Reference Manual – English

NAC-N 272
NAC-N 172 XS

naim

Contents

Introduction

Welcome to Naim and congratulations on your purchase. This manual covers the NAC-N preamplifiers: NAC-N 172 XS and NAC-N 272. The NAC-N preamplifiers are highly capable products that will repay time and effort spent on installation and configuration. We strongly recommend that you read this manual in full. The manual provides comprehensive information on all NAC-N features and facilities and will enable you to set up your product either to integrate with your existing music systems and media, or to form the heart of a new system.

NAC-N preamplifiers can play audio from a variety of components and sources. Each of the components and sources is introduced in the following Section 1 paragraphs and subsequently described in full detail in Sections 5 to 9. Sections 2 to 4 cover installation and set up.

NAC-N preamplifiers can be controlled from their front panels, the supplied remote control handset, and from the Naim App freely available from the Apple iTunes App Store and the Google Play Store.

1. NAC-N preamplifier Components and Audio Sources

1.1 Preamplifier

1.1.1 Inputs

NAC-N preamplifiers provide external analogue and digital audio inputs. The number of external inputs provided varies with each product.

In addition to the conventional analogue and digital inputs, NAC-N preamplifiers can also play audio from the the following external sources:

- Internet radio via a wired network socket or wireless network connection.
- DAB and FM radio via an external aerial.
- UMS (Universal Mass Storage) USB memory devices via a USB interface.
- Universal plug and play (UPnP™) servers holding audio files via a wired or wireless network connection.
- Spotify® audio streams via a wired or wireless network connection from the Spotify® Connect feature incorporated in Spotify® player apps.
- TIDAL audio streams via a wired or wireless network connection from the TIDAL functions built into the Naim App.
- Bluetooth® audio streams from Bluetooth equipped hardware such as iOS, Android and Windows Phone mobile devices running a suitable music player app.
- Music streams from other Naim streamer products connected to the same wired or wireless network.

1.1.2 Signal Outputs

NAC-N preamplifiers provide a variety of signal outputs. The number and type of signal outputs varies with each product. They are tabulated in Section 2.2.1.

1.2 Multi-mode Radio

The NAC-N preamplifier multi-mode radio combines an internet radio (iRadio) player and optional DAB/FM tuner.

A total of 40 radio stations across all three modes can be stored as presets. In DAB and FM mode, stations are tuned by scanning the respective transmission bands. In iRadio mode, a list of available radio stations is automatically downloaded from a dedicated internet server. iRadio requires broadband internet access via a wired or wireless network connection. See Section 6 for more information.

The DAB tuner incorporates full broadcast and station display capabilities. The FM tuner is fully RDS (Radio Data System) capable.

> Note: DAB and RDS broadcasts are not available in all countries.

1.3 USB Audio Interface

NAC-N preamplifiers can play audio files stored on USB memory sticks. See Section 7 for more information.

> Note: Compatible audio file formats are listed in Section 7.1.

1.4 UPnP™ Audio Interface

1. NAC-N preamplifier Components and Audio Sources

NAC-N preamplifiers can connect to a home network and play audio files stored on appropriately configured UPnP™ servers. See Section 8.1 for more information.

Note: Compatible audio file formats are listed in Section 8.1.1.

1.5 Spotify® Connect

NAC-N preamplifiers can connect to a home network and play Spotify® Connect audio streams from devices running an appropriate Spotify® app. A Spotify® Premium subscription is required. See Section 8.2 for more information.

Note: Spotify® Connect is not available in all countries. For a list of availability by country visit the support pages at www.spotify.com/connect.

1.6 TIDAL

NAC-N preamplifiers can connect to a home network and play TIDAL audio streams via iOS or Android devices running versions 4.6 (iOS) or 1.6 (Android) or later of the Naim App. A TIDAL subscription is required. See Section 8.3 for more information.

Note: TIDAL is not available in all countries. For a list of availability by country visit the support pages at: https://support.tidal.com

1.7 Multiroom Streaming

NAC-N preamplifiers can play audio streams from other Naim streamer products connected to the same home network. Similarly, NAC-N preamplifiers can simultaneously broadcast audio playing from their Spotify®, TIDAL, UPnP™, iRadio, or USB inputs to a maximum of four other Naim streamer products connected to the same network. See Section 8.4 for more information.

1.8 Bluetooth® Streaming

NAC-N preamplifiers can play Bluetooth audio streams from Bluetooth devices running an appropriate audio playback app. See Section 9 for more information.

2. Installing and Connecting

Your NAC-N preamplifier should be installed on an equipment stand intended for the purpose. Do not stand it directly on top of another item of equipment. Ensure it is well ventilated. Care should be taken to ensure that it is level. It should be installed in its final location before connecting cables or switching on. NAC-N preamplifiers have no standby mode and are intended to be left switched on.

Connecting your NAC-N preamplifier to mains power and to a variety of audio peripherals and sources is described in the following paragraphs. Diagram 2.11 illustrates connection sockets and control features.

2.1 Mains Power Connection

NAC-N 172 XS

Connect your NAC-N 172 XS to a mains power supply using either the mains cable supplied or a Naim Power-Line.

NAC-N 272

The NAC-N 272 can either be connected directly to a mains power supply or, for improved performance, powered by an external XP5 XS, XPS or 555PS power supply.

If your NAC-N 272 is to be connected directly to a mains power supply, insert the supplied power supply upgrade link plug in the rear panel Burndy socket and connect the NAC-N 272 to the mains supply using either the mains cable supplied or a Naim Power-Line. Do not switch on the NAC-N 272 until all its other connections are made.

If your NAC-N 272 is to be powered by an external power supply, the power supply upgrade link plug is not required. Instead, connect the external power supply to the NAC-N 272 power supply upgrade socket using a Naim SXPS Burndy power supply cable. The NAC-N 272 should not be connected directly to mains power when an external power supply is used.

> Note: Your local local Naim retailer or distributor will be able to supply an SXPS Burndy cable if required.

The power supply should be switched off while connection is made and remain switched off until all other NAC-N 272 connections are made.

> Important: XPS power supplies with serial numbers below 188015 are not compatible with the NAC-N 272 and should not be used. Contact your local Naim retailer or distributor for more information.

The NAC-N 272 rear panel mains switch has no function when an external power supply is connected.

2. Installing and Connecting

2.2 Audio Signal Connections

Table 2.2.1 lists the audio inputs and outputs provided on each NAC-N preamplifier. Always use high quality interconnect cables to connect inputs and outputs.

Note: Post volume control output signals are affected by volume and balance adjustments. Pre volume control output signals are unaffected by volume and balance adjustments and must be routed via a volume control before reaching a power amplifier.

2.2.1 Audio Signal Inputs and Outputs

NAC-N 172 XS

Type	Name	Format	Notes
Input	an. 1	Analogue 5-pin DIN	Fixed volume capable
Input	an. 2	Analogue RCA phonos	Fixed volume capable
Input	Front	Analogue 3.5mm jack	Combined auto-switching analogue/digital socket
		Digital 3.5mm miniTosLink	S/PDIF (to 96kHz/24bit) format
Input	dig. 1	Digital coaxial (RCA phono)	S/PDIF (to 192kHz/24bit) format
Input	dig. 2	Digital optical (TosLink)	S/PDIF (to 96kHz/24bit) format
Input	dig. 3	Digital coaxial (RCA phono)	S/PDIF (to 192kHz/24bit) format
Input	dig. 4	Digital optical (TosLink)	S/PDIF (to 96kHz/24bit) format
Output	Preamp	Analogue 4-pin DIN	Post volume control
Output	Preamp	Analogue RCA phonos	Post volume control
Output	Line	Analogue RCA phonos	Pre volume control

Note: The NAC-N 172 XS Series front analogue/digital jack input socket can accommodate both conventional analogue 3.5mm plugs and miniTosLink optical digital plugs. It will automatically identify the type of plug inserted and handle the signal appropriately. See Section 4.3.10.

NAC-N 272

Type	Name	Format	Notes
Input	an. 1	Analogue 5-pin DIN	Fixed volume capable
Input	an. 2	Analogue RCA phonos	Fixed volume capable
Input	an. 3	Analogue RCA phonos	Fixed volume capable
Input	dig. 1	Digital coaxial (BNC)	S/PDIF (to 192kHz/24bit) or DSD64 formats
Input	dig. 2	Digital coaxial (RCA phono)	S/PDIF (to 192kHz/24bit) or DSD64 formats
Input	dig. 3	Digital coaxial (RCA phono)	S/PDIF (to 192kHz/24bit) or DSD64 formats
Input	dig. 4	Digital optical (TosLink)	S/PDIF (to 96kHz/24bit) format
Input	dig. 5	Digital optical (TosLink)	S/PDIF (to 96kHz/24bit) format
Input	dig. 6	Digital optical (TosLink)	S/PDIF (to 96kHz/24bit) format
Output	Preamp	Analogue 4-pin DIN x 2	Post volume control
Output	Preamp	Analogue RCA phonos	Post volume control
Output	Line	Analogue RCA phonos	Pre volume control
Output	Line	Digital coaxial (BNC)	Pre volume control. S/PDIF (to 192kHz/24bit) format

Note: NAC-N preamplifier outputs are intended for connection to a power amplifier or a subwoofer. Preamplifier outputs always reflect the selected input. Your local Naim retailer will be able to supply appropriate cables for power amplifier or subwoofer connection if necessary.

2. Installing and Connecting

2.3 Headphone Output

The NAC-N 172 XS and NAC-N 272 are equipped on their front panels with 3.5mm and 6.3mm stereo headphone sockets respectively. Insertion of a headphone plug will mute the preamplifier outputs. Removal of the plug will restore the outputs.

Note: NAC-N preamplifiers control and store volume settings separately for headphones and speakers.

2.4 DAB/FM Aerial Connection

The NAC-N preamplifier DAB/FM tuner module requires a strong, interference-free signal to enable high quality DAB and FM reproduction. The rear panel DAB/FM Aerial socket should be connected, via 75 ohm low-loss coaxial cable, to a suitable aerial. The aerial should be mounted clear of large obstructions and as high as possible; ideally on a roof.

Note: Your local Naim retailer should be able to offer advice on a suitable aerial and aerial installer.

2.5 Signal Ground Switch

Your NAC-N preamplifier is fitted on its rear panel with a Signal Ground switch offering two positions: Chassis and Floating. Select the Chassis position unless the NAC-N preamplifier is connected in a hi-fi system incorporating another earthed source component, or mains “hum” is audible through the loudspeakers. Contact your retailer, distributor or Naim for advice if necessary.

Note: “Connected” in the context above means an analogue audio signal cable that includes an earth connection. The digital inputs are isolated from the mains earth regardless of the Signal Ground switch.

Note: All Naim CD players are earthed so the Signal Ground switch should be set to floating if one is connected in the system.

No damage will be done if the wrong Signal Ground position is chosen, however the system sound quality may be compromised.

