

CleanSOURCE-I

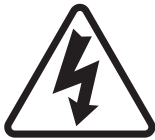
O W N E R M A N U A L



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Important Safety Instructions

Please read all instructions and precautions carefully and completely before operating your CleanSOURCE-1

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.
2. This product must be terminated with a three-conductor AC mains power cord that includes an earth ground connection. To prevent shock hazard, all three connections must **ALWAYS** be used.
3. AC extension cords are not recommended for use with this product
4. **NEVER** use flammable or combustible chemicals for cleaning components.
5. **NEVER** operate this product with any covers removed.
6. **NEVER** wet the inside of this product with any liquid.
7. **NEVER** pour or spill liquids directly onto this unit.
8. **NEVER** block airflow through ventilation slots or heat sinks.
9. **NEVER** bypass any fuse.
10. **NEVER** replace any fuse with a value or type other than those specified.
11. **NEVER** attempt to repair this product. If a problem occurs, contact your CleanSOURCE-1 retailer.
12. **NEVER** expose this product to extremely high or low temperatures.
13. **NEVER** operate this product in an explosive atmosphere.
14. **ALWAYS** keep electrical equipment out of the reach of children.
15. **ALWAYS** unplug sensitive electronic equipment during lightning storms.

*From all of us at Clef Audio,
Thank you for choosing our product.*

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Unpacking

Warning!

DO NOT attempt to lift or move the CleanSOURCE-1 without adequate assistance. Failure to follow the procedures included in this section may result in personal injuries and/or product damage.

Caution!

DO NOT attempt to lift the CleanSOURCE-1 while bending at the waist. When lifting, stand as straight as possible using the leg muscles to lift.

When unpacking the CleanSOURCE-1:

- **DO** save all packing materials for possible future shipping needs.
- **DO** inspect the CleanSOURCE-1 for signs of damage during shipment. If damage is discovered, contact an authorized Clef Audio dealer for assistance making appropriate claims.

Installation Considerations

The CleanSOURCE-1 requires special care during installation to ensure optimal performance. Pay particular attention to the precautions included in this section and to other precautions included throughout this owner manual.

Placement

- **DO** review "Important Safety Instructions" and "Power Requirements " before installing the CleanSOURCE-1
- **DO** place the CleanSOURCE-1 on a solid, flat, level surface such as a table, shelf, or floor
- **DO** allow at least a 6-inch (15cm) clearance behind the CleanSOURCE-1 for the power cord to bend without crimping or straining.
- **DO** refer to "Dimensions" for assistance with custom installations.
- **DO NOT** place the CleanSOURCE-1 on a windowsill or in another location in which it will be exposed to direct sunlight.

Caution!

Before moving the CleanSOURCE-1, make sure it is powered off with the rear panel power button. Then, make sure the power cord is disconnected from the AC mains connector and the electrical outlet.

Ventilation

- **DO** select a dry, well-ventilated location out of direct sunlight.
- **DO NOT** expose the CleanSOURCE-1 to high temperatures, humidity, steam, smoke, dampness, or excessive dust. Avoid installing the CleanSOURCE-1 near radiators and other heat-producing appliances.

Power Requirements

When shipped, the CleanSOURCE-1 is configured for 220-230V AC power operation at 50Hz. Before operating the CleanSOURCE-1 make sure the AC mains connector label indicates the correct operating voltage for the current location.

Operating States

The CleanSOURCE-1 has three operating states:

1. Off

Power is disconnected from the AC mains connector.

2. Standby

Power is connected to a small power supply, and control circuits. The CleanSOURCE-1 consumes less than 30W of power.

3. On

Power is connected to the AC mains connector and all power components.

Continuous Operation

The CleanSOURCE-1 should be unplugged during lightning storms and extended periods of non-use. Otherwise, it is designed for continuous operation. For best performance, make sure power is connected to the AC mains connector at all times. During normal operation, do not use the power button (on the rear panel) to power off the CleanSOURCE-1. Instead, use the on/off button to place the CleanSOURCE-1 into standby.

