

Cherokee DMR

Field Day 2025

Version 27 June 2025

Agenda

- What is DMR
- Why DMR
- Terminology
- Configuration
- APRS.TO
- NET Operations
- Hands on
- Bonus!



Details Rob to Cover

- Configuration
 - WA4EOC ID: [3215969](#)
 - WX4CAR: [3217955](#)
 - APRS via DMR
 - SMS via DMR
- Equipment Discussion
 - Anytone D878UVII Plus (HT) Anytone D575UVIIPro
 - OpenSpot4 Pro



What is DMR?

What is DMR

- DMR stands for Digital Mobile Radio and is an international standard that has been defined for two-way radios.
- The DMR standard allows equipment developed by different manufacturers to operate together on the same network for all the functions defined within the standard.
- The aim of the DMR standard was to create a digital radio system with low complexity and low cost that still allows for equipment from different manufacturers to work together.
- The European Telecommunications Standards Institute (ETSI) is responsible for the creation and maintenance of the DMR standard. The standard was first ratified in 2005 and has subsequently been updated and revised several times, most recently in November 2018.



Advantages of DMR?

Advantages of DMR?

- DMR is four times more efficient when it comes to spectrum usage.
- For one 25 kHz analogue FM channel, you could fit four DMR transmissions.
- DMR offers some very flexible calling facilities - you can call one person, a group of people, or everyone in your team/group at once.
- While not every DMR network supports it, sending of data and short messages (SMS) and APRS is also possible.
- Wide coverage areas using a network of DMR repeaters is already built-in; cover your city or cover the entire country!
- DMR transmitter is only turned on about half the time due to it transmitting in bursts, battery life is longer.



Why DMR for Cherokee ?

Why DMR for Cherokee ?

- DMR is another tool we can add to our toolbox to allow members to check into the NET or stay in touch when out of town or unable to access our standard county repeaters.
- We can communicate on a custom Talkgroup only known by our members to avoid unnecessary noise/traffic and allow us to monitor for key Cherokee Activity.
- We can send SMS message or make direct call to another member.
- We have published two Talk Groups (TG)'s that we can use for Cherokee County:
 - WX4CAR- Cherokee Club related activity
 - WA4EOC- Cherokee ARES related activity



DMR Terminology

DMR Terminology

- 1. Color codes:** Every DMR transmission uses a "color code" which is very similar to CTCSS or PL tones in the analogue radio world. On a repeater or simplex frequency, every radio must use the same color code to be able to communicate together. The main use for color codes is for where two repeater coverage areas on the same frequency may overlap, different color codes are used to ensure each radio accesses the correct repeater.
- 2. Timeslot:** A timeslot is a slice of time, about 30ms long, that a radio can transmit in, or receive in. There are two timeslots per frequency, and you need to have your radio configured for the right color code for the repeater, the correct timeslot and correct talkgroup for you to be able to hear anything.

DMR Terms

- 3. Zones:** This is simply a collection of channels & talkgroups, all grouped together in one "zone" or bank. A radio user can switch zones to access a different lot of channels & talkgroups that they may wish to use. Typically a zones are divided into repeaters for different areas, so you might have one zone for the west side of a city, and another covering the east side of the city - but there's nothing to say that you must set up a zone that way.
- 4. Code Plug:** This is a Motorola term that has stuck over the years, and in the DMR context means a complete configuration file of channels, talkgroups, zones, contacts etc. for a radio. The code plug can be saved to a computer and is used to program a radio to give it the functionality a user requires.
- 5. CPS:** Another Motorola term, meaning Customer Program Software. Simply put, this is the software you'd use to create a "code plug" and configure your radio. Your DMR Radio will have a CPS specifically generated by your radio manufacture that must match the firmware on the radio.

DMR Terms

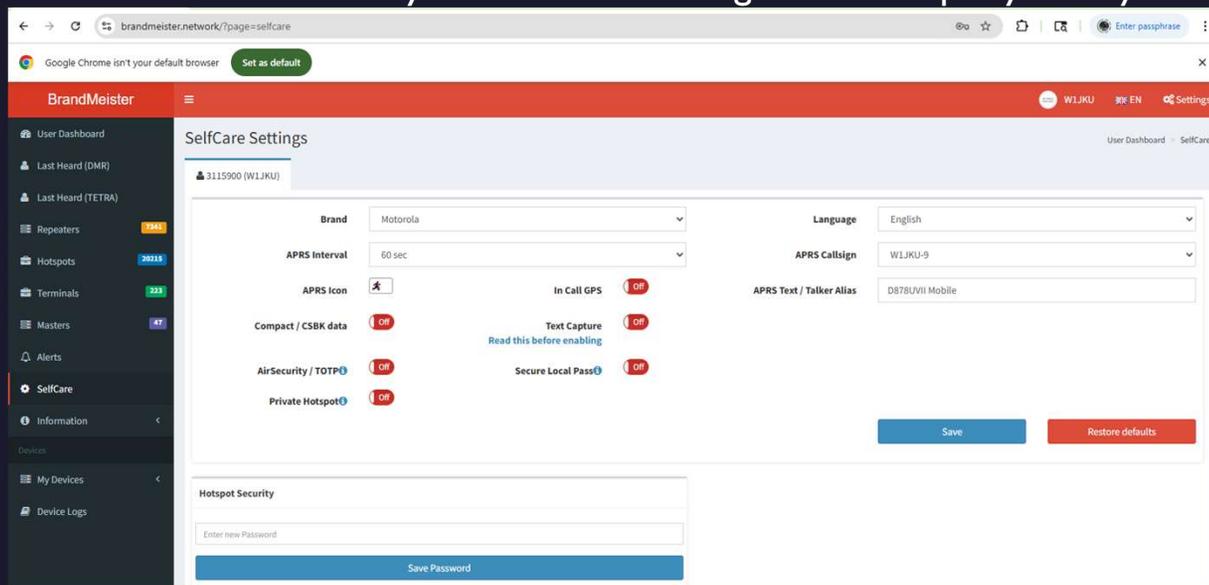
6. **Hotspot:** A small box that connects to the internet and acts like your own personal low power DMR repeater, useful if you're not in range of a DMR repeater to access.
 - A. You can even take them with you and use your cell / mobile phone wireless data to connect the hotspot to the internet and be able to use DMR anywhere you get cellular signal.
 - B. Most hotspots are multi-mode, handling not only DMR but DStar, Yaesu Fusion and P25 as well.
 - C. ZUMspot, Jumbospot, Openspot, MMDVM etc are all examples of hotspots that you can buy or build yourself.



