





SYSTEM INSTALLATION AND SETUP MANUAL

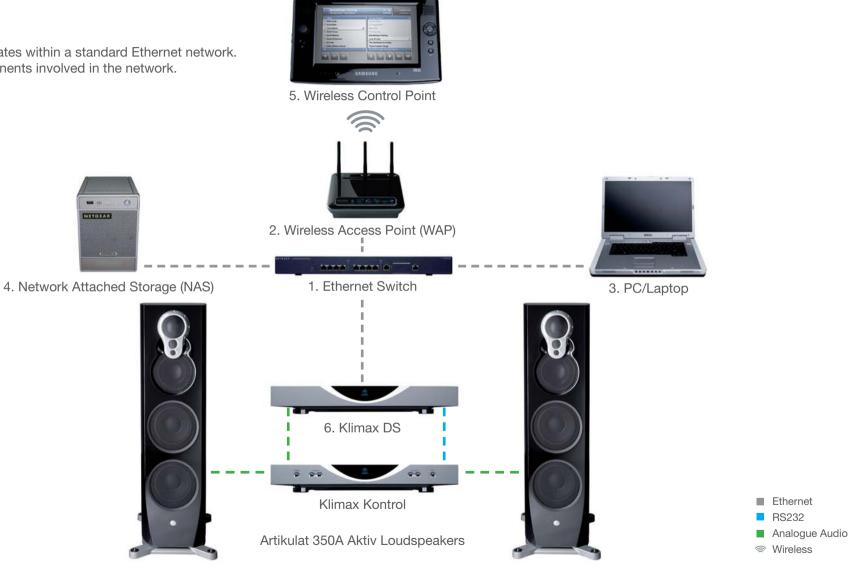
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KLIMAX DS SYSTEM INSTALLATION AND SETUP

1 OVERVIEW

The Klimax DS operates within a standard Ethernet network. There are six components involved in the network.



1 OVERVIEW (continued...)

The first two components provide network infrastructure.

1. Ethernet Switch

This device is the connection point for all other components on the network allowing all components to communicate with each other.

2. **WAP**

Plugs into the switch thereby allowing wireless components to communicate with wired ones.

3. The PC or laptop is a standard computer that is used during setup and configuration of the Klimax DS system. The same, or another computer, may be used after setup to add new music to the NAS. In order for the computer to communicate with the Klimax DS system, it must be connected to the switch.

The final three devices interact together to provide the Klimax DS music experience. They are:

4. **NAS**

Securely stores music on a hard drive array. Additionally, the NAS runs three important pieces of software:

a. Media Server

Indexes and allows retrieval of the music from the NAS.

b. DHCP Server

Responsible for allocating IP addresses to all devices on the network.

c. Network Sharing Protocols

Allows computers to place new music on the NAS.

5. Wireless Control Point

Allows the user to browse, select, and control the playback of music. It requests information about the location of the music from the Media Server and then passes this information to the Klimax DS.

6. Klimax DS

Follows instructions from the wireless control point to retrieve music on the demand from the NAS and then transforms the digitally stored music into high quality analogue audio.

This describes a default network architecture for the Klimax DS. Many other network configurations are possible depending on specific requirements.

KLIMAX DS SYSTEM INSTALLATION AND SETUP

2 SET UP OF THE NAS

To make installation easier, here we describe in detail the steps needed to setup an Infrant ReadyNAS NV+. For other NAS devices consult the documentation from your NAS vendor.

These instructions assume that the NAS has been supplied with hard drives pre-installed. The RAID configuration for the Infrant ReadyNAS NV+ is best set at X-RAID. For other manufacturers' devices RAID 5 should be chosen to allow easy future expansion of storage.

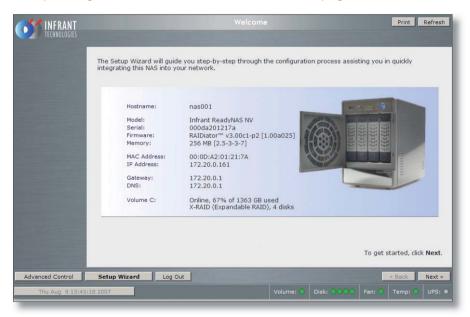
1. On the installation PC install the RAIDar software supplied with the NAS. This will scan the network and allow the user to open the NAS setup screens.

	MAC Address	Model	Host Name	IP Address	Vol Disk:	1	2	3		5	6	7	Tmp	Fan	UPS	Info	
•	00:0D:A2:01:42:39	ReadyNAS NV+ [X-RA.	nas002	10.15.10.0	0			0	0					0	0	3.01c1-p6	

Select the appropriate NAS (if more than one is available), then press 'Setup'.

You will be asked for a user name and password. The default User Name is 'admin', and the password 'Infrant1'.

2. After you login, select 'Setup Wizard'. Progress through the set-up process by following the on-screen instructions on each page, and pressing the 'Next' button to move to the next page.



3. The 'Contact' Page

Linn recommends that the Linn installer provides a service email contact in the contact page of the NAS configuration. If there are any problems with the NAS, the dealer will receive an email notification from the NAS. This allows the problem to be diagnosed and corrective action taken before the user is aware that a problem exists.

2 SET UP OF THE NAS (continued...)

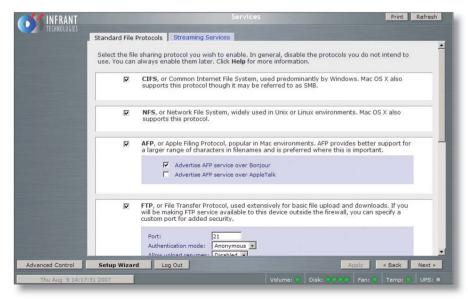
4. The 'Ethernet' Page

Select a hostname for the NAS, e.g. 'nas001'. This name should be unique to the network. This name will be used to refer to the NAS from other devices on the network, for example the ripping software (please refer to the *EAC and FLAC Installation* section for details.)

Select the IP address assignment appropriate for the network the Klimax DS system is being installed into (see *Overview* section). 'Use values from DHCP server' will be appropriate if the installation matches the network architecture described in the *Overview* section.

5. The 'Standard File Protocols' page

Within FTP, set 'Masquerade as' to the NAS hostname (e.g. nas001).



6. The 'Share List' Page

From the Share List click on the CIFS icon on the line beginning 'media'. This will take you to 'Share Options'...

