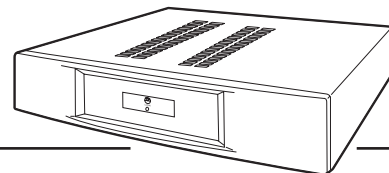




LINN

AKURATE 2200•3200•4200

POWER AMPLIFIERS



OWNER'S MANUAL
ENGLISH

Important Safety Instructions

Explanation of symbols used in this manual or on the rear/underside of the apparatus:



This symbol is intended to alert the user to the presence of uninsulated dangerous voltages within the enclosure of sufficient magnitude to cause electric shock.



This symbol is intended to alert the user to the presence of important operation, maintenance and servicing information in the instruction and service manuals.

For apparatus connected to the mains electricity supply

CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE THE COVER.

NO USER SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

REPLACE THE MAINS FUSE IN THE PLUG WITH ONE OF THE SAME TYPE AND RATING.

DISCONNECT SUPPLY CORD BEFORE CHANGING FUSE.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. SHOCK HAZARD - DO NOT OPEN.

MAINS PLUGS

This apparatus is supplied with a non-rewireable mains plug for the intended country. Replacement mains leads can be obtained from your Linn retailer. Should you need to change the plug please dispose of it carefully. A plug with bared conductors is dangerous if engaged in a live socket.

The Brown wire must be connected to the Live (Line) supply pin.

The Blue wire must be connected to the Neutral supply pin.

The Green/Yellow wire must be connected to the Earth (Ground) supply pin.

Please contact your retailer or a competent electrician if you are in any doubt.



Refer to the rear or underside of the product for fuse and power consumption information.

General Safety Instructions

1. **Read these instructions.**
2. **Keep these instructions.**
3. **Heed all warnings.**
4. **Follow all instructions.**
5. **Do not use the apparatus near water**, for example near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool etc.
6. **Clean only with dry cloth.**
7. **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.** Site the apparatus so that its location or position does not interfere with its proper ventilation. For example, the apparatus should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
8. **Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**
9. **Do not defeat the safety purpose of the polarised or grounding type plug.** A polarised plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into 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 at the point where they exit from the apparatus.**
11. **Only use attachments/accessories specified by the manufacturer.**
12. **Use only with the stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.**
13. **Unplug this apparatus during lightning storms or when unused for long periods of time.**
14. **Refer all servicing to qualified service personnel.** Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug has been 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.
15. **Wall or ceiling mounting.** Mount the apparatus to a wall or ceiling only as recommended by the manufacturer.

16. **Power sources.** Connect the apparatus to a power supply only of the type described in the operating instructions or marked on the apparatus.
17. **Mains plug.** Use the mains plug to disconnect the apparatus from the mains supply. The mains plug must be accessible at all times. Use the mains switch (if applicable) when the apparatus is not in use.
18. **Power lines.** An outdoor antenna should be located away from power lines.
19. **Outdoor antenna grounding.** If an outdoor antenna is connected to the apparatus, ensure that the antenna system is grounded to provide some protection against voltage surges and static build up. In the USA see article 810 of the National Electrical Code ANSI/NFPA 70 concerning installation requirements.
20. **Telephone line.** Do not connect the apparatus to a telephone line except where specifically instructed to do so.
21. **Objects and liquid entry.** Do not let objects or liquids fall into the apparatus. Do not expose the apparatus to dripping or splashing. Do not place a vessel containing liquid on top of the apparatus.
22. **No naked flame sources, such as lighted candles, should be placed on the apparatus.**
23. **The apparatus has been designed for use in moderate and tropical climates.**

UK USERS PLEASE READ THIS IMPORTANT SAFETY INFORMATION

Fuse replacement

This appliance is fitted with a non-rewireable 13 amp mains plug. The plug contains a 5 amp fuse. If the fuse has blown it can be replaced as follows:

- a) Pull out the red fuse cover/carrier.
- b) Remove and dispose of the blown fuse.
- c) Fit a new 5 amp BS1362 approved fuse into the carrier and push the carrier back into the plug.

