

Audiolab

Instruction Manual

8000S Stereo Amplifier

8000SX Stereo Power Amplifier

Contents

Please read this manual before using your new Audiolab equipment.

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Addendum — 115 V models only

This model is fitted with loudspeaker terminals which accept 4 mm plugs.

References to BFA plugs or connectors do not apply to this model.

Photographs show European models.

1 Safety Instructions

IMPORTANT

1.1 Read Instructions

All safety and operating instructions in this instruction manual should be read before the equipment is operated.

1.2 Retain Instructions

This instruction manual should be retained for future reference.

1.3 Heed Warnings

All warnings on the equipment and in the instruction manual should be adhered to.

1.4 Follow Instructions

All safety and operating instructions should be followed.

1.5 Water and Moisture

The equipment should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry machine, in a wet basement or near a swimming pool.

1.6 Ventilation

The equipment should be situated so that its location or position does not interfere with its proper ventilation. For example, the equipment should not be situated on a bed, sofa, rug, carpet, or similar surface which may

block ventilation openings, or placed in a built-in installation, such as a bookcase or cabinet which may impede the flow of air through the ventilation openings.

1.7 Heat

The equipment should be situated away from heat sources such as radiators, heaters, heat registers, stoves and direct sunlight.

1.8 Power

The equipment should be connected to an AC power supply only of the type described in the instruction manual or as marked on the equipment. AC power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them, paying particular attention to AC power cords at plugs, convenience receptacles, and the point where the AC power cords exit from equipment.

1.9 Cleaning

While cleaning is in progress the AC power cord must be unplugged from the AC power supply socket.

1.10 Power Lines

An outdoor antenna should be located away from power lines.

1.11 Non-use Periods

The AC power cord of the equipment should be unplugged from the AC power supply socket when equipment is to be left unused for a long period of time.

1.12 Object and Liquid Entry

Care should be taken so that objects do not fall, and liquids are not spilt into the enclosure through openings.

1.13 Damage Requiring Service

The equipment should be serviced by qualified personnel when:

- A. The AC power cord or the plug has been damaged.
- B. Objects have fallen, or liquid has been spilt into the equipment.
- C. The equipment does not appear to operate normally or exhibits marked change in performance.
- D. The equipment has been dropped, or the enclosure damaged.

1.14 Servicing

Do not attempt to service the equipment beyond that described in the instruction manual. All other servicing should be referred to qualified service personnel. See Service section of instruction manual for further information.

2 AC Power Connection

WARNING

Check the voltage setting. Do not connect this equipment to an incorrect AC power supply, serious damage may result. Do not connect the AC power cord until all other connections have been made.

The AC power cord is normally fitted with a plug which complies with local requirements. If a plug is not fitted, or if the colours of the wires in the AC power cord do not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

For 220–240 V models, the wires in the AC power cord are coloured in accordance with the following code:

BLUE – NEUTRAL

BROWN – LIVE

The BLUE coloured wire must be connected to the terminal in the plug marked by the letter N or coloured BLACK.

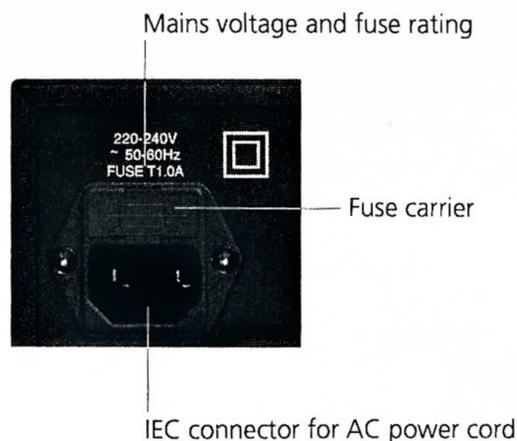
The BROWN coloured wire must be connected to the terminal in the plug marked by the letter L or coloured RED.

