

LINN

SONDEK CD12
OWNERS 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 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. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
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. Unplug this apparatus during lightning storms or when unused for long periods 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 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.

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 consent of the publisher.

Printed in the United Kingdom.

Sondek is a trademark of Linn Products Limited.

HDCC and High Definition Compatible Digital are registered
trademarks of Pacific Microsonics, Inc., Patent No. 5,479168.

ST is a registered trademark of AT&T.

TOSLINK is a trademark of Toshiba Corporation.

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 194

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

Contents

Introduction	2	Programming the Sondek CD12	16
The Linn philosophy	2	Programming a disc	16
Using the Sondek CD12	4	Programming a selection of tracks (Add)	17
Switching on	4	Excluding tracks (Del)	19
Playing a disc	4	Random play (Rand)	20
Selecting tracks	6	Repeating a program	20
Using the Sondek CD12 with the Linn		Turning a program on or off	21
Hi-Fi Personal Handset	7	Editing a program	22
Switching on	7	User options	24
Playing a disc	8	User option definitions	26
Playing, pausing, and stopping a disc	9	Technical specifications	29
Choosing what is displayed	10	Index	32
Playing from a specific track	11		
Searching for a position on the disc	12		
Selecting a precise time position on the disc ...	13		
Playing a disc or selection repeatedly	14		

Introduction

The Linn philosophy

The Sondek tradition

25 years ago Linn developed the Linn Sondek LP12, a precision turntable for 12" long-playing records. The design philosophy of the LP12 was to include nothing in the product that did not directly contribute towards achieving the best possible sound. Each component was engineered so that it performed its job to the highest possible specification. The result established the reputation of Linn Hi-Fi, and became the standard by which all other turntables were judged.

The Sondek CD12

Now 25 years after the design of the original Linn Sondek LP12, the same philosophy has been applied to create the ultimate CD player, and the result is the Linn Sondek CD12. Each component has been designed without compromise to perform its task to the highest possible performance, and any features that do not directly contribute to the quality of the sound have been eliminated from the design.

The Linn Sondek CD12 has been massively engineered to ensure that the data retrieval systems within the unit are allowed to operate at their optimum level. Each electronic subsystem within the Linn CD Engine is thoroughly isolated from the others to preclude any loss of audio performance.

The CD12 includes extensive use of advanced digital circuit techniques to ensure that the critical timing necessary for high-quality music reproduction is maintained.

The CD12 replay chain is completed with a very carefully implemented analogue audio stage to ensure faithful reproduction of the high dynamic range available from CD.

Touch control

To keep the appearance of the CD12 as elegant as possible the front panel controls have been eliminated. All the most important operations of inserting, playing, and stopping a disc are performed simply by gently pressing on the disc drawer.

If you prefer to select tracks individually from a CD, or program a specific selection, the Linn Hi-Fi Personal Handset supplied with the Sondek CD12 provides a flexible range of additional options.

Once you have programmed a personal selection of tracks on a particular CD, the Linn Sondek CD12 will recognise the disc when it is inserted at a later time, and play your original selection. The Sondek CD12 can remember information for up to 50 CDs in this way, allowing you to personalise your music collection in a way that was not previously possible.

Digital output

The Linn Sondek CD12 provides a digital output on the back panel. By default this is switched off, but it can be switched on if required by pressing and holding the **0** number key. The **DIGITAL** indicator on the front panel is lit when the output is on.

Using the Sondek CD12

This chapter explains how to play CDs using the touch control feature of the Sondek CD12 front panel. For information about using the CD12 in conjunction with the Linn Hi-Fi Personal Handset refer to *Using the Sondek CD12 with the Linn Hi-Fi Personal Handset*, page 7.

Switching on

To switch on the CD player

- Switch on the CD player using the switch on the back panel.

The display will show:



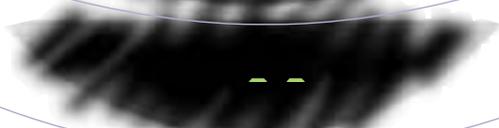
Cd 12

It will then inform you that no disc has been inserted:



noCd

After a short delay the display shows:



--

Playing a disc

To insert the disc

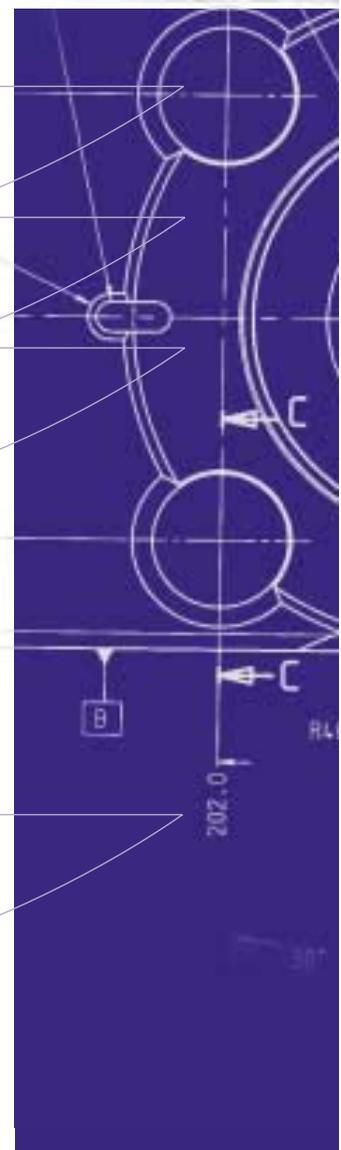
- Press gently on the drawer until you hear the click of the drawer interlock.

The display shows:



OPEN

- Release the drawer to allow it to open.
- Place the CD in the drawer with the label uppermost.



To close the drawer

- Press gently on the front of the drawer.

The display will briefly show:



The disc will then start playing.

The display shows the number of the first track and index:



If the track is HDCD encoded the **HDCD** indicator will be lit.

If you prefer not to play discs as soon as they are inserted you can turn the auto play feature off; see User options, page 24.

To stop the disc playing

- Press once on the drawer.

The display will change to show the number of tracks on the disc:



- Press again on the drawer to start the disc playing again.

To remove the disc

- Press and hold the drawer until you hear the click of the drawer interlock.

You can do this whether or not a disc is playing.

The drawer will then open, and you can remove the disc.

- Press again on the drawer to close it.

If you leave the drawer open for more than two minutes it will close automatically to protect the disc from dust.

Selecting tracks

You can set up the CD12 so that you can also select tracks by pressing the drawer; see *User options*, page 24. In this case:

To play the disc and select tracks

- Press once on the drawer to start playing.
- Press again on the drawer to skip to the next track.
- Press and hold the drawer to stop the disc playing.

To remove the disc

When the disc is stopped:

- Press and hold the drawer until you hear the click of the drawer interlock.

The display shows:



OPEN



SECTION C-C
HOLE DETAIL AT N. SCALE 2

RADIUS AT 'A' GENERATED BY CIRCLES PASSING THRO' POINTS ON CONTROL LINE AT TR. A.

35.0 HOLE

10.0 HOLE WINDOW APERTURE.

4.75

2.0

BOSS FOR EDGES AND BOTH SIDES FRONT AND BACK.

PART SECTION C-C
SCALE 2

FILE	DESCRIPTION
F	Ø 5.0 BOSS, DRILLED Ø 2.5 X 8
G	Ø 7.1 BOSS, DRILLED Ø 3.5 X 1
H	Ø 4.1 HOLE, 10.0 DEEP CSK 90°
SEE SECTION C-C.	
	Ø 7.5 HOLE X R.O., CSK 90° X 0.
	Ø 7.5 HOLE X R.O., CSK 90° X 0.

Using the Sondek CD12 with the Linn Hi-Fi Personal Handset

This chapter explains how to take full advantage of all the features of the Sondek CD12 using the Linn Hi-Fi Personal Handset.

You can use the Hi-Fi Personal Handset to control the other Linn products in your system. It can also be programmed to learn the commands of other handsets, allowing you to control any other equipment you own, such as a television or video recorder. For more information about using the Hi-Fi Personal Handset with other equipment refer to the *Linn Hi-Fi Personal Handset Owners Manual*.

Switching on

To switch on the CD player

- Switch on the CD player using the switch on the back panel.

The display will show:



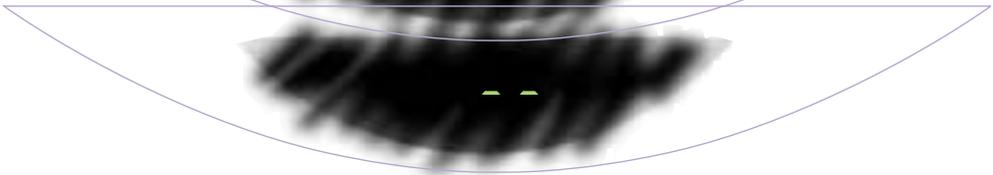
Cd 12

It will then inform you that no disc has been inserted:



noCd

After a short delay the display shows:



--

Playing a disc

To insert the disc

- Press **OPEN**.

The display will show:



OPEN

- Place the CD in the drawer with the label uppermost.

To close the drawer and play the disc

- Press **OPEN** or **PLAY**.

The display shows:



LOAD

The drawer will then close and the disc will start playing.

If you prefer not to play the disc as soon as the drawer is closed you can turn the autoplay feature off: see *User options*, page 24.

To close the drawer without playing the disc

- Press **STOP** or **PAUSE**.

If you pressed **STOP** the display briefly shows the total playing time of the disc.

For example:



TOTAL
73.07

followed by the number of tracks on the disc:



TRACK
17

To remove the disc

- Press **OPEN**.

The display shows:

You can do this whether or not a disc is playing.

The drawer will then open, and you can remove the disc.

- Press **OPEN** again to close the drawer.

If you leave the drawer open for more than two minutes it will close automatically to protect the disc from dust.



