naim

world class sound... with vision
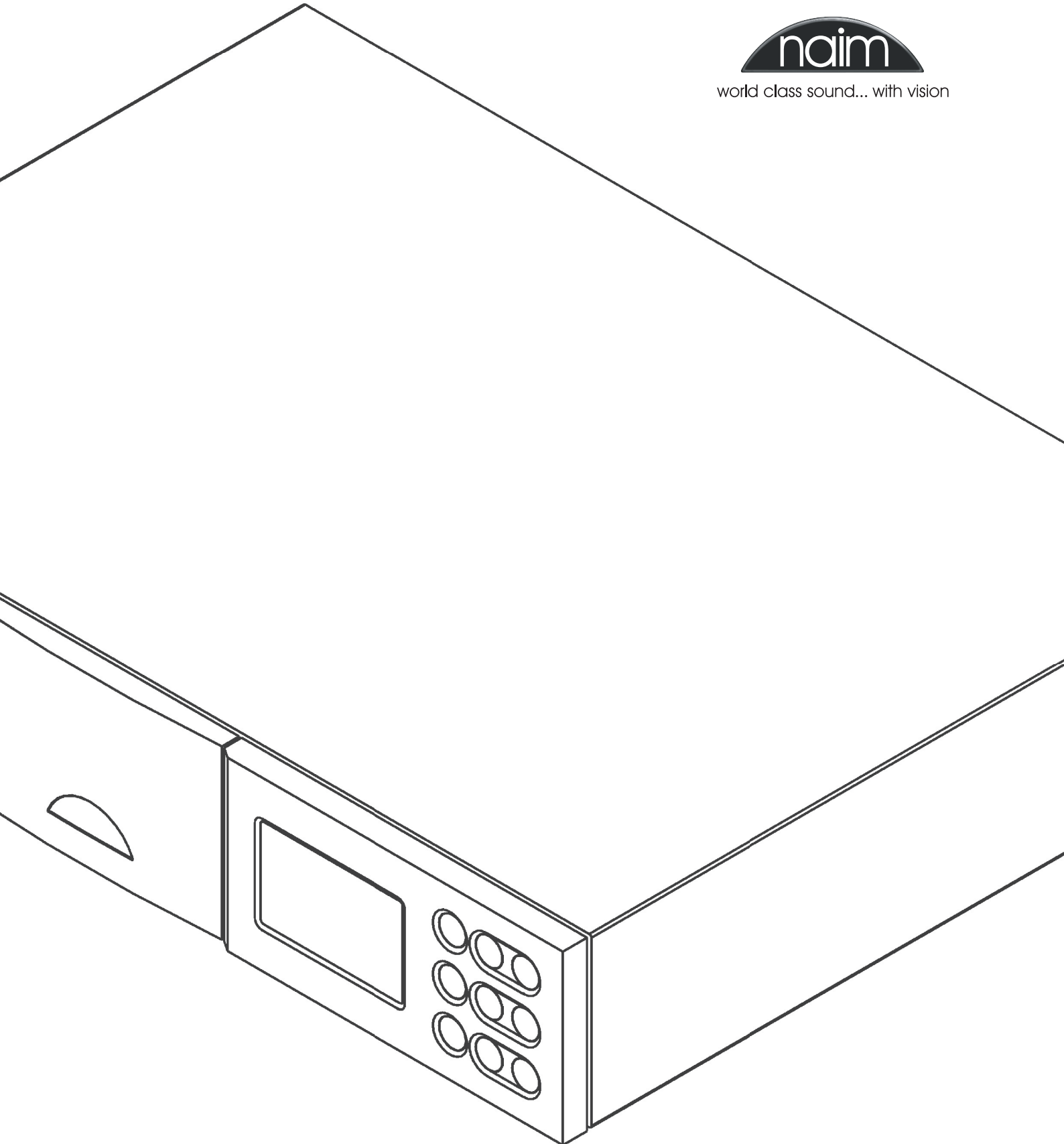
O W N E R S   M A N U A L

n-Vi Home Theatre System

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.

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:

WARNING

THIS APPARATUS MUST BE EARTHED

NOTE

This equipment has been tested and found to comply with the relevant EMC and Safety Standards, and, where applicable, also complies with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and the receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult your Naim retailer or an experienced radio/TV technician for help.

Contents

naim Introduction

Naim Audio products are conceived with performance as the top priority. Careful installation will help ensure that their full potential is achieved. This manual covers the n-Vi all-in-one home theatre system. It begins with some general installation notes and statutory safety warnings. More product specific information begins in Section 4.

1 Connections

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

1.1 Interconnect Cables

If options are available with your equipment and installation, DIN interconnect sockets should be used in preference to RCA Phono sockets. One end of each Naim interconnect cable is marked with a band to establish its correct orientation. The band denotes the end that connects to the signal source.

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

Although any high quality loudspeaker cable is suitable, 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 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 Connection

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

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

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

2.2 Equipment Fuses

Mains powered Naim Audio equipment is fitted with a mains input fuse on the rear panel adjacent to the mains input socket. Replace it if necessary only with the spare fuse supplied or with identical fuses. Repeated failure of this fuse points to an equipment or system fault that should be investigated by your retailer or at the factory by 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. A separate mains circuit (ideally with a 30 or 45 Amp rating) may reduce such distortion and improve system performance. Advice on the installation of a separate mains circuit should be sought from a qualified electrician.

Do not substitute alternative mains leads and plugs to those supplied. They are selected to offer the best possible performance.

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

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

Always use the switch on the product rather than a mains outlet switch to switch the product on.

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 strike. 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 Audio 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 Audio 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 factory by Naim itself. 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@naim-uk.com**

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

4 Product Introduction and Contents

This manual covers installation and operation of the n-Vi all-in-one home theatre system. With the n-Vi, combining DVD, home theatre and genuine high-end hi-fi music reproduction is simple. The n-Vi includes everything you need in one box: DVD and CD player, AV Processor, audio preamplifier, five channel audio power amplifier and an optional DAB*/FM tuner. Just add speakers and a display.

The n-Vi is fundamentally straightforward in use, however its versatility and comprehensive functionality mean that a little time spent reading will help ensure problem-free setup and use.

