



BALANCED OUTPUT MODULE

BLONX

Owner's Manual

Thank you very much for purchasing our product.

We sincerely hope that you will be able to enjoy music right away.

Please keep this owner's manual safe so that you can refer to it whenever you need explanations about the product.

In the unlikely event that you lose it, you can download the latest version from our website. (The download version is free of charge.)

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Rev. E01

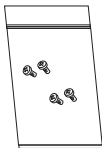
Included items

First, please check the included items.

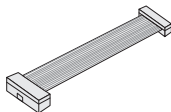
Owner's Manual (This manual)



M3 screws for module mounting (x4)



16-pins flat cable (x1)



Precautions for use



CAUTION

Please use the product while observing the safety precautions.

This unit is designed to conform to the specifications of Doepfer's A-100 format (Eurorack), and its operation is not guaranteed under unforeseen usage methods or conditions.

Please also read the following information to help prevent potential malfunctions and accidents.

- Always use the power supply provided by the Eurorack power module or the power supply installed in the Eurorack case.
Any malfunctions or performance degradation resulting from using any other power supply will not be covered under our warranty.
- If you modify this device or attempt to repair it yourself, we will not be held liable in any way, regardless of the warranty period.
- If the malfunction is caused by a device connected to this unit, any resulting problems or failures will not be covered by our warranty.
- The 16-pins header on this unit conforms to the standard Eurorack specification where one pin is -12V.
When using this unit, please check the specifications of your power module or power bus board and connect it so that 1pin is -12V.
- This device is intended for indoor use.
Even indoors, stable operation/performance cannot be guaranteed in environments where the ambient temperature is below 0°C or above 35°C. The same applies to environments with humidity exceeding 85%.

SAFETY PRECAUTIONS

Heed all precautions for your own safety!



WARNING

If this device or the cables connected to it get wet, there is a risk of electric shock, and it could also lead to a serious accident due to malfunction.

Always use it in a place where it will not get wet, or protect it from moisture such as rain or drinking water, and use it with caution.



CAUTION

In the unlikely event that you experience or notice any abnormal conditions, immediately mute the output of the connected mixer or amplifier and turn off the power.

Also, do not continue using the device.

The following are examples of abnormal conditions:

- Unusual odors or smoke emanating from the unit or the case in which it is installed.
- Flames or sparks emanating from the unit or the case in which it is installed.
- The insulation of the power cord on the case in which the unit is installed, or the cables connected to the unit, is damaged, exposing the internal wires.
- A power outage caused by a lightning strike occurred, and no sound is emitted from the unit even after power is restored.

This unit should be mounted in a Eurorack case.

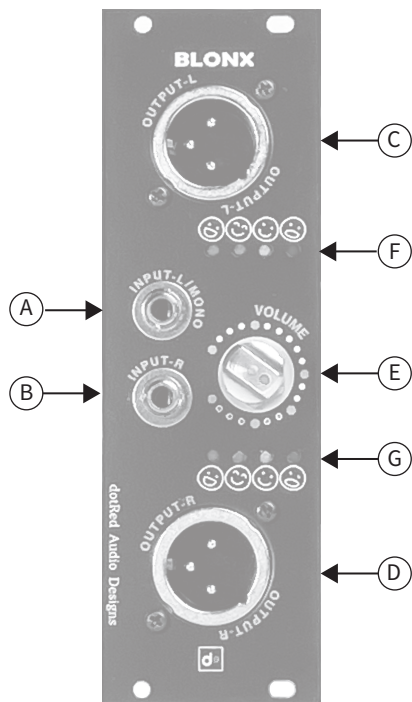
If using it without a case, secure it in a location where metal fragments and moisture will not come into contact with the inside of the unit.

Also, if the ambient temperature or the internal temperature of the case becomes high, the surface of this unit may become hot.

If it feels too hot to touch, do not try to touch it.

Please note that if the internal temperature of the case becomes too high, unintended noise may increase, the sound may distort, and it may result in an extremely loud sound through the PA system.

NAME & FUNCTION OF EACH COMPONENT



(A) “INPUT-L/MONO” Input jack

This is the audio signal input jack. For mono signals, connect here. At this time, the signal input here will be output to both output jacks.

(B) “INPUT-R” Input jack

This is the audio signal input jack. In mono mode, if you input a signal only here, the signal will be output only to the “OUTPUT-R” output jack.

(C) “OUTPUT-L” Output jack

This is an audio signal output jack. The signal input to the “INPUT-L/MONO” input terminal passes through the volume control and is output from this jack.

(D) “OUTPUT-R” Output jack

This is an audio signal output jack. The signal input to the “INPUT-R” input jack passes through the volume control and is output from this jack.

