



LINN AV STEREO POWER AMPLIFIER USER'S GUIDE

PREFACE

IMPORTANT SAFETY INFORMATION

Explanation of symbols used in this manual and on the product:



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 maintenance and servicing information in the instruction and service manuals.

CAUTION

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

NO USER SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: SHOCK HAZARD. DO NOT OPEN.

AVIS: RISQUE DE CHOC ELECTRIQUE. NE PAS OUVRIR.

CAUTION: REPLACE FUSE WITH SAME TYPE AND RATING.

ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE.

DISCONNECT SUPPLY CORD BEFORE CHANGING FUSE.

ATTENTION: DEBRANCHER AVANT DE REMPLACER LE FUSIBLE.

WARNING

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

MAINS PLUGS

This appliance is supplied with a non rewirable 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.

GENERAL SAFETY INSTRUCTIONS

1. Read Instructions. Read the safety and operating instructions before operating the appliance.
2. Retain Instructions. Retain the safety and operating instructions for future reference.
3. Heed Warnings. Observe all warnings on the appliance and in the operating instructions.
4. Follow Instructions. Follow all operating and use instructions.
5. Water and Moisture. Do not use the appliance near water, for example near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool and the like.
6. Carts and Stands. Use only with a cart or stand that is recommended by the manufacturer.
 - 6a. An appliance and cart combination should be used with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.
7. Ventilation. Site the appliance so that its location or position does not interfere with its proper ventilation. For example the appliance 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. Heat. Site the appliance away from heat sources such as radiators, heaters, stoves or other appliances (including amplifiers) that produce heat.
9. Power Sources. Connect the appliance to a power supply only of the type described in the operating instructions or marked on the appliance.
10. Grounding or Polarisation. Do not defeat the precautions taken to ground or polarise the supply to the appliance.

11. Power Cord Protection. Route power cords so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, power sockets and at the point where they exit from the appliance.

12. Protective Attachment Plug. As a safety feature the product is equipped with an attachment plug containing overload protection. See the instruction manual about resetting or replacing the plug. Should the plug need replacing ensure that a replacement is used which has the same overload protection as the original.

13. Cleaning. The product should be cleaned only as recommended by the manufacturer.

14. Non use periods. Unplug the power cord from the outlet if the product will be unused for a long period of time.

15. Objects and liquid entry. Take care not to let objects or liquids fall into the product.

16. Damage requiring Service. The product should be serviced by qualified personnel if :

- a. The power cord or plug has been damaged.
- b. Objects or liquid have fallen into the product.
- c. The product has been exposed to rain.
- d. The product does not appear to operate normally or exhibits a marked change in operation.
- e. the product has been dropped or the enclosure damaged.

17. Servicing. Do not attempt to service this product. All servicing should be referred to qualified service personnel.

UK USERS PLEASE READ THIS IMPORTANT SAFETY INFORMATION

The AV 5105 Stereo Power Amplifier 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 :

- 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.

FUSE RATINGS

220V/230V/240V setting: 3.15A anti-surge.

115V/100V setting 6.3A anti-surge.

REPLACING THE FUSE

Should the mains fuse blow replace it only with an equivalent part. The fuse holder is located just below the mains inlet socket. To replace the fuse disconnect the product from the mains supply. Using a flat blade screwdriver remove and replace the fuse. If the fuse blows a second time there is a fault in the product. Contact your local retailer.

MAINS VOLTAGE OPERATING RANGE

115V, 230V +/- 10%, 50-60Hz.

SETTING THE MAINS OPERATING VOLTAGE

Please check the setting of the voltage selector switch at the mains input socket before connecting the product to a mains supply.

The AV5105 Stereo Power Amplifier is supplied set for 230v operation for use in Europe. To set it for 115V operation disconnect it from the mains and slide the voltage selector switch to the appropriate position.

Warning!! The power supply may be destroyed if it is connected to 240V when set for 120V.

