Packet Commander v1.2

https://islandmagic.co/packetcommander

2026-10-31

1 Getting Started
2 Finding Nodes
3 Monitor
4 Managing Nodes
5 TNC Pairing
6 Connecting
7 Terminal
8 Digipeaters

1 Getting Started

1.1 Requirements

- iOS 18.2 or later
- Compatible iPhone or iPad
- Compatible radio or TNC (see Supported Devices)
- Valid amateur radio license

1.2 Installation

1. Visit the Apple App Store on your device
2. Search for “Packet Commander”
3. Tap **Get** or **Download**

1.3 Setup

1. Open the app
2. Enter your amateur radio callsign
3. Add a Node
4. Pair with a TNC
5. Connect

2 Finding Nodes

Finding nodes to connect to can be challenging. There is no central directory due to the distributed nature of radio, and much of the knowledge is localized to specific regions.

Here are some resources to help you get started. Ask around, and enjoy the thrill of discovering new nodes and exploring the network.

2.1 Nationwide Amateur Radio Packet Directory

A nationwide, crowdsourced map and directory of AX.25 packet radio stations created by Prof. Chris Lance (WW2BSA) to support experimentation, learning, and connection in the amateur radio digital community.

2.2 West Coast

2.2.1 145.050 Network

The 145.050 Packet Network is a long-standing, multi-state AX.25 keyboard-to-keyboard amateur radio network focused on 1200bps packet communication, supported by a community-curated directory of active nodes across Northern California, Nevada, and Oregon.

2.2.2 The Northern California Packet Association

The Northern California Packet Association (NCPA) is a regional committee that promotes amateur digital communications by serving as a forum for packet radio groups, coordinating digital frequency use, and providing digital band planning across Northern California.

2.2.3 Tucson Amateur Packet Radio

TAPR is a nonprofit community of amateur radio operators focused on advancing radio technology through education, open-source innovation, and development in areas like software-defined radio, digital modulation, and precise time and frequency measurement.

2.3 East Coast

2.3.1 North Carolina Packet

NCPACKET is a grassroots group in North Carolina building a fun and educational amateur radio packet network (TARPN) for regional email, chat, and social interaction entirely over ham radio while promoting digital radio, collaboration, and emergency preparedness.

2.3.2 The Virginia Packet Network (VAPN)

The Virginia Packet Network (VAPN) is a hybrid AX.25 and 802.11 amateur radio network serving northern Virginia, offering RF-only messaging in remote areas like Shenandoah National Park, with active VHF and HF nodes supporting resilient, off-grid communication.

2.3.3 The Main Packet Radio

The Maine Packet Network is dedicated to building a packet radio backbone that connects local networks and emergency comms teams across Maine, while also serving as a central hub for learning and resources for packet operators of all experience levels.

2.3.4 East Net Packet

EastNet Packet is a community of amateur radio operators focused on operating and expanding a digital packet radio network, welcoming all hams interested in digital modes and systems.

2.3.5 Delware Packet Network

The Delaware Packet Network (DEPN) promotes and supports the growth of community-based AX.25 packet networks across Delaware and nearby regions, offering guidance on setting up nodes, gateways, and digipeaters as part of a broader effort to rebuild the RF packet backbone in the U.S.

2.4 Worldwide Amateur Radio AX.25 Packet Directory

Created by Prof. Chris Lance (WW2BSA), this global AX.25 packet radio map honors operators by documenting mailboxes, nodes, BBS, and gateways as a living reference for users—an ongoing project aimed at keeping packet radio visible, useful, and fun.

2.5 UK Packet Radio Network

The UK Packet Radio Network Wiki is a collaborative resource aimed at supporting the restoration and growth of a UK-wide amateur radio data network.

