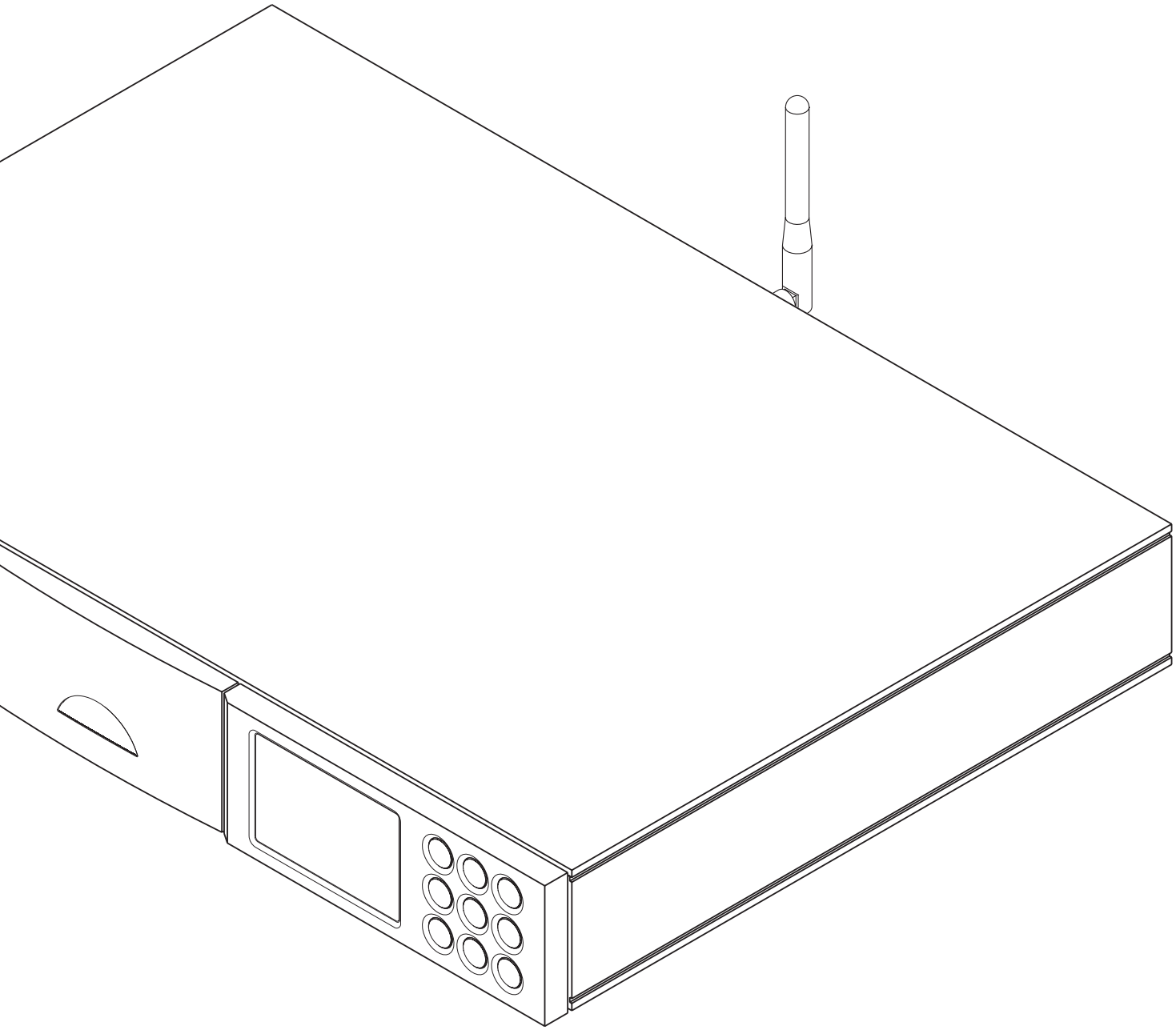
naim

world class sound...



REFERENCE MANUAL
NAC-N 172 XS STREAMING PREAMPLIFIER
ENGLISH

Contents

Note: *This manual is Issue No. **1** and describes the operation of NAC-N 172 XS units running software release version 3.13.xx.*

Made for iPod iPhone

"Made for iPod" and "Made for iPhone" mean that an electronic accessory has been designed to connect specifically to iPod or iPhone respectively and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

1 NAC-N 172 XS Introduction

The NAC-N 172 XS is a highly capable product that will repay time and effort spent on installation and setup. We strongly recommend that you read this manual. The NAC-N 172 XS incorporates four separate elements. Each of these is introduced in the following paragraphs and subsequently described in full detail in Sections 5 to 8. The NAC-N 172 XS elements are:

A Stereo Preamplifier	**Introduced below and fully described in Section 5**
A Multi-mode Radio	**Introduced below and fully described in Section 6**
A UPnP™ Audio Interface	**Introduced below and fully described in Section 7**
A USB/iPod Interface	**Introduced below and fully described in Section 8**

Prior to the sections describing NAC-N 172 XS elements, Section 2 covers its installation and connection, Section 3 describes its operation and Section 4 describes its setup.

1.1 The Stereo Preamplifier

1.1.1 Inputs

The NAC-N 172 XS incorporates an audio preamplifier that provides three analogue and five S/PDIF digital audio external inputs. The preamplifier also accepts internal inputs from NAC-N 172 XS's optional FM/DAB tuner.

In addition to conventional analogue and digital input signals, the NAC-N 172 XS preamplifier can accommodate the following external peripheral inputs:

- iPod and USB storage via a USB interface.
- Internet radio and universal plug and play (UPnP™) servers via an Ethernet network socket or wireless network connection.

1.1.2 Signal Outputs

The NAC-N 172 XS preamplifier provides the following signal outputs:

- A preamplifier output (post volume/balance control).
- A headphone output (post volume/balance control).
- A line output (pre volume/balance control).

1.2 The Multi-mode Radio

The NAC-N 172 XS multi-mode radio combines an internet radio (iRadio) player and an optional FM/DAB (Digital Audio Broadcasting) tuner. A total of 40 radio stations across all three modes can be stored as presets. In FM and DAB mode, stations are tuned by NAC-N 172 XS scanning the respective transmission bands. In iRadio mode the NAC-N 172 XS receives data streams and a list of available radio stations from a dedicated internet server. iRadio requires broadband internet access via a home network connection.

The NAC-N 172 XS DAB module incorporates full broadcast and station display capabilities. The FM module is fully RDS (Radio Data System) capable.

Note: *DAB and RDS broadcasts are not available in all territories.*

1.3 The UPnP™ Audio Interface

The NAC-N 172 XS can connect to a home network and play audio files stored on UPnP™ drives such as the Naim UnitiServe or on PC and Mac computers.

1.4 The USB/iPod Interface

The NAC-N 172 XS incorporates a front panel USB interface socket that enables audio files stored on USB memory devices and Apple iPod and iPhone models to be selected and played.