POWER CONSUMPTION

Operate mode 25W-850W

Standby mode 5W

SWITCHING THE PRODUCT ON AND OFF – STANDBY OPERATION

The AV 5105 contains circuitry which senses the presence of an audio signal and powers up the product. The AV5105 will automatically switch to standby mode after a few minutes if no input signal is present. In standby mode the AV 5105 shuts down the bulk of its circuitry, thereby using only a fraction of the on state power.

POSITIONING THE PRODUCT AND HEAT

All electronic products generate some heat. Audio products, in particular audio power amplifiers, have to handle and dissipate large amounts of power. It is essential to provide adequate ventilation to allow this heat to dissipate into the environment. All Linn products are fully protected against overheating and will shut down before any component becomes over heated. However the products will last longer and perform better if they are kept cool. The AV 5105 Stereo Power Amplifier keeps its power amplifier semiconductors cool by transferring the heat on to the case. As a result the base of the amplifier will become warm in use.

COPYRIGHT AND ACKNOWLEDGEMENTS

Copyright © Linn Products Limited.

Linn Products Limited, Floors Road, Waterfoot, Glasgow, G76 0EP, Scotland, United Kingdom.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Printed in the United Kingdom.

AV 5101, AV 5103, AV 5105, AV 5110, AV 5120, AV 5140 and AV 5150 are trademarks of Linn Products Limited.

The information in this manual is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by Linn Products Limited. Linn Products Limited assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual.

Part no: PACK 267

This manual was produced by Human-Computer Interface Ltd, Cambridge, England.

CONTENTS

INTRODUCTION.....	1
AV 5103 System Controller.....	1
AV 5101 Personal Handset.....	2
AV 5105 Stereo Power Amplifier.....	2
AV 5140 Floor-Standing Loudspeaker.....	3
AV 5120 Compact Loudspeaker.....	3
AV 5110 Local Loudspeaker.....	4
AV 5150 Active Isobarik Bass Speaker.....	4
...Making it real.....	5
About the AV 5105 Stereo Power Amplifier.....	6
CONNECTING THE AV 5105 STEREO POWER AMPLIFIER	7
Unpacking.....	7
Positioning the Stereo Power Amplifier.....	7
Rear panel connections.....	8
Connections.....	9
Operation.....	10
Protection.....	11
GUARANTEE AND SERVICE	12
AV 5105 Stereo Power Amplifier.....	13
TECHNICAL INFORMATION.....	13
INDEX	15

CONTENTS

P R E F A C E

INTRODUCTION

THE LINN AV SYSTEM

To get the most out of a film you have to do more than simply watch it: you have to experience it fully, exactly as its creators intended. That means images and sound must be married together perfectly, giving you the same emotional impact you would receive in the cinema itself. Without sound of the very highest quality, every film lacks an essential dimension – and so does your pleasure in viewing it.

In designing your Linn AV system, we have set out to create the ultimate experience of cinema and music in the home and every component has been carefully designed to give you exactly that. No-one knows more than Linn about designing music systems for the home and we have used that unique experience and know how to create an AV system which gives you the same accuracy and purity of sound, even when you are listening to special effects in an action movie.

AV 5103 SYSTEM CONTROLLER

The heart of the system is the AV 5103 System Controller. This controls your audio and video sources, to let you choose what you want to watch or listen to. It can control analogue signals, from a tape recorder or FM tuner, for example; digital signals, from a CD player or a LaserDisc player, and video sources, from a TV tuner, video recorder and LaserDisc player. It also decodes surround encoded materials, including AC-3, to give you a complete surround sound experience. With its informative two-line text display, and the option of on-screen graphics, the AV 5103 System Controller is both powerful and simple to use. Most operations involve just one key-press on the front panel or handset.

