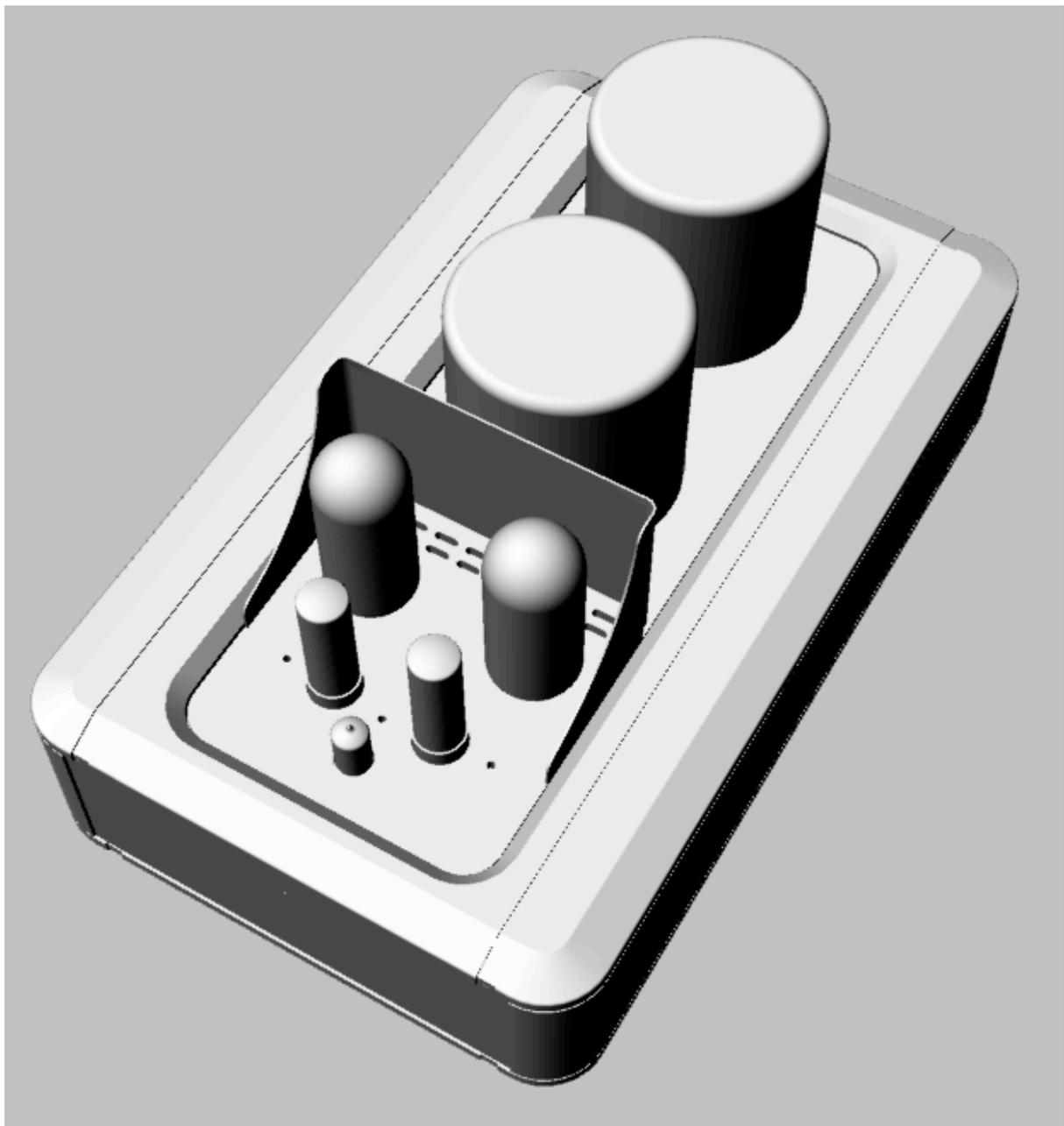


ABSOLARE Push-Pull Amplifier

User Manual



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1. General Description

The Absolare Push-Pull Amplifier is a transformer coupled, zero feedback, two chassis monoblock stereo amplifier with an all tube signal path and point-to-point construction. Transformer Balanced (XLR) and Single-ended (RCA) input versions are available.

