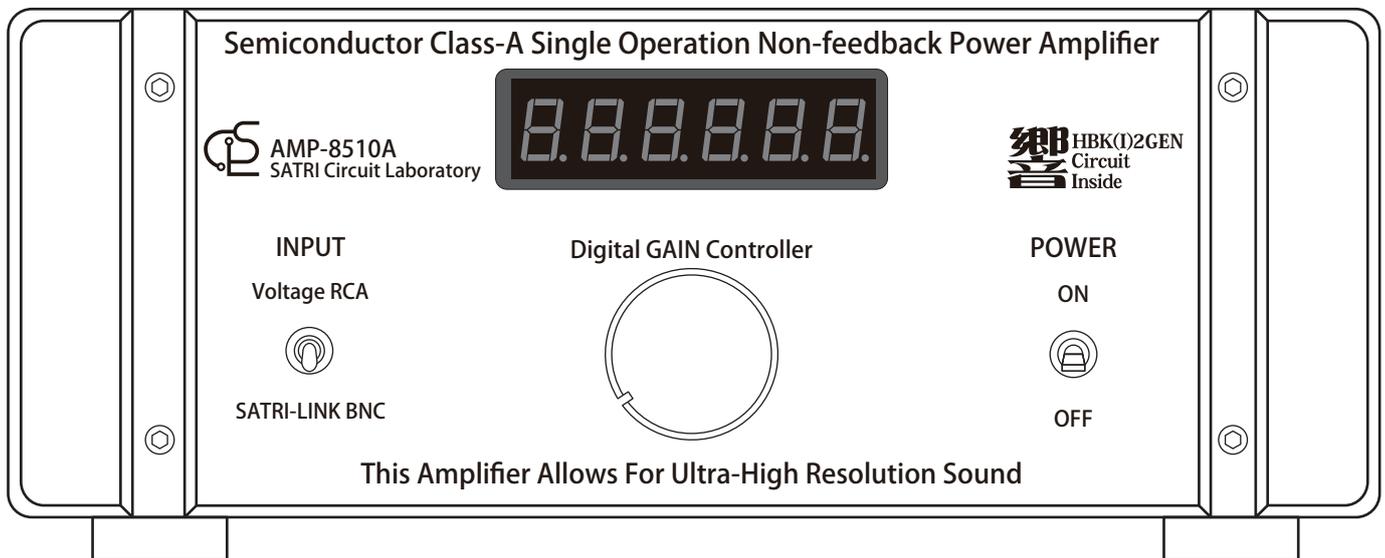
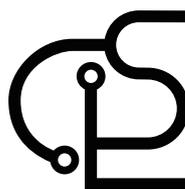


AMP-8510A

User's Manual



 SATRI回路研究所
SATRI Circuit Laboratory
製造・販売 バクーンプロダクツ株式会社

Thank you very much for purchasing the AMP-8510A.

The AMP-8510A is an unprecedented attempt at a semiconductor, non-negative-feedback, Class-A single amplifier. For the voltage amplification stage, it uses the second-generation HBK(I) circuit, which features current/voltage input and current output.

For the output stage, it employs a non-negative-feedback single circuit operating in Class A.

By using a constant-current circuit that provides a high impedance to the source load, the amplifier is able to draw out the maximum capability of the output semiconductor.

Despite being a semiconductor single amplifier, the distortion at 1 kHz / 1 W is approximately 0.04 to 0.06% for all models. Furthermore, because the output semiconductor is directly connected to the speaker, distortion caused by source resistance—an issue in previous designs—is completely eliminated.

Please read this instruction manual before using the product to ensure safe and proper operation.

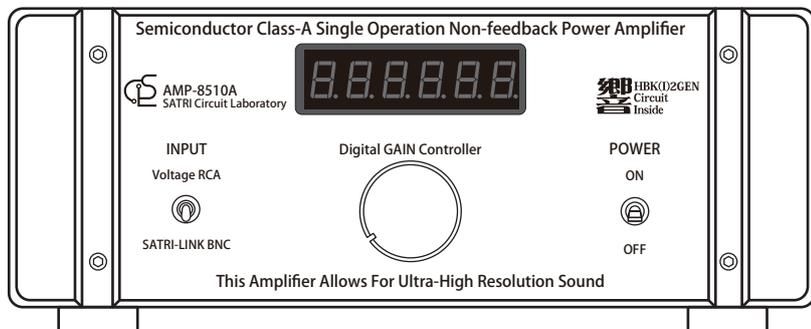
Safety Precautions

To ensure safe use and to prevent malfunctions or accidents, please be sure to follow the instructions below.