2.6 Terestrial Amateur Radio Packet Network

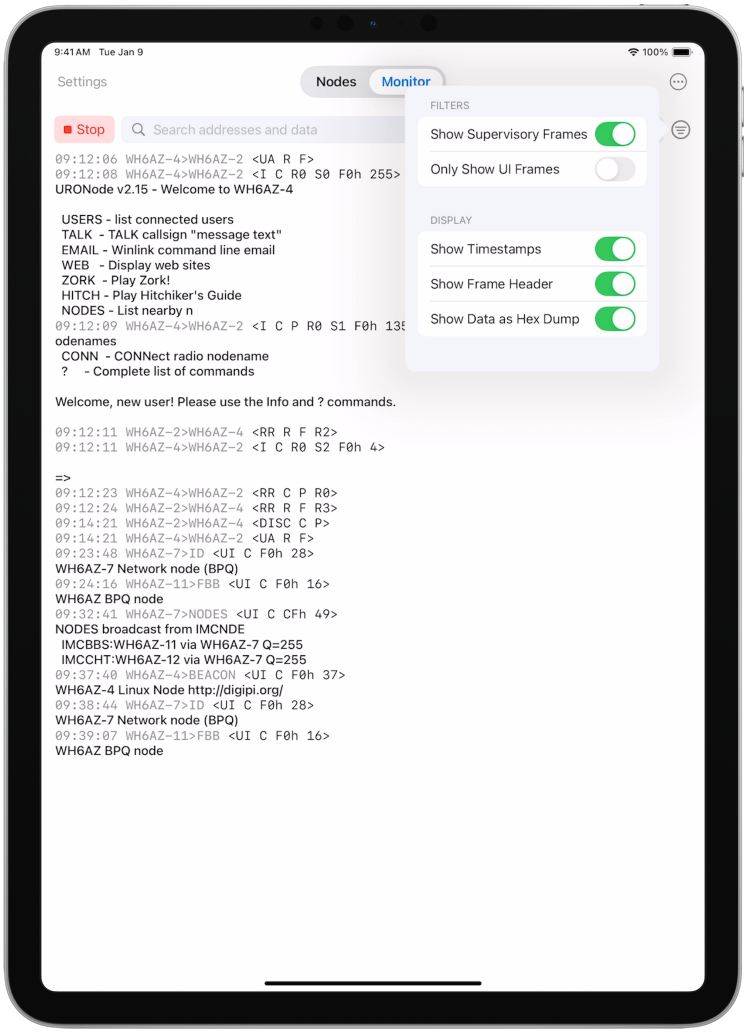
TARPN is a grassroots initiative helping amateur radio operators build over-the-air, Internet-free VHF/UHF packet networks using simple, hobbyist-friendly hardware.

2.7 The Packet Radio RF Forwarding Network (TPRFN)

The Packet Radio RF Forwarding Network (TPRFN) is a volunteer-driven, RF-only amateur radio network that links VHF/UHF packet systems and HF digital modes across the U.S. to provide dependable, Internet-free messaging and emergency communications support.

3 Monitor

The Monitor provides a real-time view of packet traffic on your frequency. Tap **Start** to begin monitoring. When monitoring is active, you cannot establish a node connection.



