Day 1: Getting Your Node Online

Welcome to the mesh. Today's goal is simple: get your node powered on, flashed with current firmware, and visible to other nodes in your area. Follow this checklist from top to bottom. If you hit a snag, the troubleshooting notes at the bottom cover the most common problems.

Setup checklist

1. **Unbox and identify your hardware.** Common beginner boards include the Heltec LoRa 32 (v2 or v3), the LILYGO T-Beam, the RAK Wisblock 4631, and the Seeed WIO Tracker. Identify your board model - you will need it to select the correct firmware variant. Look for a model number printed on the PCB or check the packaging.
2. **Attach the antenna.** Always connect the antenna before powering the board - transmitting without an antenna can damage the radio.
3. **Download the Meshtastic app.** Available on the Google Play Store (Android) and the Apple App Store (iOS). Install it before proceeding - you will need it to configure your node via Bluetooth.
4. **Connect the node to your computer via USB.** Use the cable that came with your board (usually USB-C or Micro-USB). Some boards require a data-capable cable, not just a charging cable - if the device is not recognized, try a different cable.
5. **Open the web flasher.** In a Chromium-based browser (Chrome or Edge), navigate to flasher.meshtastic.org. Firefox is not supported - it lacks the Web Serial API required by the flasher.
6. **Select your board.** In the flasher interface, choose your board from the dropdown. If you are unsure of the variant (e.g., Heltec v2 vs v3), check the Meshtastic hardware compatibility page or the back of your PCB.
7. **Flash the latest stable firmware.** Click Flash and follow the prompts to select your serial port. The process takes 1 - 3 minutes. Do not disconnect the USB cable during flashing. When complete, the board will restart automatically.
8. **Connect via Bluetooth.** Open the Meshtastic app on your phone. Tap the + icon or New node to scan for nearby devices. Your node should appear - tap it to pair. **Pairing PIN:** boards without a screen use the fixed default PIN **123456**; boards with a screen display a random PIN on the screen for you to enter (typing 123456 there will fail). Change the default PIN after setup for security.
9. **Set your name and short name.** In the app, go to **Settings → User**. Enter your long name (e.g., Jane - K5ABC) and a short name (4 characters max, e.g., JANE). The short

name appears on the map and in the node list.

10. **Set your channel to match your local community.** Go to **Settings → Channels**. The default channel is LongFast - this is what most North American community meshes use. If your local group uses a custom channel key, your administrator will provide it. Do not change the channel key unless instructed - nodes on different keys cannot see each other.
11. **Verify region is set to US.** Go to **Settings → Radio → Region** and confirm it is set to **US** (for North American users). This sets the legal frequency range and transmit power limits. An incorrect region setting can cause your node to transmit on illegal frequencies.
12. **Verify your node appears on the map.** If your board has GPS (T-Beam, RAK Wisblock, etc.), wait a few minutes for a GPS fix outdoors. Once you have a fix, your node appears in the app map view. To appear on meshmap.net you must also enable OK to MQTT and have an MQTT-connected path (your node or a neighbor) to the public server.

Troubleshooting Day 1 issues

- **No Bluetooth connection:** In your phone Bluetooth settings, find the node name and tap Forget to clear any stale pairing. Then re-scan in the Meshtastic app and pair fresh.
- **Node not seen by other nodes:** Verify the channel key matches your community channel exactly. Also confirm your region setting is correct - a wrong region can put you on a slightly different frequency.
- **Flasher does not see the device:** Install the CP210x or CH340 USB-serial driver for your OS. Many LoRa boards use these chips, and Windows sometimes lacks the driver by default.
- **Node starts but shows no display:** Some boards have no screen. Check the app - if it connects via Bluetooth, the node is working normally even without a visual indicator.

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