



PRODUCT DOSSIER + USER GUIDE

MeshLink

One room. Many paths.



Secure team communication, shared maps and planning across Internet and compatible radio links.

VERSION 3.9.7

Android / iOS / Windows

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START HERE

From first install to field use

A product overview and practical user guide for individual users, outdoor teams and organisations.

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- 05 A complete hybrid room example
- 06 Platform and equipment choices

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About the app views

App screens are illustrative demonstrations from the 3.9.1 interface using fictional accounts, identities, positions and messages. This 3.9.7 guide updates branding and contact details. Native platform appearance can differ. Cover concept illustration; not a hardware photograph or a coverage prediction.

01 / THE OPERATIONAL IDEA

Stay coordinated beyond coverage

Keep the conversation, the route and the shared picture together when your team moves between connected and disconnected terrain.



Trail and expedition teams

Share a check-in, mark a meeting point and retain downloaded maps when cellular service disappears.



Dispersed field teams

Use compatible local radios and same-room bridges to connect people working across separate areas.



Coordinators and base teams

See reachable room members, receive field updates and distinguish a queued message from verified delivery.



Organisations

Issue named rooms with defined seat capacity, plan access and configure compatible equipment before deployment.

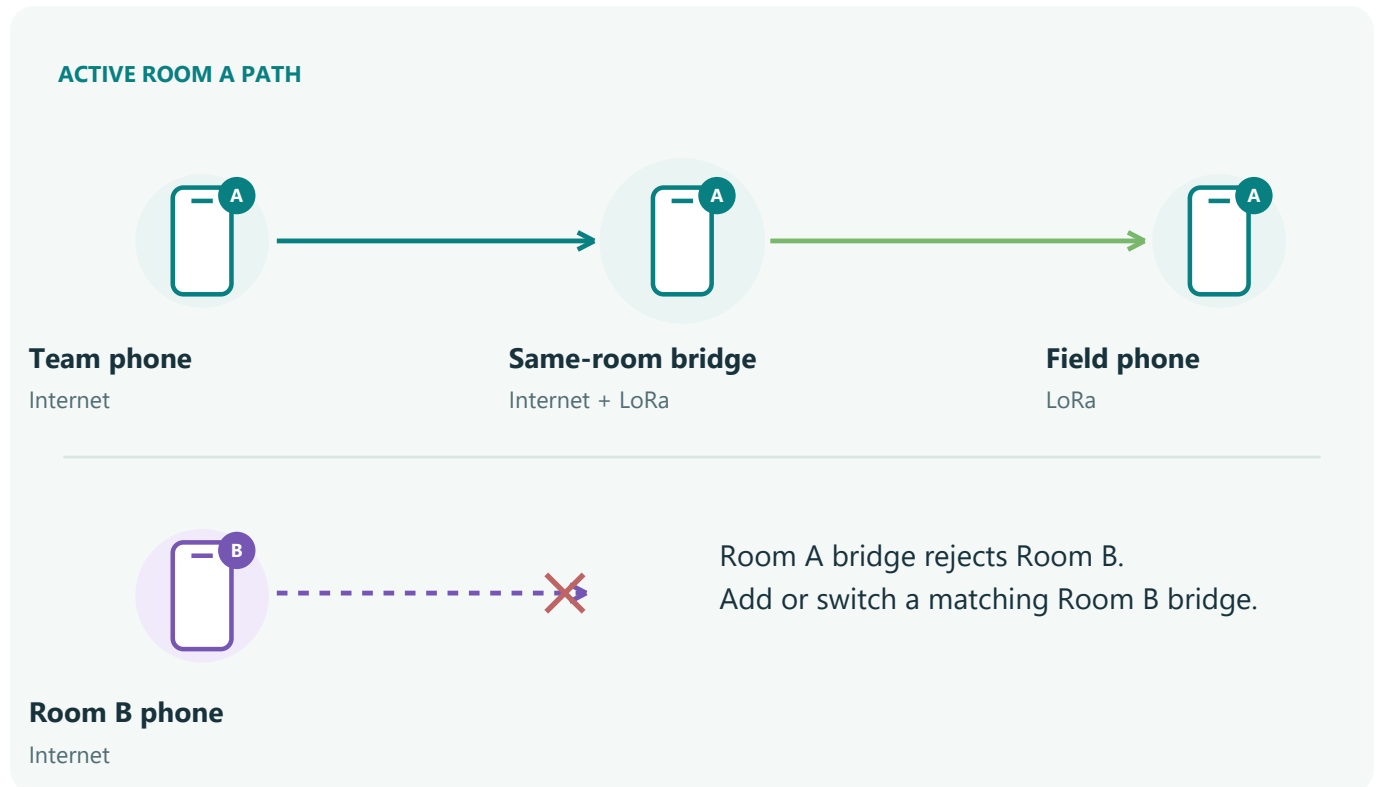
Designed for real conditions

MeshLink needs an available supported path. Terrain, antennas, radio settings, interference, battery and operating-system limits affect communication. It is not a replacement for a tested emergency communications plan.

02 / HOW THE SYSTEM FITS TOGETHER

A phone becomes a mesh node

A bridge is a MeshLink device with more than one supported active connection. It moves admitted traffic between those links within its active room.



One room

All participating phones use authorised access for the same room.

More than one bearer

Internet, LoRa and supported VHF-R or message-based doorways can form a connected path.

A real bridge

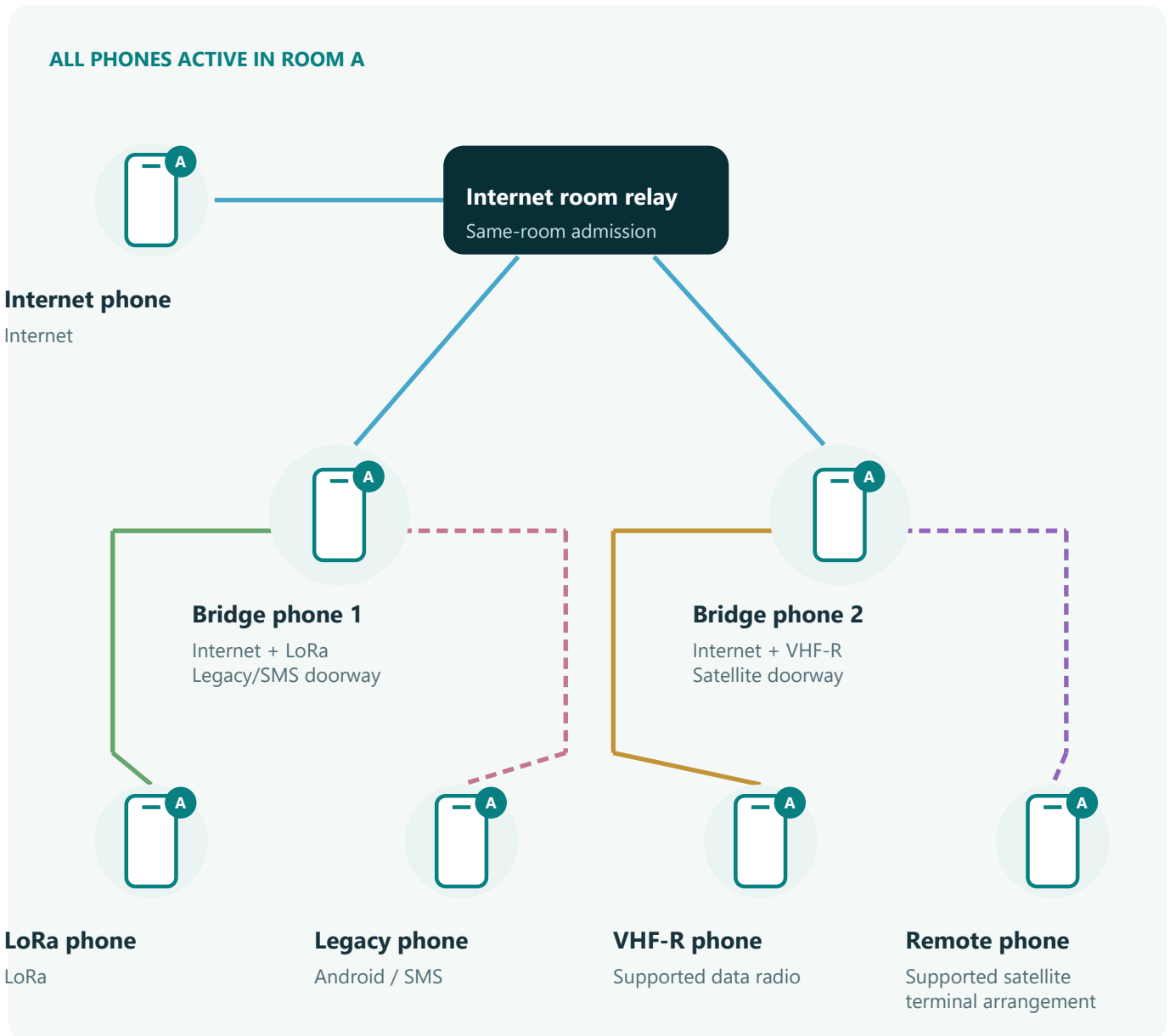
An Internet-and-LoRa device in Room A cannot carry Room B between Internet and LoRa. Room B needs its own matching bridge.

Rooms isolate accepted application traffic, not physical spectrum. Radios using the same RF channel still compete for airtime; firmware may independently repeat compatible frames.

03 / A HYBRID ROOM IN ACTION

One room across different links

This example brings Internet, LoRa, VHF-R and supported Android message-based doorways into one authenticated room. The bridge phones belong to that same room.



Conceptual topology, not a coverage prediction. Links require compatible equipment and usable services. Android legacy/SMS and supported iSatPhone 2 doorways need the correct hardware, permissions and service; provider charges can apply.

04 / CHOOSE THE RIGHT EQUIPMENT

One app family, platform realities

The shared room, messaging and map experience spans Android, iOS and Windows. Direct hardware access depends on the platform.

Capability	Android	iOS	Windows
Internet room connection	Yes	Yes	Yes
Compatible Meshtastic BLE LoRa	Yes	Yes	Yes
Supported VHF Radio data cable	Yes	No direct adapter	Yes
Legacy / satellite SMS doorway	Supported Android setup	Via same-room bridge	Via same-room bridge
Local maps, plans and room tools	Yes	Yes	Yes

Compatibility is a deployment check

Check the exact radio model, firmware, cable, permissions and data service. The phone does not turn an arbitrary satellite terminal into a compatible data adapter. Internet, carrier and satellite services can have their own costs.

05 / FIRST-TIME SETUP

Verify email, then choose access

Registration begins with your email. Verification identifies the account; a room key and device registration determine which room this phone joins.