WARNING

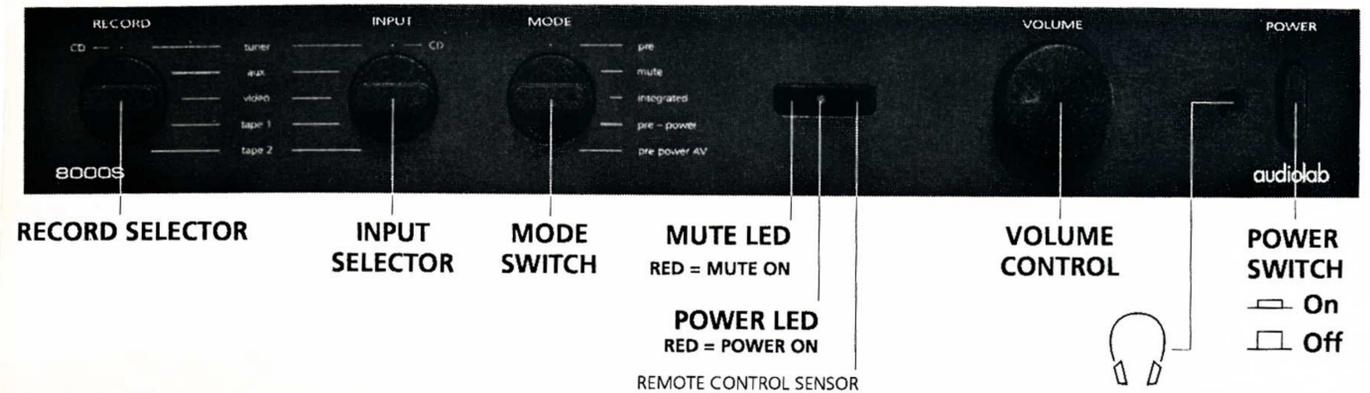
Ensure that neither of the two wires of the AC power cord are connected to the earth terminal in a three pin plug.

In the event of the plug fitted to the AC power cord not being suitable for the local supply connection, consult your Audiolab dealer. If the plug is fused, ensure the fuse fitted matches the rating shown on the plug cover.

If the equipment fuse is changed it MUST be replaced by one of the correct type and rating as shown on the rear panel of the equipment. The fuse is a 5 mm x 20 mm Time Lag (T) type, located in a slide-in carrier which also contains a spare fuse. The fuse carrier cannot be pulled out until the AC power cord is unplugged from the equipment. When the carrier is opened the first fuse to be seen is the spare fuse.



3 Controls 8000S



- After power is switched on the 8000S remains muted for \approx 18 seconds

INPUT SELECTOR

Turn to select source. 8000S mutes automatically whilst new input is selected.

VOLUME CONTROL

Adjusts playing volume. Always turn the volume down before changing connections.

RECORD SELECTOR

Turn to select source to record to TAPE 1, TAPE 2 or VIDEO.

MODE SWITCH

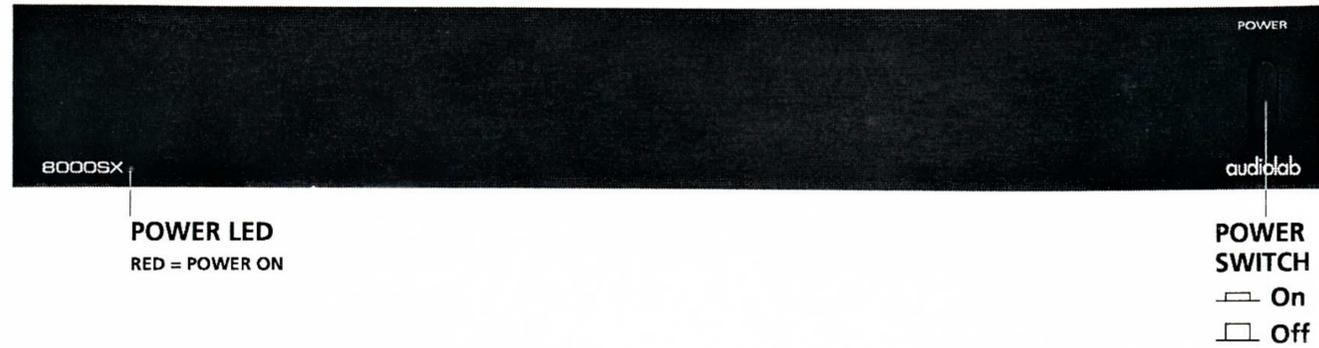
Select *integrated* when using 8000S as an integrated amplifier. Select *mute* to turn off pre-amplifier outputs, loudspeakers or headphones. See section 7 Operating Modes 8000S, for further details.

HEADPHONE SOCKET

Socket for connection of headphones. Unplug headphones when not in use.



