

REFERENCE MANUAL
MUSIC SERVERS NS01, NS02
ENGLISH

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Introduction

NaimNet products are conceived with performance as the top priority. Careful installation will help ensure that their full potential is achieved. Before installing and using your music server please read the Statutory and Generic Information Manual supplied with the product, especially the Safety Warnings it contains. A Quick Start manual is also provided to aid rapid installation and use.

This Reference Manual covers the NS01 and NS02 music servers. It begins with a music server overview and an explanation of the various user interface options. Music server installation and set up is covered in Sections 2 and 3. If your music server was professionally installed and commissioned you may not need to read these sections.

NaimNet products are subject to continual development and it is possible that this manual may not fully reflect the features and functionality of your music server. For up to date information and the latest Reference Manual please visit the support pages at www.naimnet.com

Finally, as with any highly sophisticated technology, music servers and networks have their own terminology. Section 8 contains a glossary of music server and network terms that may help you get the best from this manual and ease the installation and operational learning-curve.

Music Server Overview

1 NaimNet Music Server Overview

A NaimNet music server will completely change the way you access and listen to your music collection. While NaimNet music servers may look like CD players, they operate in fundamentally different ways.

- Rather than simply reproducing the audio on a CD inserted in the drawer, a music server automatically reads and stores the CD data for replay at any later time. Furthermore, the hard-disk storage capability of a music server enables the data from approximately 550 CDs to be stored.
- A music server can provide up to four different analogue or digital audio signals simultaneously (depending on the music server model), and up to six additional NaimNet/DigiLinX network streams for playback in multiple remote areas.
- When a music server first reads the data from a CD it automatically accesses an internet music database and downloads the data held for that CD. The data can include title, tracks, artist, composer, genre and numerous additional details. This data can then be used by the music server or network user interface to select or search for material and to build custom playlists. The CD cover artwork can be downloaded when available and displayed by the user interface.

The mode of control and operation of your music server will depend upon the type of system with which it is integrated. These different “user interfaces” are introduced in Section 1.1 while the most commonly used, Local Interface, is described in detail in Section 4.

If the NaimNet music server is your first experience of a network connected product you may find it worthwhile to read the glossary in Section 8 before moving on to installation and operation.

1.1 Music Server User Interfaces

Unlike a conventional item of hi-fi equipment, a NaimNet music server can be operated in a number of different ways using a variety of user interfaces. The user interface you use to control your music server will depend on the type of system in which it is installed and the ancillary equipment available. The following table and paragraphs carry short descriptions of each user interface.

1.2 Music Server Interface Options

Interface	Control	Display	Notes
Local	Remote handset. Keyboard/mouse. USB touch-screen.	VGA Monitor. Composite or S-video input TV.	Internet connection only required for CD data lookup and download.
NaimNet/DigiLinX	StreamNet compliant network touch screen.		Controls NetStreams streams only. Does not control local audio outputs. Network connection required.
Browser	Flash enabled web browser.		Duplicates functionality of Local Interface. Network connection required.
Desktop Client	PC running Windows XP.		Provides music database management and advanced music server setup functions. Network connection required.

Note: An internet connection is always required for CD data lookup and download.

Music Server Overview

1.2.1 The Local Interface

A music server can be operated through the **Local Interface** either using the supplied remote handset in line of sight of the server, or via a keyboard and/or mouse, both in combination with a display screen. The screen may be a VGA monitor or a TV with a composite video or S-video input.

The same Local Interface may also be used on an appropriate touch-screen connected to one of the music server's USB sockets.

1.2.2 The NaimNet/DigilinX Touch Screen Interface

If the music server is installed in a NaimNet home network, it (and any other StreamNet compliant device) can be operated via an appropriate network touch screen. The Touch screen interface does not control the music server's local audio outputs however, only its NetStreams streams. The Touch screen Interface is not covered in this manual.

1.2.3 The Web Browser Interface

If the music server is installed in a home network that includes a personal computer, it (and any other StreamNet compliant device) can be operated via a Flash capable web browser. The **Web Browser interface** is not specifically covered in this manual as it has much in common with the Local Interface.

To access the **Web Browser Interface** open your web browser application and type the "name" of your music server into the browser address field. The name of a music server is the last four characters (excluding colons) of its MAC address (printed on its rear panel) preceded by its model number (NS01 or NS02). A typical "name" would be NS014567.

Note: Depending on your web browser you may need to type "http://" immediately before the music server name.

1.2.4 The Desktop Client Interface

If the music server is installed in a home network that includes a personal computer, it can be operated via the **Desktop Client** application running under Windows. The **Desktop Client** application provides the most comprehensive operational and search functionality. The **Desktop Client** is not covered in this manual but has its own documentation that can be found on the application installation disc.

Installation - Getting Started

2 Getting Started

For best results your music server should be installed horizontally on a dedicated equipment stand intended for the purpose. Do not stand the music server directly on top of another item of equipment. Ensure that the fan aperture on the rear panel is not obstructed. The music server should be installed in its final location before connecting cables or switching on. Remember to install batteries in the remote handset.

It is important that connection is made to a known working network before the music server is switched on. Locally connected audio amplifiers should not be switched on before the music server is switched on. The music server power switch is located on the rear panel with a standby button located on the front panel. The front panel Naim logo illuminates when the music server wakes from standby.

If your music server was installed professionally you may not need to make any rear panel connections or to switch it on. If it was not professionally installed, you should first identify the rear panel network, display (VGA, S-video or composite), audio output one and mains input sockets, and connect the appropriate cables and hardware.

2.1 Minimum Services and Hardware

NaimNet music servers require a minimum level of network services and hardware to operate. Before attempting to install your music server you should ensure that the necessary services and hardware listed below are present and working reliably.

Internet:

Always-on

Network:

Modem/router with at least one spare ethernet socket.

Display and Control:

Composite or S-video TV screen and supplied remote handset.

Note: A PS2 or USB format mouse or keyboard can be used in place of the remote handset.

Note: A VGA video monitor can be used in place of the TV screen. A VGA connection socket can be found on the back panel.

2.2 Internet/Network Connections

Apart from mains power and an audio output, the only connection necessary for a music server to operate is a working internet connection that enables it to download the data associated with ripped discs.

If the music server is to be used in a DigiLinX/NaimNet network audio system, the network connection also enables the music server to communicate with other network devices.