MeshLink

 Your network. Your team.

1 / 4 · Verify email

Verify your email

First verify your email. Then start a 25-seat free trial, buy a room subscription or use a security key you already have.

 Email address

Send verification code

1 / Enter an email you can access.

A straightforward start

Install the current Store edition. Request the verification code and enter it in MeshLink. Use a display name your team recognises.

MeshLink

 Your network. Your team.

2 / 4 · Choose your access

Choose your access

Email verified: Demo account

[Change email](#)

 Start 7-day free trial

 Buy licences

 I already have a security key

A room subscription includes 25 or 50 device seats. Only devices using the same security key join that room. Manual keys provide lifetime access.

 Try one shared room with 25 device seats for 7 days, once per verified email. The trial starts when your key is generated. No automatic charges.

Paid plans

Monthly

2 / Choose trial, purchase or an existing key.

Keep your room key private

Use I already have a security key for an authorised manual or shared room key. Register the device and accept the displayed terms. Sharing a contact identity is different from sharing a room security key.

06 / PLANS AND DEVICE SEATS

Choose a room for 25 or 50

A purchased room is a shared capacity, not one subscription per person. Its seats count participating devices across supported platforms.

1 25-seat monthly

INR 2,500 per month.

2 50-seat monthly

INR 6,000 per month.

3 25-seat yearly

INR 30,000 per year.

4 50-seat yearly

INR 72,000 per year; Apple India uses INR 72,900.

5 Trial or manual access

The separate trial creates a 25-seat room for seven days, once per verified email. Manual rooms are operator-created; lifetime access is not sold as a Store plan.

MeshLink

Paid plans

Monthly

₹2,500 per month

Store total · 25 devices

☐

Yearly

₹30,000 per year

Store total · 25 devices

☒

Room capacity

 25 device seats

Store total

₹30,000

Billed yearly · 25 devices

The final price and billing terms are shown by your app store before you pay.

Renews automatically until cancelled. Manage or cancel your subscription in the store where you paid before the next renewal.

Refresh prices

Continue

Restore purchases

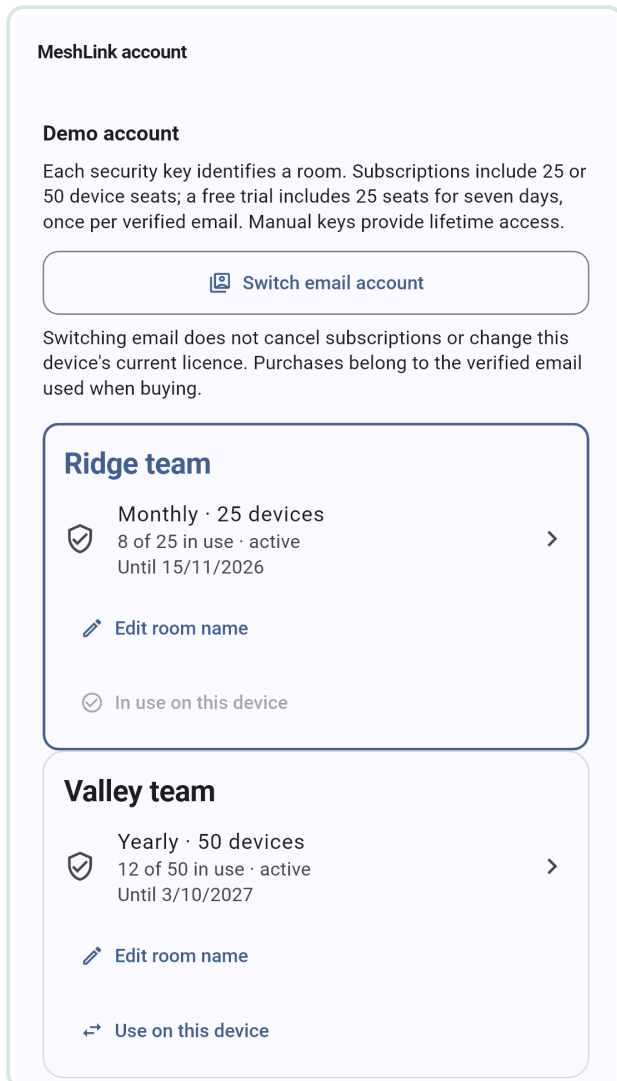
Example purchase screen with demonstration data.

Subscriptions renew until cancelled in the purchasing store. Confirm its price and renewal terms. Restore an existing purchase instead of buying again. Paid access works offline through its verified paid-through expiry; reconnect after expiry to verify renewal. Manual access requires online verification every 30 days.

07 / ROOM MANAGEMENT

Name rooms. Move with clarity.

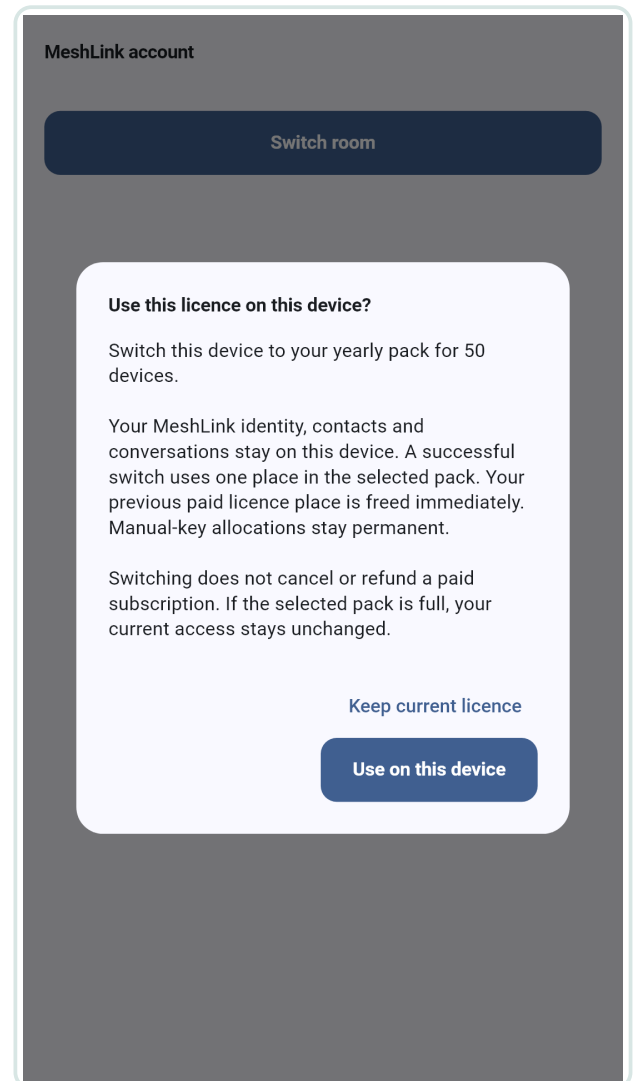
Use recognisable room names when your account manages multiple rooms. A device has one active room at a time.



Named rooms and their seat counts.

Name the room

Use Edit room name where you have management rights. The shared room name is refreshed for devices on their next online check. Manual-room names can also be managed by the operator.



Confirm before moving this device.

Switch without losing identity

Use the destination licence on this device. A completed switch frees its previous paid seat and occupies an available destination seat. A full room is rejected. Manual reservations remain permanent and can be reused. Changing the management email alone does not move the active licence.

08 / ACCOUNT AND LICENCE ACTIONS

Manage access from one place

Open Settings > License > Manage subscription and account. The verified management email and this device's active room are related, but they are not the same setting.

Switch email account

Verify another email to manage its purchases. This alone does not cancel billing or change the phone's active licence. Finish a pending payment check before switching.

Restore purchases

Use the store account that paid, then restore and let MeshLink verify ownership. Check the existing room before making a second purchase.

I already have a key

Enter an authorised manual or shared room key. Confirm the device switch. Identity and chats stay on this device; destination capacity and access still apply.

Manage store subscriptions

Choose Apple App Store, Google Play or Microsoft Store, then use the purchasing Store account. For a shared room, the purchaser manages its renewal or cancellation.

Delete MeshLink account

- 1 Open Delete MeshLink account for the intended verified email.
- 2 Read the confirmation, type DELETE exactly and choose Delete account.
- 3 The account and its access credentials are deleted. Devices using licences it owns lose access; offline devices can continue until existing authorisation expires.

Account deletion does not refund or cancel a Store subscription. Cancel recurring billing separately in the purchasing store. Minimal records are retained to prevent repeat free trials and payment reuse.

09 / CONNECT LORA

Pair once, then check the path

Use a compatible Meshtastic radio with Bluetooth enabled. The radio supplies the LoRa link; the phone supplies the MeshLink interface and room admission.

1 Prepare the radio

Charge it, attach its correct antenna and set the permitted region/channel and compatible firmware before use.

2 Connect in MeshLink

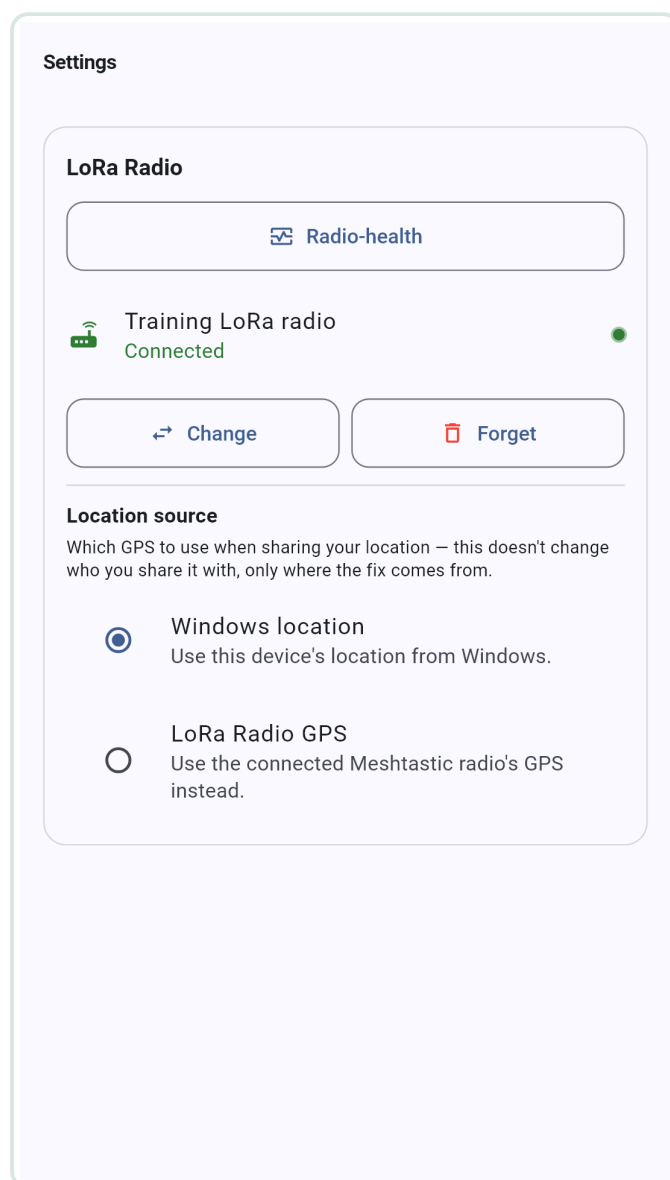
Open Settings > LoRa Radio. Select the intended nearby radio and complete any system Bluetooth permission or pairing request.

