USER MANUAL

CASTER

Auracast™ Audio Streamer

Models CASTER · CASTER X | Firmware 1.5.0 | October 2026

AURACAST



Analog audio inputs
Two balanced inputs: stereo, dual mono or mixed mono

Low latency
Auracast™ streaming under 40 ms

Extend coverage
Extender and audio sharing modes, and Hybrid mode with B-SHOW Wi-Fi audio streaming

Language metadata
Each stream carries its language for receivers to show

Timecode
Synchronized audio for video and multimedia over Auracast™

Secure access
Encrypted broadcast and a protected management panel

Flexible antenna options
Internal antennas; external antenna supported on the CASTER X

API control
UDP control API for AV control systems

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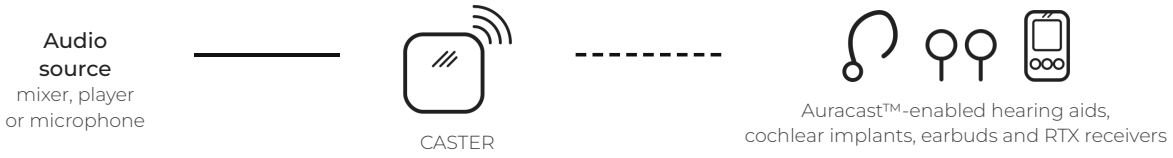
About this manual: this edition covers CASTER firmware 1.5.0 on the CASTER and CASTER X. Screens and features may differ on devices running earlier firmware – see *Firmware upgrade* to update.

01

Overview

The CASTER is a professional Auracast™ streamer that samples analog audio and broadcasts it live – for assistive listening in venues and for high-fidelity streaming to personal devices.

TX How it works



Connect up to two balanced analog inputs; the CASTER broadcasts them as one stereo stream, as two mono channels or as a mixed mono stream. Listeners join the broadcast on their own device, or with an RTX receiver and headphones or a neck loop.

Models

MODEL	DESCRIPTION
CASTER	Professional Auracast™ streamer with two balanced analog inputs and an internal antenna.
CASTER X	As the CASTER, with a switchable internal / external antenna (front-panel RP-SMA connector) to tune RF coverage to the room.
CASTER XD	Dante® model – audio is received digitally over a Dante® network, with a switchable internal / external antenna. *Not covered in this manual.*

The CASTER and CASTER X share the same management panel and features; unless stated otherwise, everything in this manual applies to both. The CASTER XD has its own user manual – find it on the CASTER page of bettear.com: bettear.com/products/caster

Where it is used

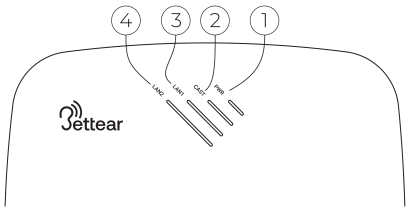
Theaters · Sports arenas · Cinemas · Classrooms · Airports · Meeting rooms · Law courts · Museums

The CASTER has a built-in web management panel for setting up the unit itself. Hive Central is Bettear's centralized management software for the Bettear Auracast™ ecosystem – it manages CASTER units, RTX receivers and other Bettear devices together. Product manuals and the Hive Central User Guide are on bettear.com – see chapter 15, *Related documentation & tools*.

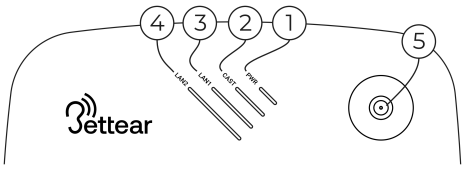
02

Front & rear panels

Front panel



CASTER
Internal antennas only



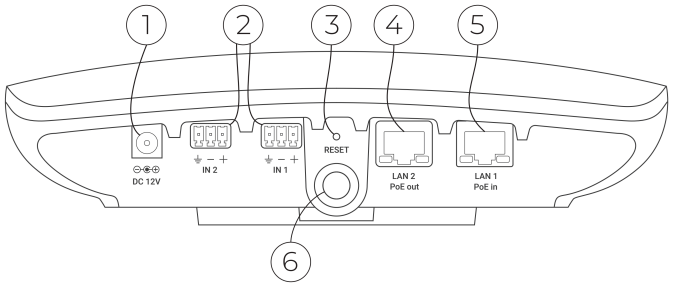
CASTER X
Internal + external antenna (5)

1. **Power indicator** (PWR)
2. **Audio broadcasting indicator** (CAST)
3. **LAN 1 connectivity indicator**
4. **LAN 2 connectivity indicator**
5. **External antenna connector** – 50-ohm RP-SMA jack (male center pin); fit a 2.4 GHz antenna with an RP-SMA plug

> **Antenna:** an external antenna is supported on the CASTER X and CASTER XD models only. The regular CASTER model has internal antennas only.

The LAN 1 and LAN 2 indicators can also be switched to audio-presence indicators in the management panel.

Rear panel



1. **Power input** – 12 VDC, 2.5 A
2. **IN 1 / IN 2** – balanced analog inputs (terminal block)
3. **Reset button**
4. **LAN 2** – 1 Gbps, PoE out (License S)
5. **LAN 1** – 1 Gbps, PoE+ in
6. **Mounting hole** – 3/8" internal thread

> **Note:** the rear panel is identical on the CASTER and CASTER X. LAN 2 (PoE out) is enabled with License S, which can be added at any time.

03

Quick start

Out of the box the CASTER broadcasts with its default settings. For anything beyond that, use the management panel.

1. Connect IN 1 and IN 2 to the audio source – balanced inputs give the best quality.
2. Power the unit – 12 VDC 2.5 A supply, or PoE+ on LAN 1.
3. Join the **'B-CASTER'** stream on an Auracast™ device.

> **Note:** adjusting the input gain and changing the broadcast name require access to the management panel – see chapter 04, *Accessing the management panel*.

