ARQ        | Kim QTH JO54WS       | C          | 2024/01/20 08:39:00 |
| N2XPM         | ARTIE MOBILE FN30    | C          | 2024/01/20 05:11:29 |
| K1MIZ         |                      | C          | 2024/01/19 19:25:48 |
| <b>N1YIV</b>  |                      | C          | 2024/01/19 17:13:54 |
| <b>KB1EJH</b> | Carl                 | C          | 2024/01/19 17:07:01 |
| <b>N1RHY</b>  | Jamie Icom 5100      | C          | 2024/01/19 14:32:02 |

## Remote Users

| Callsign | User Message | Last TX on | Type    |
|----------|--------------|------------|---------|
| K1DTC    |              | listening  | HotSpot |
| AJ1L     |              | listening  | HotSpot |
| KB1YAP D |              | listening  | HotSpot |
| KU1U     |              | listening  | HotSpot |
| K1DDJ    |              | listening  | HotSpot |
| KC1PHF   |              | listening  | HotSpot |
| WZ3HMT   |              | listening  | HotSpot |
| NQ1W     |              | listening  | HotSpot |
| KB1IWE   |              | listening  | HotSpot |
| K1PGS    |              | listening  | HotSpot |
| W1DLO    |              | listening  | HotSpot |
| N1PCE    |              | listening  | HotSpot |
| KA1IKK   |              | listening  | HotSpot |
| K1AFS D  |              | listening  | HotSpot |
| N1MQR    |              | listening  | HotSpot |
| AB1VA    |              | listening  | HotSpot |
| KM7N     |              | listening  | HotSpot |
| KC1SUI   |              | listening  | HotSpot |
| KC1BEK   |              | listening  | HotSpot |
| N1HGD    |              | listening  | HotSpot |
| KA7VPR   |              | listening  | HotSpot |
| KA1UFE   |              | listening  | HotSpot |
| N1RHY    |              | listening  | HotSpot |

Remote Users  
Connected –  
hotspots,  
dongles

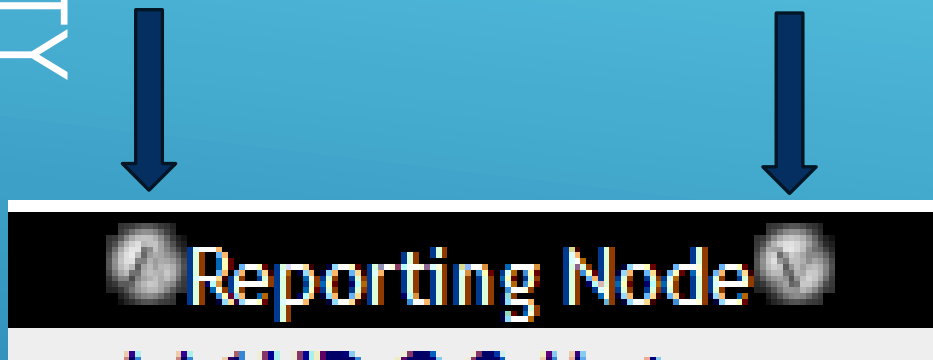


<http://ref050.dstargateway.org>

# ACTIVITY – LAST HEARD

| Callsign | Time Heard            | Reporting Node         | 330 Unique callsigns heard in the last hour |
|----------|-----------------------|------------------------|---------------------------------------------|
| PY2FO C  | 08/05/23 18:03:22 UTC | REF018 Dongle User DVD | REF018, REF018, Brazil                      |
| K9KWP    | 08/05/23 18:03:17 UTC | REF012 A 1.2GHz DVD    | CA, USA                                     |
| VE7OMD   | 08/05/23 18:03:17 UTC | REF001 Dongle User DVD | USA                                         |
| KM7N     | 08/05/23 18:03:17 UTC | REF050 Dongle User DVD | Boston, MA, USA                             |
| PY2RMF   | 08/05/23 18:03:17 UTC | REF018 D Unknown DVD   | REF018, REF018, Brazil                      |
| KI6N     | 08/05/23 18:03:07 UTC | REF001 C 2 Meters DVD  | USA                                         |
| VA2YYQ   | 08/05/23 18:02:56 UTC | VE2RIO A 1.2GHz        | Montreal, Quebec, Canada                    |
| KN6KNE   | 08/05/23 18:02:52 UTC | REF012 A 1.2GHz DVD    | CA, USA                                     |
| N5KJJ    | 08/05/23 18:02:51 UTC | W5SSV B 440 MHz        | NEDERLAND, TX, USA                          |
| JN3VDE   | 08/05/23 18:02:51 UTC | REF008 Dongle User DVD | Japan                                       |
| PA0MBO   | 08/05/23 18:02:51 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA                      |
| IU1PNJ   | 08/05/23 18:02:51 UTC | REF068 B 440 MHz DVD   | Milan, Lombardy, Italy                      |
| G0SBN    | 08/05/23 18:02:46 UTC | REF001 Dongle User DVD | USA                                         |
| IK4UNQ P | 08/05/23 18:02:42 UTC | T79DV B 440 MHz        | San Marino, SM, San Marino                  |
| K5PNG    | 08/05/23 18:02:17 UTC | REF004 D Unknown DVD   | US, USA                                     |
| OE5UAM   | 08/05/23 18:02:12 UTC | REF096 Dongle User DVD | Innsbruck, Tyrol, Austria                   |
| DF1OA    | 08/05/23 18:02:12 UTC | REF001 Dongle User DVD | USA                                         |
| KC9ONY   | 08/05/23 18:02:12 UTC | KC9LKZ C 2 Meters      | Milwaukee, WI, USA                          |
| W3DHS R  | 08/05/23 18:02:07 UTC | REF062 Dongle User DVD | Hunt Valley, MD, USA                        |
| W4WSM    | 08/05/23 18:02:07 UTC | REF056 Dongle User DVD | Danville, KY, USA                           |
| KA3OJS   | 08/05/23 18:02:03 UTC | W3DHS B 440 MHz        | Towson, MD, USA                             |
| W4RJG    | 08/05/23 18:02:02 UTC | REF062 Dongle User DVD | Hunt Valley, MD, USA                        |
| K3LJ     | 08/05/23 18:01:57 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA                      |
| LU1BJW   | 08/05/23 18:01:45 UTC | LU3AOC B 440 MHz       | Buenos Aires, CABA, Argentina               |
| G7USP D  | 08/05/23 18:01:22 UTC | REF001 Dongle User DVD | USA                                         |
| KC9GSK   | 08/05/23 18:01:17 UTC | REF019 Dongle User DVD | WI, USA                                     |
| KB3EOF   | 08/05/23 18:01:17 UTC | REF062 Dongle User DVD | Hunt Valley, MD, USA                        |
| WN6OTL   | 08/05/23 18:01:12 UTC | REF012 Dongle User DVD | CA, USA                                     |
| KB7RFT   | 08/05/23 18:01:09 UTC | KF7VTM B 440 MHz       | Jerome, ID, USA                             |

# ACTIVITY



Sort by "Node"  
Click on the Reporting  
Node column arrows

|       |                       |                       |                   |
|-------|-----------------------|-----------------------|-------------------|
| N8FM  | 08/05/23 18:38:34 UTC | W8DTW B 440 MHz       | Westland, MI, USA |
| N8ASD | 08/05/23 18:06:40 UTC | W8DTW B 440 MHz       | Westland, MI, USA |
| VA3UG | 08/05/23 18:38:11 UTC | W8DTW B 440 MHz DVD   | Westland, MI, USA |
| W4WJR | 08/05/23 18:12:11 UTC | W8DTW Dongle User DVD | Westland, MI, USA |
| N4RTD | 08/05/23 18:12:11 UTC | W8DTW Dongle User DVD | Westland, MI, USA |
| KA8E  | 08/05/23 18:24:04 UTC | W8DTW Dongle User DVD | Westland, MI, USA |
| W8DR  | 08/05/23 18:12:11 UTC | W8DTW Dongle User DVD | Westland, MI, USA |

|          |                       |                        |                        |
|----------|-----------------------|------------------------|------------------------|
| K5HSV    | 08/05/23 18:32:03 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| KD9URG   | 08/05/23 18:06:25 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| N2NKP    | 08/05/23 18:32:13 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| KD2BAN   | 08/05/23 18:23:13 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| AG5XY    | 08/05/23 18:36:42 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| K8CBR    | 08/05/23 18:27:30 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| M0XLR    | 08/05/23 18:31:18 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| K4QF     | 08/05/23 18:33:19 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| OZ4ACA   | 08/05/23 18:40:32 UTC | REF030 C 2 Meters DVD  | Lawrenceville, GA, USA |
| KF0HSR   | 08/05/23 18:31:53 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| VK3PLA   | 08/05/23 17:44:57 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| K2CSX D  | 08/05/23 18:34:19 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| W2LPC    | 08/05/23 18:21:12 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| VK2GV    | 08/05/23 18:34:24 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| KG5YEL D | 08/05/23 18:36:12 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| VK2GMC   | 08/05/23 18:38:40 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| W9PVC    | 08/05/23 17:43:04 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| VE6MHD   | 08/05/23 17:58:09 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| N4HUD D  | 08/05/23 18:05:10 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| K3LJ     | 08/05/23 18:10:30 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| M5COL D  | 08/05/23 18:10:55 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| W0WDW D  | 08/05/23 18:11:40 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| N6GVG    | 08/05/23 18:31:43 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| VK3YAP   | 08/05/23 18:29:11 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| N3UPS D  | 08/05/23 17:45:07 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| KN4OSM   | 08/05/23 17:41:19 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| KI5FTB   | 08/05/23 17:57:28 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| PA0MBO   | 08/05/23 18:30:22 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| N3HPX    | 08/05/23 18:36:07 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| N4PNV D  | 08/05/23 17:43:55 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| KE4LPL   | 08/05/23 18:32:54 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| AG5XY D  | 08/05/23 18:36:07 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| WC9AAG D | 08/05/23 18:40:12 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| K4OFV    | 08/05/23 18:15:39 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |
| GI0UVD   | 08/05/23 18:35:37 UTC | REF030 Dongle User DVD | Lawrenceville, GA, USA |