3 Confirm status

Check the displayed connection and choose the location source: device location or the connected radio GPS where supported.

4 Return to a known radio

MeshLink keeps its selected radio for reconnect attempts. Keep it powered and in range. If reconnection fails, inspect Bluetooth permission, another app holding the link and device availability before forgetting the radio.



Settings / LoRa Radio.

Bluetooth connection to a module is not proof of radio delivery to another person. Test with a second authorised room member, then inspect recipient acknowledgement and Radio-health.

10 / CONNECT VHF RADIO

Configure the supported data link

On supported Android and Windows equipment, MeshLink carries its packets through the radio data interface. It does not modify the radio firmware.

1 Connect the correct interface

Use the supported radio/cable/USB interface, approved by your equipment custodian. Confirm system access to the interface.

2 Match the data settings

Set the data baud rate to match the radio. Begin from your tested equipment profile; do not guess timing values in an operational network.

3 Use the radio set

Enable the VHF Radio path in MeshLink. Fragment size, error correction and lead/tail timing affect airtime and compatibility.

4 Test both directions

Check a small message, return acknowledgement and shared position before relying on the path. Watch queue delay and radio load.

Settings

VHF Radio

 Radio set connected

✓

Active data rate: 4800 baud

Use the radio set

Carry mesh traffic over VHF-R when a set is plugged in.

☒

Data baud rate

Sets the cable's data rate. Must match the radio setting.

4800 baud

▼

Error correction

Adds recovery data to help repair damaged frames. Higher levels use more airtime.

Off

▼

Fragment size

Smaller survives a noisy channel better.

256 bytes

▼

Transmit tail — 300 ms

Extra pause after each burst before sending again.

Lead-in — 300 ms

Warm-up before each burst. Raise it if voice gets through but data does not.

Send messages

Copies of each message and acknowledgement per burst. More gets through a weak link.

Once

▼

A short message takes about 1.3 s on air with these settings.

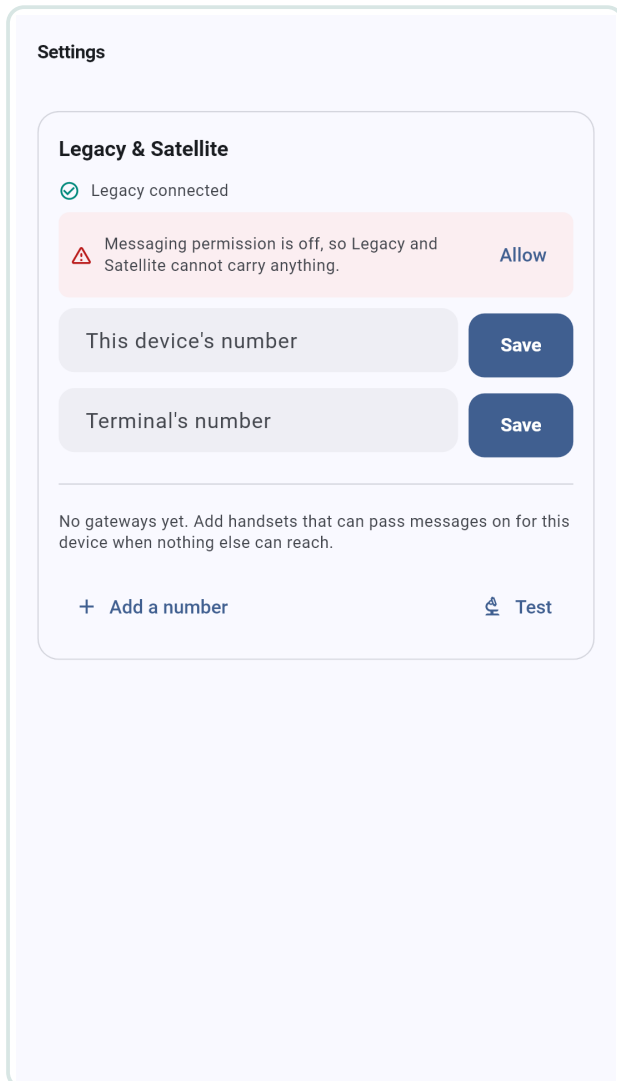
Settings / VHF Radio.

VHF-R is the transport label; VHF Radio is the Settings card. Physical wiring, radio mode, duty rules and the security of the radio/phone remain the operator's responsibility.

11 / LEGACY AND SATELLITE DOORWAYS

Message-based links need a bridge

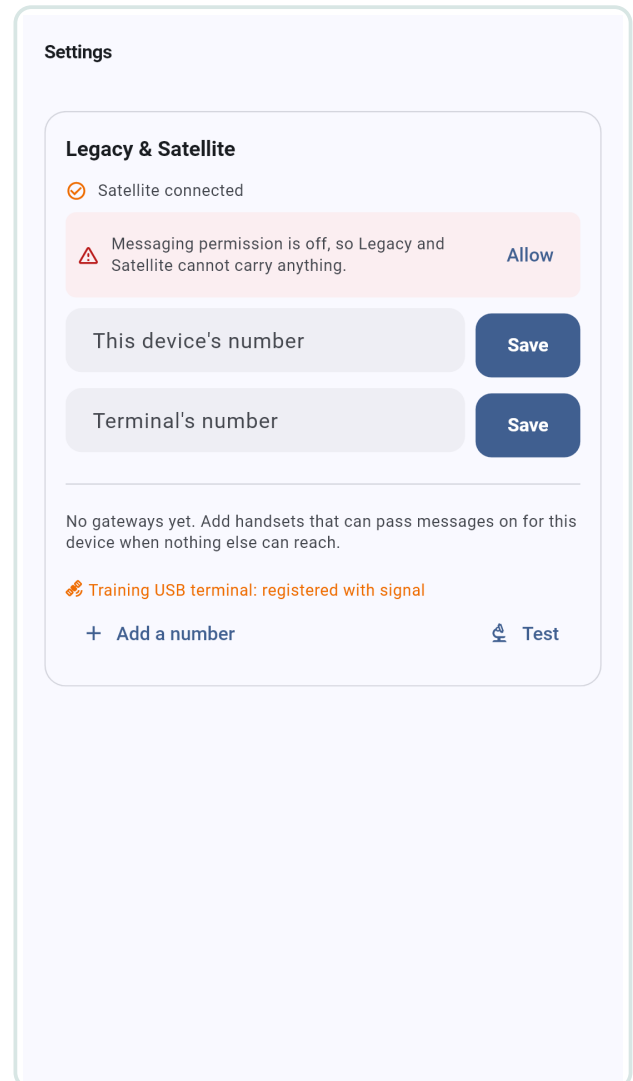
Where supported on Android, a configured phone can pass MeshLink traffic through compatible legacy/SMS or satellite-terminal messaging links.



Legacy / SMS setup and permissions.

Define the doorway

Configure the device and terminal numbers, permissions and reachable gateway/peer entries in Legacy & Satellite. A same-room bridge must have both sides available. Test the selected route explicitly.



Example supported terminal configuration.

Know the constraints

Compatible satellite phones, including supported iSatPhone 2 arrangements, need their own service, hardware and configuration. Carrier limits, message size and satellite visibility can delay delivery. This is not a promise that every terminal works directly with every platform.

12 / FIND YOUR TEAM

Discover reachable room members

The Network screen brings together the peers your device can currently reach through admitted connections.

1 Start with the connection cards

Check Internet, LoRa and VHF-R availability. Enabled is different from connected.

2 Read each peer card

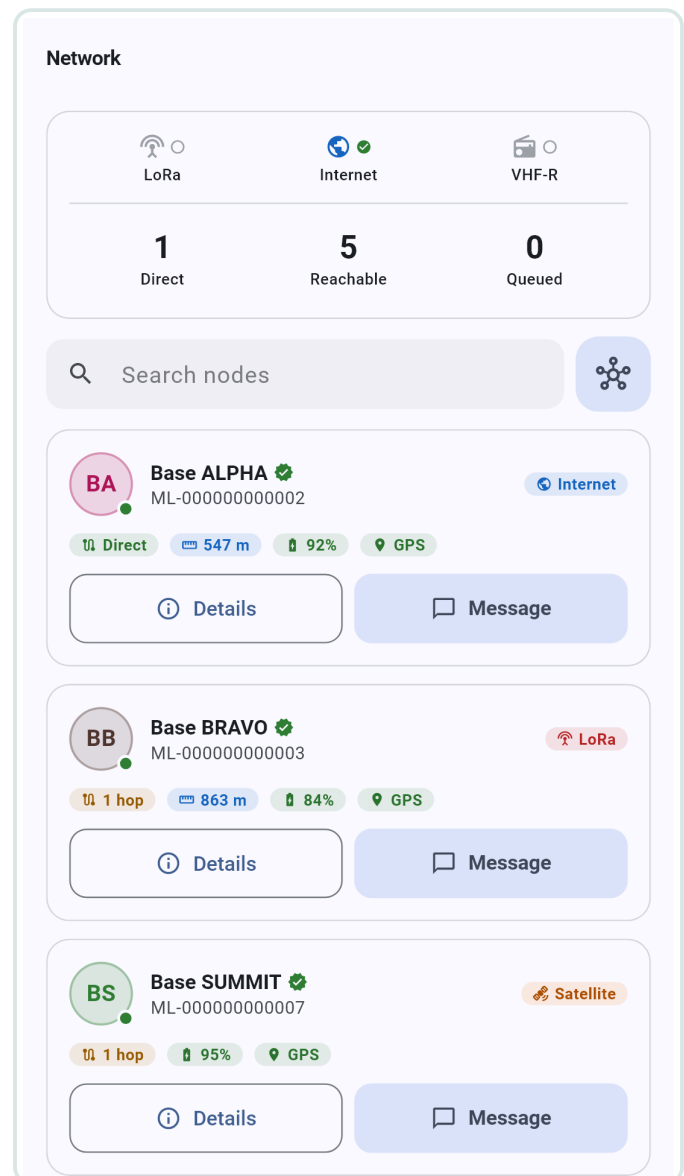
Use its transport, path and freshness information. Battery, location and other telemetry depend on what the peer shares.