Despite the simplicity of its front panel, however, almost every aspect of the System Controller can be configured in exactly the way you want. You can define and control everything: the inputs you use for each of your sources, the name of those sources, the surround-sound decoding options and loudspeaker settings. The System Controller also provides a sophisticated range of audio and video recording options, allowing you to record several sources simultaneously without affecting what you are watching or hearing.



AV 5101 PERSONAL HANDSET

The power and flexibility of the Linn AV system is entirely under your control, from wherever you are in the room, with the AV 5101 Personal Handset. This uses a powerful infra-red signal to allow you to select any of the AV 5103 System Controller's functions with a few simple key presses.

Its uniquely contoured shape makes it extremely comfortable to hold, and the keys are large, and easy to read and use. It is also equally suitable for table-top use, if you prefer.

As well as controlling the Linn AV system, and any other Linn products you may own, the Personal Handset can also learn the commands for your other equipment, so that your whole system can be controlled with a single handset.



AV 5105 STEREO POWER AMPLIFIER

The AV 5105 Stereo Power Amplifier is the ideal companion to the System Controller in your AV system. It has the power to cope with the most demanding cinema effects, while providing the purity and low distortion needed for the perfect reproduction of music.

Each AV 5105 Stereo Power Amplifier will drive two of the loudspeakers in your system, and for the best possible sound we recommend you divide the output of one AV 5105 Stereo Power Amplifier to drive the bass and treble sections of your centre speaker separately.



AV 5140 FLOOR-STANDING LOUDSPEAKER

The AV 5140 Floor-Standing Loudspeaker is the perfect choice for use as the front speakers in a surround sound installation. With film, TV, video, or music the outstanding bass performance of the AV 5140 Floor-Standing Loudspeakers, combined with their natural reproduction of voice and music, will provide you with a totally absorbing and breathtaking cinematic experience. Their unique stylish shape ensures that they enhance, rather than dominate, your home.



AV 5120 COMPACT LOUDSPEAKER

The centre loudspeaker is fundamental to a good AV system because it has the task of reproducing the most critical information for music and cinema sources. We therefore designed the AV 5120 Compact Loudspeaker without any compromises to give a superior full-range response, together with especially good bass handling.

As well as giving superb reproduction of music it reproduces speech with particular accuracy, making it ideal for use with film soundtracks. We also carefully matched it to the AV 5140 Floor-Standing Loudspeakers so that sounds which pan across and move between the speakers sound both accurate and highly dramatic. This gives you the most realistic possible impression when listening to film and video soundtracks.

The AV 5120 drive units are screened to ensure that there is no interference if you place it next to your television.



AV 5110 LOCAL LOUDSPEAKER

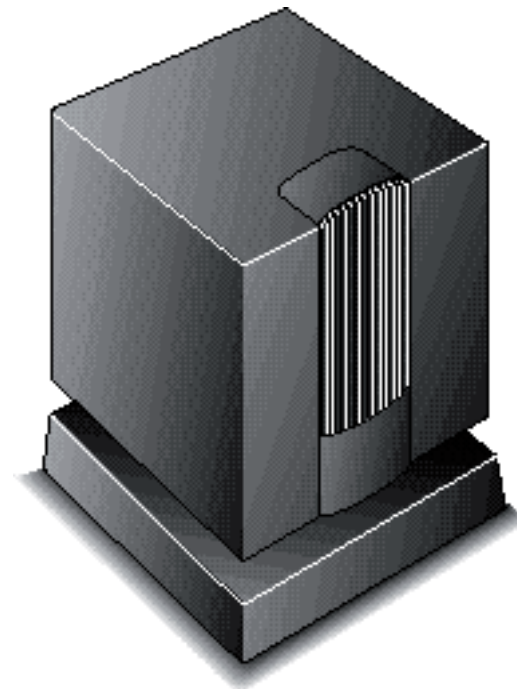
The rear loudspeakers in a surround system are important in creating a spacious sound for music and provide background noises and special effects in film soundtracks. These need to be capable of handling the full dynamic range for AC-3 but only limited range for ProLogic. The AV 5110 Local Loudspeakers were designed to be compact and stylish, so that they can be positioned easily in any room.