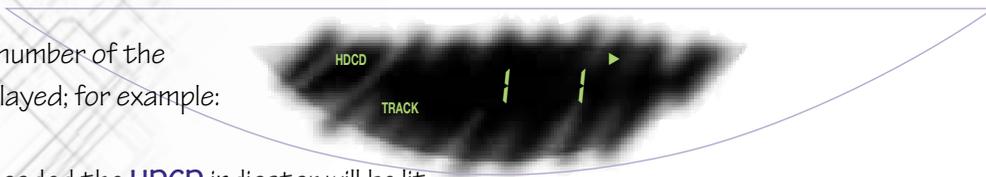
Playing, pausing, and stopping a disc

To play the disc

- Press **PLAY**.

The display shows the number of the track and index being played; for example:

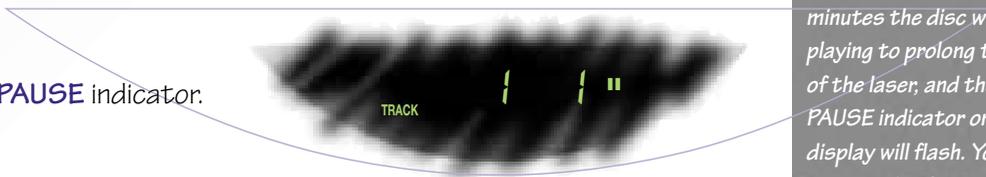
If the track is HDCD encoded the **HDCD** indicator will be lit.



To pause the disc

- Press **PAUSE**.

The display shows the **PAUSE** indicator.



If you leave the CD player paused for more than five minutes the disc will stop playing to prolong the life of the laser, and the PAUSE indicator on the display will flash. You can resume play from the last position by pressing PLAY.

To continue playing

- Press **PLAY**.

To stop the disc

- Press **STOP**.

The display shows the total number of tracks on the disc; for example:



Choosing what is displayed

To choose what information is displayed

- Press **DISPLAY**.

While a disc is playing this steps between the following options:

<i>Option</i>	<i>Description</i>	<i>Example</i>
TRACK	Track and index number.	
TRACK TIME	Time from the start of the current track.	
REMAIN TRACK TIME	Time remaining for the current track.	
TOTAL TIME	Time from the start of the disc.	
TOTAL REMAIN TIME	Time remaining for the disc.	

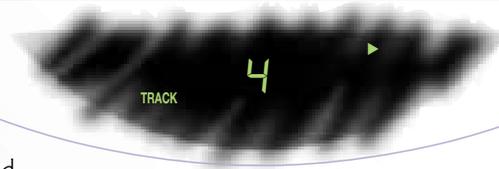
When the disc is stopped you can switch between TRACK and TOTAL TIME. The display digits are blank when the other options are selected.

Playing from a specific track

To step between the tracks

- Press ►► or ◀◀, or hold down the key to step rapidly through the tracks.

The display shows the currently selected track; for example:



If you select a track while the CD is stopped the track will start playing automatically.

To select a track number directly

Alternatively you can select a track using the number keys on the Hi-Fi Personal Handset.

For example, to choose tracks 1 to 9:

- Press the corresponding number key.

To choose a track number greater than 9

- Press and hold the key for the first digit.

The display shows, for example:



- Then press the second digit.



If you enter a track number that doesn't exist, for example 25, the selection is ignored and the display briefly shows **E**:



Searching for a position on the disc

The Sondek CD12 allows you to choose a precise position on a disc with an accuracy of one second, which is useful for accurately selecting a specific cue point on the disc, or for locating a particular segment of music.

To search forwards or backwards

- Press ►► or ◀◀.

Each press steps the disc position by 1 second, which is useful for selecting a specific position while the disc is paused.

Alternatively, holding down the button gradually accelerates the search speed. If the disc is paused the search speed increases to approximately 100 times normal speed, or 1½ minutes of playing time per second. When the disc is playing, the speed is limited to approximately 20 times normal speed to allow the music to be heard during the search.

If you were displaying the track number before you started searching, the display will automatically change to show the track time.

For example:

TRACK
TIME

2.38

Otherwise the currently selected time display is updated to show the new disc position as you search.

If you search while the disc is stopped it will automatically be paused before searching.

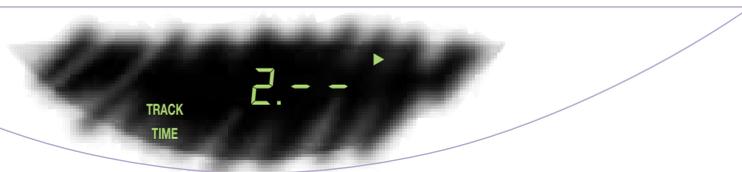
If you search past the beginning or end of a track the display briefly shows the number of the next track.

Selecting a precise time position on the disc

You can set up the CD12 so that you can use the number keys on the Hi-Fi Personal Handset to select a precise time position on the disc; see *User options*, page 24.

To enter a time position

- Select the appropriate display option; for example, **TRACK TIME**.
- Press the number key for the first digit of the minutes. The display shows dashes for the other digits you need to enter; for example:
- Enter the remaining digits of the minutes and seconds.



To correct a mistake

Before all digits have been entered:

- Press **◀◀** to clear the last digit you entered.

If you enter an invalid time it will be changed to the nearest valid time.

Playing a disc or selection repeatedly

The Sondek CD12 allows you to play the entire disc repeatedly, or to repeat a selection between two points on a disc.

The repeat selection is remembered even when you stop the disc, so that the same section is repeated when you next play the disc .

The repeat selection is erased when you remove the disc.

To repeat the entire disc

If the disc is stopped:

- Press **REPEAT**.

The disc will play automatically and the **REPEAT** indicator will be lit.

If the disc is playing or paused:

- Press and hold **REPEAT** until the display shows:



There will be a short delay before the disc display appears, and the **REPEAT** indicator will be lit.

To repeat a section of the disc (referred to as A-B repeat)

You can choose the section you want to repeat with the disc paused or playing.

- Choose the beginning of the section you want to repeat, using the **▶▶** and **◀◀** or **▶▶** and **◀◀** keys.

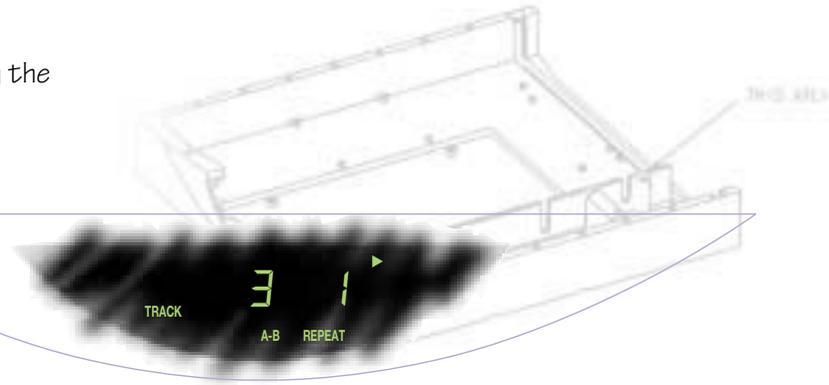
- Press **REPEAT** briefly to set the starting point.

The **A-B** indicator flashes.

- Then choose the end of the section using the **▶▶** and **◀◀** or **▶▶** and **◀◀** keys.
- Press **REPEAT** again to select the end point.

The **A-B** indicator is lit continuously:

The section you have selected will now play repeatedly.



To cancel a repeat mode

- Press **REPEAT** again.

Programming the Sondek CD12

This chapter describes the more advanced capabilities of the Sondek CD12 that allow you to store a program for each disc in your music collection. For example, you can choose to play a specific selection of tracks in a specific order, or omit certain tracks when the disc is played.

Once you have created a program for a disc, the Sondek CD12 remembers the program and selects it when you next play the same disc. It can remember your programmed selection for up to 50 of your most recently played discs.

Programming a disc

If you have not yet created a program for a disc, the following programming options are available:

<i>Option</i>	<i>Description</i>
Add	Programs a sequence of tracks to be played in any order, including repetitions of a track.
Del	Excludes tracks from the normal playing sequence.
Rand	Plays the tracks in a random order.

For more information about each mode see the following sections.

While you are entering or editing a program you can press **PLAY**, **PAUSE**, or **STOP** to exit without making any changes.

Once you have programmed a selection for a disc, the program is automatically chosen if you insert the disc again at a later date. If you prefer you can turn this feature off, so that a program is only used if you select it. See User options, page 24.



Programming a selection of tracks (Add)

In this program mode you can choose to play a specific selection of tracks in a specific order.

To create an Add program

- Press and hold **DISPLAY** until the display shows:



PROG

- Press **INDEX** ► or ◀ until the display shows:



TRACK Add PROG

- Press **DISPLAY**.

The display shows the first program step:

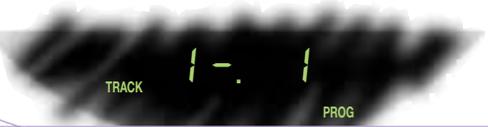


TRACK . 1 PROG

- Select the first track to be played using the ►► or ◀◀ keys, or enter the track number directly using the numeric keys.

For example, if you want to play track 12:

- Hold down the **1** numeric key until the display shows:



TRACK 1. PROG

- Then press the **2** numeric key. The display shows:



TRACK 12. PROG

- Press **INDEX** ► to move to the next program step:



TRACK . 2 PROG

- Program the remaining track selections in a similar way.

To edit a step

- Press **INDEX** ► or ◀ to select the program step you want to edit.
- Then enter a new track number.

To delete a program step

- Press **INDEX** ► or ◀ to select the program step you want to delete.
- Briefly press **O** to delete it.

