Burson Conductor Stellar (S-280)

Headphone Amplifier / DAC / Pre-Amplifier

User Manual

Register for warranty Ref. page 14 for details

Thank You

Everyone at Burson Audio would like to thank you and congratulate you on choosing the Burson Conductor Stellar. We believe you have made an excellent choice, and we are confident it will provide many years of musical enjoyment.

Before powering on your new Conductor Stellar, we recommend taking a few moments to familiarise yourself with its features and operation. Reading this manual will help you achieve the best performance and ensure safe operation from the very beginning.

Our Philosophy

The less audio equipment interferes with the music, the greater the sense of purity and musical enjoyment. This principle has been at the core of Burson Audio's design philosophy since 1996.

When equipment is honest and transparent, tempo, dynamics, and tonal balance emerge naturally from the music itself, making artificial "flavouring" unnecessary. We believe this ideal cannot be achieved through standard circuitry building blocks such as IC op-amps, integrated regulators, or off-the-shelf transformers.

Instead, we pursue this goal through the research and development of customised solid-state circuits designed specifically for our applications, with every component pushed to its performance peak. Only then can the final result truly reflect our philosophy and standards.

Team Burson

Unpacking

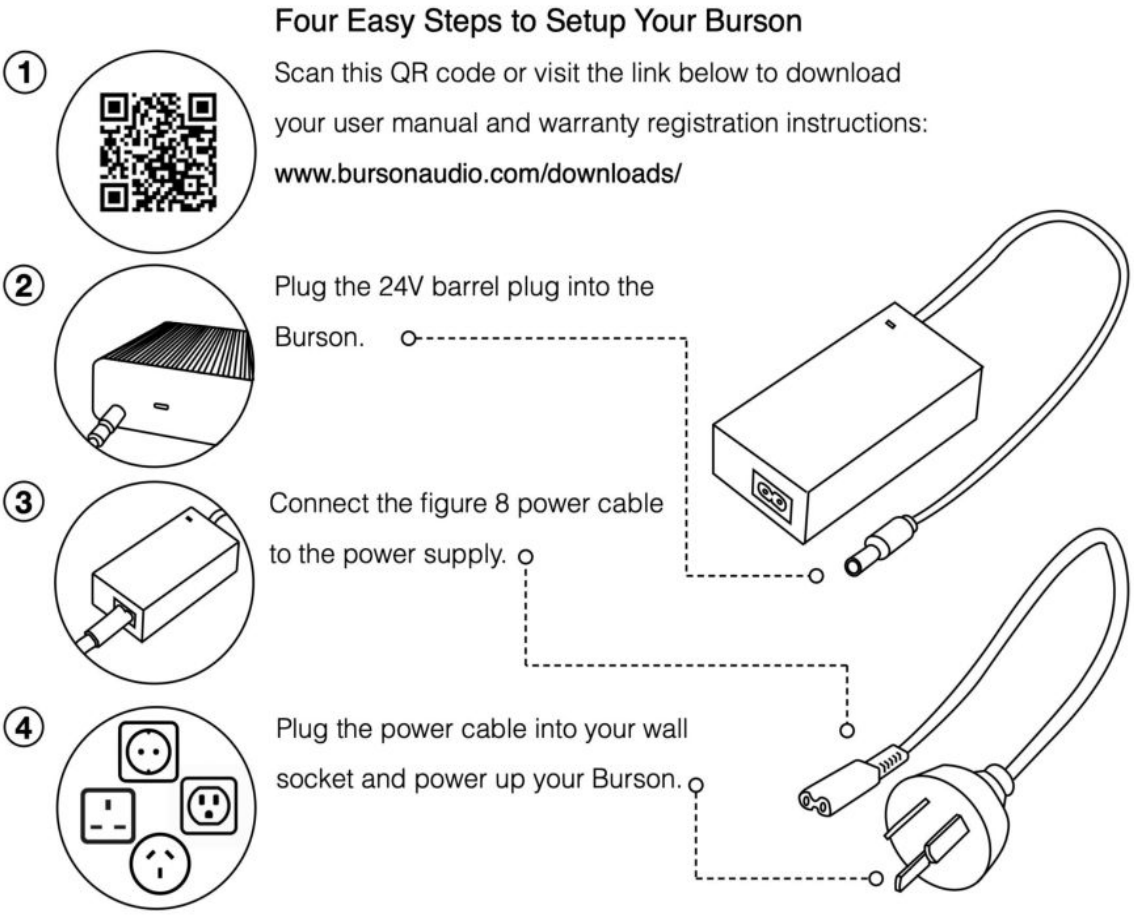
After carefully unpacking your Burson Conductor Stellar, inspect the unit for any signs of shipping damage. If damage is found, contact your dealer immediately. Do not power on the unit if shipping damage is present.

