



FlooGoo™ FMA120 Bluetooth Audio Source Dongle

Church Setup Guide v1.1

Flairmesh Technologies

PO Box 4086, Croydon Hills, Victoria 3136, Australia

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Introduction

The FlooGoo FMA120 is a USB Auracast™ transmitter that works with your PC. In a church or similar venue, you can connect it through the PC to the existing sound board. Whether you use USB audio or a simple line-in connection, the same sound that goes to the speakers can also be broadcast over Auracast for people to listen on compatible devices.

For listeners without Auracast-enabled devices, such as many current hearing aids that do not yet support Auracast, the FMA120 can also operate as an Auracast receiver. This allows legacy phones, headphones, earbuds, or hearing aids to tune into the broadcast. For setup instructions, please refer to the separate receiver manual.

[FMA120 Auracast Receiver Mode User Manual](#)

Quick Start

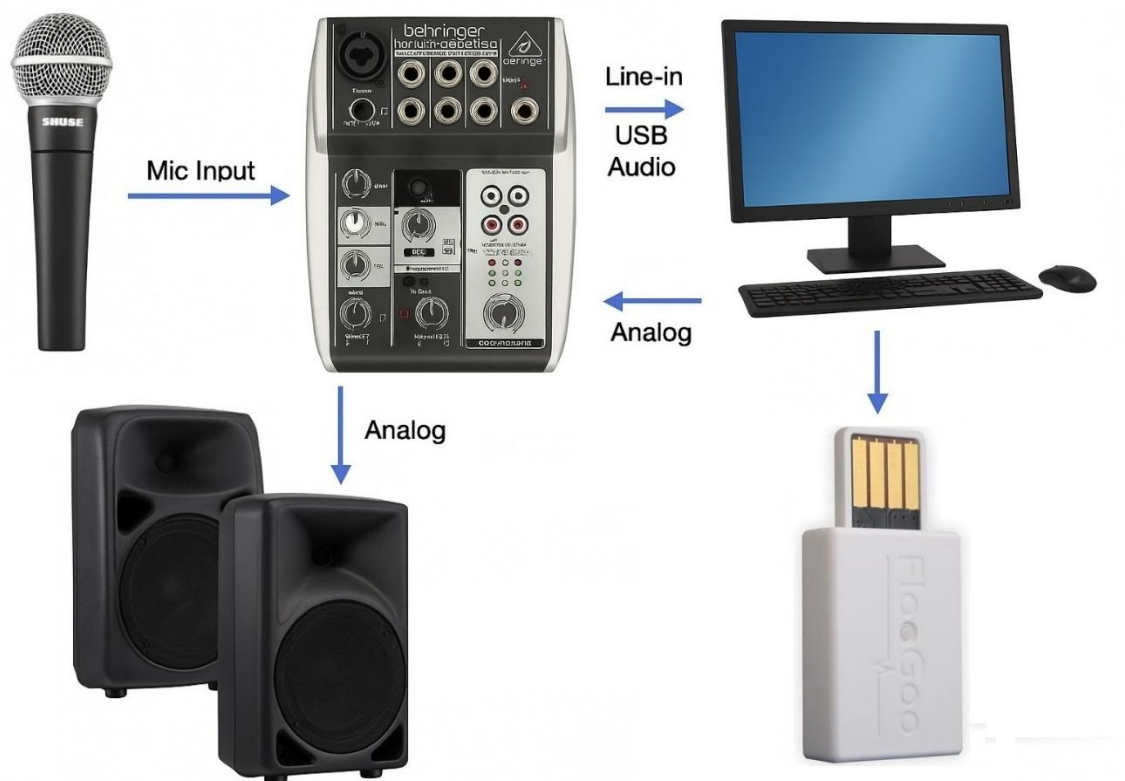


Figure 1. Example Church Audio Setup

As shown in Figure 1, multiple microphones connect to a soundboard, where their signals are mixed with other audio sources and sent to the speakers. Many modern USB soundboards also provide the same main output over USB, enabling the mixed audio to be recorded or processed directly on a PC at the same time.

If your soundboard does not have a USB connection, you can still route its output to the PC using either an **XLR-to-USB recording cable** or an **XLR-to-1/8" (3.5 mm) stereo cable** connected to the PC's line-in jack.

After the audio is available on the PC, open the **FlooCast app**, select the input device under "**Broadcast Additional Audio Input,**" and the signal will be transmitted as an Auracast™ broadcast.