Music servers are configured when originally shipped not to require any specific (TCP/IP) network setup but to connect to a network automatically (they use DHCP by default). However, if your music server has been previously used, or it has been switched on without being connected to a working network, its network configuration may have been altered leaving it unable to connect automatically.

Contact your retailer, installer or NaimNet directly if this appears to be the case.

Note: A music server switched on without a working network connection will be unable to negotiate a DHCP IP address and will revert to a non-operational IP address. To restore the default DHCP setup, switch the music server off, connect the network and switch it on again.

2.2.1 Network Hardware

Wired, rather than wireless, network connection is preferable for the most consistent and secure music server operation.

Ethernet-over-mains hardware may be used and provides a simple and convenient method of home network connection, however, the presence of network data on the mains supply will degrade the overall audio system sound quality. For this reason mains network hardware should be unplugged at all connection points during periods of critical listening. It should be reconnected when the music server and hi-fi system is idle, particularly at night, when the music server is programmed to perform automatic music database maintenance.

Note: Music server internal clocks are factory set as appropriate for their expected final world location. Clocks can be re-set via the Desktop Client interface.

2.3 Audio Connections

2.3.1 NS01

Connect either the **Phono** or **DIN Output 1**, or the **Digital Output**, to an appropriate audio system input. Use Naim Hi-Line interconnect cable for best results.

2.3.2 NS02

If audio is to be played in the same area as the music server, either the **Phono** or **DIN Output 1**, or the **Digital Output**, should be connected to an appropriate audio system input.

Installation - Getting Started

If audio is to be played directly from the music server in further areas, one or more of **audio outputs 2, 3 or 4** (NS02 only) should be connected to an appropriate audio system input in each area.

In both cases, use Naim Hi-Line interconnect cable for best results.

Note: *Long runs of analogue cable will cause degradation of audio quality. Cable runs should be as short as possible.*

2.3.3 Signal Ground

If the music server is directly connected in a hi-fi system incorporating another earthed source component, switch the music server's rear panel **Signal Ground** switch (see paragraph 3.2.11) to the **Floating** position. Contact your retailer, distributor or NaimNet for advice if necessary.

Note: *Directly connected in this context means an audio signal cable that includes an earth connection.*

2.4 Switch On and Screen Setup

Before switching on, ensure that all the necessary peripheral equipment is appropriately connected and configured. Switch on the music server using the rear panel power switch.

Note: *If the music server is already switched on but is in standby mode, press the front panel standby button or the handset standby key.*

After approximately one minute's delay, during which the music server's standby button will flash, the user interface **Home** menu will appear on the connected display. Use the remote handset **navigation** (◀ ▶ ▲ ▼), **ok**, **home** and **back** keys to navigate around the interface and to select options.

Note: *It is occasionally possible for the default remote handset command set to conflict with other remote controlled equipment in the home. A conflict will be apparent if the handset appears to control an unintended device or if another handset appears to control the music server. If a conflict occurs the music server handset command set can be changed. Press and hold both the page down and input keys while simultaneously pressing the 2 or 3 key to change the command set. Press the 1 to return to the default command set.*

Depending on the display in use, the music server's video screen setup may need to be modified. Use the handset to navigate, via the **System** menu, to the **Screen Setup** menu. Select and save the desired colour **theme** and display **aspect ratio**. Initially disable the **screen saver**.

Note: *Once you have become used to the interface and are familiar with its functions the screen-saver can be re-enabled.*

The screen setup menu also provides options for **remote control** handset or **touch-screen** control. If touch-screen control is selected, the interface displays four selectable tabs that correspond to the **home**, **browse**, **system** and

find keys on the handset. The tabs are unnecessary with **handset control** and are not displayed.

2.5 First Use

The music server will already have some music files stored on its hard disk. One of these can be used to check that playback is operating correctly. Navigate through the interface from the **Home** Menu to the **Quick Play** menu and select a track to play.

To "rip" a CD to the music server's hard disk, use the front panel **open** button to open the CD drawer. Insert a CD and press the **open** button again to close the drawer. The ripping process will begin automatically. When CD ripping is complete the music server will eject the CD automatically. See Section 5 for further information on ripping CDs.

Note: *Although the music server contains a limited internal music database, to be able to identify a CD and download its associated data during the ripping process, it must be connected to a working internet connection.*

2.6 Software Upgrade

Software upgrade CDs will occasionally be released for NaimNet music servers. New software is installed simply by inserting the upgrade CD in the music server's CD drawer. The software upgrade process will commence automatically with progress shown in an indicator on the left-hand side of the display. Once the upgrade process is complete the music server will re-boot automatically and eject the CD. Remember to remove the CD.

Never switch off the music server from the rear panel power switch or unplug it from the mains supply while a software upgrade process is underway.

2.7 Switching Off

Switching off the music server from its rear panel power switch is not normally necessary and is undesirable unless it is to be un-installed. It can be put into a standby by pressing the handset **standby** key or pressing and holding the front panel **standby** button for 2 seconds. The Naim logo will extinguish when the music server is in standby mode.

If the music server is to be switched off from its rear panel switch, wait until the Naim logo is fully extinguished.

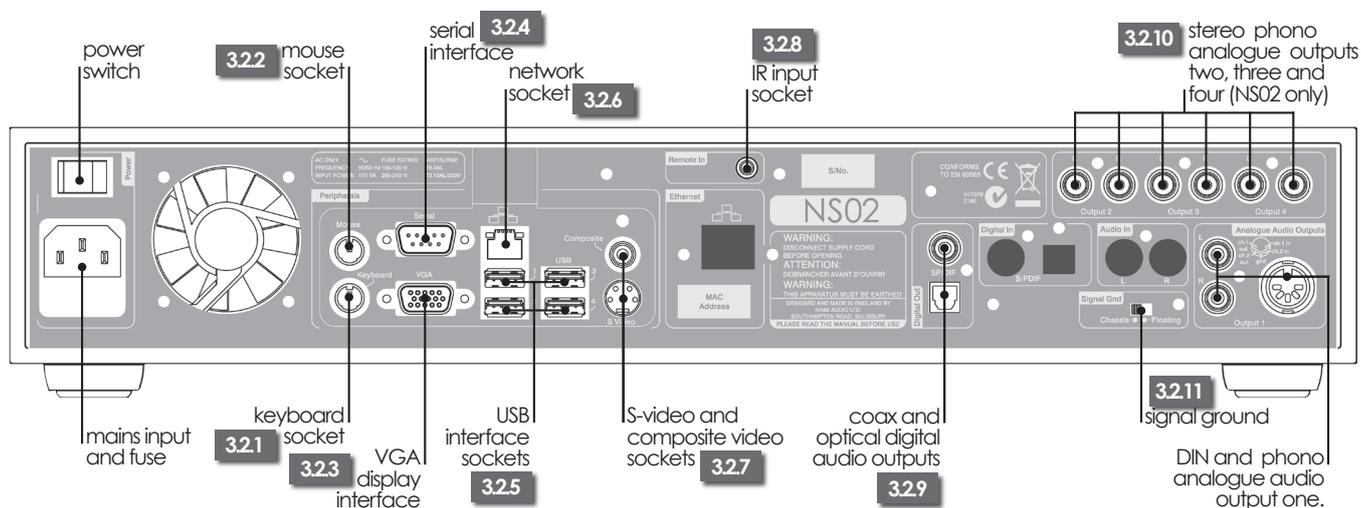
Never switch off the music server from the rear panel power switch or unplug it from the mains supply while the Naim logo is illuminated.