The n-Vi should be installed on a dedicated equipment stand intended for the purpose. Care should be taken to ensure that it is level. Do not switch on the n-Vi until all input and output connections are made. Make sure you are familiar with the safety warnings and general installation advice contained within the first part of this manual.

Following this introduction, the manual is divided into the following sections.

Contents

* DAB radio broadcasts are not available in all territories.

5 Connections

Once the n-Vi is positioned on a rack or furniture unit it can be connected to a mains supply. Use the mains cable supplied. Do not switch on the n-Vi until all audio, video and control connections have been made.

The appropriate input and output connections will depend on the type of system the n-Vi is to be used in. An Illustration of the n-Vi input and output connections can be found on the page opposite while a diagram illustrating the n-Vi integrated with an existing stereo system can be found in Section 12.

It is important that high quality cable is used for signal and speaker connections. Your local retailer or distributor will be able to offer advice.

5.1 Signal Inputs

The n-Vi can accept three digital and four analogue audio inputs for the connection of external source equipment. Two of the digital inputs are connected via RCA-phono sockets and one via an optical connector. Two of the analogue inputs are connected via RCA-phono socket pairs and one via a 5-pin DIN socket. One RCA-phono analogue input socket pair (Input A3) is duplicated on the n-Vi front panel with a stereo 3.5mm jack socket. This socket is intended for the temporary connection of portable music players. Insertion of a plug into the front panel jack socket will automatically switch the n-Vi to this input. If any equipment is simultaneously connected to the rear panel A3 input sockets its audio signal will be mixed with the front panel signal. Removal of the front panel input plug will automatically switch the n-Vi to the previously selected input.

Table 5.3

Preferred Video Connections

Rank Order	Connection		
	Connection Format	Cable/Socket Type	Notes
First	DVi	DVi	Digital Progressive Scan
Second	RGB	3 x BNC	Analogue Progressive Scan
Third	YPbPr	3 x BNC	Analogue Progressive Scan
Fourth	RGB	SCART	Analogue Interlaced
Fifth	YPbPr	SCART	Analogue Interlaced
Sixth	S-Video	4-pin mini DIN	Analogue Interlaced
Seventh	Composite	SCART	Analogue Interlaced

Note: *Section 10 carries an explanation of the video formats listed.*

Note: *RGB progressive scan output is disabled when replaying Macrovision encoded material.*

If the n-Vi has a DAB/FM Radio Upgrade fitted it will also have an F-Type radio aerial input socket on the rear panel. Indoor aerials can be used although best results are likely to be obtained from roof aerials mounted as high as posssible. Use high quality 75Ω aerial cable for connecting aerials.

Use of an aerial preamplifier may disturb the FM muting operation of the tuner and may cause other problems. Such preamplifiers should therefore only be used as a last resort. An aerial combining unit may be used to combine signals from separate DAB and FM aerials. Your local retailer or distributor will be able to offer specific advice on local DAB and FM signal reception.

For details of all signal input sockets see Diagram 5.7.

5.2 Control Inputs

The n-Vi provides control inputs that enable it to be integrated with remote handset (RC5) signal repeaters and optionally with multi-room equipment control systems. The RC5 signal is connected through a single RCA-phono socket and the optional multi-room control input connected through an RJ45 socket. For details of all control input sockets see Diagram 5.7.

5.3 Video Outputs

The n-Vi can provide video outputs in a number of different formats on a variety of connection sockets. Each format and socket is appropriate for alternative display types - TV, CRT Monitor, TFT Monitor, Plasma, Projector, etc. - and it is important for the best picture quality that the appropriate socket is used. Table 5.3 lists, in order of preference, connection formats for any display device. Select, from the connection options available on your display, the one nearest the top of the list. For details of all video output sockets see Diagram 5.7.

5.4 Audio Outputs

The n-Vi provides one stereo analogue audio output via a 5-pin DIN socket and one digital audio output via a single RCA-phono socket. These sockets enable the n-Vi to be connected to an external audio preamplifier or alternative multi-channel decoder respectively. In the case of multi-channel programme material, the signal present on the analogue output is the front left and right channels. Analogue programme material input to the n-Vi from an external source is not available from the digital output. The n-Vi also provides one analogue subwoofer output via a single RCA-phono socket. For details of all audio signal output sockets see Diagram 5.7.
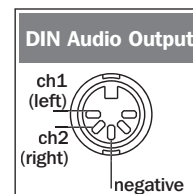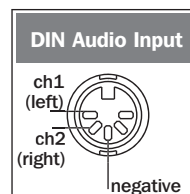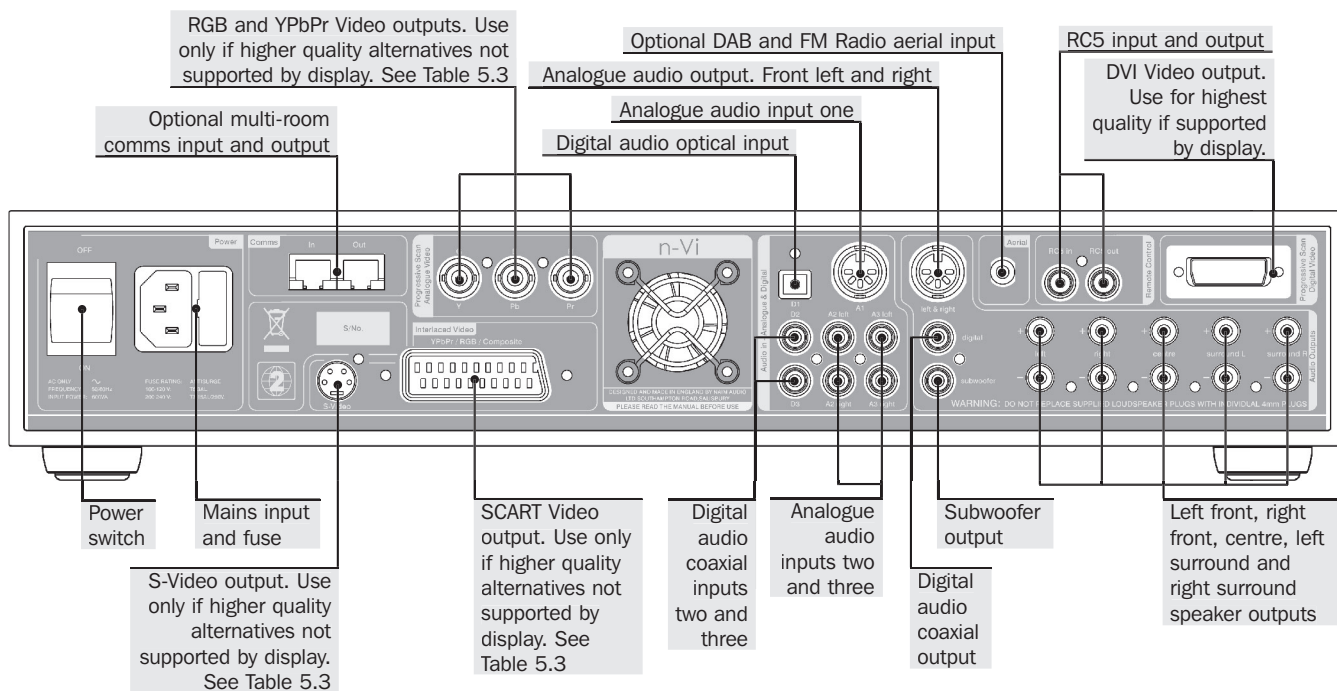
5.5 Speaker Outputs