Please retain all original packing materials so the unit can be safely and securely transported if required in the future.

The Package

- Conductor Stellar Headphone Amp / Pre Amp / DAC
- External Power Supply 24V 5A
- Remote control unit (Optional)
- USB Cable
- Mic Adaptor
- 12V trigger cable
- Hex Key / Spare Fuse / Spare IC opamps for troubleshooting.

Basic Setup


Four Easy Steps to Setup Your Burson
1
Scan this QR code or visit the link below to download your user manual and warranty registration instructions:
www.bursonaudio.com/downloads/
2
Plug the 24V barrel plug into the Burson.
3
Connect the figure 8 power cable to the power supply.
4
Plug the power cable into your wall socket and power up your Burson.

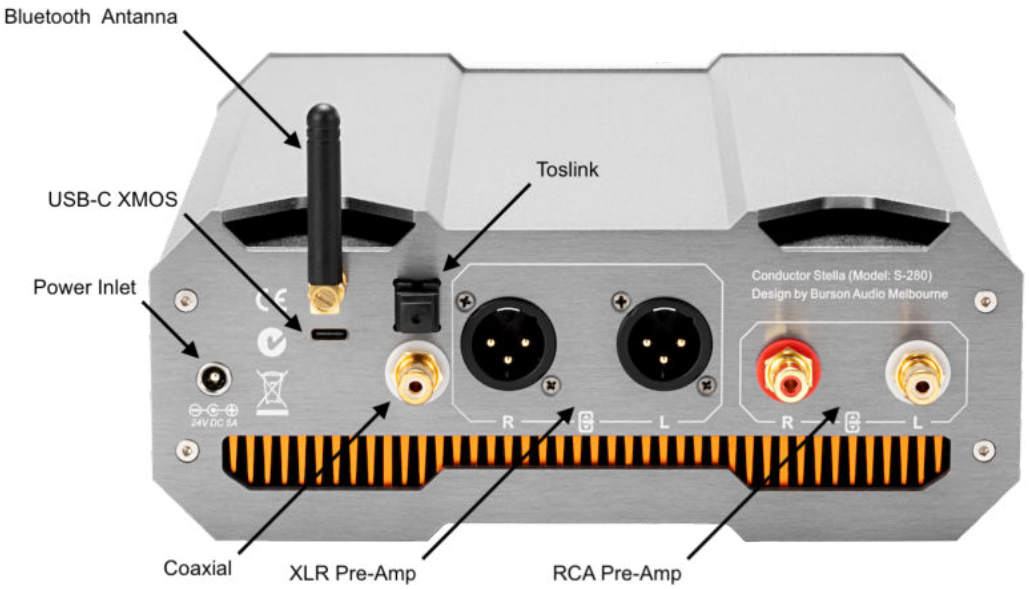
XLR to RCA Output

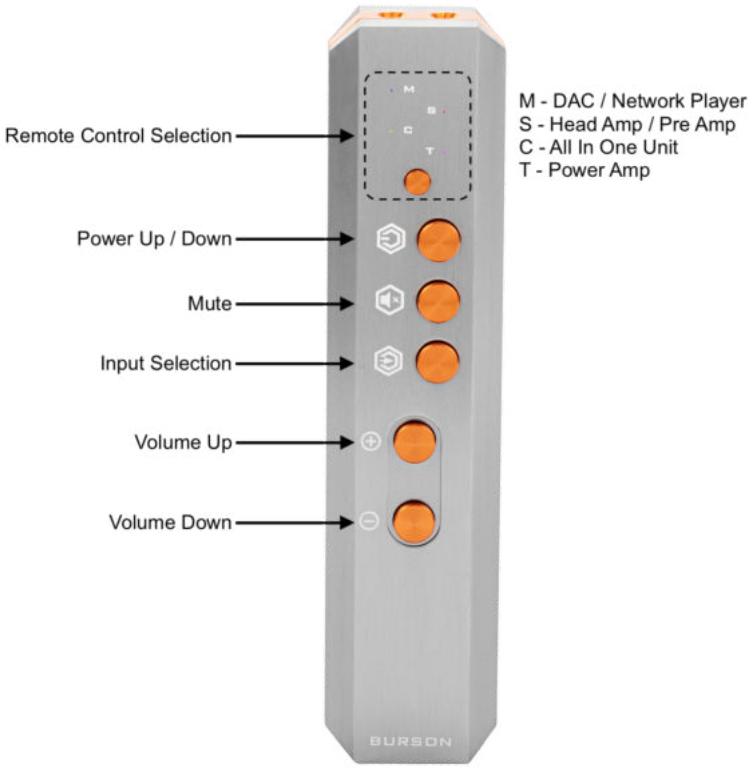
To achieve optimal sonic performance, the Conductor Stellar's XLR outputs are direct-coupled. This means there are no coupling capacitors or transformers in the audio signal path.

Direct-coupled outputs are **not compatible** with standard off-the-shelf XLR-to-RCA adaptors like those shown below. Never use these adaptors. Connecting the Conductor Stellar to a single-ended amplifier with RCA inputs using such adaptors will damage the internal op-amps and will void the warranty.

Only use the custom-made, Burson-marked XLR-to-RCA adaptors supplied in the accessories box when connecting the Conductor Stellar's XLR outputs to downstream amplifiers with RCA inputs.

Connections