|                                                                                                                               |             |          |          |          |          |                      |                   |
|-------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------|----------|----------|----------------------|-------------------|
| 17:57:07                                                                                                                      | HB9EZX      |          | HB9HD_C  |          | .        | .                    | 00 00 00          |
| 17:57:08                                                                                                                      | LU1BJW      |          | LU3AOC_B | LU3AOC_G | .        | D-Star: DX w/o QRM   | 00 00 00          |
| 17:57:34                                                                                                                      | G4WXN 2421  | CQCQCQ   | MB6IBD_B | MB6IBD_G | REF055_D | Wed 1800UTC REF055D  | 53.8s S:0% E:0.0% |
| 17:57:39                                                                                                                      | *****       | CQCQCQ   | DB0DOS_B | DB0DOS_G | DCS001_C | .                    | 0.8s S:0% E:0.1%  |
| 17:57:59                                                                                                                      | VA6KRK ID51 | REF030CL | VE6MHD_B | VE6MHD_G | .        | Kelly - Med Hat AB   | 0.2s S:0% E:0.0%  |
| 17:58:15                                                                                                                      | F4IVO 9700  | CQCQCQ   | F5ZQT_B  | F5ZQT_G  | DCS033_C | Claude - IC-9700     | 0.9s S:0% E:0.0%  |
| 17:58:27                                                                                                                      | HB9TZS      | CQCQCQ   | HB9HD_C  | HB9HD_G  | .        | Giuseppe, St. Gallen | 4.3s S:0% E:0.0%  |
| 17:58:42                                                                                                                      | HB9TZS      | CQCQCQ   | HB9HD_C  | HB9HD_G  | .        | Giuseppe, St. Gallen | 5.3s S:0% E:0.0%  |
| 17:59:00                                                                                                                      | *****       | CQCQCQ   | W5NGU_B  | W5NGU_G  | .        |                      | 1.0s S:0% E:0.0%  |
| 17:59:02                                                                                                                      | HB9EZX 7100 | U        | HB9HD_C  | HB9HD_G  | .        | NASSOS/JN47RL        | 1.6s S:0% E:0.0%  |
| 17:59:28                                                                                                                      | *****       | CQCQCQ   | VA3AAR_B | VA3AAR_G | .        |                      | 6.1s S:0% E:0.0%  |
| 17:59:55                                                                                                                      | *****       | /DB0DWLB | DB0DOS_B | DB0DOS_G | .        |                      | 0.6s S:0% E:0.0%  |
| 18:00:01                                                                                                                      | *****       | CQCQCQ   | VA3AAR_B | VA3AAR_G | .        |                      | 8.2s S:0% E:0.0%  |
| 18:00:05                                                                                                                      | *****       | CQCQCQ   | DB0BBW_B | DB0BBW_G | .        |                      | 0.6s S:0% E:0.0%  |
| 18:00:42                                                                                                                      | SQ6VRS TH74 | CQCQCQ   | SR6UKB_B | SR6UKB_G | .        | Radek QTH: Nysa      | 1.9s S:0% E:0.0%  |
| 18:01:32                                                                                                                      | SQ6VRS TH74 | CQCQCQ   | SR6UKB_B | SR6UKB_G | .        | Radek QTH: Nysa      | 0.8s S:0% E:13.0% |
| 18:01:45                                                                                                                      | LU1BJW      | CQCQCQ   | LU3AOC_B | LU3AOC_G | .        | D-Star: DX w/o QRM   | 00 00 00          |
| 18:02:32                                                                                                                      | SQ6VRS TH74 | CQCQCQ   | SR6UKB_B | SR6UKB_G | .        | Radek QTH: Nysa      | 0.8s S:0% E:12.0% |
| 18:02:35                                                                                                                      | LX2RV 5100  | CQCQCQ   | LX0DRD_B | LX0DRD_G | DCS270_B | 73 de Roger          | 1.0s              |
| 18:02:42                                                                                                                      | *****       | DCS039DL | T79DV_B  | T79DV_G  | DCS039_D |                      | 1.0s S:0% E:0.0%  |
| 18:03:32                                                                                                                      | SQ6VRS TH74 | CQCQCQ   | SR6UKB_B | SR6UKB_G | .        | Radek QTH: Nysa      | 0.8s S:0% E:12.3% |
| 18:04:31                                                                                                                      | *****       | CQCQCQ   | AA1HD_C  | AA1HD_G  | REF069_C |                      | 0.7s S:0% E:0.0%  |
| 18:04:33                                                                                                                      | SQ6VRS TH74 | CQCQCQ   | SR6UKB_B | SR6UKB_G | .        |                      | 0.8s S:0% E:12.6% |
| 18:04:43                                                                                                                      | *****       | CQCQCQ   | AA1HD_C  | AA1HD_G  | REF069_C |                      | 2.3s S:0% E:0.0%  |
| You don't see your call sign here? Please read: <a href="http://ircddb.net/live-vis.html">http://ircddb.net/live-vis.html</a> |             |          |          |          |          |                      |                   |
| 18:05:33                                                                                                                      | SQ6VRS TH74 | CQCQCQ   | SR6UKB_B | SR6UKB_G | .        | Radek QTH: Nysa      | 0.8s S:0% E:12.6% |
| 18:05:39                                                                                                                      | LU1BJW      | CQCQCQ   | LU3AOC_B | LU3AOC_G | .        | D-Star: DX w/o QRM   | 3.6s S:0% E:0.0%  |
| 18:05:54                                                                                                                      | VA2DFK 5100 | CQCQCQ   | VE2RRJ_B | VE2RRJ_G | .        | 5100                 | 2.4s S:0% E:10.8% |
| 18:05:59                                                                                                                      | *****       | CQCQCQ   | ED7ZAD_B | ED7ZAD_G | DCS018_D |                      | 0.4s S:0% E:0.0%  |
| 18:06:08                                                                                                                      | LU1BJW      | CQCQCQ   | LU3AOC_B | LU3AOC_G | .        | D-Star: DX w/o QRM   | TX on             |
| 18:06:33                                                                                                                      | SQ6VRS TH74 | CQCQCQ   | SR6UKB_B | SR6UKB_G | .        | Radek QTH: Nysa      | 0.8s S:0% E:12.3% |



# ACTIVITY - DPLUSMON

| dplus Last Heard        |         |               |        |           |          |          |
|-------------------------|---------|---------------|--------|-----------|----------|----------|
| Date / Time             | Gateway | MyCall        | UrCall | Reflector | RPT1     | RPT2     |
| 2023-08-05 19:22:24 UTC | REF018  | PU2PYC (5100) | CQCQCQ | REF018 C  | PU2PYC B | REF018 C |
| 2023-08-05 19:22:23 UTC | REF068  | IZ2LPW (ID52) | CQCQCQ | REF068 B  | REF068 G | REF068 B |
| 2023-08-05 19:22:20 UTC | WA7HJR  | WA7LZO (ID52) | CQCQCQ |           | WA7HJR B | WA7HJR G |
| 2023-08-05 19:22:20 UTC | REF018  | PY2TWI (2820) | CQCQCQ | REF018 C  | PY2TWI D | REF018 C |
| 2023-08-05 19:22:18 UTC | REF030  | KE2BJJ (NATE) | CQCQCQ | REF030 C  | KE2BJJ B | REF030 C |
| 2023-08-05 19:22:17 UTC | REF018  | PU2ORR (ID51) | CQCQCQ | REF018 C  | PY2KGV B | REF018 C |
| 2023-08-05 19:21:43 UTC | REF001  | MM3GQT (AMBE) | CQCQCQ | REF001 C  | MM3GQT C | REF001 C |
| 2023-08-05 19:21:28 UTC | KJ4ZLL  | KJ4VO (MARK)  | CQCQCQ |           | KJ4VO    | KJ4ZLL Z |
| 2023-08-05 19:20:50 UTC | REF068  | IT9FRN (ID52) | CQCQCQ | REF068 B  | REF068 G | REF068 B |
| 2023-08-05 19:20:29 UTC | REF001  | 2E0RPU (9700) | CQCQCQ | REF001 C  | 2E0RPU B | REF001 C |
| 2023-08-05 19:20:14 UTC | GB7WC   | M0XLR (4100)  | CQCQCQ |           | GB7WC B  | GB7WC G  |
| 2023-08-05 19:20:05 UTC | REF018  | PY2RMF (ID51) | CQCQCQ | REF018 D  | PY2RMF B | REF018 D |
| 2023-08-05 19:19:06 UTC | REF018  | PU2OIA (CAR)  | CQCQCQ | REF018 C  | PU2OIA C | REF018 C |
| 2023-08-05 19:18:51 UTC | W7MOT   | N7TWW (2820)  | CQCQCQ |           | W7MOT B  | W7MOT G  |
| 2023-08-05 19:18:47 UTC | REF024  | KB8CXK (ID51) | CQCQCQ | REF024 C  | KB8CXK B | REF024 C |
| 2023-08-05 19:18:41 UTC | REF004  | K5PNG (D74)   | CQCQCQ | REF004 D  | K5PNG D  | REF004 D |
| 2023-08-05 19:18:24 UTC | REF068  | IZ2QLP (2820) | CQCQCQ | REF068 B  | REF068 G | REF068 B |
| 2023-08-05 19:18:15 UTC | REF055  | G4WXN (2421)  | CQCQCQ | REF055 D  | MB6IBD B | REF055 D |
| 2023-08-05 19:17:31 UTC | REF018  | PY2LOC (ID52) | CQCQCQ | REF018 C  | PY2LOC B | REF018 C |
| 2023-08-05 19:17:19 UTC | REF014  | K7NBO (5100)  | CQCQCQ | REF014 C  | K7NBO B  | REF014 C |
| 2023-08-05 19:16:35 UTC | W8MAI   | KE8GIM (5100) | CQCQCQ |           | W8MAI B  | W8MAI G  |
| 2023-08-05 19:16:22 UTC | REF096  | OE5AYQ (705)  | CQCQCQ | REF096 A  | REF096 G | REF096 A |
| 2023-08-05 19:16:20 UTC | REF030  | G4LUE (ERNI)  | CQCQCQ | REF030 C  | G4LUE D  | REF030 C |
| 2023-08-05 19:16:10 UTC | REF030  | AG5XY         | CQCQCQ | REF030 C  | AG5XY D  | REF030 C |
| 2023-08-05 19:16:04 UTC | W1SCC   | KI5US         | CQCQCQ |           | W1SCC B  | W1SCC G  |
| 2023-08-05 19:15:17 UTC | REF096  | OE5UAM (AMBE) | CQCQCQ | REF096 A  | OE5UAM D | REF096 A |



# ACTIVITY - DPLUSMON

Put REF001 in Gateway box and then the Filter button

| MyCall:                 |         | Gateway:      |        | Filter    |
|-------------------------|---------|---------------|--------|-----------|
| dplus Last Heard        |         |               |        |           |
| Date / Time             | Gateway | MyCall        | UrCall | Reflector |
| 2023-08-05 19:24:09 UTC | REF001  | MM3GQT (AMBE) | CQCQCQ | REF001 C  |
| 2023-08-05 19:23:01 UTC | REF001  | 2E0RPU (9700) | CQCQCQ | REF001 C  |
| 2023-08-05 19:11:15 UTC | REF001  | KO4JDP        | CQCQCQ | REF001 C  |
| 2023-08-05 18:56:26 UTC | REF001  | KB6RRX        | CQCQCQ | REF001 C  |
| 2023-08-05 18:56:12 UTC | REF001  | 2E0XHG (INFO) | CQCQCQ | REF001 C  |
| 2023-08-05 18:53:53 UTC | REF001  | DJ7FG (E880)  | CQCQCQ | REF001 C  |
| 2023-08-05 18:50:39 UTC | REF001  | GW1WRV        | CQCQCQ | REF001 C  |
| 2023-08-05 18:48:11 UTC | REF001  | G0SEC (9700)  | CQCQCQ | REF001 C  |
| 2023-08-05 18:43:31 UTC | REF001  | G6LTT (RON)   | CQCQCQ | REF001 C  |
| 2023-08-05 18:36:44 UTC | REF001  | VE6DZ (GARY)  | CQCQCQ | REF001 C  |
| 2023-08-05 18:36:24 UTC | REF001  | WD6CWE        | CQCQCQ | REF001 C  |