DMR Configuration

Brandmeister.Network Setup

1. Setup DMR Radio ID that is linked to your callsign via [Radio-ID.net](https://radio-id.net)
2. Register an Account on the [Brandmeister.Network](https://brandmeister.network) website and login to manage settings
 1. Go into SelfCare and set your values according to the hotspot you may use or radio if no hotspot



The screenshot shows the 'SelfCare Settings' page for user 3115900 (W1JKU) in a web browser. The page is divided into two main sections: 'SelfCare Settings' and 'Hotspot Security'.

SelfCare Settings:

- Brand:** Motorola
- Language:** English
- APRS Interval:** 60 sec
- APRS Callsign:** W1JKU-9
- APRS Text / Talker Alias:** D878UVII Mobile
- APRS Icon:** [Icon]
- In Call GPS:** Off
- Compact / CSBK data:** Off
- Text Capture:** Off (with a link: [Read this before enabling](#))
- AirSecurity / TOTP:** Off
- Secure Local Pass:** Off
- Private Hotspot:** Off

Hotspot Security:

- Enter new Password: [Input field]
- Save Password: [Button]

The page also features a left sidebar with navigation options: User Dashboard, Last Heard (DMR), Last Heard (TETRA), Repeaters (2941), Hotspots (20215), Terminals (223), Masters (47), Alerts, SelfCare (selected), Information, Devices, My Devices, and Device Logs. The top navigation bar includes the Brandmeister logo, user ID (W1JKU), language (EN), and a Settings icon.

Brandmeister.Network Setup

3. Goto My Devices and when Hotspot is online to Brandmeister the entry will be green, if offline it will be red.
4. If using more than one Hotspot, give each one a unique Radio ID suffix 01,02,03 per your hotspot documentation so that Brandmeister sees each one individually and you can manage the setting by hotspot should they be different.
5. Enter a unique password you control on the field Network Security, and configure that value in your hotspot to match. Your hotspot will need that setting to access and use Brandmeister.
6. You will use this webpage often so make it a favorite!

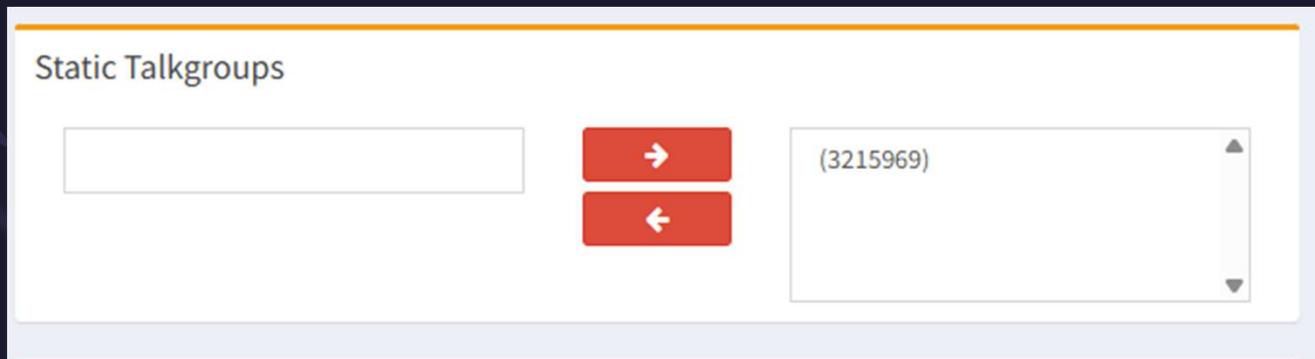
Cherokee Talkgroup

- Add a Group Call to the Digital Contacts for Cherokee ARES (WA4EOC) and Club (WX4CAR)

TG/DMR ID	Call Alert	Name	Call Type
3215969	None	WA4EOC 3215969	Group Call

TG/DMR ID	Call Alert	Name	Call Type
3217955	Online Alert	WX4CAR 3217955	Group Call

- Suggest you add the Cherokee ID as a Static Talkgroup on your Brandmeister account so that no matter what channel your on, your radio will intercept traffic on WA4EOC and optional WX4CAR



Static Talkgroups

→ (3215969)

←

Brandmeister.Network

Full Screen Example

Cherokee ID added at a Static Talkgroup

BrandMeister W1JKU EN Settings

User Dashboard My Devices W1JKU Edit

Settings of W1JKU (view)

