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BASTL INSTRUMENTS Ciao Eurorack Audio Output Module User Guide

Contents

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Product Information

Specifications

- **Brand**: Bastl Instruments
- **Model**: Ciao!!
- **Line Output**: Quad
- **Power Consumption**: PTC fuse and diode-protected
- **Power Connector**: 10-pin
- **Power Requirement**: 5 HP

Product Usage Instructions

1. Power Connection

To use the Ciao!! Quad Line Output, follow the steps below:

1. Locate the 10-pin power connector on the device.
2. Connect a compatible power supply to the 10-pin power connector.
3. Ensure that the power supply is rated for at least 5 HP.
4. Make sure the PTC fuse and diode protection are in place to prevent damage to the device.

2. Audio Output Setup

The Ciao!! Quad Line Output provides four separate audio outputs. To set up the audio output:

1. Connect your audio equipment (e.g., speakers, mixer, or amplifier) to the line output jacks on the device.
2. Ensure that the audio equipment is turned off before making any connections.
3. Use appropriate cables (such as RCA or XLR) to connect the line outputs to your audio equipment.
4. Adjust the volume levels on both the Ciao!! Quad Line Output and your audio equipment to desired levels.

3. Troubleshooting

If you encounter any issues with the Ciao!! Quad Line Output, please try the following troubleshooting steps:

1. Check the power connection to ensure it is securely connected and the power supply is functioning properly.
2. Inspect the PTC fuse and diode protection to ensure they are intact.
3. Verify that all audio cables are properly connected and not damaged.
4. Try connecting the device to a different audio equipment to determine if the issue is with the Ciao!! Quad Line Output or the audio equipment.
5. If the problem persists, refer to the user manual for further assistance or contact customer support.

FAQ

Q: Can I use the Ciao!! Quad Line Output with headphones?

A: No, the Ciao!! Quad Line Output is designed for line-level output and is not suitable for direct headphone connection. You will need a separate headphone amplifier to use headphones with this device.

Q: What is the purpose of PTC fuse and diode protection?

A: The PTC fuse and diode protection safeguards the device against power surges and short circuits, preventing damage to both the Ciao!! Quad Line Output and connected equipment.

Q: Can I connect multiple Ciao!! Quad Line Outputs together?

A: Yes, you can daisy-chain multiple Ciao!! Quad Line Outputs by connecting the line outputs of one unit to the line inputs of another unit. This allows you to expand your audio output capabilities.

CIAO!!