Put REF030 in Gateway box and then the Filter button

| MyCall:                 | Firefox Home Page | Gateway:      |        | Filter    |
|-------------------------|-------------------|---------------|--------|-----------|
| dplus Last Heard        |                   |               |        |           |
| Date / Time             | Gateway           | MyCall        | UrCall | Reflector |
| 2023-08-05 19:28:20 UTC | REF030            | KA2APD (AMBE) | CQCQCQ | REF030 C  |
| 2023-08-05 19:26:15 UTC | REF030            | KE2BJJ (NATE) | CQCQCQ | REF030 C  |
| 2023-08-05 19:22:47 UTC | REF030            | KN6KNE        | CQCQCQ | REF030 C  |
| 2023-08-05 19:16:20 UTC | REF030            | G4LUE (ERNI)  | CQCQCQ | REF030 C  |
| 2023-08-05 19:16:10 UTC | REF030            | AG5XY         | CQCQCQ | REF030 C  |
| 2023-08-05 18:41:59 UTC | REF030            | K4QF          | CQCQCQ | REF030 C  |
| 2023-08-05 18:40:31 UTC | REF030            | OZ4ACA (PETE) | CQCQCQ | REF030 C  |
| 2023-08-05 18:32:13 UTC | REF030            | N2NKP (2820)  | CQCQCQ | REF030 C  |
| 2023-08-05 18:32:04 UTC | REF030            | K5HSV (D74A)  | CQCQCQ | REF030 C  |
| 2023-08-05 18:27:26 UTC | REF030            | K8CBR (ID51)  | CQCQCQ | REF030 C  |
| 2023-08-05 18:23:13 UTC | REF030            | KD2BAN (DVAP) | CQCQCQ | REF030 C  |
| 2023-08-05 18:14:11 UTC | REF030            | W2LPC (9700)  | CQCQCQ | REF030 C  |

# PI-STAR HOTSPOT ACTIVITY

## Live Quadnet Info:

|                     |         |           |              |          |          |          |                               |
|---------------------|---------|-----------|--------------|----------|----------|----------|-------------------------------|
| 2023-08-05 18:08:58 | 0.16s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:08:50 | 0.08s:  | 0%: 0.0%  | IZ6FGP_/4100 | STN066_A | IZ6FGP_B | IZ6FGP_G | IR6L___F                      |
| 2023-08-05 18:08:49 | 4.62s:  | 0%: 0.0%  | WE0FUN_/DVSW | CQCQCQ_  | WE0FUN_B | WE0FUN_G | XRF815_B                      |
| 2023-08-05 18:08:40 | 0.22s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:08:39 | 1.24s:  | 0%: 0.0%  | IZ6FGP_/4100 | STN066_A | IZ6FGP_B | IZ6FGP_G | Mario-IZ6FGP,_CH-IT_ IR6L___F |
| 2023-08-05 18:08:34 | 15.50s: | 0%: 0.0%  | DL7AC_/ID52  | CQCQCQ_  | DL7AC_B  | DL7AC_G  | Romeo_Ronneburg_TH_           |
| 2023-08-05 18:08:31 | 0.14s:  | 0%: 7.7%  | F5SDM_/ID51  | CQCQCQ_  | F5SDM_B  | F5SDM_G  | DCS033_H                      |
| 2023-08-05 18:08:19 | 0.44s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:08:19 | 7.44s:  | 0%: 0.0%  | WE0FUN_/DVSW | CQCQCQ_  | WE0FUN_B | WE0FUN_G | XRF815_B                      |
| 2023-08-05 18:08:14 | 8.10s:  | 0%: 0.0%  | D07JG_/ID52  | XLX900GL | D07JG_B  | D07JG_G  | Juergen_aus_Gera_             |
| 2023-08-05 18:08:13 | 0.14s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:08:14 | 50.10s: | 0%: 0.0%  | IW9BZW_/51P2 | DCS118FL | IW9BZW_C | IW9BZW_G | CIAO_DA_FRANCO_ DCS118_F      |
| 2023-08-05 18:08:08 | 0.88s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:07:59 | 2.82s:  | 0%: 0.0%  | WE0FUN_/DVSW | CQCQCQ_  | WE0FUN_B | WE0FUN_G | XRF815_B                      |
| 2023-08-05 18:07:56 | 40.08s: | 0%: 0.0%  | DL7AC_/ID52  | CQCQCQ_  | DL7AC_B  | DL7AC_G  | Romeo_Ronneburg_TH_           |
| 2023-08-05 18:07:54 | 0.32s:  | 0%: 0.0%  | IK2YYL_/ID52 | _____I   | IK2YYL_H | IK2YYL_G | _____                         |
| 2023-08-05 18:07:53 | 0.28s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:07:51 | 1.42s:  | 0%: 0.0%  | WE0FUN_/DVSW | CQCQCQ_  | WE0FUN_B | WE0FUN_G | XRF815_B                      |
| 2023-08-05 18:07:41 | 2.62s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:07:34 | 0.28s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:07:29 | 0.10s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:07:24 | 0.20s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:07:16 | 0.18s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:07:12 | 23.62s: | 0%: 0.0%  | D07JG_/ID52  | XLX900GL | D07JG_B  | D07JG_G  | Juergen_aus_Gera_             |
| 2023-08-05 18:07:06 | 2.00s:  | 0%: 11.5% | KA3JSD_/DAVE | CQCQCQ_  | KA3JSD_B | KA3JSD_G | _____                         |
| 2023-08-05 18:07:00 | 1.28s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:06:56 | 1.18s:  | 0%: 0.5%  | KA3JSD_/DAVE | CQCQCQ_  | KA3JSD_B | KA3JSD_G | Dave_in_Latrobe,_PA_          |
| 2023-08-05 18:06:51 | 1.30s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:06:46 | 24.16s: | 0%: 0.3%  | DL7AC_/ID52  | CQCQCQ_  | DL7AC_B  | DL7AC_G  | Romeo_Ronneburg_TH_           |
| 2023-08-05 18:06:45 | 10.52s: | 0%: 0.0%  | IW9BZW_/51P2 | DCS118FL | IW9BZW_C | IW9BZW_G | CIAO_DA_FRANCO_ DCS118_F      |
| 2023-08-05 18:06:45 | 1.18s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:06:38 | 2.86s:  | 0%: 0.0%  | WE0FUN_/DVSW | CQCQCQ_  | WE0FUN_B | WE0FUN_G | XRF815_B                      |
| 2023-08-05 18:06:36 | 0.48s:  | 0%: 0.0%  | IW4DGS_/9700 | _____E   | IK0CHU_B | IK0CHU_G | _____                         |
| 2023-08-05 18:06:35 | 0.72s:  | 0%: 0.0%  | KG4CWC_/BOB_ | _____I   | KG4CWC_B | KG4CWC_G | Let`s_Go_Brandon_             |
| 2023-08-05 18:06:33 | 2.14s:  | 0%: 0.0%  | WE0FUN_/DVSW | CQCQCQ_  | WE0FUN_B | WE0FUN_G | XRF815_B                      |
| 2023-08-05 18:06:30 | 2.48s:  | 0%: 0.0%  | WE0FUN_/DVSW | CQCQCQ_  | WE0FUN_B | WE0FUN_G | XRF815_B                      |
| 2023-08-05 18:06:28 | 4.58s:  | 0%: 0.0%  | WE0FUN_/DVSW | CQCQCQ_  | WE0FUN_B | WE0FUN_G | XRF815_B                      |
| 2023-08-05 18:06:26 | 1.34s:  | 0%: 0.4%  | KA3JSD_/DAVE | CQCQCQ_  | KA3JSD_B | KA3JSD_G | Dave_in_Latrobe,_PA_          |
| 2023-08-05 18:06:19 | 8.20s:  | 0%: 0.0%  | D07JG_/ID52  | XLX900GL | D07JG_B  | D07JG_G  | _____                         |

