

REFERENCE MANUAL
NAIT XS INTEGRATED AMPLIFIER
ENGLISH, DEUTSCH, FRANÇAIS, ITALIANO

Contents

SAFETY INSTRUCTIONS

In order to comply with current European safety regulations it is essential that the Naim loudspeaker connectors supplied with amplifiers and loudspeakers are used.

Do not under any circumstances allow anyone to modify your Naim equipment without first checking with the factory, your retailer, or your distributor. Unauthorised modifications will invalidate your guarantee.

Equipment must not be exposed to dripping or splashing and no objects filled with liquid, such as vases, should be placed on the equipment.

Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

For your own safety do not under any circumstances open Naim equipment without first disconnecting it from the mains.

Warning: an apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.

Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable. To disconnect the equipment from the mains remove the mains plug from the mains outlet.

The following label is attached to all mains powered equipment:



Page	Section
E1	1 Connections
E1	2 Mains Power
E2	3 General Installation
E3	4 NAIT XS Introduction, Installation and Connection
E5	5 NAIT XS Operation
E6	6 NARCOM 4 Remote Handset
E7	7 NAIT XS Controls and Connections
E9	8 Specification
E9	9 Declaration of Conformity

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 byproducts. 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.



Introduction

Naim products are conceived with performance as the top priority. Careful installation will help ensure that their full potential is achieved. This manual covers the NAIT XS integrated amplifier. It begins with some general installation notes and statutory safety warnings. Product specific information begins in Section 4.

1 Connections

It is important for both safety and performance that any standard cables supplied are not modified.

1.1 Analogue Audio Interconnect Cables

If options are available with your equipment and installation, DIN interconnect sockets should be used in preference to phono sockets. One end of each Naim audio interconnect cable is marked with a band to establish its correct orientation. The band denotes the end that connects to the signal source. Naim Hi-Line interconnect cables will provide the best results.

Audio interconnect plugs and sockets should be kept clean and free from corrosion. The easiest way to clean them is to switch off the equipment, pull the plugs out of their sockets, and push them back in again. Contact cleaners and "enhancers" should not be used as the film they deposit may degrade the sound.

1.2 Loudspeaker Cables

Loudspeaker cables are vitally important. They should each be at least 3.5 metres long and of equal length. The recommended maximum is normally 20 metres although longer cables may be viable with some Naim amplifiers.

Some Naim amplifiers are designed only to work with Naim loudspeaker cable and using alternatives may degrade the performance or even damage the amplifier. Other Naim amplifiers can be used with any high quality loudspeaker cable although we recommend that Naim loudspeaker cable is used. Naim loudspeaker cable is directional and should be oriented so that the printed arrow points towards the speakers. The Naim loudspeaker connectors supplied are designed to comply with European safety legislation and must be used.

Contact your local retailer or distributor for further advice on loudspeaker cables and connectors.

2 Mains Power

Where fused plugs are used 13 amp fuses should be fitted. Fuses of a lower rating will fail after a period of use. Do not wire voltage dependent resistors or noise suppressors into mains plugs. They degrade the mains supply and the sound.

2.1 Mains Plug Wiring

In some territories a mains plug may need to be fitted to the supplied mains lead. As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in the plug proceed as follows:

The wire coloured **GREEN-AND-YELLOW** must be connected to the terminal in the plug marked by the letter **E** or by the safety earth symbol or coloured **GREEN** or **GREEN** and **YELLOW**.

The wire coloured **BLUE** must be connected to the terminal in the plug marked with the letter **N** or coloured **BLACK**.

The wire coloured **BROWN** must be connected to the terminal in the plug marked with the letter **L** or coloured **RED**.

2.2 Equipment Fuses

Mains powered Naim equipment is fitted with a mains fuse on the rear panel adjacent to the mains input socket. Replace it if necessary only with the spare fuse supplied or with an identical fuse. Repeated failure of the fuse points to a fault that should be investigated by your retailer or Naim itself.