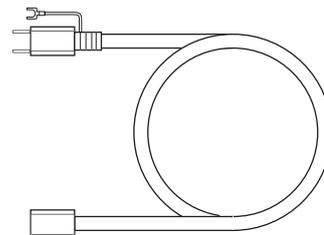
- Do not use the unit in locations with high temperature or humidity.
- Do not allow the unit to get wet, as this may cause electric shock or fire.
- Do not disassemble the unit, such as by removing the cover. Doing so may lead to malfunction or electric shock.
- When replacing speaker cables or connecting/disconnecting input cables, always turn off the power first.
- It takes approximately 10 seconds after powering on for the bias current to stabilize. During this time, a DC offset voltage may appear. If you are using horn speakers, be sure to connect a capacitor in series.
- Never input a current signal (SATRI-LINK) into the voltage-input connector using an adapter. Doing so may damage the amplifier or speakers.
- Likewise, never input a voltage signal into the current-input connector (SATRI-LINK).
- Do not use the unit in extremely high-temperature environments.
- The heatsink becomes very hot during operation, so do not touch it directly.
- When moving the amplifier, ensure that the heatsink has sufficiently cooled before handling.
- If any abnormality occurs, immediately unplug the power cord from the outlet and contact your dealer or our company.
- Any modifications performed by the customer may void the warranty.

Included Items

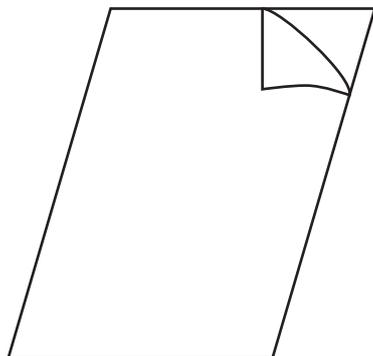
The package includes the following items.
If anything is missing, please contact your dealer.