INFRANT						Print	Email	Refres	h He	lp
TECHNOLOGIES	dd Shares									
Silare List										
Shares on R/	AID Volumes									
Click on the ac level in the sta Help .	ccess icon to customize atus bar. Quota values	the access of 0 disable	control. Plac s quota enfo	e the mous prcement. F	e cursor or instru	over th	ne icon to n how to	display access t	the curr he share	ent a es, cl
Share Name	Description	Password	Disk Used	Quota (MB)	CIFS	NFS A	FP FTP/S	HTTP/S	Rsync	C
backup	Backup Share		0 MB	0	2					
media	Media Server Share		181041 MB	0	R	2		R.	2	
Shares on U	SB Storage Devices									- 8
No USB shares	s exist. Plug in a USB st	orage devic	e and click R	efresh to d	isplay a	USB sh	are.			
										- 8
Contraction of the local division of the										
									1	
Advanced Control Setup Wizard	Log Out		-			App	oly 4	Back	Next	> [
Thu Aug 9 14:21:39 2007			Vol	ume: 🔵 🛛 🕻	oisk: 🔘 🕻		Fan: 💿	Temp:	UPS:	

2 SET UP OF THE NAS (continued...)

7. The 'Share Options' Page

Set the default access to 'Read/Write'. Repeat this on the NFS, HTTP/S and Rsync tabs. Leave the AFP and FTP/S tabs set to 'Disabled'.

Select the Advanced Options tab.

Set the following settings: Share folder owner: media Share folder group: nogroup Share folder rights: Read/write Share group rights: Read/write Share folder everyone rights: Read/write Uncheck 'Set ownership and permission for existing files...' Check 'Grant rename and delete privileges to non-owner of files. '

This completes the initial setup of the NAS.

3 TwonkyMedia

Installing TwonkyMedia Server

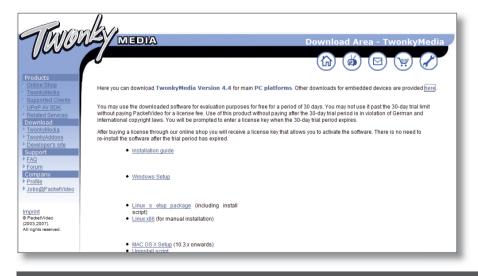
To complete the installation of the Infrant ReadyNAS, TwonkyMedia Server software has to be installed onto it. This is a UPnP media server and allows access to all material stored on the NAS. For this application we will describe setup for audio material only.

TwonkyMedia will present the music files to the user in such a way that they will be ordered by Artist, Album, Artist/Album, Genre etc... It gives various options for searching through the music and all this is explained below.

Downloading TwonkyMedia

1. Visit the TwonkyVision website: www.twonkyvision.de

Select 'TwonkyMedia' from the Download selection shown on the far left of the page.



2. From the download page click 'here' from the first line, taking you to downloads for embedded devices.

Select the download for Infrant ReadyNAS.

Chose to save the file to disc and select 'OK'. The download will begin. Select the 'Installation Guide' for the Infrant ReadyNAS, download the file and open it. This Installation Guide will guide you through the installation of TwonkyMedia onto the NAS.

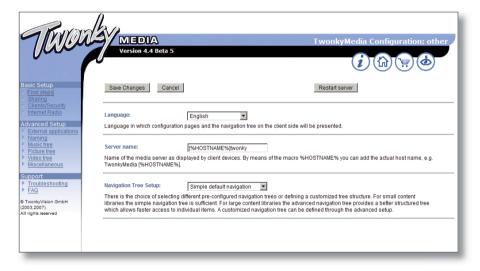
Suggested TwonkyMedia Setups

There are various options for setting up of TwonkyMedia which will effect how the information is displayed to the user. This can be customised for each individual customer as required.

- 3. Log onto the NAS. Select the Services page, Streaming Services.
- 4. Ensure the 'TwonkyMedia' service checkbox is enabled.
- 5. Select 'TwonkyMedia' and follow the http link to connect to the TwonkyMedia server.

3 TwonkyMedia (continued...)

6. Select 'First Steps' from the menu on the left hand side.



Here the name of the server can be set. This is necessary for installations where more than one NAS is available.

7. Select 'Sharing' from the left of the page.

Twon	MEDIA Version 4.4 Beta 5	TwonkyMedia Configuration: Sharing
Basic Setup > First steps > Sharing	Save Changes Cancel	Rescan content directories
 ClientisSecurity InternetRadio Vavanced Setup External applications Naming Musici tree Picture tree Video tree Miscellaneous Support FAQ Townsky/tuion GmbH 2003.2007). III rights reserved 	Content Locations:	the directory.

The settings for Content Location are important as they will be used when setting up EAC. Set these to correspond to the directory into which EAC will rip CDs.

After new CDs are ripped to the NAS, TwonkyMedia will automatically update the control device to enable the new material to be selected for playback.

3 TwonkyMedia (continued...)

8. Select 'Naming' from the left of the page.

Tavon	
	MEDIA TwonkyMedia Configuration: Nam
Jun	Version 4.4 Beta 5
Basic Setup > First steps > Sharing > Clients/Security	Save Changes Cancel Restart server
Internet Radio	Standardize titles:
Advanced Setup	Enable/ disable standardization of titles and artists, e.g. changing "The Beatles" to "Beatles, The"
External applications Naming Music tree Picture tree Video tree Miscellaneous	Folder prefix string: Folder prefix string to be prefixed to all folder names in folder navigation to help you differentiate folders from content items at the client device.
Support Troubleshooting FAQ TwonkyVision GmbH	All Tracks: Total Tracks Name for 'All Tracks' folder (server default used if left empty).
(2003,2007). All rights reserved	Playlists: Playlists Name of the playlists node in the navigation tree, leave empty if this node shall not be included in the navigation tree.
	Last played: Last played - Name of the auto generated playfist 1ast played', leave empty if this playfist should not be added to the navigation tree.

Tava	MEDIA TwonkyMedia Configuration: Namine Version 4.4 Beta 5
Basic Setup > First steps > Sharing > Clients/Security > Internet Radio Advanced Setup > External applications > Naming	All Pictures: Name for 'All Pictures' folder (server default used if left empty). All Videos: Name for 'All Videos' folder [server default used if left empty].
Music tree Picture tree Video tree Miscellaneous Support Troubleshooting FAQ	Music: Music Name for Music root folder, leave empty to suppress this folder. Pictures:
TwonkyVision GmbH (2003,2007). All rights reserved	Name for Video root folder, leave empty to suppress this folder. Videos: Name for Video root folder, leave empty to suppress this folder.
	- ALL -: Title of the - ALL - entry in the nodes of the navigation tree.

