My messages are not getting through

First: identify the failure mode

- Node visible in list but messages do not arrive: routing or range issue
- Node does not appear in list at all: preset, channel, or range issue (see previous page)

Hop limit too low

If your hop limit is set to 1, you can only reach nodes in direct radio range. Increase it (Meshtastic: Radio Config → LoRa → Hop Limit; default 3 is fine for most networks). Note: "hop limit" is the cap you set, while "hop count" is the number of hops a packet has already taken.

Network congestion

If channel utilization exceeds 25% (visible in Meshtastic app), collisions become more likely. 25% is a soft "green/optimal" ceiling rather than a hard collision cliff — Meshtastic firmware defers transmissions until channel utilization drops back below roughly 25%. Reduce your broadcast intervals for position and telemetry to ease congestion.

ACK failures

Meshtastic uses ACKs to confirm delivery. No ACK means the destination node may be offline or out of range. Check its last-heard timestamp. **Important for life-safety traffic:** a received ACK does not guarantee the intended recipient got the message. On a multi-hop path the ACK you see may be an implicit ACK from a relay rebroadcasting the packet, not a confirmation from the final destination. The mesh also has a hard shared-airtime ceiling with no message prioritization (no QoS), so urgent traffic competes with everything else and congestion spikes exactly when volume

rises. For any critical message, require an explicit human reply rather than trusting the ACK indicator.

Recently joined node

New nodes may not have propagated throughout the mesh yet. Wait 5-10 minutes after joining before expecting full connectivity.

MeshCore specific

MeshCore requires successful route discovery before first contact. If intermediate repeaters are offline, the route cannot be established. Check that all repeaters in the expected path are online.

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