The display shows:



To insert a new program step

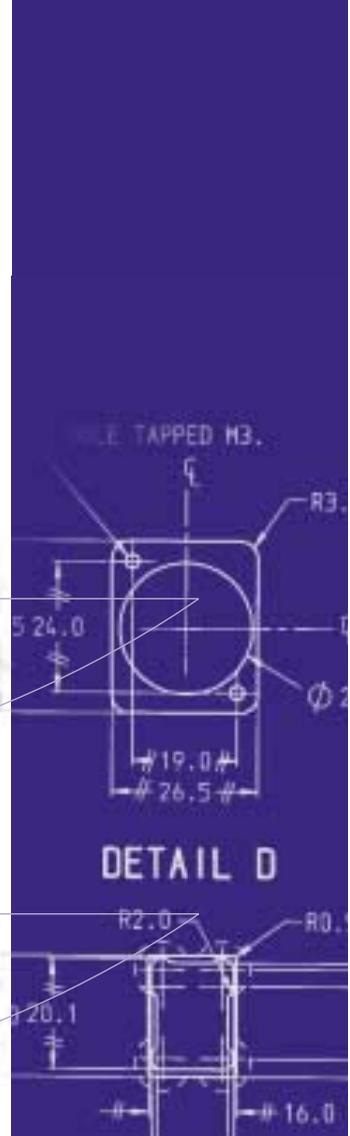
- Select the position in the sequence where you want to insert the step.
- Hold down **O** until the display shows:



A new step is inserted before the step you selected.

To store the program

- Press **INDEX** ► until the display shows:
- Then press **DISPLAY** to save the program and return to normal operation.



Excluding tracks (Del)

In this program mode you can omit one or more tracks when the disc is played.

To create a Del program

- Press and hold **DISPLAY** until the display shows:

The CD player's LCD display shows the word 'PROG' in green, indicating that the program mode has been entered.

- Press **INDEX** **▶** or **◀** until the display shows:

The CD player's LCD display shows 'DEL' in green, with 'TRACK' on the left and 'PROG' on the right, indicating that track deletion mode is active.

- Press **DISPLAY**.

This display initially shows:

The CD player's LCD display shows a single dot on the left and a horizontal dash on the right, with 'TRACK' on the left and 'PROG' on the right, indicating that the first track is selected for deletion.

- Select the first track to be omitted using the **▶▶** or **◀◀** keys, or enter the track number directly using the numeric keys.

For example, if you want to omit track 3:

- Press the **▶▶** key until the display shows:

The CD player's LCD display shows '3.' in green, with 'TRACK' on the left and 'PROG' on the right, indicating that track 3 is selected for deletion.

- Press **INDEX** **▶** to enter another track to omit:

The CD player's LCD display shows a single dot on the left and a horizontal dash on the right, with 'TRACK' on the left and 'PROG' on the right, indicating that the next track is selected for deletion.

- Repeat this procedure to enter any other tracks you want to omit.

To store the program

- Press **INDEX** ▶ until the display shows:
- Then press **DISPLAY** to save the program and return to normal operation.



Random play (Rand)

In this program mode a new random sequence of tracks is created each time the disc is played.

To select random play

- Press and hold **DISPLAY** until the display shows:
- Press **INDEX** ▶ or ◀ until the display shows:
- Press **DISPLAY** to select random play.



Repeating a program

You can choose to play an **Add**, **Del**, or **Rand** program repeatedly, until you press **STOP**.

To specify that a program should be played repeatedly

- Press **REPEAT** while entering or editing the program.



To repeat the entire disc

- Create an **Add** or **Del** program with no steps, and include the **REPEAT** option.

Turning a program on or off

Once you have created a program for a CD the program is automatically turned on when you insert the CD, and the **PROG** indicator is illuminated.

To turn a program off

- Press and hold **DISPLAY** until the display shows:



PROG

After a short delay the display shows:



OFF
PROG

- Press **DISPLAY** again to turn the program off.

The **PROG** indicator will disappear.

To turn a program on

- Press and hold **DISPLAY** until the display shows:



PROG

After a short delay the display will show:



ON
PROG

- Press **DISPLAY** again to turn the program on.

The **PROG** indicator will be illuminated.

If you prefer you can change the user options so that the program is initially off until you turn it on; see User options, page 24.

Editing a program

When you have created a program for a disc the following options are available:

<i>Option</i>	<i>Description</i>
On or Off	Turns the program on or off.
Edit	Edits the program.
Clr	Clears the program.

While you are entering or editing a program you can press **PLAY**, **PAUSE**, or **STOP** to exit without making any changes.

To edit a program

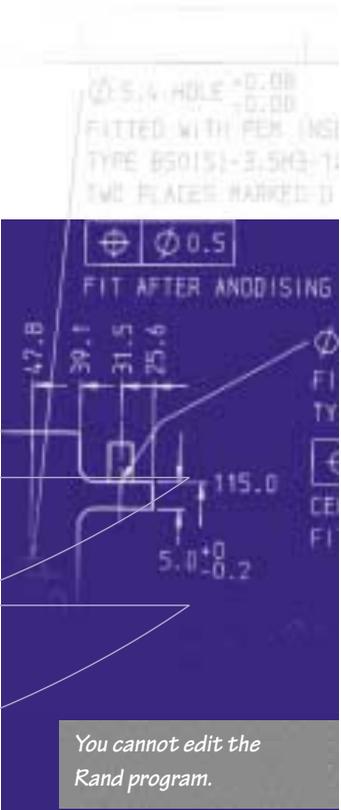
- Press and hold **DISPLAY** until the display shows:
- Press **INDEX** **▶** or **◀** until the display shows:
- Press **DISPLAY**.



PROG



Edit



You cannot edit the Rand program.

- Use the **INDEX** ► or ◀ keys to step through the program, or the **REPEAT** key to turn repeat mode on or off.
- Edit, insert, or delete any program steps you want to change.

- Press **INDEX** ► until the display shows:



- Then press **DISPLAY** to save the program and return to normal operation.

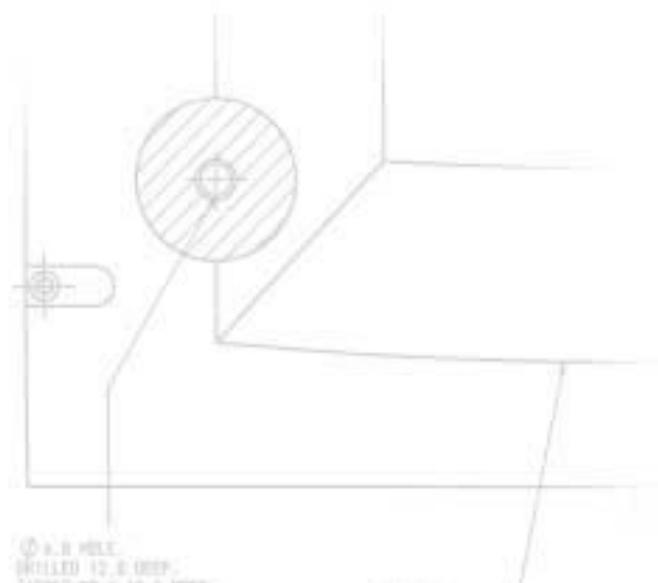
To clear a program

- Press and hold **DISPLAY** until the display shows:
- Press **INDEX** ► or ◀ until the display shows:
- Press **DISPLAY** to clear the program.



If you are editing a Del program the tracks are presented in numerical order.

The program for the currently inserted disc will be permanently cleared.



User options

This chapter explains how to configure the user options, to allow you to change the way the Sondek CD12 operates to suit your personal preferences.

The user options are initially set to standard values, designed to suit most tastes, but this section describes how to change them if you prefer.

To change the user options

- Turn off the Sondek CD12 using the power switch on the back panel.
- Press and hold the **◀◀** key while turning on the power.
- Keep the button depressed until the display shows:

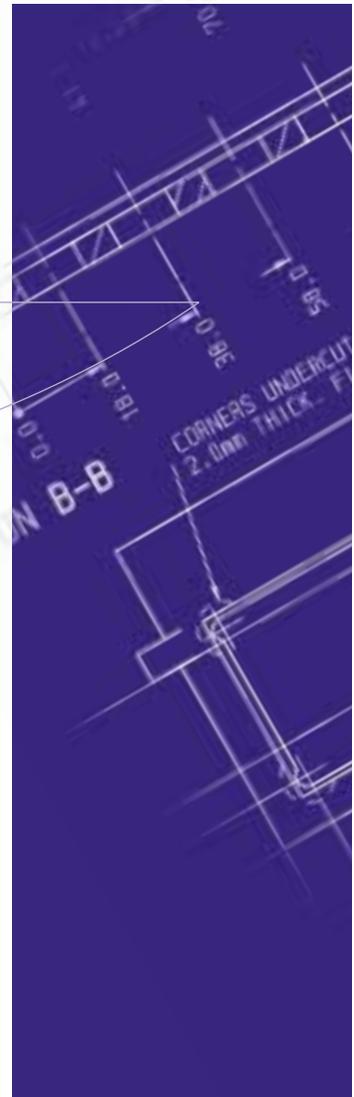


U1 0

The first two characters show the user option number, and the last character shows its current setting.

To choose a specific user option

- Press the **◀◀** key.