Special Design Features

Thank you for purchasing the CleanSOURCE-1. The CleanSOURCE-1 is designed to focus on AC line filtering, surge & spike protection and under/over voltage protection. CleanSOURCE-1 outputs deliver very clean AC power so the equipment connected to CleanSOURCE-1 will operate at optimum condition resulting in gaining maximum performance.

Polaris V Technology

This is Clef proprietary filter technology which is different from common filter design. The common filter design usually filters only high and very high frequency. Polaris filter in CleanSOURCE-1 is designed to work from 10KHz upward which is the frequency band that affects the sound quality. For video improvement, new Vega filter is used for reduce high frequency noise in video band. This Polaris filter can reduce the noise in AC line over 95% of total noise so the improvement of sound and picture quality can be clearly detected.

The whole filter circuit is specially designed to handle "high current" thus you can use any high power equipment e.g. power amplifier, AV reciever or powered subwoofer with CleanSOURCE-1 without "current limit effect" found in other common line conditioners.

Zero-Cross Technology

Each CleanSOURCE-1 duplex has the special filter circuit to reduce the interference generated by equipment plugged into duplexes from one duplex to the other duplex. This to ensure the purity and cleanness of the AC line delivered to equipment

Star Wiring Technic

This is special technique which totally separate the wiring to each duplex. This will reduce the crosstalk between duplex and increase maximum current delivered the equipment.

Protections

Surge Protection

CleanSOURCE-1 is equipped with surge protection circuit that can absorb up to 20,000 amps surge (8x20ms pulse) and up to 1,520 Joules. This will protect CleanSOURCE-1 itself and the equipment connected to CleanSOURCE-1 from surge voltage from AC mains.

Under & Over Voltage Protection

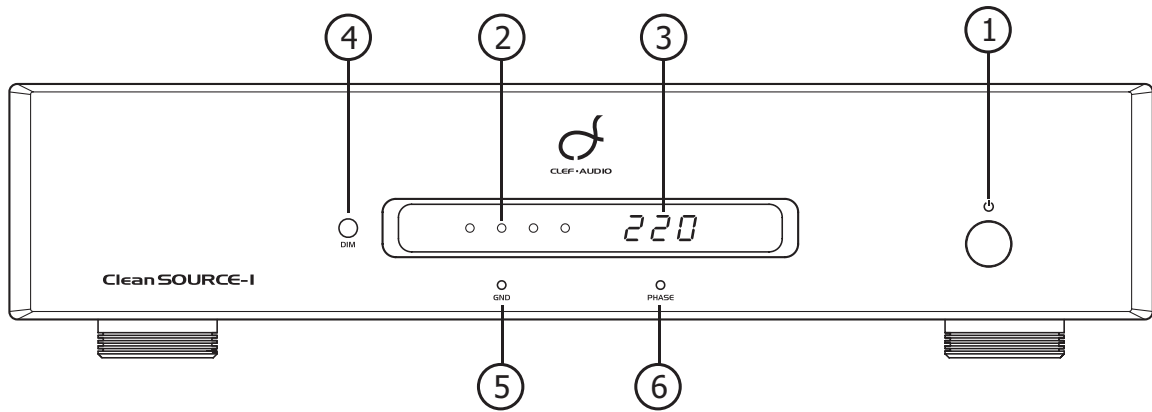
In case of AC mains is under or over voltage;

- AC mains between 196V-199V (under voltage) and 241V-245V (over voltage) The audible alarm will sound to alert user the abnormal voltage. The CleanSOURCE-1 will still function properly. The alarm sound can be turned off by **Alarm On/Off switch** on rear panel.

- AC mains under 196V and over 245V This is extremely low or high voltage, CleanSOURCE-1 will shutdown itself to protect against too low or too high voltage. CleanSOURCE-1 can be turned on again by pressing **On/Off button** while AC mains is back to normal level, 196V-240V.