General Settings

Priority Message

Description

Website **Location (City)**

Latitude **Longitude**

Power **Height AGL in m**

[Save changes](#)

Sysops [+ Add a sysop to W1JKU](#)

Callsign	Read Settings	Write Settings	Manage Sysops	Actions
W1JKU	✓	✓	✓	

Actions

[Get IP address](#) [Reset connection](#)

[Drop call](#) [Drop dynamic groups](#)

Static Talkgroups

[→](#) [←](#)

Scheduled static [+ Add Scheduled Static](#)

Active Timed Statics:

[Remove](#)

Brandmeister.Network

Full Screen Example

Cherokee ID added at a Static Talkgroup

Brandmeister W1JKU EN Settings

User Dashboard Last Heard (DMR) Last Heard (TETRA) Repeaters 7312 Hotspots 39033 Terminals 281 Masters 47 Alerts SelfCare Information

Devices My Devices 3115900 311590002 Device Logs

Settings of W1JKU (view)

User Dashboard My Devices W1JKU Edit

General Settings

Priority Message:

Description:

Website: Location (City):

Latitude: Longitude:

Power: Height AGL in m:

[Save changes](#)

Sysops

[+ Add a sysop to W1JKU](#)

Callsign	Read Settings	Write Settings	Manage Sysops	Actions
W1JKU	✓	✓	✓	

Actions

[Get IP address](#) [Reset connection](#)

[Drop call](#) [Drop dynamic groups](#)

Static Talkgroups

[→](#) [←](#)

Scheduled static

[+ Add Scheduled Static](#)

Active Timed Statics:

[Remove](#)



APRS Anytone D-878 UVII Plus Configuration

D-878 UVII Pro APRS Settings

- The following Settings work for Analog APRS.
- Transmit Delay and Prewave may need adjusting but currently working for me.
- Digital # 1-4 is based on having multiple Host spots, your list may be less.
- Digital #5 is used for APRS over Digital via Simplex.
- The TOCALL is unique per Radio Model.

Digital

No.	Report Channel	Report Slot	APRS TG	Call Type
1	APRS OS-1	Slot1	310999	Private Call
2	APRS OS-2	Slot1	310999	Private Call
3	APRS OS-4	Slot1	310999	Private Call
4	APRS OS-4	Slot1	310999	Private Call
5	Current Channel	Channel Slot	99	Private Call
6	Current Channel	Channel Slot	0	Private Call
7	Current Channel	Channel Slot	0	Private Call
8	Current Channel	Channel Slot	0	Private Call

Repeater Activation Delay[ms] 100

Analog

Transmission Frequency1[MHz] 144.39000 Transmission Frequency2[MHz] 144.39000 Transmission Frequency3[MHz] 144.39000
 Transmission Frequency4[MHz] 144.39000 Transmission Frequency5[MHz] 144.39000 Transmission Frequency6[MHz] 144.39000
 Transmission Frequency7[MHz] 144.39000 Transmission Frequency8[MHz] 144.39000 PASS ALL On

Analog

APRS TX Tone Off
 TOCALL APAT81
 TOCALL SSID -1
 Your Call Sign W1JKU
 Your SSID -9
 APRS Symbol Table /
 APRS Map Icon k
 Digipeater Path WIDE1-1,WIDE2-1
 Enter Your Sending Text Anytone D878UVII Portable Ana Aprs Tx Wide

Transmit Delay[ms] 1200
 Send Sub Tone Off
 CTCSS 100.0
 DCS D021N
 Prewave Time[ms] 1500
 Transmit Power Turbo

No.	Receive Filter	Call Sign	SSID
1	Off		Off
2	Off		Off
3	Off		Off
4	Off		Off
5	Off		Off
6	Off		Off
7	Off		Off
8	Off		Off

POSITION
 MIC-E
 OBJECT
 ITEM
 MESSAGE
 WX REPORT
 NMEA REPORT
 STATUS REPORT
 OTHER

D-878 UVII Pro APRS Settings Analog Channel

The following Settings work for Analog APRS

The screenshot shows the 'Channel Information Edit' dialog box for an Analog APRS channel. The channel name is 'APRS ANA'. The receive and transmit frequencies are both set to 144.39000 Hz, and the correct frequency is 0 Hz. The channel type is 'A-Analog', transmit power is 'Turbo', and band width is '25K'. The APRS report type is 'Analog', and the APRS PTT mode is 'Off'. The digital APRS PTT mode is also 'Off', and the digital APRS report channel is '1'. The DMR mode is 'DMO/simplex', and the analog APRS report frequency is '1'. The digital settings include a contact of 'K04UQF Bill', radio ID 'Rob - WJKU', RX color code '1', TX color code '0', and slot 'Slot1'. The digital encryption settings are all 'Off'. The analog settings include CTCSS/DCS decode and encode set to 'Off', squelch mode 'Carrier', and optional signal 'Off'. The DTMF ID, 2Tone ID, 5Tone ID, and PTT ID are all set to 'Off'. The 2Tone decode is '1', and the custom CTCSS settings are 'R5toneBot' and 'R5toneEot' both set to 'customize'. The dialog box has 'OK', 'Cancel', 'Previous', and 'Next' buttons at the bottom.