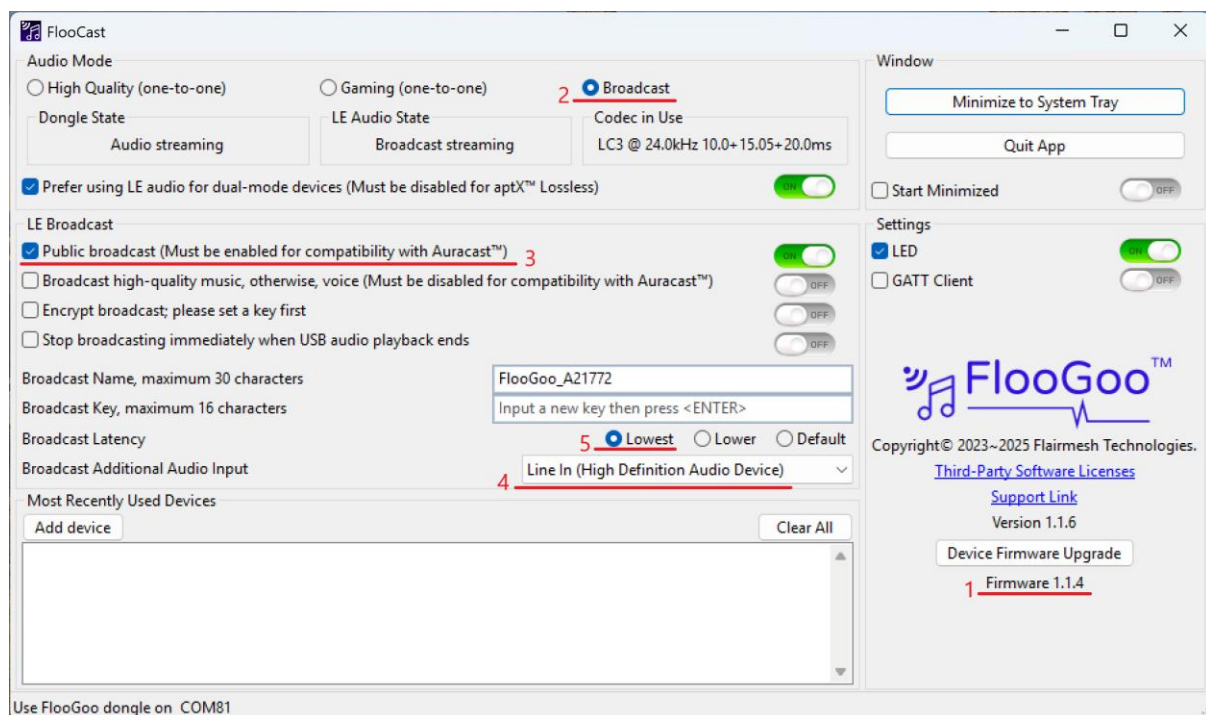


Figure 2. FlooCast Settings for Church Audio

1. Update firmware – Make sure the device is running the latest firmware as shown in the app.
2. Set Audio Mode – Select Broadcast.
3. Broadcast settings – Enable Public Broadcast. If the broadcast will be used with hearing aids, disable Broadcast High-Quality Music.
4. Select input – Choose the audio input interface connected to the sound board.

5. Latency – Set Broadcast Latency to Lowest to minimize delay when using microphones.
6. Mix PC playback – To include audio playback from the PC in both the sound board mix and the FMA120 broadcast:
 - a. Set the PC’s audio output device to its analog output.
 - b. Connect this output to the sound board.
 - c. The playback will be mixed into the main output and sent back to the FMA120 via USB or line-in.

The first time you access “**Broadcast Additional Audio Input,**” you’ll be prompted to allow microphone access — please make sure to grant permission.