Ciao!! is a compact and performance-oriented output module built with high-quality, low-noise components and layout for top-notch modular-to-line level conversion. It has 2 stereo line outputs, a headphone amplifier, and a few tricks up its sleeve. Stereo pairs A and B have dedicated level controls with signal indication and possible line-level clip warning for signals over 1 Volt. Channel A is equipped with 6.3mm balanced jack outputs to minimize noise and ensure maximum quality when delivering to the sound system. Channel B outputs through a 3.5mm stereo jack. A dedicated headphone output provides high output power and includes a selection switch for listening to either A or B channels. The normalization of inputs makes it easier to distribute signals among the outputs. The MIX switch can blend Channel B into Channel A in stereo, opening up the module performative pre-listening or simple stereo mixing.
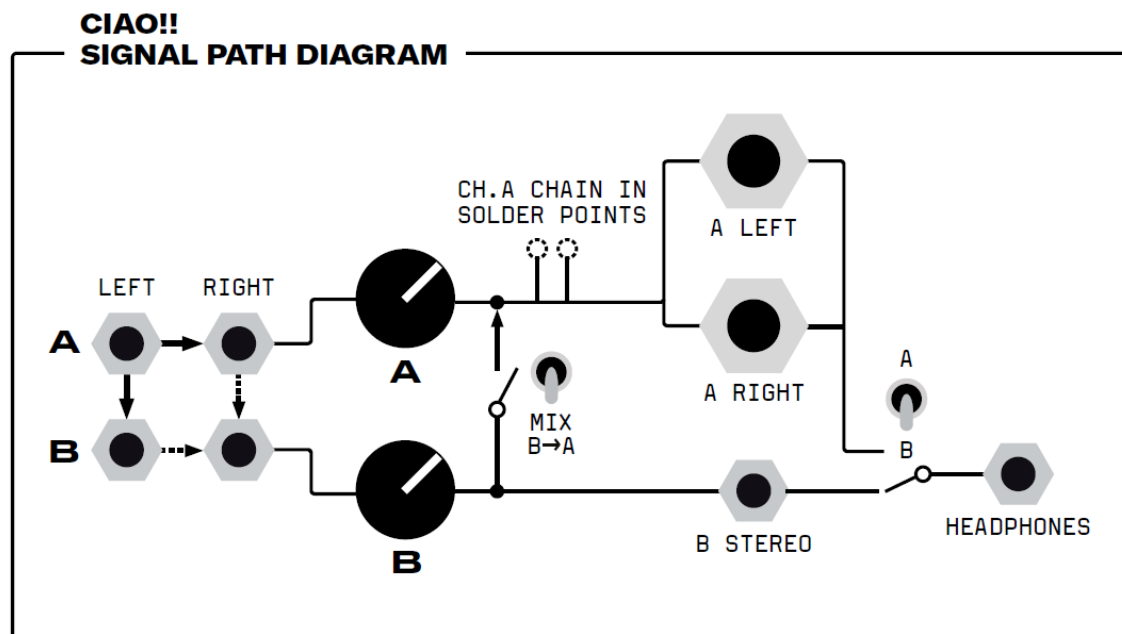
FEATURES

- 2 stereo channels A and B
- Channel A output features 6.3mm (¼") balanced jacks
- Channel B output features a 3.5mm (⅛") stereo jack
- Dedicated level controls for each channel
- Signal indication with line-level clip detection
- Clever input normalization
- Headphone output with a channel-select switch
- Stereo MIX switch to mix Channel B into Channel A
- Back jumper for customizing the normalization path

TECHNICAL DETAILS

- 5 HP
- PTC fuse and diode-protected 10-pin power connector
- Current consumption: <120 mA (w/o headphones), <190 mA (w/headphones to max)
- Depth (with power cable connected): 29 mm
- Input impedance: 100 kΩ
- Output impedance: 220 Ω
- Headphone impedance: 8–250 Ω

INTRODUCTION
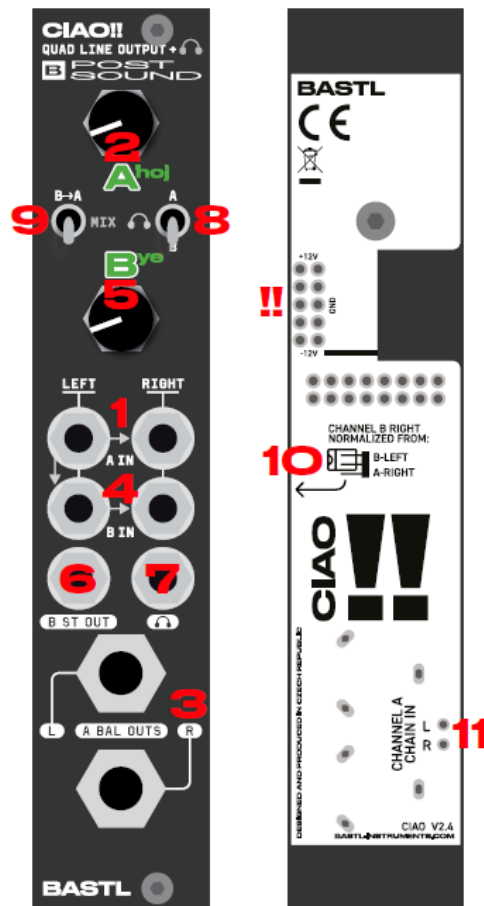

BASTL-INSTRUMENT-SCiao-Eurorack-Audio-Output-Module-fig7

B-RIGHT CAN BE NORMALIZED EITHER FROM B-LEFT OR A-RIGHT

FOR DRAWING SIMPLIFICATION THE
SINGLE LINES REPRESENT BOTH L AND R.