Note: NAC-N preamplifier analogue input and output negative connections for each channel are common. The mains earth (ground) should always be connected regardless of what other equipment is used. The mains earth primarily grounds the case and the electrostatic screen within the transformer, and is only connected to the signal negative if the Signal Ground switch is set to Chassis. In order to avoid hum loops, the signal negative of the whole system should be connected to the mains earth in one place only.

2.6 USB Interface

NAC-N preamplifiers are fitted with a front panel USB interface intended for the connection of USB memory sticks carrying audio files. The USB interface should not be used for any other purpose.

Note: Most UMS (Universal Mass Storage) USB memory sticks are compatible with the NAC-N preamplifier USB audio interfaces. Other UMS devices might include portable digital music players, smart-phones, tablet computers and memory card readers. Non-UMS USB devices, such as older MP3 players, may be connected to a NAC-N preamplifier analogue audio input from their headphone sockets. See Section 7 for more information.

2.7 Network Connections

2.7.1 Wired Network Connection

NAC-N preamplifiers are fitted on their rear panels with a standard RJ45 Ethernet socket. This socket enables them to join home networks via a network router to access internet radio streams, to play audio files stored on UPnP™ servers, to play Spotify® Connect and TIDAL streams, and to play from or broadcast to other Naim streamers on the same network.

Note: Ethernet-over-mains hardware may be used and provides a simple and convenient method of wired home network connection. However, depending on mains wiring factors specific to each home environment, the presence of network data on the mains supply may compromise overall system sound quality. If any sound quality compromise is found to be unacceptable, dedicated network cabling should be installed as the preferred option, or alternatively wireless networking can be employed.

2.7.2 Wireless Network Connection

If your NAC-N preamplifier is to connect wirelessly to the home network, the supplied Wi-Fi aerial must be fitted to the rear panel Wi-Fi aerial socket. Wireless configuration will also be necessary before network connection can be made. See Section 4.7.1.

Note: The Wi-Fi aerial is the longer one.

Note: An optional high-gain Wi-Fi antenna, the WA5, is available. The WA5 may improve Wi-Fi connection reliability in some installations. Contact your Naim retailer for more information.

2.7.3 Network Settings

NAC-N preamplifiers are set up when originally shipped not to require any network configuration but to connect to networks automatically (DHCP is used by default). However, if your NAC-N preamplifier has been previously used, its network configuration may have been altered leaving it unable to connect automatically. If this appears to be the case ensure that DHCP is selected in the Network Settings menu and re-start the unit. If the problem still persists carry out a Factory Reset operation (by selecting Reset All Settings from the Factory Settings setup menu) and try again.

Note: Wireless configuration data and user radio presets will be deleted during the Factory Reset operation.

2.8 Bluetooth

NAC-N preamplifiers are able to play Bluetooth audio streams from Bluetooth capable devices incorporating an appropriate audio playback app. The Bluetooth aerial supplied must be fitted to the rear panel Bluetooth aerial socket.

Note: The Bluetooth aerial is the shorter of the two supplied.

2.9 System Automation

NAC-N preamplifiers can be linked using System Automation to control some Naim CD players. This enables a Naim CD player to be controlled from the Naim iOS and Android app.

To take advantage of System Automation, connect the NAC-N preamplifier rear panel Remote Out socket to the CD player Remote In socket. Use a cable terminated with a 3.5mm jack plug at one end and a 3.5mm jack or phono plug as necessary at the other end.

Note: Stereo and mono 3.5mm jack to 3.5mm jack can be used for System Automation. If a stereo 3.5mm jack to phono plug cable is used, connect the left channel phono plug.

Note: System Automation is switched off by default. A full description of its configuration and use can be found in Section 4.12.

2.10 Control and Update Sockets

NAC-N preamplifiers are fitted on their rear panels with remote control and update interface sockets.

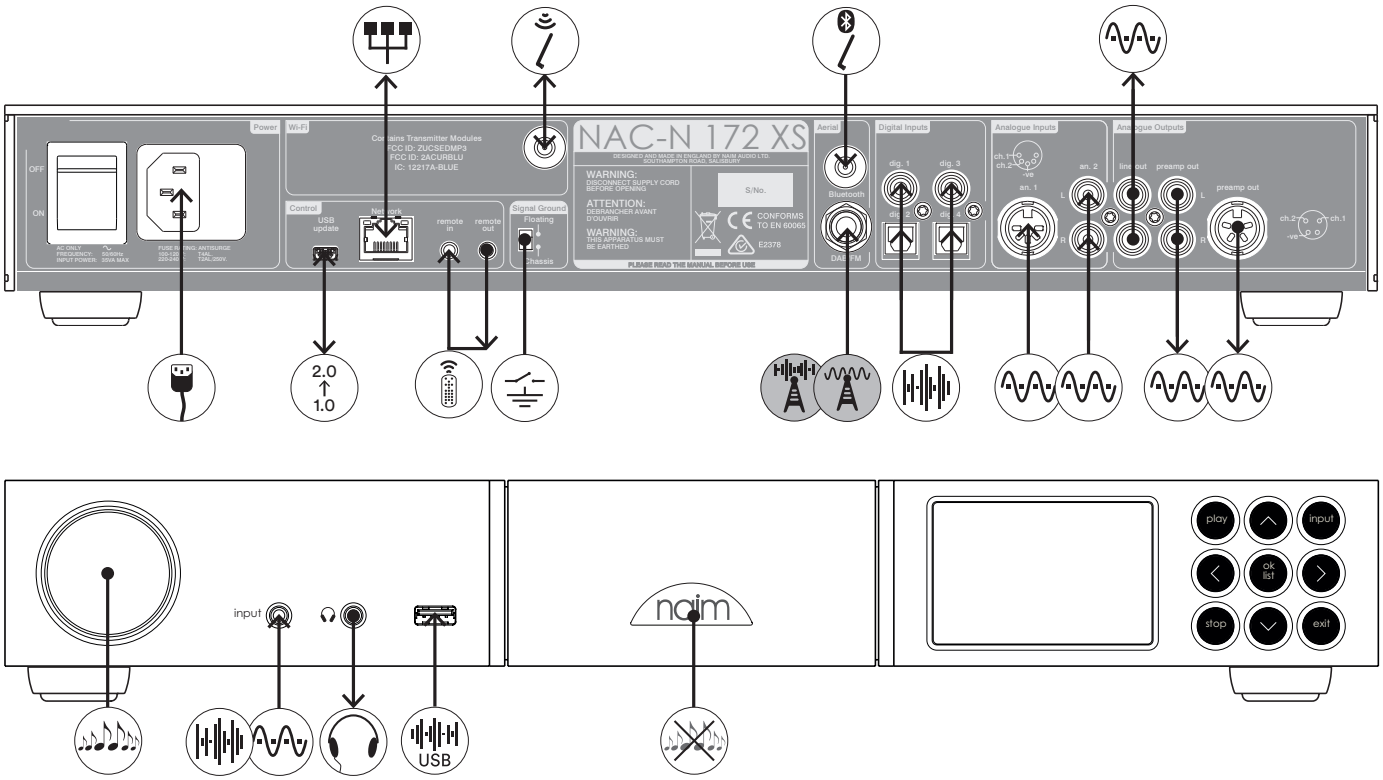
- In addition to System Automation (see Section 2.9) the Remote In and Out sockets can be used for RC5 remote control via a wired connection or a remote IR repeater.
- The Mini-USB socket enable firmware upgrades and diagnostic tests to be carried out. Contact your Naim retailer for more information if required.

Note: The mini-USB interface is not intended for the connection of USB memory devices.

