

LINN KELTIK
&
KELTIK AKTIV
OWNERS MANUAL



MUSIC is very important for people. It stimulates the imagination, helps them relax, can change their mood, and of course provides entertainment and pleasure.

A good hi-fi works well enough to deliver these benefits. It also helps you appreciate music you never thought you would.

At Linn we devote our energy to improving standards of music reproduction, because we know that the better the sound the more you'll enjoy music at home.

The addition of any Linn component will improve the sound quality of your system. Linn has a policy of continuously improving, its equipment allowing customers to retro-fit most product upgrades.

INTRODUCTION The KELTIK AKTIV playback system is designed to provide outstanding musical performance. The KELTIK AKTIV crossover maximises the information sent to the KELTIK loudspeaker by accurate division of the signal from the pre-amplifier to the separate power amplifiers. The KELTIK loudspeaker uses the unique patented ISOBARIK bass driver principle, which gives accurate, musical bass response.

Your hi-fi system performs at its best when used with the highest quality source. The better the sound from your turntable, tuner or CD player the better the sound you will hear from your KELTIK AKTIV playback system.



ACTIVE PLAYBACK With a passive loudspeaker, the signal from the amplifier is divided 'into three frequency bands. (bass, mid and treble) by a passive filter built into the loudspeaker cabinet. This is powered by the signal itself, absorbing some of the amplifier power, and preventing the amplifier from accurately controlling the loudspeaker.

Although the highest quality components are used in Linn loudspeakers, there are several fundamental limits to the performance of a passive loudspeaker system.

An active crossover frees the loudspeaker system from these limits. It accurately divides the signal from the preamplifier into three frequency bands, and feeds each to its own power amplifier. The loudspeaker drive units are directly controlled by the power amplifiers. The electronic circuitry of the active crossover makes it possible to control the drive units in the KELTIK precisely and over an extended frequency range.

The combination of active crossover, high power amplifiers and advanced loudspeaker drive units in the KELTIK system results in an extremely accurate musical system which is capable of playing music at realistic sound levels.

The KELTIK AKTIV has been extensively optimised to work with the KELTIK loudspeaker. It will not work with any other loudspeaker. We strongly recommend that it be used with Linn power amplifiers.

INSTALLATION Unpack the KELTIK AKTIV and retain the packing for future transportation.

CAUTION Take extreme care when handling the Keltik speakers – they each weigh 51KG.

Your Linn Dealer is responsible for ensuring correct installation of the KABER AKTIV system. He is best placed to provide information, address your queries and resolve any problems. If this is not possible, please contact the Linn Products factory in Scotland, or your national distributor. For your information some tips regarding positioning, electrical supplies and interconnections are listed below.

CONTENTS

KELTIK loudspeakers with fitted stands	1 Pair Phono to Phono leads
KELTIK AKTIV Crossover Unit	Spare Fuse
Mains Lead	Set of Labels
Owner Manual and registration card	Resistor Pack (for installation use only)
3 Pairs Phono to Cannon leads	

WARNING Use the earth moulded mains lead supplied. Never use an unearthed plug or adapter.

WARNING **THIS APPLIANCE MUST BE EARTHED**

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire coloured green-and-yellow must be connected to the terminal in the plug, which is marked with the letter E or by the earth symbol or coloured green or green-and-yellow.

The wire coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

ELECTRICAL SUPPLIES

WARNING Under no circumstances wire multiple cables into one plug. If there are not enough mains outlets, use high quality approved mains extension units. If possible, feed each power amplifier directly from the mains. If not, use one extension for the pre-amplifier, the crossover and the sources, and another for the power amplifiers.

If all the power amplifiers are run off an extension from one mains outlet, it is good practice to switch the power amplifiers on one at a time, to avoid the enormous surge current which would occur if they were all switched on at once.

POSITIONING

KELTIK speakers are designed to perform best when placed close to a wall. Ideally the rear of the loudspeaker should be between 4" and 12" (10cm and 30cm) from the wall and at least 18" (45cm) from any corner. It is important that they are equally spaced from the back wall.

The distance between each loudspeaker and your normal listening position should form part of an equilateral triangle. They also benefit from being angled inwards slightly by 5 to 10 degrees.

These are general guidelines and a little experimentation with position and angle can optimise results for a particular listening room.

CAUTION: The spikes are sharp and you should take care when moving the speakers.

Once you have determined the final position, level each KELTIK, eliminating any rocking movement by adjusting the appropriate spike/s until complete stability is achieved. Tighten all locknuts, taking care not to alter the positioning of the spikes.