04

Accessing the management panel

The management panel is a web page served by the CASTER. Open it in any browser (Google Chrome, Safari, etc.) on a computer connected to the **same local network** as the unit – through a network switch, or with a cable straight to **LAN 1**.

> **Default IP mode – DHCP with fallback:** the CASTER obtains its IP address from a DHCP server on the local network. If there is no DHCP server, or no address is obtained, it falls back to its default IP address, **192.0.2.1**.

With a DHCP server on the network

1. Connect **LAN 1** to the local network; the unit obtains its address from the DHCP server.
2. Find the unit with an IP scanner (Windows – Advanced IP Scanner, macOS – LanScan): look for **Bettear – Accessibility Technologies Development** under Manufacturer / Vendor.
3. Browse to that IP address.

Without a DHCP server – default IP

1. Connect **LAN 1** to the local network, or directly to the computer.
2. Set the computer's network adapter to a static IP in the same subnet – for example **192.0.2.10**, mask **255.255.255.0**.
3. Browse to the default address **192.0.2.1**.

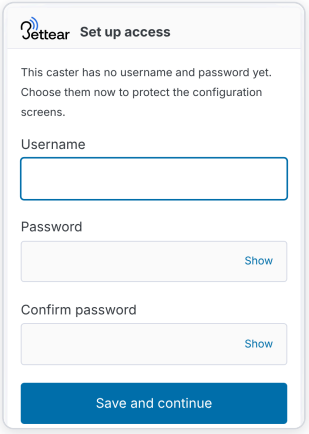
DEFAULT IP ADDRESS (FALLBACK)	SUBNET MASK	GATEWAY
192.0.2.1	255.255.255.0	0.0.0.0

05

Signing in

The management panel is protected by a username and password. There are no default credentials – the first person to open the panel sets them.

First-time setup

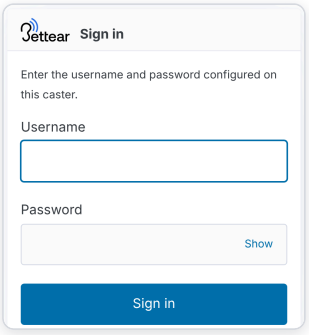


On a new or factory-reset CASTER, the **Set up access** screen is shown:

1. Enter a **Username** – up to 32 characters.
2. Enter a **Password** – 4 to 64 characters – and repeat it in **Confirm password**.
3. Click **Save and continue**.

Use **Show** to check a password as you type it.

Sign in



From then on, the panel opens with the **Sign in** screen. Enter the username and password and click **Sign in**.

You stay signed in until the browser tab is closed, or until you click **Log Out** in the Maintenance section.

This sign-in applies to the web management panel only.

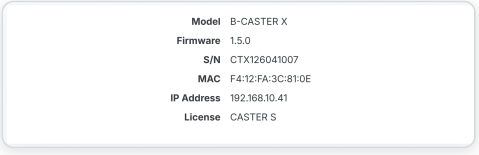
> **Keep it on a trusted network:** the username and password protect the management panel screens. Keep the CASTER on a network that is limited to authorized users.
>
> **Forgotten password:** it can only be cleared by a factory reset, which also restores all other settings – see *Factory reset*.

06

Web management panel

The web management panel is organized into sections – Summary, Broadcast, Audio, Radio, Network, LEDs and Maintenance – listed in the menu on the left. It also works on a tablet or phone.

Summary



Key device information: model, firmware version, serial number (S/N), MAC address and IP address, and the applied license.

Broadcast

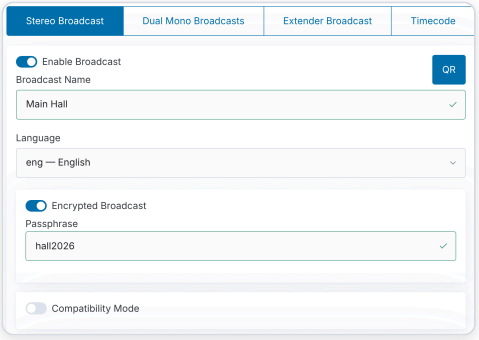
Select the broadcast mode that matches your project:

MODE	WHAT IT DOES
Stereo Broadcast	IN 1 and IN 2 are broadcast as one stereo stream.
Dual Mono Broadcasts	IN 1 and IN 2 are broadcast as two separate mono streams – for example, two languages.
Extender Broadcast	Rebroadcasts audio from a Master CASTER, a B-SHOW or a FORGE XD – or a Master's timecode – to extend coverage.
Timecode	Broadcasts timecode instead of audio; receivers play locally stored audio tracks in sync with video or a show.

Note: each mode is explained in detail later in this manual – Stereo and Dual Mono below, Extender in chapter 07 and Timecode in chapter 08.

Stereo Broadcast

IN 1 and IN 2 are streamed as a single stereo broadcast.



Enable Broadcast

Turns the broadcast advertisement on or off. When it is off, listeners cannot find the stream.

Broadcast Name

The name advertised and shown to listeners – 4 to 32 characters.

Encrypted Broadcast

Makes the broadcast private. Enter a **Passphrase** of 4–16 characters that listeners use to join.

QR

Generates an Auracast™ connection QR code that can be saved or printed for quick access from supported devices.

Language

The language of the broadcast audio. It is carried in the Auracast™ broadcast information, so receivers and assistant apps that support it can present and select streams by language – for example, the RTX shows a language flag next to the stream name. Choose **None** to leave it unset, or select the language of your stream from the language list.

Part of the Auracast™ standard: the language is sent as the standard Language metadata of the Auracast™ broadcast (Bluetooth LE Audio metadata type 0x04, carried in the broadcast's BASE), as a three-letter ISO 639-3 code – for example *eng*, *fra* or *jpn*. Any receiver that supports Auracast™ language metadata can read it, not only Bettear devices.

Languages in the list: Arabic, Bengali, Bulgarian, Cantonese, Chinese, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Mandarin Chinese, Norwegian, Persian, Polish, Portuguese, Romanian, Russian, Slovak, Spanish, Swedish, Tagalog, Thai, Turkish, Ukrainian, Urdu and Vietnamese. Any other language can be entered as a three-letter ISO 639-3 code with *Other…*.