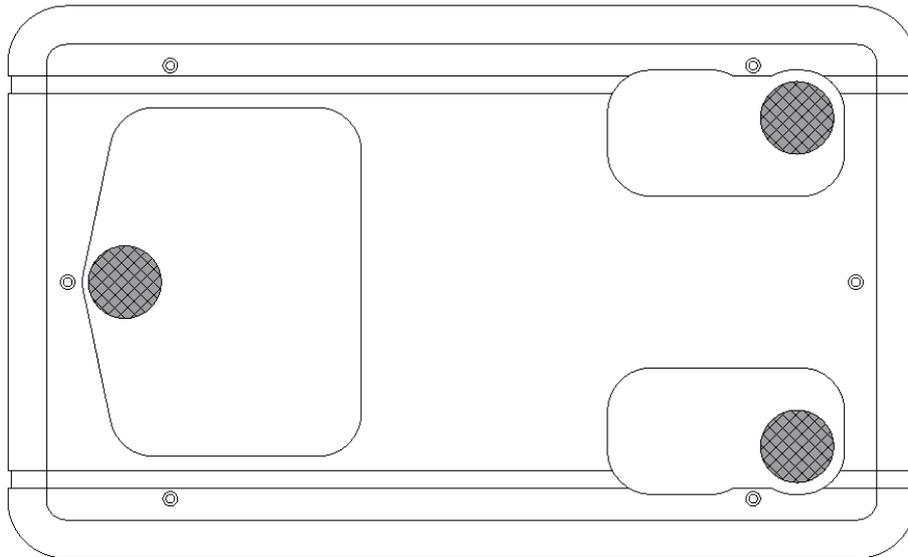
2. Safety Issues and Warnings

- - Ensure the voltage setting of the unit matches the voltage of the available AC power. Operating voltage is fixed and must only be changed by an authorized service agent.
- Do not touch tubes while operating. Tubes are extremely hot devices and also contain very high voltages.
- There are no user serviceable parts inside the units. Do not open bottom covers.
- Do not operate the amplifier without an output load. 4 – 8 ohm speakers or equivalent load should be connected to speaker terminals when the amplifier is operating.

