LINN
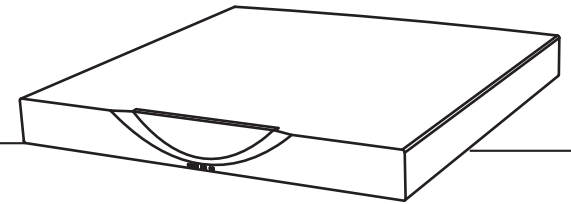
KLIMAX DS

DIGITAL STREAM PLAYER

SYSTEM INSTALLATION AND SETUP MANUAL

KLIMAX DS SYSTEM

INSTALLATION AND SETUP
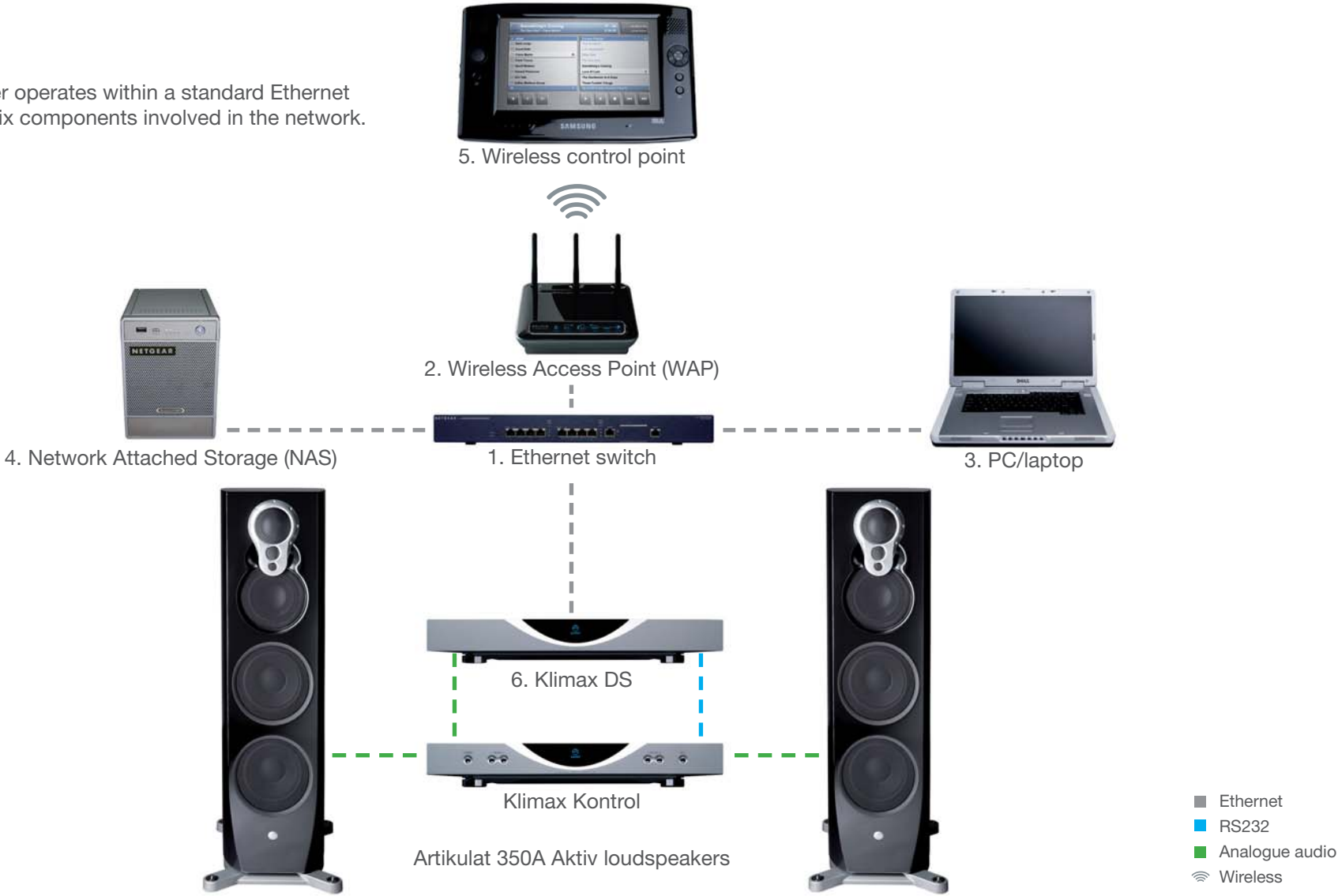
CONTENTS

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

1 OVERVIEW

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

5. Wireless control point

2. Wireless Access Point (WAP)

4. Network Attached Storage (NAS)

1. Ethernet switch

3. PC/laptop

6. Klimax DS

Klimax Kontrol

Artikulat 350A Aktiv loudspeakers

■ Ethernet
■ RS232
■ Analogue audio
⌒ Wireless

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

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.

A PC/laptop is required for system installation.

3. **PC/laptop**
   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. The Klimax DS plays WAV and FLAC files.