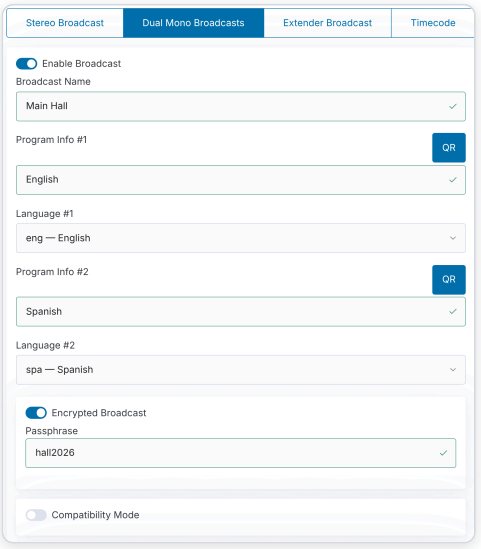
Dual Mono Broadcasts

IN 1 and IN 2 are streamed as two separate mono streams – for example, two languages or two different programs. Listeners choose the channel on their receiver.

For each channel, set:

- **Program Info #1 / #2** – a short label for the channel (up to 32 characters), shown by receivers that support it.
- **Language #1 / #2** – the language of the channel (optional).
- **QR** – a connection QR code for each channel.

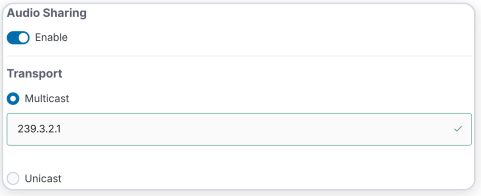
The broadcast name, encryption and passphrase apply to the whole broadcast.



Audio Sharing

Lets other CASTER devices on the same network connect to this unit (the **Master**) and receive its audio inputs over Ethernet. Select the transport: **Unicast**, or **Multicast** (recommended where the network supports it – enter a multicast group address).

If there are several Masters on the same network, give each one a different multicast address from the range **239.3.2.1 – 239.3.2.254** (for example 239.3.2.1, 239.3.2.2).



See *Extender, audio sharing & hybrid*.

> **Important:**
> in Unicast mode, a Master can share its audio with up to 2 additional units. For more units, use Multicast.

Audio

Fine-tune the two analog inputs before they are broadcast.

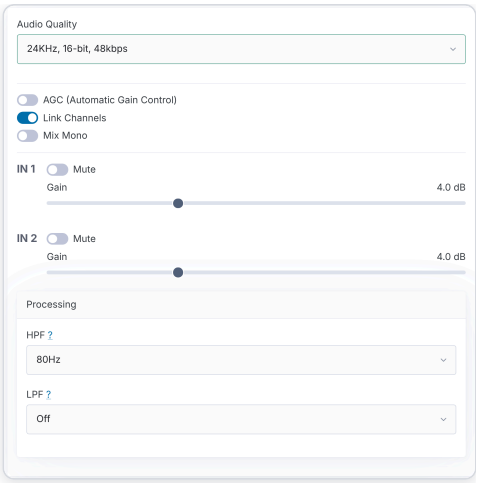
Audio Quality

Select the audio quality for the installation:

AUDIO QUALITY	DETAILS	EARBUDS, HEADPHONES & RTX	HEARING AIDS & COCHLEAR IMPLANTS
Low	16 kHz, 16-bit, 32 kbps	Supported	Supported
Medium (default)	24 kHz, 16-bit, 48 kbps	Supported	Supported
High	48 kHz, 16-bit, 80 kbps	Supported by most devices	Most current models are limited to 24 kHz – use Medium

AGC (Automatic Gain Control)

Adjusts the gain of the analog inputs (IN 1 / IN 2) automatically, keeping the input level steady.



Link Channels

Adjusts the IN 1 and IN 2 gains together or independently.

Mix Mono

Mixes IN 1 and IN 2 into a single mono channel. To broadcast one input in mono, enable Mix Mono and mute the unused input. Mix Mono applies to the Stereo Broadcast mode only.

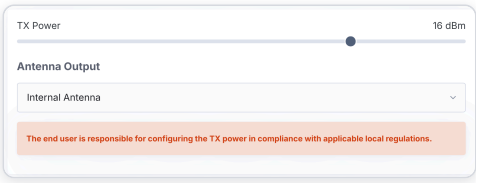
IN 1 / IN 2

Gain slider and Mute for each input.

Processing

HPF (high-pass filter): Off, 80 Hz, 120 Hz, 250 Hz. **LPF** (low-pass filter): Off, 8 kHz, 12 kHz.

Radio



TX Power

Sets the transmission power; the value is shown in dBm.

Antenna Output (CASTER X)

Select **Internal Antenna** or **External Antenna**. Connect a 2.4 GHz antenna with an RP-SMA plug to the front-panel connector first. The selection applies without a restart and can also be switched from Hive Central. The external antenna is sold separately.

> **Note:** the external antenna is relevant for the CASTER X model only. The regular CASTER model has internal antennas only – keep Antenna Output set to Internal Antenna.

> **Regulatory:** the end user is responsible for configuring the TX power in compliance with applicable local regulations. Bettear will not be held liable for any regulatory violations.

Network



DHCP

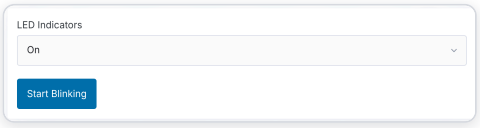
The default mode. The unit obtains its IP address from a DHCP server. If there is no DHCP server, or no address is obtained, it falls back to its default IP address: **192.0.2.1**, so it can still be reached in stand-alone mode.

Static

Set the IP Address, Subnet Mask and Gateway manually – for a fixed address, or when several units share a network (each needs its own address).