The NAC-N 172 XS is compatible with the iPod and iPhone models illustrated below.

iPod classic
80GB

iPod
5th generation (video)
60GB 80GB

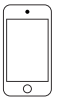
iPhone 3G
8GB 16GB

iPod classic
160GB (2007)

iPod nano
6th generation
8GB 16GB

iPhone 3GS
8GB 16GB 32GB

iPod classic
160GB (2009)



iPod touch
4th generation
8GB 32GB 64GB

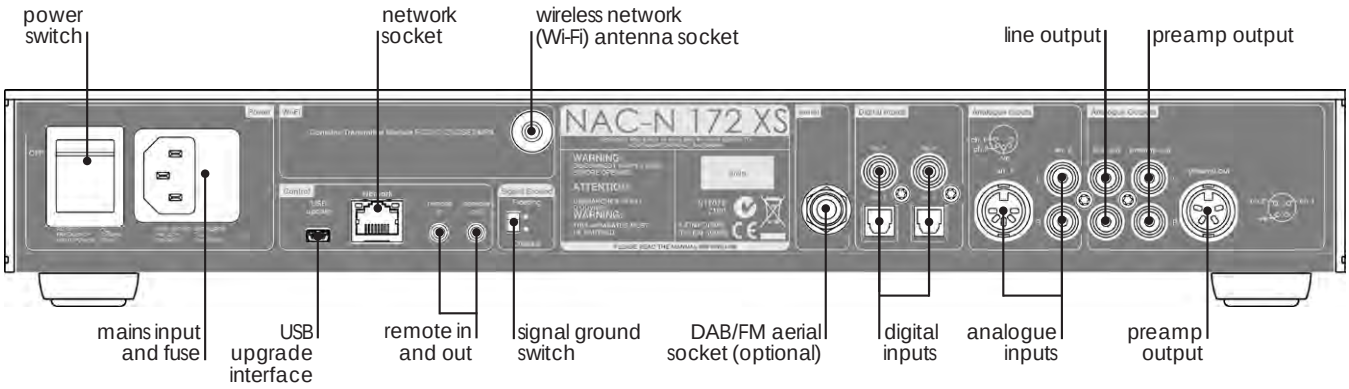
iPod
5th generation (video)
30GB

2 NAC-N 172 XS Installation and Connection

Your NAC-N 172 XS should be installed on an equipment stand intended for the purpose. Ensure it is well ventilated, and do not stand it directly on top of another item of equipment. It should be installed in its final location before connecting cables or switching on. The NAC-N 172 XS has no standby mode and is intended to be left switched on.

Connecting the NAC-N 172 XS to mains power and to a variety of audio peripherals and sources is described in the following paragraphs. Diagram 2.1 illustrates the NAC-N 172 XS rear panel connection sockets.

2.1 NAC-N 172 XS Rear Panel



2.2 Mains Power Connection

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

2.3 FM/DAB Aerial Connection

The optional NAC-N 172 XS FM/DAB module will only be able to provide high quality FM and DAB radio if a strong, interference-free radio signal is available. The NAC-N 172 XS rear panel FM/DAB Aerial socket must 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 retailer should be able to offer advice on a suitable aerial and aerial installer.*

2.4 Audio Inputs and Outputs

2.4.1 Audio Signal Inputs

The NAC-N 172 XS provides three stereo analogue inputs and five S/PDIF digital inputs including one combined analogue/digital input socket. Connection to the inputs is made via a variety of socket types. The following table lists the inputs and their socket type:

Input	Type	Socket
an. 1	Analogue	5-pin DIN
an. 2	Analogue	RCA phonos
front panel	Analogue	3.5mm jack
	Digital	3.5mm mini-TosLink jack
dig. 1	Digital	Coaxial (RCA phono)
dig. 2	Digital	Optical (TosLink)
dig. 3	Digital	Coaxial (RCA phono)
dig. 4	Digital	Optical (TosLink)

Note: *The front panel analogue/digital jack socket can accept both conventional analogue 3.5mm plugs and mini-TosLink optical digital plugs. It will automatically identify the type of plug inserted and handle the signal appropriately.*

Always use high quality interconnect cables to connect sources to NAC-N 172 XS inputs.

2.4.2 Audio Signal Outputs

The NAC-N 172 XS provides preamplifier and line signal outputs. Connections to the outputs are made via the socket types listed below:

Output	Type	Socket
Preamplifier	Analogue stereo	4-Pin DIN
		2 x RCA phono
Line	Analogue Stereo	2 x RCA phono

Note: *The DIN and RCA preamplifier output sockets operate in parallel and can be used simultaneously. If a subwoofer is to be used it should be connected to the second preamplifier output using a dedicated Naim subwoofer connection cable. Contact your local Naim retailer or distributor if necessary for more information on subwoofer cables.*

Note: *The preamplifier outputs are taken after the NAC-N 172 XS volume and balance controls so peripheral equipment connected to them will respond to NAC-N 172 XS volume and balance control changes. The output always reflects the selected input signal.*

Note: *The line output is taken before the NAC-N 172 XS volume and balance controls so the output signal will not reflect NAC-N 172 XS volume and balance control or mute function. The output always reflects the selected input signal.*

2.5 Headphone Output

The NAC-N 172 XS is fitted on its front panel with a 3.5mm stereo headphone socket. Insertion of a headphone plug will mute the preamplifier outputs.

Note*: NAC-N 172 XS controls and stores volume settings separately for headphone and preamplifier outputs.*

2.6 Signal Ground Switch

The NAC-N 172 XS is fitted on its rear panel with a **Signal Ground** switch offering two positions: **Chassis** or **Floating**. Select the **Chassis** position unless the NAC-N 172 XS 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* NAC-N 172 XS *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: *The NAC-N 172 XS negative analogue input and output 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.*

2.7 USB/iPod Interface

The NAC-N 172 XS is fitted with a front panel USB interface intended for the connection of Apple iPod and iPhone models and USB memory hardware carrying audio files. The USB interface should not be used for any other purpose.

Depending on the setup options chosen, iPod and iPhone batteries will be charged when connected to the USB interface (see Section 4.3.5).

2.8 Network Connections

The NAC-N 172 XS can be connected to a TCP/IP network via either a wired or wireless connection. Network connection enables the NAC-N 172 XS to play internet radio data streams or play audio files stored on UPnP™ servers such as the Naim UnitiServe and HDX, and appropriately configured computers and network drives.

2.8.1 Wired Network Connection

The NAC-N 172 XS is fitted on its rear panel with a standard Ethernet socket. For wired network connection this socket should be connected to a spare Ethernet socket on your network router.

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 or wireless networking should be employed.*

2.8.2 Wireless Network Connection

If NAC-N 172 XS is to connect wirelessly to the home network the supplied Wi-Fi antenna must be fitted to the rear panel wireless antenna socket. Wireless configuration will also be necessary before NAC-N 172 XS is able to connect to your home network. See Section 4.6.1.

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.*

2.8.3 Network Settings

The NAC-N 172 XS is set up when originally shipped not to require any on-site TCP/IP configuration but to connect to a network automatically (it uses DHCP by default). However, if your NAC-N 172 XS 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 (see Section 4.6 of this manual) and re-start the NAC-N 172 XS. If problems still persist contact your retailer, installer or Naim Audio directly.

Note: *Before reporting network connection problems carry out a Factory Reset operation. Select Reset All Settings from the Factory Settings setup menu. See Section 4.11.*

Note: *A NAC-N 172 XS switched on without a working wired network connection will only be able to connect to a home network wirelessly. To use an Ethernet (wired) connection, switch the NAC-N 172 XS off, connect the network and switch it on again.*

Note: *For internet radio to operate, the NAC-N 172 XS requires connection to a broadband internet service.*

2.9 System Automation

The NAC-N 172 XS can be linked using **System Automation** to control some Naim CD players. This enables a Naim CD player to be controlled from the **n-Stream** iPhone and iPad App.