Field	Value
Channel Name	APRS ANA
Receive Frequency	144.39000
Transmit Frequency	144.39000
Correct Frequency[Hz]	0
Channel Type	A-Analog
Transmit Power	Turbo
Band Width	25K
Busy Lock	Off
Scan List	None
APRS Report Type	Analog
Analog APRS PTT Mode	Off
Digital APRS PTT Mode	Off
Digital APRS Report Channel	1
Exclude channel from roaming	off
DMR MODE	DMO/simplex
Analog APRS Report Freq	1
PTT Prohibit	<input checked="" type="checkbox"/>
Talk Around(Simplex)	<input type="checkbox"/>
APRS RX	<input checked="" type="checkbox"/>
Work Alone	<input type="checkbox"/>
DataACK Disable	<input type="checkbox"/>
Auto Scan	<input type="checkbox"/>
Ana Aprs Mute	<input checked="" type="checkbox"/>
Digital Contact	K04UQF Bill
Radio ID	Rob - WJKU
RX Color Code	1
TX Color Code	0
Slot	Slot1
Receive Group List	None
Digital Encryption	Off
Extend Encryption	AES
ARC4 Encryption Code	Off
AES Digital Encryption	Off
Multiple Key	Off
Random Key	Off
SMS Forbid	Off
Send Talker Alias	<input type="checkbox"/>
Call Confirmation	<input type="checkbox"/>
Ranging	<input type="checkbox"/>
Slot Suit	<input type="checkbox"/>
SMS Confirmation	<input checked="" type="checkbox"/>
Analog CTCSS/DCS Decode	Off
Analog CTCSS/DCS Encode	Off
Analog Squelch Mode	Carrier
Analog Optional Signal	Off
Analog DTMF ID	Off
Analog 2Tone ID	Off
Analog 5Tone ID	Off
Analog PTT ID	Off
Reverse	<input type="checkbox"/>
2TONE Decode	1
Custom CTCSS R5toneBot	customize
Custom CTCSS R5toneEot	customize

D-878 UVII Pro APRS Settings Digital Channel

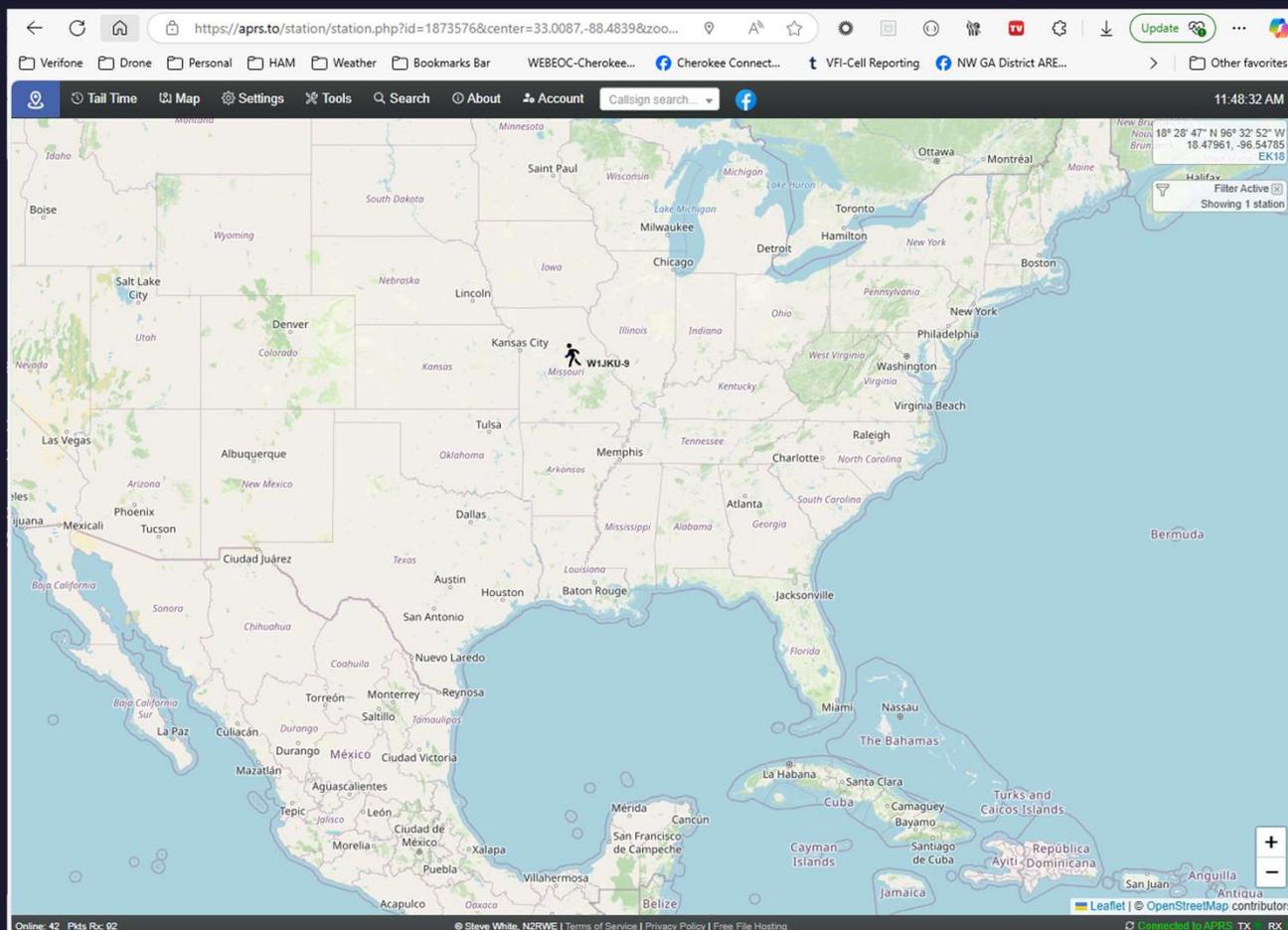
- The following Settings work for Digital APRS via Hotspot /Brandmeister using Openspot.
- Digital APRS Report Channel shall match your APRS Digital Setting
- Sample Code Plug can be found on the Cherokee-ARES.ORG website for the Anytone D-878UVII Pro