AMP-8510A



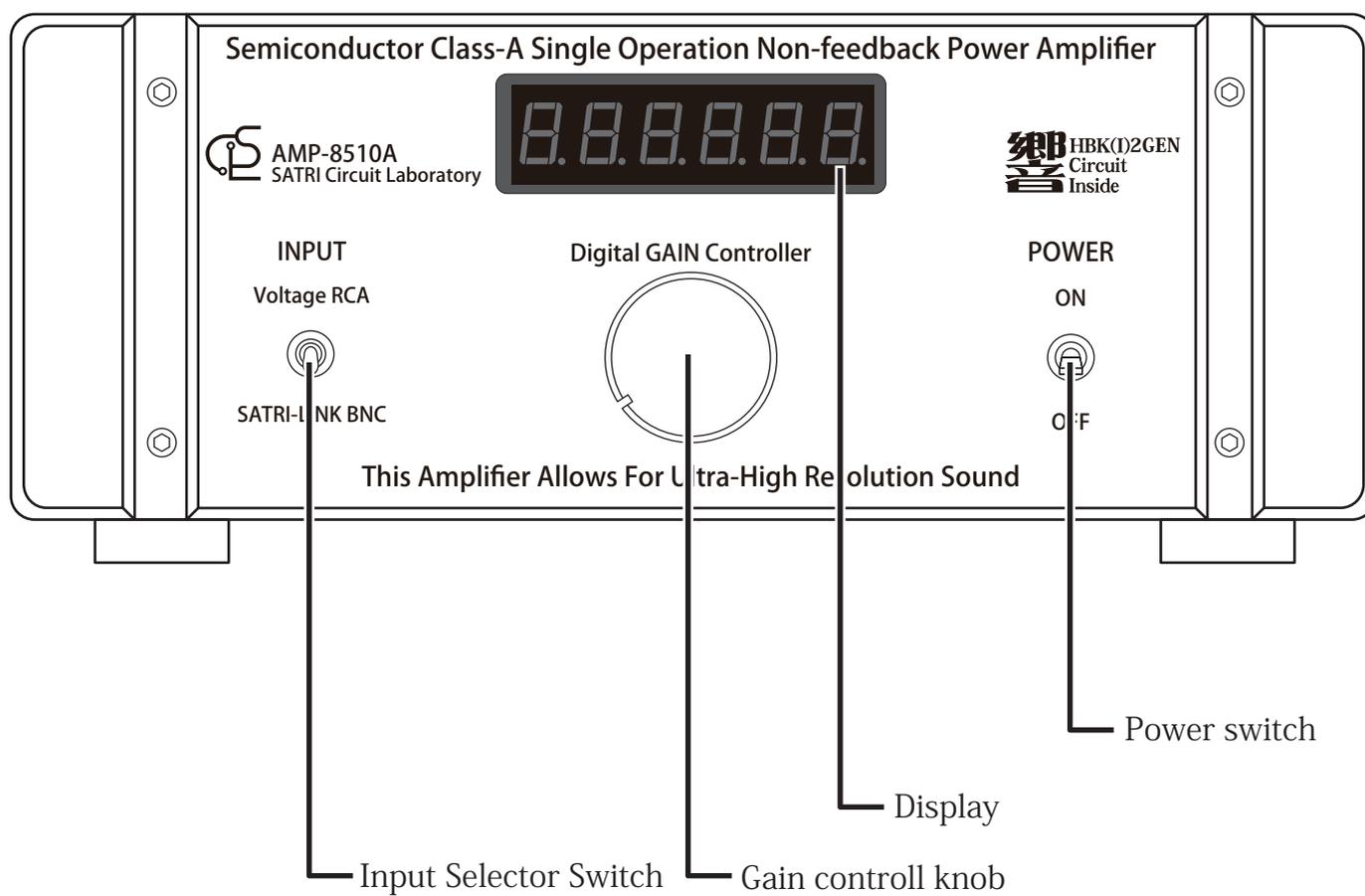
Power cable



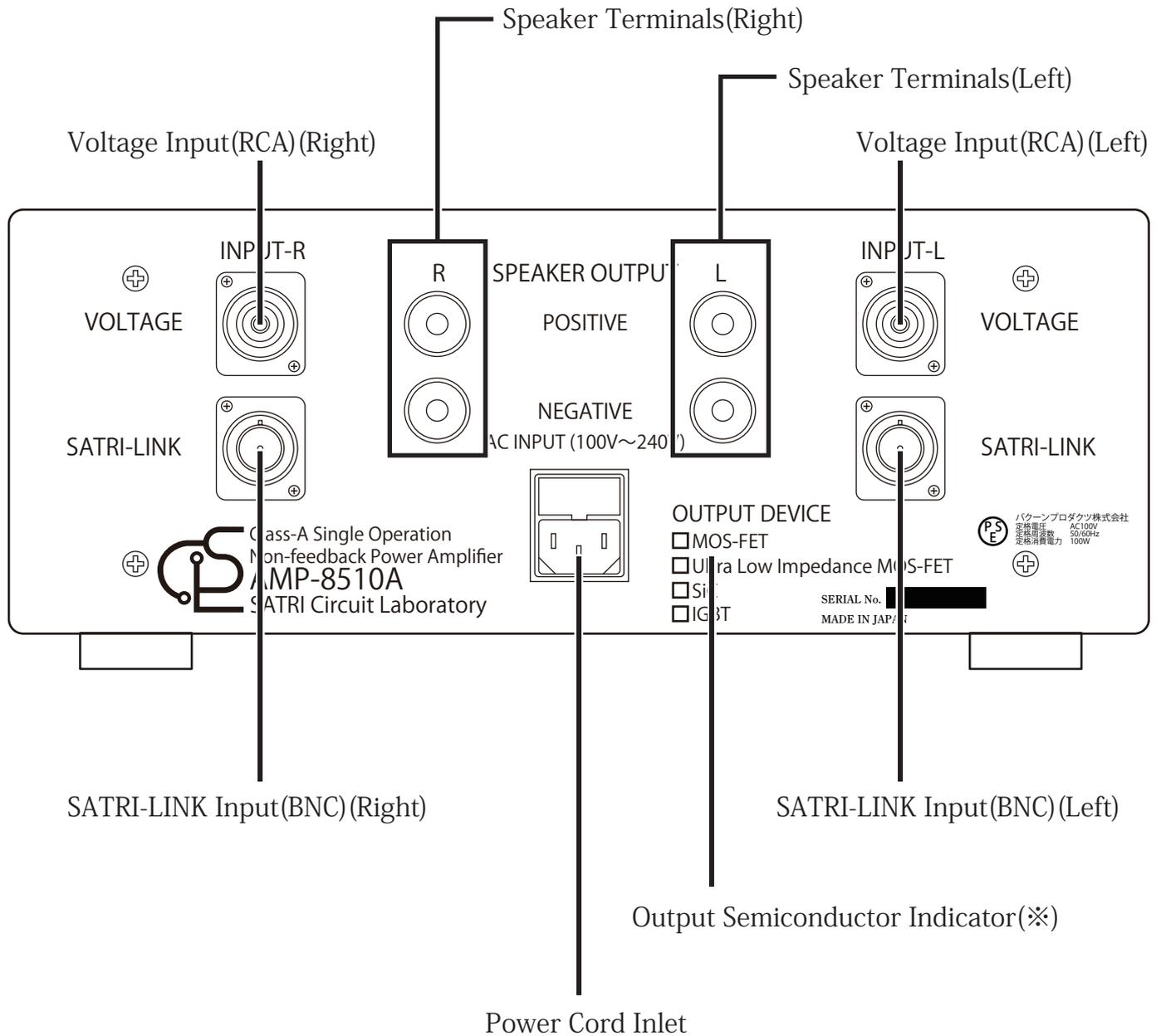
User's Manual (This book)