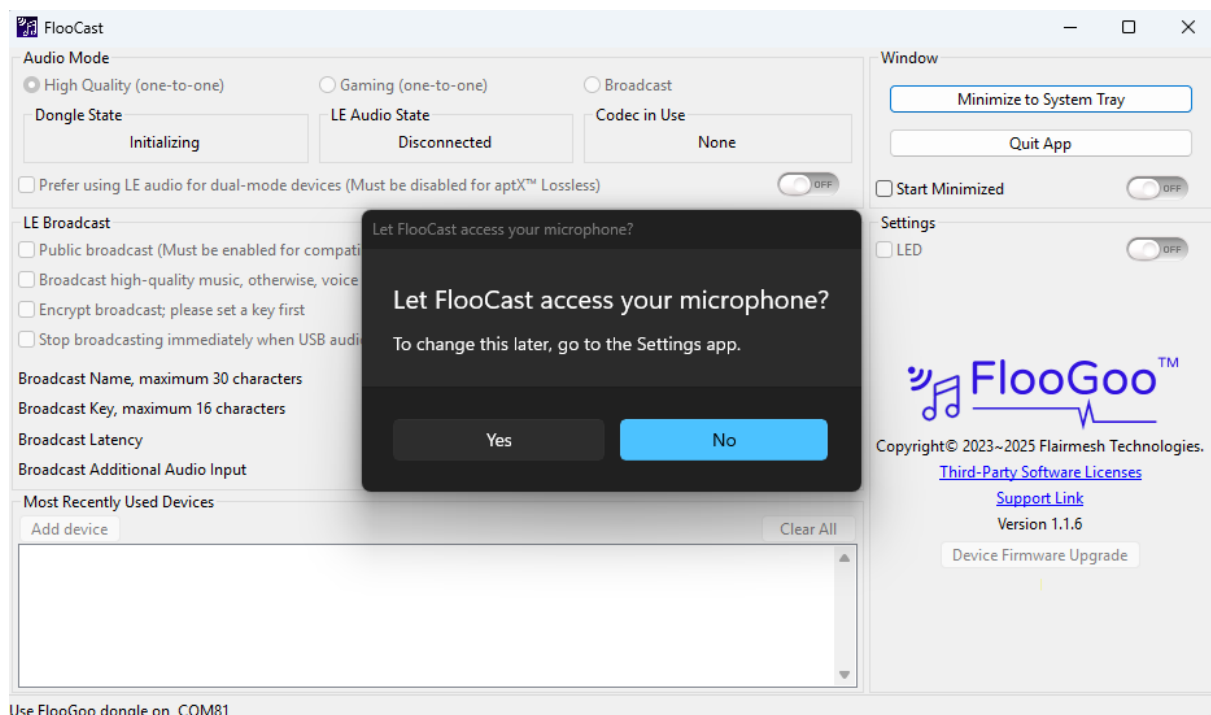


Figure 3. Grant Microphone Access

Additional Setup Guidance

FlooCast Desktop App

To access the advanced functions of the dongle, please download the corresponding host app for your system.

For Windows, you can download the app from the Microsoft Store at the following link:

[FlooCast on Microsoft Store](#)

For Mac, we provide compiled app available for download at the following links. Alternatively, you can run it from the source code on GitHub.

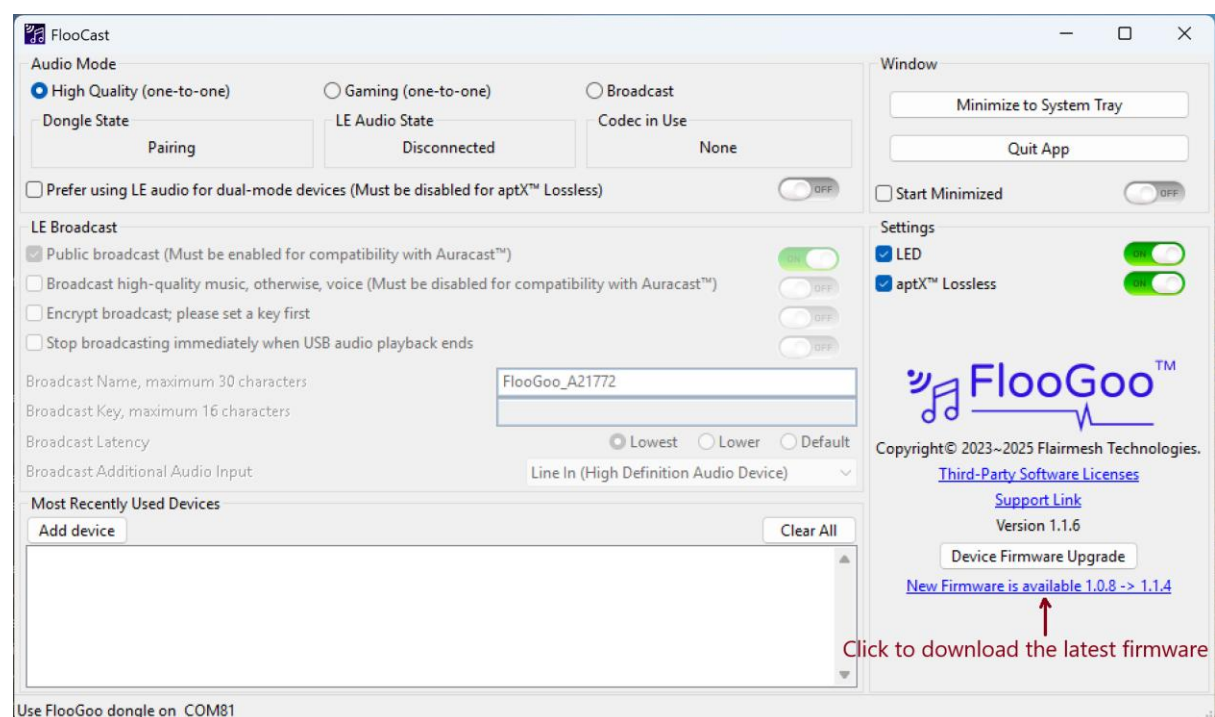
[AppleSilicon](#)
[Intel](#)

For Linux, the app is available as an open-source GitHub repository provided below:

[FlooCast on GitHub](#)

Update the FMA120's firmware

As more Bluetooth earbuds, headsets, and hearing aids are released after the dongle's launch, we continue to improve the firmware to ensure compatibility and performance. When you first open the FlooCast app, it will automatically check if a newer firmware version is available for your dongle.