The screenshot shows the 'Channel Information Edit' dialog box for a digital APRS channel. The window title is 'Channel Information Edit---12'. The 'Channel Name' is 'APRS OS-2'. The 'Receive Frequency' and 'Transmit Frequency' are both set to 433.90000, and the 'Correct Frequency[Hz]' is -780. The 'Channel Type' is 'D-Digital', 'Transmit Power' is 'Low', 'Band Width' is '12.5K', and 'TX Permit' is 'ChannelFree'. The 'Scan List' is 'None', 'APRS Report Type' is 'Digital', 'Analog APRS PTT Mode' is 'Start Of Transmission', 'Digital APRS PTT Mode' is 'On', 'Digital APRS Report Channel' is '2', 'Exclude channel from roaming' is 'off', 'DMR MODE' is 'DMO/simplex', and 'Analog APRS Report Freq' is '1'. The 'Digital' section includes 'PTT Prohibit' (checked), 'Talk Around(Simplex)' (unchecked), 'APRS RX' (checked), 'Work Alone' (unchecked), 'DataACK Disable' (unchecked), 'Auto Scan' (unchecked), and 'Ana Aprs Mute' (unchecked). The 'Contact' is 'BM APRS', 'Radio ID' is 'Rob - W1JKU', 'RX Color Code' is '1', 'TX Color Code' is '1', 'Slot' is 'Slot1', 'Receive Group List' is 'OS TG 9', 'Digital Encryption' is 'Off', 'Extend Encryption' is 'AES', 'ARC4 Encryption Code' is 'Off', 'AES Digital Encryption' is 'Off', 'Multiple Key' is 'Off', 'Random Key' is 'Off', and 'SMS Forbid' is 'Off'. The 'Analog' section includes 'CTCSS/DCS Decode' (Off), 'CTCSS/DCS Encode' (Off), 'Squelch Mode' (Carrier), 'Optional Signal' (Off), 'DTMF ID' (), '2Tone ID' (), '5Tone ID' (), 'PTT ID' (Off), 'Reverse' (unchecked), '2TONE Decode' (1), 'Custom CTCSS' (), 'R5toneBot' (customize), and 'R5toneEot' (customize). The 'Send Talker Alias', 'Call Confirmation', 'Ranging', 'Slot Suit', and 'SMS Confirmation' options are all unchecked. The dialog has 'OK', 'Cancel', 'Previous', and 'Next' buttons at the bottom.

D-878 UVII Pro APRS Viewing

APRS.TO

Browser Based APRS Viewing



D-878 UVII Pro APRS Viewing APRS.TO

Station Details with ability to drill down on Map, Raw Packets, etc

The screenshot shows a web browser displaying the APRS.TO website. The URL in the address bar is <https://aprs.to/station/station.php?id=1873576>. The page title is "W1JKU-9 Station Details". The browser's address bar shows several tabs: Verifone, Drone, Personal, HAM, Weather, Bookmarks Bar, WEBEOC-Cherokee..., Cherokee Connect..., VFI-Cell Reporting, and NW GA District ARE... The browser's navigation bar includes "Tail Time", "Map", "Settings", "Tools", "Search", "About", "Account", and "Callsign search...". The page content is organized into several sections:

- Station Details:** Call Sign: W1JKU-9; Station ID: 11873576; Source: APRS-IS; Symbol: Human/Person (Table: /, Symbol: D). A "Connected" status indicator is shown in the top right.
- Latest Packet:** Position Packet; Receive Time: 04/29/2025 11:31:29 AM-05:00; Age: 18m 42s; Path: APBM1D,W1JKU,DMR*,qAR,W1JKU; Path Quality: (1 hop); Path Type: RF via DMR (W1JKU); Comment: Cherokee ARES.
- Latest Position:** 38.96633, -92.25567 (Received in latest packet); Age: 18m 42s; Locator Square: EM38UX91HW; Location: Godas Drive, Columbia, Boone County, Missouri, 65202, United States; Local Time: 04/29/2025 12:50:12 PM; Time Zone: America/Indiana/Vincennes (GMT -04:00); Course: W 264°.
- Equipment:** BrandMeister DMR; Description: BrandMeister DMR Server for R3ABM; Manufacturer: R3ABM.

On the right side of the page, there is a search bar for W1JKU at: QRZ | HamCall | HamQTH. Below this, it shows "Lic. Class: Extra" and "DMR IDs: 3115900". There are also options to "Export W1JKU-9 data to KML", "Saved in Favorites", and "Track Me". At the bottom of the page, a link is provided: "Link directly to this page: <https://aprs.to/station/W1JKU-9/>".

D-878 UVII Pro APRS Viewing

APRS.TO

Raw Packets view

W1JKU-9 Raw Packets

Station Statistics Trail Chart Weather Telemetry Raw Packets Live Feed Messages Bulletins

A total of 161 received packets have been found for station/object **W1JKU-9** between **04/19/2025 11:52:05 AM-05:00** and **04/29/2025 11:52:05 AM-05:00**. Request took 0.006 seconds to find in our database.
Raw packet history is available for up to 30 days. Use [>] to decode with our packet decoder tool.