To take advantage of System Automation, connect the NAC-N 172 XS 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 4.10.*

2.10 External Control and Interface

The NAC-N 172 XS is fitted on its rear panel with a 3.5mm jack **Remote In** socket and a **mini-USB** interface socket.

The Remote In socket can be used for RC5 remote control of the NAC-N 172 XS via a wired connection or a remote IR repeater.

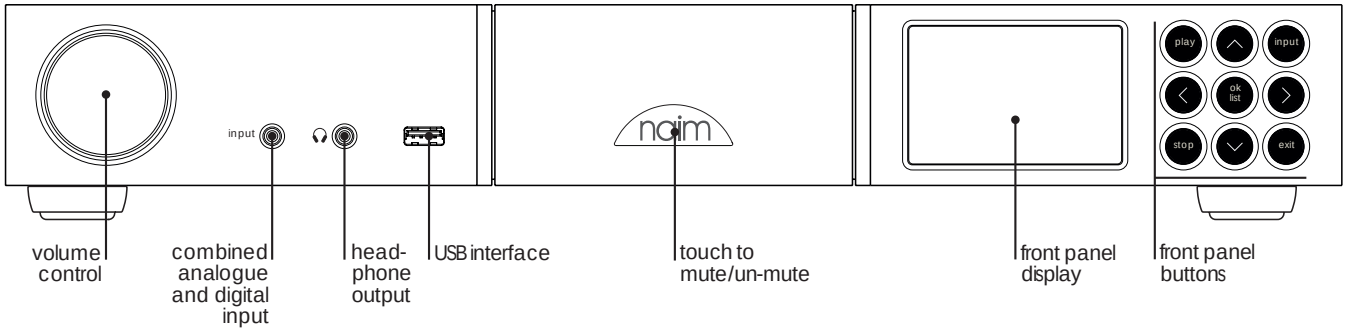
The mini-USB socket enables firmware upgrades and diagnostic tests to be carried out. Contact your Naim retailer for more information if required.

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

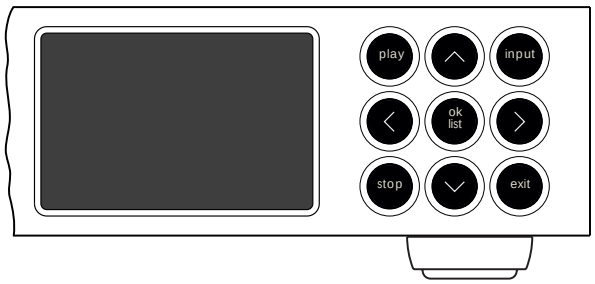
3 NAC-N 172 XS Operation

The NAC-N 172 XS can be operated from either its front panel controls, from the supplied remote control handset or via the n-Stream iPhone and iPad app. Setting up and operating a NAC-N 172 XS involves navigation through a menu-based user interface. The general principles of the interface are carried across each NAC-N 172 XS element so this section of the manual describes and illustrates those general principles.

3.1 Front Panel Features



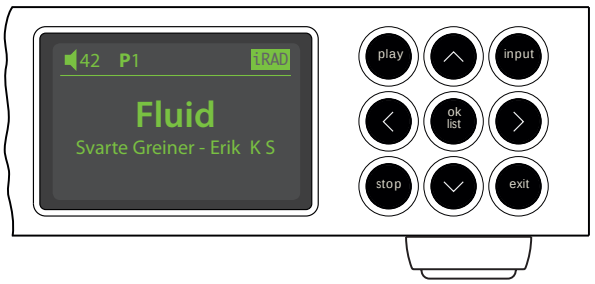
3.2 Front Panel Buttons



The NAC-N 172 XS front panel buttons function as described below:

play	Plays a selected track or radio station.
^	Navigates up a menu or list.
input	Sequentially selects NAC-N 172 XS inputs.
<	Returns to the previous display menu.
ok/list	Confirms menu item selection. Enters list display mode.
>	Advances to the next display menu.
stop	Stops playing a track or radio station.
v	Navigates down a menu or list.
exit	Exits list display mode.

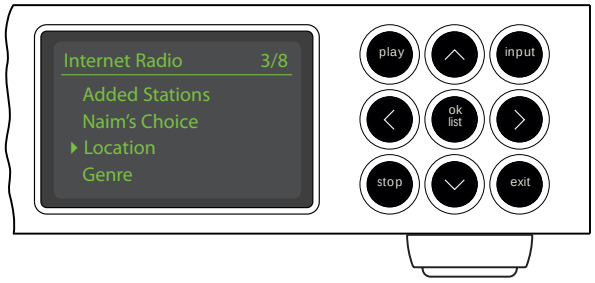
3.3 Front Panel Display (normal play mode)



In normal play mode the NAC-N 172 XS screen provides a variety of information on the current setup, the input selected and the material playing. A typical normal play mode screen is illustrated above showing an **iRadio** station called **Fluid** playing programme material by **Svarte Greiner**. The radio station has been saved as **Preset 1**.

At the top left of the screen volume level **42** is displayed along with a "**speaker**" icon that shows the NAC-N 172 XS is not muted.

3.4 Front Panel Display (list display mode)



List mode is entered by pressing the front panel **ok/list** button or handset **ok/list** key. List mode is used where NAC-N 172 XS 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.

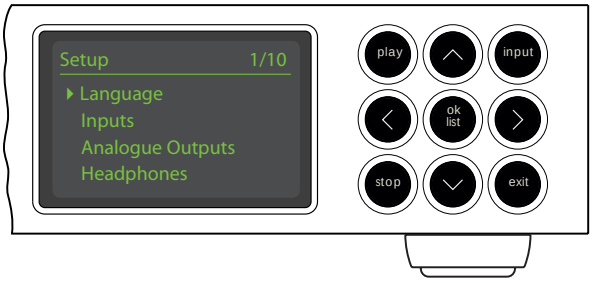
At the top right of the screen, "3/8" denotes that the selected item is number three of eight.

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 and button 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.

3.5 Front Panel Display (setup mode)



Setup mode is engaged by pressing the handset **setup** (🔧) key or pressing and holding the front panel **ok/list** button. Setup mode provides access to all NAC-N 172 XS setup functions.

The illustration above shows the setup home screen displayed when setup mode is engaged. The "1/10" at the top right denotes that the selected item is number one of ten.

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 and button duplicates the ok/list key when navigating setup mode menus.*

To exit setup mode press the handset **setup** (🔧) key a second time or press the **exit** key or front panel **exit** button.

NAC-N 172 XS setup is covered in Section 4.

Note: *If programme material is playing when the NAC-N 172 XS enters setup mode it will continue to play. The volume, mute and transport (play, pause, stop etc.) keys on the handset will remain operational.*

3.6 NAC-N 172 XS Remote Handset

The supplied remote control handset is a multifunctional device designed specifically for the NAC-N 172 XS and Naim Uniti Series 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 when the NAC-N 172 XS is in list/setup mode. 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.

