

SYBARITE AUDIO

No 1622

Owner's manual

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1 Introduction

Dear customer,

Congratulations on your purchase of the Sybarite Audio No1622 preamplifier designed and manufactured in Sweden by Sybarite Audio. We do believe and hope that your new Sybarite Audio equipment will be to your full satisfaction for many years to come.

After reading this manual, you will realize that operating the Sybarite Audio No1622 is simplicity itself and during listening you will enjoy your treasured records more than ever before.

1.1 Important safety information

- Read these instructions.
- Heed all warnings.
- Do not use this apparatus near water
- Clean only with dry cloth.
- Do not block any ventilation openings
- Do not install in close proximity to heat sources such as radiators
- Connect mains only to outlet with protection earth tab.
- Unplug the apparatus from the mains in case of lightning storms.
- Refer all servicing to qualified personnel.
- Servicing is required if the apparatus has been damaged in any way, if liquid has been spilled or objects have fallen into the apparatus.
- Unplug the mains cable from the apparatus before the lid is removed to adjust phonograph settings.

1.2 Description

The Sybarite Audio No1622 is a cost-no-object all discrete solid state design operating in class A, employing a relay based R-2R-ladder level control. As transparency and accuracy are words of honor for us, the main design objectives have been: ultralow noise and distortion, wide bandwidth, large overload margin, accurate RIAA-tracking in the phonograph section among many other aspects of performance.

1.3 Features

- Six single ended line level inputs
- One phonograph input (MM and MC)
- Two single ended main outputs
- One single ended recorder output (unity gain)
- Cinema bypass option on LINE 6
- IR remote control, machined from an aluminum billet with turned aluminum buttons
- 12 V trigger output
- All discrete class A circuitry, comprising ultralow noise JFET and bipolar devices
- DC-servos to keep output offset negligible

1.4 Sybarite Audio limited warranty

Sybarite Audio products are warranted to be free from manufacturing defects for five years from date of manufacture. Both parts and labor are included in the warranty, but shipping is excluded. The warranty is considered void if the device has been tampered, repaired by unauthorized personnel or if the unit has been subject to abuse such as excessive mains voltage, excessive mains transient surge, excessive input level, overheating due to inadequate siting, excessive ambient temperature or abnormal physical shock. The warranty is transferable from owner to subsequent owner as long as the original sales invoice accompanies the resale.

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2 Installing the Sybarite Audio No1622

2.1 Siting the Sybarite Audio No1622

Install the preamplifier with at least 50 mm of clearance above and do not install in a closed cabinet. Make sure not to obstruct the ventilation slots on top. Power amplifiers should be located as far as possible to avoid hum in the phonograph section.

Connect the supplied IEC-320 C14 mains cable to the inlet on the rear panel. The inlet is a combined inlet, fuse holder and illuminated mains switch. Make sure that the mains voltage is 230 V (+/-10%), 50-60 Hz.

2.2 Audio inputs

Line level sources are connected to line 1 to line 6 and a phonograph is connected to the phono input on the rear panel.

2.3 Audio outputs

One or two power amplifiers can be connected to the "OUT A"- and "OUT B"-outputs respectively and a recorder to the "RECORDER"-output. All outputs are very load tolerant thanks to the discrete, class A output buffers.

2.4 Trigger output

There is one 3.5 mm output that can be used to trigger power amplifiers. The output is protected against overload with an automatic fuse that will trip at 50 mA. The tip of the connector is +12 V and the ring is ground.

3 Operating the Sybarite Audio No1622

3.1 Front panel controls

There are twelve buttons and one knob with functions as described below – from left to right::

“OUT A”

A short press enables or disables output A. A long press (>1 second) toggles the trigger output.

“OUT B”

A short press enables or disables output B.

“-12 dB”

A short press toggles between +6 dB and +12 dB line section gain. A long press (>1 second) opens the menu, where maximum gain can be defined.

“L/R REV”

A short press toggles between normal mode and reversed stereo mode, meaning that the left input channel will appear in the right output channel and vice versa.

“DIM”

A short press toggles between normal and dimmed display and LED intensity. A long press enables cinema bypass, meaning that the gain of line level input 6 is set to unity (0 dB) and all gain controls are disabled.

“LINE 1” to “LINE 6” and “PHONO”

A short press enables line level input 1 to 6 or phonograph. A long press on “LINE 1” to “LINE 6” opens the menu, where labels and gain offset can be defined.

“GAIN”

Turning the knob changes the gain in increments of 1 dB.

