

RoomCast

User Manual — RoomCast for Mac

Walter Kaan
roomcast.channel

https://roomcast.channel/

Download RoomCast: https://roomcast.channel/#download

If RoomCast helped: https://buymeacoffee.com/roomcast

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This guide is also on the web: roomcast.channel/manual.html. Download RoomCast at roomcast.channel/#download. If RoomCast helped, you can buy me a coffee.

This guide is for the person running the event. You do not need to be comfortable with networks or audio software. Listeners join a Wi-Fi network, scan a QR code, and listen in the browser. They do not need to sign in or create an account.

RoomCast sends sound from a Mac to phones in the same room. People use it for a live interpreter, a silent disco, an overflow or cry room, and similar room-audio jobs. The audio stays on the local network. It is not uploaded to the internet, and the app does not record.

This guide describes the RoomCast Mac app. The current download from roomcast.channel is version 1.0.2 (build 2). About 50 phones on a modern Wi-Fi router can listen at once. The real number depends on the router, other traffic on the network, distance and walls, and the quality setting.

What to bring

- A Mac with macOS 13 Ventura or later (Apple silicon or Intel).
- RoomCast, installed in the Applications folder.
- The sound source: a USB or Thunderbolt audio interface from the sound desk, the Mac's built-in microphone for a small room, a headset or earbuds, or — for music from an app or DJ software — the free BlackHole 2ch driver (see Broadcast music from an app).
- Your own small Wi-Fi network for the phones and the Mac. A portable or travel router is the reliable choice. The venue's Wi-Fi often blocks phones from seeing each other.
- Power for the Mac and that router. Closing the laptop lid puts the Mac to sleep.

Bring your own network

Venue Wi-Fi often blocks this. Guest networks isolate each phone, so a phone can reach the internet and still be unable to reach the Mac. Bring a small network of your own and the venue's Wi-Fi no longer matters.

Any portable or travel Wi-Fi router will do. It does not need an internet connection. RoomCast only needs the phones and the Mac on that same private Wi-Fi.

What to look for when you buy or borrow one:

- It can handle about 50 phones on a modern Wi-Fi router. The real number depends on the router, other traffic on the network, distance and walls, and the quality setting.
- It can reserve a fixed address for the Mac (sometimes called a DHCP reservation, a static lease, or address binding).

A phone's personal hotspot usually stops at about 5 to 10 devices. That is fine for a rehearsal or a handful of listeners. It is too small for a typical room of phones.

The useful part is doing this at home, before the event. Set up the router and the Mac, listen on your own phone, and confirm it works. Give the Mac a fixed address on that router so the listener link stays the same next time you power everything on. The listen address contains that address and the listener port, for example `http://192.168.1.20:8889/`. When the address stays put, make the poster before the event. On the Listen card, **Open PDF QR Poster** saves a PDF and opens it. Print that PDF yourself. It uses that stable link, so you can print or email it days ahead. Once the travel-router address is stable, fill in the Wi-Fi name under **Settings → Poster**, open the PDF, and print it. People can join the network from the poster before they scan the listen code.

The app warns you if the Mac's address has changed since the poster was made. If you have to use the venue's network instead, ask them for a fixed address for the Mac.

Name the Wi-Fi on the poster

Listeners have to join your network before the listen code will work. Open **Settings → Poster** and fill in:

- **Wi-Fi name.** The name people see when they join. Type the network the phones will use.
- **Password.** What people type if they cannot scan the join code. It is stored in the macOS Keychain on this Mac. It is not saved in the settings file, the log, or diagnostics.
- **Security.**
- **Hidden network.** Turn this on only when the router does not broadcast its name.

A short hint under those fields explains how the name is used on the poster.

If the Wi-Fi name is filled in, the poster has two codes, in order. **1. Join the Wi-Fi** is a join code for that network, with the name and password written underneath. **2. Open the broadcast** is the same listen link as the window, written out underneath. The last line says tap play and use your own earphones. Scan the first code, then the second.

If the Wi-Fi name is empty, the poster stays one code: the listen link, and a blank line where you can write the network name by hand.

Anyone who can read the printed sheet can read the Wi-Fi password. Print it for the room, and do not leave copies where you do not want that password seen.

Set it up at home, then test it

Do this once, on the Wi-Fi you will take to the venue.

1. Turn on your router. It does not need the internet.
2. Join the Mac to it, with the Mac's address reserved so it stays the same.