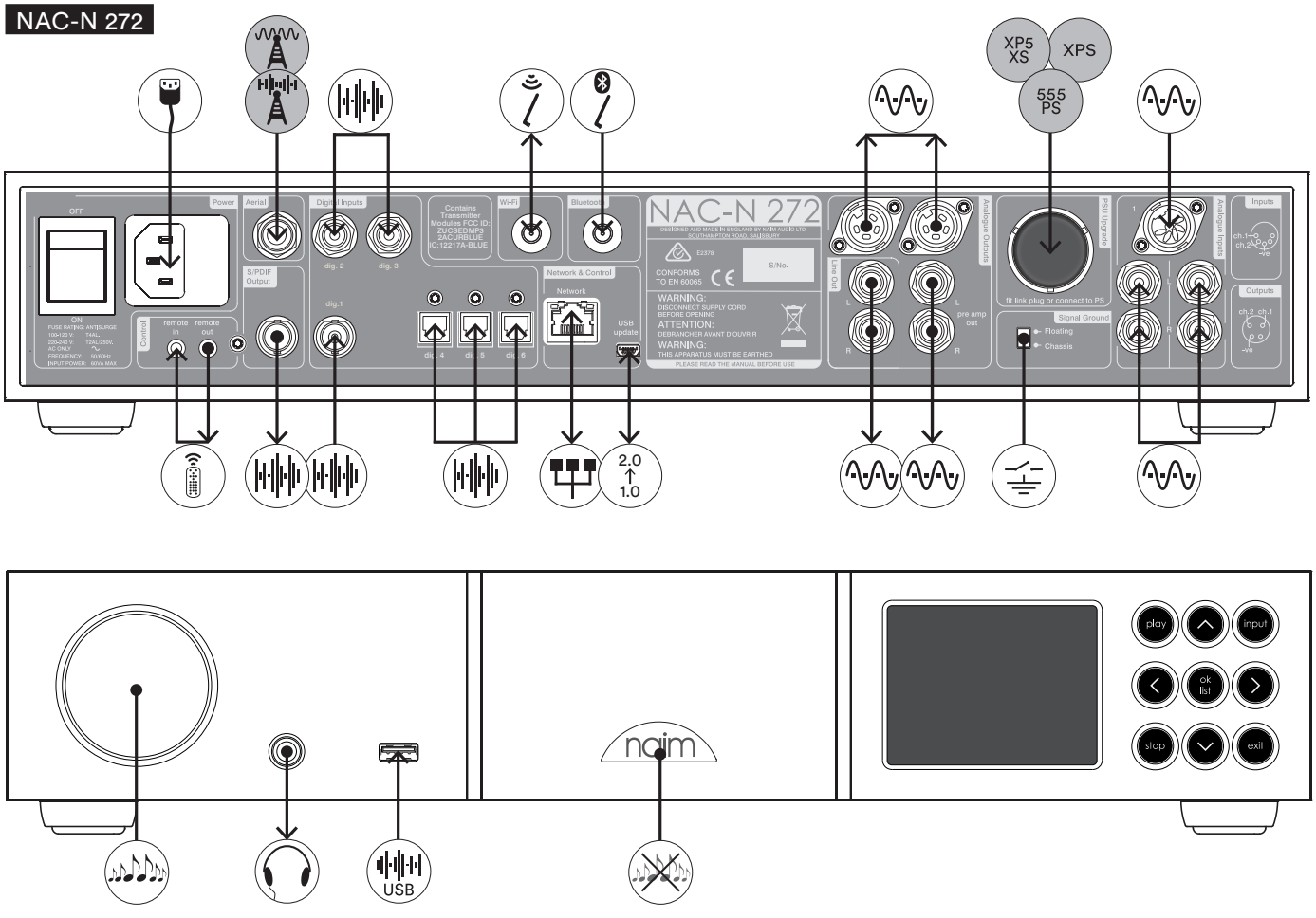
2. Installing and Connecting

2.11 Connections

NAC-N 172 XS



NAC-N 272



2. Installing and Connecting

2.12 Diagram Icons


Analogue signal


S/PDIF digital audio signal

USB audio data


Optional FM radio


Optional DAB radio


Headphones


IEC mains supply


Signal Ground Switch


W-Fi aerial


Bluetooth aerial


Wired network


RC5 remote control signal

Firmware upgrade socket

Optional 555PS power supply

Optional XPS power supply

Optional XP5 XS power supply


Volume control

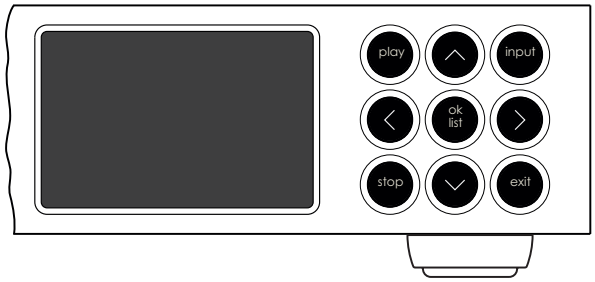

Logo touch mute and un-mute

3. Operation and Control

NAC-N preamplifiers can be operated using either the supplied remote control handset, their front panel buttons or via the Naim iOS and Android app. Setting up and operating NAC-N preamplifiers using the remote handset or front panel controls involves navigation through a menu-based user interface. The general principles of the interface are the same for all NAC-N preamplifier components and this section of the manual begins by illustrating those general principles using front panel controls.

Note: NAC-N preamplifier front panel logos are touch sensitive and provide mute functions.

3.1 Front Panel Buttons



The front panel buttons function as described below:

play	Play a selected track or radio station.
^	Navigate up a menu or list.
input	Sequentially select inputs.
<	Return to the previous display menu.
ok/list	Confirm menu item selection. Enter list mode.
>	Advance to the next menu.
stop	Stop playing a track, radio station or streaming input.
v	Navigate down a menu or list.
exit	Exits list mode.

3.2 Front Panel Display

Front panel display behaviour is common to all NAC-N preamplifiers.

3.2.1 Normal Play Mode

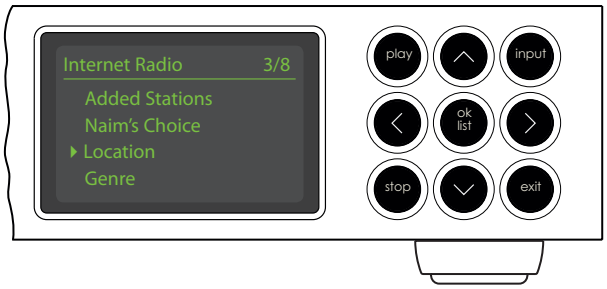
In normal play mode the display provides information on the current setup, the input selected, and the material playing. A typical normal play mode screen is illustrated above showing an audio file playing via the USB input.

At the top left of the display the volume level is shown along with a “speaker” icon that indicates mute is not engaged. The speaker icon flashes when mute is engaged.

At the top of the display the “play” icon is shown to indicate that playback is underway and the “shuffle” icon is displayed to denote random play has been selected. “USB” denotes that the USB input is selected.

3. Operation and Control

3.2.2 Front Panel Display (List Mode)



List mode is selected by pressing the front panel list button or handset ok/list key. List mode is used where sources provide data that can be browsed: a list of radio stations or tracks for example.

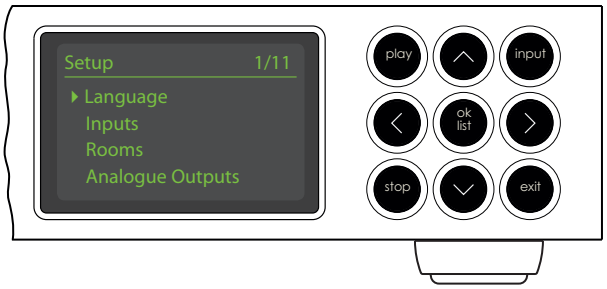
Lists displayed will depend on the source selected and data available. A typical list mode screen, illustrated above, shows the initial internet radio display menu. At the top right of the screen, “3/8” denotes that the selected item is number three of eight.

To navigate around lists and select items use the front panel or handset up (▲), down (▼), left (◀) and ok/list buttons or keys. To return to normal display press the handset exit key or front panel exit button.

> Note: The right (▶) key duplicates the ok/list key when navigating list mode menus.

In long item lists the handset numeric/text keys can be used to jump through the list alphabetically.

3.2.3 Setup Mode



Setup mode is selected by pressing the handset setup (🔧) key, pressing and holding the front panel list button, or selecting the Naim App settings menu. Setup mode provides access to all user-configurable parameters.

The illustration above shows the setup home menu displayed when setup mode is initially selected. The “1/11” at the top right denotes that the selected menu item is number one of eleven.

> Note: Not all NAC-N preamplifiers have the same number of setup menu items.

To navigate around the setup menus and make selections use the front panel or handset up (▲), down (▼) and left (◀) arrow keys to navigate around menus and the ok/list button or key to confirm a selection.

> Note: The right (▶) key duplicates the ok/list key when navigating setup mode menus.

To leave setup mode press the handset setup (🔧) or exit key or the front panel list or exit button.

> Note: If playback is underway when setup mode is selected it will continue. The volume, mute and transport (play, pause, stop, etc.) keys on the handset will remain operational.

3. Operation and Control

3.3 Remote Control Handset

The remote control handset is a multifunctional device designed specifically for NAC-N preamplifiers and Naim streaming products.

To fit batteries, remove the battery cover and insert the batteries into the body taking care with their orientation. Replace the battery cover.

The handset key functions are listed and described in the tables below. Some keys change function in list and setup modes. Normal play mode functions are denoted by the text on each key and list/setup mode functions are denoted by the text below each key. Keys with only one function are listed in the table on the right.

3.3.1 Normal and List/Setup Mode Keys

Key	Normal Mode	List/Setup Modes
numeric text	Enter digits 1 to 9	Enter characters in text
␣ 0	Enter 0 (zero)	Enter spaces in text
preset del	Display the radio preset list	Delete last character in text
store ↑	Display the radio preset menu	Switch text case
input + ▲	Select next input	Menu up navigation
input – ▼	Select previous input	Menu down navigation
◀	Input dependent (see note)	Previous menu or back one character in text
▶	Input dependent (see note)	Next menu or forward one character in text
exit	No function	Exit current menu without saving changes
list ok	Display input dependent list of tracks/functions	Confirm action or selection

Note: Navigation (◀ ▶ ▲ ▼) key assignments can be altered via the Handset Keys setup menu. See Section 4.11.

3.3.2 Normal Play Mode Keys

Key	Function
disp	Switch display on or off. Toggle clock display if configured.
vol +	Increase volume
vol –	Decrease volume
mute	Mutes audio output
(repeat)	Repeat selected track, programme or playlist
(shuffle)	Play tracks randomly from list
(setup)	Display the setup menu
(info)	Cycle through secondary input information
(play/pause)	Play or pause track
(previous)	Go to previous track/station
(next)	Go to next track/station
(stop)	Stop playback
(reverse)	Fast reverse track
(forward)	Fast forward track
cd	Sequentially selects the Analogue 1 and Digital 1 inputs.
radio	Sequentially selects the FM, DAB and iRadio inputs.
pc	Sequentially selects the UPnP™ and Bluetooth inputs.
iPod	Sequentially selects the USB, front panel Spotify® and TIDAL inputs.
tv	Input selection is NAC-N preamplifier model dependent. See Section 4.11.2.
av	Input selection is NAC-N preamplifier model dependent. See Section 4.11.2.
hdd	Input selection is NAC-N preamplifier model dependent. See Section 4.11.2.
aux	Input selection is NAC-N preamplifier model dependent. See Section 4.11.2.

Note: Input selection key assignments can be altered via the Handset Keys setup menu. See Section 4.11.

3. Operation and Control

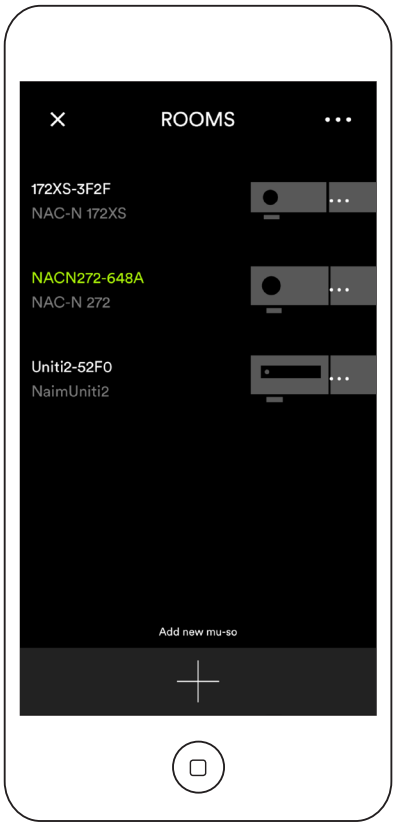
3.4 The Naim App

The Naim App comprises pages dedicated to each streaming source and input, and pages dedicated to set up. The Naim App is intuitive in use and its capabilities and principles are best learned by using it to configure your NAC-N preamplifier to suit your needs. To begin using the Naim App follow the steps below:

- Download and install the Naim App on your iOS or Android device.
- Ensure that the iOS or Android device is connected to the same network as your NAC-N preamplifier and open the Naim App.
- From the Rooms menu select the Naim streaming product you wish to control with the Naim App. The diagram below illustrates selection of a NAC-N 272 from the Naim App setup page.

Note: If there are multiple Naim streaming products connected to your network they will be listed for selection on the Naim App rooms screen. The correct unit can be identified either by its product name or, in the case of multiple identical products, by the first four characters of each unit's MAC address appended to its product name. The individual MAC address is listed in the unit's front panel Setup menu under Network Settings.

Naim App Rooms



Note: The Naim App Settings menu enables preamplifier default names to be changed. Designating each one with a name that reflects their location will help make multiroom control more satisfying and intuitive.