3.1 Getting Started

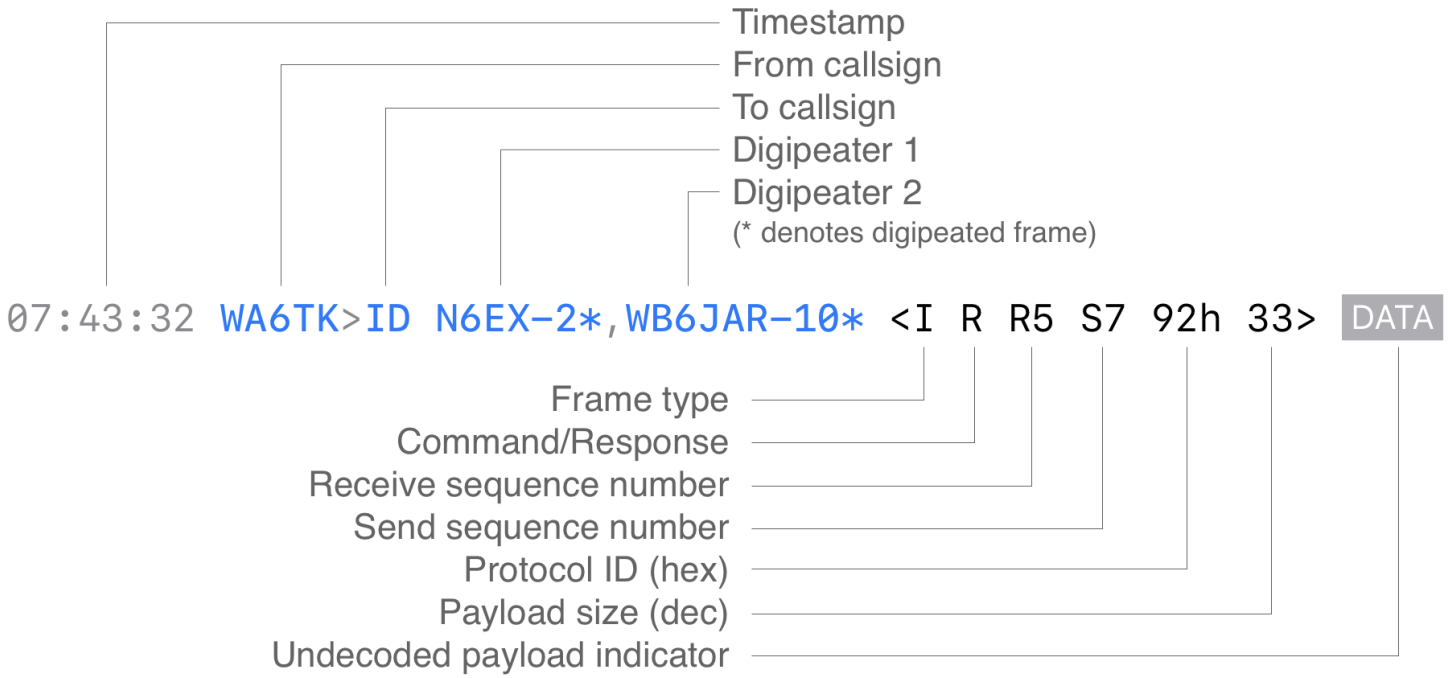
3.1.1 TNC Selection

Go to **Settings** and pair with a TNC to get started.

3.1.2 Frequency Selection

To change the monitoring frequency, tap on the displayed frequency value.

3.2 Understanding Frame Display



3.3 Monitor Actions

Access additional options by tapping



(the three-dot menu).

3.3.1 Adjusting Text Size

Select **Text Size** to increase or decrease the font size for better readability.

3.3.2 Saving Logs

To save the monitor log to a file: 1. Select **Save to File** 2. Navigate to your desired folder 3. Tap **“Move”** (iOS treats this as a move operation since you’re moving the temporarily created log to a permanent location)

Note: Logs always contain the complete dump of captured packets. Filters do not affect the saved log content.

3.3.3 Clearing the Display

Use **Clear Monitor** to reset the monitor screen and start fresh.

3.4 Filtering Frames

Control which frames are displayed by tapping



. When a filter is active and hiding certain frames, the filter icon appears filled



.

3.4.1 Show Supervisory Frames

Toggle this option to show or hide supervisory frames. Supervisory frames in AX.25 are control frames that manage data flow and error recovery. They handle functions like: - Acknowledgments - Polling - Retransmission requests

These frames don’t carry user data—they only show how each station is managing the connection.

3.4.2 Only Show UI Frames

This toggle displays only UI (Unnumbered Information) frames while hiding everything else. UI frames are connectionless frames used for: - Broadcasting information - Simple one-way communication (like APRS or beacons) - Node presence advertisements and identification

When no other users are actively connecting to a node, UI frames are the best way to determine if a node is present and active.

3.4.3 Search Function

Filter frames by callsign or content by typing text in the search field. The search is case-insensitive and will show only frames that match your criteria.

3.5 Display Options

3.5.1 Show Timestamps

Toggle to show or hide timestamps for each frame.

3.5.2 Show Frame Header

Toggle to show or hide the summary information in frame headers.

3.5.3 Show Data as Hex Dump

When frame payloads can’t be decoded as displayable ASCII characters, they’re marked with a **DATA** indicator. This toggle switches between:

- **Off:** Simple DATA marker
- **On:** Full hex dump with partial ASCII representation of displayable characters

4 Managing Nodes

4.1 Adding Nodes

1. Tap the plus



   icon to add a new node.
2. Enter the node’s callsign and frequency.
3. Add a friendly name for easy recognition.
4. Tap **Done** to save.

4.1.1 Node Location

You may optionally specify the location of a node using either a 6-digit grid square or latitude/longitude coordinates.

A 6-digit grid provides approximately 2.5 mile (4 km) precision, a good balance between identifying the general vicinity and preserving location privacy.