However, if a mono signal is input only to the “INPUT-L/MONO” jack, the “INPUT-L/MONO” signal, after passing through the volume control, will be output from this jack.

(E) VOLUME

This adjusts the volume.

The same volume change applies to audio signals input to both the “INPUT-L/MONO” input terminal and the “INPUT-R” input jack.

Turning counterclockwise decreases the volume, and turning it all the way down results in almost zero volume. Turning it clockwise increases the volume, and turning it all the way down results in maximum volume.

(F) “OUTPUT-L” Output Level Meter

This displays the signal strength of the “OUTPUT-L” output.

If the input signal is weak, the LED will not light up. As the signal increases, the green LED will light up, and as the volume approaches maximum, the yellow and red LEDs will light up. A lit red LED does not necessarily mean that the unit is clipping, but if it remains lit for a long time, it is highly likely that the unit is clipping, so please adjust the signal level with the volume control.

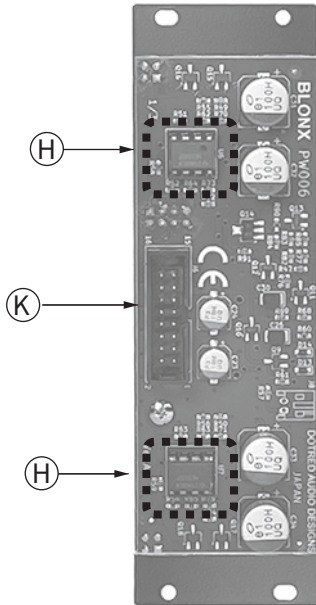
(G) “OUTPUT-R” Output Level Meter

This displays the signal level of the “OUTPUT-R” output.

Similar to the “OUTPUT-L” output level meter, the LED lights up according to the signal level.

NAME & FUNCTION OF EACH COMPONENT (continued)

View of the back of the front panel



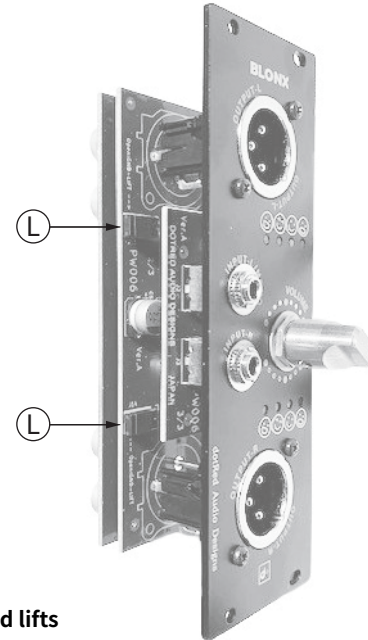
(H) Output driver Operational amplifier

These are operational amplifiers for the output drivers of "OUTPUT-L" and "OUTPUT-R". They are socketed, allowing you to easily replace them with your preferred operational amplifiers.

(K) 16pins Connector

Connect this connector to the connector on the power module or power bus board using a ribbon cable. This unit uses +12V and -12V, so a 10-pins to 16-pins ribbon cable can be used, but please connect it using the 16-pins cable.