In general, the power amplifiers will have to be positioned at least one Metre away from the pre-amplifier or turntable.

The KELTIK AKTIV crossover may be positioned by the pre-amplifier or near (but not on top of) the power amplifiers.

The Kairn, LK1 and the KELTIK AKTIV can drive up to 20 metres of Linn interconnect cable, so that the power amplifiers and crossovers may be sited near the loudspeakers if desired.

Wherever the power amplifiers are situated, it is essential to ensure adequate ventilation. Do not expose to strong direct, or radiated heat.

SIGNAL INTERCONNECTIONS

Label all the cables at installation to avoid errors. Double check all connections, especially loudspeaker phase, before powering up for the first time.

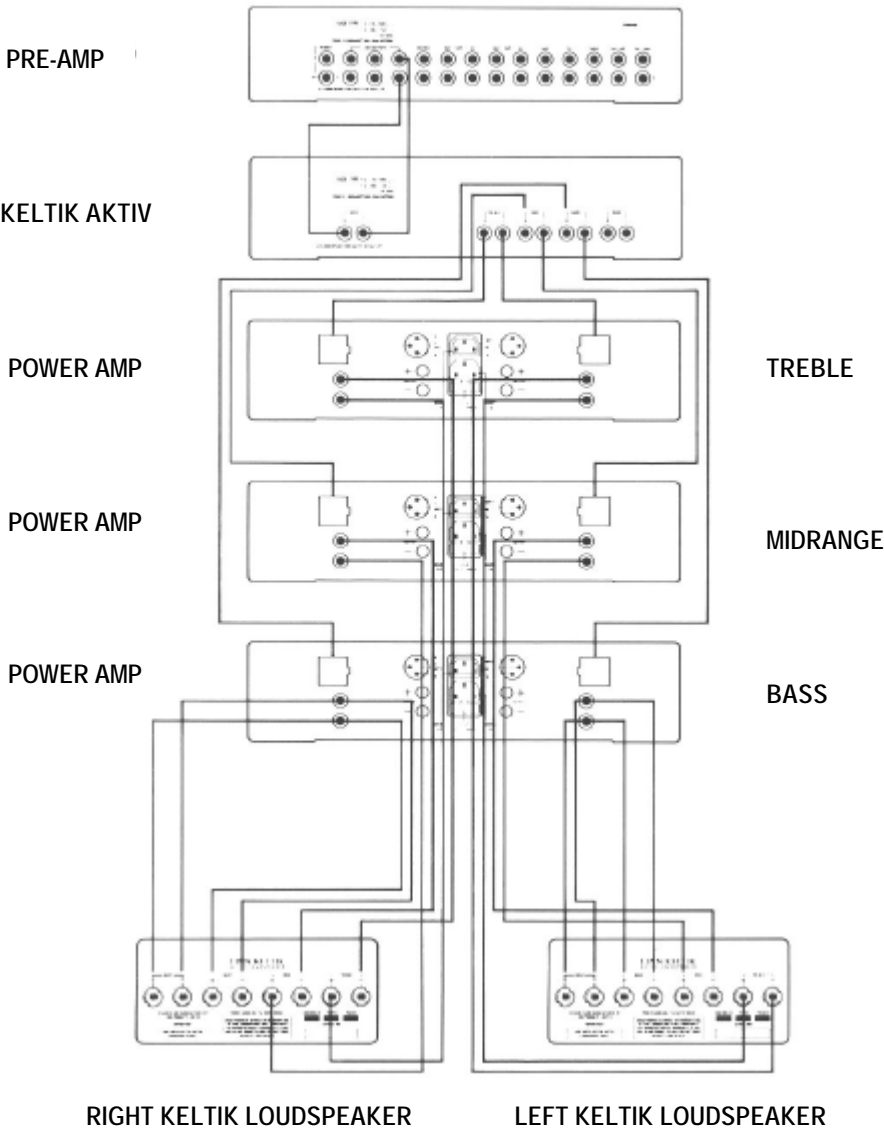
NOTE When using a Linn pre-amplifier, connect the positive output of the power amplifier to the negative loudspeaker terminal, and the negative output to the positive loudspeaker terminal, as Linn pre-amplifiers invert the signal phase to their main output. It is best to connect positive to positive, negative to negative on the speaker outputs of the power amplifiers and connect positive to negative, negative to positive on the backs of the loudspeakers. It is generally easier to see the backs of the loudspeakers to check the installation.