3 Open Details

Inspect the node identity and available information before starting a conversation or adding a contact.

4 Search or message

Find the intended display name or MeshLink ID. Use Message for a direct conversation with that peer.



Network / room-scoped discovery.

A recent peer profile is not a guaranteed live route. Reachability and telemetry freshness are separate observations. Different-room users are not valid members of this room's application network.

13 / UNDERSTAND THE ONLINE MESH

Explore connections in 3D

The Online Mesh view turns discovered room relationships into an interactive network picture. Use it to understand links, not to infer a surveyed radio footprint.

1 Open the mesh view

From Network, open the mesh topology view. Search for a node or select it in the scene.

2 Move around the scene

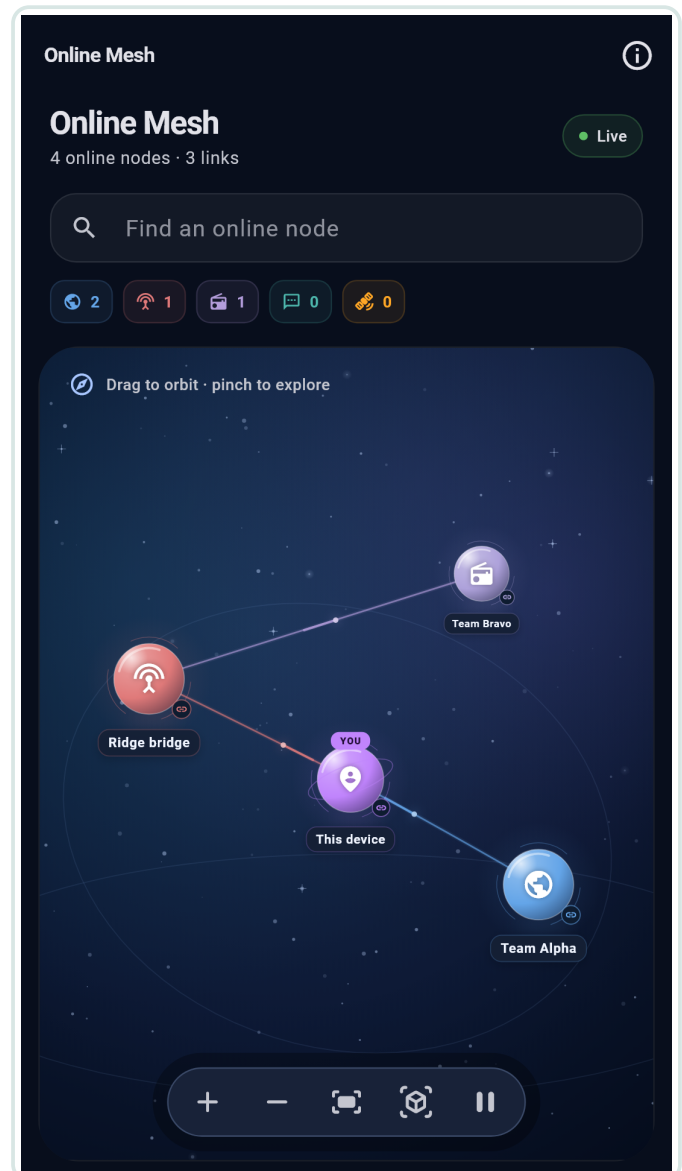
Drag to orbit and pinch or use the view controls to explore the connected relationships.

3 Inspect a selected node

Read the actual node/path information. Colours and transport labels help distinguish Internet, LoRa and VHF-R.

4 Interpret the picture carefully

The drawing reflects available discovery data. It is not a live spectrum analyser, a terrain survey or proof that every visible path can carry a message now.



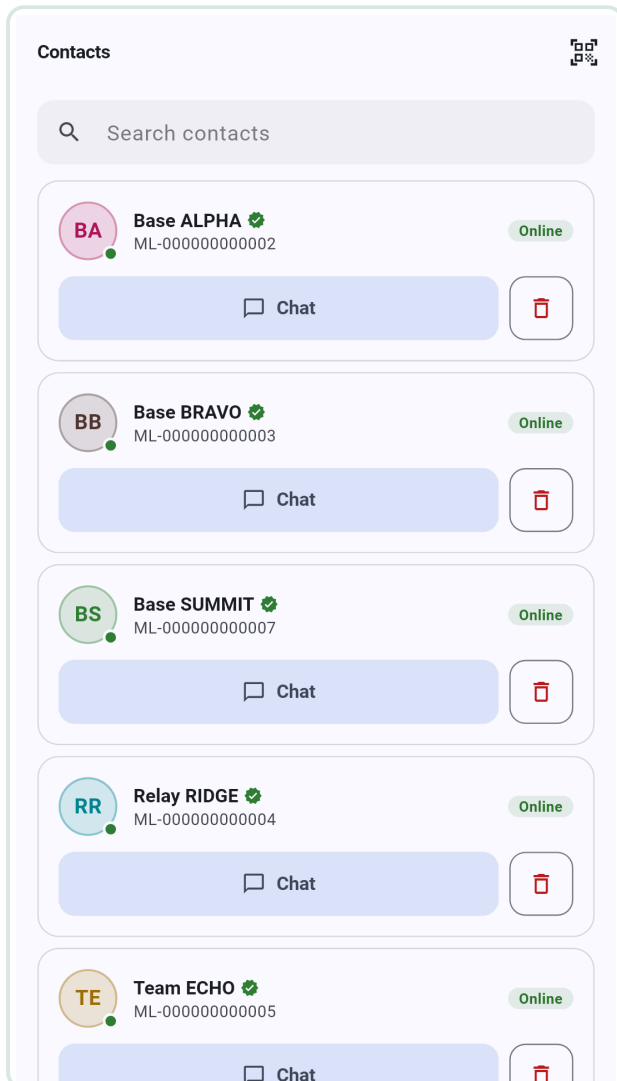
Online Mesh / illustrative app view.

A useful bridge belongs to the same active room as both endpoints. A physical radio repeater can repeat a frame without making its attached different-room phone an Internet bridge.

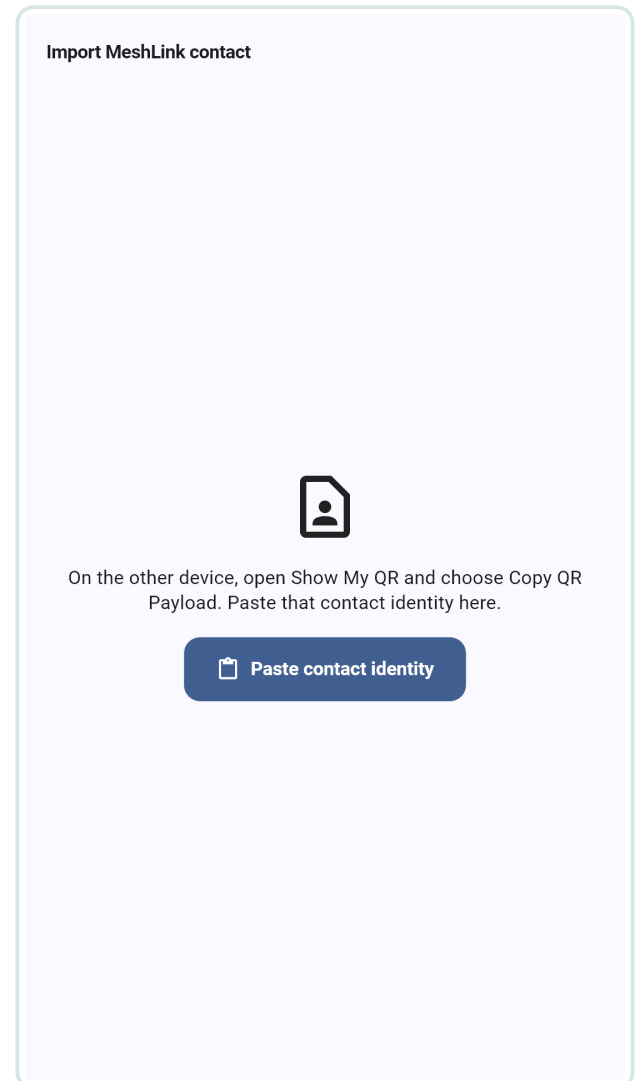
14 / KEEP USEFUL IDENTITIES

Add contacts without sharing keys

A contact is a person or node identity. A room security key controls room membership. Keep those two exchanges separate.



Contacts / saved demo identities.



Import a shared MeshLink contact identity.

Add and find people

Add a discovered node from its details, or import a shared MeshLink contact identity using the supported QR/payload flow. Name contacts clearly so you select the right recipient.

Share only what you intend

Use the app's contact-share flow to pass a selected identity. Do not paste a room security key into a public contact exchange. Saving a contact does not grant that device a seat in your room.

15 / DIRECT MESSAGING

A conversation with delivery context

Choose a reachable same-room peer from Network or Contacts, then open the conversation and compose your message.

1 Write and send

Use normal text for compact radio traffic. Available connection and routing policy determine how the packet can travel.

2 Use speech where available

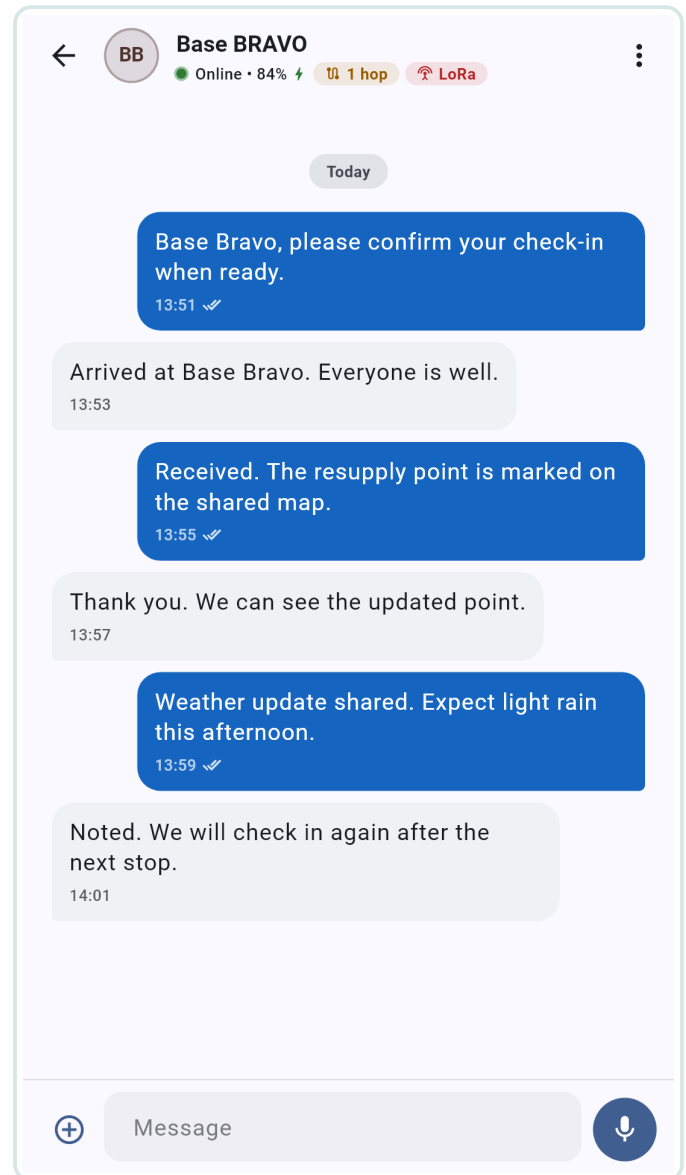
Speech tools can turn spoken input into text and read messages aloud. Availability and processing depend on the device's speech engine, languages and permissions.