3. Install RoomCast and open it (the next section). Allow the microphone. If the firewall asks whether to allow incoming connections (it may name RoomCast or mediamtx), allow them. mediamtx is the helper program the phones connect to.
4. Plug in the audio interface, or use the built-in microphone for this test. For music from an app, set up BlackHole first (see Broadcast music from an app). In Settings, choose the input. For speech, leave quality on **Speech 32k**.
5. Watch **Input level** on the Broadcast card. Talk, or play the desk. The meter moves before you go live. If it stays empty, the Mac is listening to the wrong input.
6. Press **Start Broadcasting**. The Listen card should show the listen address, for example `http://192.168.1.20:8889/`. An older poster or QR code that still ends in `/live` opens the same page.
7. On your phone, join that same Wi-Fi. A phone still on the house network will not open the link.
8. Scan the QR code, or type the link. Tap play. If you hear nothing, unmute using the listener steps below.
9. In **Settings → Poster**, type the Wi-Fi name, the password, and the security type. Then, on the Listen card, press **Open PDF QR Poster**. The PDF opens so you can check it. Print that PDF from Preview, or any PDF app. The first code should join the Wi-Fi, and the second should open the stream. Email the PDF to yourself and try both codes on the phone. Print copies once this link is the one you will keep. If you change the router address, the Wi-Fi name, or the password, open the PDF and print again.
10. Stop the broadcast. Power the router off and on, start the Mac again, and confirm the listener link is unchanged.

Take the same router, the same Mac, and that PDF to the event.

Install and first open

1. Download RoomCast from roomcast.channel. The current file is the disk image `RoomCast.dmg`.
2. Open the disk image and drag **RoomCast** to **Applications**. Running it from the disk image or from Downloads makes macOS treat it as untrusted, and it then behaves oddly.
3. Open RoomCast from the Applications folder.
4. Allow the microphone when asked. That permission is how the app hears the sound desk.
5. When you first press **Start Broadcasting**, macOS may ask whether to allow incoming connections so phones on the Wi-Fi can reach this Mac. Click Allow.

The current download is signed with Apple Developer ID and notarized. Most Macs open it after you drag it to Applications and double-click it. The first open may show that the app was downloaded from the internet; choose Open.

The first time you open RoomCast you may see **Welcome to RoomCast** and **Getting Started**. Those screens explain that there is no sign-in or account, that the Wi-Fi does not

need internet, and that sound can come from the Mac's microphone, an application, a headset or earbuds, or a mixing desk.

On the main window, **Help** includes **Getting Started**, **FAQ**, and **Troubleshooting**. Getting Started and the RoomCast FAQ are also how you come back to those explanations later.

If macOS blocks the app

If a dialog says "RoomCast" Not Opened – Apple could not verify…:

1. Click **Done**. Do not click Move to Trash.
2. Open **System Settings → Privacy & Security**.
3. Scroll to **Security**, find "RoomCast was blocked…", and click **Open Anyway**.
4. Confirm with your password or Touch ID, then click **Open**.

On macOS 13 and 14, Control-click (right-click) RoomCast in Applications → **Open** → **Open** can also work, as can **Open Anyway** in System Settings → Privacy & Security.

If macOS says the app **is damaged**, the download or the signature is broken. Download it again.

After an update

A new download is quarantined again, so macOS may ask you to open it once more. It may also ask for the microphone again. If you previously clicked Don't Allow, go to System Settings → Privacy & Security → Microphone.

The main window

The main window is built around two cards, then support and help.

Broadcast

- **Start Broadcasting** starts the stream. **Stop Broadcasting** ends it.
- **Change Sound Source** opens the input picker.
- **Input level** shows whether sound is reaching RoomCast.
- **Volume** adjusts the broadcast level. **0 dB** leaves the volume unchanged.

Listen

- A QR code for the listen link.
- The listen address, with a `.local` fallback shown as well.
- **Open PDF QR Poster** saves a PDF of the poster and opens it so you can print it yourself.
- **Listening now** shows how many people are connected.

Support RoomCast has links to Ko-fi, Patreon, and Buy Me a Coffee.

Help has **Getting Started**, **FAQ**, and **Troubleshooting**.

Settings

Open **RoomCast → Settings…** (Command-,). Settings is in the app menu, under the RoomCast name.

The sidebar lists the panes in this order: **Audio**, **Stream**, **Poster**, **General**, **Advanced**.

The footer of the Settings window has **Save and Close**, and the line **Changes take effect next time you start broadcasting.**

Audio

Use the Audio pane (or **Change Sound Source** on the main window) to pick the input: a USB interface, the built-in microphone, a headset, or another listed device. For Spotify, another music app, or DJ software, see Broadcast music from an app.