When a new static IP address is saved, the unit restarts and the panel automatically reopens at the new address. After switching to DHCP, find the new address with an IP scanner.

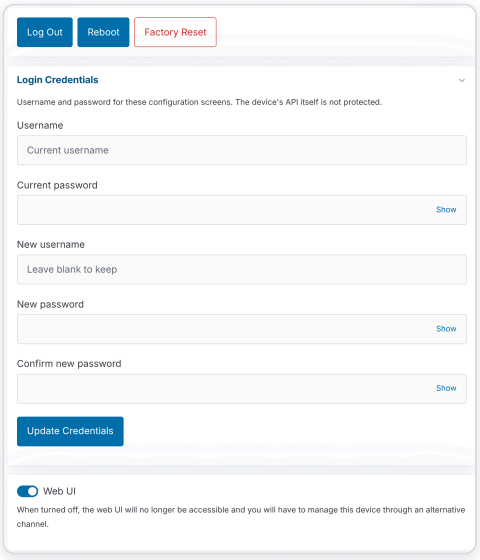
LED indicators



On	Default: power, broadcasting and LAN 1 / LAN 2 link.
Off	All indicators off.
Audio Indicator	LAN 1 and LAN 2 show audio presence and level.

Start Blinking flashes all LEDs together to identify the unit when several are installed; **Stop Blinking** ends it.

Maintenance



Log Out

Signs out of the management panel.

Reboot

Restarts the unit; the page refreshes when it is back online.

Factory Reset

Restores the factory settings – including the network settings and the panel username and password – and restarts the unit, after a confirmation.

Login Credentials

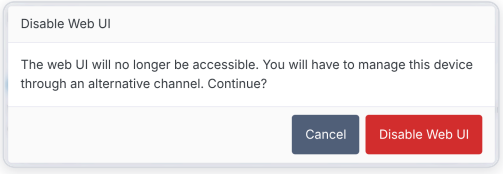
Change the username and password: enter the current username and password, an optional new username (leave blank to keep it) and the new password twice, then click **Update Credentials**.

Web UI

Turns the management panel on or off – see below.

Turning off the Web UI

Where the panel should not be available in a browser, switch **Web UI** off and confirm. From the next page load, the panel can no longer be opened.

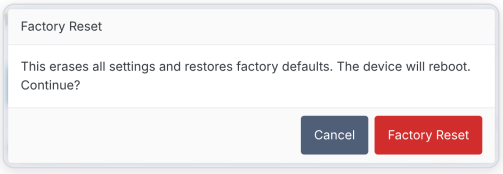


The unit stays fully manageable from Hive Central and the Control API. To turn the panel back on, enable it from Hive Central, send **SET ui.enabled 1** to the API, or perform a factory reset.

Hive Central User Guide: bettear.com/hive-central-guide

Factory reset from the panel

Click **Factory Reset** and confirm. If the unit was using a static IP address, it returns to its default network settings – reconnect as described in *Accessing the management panel*.



Save changes

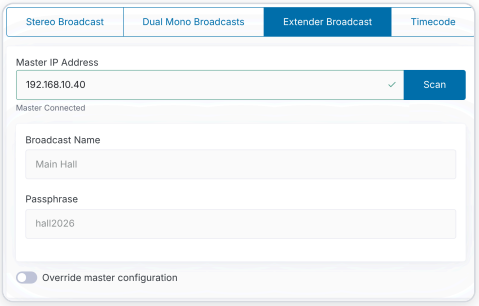
Click **Save Changes** to apply your edits, or **Reset** to discard them. Some changes – such as the broadcast name, encryption or network settings – briefly restart the broadcast while they are applied.

07

Extender, audio sharing & hybrid

A CASTER in Extender mode receives audio from a Master CASTER – or from a B-SHOW or a FORGE XD – over the network and rebroadcasts it, extending Auracast™ coverage. It can also extend a Master CASTER's timecode broadcast. Deploy as many extenders as the venue needs.

Extender Broadcast



1. Select **Extender Broadcast**.
2. Enter the **Master IP Address** and click **Scan**. **Master Connected** is shown and the Master's broadcast information is retrieved automatically.
3. Click **Save Changes**.

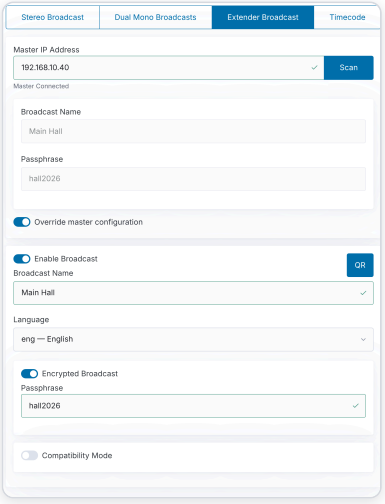
By default the extender uses the Master's broadcast settings, so listeners move smoothly between antennas.

Override master configuration

Enable this option to set the extender's own broadcast name, program information, language, encryption and passphrase. TX power is set in the Radio section.

Keep the extender identical to the Master for seamless roaming, or give it a different name so listeners can pick a specific antenna – for example, per hall or exhibit.

The broadcast mode, the number of channels and the audio settings always follow the Master.



Audio-over-Ethernet sharing

Master

1. Select Stereo or Dual Mono Broadcasts.
2. Set the broadcast name and passphrase.
3. Enable **Audio Sharing** and select Unicast or Multicast.
4. Click **Save Changes**.

Extender

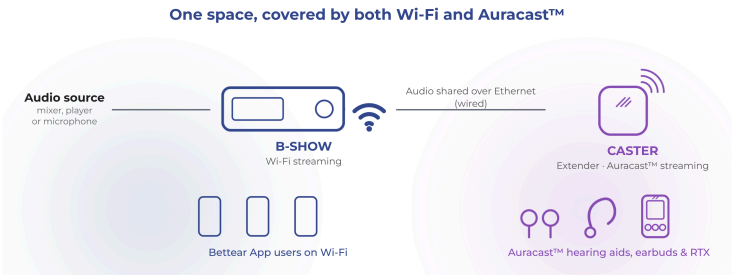
1. Select **Extender Broadcast**.
2. Enter the Master's IP address and click **Scan**.
3. Override the Master configuration if needed.
4. Click **Save Changes**.