In the example above the Video and Pictures directories have been removed.

The '-ALL-' selection is also removed as this can take a lengthy period of time to display if there is a large amount of audio stored on the NAS.

3 TwonkyMedia (continued...)

9. Select 'Music Tree' from the left of the page.

WON	MEDIA Version 4-3		Twor	kyMedi	a Coni	figuration: Music tree
					i	
tup 0 <u>01</u>	Save Changes Cancel	1		Restart se	rver	
differurity t.R.adta	-	Name	Type	AD	c .	
d Setup	Music node 1:	Artist	Artist		3 💌	Add level
al applications	Music node 2:	Album	Album		3 💌	Add level
troe	Music node 3:	Folder	Folder		· #	Add level
tree	Music node 4:	ArtistAlbum	Artist		3 🛒	
Isneous			Album	×.	3 +	Add level
estooting	Music node 5:	Year/Artist	Vear			
LESSON A			Artist			
alos GmbH			Album			Add level
served	Music node 6:					Add level
		Add node				
	An individual music navigation tr addition an alpha sub-grouping					me to be presented in the navigation tree and the node type have to be sp
	Navigation Tree Setup:	Advanced default navigat	on 💌			
	There is the choice of selecting libraries the simple navigation to					

Apply the above settings.

10. Select the 'Miscellaneous' link from the left hand panel.

11. Set the 'Compilations Directory' setting to 'compilations'.

WO	MEDIA TwonkyMedia Configuration: Miscellanec
	Version 4.4
up Ips	Save Changes Cancel Restart server
Security Radio I Setup I applications	Ignore directories: AppleDouble Comma separated list of directories which shall be ignored during content scans (substring match).
ee tree ee	Compilation directories: Compilations Comma separated list of directories (or substrings) which shall be handled as music compilations
neous shooting	- Randomize playfists: If this option is enabled the server will randomize .m3u files on startup. This option should only be used if client devices do not directly support shuffle mode.
ion GmbH erved	Streaming Buffer Size: 16384 Buffer size in bytes which is used for streaming. Change this only if you experience video streaming problems. Value should be between 16000 and 128000.
	10000 and 128000.

4 EAC AND FLAC INSTALLATION

Linn recommends the use of EAC (Exact Audio Copy) for the ripping of CDs onto the NAS. This software is available free of charge from the Internet.

EAC Installation and Setup

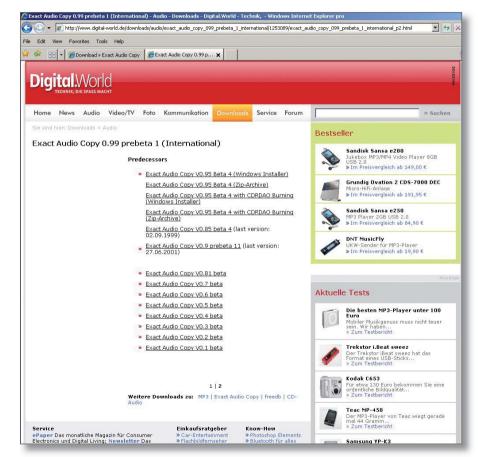
This tool will be required for copying CDs to the NAS. Linn have included a configuration file for this tool which contains the recommended setup for accurate, lossless ripping.

EAC Installation

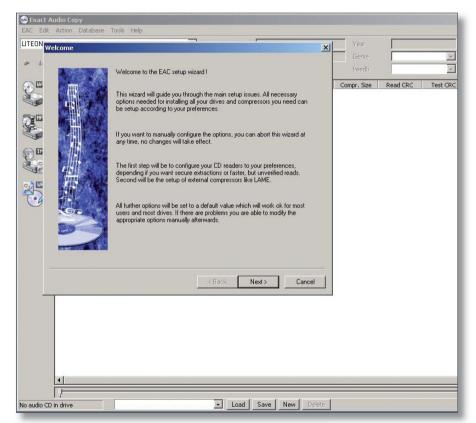
- 1. Go to the following website: http://www.exactaudiocopy.de/en/index.php/resources/download/
- 2. Select the link for English download.



3. Select 'Exact Audio Copy V0.95 beta 4, Windows Installer'. The download will begin. Once the download is complete double-click the downloaded .exe file to start the installation process. Follow the on screen instructions. At the end of the install run EAC.



4. EAC will autorun the EAC setup wizard. Select 'Cancel' to prevent this running.



EAC Configuration

 Copy the files contained within the 'Profile' directory on the disc supplied with the Klimax DS, onto the hard disk of the installation PC. Using Windows Explorer, copy the files into Program Files\Exact Audio Copy\Profiles.

Action Database Tools		CD THA		Yest		
D-NOW LTD 163 Adapter.	1 10.0	and a second second second				
a 144 44 MA MA	a 🕤	To treedb	Various Artists	freedb		
Title	Track	Start Leont	h Gan Sizi	Compr. Size R	ead CRC Test CRC	CRC Pre-Empha
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		Title Track	Title Track Start Lengt Title Track Start Lengt Title Clyprogram Files/Exact Audio File Edk View Pavorkes Tor Comparison Files/Exact A Address C Clyprogram Files/Exact A Linn_EAC.cfg	Itel Track Start Length Gap Start Title Track Start Length Gap Start Image: Comparison of the start File Edd Wew Favorities Total File File Start Length Gap Start Image: Comparison of the start File Edd Wew Favorities Total File File File Start File Fil	It It <td< td=""><td>Itte under the under the</td></td<>	Itte under the

6. From EAC, select 'Load Profile' and browse to Program Files\Exact Audio Copy\Profiles.

🐵 Exact Audio Copy		and the second	
EAC Edit Action Database	Tools He	lp	
EAC Options	F9	0 .	CD Title
Drive Options	F10		CD Artist
Compression Options freedb / Database Options	F11	: 💽 🖓 freedb	I
WAV Editor Options	Alt+Q		
		Track Start	Length
Configuration Wizard Profiles		Load Profile Shift	UE1
Fromes		Save Profile Shift	
Exit	Alt+F4		
IMG IMG			
der			
WRI			
7.7			

7. Select "Linn_EAC095.cfg" for version 0.95 of EAC. Additional configurations are provided for newer versions of EAC, if required.

