

# SDA 2175

Compact Analog Power Amplifier



Owner's Manual

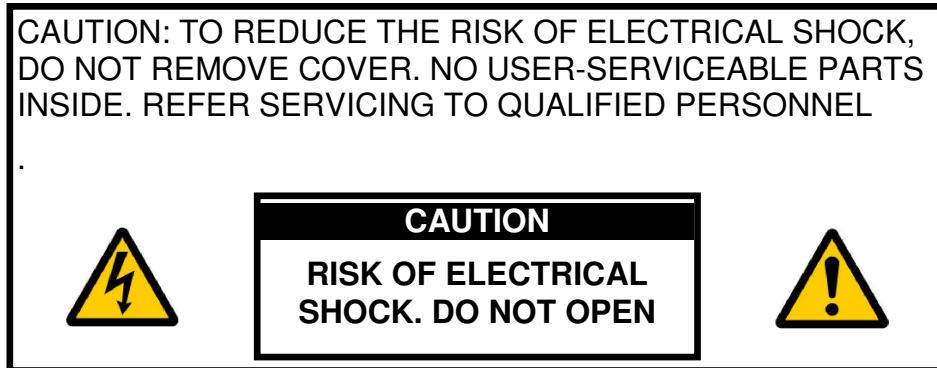
**LYNGDORF**

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# WARNINGS

**TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE**



## Explanation of symbols

### Exclamation symbol



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (service) instructions in the literature accompanying the product.

### Lightning symbol



The lightning with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “Dangerous Voltage” within the products’ enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to a person.

## Important safety instructions

- 1: Read these instructions carefully before installing or operating this apparatus.
- 2: Keep these instructions.
- 3: Heed all warnings.
- 4: Follow all instructions.
- 5: Do not use this apparatus near water.
- 6: Clean only with a dry cloth.
- 7: Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8: Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- 9: Do not defeat the safety purpose of the grounding-type plug. A grounding-type plug has two pins and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
- 10: Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Do not use this unit with a damaged cord or plug.
- 11: Only use attachments and accessories specified by the manufacturer.
- 12: Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13: Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14: Connect only to the proper mains voltage.
- 15: Do not connect any output from the amplifier to any other amplifier's output or any other voltage source.
- 15: To avoid electrical shock, make sure that no conductive part of the loudspeaker wiring is exposed while the amplifier is operating. Do not connect loudspeakers with uninsulated terminals to the amplifier.
- 17: Refer all service to qualified service personnel. Service is required when the apparatus has been damaged in any way, such as when the power supply cord or plug are damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

## Unpacking the SDA 2175

Carefully remove the unit and accessory kit from the carton, visually check for shipping damage. Contact both the shipper and Lyngdorf Audio immediately if the unit shows any sign of damage from mishandling. All Lyngdorf Audio equipment is carefully inspected before leaving our factory.



**KEEP SHIPPING CARTON AND PACKING MATERIALS** for future use or in the unlikely event that the unit needs service. If this unit is shipped without the original packing, damage could occur and void the warranty.

## Accessories

The following items are included in the accessories kit:

- 1: One mains cord
- 2: This manual
- 3: Customer registration form

## Operating voltage

The SDA 2175 is available in a version for 115V mains voltage and in a version for 230V mains voltage.

Check the label on the SDA 2175 rear panel and verify that you have the version with the proper voltage for your area.

The 115V version requires a mains voltage of 100V-120V at 50-60Hz with a current rating of 8A.

The 230V version requires a mains voltage of 200V-240V at 50-60Hz with a current rating of 4A.

The mains voltage setting for your SDA 2175 can be changed **ONLY BY A QUALIFIED TECHNICIAN**.



**WARNING: Connect the power input only to the AC source printed on the label. The warranty will not cover any damage caused by connecting to the wrong type of AC mains.**

## Product Registrations

Please record the serial number of your amplifier here for future reference. The serial number is printed on the label on the SDA 2175 rear panel. You will need this serial number, should you ever require service for your SDA 2175 power amplifier.

**SDA 2175 serial number:** \_\_\_\_\_



Please fill in the enclosed Customer registration form and submit it to Lyngdorf Audio, so that we can register you as owner of the unit and keep you informed of future upgrades of the product.