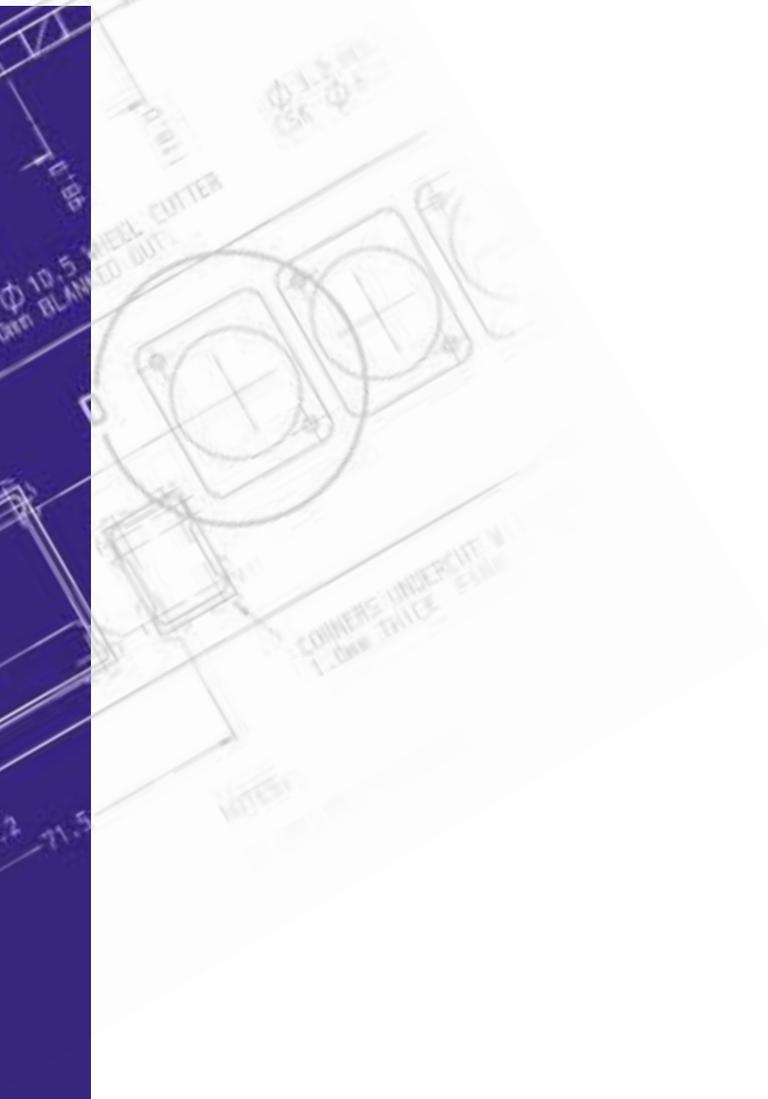
To change the setting of the currently displayed user option

- Press the ►► key.

To exit from user option mode

- Press any other CD player key.

This will retain any changes you have made to the user options.



User option definitions

The following tables give details of the alternative user options. The default state of each user option is marked *.

U1 – Display time-out mode

Option Description

0	Display reverts to sleep state
---	--------------------------------

1*	Display remains on
----	--------------------

U2 – Infra-red mode

Option IR to processor IR to remote out Remote in to remote out

0	Disabled	Off	Off
---	----------	-----	-----

1	Enabled	Off	Off
---	---------	-----	-----

2	Disabled	On	Off
---	----------	----	-----

3	Enabled	On	Off
---	---------	----	-----

4	Disabled	Off	On
---	----------	-----	----

5	Enabled	Off	On
---	---------	-----	----

6	Disabled	On	On
---	----------	----	----

7*	Enabled	On	On
----	---------	----	----

U3 – Autoprogram mode

Option Description

0	Program mode is off if programmed disc is recognised
---	--

1*	Program mode is on if programmed disc is recognised
----	---

U4 – Power up mode

Option Description

0 Resume previous state at power on

1* Go to stop at power on

2 Go to play at power on

U5 – Autoplay on load

Option Description

0 Resume previous state when disc is loaded

1 Go to stop when disc is loaded

2* Go to play when disc is loaded

U6 – Direct time mode

Option Description

0* Numeric keys on handset always select track number

1 Numeric keys enter track or time depending on the display format

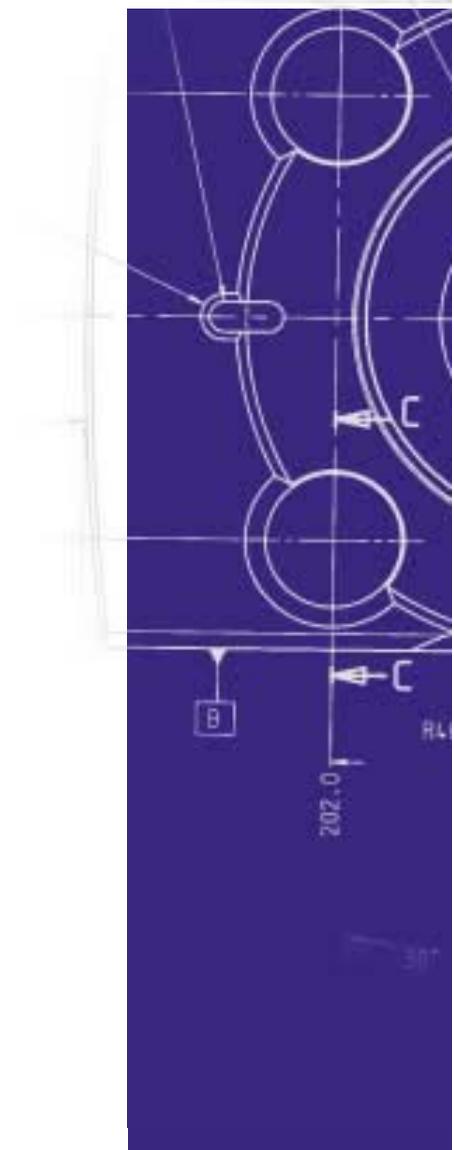
U7 – Smart drawer mode

Option Description

0* Drawer functions are play, stop, open, close

1 Drawer functions are play, skip, stop, open, close

R28.3
R25.0



R4

202.0

307

Technical specifications

General

Dimensions	320mm x 350mm x 80mm (W x D x H including feet).
Weight	12kg.
Power consumption	20W.
Mains supply fuse	100V–120V: T800mA antisurge. 200V–240V: T800mA antisurge. <i>Note: correct selection of voltage must be made on the back panel.</i>
Mains supply tolerance	Nominal $\pm 10\%$ with no performance change.

Transport

Linn CD Engine.

Conversion technology

24-bit 8-times oversampling with HDCD®, dual digital to analogue conversion per channel.

Control

CD sync link

Master/slave input connection.

Connector High quality RCA phono.

Level 0–10V DC.

RS232-C software upload port

Connector RJ-11.

Fully electrically isolated from audio circuitry.

Remote input

Current loop remote control input.

Connector High-quality RCA phono.

Sensitivity 5mA differential signal current.

Remote output

Current loop remote control output.

Connector High-quality RCA phono.

Level 6mA output signal current.

Opto isolated current loop output to interface with

Linn KNEKT system.

Outputs

2 pairs unbalanced stereo analogue audio outputs

Connector High-quality RCA phono.

Output level 2V rms (peak code).

Output impedance 200 Ω .

Minimum load 1k Ω .

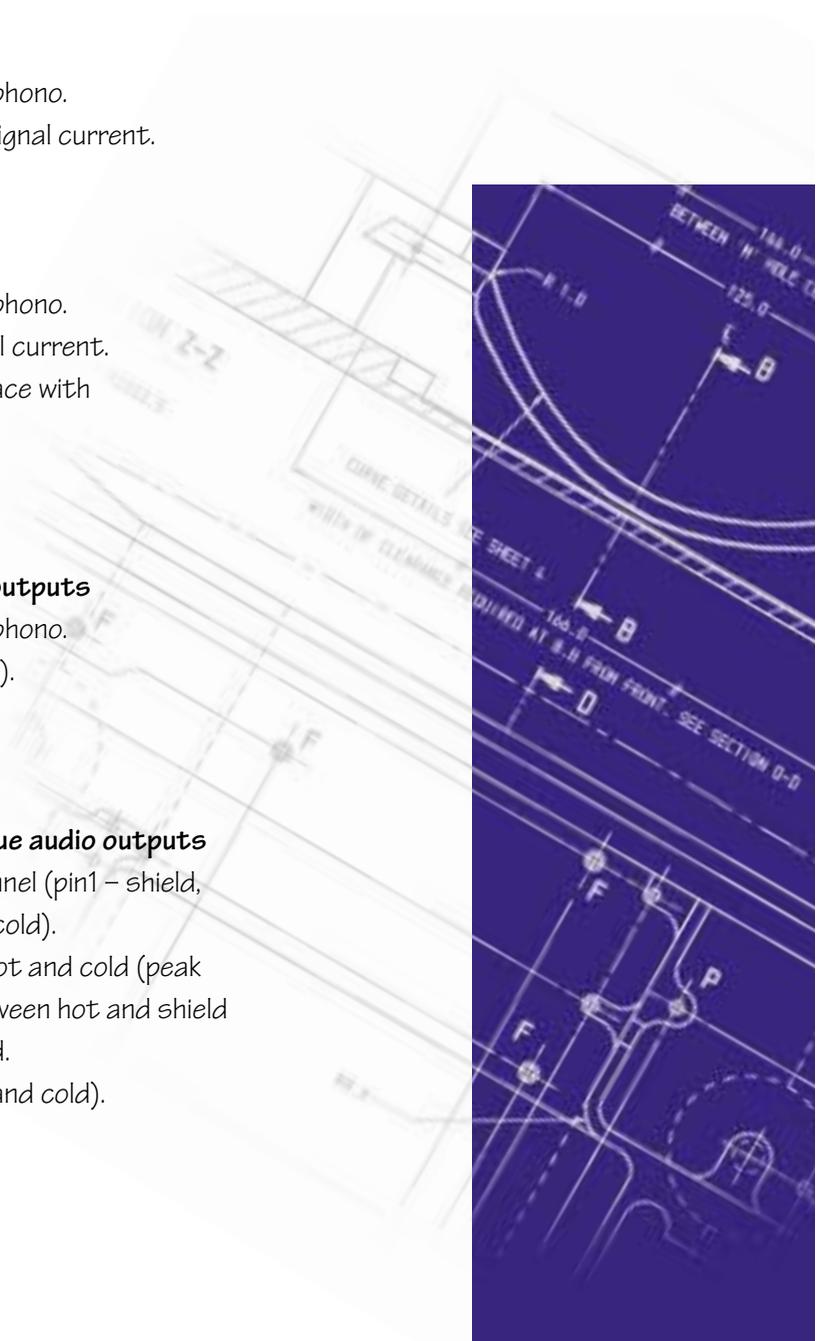
1 pair balanced (differential) stereo analogue audio outputs

Connector 3-pin XLR per channel (pin1 – shield, pin2 – hot, pin3 – cold).

Output level 4V rms between hot and cold (peak code), 2V rms between hot and shield and cold and shield.