Ciao!! has a straightforward signal flow. It takes inputs from Channels A and B, attenuates them with the level knob to line-level, and outputs them through the channel outputs. The headphone output features a switch for selecting which channel you are listening to, and there is also a MIX switch to blend Channel B into Channel A. The inputs are cleverly normalized to make patching mono signals easy. See the Inputs section for more info.

MANUAL

1. An IN Channel LEFT A IN is normalized to RIGHT A IN. This means that unless you connect both channels, the left Channel A will be copied into the right Channel A, resulting in a dual mono signal at the Channel A outputs.

2. A LEVEL AND INDICATION Use the A (Ahoj) knob to set the level of both the left and right inputs of Channel A. The green light behind the Ahoj label indicates signal presence, while the red light indicates that you are sending signals over 1 Volt, which is the standard for line-level audio. However, you are NOT clipping inside the Ciao!! module. This is just a warning that any line-level device down the signal chain might clip if not attenuated by an input level control.

3. A BAL OUTS After being attenuated with the dedicated level knob, the left and right Channel A signals are sent to the balanced outputs A BAL OUTS. For the best noise-free experience, use balanced 6.3mm (¼") TRS cables and balanced inputs. A BAL OUTS can also handle mono TS cables. Note: Do not connect A BAL OUTS to stereo inputs, as it would result in an out-of-phase stereo image.

4. B INPUTS Channel LEFT B IN is normalized to RIGHT B IN. This means that unless you connect both channels, the left Channel B will be copied into the right Channel B, resulting in a dual mono signal at the Channel B output. At the same time, channel LEFT A IN is also normalized to LEFT B IN, so if you do not connect anything to channel LEFT B IN, it will copy the left Channel A signal into the left Channel B input. Note: Instead of the default normalization from LEFT B IN to RIGHT B IN, you can select RIGHT A IN as a normalization source using the jumper on the back of the module. See the Patch examples below.

5. B LEVEL Use the B (Bye) knob to set the level of both the left and right inputs of Channel A. The green light behind the Bye label indicates signal presence, while the red light indicates that you are sending signals over 1 Volt, which is the standard for line-level audio. However, you are NOT clipping inside the Ciao!! module. This is just a warning that any line-level device down the signal chain might clip if not attenuated by an input level control.

6. B OUTPUT After being attenuated with the dedicated level knob, the left and right Channel B signals are sent to B STOUT. This output is designed for use with a 3.5mm (⅛") TRS stereo cable, but can also be used with headphones.

7. HEADPHONE OUTPUT Connect headphones to this output. Use the channel level knobs to set the loudness.

8. HEADPHONE SELECTION SWITCH Use the switch to select the channel to which the headphone output will be listening.

9. MIX B→A SWITCH When this switch is in the upper position, it will mix the LEFT B IN into LEFT A IN and RIGHT B IN into RIGHT A IN. This can be used for stereo mixing or for pre-listening to Channel B on headphones (with the MIX switch in the lower position).

10. NORMALIZATION JUMPER By default, LEFT B IN is normalized to RIGHT B IN. However, in some cases, it might be useful to have RIGHT A IN normalized into RIGHT B IN instead. If that is your desired functionality, you can move the jumper into the alternate position, connecting the center and bottom pins of the jumper header.