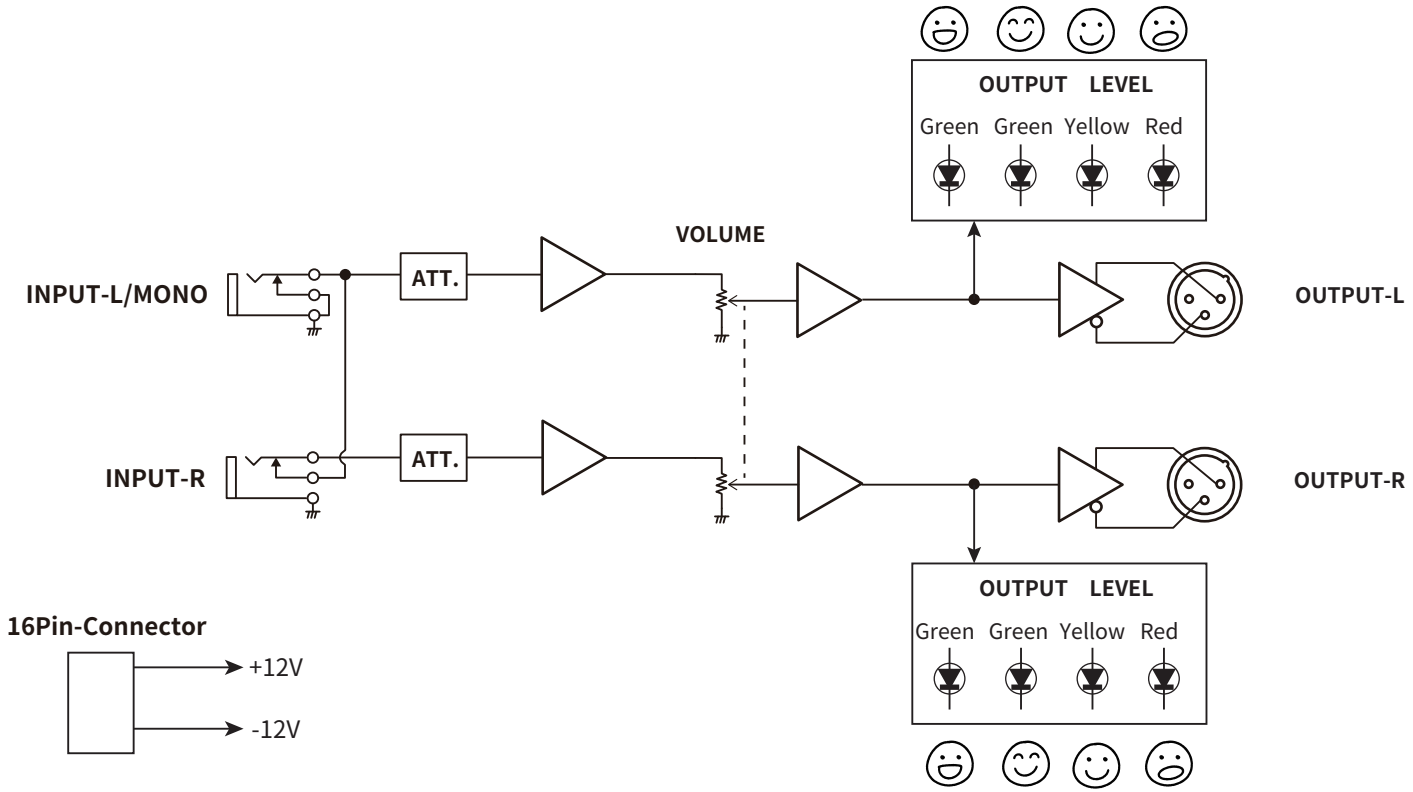
View from the diagonal left



(L) Short pins for ground lifts

In systems using balanced transmission, if you hear hum caused by a ground loop, removing this shorting pin may eliminate the hum. (This effect will not be observed if the balanced output is converted to unbalanced.)

BLOCK DIAGRAM



About Level Meter

The output level of this unit is indicated by four LEDs:

(Green), (Green), (Yellow), and (Red).

Each LED has an emoticon printed next to it that represents the magnitude of the output level.

The signal levels corresponding to the emoticons are explained below.



It lights up when the signal level reaches approximately -10 dBu.
Adjust the volume so that it lights up when outputting at a medium volume.

It lights up when the signal level reaches approximately -6 dBu.
Adjust the volume so that it lights up occasionally when outputting at a medium volume.

It lights up when the signal level reaches approximately 0 dBu.
Adjust the volume so that it lights up when outputting at a volume higher than the medium level.

The light illuminates when the signal level reaches approximately +4 to +6 dBu.
Adjust the volume so that it illuminates occasionally when outputting at a higher volume.
If it remains constantly lit, the signal may be clipping unintentionally.
Judge whether clipping is occurring by ear and adjust the volume accordingly.

About VOLUME

The volume control on this unit simultaneously adjusts the volume for both OUTPUT L and OUTPUT R.
(Individual volume control for L and R is not possible.)
Normally, set it to the Nominal position and adjust as needed.

Minimum position:

Volume is $-\infty$ (minimum).



Nominal Position:

The position where the output is +4dBu when the input level is +4dBu.



*Approximately 10dB of gain is added from the Nominal position to the Maximum position.

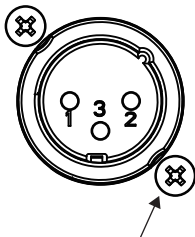
Maximum position:

Volume is at its maximum.



About Balanced Output

This unit features a balanced output using an XLR (male) connector.

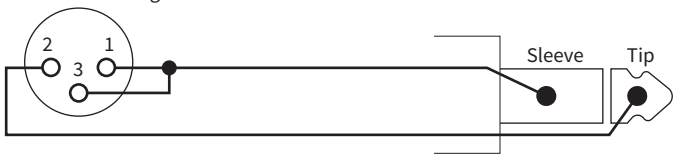


- 1: GND (Ground)
- 2: HOT ※In Phase
- 3: COLD ※Inverted Phase

This screw connects the XLR plug's shell to the frame and ground of this unit.