Installation - Getting Connected

3 Getting Connected

Each NaimNet music server carries a variety of connection and interface sockets on its rear panel. These are illustrated and described in the following diagrams and paragraphs. The numeric legends on the rear panel diagrams refer to the numbered paragraphs in Section 3.2

3.1 NS01/02 Rear Panel



3.2 Music server Connections

3.2.1 Keyboard Socket

Optionally connect a PS2 format keyboard here to control the music server in combination with a local display.

3.2.2 Mouse Socket

Optionally connect a PS2 format mouse here to control the music server in combination with a local display.

3.2.3 VGA Interface

Optionally connect a VGA format display screen here for display of the music server Local Interface.

3.2.4 Serial Interface

For use if the music server is to be integrated into an RS232 controlled environment.

3.2.5 USB Interface Sockets

USB control (keyboard/mouse/touch screen) or audio source devices may be connected here. USB source devices (iPod for example) can be made available across the network.

3.2.6 Network Socket

Connect to your network router here. The music server requires a working internet connection with DHCP server to operate fully.

3.2.7 S-video and Composite Video Sockets

Connect an S-video or composite video screen (television) here for display of the music server Local Interface.

3.2.8 IR Input Socket

Optionally connect an RC5 control signal here for local control of the music server from an IR control repeater.

3.2.9 Coax and Optical Digital Audio Outputs

These sockets provide S/PDIF format digital audio for connection to a local audio system's digital input. They duplicate analogue output one

3.2.10 Analogue Outputs Two to Four (NS02 Only)

These three pairs of phono sockets provide analogue audio outputs from the music server to three further areas.

Note: Long runs of analogue cable will cause degradation of audio quality. Cable runs should be as short as possible.

3.2.11 Signal Ground

Optionally disconnects and "floats" the analogue signal ground from the chassis earth. Only select **floating** if the music server is directly connected in a hi-fi system incorporating another earthed source component.

Note: Directly connected in this context means an audio signal cable that includes an earth connection.

3.2.12 DIN and Phono Analogue Output One

This analogue output from the music server for connection to a local audio system. Use the DIN option in preference to the Phono option if connecting to a Naim system.

Note: Long runs of analogue cable will cause degradation of audio quality. Cable runs should be as short as possible.

* iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries

Operation - The Local Interface

4 The Local Interface

As introduced in Section 1, the Local Interface can be accessed by a number of different means - TV/video monitor with the supplied remote handset or a keyboard/mouse, or a touch screen.

The Local Interface is a graphical interface based on navigation around pages and selection of command icons. The emphasis in this section is on the use of the interface via the supplied remote handset in combination with a TV/video display. The Local Interface is however functionally identical when presented on a suitable touch screen. The handset can also be used to operate Naim preamplifiers, integrated amplifiers and CD players.

The following paragraphs and illustrations first describe the handset functions and then demonstrate how the Local Interface is used to access some of the most often used music server functions. Other functions can be accessed by following the same principles of interface navigation and selection. A navigation diagram showing the top levels of the interface can be found in Section 4.12

4.1 Handset Functions

Navigating around and selecting options in the Local Interface (or web browser interface) can be done with seven primary handset keys: **Navigation** (◀ ▶ ▲ ▼), **ok**, **Back** and **Home**. These keys are highlighted in the diagram annotations.

Standby: Depending on the handset mode, switches to standby or wakes hardware.

Mode: Switches handset mode to preamplifier/integrated amplifier (**pre**), CD player (**cd**), or music server (**hdd**).

Numeric: Enable numeric or text entry for track selection or search.

Delete (del): Enables deletion of the last numeric or text entry.

Up Arrow (↑): Shifts text entry to upper case.

Output (out): Selects music server outputs.

Volume: Volume up (▲) and down (▼) for preamplifier or AV processor. These keys function regardless of the the handset mode.

Mute: Mutes the preamplifier or av processor audio output.

Info (i): Displays information items selected when browsing the music library.

Page: Selects the next (▲) or previous (▼) interface menu.

Navigation: Navigates around and selects menu icons. (◀ ▶ ▲ ▼)



ok: Confirms icon selection.

Back: Steps back one interface menu.

Home: Selects the **Home** menu.

Browse: Selects the **Browse** menu.

System: Selects the **System** Setup menu.

Find: Selects the **Search** menu.

Album: Selects the **Album** display menu.

Artist: Selects the **Artist** display menu.

Genre: Selects the **Genre** display menu.

Playlist: Selects the **Playlist** display menu.

Start (⏮): Returns to the start of a track.

End (⏭): Advances to the end of a track.

Stop (■): Stops playback.

Play (▶): Begins play.

Rewind (⏪): Fast reverse.

Forward (⏩): Fast forward.

Repeat (🔄): Repeats item.

Pause (⏸): Pauses play.

Shuffle (🔀): Randomises order of play.

Red Dot (●): Triggers audio record on appropriately equipped servers.

Input: Selects audio inputs on appropriately equipped servers.

