

Synästec Audio

Bivium Preamplifier Owner's Manual

Dear Music Enthusiast,

Thank you for purchasing Synaestec Audio Bivium, a state of the art line stage preamplifier utilizing revolutionary technology and the top construction quality that we are so proud of. When working together with the Volatus 200 power amplifier, they simply break every ground in audio technology. Prepared to be surprised by the extreme realism in music reproduction.

Please take some time to read this owner's manual before using the equipment for the first time. You will find useful information which will enhance your listening pleasure.

Stefan Stotz
Managing Director

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Warning

To prevent the risk of electrical shock, **DO NOT** remove the cover of the preamplifier or the power supply.

There is no user serviceable part inside Bivium preamplifier or the Bivium power supply.

Unpacking

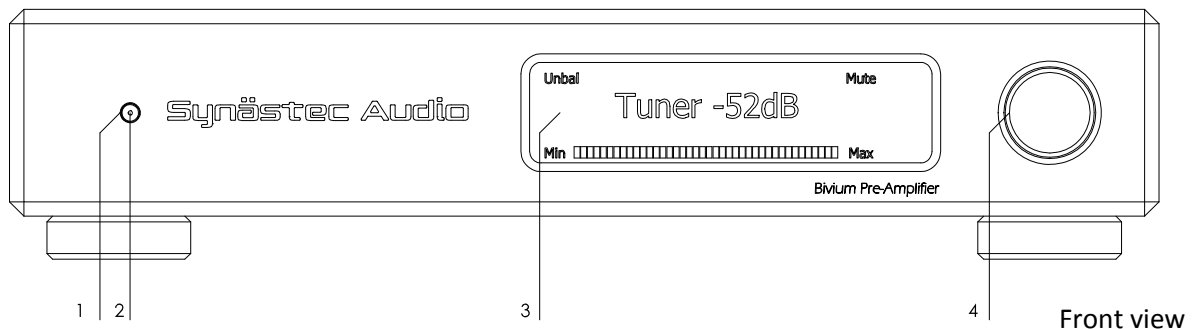
You will find in the Bivium packaging:

- A Bivium preamplifier
- A Bivium power supply
- A remote control unit
- An analog DC power cable with 4-pin LEMO connector
- A digital DC power cable with 3-pin LEMO connector
- An AC power cord
- This owner's manual

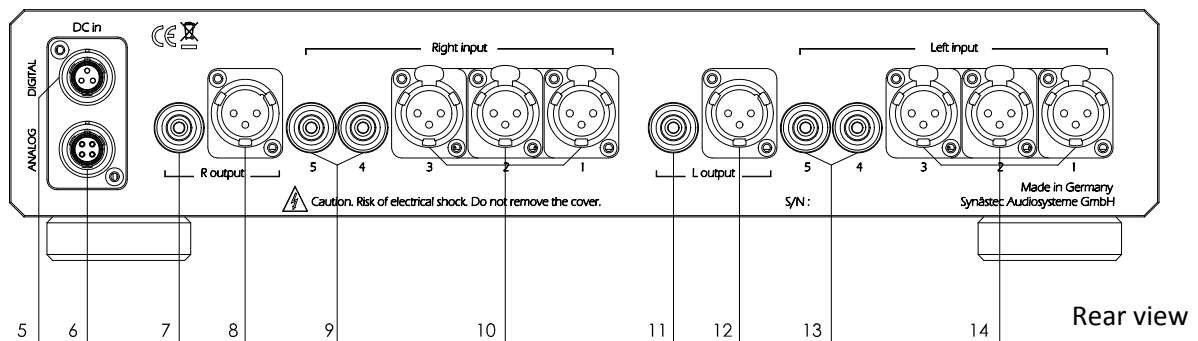
The Bivium is machined from a solid block of aircraft grade aluminum, therefore it is much heavier than it looks. Lift the amplifier with great care, or ask for assistance when trying to remove it from the packaging.

The packaging material is specially designed to well protect the Bivium. We recommend you to keep the original packaging in case you need to transport the amplifier in the future.