3 Watch the acknowledgement

Local radio or Internet hand-off is not delivery. The recipient's verified acknowledgement is the delivery evidence.

4 Check waiting messages

Use Queued messages for the observed stage and waiting reason instead of guessing from a slow link.



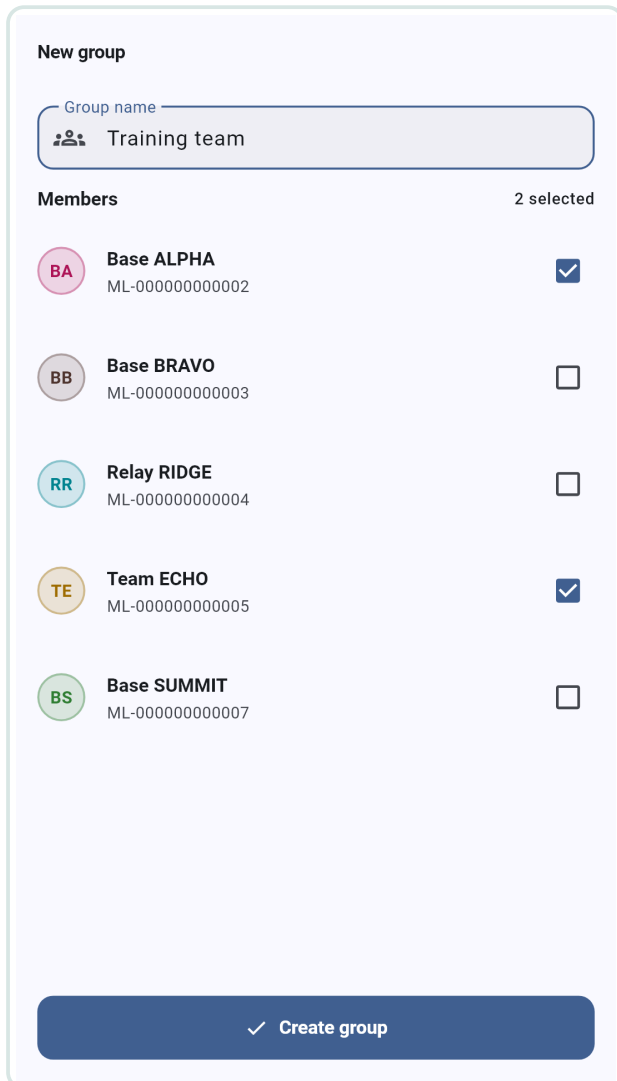
Direct conversation / fictional team traffic.

MeshLink is designed for communication over constrained links. It is not an unrestricted media chat service. Keep radio messages concise, and check device speech-engine privacy settings before sensitive dictation.

16 / GROUP AND BURN MESSAGES

Coordinate the team conversation

Create a group from known contacts for repeated coordination. Burn controls help manage message retention on participating devices.



New group

Group name
Training team

Members 2 selected

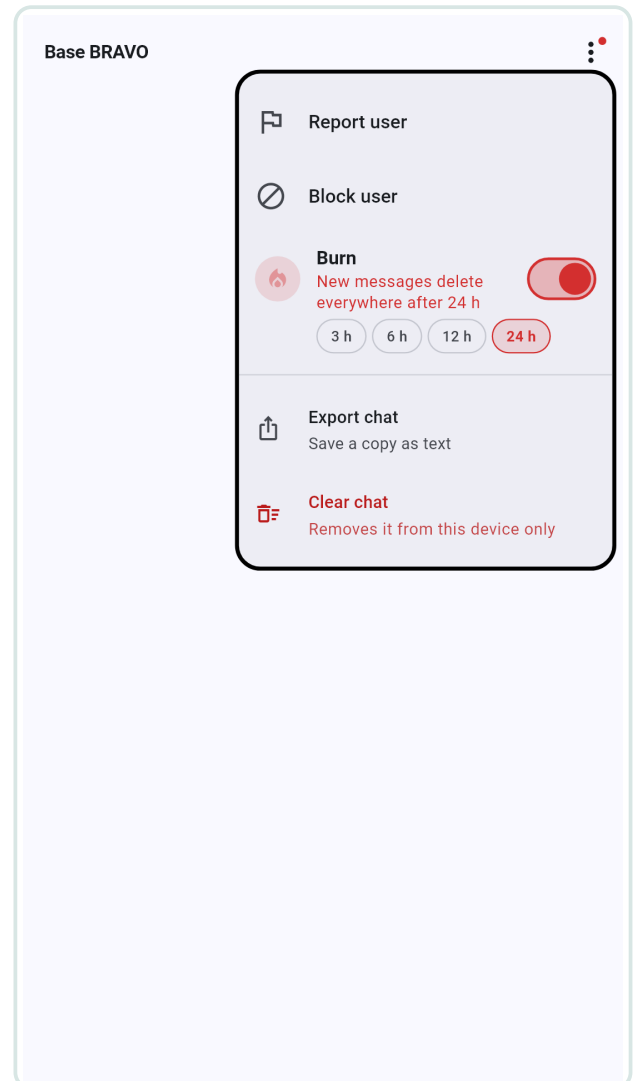
- Base ALPHA** ML-000000000002 ☒
- Base BRAVO** ML-000000000003 ☐
- Relay RIDGE** ML-000000000004 ☐
- Team ECHO** ML-000000000005 ☒
- Base SUMMIT** ML-000000000007 ☐

✓ Create group

Choose members for a new group.

Create the group

Choose New group, enter a meaningful name and select the intended same-room contacts. Confirm membership before sending operational or personal information.



Base BRAVO

- Report user
- Block user
- Burn**
New messages delete everywhere after 24 h
3 h 6 h 12 h 24 h
- Export chat
Save a copy as text
- Clear chat
Removes it from this device only

Conversation menu / burn and safety controls.

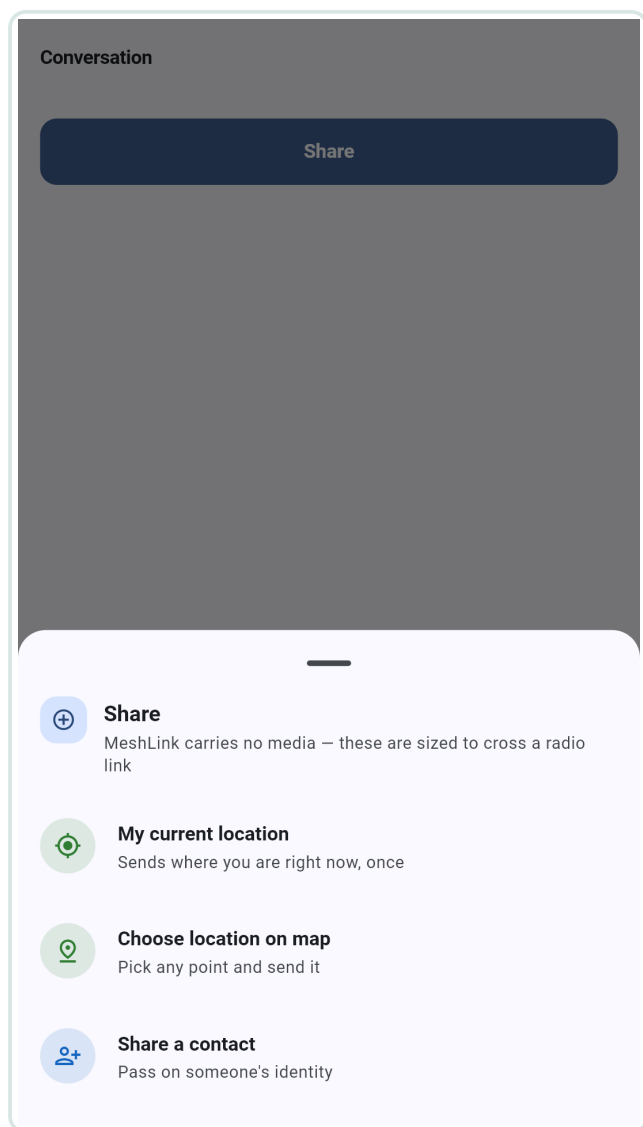
Use burn with understanding

Select the available burn duration from the conversation menu when needed. Cleanup follows the app's supported retention behaviour; it cannot erase screenshots, exported copies or data held outside cooperating devices. Keep important records separately when policy requires them.