Always ensure the fuse cover is fitted. If the fuse cover is missing do not use the plug. Contact your Linn retailer to obtain a replacement fuse cover.

Fuses are for fire protection and do not protect against electric shock.

Mains plug replacement

Should your mains plug need replacing and you are competent to do this proceed as follows. If you are in doubt contact your Linn retailer or a competent electrician.

- a) Disconnect the plug from the mains supply.
- b) Cut off the plug and dispose of it safely. A plug with bared conductors is dangerous if engaged in a live socket.
- c) Only fit a 13 amp BS1363A approved plug with a 5 amp fuse.
- d) The cable wire colours or a letter will be marked at the connection points of most quality plugs.

Attach the wires securely to their respective points. The Brown wire must go to the Live pin, the Blue wire must go to the Neutral pin, and the Green/Yellow wire must go to the Earth pin.

- e) Before replacing the plug top ensure that the cable restraint is holding the outer sheath of the cable firmly and that the wires are correctly connected.

WARNING

THIS APPLIANCE MUST BE EARTHED.

CE Declaration of Conformity

Linn Products Ltd declare that this product is in conformance with the Low Voltage Directive 73/23/EEC and Electromagnetic Compatibility 89/336/EEC as amended by 92/31/EEC and 93/68/EEC.

The conformity of the designated product with the provisions of Directive number 73/23/EEC (LVD) is proved by full compliance with the following standards:

Standard number	Date of issue	Test type
EN60065	2002	General requirements Marking Hazardous radiation Heating under normal conditions Shock hazards under normal operating conditions Insulation requirements Fault conditions Mechanical strength Parts connected to the mains supply Components Terminal devices External flexible cords Electrical connections and mechanical fixings Protection against electric shock Stability and mechanical hazards Resistance to fire

The conformity of the designated product with the provisions of Directive number 89/336/EEC (EMC) is proved by full compliance with the following standards:

Standard number	Date of issue	Test type
EN55013	2001	Conducted emissions
EN55013	2001	Absorbed emissions
EN55020	2002	Immunity

FCC notice

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Waste Electrical and Electronic Equipment (WEEE) Directive

Directive 2002/96/EC of the European Parliament and of the Council

The symbol (right) is shown on this product. It indicates that the product should not be disposed of with regular household waste, but should be disposed of separately.



Electrical and electronic equipment can contain materials that are hazardous to the environment and human health and therefore should be disposed of at a designated waste facility or returned to your retailer for the appropriate recycling to take place (see www.linn.co.uk for further information).

If you wish to dispose of this product and the product still functions, please consider recycling/reusing it by donating it to a charity shop, selling it or part-exchanging it with your retailer.

Copyright and Acknowledgements

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Introduction

Over thirty years ago Linn was born out of a simple truth: the more accurately a system reproduces sound, the greater the impact it will have on the listener.

The AKURATE range of power amplifiers have been designed to offer true flexibility when building or upgrading a stereo or multi-channel system. All AKURATE amplifiers feature Linn's proprietary CHAKRA technology, first used in the flagship KLIMAX 500 Twin power amplifier, and are available with either phono or balanced connections. Go AKTIV for the best possible sound from your Linn system!

The AKURATE power amplifier is the perfect partner for Linn's AKURATE CD player and AKURATE KONTROL pre-amplifier. Add the AKURATE Tuner and AKURATE loudspeakers for a complete AKURATE System and experience the exceptional sound quality delivered by this dedicated music system.

The AKURATE power amplifier range

The following AKURATE power amplifier models are available:

Model	Number of channels	Power rating*
2200	two	200 W
3200	three	200 W
4200	four	200 W

Connector options

'Phono' models use RCA phono connectors for the input and output signal connectors. They are designed to accept unbalanced line-level audio signals.