## Introduction

Lyngdorf SDA 2175 is a compact, high-performance analog switch-mode amplifier utilizing some of the circuit topologies originally developed for the Lyngdorf Millennium and M2150 amplifiers. Due to the switch-mode topology, with an efficiency of up to 85%, the SDA 2175 will provide its output power with minimal heat dissipation. A massive power supply with a 650VA toroidal transformer and more than 40000 microF capacitors ensures that the SDA 2175 can deliver the current to drive even the most demanding loudspeakers. The SDA 2175 has 2 gold-plated XLR connectors accepting balanced input signals and 2 gold-plated phono connectors for unbalanced signals. The input signal is fed to the power amplifier circuit via an AC-coupled true instrumentation type input amplifier. Except for the input amplifier, the SDA 2175 is fully DC coupled with no bypass capacitors or DC servos to degrade performance. The protection circuitry in the SDA 2175 shuts down the unit in case of over-temperature, DC voltage on the outputs and too high output current. The amplifier will resume normal operation when the fault condition is no longer present. A trigger input and bypass on 3.5 mm minijack connectors allow the SDA 2175's standby mode to be controlled remotely.

## Front panel

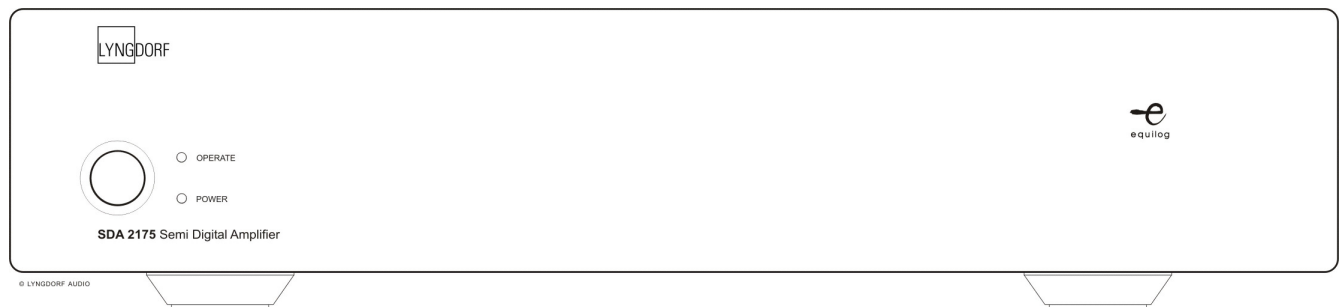


Fig 1: SDA 2175 front panel.

## Controls

Mains switch

Turns the power to the unit on or off.

## Indicators

OPERATE

Indicates the operational status of the SDA 2175.

Off The SDA 2175 is in standby mode (controlled via the TRIGGER input).

Flashing The SDA 2175 is in soft-start mode or the protection circuit is engaged.

On The SDA 2175 is operating normally.

POWER

Illuminates when power is applied to the SDA 2175 and the mains switch is ON.

## Rear panel

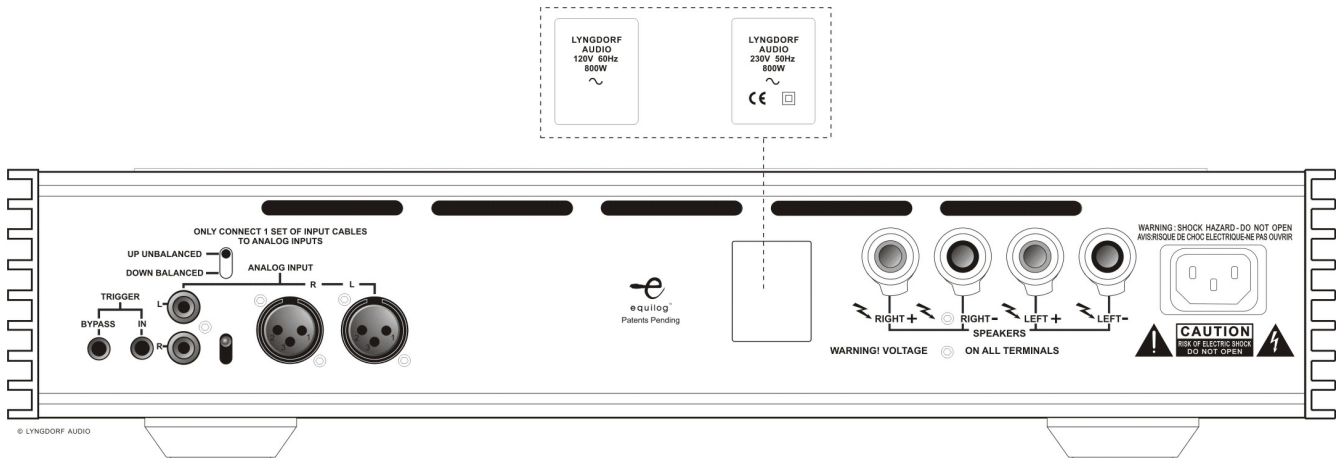


Fig 2: SDA 2175 rear panel.

## Mains Connector

Mains voltage to the SDA 2175 is applied via an IEC320 type connector. The supplied cable with safety ground should be used to connect the SDA 2175 to a mains outlet.