3. Unpacking and Placement

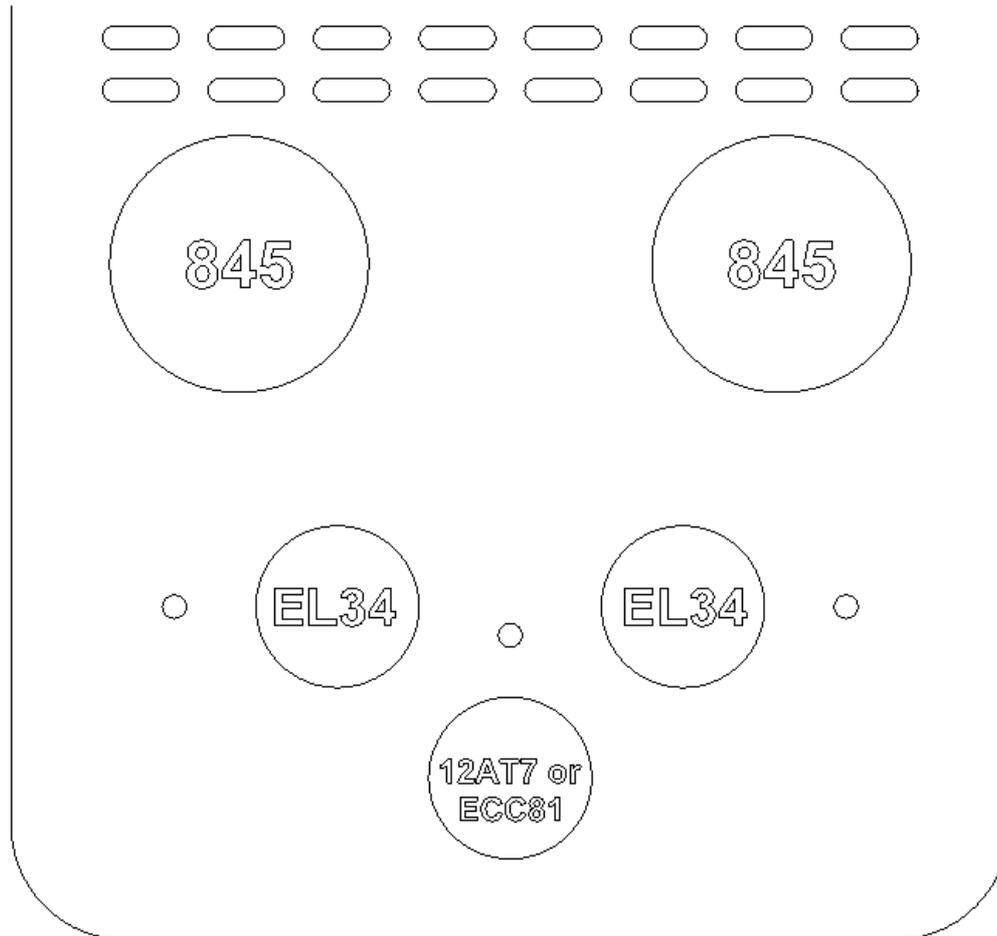
The monoblock amplifiers are supplied in separate boxes. After opening the top cover of the box, remove the upper layer of hard foam material. You can then lift the units from the box using the cloth underneath each chassis.

Feet can affect the sound quality significantly. Feet should be placed directly under the aluminum base plate, not the MDF/leather plate. There are three areas where the aluminum base plate is exposed through openings in the bottom MDF/leather plate. These areas are where feet should be placed. You can use either three or four feet. Adjusting their position will also affect the sound to varying degrees, depending on the type of rack, location or interaction with other equipment. For most situations the arrangement as shown in the diagram below is a good starting point.



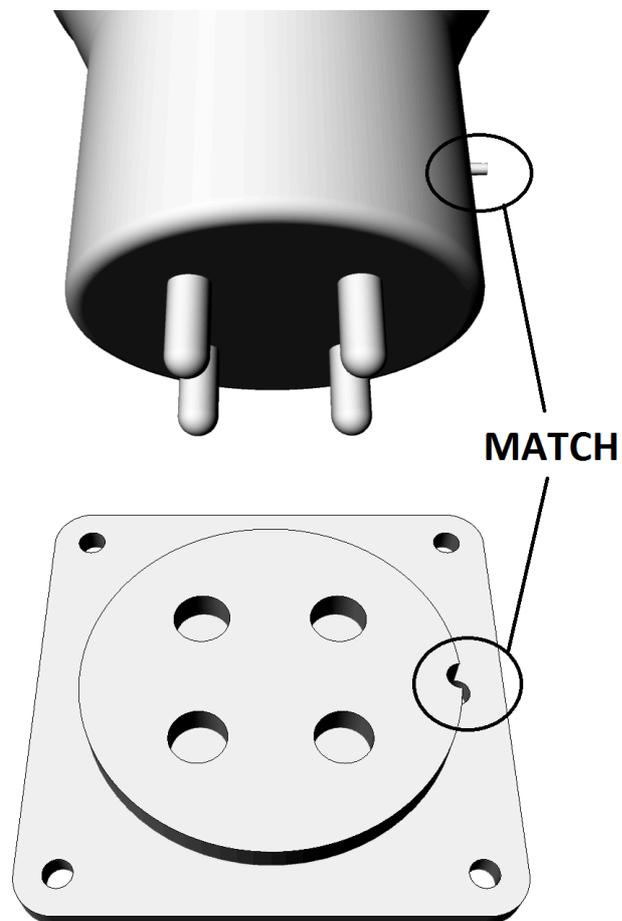
4. Installing the Tubes

There are total of 5 tubes in each monoblock. Placement of tubes is shown below:

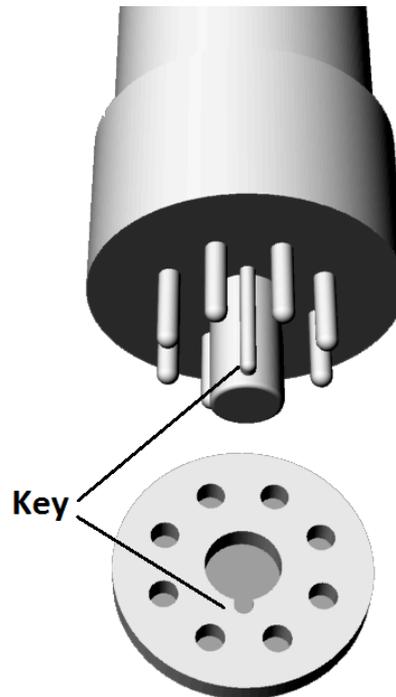


845 tubes must be installed in the correct orientation. The small indicator pin on the lower side of the tube base should match the small hole on the right-side of the tube socket, as illustrated in the figure below.

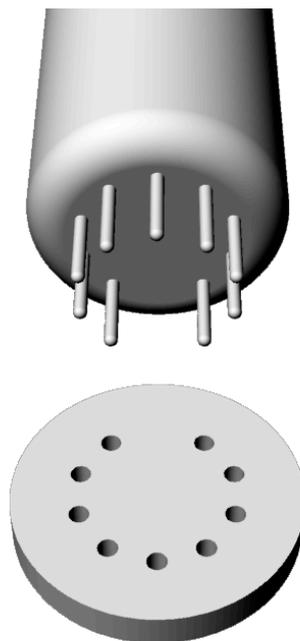
CAUTION: Incorrect positioning of 845 may seriously damage the amplifier!



EL34 tubes have a small bump in the center as a key for correct positioning. Align it with the corresponding notch in the tube socket while inserting.



12AT7 / ECC81 tube has one missing pin acting as a correct positioning key. Align missing pin with the missing hole in the tube socket while inserting.



5. Connecting the Cables

5.1. Power cables

AC power input is via a standard IEC socket. Operating voltage must only be changed by an authorized service agent.

The quality of the power cable used will affect the sound quality.

5.2. Signal Cables

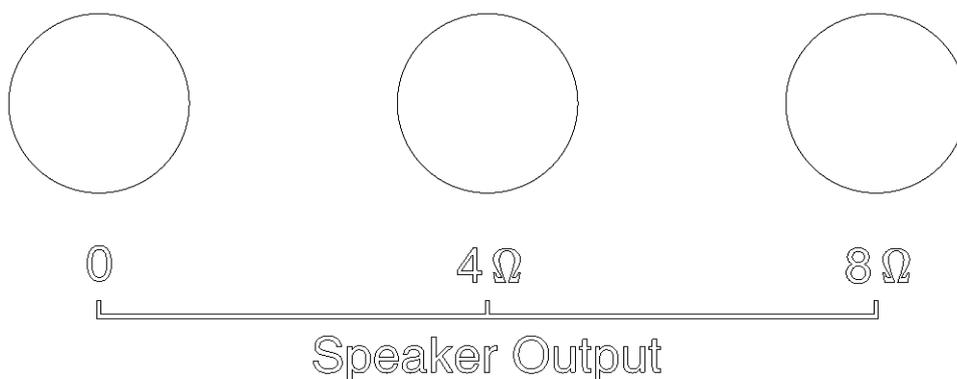
Single-ended version has only one RCA input connector. Balanced version has both RCA and XLR input connectors. The RCA and XLR inputs are connected in parallel inside the unit. Do not connect two source devices at the same time. A selector switch (marked as SEL) allows you to bypass the input transformer. When the input transformer is bypassed, the sound level will increase due to level differences of balanced and unbalanced connection standards, but you lose true balanced input features and the system may become more susceptible to noise.