Displaying 1 - 25 of 161 packets. Page 1 > Show 25 rows of Raw packets regarding W1JKU-9 from 2025-04-19 to 2025-04-29 Go

```
[>] 04/29/2025 11:31:29 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@163127h3857.98N/09215.34W[264/000Cherokee ARES
[>] 04/29/2025 10:56:03 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@155601h3857.96N/09215.30W[138/000Cherokee ARES
[>] 04/29/2025 10:55:00 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@155458h3857.97N/09215.30W[291/000Cherokee ARES
[>] 04/29/2025 10:16:12 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@151610h3858.01N/09215.45W[155/001Cherokee ARES
[>] 04/29/2025 9:55:17 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@145515h3857.98N/09215.30W[102/001Cherokee ARES
[>] 04/29/2025 8:58:26 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@135824h3857.97N/09216.15W[012/002Cherokee ARES
[>] 04/29/2025 8:47:14 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@134712h3857.81N/09215.71W[269/001Cherokee ARES
[>] 04/29/2025 8:37:04 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@133700h3857.92N/09215.22W[300/001Cherokee ARES
[>] 04/29/2025 8:11:13 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@131112h3857.96N/09215.29W[000/000Cherokee ARES
[>] 04/29/2025 7:35:13 AM-05:00: W1JKU-9->APAT81-1,WX0BC-3*,WIDE2-1,qAR,WA0SDO-10:3857.97N/09215.29W[198/001A=000744Anytone D878UVII Portable
[>] 04/29/2025 7:24:47 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@122445h3857.97N/09215.29W[335/000Cherokee ARES
[>] 04/29/2025 6:29:20 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@112919h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 6:23:18 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@112317h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 6:14:15 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@111414h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 6:11:14 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@111113h3857.97N/09215.30W[350/001Cherokee ARES
[>] 04/29/2025 6:02:11 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@110210h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 5:50:07 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@105006h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 5:41:05 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@104103h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 5:22:58 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@102257h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 5:16:57 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@101655h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 5:13:56 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@101354h3857.97N/09215.30W[350/000Cherokee ARES
[>] 04/29/2025 4:58:54 AM-05:00: W1JKU-9->APBM1D,W1JKU,DMR*,qAR,W1JKU:@095846h3857.97N/09215.30W[350/000Cherokee ARES
```

* If you compare the raw packets with similar data from other websites it may differ (especially the path), the reason is that we are not collecting packets from the same APRS-IS servers. Each APRS-IS server performs duplicate filtering, and which packet that is considered to be a duplicate may differ depending on which APRS-IS server you receive your data from.

Link directly to this page: <https://aprs.to/station/W1JKU-9/raw/>

Troubleshooting

WA4EOC Talk Group



WA4EOC Communication Troubleshooting

- You must use Group Call and Not Private Call to talk to other members on the WA4EOC-ARES, WX4CAR-Club Digital Radio ID
- If you configure as a Private Channel, no one will hear you!
- Hint- On the Brandmeister Last Heard Portal, In Destination if you see WA4EOC (3215969) via Brandmeister dashboard versus just 3215969, then you incorrectly attempted call via Private instead of Group Call.

Time	Link name	My call	Talker Alias	Source	Destination
6 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	(3215969)
6 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	(3215969)
6 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	(3215969)
6 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	(3215969)
6 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)		KD4Z Sweat Mnt (311338)	WA4EOC (3215969)
6 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)		KD4Z Sweat Mnt (311338)	WA4EOC (3215969)

WA4EOC Communication Troubleshooting

SAMPLE- Search

The screenshot displays the BrandMeister web interface. The left sidebar contains navigation options: User Dashboard, Last Heard (DMR), Last Heard (TETRA), Repeaters (7290), Hotspots (20958), Terminals (203), Masters (47), Alerts, SelfCare, and Information. The main content area is titled "LastHeard (DMR)" and features a search filter with two criteria: "Destination ID" equal to "3215969" and "My call" equal to "AI4AK". Below the search criteria are buttons for "Load SQL" and "Copy Query Url".

The search results are displayed in a table with the following columns: Time, Link name, My call, Talker Alias, Source, Destination, Options, RSSI, dBm, Duration, and Loss rate. The table contains five rows of data, all from 16:00 to 16:05, showing communications from Motorola IP Site Connect to WA4EOC.

Time	Link name	My call	Talker Alias	Source	Destination	Options	RSSI	dBm	Duration	Loss rate
16 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	(3215969)	TS1 DMR	S9+10dB	-81	3	0% (0/45)
16 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	(3215969)	TS1 DMR	S9+10dB	-80	10	0% (0/165)
16 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	(3215969)	TS1 DMR	S8	-97	2	0% (0/39)
16 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	(3215969)	TS1 DMR	S9	-89	1	0% (0/1)
16 Hours	Motorola IP Site Connect	AI4AK [Warren J] (3135564)	AI4AK Georgia	KD4Z Sweat Mnt (311338)	WA4EOC (3215969)	TS1 DMR	S9+10dB	-82	1	0% (0/9)