The n-Vi provides five speaker output sockets each rated at 90 watts into 4Ω. The five speaker outputs are intended to be connected to the front left, front right, centre, surround left and surround right speakers. In order to comply with European safety legislation speakers should be connected using the supplied Naim Audio n-Vi speaker plugs only. Naim Audio speaker cable is recommended although alternatives are possible. Your local retailer or distributor will be able to offer advice.

When connecting speakers ensure that each positive pin - identified by a "+" mark on the side of the connector body - is always inserted to the positive output sockets. Also ensure that the connections at the speaker are connected with the same polarity. For details of the speaker output sockets see Diagram 5.7.

5.6 Control Outputs

The n-Vi provides control outputs that enable it to be integrated with remote handset signal (RC5) repeaters and optionally with multi-room equipment control systems. The RC5 output is connected via a single RCA-phono socket and the optional multi-room control output is connected via an RJ45 socket. For more detail on connection to the control input sockets see Diagram 5.7.

5.7 Rear Panel and Connections

RGB and YPbPr Video outputs. Use only if higher quality alternatives not supported by display. See Table 5.3

Optional multi-room comms input and output

Optional DAB and FM Radio aerial input

Analogue audio output. Front left and right

Analogue audio input one

Digital audio optical input

RC5 input and output

DVI Video output. Use for highest quality if supported by display.

Power switch

Mains input and fuse

S-Video output. Use only if higher quality alternatives not supported by display. See Table 5.3

SCART Video output. Use only if higher quality alternatives not supported by display. See Table 5.3

Digital audio coaxial inputs two and three

Analogue audio inputs two and three

Digital audio coaxial output

Subwoofer output

Left front, right front, centre, left surround and right surround speaker outputs

DIN Audio Input

ch1 (left)
ch2 (right)
negative

DIN Audio Output

ch1 (left)
ch2 (right)
negative

6 Control and Setup

Once all the input and output connections are made the n-Vi can be set up. Although the n-Vi can be set up and controlled from its front panel, many parameters are best set from the listening position, so use of the NARCOM DV handset is recommended.

When initially switched on from the rear panel, the n-Vi will, after a short delay, enter standby mode. Standby is indicated by an illuminated front panel **standby** button. To wake the n-Vi press the handset **standby** key or front panel **standby** button. The n-Vi will wake in either the factory default state, if it is previously unused, or in the state in which it was last shut down. Once the n-Vi is switched on, the video display and any other associated equipment should also be switched on.

Note: *The n-Vi can be returned to its factory default settings by pressing and holding the handset clear key with no disc loaded.*

6.1 The User Interface

The n-Vi can generally be operated from its front panel or from the **Narcom DV** remote handset in either **AV** or **DVD** modes. The On Screen Display and Front Panel Display provide operational feedback.
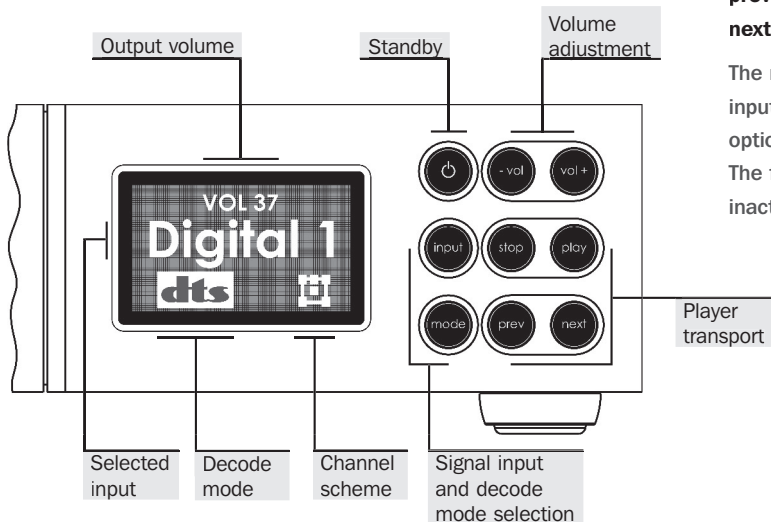
Note: *If nothing is displayed when the n-Vi and display are first switched on some Front Panel Setup video output options may need to be changed. See Section 8.1.*

The n-Vi has two setup routines. **On Screen Setup** (Section 7) and **Front Panel Setup** (Section 8). **On Screen Setup** configures parameters that apply to system-wide setup, DVD playback and video display.

Note: *Some On Screen Setup parameters can also be accessed and adjusted via Front Panel Setup.*

Diagram 6.1.2

Front panel controls and display.