17 / SHARE USEFUL FIELD INFORMATION

Send a point, a contact or a route

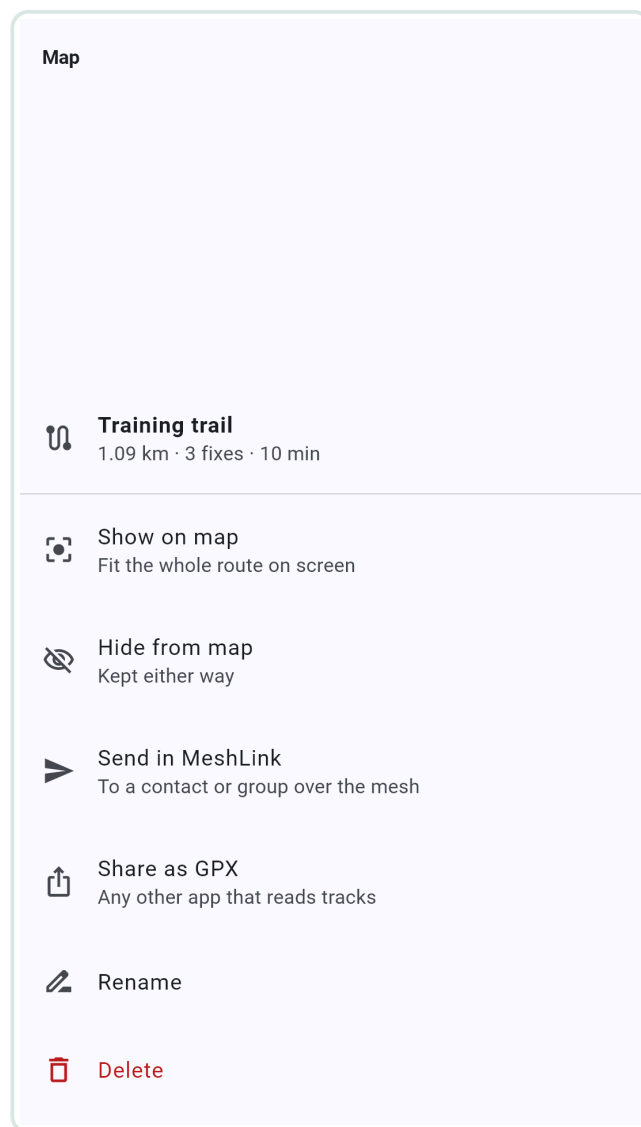
The chat attachment sheet keeps common field exchanges close to the conversation.



Share from within a conversation.

Choose the exact item

Share your current location, choose a point on the map, send a contact identity or use the route's Send in MeshLink action. Check the selected conversation and position before confirming.



A recorded route can be sent through MeshLink.

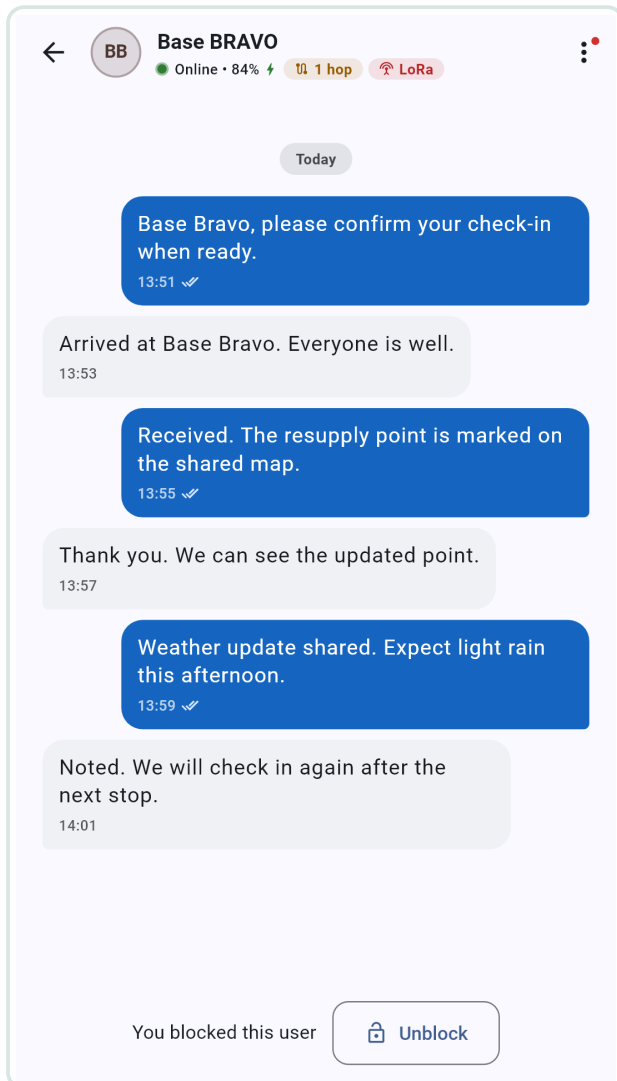
Give the recipient context

Explain what the point or route means and when it was recorded. Location fixes and recorded trails are observations, not a promise that a path is safe or passable. Large data may need more airtime than a short text.

18 / SOS, BLOCKING AND REPORTING

Clear actions when it matters

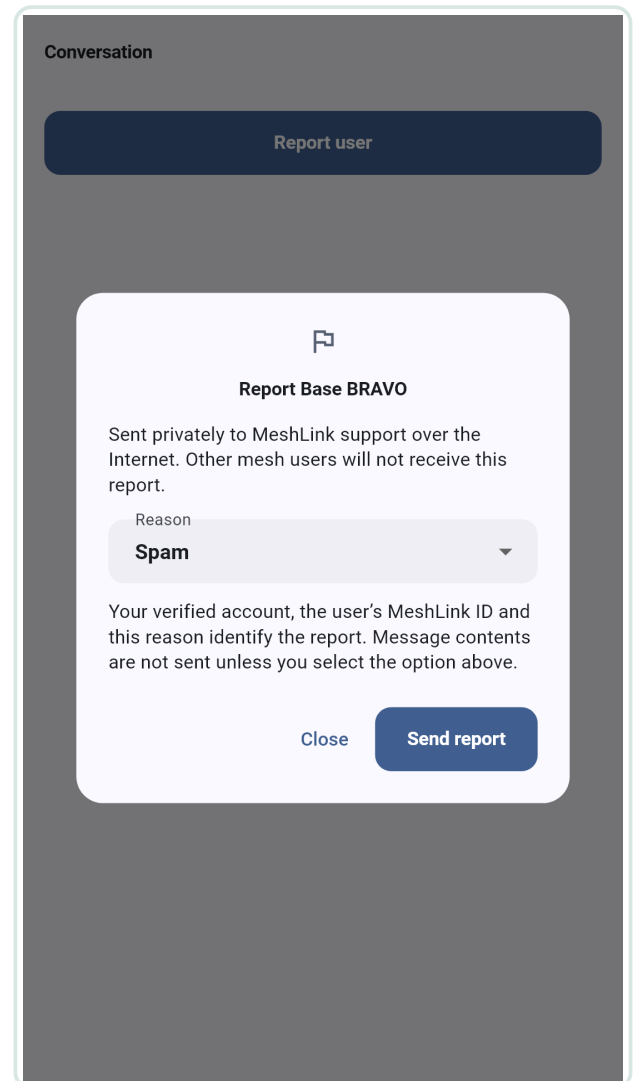
SOS requests help from reachable MeshLink members. Conversation controls let you block an unwanted peer and send a private report.



Blocking preserves the earlier conversation.

SOS is a team alert

Use the guarded SOS control, check that the alert is active and stand down when appropriate. An acknowledgement means a MeshLink member responded; it does not summon public emergency services.



Report user / optional content selection.

Block, unblock and report

The conversation menu can block a user while keeping prior conversation visible. Settings > Blocked users allows review and unblocking. Reports go privately over Internet to support; include message content only when you choose to.

19 / YOUR SHARED MAP

Keep the terrain and team together

The map combines the selected basemap with available peer positions, saved markers, recorded routes and planning tools.

1 Choose the map source

Select the available online or offline source. Online maps require a usable connection; an offline area must already be downloaded.

2 Read the coordinate display

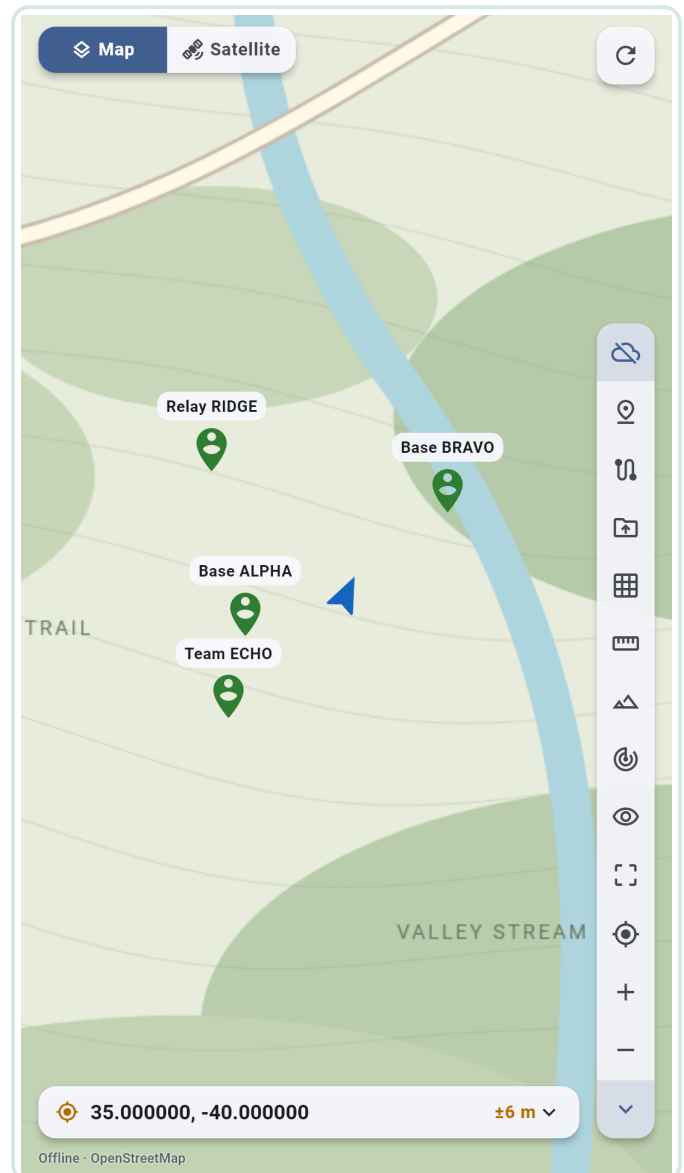
Use the position/GR display and scale to orient yourself. Check the age of a fix before treating it as current.

3 Place and inspect markers

Select a point or marker to inspect position, distance and bearing. Share a chosen point deliberately.

4 Open the toolbox

Routes, overlays, LOS and viewshed are separate tools. Their results support planning; they do not replace local navigation judgement.