2.3 Non-rewirable Mains Plugs

If a non-rewirable plug is cut from a mains lead (for whatever purpose) the plug **MUST** be disposed of in a way to render it totally useless. Considerable shock hazard exists if the cut-off plug is inserted into a mains outlet.

2.4 Mains Circuits and Cables

A hi-fi system usually shares a mains circuit with other household equipment, some of which can cause distortion of the mains waveform. This distortion can in turn lead to mechanical hum from mains transformers. Some Naim transformers are large in size, making them relatively sensitive to such distortion, and it may be necessary to take account of transformer hum when siting your equipment.

Transformer hum is not transmitted through the speakers and has no effect on the performance of the system; however, a separate mains circuit may reduce it. Such a circuit (ideally with a 30 or 45 Amp rating) will also generally improve system performance. Advice on the installation of a separate mains circuit should be sought from a qualified electrician.

Only use either the mains cable and plugs supplied or a Naim Power-Line mains cable.

Introduction

3 General Installation

Naim equipment is designed to offer the finest performance possible, avoiding compromise wherever practical. This can lead to circumstances that may be unfamiliar. The notes that follow contain advice specifically related to Naim equipment as well as more general warnings about the use of domestic audio products. Please read them carefully.

3.1 Siting The Equipment

In order to reduce the risk of hum audible from the loudspeakers, power supplies and power amplifiers should be located a reasonable distance away from other equipment. The maximum separation distance for connected equipment is that allowed by the standard interconnect lead.

Some Naim equipment is extremely heavy. Check the weight of the equipment prior to lifting and if necessary use more than one person so that it can be moved safely. Ensure that your equipment rack or table can easily support the weight and is stable.

3.2 Switching On

Source components and power supplies should be switched on before the power amplifiers. Always switch amplifiers off and wait a minute before connecting or disconnecting any leads. Always use the power switch on the product rather than a mains outlet switch.

A "thump" may be heard from the loudspeakers as power amplifiers are switched on. This is normal, will not cause any loudspeaker damage and does not point to any fault or problem. A mild "pop" may also be heard shortly after equipment is switched off.

3.3 Running In

Naim equipment takes a considerable time to run in before it performs at its best. The duration varies, but under some conditions the sound may continue to improve for over a month. Better and more consistent performance will be achieved if the system is left switched on for long periods. It is worth remembering however that equipment left connected to the mains can be damaged by lightning.

3.4 Radio Interference

In some circumstances, depending on where you live and the earthing arrangements in your home, you may experience radio frequency interference. Controls on broadcasting in some territories allow very high levels of radio frequency radiation and both the choice and exact siting of equipment may be critical. Susceptibility to radio frequency interference is related to the wide internal bandwidth necessary for high sound quality. A radio frequency filter kit is available for some Naim equipment

but sound quality will be progressively compromised as more elements of the kit are fitted. In situations of extreme radio interference Naim equipment may be unsuitable.

3.5 Lightning Precautions

Your Naim hi-fi system can be damaged by lightning and should be turned off and disconnected from the mains when there is risk of lightning. For complete protection all mains plugs and any aerial cables should be disconnected when not in use.

3.6 Problems?

Consumer protection varies from country to country. In most territories a retailer must be prepared to take back any equipment he has sold if it cannot be made to work satisfactorily. A problem may be due to a fault in the system or its installation so it is essential to make full use of your dealer's diagnostic skills. Please contact your local distributor, or Naim directly, if any difficulties cannot be resolved.

Some Naim equipment is made in special versions for different territories and this makes it impracticable to arrange international guarantees. Please establish the local guarantee arrangements with your retailer. Contact Naim directly for help and advice if necessary.

3.7 Service and Updates

It is essential that repairs and updates are only carried out by an authorised Naim retailer or at the Naim factory. Many components are custom made, tested or matched and appropriate replacements are often unobtainable from other sources.

Direct contact to Naim for service or update information should be made initially through Customer Services:

Tel: **+44 (0)1722 426600**
Email: **info@naimaudio.com**

Please quote the product serial number (found on its rear panel) in all correspondence.