4 Controls 8000SX



- After power is switched on the 8000SX remains muted for \approx 8 seconds

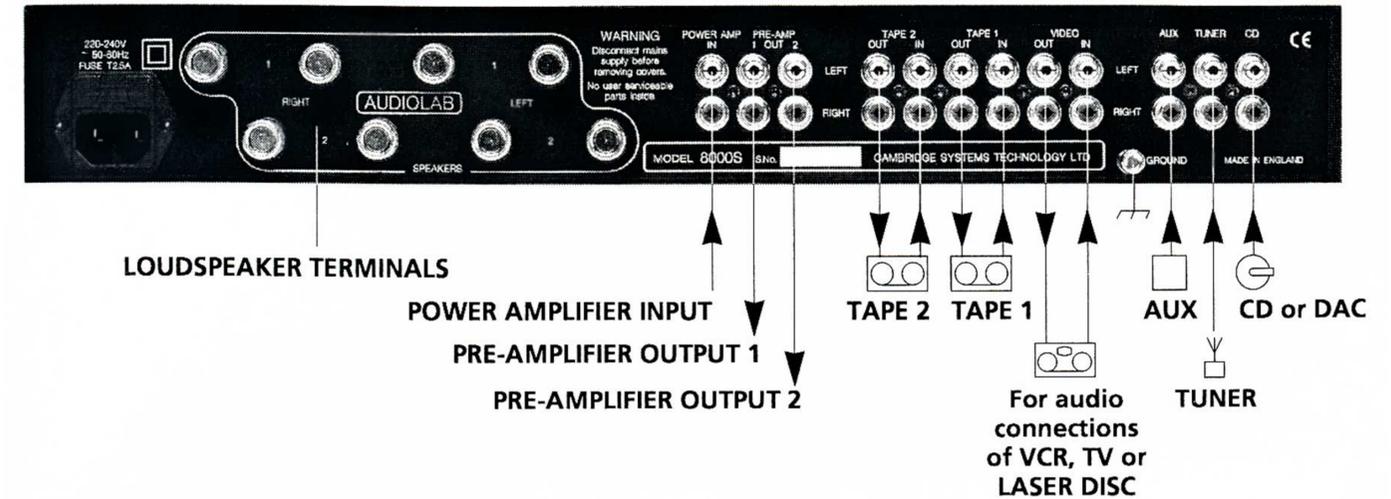


Audiolab 8000S



Audiolab 8000SX

5 Input & Output Connections 8000S



- Always switch power off before changing any connections

CD, TUNER, AUX, VIDEO IN, TAPE 1 IN, TAPE 2 IN

The six inputs may be used for connecting any line level source.

VIDEO OUT, TAPE 1 OUT, TAPE 2 OUT

Three sets of record outputs for connection of up to three stereo audio recorders, e.g. tape recorder, CD recorder, audio recording input of VCR.

PRE-AMP OUT 1 & 2

Low impedance (100 Ω) pre-amplifier outputs for driving external power amplifiers, sub-woofers or signal processors. Long cables may be used if required. Pre-amp outputs are switched off when *integrated* mode is selected or whenever amplifier is muted.

Use good quality screened phono-phono connecting leads for all input and output connections.

It is normal for the 8000S to require a 'burn-in' period of a few hours before the best sound quality is obtained. It is quite safe to leave the equipment switched on. The power consumption is less than 30 watts.

POWER AMP IN

For driving the power amplifier input directly from an external source. Only operates when *pre power AV* mode selected.

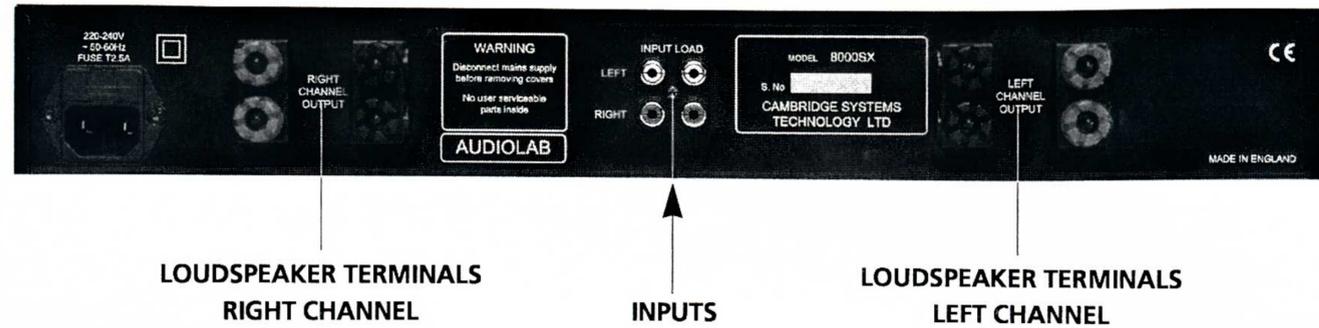
SPEAKERS

Each channel has two sets of loudspeaker output terminals connected in parallel. See section 8 Loudspeaker Connections, for further details.