Note: The “**Device Firmware Update**” button is available **only** in the version of the app from the **Microsoft Store**. Firmware updates **cannot be performed in**

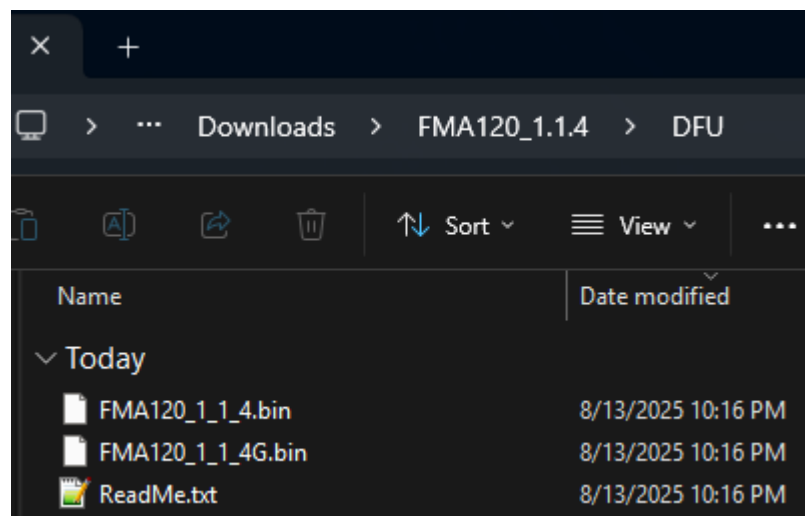
a Windows virtual machine running on a Mac. To ensure a safe and reliable upgrade, please use a **native Windows system**.

After downloading the firmware, please ensure the following:

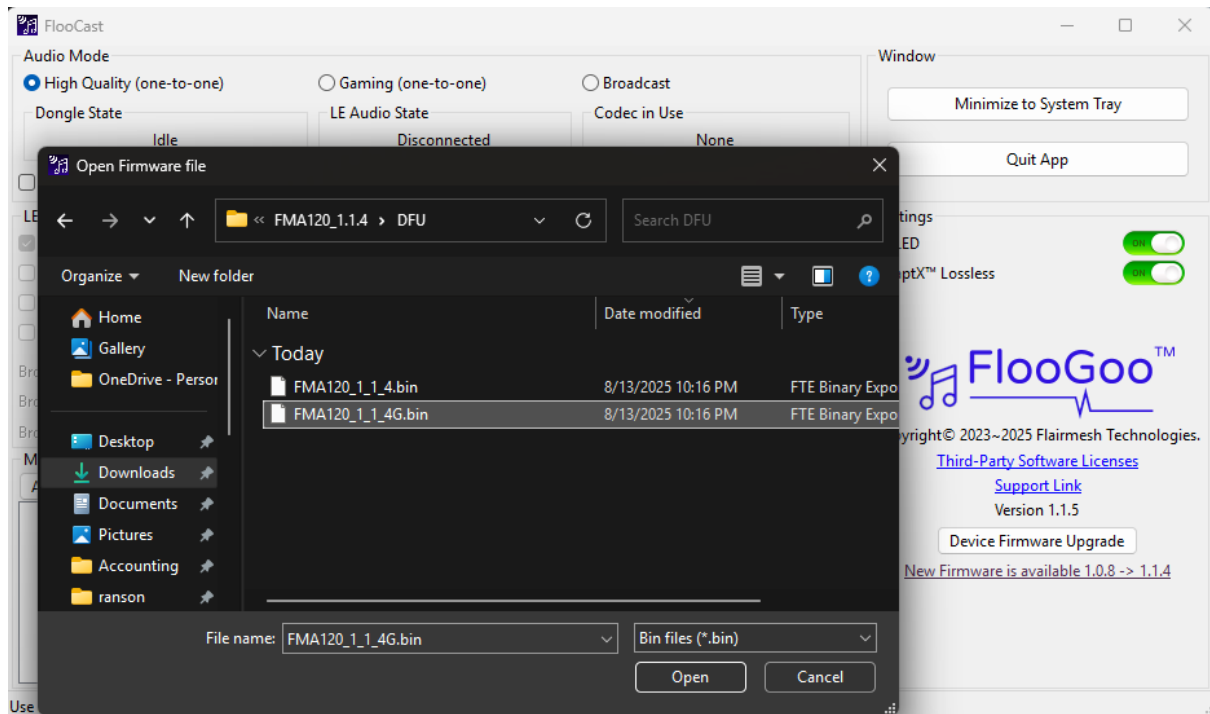
- Unzip the file into a local folder (avoid using cloud-synced folders like Microsoft OneDrive or Google Drive).
- Make sure the full folder path contains only English characters (no special or non-English symbols).

Inside the folder, you'll find a ReadMe.txt file with a brief summary of the firmware update process. The firmware itself is provided as .bin files. In some cases, there may be two .bin files included—these are automatically handled by the FlooCast app. As long as both files stay in the same folder, you don't need to worry about choosing the correct one.