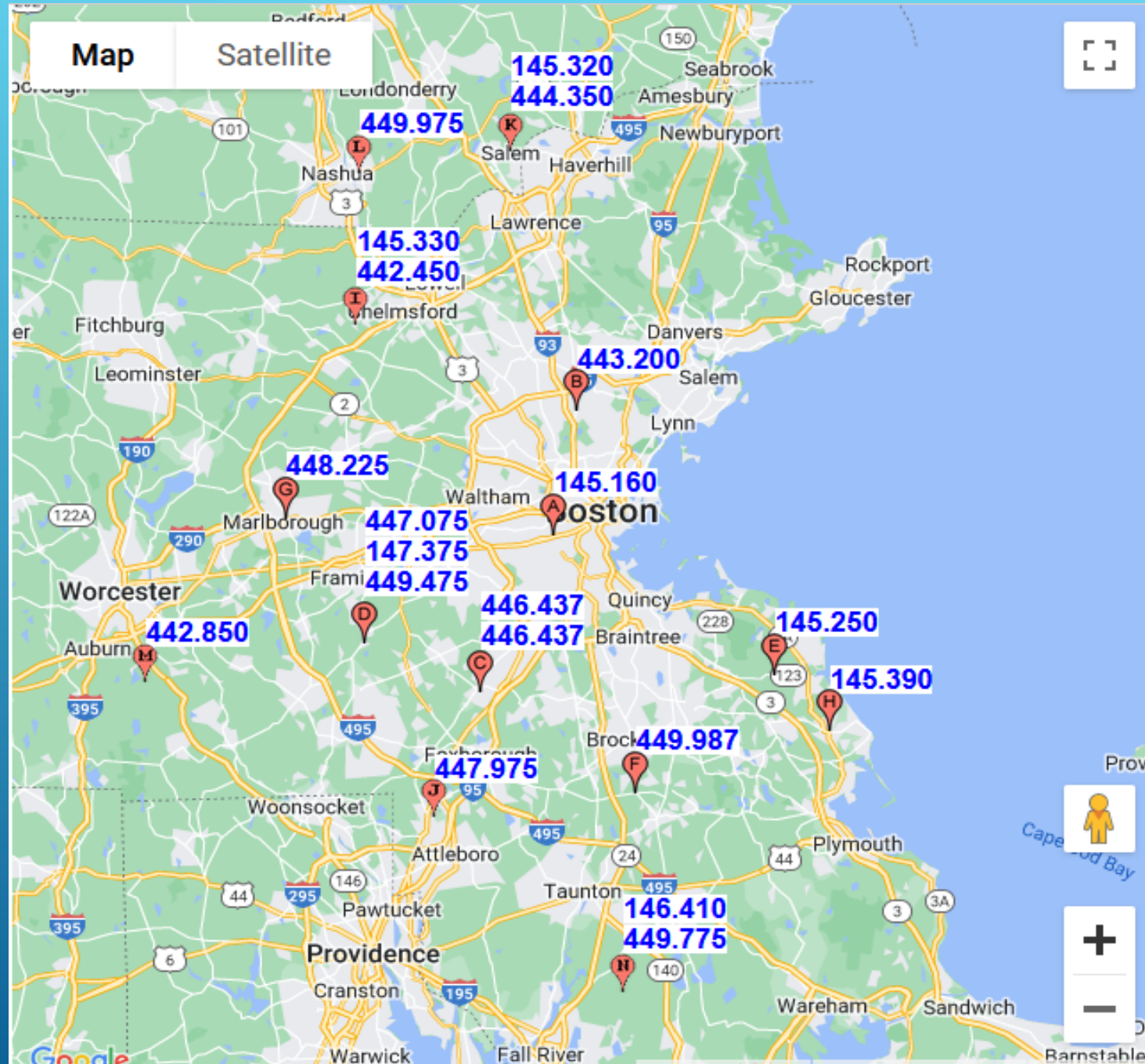


# REPEATER ACTIVITY

## Last 500 D-Star "sessions" for 'rpt1Call' = 'WB1GOF'

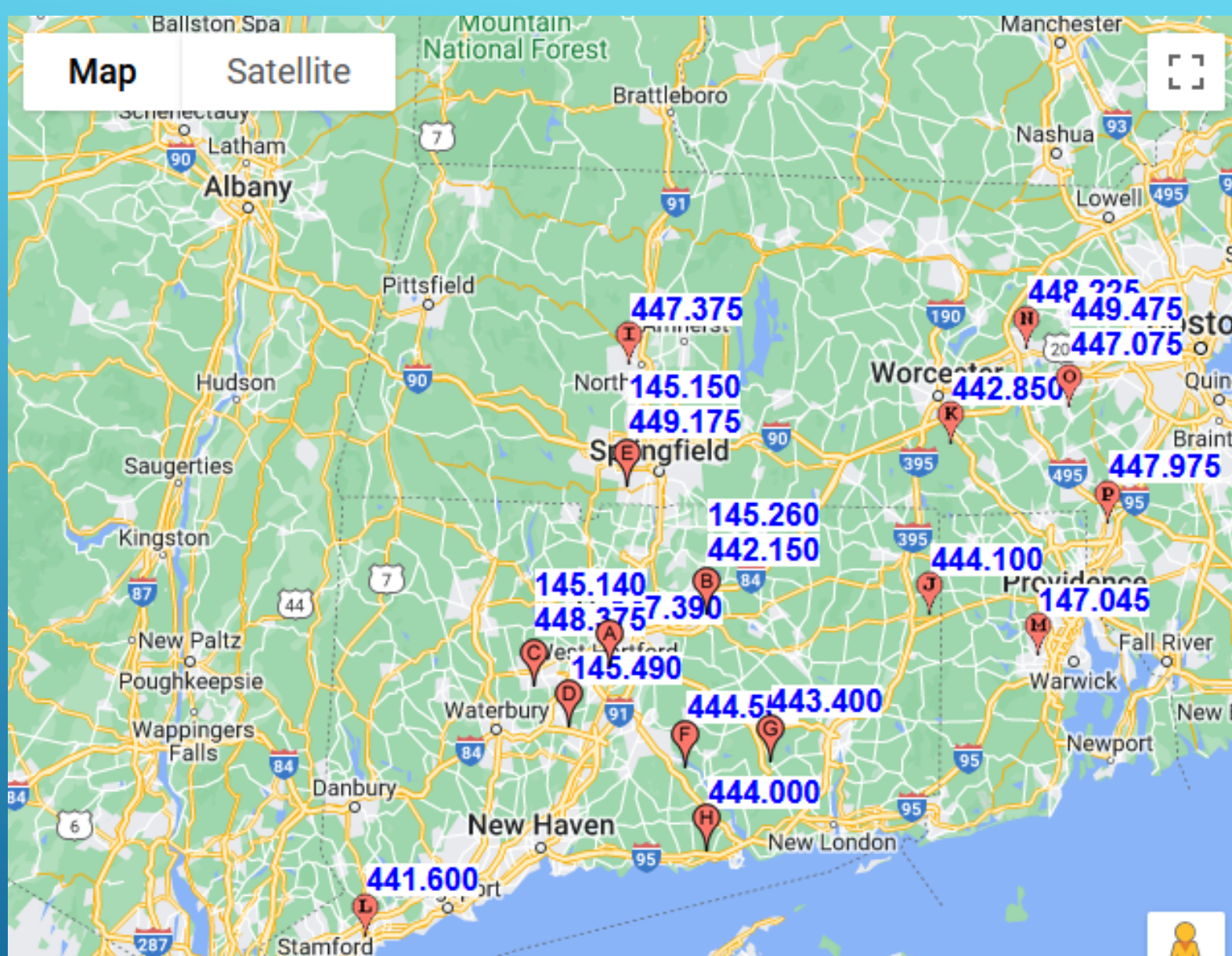
| First TX<br>(italic if overlaps)        | Last TX<br>(sort #)                     | TX  | Session†<br>Duration | myCall<br>/tag                  | rpt1Call<br>rpt2Call                                 | urCall @ destination<br>D-Star message           | unproto (location) altitude <sup>ft</sup> course <sup>°</sup> knots<br>APRS message |
|-----------------------------------------|-----------------------------------------|-----|----------------------|---------------------------------|------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------|
| <i>Sat 2024-01-06</i><br>@ 12:30:48 EST | Sat 2024-01-20<br>@ 18:07:42 EST        | 171 | 14 days<br>05:36:55  | <a href="#">W1KQ</a><br>/2820   | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Jim - Loc:FN42       |                                                                                     |
| <i>Sat 2024-01-20</i><br>@ 13:50:38 EST | Sat 2024-01-20<br>@ 13:50:46 EST        | 1   | 00:00:08             | <a href="#">KA8SCP</a><br>/ID51 | <a href="#">WB1GOF C</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>d MA - Westfor       | API51 (42°36.60'N,71°28.02'W)<br>ID51 MA PORTABLE                                   |
| <i>Fri 2024-01-19</i><br>@ 15:58:04 EST | <i>Fri 2024-01-19</i><br>@ 15:59:17 EST | 5   | 00:01:13             | <a href="#">KA8SCP</a><br>/ID31 | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Terry - Westford MA  |                                                                                     |
| <i>Sun 2023-09-10</i><br>@ 20:56:05 EDT | <i>Fri 2024-01-19</i><br>@ 11:17:43 EST | 528 | 130 days<br>15:21:39 | <a href="#">N1ZHA</a><br>/      | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>OF BC                |                                                                                     |
| <i>Fri 2024-01-19</i><br>@ 09:22:55 EST | <i>Fri 2024-01-19</i><br>@ 09:22:57 EST | 1   | 00:00:02             | <a href="#">KA8SCP</a><br>/ID51 | <a href="#">WB1GOF C</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Terry - Westford MA  |                                                                                     |
| <i>Thu 2024-01-18</i><br>@ 15:55:13 EST | <i>Thu 2024-01-18</i><br>@ 16:16:42 EST | 11  | 00:21:29             | <a href="#">KA10LA</a><br>/5100 | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Dave Lowell Mass USA | API510 (42°39.61'N,71°18.33'W) 144 <sup>ft</sup>                                    |
| <i>Wed 2023-03-08</i><br>@ 15:00:44 EST | <i>Thu 2024-01-18</i><br>@ 07:31:18 EST | 335 | 315 days<br>16:30:33 | <a href="#">N1RHY</a><br>/      | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Jamie Icom 5100      | API510 (42°38.56'N,71°14.64'W)                                                      |
| <i>Wed 2024-01-17</i><br>@ 07:29:45 EST | <i>Wed 2024-01-17</i><br>@ 09:32:08 EST | 20  | 02:02:23             | <a href="#">KA8SCP</a><br>/TRK  | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Terry Westford MA    | API510 (42°36.78'N,71°27.29'W)                                                      |
| <i>Wed 2023-12-13</i><br>@ 14:05:19 EST | <i>Wed 2024-01-17</i><br>@ 09:21:13 EST | 66  | 34 days<br>19:15:54  | <a href="#">AA1HO</a><br>/5100  | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Art /Lowell,MA/ 5100 | API510 (42°37.44'N,71°20.06'W) 192 <sup>ft</sup>                                    |
| <i>Wed 2024-01-17</i><br>@ 07:30:03 EST | <i>Wed 2024-01-17</i><br>@ 07:47:10 EST | 32  | 00:17:08             | <a href="#">KA1IKK</a><br>/2820 | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>STEVE, DRACUT, MA.   |                                                                                     |
| <i>Tue 2024-01-16</i><br>@ 19:20:14 EST | <i>Tue 2024-01-16</i><br>@ 19:20:15 EST | 1   | 00:00:00             | <a href="#">KA8SCP</a><br>/ID51 | <a href="#">WB1GOF C</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Terry - Westford MA  |                                                                                     |
| <i>Tue 2024-01-16</i><br>@ 11:04:19 EST | <i>Tue 2024-01-16</i><br>@ 11:12:02 EST | 2   | 00:07:43             | <a href="#">KA8SCP</a><br>/ID31 | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Terry - Westford MA  | API31 (42°36.60'N,71°28.02'W) 257 <sup>ft</sup>                                     |
| <i>Tue 2023-02-28</i><br>@ 09:15:37 EST | <i>Tue 2024-01-16</i><br>@ 09:45:43 EST | 11  | 322 days<br>00:30:05 | <a href="#">KC1OMF</a><br>/D74A | <a href="#">WB1GOF B</a><br><a href="#">WB1GOF G</a> | <a href="#">CQ CQ CQ</a><br>Jeff Newton MA       |                                                                                     |
| <i>Mon 2024-01-15</i><br>@ 10:55:15 EST | <i>Mon 2024-01-15</i><br>@ 10:55:15 EST | 1   | 00:00:00             | <a href="#">KC1MQX 12</a><br>/  | <a href="#">WB1GOF C</a>                             |                                                  | API510 (42°32.64'N,71°45.83'W)                                                      |

# WHERE ARE D-STAR REPEATERS



|  |                                                     |
|--|-----------------------------------------------------|
|  | Brookline: 145.160 (C) K1MRA                        |
|  | Stoneham: 443.200 (146.2) WO1VES                    |
|  | Walpole: 446.437 (B) WA1PLE                         |
|  | Walpole: 446.437 (123.0) W1ZSA                      |
|  | Holliston: 447.075 (B) W1DSR                        |
|  | Holliston: 147.375 (136.5) W1DSR                    |
|  | Holliston: 449.475 (136.5) W1NGS                    |
|  | Norwell: 145.250 (NAC250/RAN2/CC5/77.0) AC1M        |
|  | West Bridgewater: 449.987 (NAC293/B/RAN1/CC4) KA1GG |
|  | Marlborough: 448.225 (B) W1MRA                      |
|  | Marshfield: 145.390 (NAC293/RAN1/CC9/67.0) W1ATD    |
|  | Westford: 145.330 (C) WB1GOF                        |
|  | Westford: 442.450 (B) WB1GOF                        |
|  | North Attleborough: 447.975 (88.5) NA1HS            |
|  | Salem: 145.320 (C) K1HRO                            |
|  | Salem: 444.350 (B) K1HRO                            |
|  | Hudson: 449.975 (B/71.9/88.5) KB1UAP                |
|  | Sutton: 442.850 (B/CC1) KC1AZZ                      |
|  | Freetown: 146.410 (C) K1BEP                         |
|  | Freetown: 449.775 (B) K1BEP                         |

# WHERE ARE D-STAR REPEATERS



|   |                                          |
|---|------------------------------------------|
| A | Newington: 147.390 (C) W1HQ              |
| B | Vernon: 145.260 AA1HD                    |
|   | Bolton: 442.150 AA1HD                    |
| C | Bristol: 145.140 W1IXU                   |
|   | Bristol: 448.375 W1IXU                   |
| D | Meriden: 145.490 W1ECV                   |
| E | Feeding Hills: 145.150 (C) W1KK          |
|   | Feeding Hills: 449.175 (B) W1KK          |
| F | Haddam: 444.550 (B) KB1UHS               |
| G | Salem: 443.400 (B) KD1STR                |
| H | Westbrook: 444.000 W1BCG                 |
| I | Florence: 447.375 AA1KK                  |
| J | Danielson: 444.100 (77.0) N1GAU          |
| K | Sutton: 442.850 (B/CC1) KC1AZZ           |
| L | Norwalk: 441.600 (B) W1NLK               |
| M | West Warwick: 147.045 (C) W1HDN          |
| N | Marlborough: 448.225 (B) W1MRA           |
| O | Holliston: 449.475 (136.5) W1NGS         |
|   | Holliston: 447.075 (B) W1DSR             |
| P | North Attleborough: 447.975 (88.5) NA1HS |