NAIT XS Integrated Amplifier

4 NAIT XS Introduction, Installation and Connections

The NAIT XS should be installed on a dedicated equipment stand intended for the purpose. Do not stand it directly on top of another item of equipment. Care should be taken to ensure that it is level. The amplifier should be installed in its final location before connecting cables or switching on. Ensure that the volume is turned down before switching on.

A variety of power supply upgrade, alternative preamplifier and alternative or additional power amplifier options are possible for the NAIT XS. Diagrams illustrating the connection of some of these are shown in Section 7. Contact your local retailer or distributor for advice on further alternative connection schemes.

The NAIT XS incorporates an AV Bypass switch on its rear panel. The switch should only be set to "On" if the amplifier is to be used in conjunction with an AV processor in a home theatre system. In all other installations the AV Bypass switch should be set to "Off". Speaker and/or amplifier damage may occur if a signal is inadvertently connected to the NAIT XS av input while the AV Bypass switch is "On".

4.1 Mains Power Connection

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

4.2 Signal Inputs

The NAIT XS front panel input buttons select the source input signal to be routed to the integral power amplifier and the loudspeakers. The six buttons are labelled **cd**, **tuner**, **tape**, **av**, **aux 1** and **aux 2**.

The **cd**, **tuner**, **tape** and **av** input buttons select parallel DIN and RCA phono input sockets on the rear panel.

Note: The *tape* and *av* sockets carry both inputs and outputs. See Section 4.4 for more information.

The **aux 1** input button corresponds to a pair of RCA phono sockets on the rear panel and a parallel 3.5mm stereo jack socket on the front panel. Insertion of a plug into the front panel **aux 1** socket will automatically switch the amplifier to that input. Removal of the plug will return the amplifier to the previously selected input.

The **aux 2** input button corresponds to a DIN input socket on the rear panel. The **aux 2** DIN socket also carries a power supply output suitable to power a Naim **Stageline** or **SuperLine** phono preamplifier.

Note: For optimum sound quality DIN sockets should be used in preference to RCA phono sockets.

Note: Where an input has DIN or Phono socket options only one should be connected at any one time.

Always use high quality interconnect cables to connect sources to inputs. The Naim Hi-Line will produce the best results.

4.3 Speaker Outputs

A set of stereo speaker connection sockets is provided on the rear panel. Custom Naim loudspeaker connectors are supplied to make the connection and in order to comply with current European safety regulations these should always be used. Naim speaker cable will provide the best results, however, a wide range of speaker cable types can be used without risk of damage to the amplifier.

Ensure when connecting speakers that they are "in phase". That is, the positive and negative connection orientation at both the speaker and amplifier ends of the cable is the same for both channels.

4.4 Tape and AV Inputs and Outputs

The NAIT XS **tape** and **av** inputs have associated outputs that enable the selected input signal to be routed externally; to an audio recording component for example.

Note: The *tape* or *av* outputs will be muted if their corresponding inputs are selected. No "tape monitor" function is possible with the NAIT XS.

4.5 AV Bypass

The NAIT XS can be integrated within a multi-channel home theatre system, driving the front left and right channel speakers, by engaging its AV Bypass mode. AV Bypass mode enables a home theatre processor to take over volume control of signals connected to the NAIT XS **av** input. It is engaged using the switch on the rear panel. The NAIT XS volume control indicator will extinguish when AV Bypass mode is engaged and the **av** input is selected. The remote handset volume control will also be disabled.

Note: The AV Bypass feature must be used with care. It bypasses the NAIT XS volume control leaving any signal connected to the **av** input to be passed to the speakers at full volume.

Note: The mute function is disabled when AV Bypass is engaged.

NAIT XS Integrated Amplifier

4.6 Auxiliary Inputs and Outputs

The NAIT XS incorporates **pre-amp out** and **power-amp in** sockets on its rear panel. In normal use these sockets are connected by a link plug. The link plug should be removed only in the following circumstances:

- A power supply upgrade is to be used.
- An alternative preamplifier is to use the NAIT XS power amplifier section.
- An alternative power amplifier is to use the NAIT XS preamplifier section.