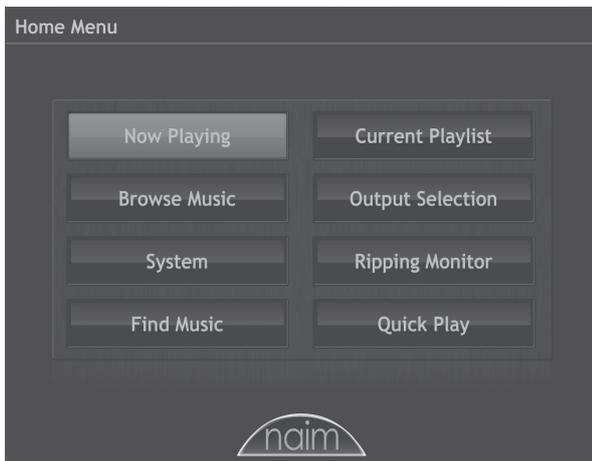
Open: Opens the CD drawer.

Operation - The Local Interface

4.2 The Home Menu

The **Home** menu, illustrated below, is the menu from which all other interface menus can be accessed. Use the handset **navigation** and **ok** keys to select each desired one and the **back** key to return to a previous menu.

The handset **home**, **browse**, **system** and **find** keys can also be used directly to select these menus.



Selecting each of the options on the **Home** menu provides the following pages and functions.

Now Playing: Displays the track currently playing, its associated information and any associated artwork. "Transport" functions (play, stop, pause, shuffle and repeat) are also available on the Now Playing menu. If no track is playing the Now Playing information will be blank.

Browse Music: Provides access to the library of music stored on the music server and on any network or USB connected storage media.

System: Provides access to music server setup functions.

Find Music: Provides access to search functions that enable tracks stored on the music server and on any network or USB connected storage media to be located.

Current Playlist: Displays details of the currently playing playlist. If no user playlist has been selected to play, the currently playing album will be displayed along with options to "suppress" tracks and save an edited version of the album as a playlist.

Output Selection: Enables output selection on music servers with multiple outputs. The currently selected output is always shown, when appropriate, in the top right-hand corner of the display.

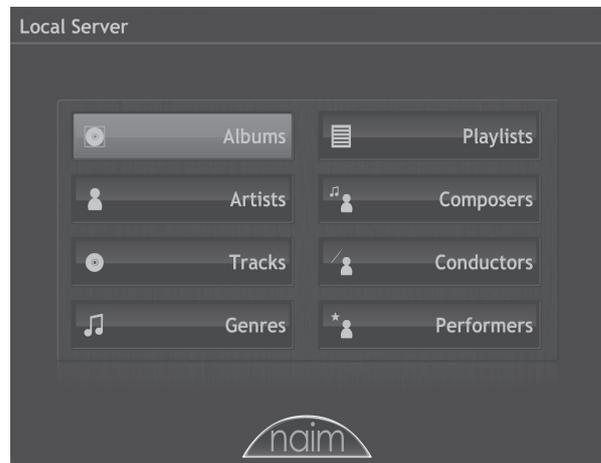
Note: *The Local Interface is specific to the output selected from this menu. If output selection is not set appropriately the Local Interface will control the "wrong" output.*

Ripping Monitor: Displays progress during ripping.

Quick Play: Selects a menu offering quick playback options.

4.3 The Browse Music Menu

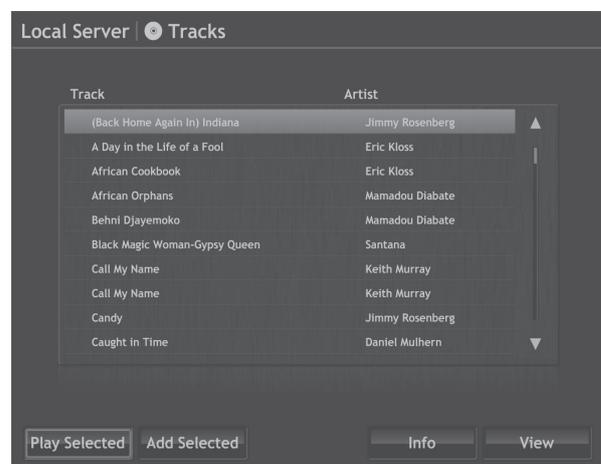
Selecting **Browse Music** from the **Home** menu will open the top level of the browse menu, illustrated below, and provide access to the library of tracks held either locally on the music server or on any available network or USB storage device.



Albums: Displays an alphabetical list of material available to the music server sorted by album. The menu also provides options of **Play Selected**, **Add Selected** (to a playlist), **Show Tracks**, **Info** and **View**.

Artists: Displays an alphabetical list of material available to the music server sorted by artist. The menu also provides options of **Play Selected**, **Add Selected** (to a playlist), and **Show Albums**.

Tracks: Displays an alphabetical list, illustrated below, of all tracks available to the music server. The page provides options of **Play Selected**, **Add Selected** (to a playlist), **Info** and **View**. Info displays the album, artist, genre and artwork associated with the track while View displays the track list and associated details of the album from which the track is taken.



Operation - The Local Interface

Genres: Displays an alphabetical list of the genres assigned to albums available to the music server. The menu also provides options to **Play Selected**, **Add Selected** (to a playlist), and **Show Albums** (within each genre).

Playlists: Displays a menu that enables the selection and management of playlists. The creation and management of playlists is covered fully in Section 4.5.

Composers: Displays an alphabetical list of material available to the music server sorted by composer.

Note: Only tracks by a specified composer will be listed.

Conductors: Displays an alphabetical list of material available to the music server sorted by conductor.

Note: Only tracks by a specified conductor will be listed.

Performers: Displays an alphabetical list of material available to the music server sorted by performer.

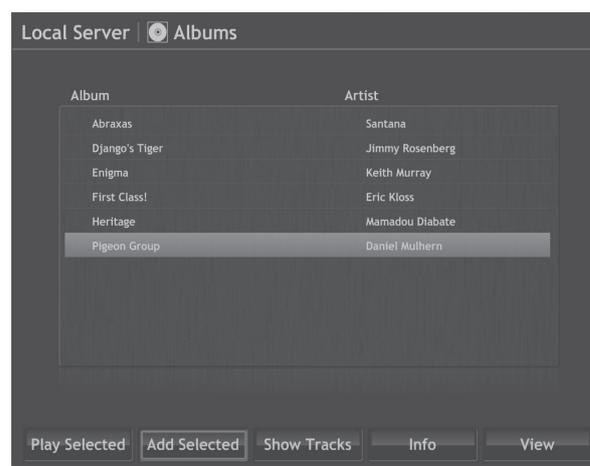
Note: Only tracks by a specified performer or performers will be listed.