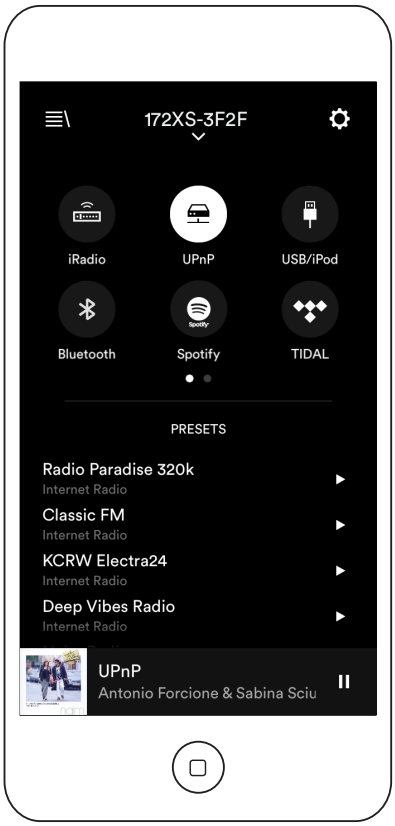
3.4.1 Selecting Inputs from the Naim App

With the desired NAC-N preamplifier selected, the Naim App Input icons will configure to reflect the inputs available. Tap the Input icon (which will display the current or default input) and then select the required input. The diagram below illustrates the Naim App home page and Input icons.

Note: Only one instance of the Naim App can be connected to a single NAC-N preamplifier at any time.

If a streaming source such as Spotify® is selected automatically by the presence of a stream, the Naim App display will switch to the appropriate streaming source page and offer the controls available to that stream type. If an alternative source is selected, the stream playback will stop and the NAC-N preamplifier will disconnect from the stream source.

Naim App home



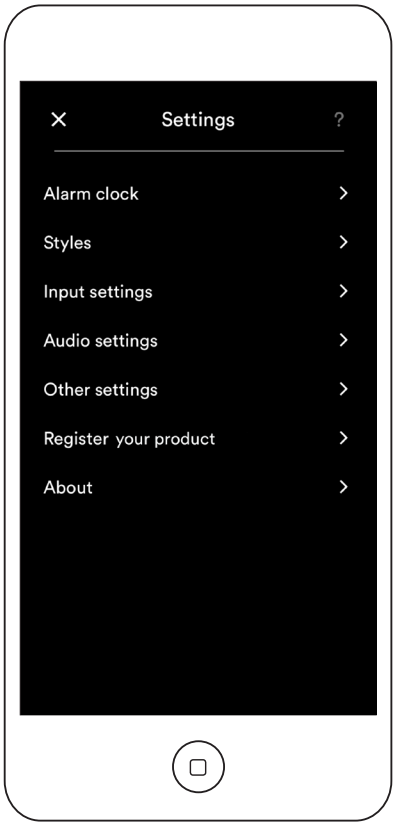
3. Operation and Control

3.4.2 Setup using the Naim App

The Naim App provides comprehensive access to all NAC-N setup parameters. The setup parameters and functions are listed in the following paragraphs. The diagram below illustrates the Naim App Settings page.

The Settings menu provides the following items: Alarm Clock, Styles, Input settings, Audio Settings, Other settings, Register your product and About.

Naim App settings



Alarm clock

The Alarm Clock menu enables the alarm time to be set and the alarm source to be selected.

Styles

The Styles menu enables various Naim App background options to be selected.

Input settings

The Input settings menu provides a variety of options specific to each type of input.

Audio settings

The Audio settings menu provides a variety of audio control and configuration options.

Other settings

The Other settings menu provides access to a variety of app interface and configuration options.

Register your product

The Register product menu enables product registration information to be sent to Naim.

About

The About menu provides third party licence information and information on NAC-N preamplifier firmware and connection status.

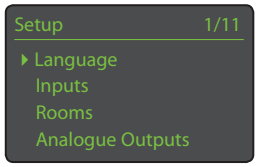
4. Set Up

Once your NAC-N preamplifier is installed with mains power, network, radio aerial and any external connections made, it can be switched on and set up for use.

The degree to which you modify the default settings of your NAC-N preamplifier will depend upon the uses to which you put it and the extent to which you use its capabilities. It may be that you have no need to modify the default settings at all, however we would encourage you to read this section of the manual in order that you gain a full understanding of your preamplifier's capabilities. The following paragraphs describe each setup menu in turn, starting with the home menu.

Select setup mode by pressing the handset setup ( ) key. Navigate around the setup menus using the handset navigation keys (▲ ▼ ◀) and make selections using the ok/list key. Exit setup by pressing the exit key or setup key.

4.1 The Setup Home Menu



The Home menu provides access to the setup menus. The function of each menu is as follows:

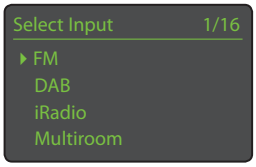
Language:	Enables the user interface language to be changed.
Inputs:	Enables various parameters for each internal, external and streaming input to be configured.
Rooms:	Enables multiroom streaming to Naim streamer units. The Rooms menu is only visible when the multiroom input is enabled (see Section 4.3.4).
Analogue Outputs:	Configures analogue output settings.
Headphones:	Configures headphone output options.
Network Settings:	Configures network connection settings.
Front Display:	Configures display features.
Clock & Alarm:	Configures the clock and alarm.
Handset Keys:	Enables inputs to be assigned to specific handset keys. Also enables configuration of the handset navigation (◀ ▶ ▲ ▼) keys.
System Automation:	Configures system automation options.
Factory Settings:	Enables interrogation of status, deletion of all user presets and return to factory default settings.

Each of the setup menus is described in the following sections. Use the handset up (▲) and down (▼) and ok/list keys to select a setup menu and make adjustments.

4.2 The Language Menu

The Language menu enables the user interface language to be changed. Select setup mode and use the handset ok/list key to select Language. Use the handset up (▲) and down (▼) and ok/list keys to select a language. Exit setup mode by pressing the handset exit key.

4.3 The Inputs Menu

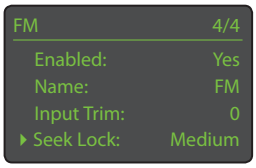


The Inputs menu enables a variety of parameters to be adjusted for each internal, external and streaming input. Three parameters are common to all inputs:

Enabled:	Switches the source or input on or off and displays or hides any associated menus.
Name:	Enables user specified names to be attached to sources or inputs. Use the handset or Naim App to enter text.
Input Trim:	Enables the relative level of sources and inputs to be adjusted so that each is of an equal volume. Adjust using the handset ▼ or ▲ key.

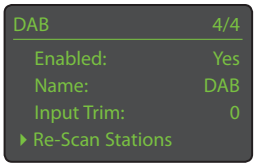
The unique parameters and options available for each input are described in the following sections.

4.3.1 FM Input (if option fitted)



Parameter	Options
Seek Lock:	Medium / High. Sets the signal level required for the tuner to identify a station.

4.3.2 DAB Input (if option fitted)



Parameter	Options
Re-scan Stations:	Re-scans for stations.

Note: The DAB input is only implemented in units sold in countries where Digital Audio Broadcasts are available.

4. Set Up

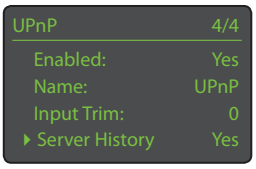
4.3.3 iRadio Input

Parameter	Options
Auto Disconnect:	Select time. Auto-disconnect is provided so that data usage limits are not inadvertently exceeded by a preamplifier left connected to internet radio.
Browse History:	Yes / No. If Yes is selected the last used station will display if it is available when list mode is selected. If No is selected the top station selection menu will display.

4.3.4 Multiroom Input

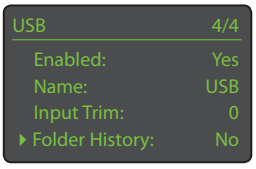
Note: The multiroom input must be enabled for a NAC-N preamplifier to operate as either a server streamer or client streamer.

4.3.5 UPnP™ (Network) Input



Parameter	Options
Server History:	Yes / No. If Yes is selected the last used folder will display if its UPnP™ server is still available. If No is selected the full list of available servers will display.

4.3.6 USB Input



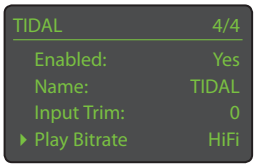
Parameter	Options
Folder History:	Yes / No. If Yes is selected the last used folder on the USB device will display. If No is selected the top level folder of the device will display.

4.3.7 Spotify® Input

With its Spotify® input enabled, a NAC-N preamplifier connected to the same local network as a device running the Spotify® app and in receipt of a Spotify® stream will automatically select its Spotify® input and play the stream.

Parameter	Options
Play Bitrate:	96k / 160k / 320k. Enables the Spotify® stream data rate to be selected to suit internet connection bandwidth. Higher data rates provide better audio quality but require faster internet connection speeds. The rate delivered in practice depends on the data rates available from Spotify® for the specific material.

4.3.8 TIDAL Input



With its TIDAL input enabled, a NAC-N preamplifier will automatically select its TIDAL input when in receipt of a TIDAL stream from the Naim App.

Parameter	Options
Play Bitrate:	Normal / High / HiFi. Enables the TIDAL stream data rate to be selected to suit internet connection bandwidth. Normal bitrate: 96kbps AAC format. High bitrate: 320kbps AAC format, HiFi bitrate: 16 bit 44.1kHz FLAC format.

4.3.9 Bluetooth Input

With its Bluetooth input enabled, and when paired with a Bluetooth audio device, a NAC-N preamplifier will automatically select its Bluetooth input when in receipt of a stream from the paired device. See Section 9 for more on pairing.

Parameter	Options
Discovery:	User definable. Enables the NAC-N preamplifier Bluetooth name to be changed. Use the handset or Naim App to enter text.
Open Paring:	Yes / No Selecting open pairing enables any Bluetooth audio device within range to connect without pairing.

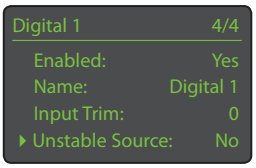
4. Set Up

4.3.10 Front Panel Input

NAC-N 172 XS

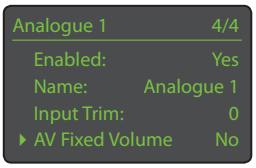
Parameter	Options
Format:	Auto / Analogue / Digital. If Auto is selected the front panel input will automatically detect the audio signal format (analogue or digital) and configure the input appropriately. Specifying Analogue or Digital will fix the front panel input format.

4.3.11 Rear Panel Digital Inputs



Parameter	Options
Unstable Source:	Yes / No Select No unless the preamplifier has problems locking to a digital signal. Selecting Yes will enable the unit to play unstable digital signals, however sound quality will be slightly degraded.

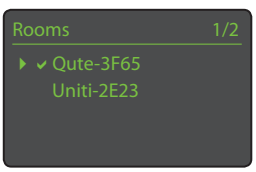
4.3.12 Rear Panel Analogue Inputs



Parameter	Options
AV Fixed Volume:	Yes / No If No is selected the input will behave normally. If Yes is selected the input will operate at a fixed volume and the preamplifier volume control will be disabled. This enables the preamplifier to be used in multi-channel AV systems with volume control handled by the AV processor. Take care when selecting AV Fixed Volume.