11. MIX-IN HEADERS For DIY heads: you can use these headers to mix in signals from other stereo modules (such as BUDDY) into Channel A. This way, you can mix a total of 3 stereo signals into Channel A.
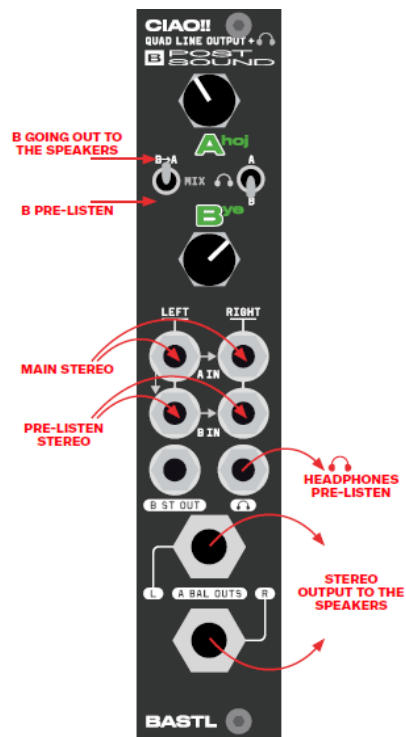
POWER

Before connecting the ribbon cable to this module, disconnect your system from power! Double-check the polarity of the ribbon cable and that it is not misaligned in any direction. The red wire should match the -12V rail both on the module and the bus board.

! PLEASE MAKE SURE OF THE FOLLOWING:

- you have a standard pinout euro rack bus board
- you have +12V and -12V rails on your bus board
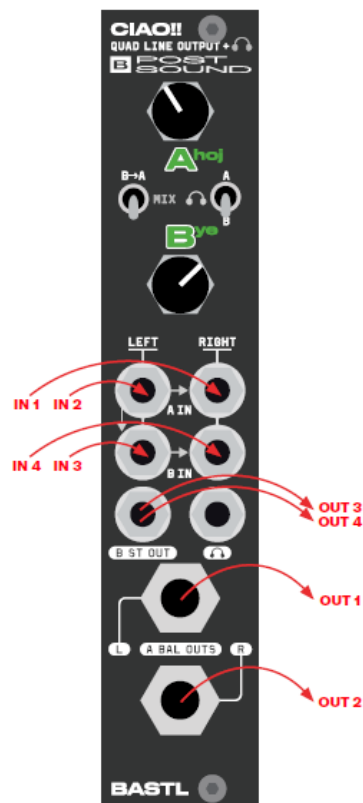- the power rails are not overloaded by the current

Although there are protection circuits on this device, we do not accept any responsibility for damages caused by the wrong power supply connection. After you've connected everything, double-checked it, and closed your system (so no power lines can be touched by hand), turn on your system and test the module.
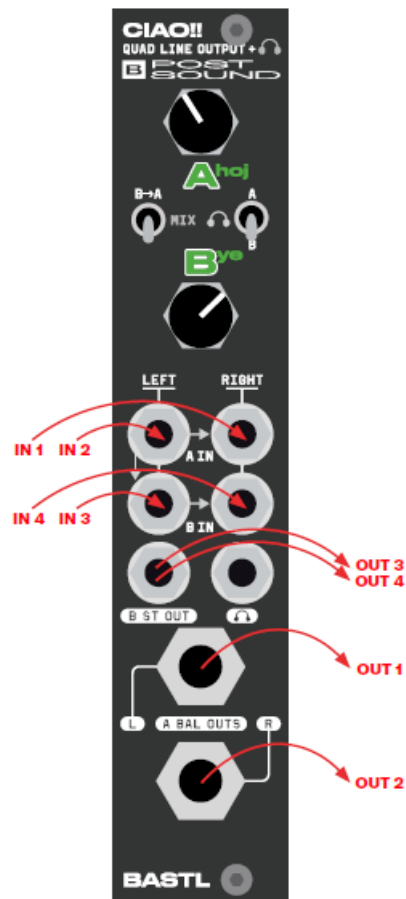
PATCH TIPS