4.5 Creating and Managing Playlists

A playlist is a group of albums, artists, tracks, or genres collected together for a specific purpose; "favourites" perhaps, or "party tracks". The tracks of an album for example may also be referred to as a playlist. A playlist is created by creating a list of items and then saving it.

4.5.1 Creating Playlists

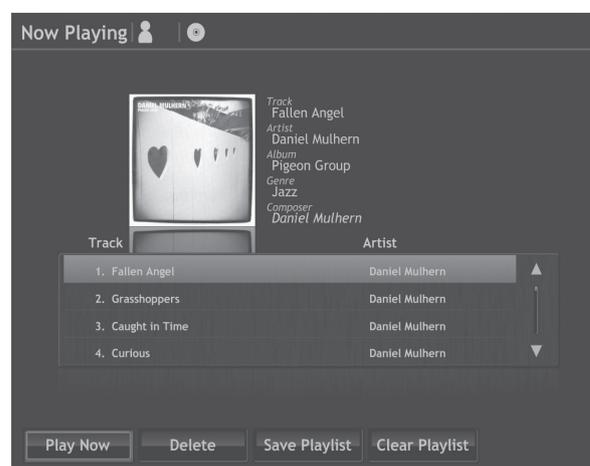
Selecting **Albums**, **Artists**, **Tracks** or **Genres** from the Browse menu displays a menu, illustrated below, that lists all the available items that fall into the selected category and enables the selection and creation of playlists.



To create a playlist, select the first desired item followed by the **Add Selected** button. Repeat this procedure for each desired item. The items will subsequently play in the order in which they were selected.

4.5.2 Naming and Saving Playlists

To name and save the playlist, select the **home** menu using the **home** key on the handset, then select the **Current Playlist** option. As illustrated below (in this case an album is a playlist), selecting Current Playlist will display a track level list of the tracks selected to play together with options to **Play Now**, **Delete** (selected tracks from the playlist), **Save Playlist** and **Clear Playlist**.



Operation - The Local Interface

Selecting **Save Playlist** will open a text entry screen, illustrated below, where the playlist can be named.

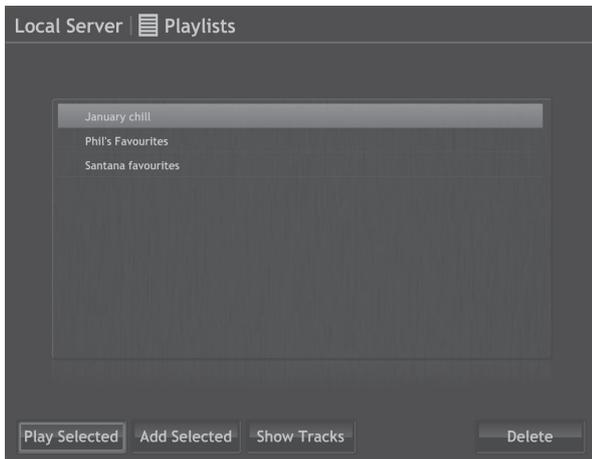


Use the handset **navigation** keys to select letters and type a track name. Use the **ok** key or select the **Save** option to save the playlist.

Note: The handset numeric keys may also be used to enter text in a similar manner to mobile phone SMS text entry.

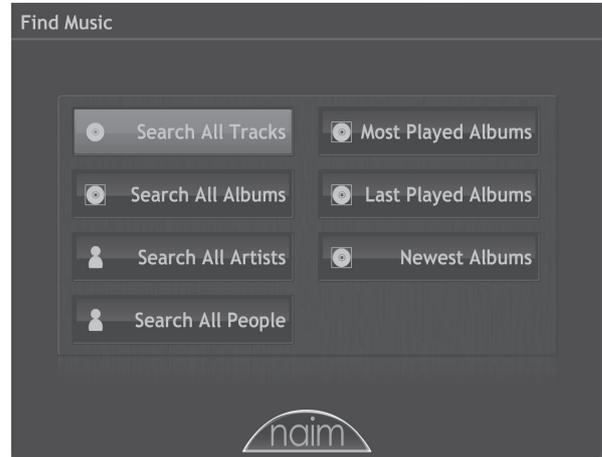
4.5.3 Selecting and Managing Playlists

Selecting **Playlists** from the **Browse** menu displays a list of previously saved playlists together with options to **Play Selected**, **Add Selected** (add the selected playlist to a new playlist), **Show Tracks** (tracks that make up the items within the selected playlist) and **Delete**.



4.6 The Find Music Menu

Selecting **Find Music** from the **Home** menu will open the top level of the search menu, illustrated below, and provide access to search functions to locate material held either locally on the music server or on any available network or USB device.



Search All Tracks: Displays a menu, illustrated below, that enables alpha-numeric search of tracks. Use the handset **navigation** keys to select letters and type a track name. Use the **ok** key to initiate the search.

Note: The handset numeric keys may also be used to enter text in a similar manner to mobile phone SMS text entry.



Search All Albums: Displays a menu that enables alpha-numeric search of albums. Use the handset **navigation** keys to select letters and type an album name. Use the **ok** key to initiate the search.

Search All People: Displays a menu that enables alpha-numeric search of personnel (artist, composer or performer). Use the handset **navigation** keys to select letters and type a name. Use the **ok** key to initiate the search.

Random Playlist: Enables generation of random playlists from within one or more music genres.

Operation - The Local Interface

Most Played Albums: Displays a list of most played albums for browse and selection. Use the handset **navigation** and **ok** keys to select an album.

Last Played Albums: Displays a list of list of last played albums for browse and selection. Use the handset **navigation** and **ok** keys to select an album.

Newest Albums: Displays a list of list of newest (most recently ripped) albums for browse and selection. Use the handset **navigation** and **ok** keys to select an album.

4.7 The System Menu

Selecting **System** from the **Home** menu will open the system menu, illustrated below, to provide house-keeping and setup functions.



Assign Albums to Genre: Enables assignment of each album available to the music server to a genre.

Backup Monitor: NaimNet music servers automatically back-up locally stored material to a second internal hard-disk. The back-up monitor menu enables back-up progress to be monitored.

USB Devices: Displays a list of USB devices known to the music server (i.e previously connected) and their connection status.

Network Shares: Displays a list of network devices known to the music server (i.e previously connected) and their connection status.

System Status: Displays the current music server system status information.