- **Unicast** – a Master shares its audio with up to 2 additional units.
- **Multicast** (recommended) – a Master shares its audio with more than 20 extenders, subject to the network. Use IGMP snooping–capable switches with an active IGMP querier, and allow multicast on every link between Master and extenders.

> **Note:** multicast addresses for audio sharing are in the range **239.3.2.1 – 239.3.2.254**. If there are several Masters on the same network, each must use a different multicast address (for example 239.3.2.1, 239.3.2.2).

Hybrid mode – Wi-Fi and Auracast™

Cover one space with both Wi-Fi and Auracast™ audio: the audio source connects to a Bettear B-SHOW, which streams it to Wi-Fi listeners and shares it over a wired Ethernet network with one or more CASTER units, operating as **extenders** that broadcast it over Auracast™.



1. Connect the audio source to the B-SHOW, and connect the B-SHOW and the CASTER to the same wired local network.
2. On the B-SHOW, enable **Audio Sharing**.
3. On the CASTER, select **Extender Broadcast**, enter the B-SHOW's IP address and click **Scan**.
4. Click **Save Changes**.

B-SHOW User Manual

For the B-SHOW side, see the B-SHOW User Manual on the B-SHOW page of bettear.com: bettear.com/products/b-show

08

Timecode over Auracast™

Instead of audio, the CASTER broadcasts lightweight timecode messages. Each listener's device plays a locally stored audio track, in the listener's language, in perfect sync with the video or multimedia content – ideal for museum exhibits, video walls and attractions.

How it works



Media players on the local network send their timecodes to the CASTER, which broadcasts only the clocks – the audio files live on each receiver.

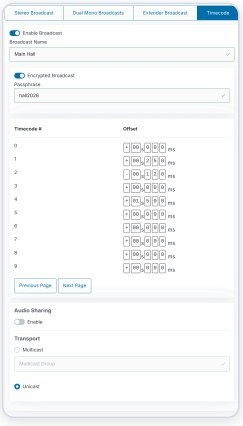
Up to 50 exhibits

Up to 50 different timecodes run on a single CASTER – one for each exhibit, at scale.

Any number of languages

Every language is perfectly synchronized on each timecode, frame-accurate to the video or show.

How to work with timecode



1. In the management panel, select **Timecode**, enable the broadcast and set the broadcast name and passphrase. All timecode setup can also be done in Hive Central – see the Hive Central User Guide: bettear.com/hive-central-guide
2. Assign a Timecode # (0–49) to each exhibit or content item.
3. Program each media player to send UDP commands to the CASTER's IP address, port **9000**, to start, sync and stop its timecode – see *Timecode commands* below.

Timecode offset

Each timecode can be offset (± seconds / milliseconds) to match the latency of each playback device. Set the offsets in the Timecode section; use **Previous Page** / **Next Page** to browse the list.

Timecode commands

Each media player sends these text commands over UDP to the CASTER's IP address, port 9000:

```
SET timecode <tid> <status> <timestamp>
```

<tid>	The Timecode # (exhibit number, 0–49)
<status>	1 = PLAY, 0 = STOP
<timestamp>	The current playback position, in milliseconds

ACTION	COMMAND (EXAMPLE: TIMECODE #3)	WHEN THE MEDIA PLAYER SENDS IT
Start	`SET timecode 3 1 0`	When its video or show starts
Sync	`SET timecode 3 1 45000`	During playback, with its current position (here 45 s) – sync mode only
Stop	`SET timecode 3 0 0`	When its video or show stops

Self-running mode

The media player sends one **Start** command. The CASTER then runs the timecode on its own clock until it receives a **Stop** command – for clips that always play from start to finish.

Sync mode

The media player sends **Sync** commands continuously, with its current playback position. Each command re-aligns every listener, for the best accuracy – for long or looping content, and whenever the player can seek or pause.

09

Installation & cascading

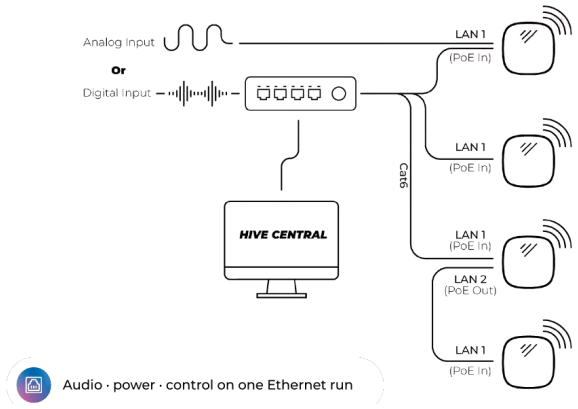
Placement

Mount the CASTER at least 3 m high with a clear line of sight to the audience. Coverage reaches about 85 m in line of sight at 20 dBm.

Cascading

Up to **three units** can be cascaded. A CASTER powered by a 12 V supply or a PoE+ source can power the next unit through LAN 2 (PoE out); the third unit needs its own power supply or PoE+ injector. For more units, use an external network switch.