Output impedance 300 Ω each (hot and cold).

Minimum load 600 Ω .



SPDIF digital audio optical output

Connector 75 Ω gold-plated BNC.
Level 500mV pk-pk (75 Ω).

AES/EBU digital audio electrical output

Connector 3-pin XLR (pin1 – shield, pin2 – hot,
pin3 – cold).
Level 2V pk-pk (110 Ω).

ST® digital audio optical output

Professional-grade fibre-optic connector.

TOSLINK™ digital audio optical output

Consumer-grade fibre-optic connector to EIAJ CP-340 specification.

Digital Filter and HDCD® decoding

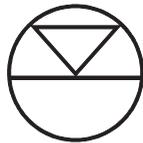
The Linn Sondek CD12 employs a Digital Filter that gives consistent high-performance audio whether decoding standard “Red Book” CDs or HDCD encoded CDs.

On detection of an HDCD® encoded disc, the Sondek CD12 will illuminate **HDCD** on the front panel display.

Index

A-B repeat	14	Displays	10
Acknowledgements	v	DIGITAL	3
Add program	17	HDCD	5, 31
deleting a step	18	REMAIN TRACK TIME	10
editing	18	REPEAT	14
inserting a step	18	TOTAL REMAIN TIME	10
storing the program	18	TOTAL TIME	10
 		TRACK	10
Cancelling a repeat	15	TRACK TIME	10
Closing the drawer	5, 8	Drawer	
Continuing from pause	9	closing	5, 8
Copyright	v	opening	4, 8
Del program	19	E display	11
storing the program	20	Excluding tracks	19
DIGITAL display	3		
Digital filter	31	HDCD decoding	31
Digital output	3	HDCD display	5, 31
Discs		Hi-Fi Personal Handset, using	7
inserting	4, 8		
pausing	9	Inserting a disc	4, 8
playing	4, 9	Introduction	2
removing	5-6, 9		
repeating	14, 21	Linn philosophy	2
repeating a section	14		
searching	12	Pause, continuing from	9
stopping	5, 10	Pausing a disc	9

Playing		Safety information	iii
a disc	4, 9	Searching a disc	12
from a specific track	11	Selecting tracks	6
Programming a selection of tracks	17	Sondek LP12	2
Programming options	16	Stopping a disc	5, 10
Add	17	Switching on	4, 7
Del	19		
Programs		Technical specifications	29
clearing	23	Time position, entering	13
editing	22	TOTAL REMAIN TIME display	10
repeating	20	TOTAL TIME display	10
turning on or off	21	Touch control	3
		TRACK display	10
Random play	20	Tracks	
REMAIN TRACK TIME display	10	excluding	19
Removing a disc	5-6, 9	playing from	11
REPEAT display	14	selecting	6, 17
Repeat, cancelling	15	selecting directly	11
Repeating		TRACK TIME display	10
a disc	14, 21		
a program	20	User options	26
a section of a disc	14	changing	24



LINN

HI-FI PERSONAL HANDSET
OWNERS MANUAL

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 consent of the publisher.

Printed in the United Kingdom.

Sondek is a trademark 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 199

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

Contents

Introduction	2	Controlling the KNEKT system	12
Key layout	3	Selecting the KNEKT system	12
Controlling sources	4	Controlling sources	12
Selecting a source	4	Selecting other functions	13
Selecting the tuner	5	Programming the	
Operating a source	6	Hi-Fi Personal Handset	14
Controlling the amplifier		Programming the handset	15
or preamplifier	7	Clearing the source	16
Selecting the amplifier	7	Positioning the two handsets	17
Operating the amplifier	7	Learning the commands for each key	19
Controlling volume	8	Resolving learning problems	21
Using macros	9	Maintenance	24
Recording a macro	9	Cleaning the Hi-Fi Personal Handset	24
Replaying a macro	11	Replacing the batteries	24
Examples of macros	11	Controlling other equipment	26
		Index	28

I n t r o d u c t i o n

The Linn Hi-Fi Personal Handset is a unique unit that brings control of virtually all your audio and video equipment to a single convenient hand-held unit.

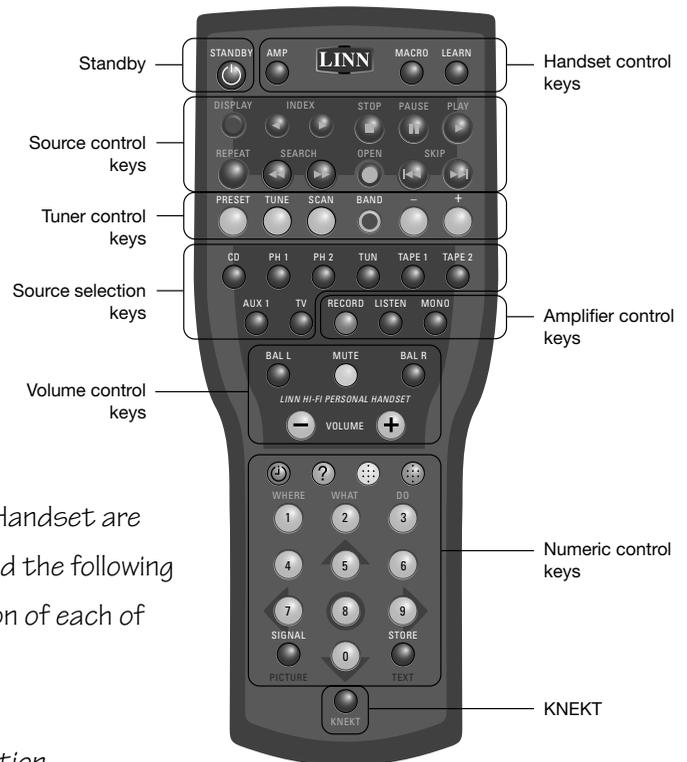
Its uniquely contoured shape makes it extremely comfortable to hold, and the keys are large and easy to read and use. It is also equally suitable for table-top use, if you prefer.

The handset provides pre-programmed keys to give you complete control over the other Linn products in your system, including CD players, tuners, and amplifiers. In addition, for total flexibility, the pre-programmed commands can be replaced by learning the commands from other infra-red remote control handsets. This allows you to use the Hi-Fi Personal Handset to control your entire system, including equipment from other manufacturers.

Finally the Hi-Fi Personal Handset can be programmed to learn a sequence of key presses called a macro, to provide convenient short cuts for operations you frequently want to perform.

Key layout

The keys on the Hi-Fi Personal Handset are arranged into logical groups, and the following illustration explains the function of each of these groups:



<i>Group</i>	<i>Description</i>
Standby	Switches the amplifier or the selected source to standby.
Source control keys	Operates the selected source.
Tuner control keys	Operates the tuner.
Source selection keys	Selects a source, and configures the source and numeric control keys to operate that source.
Volume control keys	Controls the amplifier or TV volume.
Handset control keys	Configures the Hi-Fi Personal Handset to operate your system.
Amplifier control keys	Operates the amplifier.
Numeric control keys	Controls the selected source.
KNEKT	Selects the KNEKT control keys, for use with a KNEKT multi-room system.

Controlling sources

This chapter explains how to use the Hi-Fi Personal Handset to select one of your audio sources, and then operate the source you have selected.

The Hi-Fi Personal Handset can control up to 8 different audio sources using the keys labelled:

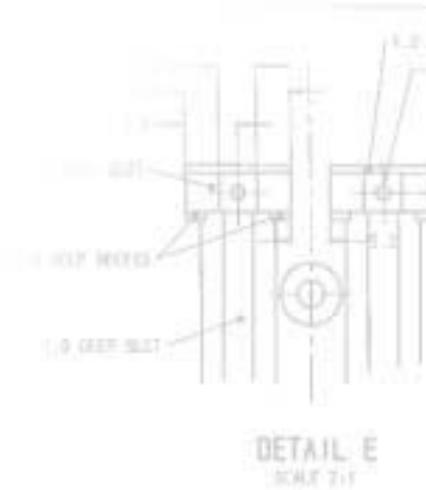
CD, PH 1, PH 2, TUN, TAPE 1, TAPE 2, AUX 1, and TV.

Initially these keys are programmed to control Linn products, and a range of products from other manufacturers; refer to *Controlling other equipment*, page 26, for details of the most important products supported.

If the products in your system are not on this list you can easily program the Hi-Fi Personal Handset with the commands from your other infra-red remote control handsets; see *Programming the Hi-Fi Personal Handset*, page 14.

Selecting a source

Pressing one of the source selection keys does two things. First, it configures the source control keys and numeric control keys to operate the source you have selected. Then, after a short delay, it instructs your amplifier to select the input associated with that source.



To select a source

- Press and hold the source selection key for the source you want to select until the **MACRO** indicator flashes.

For example, if you want to select the CD source:

- Press and hold the **CD** source selection key.

This will configure the source control keys to control the CD player, and then select the CD input on your amplifier.

To configure the source control keys without selecting a source

- Briefly press the source selection key for the source you want to control, releasing it before the **MACRO** indicator starts to flash.

For example, if you want to control the CD player without selecting the CD input on the amplifier:

- Briefly press the **CD** source selection key.

This will allow you to eject a CD from the CD player while listening to a tuner, without selecting the CD input on your amplifier.

Selecting the tuner

The tuner source is different from the other sources, and has a dedicated set of tuner control keys.

To select the tuner source

- Press and hold the **TUN** source selection key until the **MACRO** indicator starts to flash.

This will select the tuner input on the amplifier, and configure the tuner control keys and the numeric control keys to operate the tuner.

Controlling the amplifier or preamplifier

This chapter explains how to use the Hi-Fi Personal Handset to control your Linn preamplifier, allowing you to select sources, change the volume, and switch it to standby. It also explains how you can configure the Hi-Fi Personal Handset to control a second amplifier by learning the commands from another infra-red remote control handset.

Selecting the amplifier

The **AMP** handset control key allows you to select which amplifier the amplifier control keys will operate.

To select the amplifier

- Press the **AMP** handset control key to switch between amplifiers.

