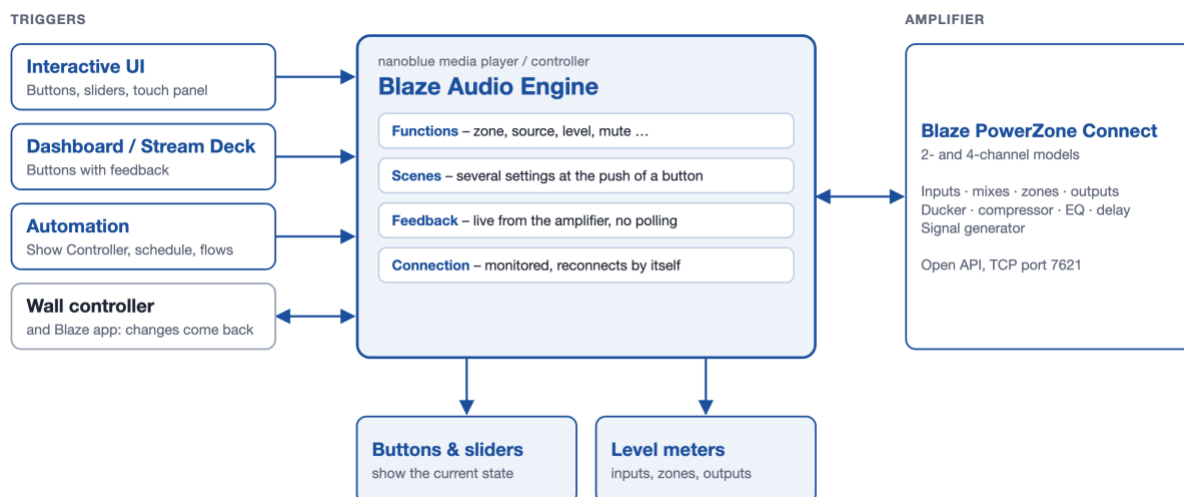


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nanobblue® Blaze Audio Control

Operate Blaze PowerZone Connect amplifiers – zones, sources, volume, scenes and level meters with live feedback



Overview: touch panel, buttons and automation trigger functions. The Blaze Audio Engine translates them for the amplifier and reports every change back instantly, even when it was made on the wall controller.

What it is about

Blaze PowerZone Connect amplifiers supply bars, restaurants, shops, offices and meeting rooms with music and speech. They mix inputs, distribute them to zones and come with their own processing: ducker, compressor, EQ, delay and signal generator. In day-to-day operation the operator only wants to see a small part of this: volume, mute, and which music plays in which room.

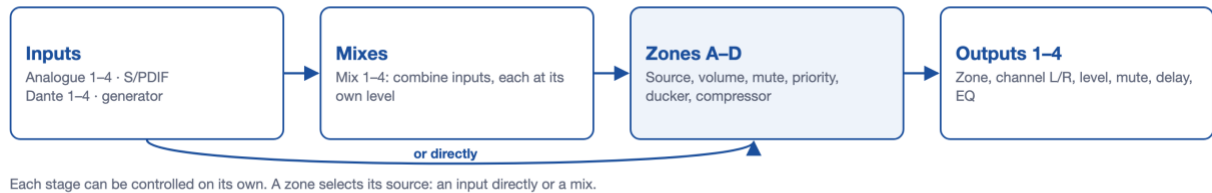
nanobblue Blaze Audio is a ready-made building block for the nanobblue media player and controller. It connects to the amplifier through the manufacturer's open interface (**Open API, TCP port 7621**) and makes every function available as a button, slider or display in the **Interactive UI**. A new project needs no programming: the function is defined by the ID of the control element.

The engine runs directly on the nanobblue device in the local network of the installation. It responds instantly and needs no internet connection.

Key features

What can be controlled

The amplifier works in four stages. Each one can be controlled on its own:



Signal path in the amplifier: inputs → mixes → zones → outputs. A zone plays an input directly or a mix.

Area	Functions
Amplifier	On / standby, locate (device flashes), operating status, device data
Zones A–D	Volume in % or dB, louder / quieter, mute, source, priority source, stereo, ducker, compressor, name
Outputs 1–4	Level, mute, assigned zone, channel left / right / sum, polarity, delay, high-pass, EQ, name
Inputs	Gain, sensitivity (+14 dBu, +4 dBu, –10 dBV, microphone), high-pass, stereo, 5-band EQ, name
Mixes 1–4	Share of each input in the mix in dB, name
Signal generator	Pink noise or sine, frequency, level – for system tuning
Scenes	Several settings at the push of a button, e.g. “Zones separate” or “Zones combined”
Free command	Read and set any register of the Open API – for special functions

Volumes are always limited to the range the installer has enabled in the amplifier. This way nobody can turn the volume up beyond the permitted level from the touch panel.

Operation in the Interactive UI

The ID of a control element also defines its function. In UI Studio, create a slider, button or text and give it the matching ID – done. Feedback is sent back to the same ID.