Despite their size they produce a deceptively full sound with excellent bass response. For even better performance, and especially if you are using AC-3, a recommended alternative is to use a pair of AV 5120 or AV 5140 Floor-Standing Loudspeakers as the rear surround speakers.



AV 5150 ACTIVE ISOBARIK BASS SPEAKER

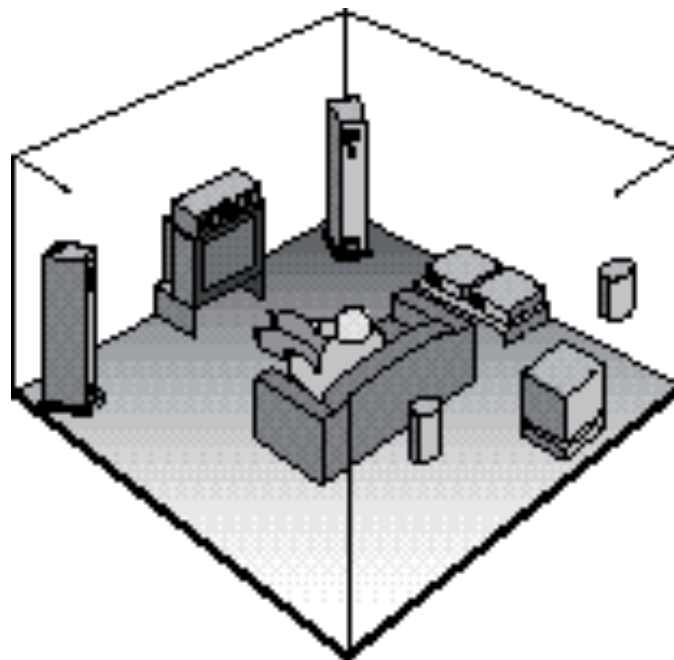
The AV 5150 Active Isobarik Bass Speaker extends the bass performance of the whole system to give you totally involving cinematic effects and enhance the impact of music. We designed the AV 5150 Active Isobarik Bass Speaker to reproduce bass sounds as faithfully as our full-range loudspeakers, with the result that its contribution to the overall sound is extremely natural and unobtrusive. Because low frequency sounds are not directional you can position the bass speaker anywhere convenient in the room.



...MAKING IT REAL

The Linn AV system has been designed to give you the most exciting and satisfying experience of cinema it is possible to achieve in the home. Our aim is to bring you the complete film as its creators intended: with images and sound working together in the most memorable way. To achieve this demanding objective we have designed each of our components to give outstanding performance in their own right while ensuring that each of them work perfectly with each other.

The result is an integrated system that will give you the most rewarding experience you can achieve from watching a film, or listening to a music recording: bringing a new dimension to the way you experience cinema in the home.



ABOUT THE AV 5105 STEREO POWER AMPLIFIER

The Linn AV 5105 Stereo Power Amplifier is intended for use in high performance audio and audio/video systems. It combines high output power, ruggedness, and ease of use with our passion for quality. It draws on years of experience of designing and making high quality audio power amplifiers.

Inside the compact case are two completely independent electrically isolated channels with fully regulated power supplies giving 'dual mono' performance. The signal path is DC coupled and servo controlled for the lowest distortion, cleanest, least coloured sound. The output stage is highly derated for cool, reliable operation, and the protection circuitry protects extensively against accidents or abuse.

A signal sensing circuit detects the presence of audio above a very low level and turns on the main power supplies to the amplifier, bringing the power amplifier channel from a very low standby power consumption to full operation. It reverts to the standby condition a few minutes after the input signal disappears. This is particularly useful in multi-channel surround sound systems.

