

LINN

LK85/140

STEREO POWER AMPLIFIER

OWNER'S MANUAL

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 MÊME 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-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.

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. Wall or ceiling mounting. Mount to a wall or ceiling only as recommended by the manufacturer.
8. 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.
9. Heat. Site the appliance away from heat sources such as radiators, heaters, stoves, or other appliances (including amplifiers) that produce heat.
10. Power sources. Connect the appliance to a power supply only of the type described in the operating instructions or marked on the appliance.
11. Grounding or polarisation. Do not defeat the precautions taken to ground or polarise the supply to the appliance.
12. 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.
13. 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.
14. Cleaning. Disconnect the unit from the power supply before cleaning. Remove dust and fingerprints with a soft, dry cloth. Avoid using domestic cleaning products on the unit.
15. Power lines. An outdoor antenna should be located away from power lines.
16. Outdoor antenna grounding. If an outdoor antenna is connected to the tuner/receiver 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.
17. Non-use periods. Unplug the power cord from the outlet if the product will be unused for a long period of time.
18. Objects and liquid entry. Do not let objects or liquids fall into the product. Do not expose the product to dripping or splashing. Do not place a vessel containing liquid on top of the product.
19. 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.
20. Servicing. Don't attempt to service the product beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

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.

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.

Fuse ratings. See specifications section.

Mains voltage operating range. See specifications section.

Warning!! The power supply may be destroyed if a unit designed for 115V is connected to 230V.

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	1998	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 radiocommunications. 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.

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Part no: PACK 326

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**Listening to your new
Linn hi-fi should be the
nearest you can get to
being at a superb live
performance.**

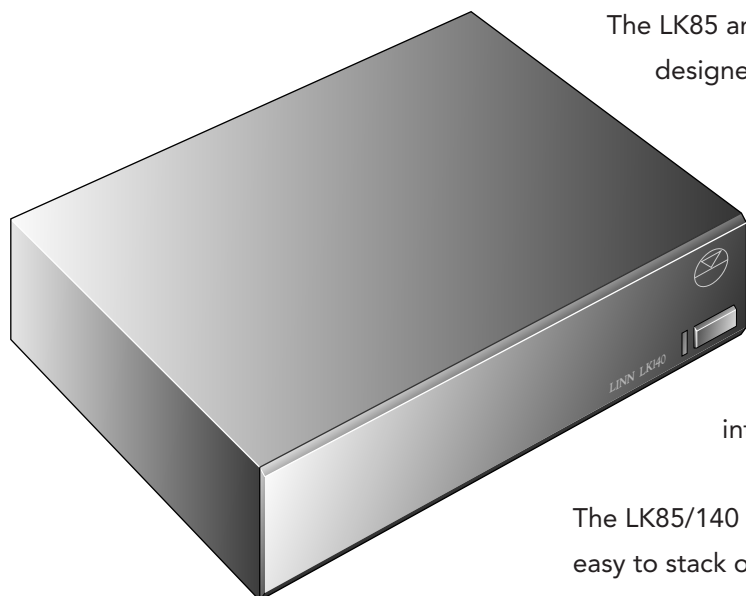
Introduction

We believe that good music is not a luxury, but a necessity, and we at Linn have dedicated the better part of two decades to making sure that our customers are given the best possible experience of the music they love. In other words, we take music seriously, which is why we dedicate ourselves to building hi-fi which sets the highest possible standards in bringing music to life within your home.

Listening to your new Linn hi-fi system should be the nearest you can get to being at a superb live performance. By making the LK85/140 Stereo Power Amplifier the building block of your Linn hi-fi system, you bring that superb live performance into your home. Once up and running the amplifier will bring you an unrivalled listening experience that we know you'll enjoy again and again.

To do that, you need to know exactly how to get the best out of your Linn amplifier, and that is what this manual is all about. In the next few pages you will find out everything you need to know about how to set up the LK85/140, and how to use it to get the best possible results.

The LK85/140 and music



The LK85 and LK140 are rugged high output amplifiers designed for ease of use and purity of sound.

You can build exactly the system you want, using one or more LK85/140 amplifiers. The LK85 gives 85W per channel into 4Ω, or 62W per channel into 8Ω, and so is ideal for most average-sized rooms. Alternatively, additional power is available from the LK140, which gives 140W per channel into 4Ω, or 95W per channel into 8Ω.