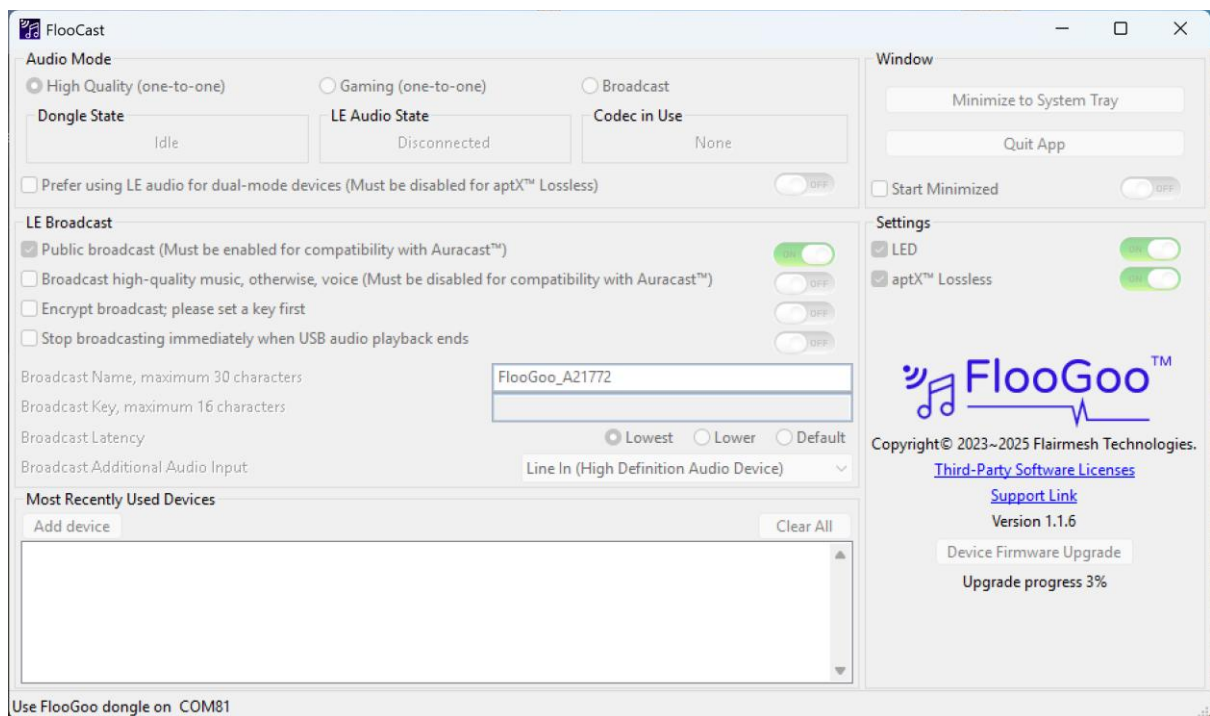
Example of the unzipped firmware folder:



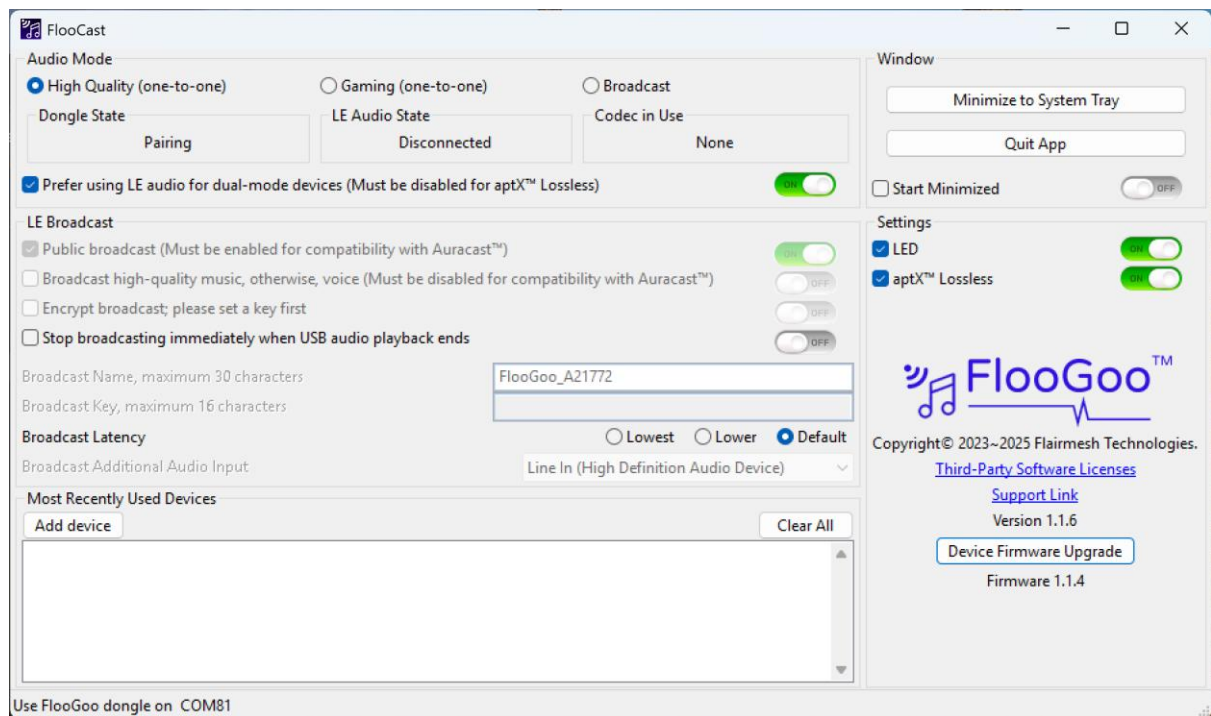
Next, click the “Device Firmware Upgrade” button and select the firmware (.bin) file to begin the update.



The app will display the update progress as a percentage.