The AV 5105 accepts the Linn active crossover modules, automatically detecting their presence and switching them in circuit as soon as they are plugged in. This makes playback system upgrades easy.

CONNECTING THE AV 5105 STEREO POWER AMPLIFIER

This chapter explains how to unpack your AV 5105 Stereo Power Amplifier, and how to install it with your other hi-fi components.

Unpacking

The power amplifier comes in a box with the following accessories:

- a mains lead
- two single phono to phono leads
- one spare fuse
- this manual.

We recommend you retain the packaging in case you need to transport the power amplifier at a later date.

WARNING: Do not connect the mains supply until you have verified that the mains voltage switch is set to the correct voltage for your mains supply.

VOLTAGE SELECTION

The AV5105 Stereo Power Amplifier is supplied set for 230V operation for use in Europe. To set it for 115V operation disconnect it from the mains and slide the voltage selector switch to the appropriate position.

To fit the fuse, first identify the correct fuse for your local voltage: 3.15 Amp anti-surge for 230V operation, and 6.3 Amp anti-surge for 115V operation. Pull open the fuse drawer under the mains inlet, insert the fuse in the rear compartment, and close the drawer.

WARNING: This appliance must be earthed. Use the earthed moulded mains lead supplied. Never use an unearthed plug or adapter.

IMPORTANT NOTE FOR UK USE

The wires in this mains lead use the following colour code:

CONNECT THIS WIRE	TO THE TERMINAL
Green and yellow (Earth)	Marked with the letter E, or by the earth symbol, or coloured green or green and yellow.
Blue (Neutral)	Marked with the letter N or coloured black.
Brown (Live)	Marked with the letter L or coloured red.

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured marking identifying the terminals in your plug, proceed as shown in the above table:

POSITIONING THE STEREO POWER AMPLIFIER

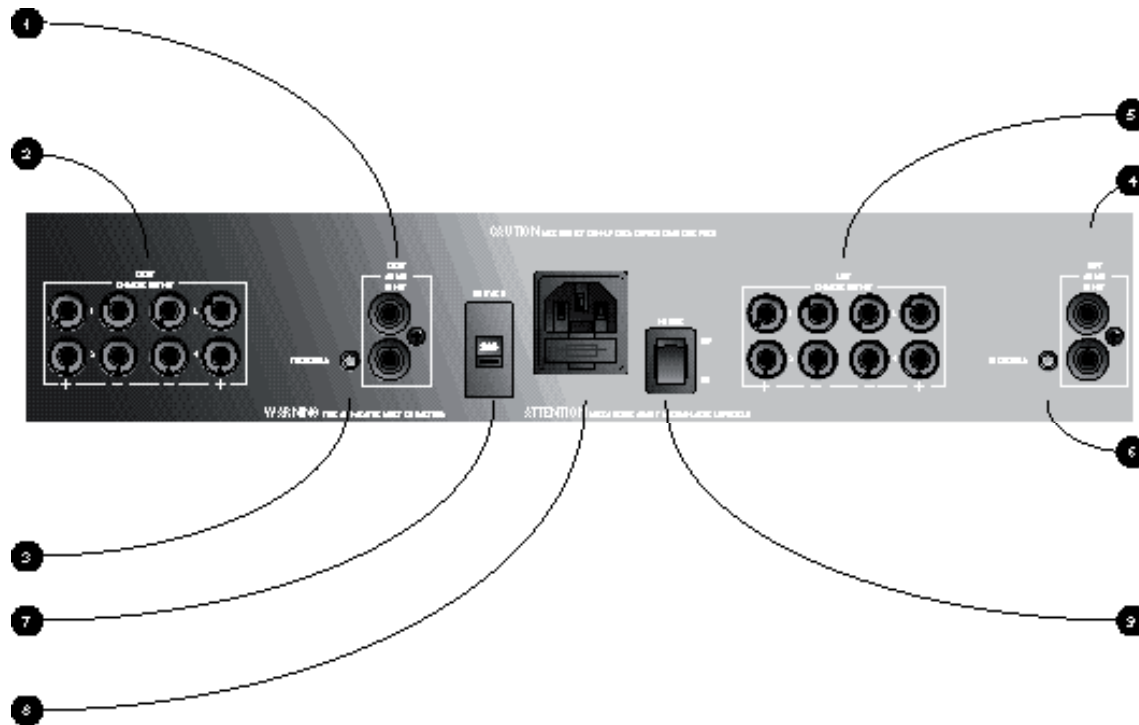
The AV5105 is a powerful amplifier and can generate several hundred Watts of heat under extreme use. Both channels are independently protected against overload and over temperature, shutting down until the fault condition is removed.