Diagrams 7.3 and 7.4 illustrate use of these sockets.

When an external preamplifier is connected to the NAIT XS **power-amp in** socket, a fault will initially be indicated by the **mute** button flashing. To clear the fault, press and hold the flashing **mute** button. This will un-mute the amplifier and turn off the display and volume indicator.

The NAIT XS provides an unfiltered analogue stereo **subwoofer** output via a pair of RCA phono sockets.

Note: *The subwoofer output is a duplicate of the preamplifier output. No low-pass filtering is applied.*

4.7 Power Supply Upgrades

The NAIT XS preamplifier section can be upgraded through the connection of an external Flatcap 2x, Hi-Cap or Supercap power supply. Diagrams illustrating power supply upgrades are shown in Section 7. The NAIT XS and external power supply must be switched off when connections are made. Switch on the external power supply first followed by the NAIT XS when all connections are complete.

4.8 General Connections Notes

The NAIT XS negative input and output connections for each channel are common. The mains earth (ground) should always be connected regardless of what other equipment is used in conjunction with the amplifier. The mains earth only grounds the case and the electrostatic screen within the transformer, and is not connected to the signal negative. In order to avoid hum loops, the signal negative of the whole system should be connected to the mains earth (ground) in one place.

A signal ground connection is fitted to the NAIT XS rear panel. This is intended to be used to connect a turntable pick-up arm signal earth only.

NAIT XS Integrated Amplifier

5 NAIT XS Operation

Once the appropriate mains, signal and speaker connections are made the NAIT XS can be switched on from its rear panel power switch. It will remain muted for 30 seconds after switch-on while its electronics stabilise. It will un-mute automatically.

The NAIT XS can be operated either from its front panel, from the supplied NARCOM 4 remote handset or from a Naim R-com remote handset. The NARCOM 4 is illustrated and its functions described in Section 6.

The NAIT XS incorporates a number of features that may be set up or operated to suit system or personal preferences. These are described in the following paragraphs.

5.1 Automatic Input Switching

With Automatic Input Switching engaged the appropriate NAIT XS input will be selected as soon as any handset function for that (Naim) source component is operated. For example, if the tuner input is selected and the cd play key is pressed on the handset, the NAIT XS will automatically switch to the cd input. Automatic Input Switching can be programmed to operate on any combination of the cd, av and tuner inputs.

To enable and setup Automatic Input Switching, the NAIT XS must be switched into **program mode** by pressing and holding the handset **prog** key (with the handset in preamplifier mode). The front panel volume control indicator will flash. The front panel **mute** button will illuminate if automatic switching is already enabled. If it is not enabled it can be switched on by multiple presses of the **mute** button.

If automatic input switching is enabled, pressing the **mute** button will reveal the inputs selected for auto switching by their indicators illuminating for a short time. Repeated operation of the button will sequentially select through each possible combination of cd, tuner and av inputs, and auto switching disabled (all indicators off). When the desired inputs selected for auto switching are indicated, stop pressing the button. The remote handset **mute** key can also be used.

Automatic Input Switching only becomes operational on exit from program mode. Exit program mode by pressing and holding the handset **prog** key.

Note: In a few cases some further equipment configuration may be required for automatic input switching to operate correctly. If this appears to be the case in your installation,

please contact your retailer or local distributor for advice.

5.2 Mute

Mute silences the amplifier and can be engaged or disengaged by pressing the front panel **mute** button or handset **mute** key.

5.3 Display

The front panel button illumination can be switched off by pressing the remote handset (in preamplifier mode) **disp** key. Any subsequent handset or front panel operation will temporarily restore the display. A second operation of the **disp** key will restore the display.

5.4 Defaults

To return the NAIT XS to its factory defaults engage program mode by pressing and holding the handset **prog** key then exit program mode by pressing and holding the handset **disp** key.