GROUND

Not normally used unless phono pre-amplifier and turntable are used and both are Class II \square double insulated with no earth connection. In this case the ground terminal can be connected to a suitable earth point to establish a system ground to eliminate residual hum. The ground terminal must not be used as a safety earth. In case of any queries consult your Audiolab dealer.

6 Input & Output Connections 8000SX



- Always switch power off before changing any connections
- INPUT & LOAD are connected in parallel
- 4 mm banana plugs cannot be connected to the loudspeaker terminals

INPUT

For connection of pre-amplifier or line level signal source. When using long cables ensure the pre-amplifier has a low output impedance (600 Ω or less) and use low capacitance cables.

LOAD

Use to connect an additional power amplifier, e.g. 8000SX, to bi-amplify loudspeakers.

Use good quality screened phono-phono connecting leads for all input and output connections.

OUTPUTS

Each channel has two sets of loudspeaker output terminals connected in parallel. See section 8 Loudspeaker Connections, for more information.

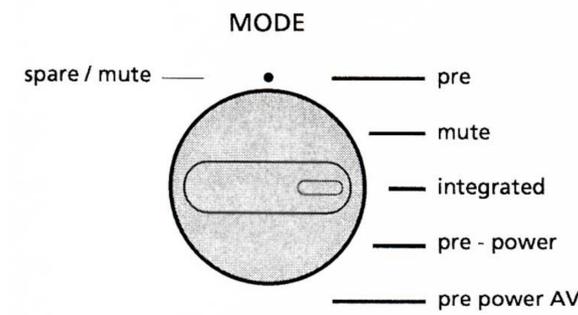
LOUDSPEAKER TERMINALS

Side entry, three-way binding posts for connecting cables using bare wire, pin or spade terminals. For connection to the BFA connectors, located in the centre of the terminal, use BFA plugs.

Stackable BFA plug kit
 – 2 pairs stackable BFA plugs
 – 1 Allen key
 – 1 Assembly instructions

It is normal for the 8000SX to require a 'burn-in' period of a few hours before the best sound quality is obtained. It is quite safe to leave the equipment switched on. The power consumption is less than 30 watts.

7 Operating Modes 8000S



POWER AMP IN	PRE-AMP OUT 1 & 2	PRE → POWER INTERNAL LINK	LOUDSPEAKERS
-	active	-	-
-	-	-	-
-	-	active	operational
-	active	active	operational
active	active	-	operational

INTEGRATED

Pre-amp output is connected internally to the power amp input. Pre-amp outputs are not operational. External power amplifiers, sub-woofers or signal processors will not receive any signals.



Audiolab 8000S



Audiolab 8000PX Stereo Power Amplifier

PRE - POWER

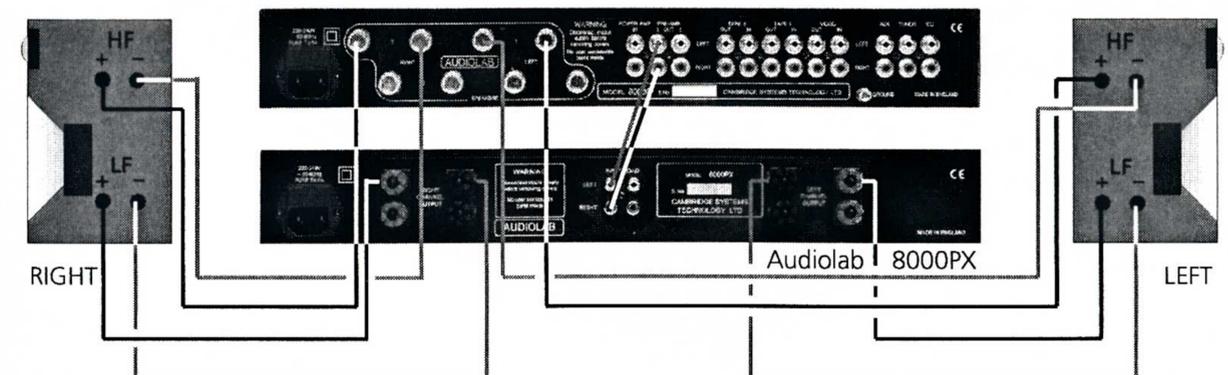
Pre-amp output is internally connected to the power amp input. Pre-amp outputs are operational. A self-powered sub-woofer will operate if connected.