Note: AV fixed volume is available on rear panel analogue inputs only.

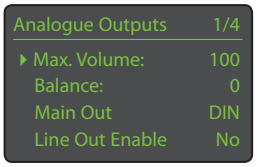
4.4 The Rooms Menu



The Rooms menu enables NAC-N preamplifiers to broadcast audio from their Spotify®, TIDAL, UPnP™, iRadio, or USB inputs simultaneously to up to four other Naim streamer products connected to the same home network.

Note: The Rooms menu is only visible when the multiroom input is enabled. See Section 4.3.4.

4.5 The Analogue Outputs Menu

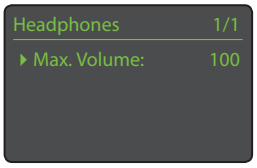


The Analogue Outputs menu enables main output DIN and RCA socket options to be configured, maximum volume and balance to be set, and the line outputs to be enabled. Volume and balance settings apply to DIN and RCA outputs.

Parameter	Options
Max. Volume:	0 to 100 (adjust with handset ▼ or ▲)
Balance:	-10 to +10 (adjust with handset ▼ or ▲)
Outputs:	DIN / RCA / DIN+RCA
Line Out Enable	No / Yes

Note: Main output socket options and line output options are not available on the NAC-N 172 XS.

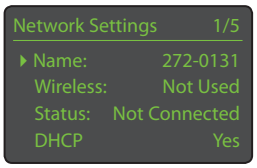
4.6 The Headphones Menu



The Headphones setup menu enables the Max. Volume parameter to be selected:

Parameter	Options
Max. Volume:	0 to 100 (adjust with handset ▼ or ▲)

4.7 The Network Settings Menu



The Network Settings menu enables network parameters to be customised to suit the router and network. The options are tabulated and described in the following sections:

Parameter	Options
Name:	User definable. Use the handset or Naim App to enter text.
Wireless:	Not Used / Wi-Fi Network Name
Status:	Connected / No Signal / Login Failure / Busy / Etc.
DHCP:	Yes / No
MAC:	Displays the unit's MAC address.

The Name parameter enables the preamplifier's default network name to be changed.

The Wireless parameter enables a wireless network to be chosen and joined. See Section 4.7.1 below for detailed wireless set up notes.

Status displays the current network connection status.

The DHCP parameter enables the network settings to be modified. In most cases leaving the option set to DHCP will be the appropriate choice. See Section 4.7.2 below for notes on non-DHCP network connection.

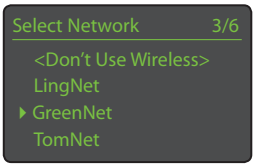
4. Set Up

Note: Devices installed on a 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. All NAC-N preamplifiers are configured by default to use DHCP.

Note: If a NAC-N preamplifier is connected to a network both wirelessly and via a wired connection, the wired connection will take priority.

4.7.1 Wireless Network Connection Set Up

If the Wireless parameter is selected in the Network Settings menu the Select Network menu will display a list of the available networks. An option not to use a wireless connection is also provided.

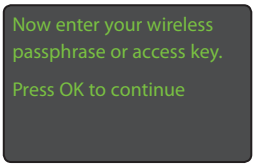


Note: NAC-N preamplifiers are compatible with the most commonly used Wi-Fi standards. Routers that support 802.11b and 802.11g will work, however those with 802.11n compatibility are recommended for best results.

Note: As with any wireless network hardware, connection reliability will be affected by both network router performance and Wi-Fi signal quality. To minimise the possibility of poor connection reliability, NAC-N preamplifiers should be connected to network audio sources by no more than one wireless "leg". Other "legs" necessary between a NAC-N preamplifier and the network audio sources should be wired.

Note: NAC-N preamplifiers cannot connect to a "hidden" wireless network.

If the selected network is secure and requires a password to join, an alert message will display. Pressing the handset ok/list key will then open a text entry screen for entry of the password.



Use the handset numeric/text keys to enter the password taking care to ensure that the letter case is correct. Press the handset ok/list key when text entry is complete. In the illustration the password is "flatfish".

If the network is successfully joined a confirmation screen will display.

If an incorrect password is entered an alert message will display.

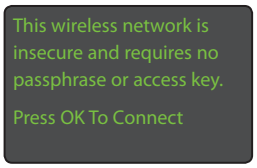
Note: Some routers may also require a MAC address to be entered before allowing NAC-N preamplifiers to join a wireless network. This type of security feature is known as 'MAC address filtering'. NAC-N preamplifier MAC addresses are shown in both the Network Settings and Factory Settings menus.

Note: The wireless password key is created when the wireless router is first set up and could be a word or a series of numbers and letters. If the password is not known, check on the router settings page or with the person who initially set up the router.

Note: If a router offers multiple security configurations, only the most secure one will be offered.

Note: If WEP security is used the router should be set to "auto" or "open" authentication.

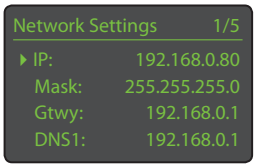
If the selected network is insecure and requires no password, an alert message will display. Pressing the handset ok/list key will immediately connect your NAC-N preamplifier to the network and display a confirmation screen.



Note: Wireless connection difficulties can sometimes be resolved by changing the wireless connection channel in the router settings.

4.7.2 Non-DHCP (Static) Network Connection

If DHCP is de-selected in the Network Settings menu, five further parameters will be displayed.

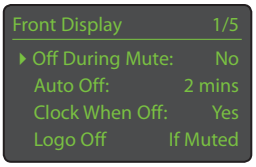


Parameter	Options
IP:	User definable (numerical entry)
Mask:	User definable (numerical entry)
Gateway (Gtwy):	User definable (numerical entry)
DNS1:	User definable (numerical entry)
DNS2:	User definable (numerical entry)

These settings enable a NAC-N preamplifier to connect to a network using a fixed IP address. On selecting each one in turn, numerical entry screens will be displayed that require completion with the appropriate network IP address settings. Consult your network router's user documentation for help with specifying fixed IP address settings.

4. Set Up

4.8 The Front Display Menu



The Front Display menu enables the behaviour of the front panel display, logo illumination, clock display and logo-touch muting to be modified. The options are tabulated and described in the following section:

Parameter	Options
Off During Mute:	Yes / No
Auto Off:	Select from list
Clock When Off:	Yes / No
Logo Off:	If Muted / If Display Off /Always / Never
Logo Mute:	Yes / No

When Off During Mute is selected the front panel display will switch off when mute is engaged. Auto Off defines the length of time the display will remain switched on after the last interface operation is carried out. Time periods of between 10 seconds and 1 hour can be selected.

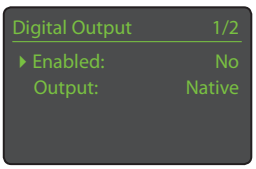
> Note: If the display has been switched off using the handset disp key this setting will take priority over the Auto Off setting. The display will always switch on briefly when control commands are received.

The Clock When Off settings enables the clock to remain displayed when other display settings are switched off.

> Note: The clock display will dim automatically after 10 seconds if mute is selected.

The Logo Off settings select the circumstances in which the front panel logo illumination will switch off. Logo Mute settings engage or disengage the touch-mute function of the front panel logo.

4.9 The Digital Output Menu



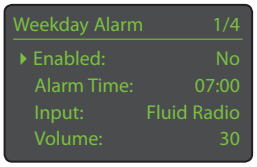
The Digital Output menu enables the digital output to be switched on and its signal format to be configured.

Parameter	Options
Enabled:	Yes / No
Output:	Native / 96kHz 24bit. If Native is selected, the digital output format will reflect the input format. If 96kHz 24bit is selected, the output is re-sampled to 96kHz and 24bit resolution.

4.10 The Clock and Alarm Menu

The Clock & Alarm menu enables the NAC-N preamplifier clock to be set and alarms to be configured.

Selecting Set Weekday Alarm or Set Weekend Alarm opens a menu that offers the following parameters and options:

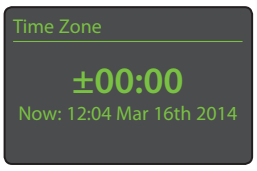


Parameter	Options
Enabled:	Yes / No. Selecting Yes primes the alarm. Selecting No disables the alarm.
Alarm Time:	07:00. Selecting the time opens a screen that enables the alarm time to be set by using the remote navigation (▲ ▼ ◀ ▶) and numeric keys.
Input:	External inputs or radio presets can be selected to become the alarm audio source.
Volume:	The alarm audio volume can be set independently of the default volume using the remote handset up (▲) and down (▼) keys.

> Note: The radio can only be used as an alarm signal using stored radio presets.

Weekday alarms operate on Mondays to Fridays. Weekend alarms operate on Saturdays and Sundays.

> Note: NAC-N preamplifiers have no default alarm tone and can only use their external inputs or radio presets as alarm signals. If the use of an alarm is critical, it is important to be certain that the alarm signal will be active when the alarm is set to sound. This is especially relevant to internet radio stations which may stop broadcasting unexpectedly.



Selecting Adjust Time Zone enables the time zone to be set. The handset up (▲) and down (▼) keys are used to select + or – with respect to GMT (Greenwich Mean Time).

> Note: The clock does not by default adjust automatically to take account of localised “daylight saving” however automatic daylight saving can be enabled from the Naim App.

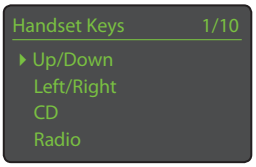
Selecting Resync Time From Net enables the clock to re-synchronise with its selected time server.

4. Set Up

Note: The clock re-syncs with its internet time server automatically every 24 hours. If it is unable to connect it retries every 30 minutes.

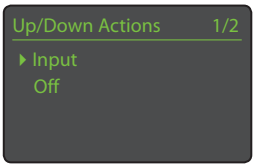
Selecting Advanced Setup enables an alternative internet time server to be selected. Contact your local Naim retailer for more information on selecting time servers.

4.11 The Handset Keys Menu

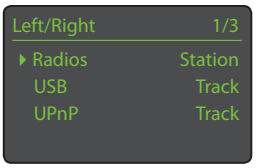


The Handset Keys menu enables the inputs assigned to each handset input selection key (cd, radio, pc, iPod, tv, av, hdd, aux) to be changed, and the function of the handset navigation keys (▲ ▼ ◀ ▶) to be configured.

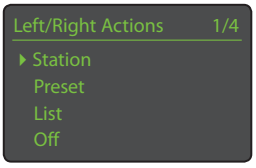
4.11.1 Navigation Key Functions



Selecting the Up/Down Actions parameter from the Handset Keys menu opens a further menu that enables the selection from two modes of handset up (▲) and down (▼) key function: Input and Off. If Input is selected the keys will select inputs and if Off is selected the keys will be disabled in respect of input selection.