The above describes the default network architecture for a Klimax DS system. Many other network configurations are possible, depending on specific requirements.
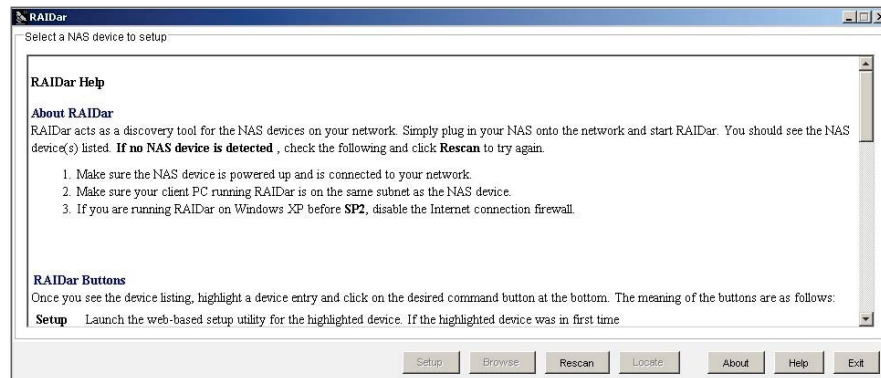
KLIMAX DS SYSTEM

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. The instructions below 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.
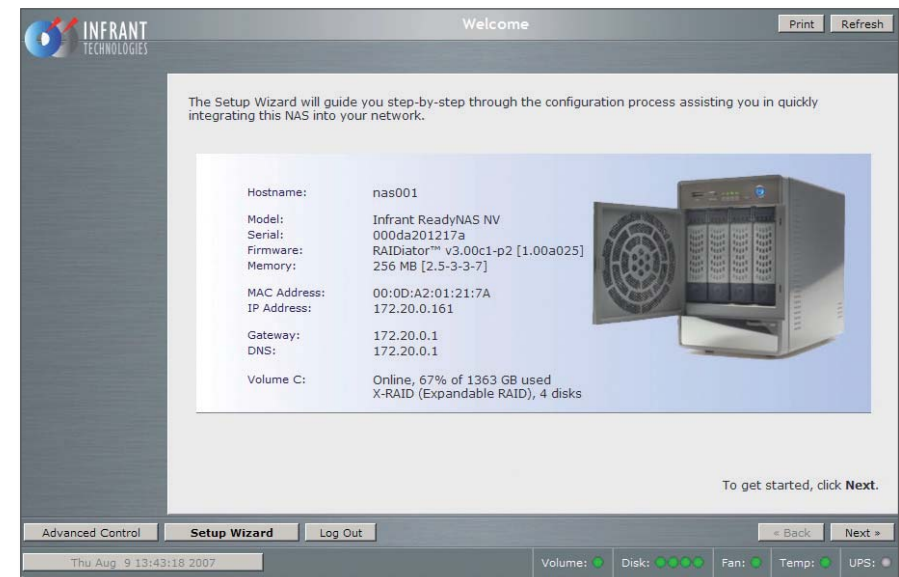
1. On the installation PC/laptop disable all firewalls and the proxy server.

2. Follow the Getting Started Guide supplied with the ReadyNAS, up to and including installing the RAIDar software. Once installed and running, RAIDar will scan the network for the ReadyNAS. If the screen below appears, check all connections, ensure all firewalls and the proxy server are disabled, then press 'Rescan'.

When the screen below appears, select the appropriate NAS (if more than one is available), then press 'Setup'.

You will be asked for a user name and password. Enter the default user name and password as shown in the ReadyNAS installation guide. After you login, select 'Next' from the bottom-right corner.
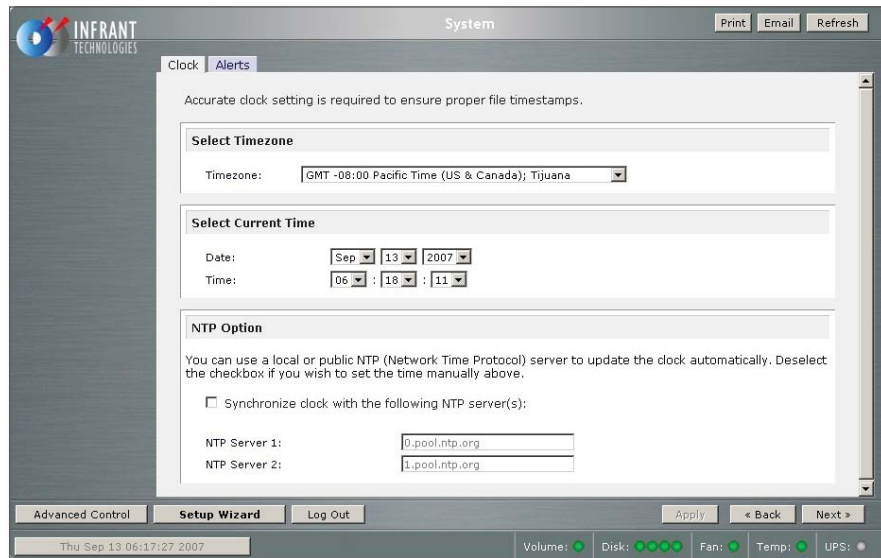
KLIMAX DS SYSTEM

INSTALLATION AND SETUP

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

3. **The 'Clock' screen**
   Select the appropriate timezone and time for your location. If the 'Synchronize clock…' checkbox is selected, deselect it. Press 'Apply', then 'Next'.