The leads provided allow for the KELTIK AKTIV to be sited a short distance from the pre-amplifier and power amplifiers, if this does not suit your installation, your dealer can supply the necessary length of cable.

NOTE When using Linn LK280s in the KELTIK system, the bass amplifier protection trip should be modified by your dealer.

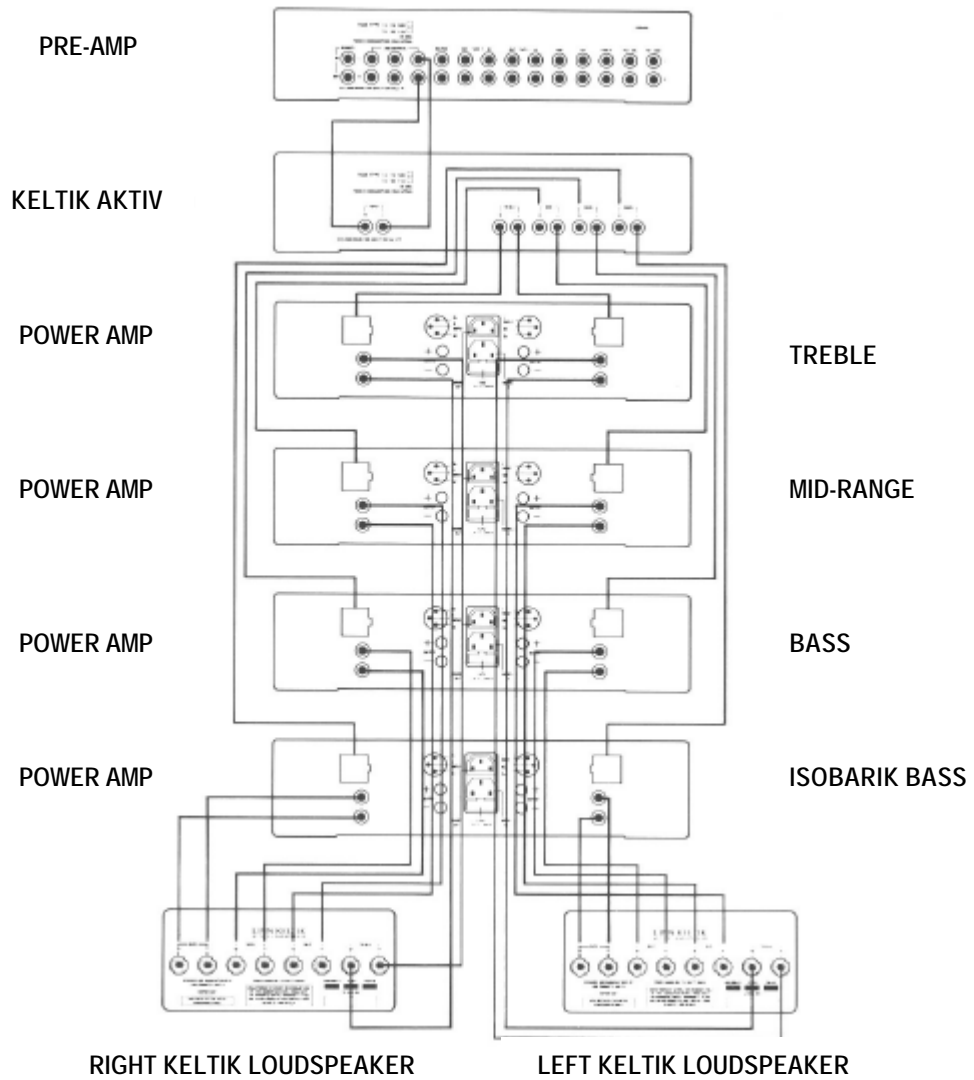
INTERCONNECTIONS

Note – Invert the phase between the power amplifiers and the speakers



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LEVEL ADJUSTMENTS

The KELTIK AKTIV system is pre-set at the factory for an accurate on-axis frequency response and this will suit most environments. However, the bass and/or treble may require adjustment to suit some rooms. A resistor pack is provided with the product to allow the dealer to carry out any necessary adjustments at installation. ON NO ACCOUNT SHOULD THIS BE ATTEMPTED BY THE USER.

OPERATION The KELTIK AKTIV has no operational controls, apart from the on/off switch. It will be correctly set to suit your listening environment by the Linn dealer on installation, and needs no further adjustment. If you move the system to another room, or move house, your Linn dealer will be pleased to advise on transfer and set it up in the new position.