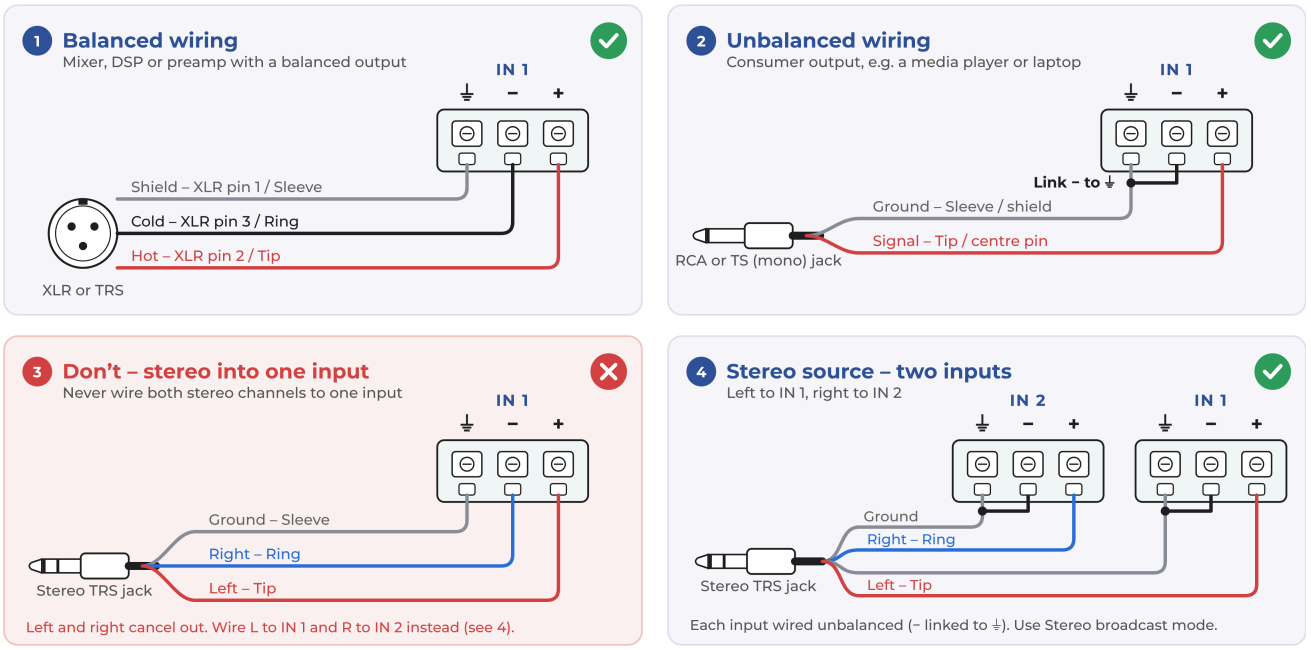
> **Note:** **License S** is required to enable the LAN 2 port.



> **Note:** a power source on DC in takes priority over PoE on LAN 1. If both are connected, the unit uses DC in.

Audio input wiring

IN 1 and IN 2 are balanced analog inputs on 3-pin terminal blocks (Phoenix), marked ⏚ − +. Each input carries one mono channel – wire a stereo source to both inputs.



Network requirements

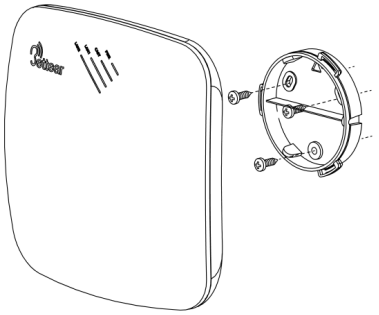
Cabling	Wired Ethernet, Cat5e or better. LAN 1 – 1 Gbps, PoE+ in (IEEE 802.3at); LAN 2 – 1 Gbps, PoE out (License S).
Management	The computer running the web management panel or Hive Central must be on the same local network as the CASTER. DHCP by default; with no DHCP server the unit falls back to **192.0.2.1**. Use static addresses for fixed installations.
Audio sharing – unicast	A Master shares its audio with up to 2 additional units. No special switch configuration is needed.
Audio sharing – multicast	IGMP snooping–capable switches with an active IGMP querier; multicast allowed on every link between the Master and its extenders. Each Master on the network uses its own address in the range **239.3.2.1 – 239.3.2.254**.
Ports & services	Allow these between the unit and the computers that manage it: **TCP 80** (HTTP) – web management panel and Hive Central **UDP 5353** – mDNS discovery (`_caster._tcp`), used by Hive Central **UDP 1337** – firmware updates (CASTER Upgrade Tool) **UDP 1339** – audio sharing between Master and extenders **UDP 9000** – Timecode and Control API, both directions: the unit replies to port 9000 on the controller

Mounting

The CASTER can be installed on a wall or ceiling using the included mounting bracket or mounted on a 3/8" threaded stand (e.g., microphone stand).

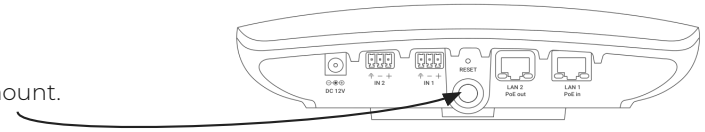
Wall or Ceiling Mounting:

1. **Fix** the mounting bracket to the wall or ceiling.
2. **Insert** the CASTER into the fixed bracket and rotate it counterclockwise (left) to 45° until it locks.



Tripod Stand Installation:

Use CASTER's 3/8" thread mount.



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Control API (UDP)

The CASTER can be controlled and monitored over the network with a simple, text-based API over UDP (port 9000) – for integration with third-party control and automation systems.

The API covers broadcast, audio, radio, network, timecode and LED functions – including the broadcast language and turning the management panel on or off – and can switch audio sharing between unicast and multicast. Commands are sent to a specific unit by its device ID.

CASTER API Guide

The complete command reference is in the CASTER API Guide, which can be downloaded from the CASTER page on bettear.com: bettear.com/products/caster

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Firmware, licenses & reset

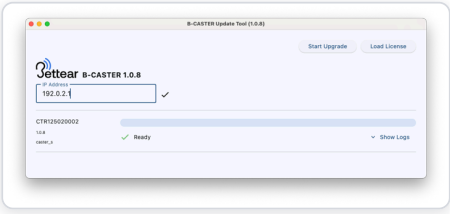
Firmware upgrade

The CASTER firmware can be upgraded in one of two ways:

A **CASTER Upgrade Tool**
From a computer on the same network – see steps below

B **Hive Central**
Recommended for multiple units and large deployments – see the Hive Central User Guide: bettear.com/hive-central-guide

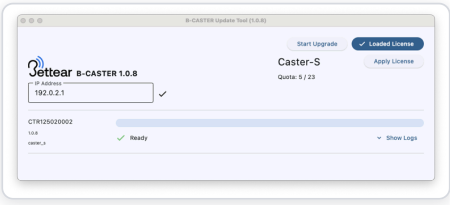
With the CASTER Upgrade Tool



1. Download the latest **CASTER Upgrade Tool** (Windows and macOS) from the CASTER product page: bettear.com/products/caster.
2. Connect the computer to the same network as the CASTER and launch the tool.
3. Enter the unit's IP address in the **Device IP address** field.
4. Click **Start Upgrade** and wait for the process to complete.