Over Current Protection

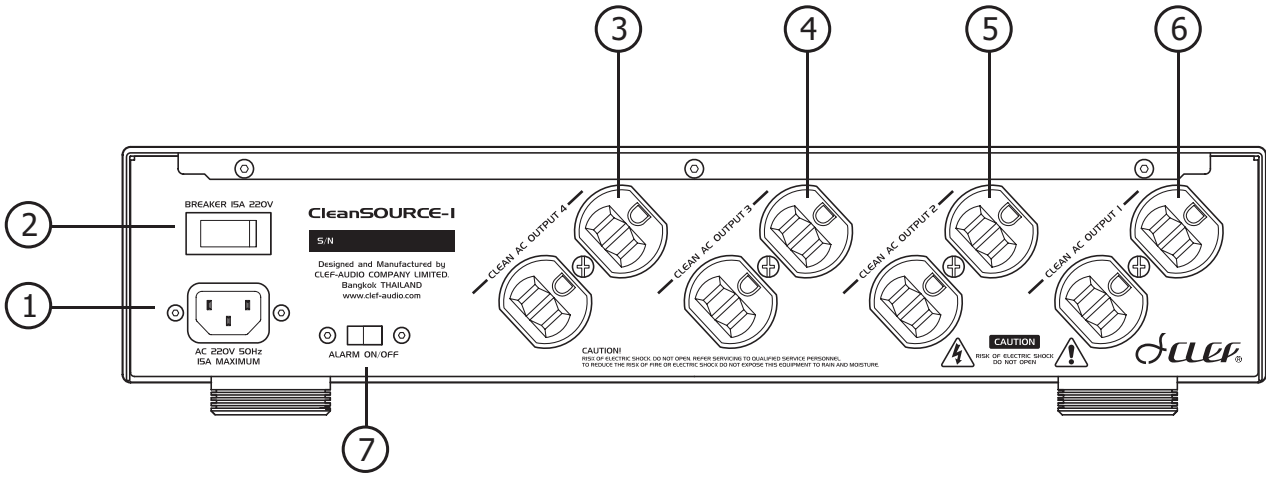
CleanSOURCE-1 is equipped with 15A Thermal breaker which will disconnect the unit when over current or short-circuit.



Front Panel

The numbers in the front panel illustration shown above correspond with the numbered items that begin below.

- 1. On/Off Button**
Places the CleanSOURCE-1 into standby mode and takes the CleanSOURCE-1 out of standby mode. When the CleanSOURCE-1 is powered on, pressing and releasing the On/Off button places the CleanSOURCE-1 standby or takes the CleanSOURCE-1 out of standby
- 2. AC Output Sequence Display**
The rightmost to leftmost LED will represent OUTPUT 1 to OUTPUT4. They will be on when CleanSOURCE-1 supplies AC voltage to the output.
- 3. AC Input Display**
Shows input voltage from AC mains.
- 4. Dimmer Button**
Press to change the intensity of the front panel display.
- 5. Ground Indicator**
Shows when AC input ground wire is connected properly.
- 6. AC Phase Indicator**
Shows when AC input Phase, Line and Neutral wires are connect properly.



Rear Panel

The numbers in the rear panel illustration shown above correspond with the numbered items that begin below.

1. AC Main Connector

Plug the supplied power cord into this connector and plug the other end into electrical outlet.

2. Power (Breaker) Switch

Press this switch to "RESET" side to start CleanSOURCE-1 in standby mode.

3-6. AC Outputs

The CleanSOURCE-1 has 4 duplexes which can connect up to 8 equipment.

7. Alarm On/Off Switch

To enable/disable high and low AC mains voltage audible alarm

Care & Maintenance

The CleanSOURCE-1 requires routine care and maintenance to ensure optimal performance. The bulleted items included in this section indicate maintenance procedures that should be performed on a regular basis.

Note

Failure to perform the maintenance procedures included in this section may void the manufacturer's warranty and/or standard repair policies.

- Use a feather duster or a low-pressure blower to remove dust from the CleanSOURCE-1 exterior surface.
- Use a soft, lint-free cloth to remove dirt and fingerprints from the CleanSOURCE-1 exterior surface. Do not use a cloth made with steel wool or metal polish. If needed, this cloth can be dampened with isopropyl alcohol. Do not dampen the cloth with Benzene, acetone-based cleaners, and other commercial cleaners.

Caution!

