

Ham Chatting

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Introduction

Ham Chatting is a handheld for where you are standing. It carries push-to-talk voice and text between the phones around you over Wi-Fi — with no internet, no repeater, no reflector and no digital-voice hotspot. Nothing you say leaves the network you brought with you.

It is NOT a radio, and you do not need a licence

This is the most important thing to understand about the app. Ham Chatting never transmits on the amateur bands. It moves your voice over an ordinary Wi-Fi network, exactly as any other app on your phone does. That means no licence is required to use it, so family, helpers and unlicensed visitors can join a field-day team on equal terms. It also means the rules that govern on-air operating — including the prohibition on encryption — simply do not apply here. The app cannot key a radio, by design.

What it is for

Field days, hamfests, club meetings, drills, contest sites, classroom sessions — the moments when the people you need are close enough to see, and tying up a frequency to talk to them makes no sense.

Be honest about the range

Usable voice range is roughly 30 to 80 metres in the open, and less through walls. A five-watt handheld does kilometres. Ham Chatting is a site intercom, not a replacement for your HT, and it is better to know that before you rely on it.

Before You Start

You bring the network

Ham Chatting has no server of its own, so everyone must be on the SAME Wi-Fi network. It does not need internet — in fact it works perfectly with the internet unplugged. What it needs is something for the phones to join.

A pocket travel router is the best answer

A small USB-powered travel router, the kind that costs about the price of a meal, is the ideal setup. It reaches further than a phone hotspot, takes far more people, and — most importantly — the net survives when any one person walks away. Plug it into a power bank and put it in the middle of your operating position.

An iPhone cannot host

iOS gives apps no way to create a Wi-Fi network for other phones. If your group is all iPhones and there is no router or Android phone to host, you cannot form a network at all. This is an Apple restriction, not something the app can work around.

Keep the app on screen

Ham Chatting runs in the foreground only, on both iPhone and Android. While you are on a channel it holds the screen awake on purpose, and you will see a note saying so. Put the phone face up on the table, the way you would rest a handheld. If the phone does go to sleep, or you take a call, or you switch to another app, the operating system tears down the app's network connections — so when you come back Ham Chatting rebuilds them for you and the roster refills within a few seconds. You do not need to leave and rejoin.

The Radio Screen

The Radio screen is where you operate. It shows the channel you are on, who else is in range, whoever is transmitting at that moment, and the push-to-talk button. Set your callsign in Settings before you join: everyone on the channel is identified by it — on the roster, in the message log, and when Net Control calls you — so the app asks for one before it lets you on. You still do not need a licence for any of this; if you have no callsign, any short name will do. The first time you join, the app also asks you to accept the house rules (see The Net).

Push to talk

Hold the big button to talk, let go to listen — half duplex, like a handheld. Your microphone is closed whenever you are not transmitting, so nothing is picked up while you are listening.

Nobody can double

This is the one thing Ham Chatting does that no radio on earth can. When you press the button it turns AMBER for a moment and your microphone stays SHUT: you have asked for the channel, not taken it. It turns RED, and only then opens the microphone, once the channel has actually granted you the floor. Two people physically cannot talk over each other, because nothing on the channel can transmit without permission.

Who is in range

The roster lists everyone the app can currently hear, with bars showing link quality. Those bars are NOT an S-meter: they measure the round trip of the packets between your phone and theirs. Nothing here is on the air.

When nobody appears

If the roster stays empty, the screen tells you what to check rather than spinning forever. By far the most common cause is AP isolation — see Troubleshooting.

Channels

CALL and twelve working channels

CALL is where everyone gathers, labelled with the simplex calling frequency your ITU region uses, and it is OPEN — anyone on the same Wi-Fi joins it by tapping it. That is what makes it a

meeting place. The twelve working channels are for the actual conversation: split off to one, work, and come back to CALL when you are done. It is the same discipline you would use on a repeater and a simplex frequency. Each working channel has a code, and CALL does not.