The LK85/140 comes in a durable compact case built to last, and easy to stack on other Linn products. The amplifier has been designed to power up automatically when it detects the presence of an audio signal and power down into standby mode when there is no signal. This enables it to be left on with minimum power consumption. An indicator light on the front panel remains red when the amplifier is in standby and green when it is powered up, telling you at a glance the operational status of the amplifier.

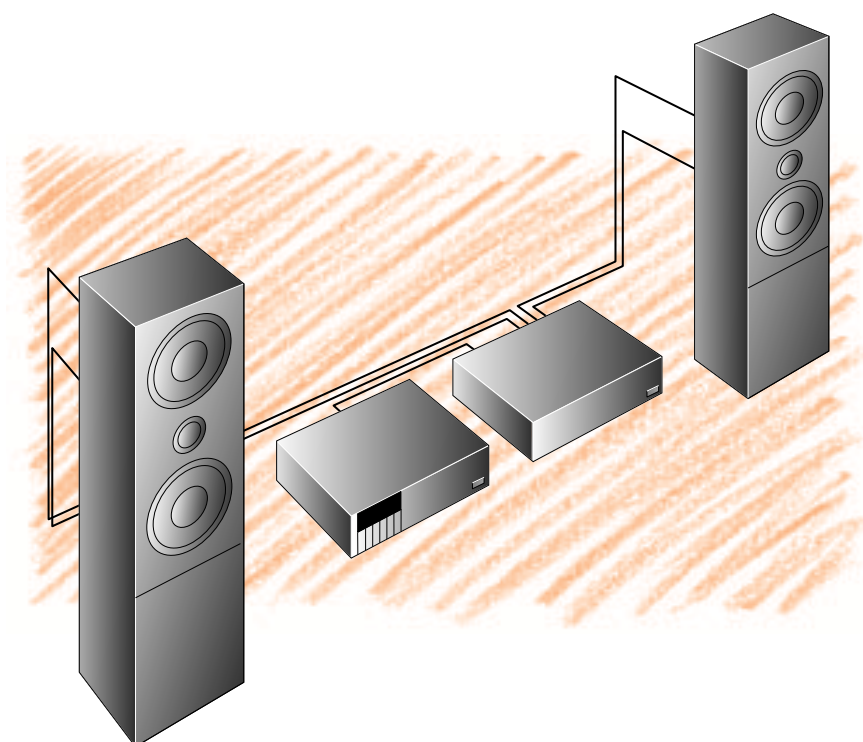
If the LK85/140 is not going to be used for a long period of time, we recommend that it is switched off using the front panel mains switch.

The LK85/140 comes with full protection against power overload and overheating, automatically shutting down to prevent damage to itself or other Linn equipment, and powering back up when it is safe to do so.

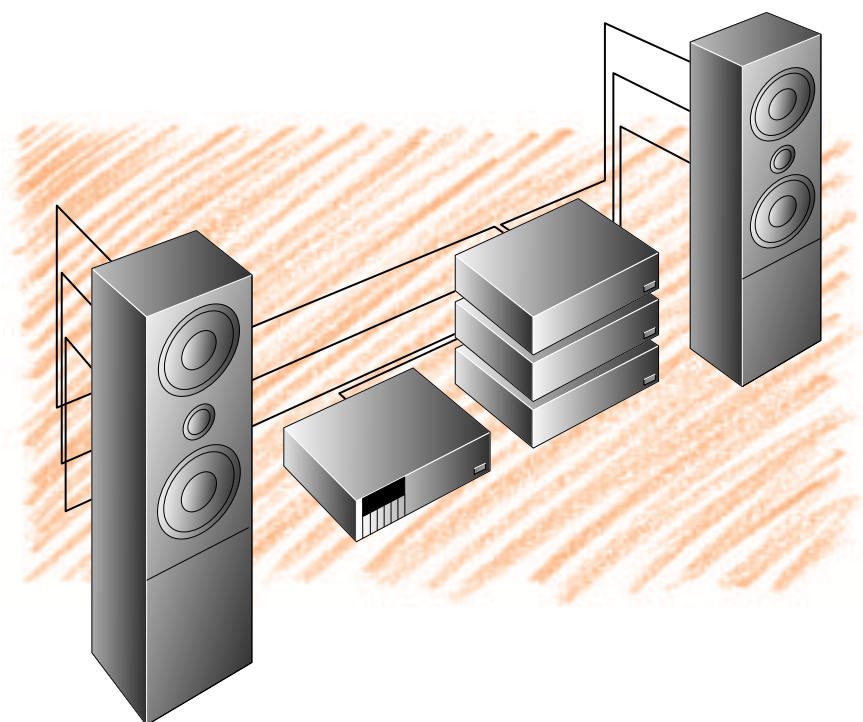
The LK85/140 is direct-coupled and servo-controlled to produce the clearest sound and the toroidal transformer is fully shielded to prevent hum when the amplifier is stacked with other products.