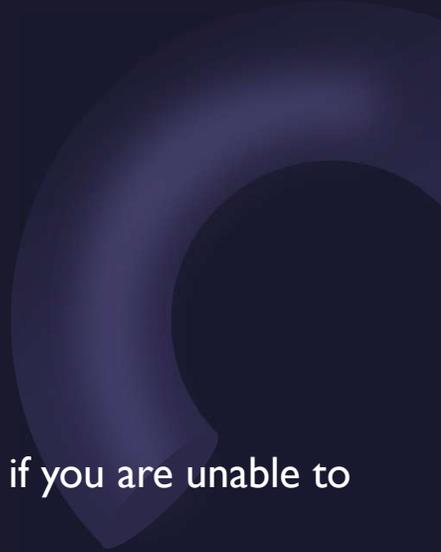
DMR Simplex



DMR Net Operations

DMR Net Operations

1. The WX4CAR Talk Group is encouraged for rag-chew/adhoc discussions at any time.

 2. The WA4EOC Talk Group is reserved for ARES related activities and discussions.
 - A. The WA4EOC is an alternate means to check into our SKYWARN or ARES NET if you are unable to reach the standard NET Repeater.
 - B. You will be afforded to Check in to the net and if there are any pertinent traffic, that traffic can be shared over the DMR-WA4EOC Talkgroup.
 - C. This allows individuals who are remote or unable to access the repeater to remain engaged and maintain situational awareness.
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DMR Net Operations

3. DMR NET Control

- A. We will need a volunteer that has DMR Capability to assist in capturing Check-In Details Before and During the NET and then Relay the Check-Ins to the Standard NET Control.
- B. DMR NET Control will pass traffic as needed between DMR NET and Standard NET.
- C. We will test these procedures and refine, as necessary.

4. DMR Check in Procedures:

- A. NET Control will simply announce “**This is [my Call] I am the Cherokee ARES DMR Net Control. Any Station wishing to check into the Cherokee ARES DMR NET, please call now.**”
- B. Stations will then announce CallSign, Say CallSign Phonetically, and state their Name and Location.
- C. NET Control will relay any announcements provided on Standard NET for anyone listening via DMR.
- D. NET Control will ask all DMR Stations if they have priority traffic to be relayed to the standard NET, and will capture that data and relay accordingly.
- E. The DMR NET will be closed after the Standard NET is over.

DMR Net Operations

5. Monitoring TG 3215969-WA4EOC

- A. If you do not have a DMR Radio, you can listen to DMR Activity on TG 3215969 from your computer.
- B. Click on the Brandmeister Link and wait for traffic: <https://hose.brandmeister.network/?subscribe=3215969>

The screenshot shows a web browser window with the URL `hose.brandmeister.network/?subscribe=3215969`. The interface is dark-themed and displays a grid of active DMR stations. At the top, there is a 'Show' dropdown menu set to 'Everything' and a 'RegEx mode' toggle switch. The grid contains 24 station cards, each with a call sign, name, location, and activity status. A 'PLAYER' button is visible in the top right corner.

Call Sign	Name	Location	Activity
91	KJ5KAQ (Jeremy)	World-wide	00:06
98	VU3DTT (Fadric)	Radio Test	00:05
214	EC3DR (Fuco Alfonso)	Spain	00:37 ago
216	HG0DQR (VOKE)	Hungary	01:41 ago
222	IW0GLN (Massimo)	Italia	02:06 ago
238	OZ8XZL (Bjoern)	Denmark	00:09 ago
244	No TA		00:00
450	DS3AUR (Nam)	South Korea	00:09 ago
520	E20TWR (Sanee)	Thailand	00:06
724	No TA		01:24 ago
734	EA1FHO (JOSE LUIS)	Venezuela	02:02 ago
914	EA1FHO (JOSE LUIS)	Spanish	01:54 ago
2355		Scotland	02:15 ago
2356		Wales	01:09
2933			01:00 ago
3100			00:01

Cherokee ARES Confirmed DMR Users

Callsign	Name	Radio ID
WIJKU	Rob	3115900
KD4KHO	Randy	3113031
KO4UQF	Bill	3200778
KO4PWB	Rod	3202328
K9APD	Jim	3113465
AI4AK	Warren	3135564
KB4SYV	Ed	3187047
K4QO	Lee	3202338
N4CDH	Dudley	3201220
WA4LIK	Robin	3163200
WB9GFA	Stan	3110991

Callsign	Radio ID	Comment
WA4EOC	<u>3215969</u>	Cherokee ARES Only
WX4CAR	3217955	Cherokee Club

Local DMR Repeaters for Cherokee County

Detail	Sweat 1	Sweat2
RCV	442.9750	444.7750
TX	447.9750	449.7750
Color Code	1	1
Time Slot	2	1
Network	Brandmeister	Brandmeister
Repeater Callsign	KD4Z	W4KIP
Location	Sweat Mtn Cobb County	Sweat Mtn Cobb County

Channel Information Edit---270

Channel Name: SWEAT1 WA4EOC

Receive Frequency: 442.97500
 Transmit Frequency: 447.97500
 Correct Frequency[Hz]: 0

Channel Type: D-Digital
 Transmit Power: High
 Band Width: 12.5K
 TX Permit: Always

PTT Prohibit: Talk Around(Simplex): APRS RX:
 Work Alone: DataACK Disable: Auto Scan:

Digital Contact: WA4EOC 3215969
 Radio ID: Rob - W1JKU
 RX Color Code: 1
 TX Color Code: 1
 Slot: Slot2

Channel Information Edit---278

Channel Name: SWEAT2 WA4EOC

Receive Frequency: 444.77500
 Transmit Frequency: 449.77500
 Correct Frequency[Hz]: 0

Channel Type: D-Digital
 Transmit Power: High
 Band Width: 12.5K
 TX Permit: Always

PTT Prohibit: Talk Around(Simplex): APRS RX:
 Work Alone: DataACK Disable: Auto Scan:

Digital Contact: WA4EOC 3215969
 Radio ID: Rob - W1JKU
 RX Color Code: 1
 TX Color Code: 1
 Slot: Slot1



DMR Training Exercise

DMR Training Challenge if you have a DMR Radio

Goals /Tasks to Complete

1. Check and Confirm Brandmeister Configuration and Static Talk group for Cherokee
2. Enter Cherokee Talk Group into radio as a Group Channel
3. Enter Simplex Channel into Radio
4. Test Coms with WA4EOC & WX4CAR Talk Group
5. Test Coms with Direct/Private Connection to WIJKU - 3115900
6. For Supported Radios Test APRS Sending
7. For Supported Radios Test APRS Receiving
8. For Supported Radios Test SMS

Hands On – Live Demo

Lets Play Radio....