Break-in, Warm-up and Caring

The sound of the Burson Conductor Stellar improves steadily within minutes of powering on. Depending on system resolution and listening sensitivity, further refinement may continue over the first few weeks of operation.

Never connect or disconnect RCA or XLR output cables while the unit is powered on or while music is playing. Always stop playback and power down the system before changing connections to prevent potential damage.

Menu Items

The menu system allows quick access to input selection, output configuration, and system settings.

Menu	Options	Comments
Input	USB*	PCM 32bit 786K / DSD512
	Toslink	PCM 24bit 192K
	Coaxial	PCM 24bit 192K
	Bluetooth	PCM 24bit 96K
	RCA 1 & 2	Line level input signal (24bit 192K ADC)
	XLR 1 & 2	Line level input signal (24bit 192K ADC)
Output	Headphone*	Headphone Amp output only
	Headphone + Subwoofer	Headphone + Subwoofer output (no Pre-Amp)
	Pre Out	Pre Amp Out with volume control (Max 12V RMS)
	DAC Out	Line-level RCA @2V RMS XLR @ 4V RMS
	Low	Headphone output power @ 1W
Setting		
Gain Level	High*	Full power (XLR @ 10W / SE @ 5W)
	Low	10% power (XLR @ 1W / SE @ 0.5W) for IEM
DPLL(BW)	HI* / MID / LOW	DPLL bandwidth setting

The DPLL Bandwidth (Digital Phase-Locked Loop) adjusts how tightly the DAC locks onto incoming digital signals. Lower settings can reduce jitter and improve sound quality but may struggle with unstable or low-quality sources. Higher settings make the DAC more forgiving, especially with Bluetooth or streaming devices.