4. **The 'Alerts' screen**
   Enter one or more service email contacts. If there are any problems with the NAS an email notification will automatically be sent. This allows the problem to be diagnosed and corrective action taken before the user is aware that a problem exists. Press 'Apply', then 'Next'.

5. **The 'Ethernet' screen**
   Select the IP address assignment appropriate for the network the Klimax DS system is being installed into. Press 'Apply', then 'Next'.

6. **The 'Global Network Settings' screen**
   Select a hostname for the NAS, e.g. 'nas001'. This name should be unique to the network. The name will be used to refer to the NAS from other devices on the network, for example the ripping software (please refer to the *Ripstation Micro DS* section for details). Leave other settings unchanged. Press 'Apply', then 'Next'.

7. **The 'Admin Password' screen**
   Complete the required information. Press 'Apply', then 'Next'.

8. **The 'Security Mode' screen**
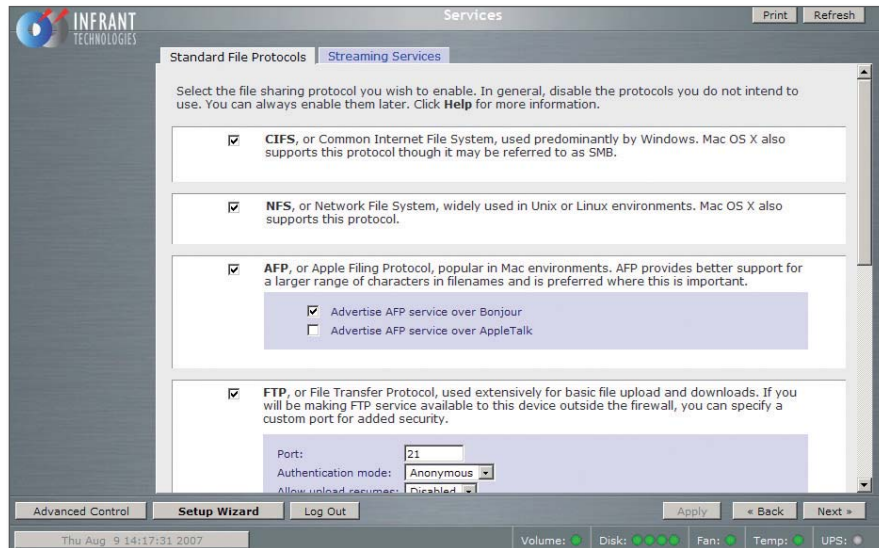   Nothing on this screen needs changed. Press 'Next'.

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

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

9. **The 'Standard File Protocols' screen**
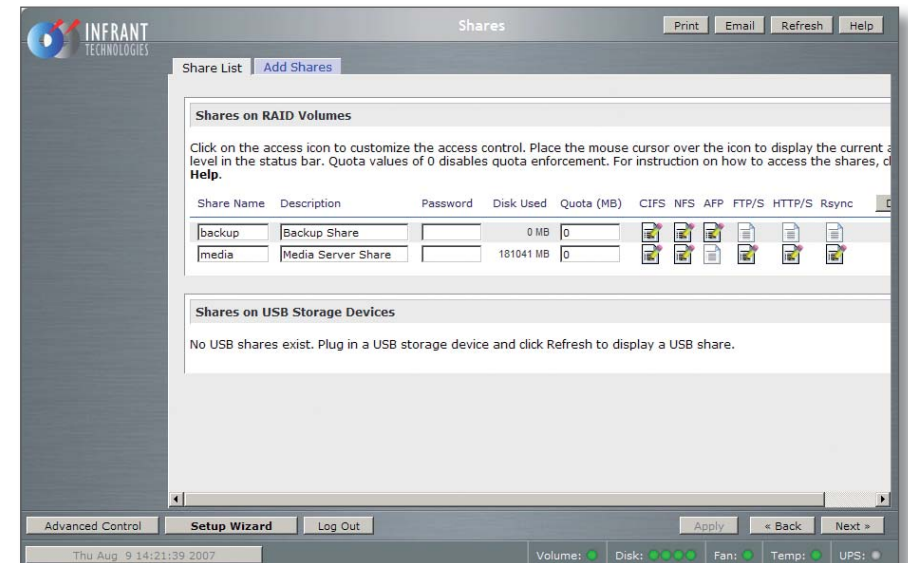   Select the NFS checkbox. Leave other settings unchanged. Press 'Apply', then 'Next'.

10. **The 'Streaming Services' screen**
    Nothing on this screen needs changes. Press 'Next'.

11. **The 'Share List' screen**
    Click on the CIFS icon on the line beginning 'media'. This will take you to 'Share Options'…

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

12. **The 'Share Options' screen**
    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.
    Make 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.