> **Direct update:** the latest tool updates units running any earlier firmware directly to 1.5.0; existing settings are kept.

License installation



1. Purchase the licenses from Bettear or your local Bettear distributor. You receive a license file by email.
2. Launch the CASTER Upgrade Tool and enter the unit's IP address in the **Device IP address** field.
3. Check the current license information in the **Detected Device** area.
4. Click **Load License** and select the license file. The number of available licenses is shown.
5. Click **Apply License** and wait for the process to complete.

Licenses can be applied to units running firmware 1.0.6 or later – update older units first.

Factory reset

Reset button

Press and hold the **Reset** button with a pin for **10 seconds**, until all front-panel LEDs blink. The reset takes up to 10 seconds.

From the panel or Hive Central

Maintenance → **Factory Reset**, then confirm – or reset the unit from Hive Central.

A factory reset restores all settings to their defaults – network settings, the panel username and password, and the Web UI setting (on). Installed licenses are kept.

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Specifications

As published in the approved CASTER and CASTER X datasheets (September 2026).

Audio

Input modes	Stereo / Mono / Mix
Inputs	2 × balanced analog, 3-pin 3.5 mm pitch terminal block (IN 1 / IN 2)
Max input voltage	2.1 Vrms (4.2 Vrms balanced)
ADC SNR / THD+N	110 dB / −90 dB
Frequency response	10 Hz – 22 kHz
Input gain	−12 dB to +32 dB
Sample rate	48 kHz
Processing	AGC — automatic gain control
High-pass filter	Off / 80 / 120 / 250 Hz
Low-pass filter	Off / 8 / 12 / 16 kHz

Network

Ports	LAN 1 – 1 Gbps (PoE+ in); LAN 2 – 1 Gbps (PoE out, License S)
IP addressing	DHCP by default, falling back to the default IP address **192.0.2.1**; or static
Ports & services	HTTP 80 (management panel); UDP 1337 (firmware update), 1338 (control), 1339 (audio sharing), 9000 (API), 5353 (mDNS _caster._tcp)
Audio sharing	Unicast (up to 2 additional units per Master) or multicast (recommended) over Ethernet
Multicast	239.3.2.1 – 239.3.2.254, a different address per Master; IGMP snooping switches with an active IGMP querier
Control API	Text-based, UDP port 9000

Physical & environmental

Dimensions	200 × 200 × 51 mm; bracket Ø 84 mm
Weight	419 g (0.92 lbs); bracket 25 g; shipping 589 g
Operating temp.	−12 °C to +40 °C (10.4 °F to 104 °F)
Colors	White, Black
Mounting	Wall/ceiling bracket (included) or 3/8" threaded stand

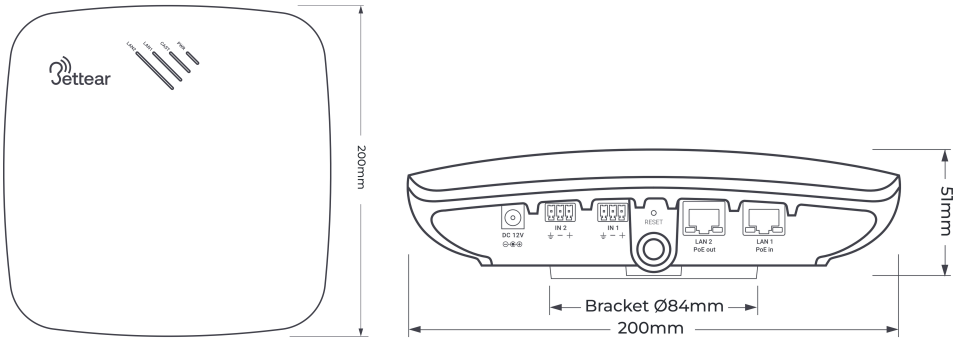
Radio

Technology	Bluetooth® 5.3 Low Energy (Auracast™)
Frequency range	2402 – 2480 MHz (2.4 GHz ISM band)
TX power	Selectable 5–20 dBm via panel or Hive Central
Antenna	**CASTER** – internal **CASTER X** – internal or external — switchable from the management panel or Hive Central
Antenna connector	**CASTER X** – RP-SMA jack (male center pin), 50 ohm — takes an RP-SMA plug antenna
Codec	LC3 (16 / 24 / 48 kHz)
Broadcast modes	Stereo / Dual Mono / Timecode
Extender mode	Receives audio from a master CASTER over the network to extend coverage
Hybrid mode	Auracast™ and B-SHOW Wi-Fi streaming at the same time
Secure broadcast	4–16-character password, AES128

Regulatory

EU / UK	**CASTER** – CE (RED 2014/53/EU) — cert TH2503009-C03-C01; UKCA — cert TH2503009-C05-C01 **CASTER X** – CE (RED 2014/53/EU); UKCA
USA / Canada	**CASTER** – FCC ID 2BOBX-BCASTER (Part 15.247); IC 33650-BCASTER (RSS-247) **CASTER X** – FCC (Part 15.247); ISED (RSS-247)
Japan	**CASTER** – MIC 219-259224 **CASTER X** – MIC / TELEC
Australia / NZ	RCM — AS/NZS 4268, CISPR 32, 2772.2, 62368.1
Environmental	**CASTER** – RoHS, WEEE (Cat. VI) **CASTER X** – RoHS, WEEE

Dimensions



What's in the box

SUPPLIED

CASTER – CASTER unit and wall/ceiling mounting bracket
CASTER X – CASTER X unit and wall/ceiling mounting bracket
Both models – 2 × 3-pin terminal block (Phoenix) connectors for the IN 1 / IN 2 analog inputs

REQUIRED – NOT INCLUDED

12 VDC / 2.5 A power supply – or power the unit over PoE+ (IEEE 802.3at) on LAN 1

Use a safety-approved AC/DC adapter (IEC/EN 62368-1 or equivalent) with a limited power source output.