PRE-LISTEN ON HEADPHONES You can use the MIX B→A switch in combination with the headphones switch in the B position to pre-listen to a signal plugged in the B IN on the headphones, while the speakers are connected to the A output. Turn the MIX B→A switch down to hear the B signal only in the headphones. Turn it up to mix the B signal to the main output.
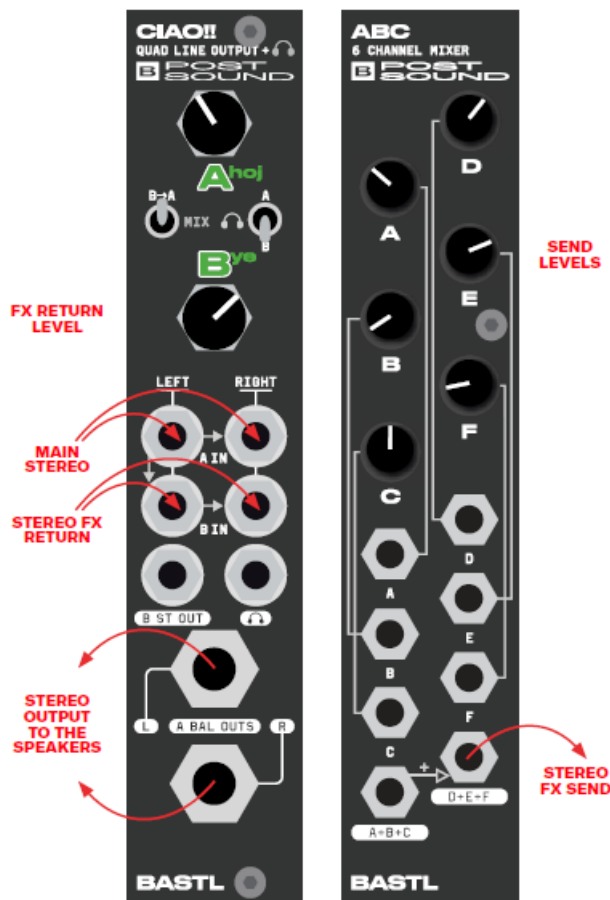
QUAD LINE OUTPUT

If you want to record 4 channels independently, simply connect all 4 signals to the 4 available inputs and use the A BAL OUTS as 2 line outputs and B STOUT as the other 2 line outputs. Check the position of both switches.

QUAD LINE OUTPUT

STEREO FX RETURN

The B channel can be used to easily mix a stereo signal with the Channel A stereo signal. This is useful if you are

using a sub mixer as an aux send mixer to an effects unit (either in the rack or outside). The B IN, along with the B channel level control knob, could then be used as stereo FX return track.

If you want to record 4 channels independently, simply connect all 4 signals to the 4 available inputs and use the A BAL OUTSas 2 line outputs and B STOUT as the other 2 line outputs. Check the position of both switches.

SINGLE STEREO INPUT, DUAL HEADPHONE OUTPUT Use B STOUT as a second headphone output for educational situations or for playing with a friend on headphones.

- Connect your stereo signal to the A IN.
- Turn the headphones switch to the A position.
- Turn the MIX B→A switch down.
- Plug one pair of headphones to the headphones output with a level controlled by the A knob.
- Connect the second pair of headphones to the B STOUT with the level controlled by the B knob.

Note: The back jumper has to be set to the A-RIGHT position for the corresponding stereo normalization.

SINGLE STEREO INPUT, SEPARATE HEADPHONES, AND SPEAKER VOLUME

- Connect your stereo signal to the A IN.
- Turn the headphones switch to the B position.
- Turn the MIX B→A switch down.
- Connect the speakers to the A BAL OUTS with a level controlled by the A knob.
- Plug headphones to the headphone output with a level controlled by the B knob.

Note: The back jumper has to be set to the A-RIGHT position for the proper stereo normalization.

MANAGEMENT: John Dinger
GRAPHIC DESIGN: Anymade Studio The idea turned into reality thanks to everyone at Bastl Instruments and thanks to the immense support of our fans.

www.bastl-instruments.com

Documents / Resources

BASTL INSTRUMENTS Ciao Eurorack Audio Output Module [pdf] User Guide
Ciao Eurorack Audio Output Module, Ciao, Eurorack Audio Output Module, Audio Output Module, Output Module, Module

References

- **B Bastl Instruments**
- **User Manual**