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, as explained below.

Downloading TwonkyMedia

TwonkyMedia for a PC or NAS other than an Infrant ReadyNAS, can be downloaded from the TwonkyVision website. If you are using an Infrant ReadyNAS, follow the steps below.

1. Enter the following link on your browser to access the installation guide: http://www.twonkyvision.com/Support/HowTo/ReadyNAS-Install.zip

2. Enter the following link on your browser to access the TwonkyMedia software: http://www.twonkyvision.com/Download/4.4/TwonkyMedia_4.4.0.bin

3. Follow the instructions in the installation guide. Please note that the firmware version shown in step 3 of the installation instructions may not show the correct information.

Suggested TwonkyMedia Setup

There are various options for setting up TwonkyMedia which will effect how the information is displayed to the user. This can be customised for each customer as required.
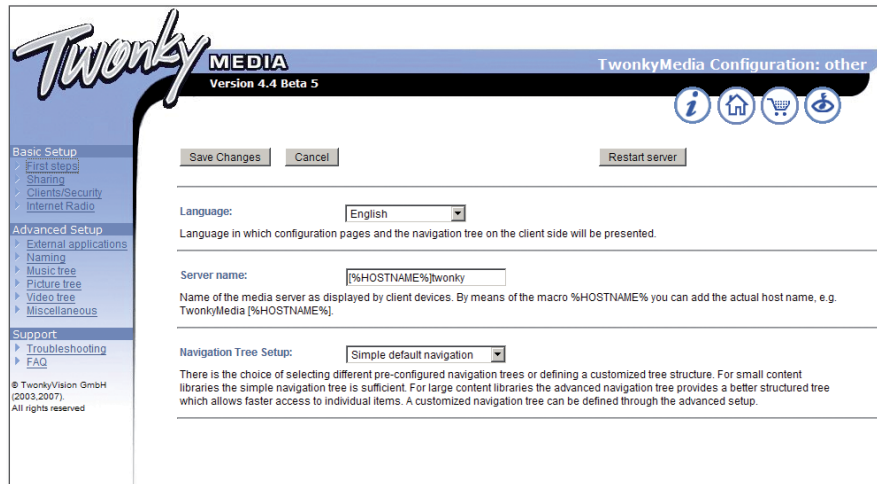
4. Log onto the NAS. Select 'Advanced Control'. From the menu on the left select 'Services' then 'Streaming Services'.

5. Ensure the 'TwonkyMedia' service checkbox is enabled.

6. Follow the http link to connect to the TwonkyMedia server and purchase a license from the online shop.

KLIMAX DS SYSTEM
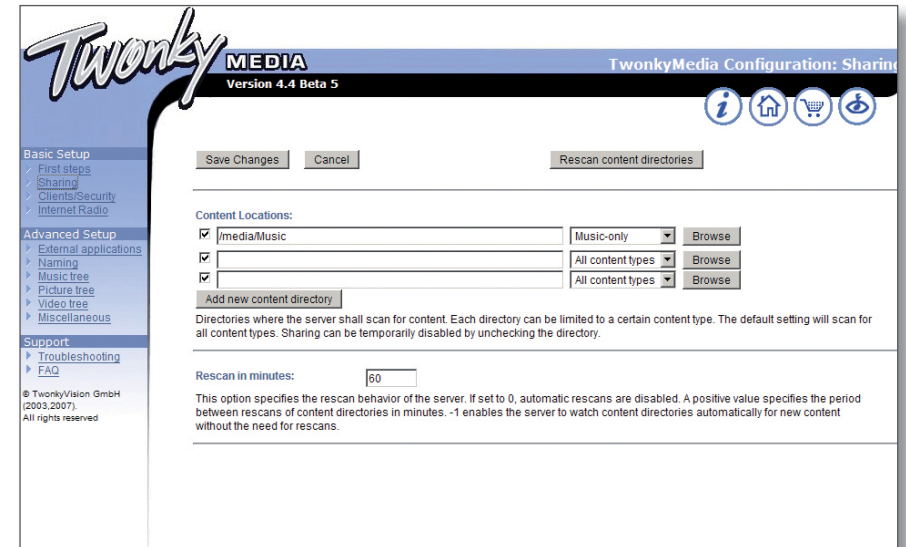
INSTALLATION AND SETUP

3 TwonkyMedia (continued...)

7. 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. If you change any of the settings, press the 'Restart server' button before continuing.

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

The settings for 'Content Locations' is important as they will be used when setting up Ripstation Micro DS (the recommended disc ripping software). Use the browse button to set the path to correspond to the directory into which Ripstation will rip CDs - typically, this will be '/Media/Music'. Set the drop-down menu to 'Music-only'.

Set 'Rescan in minutes' to '60'.

Press 'Save Changes'.