Preamplifier

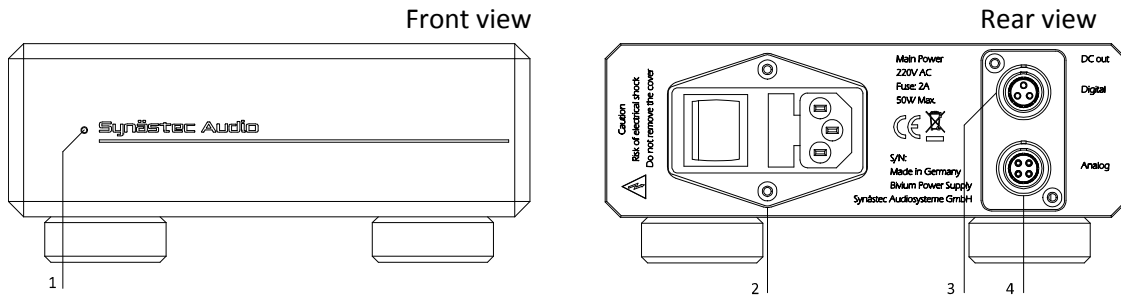


1. ON/OFF Button
2. Operate LED (green when operate, red when ready)
3. Display and IR remote sensor
4. Volume knob with integrated push button
 - Turn the volume knob clockwise will raise up the volume;
 - Pressing the knob will switch the active audio channel to the next input.



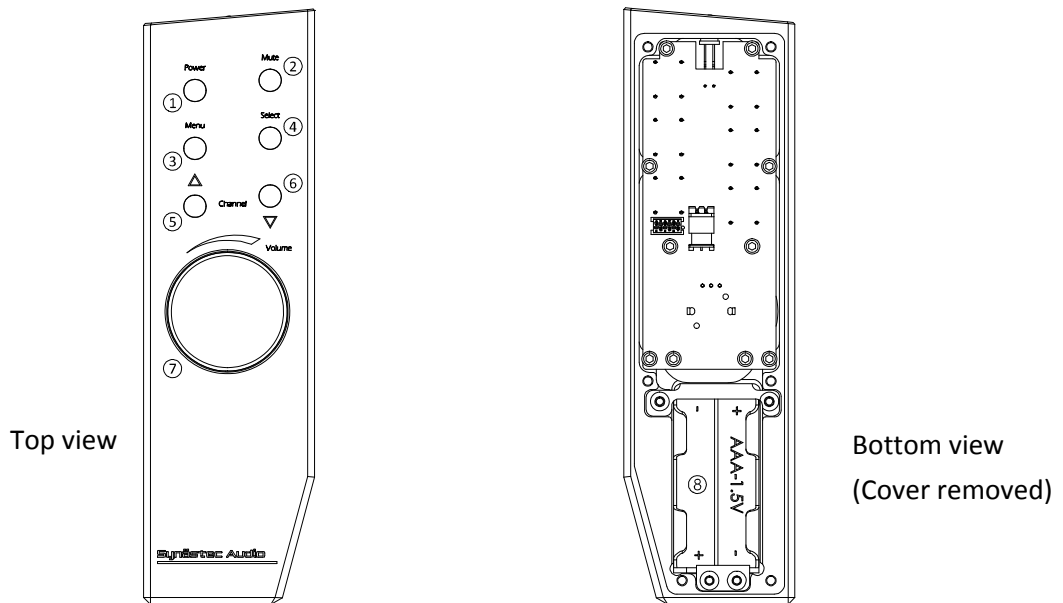
5. DC power input (Digital)
6. DC power input (Analog)
7. Right audio output - RCA unbalanced
8. Right audio output - XLR balanced
9. Right audio input - RCA unbalanced
10. Right audio input - XLR balanced
11. Left audio output - RCA unbalanced
12. Left audio output - XLR balanced
13. Left audio input - RCA unbalanced
14. Left audio input - XLR balanced

Power supply



1. Main power LED
2. IEC power inlet, fuse holder, main power on / off switch
3. DC power output (Digital)
4. DC power output (Analog)

Remote control

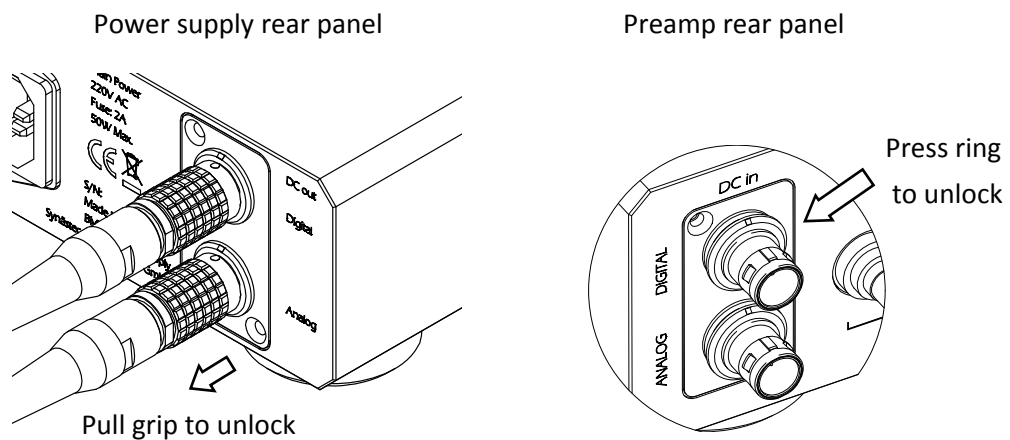


1. Power
2. Mute
3. Menu
4. Select
5. Channel up (- adjust in Menu mode)
6. Channel down (+ adjust in Menu mode)
7. Volume control (Scroll in Menu mode)
8. Battery holder

Preparations

Bivium is a line stage preamplifier with separate power supply. Install Bivium on a rigid and stable platform. A vibration free platform will help extracting the optimal sonic performance.

