



Bettear: Auracast™ Streaming System



AUDIOropa



The »B-CASTER« Auracast™ streamer represents an innovation in audio streaming technology: Auracast™ broadcast audio allows wireless transmission to an unlimited number of Auracast™-enabled receivers. These include hearing aids, cochlear implants (CI) or headphones. People with hearing loss can experience significantly greater speech intelligibility and sound depth with Auracast™.

The »B-CASTER« can be operated independently in plug-and-play mode. With the use of the »B-Caster S« variant, a hybrid mode setup together with the »B-SHOW« Wi-Fi streaming server (Wi-Fi streaming product group) is also possible. Hybrid mode ensures compatibility with modern and many classic hearing aids.

The streamer is characterised by reliable, stable audio supply with a long range. It can be easily and conveniently integrated into a wide range of environments and applications. Typical areas of application include conference rooms, theatres and other cultural venues, cinemas, educational institutions and public transport applications such as airports, railway stations, trains and more.

»B-CASTER«

Auracast™-Streamer

- Audio streaming with low latency (<40 ms)
- Dual-purpose streaming – parallel streaming in two different qualities
- Choice of open or password-protected audio streaming
- The »B-CASTER« offers robust and reliable signal coverage of up to 100 m, even in difficult environments (indoors and outdoors).
- Excellent HF technology for comprehensive radio coverage
- DSP for audio customisation (AGC, LPF, HPF)
- Cascadable power and audio (with B-Caster S model)
- Web management dashboard enables effortless configuration.

B-CASTER · Technical data

A-5550-0 / A-5555-0

■ Hardware

Audio Input Channels:	1 Stereo / 2 Mono
Maximum Input Voltage:	2.1 Vrms (4.2 Vrms for balanced input)
Mounting:	Wall/Ceiling Mount/ 3/8" Microphone stand
Power Supply:	12 VDC (Positive polarity), 2.5 A
Operating Temperature:	0 °C – 55 °C
Regulatory:	FCC, CE, cUL

■ Network

Transmission technology:	Auracast™ (Bluetooth® 5.3)
	Zwei 1 GbE RJ45
	LAN 1 (30 W PoE+ In)
	LAN 2 (15.4 W PoE out)

■ Audio

ADC Signal-to-Noise Ratio:	110 dB
DAC Signal-to-Noise ratio:	112 dB
ADC THD+N:	-90 dB
DAC THD+N:	-93 dB
Frequency Response:	10 Hz-22 kHz
Input Gain:	-12 dB bis 32 dB
Automatic Gain Control (AGC):	Switchable
Audio Filter:	HPF und LPF
Codec:	LC3
Sample rate:	B-Caster: 16/24 kHz B-Caster S: 16/24/48 kHz
Bit Depth:	32 bits

B-Caster	Item no.:	A-5550-W	A-5550-B
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B-Caster-S	Item no.:	A-5555-W	A-5555-B
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Colour options:	White	Black
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B-Caster: Auracast transmitter, analogue inputs, LC3 sampling rates 16/24 kHz, max. TX power 10 dBm

B-Caster-S: Auracast transmitter, analogue inputs and Ethernet switching (PoE and audio), LC3 sampling rates 16/24/48 kHz, max. TX power 10 dBm



B-RTX components at a glance

- »B-RTX EXPERIENCE«: compact receiver for receiving Auracast™ data streams
- »B-RTX DUPLEX 10« and »B-RTX DUPLEX 10+«: switchable between Auracast™ transmitter and receiver function

If listeners use personal hearing components without direct Auracast™ reception, they can use the »B-RTX EXPERIENCE« receiver. Headphones, earphones or neckloops can be connected via the 3.5 mm jack socket. The participants then receive the Auracast™ data stream with their respective hearing systems.

Auracast™ audio broadcast streaming is suitable for use in all environments - indoors and outdoors, stationary or mobile. Areas of application include guided tours in museums and exhibitions, at historical sites or in halls with unfavourable room acoustics, up to busy centre streets.

Contemporary technology combined with a user-friendly design characterises all devices in the B-RTX series. For example, the desired Auracast™ broadcast audio channel can be searched for and selected using the control elements. The robust design ensures a long service life.

The device battery is charged via the integrated USB-C socket or with the »B-SmartHive« charger.

The »B-RTX DUPLEX 10« transceiver, which can be switched between transmitter and receiver function, is primarily designed for mobile Auracast™ applications – for example as a transmitter for guided tours or in teaching situations. The integrated 3.5 mm jack socket is used to connect a microphone.

The »B-RTX DUPLEX 10+« transceiver model also has a microSD card slot and a media player.

The B-RTX series

Auracast™-Streamer

- Low latency (< 40 ms)
- Range of up to 50 metres
- 10 hours operating time with one battery charge
- Simple and intuitive operation thanks to navigation buttons and high-contrast screen

B-RTX · Technical data

■ Hardware

Internal Battery:	3.7 V, 1400 mAh
Connections:	3.5 mm socket (Microphone/headphone)
Operating Temperature:	0 °C – 55 °C
Regulatory:	FCC, CE, cUL

■ Netzwerk

Transmission technology:	Auracast™ (Bluetooth 5.3)
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■ Audio

ADC Signal-to-Noise Ratio:	90 dB
DAC Signal-to-Noise ratio:	95 dB
ADC THD+N:	-90 dB
DAC THD+N:	-93 dB
Frequency Response:	50 Hz - 7,5 kHz at 16 kHz Sample rate 50 Hz - 11 kHz at 24 kHz Sample rate 50 Hz - 20 kHz at 48 kHz Sample rate
Sampling rate:	48 kHz
Bit depth:	32 bits