KLIMAX DS SYSTEM

3 TwonkyMedia (continued...)
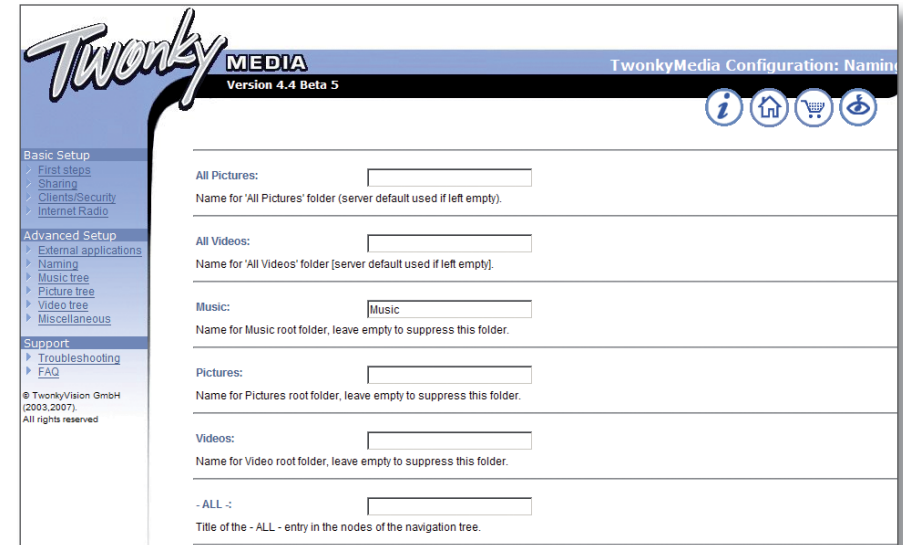
9. Select 'Naming' from the left of the page.

    Tick 'Standardize titles' at the top of the page.

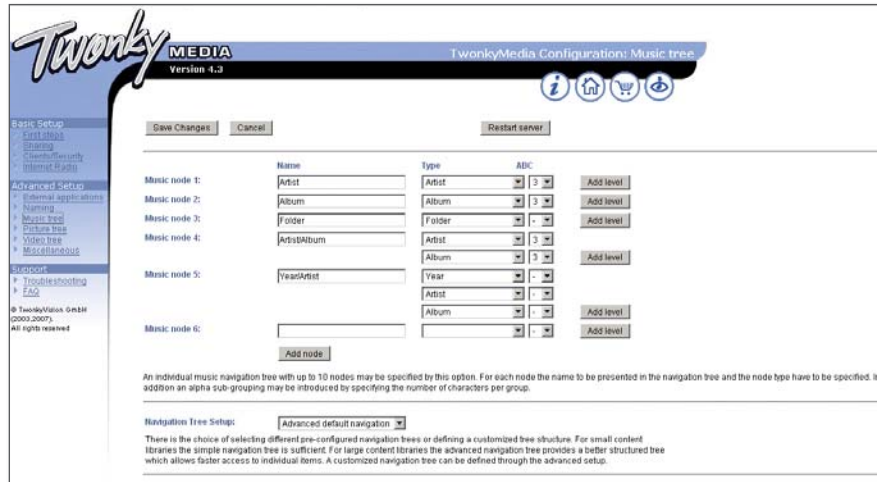Remove the 'Videos', 'Pictures' and '-ALL-' directories.

Press 'Save Changes'.

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

3 TwonkyMedia (continued...)

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

Apply the settings shown in the above screen image. Press 'Save Changes', then 'Restart server'.

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

4 RIPSTATION MICRO DS INSTALLATION

Linn recommends the use of Ripfactory's Ripstation Micro DS for ripping CDs to FLAC and sending them to the NAS. This software is available free of charge from Ripfactory's website.
Ripstation Micro DS should be installed on the PC/laptop that will be used for ripping CDs.

Installation
Go to the Ripfactory website:
http://www.ripfactory.com/rsmicrods.html
Download and install the software.

Operation
Full details on using the software can be found in the Ripstation Micro DS User Manual, which you will find in the Ripfactory directory that has been added to the PC's Programs menu. A quick start guide is provided in the manual.

Ripping a large collection of cds
If a large collection of CDs needs to be ripped to the NAS, using Ripstation Micro DS may be too time consuming. An alternative method is to use Ripfactory's, or one of their approved dealer's, ripping service, details of which can be found on their website http://www.ripfactory.com/find.html.

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

5 RIPPING CDs

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, such as Ripfactory (http://www.ripfactory.com/).

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

6 THE WIRELESS CONTROL POINT, AND INSTALLING THE LINN GUI AND CONFIG APPLICATION

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

1. Update the control point with .NET 2.0, available at www.microsoft.com/net.

2. Copy the Linn GUI installer to the wireless control point.*

3. Copy the Linn Config installer onto the installation PC/laptop.**

4. Run both the installers. Do not launch the Linn GUI or Linn Config at this time.

5. On the control point 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. The Linn GUI and Linn Config must be given firewall permissions to allow them to operate. If the PC/laptop uses the Windows Firewall the Linn software will be added automaticaly, providing you have admin rights on the PC/laptop. If a different firewall is used, consult the vendor's manual for instructions on how to add the Linn software to the list of permissions.