The LK85/140 provides two input sockets to make it easy to daisy chain multi-amplifier systems, allowing you to boost the output power of your system, or take advantage of bi-amping and tri-amping.

Loudspeakers can be bi-wired to the LK85/140 by the use of the two loudspeaker sockets to obtain even higher sound quality. Bi-wiring involves making separate connections to the treble and midrange/bass units on a loudspeaker. Keeping the treble and midrange/bass signals separate improves the performance of the loudspeakers by reducing the coupling between the signals.



For more performance, you can use two or three LK85/140s to bi-amp or tri-amp to the loudspeakers, each amplifier driving the bass, midrange, and treble signals separately.



When bi-amping or tri-amping the highest possible performance can be obtained by removing the passive crossover units from the loudspeaker and fitting active crossover modules to the LK85/140 to accurately divide the signal into the appropriate frequency bands. This is known as active playback.

The LK85/140 is designed to be easy to convert to active playback. A complete range of stereo active crossover modules is available for all current Linn loudspeakers. Your retailer can fit these and make the necessary changes to your loudspeakers to transform your system to fully active.

Setting up the LK85/140

This chapter explains how to unpack your Linn LK85/140 Stereo Power Amplifier, and how to install it with your other hi-fi components.

Unpacking

Before connecting the LK85/140 to the mains supply, you should check the following:

- that everything is in the box
- that the correct voltage has been selected
- that the correct fuse has been fitted.

Accessories

The LK85/140 comes in a box with the following accessories:

- a mains lead
- two phono to phono leads
- two fuses for your local voltage (as defined on page 6)
- two red speaker plugs
- two black speaker plugs
- this manual.

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

Input

The LK85 and LK140 are factory-set for your local voltage, and fitted with the appropriate fuse.

Replacing the fuse

To replace the fuse, first identify the correct fuse for your local voltage. This should be:

- 3.15A anti-surge for 230V
- 6.3A anti-surge for 115V
- 6.3A anti-surge for 100V (Japanese version).

Pull open the fuse drawer at the bottom of the mains inlet, insert the fuse in the rear compartment, and close the drawer.

Earthing the LK85/140

The earthed moulded mains lead supplied must always be used with the LK85/140. Never use an unearthed plug or adaptor.

Positioning

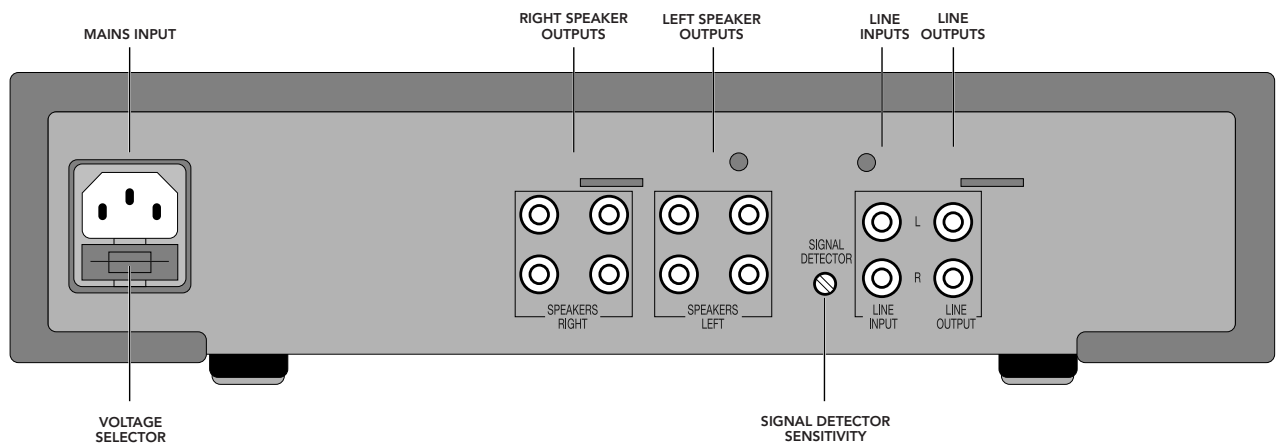
You can position the LK85/140 almost anywhere you find convenient, but the following considerations may be useful.