'Balanced' models use 3-pin XLR connectors for the input and output signal connectors. They are designed to accept balanced line-level audio signals.

* Per channel, into 4 Ω (rms).

Features

CHAKRA amplifier technology

All AKURATE power amplifiers feature Linn's proprietary CHAKRA technology.



The CHAKRA topology uses an array of large bi-polar transistors as 'boosters' around a monolithic (single chip) amplifier IC (integrated circuit). Linn's execution of the monolithic to bi-polar transition is unique, and a patent application for the design has been registered. When output current is less than a few amps, all the power output comes from the monolithic IC, maximising the speed and linear properties of this design. At higher output currents the bi-polar transistors provide the majority of the output current, leaving the monolithic to operate well within its capability and able to correct any error instantaneously.

The topology is very compact, reducing the circuit area and length of the signal path and is also highly efficient, producing much less heat than traditional designs.

Switch Mode Power Supply

A Switch Mode Power Supply (SMPS) is incorporated into all AKURATE power amplifiers. SMPS is an electronic power supply which converts and regulates the incoming mains voltage, and also provides the internal audio circuitry with excellent electrical isolation from the outside world. The SMPS replaces the bulky, heavy and noisy transformer and components normally found in conventional amplifiers.

The major benefits of SMPS over conventional power supplies include: small size, high efficiency, fast response, high mains input tolerance, good load tolerance, low acoustic noise and, with its much reduced material use, environmental friendliness.

Also, SMPS does not emit distortion into the local mains supply, as conventional large power supplies tend to do and if you upgrade from an amplifier with a conventional power supply to the AKURATE

amplifier, aside from the benefits of the improved amplification, the sound of your entire system will almost certainly improve as a result of the cleaner mains supply.

AKTIV* operation

All AKURATE power amplifiers support AKTIV operation.

Standard 'passive' crossovers are driven by the audio signal itself and so some of the signal is effectively lost. AKTIV crossovers are powered by the SMPS (see opposite) and therefore much more of the audio signal is delivered to the loudspeaker. They are also able to exert a much greater degree of control over the signal and these qualities combine to provide a significant improvement in sonic performance over standard operation.

Your authorised Linn retailer can carry out the AKTIV conversion of any AKURATE amplifier channel with the insertion of a specially designed Linn AKTIV module.

Protection

Over-current protection

If the output current goes above the amplifier's designated safe operating level, the affected channels shut down instantly for a few seconds in order to protect themselves and the loudspeaker drive units to which they are connected.

Over-temperature protection

Similarly, if the amplifier's temperature rises above its safe operating limit, the affected channels will cease operation until the temperature drops to a safe level and will then automatically resume.

* The term 'AKTIV' refers to the proprietary Linn active modules and loudspeaker configuration.

Installation

Important:

It is strongly recommended that your AKURATE amplifier is installed and configured by an authorised Linn retailer.

Unpacking

Each AKURATE power amplifier is supplied with the following accessories:

- mains lead
- interconnect cables - cable type will suit amplifier's input connection (balanced or phono), one cable per amplifier channel (e.g. 4-channel amplifier will receive 4 cables)
- warranty card
- this manual

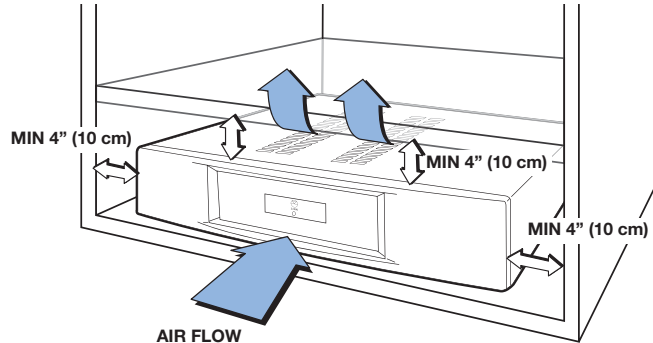
Positioning

Ventilation requirements

Despite the efficiency of the design, your AKURATE amplifier still requires to dissipate considerable power in the form of heat. It should therefore be sited in a position that does not restrict the airflow around it.