3.6.1 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	Exits 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 4.9.*

3.6.2 Normal Play Mode Keys

Key	Function
disp	Switches NAC-N 172 XS display on or off. Toggles clock display if configured.
vol +	Increase preamp volume
vol –	Decrease preamp volume
mute	Silence preamp
(repeat)	Repeat selected track or playlist
(shuffle)	Play tracks randomly from list
(setup)	Display the setup menu
(info)	Cycle through input information
(play/pause)	Play or pause audio
(previous)	Go to previous track/station
(next)	Go to next track/station
(stop)	Stop audio
(reverse)	Fast reverse audio (with system automation)
(forward)	Fast forward audio (with system automation)
cd	Sequentially selects the Analogue 1 and Digital 1 inputs
radio	Sequentially selects the iRadio, FM, and DAB
pc	Selects the UPnP™ input
iPod	Sequentially selects the USB/iPod and front panel inputs
tv	Sequentially selects the Analogue 2 and Digital 2 inputs
av	Selects the Digital 3 input
hdd	Selects the Digital 4 input
aux	Unassigned by default

Note: *The default input selection key assignments can be modified via the Handset Keys setup menu. See Section 4.9.*

Note: *Use of system automation can modify the action of remote handset keys. See section 4.10.*

NAC-N 172 XS Operation

3.7 Handset Text Entry

Some NAC-N 172 XS menu screens require text entry - naming inputs for example. Text entry is carried out using the handset numerical buttons in a manner similar to mobile phone SMS text entry.

When text entry is required, multiple presses of a key will scroll through the characters associated with that key. In addition to characters, the **preset** key provides a **delete** function, the **zero** key provides a **space** and the **store** key provides letter **case** change. The **up** (▲) and **down** (▼) keys will also scroll through all the available letters.

The enlarged handset image illustrates the number keys and the characters associated with each.

When prompted on a NAC-N 172 XS screen to enter text, select characters in turn by pressing each appropriate key the required number of times. Confirm the text entry by pressing the **ok/list** key.

3.8 The n-Stream Control App

The n-Stream control application is available from the iTunes App Store. n-Stream is compatible with iPad, iPhone and iPod touch models running iOS software Version 3.1.3 or later.

3.8.1 n-Stream Setup

To begin using n-Stream to control your NAC-N 172 XS you must first install the app on your iPad, iPhone or iPod touch. With the app installed and the iPad, iPhone or iPod wirelessly connected to the same network as your NAC-N 172 XS, start the app by touching its screen icon.

Selecting **setup** opens a menu that enables the NAC-N 172 XS to be selected for control. Touch the appropriate NAC-N 172 XS as identified by its device name or network address; 172XS-7ADE and 010.015.000.025 respectively in the illustration above.

Note: *Your NAC-N 172 XS network address and device name can be found in its Factory Settings setup menu.*

Note: *The NAC-N 172 XS name can be changed from its setup menu. Doing so can enable individual units in a multiple installation to be identified more easily.*

The setup menu enables the following options to be selected:

Auto connection: Select **ON** for automatic connection to the NAC-N 172 XS whenever the n-Stream app is running.

Stay connected: If **OFF** is selected, the n-Stream app will "sleep" following a preset period of inactivity. Selecting **ON** will force n-Stream to remain continuously active.

Note: *Continuous connection of n-Stream may result in your iPad, iPhone or iPod battery draining.*

Set Weekday Alarm: Enables a weekday alarm to be enabled and its time set.

Set Weekend Alarm: Enables a weekend alarm to be enabled and its time set.

Use Hi-Fi Language: Select **ON** for the n-Stream app to reflect the selected NAC-N 172 XS display language. If **NO** is selected the n-Stream app will display in the default iPad, iPhone or iPod language.

Clear Image Cache: Deletes album artwork images stored by the n-Stream app.

3.8.2 Using n-Stream

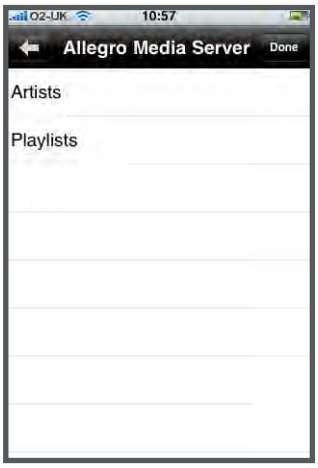
The n-Stream app is based on three main screens. The **Inputs** screen, the **Playing** screen and the **Library** screen. These screens are selected by touching the icons at the top of the display.

The **Inputs** screen enables selection of NAC-N 172 XS inputs. Input names reflect those specified in the NAC-N 172 XS input setup menus (See Section 4.3) or through System Automation (See Section 4.10).

The **Playing** screen displays the currently playing item and provides appropriate transport controls. When a Radio station is playing an icon is also provided to open a preset station menu through which presets can be either stored or recalled.

The **Library** screen displays lists of playback items available to the selected NAC-N 172 XS input. The adjacent illustration shows Allegro Media Server is available to the NAC-N 172 XS UPnP™ input.

Note: *Allegro Media Server is an application that makes iTunes songs and playlists available to UPnP™ players.*



Selecting Allegro Media Server followed by items in the subsequent lists enables the selection of playlists, albums or individual tracks for playback.

The **Playing** and **Library** screens for other inputs follow the same protocol of item selection.

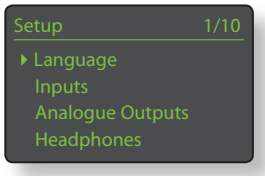
4 NAC-N 172 XS Setup

Once your NAC-N 172 XS is installed with mains power and all external connections made, it can be switched on and set up for use.

The degree to which you modify your NAC-N 172 XS's default settings 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 NAC-N 172 XS's capabilities. The following paragraphs describe each NAC-N 172 XS setup menu in turn starting with the setup home menu.

Enter the NAC-N 172 XS setup mode by pressing the handset setup (🔧) key or pressing and holding the front panel ok/list key. Navigate around the setup menus using the front panel or handset arrow keys and make selections using the ok/list key. Exit setup by pressing the exit keys.

4.1 The Setup Home Menu



The NAC-N 172 XS setup home menu provides access to ten setup menus. The function of each menu is as follows:

Language: Enables the NAC-N 172 XS user interface language to be changed.

Inputs: Enables various parameters for each internal and external input to be configured.

Analogue Outputs: Configures NAC-N 172 XS analogue output settings.

Headphones: Configures NAC-N 172 XS headphone output options.

Network Settings: Configures NAC-N 172 XS network connection settings.

Front Display: Configures NAC-N 172 XS display features.

Clock & Alarm: Configures clock and alarm.

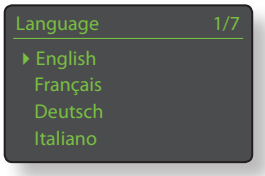
Handset Keys: Enables NAC-N 172 XS inputs to be assigned to specific handset keys. Also enables configuration of the handset navigation (◀ ▶ ▲ ▼) keys.

System Automation: Enables system automation to be configured.

Factory Settings: Enables interrogation of NAC-N 172 XS status, deletion of all user presets and return to factory default settings.

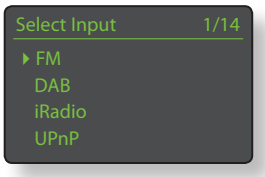
Each of the ten setup menus is described in detail in the following sections. Use the handset **up** (▲) and **down** (▼) and **ok/list** keys to select a setup menu.

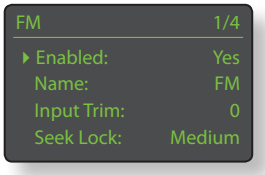
4.2 The Language Menu



The Language setup menu enables the NAC-N 172 XS user interface language to be changed. Enter 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 **exit** key.