Output volume   Standby   Volume adjustment

VOL 37
Digital 1
dts

Player transport

Selected input   Decode mode   Channel scheme   Signal input and decode mode selection

6.1.1 On Screen Setup

During **On Screen Setup**, all functions are accessed via a cascading menu system with the handset ▲ (up), ▼ (down), ◀ (left), ▶ (right) and **ok** keys. To navigate through the top level and second level menus use the handset **up** (▲) and **down** (▼) keys. To confirm a selection press the **ok** key. To return to the previous menu without making a selection or a change use the **rtn** (return) key, or press **setup** to exit from the setup menus.

To navigate through the third level menu use the handset **left** (◀) and **right** (▶) keys. To increase or decrease a parameter value use the **up** (▲) and **down** (▼) keys respectively. Use the **ok** key to confirm the setting. To return to the previous menu without making a selection or a change use the **rtn** (return) key. Press **setup** to exit from the setup menus.

Note: *The handset clear key can be used at any time to clear any On Screen Display.*

6.1.2 Front Panel Setup, Controls and Display

During **Front Panel Setup**, functions are accessed via a cascading menu system with front panel **-vol**, **prev**, **input**, **play** and **stop** buttons providing menu **navigation** and **ok** commands. These buttons are illuminated in setup mode. In normal mode the buttons revert to operating as described below and illustrated in the diagram.

Note: *The handset navigation keys can also be used for Front Panel setup.*

standby: Switches the n-Vi in and out of standby mode.
-vol: Decreases volume
vol+: Increases volume
input: Selects next signal input
mode: Selects next AV decode mode
stop: Stops playback. Press while stopped opens drawer.
play: Starts playback. Press while in play pauses play. Press while drawer open closes drawer.
prev: Selects previous chapter or track.
next: Selects next chapter or track.

The n-Vi front panel display provides feedback of volume level, input selection, decode mode, channel scheme and, if the optional DAB/FM tuner is fitted, radio station identity and data. The front panel display will switch off after two minutes of inactivity.

6.1.3 Front Panel Channel Scheme Icon

The term "channel scheme" describes the array of speakers in use. The channel scheme operating at any time is linked to the input signal, speaker setup and decode mode and is illustrated on the n-Vi front panel display by an icon in the bottom right hand corner (See Diagram 6.1.3). The icon changes as different input signals and decode modes are selected (either manually or automatically) or speaker setups are specified.

The icon represents a listening room with front left, centre, front right, surround left, surround right and subwoofer speakers. Each speaker element within the icon shows or hides to denote presence in the speaker setup, grows or shrinks to reflect "large" or "small" specification (see Paragraph 7.6.1), or is filled or empty to denote its presence or absence in the channel scheme.

Diagram 6.1.3

Front panel display channel scheme icon
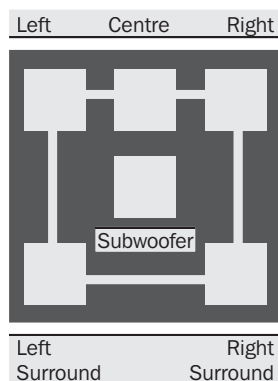
Example of a channel scheme icon illustrating a 5.1 system with large front, centre and surround speakers and a subwoofer.
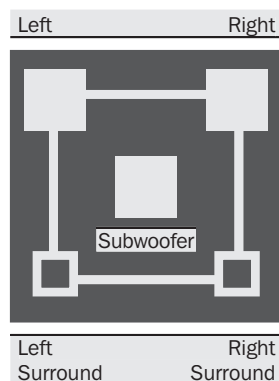
Example of a channel scheme icon illustrating a 4.1 system with large front speakers, a subwoofer and inactive small surround speakers.

Note: *As a stereo signal has no native subwoofer content Bass Mix has been enabled to generate subwoofer information.*

6.2 The NARCOM DV Handset

The NARCOM DV is a dedicated remote handset for the n-Vi, DVD5 and AV2. It will also operate the core functions of a Naim CD player, preamplifier or integrated amplifier.

The **System Component** keys switch the handset mode of operation as appropriate to different components (preamplifier, CD, AV, DVD, n-Vi).

pre: Switches the action of appropriate keys to operate a preamplifier or integrated amplifier.

cd: Switches the action of appropriate keys to operate a CD player.

av: Switches the action of appropriate keys to operate an AV2 audio-visual processor or n-Vi system (including DAB/FM module).

dvd: Switches the action of appropriate keys to operate a DVD player or n-Vi system (including DAB/FM module).

Note: *An audio CD played in a DVD/n-Vi player would still be controlled with the handset in DVD mode.*

Depending on the System Component setting and, in some cases signal input selected, the **Numeric** keys select disc titles, groups, tracks or chapters or tuner presets.

Note: *To select DVD titles or DVD-A groups place a leading zero before the required title or group number.*

The twin sets of **Volume** and **Mute** keys remain available to either an AV processor (or n-Vi) or preamplifier regardless of the setting of the System Component keys.

The **Player Transport** keys will switch between CD and DVD player operation depending on the **System Component** key selection. If preamplifier or AV is selected the Player Transport keys will operate the last component type selected.
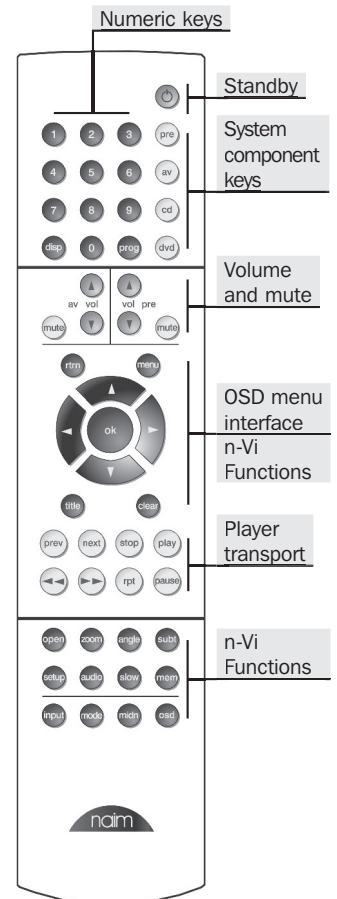
6.3 Recommended Initial Setup

The n-Vi incorporates numerous features and facilities, many of which may initially be left at their default settings until later preferences have been established.