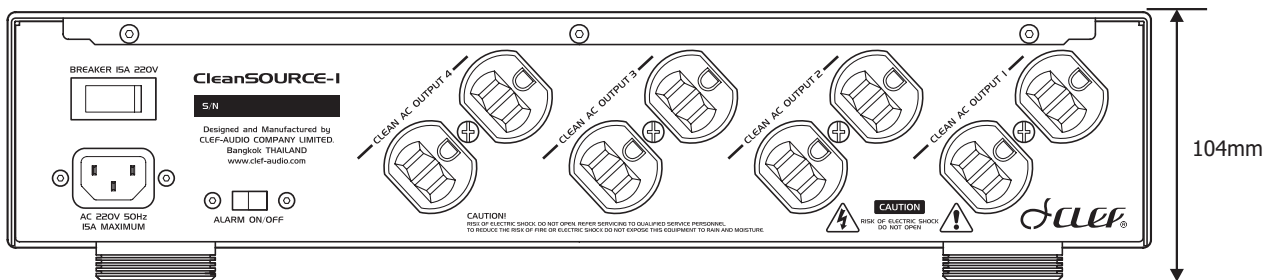
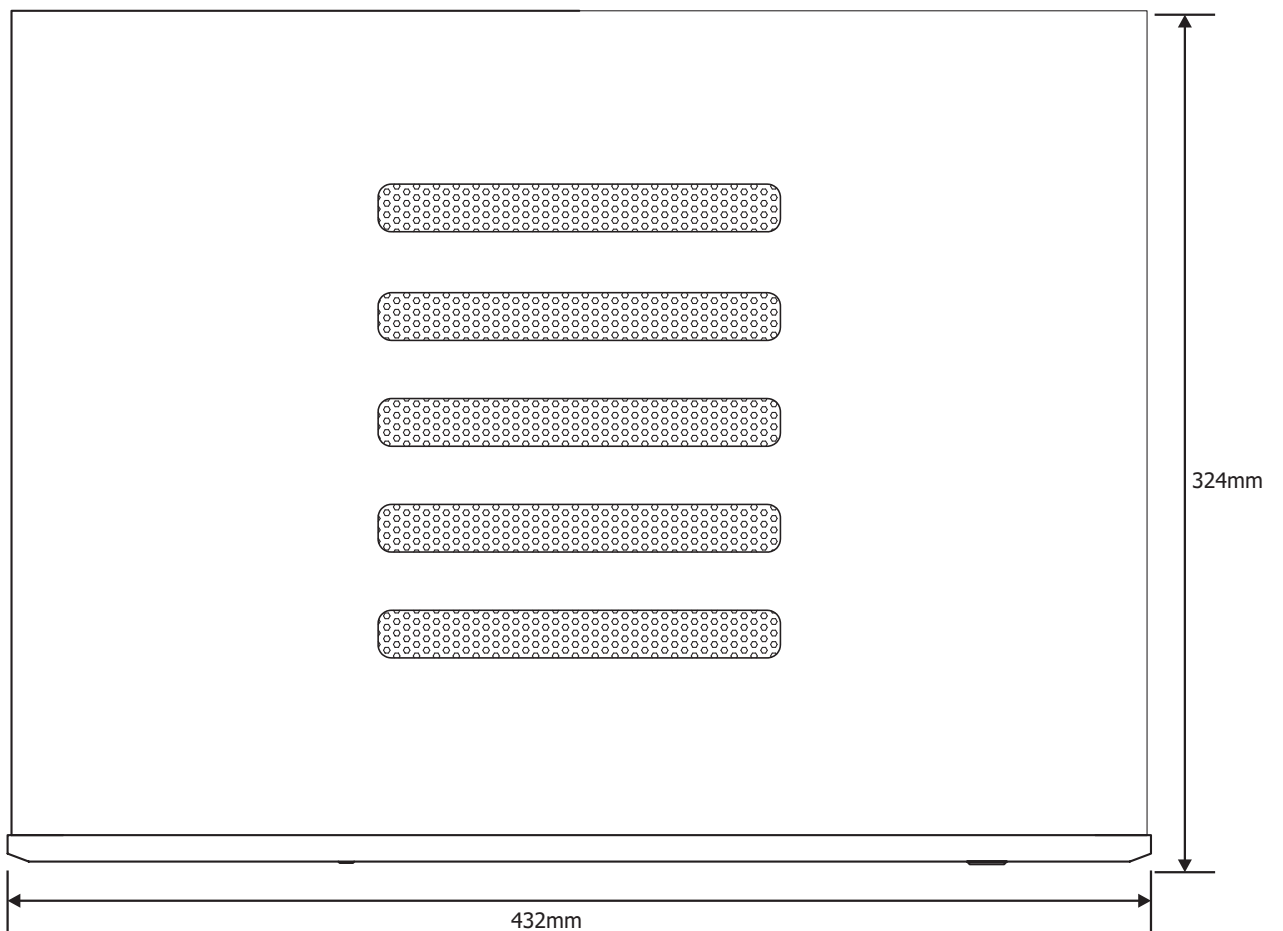
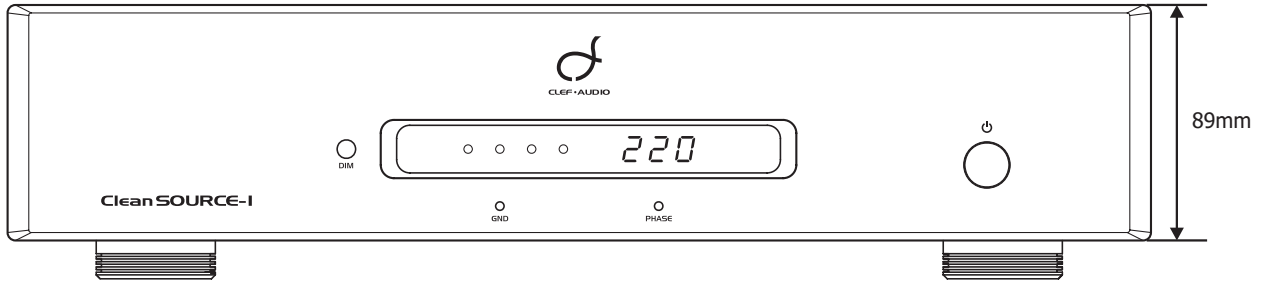
Do not apply liquid directly to the CleanSOURCE-1 exterior surface. Doing so may damage electrical components.