4.3 The Inputs Menu





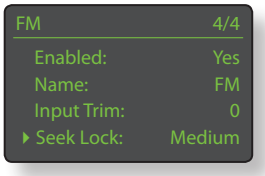
The Inputs setup menu enables a variety of parameters to be specified for each NAC-N 172 XS internal source and external input. These parameters define how control of NAC-N 172 XS inputs behaves. The options available for each are described in the following sections. Three parameters are common to all inputs:

Enabled: Switches the input on or off and displays or hides any associated menus.

Name: Enables user specified names to be attached to inputs. Use the handset to enter text.

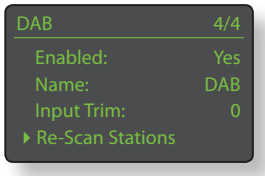
Input Trim: Enables the relative level of each input to be adjusted so that each is of an approximately equal volume. Adjust using the handset ▼ or ▲ key.

4.3.1 FM Input



Parameter	Options
Enabled:	Yes / No
Name:	User definable
Input Trim:	±10dB
Seek Lock:	Medium / High. Sets the FM signal strength required for the NAC-N 172 XS tuner to identify an FM station.

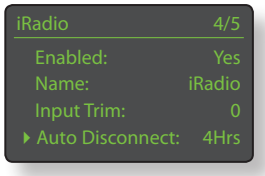
4.3.2 DAB Input



Parameter	Options
Enabled:	Yes / No
Name:	User definable
Input Trim:	±10dB
Re-scan Stations:	Re-scans for DAB stations.

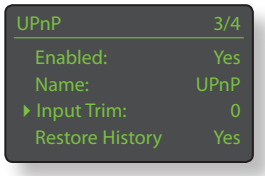
Note: *The NAC-N 172 XS DAB input is not implemented in units distributed in territories where Digital Audio Broadcasting is unavailable.*

4.3.3 iRadio Input



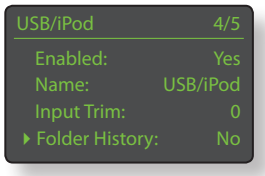
Parameter	Options
Enabled:	Yes / No
Name:	User definable
Input Trim:	±10dB
Auto Disconnect:	Select time. Auto-disconnect is provided so that internet provider data usage limits are not inadvertently exceeded if a NAC-N 172 XS is left connected to internet radio.
Browse History:	Yes / No. If **Yes** is specified the NAC-N 172 XS will display the last used station if it is available when list mode is selected. If **No** is specified NAC-N 172 XS will display the top station selection menu.

4.3.4 UPnP™ (Network) Input



Parameter	Options
Enabled:	Yes / No
Name:	User definable
Input Trim:	±10dB
Restore History:	Yes / No. If **Yes** is specified NAC-N 172 XS will remember the last used folder if the UPnP™ server is still available. If **No** is specified NAC-N 172 XS will display the full list of available servers.

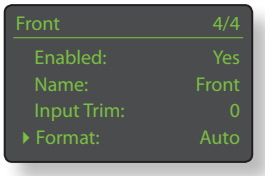
4.3.5 USB/iPod Input



Parameter	Options
Enabled:	Yes / No
Name:	User definable
Input Trim:	±10dB
Folder History:	Yes / No. If **Yes** is specified the NAC-N 172 XS will automatically display the last used folder on the USB device. If **No** is specified the top level folder of the device will be displayed.
Charge:	Always / Never. iPod battery charging takes place **always** when the iPod is connected or **never** takes place.

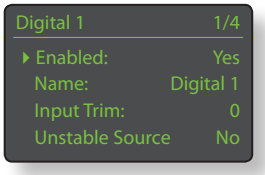
Note: *The non-charging option is provided because there is a small reduction in iPod sound quality when simultaneously charging and playing. This means however that an iPod can potentially run out of power while playing.*

4.3.6 Front Panel Input



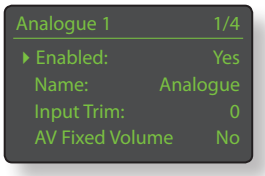
Parameter	Options
Enabled:	Yes / No
Name:	User definable
Input Trim:	±10dB
Format:	Auto / Analogue / Digital. If **Auto** is specified the front panel input will automatically detect the audio signal format (analogue or digital) and configure the input appropriately. Specifying **Analogue** or **Digital** will fix the front panel input format.

4.3.7 Rear Panel Digital Inputs



Parameter	Options
Enabled:	Yes / No
Name:	User definable
Input Trim:	±10dB
Unstable source:	Yes / No Select **No** unless the NAC-N 172 XS 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.

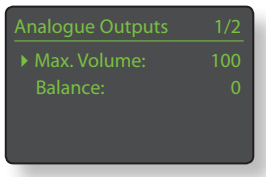
4.3.8 Rear Panel Analogue Inputs



Parameter	Options
Enabled:	Yes / No
Name:	User definable
Input Trim:	±10dB
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 NAC-N 172 XS volume control will be disabled. This enables NAC-N 172 XS to be used in multi-channel AV systems with volume control handled by the AV processor. **Take care when selecting AV Fixed Volume**.

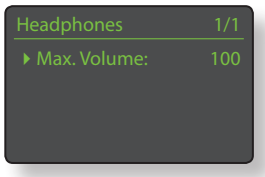
4.4 The Analogue Outputs Menu

The Analogue Outputs menu enables the preamplifier DIN and RCA phono output maximum volume and balance to be set. The volume and balance settings apply simultaneously to both outputs.



Parameter	Options
Max. Volume:	0 to 100 (adjust using handset ▼ or ▲ keys)
Balance:	-10 to + 10 (adjust using handset ▼ or ▲ keys)

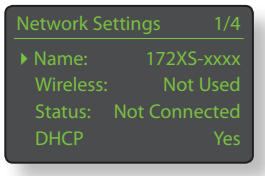
4.5 The Headphones Menu



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

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

4.6 The Network Settings Menu



The Network Settings menu enables NAC-N 172 XS 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 (text entry) Default: 172XS-xxxx
Wireless:	Not Used / Wireless Network Names
Status:	Connected / No Signal / Login Failure / Busy / Etc.
DHCP:	Yes / No

The **Name** parameter enables the NAC-N 172 XS's default network name to be changed.

The **Wireless** parameter enables a wireless network to be chosen and joined. See Section 4.6.1 below for detailed wireless set up notes.

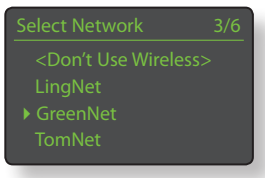
Network **Status** displays the current network connection status.

The **DHCP** parameter enables the NAC-N 172 XS network settings to be modified. In most cases, specifying **Yes** and leaving the NAC-N 172 XS set to DHCP, will be the appropriate option. See Section 4.6.2 below for notes on non-DHCP network connection.

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. The NAC-N 172 XS is set up by default to use DHCP.*

Note: *If the NAC-N 172 XS is connected to the network both wirelessly and via Ethernet (wired), the Ethernet connection will take priority.*

4.6.1 Wireless Network Connection Set Up

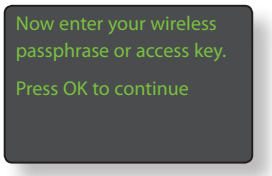


If the **Wireless** parameter is selected in the Network Settings menu the Select Network menu will display a list of the available networks. An option not to use a wireless connection is also provided. Use the handset **up** (▲) or **down** (▼) keys to scroll through the list and the **ok/list** key to select a network.