FIR Filter	MP*	Minimum Phase
	LPAFR	Linear Phase Apodizing Fast Roll-Off

	MPFRO	Minimum Phase Fast Roll-Off
	MPSRO	Minimum phase slow roll-off
	MPSROLD	Minimum Phase Slow Roll-Off Low Dispersion

The FIR Filter (Finite Impulse Response) defines the digital reconstruction curve of the audio signal. It shapes how the DAC rebuilds the analog waveform from digital data. You can choose between different roll-off types—like fast, slow, or linear phase. Each has a slightly different effect on timing and frequency response. For example, a fast roll-off filter suppresses high-frequency noise more aggressively, while a slow roll-off preserves more high-frequency detail at the expense of slightly more aliasing. It's a tool for fine-tuning the DAC's sonic presentation.

THD COMP	C2 ON	Only C2 is turn on.
	C2 C3 ON*	By default both C2 and C3 are turn on.
	BP ALL	Bypass both C2 and C3

THD Compensation (Total Harmonic Distortion) is designed to cancel out tiny harmonic distortions introduced during digital-to-analog conversion. Turning it on gives a cleaner, more precise sound. Turning it off may allow a slightly warmer or more relaxed sound, which some listeners prefer.

IRR BW	BW*	
	BW X 2	
	BW X 4	
	IBW X 8	

IRR Bandwidth (Image Rejection Ratio) controls how aggressively the DAC suppresses unwanted out-of-band frequencies—basically digital "noise" that's outside the audible range. Tweaking this can subtly clean up the background and improve clarity, especially with complex recordings.

DAC PATH	NO BP	No bypass
	BP IIR*	Bypass only IIR stage
	BP FIRX4	Bypass only FIR X 4 filter
	BP FIRX2	Bypass only FIR X 2 filter
	BP ALL	Bypass IIR+ FIR X 2 + FIR X 4

The DAC Path setting changes the internal signal routing inside the ESS chip. It's designed to let you balance between different levels of processing and signal purity. Adjusting this may subtly impact dynamics, tonal balance, and perceived detail, depending on your system.

OLED LVL	Low*/High	Display Brightness
USB MIC	OFF* / ON	USB Mic, turn off allow better compatibility with network

		streamer and etc.
REMOTE	ON*/OFF	Remote Control
AUTO OFF	OFF / ON*	Unit auto turn off after 20 mins of no output.
RESET SET	NO* / YES	

(*)= Default factory setting.

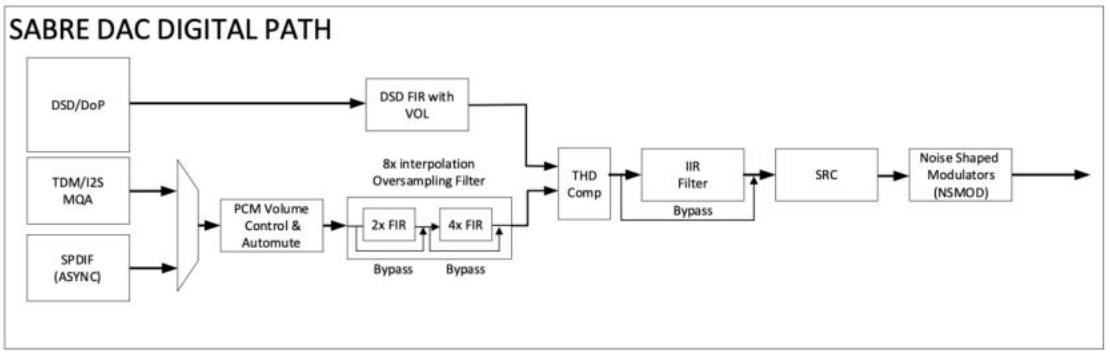
FIR Filters are part of the digital process built in the DAC chip. These filter settings mainly affect high-frequency roll-offs usually in the 18khz and above frequency range. The effect of the filter settings is very subtle and may not always be audible.