Exact Audio Copy EAC Edit Action Database Tools	Halp						
LITEON DVD-ROM LTD163 Adapter: 1			[Year		
▶ II ⊒ HI HI ₩ ₩	🔺 🕑 🌾 freedb	CD Artist	Various Artist	\$	Gienre freedb		×
Title	Track Start	Length	Gap	Size	Compr. Size	Read CRC	Test CRC
Load Option Pro					?×		
Look in			I G	1 🖻 📰			
	Linn_EAC.cfg						
My Documents							
1							
My Computer							
My Network Places		_EAC.cfg C Profiles (*.cfg)		- -	Open Cancel		
	Fries of type.	. Fromes (.crg)		<u> </u>	Cancel		
•							
No audio CD in drive		▼ Load	Save New	Delete			

8. Open the EAC Options dialogue.

Tools	Help				
F9	0		-	CD T	itle
		•	freedb	CD A	
AIC+Q		Track	Start		Length
	+				
Alt+F4					
	F9 F10 F11 F12 Alt+Q	F9 0 F10 F11 F12 Alt+Q	F9 0 F10 • F11 • F12 • Alt+Q Track	F9 0 F10 • F11 • F12 • Alt+Q Track	F9 0 CD T F10 CD A CD A F12 Alt+Q Track Start

9. Select the Directories tab. Click the 'Use this directory' radio button and enter the details of the NAS. This should take the following form:

\\hostname.domain_name\media\music\flac

Where,

Hostname - defaulted to NAS001

Domain Name – automatically generated by any DNS which would have to be on the same network as the NAS

If there is no DNS you may have to map the NAS as a web page within Windows Explorer. When this is complete the directory will have the form:

\\192.168.1.3\media\music\flac

The IP address will be that of the NAS. This is shown on the front panel of the NAS by pressing and releasing the standby switch.

Using the setup wizard lets EAC determine the best setup for your PC's drive.

E	EAC options	? ×
L	Extraction General Tools Normalize Filename Catalog Directories Write Interface	
	Extraction General Tools Normalize Filename Catalog Directories Write Interface Standard directory for extraction C Ask every time (default showing last used directory) C Use this directory 01.design.linn.co.uk\media\music\flad Browse	
	OK Car	ncel

10. Select 'Drive Options' from the menu. Insert an audio CD into the appropriate ROM drive.

🐵 Exact Audio Copy	
EAC Edit Action Database	Tools Help
EAC Options	F9 0 CD Title
Drive Options	F10
Compression Options	F11 CD Artist
freedb / Database Options	
WAV Editor Options	Alt+Q Track Start Length
Configuration Wizard	index start conger
Profiles	•
Exit	Alt+F4

11. Click 'Detect Read Features'.

The test will start.

tions for drive LITEON DVD-ROM LTD163		? ×
Extraction Method Drive Offset / Speed Gap Detection		
Secure modes		
Secure mode with following drive features (recommended)		
Drive has 'Accurate Stream' feature		
Drive caches audio data		
☑ Drive is capable of retrieving C2 error information		
C Paranoid mode (not recommended)		
🗖 Disable CD-ROM drive cache		
Synchronized modes		
C Fast mode		
Burst modes		
C Burst mode		
Detect Read Features Examin	e C2 Feature	
	OK	Cancel
•		

www.linn.co.uk

12. When complete you will then be asked to apply the results.

	Offset / Speed Gap Detection			
yzing		×		
etecting CD-ROM drive	features	mmended)		
aching :	No			
ccurate Stream :	Testing	ormation		
2 Error Info :				
Please wait ! Calcula	tion could take some minutes !			
Do not produce loa	d while detecting features !			
formation :				
				- 1
	Apply Cancel	Exan	nine C2 Feature	
			OK	Cancel
	ching : curate Stream : Error Info : Please wait ! Calcula Do not produce loa ormation : hereas the 'Accurate S thereas the 'Accurate S	Curate Stream : Testing Error Info : Please wait ! Calculation could take some minutes ! Do not produce load while detecting features ! ormation : hereas the 'Accurate Stream' feature is useful for audio traction, the 'Caching' feature will make exact extraction en more complicated and insecure !	ching : No curate Stream : Testing Error Info : Please wait ! Calculation could take some minutes ! Do not produce load while detecting features ! ormation : hereas the 'Accurate Stream' feature is useful for audio traction, the 'Caching' feature will make exact extraction en more complicated and insecure !	Indexed (indexed) (indexed

13. Click 'Apply'. This will close the current window and take you back to the Extraction Method tab. Select 'OK' from this tab to exit Drive Options. Now, the current configuration will have the correct drive features and be pointing to the desired NAS.

Extraction Method Driv Analyzing	e Uffset / Spee	ed Gap Detection	×	
Detecting CD-ROM dr	ive features		nmended)	
Caching :	No			
Accurate Stream :	Yes			
C2 Error Info :	Yes		ormation	
Do not produce Information : Whereas the 'Accurat extraction, the 'Cachin even more complicate	g' feature will mak	is useful for audio		
	Apply	ОК	Examine C2 F	eature
				OK Ca

14. Save this new configuration.

/D-ROM LTD163 Adapter: 1 ID:)	- ci	D Title	Symphony No.6	and No.7	Year	2006	_		
		~ CI	D Artist	Sibelius, Jean		Genre	Orchestral	•		
⊒ સ્તર્ય સ્ક્રમ્સ ₹	•	freedb		Various Artist	s	freedb	Classical	•		
Title	Track	Start	Length	Gap	Size	Compr. Size	Read CRC	Test CRC	CRC	Pre
En Saga, Op.9	01	0:00:00.00	0:20:01.06	Unknown	202.05 MB	46.91 MB				
Symphony No.6 in D minor,		0:20:01.06	0:09:53.48	Unknown	99.86 MB	23.18 MB				
Symphony No.6 in D minor, .		0:29:54.54	0:06:23.32	Unknown	64.50 MB	14.97 MB				
Symphony No.6 in D minor, .		0:36:18.11	0:04:00.56	Unknown	40.50 MB	9.40 MB				
Symphony No.6 in D minor, . Symphony No.7 in C, Op.105		0:40:18.67 0:51:31.10	0:11:12.18 0:21:54.03	Unknown Unknown	113.08 MB 221.05 MB	26.25 MB 51.32 MB				
<u>a</u>]										
1										

Installing FLAC Encoder

This is used to convert the WAV files, generated by copying a CD, to FLAC files. The encoder is lossless and gives a size reduction of up to 40%.