**WARNING:** Connect the power input only to the AC source printed on the label. The warranty will not cover any damage caused by connecting to the wrong type of AC mains.

## Loudspeaker connectors



The SDA 2175 loudspeaker connectors accept banana plugs, spades or bare wire ends up to 5 mm in diameter. Connect the wires from each loudspeaker to each channel's + and – terminals. Do not make any other connections to the output terminals. The loudspeaker cable is inserted into the slot in the loudspeaker terminal and the terminal is tightened firmly.



**WARNING:** Always disconnect the SDA 2175 from the mains before changing any connections to its inputs or outputs.



When the SDA 2175 is operating, there is 35V DC on its output terminals with reference to ground.

## Input connectors

The SDA 2175 has input sockets for both balanced and unbalanced signals, but only one may be used at a time. The XLR and phono sockets are internally connected in parallel, so only one set of the connectors should be connected externally. **ALWAYS** use **EITHER** the XLR inputs **OR** the phono inputs. **NEVER** use both at the same time.

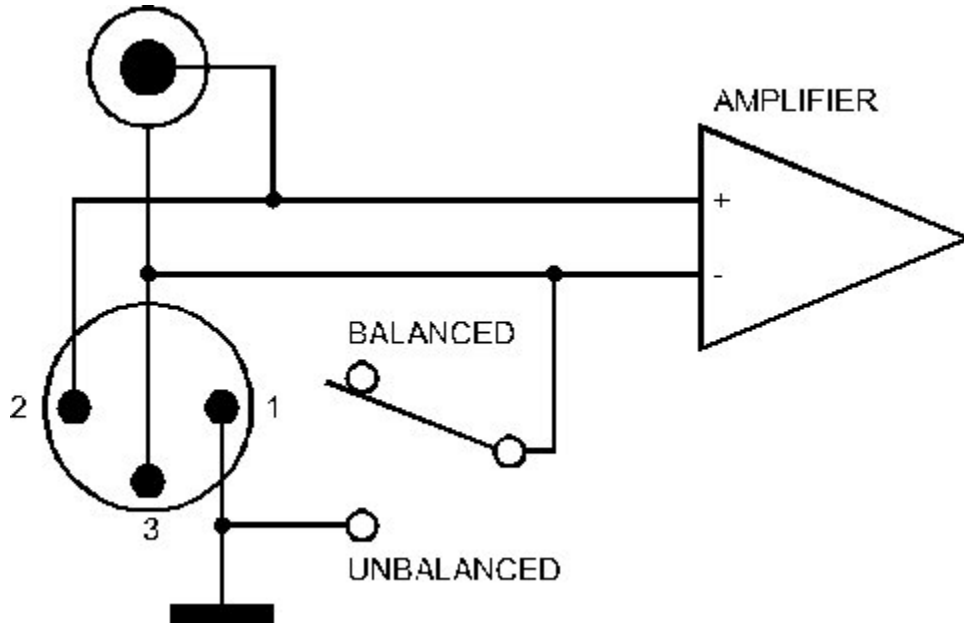


Fig 3: SDA 2175 Input configuration.

## Balanced inputs

The balanced XLR inputs are wired in accordance with IEC268:

Pin 1: Chassis and ground.

Pin 2: Hot (+).

Pin 3: Cold (-).

Shell: Chassis and ground.

When the balanced inputs are used with a balanced source, the input selector switch **MUST** be set to the **BALANCED** position. The switch position can be changed with a small screwdriver.



**If any cables are connected to the unbalanced inputs, remove these before the switch is put in the **BALANCED** position.**

We recommend the use of the balanced inputs whenever possible, as balanced signals are much less sensitive to noise than unbalanced signals.



## Unbalanced inputs

The unbalanced RCA inputs are wired in accordance with normal practice:

Shell: Chassis and ground.

Pin: Hot (+).

When the unbalanced inputs are used, the input selector switch **MUST** be set to the UNBALANCED position. The switch position can be changed with a small screwdriver.



**The switch must be changed to the unbalanced position before any connections are made to the RCA connectors**

## Trigger connectors

The SDA 2175 is equipped with TRIGGER IN and TRIGGER BYPASS sockets. These are ordinary 3.5 mm mono mini jack sockets.

When TRIGGER IN is left unconnected, the SDA 2175 will go into OPERATE mode when power is applied.

If there is a plug in the TRIGGER IN socket, the SDA 2175 standby mode is controlled by the voltage on the plug. With no voltage applied, the SDA 2175 will go into standby mode. If a DC voltage of 5-24V or a 50Hz AC voltage of 4-17Vrms is applied, the SDA 2175 will go into OPERATE mode.

TRIGGER BYPASS is for daisy-chaining a number of SDA 2175 and controlling them via the same signal. Connect the control signal to TRIGGER IN on the first SDA 2175 and connect its TRIGGER BYPASS to TRIGGER IN on the next unit, etc.