It is possible to use a second power amplifier either to bi-amp loudspeakers or to drive an additional pair of loudspeakers in a remote location.

While headphones are plugged in, the pre-amplifier outputs and power amplifier input are not operational. Loudspeaker outputs are muted.

NOTE:

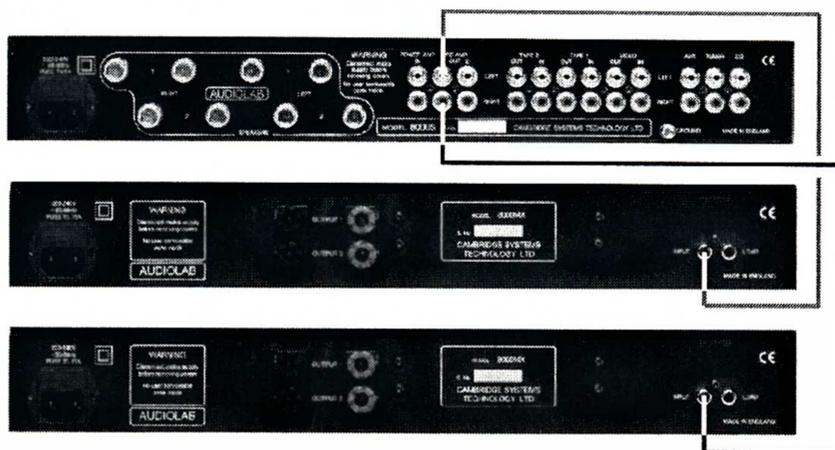
Static discharge to the 8000S or the making and breaking of connections may momentarily operate the muting function.



8 Loudspeaker Connections

PRE

All signals to and from the power amplifier are disconnected. 8000S is ready to function as a stand alone pre-amplifier.

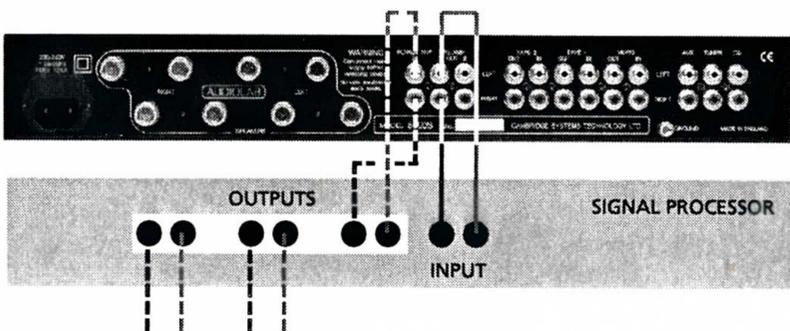


Audiolab 8000MX Monobloc Power Amplifiers

PRE POWER AV

The pre-amplifier and power amplifier operate totally independently.