Digital FIR Filters:

The ES9039 PRO has pre-programmed digital filters. Burson opened 5, which we believe are relevant to our design, so customers can fine-tune the sound to their liking.

MP	Minimum phase (default)	Less ripple, more image rejection
LPAFR	Liner phase apodizing fast roll-off	Full image rejection by FS/2 to avoid any aliasing, with smooth roll-off starting before 20k
MPFRO	Minimum phase fast roll-off	Low latency, minimal pre-ringing and low passband ripple, image rejection @ 0.55fs
MPSRO	Minimum phase slow roll-off	Lowest latency at the cost of image rejection
MPSROLD	Minimum phase fast roll-off low dispersion	Provides a nice balance of the low latency of minimum phase filters and the low dispersion of linear phase filters. Minimal pre-ringing is added to achieve the low dispersion in the audio band

Digital Signal Path



THD Compensation

The ES9039PRO has built-in THD compensation to help compensate for system second and third harmonics that may be present on the output signal. The compensation is controlled through 4 individual signed 16-bit coefficients in the THD Compensation Coefficient Registers.

The following equation displays how the second and third harmonics are affected by the C2 and C3 values:

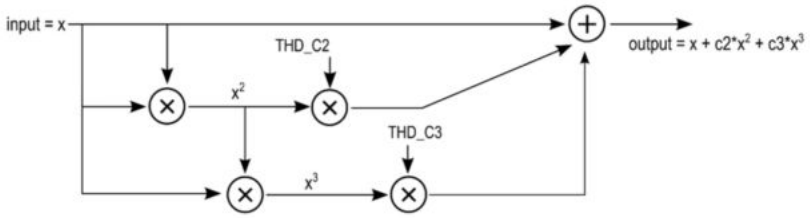


Figure 4 – THD Compensation Block Diagram

For more information on any of the DAC settings, please refer to the official ESS9038 datasheet.

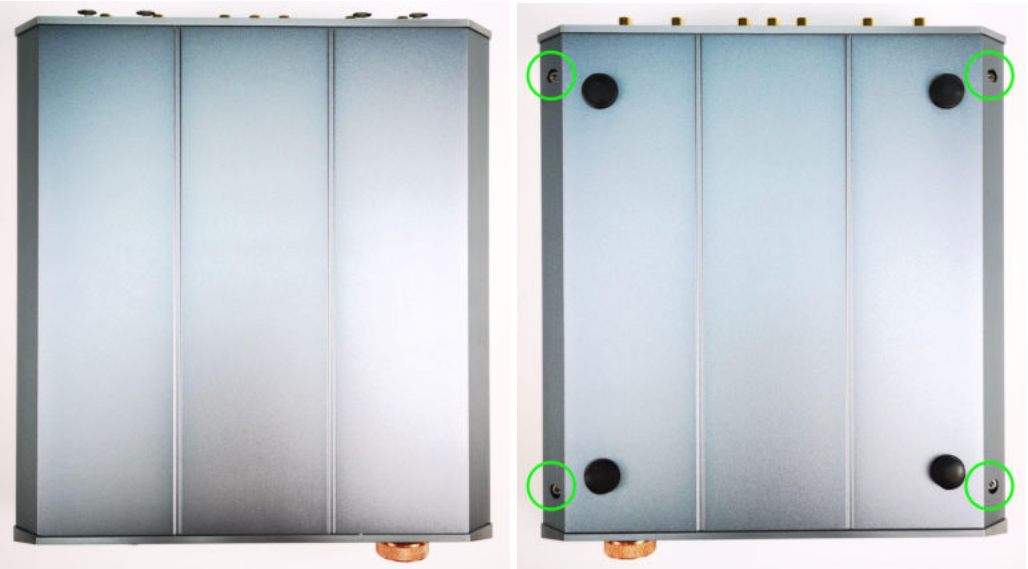
Changing Menu Items

- Press the **Menu** button to enter the menu.
- Rotate the **Volume** dial to scroll through menu items.
- Press the **Volume** dial to select an item.
- Rotate and press the dial to adjust available options.
- Press the **Menu** button again to confirm and exit.