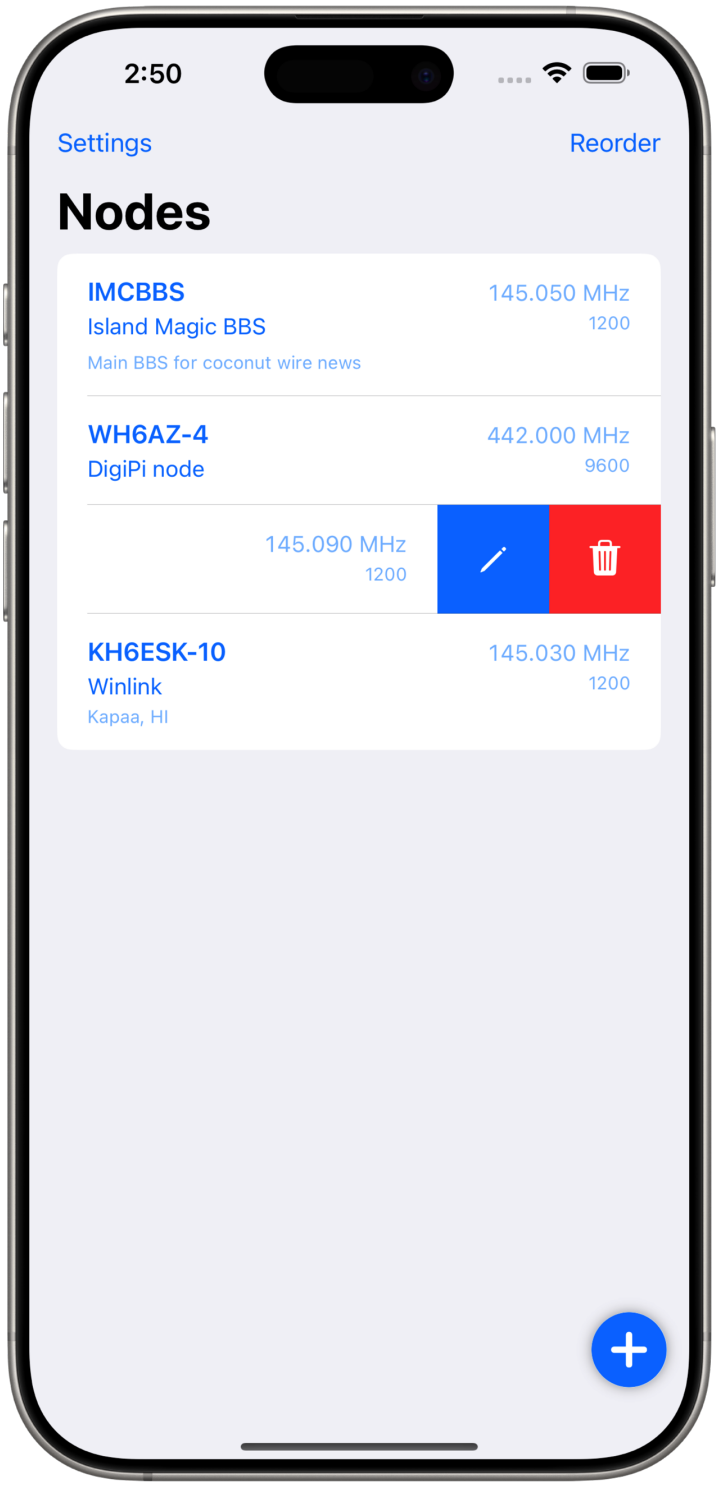
When a location is provided, Packet Commander will attempt to display the nearest town in the node listing. This feature requires an internet connection.

4.2 Editing Node Information

1. Swipe the node row to the left to reveal action buttons.
2. Tap the pencil



   icon to edit the node details.