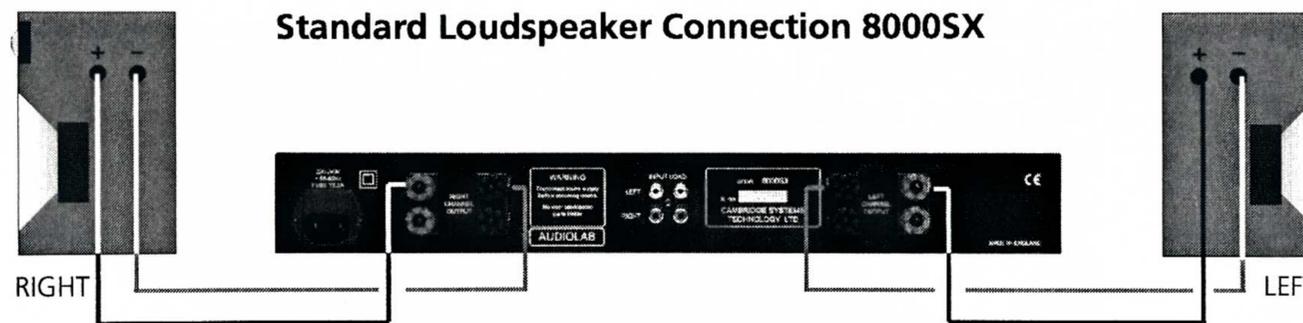
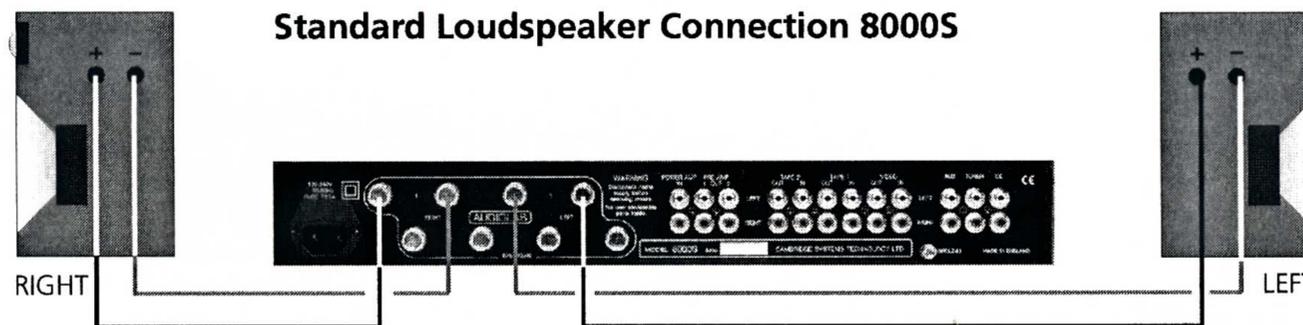
Use for connection of a signal processor e.g. surround sound decoder or loudspeaker equaliser.



For vinyl enthusiasts the Audiolab 8000PPA Phono Pre-amplifier connects directly to the AUX input of the Audiolab 8000S.

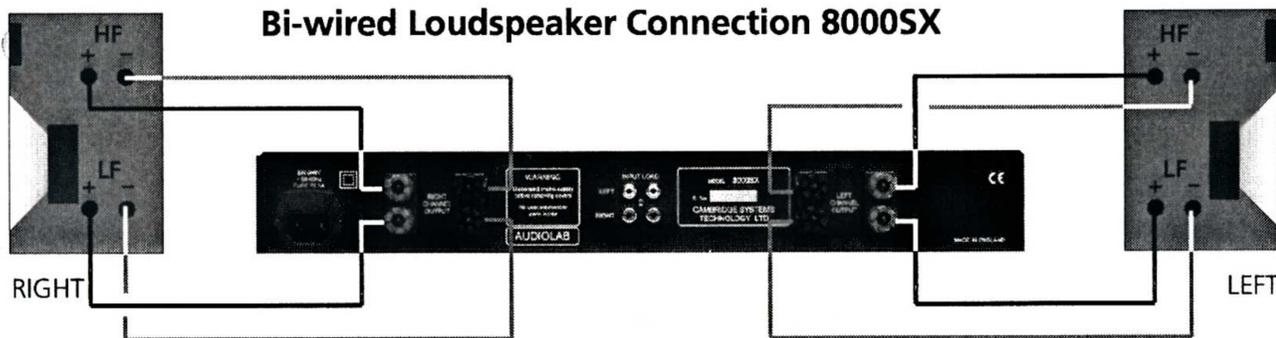
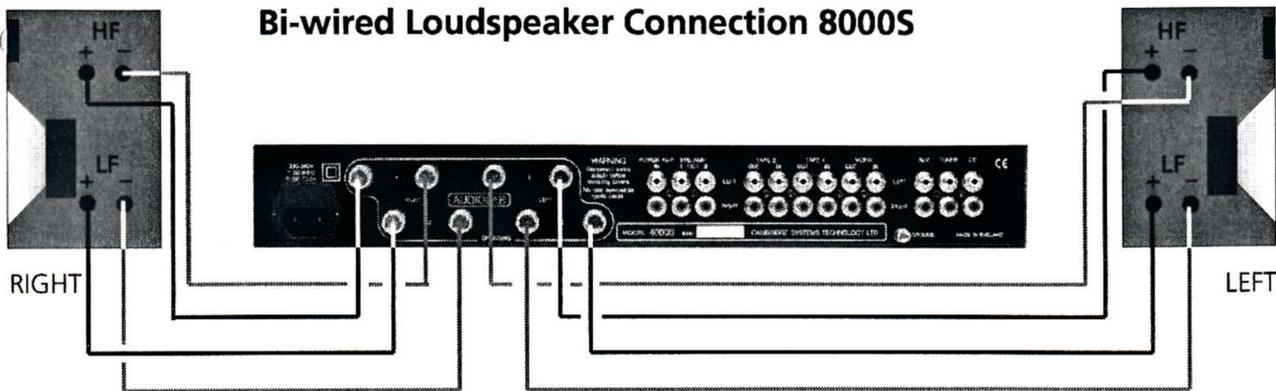
- Always switch power off before changing any loudspeaker connections
- Always remove any shorting links from loudspeaker terminals when connecting two or more power amplifiers for bi- or tri-amping
- Use good quality low resistance loudspeaker cables
- To secure cable terminations tighten the loudspeaker terminals securely by hand. Make sure there are no loose strands of wire which could cause shorts