3.2 Label and gain offset menu

A long press on “LINE 1” to “LINE 6” enables the first menu level. A short press will move to the next option – there are three options: “LABEL MENU”, “GAIN OFFSET” and “EXIT”.

3.2.1 Label menu

Selecting the “LABEL MENU” with a long press enables the next level with the options: “CUSTOM LABEL” and “PREDEFINED LABEL”

Selecting “CUSTOM LABEL” with a long press lets the user define a custom label using the gain knob to select a character and a short press moves the cursor to the right. A long press will save the label and exit the menu.

Selecting “PREDEFINED LABEL” with a long press lets the user select one of the 14 factory defined labels using the gain knob to select and a short press to save and exit the menu.

The label of the phonograph cannot be changed.

3.2.2 Gain offset menu

Selecting “GAIN OFFSET” with a long press lets the user define a gain offset using the gain knob. A long press will save the gain offset and exit the menu. This feature is useful if different audio sources have slightly different output level.

Example: Assume a CD-player has a nominal output of 2.0 V and a vintage FM tuner has an output of 500 mV. The CD-player is four times louder $(2.0 \text{ V} / 500 \text{ mV}) = 4$. A factor of four equals 12 dB, hence the FM tuner shall have an offset of +12 dB or the CD-player an offset of -12 dB to compensate for the level difference.

3.2.3 Setting the gain and impedance of the phonograph section

Important safety instruction: disconnect the mains before opening the enclosure.

Use the supplied allen key to unscrew the ten screws holding the lid. Carefully lift the lid upwards. On the main circuit board, there are four DIP-switches used to set gain and input impedance. There is one set of two switches for each channel (left and right). The gain and impedance are printed on the circuit board (see picture below). Consult your cartridge manufacturer for adequate resistive and capacitive loading. Remember that the total load capacitance is the sum of the input capacitance of the phonograph section and the capacitance of the cable – including the tonearm cable – from the turntable to the No1622 preamplifier. For typical moving coil cartridges, the load capacitance is irrelevant. In this case, a load capacitance of 470 pF is recommended to suppress radio frequency interference.

The Sybarite Audio No1622 can be ordered with custom impedance at an additional cost.

In order to maximize the overload margin, it is recommended that the lowest gain setting giving adequate signal level is used. The table below indicates recommended gain setting for typical cartridge output levels at 5 cm/s at 1 kHz.

Cartridge output	gain setting
>5 mV – 2.5 mV	46 dB
2.5 mV – 1.25 mV	54 dB
1.25 mV – 0.5 mV	60 dB
0.5 mV – 0.25 mV	66 dB

Cartridges having a lower output level than 0.25 mV are not recommended.

3.3 Remote control unit

The remote control unit duplicates all functions accessible from the front panel controls, except for functions enabled with a long press. In order to simplify gain adjustment, the remote unit is equipped with two sets of gain buttons: one set for increments of 1 dB and one set for increments of 3 dB.

The remote control unit is powered with two CR2032 (5004LC) batteries. Use the supplied allen key to open the unit for replacement of batteries.

3.4 Technical specifications

3.4.1 Line section

Frequency response	20 Hz – 20 kHz (+/- 0.1 dB)
Total harmonic distortion	<0.002% (2V RMS, 20 Hz – 20 kHz)
Signal to noise ratio	>110 dB (A-weighted, rel 2 V)
Input impedance	10 k Ω
Output impedance	75 Ω (all outputs)
Minimum load impedance	150 Ω (all outputs)
Gain	+6 dB or +18 dB
Maximum output voltage	16 V RMS (23 V peak)

3.4.2 Phonograph section

Frequency response	20 Hz – 20 kHz (+/- 0.1 dB)
Total harmonic distortion	<0.01 % (2 V RMS output, 20 Hz – 20 kHz)
Signal to noise ratio	>90 dB (A-weighted, 46 dB gain, rel 5mV at 1 kHz)
Resistive cartridge load	100 Ω , 22 k Ω , 33 k Ω or 47 k Ω
Capacitive cartridge load:	47 pF, 100 pF, 220 pF or 470 pF
Gain	+46, 54 dB, 60 dB or +66 dB
Overload margin	20 dB (46 dB gain, rel 5mV at 1 kHz)

General

Dimensions	432 x 102 x 300 mm (W x H x D)
Weight	4.5 kg
Power consumption	35 W
Mains voltage	230 V, 50-60 Hz
Mains fuse	250 mA T