For best results:

- The unit should be placed on a flat, stable and rigid surface.
- Allow at least 4" (10 cm) free space above and at each side of the unit.
- If the unit is sited in a cabinet, air must be able to flow through from front-to-back. An enclosed cabinet will severely restrict heat dissipation.
- Ensure that nothing is placed above or below the amplifier that might block or restrict the vents.
- Do not place anything directly in front of the amplifier.



If the AKURATE amplifier has inadequate ventilation and/or is played very enthusiastically for a period of time, its temperature may rise above the designated operating level and the affected channels will shut down until they have cooled sufficiently.

Other devices

Ideally, your AKURATE amplifier should not be located directly above or adjacent to other heat-producing products such as radiators, other power amplifiers etc. If multiple amplifiers are being used and space is restricted, placing them side by side is preferable to stacking.

As with all hi-fi equipment, it is advisable to site your AKURATE amplifier away from (and if possible connected to a power socket on a different circuit from) powerful electrical or electronic products such as TV sets, computers, cookers, fridges etc. This will prevent the possibility of the strong electrical and electromagnetic emissions or interference given off by such devices adversely affecting the performance of your amplifier.

Connecting

Connecting to the mains supply

The unit can be connected to any worldwide mains voltage with no adjustment. It incorporates Automatic Voltage Selection (AVS) and the power supply automatically adjusts for the incoming mains supply.



This unit must be earthed. Use the earthed moulded mains lead supplied. Never use an unearthed plug or adaptor.

Back panel connectors and switches

1 Speaker outputs

Amplified output for connection to loudspeakers.

2 GAIN

For increasing or reducing the gain.

Important:

Only for use when a Linn AKTIV module is fitted to the channel. If no AKTIV module is fitted, always leave set to 3 (default gain setting). If an AKTIV module is fitted, this adjustment can be used to finely tune the AKTIV system to match the room acoustics.

3 AUDIO IN

For connection to the incoming audio signal.

4 AUDIO OUT

Allows the AUDIO IN signal to be relayed to another amplifier channel or another device (e.g. subwoofer).

For balanced models, due to space restrictions on the back panel, AUDIO OUT is not available on all channels.

5 Power switch

For switching the power to the amplifier on and off. Note - this is not a standby switch but cuts the mains supply to the unit.