Six setup stages are however necessary to establish a basic setup for satisfactory video and multi-channel audio playback of audio and audio-visual programme material. These stages, with their owner's manual section numbers, are listed below. Each is also accompanied in the body of the owner's manual by an exclamation mark graphic: **!**

6.3.1 Initial Setup Stages

Stage One: Video System and Output Format
Section 7.3.1 or Section 8.1

Setting the Video System and Output Format ensures that the n-Vi is configured correctly for the display connected. Can be set from either the On Screen or Front Panel menus.

Note: *The default setting is auto.*

Stage Two: Aspect Ratio
Section 7.3.6

Sets the video output aspect ratio appropriately for the display connected.

Note: *The default setting is 16:9.*

Stage Three: Colour Format
Section 7.4.1

Sets the video output colour format (RGB, YPbPr) appropriately for the display connected.

Note: *The default setting is YPbPr.*

Stage Four: Speaker Size
Section 7.6.1 or Section 8.2.1

Defines the size of each speaker (small, large or none) connected to the n-Vi.

Note: *The default setting is 5.1 with large speakers.*

Stage Five: Speaker Distance
Section 7.6.3 or Section 8.2.2

Defines the distance of each speaker from the listening position.

Note: *The default setting is 0.*

Stage Six: Speaker Levels
Section 7.6.5 or Section 8.2.3

Sets the relative volume level of each speaker in the system.

Note: *The default setting is 0.*

7 On Screen Setup

On Screen Setup configures parameters that apply to system-wide setup, DVD playback and video display.

To begin the setup procedure insert a DVD and, after waiting for the n-Vi to read the disc contents, press the remote handset **setup** key. The top level setup menu will be displayed.

Note: *If nothing is displayed when the n-Vi and display are first switched on some Front Panel Setup video output options may need to be changed. See Section 8.1.*

The top level setup menu provides access to **DVD Playback, System Setup, Video Setup, Progressive Scan Video Setup, Audio Setup** and **Parental Control** options.

Note: *On Screen Setup help text can be accessed by pressing the handset menu key.*

7.1 DVD Playback Setup

Selection of **DVD Playback** from the top level menu generates a second level menu comprising the options described and illustrated below. The availability of some options in the second level menu is dependent on the content of the DVD.

MENU		
DVD playback ▸	audio track ▸	1 English AC-3 ↕
system setup	camera angle	
video setup	subtitle	up/down to select
prog. scan setup	DVD auto play	ok to confirm
audio setup	subtitle pref.	left or return to go back with no change
speaker setup	audio lang. pref.	
parental control	audio fmt. pref.	menu for help
exit menu		

7.1.1 Audio Track

Enables the selection of alternative DVD audio tracks if any are present on the disc. The alternatives may include sound-track languages and audio encoding format (Dolby*, DTS, etc.). If no alternative is available no options will be displayed. The disc must be playing for audio track selection to be available.

Note: *Audio tracks can also be directly selected during playback by pressing the handset audio key. Not all discs offer direct selection.*

7.1.2 Camera Angle

Enables the selection of alternative camera angles if any are present on the disc. If no alternative is available no options will be displayed. The disc must be playing for camera angle options to be available.

Note: *Camera angles can also be directly selected during playback by pressing the handset angle key.*

7.1.3 Subtitle

Enables the display and selection of alternative DVD subtitles if any are present on the disc. If no alternative is available no

* Dolby is a trademark of Dolby Laboratories

options will be displayed. The disc must be playing for subtitle options to be available.

Note: *Subtitles can also be directly selected during playback by pressing the handset subt key.*

7.1.4 DVD Auto Play

Sets the n-Vi to begin playback as soon as the drawer is closed. Select from **on** or **off**.

Note: *Closing the drawer with the front panel stop button overides Auto Play. The n-Vi will remain stopped.*

7.1.5 Subtitle Preference

Selects the preferred subtitle language. When subtitles are switched on from either the handset **subt** button or from the n-Vi menu the subtitle preference language will be shown if 'preference' is selected. If the preferred language is not available the disc default will be shown.

7.1.6 Audio Language Preference

Selects the disc-independent **Audio Language Preference**. **Auto** will select the disc default. If a disc is loaded that does not carry the selected preference the audio output will switch to the disc default. The audio track preference will automatically play if a preference is set and available.

7.1.7 Audio Format Preference

Selects the disc-independent **Audio Format Preference**. **Auto** will select the disc default. If a disc is loaded that does not carry the selected preference the audio output will switch to the disc default. The audio track preference will automatically play if a preference is set and available.

7.2 System Setup

Selection of **System Setup** from the top level menu generates a second level menu described and illustrated below.

MENU		
DVD playback	status bar ▸	on ↕
system setup ▸	status bar volume	
video setup	status bar decode	up/down to select
prog. scan setup	status bar delay	ok to confirm
audio setup	screen saver	left or return to go back with no change
speaker setup		
parental control		menu for help
exit menu		

7.2.1 Status Bar

Sets the system **Status Bar** to display on screen when player adjustments are made.

7.2.2 Status Bar Volume

Sets the volume **Status Bar** to display on screen when volume adjustments are made.

7.2.3 Status Bar Decode

Sets the decode mode **Status Bar** to display on screen when mode changes are made.

7.2.4 Status Bar Delay

Sets the length of time, from one to ten seconds, that the **Status Bar** remains visible following a control command.
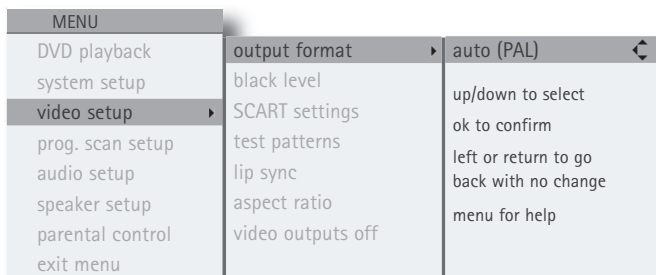
7.2.5 Screen Saver

Sets a **Screen Saver** to operate after five minutes of display inactivity. Select from **on** and **off**.