Go to the website:

http://flac.sourceforge.net/download.html

15. Select 'FLAC for Windows with installer'. This will redirect you to another site and the download will begin. Once complete, double-click the executable and install the encoder.

Follow the on-screen instructions. EAC will be automatically configured to use this encoder. There are no more steps to follow to make this happen.



Copying CDs onto the NAS

1. Insert the CD into the PC's drive. Start EAC. The screen will show the disc contents.

N DV	/D-ROM LTD163 Adapter: 1 ID: 0		🔽 CC) Title	A Place In My He	eart	Year			
		~) Artist	Carol Kidd		Genre		-	
11	길 (여 석 杼 ₩ 폭	•	freedb		Various Artists		freedb	Jazz	-	
AU	Title	Track	Start	Length	Gap	Size	Compr. Size	Read CRC	Test CRC	CRC
-	🞜 Little Girl Blue	01	0:00:00.00	0:04:27.22	Unknown	44.96 MB	10.44 MB			
	Pennies From Heaven	02	0:04:27.22	0:03:36.63	Unknown	36.47 MB	8.47 MB			
_	🞜 The Charm Of You	03	0:08:04.10	0:02:50.52	Unknown	28.71 MB	6.66 MB			
	🕫 I've Got You Under My Skin	04	0:10:54.62	0:02:31.58	Unknown	25.53 MB	5.92 MB			
	💋 Put Your Dreams Away	05	0:13:26.45	0:03:27.57	Unknown	34.95 MB	8.11 MB			
	The Very Thought Of You	06	0:16:54.27	0:04:27.00	Unknown	44.91 MB	10.42 MB			
KG	# The Sunny Side Of The Street	07	0:21:21.27	0:03:35.30	Unknown	36.23 MB	8.41 MB			
	If You Are But A Dream	08	0:24:56.57	0:03:37.28	Unknown	36.56 MB	8.49 MB			
4	🕫 I'll Never Smile Again	09	0:28:34.10	0:04:07.22	Unknown	41.60 MB	9.65 MB			
_	I Get A Kick Out Of You	10	0:32:41.32	0:04:44.68	Unknown	47.92 MB	11.12 MB			
RI	I Get Along Without You Ver	11	0:37:26.25	0:04:25.57	Unknown	44.70 MB	10.38 MB			
2	Bewitched, Bothered And B	12	0:41:52.07	0:04:31.58	Unknown	45.71 MB	10.61 MB			
	1									
	1									
	1									

2. To start the process of copying the CD onto the NAS, select 'Action', 'Copy Selected Tracks', 'Compressed'. Alternatively, the key shortcut is Shift + F5.

Copying will begin.

D/	Copy Selected Tracks Test & Copy Selected Tracks	•		pressed F5 pressed Shi	ft+F5	eart	Year				
a l	Copy Range	,		Sugar Le	Sarorread		Genre		-		
	Test Selected Tracks Copy Image & Create CUE Sheet	F8		Γ	Various Artist	5	freedb	Jazz	-		
IAU	Copy Image & Create CUE Sneet Catalog Selected Tracks		rt	Length	Gap	Size	Compr. Size	Read CRC	Test CRC	CRC	Pre-Emp
>	Copy Selected Tracks Index-Based	•	0.00	0:04:27.22	Unknown	44.96 MB	10.44 MB				No
			7.22	0:03:36.63	Unknown	36.47 MB	8.47 MB				No
			4.10	0:02:50.52	Unknown	28.71 MB	6.66 MB				No
	Test Gaps On Silence		4.62	0:02:31.58	Unknown	25.53 MB	5.92 MB				No
	Create CUE Sheet	•	6.45	0:03:27.57	Unknown	34.95 MB	8.11 MB				No
			4.27	0:04:27.00	Unknown	44.91 MB	10.42 MB				No
IG	 Append Gaps To Previous Track (default) 		1.27	0:03:35.30	Unknown	36.23 MB	8.41 MB				No
	Append Gaps To Next Track		6.57	0:03:37.28	Unknown	36.56 MB	8.49 MB				No
٦ 🗠	g= Til Never Sinile Hgain 02	0.2010	4.10	0:04:07.22	Unknown	41.60 MB	9.65 MB				No
	🕫 I Get A Kick Out Of You 10	0:32:4	1.32	0:04:44.68	Unknown	47.92 MB	11.12 MB				No
3	🕫 I Get Along Without You Ver 11	0:37:2	26.25	0:04:25.57	Unknown	44.70 MB	10.38 MB				No
>9	Bewitched, Bothered And B 12	0:41:5	52.07	0:04:31.58	Unknown	45.71 MB	10.61 MB				N
9											
,											
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9											
9	4										

3. On completion the following will be displayed and the disc will be ejected. Select 'OK'.

	TD163 Adapter: 1 ID: 0	- CD		A Place In My He	eart	Year				
stracting Audio	Data	_ _ ×	ist ist	Carol Kidd		Genre		•		
Copy Track	12			Various Artists	3	freedb	Jazz	•		
Filename :	12 - Bewitched, Bothered And B	ewildered.wav	Length	Gap	Size	Compr. Size	Read CRC	Test CRC	CRC	Pre-Emp
Track Progress			0:04:27.22	Unknown	44.96 MB	10.44 MB				No
Hock Hogicss			D:03:36.63	Unknown	36.47 MB	8.47 MB				No
		4:31.76	0:02:50.52	Unknown	28.71 MB	6.66 MB				No
Track	100.0 % Time	0:00:34	D:02:31.58	Unknown	25.53 MB	5.92 MB				No
Speed	7.8 X Est. Remaining	0:00:00	D:03:27.57	Unknown	34.95 MB	8.11 MB				No
			0:04:27.00	Unknown	44.91 MB	10.42 MB				No
Total Progress			0:03:35.30	Unknown	36.23 MB	8.41 MB				Ne
rotarriograd			0:03:37.28	Unknown	36.56 MB	8.49 MB				No
			0:04:07.22	Unknown	41.60 MB	9.65 MB				No
Total	100.0 % Time	0:06:53	0:04:44.68	Unknown	47.92 MB	11.12 MB				No
Speed	6.7 X Est. Remaining	0:00:00	0:04:25.57	Unknown	44.70 MB	10.38 MB				N
Reading Trac Copy OK Compress Tra	k ck By External Program									
Audio Extraction	Complete									
Power Down	after extraction finished									
	kip Track OK	-1								
			-							

4. Select 'OK' again. The CD will now be copied onto the NAS. No further actions are required. After a short time, the new content will be available to select and listen to.