# WHERE ARE NE D-STAR REPEATERS 2 METERS



| FREQ    | OFS   | ST | CITY          | CALL   | MODE   | CODE<br>IN OUT | STATUS | COUNTY     | IRLPECHO | LINKS/COMMENTS             | Last<br>Update |
|---------|-------|----|---------------|--------|--------|----------------|--------|------------|----------|----------------------------|----------------|
| 145.140 | -     | CT | Bristol       | W1IXU  | D-STAR | C              |        | Hartford   |          | 147.030<br>(Hauppauge, NY) | 2014/04/30     |
| 145.150 | -     | MA | Feeding Hills | W1KK   | D-STAR | C              |        | Hampden    |          |                            | 2015/10/11     |
| 145.160 | -     | MA | Brookline     | K1MRA  | D-STAR | C              |        | Norfolk    |          | D-STAR REF050 C            | 2014/12/23     |
| 145.260 | -     | CT | Vernon        | AA1HD  | D-STAR | C              |        | Tolland    |          | D-STAR REF069 C            | 2015/01/26     |
| 145.300 | -     | RI | Portsmouth    | W1AAD  | D-STAR | C              |        | Newport    |          | [D-STAR REF069 C]          | 2019/01/04     |
| 145.320 | -     | NH | Salem         | K1HRO  | D-STAR | C              | Local  | Rockingham |          |                            | 2012/09/06     |
| 145.330 | -     | MA | Westford      | WB1GOF | D-STAR | C              |        | Middlesex  |          |                            | 2014/03/11     |
| 145.380 | -     | NH | Madbury       | N1HIT  | D-STAR | C              |        | Strafford  |          |                            | 2015/11/30     |
| 145.400 | -     | NH | Kensington    | KB1TIX | D-STAR | C              |        | Rockingham |          |                            | 2012/09/06     |
| 145.420 | -     | MA | Fall River    | K1RFI  | D-STAR | C              |        | Bristol    |          | D-STAR REF050 C            | 2015/12/24     |
| 145.440 | -     | NH | Hampton       | K1HBR  | D-STAR | C              |        | Rockingham |          | D-STAR REF050 C            | 2014/04/30     |
| 145.460 | -     | NH | Franklin      | W1JY   | D-STAR | C              |        | Merrimack  |          |                            | 2022/08/08     |
| 145.490 | -     | CT | Meriden       | W1ECV  | D-STAR | C              |        | New Haven  |          | D-STAR REF069 C            | 2015/01/26     |
| 146.410 | -1.5M | MA | Freetown      | K1BEP  | D-STAR | C              |        | Bristol    |          | D-STAR REF050 C            | 2020/06/16     |
| 146.460 | -1.5M | NH | Windham       | KC1EGN | D-STAR | C              | OFF    | Rockingham |          |                            | 2020/03/06     |
| 146.985 | -     | ME | Cooper        | W1SCV  | D-STAR | C              |        | Washington |          |                            | 2023/02/20     |
| 147.045 | +     | RI | West Warwick  | W1HDN  | D-STAR | C              |        | Kent       |          | D-STAR REF069 C            | 2021/04/03     |
| 147.150 | +     | ME | Biddeford     | KC1ALA | D-STAR | C              |        | York       | 642019   |                            | 2014/06/20     |
| 147.390 | +     | CT | Newington     | W1HQ   | D-STAR | C              |        | Hartford   |          |                            | 2012/09/06     |

440

# WHERE ARE NE D-STAR REPEATERS

| FREQ     | OFS | ST | CITY            | CALL   | MODE          | CODE<br>IN OUT  | STATUS | COUNTY       | IRLPECHO | LINKS/COMMENTS       | Last Update |
|----------|-----|----|-----------------|--------|---------------|-----------------|--------|--------------|----------|----------------------|-------------|
| 442.850  | +   | MA | Sutton          | KC1AZZ | D-STAR DMR    | B/<br>CC1       | CC1    | Worcester    |          | Brandmeister DMR Net | 2018/04/19  |
| 441.600  | +   | CT | Norwalk         | W1NLK  | D-STAR        | B               |        | Fairfield    |          | D-STAR REF069 C      | 2015/01/26  |
| 441.950  | +   | NH | Portsmouth      | KB1ZDR | D-STAR        | B               |        | Rockingham   |          |                      | 2014/02/20  |
| 442.150  | +   | CT | Vernon          | AA1HD  | D-STAR        | B               |        | Tolland      |          |                      | 2012/09/06  |
| 442.450  | +   | MA | Westford        | WB1GOF | D-STAR        | B               |        | Middlesex    |          | D-STAR REF050 C      | 2020/03/06  |
| 443.050  | +   | ME | Biddeford       | KC1ALA | D-STAR        | B               |        | York         |          |                      | 2014/06/20  |
| 443.300  | +   | ME | Livermore       | W1NPP  | D-STAR        | B               | OFF    | Androscoggin |          |                      | 2019/06/01  |
| 443.400  | +   | CT | Salem           | KD1STR | D-STAR        | B               |        | New London   |          | D-STAR REF069 C      | 2015/01/26  |
| 444.000  | +   | CT | Westbrook       | W1BCG  | D-STAR        | B               |        | Middlesex    |          | D-STAR REF069 C      | 2015/01/26  |
| 444.100  | +   | CT | South Killingly | N1GAU  | D-STAR        | B               |        | Windham      |          | D-STAR REF069 C      | 2015/01/26  |
| 444.300  | +   | ME | Knox            | W1EMA  | D-STAR        | B               | OFF    | Waldo        |          |                      | 2016/03/28  |
| 444.350  | +   | NH | Salem           | K1HRO  | D-STAR        | B               | Local  | Rockingham   |          | D-STAR REF050 C      | 2020/03/06  |
| 444.550  | +   | CT | Haddam          | KB1UHS | D-STAR        | B               |        | Middlesex    |          | D-STAR REF069 C      | 2017/01/20  |
| 446.4375 | -   | MA | Walpole         | WA1PLE | D-STAR        | B               |        | Norfolk      |          |                      | 2014/05/21  |
| 446.575  | -   | NH | Goffstown       | NE1DV  | D-STAR        | B               |        | Hillsborough |          |                      | 2012/09/07  |
| 446.725  | -   | NH | Greenland       | KB1UVE | D-STAR        | B               | OFF    | Rockingham   |          |                      | 2022/05/27  |
| 447.075  | -   | MA | Holliston       | W1DSR  | D-STAR        | B               |        | Middlesex    |          | D-STAR REF050 C      | 2014/05/26  |
| 447.225  | -   | NH | Derry           | KB1UVD | D-STAR        | B               |        | Rockingham   |          |                      | 2016/03/24  |
| 447.375  | -   | MA | Holyoke         | AA1KK  | D-STAR        | B               | OFF    | Hampden      |          |                      | 2017/09/27  |
| 447.375  | -   | NH | Derry           | K1QVC  | D-STAR/<br>FM | B/<br>85.4      | 85.4   | Rockingham   |          |                      | 2013/06/10  |
| 447.575  | -   | ME | Phippsburg      | KS1R   | D-STAR        | B               |        | Sagadahoc    |          |                      | 2014/12/11  |
| 447.775  | -   | NH | Gilford         | W1CNH  | D-STAR        | B               |        | Belknap      |          |                      | 2015/10/29  |
| 448.225  | -   | MA | Marlborough     | W1MRA  | D-STAR        | B               |        | Middlesex    |          | D-STAR REF050 C      | 2020/03/06  |
| 448.375  | -   | CT | Bristol         | W1IXU  | D-STAR        | B               |        | Hartford     |          |                      | 2012/09/06  |
| 448.875  | -   | NH | Madbury         | N1HIT  | D-STAR        | B               |        | Strafford    |          |                      | 2015/11/30  |
| 448.975  | -   | CT | Mystic          | KB1TMO | D-STAR        | B               | OFF    | New London   |          |                      | 2019/08/10  |
| 449.175  | -   | MA | Feeding Hills   | W1KK   | D-STAR        | B               |        | Hampden      |          | D-STAR REF069 C      | 2015/10/11  |
| 449.475  | -   | NH | Hampton         | K1HBR  | D-STAR        | B               |        | Rockingham   |          |                      | 2012/09/06  |
| 449.575  | -   | NH | Moultonborough  | W1CEN  | D-STAR        | B               |        | Carroll      |          |                      | 2022/03/16  |
| 449.675  | -   | NH | Sanbornton      | W1VN   | D-STAR        | B               |        | Belknap      |          |                      | 2014/12/19  |
| 449.775  | -   | MA | Freetown        | K1BEP  | D-STAR        | B               |        | Bristol      |          | D-STAR REF069 C      | 2020/06/16  |
| 449.975  | -   | NH | Hudson          | KB1UAP | D-STAR/<br>FM | B/<br>71.9/88.5 | 88.5   | Hillsborough | 355114   | RB:222/440           | 2015/12/01  |



# REFLECTORS



- Multiple “reflectors” available:
- Good info at: <https://www.f4fxl.org/ref-xrf-dcs-xxl-whats-the-difference>
  - DPLUS reflectors (AA4RC) are REF001-REF097
    - Dashboards are: [refxxx.dstargateway.org](http://refxxx.dstargateway.org)
    - <http://www.dstarinfo.com/reflectors.aspx>
  - XRF reflectors (DEXTRA)
    - Non-standard numbering
    - Example: <https://xrf757.openquad.net/>
  - XLX reflectors (multi-protocol)
    - Active XLX reflectors can be found on XLX dashboard
    - Example: <http://xll978.dyndns.org/index.php?show=reflectors>

# MORE ON REFLECTORS



- Multiple “reflectors” available:
- Repeating... Good info at: <https://www.f4fxl.org/ref-xrf-dcs-xxl-whats-the-difference>
- DCS reflectors
  - List: <http://xreflector.net/>

# REFLECTORS



Where can I find a list of reflectors:

► Valid lists:

► DPLUS reflectors.... REF001-REF099 -

<http://www.dstarinfo.com/reflectors.aspx>

► XLX reflectors... -

► W0CHP/WPSD: <https://w0chp.radio/xlx-reflectors/>

► Or any XLX reflector page has “Reflector list” tab:  
<https://xlx978.dyndns.org/index.php?show=reflectors>

# XLX Multiprotocol Gateway Reflector

XLX978 v2.5.3 - Dashboard v2.4.2 New England Reflector - G3 enabled - ne-dstar.org sponsored / Service uptime: 2 days 14:56:29

- Users / Modules
- Repeaters / Nodes (13)
- Peers (8)
- Modules list
- Reflectors list
- D-Star live

| Callsign |                                                                                    |          |        | Module                                                                              |                         |                     |   |
|----------|------------------------------------------------------------------------------------|----------|--------|-------------------------------------------------------------------------------------|-------------------------|---------------------|---|
| Apply    |                                                                                    |          |        |                                                                                     |                         | Apply               |   |
| #        | Flag                                                                               | Callsign | Suffix | DPRS                                                                                | Via / Peer              | Last heard          |   |
| 1        |    | N1RHY    |        |    | REF351<br>G /<br>XLX351 | 23.01.2024<br>10:46 | C |
| 2        |    | AA1HO    | 5100   |    | REF351<br>G /<br>XLX351 | 23.01.2024<br>10:46 | C |
| 3        |    | N1JXX    | DMR    |    | XLX978<br>G /<br>BM3104 | 23.01.2024<br>10:41 | G |
| 4        |   | K1VK     | PAUL   |   | REF351<br>G /<br>XLX351 | 23.01.2024<br>10:32 | C |
| 5        |  | W3GAC    | DMR    |  | XLX978<br>G /<br>BM3104 | 23.01.2024<br>08:56 | G |

|                                                                                               |                                    |                            |                                                            |                                                             |                                               |                                |             |
|-----------------------------------------------------------------------------------------------|------------------------------------|----------------------------|------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------|--------------------------------|-------------|
| Peanut:XLX978A<br>CanNet OWDN<br>ORCN REF038A<br>XRF038A<br>XLX044A(hub)<br>DMR:BM302050<br>A | Maine<br>Statewide<br>REF039C<br>B | REF050C via<br>XLX351<br>C | Peanut:XLX978D<br>REF038D<br>DMR:BM312543<br>YSF85560<br>D | Peanut:XLX978G<br>The Gathering<br>Spot<br>DMR:BM31801<br>G | D-STAR ONLY<br>Peanut:REF069C<br>REF069C<br>H | Ohio Reflector<br>REF038C<br>I | DV Bot<br>S |
| XRF221-A                                                                                      | KA8SCP-D                           | KA8SCP-H                   | PA7LIM-D                                                   | PA7LIM-D                                                    | XRF638-A                                      | KA8SCP-Z                       | AA1HO-D     |
| PA7LIM-D                                                                                      |                                    |                            | KF0AXA-B                                                   | KA8SCP-N                                                    |                                               |                                |             |
|                                                                                               |                                    |                            | XRF138-D                                                   |                                                             |                                               |                                |             |