Note: *The NAC-N 172 XS is compatible with 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.*

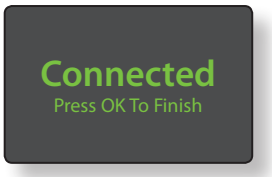
Note: *As with any wireless network hardware, NAC-N 172 XS connection reliability will be affected by both network router performance and Wi-Fi signal quality. To minimise the possibility of poor connection reliability, NAC-N 172 XS should be connected to network audio sources by no more than one wireless "leg". Other "legs" necessary between NAC-N 172 XS and the network audio sources should be wired.*

Note: *The NAC-N 172 XS cannot connect to a "hidden" wireless network.*

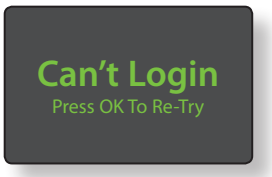


If the selected network is secure and requires a passphrase or access key to join, the NAC-N 172 XS will display an alert message. Pressing the handset **ok/list** key will then open a text entry screen for entry of the passphrase or access key.

Use the handset **numeric/text** keys to enter the passphrase or access key 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 passphrase is "flatfish".



If the network is successfully joined the NAC-N 172 XS will display a confirmation screen.



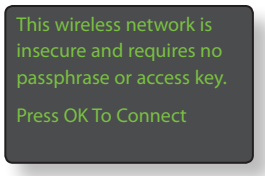
If an incorrect passphrase or access key is entered the NAC-N 172 XS will display an alert message.

Note: *As a security measure, a router may also require the NAC-N 172 XS's MAC address to be entered before allowing it to join the wireless network. This type of security feature is known as 'MAC address filtering'. The NAC-N 172 XS MAC address is shown in the 'Factory settings > System Status' page.*

Note: *The wireless passphrase/access 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 passphrase/access key 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, the NAC-N 172 XS will automatically offer only the most secure one.*

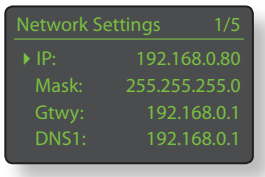
Note: *If WEP security is used the router should be set to "auto" or "open" authentication.*



If the selected network is insecure and requires no passphrase or access key to join, the NAC-N 172 XS will display an alert message. Pressing the handset **ok/list** key will immediately connect NAC-N 172 XS 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.*

4.6.2 Non-DHCP (Static) Network Connection

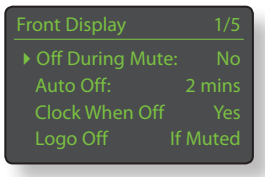


If **DHCP** is de-selected in the Network Settings menu, five further parameters will be displayed.

Parameter	Options
IP:	User definable (numerical entry) Default: 192.168.0.80
Mask:	User definable (numerical entry) Default: 255.255.255.0
Gateway (Gtwy):	User definable (numerical entry) Default: 192.168.0.1
DNS1:	User definable (numerical entry) Default: 192.168.0.1
DNS2:	User definable (numerical entry) Default: 192.168.0.1

These settings enable the NAC-N 172 XS 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.

4.7 The Front Display Menu



The Front Display setup menu enables the behaviour of the front panel display, logo illumination, clock display and logo touch-muting to be modified.

Parameter	Options
Off During Mute:	Yes / No
Auto Off:	Select time 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.

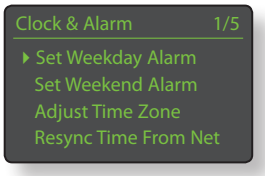
Note: *If the display has been switched off using the handset disp key this setting will take priority over the Auto Off setting. The display will always switch on briefly when control commands are received.*

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

Note: *If Clock When Off is set to Yes and Logo Off is set to If Muted, the clock display will dim automatically 10 seconds after mute is selected.*

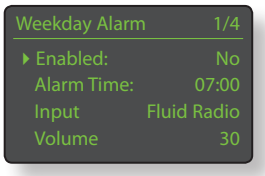
The **Logo Off** settings select the circumstances in which the front panel logo illumination will switch off. **Logo Mute** settings engage or disengage the touch-mute function of the front panel logo.

4.8 The Clock & Alarm Menu



The Clock & Alarm setup menu enables the NAC-N 172 XS 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:	NAC-N 172 XS external inputs or radio presets can be selected to become the alarm audio source.

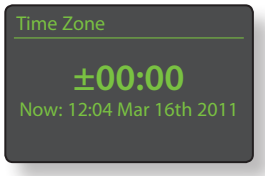
Note: ***The NAC-N 172 XS radio can only be used as an alarm signal using stored radio presets.***

Volume:	30. The alarm audio volume can be set independently of the default NAC-N 172 XS volume using the remote handset **up** (▲) and **down** (▼) keys.

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

Note: The NAC-N 172 XS has no default alarm tone and can only use its 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 cease to broadcast unexpectedly.



Selecting **Adjust Time Zone** enables the time zone within which the NAC-N 172 XS is located to be set. The handset **up** (▲) and **down** (▼) keys are used to select **+** or **–** with respect to GMT (Greenwich Mean Time).

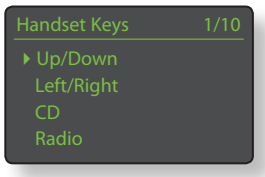
Note: *The NAC-N 172 XS clock does not adjust automatically to take account of localised "daylight saving" time changes. Use the Adjust Time Zone function to advance or retard the clock as appropriate.*

Selecting **Resync Time From Net** enables the NAC-N 172 XS clock to re-synchronise with its specified time server.

Note: *The NAC-N 172 XS clock re-syncs with its internet time server automatically every 24 hours. If it is unable to connect it re-tries every 30 minutes.*

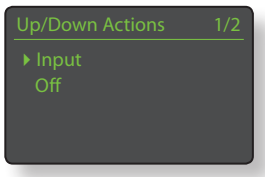
Selecting **Advanced Setup** enables an alternative internet time server to be specified. Contact your local Naim retailer for more information on selecting time servers.

4.9 The Handset Keys Menu

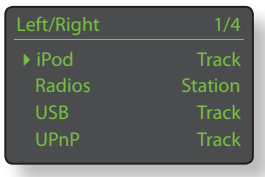


The Handset Keys setup menu enables the function of the handset navigation keys (Diagram 4.9.3) to be configured and the NAC-N 172 XS inputs assigned to each handset input selection key (Diagram 4.9.4) to be changed.

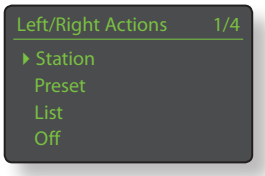
4.9.1 Navigation Key Functions



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.



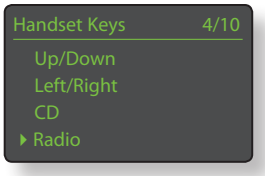
Selecting the **Left/Right Actions** parameter from the Handset Keys menu will open further menus enabling the configuration of the **left** (◀) and **right** (▶) keys independently for the USB/iPod, Radios, and UPnP™ inputs. The options available for the USB/iPod and UPnP™ inputs are **Track**, **List** 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 NAC-N 172 XS to list mode, and if **Off** is selected the keys will be disabled in terms of track or list mode 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 NAC-N 172 XS to list mode, and if **Off** is selected the keys will be disabled in terms of station, preset or list selection.