+ RED —
- BLACK —



It is possible to connect a loudspeaker switching box or headphone adapter to the second set of loudspeaker outputs.

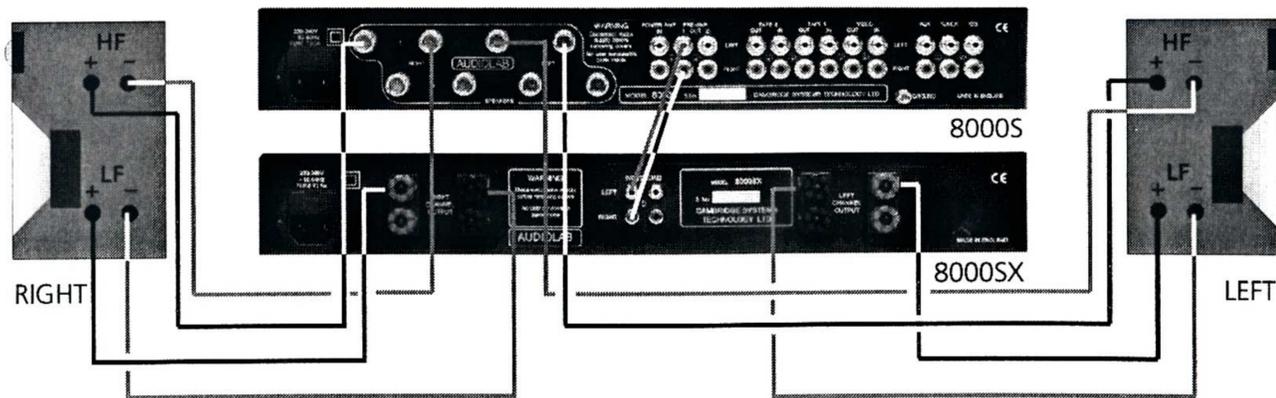
9 Service



Loudspeaker bi-wiring offers improved sound quality because high and low frequency signals are carried individually to the loudspeaker drive units.

For tri-wiring an 8000SX use stackable BFA plugs.

Bi-amp Loudspeaker Connection



Servicing of Audiolab products should only be carried out by authorised service agents. If Service is required the equipment should be returned, securely packaged, preferably using original packaging, to your Audiolab dealer.

In the UK equipment may be returned to Cambridge Systems Technology Ltd. Always telephone before returning any equipment.

A note should be enclosed giving your name, address, telephone number, and a brief description of the reason for return.

If you require Service outside the Guarantee period, do not hesitate to contact your Audiolab dealer.

While cleaning is in progress the AC power cord must be unplugged from the AC power supply socket.

Any grease or dirt on the equipment may be removed with a soft, lint-free cloth slightly moistened with a mild solution of warm water and detergent or washing-up liquid. Do not use any other solutions or solvents.

Retain original packaging for transporting equipment.

If you have any queries regarding the use of Audiolab equipment, consult your Audiolab dealer.

10 Guarantee

All Audiolab products are guaranteed against defects in components and materials for a period of 12 months from date of purchase. Within this period parts will be replaced free of charge provided that failure is not due to accident, negligence or misuse.

Cambridge Systems Technology Ltd. and any of its authorised distributors or Audiolab dealers reserve the right to refuse service under Guarantee if the equipment has been subjected to unauthorised modifications or any of the serial numbers identifying the equipment have been defaced or removed.