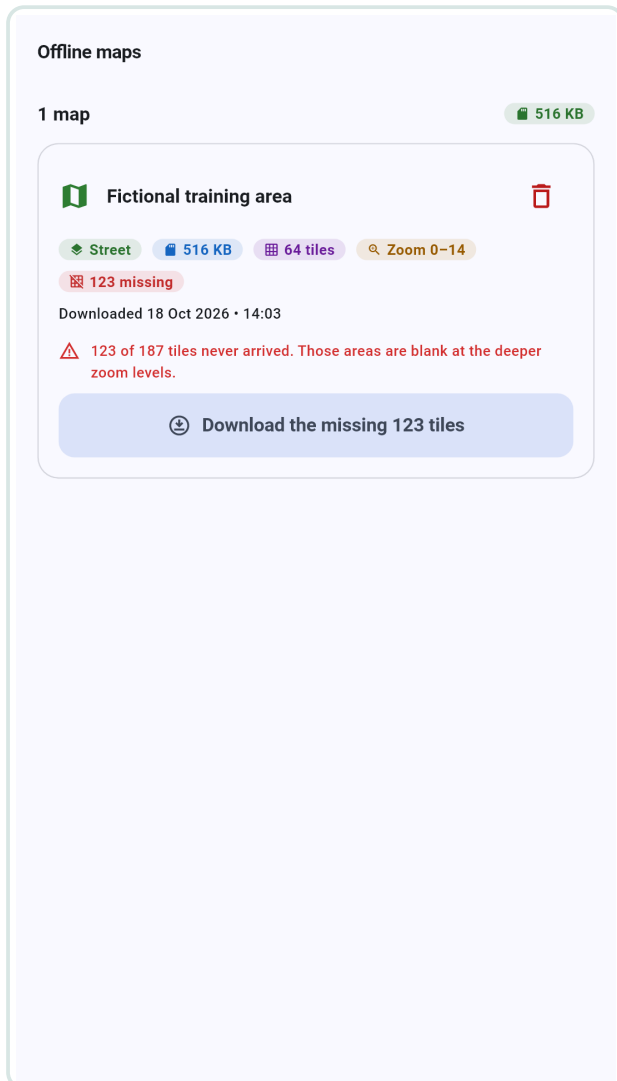
Map / tools and fictional demonstration positions.

Respect the map provider's licence and attribution. A saved position is not continuous tracking. Missing terrain or map data must not be interpreted as safe ground or guaranteed coverage.

20 / OFFLINE MAPS AND RECORDED ROUTES

Prepare before you lose Internet

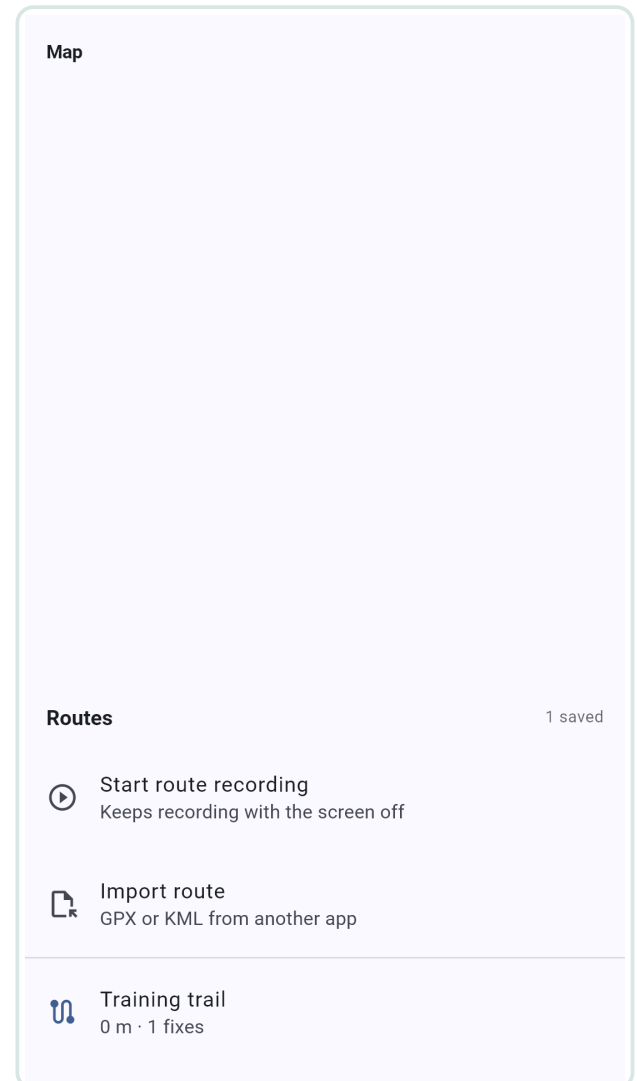
Download a permitted map area, verify completeness and record a trail so your route remains useful after the network disappears.



Offline area / missing-tile information.

Verify offline readiness

Choose the area and permitted source, then inspect the download status. Resolve missing tiles before departure and test the area in offline conditions. Not every online map source permits bulk download.



Routes / recording and import tools.

Record, import and share

Start route recording and confirm the track is growing. Import supported GPX or KML routes; export recorded routes as GPX or send them through MeshLink. GPS, battery settings, permissions and device sleep can affect recordings.

21 / PLANNING ON THE MAP

A shared picture with context

Use the planner to organise map-based information around an aim, rather than losing important changes in a long conversation.

1 Create or open a plan

Give the plan a clear name and purpose. Use an aim your group will recognise.

2 Add structured information

Place the supported markers and geometry, and use notes, tasks or instructions where available.

3 Share changes carefully

Send or synchronise the supported plan content through your room. Confirm recipients received the intended version before acting on it.

4 Retain field judgement

A line or symbol is a planning aid. It is not a terrain clearance, a surveyed boundary or automatic agreement by every participant.



Planner / synthetic training plan.

On constrained radios, complex plans take airtime. Keep the shared picture focused, avoid repeated large edits and verify critical changes with a short acknowledged message.

22 / LINE-OF-SIGHT PLANNING

Choose map points or saved markers

Select each endpoint independently. You can tap a new point on the map or reuse an existing visible marker.

1 Set Point A

Choose on map or Use a marker. Confirm the coordinate and marker/fix information.

2 Set Point B

Choose its source independently. Pick points at least 50 metres apart.

3 Analyse the terrain path

Run Analyse line of sight with an Internet connection. Review the terrain result and selected endpoints.

4 Understand the snapshot

Marker endpoints retain the selected position. A moving or renamed marker does not silently move the analysis; reselect it when appropriate.


Line of sight

Choose each end on the map or use an existing marker.

Point A
Training point A
Lat/Lon: 35.000000, -40.000000

 Choose on map
  Use a marker

Point B
Training point B
Lat/Lon: 35.012000, -39.990000

 Choose on map
  Use a marker


Analyse line of sight

Clear points and analysis

Marker positions are snapshots, not live tracking. Terrain analysis needs an Internet connection. A clear terrain path does not guarantee a radio connection.

Line of sight / Point A and Point B selectors.

This is terrain line-of-sight planning, not a radio-link guarantee. It does not model every building, tree, antenna, frequency, interference source or equipment setting. LOS and cached offline viewshed are distinct tools.

23 / VIEWSHED ANALYSIS

See visibility and overlap clearly

Compare terrain visibility from up to six observer points, with a separate range and observer height for each point.

 **Viewshed analysis**
Compare what can be seen from up to six points.

1. Choose points
 2 of 6 selected. Tap a point below to set its range and observer height.

1

Training point A
5 km · 2.0 m observer height

×

2

Training point B
5 km · 2.0 m observer height

×

 Choose on map

 Use a marker

☐ Download missing terrain
Downloaded terrain is saved for offline use. Turn this off to use only saved terrain.

 **2. Analyse visibility**

[Clear analysis and points](#)

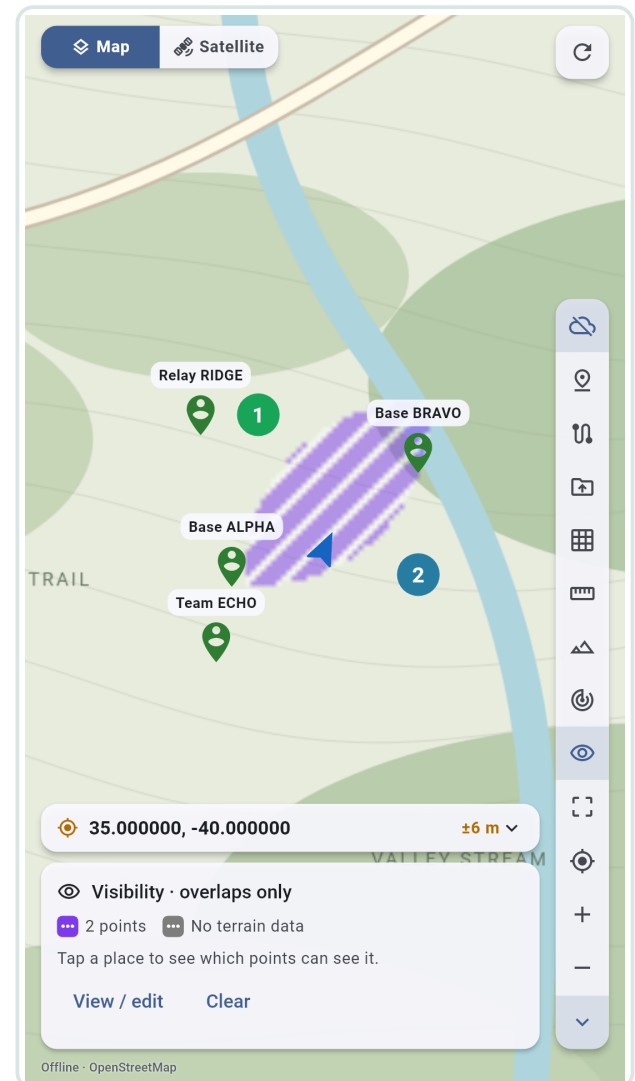
This estimates terrain visibility, with approximate 30–98 m grid spacing and Earth curvature. It does not model buildings, vegetation or radio reception. Default observer height is 2 m above the ground; tap a point to change it.

Terrain: Mapzen; SRTM/GMTED2010/3DEP courtesy of USGS; ETOPO1: NOAA. Regional sources: ArcticDEM (NSF/DigitalGlobe); Australia © Commonwealth of Australia

Choose up to six points or existing markers.

Build the analysis

Tap the map or select a visible marker. Set each point's radius to 1, 5, 10, 15, 20 or 25 km and adjust observer height. Download missing terrain where needed. Cached data can support later offline analysis.



Overlap mode highlights visibility from multiple points.

Read the result

Switch between All points, Overlap only and One point. Adjust overlay opacity and use the legend; tap a shaded area to identify which observers can see it. Missing terrain is not visibility. Results depend on terrain resolution and exclude obstacles such as buildings and vegetation.

24 / RADIO-HEALTH

Know what the radio is waiting for

Open Settings > LoRa Radio > Radio-health. It observes existing local activity without sending test packets or changing radio settings.

Radio-health

Your attached LoRa radio

Radio connected

This screen observes existing activity. Opening or refreshing it sends no test packets and changes no radio settings.