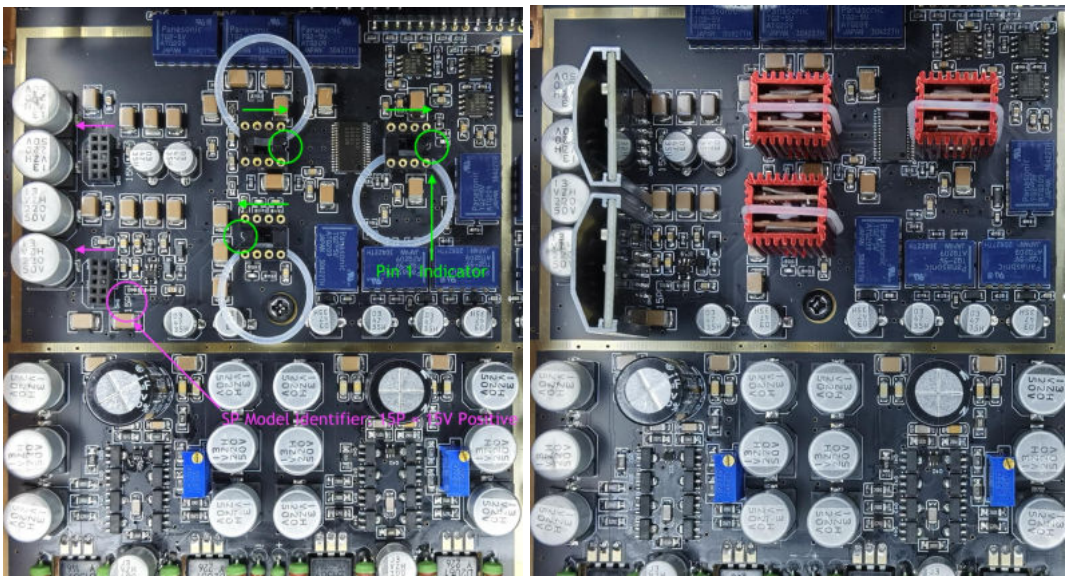
Opamp Upgrade

Upgrading op-amps can further enhance performance. This procedure should only be carried out by experienced users.

Step 1: Ensure the unit is powered off and disconnected from the mains before opening the chassis.