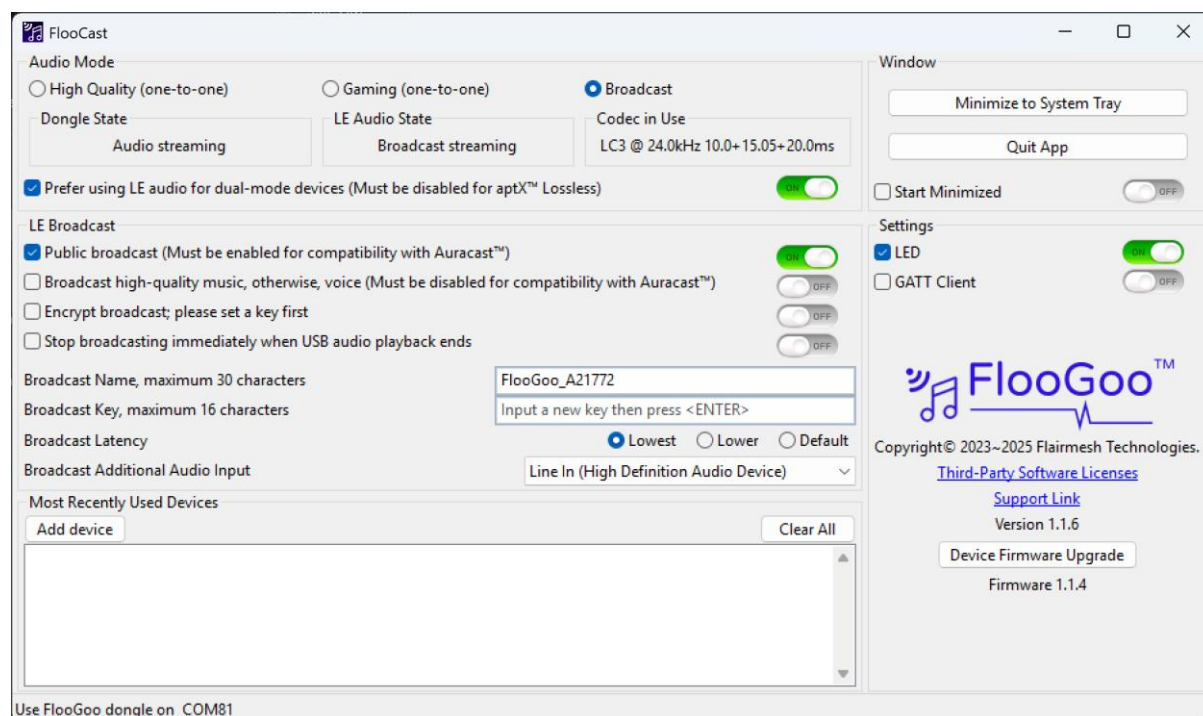


During the upgrade process, progress may **pause at 95%** while the dongle verifies the firmware. This is normal. Please wait until the new firmware version (for example, **“Firmware 1.1.4”**) appears below the **“Device Firmware Upgrade”** button to confirm that the update was successful.



Using FMA120 as an Auracast Transmitter

The FMA120 is [officially listed](#) by the Bluetooth SIG as an Auracast Transmitter.



To Start Broadcasting with the FMA120:

1. Set “Audio Mode” to Broadcast, then choose a device under “Broadcast Additional Audio Input.”
2. Once the “LE Audio State” changes to “Broadcast Streaming”, the broadcast is live.
3. You can now tune into the stream using the name shown in the “Broadcast Name” field. To customize the broadcast name, simply change it to your preferred one and reset the dongle for the change to take effect.

There are eight settings for LE audio broadcast.

Public broadcast (Auracast™)

When enabled, the public audio broadcast feature is activated. The dongle then acts as a PBS. PBS (Public Broadcast Source) is designed for broadcasting to devices without pairing. When disabled, the dongle is tailored for paired

devices, intended for sharing audio with one or two friends or family members. It operates then as a BMS (Broadcast Media Sender).

Broadcast high-quality music

When enabled, the dongle will use a 48 kHz sample rate for music content during broadcasting. When disabled, the dongle will utilize a 24 kHz sample rate for voice content.

For hearing aids, please disable this option, as these devices support a maximum sample rate of 24k.

Encrypt broadcast

If enabled, an encryption code is used to restrict access to the broadcast content, like a Wi-Fi access code, and only those receivers that know the code can access it.

Broadcast Name

This is a human-readable string for the receiver to distinguish between multiple nearby broadcasters.

Broadcast Key

This is an encryption code to be used in the broadcast. When the input code length is less than 16 bytes, it will be padded to 16 bytes with zeros.

Some Android phones may limit the key length to 4 characters. For these devices, please use a 4-character code.

Stop broadcasting immediately when USB audio playback ends

When this option is **off**, the FMA120 will continue broadcasting for 3 minutes after USB audio playback stops.

Broadcast Latency

Select your preferred latency setting:

- **Lowest** – Recommended when broadcasting microphones; minimizes delay.
- **Default** – Provides higher audio quality, but with slightly more delay.