	-	CD Title	A Place In My He	art	Year				
	122	CD Artist	Carol Kidd		Genre		*		
Status and Error Messages			Various Artists		freedb	Jazz	-		
Track status and errors			Gap	Size	Compr. Size	Read CRC	Test CRC	CRC	Pre-Empha
Track table and errors Track 19 Peak level 85.4 % Track upsty 100.0 % Copy 0K Track 11 Peak level 85.4 % Track upsty 100.0 % Copy 0K No errors occured End of status report Review Tracks	og	ОК	Ukiroovn Ukiroovn	44.96 MB 28.71 MB 22.53 MB 24.95 MB 44.91 MB 36.56 MB 36.56 MB 41.60 MB 47.92 MB 44.70 MB 45.71 MB	10.44 MB 8.47 MB 8.11 MB 8.11 MB 10.42 MB 8.41 MB 8.49 MB 9.45 MB 10.38 MB 10.38 MB 10.61 MB				No No No No No No No

Ripping a large collection of CDs

If the customer has a large collection of CDs that need to be ripped to the NAS, using the above method may be too time consuming. An alternative method is to use a ripping service, details of which can be found on the Klimax DS product information page on Linfo.

5 THE CONTROL DEVICE, AND INSTALLING THE LINN GUI AND CONFIG APPLICATION

You may need to fully charge the battery on the control device before continuing with this procedure (see the information supplied with the control device), this may take an hour or longer.

- 1. Update the control device with .NET 2.0, available at www.microsoft.com/net.
- 2. Copy the Linn GUI installer to the control device.
- 3. Copy the Linn Config installer onto the installation PC.
- 4. Run both the installers. Do not launch the Linn GUI or Linn Config at this time.
- 5. On the control device, disable the "Auto Right Click" behaviour. This can be done by locating the notification area at the bottom-right of the Windows screen, and clicking the Touchkit: USB Controller icon
 - Select the Setting tab
 - Press the Option button
 - Deselect 'Enable Auto Right Click'.
- 6. You must give the PC's firewall permissions for the Linn Config and Linn GUI to access the network.

If the owner uses the Windows Firewall, follow the instructions from the following link to add Linn Config and Linn GUI.

http://www.microsoft.com/windowsxp/using/networking/security/ winfirewall.mspx If they use a different firewall, consult the vendor's manual for instructions.

Note:

If you update the Klimax DS system with new Linn Config or Linn GUI software, you must add the new software to the firewall permissions.

7. To configure you Klimax DS system, follow the instructions in the *Linn Config Application* section.

6 KLIMAX DS INSTALLATION

This section describes how to connect the Klimax DS into a Linn hi-fi system.

Unpacking

The Klimax DS is supplied with the following:

- handset
- 2 x AAA batteries for the handset
- 1 pair of silver interconnect cables
- RS232 lead
- mains lead
- CD-ROM
- warranty pack
- owner's manual

We recommend that the owner retains all packaging in case they need to transport the Klimax DS at a later date.

Positioning

The Klimax DS can be positioned almost anywhere, but please consider the following points:

- The unit should be placed on a flat, stable and rigid surface.
- Do not position the unit where sunlight can shine (whether directly, diffused or reflected) on its display as the infra-red (IR) radiation in sunlight will be picked up by the unit's IR remote sensor and this can adversely affect its operation. Similarly, some electrical devices such as plasma TVs, fluorescent lights and energy saving lamps can emit IR which can likewise affect the operation.
- For best performance, do not stack the unit with other products. Ideally, position the unit on a shelf by itself or, if proximity to other products is unavoidable, positioning side-by-side is preferable to stacking.
- The unit should not be situated above, or otherwise directly adjacent to sources of heat such as radiators, power amplifiers etc. Nor should it be enclosed in a cabinet with such devices.
- The unit itself produces very little heat; however it is advisable to allow a little space to the sides, rear and above the unit (ideally 10 cm / 4") for air circulation which will allow any heat to dissipate.

6 KLIMAX DS INSTALLATION (continued...)

Back panel



1. **UNBALANCED OUT RIGHT/LEFT** For connection to a Linn Klimax Kontrol or other pre-amplifier

2. BALANCED OUT RIGHT/LEFT

For connection to a Linn Klimax Kontrol or other pre-amplifier

3. **RESET**

Used when reprogramming the unit (see Troubleshooting document)

4. EARTH GROUND

For connecting the unit to an earthing terminal if no mains earth is available

- 5. **RS232 1, 2** Port 1 is for connecting to a Linn CD12, port 2 for a Linn Klimax Kontrol
- 6. **ETHERNET** For connecting the unit to the network switch
- 7. **OFF, ON** Mains power switch
- 8. **POWER** Mains power inlet

6 KLIMAX DS INSTALLATION (continued...)

Connecting to the mains supply

The Klimax DS contains an automatic internal mains voltage switch. This switch operates on all worldwide mains voltages from 100 V to 240 V. The unit can be connected to any worldwide mains voltage with no adjustment.

This unit must be earthed. Use the earthed moulded mains lead supplied, or if no mains earth is available, ensure the product's EARTH GROUND connector is connected to an earthing terminal.



RS232 connection on Klimax Kontrol and CD12

For communication to take place between the components in a Klimax DS system, the RS232 connection must be enabled on the Klimax Kontrol and CD12.

Klimax Kontrol

The RS232 Connection user option must be set to 'Enabled'. This is the default setting, so unless it has been changed no alteration is required. If the setting has been changed, or you wish to check it, follow the instructions below.

- 1. Put the Klimax Kontrol into standby.
- 2. Hold STANDBY on the front panel until the front panel display shows 'SLEEP DISPLAY'.
- 3. Repeatedly press SOURCE until the display shows 'RS232 CONNECTION'.
- 4. To change the setting, press VOLUME +.
- 5. Press STANDBY.

CD12

To enable the RS232 connection on the CD12 requires an internal change to the unit. This procedure is detailed in the CD12 Software Pack Version 1.3 document, which can be found within the following software pack CD12 boot-PROM Upgrade Procedure Rev. 2, on Linfo's Sondek CD12 product information page.