4.3 Deleting a Node

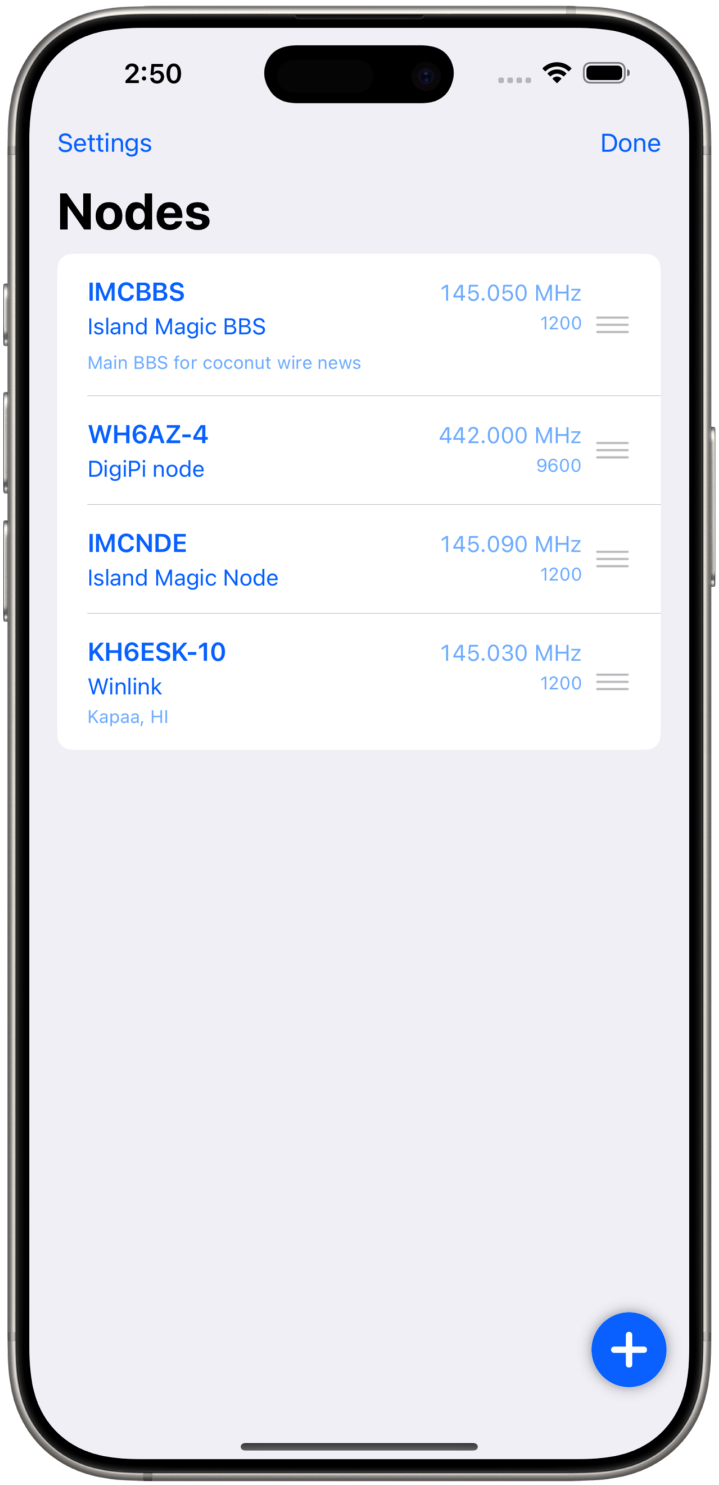
1. Swipe the node row to the left to reveal action buttons.
2. Tap the trash



icon to delete the node.

4.4 Reordering Nodes

1. Tap **Reorder** at the top of the list.
2. Drag and drop nodes to rearrange them.
3. Tap **Done** to save your changes.