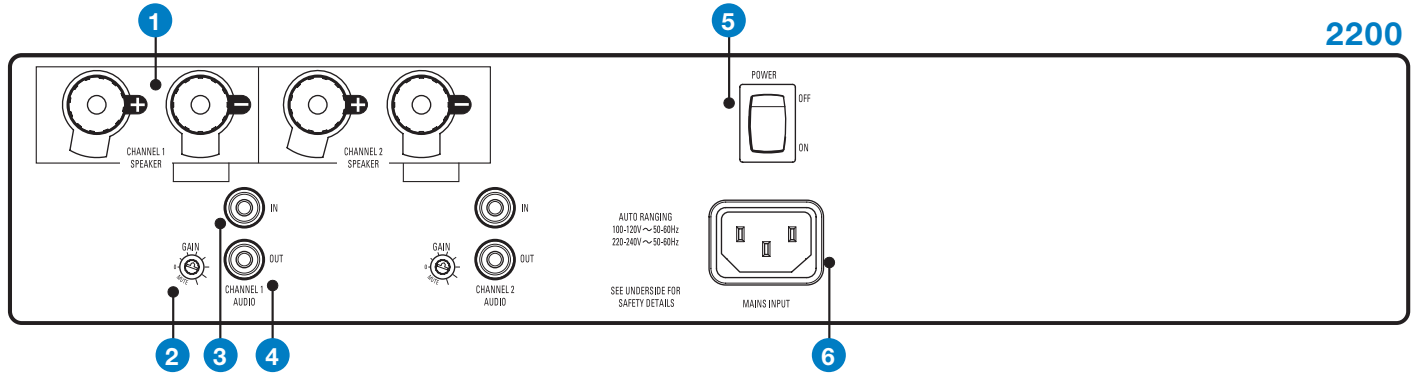
6 MAINS INPUT

See *Connecting to the mains supply* opposite.

Please see following pages for back panel diagrams showing connectors and switches.

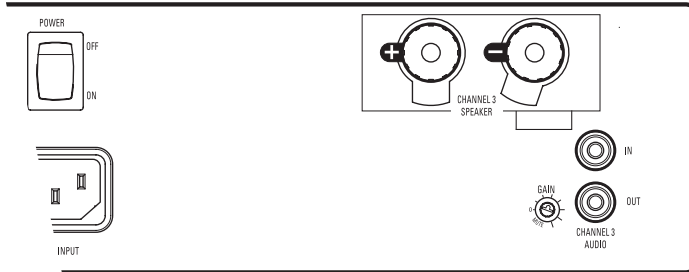
Back panels (Phono)

Notes:
The connections and adjustments indicated by numbers 1 to 4 are repeated for each channel. See *Back panel connectors and switches* (page 4) for further details.



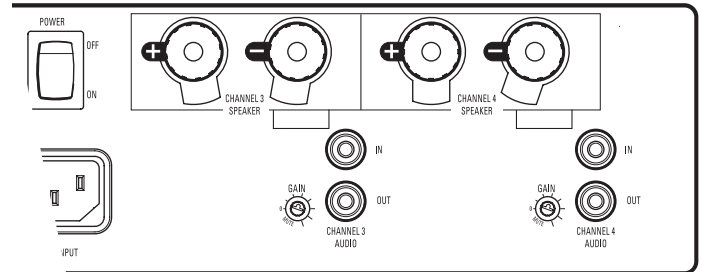
Left side as above - additional channels shown below

3200



Left side as above - additional channels shown below

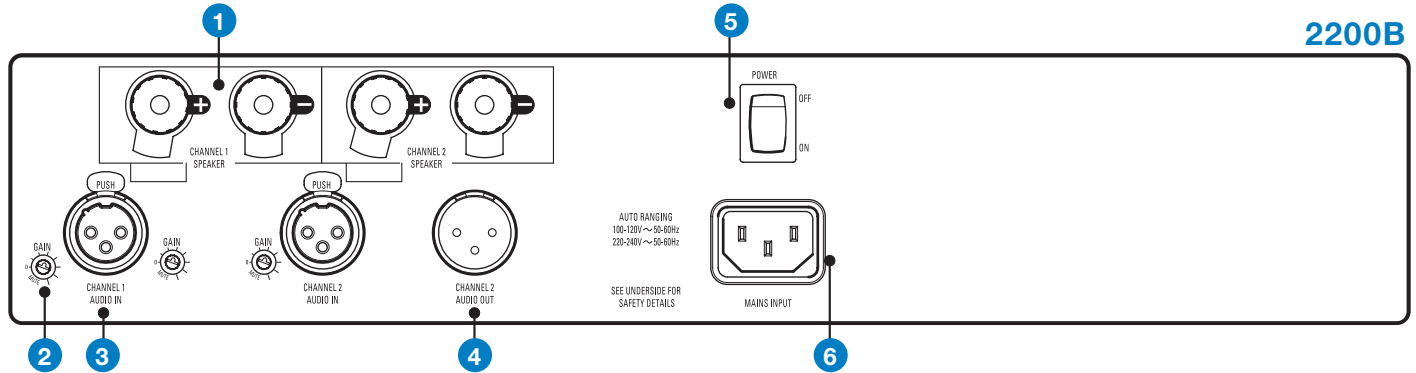
4200



Back panels (Balanced)