Holding a channel

The first person onto a working channel sets its CODE. The app offers one — six characters chosen so they cannot be misheard across a field — or you can use a word of your own; a longer one is stronger. Everyone else needs exactly that code, and a padlock on the tile means somebody there is using one. Share it by holding up the QR or by reading it out: spaces, dashes and capital letters do not matter. Each tile also shows how many stations are on that channel, so you can see at a glance where everybody went, and channels with people on them sort to the top. Stations on another channel do not appear on your roster and cannot hear you.

Ownership is advisory

When the last person leaves a working channel, it frees itself. The app does not try to stop somebody else claiming it later: on a local network there is nothing to enforce that with, and pretending otherwise would be theatre.

Joining by code or QR

CALL is open and needs nothing. Every working channel is joined with its code, and the code is not a label that gets checked — IT IS WHAT UNLOCKS THE CHANNEL. Scanning the QR is the quicker way, because a code cannot be misheard across a noisy site, but typing it is exactly as good: both derive the same key. The type-in box is always on screen, whether the camera works or not, and beside it you choose which channel the code is for, because a code does not carry one. If the camera is switched off for Ham Chatting, or another app is using it, the panel says so and offers a button to the right settings page instead of going black.

A wrong code produces no error message, and that is deliberate: the channel is simply silent, because your phone cannot open what the others are sending. There is no success-or-failure answer to hand somebody who is guessing.

Remember where the real front door is. Everyone has to be on your Wi-Fi to reach you at all — within a few tens of metres, on a network somebody let them onto. Ham Chatting is a tool for a group that arranged to meet, not a room strangers wander into, and the network is most of what makes that true. The code is the room.

Messages

You cannot double on text

Text rides the same channel as the voice, but it is never subject to the floor. You can type while somebody else is talking and it goes straight through — no waiting, no clashing.

Quick messages

The chips along the bottom are the Q-codes you actually use at a site: QSY to move channel, QRT to close down, QRX to stand by, QSL to acknowledge, QTH to ask where somebody is, 73, and a plain HELP.

The Net

Net Control

One station on the channel decides who may transmit. That single point of authority is the entire reason two people cannot talk over each other. The role is chosen automatically.

It stays put

A station already running the net is never displaced by somebody arriving, even if the newcomer would be a better choice. If the role changed every time anyone walked in, the channel would stall each time. Only losing the current Net Control causes a new one to be chosen.

Waiting to talk

If somebody else has the floor, your request joins a queue and the Net page shows the order. When the current speaker finishes, the floor passes to whoever asked first.

If a speaker vanishes

If the station holding the floor walks out of range or its battery dies, the channel does not lock up: the floor passes on. A stuck transmit button — a phone in a pocket — is caught by a time-out timer, exactly as a repeater would.

Blocking and reporting

Any station can block another for itself: Net → Stations → Block. Their voice and messages stop on your phone at once, and stay stopped after the app closes and after a settings reset. Nobody else is affected and the station is not told. Report — the flag beside the name — blocks the station too, and opens an email to the developer with its identity and the time filled in; every report is read and answered within 24 hours. There are no accounts and no server, so be clear about the limits: a block is by device, and somebody determined can reinstall the app and appear as a new station. Net Control can refuse them the floor, and your group can move to a working channel with a fresh code to leave them behind.

House rules

Before you join a channel for the first time, the app asks you to accept the house rules: zero tolerance for abuse — harassment, threats, hate, sexual content, spam or anything illegal — in your voice, your messages or your station name. Read them again any time under About → House Rules; the full terms are at unixeer.com/ham_chatting/terms.html.

Offensive words

Common offensive words in the messages and station names you receive are hidden by default — the first letter stays, so you can still see that something was said (Settings → Hide offensive words). It never changes what you send, and it cannot filter a voice: block the station for that.

Extra

Parrot self-test

Parrot plays your own transmission straight back into your ear, so you can set your level and prove the audio works with nobody else present. It runs through exactly the same receive path as a real station, so what you hear is what they would hear.

Replay the last two minutes

The app keeps the last two minutes of everything you heard, so “say again?” is a button rather than a request. No radio can do this. Buttons offer the last ten seconds, thirty seconds, one minute and two minutes. It costs a few megabytes of memory at the default voice quality, and about fifty kilobytes on the Efficient setting — it stores the audio exactly as it arrived, so a replay sounds the same as the original.