4.5 Node Syncing via iCloud

Node information is automatically synced with iCloud. If you use Packet Commander on another device, any changes will be reflected there as well.

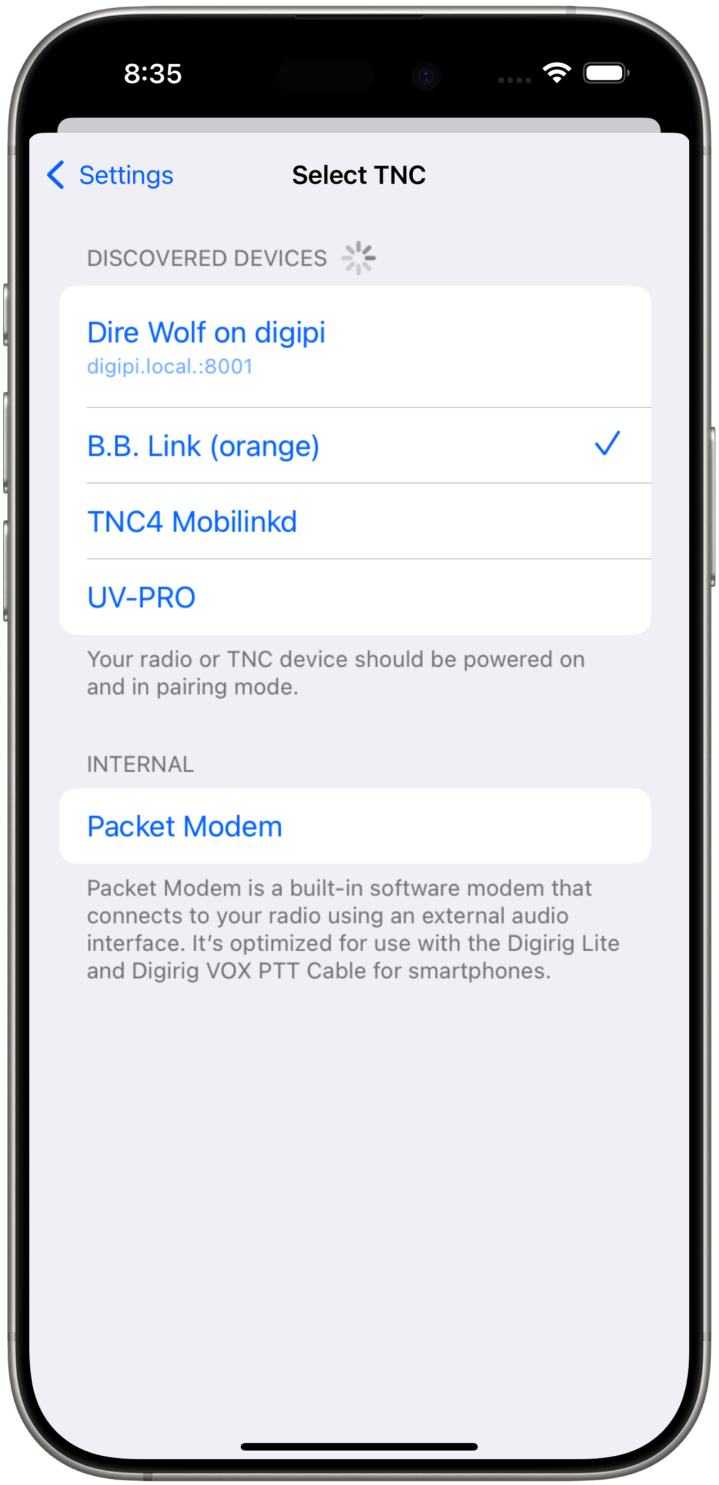
Note: If you're offline, changes are saved locally and will be synced the next time you're connected to the internet.