Selecting the Left/Right Actions parameter from the Handset Keys menu will open further menus enabling the configuration of the left (◀) and right (▶) keys independently for the CD, USB, Radios and UPnP™ inputs. The options available for the USB, UPnP™ and CD inputs are Track, List and Off. If Track is selected the left (◀) and right (▶) keys will select the previous or next track. If List is selected the keys will return the display to list mode, and if Off is selected the keys will be disabled in respect of track or list selection.



The options available for the Radios input are Station, Preset, List, and Off. If Station is selected the left (◀) and right (▶) keys will select the next or previous station. If Preset is selected the keys will select the previous or next stored station preset. If List is selected the keys will return the display to list mode, and if Off is selected the keys will be disabled in respect of station or preset selection.

Note: Front panel navigation button actions will also be affected by changes made in the Handset navigation key functions.

4.11.2 Input Key Assignments

Each handset input selection key may have up to four inputs assigned to it. The default assignments are shown in the following table:

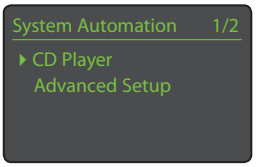
Default Input Key Assignments

Key	NAC-N 172 XS Inputs	NAC-N 272 Inputs
cd	Analogue 1, Digital 1	Analogue 1, Digital 1
radio	FM, DAB, iRadio	FM, DAB, iRadio
pc	UPnP™, Bluetooth	UPnP™, Bluetooth
iPod	USB, Front, Spotify®, TIDAL	USB, Spotify®, TIDAL
tv	Analogue 2, Digital 2	Analogue 2, Digital 2
av	Digital 3	Analogue 3, Digital 3
hdd	Digital 4	Digital 4, Digital 5
aux	Unassigned	Digital 6

Beneath the Up/Down keys and Left/Right keys parameters the Handset Keys menu displays a list of the eight handset input keys. Selecting one of the keys then displays a list of the four existing assignments to that key (including unassigned). To change an assignment, select the assignment number to be altered and, from the subsequent menu, select the desired input.

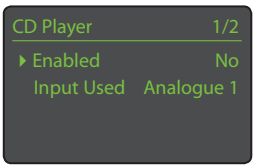
4. Set Up

4.12 The System Automation Menu



With System Automation enabled and the NAC-N preamplifier Remote Out socket connected to the Remote In socket of a Naim CD player, the Naim App can provide system-wide control.

The System Automation menu comprises two items. These are described in the following paragraphs:

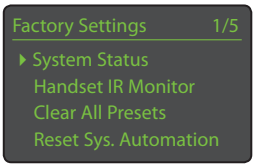


Selecting CD Player opens a menu that makes CD transport control available through the Naim App. Select Enabled to enable CD control and select Input Used to specify the NAC-N preamplifier input that the CD player is connected to.

> Note: CD player transport control using the NAC-N preamplifier handset via System Automation is not possible. The Naim App must be used.

Selecting Advanced Setup opens a menu that provides access to a range of advanced configuration parameters. These parameters will not normally need adjustment. Contact your retailer, distributor or Naim directly for more information if required.

4.13 The Factory Settings Menu



The Factory Settings menu enables system status information to be displayed, handset commands to be analysed, radio presets to be deleted, system automation to be reset and default settings to be restored. The options are listed below:

Parameter	Options
System Status:	Select to display
Handset IR Mon.:	Select to display
Clear All Presets:	Yes / No
Reset Sys Auto:	Yes / No
Reset All Settings:	Warning displayed: Resetting to factory defaults. You will lose ALL user settings. Press front panel play to continue.

5. Preamplifier

NAC-N preamplifiers incorporate a high performance stereo preamplifier based on established Naim design principles. Once a preamplifier is connected to an appropriate power amplifier, using it is simply a matter of selecting the desired input and setting the volume level.

5.1 Selecting Inputs

Inputs can be selected by pressing the front panel input button or one of the handset input selection keys.

> Note: The handset up (▲) and down (▼) keys or front panel up (▲) and down (▼) buttons will also scroll through and select inputs if this navigation key action has been configured. See Section 4.11.1.

> Note: The NAC-N 172 XS front panel input is automatically selected as soon as a plug is inserted.

Pressing the front panel input button scrolls through and selects the inputs. Pressing one of the handset input selection keys either directly selects a single input or scrolls through a group of inputs.

> Note: The default input selection key assignments may be altered within the NAC-N preamplifier set up menus. See Section 4.11.2.

Selecting an input will route the input audio signal to the preamplifier outputs.

The preamplifier will momentarily display input names as they are selected before displaying input specific information; USB track or radio preset for example.

If an input is not operational (for example, no USB memory stick is attached) when selected, the NAC-N preamplifier will display a descriptive alert message.

5.2 Volume Control

NAC-N preamplifier volume control is achieved by using front panel volume control, Naim App or the handset vol– and vol+ keys. The volume control affects the preamplifier and headphone outputs.

The mute function silences the NAC-N preamplifier headphone, preamplifier and line outputs. Mute is engaged or disengaged by touching the front panel logo or pressing the handset mute key. Mute is indicated by the display volume icon flashing.

> Note: Logo-touch muting can be disabled. See Section 4.8

5.3 Preamplifier Display

In normal operation the NAC-N preamplifier front panel display primarily shows information relating to the selected input. It will change temporarily to show adjustments such as volume level and signal mute state as these are made.

5.4 Signal Outputs

NAC-N preamplifiers provide a preamplifier output, a line output and a headphone output.

The preamplifier output is designed to be connected to a downstream power amplifier. The line output is designed to enable a variety of downstream ancillaries to be connected. These might include a second headphone amplifier or a remote integrated amplifier.

The NAC-N preamplifier headphone amplifier is able to drive most commonly available headphones. Insertion of a headphone plug will mute the NAC-N preamplifier preamplifier outputs.

6. Multi-format Tuner

NAC-N preamplifiers incorporate a multi-format radio tuner able to play internet radio streams and, optionally, DAB and FM broadcasts. Internet radio requires a high-speed internet connection via a network router that incorporates an appropriate firewall. DAB and FM operation requires an appropriate aerial to be connected to the rear panel aerial input. A total of 40 station presets (favourites) across all three formats can be stored. Select the FM, DAB or iRadio input to begin.

6.1 FM Tuner – Seeking Stations

To find FM stations press the handset prev (⏮) or next (⏭) keys and the tuner will scan the FM band locking on to and stopping at stations that exceed a specific signal strength.

Note: The interlocked circle icon at the top right of the display indicates a stereo signal.

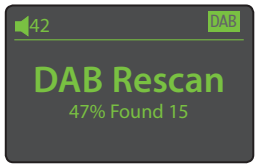
Note: The signal strength lock threshold may be altered within the set up menus. See Section 4.3.1.

If stations are RDS enabled their names, rather than just their frequencies, will be displayed. Pressing the handset info (ℹ) key will sequentially display any station info broadcast, station genres if defined and station frequency. If stations are not RDS enabled, the info key will display only the station frequency.

When the scan stops at a station either press the prev (⏮) or next (⏭) key again to ignore the station and continue the scan or store the station as a preset favourite by pressing the handset store key.

Pressing the handset ok/list key displays an FM options menu that enables mono mode to be selected. Mono operation can sometimes be useful to reduce noise and interference.

6.2 DAB Tuner – Seeking Stations

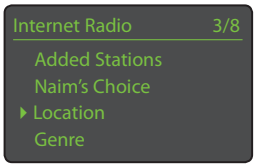


When the DAB Radio input is first selected the tuner must scan for stations. Select the DAB input and press the handset ok/list key to begin the scan. Search progress and the number of stations found will be displayed. When the scan is complete the stations will be listed alphabetically and the first station in the list selected.

DAB stations can be selected either alphabetically in turn by pressing the handset prev (⏮) or next (⏭) keys, or selected in list mode by pressing the ok/list key and browsing the station list. Use the handset up (▲) or down (▼) keys to scroll through the list and the ok/list key to select a station. In long lists the handset numeric/text keys can be used to jump through the list alphabetically.

Once a station is selected, pressing the handset info (ℹ) key will sequentially display the station genre, signal strength, bit rate and any station info broadcast.

6.3 iRadio Tuner – Seeking Stations



When a NAC-N preamplifier is connected to a network with high speed internet access it will automatically download a list of available internet radio stations. When the iRadio input is subsequently selected, a list mode menu will be displayed that shows all the available stations sorted by location, genre, podcast location, podcast genre, new station and most popular stations. The display will automatically enter list mode so the handset up (▲), down (▼), left (◀) and ok/list keys can be used to browse the menus and select stations. In long lists the handset numeric/text keys can be used to jump through the list alphabetically.

Once a station is selected the display will exit from list mode and revert to normal mode. To re-enter list mode for further list browsing and selecting press the handset ok/list key.

Pressing the handset info (ℹ) key while a station is playing will sequentially display the station (stream) name, elapsed time, stream info, buffer level and any station info broadcast.

Note: Buffer level indicates the quantity of stored data and reflects the ability of the network to provide data at the necessary rate.

It is possible for an internet radio station listed to be "off-line" and be unavailable when selected. If this occurs an alert message will be displayed.

Note: If mute is engaged for more than five minutes while an internet radio station is selected, the data stream will be stopped in order to save network bandwidth. The stream will re-start when mute is disengaged.

6. Multi-format Tuner

6.4 Adding iRadio Stations

The Naim Radio Guide website enables iRadio stations not included in the standard list to be downloaded to your NAC-N preamplifier. To access the website and add stations follow the steps below.

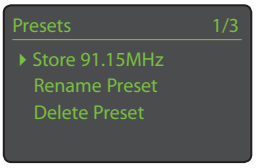
- With a computer connected to the same network as your NAC-N preamplifier, browse to: http://naim.vtuner.com
- Enter the identification (ID) of your NAC-N preamplifier on the web page. The ID is the unit's MAC address. This can be found via the following menus: Setup > Factory Settings > System Status > MAC.

Note: You can register a username and password so that the MAC address is not required on any subsequent visit.

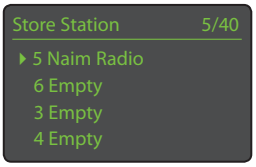
- To add stations follow the My Added Stations link and provide the information required. Click on the arrow to complete the procedure.
- The added station will then be visible on the Naim Radio Guide home page.
- To access the stations on your NAC-N preamplifier, select the iRadio input followed by Added Stations.

6.5 Storing Radio Presets

When the handset store key is pressed the display will show a menu that enables confirmation of the preset store and options to rename or delete a stored preset.



Selecting the store option opens a menu that enables the preset to be stored in one of the forty locations. Scroll to the desired location and press the ok/list key.