Control element	ID (example)	Effect
Slider	blaze__zoneA_volume	Volume of zone A in %
Text	blaze__zoneA_gain_txt	shows the level, e.g. “-20.0 dB”
Button	blaze__zoneA_mute	Mute on / off, lights up when muted
Buttons	blaze__zoneA_gain__up / __down	louder / quieter in fixed steps
Button	blaze__zoneA_src_mix1	Zone A plays mix 1, lights up when active
Button	blaze__scene_getrennt	Recall a scene, lights up while it applies
Bar graph	blaze__meter_zoneA	Level meter of the zone
Lamp	blaze__clip_in1	lights up when input 1 clips

- **Source buttons** behave like radio buttons: the active one lights up, the others go dark.
- **Live:** if someone changes the volume on the wall controller or in the Blaze app, the slider in the Interactive UI follows immediately.
- **Dashboard and other interfaces:** in addition, the most important functions have ready-made inputs and outputs with plain on/off or numeric values, e.g. for dashboard buttons or a Stream Deck.

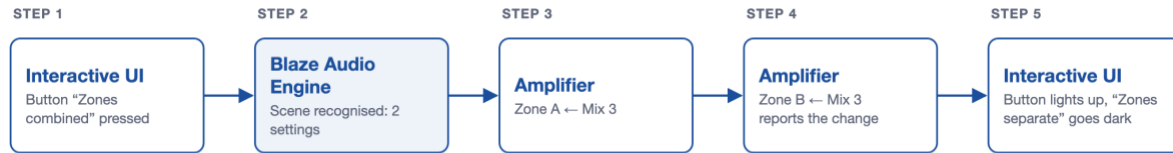
Level meters

The amplifier continuously reports the signal levels of all inputs, zones and outputs as well as a clip indication. nanoblu shows them as a bar graph, as a number in dB and as a clip lamp. The display is updated several

times per second. At a glance you can see whether music is arriving, whether a zone is playing and whether an input gain is set too high.

Scenes

A scene combines several settings, e.g. which zone plays which mix. It is recalled at the push of a button. The button stays active as long as all settings of the scene match the amplifier.



If someone later changes the source on the wall controller, the scene button goes dark by itself.

Real-world example: "Zones combined" sets zones A and B to mix 3. The button lights up, "Zones separate" goes dark.

Scene (example)	Content
Zones separate	Zone A plays mix 1, zone B plays mix 2 – e.g. bar and lounge with their own music
Zones combined	Zones A and B play mix 3 – e.g. one programme throughout the venue
Zones A + B on mix 1	Both zones play mix 1

Scenes are defined freely during setup and can contain any setting of the amplifier.

Control from other workflows

- **Show Controller and schedule:** cues or appointments trigger functions, e.g. switch on in the morning, scene "Zones combined" in the evening, standby at night.
- **Other workflows:** any flow in the nanoblue Editor can send commands, e.g. prepare an announcement or lower the volume when a sensor reports that the room is empty.

Setup

- **In the nanoblue Editor:** Blaze Audio is a ready-made flow. Only the IP address, the scenes and – if required – the step size for louder / quieter are entered.
- **Test mode:** an included test mode simulates a 4-channel amplifier. This allows the interface and workflows to be prepared before the system is on site.
- **Persistent:** the configuration is stored on the device and survives restarts and flow updates.
- **First commissioning:** the first run on the real amplifier is carried out together with the operator.

Reliable in operation

- **Self-contained:** control and feedback run on the nanoblue device in the local network – even without internet.
- **Live instead of polling:** the amplifier reports every change by itself. This keeps the network quiet and the display up to date.
- **Self-healing:** if the connection drops, e.g. because the amplifier restarts, the engine reconnects automatically and reads all values afresh.
- **Protected:** the operating mode of the speaker outputs (8 Ω, 70 V, 100 V) is deliberately not accessible via buttons – a wrong setting could damage loudspeakers.

Security

The Blaze Open API is intended for closed technical networks: it has neither login nor encryption. The amplifier is therefore only operated in the local network or a dedicated VLAN of the installation and is not exposed to the internet. Remote maintenance of the nanoblu device runs encrypted via the nanoblu VPN as usual.

Supported devices

Device	Connection	Functions	Status
Blaze PowerZone Connect, 4 channels (e.g. 504, 1004)	Open API, TCP 7621	Zones A–D, outputs 1–4, mixes 1–4, all functions in this overview	implemented and tested in test mode; verified during commissioning
Blaze PowerZone Connect, 2 channels (e.g. 252, 502)	Open API, TCP 7621	as above with zones A–B, outputs 1–2, mixes 1–2	implemented; verified during commissioning
Models with Dante	Open API, TCP 7621	additionally Dante inputs 1–4 as source	implemented

Technology in brief

- Blaze Audio Engine as a flow in the nanoblu Editor on the nanoblu media player or controller.
- Blaze Open API (revision 5.1, firmware 1.5 or later): one persistent TCP connection, changes via subscription.
- Levels of all inputs, zones and outputs at an adjustable rate, clip indication.
- Integration with Interactive UI, Dashboard, Show Controller, schedule and all flows in the nanoblu Editor.

Typical applications

- Hospitality: staff control music per area on the touch panel without having to go to the amplifier.
- Shops and showrooms: fixed scenes for opening hours, promotions and closing time via the schedule.
- Offices and meeting rooms: room audio together with lighting, projector and media in one interface.
- Hotels and spas: areas served separately or together, depending on occupancy.

In preparation

Display in the nanoblu connection monitor · ready-made example page for the Interactive UI with zones, sources and level meters · installation via the nanoblu flow catalogue.