To make the most of the AV5105 ensure that there is adequate airflow available. Stacking AV5105's vertically is fine, as long as there is a clear air flow path from bottom to top. If you want to shut them in a cupboard cut big vent holes at the bottom and top of the back, and everywhere else possible. No harm will result from inadequate ventilation, the amplifier will just shut down safely.

REAR PANEL CONNECTIONS

The following diagram shows the connections for the rear panel of the power amplifier.

Note that the power amplifier should be switched off before connecting or disconnecting any of the plugs on the rear panel, or you may generate surges which could damage other components in your AV system.



1. Right audio input
2. Right speaker outputs
3. Right threshold adjustment
4. Left audio input
5. Left speaker outputs
6. Left threshold adjustment
7. Voltage selector
8. Mains input and fuse
9. Power on/off switch

CONNECTIONS

AUDIO INPUTS

Audio inputs to the AV5105 are RCA phono. There are two input sockets per channel, electrically in parallel. This makes it easy to daisy chain multi-amplifier systems. Simply loop from one amplifier to the next one.

SPEAKER CONNECTIONS

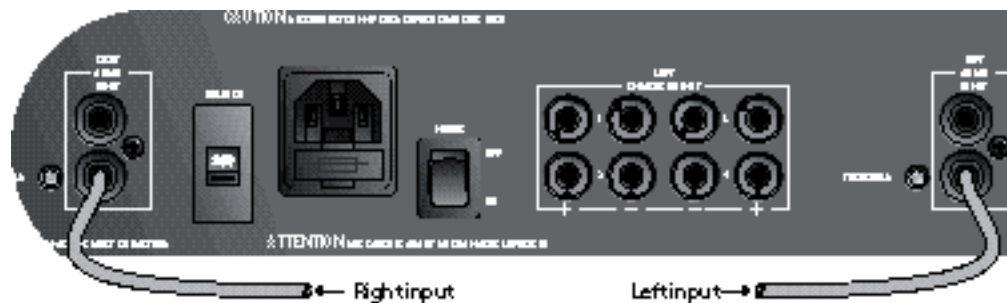
Speaker connections are high contact pressure binding posts which accommodate up to 4mm cable, making a positive, reliable, secure connection directly on to the speaker cable. There are two speaker outputs per channel.

CONNECTING TO A STEREO PREAMPLIFIER

Connect the LEFT and RIGHT AUDIO INPUTS of the AV 5105 to the left and right line outputs of the preamplifier.

CONNECTING TO THE AV 5103 SYSTEM CONTROLLER

Connect one pair of the System Controller's ANALOGUE AUDIO OUT sockets to the LEFT and RIGHT INPUT sockets on the AV 5105, using a stereo phono lead.



OPERATION

In normal use the power amplifier can be left switched on at the back panel.

The signal sense circuitry automatically switches the power amplifier to standby after a few minutes if no input signal is present, and the front panel indicator changes from green to red.

The sensitivity adjustment control on the back panel allows you to adjust the signal sensing threshold. Normally this should be at maximum sensitivity.

Only back this off if the amplifiers regularly get powered up by interference or noises in the system.