Labour and carriage are not covered except by local agreement. The Guarantee offered does not affect the consumer's statutory rights.

Please register ownership of your Audiolab equipment by completing and returning the Guarantee card. This will help when dealing with any queries regarding your equipment.

11 Specification 8000S

RATED OUTPUT POWER

60 W (18 dBW) per channel into rated load impedance (8 Ω) with both channels driven.

INPUTS

CD, TUNER, AUX, VIDEO, TAPE 1, TAPE 2: 125 mV/20 k Ω IHF.

POWER AMP:

782 mV/47 k Ω .

GAIN

Pre-amp:

9 dB @ 1 kHz.

Power amp:

29.0 dB @ 1 kHz.

SIGNAL TO NOISE

CD, TUNER, AUX, VIDEO, TAPE 1, TAPE 2: Better than 80 dB (IHF, rel. 0.5 V pre-amp output). POWER AMP: Better than 80 dB (IHF, rel. 0 dBW).

FREQUENCY RESPONSE

CD, TUNER, AUX, VIDEO, TAPE 1, TAPE 2, POWER AMP: 20 Hz–20 kHz \pm 0.5 dB, 1 Hz–65 kHz -3 dB.

TOTAL HARMONIC DISTORTION + NOISE

Less than 0.07 %.

CHANNEL BALANCE

Within 1 dB.

CHANNEL SEPARATION

Better than 60 dB @ 1 kHz any input.

CROSSTALK

Better than 80 dB @ 1 kHz.

POLARITY (PHASE)

Non-inverting for all inputs and outputs.

PRE-AMP OUTPUT

OUTPUT 1, OUTPUT 2: Output impedance 100 Ω . Maximum output >7.3 V rms.

HEADPHONE OUTPUT

Output impedance 330 Ω . Suitable for headphones 8 Ω –2 k Ω impedance.

RECORD OUTPUT

VIDEO OUT, TAPE 1 OUT, TAPE 2 OUT: Output impedance 1 k Ω . Gain from input to record output 0 dB (x1).

MUTING

Muting controlled manually or automatically.

ACCESSORIES SUPPLIED

AC Power Cord.
Instruction Manual.
8000RC Remote Control with 2 x AA batteries.

COLOUR

Black.

OPERATING TEMPERATURE RANGE

10–35 $^{\circ}$ C.

POWER REQUIREMENTS

50–60 Hz. 100 V, 110–120 V and 220–240 V models available. Maximum power consumption 300 VA.

DIMENSIONS (W x H x D)

445 x 74 x 335 mm including feet, terminals and controls.

445 x 64 x 302 mm excluding feet, terminals and controls.

WEIGHT

Net 7.6 kg.

Shipping 8.8 kg.

12 Specification 8000SX

RATED OUTPUT POWER

60 W (18 dBW) per channel into rated load impedance (8 Ω), with both channels driven.

INPUT

782 mV rms for 60 W (18 dBW) into 8 Ω . Input impedance 50 k Ω .

LOAD

Connected in parallel with INPUT.

GAIN

29.0 dB @ 1 kHz.

SIGNAL TO NOISE

(IHF rel. 0 dBW)
Better than 95 dB.

FREQUENCY RESPONSE

20 Hz–20 kHz \pm 0.3 dB,
0.1 Hz–75 kHz -3 dB.

TOTAL HARMONIC DISTORTION + NOISE

Less than 0.05 %.

CHANNEL BALANCE

Within 1 dB.

CHANNEL SEPARATION

Better than 80 dB 20 Hz–20 kHz.

POLARITY (PHASE)

Non-inverting.

MUTING

Muting controlled automatically.

ACCESSORIES SUPPLIED

AC Power Cord.
1 x Stackable BFA Plug kit.
Instruction Manual.

COLOUR

Black.

OPERATING TEMPERATURE RANGE

10–35 $^{\circ}$ C.

POWER REQUIREMENTS

50–60 Hz. 100 V, 110–120 V
and 220–240 V models
available. Maximum power
consumption 280 VA.

DIMENSIONS (W x H x D)

445 x 74 x 337 mm
including feet, terminals and controls.

445 x 64 x 302 mm
excluding feet, terminals and controls.

WEIGHT

Net 7.7 kg.

Shipping 9.0 kg.

Audiolab products are designed and manufactured by Cambridge Systems Technology Ltd.

Cambridge Systems Technology Ltd. reserve the right to alter design and specification without notice. Specification may vary for different countries.