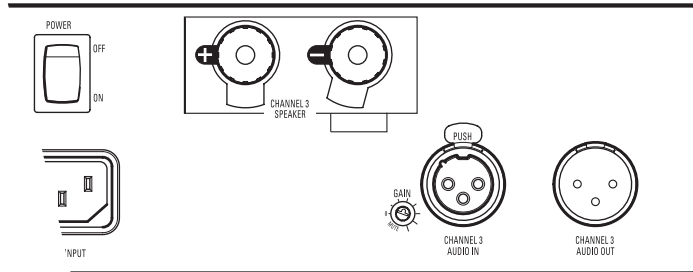
Notes:

The connections and adjustments indicated by numbers 1 to 3 are repeated for each channel. See *Back panel connectors and switches* (page 4) for further details.



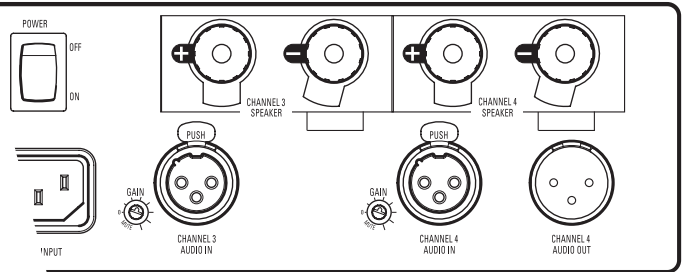
Left side as above - additional channels shown below

3200B



Left side as above - additional channels shown below

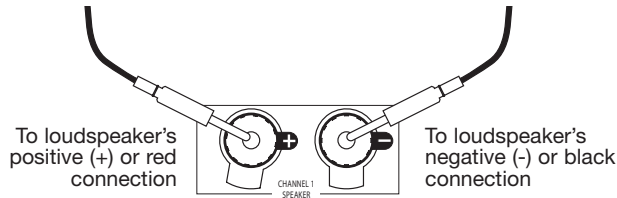
4200B



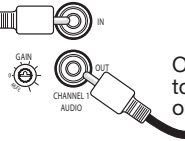
Audio connections

Connect each channel as shown.

Phono models

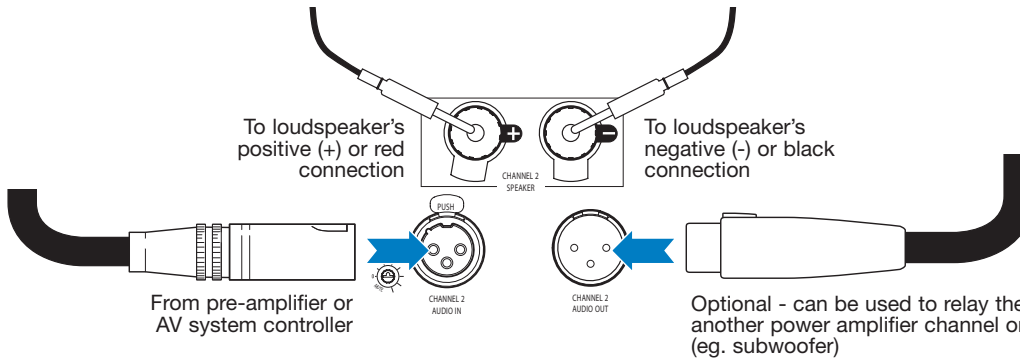


From pre-amplifier or AV system controller



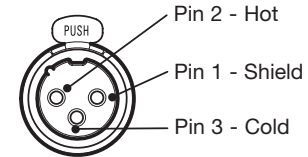
Optional - can be used to relay the audio in signal to another power amplifier channel or other audio device (eg. subwoofer)