5.5 Fault Conditions

The NAIT XS will indicate an "over-current" fault condition by the front panel **tuner** indicator flashing. An incorrectly installed link plug or power supply will be indicated by the front panel **mute** indicator flashing.

NAIT XS Integrated Amplifier

6 NARCOM 4 Remote Handset

The NARCOM 4 remote handset is a multi-functional remote control handset designed to be used with Naim CD players, integrated amplifiers, preamplifiers, preset tuners and subwoofers.

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

6.1 Using NARCOM 4

Operation of the NARCOM 4 handset is based around three types of keys: **System Component Keys**, **Global Keys** and **Soft Keys**.

System Component Keys keys switch the operation of the **Soft Keys** into modes appropriate to each system component (CD player, preamplifier, etc.).

Global Keys operate specific component functions regardless of the **System Component Key** setting and are available at all times.

Preamplifier and Integrated Amplifier **Global Keys** operate as follows:

vol (▲ & ▼) Adjusts the preamplifier volume and the volume control position.

mute Reduces the preamplifier volume to zero. A second press restores the volume.

bal (◀ & ▶) Unused on the NAIT XS.

mon Unused on the NAIT XS.

Preamplifier and Integrated Amplifier **Soft Keys**, which change function depending on which System Component Key has been pressed, operate as follows:

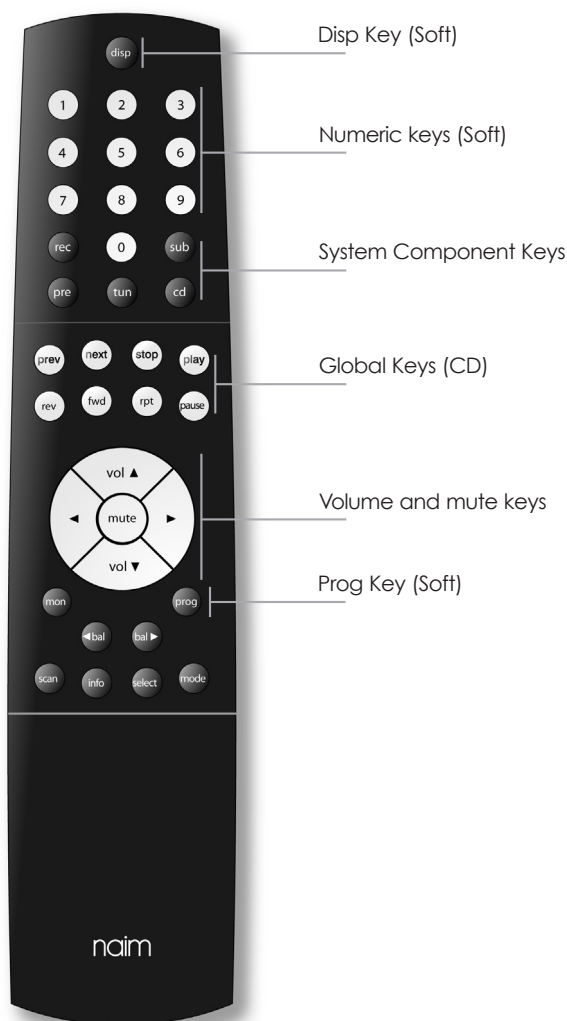
disp Switches the front panel button indicators off and on.

prog Press and hold to switch the preamplifier or integrated amplifier into program mode.

numeric Directly selects preamplifier or integrated amplifier source inputs.

◀ & ▶ Sequentially selects amplifier source inputs.