The **MACRO** indicator will flash once to indicate that the Linn amplifier commands have been selected, or twice to indicate that the program commands for the second amplifier have been selected.

Operating the amplifier

To operate the selected amplifier

- Press one of the volume control keys or amplifier control keys to operate the selected amplifier.

For example, to send the listen command:

- Press the **LISTEN** amplifier control key.

To switch the amplifier to standby

- Press the **STANDBY** key.

Controlling volume

The volume control keys normally control the amplifier volume, irrespective of which source you have selected.

Alternatively, you can program the Hi-Fi Personal Handset so that for particular sources the volume control keys operate the TV volume.

For example, if you normally listen to the VCR through your TV rather than through your amplifier, you can program the source used to learn VCR commands so that the volume keys operate the TV volume when that source is selected.

To change the volume

- Press the **VOLUME +** and - keys.

To mute the volume

- Press the **MUTE** key.

To change the balance

- Press the **BAL L** or **BAL R** keys.

To associate the volume control keys with a new source

- Press the source selection key for the source you want to change.
- Within two seconds press the **VOLUME +** and - keys together.

Each time you do this the volume association of the source will be changed between amplifier volume and TV volume.

For example, if you are using the **TAPE 2** key to select your VCR, and you want the volume keys to control the TV volume when the VCR is selected:

- Press **TAPE 2**, followed by **VOLUME +** and - keys together.

Using macros

This chapter describes the Hi-Fi Personal Handset's macro function, a very convenient and powerful feature which allows you to record a sequence of key presses, and then replay the sequence at any time using a single key press.

Each sequence of key presses is called a macro, and you can keep up to 10 different macros for your most frequently used operations.

For example, you could record a news macro to pause the CD player and then select channel 1 on the TV.

Recording a macro

You can record up to 10 different macros, one for each of the numeric control keys **0** to **9**. Each macro can record up to 10 key presses.

To record a macro

- Press the **LEARN** handset control key.

The **LEARN** indicator will be illuminated to show that the Hi-Fi Personal Handset is ready to learn a macro.

- Press the **MACRO** handset control key.

The **MACRO** indicator will be illuminated to show that the Hi-Fi Personal Handset is ready to record a macro.

- Press one of the numeric control keys **0** to **9** to identify the macro.

The macro will be assigned to the key you press.

The **LEARN** indicator will flash slowly to show that the Hi-Fi Personal Handset is ready to record key presses in the macro.

Each command you record can be one of the following:

<i>To record this</i>	<i>Press this</i>
A single key press	Press the key for less than one second.
An extended key press command	Press the key for more than one second.
A one second delay	Press the MACRO handset control key.

The **MACRO** indicator will flash once for each command you record.

Use an extended key press command if you want to record a source selection key press that also selects the source on your amplifier.

Record a delay if the equipment you are controlling needs a delay before receiving the next command. For example, after sending a command to bring a VCR out of standby you may need a short delay before sending the **PLAY** command.

Each macro can record up to 10 commands. When you have entered 9 commands both the **MACRO** and **LEARN** indicators will flash slowly to warn you that the macro is nearly full. If you enter a tenth command the macro is automatically saved.

To save the macro

When you have finished entering the macro:

- Press the **LEARN** handset control key.

Both the **MACRO** and **LEARN** indicators will turn off to show that the macro has been saved.



Replaying a macro

To replay a macro

- Press the **MACRO** handset control key followed by the numeric control key **0** to **9** corresponding to the macro you want to replay.

The **MACRO** indicator will flash rapidly as the commands recorded in the macro are transmitted, and then turn off at the end of the sequence.

Examples of macros

The following examples show typical sequences of commands for operating typical equipment. Note that the precise sequences of key presses you need for your own equipment may be different.

To interrupt a CD for the news

To interrupt the CD and select TV channel 1:

- Press **CD**, **PAUSE**, **TV** (held for 1 second), **1**.

To resume playing the CD after the news:

- Press **CD** (held for 1 second), **PLAY**.

To select a favourite track on the CD player

To select track 12 on the KARIK CD player:

- Press **CD** (held for one second), **1** (held for 1 second), **2**.

To turn on the teletext subtitles on the TV

To select page 888 of teletext on channel 3 of the TV:

- Press **TV** (held for 1 second), **3**, **TEXT**, **MACRO** (delay before next command), **8**, **8**, **8**.

Controlling the KNEKT system

This chapter describes how to use the Hi-Fi Personal Handset to control a Linn KNEKT multi-room system.

These sections give general information about using the Hi-Fi Personal Handset with a KNEKT system. As each KNEKT multi-room system is specifically configured to suit your requirements please consult your installer, and the *KNEKT Owners Manual*, for detailed information about using the handset with your particular installation.

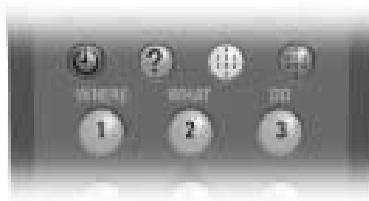
Selecting the KNEKT system

This section describes the keys that are used to control the KNEKT system.

To select the KNEKT control keys

- Press the **KNEKT** key.

The group of seven KNEKT control keys will now be selected:



To restore normal operation of the numeric control keys

- Select a source using one of the source selection keys, or press one of the source control keys or tuner control keys.

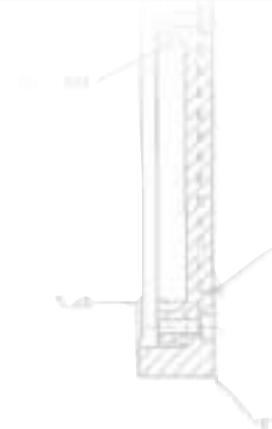
See *Controlling sources*, page 4.

Controlling sources

To select where the source is you want to listen to

- Press the **WHERE** KNEKT control key.

Each time the key is pressed the RCU display will switch between the name of your main system and the name of the local room you are in.



To select what you want to listen to

- Press the **WHAT** KNEKT control key.

Each time you press the key the RCU display will step through the available sources.

To select what you want the source to do

- Press the **DO** KNEKT control key.

Each time you press the key the RCU display will step through the available functions for the source you selected.

To perform the selected DO function

- Press the yellow  key to operate the *left* function. Press the blue  key to operate the *right* function.

The function of each key will be shown by the two right-hand symbols on the RCU display.

Selecting other functions

To display the time or date

- Press the  KNEKT control key.

Each time you press the key the RCU display will step through the available time and date formats.

To get help on an RCU function

- Press the  KNEKT control key.

The RCU display will show an appropriate help message.

Programming the Hi-Fi Personal Handset

This chapter explains how to program the Hi-Fi Personal Handset to learn the commands from your other infra-red handsets, so that you can use it to control all your other equipment.

The Hi-Fi Personal Handset can learn commands from up to nine other infra-red handsets, and each set of commands is stored as one of the eight audio sources, selected using the source selection keys labelled:

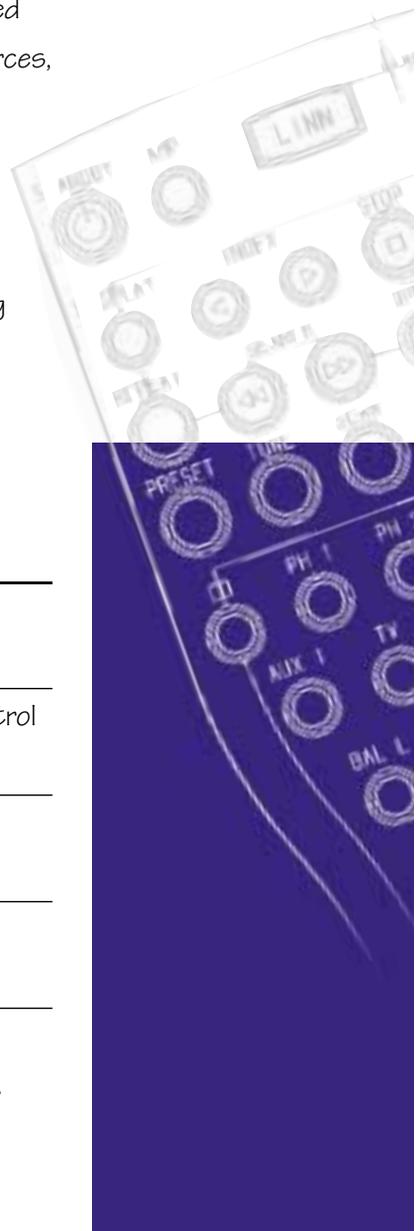
CD, PH 1, PH 2, TUN, TAPE 1, TAPE 2, AUX 1, and TV.

In addition, the commands for a preamplifier can be recorded and stored using the **AMP** key.

The following table shows the keys that can be learnt for each source:

<i>Source</i>	<i>Commands</i>
TUN	Tuner control keys, numeric control keys, and STANDBY key.
TV	Source control keys, numeric control keys, volume control keys, and STANDBY key.
CD, PH 1, PH 2, TAPE 1, TAPE 2, and AUX 1	Source control keys, numeric control keys, and STANDBY key.
AMP	Amplifier control keys, source selection keys, volume control keys, and STANDBY key.

Refer to the section *Key layout*, page 3, for an explanation of each set of keys.



Programming the handset

Programming the Hi-Fi Personal Handset requires the following steps:

Clear the source ready for new commands

This first step involves choosing a source with an appropriate name, and clearing any previous commands.

Position the two handsets correctly

The next step is to position the handsets correctly, so that the Hi-Fi Personal Handset can read the beam from the other handset.