5.3. Speaker Cables

Speaker binding posts can handle spade lugs, banana plugs or bare wire. Polyethylene knobs are chosen instead of metal ones to reduce extra conductor mass and eddy currents. Do not overtighten the binding posts. The higher friction of polyethylene will secure the speaker cables.

There are two impedance options for speaker connection. You should use the closest matching output with your speaker manufacturer's recommended value. Since the output is transformer coupled, there is no output power difference when using 4 or 8 ohm speakers.

Always use a combination of 0+4 ohm or 0+8 ohm terminals. Never combine 4 ohm and 8 ohm terminals as a 4 ohm output.



6. Operating the Unit

6.1. General Operation

Before turning on the unit be sure that all tubes are installed and all cables connected correctly.

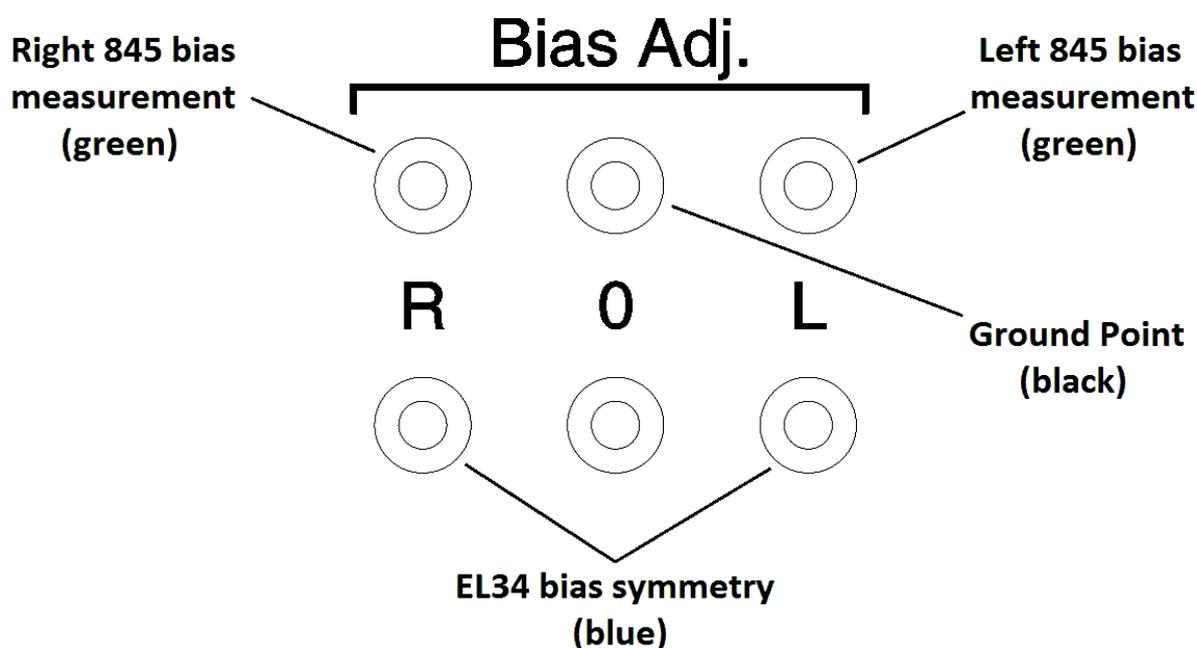
If you have changed 845 tubes you should first minimize the bias settings (by rotating to counter-clockwise) before turning-on the amplifiers and re-adjust the bias settings. Please refer the bias settings section (6.2.1).

After turning on, the power indicator LED on the front plate will start to blink. Sound will only be audible after all capacitors inside are charged and internal voltages are stabilized (after that the indicator LED starts to illuminate continuously).