Part Names

Front Panel



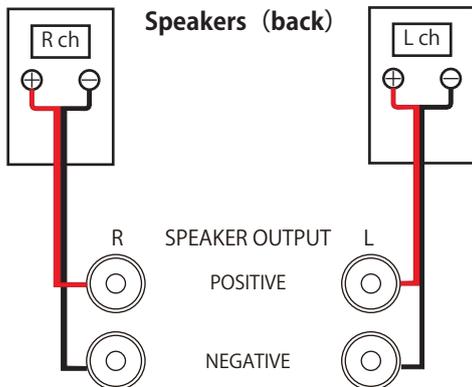
Rear Panel



※Please check that a label is attached in the field indicating the output semiconductor you specified when placing your order.

If it does not match your specification, please contact your dealer.

Connecting Speakers



Connect the speakers to the speaker output terminals on the rear panel of this unit.

Connect the positive (+) wire of the speaker cable to the Positive terminal of this unit, and the negative (-) wire to the Negative terminal.

Caution: Reversing the positive and negative connections may cause damage to the amplifier.

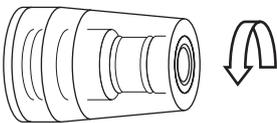
The compatible speaker impedance for this unit is 6–8 Ω .

Do not connect speakers with an impedance below 6 Ω , as this may cause damage to the unit.

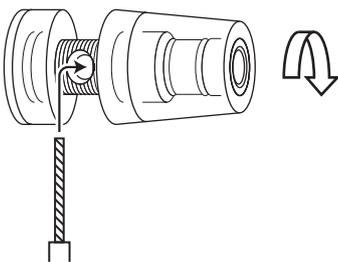
Connecting to the Speaker Terminals



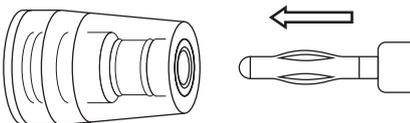
Strip 15–20mm of insulation from the end of the speaker cable and expose the conductor wire.



Loosen the speaker output terminals.



Insert the conductor wire into the speaker terminal hole and tighten the terminal securely.



When using a banana plug, do not loosen the terminal. Insert the plug fully and securely.

Caution:

- This unit is designed with the output semiconductors directly connected to the speakers.
- To prevent damage, always turn off the power before inserting, removing, or replacing speaker cables.
- When using horn speakers, do not connect them directly. Always connect a capacitor in series.

Connecting Audio devices

Voltage input



RCA pin plug(exsample)

Connect audio equipment to the voltage input (RCA) terminals using a commercially available RCA pin plug. You can connect devices with standard line-level outputs.

INPUT

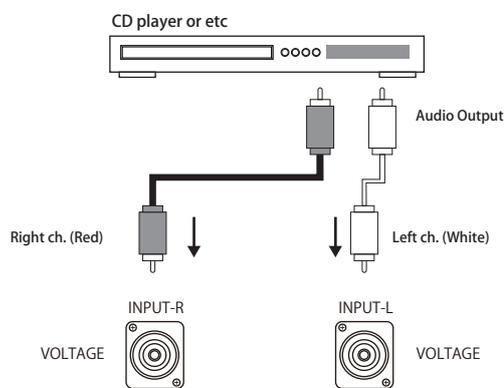
Voltage RCA



SATRI-LINK BNC

To listen to audio from a device connected to the voltage input (RCA) terminals, set the input selector switch to “Voltage RCA” . Play the audio device.