Make sure the main power switch is in the OFF position (O) before connecting any power cable. Connect the Bivium to the power supply unit, using the two special DC power cables enclosed in the package. The 4 pin DC cable is for the analog supply whereas the 3 pin cable is for the digital and control circuitry. Both DC cables are terminated with LEMO connector equipped with special locking mechanism. Please release the lock when unplug.



Always use an AC power cord with ground wire. The Bivium power supply must be earthed, both for safety and sonic reason. To get the best sound quality, make sure that all your Hi-Fi equipments are connected into one mains socket.

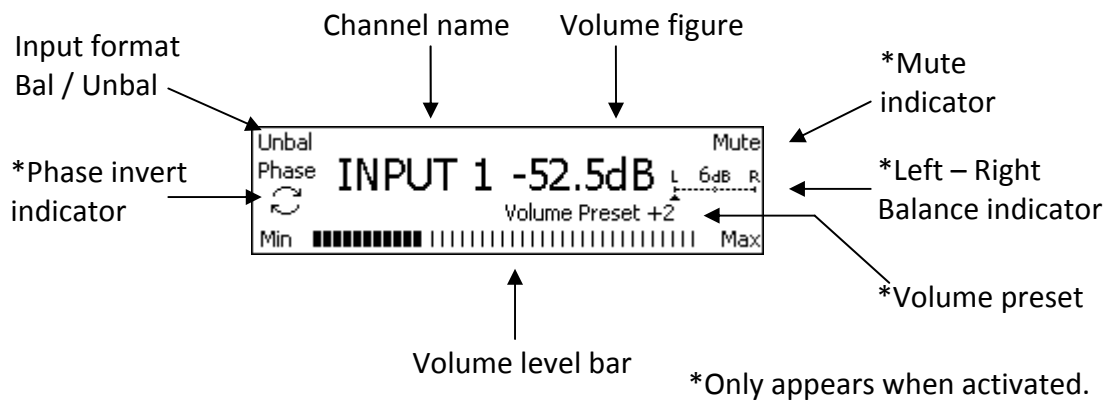
Connect your audio signal sources, for example CD player, SACD player, radio tuner, etc, to the audio input sockets on the rear panel of the Bivium preamplifier. Then connect the preamplifier's audio output to your power amplifier.

Audio input 1 to 3 are balanced while input 4 to 5 are single ended. The Bivium audio circuit is fully balanced all the way from input to output. Therefore balanced XLR cable is preferred for the best sound quality. Any audio signal will be converted into balanced mode internally by the Bivium, so the audio performance is not compromised even when unbalanced RCA cable is used. The balanced audio outputs are wired as pin 1 Ground, pin 2 hot and pin 3 cold (Comply to the AES 48-2005 standard). Audio phase can be switched manually to be compatible with signal source wired in different fashion. The Balanced output and single ended output are driven by separate amplifier circuits and they can be used simultaneously.

Operation

Turn on the main power switch on the rear panel of the Bivium power supply unit.

After turning on the main power switch, the LED on the power supply front panel will glow green. At the same time, the LED on the Bivium preamplifier front panel will glow dim red, indicating it is in ready mode. Now you can press the ON/OFF button once to turn the preamplifier on completely.



Before playing your favorite music, turn the volume down to the minimum first to avoid accidental hearing damage by excessive loudness. Turn up the volume slowly until it is comfortable. Then sit down and enjoy.

When you have finished listening, press the power button once more to toggle the Bivium back into ready mode. If you plan to leave the Bivium unused for a long period of time, use the main power switch on the power supply rear panel to switch it off completely.

Setup Menu

Enter the Setup Manual by pressing the Manual button on the remote control, or by pressing the volume knob on the preamplifier's front panel continuously for more than 2 seconds.

Input Setting	Volume Unit
<u>LR Balance</u>	Mute Volume
Volume Speed	Brightness
	<u>Exit</u>

Input Settings

Input Name, *Input Phase*, *Theater Bypass* and *Volume Preset* are channel dependent parameters that are adjusted separately for each input channel. Adjustments of these parameters are made to the active channel being listened only. To adjust these parameters on another channel, exit Setup Menu and switch the input channel.