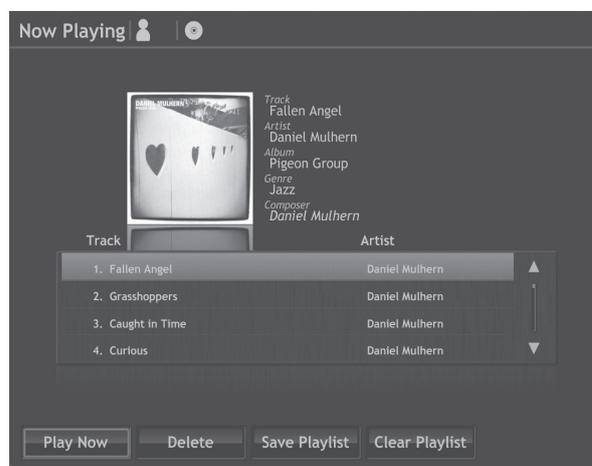
Screen Setup: Displays the current screen setup and enables modification for display and control alternatives. The correct screen selection for the control hardware in use must be made in order for correct operation of the interface. Options for **theme** (display colour), display **aspect** ratio, **screen saver** time, and hardware **mode** are provided.

Note: The hardware mode options are *Remote Control and Touch Screen*. In *Touch Screen* mode the interface displays four tabs that correspond to the *home, browse, system and find* keys on the handset.

Note: If a touch-screen is connected to the music server a *Calibrate Touch-screen* option is provided below *Screen Setup*. Select *Calibrate Touch-screen* and touch and hold the flashing cross as it moves to each corner of the screen. Once each corner has been registered by the software, a confirmation message is displayed and the interface returns to the *System Menu*.

4.8 The Current Playlist Menu

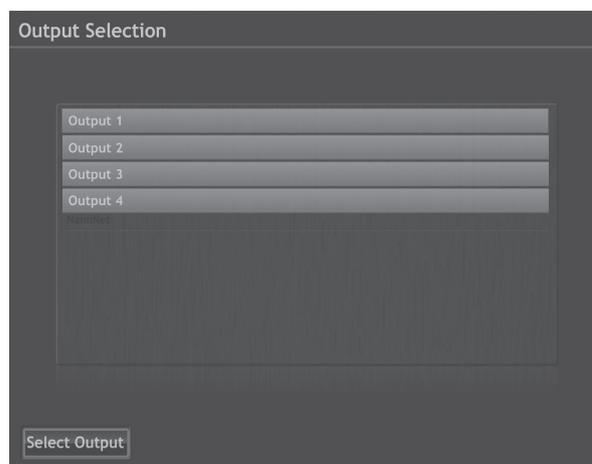
Selecting **Current Playlist** from the **Home** menu will open a page, illustrated below, that displays both the track currently playing and those lined up to play. If a complete album is playing (as in the illustration), the playlist will reflect its the running order. If a programmed or random playlist is playing, the menu will show that playlist.



4.9 The Output Selection Menu

Selecting **Output Selection** from the **Home** menu will open a menu, illustrated below, that displays a list of the music server audio outputs. The handset **navigation** and **ok** keys can be used to select an output. The output selected is shown, when appropriate, in the top right-hand corner of the display. All the interface functions will reflect the selected output.

Note: This menu is only relevant to the multiple output NS02.



Operation - The Local Interface

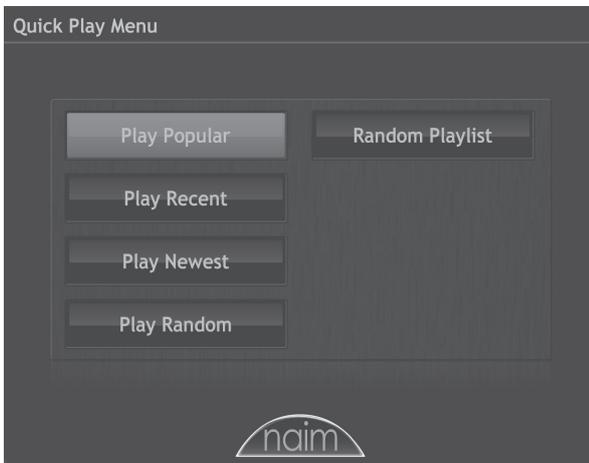
4.10 The Ripping Monitor Menu

Selecting **Ripping Monitor** from the **Home** menu will open a page, illustrated below, that displays the music server's ripping activity. Ripping can be stopped by selecting the **abort** function or pressing the handset **open** key.



4.11 The Quick Play Menu

Selecting **Quick Play** from the **Home** menu will open a menu, illustrated below, that provides access to four playback short-cut pages.



Play Popular: Plays from an automatically generated playlist of the most often played tracks.

Play Recent: Plays from an automatically generated playlist of the most recently played tracks.