Note: *Only disable the Screen Saver if the display is not sensitive to "burn-in".*

7.3 Video Setup

Selection of **Video Setup** from the top level menu generates a second level menu described and illustrated below.

7.3.1 Video System and Output Format

MENU		
DVD playback	output format ▸	auto (PAL) ⬍
system setup	black level	
video setup ▸	SCART settings	up/down to select
prog. scan setup	test patterns	ok to confirm
audio setup	lip sync	left or return to go
speaker setup	aspect ratio	back with no change
parental control	video outputs off	menu for help
exit menu		

Selects between NTSC, PAL and auto (disc dependent) video output. This menu overrides the Front Panel video set up described in Section 8.1

Note: *If the display is working satisfactorily this setup stage may not be required.*

The selection of **NTSC**, **PAL** or **auto** depends on the capability of the display device connected. Many displays are limited either to PAL or NTSC and if this is the case for your display the appropriate option should be selected. The n-Vi will convert PAL encoded programme material to NTSC if NTSC is selected, or convert NTSC to PAL if PAL is selected - display quality may however suffer.

If the display supports both **NTSC** and **PAL** the **auto** option should be used. Auto switches the DVD output to NTSC or PAL depending on the disc format. The combination of a multi-standard display and the **auto** option ensures the highest video quality as no format conversion need take place.

Note: *If Auto is selected the On Screen Display will show "Auto" folllowed by the currently selected format.*

Note: *A black and white picture is often a sign that a PAL only display is being fed an NTSC signal.*

7.3.2 Black Level

Black Level adjustment is effective when **NTSC** output is selected. Black Level defines the brightness level at which image information will be displayed as black. A video brightness signal is measured in IRE units on a scale from 0 (black) to 100 (white). In American NTSC encoding the value of 7.5 IRE is the "black level cutoff".

Note: *Black level adjustment only affects NTSC material.*

7.3.3 SCART Settings

The player's **SCART** output connector carries video signals in both **composite** and **component** forms with two alternate varieties of the component format - **RGB** or **YPbPr** - available. If using component video from the SCART connector, select the variety appropriate to the display connected.

Note: *Composite and component video and the various signal formats are explained in Section 10.*

7.3.4 Test Patterns

Provides three display **Test Patterns** intended to help calibrate the player and display combination and ensure optimum performance. The Test Patterns are primarily intended for advanced users or video service engineers. Make a note of all display and n-Vi settings prior to making any adjustments, and ensure the display user manual is available for reference.

Note: *It is not always necessary to make calibration adjustments based on the test patterns. The n-Vi and display default settings will in the majority of cases provide excellent results.*

Note: *Help text for each test pattern is available by pressing the handset menu key.*

Note: *The player must be in stop mode to display the test patterns.*

Overscan Test Pattern

Adjust the display's horizontal, vertical, aspect ratio and zoom controls until the test pattern is central and spills over the edge of the display by approximately 5%. On a wide-screen display the circle labelled 16:9 should appear undistorted.
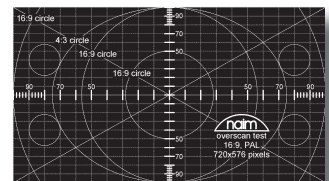
Grey Scale Test Pattern

Adjust the display's brightness until the 0% box looks black. Adjust the display's contrast until the 100% box is a clear bright, undistorted white. Ensure no two of 5% boxes appear the same.
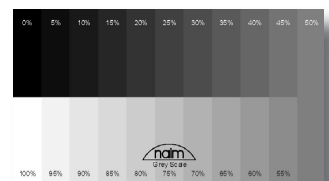
75% Colour Scale Test Pattern

The display must be viewed using a 47b blue separation filter. Adjust the display's colour and tint/hue control until the four large boxes (1, 2, 3 and 4) appear the same shade of blue.
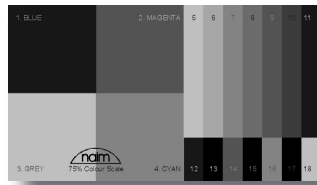
7.3.5 Lip Sync (Audio/Video delay)

DVD video and audio can sometimes appear to be a little out of synchronisation. **Lip Sync** provides adjustment in 10mS steps to compensate for any apparent error. Use the handset ◀ key to delay the audio and ▶ key to delay the video.

Note: *The default value for lip sync is -10 which ensures correct audio/video synchronisation on the DVI and BNC video outputs. For correct synchronisation with interlaced video outputs (SCART and S-Video) lip sync should be set to 0.*

7.3.6 Aspect Ratio

MENU		
DVD playback	output format	16:9 widescreen ↕
system setup	black level	
video setup ▶	SCART settings	up/down to select
prog. scan setup	test patterns	ok to confirm
audio setup	lip sync	left or return to go back with no change
speaker setup	aspect ratio ▶	
parental control	video outputs off	menu for help
exit menu		

Sets the player to output video appropriate to the display. For 16:9 (widescreen) displays, non-widescreen programme material will be accommodated by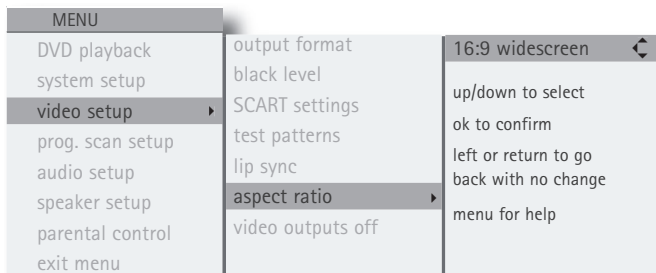 leaving a proportion of the display either side of the picture unused. Widescreen material on 4:3 (conventional) displays can be accommodated by selecting either the **pan-scan** or **letter box** options. The **pan-scan** option uses the full height of the display but dynamically pans the material to ensure that the important information is always displayed. The **letter box** option displays the material's full width but leaves a proportion of the display above and below the picture unused.

7.3.7 Video Outputs Off

Enables unused video sockets to be selectively switched off during playback. Switching off the video sockets will improve sound quality of audio CD and DVD-A material.