7 THE LINN CONFIG APPLICATION

The Linn Config application is used to configure the settings on your Klimax DS as well as a Klimax Kontrol and CD12.

- 1. Switch on Klimax Kontrol and CD12.
- 2. Switch on the Klimax DS.
- 3. Launch the Linn Config if you have not already done so.

loom	Device Type	Product ID	MAC Address	IP Address	
fault	Klimax DS	11184658	40000020012	172.20.4.223	
ersion Auto	Configure Advanced Config	nure Diagnostics			
ion Auto	Configure Advanced Config	gure Diagnostics			
rsion Auto	Configure Advanced Config	gure Diagnostics			
rsion Auto	Configure Advanced Config	gure Diagnostics			
rsion Auto	Configure Advanced Config	gure Diagnostics			
rsion Auto	Configure Advanced Config	gure Diagnostics			
sion Auto	Configure Advanced Config	gure Diagnostics			
sion Auto	Configure Advanced Config	gure Diagnostics			
sion Auto	Configure Advanced Config	gure Diagnostics			
sion Auto	Configure Advanced Config	gure Diagnostics			
sion Auto	Configure Advanced Config	gure Diagnostics			
sion Auto	Configure Advanced Config	gure Diagnostics			
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sion Auto	Configure Advanced Config	gure Diagnostics			
sion Auto	Configure Advanced Config	gue Diagnostics			
sion Auto	Configure Advanced Config	gure Diagnostics			
sion Auto	Configure Advanced Config	gure Diagnostics			

4. Highlight the Klimax DS and wait until the Linn Config connects to the unit. The 'Version' tab contains information on the Klimax DS for use by Linn Service personnel.

mom	Device Type	Product ID	MAC Address	IP Address	
fault	Klimax DS	11184658	40000020012	172.20.4.223	
oftware Version:		· · ·			
oftware Version: .F File: oduct Id: AC Address:	•	· · ·			
	1.0-0.35 /bin/.binaries/Ds12_m 11184658 400000020012 172.20.4.223	· · ·			
oftware Version: F File: oduct Id: AC Address: Address: Board Type CAS678P1R1	1.0-0.35 /bin/.binaries/Ds12_m 11184658 40000020012 172.20.4.223 B 5	p_m.elf oard ID 3000002720:8c14			
oftware Version: F File: oduct Id: AC Address: Address: Board Type CAS678P1R1	1.0-0.35 /bin/.binaries/Ds12_m 11184658 40000020012 172.20.4.223 B 5	p_rr.elf oard ID			
oftware Version: F File: oduct Id: AC Address: Address: Board Type CAS678P1R1	1.0-0.35 /bin/.binaries/Ds12_m 11184658 40000020012 172.20.4.223 B 5	p_m.elf oard ID 3000002720:8c14			
oftware Version: F File: oduct Id: AC Address: Address: Board Type CAS678P1R1	1.0-0.35 /bin/.binaries/Ds12_m 11184658 40000020012 172.20.4.223 B 5	p_m.elf oard ID 3000002720:8c14			
oftware Version: .F File: oduct Id: AC Address: Address: Board Type	1.0-0.35 /bin/.binaries/Ds12_m 11184658 40000020012 172.20.4.223 B 5	p_m.elf oard ID 3000002720:8c14			
oftware Version: F File: oduct Id: AC Address: Address: Board Type CAS678P1R1	1.0-0.35 /bin/.binaries/Ds12_m 11184658 40000020012 172.20.4.223 B 5	p_m.elf oard ID 3000002720:8c14			
oftware Version: F File: oduct Id: AC Address: Address: Board Type CAS678P1R1	1.0-0.35 /bin/.binaries/Ds12_m 11184658 40000020012 172.20.4.223 B 5	p_m.elf oard ID 3000002720:8c14			

7 THE LINN CONFIG APPLICATION (continued...)

5. Select the 'Auto Configure' tab. Select the configuration appropriate for the Klimax DS system, and press 'Run'.

🗑 Linn Configurat	tion Application				_ 🗆 🗙
Room	Device Type	Product ID	MAC Address	IP Address	×
Default	Klimax DS	11184658	400000020012	172.20.4.223	
DemoRelease	Klimax DS	4321013	40000002000d	172.20.4.245	
-					
J					<u>.</u>
Version Auto Conf	figure Advanced Config	ure Diagnostics			
Standard Configurat	tion 1 - Default (DS12 on tion 3 - Klimas Kontrol + D tion 3 - Klimas Kontrol + D tion 5 - Klimas Kontrol + D	S12 on input 1 (balance S12 on input 2 (phone)	of Interconnectal Metconnectal ni input 2 ni input 1		Run
Online Cor	nnected				1.0-0.41 .::

6. Wait until the configuration has completed, then close the Automatic Configuration notice and select the 'Advanced Configure' tab.

			1		
loom	Device Type	Product ID	MAC Address	IP Address	
efault efault	Klimax DS Klimax Kontrol	11184658 Unknown	400000020012 N/A	172.20.4.223 N/A	
erault	Nimax Nontrol	Unknown	N/A	N/A	
			Automatic Configura	tion X	
			Which is a state of the local data of the local		
andard Confic	Configure Advanced Config juration 1 · Default (DS12 on juration 2 · Klimax Kontrol + D	its own)	Auto Config Complete	d SuccessFully	
tandard Confic tandard Confic tandard Confic tandard Confic		its own) S12 on input 1 (balance S12 on input 2 (phono i S12 on input 1, CD12 o	d nterconnects;	d SuccessFully	Run

7 THE LINN CONFIG APPLICATION (continued...)

7. On this screen you are able to customise aspects of the configuration, for example you may want to change the Room Name, Device Name or Display Brightness. You are also able to add additional source products that you wish to select from the Linn GUI. If you change items in the 'Advanced Configuration' tab, press 'Reboot'.