The LK85/140 is a powerful amplifier and can generate several hundred Watts of heat under extreme use. In cases of overloading or overheating the amplifier will automatically shut down. No damage will result if it does so.

Always ensure there is plenty of air circulation around the amplifier, especially if stacked with other Linn products or stored in a cupboard. If your amplifier does shut down, try increasing the ventilation around the unit and, if necessary, move it to a more suitable location if it keeps shutting down.

Connecting

The following diagram shows the connections for the rear panel of the LK85/140:



Connecting the mains supply

Connect the LK85/140 to a mains supply using the mains cord supplied.

Note that the LK85/140 should be switched off before connecting or disconnecting the plug on the rear panel, or you may generate surges which could damage other components in your hi-fi system.

Connecting the audio input

The LK85/140 provides two audio input sockets, to allow amplifiers to be daisy-chained. Connect the phono cable from your source. This may be a pre-amplifier, multi-room system, or some similar hi-fi component.

Connecting the speakers

The LK85/140 comes equipped with two pairs of speaker output sockets to allow bi-wiring. Alternatively, auxiliary speakers may be connected.

Operation

To turn on the LK85/140 amplifier, press the power switch on the front panel.

Signal detector sensitivity

The LK85/140 uses signal sense circuitry to detect the presence of an audio input signal. As soon as the amplifier detects the presence of an audio signal, it will power up and a small indicator light adjacent to the power switch will light green. Whenever an audio signal is removed, the amplifier powers down to standby mode after a short delay until it again detects an audio signal. The small indicator light will turn red when the amplifier switches to standby mode.

Adjusting the signal detector

The LK85/140 is shipped with signal sense circuitry set to maximum sensitivity for normal operation. However, if you find that interference or other audio noises in your system cause the amplifier to power up, you may wish to decrease the sensitivity of the signal detector. To do this turn the signal detector sensitivity control on the back panel anticlockwise towards the minimum position.

By-passing the signal detector

Depending on its configuration, the LK85/140 will remain on standby for 10 or 20 minutes after an input signal has been removed. You can override this facility by fitting an internal link which forces the amplifier to remain on as long as the mains power is connected. Please consult your Linn retailer for further details.

Protection

Like all Linn products, the LK85/140 is a rugged amplifier, designed and built to withstand most eventualities. To ensure safe operation, the amplifier automatically shuts down in conditions of extreme heat or power overloading.

If the amplifier overheats it will power down and the indicator light on the front panel will turn red until the temperature has fallen to safe operating levels, usually after about 30 seconds. The amplifier has been designed to withstand temperatures of up to 70°C.

If the amplifier continually overheats try increasing the ventilation around the unit. Refer to the section *Positioning*, page 6.

Consult your Linn retailer if any problems persist.

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.

In the UK and other markets, extended warranty is offered to customers who register their purchase with Linn. A registration card can be obtained from your Linn retailer and should be stamped by them. This will also enable you to receive the Linn RECORD newsletter and details of hi-fi and music available from Linn.

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

Specifications

Output power (230 Vac mains)	62W per channel into 8 Ω , 85W per channel into 4 Ω (LK85) 95W per channel into 8 Ω , 140W per channel into 4 Ω (LK140)
Input signal for maximum output	685mV rms (LK85) 870mV rms (LK140)
Maximum output voltage	18.5V rms (LK85) 23.5V rms (LK140)
Gain	x27 (28.6dB)
Input impedance	10K Ω
Frequency response	(-3dB) 10Hz–70kHz
Output offset	<5mV
Signal sense threshold	>150 μ V rms
Standby power consumption	<5W
Maximum input power	350W (LK85) 570W (LK140)
Fuse rating	115V: T6.3A 230V: T3.15A 100V model: T6.3A
Safety approvals	EN60065 (Europe), UL6500 (USA), CSA-E65-94 (Canada) EMC approval to European standards
Size	320mm x 325mm x 80mm (12.6" x 12.8" x 3.1") (W x D x H)
Weight	7Kg (15.4lb)

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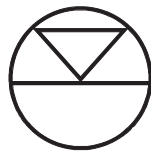
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LK85/140

STEREO POWER AMPLIFIER