Note: *All video outputs will operate when player is in stop mode or when the OSD menu is displayed.*
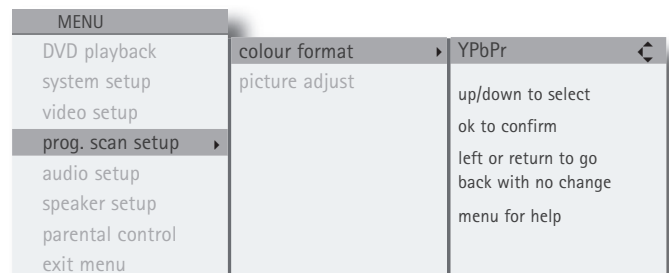
7.4 Progressive Scan Setup

Selection of **Progressive Scan Video Setup** from the top level menu generates a second level menu described and illustrated below.

The **Progressive Scan Output** menus enable selection of the signal format to be output from the player's **BNC** sockets.

The signals available from the BNC sockets provide improved quality over the SCART and S-Video outputs.

7.4.1 Colour Format

MENU		
DVD playback	colour format ▶	YPbPr ↕
system setup	picture adjust	
video setup		up/down to select
prog. scan setup ▶		ok to confirm
audio setup		left or return to go back with no change
speaker setup		
parental control		menu for help
exit menu		

The **Colour Format** sub-menu enables selection of the video signal **Colour Format** (RGB, YPbPr).

Note: *YPbPr is the appropriate selection for most programme material. Video colour formats are explained in Section 10.*

7.4.2 Picture Adjust

Three separate **Picture Adjust** sub-menus are available. One for adjustment of the player's **Progressive Scan RGB** output, one for adjustment of the player's **Progressive Scan YPbPr (YUV)** output and one that is common to both.

Each signal channel of the **RGB** outputs can be independently adjusted. For example, to emphasise red, green or blue tones in an **RGB** picture boost the R, G or B channels respectively. **YPbPr** adjustment covers luminance and saturation only.

The picture adjustments common to **Progressive Scan** outputs are **Vertical Offset**, **Horizontal Offset** and **YC Delay**.

The **Offset** adjustments enable the picture to be properly centred in the display screen.

YC Delay adjustment provides compensation for the timing errors that can occur between the colour and brightness elements of a video signal. YC Delay is best left at its default adjustment unless picture abnormalities that cannot be corrected by any other means are apparent.

Note: *Offset and YC Delay adjustment made from this menu will also be reflected in the DVI output.*

Note: *No picture adjustment is available on the player's SCART and S-Video outputs.*

7.5 Audio Setup

Selection of **Audio Setup** from the top level menu generates a second level menu described and illustrated below.

MENU		
DVD playback	digital audio output ▸	multi-channel ⬍
system setup	bass mix	
video setup	Pro Logic II	up/down to select
prog. scan setup	Neo:6 centre gain	ok to confirm
audio setup ▸	midnight mode	left or return to go back with no change
speaker setup	input labels	
parental control		menu for help
exit menu		

7.5.1 Digital Audio Output

Selects the player's **Digital Audio Output** format from **Multi-channel** (i.e Dolby Digital, DTS, etc.) or **Stereo** (PCM stereo) options.

Note: *The n-Vi must be in stop mode to select audio outputs.*

7.5.2 Bass Mix

Selection of **Bass Mix** routes the front left and right speaker low frequency signals additionally to the subwoofer channel.

Note: *Bass Mix will have no effect when a low frequency effects (LFE) channel is encoded in the programme material.*

Note: *Bass Mix is not available on analogue source material.*

7.5.3 Pro Logic II

Selection of **Pro Logic II** Options provides adjustment of the **Panorama**, **Centre Width** and **Dimension** parameters.

Panorama "ON" diverts a proportion of the front stereo signal to the surround channels.

Centre Width adjustment varies the relative strength of the centre and front channels, a higher value increasing the strength of the front channels.

Dimension adjustment varies the relative strength of the surround and front signals, a higher value increasing the strength of the surround channels.

Note: *Pro Logic II Options are only effective when Dolby* Pro Logic II Music Mode is selected.*

7.5.4 Neo:6 Centre Gain

Selection of **Neo:6 Centre Gain** provides independent adjustment of the centre channel volume level.

Note: *Neo:6 Centre Gain is only effective when DTS Neo:6 Music Mode is selected.*

7.5.5 Midnight Mode

Selection of **Midnight Mode** compresses the audio signal and reduces its bass content to reduce the disturbance of late-night listening.

Note: *Midnight Mode is not available with analogue material.*

Note: *Midnight Mode can also be selected directly during normal operation from the remote handset.*

7.5.6 Input Labels

MENU		
DVD playback	digital audio output	A1 : Analogue 1 ⬍
system setup	bass mix	
video setup	Pro Logic II	left/right to select input
prog. scan setup	Neo:6 centre gain	up/down to select label
audio setup ▸	midnight mode	ok to confirm
speaker setup	input labels ▸	left or return to go back with no change
parental control		menu for help
exit menu		

Input Labels enables a descriptive label to be assigned to each numbered n-Vi input socket. Inputs can also be disabled (set to OFF) from this menu. The n-Vi's internal "inputs" - Disc, DAB and FM cannot be assigned alternative names.

Note: *It is not necessary to assign labels to the inputs but doing so helps make n-Vi operation more intuitive.*

Note: *Two labels can be assigned to Analogue Input 3, one for its rear panel socket and one for its front panel socket. The front panel input will only be available for selection when a connector is plugged-in.*

7.6 Speaker Setup

Selection of **Speaker Setup** from the top level menu generates a second level menu described and illustrated below.

7.6.1 Speaker Size

MENU		
DVD playback	speaker size ▸	front: large ⬍
system setup	units	
video setup	speaker distance	left/right to select speakers
prog. scan setup	test signal	up/down to select size
audio setup	speaker level	ok to confirm
speaker setup ▸		return to go back with no change
parental control		menu for help
exit menu		

Selection of **Speaker Size** enables the size of each speaker to be defined. Generally a "small" speaker is an element of a satellite/subwoofer package, while a "large" speaker is a full-range type. The "small" left/right option is unavailable if no subwoofer is present.

