Building a Go-Bag Node Kit

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A go-bag node kit is a self-contained, portable LoRa mesh capability you can deploy quickly in an emergency without depending on fixed infrastructure. The goal is a kit you can grab and go, with everything needed to establish mesh communications from any location.

> **Mesh is a supplement, not a lifeline.** LoRa mesh is best-effort: messages are not guaranteed to be delivered and there is no reliable end-to-end acknowledgment under load or marginal RF. Do not rely on a go-bag mesh node as your only life-safety communications path - keep a confirmed-receipt backup (voice radio, cell, satellite messenger) and treat mesh as supplemental.

Core Components

Component	Recommended Option	Notes
LoRa Node	Heltec V3 or T-Deck Plus	T-Deck Plus has a built-in keyboard and screen for standalone operation without a phone; Heltec V3 requires companion app on phone
External Antenna	Fiberglass omni, 3 - 5 dBi	Significant range improvement over stock PCB antenna; choose one with SMA connector matching your node. A 3-5 dBi antenna stays within the 6 dBi allowance of FCC Part 15.247, so no conducted-power reduction is required at 1 W.
Power Bank	10,000+ mAh	A 10,000 mAh bank can run a Heltec V3 for a day or more depending on duty cycle and screen use; larger capacity is preferred for extended deployments. Note that some power banks auto-shut-off at the low current a node draws - test yours and use one with a low-power/trickle mode if available.

Component	Recommended Option	Notes
Antenna Jumper / Adapter	Match your node's connector	Identify your node's antenna connector before buying: many boards (including Heltec V3 and T-Deck Plus) already present an SMA jack and need no jumper, while WisBlock and bare LoRa modules use a U.FL/IPEX port and need a U.FL-to-SMA pigtail (15-30 cm) to reach an external SMA antenna.
USB-C Cable (spare)	Short, braided	For charging/data; carry at least one spare

Optional Additions

- **Magnetic antenna mount:** For vehicle deployment - place antenna on roof for dramatic range improvement
- **Waterproof case:** Pelican 1150 or similar; protect electronics in wet conditions
- **Small tripod or mast:** Elevate antenna 2 - 3 meters above ground when vehicle deployment isn't available
- **Solar panel:** 10 - 20W panel + small charge controller for extended field deployment when sun is available. Solar is not guaranteed power - smoke, overcast, snow, and short winter days can zero out a small panel for days, so size the battery for the worst expected no-sun period.
- **Printed QR code:** Link to your local network's channel settings for quick onboarding of others

Kit Preparation

Configure the device before an emergency. A go-bag kit with unconfigured or default-password hardware is useless under stress. Before packing the kit:

1. Flash and configure the node with the correct channel/preset for your local network. This is the step that determines whether the kit works at all: every node you want to talk to must use the *identical* regional preset, frequency, and channel. See the Meshtastic app guide for flashing firmware and selecting the preset and channel, then confirm with a live test (below) before packing.
2. If your node runs room-server / repeater firmware (an advanced feature most personal go-bag users will not use), change its default admin and guest passwords. If you're only using a personal node with the phone app, you can skip this step.
3. Test connectivity with known nodes in your area
4. Label the device with your callsign or contact info
5. Export and store a config backup

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