Bonus – Radios for Sale KD4KHO

First Come, First Serve.

Many great options for DMR!

Email KD4KHO@comcast.net

Bonus – Radios for Sale KD4KHO

TYT-MD380



IC-92AD



Bonus – Radios for Sale KD4KHO

	Brand	Model	Description	\$\$	Quantity
	TYT	MD380	UHF DMR and Analog HT	\$25.00	2
	TYT	MDUV380	VHF-UHF DMR and Analog HT	\$35.00	1

Bonus – Radios for Sale KD4KHO

	Brand	Model	Description	\$\$	Quantity
	Radioddity	GD77	VHF-UHF DMR and Analog HT	\$35.00	2
	Radioddity	GD73	UHF DMR and Analog HT	\$25.00	1

Bonus – Radios for Sale KD4KHO

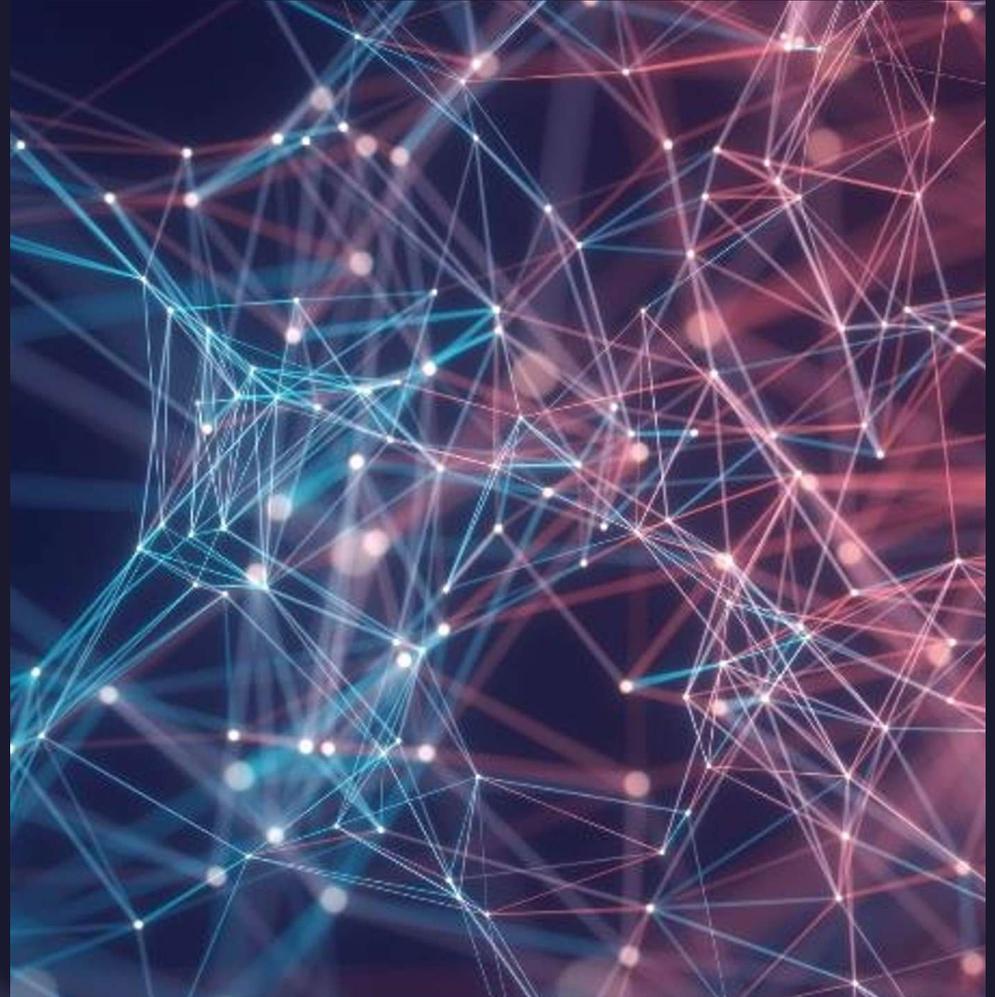
	Brand	Model	Description	\$\$	Quantity
	ICOM	IC92AD	VHF-UHF DSTAR and Analog HT	\$45.00	1
	Uniden	BCD996T	Multi-Band Digital TrunkTracker Scanner	\$65.00	1

Thank you

Rob Bruderer

WIJKU

DMR ID: 3115900



References

- [Radioddity](#)
- [talkpod.com](#)
- [Dashboard | BrandMeister](#)
- [Radio-ID.net](#)
- [BridgeCom Systems - your source for two-way radios and systems](#)
- Cherokee Sample Code Plug: [See Anytone Code Plug on Cherokee-ARES.ORG](#)