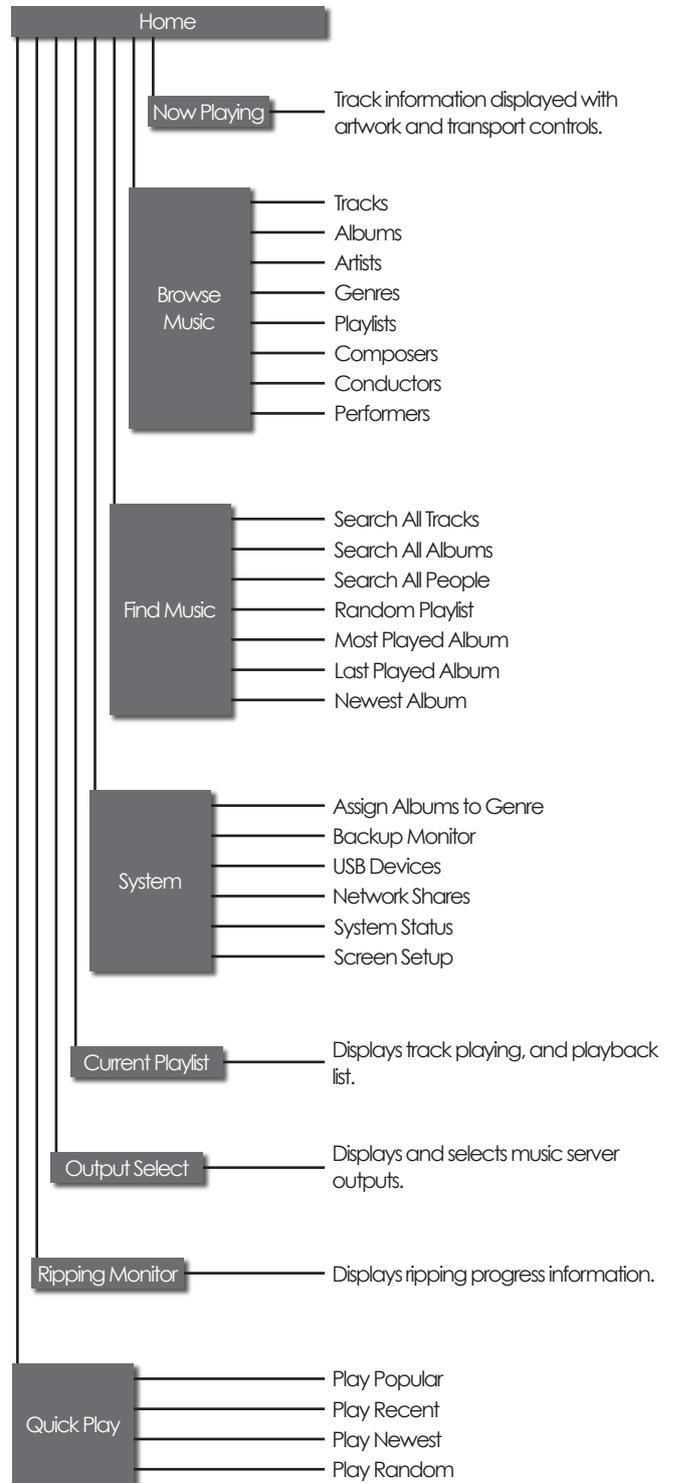
Play Newest: Plays from an automatically generated playlist of the most recently ripped tracks.

Play Random: Plays tracks randomly selected from all those available to the music server.

Random Playlist: Displays sequential menus from which genres, artists and albums can be selected. A random playlist will then be chosen from within those selections.

4.12 Interface Menu Structure

The diagram illustrates the upper levels of Local Interface menu and menu structure.



Operation - Ripping

5 Ripping

A music server will only fulfil its potential if it holds a significant library of music. Depending on the size of your CD collection, you may need to decide which to rip and which to leave for replay on a conventional CD player. A typical music CD carries approximately 600MB of data and the 400GB storage capacity of a NaimNet music server will hold approximately 550 CDs.

5.1 The Ripping Process

Ripping CDs to a NaimNet music server is a simple process. It is preferable while ripping for the music server to be connected to a working and reliable internet service.

Note: An internet connection is necessary for the music server to identify CDs and download their artist, title, track listing and artwork data. If the music server is unable to access the internet while ripping, it will initially interrogate a small internal database for the CD's associated data. If the CD is not found on the internal database, only the ripped audio data, the CD's title and its identification code will be stored. Manual input of CD data or further AMG and Freedb database requests can be made via the NaimNet Desktop Client application once internet connection is re-established.

To rip a CD press the front panel or handset **open** button and place the CD on the drawer. Press the **open** button again, or nudge the drawer, to close it. Ripping will begin automatically and the process will take seven to eight minutes for each CD.

Note: It is good practice to check the playing surface of each CD is clean before ripping.

When the music server has ripped the CD and downloaded its associated data it will eject the CD automatically. As soon as a CD has been ejected, the music server is ready to rip the next one. The **Ripping Monitor** menu of the Local Interface user interface provides feedback on progress as the ripping process takes place.

The CD will be included in the music server's music library listing about 30 seconds after it has been successfully ripped. It will then be available for playback either locally or across the NaimNet network.

5.2 Copyright Issues

The programme material carried on a CD, and the recording of the CD itself, is likely to be the subject of copyright restrictions which restrict the owner of the CD only to make copies (ripping in effect copies a CD) for personal use only. Ripping CDs that you don't personally own is likely to infringe copyright restrictions.

Operation - Playback

6 Playback

A NaimNet music server is able to provide simultaneous multiple outputs. These can be a mix of local analogue or digital audio and network streams for playback by NaimNet enabled output hardware such as a NaimNet room amplifier. NaimNet streams cannot be output as either digital or analogue audio directly from a music server.

The mix of outputs you will employ from your music server will depend on the type of system in which it is used. The following paragraphs describe the various output options and their context.

6.1 Local Playback

Depending on your music server model, it will be fitted with either a single analogue output with DIN and phono socket options (NS01), or one analogue output with DIN and phono socket options and three further analogue phono socket outputs (NS02).

Both music server models also carry a single digital audio output with coax and optical socket options. In the case of servers with multiple analogue outputs, the digital audio output is a duplicate of analogue output one.

Music server audio outputs are intended to be connected to a hi-fi system or systems located either in the same area as the music server or in nearby areas.

The four outputs of the NS02 can simultaneously carry different programme material.

Selection of local playback can be made using the Local and Network Browser interfaces.

In addition to the programme material stored on a music server's hard disk, DRM free MP3, or WAV audio files stored on locally connected and appropriately formatted storage hardware will also be available for playback via the music server's audio outputs.

Note: *Hard disks connected via USB must be in FAT, FAT32, or NTFS format. Apple Macintosh formats are not compatible.*

Note: *Other playback file formats in addition to MP3 and WAV will be added as firmware updates in the future. Contact your retailer or distributor for more information.*

6.2 Network (streamed) Playback

Both music server models carry a single NaimNet network connection socket. In addition to providing network based remote control, NaimNet enables six unique streams of audio files to be delivered from the music server for playback through NaimNet enabled output hardware in an almost limitless number of areas.

Note: *Only 44.1kHz, 16 bit WAV or MP3 files identified and presented by a music server will be available for streaming via StreamNet.*

Operation - External Storage

7 External Storage

A NaimNet music server is not only able to replay programme material ripped and stored on its internal hard disk but will also enable playback of material stored on a variety of externally connected storage hardware. Such hardware might be relatively small capacity units temporarily connected via one of the music server's USB interface sockets, or large capacity disk drives connected via the home network. Storage hardware might include portable music players, mobile phones, personal computers or appropriately formatted external hard-disks. Programme material is available to all other NaimNet connected output devices as well as locally to the music server's audio outputs.

7.1 Network Devices

Before programme material stored on a network device can be accessed by the music server, it must scan the network to identify the address of each device and to build a database of the locations and details of the available audio files.

