

GrilloBot | MeshCore User Guide

DM22 channel bot - commands, examples, and operating instructions • October 22, 2026

What is GrilloBot?

GrilloBot is an automated MeshCore channel assistant operated through a Heltec V3 companion radio and a Debian 13 server. It answers text commands in a MeshCore channel and offers radio diagnostics, repeater listings, and route information. Its intended audience is radio operators testing MeshCore connectivity in the DM22 / Imperial Valley / Mexicali area.

Bot display name: GrilloBot (the cricket symbol is part of the requested name). Configured test channel: #TestDM22. Access: MeshCore iPhone app or another compatible MeshCore client with the channel configured. The bot currently processes commands on this test channel; other channels are not confirmed.

How to use the channel

1. Open your MeshCore app and connect to your normal companion device.
2. Open the #TestDM22 channel. You must have the correct channel configuration/key to participate.
3. Send a command as a normal channel message, starting with a slash. Example: /help.
4. Wait for the bot reply in the same channel. Radio delivery depends on connectivity and network traffic; replies are not guaranteed.
5. For live repeater tests, observe the cooldown shown in the bot reply before testing again.

Quick command reference

Command	What it does
/help	Lists the principal commands.
/status	Reports that the bot is online and operational.
/info	Displays basic bot / Heltec V3 / Debian server information.
/test	Checks that the bot receives a command and can answer.
/signal	Reports Heltec radio statistics: last RSSI, last SNR, and noise floor.
/route	Shows the stored route toward the station requesting the command.
/route NAME	Shows a stored route toward a named contact, if available.
/trace	Shows stored route information for the requesting station.

Commands and examples

Use the commands exactly as shown in #TestDM22. Repeater names are case-insensitive in the current bot implementation.

Command	Instructions / example
/repeaters	Shows a page of repeaters saved in the Heltec contact directory.
/repeaters 2	Shows the next page of the repeater directory; change the number for other pages.
/repeaters local	Shows the first page of the curated local repeater directory.
/repeaters local 2	Shows another page of the local directory, when available.
/trace DM22-RPT	Runs a live RF trace using the configured DM22-RPT repeater path.
/trace K6CLX Repeater	Runs a live RF trace using the configured K6CLX repeater path.
/signal DM22-RPT	Runs a live RF trace and reports available SNR through DM22-RPT.
/signal K6CLX Repeater	Runs a live RF trace and reports available SNR through K6CLX Repeater.

Understanding /signal

The basic /signal command reads the Heltec radio statistics. RSSI is received signal strength in dBm; SNR is signal-to-noise ratio in dB; noise floor indicates background radio noise. These are the radio's latest reported measurements, not a guaranteed measurement of the requesting phone or a specific remote station.

Example format: GrilloBot Signal: RSSI -52 dBm | SNR +12.8 dB | Noise -114 dBm. Values shown here are from a previously observed test, not a live measurement.

Understanding live repeater traces

The repeater-specific /trace NAME and /signal NAME commands use the same live RF trace mechanism. They can report repeater SNR and final SNR from a successful trace. These are trace measurements, not continuous monitoring and not per-repeater RSSI readings.

Example: /signal K6CLX Repeater "trace OK. Repeater SNR +10.8 dB, final SNR +10.8 dB." If the repeater does not answer before the timeout, the bot reports no trace response; that alone does not prove the repeater is offline.

Understanding /route and /trace

A stored route is routing information saved in the Heltec contact data. It may indicate zero stored hops, flooding, or stored path hashes. It does not prove the precise RF route used by the latest channel message. Use a named live repeater trace for a fresh trace test.

Operating notes & troubleshooting

Practical guidance for DM22 MeshCore users and administrators.

Cooldowns and responsible use

Live RF traces share a three-minute cooldown per requesting station across /trace and /signal repeater tests. When a trace is requested too soon, GrilloBot now reports the remaining time, for example: "Trace cooldown. Try again in 2m 45s." The bot also uses a separate short sender-response cooldown (approximately 10 seconds). Wait at least 15 seconds between ordinary tests so requests are not silently skipped.

Only one live trace can run at a time. If another trace is already underway, the bot can report that a trace is in progress. Avoid repeated testing that adds unnecessary channel and RF traffic.

If a command does not receive a reply

Check	What to try
Channel	Verify that you are sending in #TestDM22, not a different channel or direct message.
Command syntax	Begin with / and use a supported command; use the exact repeater name.
Timing	Wait 15 seconds after a previous command; honor any three-minute trace countdown.
RF connectivity	Check your companion connection and MeshCore network coverage; channel messages may be delayed or lost.
Trace timeout	A repeater may not respond during the trace window; retry later after the cooldown.
Directory results	The repeater list comes from contacts stored on the Heltec; it is not a live online-status list.

About the local repeater directory

The local directory is a curated subset of saved repeater contacts. It currently includes names matching DM22-RPT, K6CLX Repeater, XE2BIZ Repeater, XE2DPC-Repeater, XE2EAO Repeater, and applicable W6ICR-prefixed entries when present. Appearance in the directory does not confirm current operation or reachability.

For the bot administrator

GrilloBot is hosted on Debian 13 and runs as the meshcore-bot.service systemd service, using a Heltec V3 MeshCore companion. The working script is /opt/meshcore-bot/dm22-bot.py. The bot uses an existing network namespace connection; do not create a second simultaneous TCP connection to the Heltec while the bot is running.

Read-only status: **systemctl is-active meshcore-bot.service**

Recent logs: **journalctl -u meshcore-bot.service --since "10 minutes ago" --no-pager**

Server management, ISPConfig, VPN, and WireGuard configuration are separate from normal bot usage. This guide does not require changes to those systems.

Note: The requested display name is GrilloBot. This guide documents the intended user-facing name; changing message text does not automatically rename the radio's advertised MeshCore contact. The bot was tested in #TestDM22 as of October 22, 2026.