Broadcast Additional Audio Input

Select the audio input device that receives sound from the sound board or a microphone.

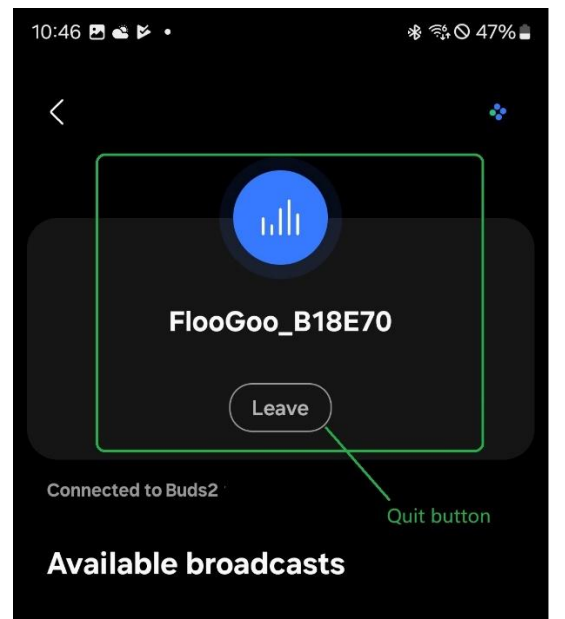
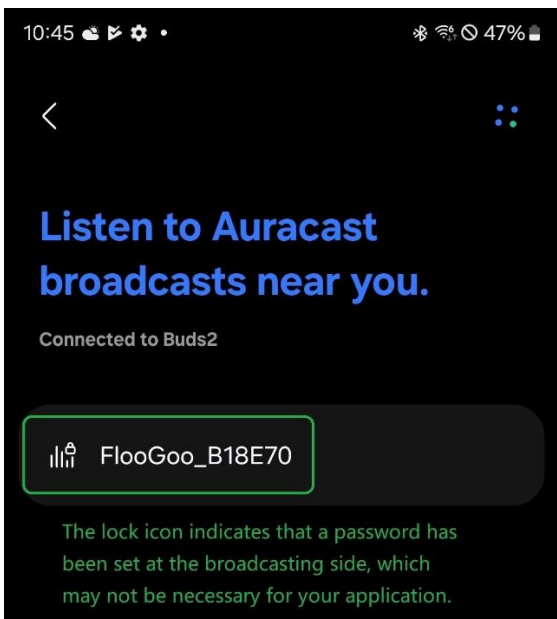
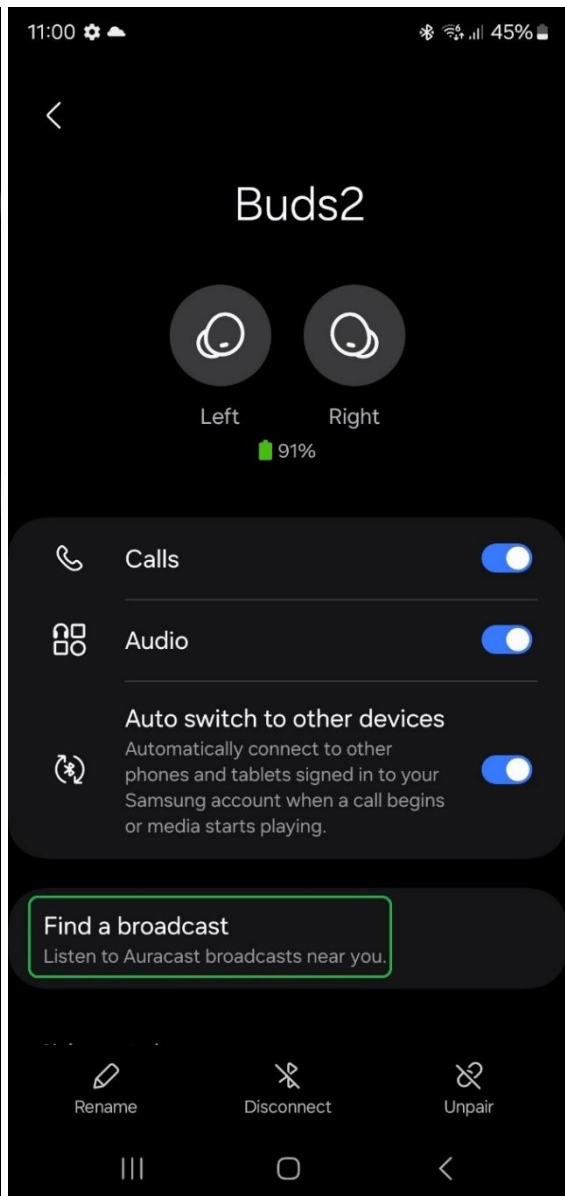
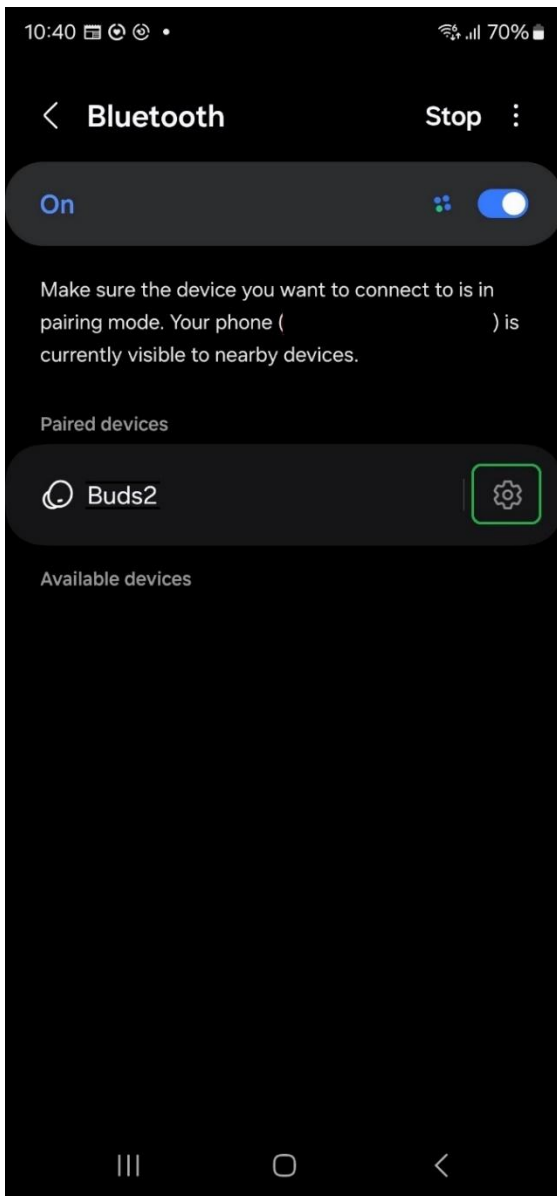
Receiving Auracast