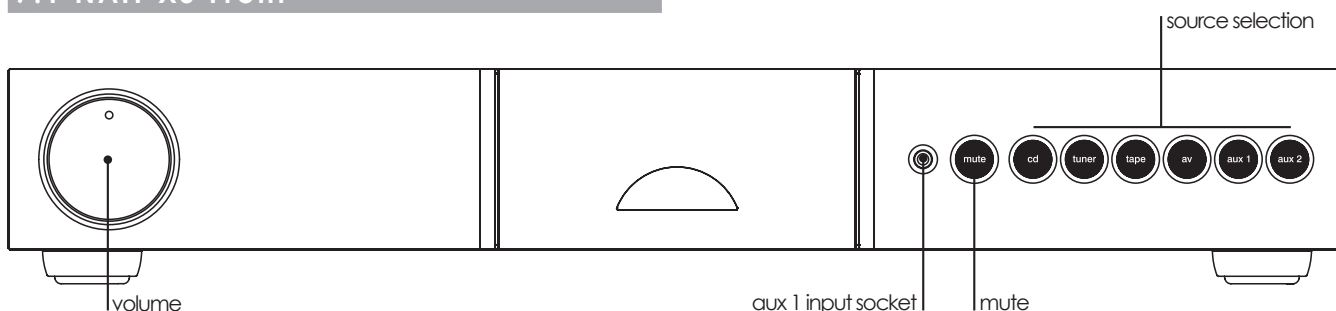
6.2 NARCOM 4 Keys



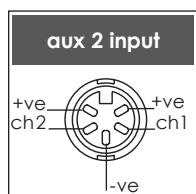
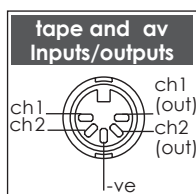
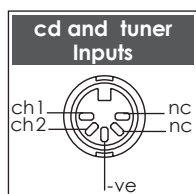
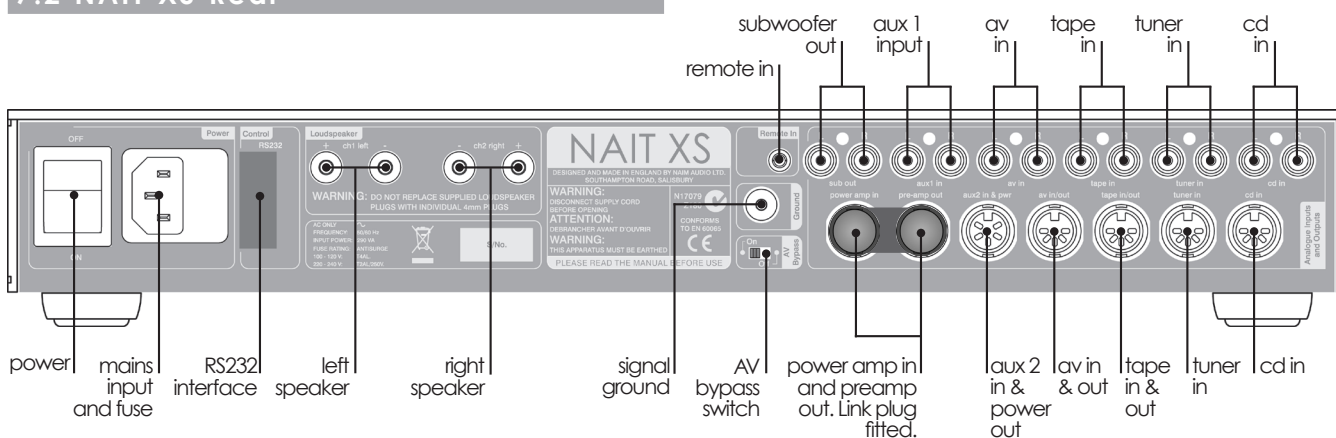
NAIT XS Integrated Amplifier