LOUDSPEAKER GRILLE The KELTIK loudspeaker grille is unusual in that it has no frame and fits directly onto the front baffle. This avoids the problem of rattling and diffraction, which a frame can introduce.

Fitting the grille is time consuming, so unless you want to use the speaker without the grille, it is best to leave it on. If you have to refit the grille, make sure you locate the knotted part of the elastic in the slot below the bass driver, before fitting the top part of the grille.

The grille can be removed by gripping the top right corner, pulling it so that the elastic clears the baffle, then gradually removing the rest.

GENERAL SYSTEM INSTALLATION

TURNTABLES For best results a turntable should be placed on a small, light, rigid table, or alternatively wall mounted on a light, rigid shelf.

POWER SUPPLIES Take care not to position too close to signal leads, turntables or pre-amplifier.

AMPLIFIERS Pre and power amplifiers may hum if positioned too close together. For minimum hum experiment by moving the components with the system at full volume but not playing music (although it is best to turn the volume down whilst actually moving the components).

LOUDSPEAKERS Loudspeakers should be positioned correctly. They should be mounted on rigid stands and not subject to any rocking movement. All Linn speakers except NEXUS and HELIX are designed to be placed very close to the wall.

CLEAN CONTACTS It is important that the electrical contacts in a hi-fi system are kept mechanically sound and clean. Occasionally unplugging and replugging all the connectors will effectively clean contacts,

WARNING This should be carried out after the mains supply has been switched off.

INTERCONNECT LEADS Correct cables should be used. We recommend good quality copper cable for interconnect leads and advise 4mm² multicore copper cable, such as Linn K20 for speaker leads.

Your Linn dealer can supply high quality interconnects for linking all your hi-fi components.

MAINTENANCE

The KELTIK AKTIV crossover and KELTIK loudspeaker normally need no maintenance. On no account should you try to remove any of the drive units. Should any problems arise, please contact your supplier.

Problems with the loudspeakers such as blown drive units can easily be solved by your dealer without removing the loudspeakers from your home. Should it become necessary to transport the loudspeakers, please use the original packing to reduce the risk of damage. If you have lost the original packing, your dealer can supply you with a replacement set.

CLEANING Dust or finger marks can be removed using a soft slightly damp cloth. Avoid the use of domestic cleaning fluids.

WARNING Disconnect the mains supply from the KELTIK AKTIV crossover first.

FUSE If the fuse in the mains inlet connector of the crossover should blow, replace it with the correct type only. To replace the fuse, first switch off and disconnect the mains lead. Open the door on the mains inlet connector by inserting a small flat-blade screwdriver in the slot at the top and levering it open. **DO NOT REMOVE OR TURN THE VOLTAGE SELECTOR BARREL.** Pull out the fuse-holder and replace the blown fuse with the spare fuse provided. Replace the fuse-holder, with the arrow pointing right, and snap the door shut

If the new fuse blows, there may be a fault and the complete unit should be returned to your Linn dealer.

GUARANTEE & SERVICE

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

In addition to any statutory rights the customer may have, we undertake to replace any parts that have failed due to faulty manufacture. To help us please ask your 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 retailer and should be stamped by him. This will also enable you to receive the Linn RECORD Newsletter and details of music available from Linn.

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

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

IMPORTANT

Please keep a copy of the sales receipt to establish 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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ADJUST RESISTOR VALUES

Treble adjustment

Resistor value	Adjustment level (dB)
680 ohm	+ 6.0
750 ohm	+ 5.5
820 ohm	+ 5.0
1 Kohm	+ 4.5
1.1 Kohm	+ 4.0
1.3 Kohm	+ 3.5
1.6 Kohm	+ 3.0
2 Kohm	+ 2.5
2.7 Kohm	+ 2.0
3.6 Kohm	+ 1.5
6.2 Kohm	+ 1.0
15 Kohm	+ 0.5
No resistor	0

Treble Factory Setting: - 3dB (no resistor)

Bass adjustment

Resistor value	Adjustment level (dB)
68 ohm	+ 6
82 ohm	+ 5
91 ohm	+ 4
120 ohm	+ 3
150 ohm	+ 2
180 ohm	+ 1
220ohm	0
270 ohm	- 1
360 ohm	- 2
560 ohm	- 3
910 ohm	- 4
2.2 Kohm	- 5
No resistor	- 6

Bass Factory Setting: 0dB (220ohm resistor)

WARNING

For use by Linn Dealers only