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

4.9.2 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:

Handset Key	NAC-N 172 XS Inputs Assigned
cd:	Analogue 1, Digital 1
radio:	FM, DAB, iRadio
pc:	UPnP™
iPod:	USB/iPod, Front
tv:	Analogue 2, Digital 2
av:	Digital 3
hdd:	Digital 4
aux:	Unassigned

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.

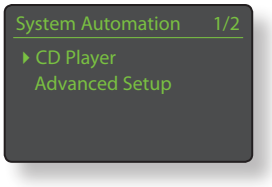
4.9.3 Handset Navigation Keys

The navigation (◀ ▶ ▲ ▼) keys are located around the **ok/list** key.

4.9.4 Handset Input Selection Keys

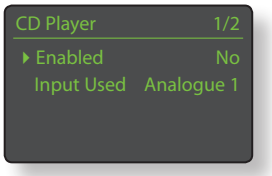
The input selection keys (**cd**, **radio**, **pc**, **iPod**, **tv**, **av**, **hdd**, **aux**) are located beneath the transport keys (⏯ ⏮ ⏭ ⏹ ⏪ ⏩).

4.10 The System Automation Menu



With System Automation enabled and the NAC-N 172 XS **Remote Out** socket connected to the **Remote In** socket of a Naim CD player the NAC-N 172 XS **n-Stream** App can provide system-wide control.

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

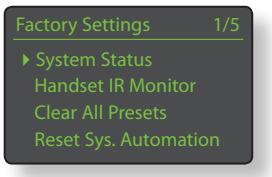


Selecting **CD Player** opens a menu that makes CD transport control available through the NAC-N 172 XS n-Stream interface. Select **Enabled** to enable CD control and select **Input Used** to specify the NAC-N 172 XS input that the CD player is connected to.

Note: *CD player transport control using the NAC-N 172 XS handset via System Automation is not possible. The n-Stream 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.

4.11 The Factory Settings Menu



The Factory Settings setup menu enables the NAC-N 172 XS system status information to be displayed, handset commands to be analysed, radio presets to be deleted, system automation to be reset, and all settings to be returned to their defaults.

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 NAC-N 172 XS Stereo Preamplifier

The NAC-N 172 XS incorporates a high performance stereo preamplifier based on established Naim design principles. The preamplifier is able to handle both analogue and digital audio signals and, in addition to its multi-mode radio, network interface and USB/ iPod interface, it has three external analogue inputs and five external digital inputs.

Once it is connected to an appropriate power amplifier, using the preamplifier 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 4.9.*

Note: *The 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 in the following order:

Analogue 1, **Analogue 2**, **Digital 1**, **Digital 2**, **Digital 3**, **Digital 4**, **FM** (radio), **DAB** (radio), **iRadio**, **UPnP™** (Network UPnP™), **USB**/**iPod**, **Front** (front panel analogue/digital).

Note: *These are the default input names. They may be altered within the NAC-N 172 XS set up menus. See Section 4.3. Inputs can also be disabled so that they are hidden from selection.*

Pressing one of the handset **input selection** keys either directly selects a single input or scrolls through a group of inputs. For example, by default, pressing the **PC** input selection key selects the **UPnP™** input, while pressing the **CD** input selection key scrolls through a group comprising the **Analogue 1** and **Digital 1** inputs.

Note: *The default input selection key assignments may be altered within the NAC-N 172 XS set up menus. See Section 4.9.2.*

Selecting an input will route the input audio signal to the NAC-N 172 outputs.

The NAC-N 172 will momentarily display input names as they are selected before displaying input specific information; iPod 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 172 XS will display a descriptive alert message.

5.2 Volume Control

NAC-N 172 XS volume control is achieved by using front panel volume control or the handset **vol–** and **vol+** keys. The volume control affects the preamplifier and headphone, outputs.

The mute function silences the NAC-N 172 XS 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 4.7*

5.3 Preamplifier Display

In normal operation the NAC-N 172 XS 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

The NAC-N 172 XS provides a preamplifier output, a line output and a headphone output.

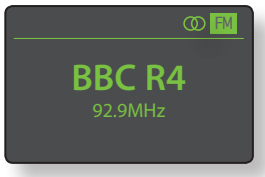
The preamplifier output is designed to be connected to a downstream power amplifier. The line output is designed to enable a variety of downstream ancillaries to be connected. These might include a second headphone amplifier or a remote integrated amplifier.

The NAC-N 172 XS headphone amplifier is able to drive most commonly available headphones. Insertion of a headphone plug will mute the NAC-N 172 XS preamplifier outputs.

6 NAC-N 172 XS Multi-mode Radio

The NAC-N 172 XS incorporates a radio module able to play internet radio streams and optionally to receive FM and DAB transmission. FM and DAB operation requires an appropriate aerial to be connected to the rear panel aerial input. Internet radio requires the NAC-N 172 XS to be connected to a broadband internet service via a network router that incorporates an appropriate firewall. The NAC-N 172 XS is able to store a total of forty station presets (favourites) across all three tuner modes. Select the FM, DAB or iRadio input to begin.

6.1 FM Tuner – Seeking Stations



To find FM stations select the FM input and press the handset **prev** (⏮) or **next** (⏭) keys. 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.*

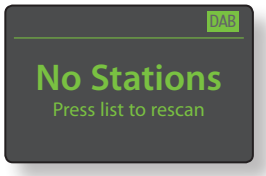
Note: *The signal strength lock threshold may be altered within the NAC-N 172 XS set up menus. See Section 4.3.1.*

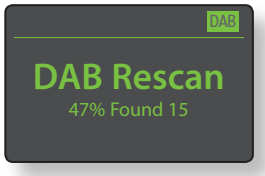
If stations are RDS enabled their names, rather than just their frequencies, will be displayed. Pressing the handset **info** (ℹ) key will sequentially display any station info broadcast, station genres if defined and station frequency. If stations are not RDS enabled, the info key will display only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



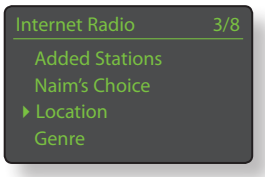


When the NAC-N 172 XS DAB Radio input is first selected it must scan for stations. Select the DAB input and press the handset **ok/list** key to begin the search. Scan progress and the number of stations found will be displayed. When the scan is complete the NAC-N 172 XS will order the stations alphabetically and select the first station in the list.

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 search 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

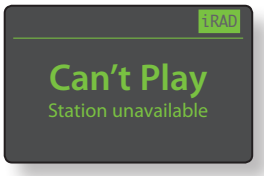


When NAC-N 172 XS is connected to a network with high speed internet access it will automatically download a list of available internet radio stations. When the iRadio input is subsequently selected, a **list mode** menu will be displayed that shows all the available stations sorted by location, genre, 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 search the list alphabetically.

Once a station is selected the NAC-N 172 XS 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 within the NAC-N 172 XS 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 the NAC-N 172 XS is left muted 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 as soon as mute is disengaged.*

6.4 Adding iRadio Stations

The Naim Radio Guide web site enables iRadio stations not included in the standard NAC-N 172 XS list to be added for playback by your NAC-N 172 XS. To access the web site and add stations follow the steps below.

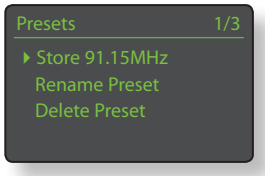
- With a computer connected to the same network as the NAC-N 172 XS, browse to **http://naim.vtuner.com**
- Enter the identification (ID) of your NAC-N 172 XS where requested on the web page. The ID is the unit's MAC address. This can be found via the following NAC-N 172 XS menus: **Setup** > **Factory Settings** > **System Status** > **MAC**.