Room	Device Type	Product ID	MAC Address	IP Address		
Main Room	Klimax DS	11184658	400000020012	172.20.4.223		
Main Room	Klimax Kontrol	Unknown	N/A	N/A		
	onfigure Advanced Config	ure Diagnostics				
Device Room Name		ure Diagnostics	Main Room			
Device Room Name Device Name	3	ure Diagnostics	Klimax DS			
Device Room Name Device Name Handset Com	e mands Accepted	ure Diagnostics	Klimax DS Yes			
Device Room Name Device Name Handset Com Device Conn	e mands Accepted ected on Input	ure Diagnostics	Klimax DS Yes 1		-	
Device Room Name Device Name Handset Com Device Conn Klimax Kontro	e imands Accepted ected on Input il Connected	ure Diagnostics	Klimax DS Yes 1 Yes			
Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Conner	e imands Accepted ected on Input il Connected cted		Klimax DS Yes 1 Yes No	List		Reboot
Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Connee Auxillary Sou	e imands Accepted ected on Input il Connected cted		Klimax DS Yes 1 Yes	List		Reboot
Device Room Name Device Name Device Name Handset Com Device Conn Klimax Kontro CD12 Conner Auxillary Sou Display	e imands Accepted ected on Input il Connected cted ice Setup for LinnGui (Re		Klimax DS Yes 1 Yes No Connection: Auxillary Source	List		Reboot
 Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Conner Auxillary Sou Display Brightness (0 	e mands Accepted ected on Input I Connected cted rce Setup for LinnGui (Re : Off, 100: Full Brightness)		Klimax DS Yes 1 Yes No Connection Auxillary Source 100	List		
Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Conner Auxillary Sou Display Brightness (0	e imands Accepted ected on Input il Connected cted ice Setup for LinnGui (Re		Klimax DS Yes 1 Yes No Connection: Auxillary Source	List		Restore
Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Connee Auxillary Sou Display Brightness (0	e mands Accepted ected on Input I Connected cted rce Setup for LinnGui (Re : Off, 100: Full Brightness)		Klimax DS Yes 1 Yes No Connection Auxillary Source 100	List		
Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Connee Auxiliary Sou Display Brightness (0 Turn Display	e mands Accepted ected on Input I Connected cted rce Setup for LinnGui (Re : Off, 100: Full Brightness)		Klimax DS Yes 1 Yes No Connection Auxillary Source 100	List		Restore
 Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Conner Auxillary Sou Display Brightness (0 	e mands Accepted ected on Input I Connected cted rce Setup for LinnGui (Re : Off, 100: Full Brightness)		Klimax DS Yes 1 Yes No Connection Auxillary Source 100	Liet		Restore
Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Connee Auxiliary Sou Display Brightness (0 Turn Display	e mands Accepted ected on Input I Connected cted rce Setup for LinnGui (Re : Off, 100: Full Brightness)		Klimax DS Yes 1 Yes No Connection Auxillary Source 100	List		Restore
Device Room Name Device Name Handset Com Device Conn Klimax Kontro CD12 Connee Auxiliary Sou Display Brightness (0 Turn Display	e mands Accepted ected on Input I Connected cted rce Setup for LinnGui (Re : Off, 100: Full Brightness)		Klimax DS Yes 1 Yes No Connection Auxillary Source 100	Liet		Restore

8. For systems with a Klimax Kontrol.

From the top window, select Klimax Kontrol. On the 'Advanced Configuration' tab you will see the current configuration settings for the unit. You are able to change the settings, if required.

Room	Device Type	Product ID	MAC Address	IP Address		
ounge	Klimax DS	11184658	40000020012	172.20.4.223		
ounge	Klimax Kontrol	Unknown	N/A	N/A		
1	1.1. 10.0	1 1				
/ersion Auto Configure	Auvanceu coning	ure Diagnostics				
Device					•	
Room Name						
			Lounge		1	
Handset Commands	Accepted		Lounge No			
	Accepted					
Handset Commands			No			
Handset Commands Volume Limit Startup Source Pres	et		No 100			
Handset Commands Volume Limit Startup Source Pres Startup Source Pres	et et Enabled		No 100 1			Rebot
Handset Commands Volume Limit Startup Source Pres Startup Source Pres Startup Volume Pres	et et Enabled set		No 100 1 Yes			Reboot
Handset Commands Volume Limit Startup Source Pres Startup Source Pres	et et Enabled set Et Enabled		No 100 1 Yes 40			Reboot
Handset Commands Volume Limit Startup Source Pres Startup Source Pres Startup Volume Pres Startup Volume Pres	et et Enabled set Et Enabled		No 100 1 Yes 40 Yes			Reboot
Handset Commands Volume Limit Startup Source Pres Startup Source Pres Startup Volume Pres Startup Volume Pres Volume Ramp Rate	et et Enabled set Et Enabled		No 100 1 Yes 40 Yes 10			
Handset Commands Volume Limit Startup Source Pres Startup Volume Pres Startup Volume Pres Volume Ramp Rate Mute Rate	et et Enabled set Et Enabled		No 100 1 Yes 40 Yes 10 10			Reboot Restore Defaults
Handset Commands Volume Limit Startup Source Pres Startup Volume Pres Startup Volume Pres Volume Ramp Rate Mute Rate	iet iet Enabled iet Enabled		No 100 1 Yes 40 Yes 10 10			Restore

9. If a CD12 is part of the Klimax DS system, you can select it from the top window and under the 'Advanced Configuration' tab make changes to its configuration.

8 FINAL STEPS

This section describes the final steps involved in getting the Klimax DS system up and running.

Final steps

- 1. Turn on the NAS.
- 2. Turn on the network switch and the wireless access point.
- 3. Wait for the NAS to finish booting.
- 4. Turn on the Klimax DS and the rest of the hi-fi system.
- 5. Turn on the control device and start the Linn GUI.
- 6. Follow the instructions in the *Operation* chapter of the Klimax DS' owner's manual.

9 TECHNICAL SPECIFICATION

Date of introduction	August 2007
Туре	Digital music player
Size	(H) 60 mm x (W) 350 mm x (D) 355 mm (H) 2.3 inches x (W) 15 inches x (D) 14.2 inches
Weight	10 kg 22 lb
Supported file types	WAV, FLAC
Audio sample rates	44.1 k, 48 k, 88.2 k, 96 k, 176.4 k, 192 k
Word depths	16 – 24 bits
Analogue audio outputs	Stereo RCA phono sockets, stereo XLR balanced audio outputs
Ethernet interface	100Base-T RJ45
Control protocol	Compatible with UPnP [™] media servers
Local control	RS232 x 2 Luminous remote control handset 128 x 32 front panel display
Power supply	Switching power supply with auto-ranging (AC 100 – 120 V @ 50 – 60 Hz) (AC 220 – 240 V @ 50 – 60 Hz)
Power consumption	13 W