Balanced models



Balanced interconnect cable

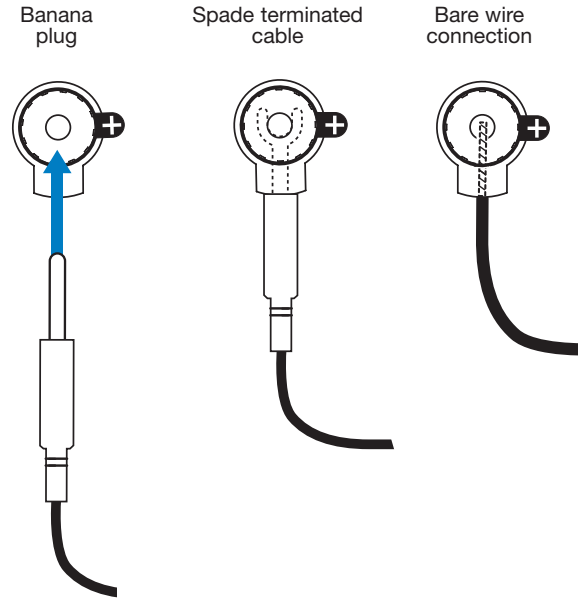
For the balanced audio connection, we recommend the use of the lead supplied or an interconnect lead with its connections configured to match with the AKURATE amplifier connections as shown below.



Speaker terminals

The binding post terminals can be used as sockets for the connection of 4 mm banana plugs or can be used as binding posts for the connection of bare wires or spade terminated cables by loosening the outer section of the binding post (do not attempt to completely remove this outer section), inserting the cable or terminal and re-tightening the binding post to clamp it in place.

Ensure that all the binding posts are tight.



Operation

General

The blue LED on the front panel will be dim when power is first applied and will remain dimmed when the amplifier is in standby mode.

Signal sensing

When an input signal is detected, the AKURATE amplifier is enabled and the LED brightens. In the absence of an audio signal, the amplifier reverts to a low power standby mode after approximately 20 minutes. The signal detector is quite sensitive and if there is noise in your system, such as hum or hiss, it could trigger the detector. If this occurs, try to eliminate the source of the noise.

Protection

Operation

If an amplifier channel overheats or detects an overload condition, the power supply for that channel will shut down in order to protect the amplifier and the loudspeaker drive unit(s) to which it is connected. Please note: all channels that are powered by that same power supply will also shutdown so more than one channel may be affected.

Duration

Once the condition that caused the amplifier to activate its protection has passed, the amplifier will automatically resume normal operation. How long the channels remain in protection will depend on the cause. If the protection operates for more than a few seconds, it could indicate overheating which may take some minutes of cooling to rectify.

A lengthier delay (10 minutes or more) could indicate a persistent overload condition (e.g. one of the units connected to the amplifier is faulty). Try switching the amplifier off at the mains for 30 minutes or so and try again. If it remains non-operational, consult your retailer who can examine your system and determine the source of the problem.