<http://xlx978.dyndns.org>

MULTIPROTOCOL REFLECTOR AND “PORTAL”



Bringing Maine D-STAR  
users together at [REF039](#)  
and [XLX139](#)

### XLX Multiprotocol Gateway Reflector

XLX139 v2.5.3 - Dashboard v2.4.2 Maine XLX Reflector-Terminal Mode enabled-transcoded / Service uptime: 134 days 23:48:40

[Users / Modules](#) [Repeaters / Nodes \(3\)](#) [Peers \(1\)](#) [Modules list](#) [Reflectors list](#) [D-Star live](#)

| # | Flag | Callsign | Suffix | DPRS | Via / Peer | Last heard       |   |
|---|------|----------|--------|------|------------|------------------|---|
| 1 |      | WU1Z     |        |      | KB1SBJ G   | 05.01.2025 10:55 | C |
| 2 |      | N2XPM    |        |      | KB1SBJ G   | 05.01.2025 10:55 | C |
| 3 |      | KI5QOU   |        |      | KB1SBJ G   | 05.01.2025 09:25 | C |
| 4 |      | N1MRE    | ANDY   |      | KB1SBJ G   | 05.01.2025 09:25 | C |
| 5 |      | KC1ANY   |        |      | KB1SBJ G   | 05.01.2025 07:40 | C |
| 6 |      | N1VLZ    | 51A    |      | KB1SBJ G   | 04.01.2025 18:54 | C |
| 7 |      | KC1VBO   |        |      | KB1SBJ G   | 04.01.2025 15:55 | C |
| 8 |      | AC1NC    | 5100   |      | KB1SBJ G   | 04.01.2025 13:07 | C |
| 9 |      | W1RAB    |        |      | KB1SBJ G   | 04.01.2025 08:32 | C |

Caribou EARS REF039A Maine Statewide REF039C

| A        | C                    |
|----------|----------------------|
| XRF138-A | KB1SBJ-G<br>KB1EJH-H |

<http://xlx139.dyndns.org>

## DPLUS Dashboard | Reflector Status and Control

[Registration](#) [REF039 Reflector System](#) [DREFD version 1.52](#)

### Linked Gateways

| Module A | Module B | Module C | Module D | Module E |
|----------|----------|----------|----------|----------|
|          |          | KA1EAR B |          |          |
|          |          | KC1SBG B |          |          |
|          |          | KS1R B   |          |          |

### Remote Users

| Callsign | User Message | Last TX on | Type    |
|----------|--------------|------------|---------|
| KC1ALA   |              | listening  | HotSpot |
| KI5QOU D |              | C          | HotSpot |
| ZL2WPA   |              | listening  | HotSpot |
| N1MRE    |              | C          | HotSpot |
| KC1ANY D |              | C          | HotSpot |
| VE1TE    |              | listening  | HotSpot |
| KC1TV D  |              | listening  | HotSpot |
| KB1SBJ   |              | C          | HotSpot |
| WU1Z D   |              | C          | HotSpot |
| N1URA    |              | C          | HotSpot |

### Last Heard

| Callsign | User Message  | Last TX on | Time                |
|----------|---------------|------------|---------------------|
| KU1U     | CORY IN MAINE | C          | 2025/01/05 12:56:10 |

<http://ref039.dstargateway.org>

# MAINE D-STAR REFLECTORS



# D-STAR INFO

INFORMATION, FAQs, AND MORE



For the love of ham



- [Home](#)
- [FAQ](#)
- [Conferences](#)
- [Nets](#)
- [Reflectors](#)
- [Downloads](#)
- [Repeater Maps & List](#)
- [Calculator](#)
- [Apps/Devices](#)
- [DV Pro](#)
- [D-RATS](#)
- [Contact Us](#)

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Repeater owners or administrator may update their information by going to [www.DSTARInfo.com/update](http://www.DSTARInfo.com/update).

## D-STAR Reflectors

| Reflector | Usage                                                                   | Location        | Links                                                                          | Speed    |
|-----------|-------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------|----------|
| REF001B   |                                                                         |                 | <a href="#">Status</a>                                                         |          |
| REF001C   | D-Star Mega Reflector                                                   |                 | <a href="#">Status</a>                                                         |          |
| REF002A   |                                                                         |                 | <a href="#">Status</a>                                                         |          |
| REF002B   |                                                                         |                 |                                                                                |          |
| REF002C   |                                                                         |                 |                                                                                |          |
| REF003A   | Ad-hock & Emergency Use - Australia                                     | Australia       | <a href="#">Status</a>                                                         |          |
| REF003B   | Permalink for Repeaters, including all WIA Port B Repeaters - Australia | Australia       | <a href="#">Status</a>                                                         |          |
| REF003C   | Australian Nets                                                         | Australia       | <a href="#">Status</a>                                                         |          |
| REF004A   | <a href="#">Alternate for Southeastern US D-STAR Weather Net</a>        | United States   | <a href="#">Status</a>                                                         | 1 Gbps   |
| REF004B   | Texas Permalink Repeaters                                               | United States   | <a href="#">Status</a>                                                         | 1 Gbps   |
| REF004C   | General Rag Chew (English only please)                                  | United States   | <a href="#">Status</a>                                                         | 1 Gbps   |
| REF005A   | UK Nets, Permalink Repeaters                                            | London, England | <a href="#">Status</a> <a href="#">Usage Guide</a> <a href="#">Information</a> | 100 Mbps |

## Linked Gateways

| Module A | Module B | Module C | Module D | Module E |
|----------|----------|----------|----------|----------|
| K4GAR B  | KA4RVT B | K1HRO C  | WD4STR C |          |
| WM8TG B  | KJ4BDF B | K5URR B  |          |          |
|          | KJ4KLD C | K6SOA C  |          |          |
|          | KJ4KLE C | K7TUS C  |          |          |
|          | KJ4PXX B | K8ETN B  |          |          |
|          | KJ4YNR C | K8ETN C  |          |          |
|          | KJ4ZLL C | K8WGR B  |          |          |
|          | KK4SGC C | KC2TGB B |          |          |
|          | KK7QJR C | KG4NXO C |          |          |
|          | KN4PLO A | KJ4KLD B |          |          |
|          | W4AMI C  | KJ4PXZ B |          |          |
|          | W4CBA B  | KJ4PYA C |          |          |
|          | W4CBA C  | KK4BXE B |          |          |
|          | W4PVW B  | KK4SGC B |          |          |
|          | W4VO C   | KM4LOD B |          |          |
|          | WC4RG C  | KM4MCN C |          |          |
|          | WD4STR B | KN4EM C  |          |          |
|          | WX4EMA C | KN5V B   |          |          |
|          | WX4GPB C | KR4AIK B |          |          |
|          |          | VA3OTL B |          |          |
|          |          | VE4WDR B |          |          |
|          |          | VE6GHZ C |          |          |
|          |          | VE7RAG A |          |          |
|          |          | VK3RWN B |          |          |
|          |          | W4HHH B  |          |          |
|          |          | W4LCO B  |          |          |
|          |          | W4PVW C  |          |          |
|          |          | W5BII B  |          |          |
|          |          | W8DF B   |          |          |
|          |          | W8VY B   |          |          |
|          |          | W9BIL C  |          |          |
|          |          | W9NTP B  |          |          |
|          |          | WA2UMX B |          |          |
|          |          | WM8TG C  |          |          |
|          |          | WX4GPB B |          |          |
|          |          | ZL3CHD B |          |          |

- REF001C and REF030C are some of the busiest reflectors in D-STAR
- Each reflector commonly has 50+ repeaters and 500+ hotspots connected from all over the world
- Please don't experiment or play with hotspots on these and other busy reflectors
- Don't connect two hotspots on the same frequency or computer

## REPEATER ETIQUETTE

<http://ref030.dstargateway.org>

901 remote users - 50 gateways





- You do NOT have to be registered to talk
- Registration allows:
  - Linking repeaters to reflectors
  - Access the D-STAR network from the internet (i.e. hotspot)
- Get on the air and then register
  - <http://regist.dstargateway.org>
  - Add 2 terminal IDs:
    - Default: just your call sign
    - Access Point: your call + Z
- Buy the D-STAR equipment and get on the air

# REGISTRATION

User Call:

✓ W1ZLA has been approved on: REGIST (on 202

✓ W1ZLA has terminals that are registered on: REC

| W1ZLA Terminal Entries |         |                        |
|------------------------|---------|------------------------|
| Terminal Call          | Gateway | Notes                  |
| W1ZLA Z                | REGIST  | Access Point Terminal  |
| W1ZLA                  | REGIST  | Space/Primary Terminal |

Hostname: wpsd-mmdvm

## WPSD Digital Voice Dashboard for KA8SCP

11:22:54, Jan 21

Profiles Live Caller

| Radio Status | TX/RX Freq. | Radio Mode | Modem Port   | Modem Speed | TCXO Freq.  |
|--------------|-------------|------------|--------------|-------------|-------------|
| IDLE         | 433.800 MHz | Simplex    | /dev/ttyAMA0 | 115,200 bps | 14.7456 MHz |

| Mode Status |            |
|-------------|------------|
| D-Star      | DMR        |
| YSF         | P25        |
| M17         | NXDN       |
| DMR X-Mode  | YSF X-Mode |
| POCSAG      |            |

### Gateway Activity

Display TG Names ☒ Caller Det

| Time (EST)      | Callsign    | Country | Mode   | Target |
|-----------------|-------------|---------|--------|--------|
| 03:02:48 Jan 21 | KA8SCP/INFO |         | D-Star | CQCQCQ |
| 21:05:23 Jan 20 | KB1G/5100   |         | D-Star | CQCQCQ |
| 19:36:20 Jan 20 | W1RAB       |         | D-Star | CQCQCQ |