Diagnostics

If something is not working, tap Email diagnostics: your mail app opens with them already filled in, and they are copied to the clipboard as well in case your mail app trims them. They say which network you are on, who the app can see, and what it has tried — which turns “it does not work” into something answerable.

Privacy, Honestly

Private channels

Every working channel is genuinely encrypted, because its code derives the key that seals it: somebody sitting nearby with a laptop cannot simply read the traffic off the air. Because Ham Chatting is not a radio, encrypting it is entirely legal. CALL is deliberately NOT encrypted — it is the meeting place, and a meeting place nobody can enter is not one. Treat CALL as you would treat a simplex calling frequency: assume anyone nearby can hear it.

What it does NOT protect against

Be clear about the limits. Anyone who has the channel code can read everything on that channel, including anyone they pass it on to. There is no protection between members of the same channel. If a code is shared, it cannot be un-shared — change it by agreeing a new one and re-joining. The six generated characters are convenient rather than strong; a word of your own is better if it matters. This is the right tool for keeping the next club off your working channel; it is not the right tool for anything that genuinely must stay secret.

CALL is open on purpose

The CALL channel is not encrypted. It is the meeting place, and a meeting place nobody can enter is not one. It is still authenticated, so the roster and blocking work there.

Your station identity

Every phone has its own identity, separate from your callsign, and it is what other operators recognise you by. Two phones belonging to the same operator are two different stations, which is exactly right. You can generate a new identity in Settings, but every other station will then see you as a brand-new station.

Nothing is collected by us

Ham Chatting has no account, no server and no telemetry of its own. Your traffic never leaves the local network, and nothing is sent to the developer. One exception, on Android only: the QR scanner is Google's ML Kit, which sends Google diagnostics about the scanner itself — the phone's make, model and system version, the app version, and how long a scan took — whenever you use it. The camera picture and the code are never sent. Type the code instead of scanning it and nothing is sent at all.

Troubleshooting

Nobody appears in the roster

First, make sure everyone really is on the same Wi-Fi network — not the same building, the same network. Then check for AP isolation.

AP isolation

Many routers, and almost every guest network, ship with a setting called AP isolation or client isolation switched on. It stops devices on the network from seeing each other. Everything looks correctly configured, and nothing works. This is the single most common reason Ham Chatting cannot find anyone, and it is why a travel router you control is worth carrying.

iPhone asks about Local Network once

The first time you join, iOS asks permission to talk to devices on your network. If you decline, iOS never asks again and the app cannot find anybody — you have to re-enable it in the iPhone Settings app under Ham Chatting.

No microphone

If the app says the microphone is unavailable, receiving still works: you will hear others, but cannot talk. Check the microphone permission in your phone settings.

The audio sounds robotic or underwater

That is the Efficient voice setting, and it is a choice you can change. Efficient uses the Codec2 vocoder, which rebuilds your voice from a description of it rather than sending the sound —

forty times less data, and a synthetic, underwater character that no amount of signal can remove. Go to Extra, then Voice quality, and pick Clear, which sends uncompressed telephone-quality audio and is the default, or Wide, which sends twice as much again and is the most natural. The setting changes only what YOU transmit; you always hear other stations the way they chose to send. If instead the audio breaks UP — stutters and drops rather than sounding synthetic — that is the network losing packets. The app repairs a short dropout by fading out what it last heard, so a moment of weak Wi-Fi should sound like a brief blur rather than a click; if it is bad enough to be obvious, the two phones are probably too far apart, or the network is congested. Move closer, or switch to Efficient, which needs a fortieth of the data and will hold up where Clear will not.

Everyone hears a howl

If two phones are close together and both on speaker, each one picks up the other. Move apart, or use headphones — the same as with two handhelds side by side.

Support

Email unixeer@gmail.com. Please include the diagnostics from the Extra page: they answer most questions immediately.

About also carries the Licences & Notices — Codec2 (LGPL-2.1, with a written offer of its source) and libsodium (ISC) — the Privacy Policy and the House Rules.

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