Note: Some factory default presets are stored in the first five storage locations. The default presets can be deleted but will be restored if the unit is subject to a factory reset.

Selecting Rename Preset opens a menu that provides the opportunity to rename a previously stored station. Scroll to the preset to be renamed and press the ok/list key to open a text entry screen. Use the handset numeric/text keys in text entry mode to select characters. Press the ok/list key to save the new preset name.

Selecting Delete Preset opens a preset list menu. Scroll to the desired preset and press the ok/list key.

Note: Preset operations (store, rename or delete) are not possible directly from list mode. The store key must be pressed when in normal play mode to access these options.

Note: Preset operations (store, rename or delete) can also be managed using the Naim App.

6.6 Selecting Radio Presets

To select a preset press the handset preset key to open the Browse Presets menu. Scroll to the desired preset and press the ok/list key.

Note: The Browse Presets menu displays presets stored across all three radio formats (FM, DAB, iRadio). Selecting a preset from a radio format other than the one currently selected will automatically switch the preamplifier to that format.

Note: It is possible for an internet radio station stored as a preset to be "off-line" and be unavailable when selected. If this occurs an alert message will be displayed.

Note: Pressing the preset key will display the preset list regardless of the currently selected input.

Note: Radio presets can also be selected using the Naim App.

7. USB Audio

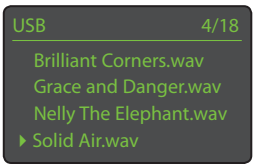
NAC-N preamplifiers can play audio files stored on USB memory sticks connected to the front panel USB socket. Begin by inserting a memory stick and selecting USB input.

7.1 USB Media and File Compatibility

USB memory sticks must be in Windows/DOS format (FAT/FAT32) to be used with NAC-N preamplifiers. Apple formats are not compatible.

NAC-N preamplifiers can play audio files stored on USB Sticks in the following formats: DSD (NAC-N 272 only), MP3, M4A, ALAC, AAC, LPCM16/24, FLAC, WMA, WAV, AIFF or Ogg Vorbis. Files must be free of digital rights management playback restrictions such as the iTunes FairPlay system.

7.2 Browsing and Playing USB Files



With a USB memory stick inserted and the USB input selected, the display will enter list mode and show the structure of stored audio files. Use the handset up (▲), down (▼), left (◀) and ok/list keys to browse and select items.

> Note: The memory stick can be safely connected or disconnected at any time.

Selecting a folder will display the list of files contained within and selecting a single file will begin playback. Playback will continue through any list of files contained within a folder. The order of play can be shuffled (randomised) by pressing the handset shuffle (⤮) key.

In long lists of items the handset numeric/text keys can be used to jump through the list alphabetically.

Once playback is underway the display will exit from list mode and revert to normal mode where the handset transport keys (⏯ ⏮ ⏭ ■) can be used to control playback. To re-enter list mode for further list browsing and selection, press the handset ok/list key.

During playback, pressing the handset info (ℹ) key will alternately display data stream info and track elapsed time.

8. Network Audio Streaming

In addition to enabling internet radio to be played, a NAC-N preamplifier network connection enables audio files stored on UPnP™ servers, audio streams from Spotify® Connect devices, audio streams from TIDAL, and audio streams from other Naim streamers to be played. Your NAC-N preamplifier must be connected, either wirelessly or via network cabling, to a network router. If the router provides an internet connection it should incorporate a firewall.

8.1 UPnP™ Streaming

NAC-N preamplifiers can play audio stored on any device that incorporates UPnP™ server software (provided that device is on the same network as the NAC-N preamplifier). The UPnP™ server is usually a Windows or Apple home computer, although some Network Attached Storage (NAS) drives incorporate a UPnP™ application.

Note: The Naim UnitiServe and HDX hard disk music players can operate as UPnP™ servers.

Windows Media™ Player version 11 or above incorporates UPnP™ support and a variety of third party UPnP™ applications are also available that are compatible with both Windows and OS X operating systems.

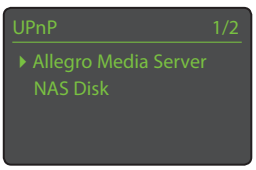
In the case of the Windows UPnP™ server, the following steps must be taken before music can be streamed to a NAC-N preamplifier:

- Ensure Windows Media™ Player version 11 or above is installed.
- Enable Windows Media™ Player file sharing. From the Media Player Options dialogue select Library > Configure Sharing... then select Share my media.
- Ensure the firewall is configured to allow file sharing.

8.1.1 Audio File Compatibility

The audio files stored on the UPnP™ servers attached to the network may be in DSD (NAC-N 272 only), MP3, M4A, ALAC, AAC, LPCM16/24, FLAC, WMA, WAV, AIFF or Ogg Vorbis formats. Files must be free of any digital rights management playback restrictions such as the iTunes FairPlay system.

8.1.2 Scanning Servers and Playing Files



When the NAC-N preamplifier UPnP™ input is selected a list of available UPnP™ servers on the network will be displayed. The display will automatically enter list mode so the handset up (▲), down (▼) and ok/list keys can be used to browse and select the desired server.

Note: Allegro Media Server (shown in the illustrations) is a UPnP™ Media Server application that runs on OS X or Windows computers and provides access to media files and iTunes library content from UPnP™ media players.

The manner in which the UPnP™ server is set up will define how the audio files and playlists it holds are listed and displayed. In most cases the default setup will list and display files by artist and album, but list by genre and predefined playlists may also be available.

Note: Playlists cannot be generated or stored on the NAC-N preamplifier. To play a playlist it must reside on the UPnP™ server on on the Naim App..

Selecting one of the playlist categories using the up (▲), down (▼) and ok/list keys will display a menu showing items that fall into the selected category. An entire category can be selected for playback by using the up (▲), down (▼) keys followed by the play/pause (⏯) key.

Alternatively, selecting a category using the up (▲) and down (▼) keys followed by the ok/list key will display the full list of tracks contained within the category. Tracks can then be selected for playback by using the up (▲), down (▼) and ok/list keys.

In long lists the handset numeric/text keys can be used to jump through the list alphabetically.

Once playback is underway the NAC-N preamplifier display will exit from list mode and revert to normal mode where the handset transport keys (⏯ ⏮ ⏭ ■) can be used to control playback. To re-enter list mode for further list browsing and selecting press the handset ok/list key.

During playback, pressing the handset info (ℹ) key will sequentially display the server name, buffer level, track elapsed time and stream (audio file) information.

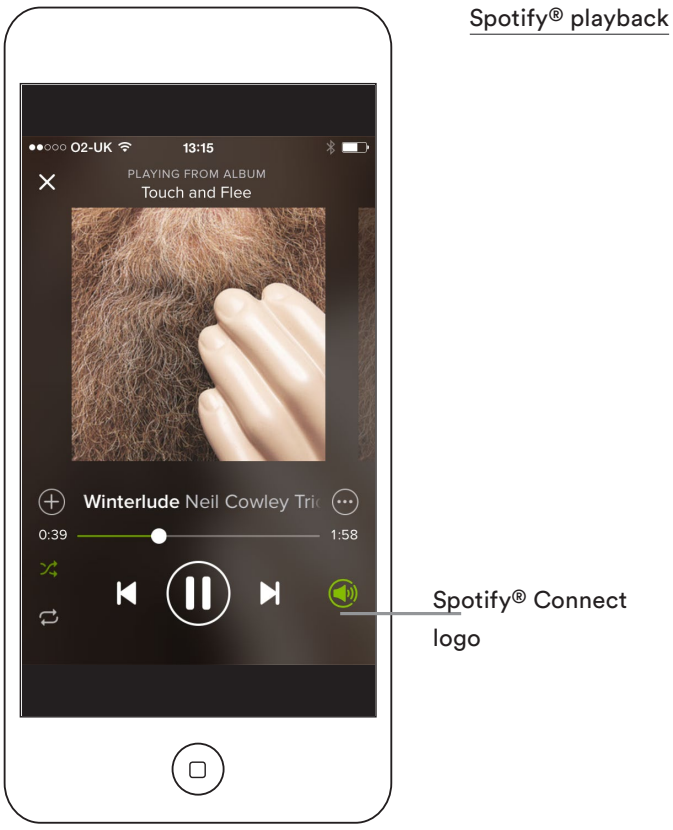
Note: Buffer level indicates the quantity of stored data and reflects the ability of the network to provide data at the necessary rate.

8. Network Audio Streaming

8.2 Spotify® Connect Streaming

With its Spotify® input enabled (see Section 4.3.7), a NAC-N preamplifier connected to the same local network as a device running the Spotify® app, and in receipt of a Spotify® stream, will automatically select its Spotify® input and play the stream. The streamed audio programme will display on the NAC-N preamplifier front panel and on the Naim App. Programme transport (⏯ ⏮ ⏭ ⏹) and volume can be controlled using the remote control handset, the front panel controls or the Naim or Spotify® apps.

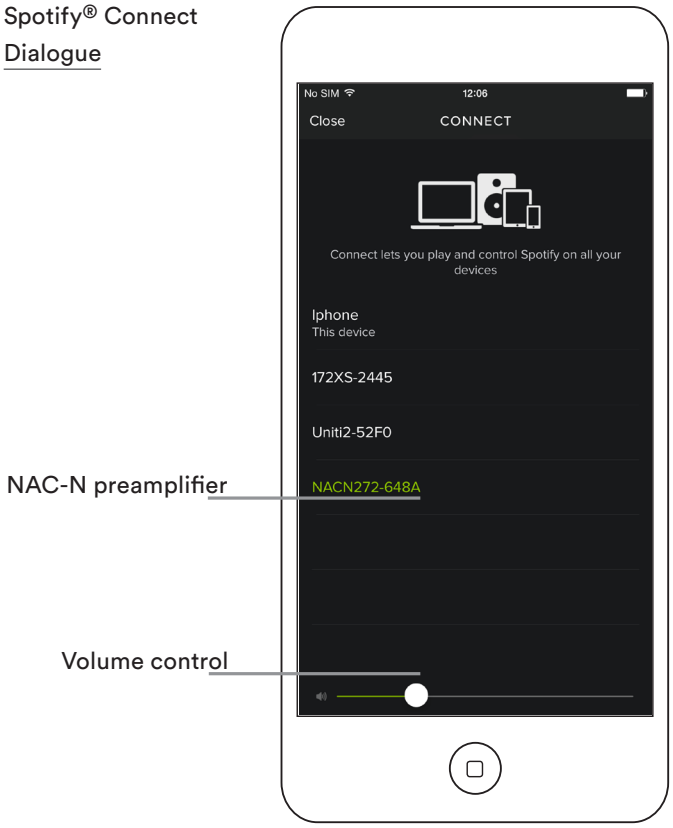
To play a Spotify® stream, open the Spotify® app and select the Spotify® Connect logo. The available playback devices will be listed for selection. Select the desired one to nominate it as the Spotify® Connect playback device. Once selected, Spotify® playback will commence, after a short delay, on the selected device.