Note:
Each time you update to a new version of the Linn GUI or Linn Config software, you must add the new software to non-Windows firewalls' list of permissions.

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

* You may wish to add a desktop shortcut to the Linn GUI to make it easier for the user to find.

** Install the Linn Config on the PC/laptop the customer will use to rip CDs. This will allow the customer to make changes to their system's setup (e.g. add a new source), and run the diagnostic tools.

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

7 KLIMAX DS INSTALLATION

This section describes how to connect the Klimax DS player 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

- 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:
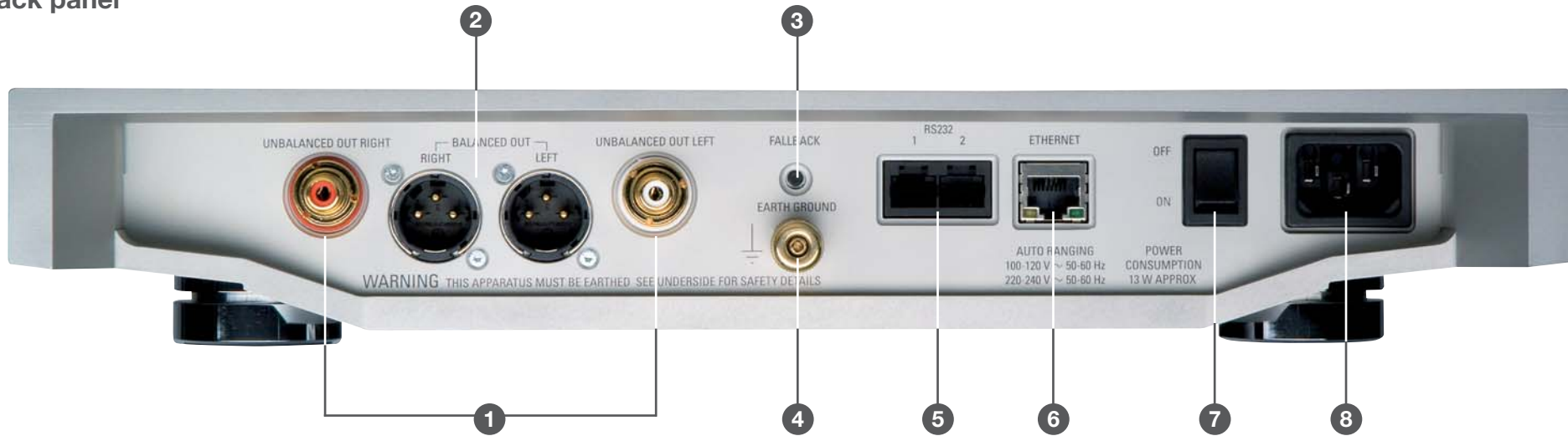
- The unit should be placed on a flat, stable and rigid surface.

- 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.

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

7 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. **FALLBACK**
   Used when reprogramming the unit

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

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

7 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.