7 NAIT XS Controls and Connections

7.1 NAIT XS Front



7.2 NAIT XS Rear

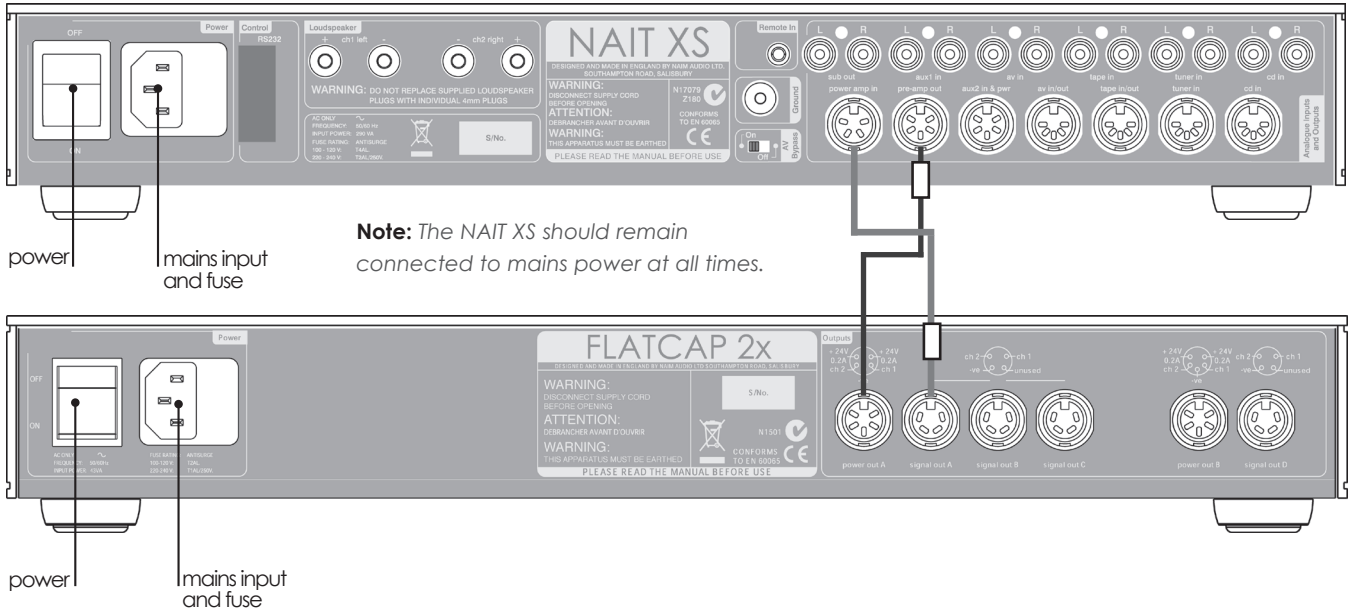


Note: The RS232 interface is an optional upgrade. It can be specified at time of order or fitted retrospectively. Contact your local representative or Naim directly for further information.