8.3 TIDAL Streaming

With its TIDAL input enabled (see Section 4.3.8), a NAC-N preamplifier in receipt of a TIDAL stream, will automatically select its TIDAL input and play the stream. TIDAL account access, browsing and playback control is fully integrated into the Naim App. The streamed audio programme will display on the NAC-N preamplifier front panel and on the Naim App. Programme transport (⏯ ⏮ ⏭ ⏹) and volume can be controlled using the remote control handset, the front panel controls or the Naim App.

To play a TIDAL stream, open the Naim App, select the TIDAL input and choose the programme material to play.



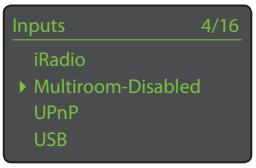
8. Network Audio Streaming

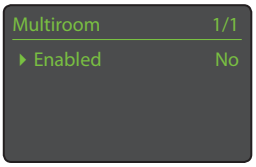
8.4 Multiroom Streaming

NAC-N preamplifiers can play audio streams broadcast from other Naim streamer products connected to the same home network.

Note: NAC-N preamplifier units that broadcast audio to others are known as “server streamers”. NAC-N preamplifier units that receive audio are referred to as “client streamers”.

With its multiroom input enabled, a client streamer, when in receipt of a stream, will automatically select its multiroom input and play the stream. The client streamer will display its “now playing” screen. Its list function, menu navigation and transport controls (except stop) will not function while the multiroom input is active.

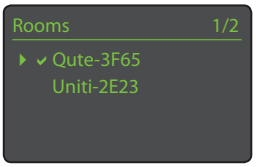




To disconnect a client streamer locally, press the handset stop key, the front panel stop button or select an alternative input. The client streamer can be reconnected only by re-selecting it from the server streamer’s Rooms menu.

8.4.1 Server Streamers

With its multiroom input enabled, selecting Rooms from the Setup menu will prompt a NAC-N preamplifier unit to search for other Naim streamers with enabled multiroom inputs. Selecting one of the streamers found by the search will nominate the NAC-N preamplifier as the server and the selected streamer as a client. The selected client streamer will immediately switch to its multiroom input.



Once a client streamer is connected to the server streamer, audio playing via the server streamer’s Spotify®, TIDAL, UPnP™, iRadio, or USB inputs will also play simultaneously via the client streamer. Up to four client streamers can be selected simultaneously to play the server streamer’s audio.

To disconnect a client streamer at the server streamer, use the handset navigation keys to select the desired connected client in the Rooms menu and press the handset ok/list key.

Note: Connected client streamers are identified by a tick mark alongside their names in the Rooms menu.

Note: Server streamer broadcasts are limited to the following digital audio formats:
ALAC up to 44.1kHz/16 bit, AAC up to 48kHz/16 bit, MP4 up to 48kHz/16 bit, MP3 up to 48kHz/16 bit, WMA up to 48kHz/16 bit, AIFF up to 48kHz/24 bit, FLAC up to 48kHz/24 bit, WAV up to 48kHz/24 bit.

9. Bluetooth Streaming

In addition to playing streamed audio via a local network, NAC-N preamplifiers can play audio over a Bluetooth wireless connection from appropriately equipped playback devices. Bluetooth connection is configured by default to be secure so a NAC-N preamplifier must be paired with specific playback devices.

Note: Pairing between Bluetooth devices means that the devices “know” and “remember” each other. Once paired, Bluetooth devices can connect automatically when within range.

Note: Bluetooth wireless connection has a relatively limited range. A maximum of around 10 metres is typical in domestic environments, however physical obstructions in the transmission path may result in reduced range.

To pair a NAC-N preamplifier with a Bluetooth audio device select the Bluetooth input and press the handset play/pause key (⏯).

The NAC-N preamplifier will enter “discovery mode” and become available for pairing in the Bluetooth device Bluetooth setup menu.

Note: The default NAC-N preamplifier Bluetooth name incorporates the last four characters of the unit’s MAC address. The MAC address can be found listed in the Setup menu under Network Settings.

Note: Up to sixteen Bluetooth devices can be paired simultaneously. If a seventeenth device is paired the oldest paired device will be deleted.

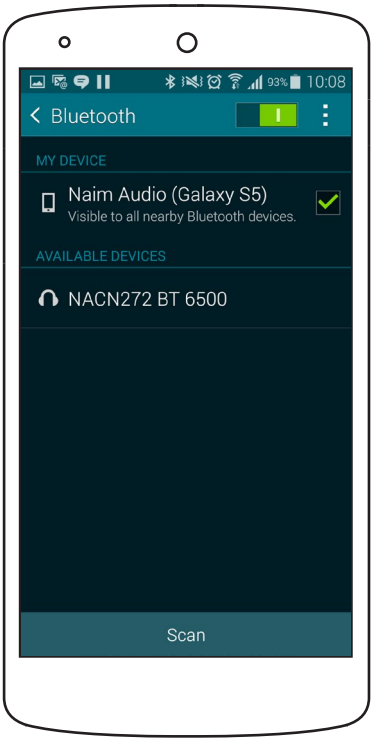
Once successfully paired with a Bluetooth device, the NAC-N preamplifier will be available to the audio apps on the device. The NAC-N preamplifier will switch automatically to its Bluetooth input when in receipt of a Bluetooth stream.

The Bluetooth input setup menu offers further Bluetooth configuration options and setup parameters, including the option to configure an “open” Bluetooth connection that does not require pairing. See Section 4.3.9 for more information.

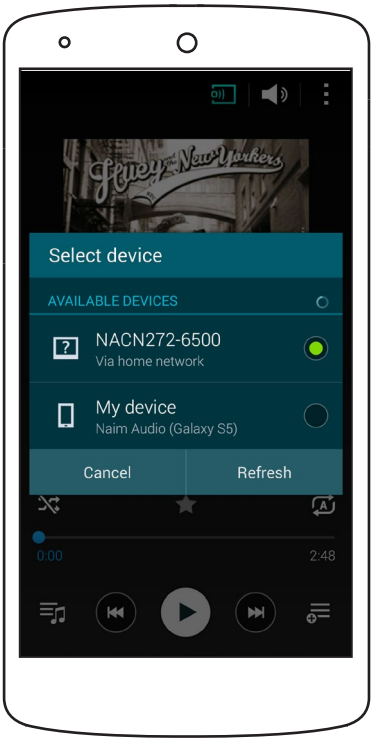
Note: If multiple devices are paired, the NAC-N preamplifiers will play from the first device from which it receives a stream. If a stream from a different paired device is required, the first device must be disconnected. Press the handset or front panel exit key to disconnect.

Bluetooth pairing and playback with an Android mobile device is illustrated in the diagrams. Bluetooth on an iOS device is similar.

Bluetooth connection



Bluetooth playback



10. Specifications

Parameter	NAC-N 172 XS	NAC-N 272
Outputs	Preamplifier (1 x DIN, 1 x RCA) Line (1 x RCA) Headphones (1 × 3.5mm)	Preamplifier (2 x DIN, 1 x RCA) Line (1 x RCA) Digital S/PDIF (1 x BNC) Headphones (1 × 6.3mm)
Preamp Output	775mV	
Line output	275mV	
Frequency Response	5Hz – 40kHz	4Hz – 40kHz
S/N Ratio	80dB	87dB
Analogue Inputs	3 (1 x DIN, 1 x RCA, 1 × 3.5mm)	3 (1 x DIN, 2 x RCA)
Analogue Input Sensitivity	275mV	
Analogue Input Overload	34dB	34dB
Digital Inputs	5 (2 x RCA, 2 x TosLink, 1 x miniTosLink)	6 (1 x BNC, 2 x RCA, 3 x TosLink)
Digital Input Sample Rate	Coaxial – 192kHz, Optical – 96kHz	
Other Inputs	DAB/FM, USB, Ethernet, Wi-Fi, Bluetooth	DAB/FM, USB, Ethernet, Wi-Fi, Bluetooth
iRadio Service	vTuner 5* full service	
Audio Formats	WAV and AIFF (up to 24bit/192kHz), FLAC (up to 24bit/192kHz), ALAC (up to 24bit/96kHz), WMA (up to 16bit/48kHz), Ogg Vorbis (up to 16bit/48kHz), MP3, M4a (up to 320kbit/s), Playlists (M3U, PLS), DSD (NAC-N 272 only). Gapless playback supported on MP3, M4A, AIFF, WAV, FLAC and ALAC. Internet radio: AAC, Windows Media™ formatted content, MP3 streams, MMS, Ogg Vorbis, Spotify® Connect: Ogg Vorbis (up to 320kps) TIDAL: AAC (96 or 320kbps), FLAC (16bit 44.1kHz) Bluetooth: SBC, AAC, aptX and aptX-LL.	
Upgrade Interface	mini-USB	
Wi-Fi Compatibility	802.11b, 802.11g and 802.11n	
Quiescent Consumption	10W	21W
Mains Supply	100V, 115V or 230V, 50/60Hz	
Power Supply Options	N/A	555PS, XPS, XP5 XS
Dimensions (H x W x D)	70 × 432 × 301mm	87 × 432 × 314mm
Weight	5.7kg	10.3kg
Finish	Black	Black

Note: This manual describes the operation of NAC-N preamplifiers running software release version 4.4.xx. Products running earlier software will not operate fully in the manner described in this manual. The software running in a NAC-N preamplifier is displayed in the Factory Settings menu. All specifications are subject to revision.

11. Acknowledgements and Declarations

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

This product incorporates Spotify software which is subject to 3rd party licences found here: www.spotify.com/connect/third-party-licenses

TIDAL

HIGH FIDELITY MUSIC STREAMING

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Naim Audio Ltd. is under licence. Other trademarks and trade names are those of their respective owners.

UPnP™ is a trademark of the UPnP™ Forum.

CE Declaration of Conformity

Naim Audio declares that Naim Audio products are in conformance with:
Low Voltage Directive 2006/95/EC
Electromagnetic Compatibility Directive 2004/108/EC
Restriction of Hazardous Substances (RoHS2) Directive 2011/65/EU
Waste of Electrical and Electronic Equipment Directive 2012/19/EU
Energy related Product Directive 2009/125/EC

Naim Audio products comply with the following standards:
EN60065 - Audio, video and similar electronic apparatus - Safety requirements
EN55013 - Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics
EN55020 - Sound and television broadcast receivers and associated equipment - Immunity characteristics
EN61000-3-2 - Mains harmonics current emissions
EN61000-3-3 - Mains flicker emissions

Products that display the crossed-out wheeled bin logo cannot be disposed of as domestic waste. These products must be disposed of at facilities capable of re-cycling them and appropriately handling any waste by-products. Contact your local authority for details of the nearest such facility. Appropriate recycling and waste disposal helps conserve resources and protects the environment from contamination.

Go Deeper

naim

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