Absolare Push-Pull Amplifier will be ready to operate approx. 40 seconds after turning on the power, but attaining full performance may take 15 to 30 minutes.

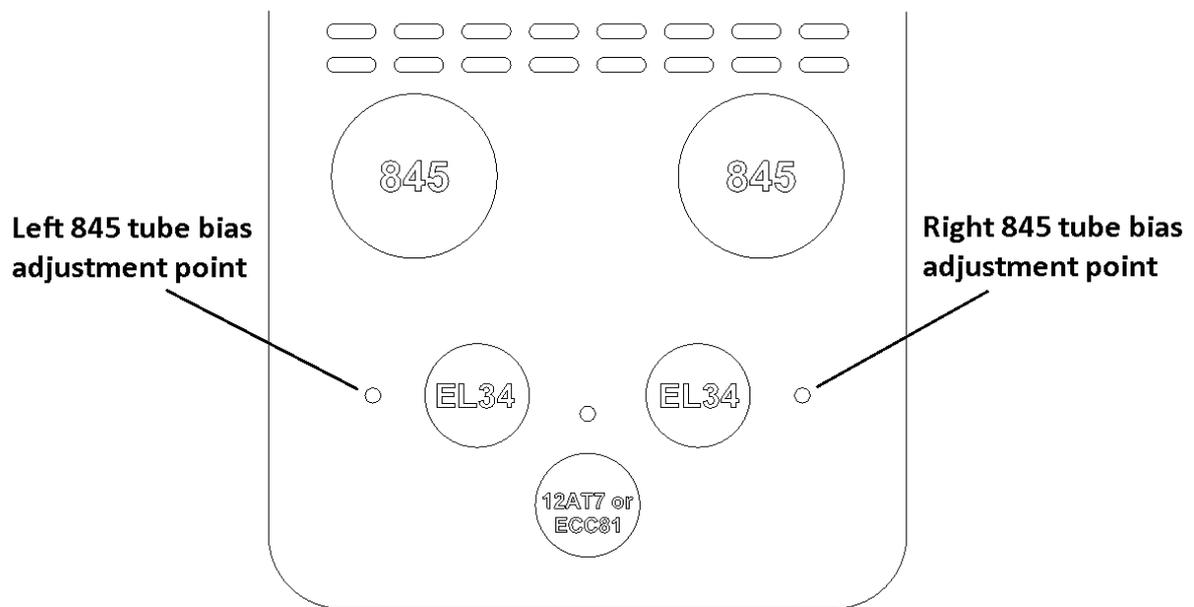
6.2. Setting the Bias Levels

Measurement points for the bias levels are at the back cover:



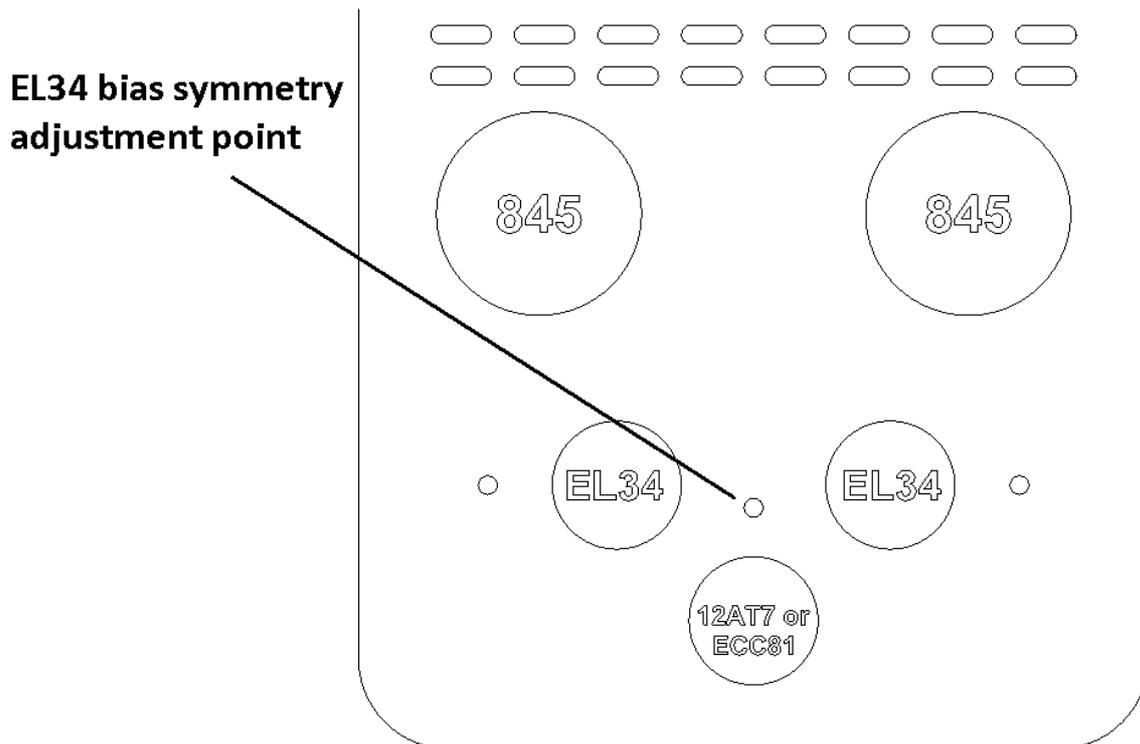
6.2.1. 845 Bias Levels

You have to adjust left and right 845 tube bias levels separately. Measurement is done via a multimeter at 2V DC (or 2000mV DC) setting. Insert black (-) probe into black socket and red (+) probe into one of the green sockets. You should read a value about 0.45V (450mV) for each tube. If the readings are different, then adjust the bias level via potentiometers near the EL34 tubes. A small flat screwdriver will be necessary to access internal bias pots.



6.2.2. EL34 Bias Levels

There is no separate bias adjustments for EL34 tubes, but the push-pull symmetry is important. With a multimeter at lowest DC volt measurement setting, insert black and red probes into blue sockets. The adjustment point is in between the EL34 sockets. You should try to get 0.0V or near by turning the adjustment pot with a small flat screwdriver. If you cannot cross the zero value (i.e. you only get positive or negative values in entire adjustment range) you should turn off the unit, wait until tubes are cooled down, swap EL34's and repeat the adjustment procedure above. This happens when one of the EL34 tube gain is very different than the other one. If swapping the tubes does not solve the issue then you should replace at least one of the tubes or install a gain matched pair.



7. Troubleshooting and Maintenance

Surface of the unit is dirty.	Clean with a slightly damp cloth.
No power light.	- Check AC line voltage. - Check the main fuse.
Power light is on but 845 tube heaters are not glowing.	- Tube orientation is wrong, turn-off the immediately and correct the installation. - Tube(s) are defective.
Power light is on, tube heaters are glowing, but no sound.	- Check the input cables , speaker cables and source. - Internal fuse for 845 tubes may be blown out. Call your dealer.
Noise / hum in the sound.	- Check grounding of power, input cables and source.

If the problem is persistent, contact your nearest ABSOLARE dealer.

8. Technical Specifications

- Substantially operating in Class A, Zero Feedback, Push-Pull architecture.
- Point-to-point construction.
- Tubes: 2 x 845, 2 x EL34, 1 x 12AT7 / ECC81 (for each monoblock).
- Output power: 85 Watts
- Input: 1 x RCA (transformer balanced XLR optional)
- Input Sensitivity: 1.5 Volts (balanced version 6 Volts)
- Input impedance: 100 kOhm
- Speaker impedance: 4 – 8 Ohms
- Bandwidth: 15 Hz – 35 KHz +/- 1.0 dB
- Dimensions: 38.2 x 62.2 x 29.5 cm (W x D x H),excluding feet.
- Weight: 42.0 Kg (each monoblock)

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