Learn the commands for each key

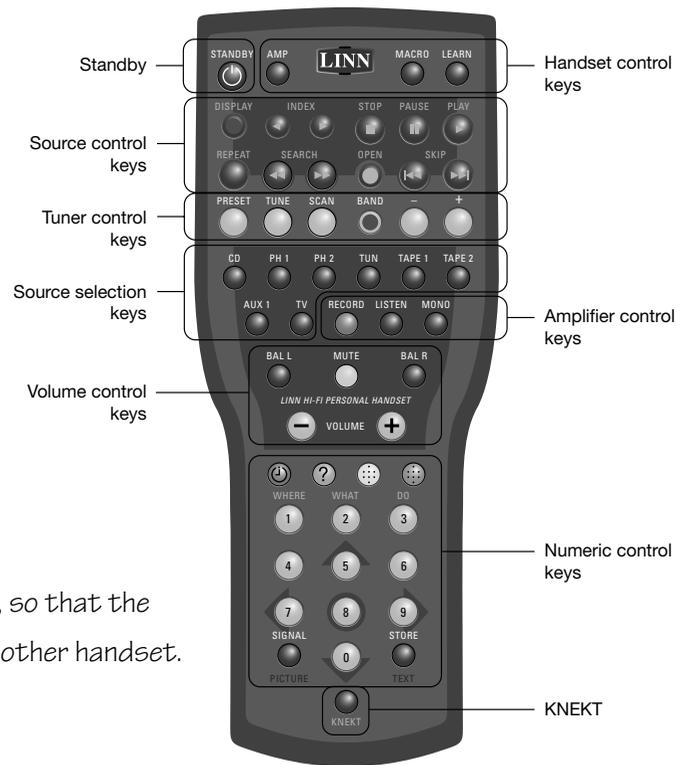
The first time you learn a command from a different handset the Hi-Fi Personal Handset calibrates itself for the new handset. This means that learning the first key will take at least three attempts, while the Hi-Fi Personal Handset learns the characteristics of the other handset.

Once you have learnt at least one key the Hi-Fi Personal Handset remembers the other handset's characteristics, and subsequent keys are learnt immediately, even if you are adding further keys at a later date.

Put the other handset away

Finally, you can put the other handset away and use the Hi-Fi Personal Handset to control your source instead.

These steps are describes in greater detail in the following sections.



Clearing the source

Before learning any commands you need to select the source you want to use. You can learn source control functions using the **CD**, **PH 1**, **PH 2**, **TUN**, **TAPE 1**, **TAPE 2**, **AUX 1**, or **TV** source selection keys. You can learn amplifier functions using the **AMP** key.

To select a source

- Choose an appropriate source selection key for the commands you are going to learn.

For example, if you are getting ready to learn the **PLAY**, **PAUSE**, and **STOP** commands from your tape recorder's handset, an appropriate choice would be the **TAPE 1** source.

To clear previously programmed commands

- Press the **LEARN** key.

The **LEARN** indicator will turn on to show that the Hi-Fi Personal Handset is ready to be programmed.

- Press and hold the source selection key for the source you want to clear.

For example, if you want to erase the **TAPE 1** source:

- Press and hold the **TAPE 1** key.

The **LEARN** indicator will blink once to show that the Hi-Fi Personal Handset has selected the source.

- While still holding the source selection key, press and hold the **LEARN** handset control key.

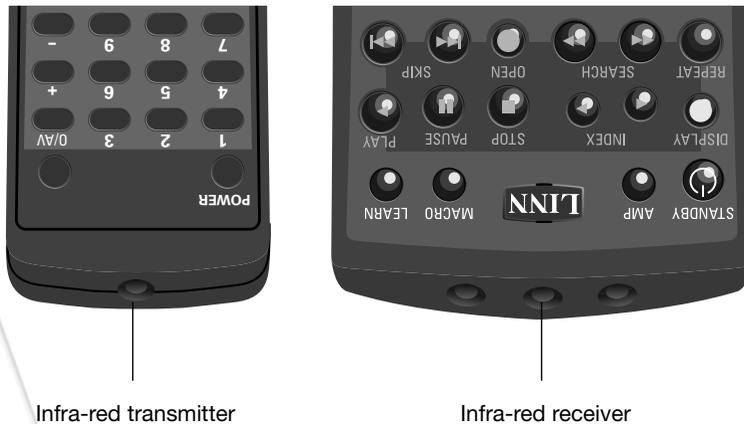
After 5 seconds the **LEARN** indicator will switch off to show that the commands for the selected source have been cleared.



Positioning the two handsets

To allow the Hi-Fi Personal Handset to learn commands from your other handset, both handsets have to be correctly positioned.

The infra-red receiver LED on the Hi-Fi Personal Handset must be aligned with the infra-red transmitter LED on your other handset.

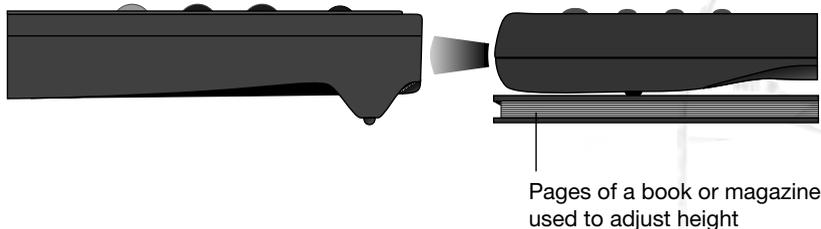


If you can see the infra-red transmitter LED on your other handset, you will be able to see when the handsets are correctly positioned after you complete the vertical and horizontal alignment steps below.

If the infra-red transmitter LED cannot be seen because it is behind an infra-red window, you can assume that it is somewhere along the centre line of the window for the vertical alignment step. The **LEARN** indicator will help you to find the exact position during the horizontal alignment step.

To align the handsets vertically

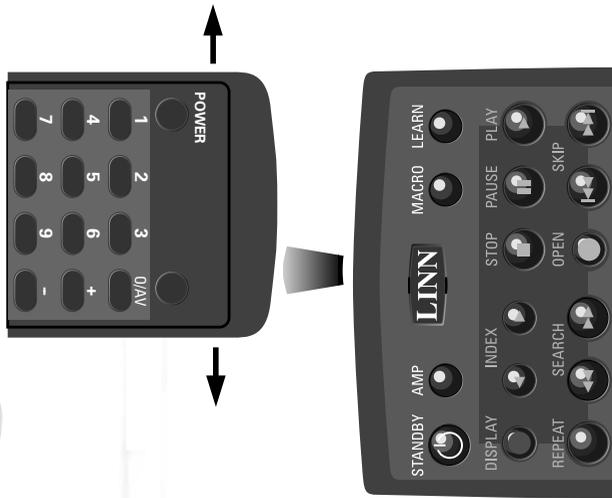
- Place the two handsets on a flat surface, approximately a finger-width apart.
- Use the pages of a book or magazine to adjust the height of one handset until the infra-red transmitter is aligned with infra-red receiver.



To align the handsets horizontally

- Press the **LEARN** key to turn on the **LEARN** indicator.
- Do not press any other keys on the Hi-Fi Personal Handset at this stage.
- Press and hold any key on your other handset to transmit a command.
- The **LEARN** indicator will flash rapidly when the Hi-Fi Personal Handset receives the command, and will turn on again when no command is received.
- Move the other handset from side-to-side while transmitting a command. The red LED will flash as the Hi-Fi Personal Handset receives a command.
- Note the extreme positions when the Hi-Fi Personal Handset stops receiving the command, and the red LED stays permanently lit.
- Position the handset halfway between these two extreme positions for the best signal.

Most infra-red remote control handsets continually transmit commands while a key is pressed. However, some keys will only transmit the command once and then stop, even if you are still pressing the key. If you cannot find a key that continually transmits commands, you will have to repeatedly press and release the key on your other handset to transmit a series of commands.



Learning the commands for each key

To select the source you want to use

The **LEARN** indicator should still be on from positioning the handsets to show that the Hi-Fi Personal Handset is ready to learn.

- Press the source selection key for the source you want to use.

For example, if you want to use the **TAPE 1** source selection key:

- Press the **TAPE 1** key.

The **LEARN** indicator will blink once to show that the Hi-Fi Personal Handset has selected the source.

To learn a key

- Press the key you want to program on the Hi-Fi Personal Handset.

For example, to program the **PLAY** key:

- Press the **PLAY** key.

The **LEARN** indicator will flash slowly to show that the Hi-Fi Personal Handset is ready to receive a command from your other handset.

- On the other handset press and hold down the key you want to learn.

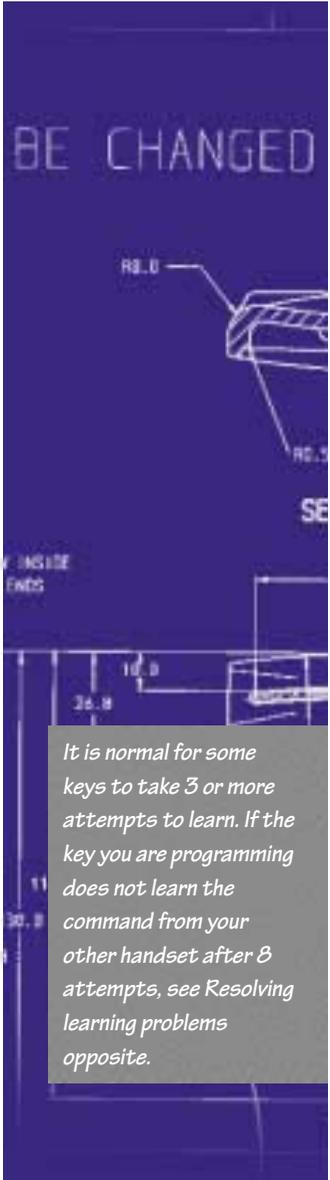
For example, to learn the play function:

- Press and hold down the play key.

The **LEARN** indicator will flash rapidly to show that the Hi-Fi Personal Handset is receiving a command from your other handset.

Continue to hold down the key on your other handset until the **LEARN** indicator responds in one of the following ways:

<i>Action</i>	<i>What it means</i>
The LEARN indicator stops flashing and turns on continuously.	The key has been programmed successfully. You can proceed to learn another key.
The LEARN indicator flashes slowly again.	The key has not been learnt. Release and then press the same key on the other handset to try again.



It is normal for some keys to take 3 or more attempts to learn. If the key you are programming does not learn the command from your other handset after 3 attempts, see Resolving learning problems opposite.

