Setup and Configuration Questions

My device won't show up in the app. What do I check?

1. **Is Bluetooth enabled?** The app connects via BLE. Ensure Bluetooth is on in your phone settings and the app has Bluetooth permission.
2. **Is the device powered and running?** Check for activity LED or screen (if present). Some devices show no activity when running normally - this doesn't mean they're off.
3. **Driver installed?** For ESP32 boards such as the Heltec V3: the board may carry either a CH340 or a CP2102/CP210x USB-to-serial chip, so install whichever driver matches your specific unit (on Windows; some Macs may need manual installation). For nRF52840 devices (RAK4631, T-Echo): standard USB CDC driver, usually auto-installs.
4. **Reboot the device:** Hold the reset button or power-cycle. Some devices get stuck during initialization.
5. **Is the device in setup mode?** Some devices require a specific button sequence to enter BLE pairing mode. Check your device's documentation.

What preset should I use?

For MeshCore in the US and Canada: Use the USA/Canada preset. This is the community standard across all major North American MeshCore networks. In the MeshCore app: Settings → Radio → Choose Preset → USA/Canada (Recommended).

For Meshtastic: Check what your local community uses. Long Fast is the Meshtastic firmware default and is widely used in sparse networks. Medium Slow is increasingly common in dense urban networks. Nodes on different presets cannot hear each other even on the same channel name. Always confirm with your local community first.

My messages are sending but nobody replies. Is it working?

Possible explanations:

- Nobody else is on the network in your area right now. Mesh communities are most active in areas with established infrastructure.
- You're on a different preset from others in the area. Verify your preset matches the community standard.
- You're on a private or custom channel that others aren't monitoring. Switch to the default public channel.
- You're sending but no nodes are in range to receive. Try moving to higher elevation and try again.

To test whether your node is working at all: pair two devices you control, confirm they hear each other, then check signal quality (RSSI/SNR).

What role should I set my node to?

- **Client** (Meshtastic) / **Client** (MeshCore): Your default for a phone-paired portable node. Participates in the mesh, sends and receives messages. (On Meshtastic, the default CLIENT role stays awake and intelligently rebroadcasts to help the mesh; it does not sleep periodically by default - battery sleep is governed by separate power-config settings, not the role. MeshCore client behavior differs.)
- **Router** (Meshtastic): Like Client but always rebroadcasts and gains rebroadcast priority (it "cuts in line" ahead of other nodes). Meshtastic recommends ROUTER **only** for nodes in high, line-of-sight locations left running semi-permanently; misusing it on a poorly-placed node harms the mesh.
- **Repeater** (Meshtastic): Full-time infrastructure role that behaves like ROUTER but goes further - it rebroadcasts other nodes' packets while completely disabling its own broadcast traffic (telemetry/position). Use only for permanently deployed nodes in good locations.
- **Repeater** (MeshCore): A MeshCore repeater is **selective** - it does not blindly forward every packet the way a Meshtastic REPEATER rebroadcasts. It does not broadcast its own position by default. Use for permanently deployed infrastructure nodes.

When in doubt: use Client. Putting a poorly-placed node in Router or Repeater mode can actually degrade network performance by increasing traffic without improving coverage.

How do I know my repeater is actually working?

After deploying a new repeater:

1. Check whether it appears in the network map (meshmap.net for Meshtastic; your regional MeshCore map). Note: meshmap.net only shows nodes that report to the public Meshtastic MQTT server, so a working repeater with MQTT disabled or no internet uplink will *not* appear there - absence on the map does not mean the repeater is down. Verify locally instead.
2. Verify another node within range shows the repeater in its contact list (MeshCore) or node list (Meshtastic)
3. Send a message from 2+ miles away and confirm it routes through the repeater (check the hop count)
4. For MeshCore: enable flood advertisements so the repeater is visible across the network, then check that remote nodes can see it

How do I update firmware on my device?

The easiest method for most devices:

1. Connect device to computer via USB
2. For MeshCore: open flasher.meshcore.io in Chrome or Edge desktop (requires the Web Serial API)
3. For Meshtastic: open flasher.meshtastic.org in Chrome or Edge
4. Select your device type, select the latest firmware version, click Flash
5. Wait for completion - device will reboot automatically

After flashing, your radio settings are preserved but verify them before putting the node back in service. A firmware update can occasionally reset settings to defaults on some devices.

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