If you want to convert to an unbalanced connection using an XLR-TS phone cable, short-circuit pin 1 (GND) and pin 3 (COLD).

XLR (Female) Plug



《Wiring example for converting from balanced to unbalanced》

Specifications

Electrical specifications

Maximum input level: +24dBu ※THD+N<1%

Maximum output level: +20dBu ※RL=10Kohm, THD+N<1%

Current consumption:

43mA @+12V, 31mA @-12V ※No signal

52mA @+12V, 32mA @-12V ※+4dBu, THD+N<1%

112mA @+12V, 77mA @-12V ※When the signal is clipping

Dimensions and Weight

Front panel: 128.5mm(H) x 40.6mm(W) ※8HP

Depth: 42mm ※From the back of the front panel to the tip of the 16-pin connector

Weight: 約 115g ※Module only

Warranty

LIMITED WARRANTY TERMS AND CONDITIONS

This limited warranty applies only to DOTRED AUDIO DESIGNS products purchased from our online shop or authorized dealers in Japan. Outside of Japan, warranty policies and services are governed by the laws of the country of purchase and are determined by the local distributor.

DOTRED AUDIO DESIGNS warrants to the first owner of a covered product purchased from an authorized DOTRED AUDIO DESIGNS dealer and our online shop, that this product will be free from defects in materials and/or workmanship for a period of one year from the date of purchase. Please writing required information or stick receipt to establish the date of purchase to the Warranty-Card (THIS IS HIGHLY ADVISED). Besides your full name and address, please mention the date and purchase location of your product.

To exercise your rights under this Warranty as the first owner/purchaser, YOU MUST SHIP THIS PRODUCT IN ITS ORIGINAL PACKAGING at your expense, with copy of Warranty-Card and supplemental parts, to DOTRED AUDIO DESIGNS to the following address:

DOTRED AUDIO DESIGNS CO., LTD
TOYAMA-Bldg. 3F, 218-8, Motoshiro-Cho, Chuo-ku,
Hamamatsu-Shi, Shizuoka, JAPAN 430-0946

An RAN (Return Authorization Number) from DOTRED AUDIO DESIGNS must be obtained first before returning any product.

Email us your RAN request to contact@dotred-audio-designs.com

Products shipped to DOTRED AUDIO DESIGNS without an RAN will be refused and returned. Shipping insurance is optional, but highly recommended. DOTRED AUDIO DESIGNS will repair or replace this product at its sole option and at no charge to you for parts and labor—when deemed necessary and within the warranty period—provided that DOTRED AUDIO DESIGNS reserves the right to determine whether the product is “defective” for purposes of this Limited Warranty. This Warranty does not apply if damage to this product occurs as a result of abuse or misuse, failure to follow instructions according to its Owner’s Manual, abnormal use or handling, improper packaging, another product’s interaction, exposure to temperature extremes, or if the product has been altered or modified/ customized in any way, or the damage was caused by unauthorized repair or service. The original product must return to DOTRED AUDIO DESIGNS unaltered.

IN NO EVENT SHALL DOTRED AUDIO DESIGNS CO., LTD BE LIABLE FOR ANY INDIRECT, INCIDENTAL, COLLATERAL, EXEMPLARY, PUNITIVE, CONSEQUENTIAL OR SPECIAL DAMAGES OR LOSSES ARISING OUT OF YOUR PURCHASE OF PRODUCTS AND/OR OUT OF THIS WARRANTY, INCLUDING WITHOUT LIMITATION, LOSS OF USE, PROFITS, GOODWILL OR SAVINGS OR LOSS OF DATA, MUSIC, ELECTRONIC FILES, OR PREFERENCES THAT MAY HAVE BEEN STORED BY A USER OF THE PRODUCT, EVEN IF DOTRED AUDIO DESIGNS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR CLAIMS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

This Limited Warranty and the right of replacement is in lieu of any and all other warranties.

Warranty-Card



Model: BLONX	
Customer	Address:
	Name:
Shop or seller's signature:	
Warranty term: 1 year	Purchase date:

◆Keep this warranty card together with your receipt or sales slip as a proof of the purchase location and date will be requested for any warranty claim.

Copy in this frame the 6-digit serial number found on the label inside the unit.

SER.

■Development and Manufacturing by

DOTRED AUDIO DESIGNS CO., LTD.

TOYAMA-BLDG. 3F, 218-8, MOTOSHIRO-CHO, CHUO-KU,

HAMAMATSU-SHI, SHIZUOKA, JAPAN 430-0946

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