Technical Specifications

Model	2200	3200	4200
Type	Two-channel power amplifier	Three-channel power amplifier	Four-channel power amplifier
Dimensions	W 381 mm, D 355 mm, H 80 mm W 15", D 14 $\frac{1}{8}$ ", H 3 $\frac{1}{8}$ "	W 381 mm, D 355 mm, H 80 mm W 15", D 14 $\frac{1}{8}$ ", H 3 $\frac{1}{8}$ "	W 381 mm, D 355 mm, H 80 mm W 15", D 14 $\frac{1}{8}$ ", H 3 $\frac{1}{8}$ "
Weight	5.8 kg / 12.7 lbs	6.6 kg / 14.5 lbs	6.9 kg / 15.2 lbs
Input connectors (Phono models)	RCA phono	RCA phono	RCA phono
Input connectors (Balanced models)	XLR	XLR	XLR
Output connectors	4 mm banana / binding post	4 mm banana / binding post	4 mm banana / binding post
Fuse rating	250 V, T10 A	250 V, T10 A	250 V, T10 A
Mains input range	AC 100-120 V; AC 220-240 V	AC 100-120 V; AC 220-240 V	AC 100-120 V; AC 220-240 V
Mains frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Input power maximum (continuous)	300 W	300 W	300 W
Input power - standby	16 W (Phono); 17.5 W (XLR)	19 W (Phono); 19.5 W (XLR)	20 W (Phono); 22 W (XLR)
Gain (Phono models). Adjustable for AKTIV (dB)	25.6, 26.6, 27.6, 28.6*, 29.6, 30.6, 31.6, 32.6	25.6, 26.6, 27.6, 28.6*, 29.6, 30.6, 31.6, 32.6	25.6, 26.6, 27.6, 28.6*, 29.6, 30.6, 31.6, 32.6
Gain (Balanced models). Adjustable for AKTIV (dB)	19.6, 20.6, 21.6, 22.6*, 23.6, 24.6, 25.6, 26.6	19.6, 20.6, 21.6, 22.6*, 23.6, 24.6, 25.6, 26.6	19.6, 20.6, 21.6, 22.6*, 23.6, 24.6, 25.6, 26.6
Input impedance	7.5 K Ω (phono); 7.8 K Ω (XLR)	7.5 K Ω (phono); 7.8 K Ω (XLR)	7.5 K Ω (phono); 7.8 K Ω (XLR)
Input level for clipping (Phono models)	1.1 V rms	1.1 V rms	1.1 V rms
Input level for clipping (Balanced models)	2.2 V rms	2.2 V rms	2.2 V rms
Harmonic distortion	< 0.005 %	< 0.005 %	< 0.005 %
Maximum output power (per channel)	200 W rms into 4 Ω 111 W rms into 8 Ω	200 W rms into 4 Ω 111 W rms into 8 Ω	200 W rms into 4 Ω 111 W rms into 8 Ω
Load tolerance	Unconditionally stable into all loudspeaker loads	Unconditionally stable into all loudspeaker loads	Unconditionally stable into all loudspeaker loads
Frequency response	1.4 Hz to 41 kHz	1.4 Hz to 41 kHz	1.4 Hz to 41 kHz
Peak output voltage	41 V	41 V	41 V

* Default setting

Guarantee and Service

This product is guaranteed under the conditions which apply in the country of purchase and your statutory rights are not limited. In addition to any statutory rights you may have, Linn undertake to replace any parts which have failed due to faulty manufacture. To help us, please ask your Linn retailer about the Linn warranty scheme in operation in your country.

In parts of Europe, the United States of America and some other markets, extended warranty may be available to customers who register their purchase with Linn. A warranty registration card is included with the product and should be returned to Linn as soon as possible. Alternatively, you can register your warranty online at www.linn.co.uk.

Warning

Unauthorised servicing or dismantling of the product invalidates the manufacturer's warranty. There are no user serviceable parts inside the product and all enquiries relating to product servicing should be referred to authorised retailers only.

Technical support and information

For technical support, product queries and information, please contact either your local retailer or one of the Linn offices opposite.

Full details of your local retailer/distributor can be found on the Linn web site: www.linn.co.uk.

Important

Please keep a copy of the sales receipt to verify the purchase date of the product.

Please ensure that your equipment is insured by you during any transit or shipment for repair.

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Channel Configuration Table

The table below is provided to allow you to take a note of how your amplifier channels are configured and/or connected.

AKTIV modules

If your AKURATE amplifier is fitted with Linn AKTIV modules, labels may be provided with the modules. Stick the label for each AKTIV module in the table below the relevant channel number to allow you to quickly and easily note the position of each module for future reference.

Channel	1	2	3	4
Configuration				
Gain setting				

Channel	1	2	3	4
Configuration				
Gain setting				