The music server automatically scans the network when first switched on and will then periodically scan to find new storage hardware and identify any changes to the available audio files. It may however take up to 45 minutes following connection of the music server to the network for changes to be reflected in the music server's database.

Note: As a rough guide network scanning is carried out at a rate of around 1000 tracks per minute.

The tracks found by the music server on network storage will be incorporated into its database and remembered until any changes are identified, irrespective of the music server being switched off.

In order for network stored music to be available to the music server, various constraints must be met:

- Folders containing audio files must be set up to be "shared". Refer to the folder's host PC operating system user manual for details on setting up shared folders.
- Music files must be in WAV or MP3 formats (16 bit, 44.1kHz only) for network playback.
- Music files must be unprotected by Digital Rights Management encoding that restricts them to specific playback hardware.

7.2 Local Devices

A locally connected storage device will most likely be an iPod, other portable music player or a stand-alone hard disk drive connected to one of the music server's USB sockets.

Note: Apple iPod models earlier than 3rd Generation use a Firewire interface and cannot be connected to a NaimNet music server.

The tracks found by the music server on locally connected storage will only be held in its database while the storage is connected and switched on.

Note: Local connection is only intended for relatively small, music collections on temporarily connected storage hardware. Any large capacity storage should always be connected via the network.

In order for locally stored music to be available to the music server, various constraints must be met:

- Music files must be in WAV, MP3 or AAC formats (up to 24 bit, 96kHz only) for local playback, or WAV and MP3 at 16 bit 44.1kHz for local and network playback.
- Music files must be unprotected by Digital Rights Management encoding that restricts them to specific playback hardware.

Installation - Terminology

8 Music Server Terminology

The following pages carry a glossary of music server and network terminology that will help you get the best from this manual and ease the installation and operational learning-curve.

AMG:

The All Music Guide database is the primary database that a NaimNet music server interrogates when a new CD is inserted in its drawer. The AMG database can be interrogated manually at www.allmusic.com

Note: *The data provided by AMG is occasionally inaccurate or incomplete, however it is possible for anyone to submit corrections at www.allmusic.com*

Broadband Internet:

Broadband internet is the generic term for an "always-on" internet connection that provides data download rates of between 256kb/sec and around 8Mb/sec.

Browser:

A browser is a PC application that accesses, displays and implements **web pages**. Microsoft Internet Explorer and Mac OS X Safari are examples. As well as distributing music data on a **network**, NaimNet music servers generate **web pages** that can be read by a browser.

Client:

A client is a software application on a PC that accesses a remote service on another computer system, known as a server, by way of a network.

DigilInX:

DigilInX is a range of **network** enabled audio products manufactured by NetStreams Inc. that are fully compatible with all **NaimNet** products. Both NaimNet and DigilInX products use StreamNet technology to distribute audio over a **TCP/IP** network.

DHCP (Dynamic Host Configuration Protocol):

Hardware items installed on a **TCP/IP** network have an **IP Address** through which they are identified by all the other items on the network. DHCP is a set of rules that enable the automatic allocation of addresses as items are connected (or switched on while connected) to the network. NaimNet music servers are set up by default to use DHCP.

Digital Rights Management (DRM):

Digital Rights Management refers to the data embedded in some music files that restricts copying and playback. Material downloaded from the Apple iTunes store is an example.

Firmware:

Firmware describes control and interface computer programmes that are embedded in the electronic hardware of a product.

Flash:

Flash is a software application that provides interactivity and animation in web sites. It is usually embedded into web **browser** applications.

Freedb:

Freedb is the secondary database that a NaimNet music server interrogates when an unknown CD is inserted in its drawer.

Internet:

The internet is the worldwide network of predominantly TCP/IP connected servers and computers. While the internet provides a variety of data services for professional and corporate use, most people know it for email and the World Wide Web.

IP Address:

An IP address is a numerical identifier unique to a specific piece of hardware on a TCP/IP network. IP addresses contain four groups of numbers from 0 to 255 separated by dots. 192.168.0.8 is a typical IP address.

Local:

Local in terms of this manual means non-network connections and associations. For example, a hi-fi system (amplifier and speakers) connected to a music server's audio outputs, or a touch screen connected to a music server's **USB** interface is local. A hi-fi system or a touch screen connected via the **NaimNet** network is not local.

Modem:

A modem is an item of network hardware that forms a bridge between the network and the internet - usually via a broadband connection through telephone lines.

NaimNet:

NaimNet **network** enabled audio products are manufactured in the UK by Naim Audio. Like their closely related non-network Naim products, they represent the ultimate in musical performance.

NaimNet Extended Music Database:

Thanks to **NaimNet** music servers' use of the **AMG** database, they are able to access significantly more information than other music servers. This means selection and searching for specific items can be more intuitive and productive.

Network:

A network in terms of this manual is a group of interconnected and communicating servers, computers, or peripheral devices that are able automatically to share and control large volumes of data at high speeds.

Network Storage:

If a CD collection is too large for the internal storage of a music server, an external hard-disk can be added to the network to increase the storage available.

Installation - Terminology

Playlist:

A playlist is a specific group of tracks collected together for a specific purpose; "favourites" perhaps, or "party tracks". A simple list of tracks queued-up to play (the tracks of an album for instance) may also be referred to as a playlist.

Ripping:

Ripping is the slang term for extracting and storing the audio data from a CD. NaimNet music servers are unusual in ripping the audio data repeatedly to minimise errors. There are some copyright and legal issues to consider when ripping CDs.

Router:

A router is an item of network hardware that controls **network** traffic. Many home network routers include a broadband **modem** to connect the network to the **internet** and many also include a wireless element that enables network hardware with wireless capabilities to connect.

Server:

Server is a generic term that describes an item of network hardware that stores and provides data to the network.

Shuffle:

Shuffle is a term used to describe the random playback of tracks.

TCP/IP:

TCP/IP (Transmission Control Protocol/Internet Protocol) is the communications protocol on which the **internet** and many other networks is based.

User Interface (UI):

Different user interfaces are available with NaimNet music servers depending on the model and mode of use. See Section 1.1.

USB:

USB (Universal Serial Bus) is a computer interface format developed to enable simple connection of computer peripheral devices.

Web Page:

A web page is a computer screen full of data output by a **network** device that communicates information on its status and may enable control via a mouse and keyboard.



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