## Cleaning and maintenance



**Always unplug the unit from the electrical outlet before cleaning.**

This unit does not require any regular maintenance except to keep its exterior clean. Simply wipe its exterior with a clean, soft cloth. A small amount of non-abrasive cleaner may be used on the cloth to remove any excessive dirt or fingerprints. Do not use abrasive cleaners.

## Technical specifications

### Audio

Parameter	Value	Note
Balanced input connectors	3-pin XLR, gold-plated	Case=Gnd, Pin1=Gnd, Pin2=Hot(+), Pin3=Cold(-)
Balanced input impedance	10 KOhm	AC-coupled
Balanced input CMRR	40 dB	20 Hz – 20 kHz
Unbalanced input connectors	Phono, gold-plated.	Case=Gnd, Tip=Hot(+)
Unbalanced input impedance	100 KOhm	AC-coupled
Max. input voltage	±15Vp AC, 0-20 VDC	
Input sensitivity	2 V	200 W/8 Ohms
Voltage gain	26 dB	
Output connectors	4 insulated binding posts, gold-plated	Will accept bare wire ends up to 5 mm diameter.
Output power, 8 Ohms	2 x 200 W	1 kHz, 1% THD+N
Output power, 4 Ohms	2 x 375 W	1 kHz, 1% THD+N
Nominal load impedance	4 - 8 Ohms	It is safe to operate the amplifier with no load.
Frequency response	0.3 Hz – 33 kHz	-3 dB points, 8 Ohms load.
Frequency response	-0dB/+0.2dB	20 Hz - 20 kHz, 8 Ohms load
Frequency response	-0.2dB/+0dB	20 Hz – 20 kHz, 4 Ohms load
Output impedance	0.035 Ohms	20 Hz - 1 kHz
Output impedance	0.4 Ohms	20 kHz
THD+N, 1 W /8 Ohms	0.004%	A-wgt.
THD+N, 1 W/4 Ohms	0.006%	A-wgt.
THD+N, 100 W/8 Ohms	0.01%	A-wgt.
THD+N, 180 W/8 Ohms	0.07%	A-wgt.
THD+N, 275 W/4 Ohms	0.07%	A-wgt.
S/N ratio	117 dB	A-wgt. ref 200 W/8 Ohms.
Channel separation	84 dB	1 kHz, 200 W/8 Ohms.
Peak output current	±40 A	
Output common mode voltage	35 VDC	Ref. Ground. The amplifier can not be used in bridged mono mode
Output DC voltage	±5 mV	

All audio measurements, except frequency response, are measured with a 20KHz low-pass filter in accordance with AES-17.

## Protection

Parameter	Value	Note
Grounding	Mains earth, chassis and audio ground are connected internally.	
Output short circuit current	±40 A	
Output DC voltage	±5 V @ <0.1 Hz	
Over-temperature	All heatsinks and mains transformer	

## Mains

Parameter	Value	Note
Mains input connector	IEC 320 cold type	Mains lead supplied
Mains voltage range	100-120 VAC, 50–60 Hz	115 V version
Mains voltage range	200-240V AC, 50-60Hz	230 V version
Internal mains fuse	8 Amp	115 V version
Internal mains fuse	4 Amp	230 V version
Power consumption	1.5 W	STANDBY mode
Power consumption	35 W	OPERATE mode, no output.
Power consumption	116 W	2 x 37.5 W/4 Ohms
Power consumption	820 W	2 x 300 W/4 Ohms.

## Trigger

Parameter	Value	Note
TRIGGER IN connector	3.5 mm (1/8") mono jack	Case=Gnd, Tip=Input
TRIGGER BYPASS connector	3.5 mm (1/8") mono jack	Case=Gnd, Tip=Output
TRIGGER IN impedance	10 Kohm	
TRIGGER IN sensitivity	4 VDC or 4Vp AC	Positive DC voltage on Tip. AC > 50 Hz
Max. input voltage	±25 Vp	

## Mechanical

Parameter	Value	Note
Width	450 mm (17.72")	
Depth	340 mm (13.39")	Excluding loudspeaker connectors.
Depth	361 mm (14.21")	Including loudspeaker connectors.
Height	88.8 mm (3.5")	Excluding feet.
Height	100.6 mm (3.96")	Including feet.
Net weight	15.5 kg (34 lb.)	
Shipping weight	17.5 kg (39 lb.)	

## Technical assistance

If you have any problems with or questions regarding your Lyngdorf Audio product, please contact Lyngdorf Audio or your nearest representative.

## Support

Please check the Lyngdorf Audio Denmark website under “Support” for latest version of control software, newest version of this document and “Questions and Answers”.

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