B-RTX EXPERIENCE	Item no.:	A-5540-A	A-5540-G	A-5540-B
B-RTX DUPLEX10	Item no.:	A-5541-A	A-5541-G	A-5541-B
B-RTX DUPLEX10+	Item no.:	A-5542-A	A-5542-G	A-5542-B

Colour options: Anthracite | Grey | Blue

B-SmartHive

Charging station
for B-RTX, 10 slots



B-SmartHive – Charging station for B-RTX, 10 slots

Item no.: A-5545-0

Rackmount Adapter – 19" rackmount adapter for B-SmartHive

Item no.: A-5546-0

SmartHive Manager – Basis B-SmartHive Software

Item no.: A-5547-0

SmartHive Manager+ – Advanced B-SmartHive Software

Item no.: A-5548-0

Application scheme A

»B-CASTER« Plug-and-Stream-Mode

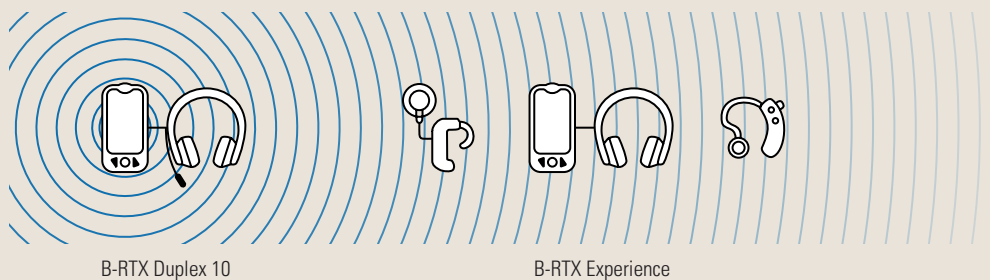
- Connect the audio source to the »B-CASTER«: Auracast™ is immediately available for all corresponding audio components.



Application scheme B

Mobile application: Auracast™ streaming directly

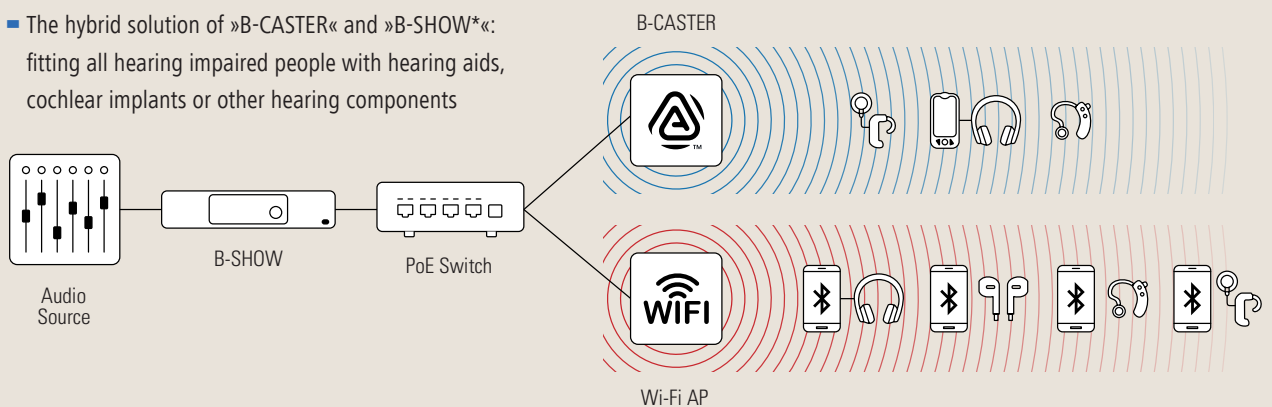
- Mobile application: Moderation with transceiver »B-RTX Duplex 10« via connected microphone. Listeners receive Auracast™ directly in their personal audio components or via their connection to the »B-RTX Experience«.



Application scheme C

Hybrid mode: Auracast™ and Wi-Fi

- The hybrid solution of »B-CASTER« and »B-SHOW*«: fitting all hearing impaired people with hearing aids, cochlear implants or other hearing components



* see AUDIORopa-Portfolio
Wi-Fi-Streaming

AUDIOropa

AUDIOropa is a brand of the Humantechnik Group

The AUDIOropa portfolio focuses on audio technology for professional use - stationary and mobile. The portfolio includes:

- **Inductive loop systems**
- **Radio transmission systems**
- **Infrared transmission systems**
- **Intercom Systems**
- **Wi-Fi streaming system (Bettear brand)**
- **Auracast™ streaming system (Bettear brand)**

The focal point of the application of these systems are solutions for acoustic accessibility within the scope of inclusion projects.

AUDIOropa systems prove their worth even under difficult acoustic conditions with an increase in audio quality and speech understanding for hearing impaired people, resulting from the integration of audiological technology.



AUDIOropa is a Bettear Certified Distributor

Bettear, based in Tel Aviv (Israel), develops and produces AI-supported audio assistance systems that enable people with impaired hearing to experience a significant improvement in sound quality and speech intelligibility. The optimised audio signals from Bettear systems are transmitted directly to hearing aids, cochlear implants, headphones and other suitable hearing components, offering barrier-free hearing and understanding as an individual, crystal-clear sound experience. Whether at cultural events, in museums, educational institutions or on public transport, Bettear's innovative audio assistance systems create equal access to high-quality audio for people with impaired hearing.

Welcome to the dialogue:

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