Measured local channel load

42.6%

Reported 8s ago

This radio's reported transmit airtime: 2.1% of the last hour.

Measured by the attached radio at its own location. Includes other traffic and interference; it is not whole-mesh load or a per-room measurement.

Routine presence waits above 90% only while the measurement is less than 3 minutes old. This app policy does not override firmware limits.

8 recent firmware samples · 0–100%



7m 0s ago → 0s ago

Up to 60 distinct reported samples from the last 3 hours, retained only in this networking session.

LoRa work waiting on this device

Messages waiting / in progress: 2 packets

Measured local load and recent sample history.

Measured channel load

Telemetry describes the attached radio's local view, including other traffic and interference. It is not a mesh-wide or per-room utilisation measurement. Routine presence defers strictly above 90% while fresh telemetry supports that decision.

Radio-health

LoRa work waiting on this device

Messages waiting / in progress: 2 packets

Oldest message waiting time: 24s

3 packets in transmit queue · 1 in progress

1 presence updates waiting for cadence or a fair turn

Oldest outstanding work: 51s

- Waiting for the app frame allowance

This is the app's LoRa scheduler, not the radio firmware queue. Message counts include locally originated and forwarded message packets, queued or in progress; a group message can create several packets. Control packets do not affect the message waiting time. Messages waiting for a route or another bearer are not included.

App frame writes to the radio

Since this networking session started, across this device's rooms. Includes locally originated and forwarded work. One packet can require several frames.

A completed local write is not proof of over-the-air transmission, recipient delivery or a read receipt. Firmware repeats are not counted here.

Frames	Attempts	Written	Failed
Presence / position	6	6	0
Route advertisements	8	8	0
Messages / groups	18	18	0
Acknowledgements	0	0	0

Local queue, counters and waiting reasons.

MeshLink's own work

The queue shows local waiting/oldest work and deferral reasons. Counters separate presence, routes, messages and repairs. A successful local frame write is not proof of over-air transmission or recipient delivery. Check role/repeater configuration with your radio operator.

25 / QUEUED-MESSAGE DIAGNOSIS

Handed off is not delivered

The Queued messages screen shows observed stages and waiting reasons, including recent outcomes after work leaves the active queue.

1 Queued on this device

The app has work waiting. It may still need an eligible route or a connected transport.

2 Waiting for a reason

The screen can distinguish local radio allowance, disconnected transport, busy-channel deferral and other observed conditions.

3 Handed to the transport

A Bluetooth/USB write or Internet submission means local hand-off only. It is not recipient confirmation.

4 Recipient proof

Delivered requires a verified acknowledgement from the exact recipient. Missing proof, carrier reports and relay custody retain separate meanings.

Queued messages

Delivered: recipient acknowledgement verified
Team Alpha

Hand-off records this device's local transport only. A Bluetooth/USB write or Internet submission does not prove radio transmission or recipient delivery. Only a verified recipient acknowledgement confirms delivery; it is not a read receipt.

- ☐ Queued on this device
Just now
- ☐ Waiting: LoRa transmit allowance
Just now
- ☐ Handed to LoRa transport
Just now
- ☒ Delivered: recipient acknowledgement verified
Just now

Queued messages / verified recipient delivery example.

Routing uses eligible current candidates, live links, room admission, leases and bounded retry/search budgets. "Known route otherwise flood" is incomplete: a stale, disconnected or unauthorised candidate is unusable, and discovery does not mean unlimited flooding.

26 / PRESENCE AND CHANNEL DISCIPLINE

Freshness depends on the path

A recent position, a valid route and a reachable peer are different things. Normal scheduling gives a useful expectation, not a delivery guarantee.

How the observation reaches you	Status freshness	Map retention	Route lease
Direct Internet	3 min	5 min	90 sec
Direct LoRa / VHF-R	12 min	12 min	9 min
Radio origin > one app bridge > Internet	9 min	9 min	150 sec
Relayed observation arriving over radio	18 min	18 min	12 min
Additional app relays before Internet	18 min	18 min	150 sec

The bridge is directional

Radio presence is normally paced at three minutes. A bridge passes a fresh radio observation to Internet without waiting for its six-minute radio export. Internet presence exported toward radio uses the six-minute forwarding cadence.

Control overhead stays bounded

Compact presence beacons, compressed route snapshots, coalesced repairs, current room checks and the radio scheduler help limit avoidable work. Shared spectrum, firmware repetition and other users still consume airtime.

What the figures do not mean

Replays do not become fresh merely by arriving later. A route can expire before the displayed profile disappears. Longer legacy/satellite policies and operating conditions remain separate.

27 / SETTINGS AT A GLANCE

Make the device fit its role

Settings gathers the controls that affect this device's connections, identity, background behaviour and daily use. Review them before leaving reliable connectivity.

Communication

Choose Auto for available recipient routes, Internet to send only through the relay, or LoRa to send only over LoRa. The VHF Radio card separately configures supported equipment.

Identity and contact tools

Read the display name, Mesh ID and fingerprint. Use My QR, Scan/Import or Paste QR Payload to exchange public contact identities. Copy Public Key is not a room security key.

Android background operation

Review Unrestricted battery, Never pause MeshLink, manufacturer Autostart where offered, and Background location when sharing position. Grant the required permissions and check the phone's own battery controls.

iOS and Windows

iOS provides Message and SOS alerts and Background location controls; iOS still limits background execution. Windows can run in the system tray and offers Start with Windows. Keep the PC awake and radios attached.

Appearance and voice

Choose System, Light or Dark appearance. Preview and select an available reading voice. Installed language packs, the operating system and permissions determine speech availability.

Utilities and maintenance

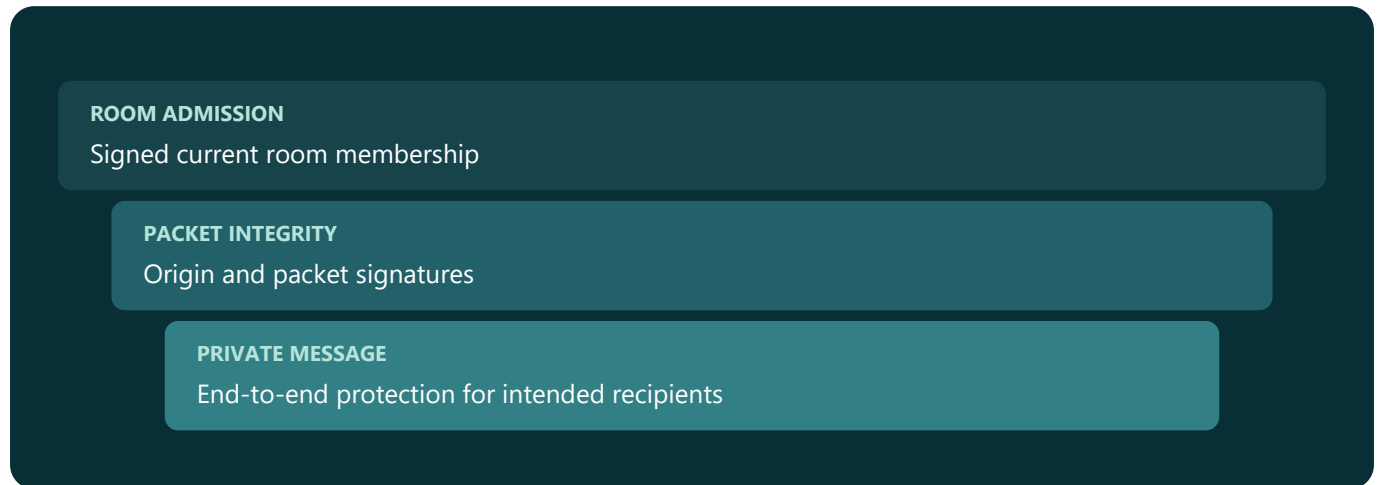
Open Offline Maps to manage downloads, Storage for database size and record counts, and Recent problems for available diagnostic entries. Identity-sharing and QR tools are also available in Utilities.

Use only the permissions needed for your role. A verified room licence, an enabled transport and an active connection are separate states; check each before relying on the device.

28 / PRIVACY AND SECURITY

Protection with clear boundaries

Direct and group messaging use end-to-end content encryption, signed identities and room admission to protect different parts of the communication path.



Message protection

Private direct and group content is protected for its intended recipients. Sender and packet signatures support integrity. The outer room envelope adds authenticated room protection and current membership checks. These controls complement one another at different boundaries.

Local storage

Message bodies and previews are encrypted locally where the device key store is available. This is not a claim that every database field, export, backup or screenshot is encrypted by the app. Protect the device, its OS account and recovery material.

Service boundaries

The Internet relay forwards sealed traffic with temporary buffering rather than a durable cloud chat archive. The account service handles email, licences and purchase records. Optional reports can include content the user explicitly submits. Third-party maps, stores and speech engines have their own processing.

Security depends on trusted devices, keys and configuration. Room membership is not a guarantee against a compromised authorised endpoint. Follow your organisation's data-handling and radio-equipment rules.

29 / ORGANISATION DEPLOYMENT AND SUPPORT

Prepare, test, then expand

Treat the app, the room, the phones and the radio settings as one system. Start with a small known group before increasing team size.

1 Set the room and roles

Choose capacity, name the room, issue authorised keys privately and appoint an operator. Purchased and operator-created manual rooms use the same room boundaries.

2 Stage the devices

Use the intended current Store edition. Verify email, register each device, check the room name and confirm a clear display name.

3 Prepare the field kit

Check charging, antennas, permitted radio settings, Bluetooth/USB access, cached maps/terrain and the correct location source.

4 Run a path test

Test direct, bridge and offline cases with acknowledgements. Change rooms deliberately; confirm paid-seat release and destination capacity.

5 Monitor and support

Inspect Radio-health and queued-message reasons before retrying repeatedly. Keep an alternative emergency method and a clear support/reporting process.

Internet disconnected

Confirm data access, current room/expiry and clock, then reconnect. An enabled card alone is not a live session.

Radio linked, no reply

Check same-room membership, radio channel, available route, queue reason and the recipient's powered state.

Cannot change rooms

Check room capacity and current authorisation. A management-email switch alone does not change the active room.

Missing map or terrain

Select the correct provider/area, inspect missing downloads and reconnect to acquire required data.

Stay informed

Developer: Suyash Dayal | Support: contact@meshlink.in | Website: meshlink.in

DOCUMENT BASIS

App source and platform adapters, 3.9.7 revision. Room admission, licensing and relay source. Radio-health guide and release records, 18 October 2026. Illustrative app views are included. Confirm current Store availability and test the intended equipment before deployment.