Connction exsample

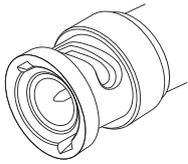


- When connecting, be careful not to mix up the left and right channels.
- Typically, the right channel RCA plug is marked red, and the left channel plug is marked white or
- When connecting from the headphone output of a music player, adjust the player' s volume appropriately.
- Make the final volume adjustment using this unit.
- If a line output is available via accessories, it is recommended to use that instead.

Caution:

Always turn off the power before inserting or removing audio cables to prevent damage to this unit.

SATRI-LINK Connection



BNC plug(exsample)

INPUT

Voltage RCA



SATRI-LINK BNC

SATRI-LINK is our proprietary audio signal transmission method. Standard line connections transmit audio signals via voltage variations. SATRI-LINK transmits signals via current variations. Current-based transmission reduces signal loss between connected devices. This allows more precise and accurate audio signal transfer, improving sound quality.

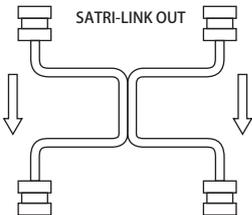
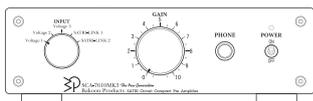
You can connect devices with SATRI-LINK outputs, such as our D/A converters, preamps, and phono equalizers, to the SATRI-LINK input of this unit.

To prevent incorrect connections with voltage inputs, BNC connectors are used.

To listen to devices connected via SATRI-LINK, set the input selector switch to SATRI-LINK BNC and play the audio device.

Connction exsample

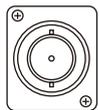
Our Pre-amps (PRE-7610MK4 etc.)



SATRI-LINK



SATRI-LINK



When connecting, be careful not to mix up the left and right channels.

SATRI-LINK cables are not included. If you wish to purchase one, please contact our company or your dealer.



Please be Careful



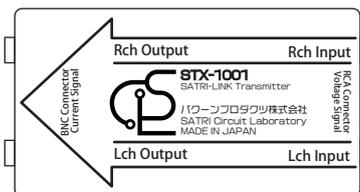
Always connect the SATRI-LINK input terminals to the SATRI-LINK output of our Pre-amps or other compatible devices using the dedicated cable.

DO NOT input voltage signals into the SATRI-LINK terminals using RCA-BNC adapters or similar.

Doing so may cause irreparable damage to the amplifier or speakers.

Similarly, do not connect SATRI-LINK outputs to voltage inputs using adapters.

Damage caused by incorrect connections is not covered by the warranty and may require paid repair.



SATRI-LINK Transmitter STX-1001 (sold separately)

For details, please visit our web shop.

When using devices without SATRI-LINK outputs, such as our CAP series, you can use the SATRI-LINK transmitter STX-1001.

This converts voltage output to current output for SATRI-LINK

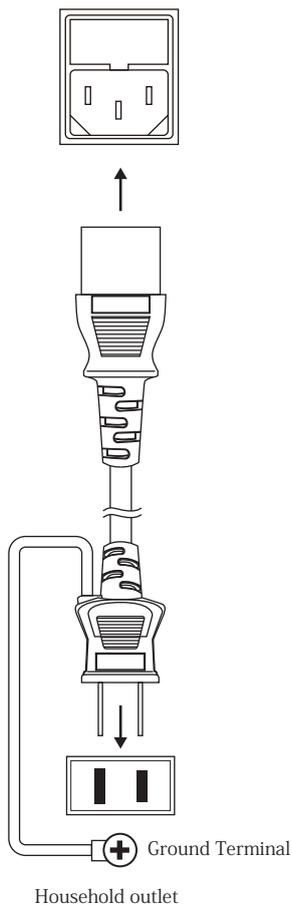
Power Connection



Before connecting the power cable, make sure the power switch of this unit is OFF.

Connecting the Power Cable

AC INPUT (100V~240V)



Connect the supplied power cable to the power socket on the rear panel.

This unit supports 100–240V AC power.

The supplied power cable is for household outlets in Japan.

For use in other countries, use a suitable power cable.

Plug the power cable into a household outlet.

Make sure the power switch is OFF before connecting.

If the outlet does not have a ground terminal, the unit will operate without connection.

If a ground terminal is available, connecting it can reduce noise, improve sound quality, and enhance safety by preventing electric shock.

Turning On the Power

POWER

ON



OFF

Turn the power switch on the front panel to ON to power on the unit.

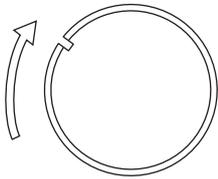
It takes about 10 seconds for the bias to stabilize and for normal sound output.