Input Name

Choose your desired equipment name from the list: AUX, CABLE, CD, DAB, DAC, DAT, DVD, DVDA, GAME, HDTV, LD, PC, *PHONO, SACD, SAT, TAPE, TUNER, TV, VIDEO.

*RIAA equalizer is not installed in the Bivium, external phono preamplifier is needed for vinyl disc playback.

Input Phase

Bivium is a non-inverting amplifier that does not reverse audio phase (preserves signal polarity). If it is necessary to invert audio phase deliberately in order to match with other equipment, select *Inverted* in the input phase menu. The phase inversion is only valid for the selected channel. A scroll arrow sign will appear on the display indicating phase inversion is activated.

Theater Bypass

The Theater Bypass allows the Bivium to be connected to surround sound processor and share the same pair of left and right loudspeaker with the surround sound system. When Theater Bypass is activated, the Bivium will switch itself to the unit gain position (0dB gain) automatically. In this case, the Bivium will behave as a buffer. Volume control will be handled by the surround sound processor upstream in the signal chain.

Volume Preset

If you have a source equipment that has particularly lower (or higher) output than the others, you can compensate this by using the Volume Preset. For example if your Tuner is 6dB quieter, you could set the Tuner Volume Preset to +6dB. With the Volume Preset tuned right, the sound level would remain the same upon switching between Tuner and other channel.

General Settings

LR Balance, Volume Control Speed, Volume Unit, Mute Volume and *Display Brightness* are general parameters that are shared among all input channels.

LR Balance

The Left Right balance of the Bivium itself is extremely well (below +/-0.05dB) which requires not adjustment at all. The LR Balance adjustment feature is only intended to compensate the difference between left and right volume caused by other equipment.

Volume Control Speed

Adjust the speed of volume control by choosing between *Fine* and *Coarse*. *Fine* mode offers 160 volume steps for high resolution adjustment, in 0.5dB increment. *Coarse* mode offers 80 volume steps for fast adjustment, in 1dB increment.

Volume Unit

Numeric mode represents volume in a user friendly 0 to 160 level scale.

dB mode represents volume in a professional manner in overall logarithmic gain.

Mute Volume

When -55dB is selected, the preamp will attenuate the output to a very soft level whenever the MUTE button is depressed. If -120dB is selected, the preamp will cut off the audio output completely when muted.

Display Brightness

There are 5 different levels of display brightness available, *level 5* being the brightest. Or you can choose *Auto*, which will brighten up the display upon any control command, and then dimmed by itself after about 2 minutes.

Restore Factory Setting

Press and hold the Power button on the preamplifier front panel for 5 seconds, the Bivium will enter the *Restore Factory Setting* menu. Activating this will erase all user entered setting and restore every parameter to the original out of factory state.

Safety and Protection

DC protection

The Bivium protects the loudspeaker from DC leakage. In case of the present of DC leakage, the audio output will be cut off automatically.

Short circuit protection

The Bivium is designed to withstand momentary short circuit. However, do not short circuit the audio output intentionally.

Maintenance

Cleaning

The Bivium requires no adjustment and will remain in optimum condition for many years. Clean the surface with soft dry cloth only. Do not use any solvent or cleaning agent.

Remote Control Battery replacement

Unscrew the bottom plate of the remote control unit. Replace old batteries with AAA size dry cell alkaline batteries (LR03). Reclose the bottom cover after battery replacement. Always replace both batteries at the same time. Mixing new and old batteries will reduce battery life.

Fuse replacement

Only replace Fuse with the same rating as the supplied one.
For 220V AC electricity supply, use T3A delayed fuse.
For 110V, use T6A delayed fuse.

Specifications

Input:	3 symmetrical 2 asymmetrical
Output:	1 symmetrical 1 asymmetrical
Frequency response:	10 Hz to 185 kHz (+0/-0.5 dB)
THD+N:	<0.0005% (10 Hz to 20 kHz)
Signal to Noise ratio:	>116 dBA
Channel separation:	> 120dB
Input impedance:	20 kOhm
Output impedance:	100 Ohm
Power consumption:	28 Watt operation / 18 Watt Ready
Weight:	21.7kg net
Dimension:	400 mm x 307 mm x 87 mm (W x D x H)

Warranty

Three years labor and parts.

Bivium Preamplifier Owner's Manual (English, Rev. 1.0)

Synästec Audiosysteme GmbH, Veilchenweg 1, 72479 Straßberg, Deutschland

Website: www.synaestec-audio.de, E-mail: info@synaestec-audio.de

Tel: +49 (0) 7434 532 496, Fax: +49 7434 532 626