- Refer to "Installation Considerations" for information about preventative maintenance.

Specifications

Current rating:	15 Amps
Operating Voltage:	196 to 245 VAC
Spike Protection Modes:	L-N
Spike Clamping Voltage:	900 Vpk (8 x 20 mS pulse) 20,000 amps
Response time:	1 nanosecond
Surge Protection Modes:	L-N, N-G, L-G
Surge Clamping Voltage:	275 Vac
Maximum Surge Current:	13,000 amps (8 x 20 mS pulse) @ L to E and N to E
Maximum spike energy:	380 Joules @ L to E 380 Joules @ N to E 760 Joules @ L to N 1,520 Joules total
Differential Mode Noise Attenuation:	>3 dB @ 2 KHz >22 dB @ 10 KHz >42 dB @ 50 KHz >70 dB @ 100 KHz >80 dB @ 130 KHz
Common Mode Noise Attenuation:	>3 dB @ 56 KHz >10 dB @ 100 KHz >35 dB @ 500 KHz >47 dB @ 1 MHz >74 dB @ 5 MHz >86 dB @ 10 MHz
Differential Mode Crosstalk Between Outlet:	>3 dB @ 2 KHz >17 dB @ 10 KHz >44 dB @ 50 KHz >81 dB @ 100 KHz >95 dB @ >130 KHz
Common Mode Crosstalk Between Outlet:	>3 dB @ 1.5 MHz >27 dB @ 5 MHz >39 dB @ 10 MHz >67 dB @ 50 MHz >80 dB @ >100 MHz
Dimensions:	Width 430 mm (17.0"), Height 103 mm (4.0"), Depth 325 mm (12.8")
Weight:	8.5 Kg net, 10 Kg in shipping carton

Dimension, CleanSOURCE-1





Clef Audio Company Limited

33/83 Soi Narknivas Narknivas Rd. Ladprao Bangkok 10230 THAILAND

Telephone: (662)-932-5981, (662)2-932-5982 Fax: (662)-932-5982

Email: info@clef-audio.com Website: www.clef-audio.com