5 TNC Pairing

5.1 Pairing with a TNC

There’s no need to pair your radio or TNC through iOS Bluetooth settings. In most cases, doing so can actually cause connection issues. Instead, follow these steps:

1. In Packet Commander, go to **Settings > Select TNC**
2. Grant **Bluetooth** permission when prompted
3. Grant **Network** permission when prompted
4. Turn on your radio or TNC
5. Make sure your radio or TNC is in **discoverable** mode
6. When your device appears in the list, tap to select it
7. Accept any confirmation screens that may appear

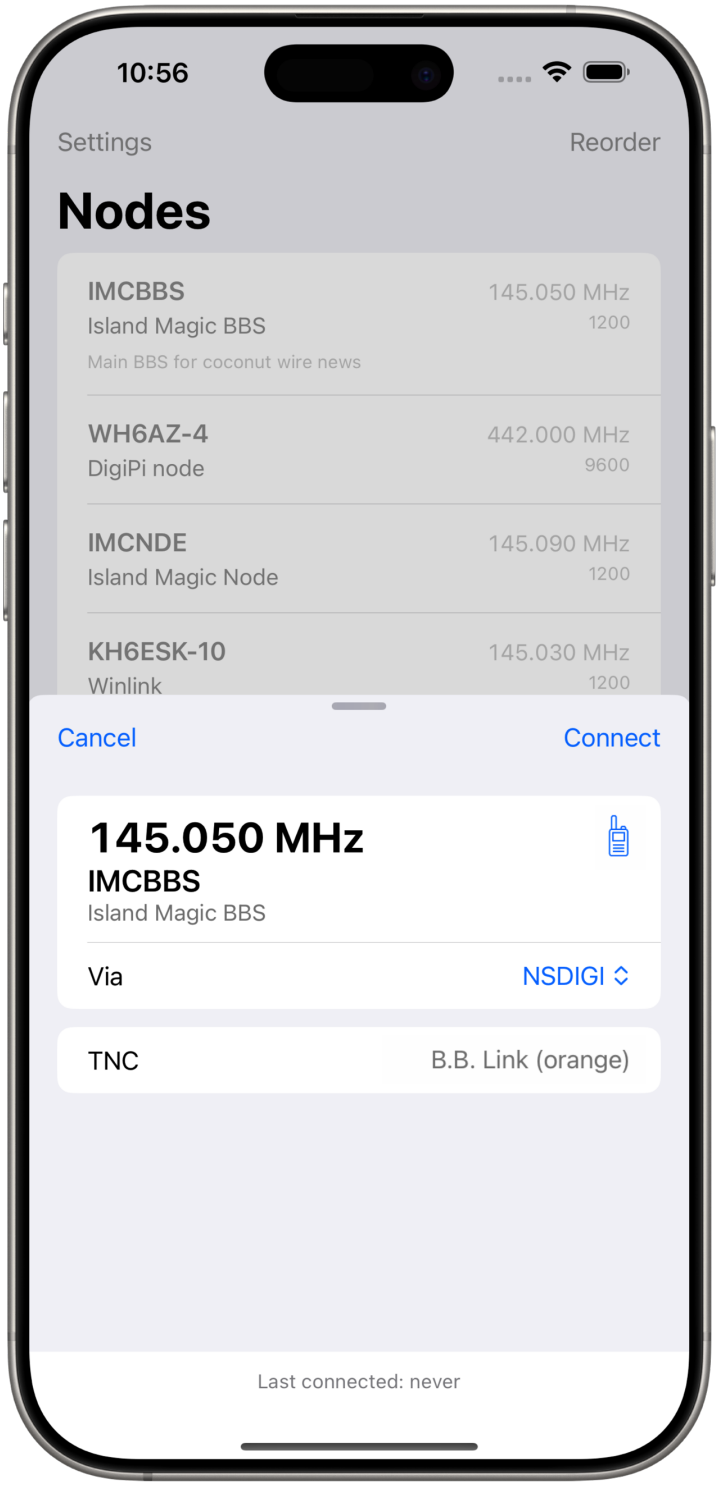


Note: Make sure no other app is connected to your device. Fully quit any radio client or APRS app before attempting to access your device.

5.2 Supported Devices

See Supported Devices list

6 Connecting



6.1 Connecting

1. On the main screen, tap a node entry to open the connection sheet.
2. Verify that the node details are correct.
3. If your radio supports frequency control, the app will set the frequency automatically. Look for the HT icon



to confirm frequency-setting support. If not, manually tune your radio to the node’s frequency.

4. Tap **Connect** to initiate the connection.

6.2 Digipeaters Smart Path

Whenever you successfully connect to a node, the selected digipeater path is remembered based on your location. The next time you open the connection window from the same area, the previously used digipeater (if any) will be automatically pre-selected.

For example, suppose you have a node at your house. When connecting from home, you don’t need a digipeater, so you leave the “via” field empty. Later, you connect from another location that requires a digipeater. You select one and successfully connect.

From then on: - At home, the digipeater will not be pre-selected. - At the alternate location, the previously used digipeater will be remembered and pre-filled.

Note: Location is quantized to 0.01 degrees of latitude and longitude, which provides approximately 1 km accuracy.

7 Terminal



7.1 File Transfer

Packet Commander supports the **YAPP protocol** for sending and receiving files over packet radio. To send a file, tap the top-right



menu, select **Send File...**, and use the file picker to choose your file.

To receive a file, simply issue the **YAPP filename** command to start the transfer.

Tip: Double-tap a file name in the terminal to quickly select and copy it.

7.2 Voice Dictation

Use voice dictation to compose longer messages without typing. Tap the microphone



icon on the keyboard to activate system dictation. Tap it again to stop. You can make any corrections before hitting **Send** to transmit the message over the air.

7.3 Auto Capitalization

Packet Commander can automatically capitalize the first letter of sentences as you type. This makes messages easier to read and more polished. The feature is **on by default**. To toggle it, **long press** the keyboard



icon.

Most packet node commands are not case-sensitive, so capitalization shouldn’t cause issues—but if you run into problems, try turning this setting off.

7.4 Auto Correction

You can enable or disable autocorrect while typing in the terminal. It helps fix typos automatically but may occasionally change a command unintentionally. This feature is **off by default**. To toggle it, **long press** the keyboard



icon.

7.5 Theme

Customize the terminal to your liking. Choose from several **retro-inspired color themes**, each designed for readability and a touch of nostalgia. You can also adjust the font size for comfort or screen space.

Go to **Settings > Terminal Appearance** to select your theme and font preferences.

7.6 Clearing Terminal

To clear the terminal screen, tap the top-right



menu and choose **Clear Terminal**. This only clears the current display—it won’t affect your connection or session data.

7.7 Special Characters

Packet radio nodes typically support only the **ISO-8859-1** character set (also known as Latin-1). Special symbols like curly quotes, emojis, or non-Latin characters aren’t supported. If you paste text containing unsupported characters, they will be filtered out automatically.