## The WPSD Project

<https://w0chp.radio/wpsd>

## PI-STAR

<https://www.pistar.uk>

# HOTSPOTS



## Pi-Star Digital Voice Dashboard for KA8SCP

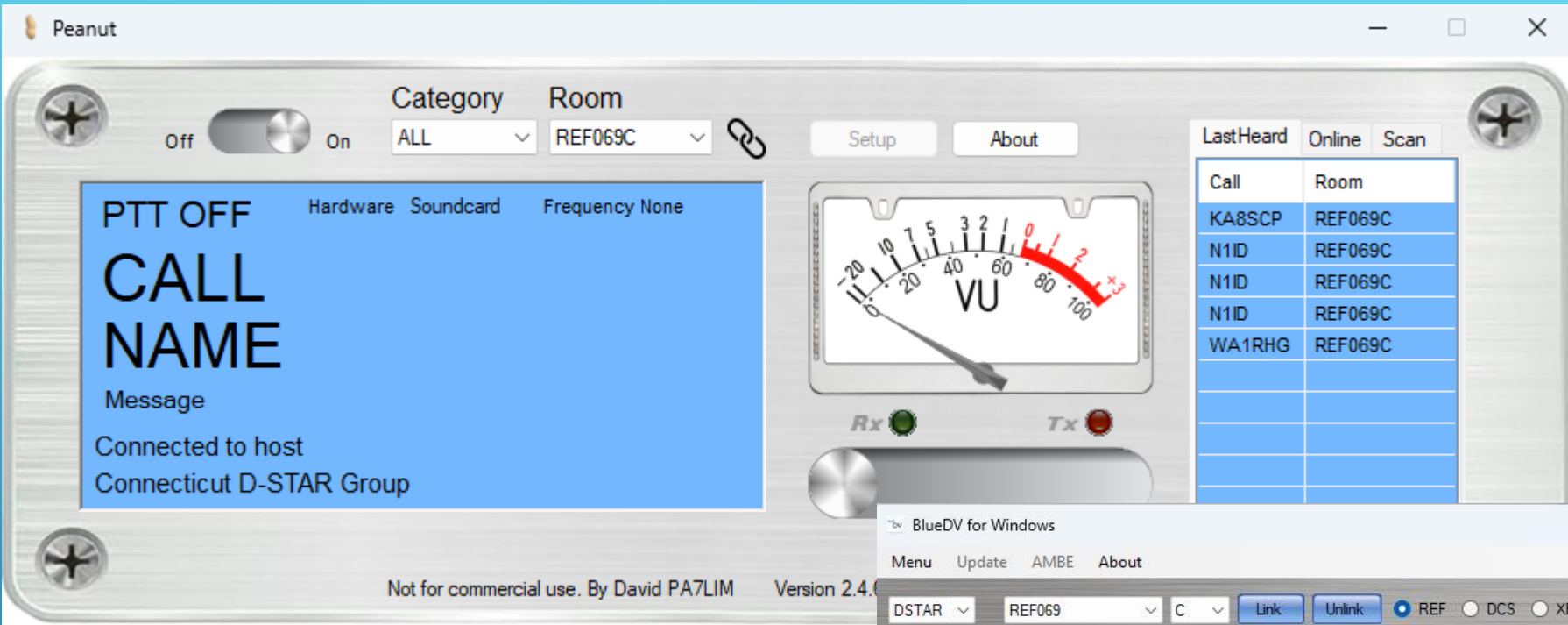
Dashboard | Admin | Configuration

| Modes Enabled |           |
|---------------|-----------|
| D-Star        | DMR       |
| M17           | NXDN      |
| P25           | YSF       |
| DMR XMode     | YSF XMode |
| POCSAG        |           |

| Network Status |          |
|----------------|----------|
| D-Star Net     | DMR Net  |
| M17 Net        | NXDN Net |
| P25 Net        | YSF Net  |
| DMR2NXDN       | DMR2YSF  |

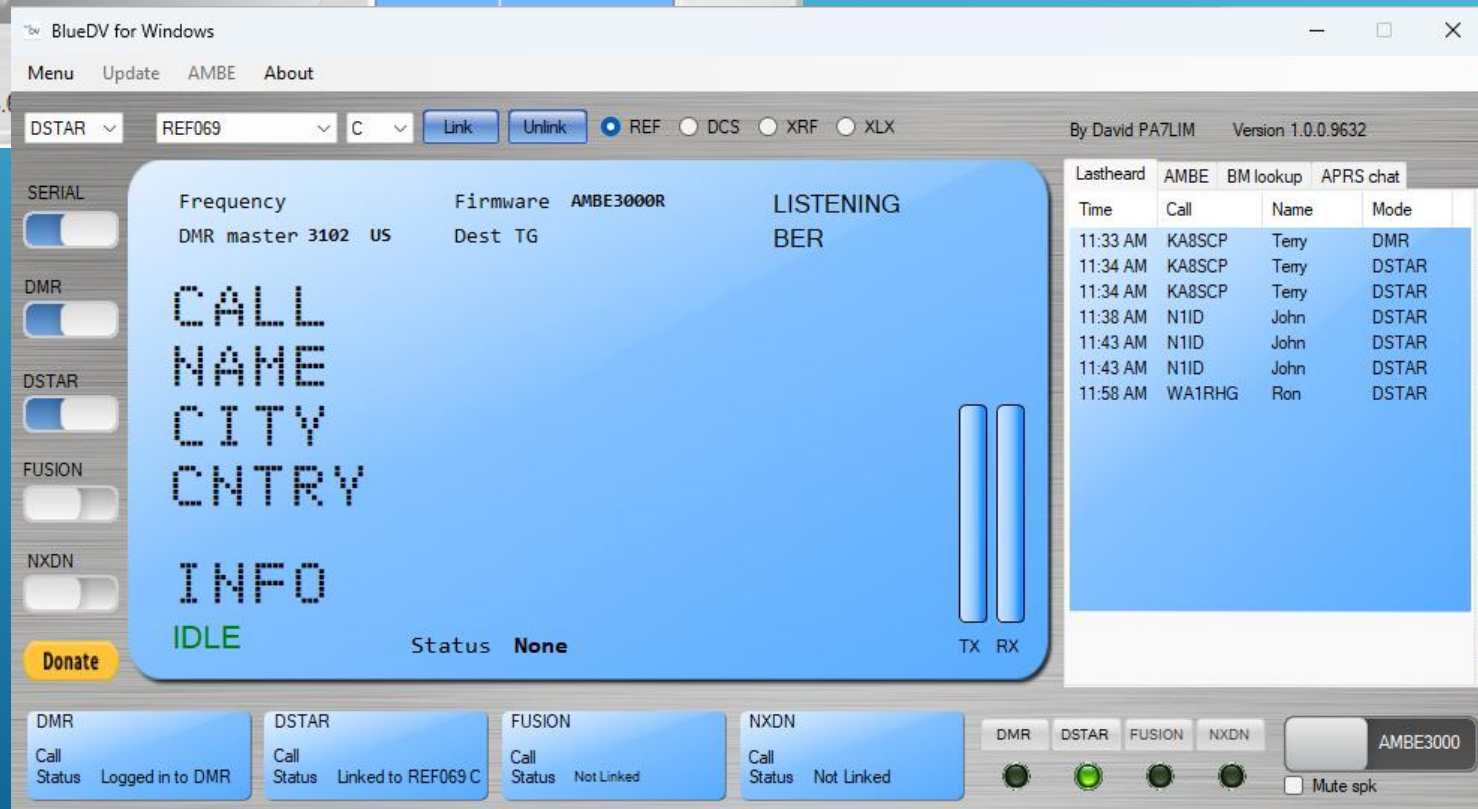
### Gateway Activity

| Time (EST)        | Mode    | Callsign         | Target              | Src | Dur(s) | Loss | BER  |
|-------------------|---------|------------------|---------------------|-----|--------|------|------|
| 10:53:57 Jan 21st | D-Star  | KW4KC/DMR (GPS)  | CQCQCQ              | Net | 1.0    | 97%  | 0.0% |
| 10:53:57 Jan 21st | DMR TS2 | KW4KC (GPS)      | TG 31801            | Net | 0.5    | 0%   | 0.0% |
| 09:05:39 Jan 21st | DMR TS2 | K4PMD (GPS)      | TG 31801            | Net | 3.0    | 0%   | 0.0% |
| 08:54:16 Jan 21st | DMR TS2 | VA3KY (GPS)      | TG 31801            | Net | 102.0  | 0%   | 0.0% |
| 08:52:55 Jan 21st | DMR TS2 | AC2ED (GPS)      | TG 31801            | Net | 74.5   | 0%   | 0.0% |
| 08:52:23 Jan 21st | DMR TS2 | W3GAC (GPS)      | TG 31801            | Net | 26.0   | 0%   | 0.0% |
| 02:20:08 Jan 21st | D-Star  | KC8YQL/DMR (GPS) | CQCQCQ via DCS978 G | Net | 1.0    | 97%  | 0.0% |
| 02:20:08 Jan 21st | DMR TS2 | KC8YQL (GPS)     | TG 31801            | Net | 25.6   | 4%   | 0.0% |
| 23:54:38 Jan 20th | DMR TS2 | KC9SIO (GPS)     | TG 31801            | Net | 4.8    | 3%   | 0.1% |
| 23:32:46 Jan 20th | D-Star  | KC9SIO/DMR (GPS) | CQCQCQ via DCS978 G | Net | 10.4   | 4%   | 0.0% |



<http://www.pa7lim.nl>

# THE PEANUT & BLUE DV





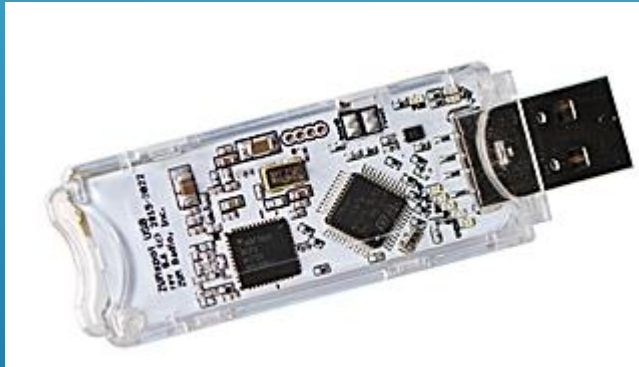
**DVMEGA** The Swiss army knife for  
Digital Voice

**DVMEGA DVstick 30**

<https://www.dvmega.nl/dvstick30>



Costs: approximately  
\$120-\$180



**ZUM Radio ZUMspot-USB**

<https://zumradio.com>

# DV STICK & THUMB DV



**DVSI AMBE3000 Digital Voice Vocoder on USB**

<https://nwdigitalradio.com>



# OPENSPOT4 PRO

- The openSPOT4 Pro has the **best voice quality** in cross mode operation
- **You don't need a transceiver** for the Pro! Use the free SharkRF Link app on your computer or phone to talk.
- Supports **D-STAR® cross modes**: use your D-STAR® transceiver to access DMR, C4FM, NXDN® networks, or your DMR, C4FM, NXDN® transceiver to access D-STAR® networks
- Supports **call audio playback** on the web interface



<https://www.sharkrf.com/products/openspot4>

# OPENSPOT4 COMPATIBLE DIGITAL RADIO PROTOCOLS AND NETWORKS



- **DMR** (BrandMeister, DMRplus, DMR-MARC, Phoenix, XLX, TGIF and others)
- **D-STAR®** (DCS, REF/DPlus, XRF/DExtra, XLX)
- **System Fusion®/C4FM** (FCS, YSFReflector, XLX)
- **NXDN®** (NXDNReflector)
- **P25** (P25Reflector)
- **POCSAG** (DAPNET)
- **APRS® messaging and location data forwarding** (APRS-IS)

Supports cross modes\* (example: talk with your D-STAR® transceiver on DMR, or with your DMR transceiver on D-STAR® networks).