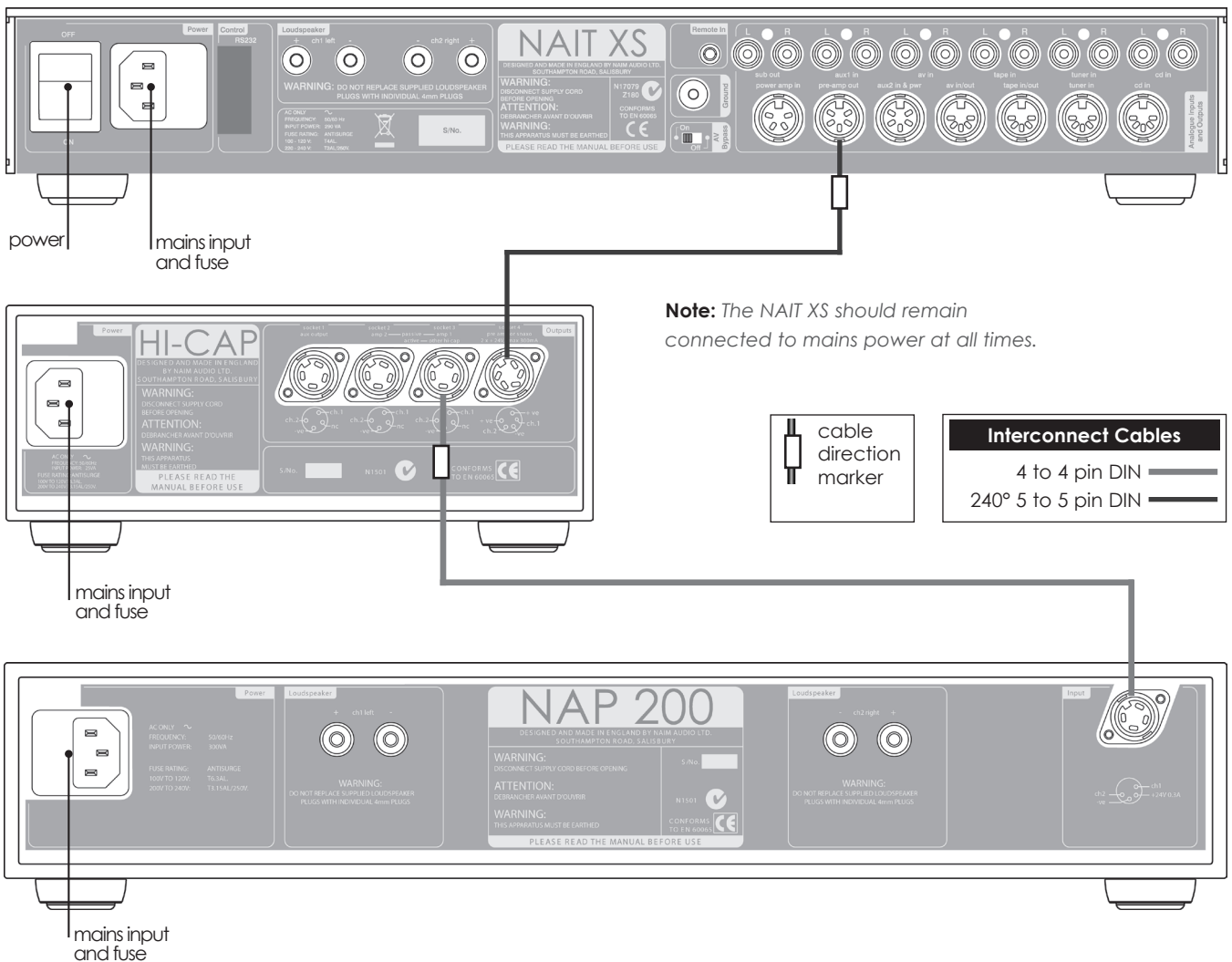
Note: The link plug should be removed only if a power supply upgrade is to be used, an alternative preamplifier is to use the NAIT XS power amplifier section, or an alternative power amplifier is to use the NAIT XS preamplifier section. It should remain fitted in all other circumstances.

NAIT XS Integrated Amplifier

7.3 NAIT XS Connected to Flatcap 2x Power Supply



7.4 NAIT XS Connected to Hi-Cap Power Supply and NAP 200 Power Amplifier



NAIT XS Integrated Amplifier

8 NAIT XS Specification

Input Sensitivities:	130mV, 47k Ω
Overload Margins:	34dB (all inputs all audio frequencies)
Preamp Output Level:	0.775V, <50 Ω
Tape Output Level:	130mV, 600 Ω
Power Output:	Continuous 60 Watts per channel into 8 Ohms
Auxiliary Power Outputs:	For Naim phono stage
Quiescent Consumption:	20VA
Dimensions (H x W x D):	70 x 432 x 301mm
Weight:	8.6kg
Mains Supply:	100-120V or 220-240V, 50/60Hz

9 Declaration of Conformity

Manufacturer	Naim Audio Limited, Southampton Road, Salisbury, England, SP1 2LN
Product	NAIT XS
Safety	EN 60065 - Audio video and similar electronic apparatus. Safety requirements.
EMC	EN 55013 - Sound and television broadcast receivers and associated equipment. EN55020 - Electromagnetic immunity of broadcast receivers and associated equipment. EN 61000-3-2 - Limits for harmonic current emissions. EN 61000-4-2 - Testing and measurement. Electrostatic discharge immunity.