During this time, a DC offset voltage may appear.

If using horn speakers, make sure a capacitor is connected in series between this unit and the speakers.

Listening to Music

Digital GAIN Controller



Set the connected audio device to playback.

Adjust the volume by turning the gain control knob on the front panel.

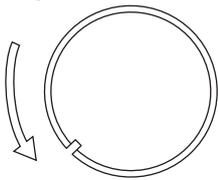
The display shows attenuation in 0.5dB steps.

Turning the gain control knob quickly during playback may cause noise.

Adjust the volume slowly.



Digital GAIN Controller



Turning the gain control knob fully to the left sets the attenuation to infinity.

-InfdB will be displayed.



Break-In

The organic semiconductor capacitors used in this unit require approximately 100 hours of operation to reach their full performance.

To achieve the unit's intended sound quality, about 100 hours of power-on time is needed. This process is called break-in.

Break-in can be done either by leaving the unit powered on continuously or by turning it on only while playing music.

It is not necessary to play music continuously during break-in.

Aim for a total of 100 hours of power-on time.

Note:

As a guideline, if the unit is powered on 2 hours per day, break-in will take about 50 days.

If the unit is left on continuously, break-in will take about 5 days.

Miscellaneous

Cleaning and Maintenance

If the unit becomes dirty, wipe it with a clean, dry cloth.

Do not use thinner, benzine, alcohol, or similar solvents.

Using such chemicals may damage the finish, cause discoloration, or lead to rust.

Enjoy Even at Low Volume or Late at Night

Features of SATRI Amplifiers

The S/N ratio (signal-to-noise ratio) remains constant regardless of the volume setting.

In typical amplifiers, lowering the volume increases the relative noise level, which can affect sound quality.

In SATRI amplifiers, reducing the volume also lowers the noise level, so the sound quality remains unchanged.

You can enjoy music comfortably at low volumes, even in environments where high volume is not possible, such as late at night.

Enjoy music to the fullest with the AMP-8510A.

Troubleshooting

If you feel that this unit is not operating normally, check the following items.

If none of the items apply, the unit may be malfunctioning.

In that case, contact your dealer or our company.

Power Does Not Turn On

- Make sure the power cable is securely connected to both the unit and the outlet.

No Sound from the Speakers

- Make sure the speaker cables are securely connected to both the unit and the speakers.
- Make sure the audio input terminals are securely connected to the playback device.
- Make sure the connected audio device is set to playback.
- Make sure the audio input terminal connected to the playback device is selected with the input selector switch.
- Turn the gain control knob and adjust to the appropriate volume.

Distorted or Unusual Sound from the Speakers

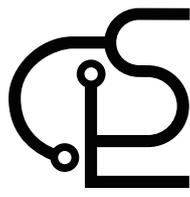
- Make sure the positive and negative speaker terminals are correctly connected.

Discoloration of the Gain Control Knob

- The gain control knob is made of Bakelite, which develops a glossy appearance over long-term use. This change does not affect performance.

Specifications of AMP-8510A

	MOS-FET	SiC	IGBT	ULI-MOS-FET
Output	Stereo Speakers 1 channel			
Input	Stereo RCA×1 channel Stereo SATRI-LINK×1 channel			
Input impedance	100kΩ			
Gain Controller	Digital ATT			
Frequency Response (0db 1W)	100kHz			
Maximum Output at 1% THD	10.42W	9.88W	11.83W	10.70W
Distortion (THD)(1mW)	0.043%	0.05%	0.037%	0.03%
Distortion (THD)(1W)	0.025%	0.15%	0.019%	0.05%
Distortion (THD)(9W)	0.25%	0.8%	0.8%	0.26%
Damping Factor (DF) (1W)	67.4	19.2	34.1	89.8
Gain	19.3db	19.0db	19.2db	19.4db
Input-Referred Noise	-95.2	-94.7	-95.2	-95.8
Voltage Amplifier Circuit	2nd Generation HBK(I) circuit			
Size	320mm(W)×115mm(H)×315mm(D)			
Weight	10kg			



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For inquiries regarding malfunctions, repairs, or this product, please contact the following.

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TEL	+81 (096)-223-5993 Reception hours: Monday to Friday 9:00 to 18:00 JST (excluding public holidays)
Website	https://bakoon-scl.shop-pro.jp/

Dealer/Store Name :	TEL (— —)
Date of Purchase(YYYY/MM/DD) :	/ /