

Starting from Zero: Your First Repeater

Every community mesh started with one person who put up the first node. This page is for that person.

The core insight

A community mesh doesn't need to be large to be useful. A single well-placed repeater can cover a neighborhood, a rural township, or a county road corridor - and become the seed that grows a larger network. Start small, start working, and others will join.

The minimum viable network

You can have a functional, useful mesh with just:

- 1 fixed repeater in a good location
- 2 - 3 participants with portable nodes

This covers a surprisingly large area if the repeater is well-placed. A rooftop-mounted repeater on the highest building in a small town can provide coverage across the entire municipality and several miles of surrounding farmland.

Step 1: Pick your protocol

Before deploying anything, decide which protocol your community will run:

	MeshCore	Meshtastic
Best if	Joining an existing regional MeshCore network (CascadiaMesh , WCMesh, RegionMesh , NoDakMesh) or planning a larger community infrastructure	Starting fresh with no nearby infrastructure; large global community; simpler initial setup
Check first	Is there existing MeshCore infrastructure in your area? (regionmesh.com , cascadiamesh.org)	Are there existing Meshtastic nodes in your area? (meshmap.net)

Key rule: Join the existing protocol in your area rather than fragmenting the community. Two separate protocols cannot interoperate.

Step 2: Get your first repeater up

The single highest-impact thing you can do is install one good, well-located, permanently-powered repeater. See the Hardware section for build guides. The minimum for a good first repeater:

- A device that can run 24/7 without attention (solar, mains, or long-life battery)
- Located at the highest accessible point in your area
- A quality external antenna (5 - 6 dBi vertical) mounted above obstructions
- Flood advertisements enabled (so it announces itself across the network)
- A name that indicates location (e.g., MILL-HILL-SOUTH, TOWNNAME-WATER-TWR)

Step 3: Tell people it exists

A mesh nobody knows about has no community. Before anything else: tell people the repeater exists and how to connect.

- Post in local Facebook groups, Nextdoor, amateur radio clubs
- Add your repeater to the regional network map (contact your regional network admin)
- Put up a simple info page or join the regional Discord
- Reach out directly to local emergency management - they're often interested in off-grid communication options

What to expect in year one

Growth is rarely explosive. A realistic year-one trajectory for a rural or small-town mesh:

- **Months 1 - 2:** You + 1 - 3 curious early adopters, mostly testing
- **Months 3 - 6:** 5 - 15 active participants; a few more repeaters added by enthusiasts
- **Month 6+:** Real use cases emerge (emergency preparedness groups, ARES coordination, outdoor enthusiasts)

The community builds around real use, not around technology. When people find a genuine reason to use it, they stick with it.

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