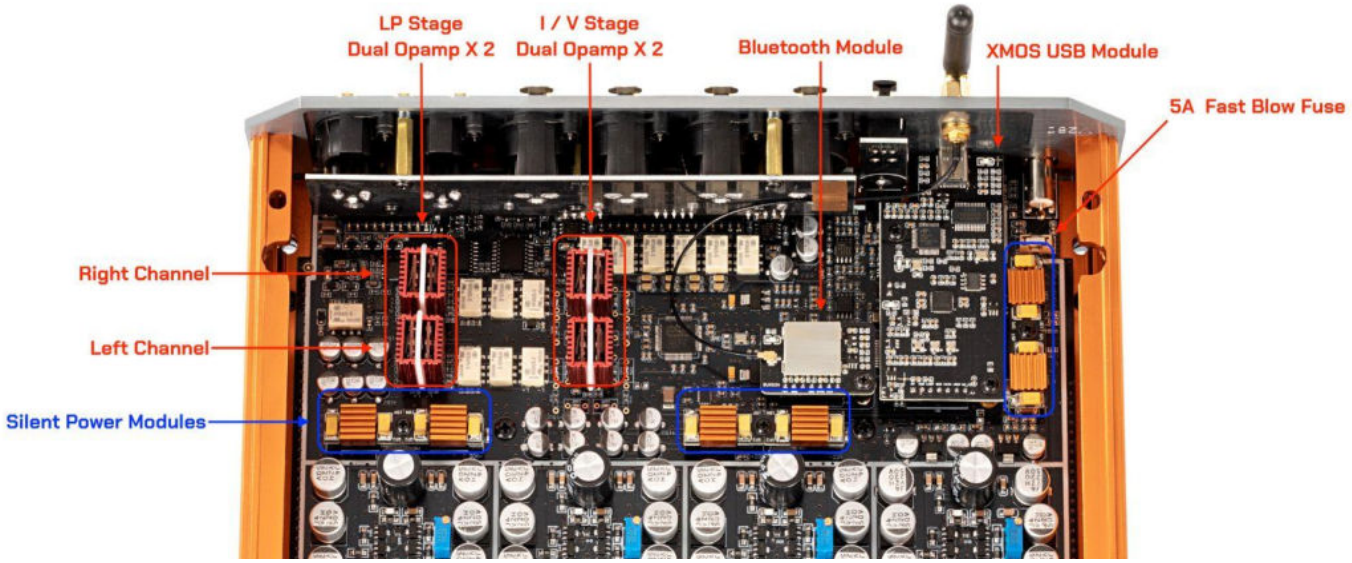


Step 2: Single and dual op-amps are not interchangeable. Refer to the layout diagram to confirm the correct type and quantity for your unit.



Step 3: Op-amps are polarity-sensitive. Align the pin-1 indicator on the op-amp with the half-moon marking on the socket before insertion. Incorrect orientation may cause immediate damage.

Important Note: Audio circuits contain multiple gain stages (I/V, low-pass, buffer, etc.). When upgrading, replace all op-amps within the same stage simultaneously to ensure consistent performance and reliability.



Silent Power Module Upgrade

Silent Power (SP) Modules further reduce noise and enhance overall performance.

When upgrading SP modules, refer to the diagram or photograph the original configuration before removal to ensure correct placement.

Chipset	Noise Spec (10Hz to 100kHz)	Output Voltage	Model
LT1963	40μVRMS	+15V	SP1-15P

LT3015	30µVRMS	-15V	SP1-15N
LT1963	40µVRMS	+5V	SP1-05P
LT1963	40µVRMS	+3.3V	SP1-03P

LT3045	0.8µVRMS	+15V	SP2-15P
LT3094	0.8µVRMS	-15V	SP2-15N
LT3045	0.8µVRMS	+5V	SP2-05P
LT3045	0.8µVRMS	+3.3V	SP2-03P

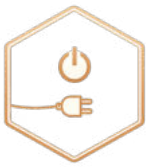
Fail-safes

For protection, the Conductor Stellar will automatically enter sleep mode if the cooling fan is disconnected, fails, or if the top cover is removed.

Before reinstalling the top cover, ensure no cables or objects obstruct the proximity sensor.

Maintenance

If dust accumulates inside the unit, cleaning may be required. Please contact Burson Audio support for detailed instructions. Do not attempt internal cleaning without guidance.



The Initial Powering up

Ensure the volume control is set to minimum before first use. Always power on source devices first and power amplifiers last. Reverse this sequence when powering down.

To select an input, rotate the **Volume** dial until the desired source is displayed, then press the dial to confirm.

Free Warranty Extension

All Burson Audio products are covered by 24 months + 12 months of warranty (See conditions below). https://www.bursonaudio.com/warranty/.

Warranty Conditions

Burson Audio warrants that this product is free from defects in materials and workmanship during the warranty period, which begins on the date of purchase.

1. This warranty is non-transferable.
2. The product is warranted only in the country of original sale by Burson or an authorised dealer.
3. Any unauthorised modification immediately voids the warranty.
4. The product must not be exposed to moisture, water, or corrosive environments.
5. Burson will repair or replace a defective unit with a comparable product at no cost for parts, labour, or return shipping.

6. Burson is not liable for incidental or consequential damages, loss of use, or damage to other equipment, within the limits of Australian law.
7. USB compatibility depends on third-party driver support and cannot be guaranteed indefinitely.
8. Use of non-approved XLR-to-RCA adaptors voids the warranty.

Warranty Registration