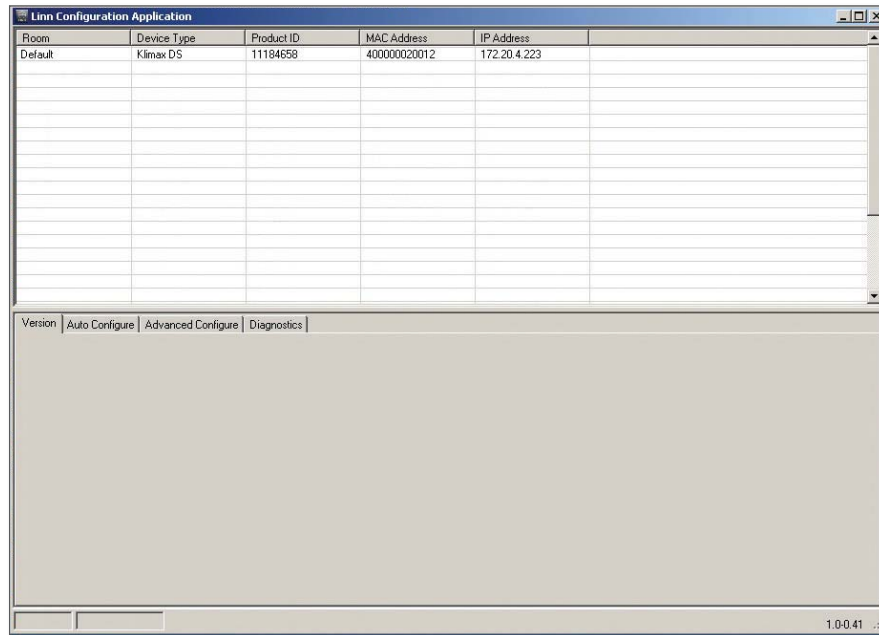# KLIMAX DS SYSTEM

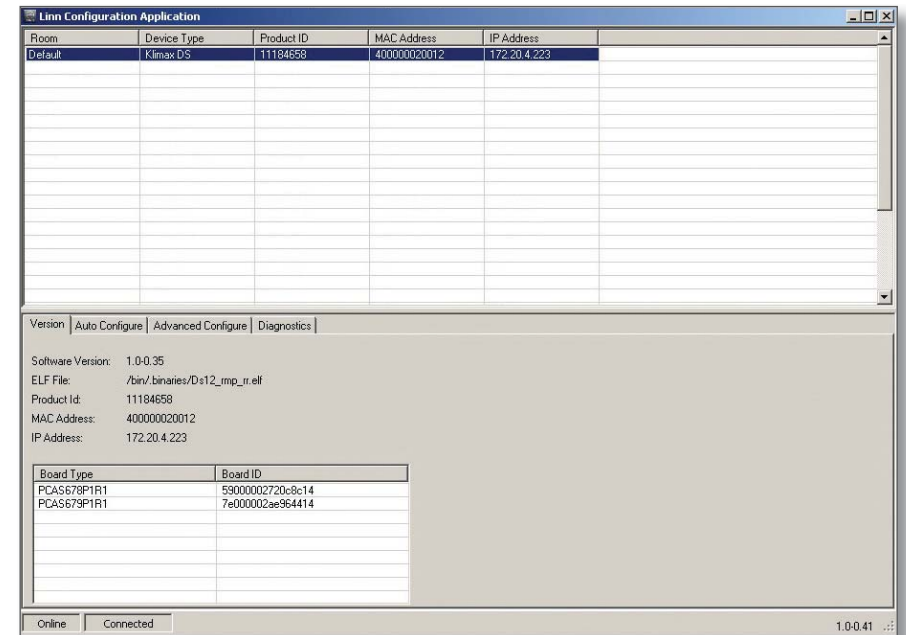**INSTALLATION AND SETUP**

8 THE LINN CONFIG APPLICATION

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

1. Switch on the Klimax Kontrol and CD12.

2. Switch on the Klimax DS.

3. Launch the Linn Config if you have not already done so.

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.
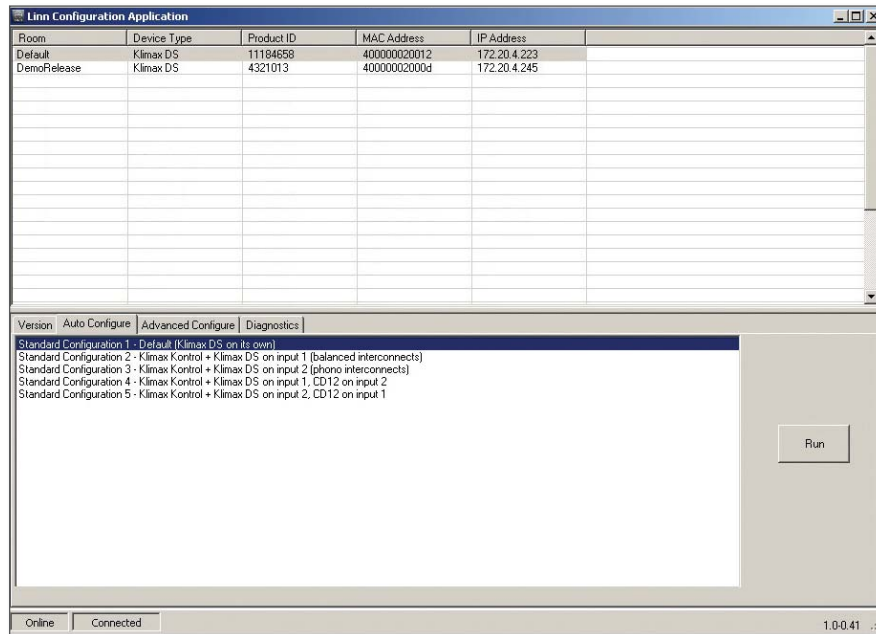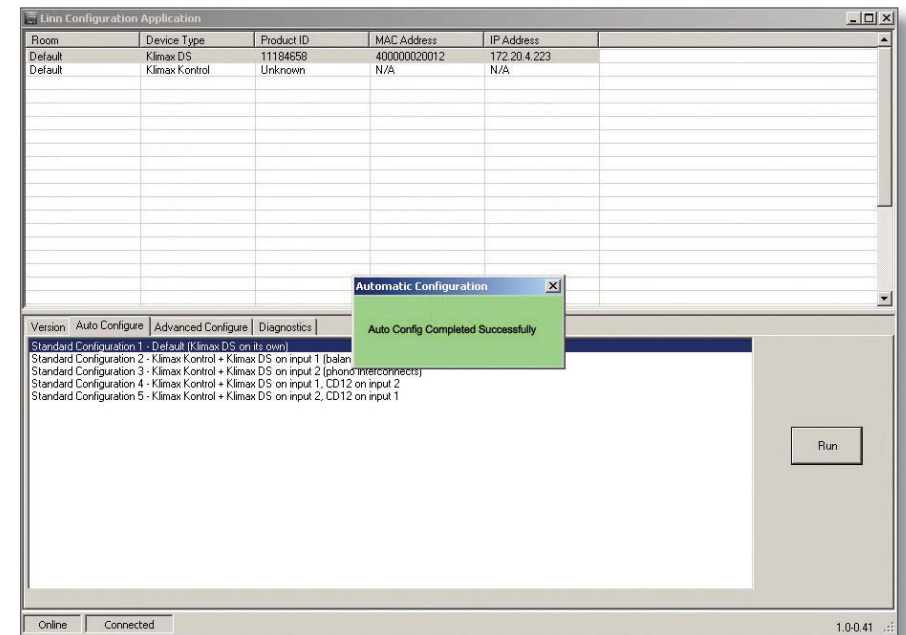
KLIMAX DS SYSTEM