Quality presets on this pane include **Speech 32k** (the default, and the one that uses the least Wi-Fi), **Standard 64k**, and **Music 96k**. There is also a bandwidth estimate for the quality you picked.

For an interpreter feed, leave channels on **Mono** (also described as **All inputs summed**). Mono adds every input on the device into one stream, so a stereo desk is heard even when the voice is only on one side. Stereo uses the input you choose and the next one.

Bluetooth earbuds (for example AirPods) switch to call mode when they are the microphone. Their own playback drops to call quality, so the stage may be harder to hear. If you use them as the mic, turn Bluetooth off on your phone and on any other nearby device paired to them before you go live.

Stream

The Stream pane has:

- **Stream name.** The default shown is `live`.
- **Port.** The listener port. The default is **8889**.
- **Broadcast title.** This is the name shown on the lock screen and in the listener’s browser. Leave it blank for “RoomCast Broadcast”.
- **Network mode. Auto (UDP+TCP)** is the normal choice. You can also pick **UDP only** or **TCP only**. The hint on this pane is: **Choose TCP only if listeners hear dropouts.**

Poster

The Poster pane has **Wi-Fi name**, **Password** (stored in the macOS Keychain, not in the settings file, the log, or diagnostics), **Security**, and **Hidden network**, plus a short hint under those fields. How to fill them in is under Name the Wi-Fi on the poster.

General

The General pane has:

- **Keep Mac awake while broadcasting.** The Mac still sleeps if you close the lid, unless it is on power with an external display. Leave the lid open, or plug in a screen.
- **Launch at login.**
- **Start broadcasting when the app opens.**

Advanced

The Advanced pane has:

- **ICE port.** The default is **8189**. Phones receive the audio on this port. You only need to change it if another program is already using it, or a firewall blocks it. It must be different from the listener port.
- **URL style. IP** is the one to use on a printed poster when the Mac's address is reserved. The `.local` name can fail on many Android phones.
- **Max listeners. 0 = unlimited**. The default shown is **0**. The app accepts values up to 500.
- **Log level.**
- **Custom bitrate**, from 16–256 kbps, if you need something other than the Speech, Standard, or Music presets.
- **Reset to defaults.**

Broadcast music from an app

RoomCast does not capture other apps' audio by itself. For Spotify, another music app, or DJ software, install the free BlackHole 2ch driver and route the app into it. The same steps are on the FAQ music question, with a short video, and in the silent disco guide.

1. Install BlackHole 2ch and restart your Mac if asked.
2. Open **Audio MIDI Setup** (in Applications › Utilities). Click **+** and choose **Create Multi-Output Device**. Tick **BlackHole 2ch** and your speakers or headphones so you can hear it too.
3. In **System Settings › Sound › Output**, choose the Multi-Output Device (or pick BlackHole 2ch only inside the music app, if it lets you choose an output).
4. In RoomCast, open Settings and choose **Broadcast music from an app**, or choose **BlackHole 2ch** as the sound source.
5. Press **Start Broadcasting**.

You can tweak the volume of each device in Audio MIDI Setup. Do this before the event. If you use Spotify or another streaming service, check that subscription's terms for public or event playback — we cannot advise on what your plan allows.

The poster and the QR code

On the Listen card, **Open PDF QR Poster** saves a PDF and opens it. Print that PDF yourself. The poster is A4, or Letter in the US and Canada. The title is the broadcast title. A small line at the bottom says Powered by RoomCast.

When **Settings → Poster** has a Wi-Fi name, the page has two codes. The first is labelled **1. Join the Wi-Fi**. A phone camera can join from it. The network name and password are printed under that code. The second is labelled **2. Open the broadcast**. It is the same link as the QR code in the window. The last line is **3. Tap play; use your own earphones**. Scan them in that order.

When the Wi-Fi name is empty, there is one code, the listen link, and the first step is a blank line to write the network in. Print once the travel-router address is stable, before people arrive. Print again if that address, the Wi-Fi name, or the password changes.

If you later see a warning that the address changed since the poster was made, the printed code is stale. Fix the reservation, or make a new poster. Do not tell people to keep using the old one.

What to tell listeners

Say this in the room, and leave it on the poster:

- Join the named Wi-Fi first. If the poster shows two codes, scan **1. Join the Wi-Fi**, then **2. Open the broadcast**. A phone that is still on the venue’s Wi-Fi, or on mobile data, cannot open the link.
- Scan the listen code, or type the address under it. Tap play. Use your own earphones.
- If there is silence, tap the speaker or mute icon on the player and in the browser tab, then turn the phone volume up. Phones often start a web player muted.
- Keep the screen on and the browser in front. Locking the phone, or leaving the browser, may pause the audio.
- Plug the phone in for a long session.