To stop learning keys

- Press the **LEARN** handset control key.

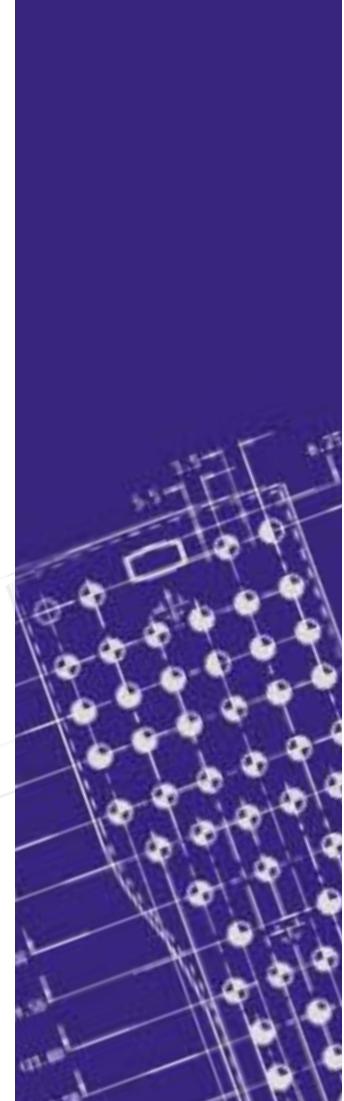
The **LEARN** indicator will turn off to show that the Hi-Fi Personal Handset is ready for normal use.

Resolving learning problems

In certain circumstances you may find that the Hi-Fi Personal Handset cannot learn some of the commands from another handset, or is not operating your equipment when it transmits the learnt commands. This section gives suggestions for resolving these problems.

<i>Problem</i>	<i>Explanation</i>	<i>Suggestion</i>
Cannot learn the first key in the selected source	The source you selected may contain previously learnt commands that are not compatible with the commands from your other handset.	Restart the learning process, ensuring you clear the source to learn new commands.
	The command you are learning may not contain enough unique timing information to be detected correctly.	Restart the learning process, ensuring you clear the source to learn new commands, and learn a different command first.
	The infra-red signal may be getting distorted by low battery power in your other handset. This could still be the case even if your handset operates your equipment.	Try replacing its batteries.

<i>Problem</i>	<i>Explanation</i>	<i>Suggestion</i>
	The signal from your other handset may have been incorrectly detected because the infra-red power is either very low or very high.	Restart the learning process, with the handsets positioned either slightly closer, or slightly further apart.
	The timing information may have been incorrectly detected if the position of the handsets changed during learning.	Restart the learning process, ensuring you clear the source to learn new commands. The position of the handsets should remain unchanged during the learning process.
Can only learn the first key in the selected source	The timing information from the first key you programmed may have been incorrectly detected.	Restart the learning process, ensuring you clear the source to learn new commands, and learn a different command first.
	The timing information may have been incorrectly detected if the position of the handsets changed during learning.	Restart the learning process, ensuring you clear the source to learn new commands. The position of the handsets should remain unchanged during the learning process.
Can learn some keys but not others	If you are learning commands from a dual or multi-function infra-red remote control handset, you may have to learn groups of commands in different sources.	For example, if you are learning commands from a combined TV/ VCR handset, try storing the TV control commands in a different source from the VCR control commands.
	The commands that cannot be learnt may contain additional timing information that has been detected as not being compatible with the timing information of the learnt commands.	Restart the learning process, ensuring you clear the source to learn new commands, and learn the commands in a different order. Use one of the commands that could not be learnt as the first command.



<i>Problem</i>	<i>Explanation</i>	<i>Suggestion</i>
Receiving equipment does not respond to any learnt commands, or the response is intermittent	The infra-red signal may be getting distorted by low battery power in the Hi-Fi Personal Handset.	Try replacing its batteries.
	Receiving equipment may have a "blind spot" to the infra-red transmitted by the Hi-Fi Personal Handset.	Try aiming the Hi-Fi Personal Handset straight at the infra-red receiver in your equipment.
	One of the commands may have incorrectly updated the timing information during the learning process.	Try finding the command responsible for affecting the other commands. To do this, restart the learning process by clearing the source to learn new commands. As you learn each command, test the response of the receiving equipment before learning the next command. The last command learnt when the equipment stopped responding will be the command at fault. Now restart the learning process by clearing the source to learn new commands. Learn the commands in a different order, using the command at fault as the first command.
Receiving equipment does not respond to some learnt commands	Additional timing information may be required for the non-functioning commands.	Re-learn the non-operational commands without erasing the previously learnt commands.
	The non-operational commands may require additional timing information that is not compatible with the timing information of the operational commands.	Restart the learning process, ensuring you clear the source to learn new commands. Learn the commands in a different order, using one of the non-operational commands as the first command.

Maintenance

This chapter gives information about cleaning your Hi-Fi Personal Handset, and replacing the batteries.

Cleaning the Hi-Fi Personal Handset

To clean the Hi-Fi Personal Handset

- Use a length of sellotape or masking tape to remove dust, hairs, etc. The particles will stick to the tape, leaving the handset clean.

Replacing the batteries

To open the Hi-Fi Personal Handset

- Remove the three screws on the back of the handset, using a small Philips screwdriver.
- With the handset upside down, tap the narrow end of the case against your hand to free the front panel from the case.
- Turn the handset over and, holding the front panel by its edges, carefully lift it up.

WARNING: Do not touch the silver contacts or components on the printed circuit board as this may damage the handset with static electricity.

To replace the batteries

- Remove the old batteries and replace with four AAA or LR03 type batteries, checking the polarity carefully.



Do not mix old and new batteries.

Controlling other equipment

The following tables give details of using the Hi-Fi Personal Handset to control other equipment.

CD

<i>Hi-Fi Personal Handset key</i>	<i>CD12</i>	<i>KARIK MIMIK</i>	<i>RC-5 CD Player System 20</i>
STANDBY			STANDBY
DISPLAY	NEXT DISPLAY MODE	NEXT DISPLAY MODE	SCROLL LOCAL DISPLAY
◀ INDEX	INDEX PREVIOUS	INDEX PREVIOUS	INDEX PREVIOUS
INDEX ▶	INDEX NEXT	INDEX NEXT	INDEX NEXT
STOP	STOP	STOP	STOP
PAUSE	PAUSE	PAUSE	PAUSE
PLAY	PLAY	PLAY	PLAY
REPEAT	REPEAT	REPEAT	REPEAT CONTINUOUSLY
◀◀ SEARCH	SEARCH BACKWARD	SEARCH BACKWARD	
SEARCH ▶▶	SEARCH FORWARD	SEARCH FORWARD	
OPEN	OPEN/CLOSE DRAWER	OPEN/CLOSE DRAWER	OPEN/CLOSE DRAWER
◀◀ SKIP	SKIP PREVIOUS	SKIP PREVIOUS	PREVIOUS
SKIP ▶▶	SKIP NEXT	SKIP NEXT	NEXT
Red			SHUFFLE/REPEAT ONCE
Green			REPEAT A/B PROGRAM
Yellow			EXPAND DYNAMIC RANGE
Blue			COMPRESS DYNAMIC RANGE
0-9	0-9	0-9	0-9
PICTURE/SIGNAL			DISPLAY USER INFORMATION
TEXT/STORE			STORE EXECUTE

PH1/PH2

Hi-Fi Personal Handset key

RC-5 Audio Stack Record Player Combi, System 21

STANDBY

STANDBY

DISPLAY

SCROLL LOCAL DISPLAY

◀ INDEX

INDEX PREVIOUS

INDEX ▶

INDEX NEXT

STOP

STOP

PAUSE

PAUSE

PLAY

PLAY

REPEAT

REPEAT CONTINUOUSLY

◀◀ SEARCH

SEARCH ▶▶

SCAN FORWARD

OPEN

OPEN/CLOSE

◀◀ SKIP

PREVIOUS OPTION

SKIP ▶▶

NEXT OPTION

Red

Green

Yellow

Blue

0-9

0-9

PICTURE/SIGNAL

TEXT/STORE

STORE EXECUTE

Index

- Acknowledgements 2
- AMP handset control key 7
- Amplifier control keys 3, 7
- Amplifiers
 - operating 7
 - selecting 7
 - switching to standby 7
- Balance, changing 8
- Batteries, replacing 24
- Cleaning the handset 24
- Control keys
 - amplifier 3, 7
 - handset 3, 9
 - KNEKT 12
 - numeric 3, 12
 - source 3, 5
 - tuner 3, 5
 - volume 3
- Controlling other equipment 26
- Copyright 2
- Handset control keys 3
 - AMP 7
 - LEARN 9, 16, 18, 20
 - MACRO 9
- Handsets, positioning for programming 17
- Help in a KNEKT system 13
- Key layout 3
- KNEKT control keys 12
- KNEKT key 3, 12
- KNEKT system, controlling 12
- LEARN handset control key 9, 16, 18, 20
- Learning commands 19
- Learning problems 21
- MACRO handset control key 9
- Macros 9
 - examples 11
 - recording 9
 - replaying 11
 - saving 10
- Muting the volume 8
- Numeric control keys 3, 12
- Opening the handset 24
- Operating
 - a source 6
 - an amplifier 7
 - the tuner 6

Programming the handset.....	15	Sources (<i>continued</i>)	
problems	21	switching to standby.....	6
Recording a macro.....	9	Standby	
Replacing the batteries	24	switching a source to	6
Replaying a macro	11	switching an amplifier to	7
Selecting		Standby key	3, 6
a source.....	5	Time or date in KNEKT system	13
an amplifier	7	Tuner	
the tuner.....	5	operating	6
Source control keys	3	selecting	5
configuring	5	Tuner control keys.....	3, 5
Source selection keys	3-4	Volume	
Sources		changing	8
controlling in a KNEKT system	13	muting	8
operating	6	Volume control keys.....	3
selecting	5	associating with a new source	8
selecting in a KNEKT system.....	12		