To set up Auracast reception, you can choose one of three methods:

1. **Compatible Android phone** – Use a newer Android device with built-in Auracast support.
2. **Companion app** – Some manufacturers provide apps that help enable Auracast reception.
3. **Second FMA120** –set it to [Auracast receiver mode](#) and connect it to your mobile phone.

For hearing aids, please consult your device manufacturer to confirm whether a firmware update is needed to enable Auracast reception. For example, ReSound Nexia 9 hearing aids require firmware version 9.68 or later to support Auracast.

The following screenshots show a typical setup using option 1 on a Samsung Galaxy S23.



Examples of USB Mixers

Mixer Model	USB Output Type	Notes
Alesis MultiMix 4 USB FX	Stereo USB	Mirrors main mix to USB and analog outs; compact and budget-friendly
PreSonus StudioLive ARc Series (AR8c, AR12c, AR16c)	Stereo USB	Sends mix to speakers while also streaming/recording via USB
Soundcraft Signature 12 MTK	Multitrack + Stereo	Provides stereo and multitrack USB while main analog outs stay active
Mackie ProFX12v3	Stereo USB	Popular in churches; USB out and main outs work simultaneously
Behringer Xenyx Q1202USB	Stereo USB	Affordable small-format mixer; sends main mix to both USB and speakers
Yamaha MG10XU (Budget)	Stereo USB	Reliable budget mixer; USB out mirrors main stereo mix
Behringer Xenyx Q802USB (Budget)	Stereo USB	Ultra-low-cost compact mixer; main mix mirrored to USB
Donner Podcast Mixer DMK25 (Budget)	Stereo USB	Entry-level budget option; marketed for streaming, works for simple church setups

Examples of XLR to USB Cable

If the sound board does not include a built-in USB interface for sending audio to a PC, a simple XLR-to-USB cable can serve as an alternative.

CableCreation XLR to USB-C, 3 ft

Note: These cables usually support mono input only and provide basic audio transfer. They are cost-effective for simple setups (e.g., one microphone or a single mono output from the sound board), but they lack the flexibility and audio quality of a dedicated USB audio interface or mixer. For larger systems or higher-fidelity requirements, a USB sound board or audio interface is recommended.

Troubleshooting Q&A and Support

Q: The LED doesn't flash or light up when I insert it into a USB port.

A: FlooGoo FMA120 can be inserted into a USB-A socket from both sides, but it only works when the correct side is used. Check if the golden connectors on FMA120's USB connector are contacting the receptors of the USB port when inserted.

Q: How can I improve the working range?

A: You may try using a USB extension cable to relocate FMA120 to a higher and better position.

Q: Do I need to keep the FlooCast app running to broadcast?

A:

Yes — if you want to broadcast additional audio coming from the sound board (or any other external input).

No — if you simply set your PC's audio output device to the FMA120, the broadcast will run without the app.

Q: I already have a standard Bluetooth adapter, will FMA120 conflict with it?

A: No, the FMA120 runs all its functions, including the Bluetooth stack, within the embedded high-performance processors inside. It doesn't require additional drivers on the host, so it won't conflict with other Bluetooth adapters.

Q: Where can I find the latest firmware for the dongle?

A: You can find the latest firmware through the [Support Link](#), which is also accessible from the desktop app.

Q: What if I encounter other issues?

A: You can contact us via email at support@flairmesh.com.