There is no password on the stream. Anyone on that Wi-Fi who has the link can listen. The Wi-Fi password is what keeps strangers off your own network.

On the day

1. Turn on your own Wi-Fi. It does not need the internet.
2. Join the Mac to it and open RoomCast. Confirm the listen address matches the poster.
3. Connect the sound desk to the interface, or confirm the music-app path. Check **Input level**.
4. Press **Start Broadcasting**. **Listening now** shows how many people are connected.
5. Listen on your own phone once, on that Wi-Fi, before people arrive. The page title is the broadcast title from Settings → Stream.

6. Put the poster where people can scan it. Remind them about the Wi-Fi name and the unmute step.

Stop with **Stop Broadcasting** when the session ends. Quitting the app also stops the stream.

How many people, and the delay

About 50 phones on a modern Wi-Fi router can listen at once. The real number depends on the router, other traffic on the network, distance and walls, and the quality setting.

The delay is usually around half a second, even on busy Wi-Fi. That suits talks, live translation, teaching and music. It is not meant for lip-sync to live video.

Bandwidth

Every listener is their own copy of the audio. Multiply the preset's kilobits per second by the number of phones, then divide by 1000 to get megabits per second.

The worked example below is for **50 phones**:

Quality	Per phone	50 phones
Speech 32k	32 kbps	1.6 Mbps
Standard 64k	64 kbps	3.2 Mbps
Music 96k	96 kbps	4.8 Mbps

So 50 phones at **Music 96k** use about **4.8 Mbps** of audio (96 × 50 ÷ 1000). Speech at the same 50 phones is about 1.6 Mbps. The network also carries a little protocol overhead, so leave some spare room.

A phone's personal hotspot, at about 5 to 10 devices, is still only for a rehearsal or a handful of listeners.

Troubleshooting

What you see	What to do
macOS says the app was not opened, or is from an unidentified developer	Use the Open Anyway steps under Install and first open. This is uncommon for the current notarized download.
macOS says the app is damaged	Download it again. Drag a fresh copy to Applications.
Input level does not move	

What you see	What to do
	The desk is not feeding the interface, or the music-app path is not reaching BlackHole. Raise Volume if the source is quiet.
Your test phone will not open the link	The phone is on a different Wi-Fi. Join the same network as the Mac. Turn mobile data off for the test if the phone keeps leaving that network.
Listeners in the venue cannot connect	They are on the venue Wi-Fi, or that Wi-Fi isolates clients. Move them to your own Wi-Fi. If you must use the venue network, ask for a fixed address for the Mac.
The link used to work and now times out	The Mac’s address changed. Check the reservation, then compare the on-screen link with the poster. Make a new poster if they differ.
People connect and hear nothing	Tap play. Tap the speaker/mute icon on the player and in the browser tab. Turn the phone volume up. Keep the screen on.
Chrome will not open the stream	Chrome may ask for permission to access devices on the local network. Tap Allow, or check the site’s settings in Chrome and allow local network access.
The listening page is blank, or play does nothing	The listening page needs JavaScript. Turn JavaScript on, or try a different browser.
The sound breaks up, or you hear a regular click	Leave quality on Speech for speech, or in Settings → Stream try **TCP only**.
The Mac slept	The lid was closed, or it was on battery and idle. Power is connected, the lid is open, and “Keep Mac awake while broadcasting” is on.
The microphone prompt appears after an update	Expected. Allow it again. See Install and first open.
It says a port is already in use	Another program is using that port. In Settings → Advanced change the ICE port (8189 by default), or in Settings → Stream change the listener port (8889 by default). If the program is a leftover RoomCast helper, press **Stop leftover helper**, then Start.

More detail is on the troubleshooting page.

Support

RoomCast is free. On the main window, **Support RoomCast** links to Ko-fi, Patreon, and Buy Me a Coffee.

Limits worth knowing

- The stream is local. People off your Wi-Fi cannot listen, including people at home.
- There is no recording in the app.
- About 50 phones on a modern Wi-Fi router can listen at once. The real number depends on the router, other traffic on the network, distance and walls, and the quality setting.
- The delay is usually around half a second. That is fine for talks and music, not for lip-sync to live video.
- Phone operating systems may pause the audio when the screen locks or the browser is in the background.

This guide on the web

This manual is published as pages at roomcast.channel/manual.html:

- Getting started
- Your network and the QR poster
- Broadcast music from an app
- Settings
- Troubleshooting

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