INSTALLATION AND SETUP

8 THE LINN CONFIG APPLICATION (continued...)

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

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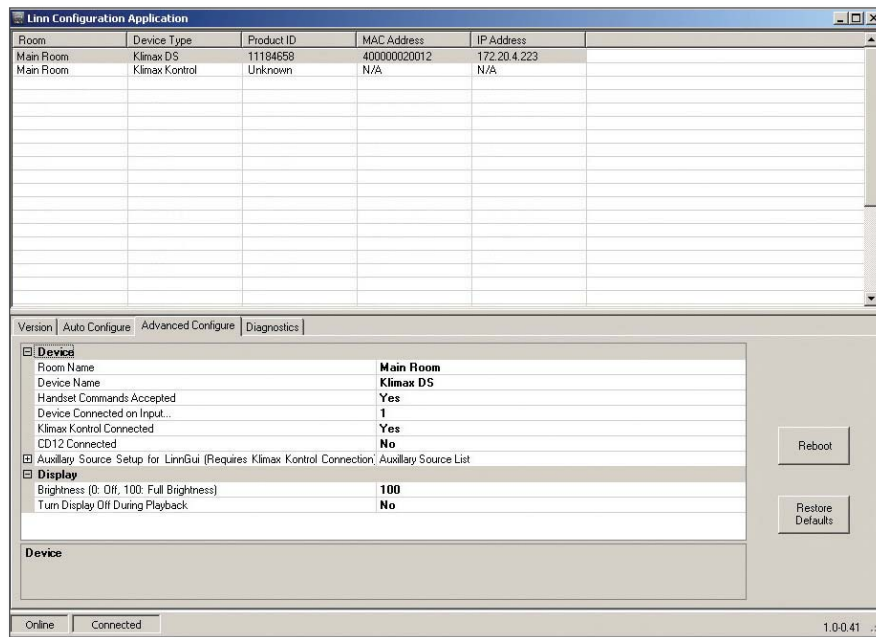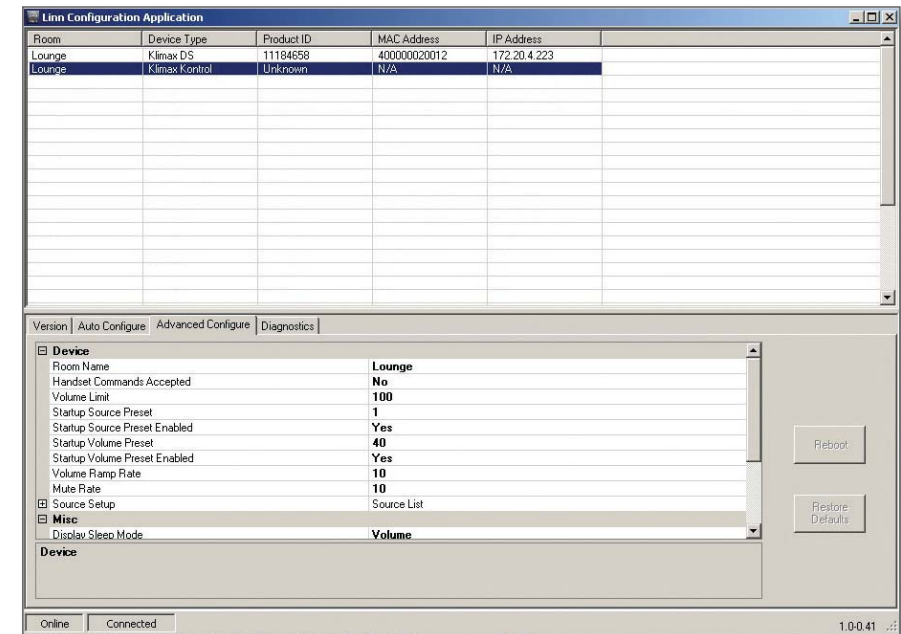
KLIMAX DS SYSTEM

INSTALLATION AND SETUP

8 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'.

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.

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.

KLIMAX DS SYSTEM

9 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 player and the rest of the hi-fi system.

5. Turn on the wireless control point and start the Linn GUI.

6. Follow the instructions in the *Operation* chapter of the Klimax DS
    owner's manual.

KLIMAX DS SYSTEM

INSTALLATION AND SETUP

10 TECHNICAL SPECIFICATIONS

Date of introduction	August 2007
Type	Digital stream 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, UPnP™ AV 1.0 control points
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