Should you wish to bypass the signal sense circuit an internal link can be fitted which forces the amplifier to power up as long as mains power is applied. Please consult your retailer if you wish this to be done.

PROTECTION

The AV5105 is a very rugged amplifier. However should you have a slight accident, for example shorting the speaker leads, it will shut down for 4 seconds then power up again. It will drive less than the rated 4Ω loudspeaker load, but expect it to trip out occasionally if you try to drive much more than 400W into 2Ω, per channel!

Internal temperature sensors (one per channel) will shut the channel down if the heatsink temperature exceeds about 70°C. It will reset when the temperature really drops, usually about 30 seconds. If the AV5105 keeps shutting down you are abusing it! Check your loads or provide more cooling.

Please note that the front panel indicator is driven from only the left channel. If your installation uses only one channel of an AV5105, use the left one.

GUARANTEE AND SERVICE

This product is guaranteed under the conditions which apply in the country of purchase.

In addition to any statutory rights the customer may have, we 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.

WARNING

Refer all enquiries to authorised Linn retailers only. Unauthorised servicing or dismantling of the product invalidates the manufacturer's warranty.

If you are in any doubt, please contact your nearest Linn retailer. For information on your nearest Linn retailer, contact the Linn factory in Scotland or your national distributor.

IMPORTANT

- 1 Please keep a copy of the sales receipt to establish the purchase date of the product.
- 2 Please ensure that your equipment is insured by you during any transit or shipment for repair.

TECHNICAL INFORMATION

AV 5105 STEREO POWER AMPLIFIER

Type	Two fully independent channels, isolated from each other and chassis (earth). Fully regulated dual power supplies per channel.
Inputs	Dual RCA Phono (Line in/out)
Outputs	Four pairs per channel
Protection	Fully protected into any load; overload, over-temperature, full short and overdrive protection
Remote control	Signal-sensing auto switch-on/off for energy conservation or remote operation
Output power	100W/channel/8 Ω , 200W/Channel/4 Ω
Input signal	1.05V rms for maximum output
Output voltage	28.3V rms maximum
Gain	x27 (28.6dB)
Input impedance	4700 Ω
Frequency response	(-3dB) 2Hz-50kHz
Output offset	<5mV

Signal sense threshold	>150 μ V rms
Mains supply	220V–240V T3.15A antisurge 100V–120V T6.3A antisurge
Standby power consumption	<5W
Maximum input power	800W
Dimensions	Height 80mm (inc. feet), width 381mm, depth 355m, weight 6.5kg

INDEX

a	AUDIO INPUTS8, 9	m	MAINS LEAD WIRING 7
	AV 5101 PERSONAL HANDSET 2	o	OPERATION 10
	AV 5103 SYSTEM CONTROLLER 1	p	POSITIONING 7
	AV 5103 SYSTEM CONTROLLER, CONNECTING TO 9		PROTECTION 11
	AV 5105 STEREO POWER AMPLIFIER.....2, 6	r	REAR PANEL CONNECTIONS..... 8
	AV 5110 LOCAL LOUDSPEAKER..... 4	s	SERVICE..... 12
	AV 5120 COMPACT LOUDSPEAKER 3		SPEAKER CONNECTIONS..... 9
	AV 5140 FLOOR-STANDING LOUDSPEAKER 3		SPEAKER OUTPUTS..... 8
	AV 5150 ACTIVE ISOBARIK BASS SPEAKER 4		STEREO PREAMPLIFIER, CONNECTING TO 9
c	CONNECTIONS 8, 9	t	TECHNICAL INFORMATION 13
	AUDIO INPUTS 9		THRESHOLD ADJUSTMENT 8
	SPEAKERS 9	u	UNPACKING..... 7
f	FUSE, FITTING 7	v	VOLTAGE SELECTION 7
g	GUARANTEE 12		
i	INTRODUCTION 1		
l	LINN AV SYSTEM 1		