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

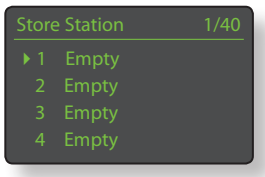
- To add stations follow the **My Added Stations** link and provide the information required. Click on the **arrow** to complete the procedure.
- The added station will then be visible on the Naim Radio Guide home page.
- To access the stations from the NAC-N 172 XS, select the iRadio input then select **Added Stations**.

6.5 Storing Radio Presets

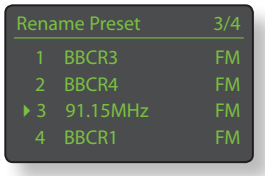
When the handset **store** key is pressed the display will show a menu that enables confirmation of the preset store and options to rename or delete a stored preset.



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.



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. See Section 3.7 for a full description of text entry.

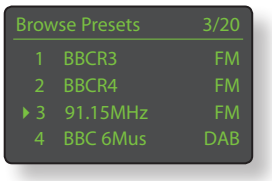


Selecting **Delete Preset** opens a preset list menu. Scroll to the desired preset and press the **ok/list** key.

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.*

6.6 Using 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 NAC-N 172 XS radio modes (FM, DAB, iRadio). Selecting a preset from a radio mode other than the one currently selected will automatically switch NAC-N 172 XS to that mode.*

Note: *It is possible for an internet radio station stored as a preset to be "off-line" and be unavailable when subsequently 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.*

7 NAC-N 172 XS UPnP™ Audio Interface

In addition to providing the network connection required for internet radio playback, the NAC-N 172 XS network interface enables audio files stored on UPnP™ servers to be streamed and played. NAC-N 172 XS must be connected, either wirelessly or via Ethernet cabling, to a network router. If the router provides an internet connection it should incorporate a firewall. If NAC-N 172 XS is already connected to a network, begin by selecting the UPnP™ input.

7.1 UPnP™ Servers

UPnP™ servers incorporate a software application that allows the NAC-N 172 XS, or any other UPnP™ compatible player, to play audio stored and streamed by another device on the network. The UPnP™ server is usually a PC or Mac 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 built in UPnP™ support and a variety of third party UPnP™ applications are also available that are compatible with both Windows and Macintosh operating systems.

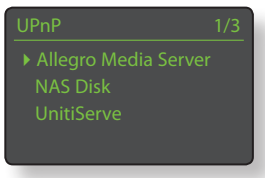
In the case of the Windows UPnP™ server the following steps must be taken before music can be streamed to the NAC-N 172 XS:

- 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.

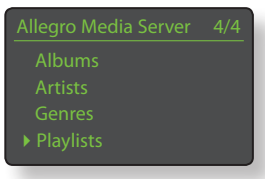
7.2 Audio File Compatibility

The audio files stored on the UPnP™ servers attached to the network may be in 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 Apple iTunes FairPlay system.

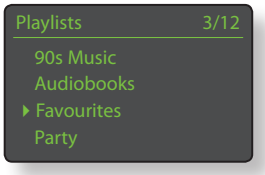
7.3 Scanning Servers and Playing Files



When the NAC-N 172 XS 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.

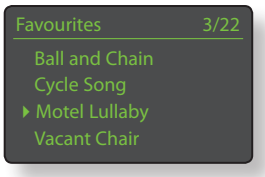


Note: *Allegro Media Server (shown in the illustrations) is a UPnP™ Media Server application that runs on Apple or Windows PCs and provides access to media files and iTunes library contents from UPnP™ media players such as NAC-N 172 XS.*



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 locally by the NAC-N 172 XS. To play a playlist it must reside on the UPnP™ server.*



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** (▲), **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 search the list alphabetically.

Once playback is underway the NAC-N 172 XS 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, track genre and stream (audio file) information.

Note: *Buffer level indicates the quantity of stored data within the NAC-N 172 XS and reflects the ability of the network to provide data at the necessary rate.*

8 NAC-N 172 XS USB/iPod Interface

The NAC-N 172 XS can play audio files stored on USB memory hardware or iPod and iPhone models connected to the front panel USB socket. Begin by connecting a USB memory device, iPod or iPhone to the USB socket and selecting USB/iPod input.

8.1 USB Media and File Compatibility

USB memory hardware must be in Windows/DOS format (FAT/FAT32) to be used with the NAC-N 172 XS. Macintosh formats are not compatible.

The NAC-N 172 XS can play USB audio files in the following formats: 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.

8.2 iPod Compatibility and Charging

The NAC-N 172 XS USB audio interface is compatible with 5th generation iPod models, all iPod touch models and the iPhone, iPhone 3 and iPhone 3GS.

The NAC-N 172 XS can play iPod and iPhone audio files in the following formats: MP3, M4A, AAC, ALAC, WAV, AIFF and Apple Lossless.

The iPod battery will be charged by default while the iPod is connected. iPod charging options can be changed in the USB/iPod input setup menu. See Section 4.3.5.

8.3 Browsing and Playing USB Files

With a USB memory device, or an iPod or iPhone connected, and the NAC-N 172 XS **USB/iPod** 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** key to browse and select items.

Note: *The memory device or iPod 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 search the list alphabetically.

Once playback is underway the NAC-N 172 XS 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.

9 NAC-N 172 XS Specifications

Audio Outputs:	Preamp output (4-pin DIN, RCA) Line output (RCA) Headphone (3.5mm jack)
Preamp Output:	775mV, 22Ω
Preamp Output Load:	10kΩ minimum
Frequency Response:	20Hz - 50 kHz
Signal to Noise Ratio:	80dB
Phase Response:	Linear phase, absolute phase correct
Radio Antenna Input:	F type (plus PAL adaptor)
Analogue Inputs:	3.5mm front panel jack 1 x 5-pin DIN 1 x RCA pair
Digital Inputs:	5 x S/PDIF (2 x coaxial RCA, 2 x optical TosLink, 1 x 3.5mm miniTosLink)
Digital Input Sample Rate:	Coaxial – 192kHz, Optical – 96kHz
Analogue Input Overload:	34dB
USB:	Front panel socket
Other Inputs:	Ethernet
IR Input:	Front panel, RC5
WiFi Compatibility:	802.11b, 802.11g and 802.11n. 802.11n preferred
Upgrade Interface:	Rear panel mini-USB
Mute Control:	Front panel touch-logo
Audio Formats Supported:	Internet radio (WMA, MP3 Streams, MMS) Playlists (M3U, PLS) MP3, M4A, AAC (up to 320 kbps, CBR/VBR) ALAC to 96kHz (inc 88.1kHz) Windows Media–formatted content (up to 320 kbps) WAV, FLAC, Ogg Vorbis, AIFF to 48kHz LPCM16 and 24 on UPnP™ to 192kHz (inc 176.4kHz). Gapless playback supported on MP3, M4A, AIFF, WAV, FLAC and ALAC.
Supply Voltage:	100V, 115V or 230V, 50/60Hz
Quiescent Consumption:	35 Watts
Certifications and Licenses	
Certifications:	Apple (made for iPod, iPhone), vTuner Premium
Licenses:	MP3, AAC, DAB
Dimensions (H x W x D):	70 x 432 x 301mm
Weight:	7.0kg
Finish:	Black

Note: *Specifications may be subject to revision.*

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