Accessories & compatible devices

ITEM	WHAT IT DOES	TYPE
2.4 GHz antenna (RP-SMA plug)	**CASTER X** – external antenna to tune RF coverage to the room	Add-on
RTX receivers / RTX GO	Receive the broadcast with headphones or a neck loop	Compatible device
B-PASS	Quick access to streams with Tap-to-Access and QR code scanning	Compatible device
FORGE XD	Professional stream expander for the CASTER and CASTER X – multiplies the number of Auracast™ streams a single transmitter can broadcast, from 2 to 8	Add-on
Hive Central	Centralized management software to configure, update and monitor CASTERs and other Bettear devices	Software

Accessories and compatible devices are sold separately.

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Troubleshooting

PROBLEM	WHAT TO DO
The management panel does not open	Check the Ethernet cable to **LAN 1** and that the computer is on the same local network. With a DHCP server, find the unit's address with an IP scanner; without one, set the computer to a static IP in the same subnet (e.g. 192.0.2.10) and browse to the default address **192.0.2.1** – see chapter 04.
The panel stopped opening after a settings change	The Web UI may have been switched off. Turn it back on from Hive Central, by sending **SET ui.enabled 1** to the Control API, or with a factory reset – see chapter 06.
The panel username or password is lost	Perform a factory reset with the Reset button (hold 10 seconds) or from Hive Central. The next person to open the panel sets new credentials. Network settings return to their defaults; licenses are kept.
The panel does not reopen after a new static IP is saved	Set the computer to the new subnet and browse to the new address.
Listeners cannot find the broadcast	Check that the CAST indicator is on and the broadcast is enabled. Mount the unit at least 3 m high with a clear line of sight, and raise the TX power if needed. On a CASTER X, check that **Antenna Output** matches the antenna in use – select External Antenna only with an antenna connected.
A stream is shown with a lock	The broadcast is encrypted. Listeners join it with its passphrase or by tapping a B-PASS panel.
No audio, or the level is too low or distorted	Check the wiring of IN 1 / IN 2 and the input mode. Adjust the input gain, check that the input is not muted, or enable AGC. Use balanced inputs for the best quality.
An RTX does not show the stream's language	Set the language in the Broadcast section. The RTX shows a language from firmware 1.5.0.
An extender CASTER has no audio	Check that the master and the extender run the same firmware version and are on the same network. In multicast mode, the network switch must support IGMP; otherwise use unicast.
A unit connected to LAN 2 is not powered	PoE out on LAN 2 needs the first unit powered from a 12 V supply or a PoE+ source. LAN 2 requires License S. Power a third unit separately.
The CASTER Upgrade Tool cannot reach the unit	Connect the computer to the same network as the unit and enter its current IP address.
The unit does not respond	Disconnect and reconnect the power. If the problem persists, perform a factory reset – see chapter 11.

Still need help? Contact Bettear support at support@bettear.com or your local Bettear distributor.

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Safety & support

Regulatory notices

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: reorient or relocate the receiving antenna; increase the separation between the equipment and receiver; connect the equipment into an outlet on a circuit different from that to which the receiver is connected; consult the dealer or an experienced radio/TV technician for help.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.
- Always observe standard safety precautions during installation, operation and maintenance of this product. Only qualified and authorized service personnel should carry out adjustment, maintenance or repairs to this product. No installation, adjustment, maintenance or repairs should be performed by either the operator or the user.
  Respectez toujours les standards de sécurité durant l'installation, l'opération et la maintenance de ce produit. Seul le personnel de service qualifié et autorisé devrait effectuer l'ajustage, la maintenance ou les réparations de ce produit. Aucune opération d'installation, d'ajustage, de maintenance ou de réparation ne devrait être effectuée par un opérateur ou l'utilisateur.
- This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: (1) this device may not cause interference; (2) this device must accept any interference, including interference that may cause undesired operation of the device.
  Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Hearing safety

This product can deliver audio at a high volume that could damage hearing if used improperly. Make sure the volume on the listening device is turned down before use, then raise it only as far as needed. Do not let children or unauthorized individuals use the product without supervision. Automatic gain control (AGC) helps prevent intense noise bursts.

Medical device safety

Before using the CASTER with an implantable or other medical device, consult your physician or the device manufacturer, and follow the safety guidelines they provide.

Warranty & privacy

Visit www.bettear.com for warranty, service and privacy policy information.

Warning: electrical shock hazard. No user-serviceable parts inside. To reduce the risk of electrical shock, do not remove or open the cover. Contact Bettear for assistance.

Support

Email	support@bettear.com
Website	www.bettear.com
Phone	+972-3-777-8630
Address	33 Ha'Barzel, Tel Aviv, Israel

Or contact your local Bettear distributor.

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Related documentation & tools

Functions that use other Bettear products or software are described in their own manuals and guides, available on bettear.com.

Hive Central User Guide Online guide, on the Hive Central page of bettear.com	bettear.com/hive-central-guide
Hive Central software Download from the Hive Central page	bettear.com/products/hive-central
CASTER API Guide On the CASTER product page	bettear.com/products/caster
CASTER Upgrade Tool Download from the CASTER product page	bettear.com/products/caster
RTX user manual On the RTX product page	bettear.com/products/rtx
B-PASS user manual On the B-PASS product page	bettear.com/products/b-pass
B-SHOW user manual On the B-SHOW product page	bettear.com/products/b-show