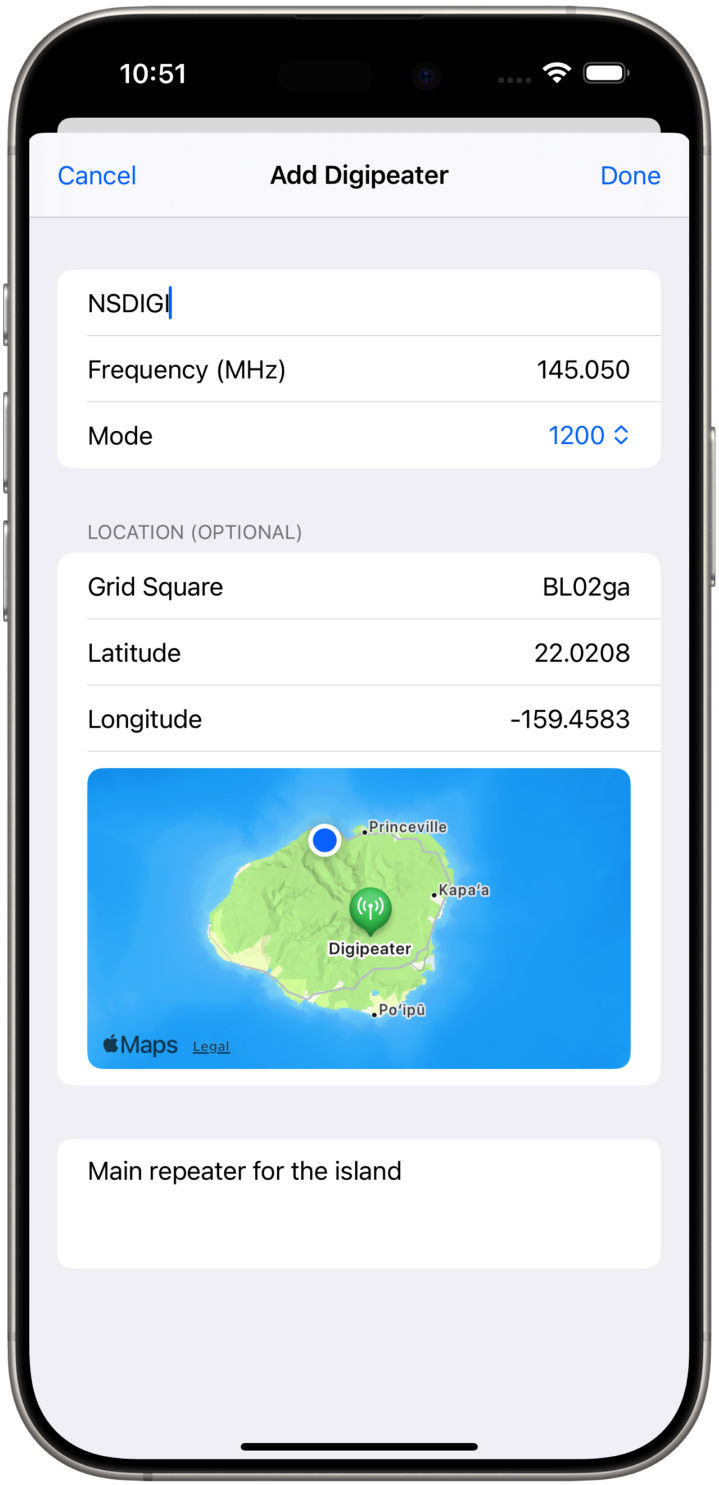
8 Digipeaters

8.1 Adding Digipeaters

1. Go to **Settings > Digipeaters**
2. Enter the digipeater’s callsign and frequency

Once added, up to two digipeaters can be selected on the connection screen. Only digipeaters that match the frequency and baud rate of the selected node will be available.

Note: To be useful, a digipeater must support **AX.25 connected mode** and operate on the **same frequency** as the node you’re trying to reach. APRS digipeaters operate differently and cannot be used for this purpose.



8.1.1 Digipeater Location

You may optionally specify the location of a digipeater using either a 6-digit grid square or latitude/longitude coordinates.

A 6-digit grid provides approximately 2.5 mile (4 km) precision, a good balance between identifying the general vicinity and preserving location privacy.

8.2 Digipeaters Smart Path

Whenever you successfully connect to a node, the selected digipeater path is remembered based on your location. The next time you open the connection window from the same area, the previously used digipeater (if any) will be automatically pre-selected.

For example, suppose you have a node at your home. When connecting from there, you don’t need a digipeater, so you leave the “via” field empty. Later, you connect from another location that requires a digipeater. You select one and successfully connect.

From then on: - At home, the digipeater will not be pre-selected. - At the alternate location, the previously used digipeater will be remembered and pre-filled.

Note: Location is quantized to 0.01 degrees of latitude and longitude, which provides approximately 1 km accuracy.

8.3 Digipeater Syncing via iCloud

Digipeater information is automatically synced with iCloud. If you use Packet Commander on another device, any changes will appear there as well.

Note: If you’re offline, changes are saved locally and will sync the next time you’re connected to the internet.