# D-STAR ON HF



- To work HF simplex D-STAR on the HF bands you will need an HF D-STAR radio:

**Icom 7100 Icom 9100 Icom 705**

- HF D-STAR is allowed in the VOICE portions of the HF Bands, based on your license privileges.
- As always, monitor for activity whether AM or SSB, so as NOT to interfere with others.

|                                                   |                                      |
|---------------------------------------------------|--------------------------------------|
| 6 mtrs 50.210 DV for 2 mins                       | 10 mtrs 28.570 DV for 5 mins         |
| 12 mtrs 24.938 DV for 5 mins                      | 15 mtrs 21.380 DV for 5 mins         |
| 17 mtrs 18.148 DV for 5 mins                      | 20 mtrs 14. <b>340</b> DV for 5 mins |
| 40 mtrs 7.285(or another open freq) DV for 5 mins | 75 mtrs 3.855 DV for 5 mins          |



- There is a D-STAR net every Saturday at 7PM and Sunday at 10AM coordinated by Kent (KQ4KK) on REF030C. <http://ref030.dstargateway.org>
- All the Info is on his QRZ page: <https://www.qrz.com/db/KQ4KK>

Also <https://groups.io/g/HFDstar>



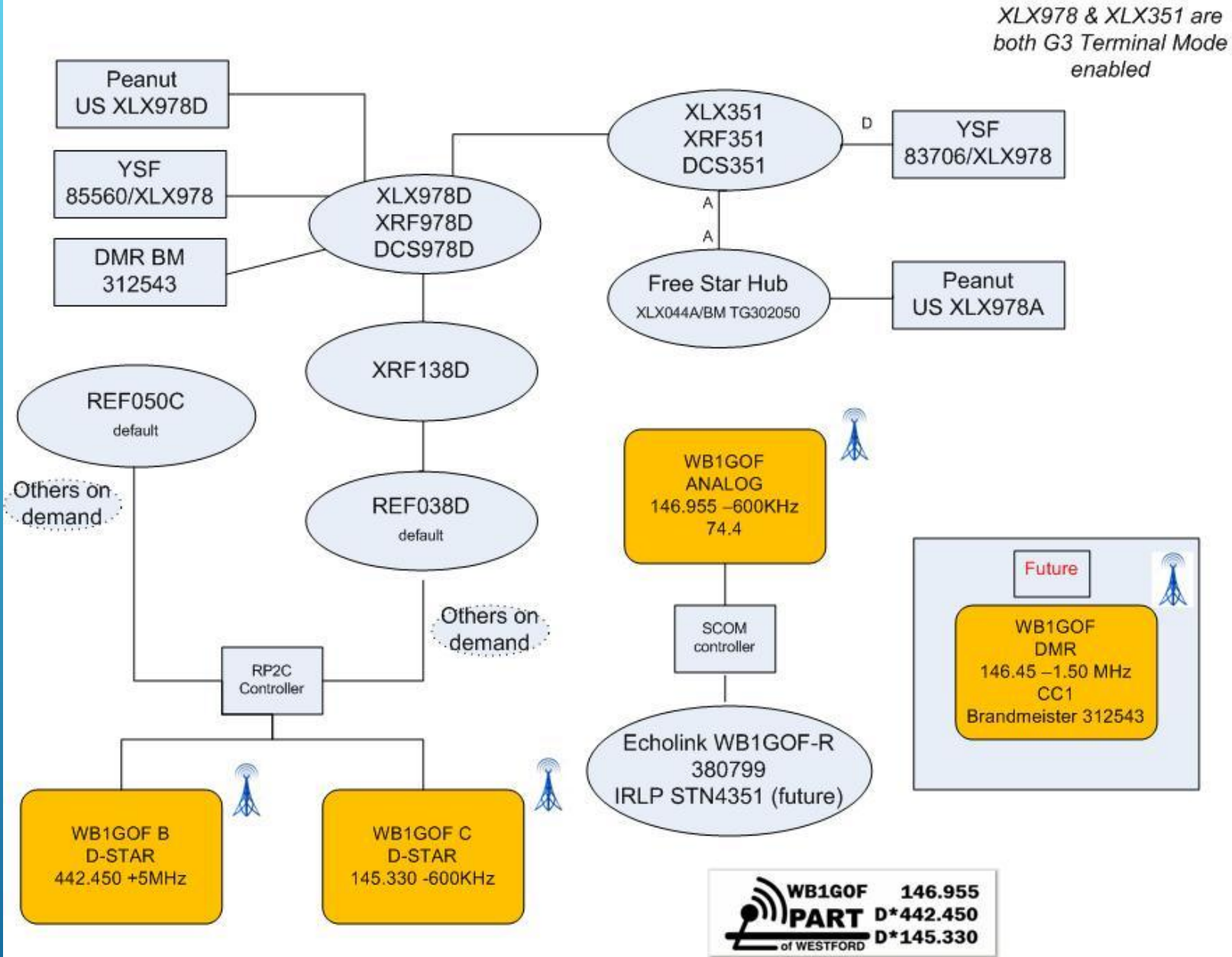
Info: Checkout the September 2023 issue of QST for a great article on “FREE DV”. It’s another way to operate HF Digital Radio!

- Started out with “digital” repeaters: D-STAR, DMR, Fusion, P25
- Now there are multi-mode repeaters based on MMDVM (Pi-Star and WPSD)
- Reflectors now are multimode: XLX
  - With transcoding devices to allow cross-mode operation

SO MANY WAYS TO CONNECT



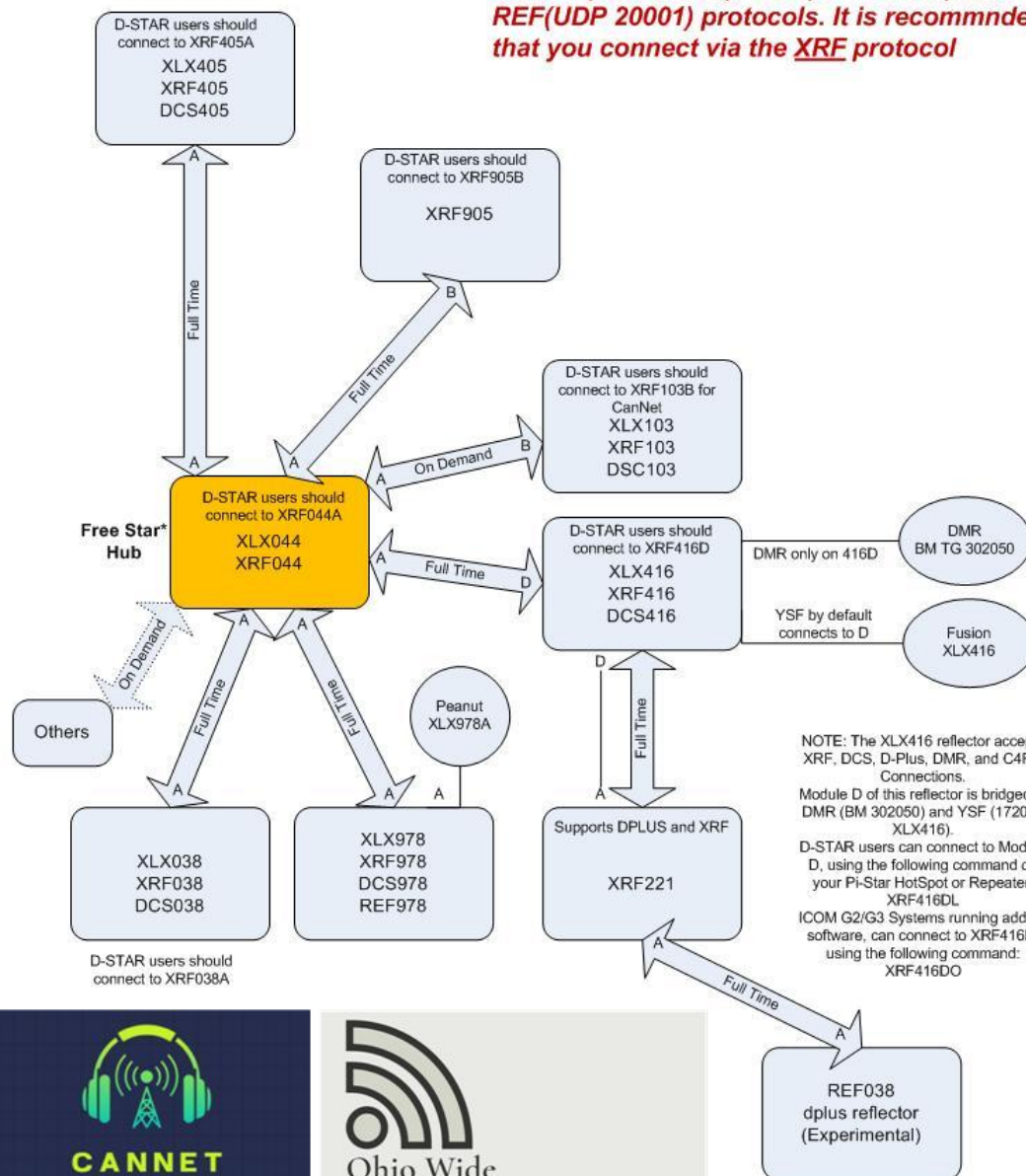
# WB1GOF REPEATERS



WB1GOF Repeaters  
Block Diagram

# FREE-STAR\* NETWORK

**XLX reflectors are multi-protocol, i.e., means they support D-STAR connections to them via XRF(UDP 30001), DCS(UDP 30051) and REF(UDP 20001) protocols. It is recommended that you connect via the XRF protocol**



The Free-Star\* Network



As of 18 October 2023

Copyright 2020 , 2021, 2022, 2023 KA8SCP

# PRESENTER



Terry M. Stader - KA8SCP ([KA8SCP@WB1GOF.org](mailto:KA8SCP@WB1GOF.org))

PART of Westford-WB1GOF, Senior Club Advisor

NESMC – EMA Director / MEMA Region 1 CommO/RACES Officer

WB1GOF Repeaters: FM-146.955, D-Star-145.330 & 442.450, DMR-146.450

Police Amateur Radio Team of Westford website: [www.wb1gof.org](http://www.wb1gof.org)

WB1GOF Repeaters: [www.wb1gof.org/repeaters](http://www.wb1gof.org/repeaters)

PART forum: <https://groups.io/g/PARTofWestford>

WB1GOF D-STAR Users: <https://groups.io/g/wb1gof-dstar>

D-STAR Admin: WB1GOF-K1HRO-W1MRA-K1MRA-KB1SBJ-AF2A-TF3RPI (and more)

Reflector Admin: [REF038](#)-[REF039](#)-[REF040](#)-[REF049](#)-[XLX038](#)([XRF038](#))-[XRF138](#)-[XLX139](#)-[XRF221](#)-[XLX351](#)-[XLX416](#)-[XLX539](#)-[XLX978](#)

# WB1GOF/R

Current

Icom  
D-Star Controller  
145.330 Repeater (18w)  
442.450 Repeater (18w)

Wacom UHF (4)  
BPBR/Duplexer

UHF Rcvr Bandpass  
Cavity (1) & Preamp

Network Router/FIOS

HP DL580 G2 (4 way)  
CentOS (Linux)  
D-Plus Gateway  
Routing Software  
Link Scheduling  
User Logging  
D-Star Registration

D-Star Cab

FM Analog Cab

3 Open Repeaters  
On the Air 24/7

21 Years of  
Continuous  
Public Service

146.955 TPL power  
amp (55W/at Ant)

146.955 Kenwood TKR-  
750 repeater

146.955 SCOM  
controller & Spare

Phelps Dodge  
145.330 (back) (6)  
Duplexer

Wacom 146.955  
(front) (4) Duplexer

AT&T Cell Site - Prospect Hill  
Westford, Ma  
579 feet/AMSL