Note: *Ext (External) Large or Small should be selected if the front speakers are connected to the n-Vi via an external power amplifier.*
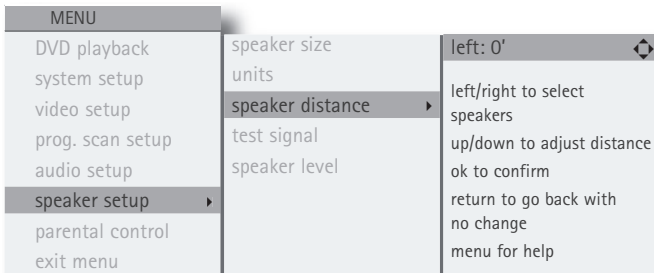
7.6.2 Units

Selection of **Units** enables the preferred distance measurement units (feet or metres) for the Speaker Distance menu to be set.

7.6.3 Speaker Distance

```
MENU
DVD playback          speaker size        left: 0'              ◇
system setup          units
video setup           speaker distance  ▸  left/right to select
prog. scan setup      test signal            speakers
audio setup           speaker level       up/down to adjust distance
speaker setup      ▸                      ok to confirm
parental control                          return to go back with
exit menu                                 no change
                                          menu for help
```

Selection of **Speaker Distance** enables the distance of each speaker from the primary listening position to be defined. Distance definition is only available for speakers previously specified (in 7.6.1) as present.

Note: *The distances need not be defined accurately. Plus or minus 300mm (1 foot) is adequate.*
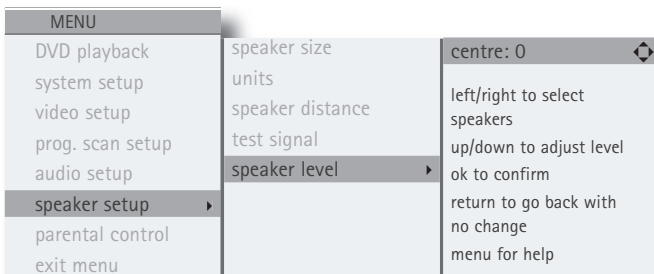
Note: *The centre speaker should be no further away from the listening position than either front speaker.*

7.6.4 Test Signal

Selection of **Test Signal** switches the n-Vi into the speaker test mode. Ensure that the n-Vi speaker outputs are connected correctly and that any subwoofer is connected, switched on and appropriately set up.

Note: *n-Vi must be in stop mode with the disc input selected and no disc loaded.*

7.6.5 Speaker Level Adjustment

```
MENU
DVD playback          speaker size        centre: 0             ◇
system setup          units
video setup           speaker distance     left/right to select
prog. scan setup      test signal            speakers
audio setup           speaker level     ▸  up/down to adjust level
speaker setup      ▸                      ok to confirm
parental control                          return to go back with
exit menu                                 no change
                                          menu for help
```
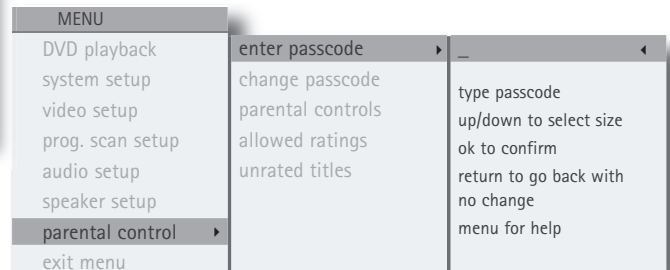
Selection of **Speaker Level Adjustment** (after switching on the **Test Signal**) enables subjective matching of the volume level of each speaker channel. Begin with the Centre speaker level set to 0 then select each speaker channel in turn and, seated at the listening position, adjust each volume level so that the speakers sound approximately equally loud.

Note: *If the test signal is either too loud or too quiet the overall system volume can be adjusted with the handset volume keys.*

Note: *The adjustment level for the subwoofer output on the n-Vi should be set somewhere between the maximum and minimum settings needed for the other loudspeakers in the system. The volume control on the subwoofer itself should then be adjusted to give the best results.*

7.7 Parental Control Setup

Selection of **Parental Control** from the top level menu generates a second level menu described and illustrated below that enables a **passcode** to be set in order to restrict access to unsuitable programme material.

```
MENU
DVD playback          enter passcode    ▸  _                   ◂
system setup          change passcode
video setup           parental controls   type passcode
prog. scan setup      allowed ratings     up/down to select size
audio setup           unrated titles      ok to confirm
speaker setup                             return to go back with
parental control   ▸                      no change
exit menu                                 menu for help
```

7.7.1 Enter Passcode

Enter the existing or a new four digit passcode using the handset **numeric keypad** to gain access to the following Parental Control menus. Ensure you keep a record of the passcode.

7.7.2 Change Passcode

Enter a new **passcode** if you wish to change the existing one. Ensure you keep a record of the new pass code.

7.7.3 Parental Controls

Select either **enable** or **disable**. With Parental Control enabled, the Parental Control options defined in the following two menu stages are operational. Parental Control disabled switches off all restricted access features.

7.7.4 Allowed Ratings

Selects the rating level above which a Parental Control passcode is required before a DVD can be viewed.

7.7.5 Unrated Titles

Some DVDs do not have a rating level encoded. Select **unrated** to restrict such DVDs with the Parental Control passcode.

7.8 Exit On Screen Setup

Setting the Parental Control options completes On Screen Setup. Use the **clear** key or **setup** key to exit On Screen Setup.

8 Front Panel Setup

Front Panel Setup provides an alternative setup routine for some parameters and provides access to Video System and Format parameters should these need adjustment before the n-Vi and display combination will operate correctly. Front Panel Setup also provides access to a number of setup parameters that are not available via On Screen Setup.

To enter Front Panel Setup either press and hold the handset **setup** key or press and hold the front panel **mode** button.

Note: *On Screen and Front Panel setup modes cannot be used simultaneously.*

8.1 Video System and Output Format

If nothing is displayed when the n-Vi and display are first switched on, two video output options on the n-Vi may need to be changed. These options select between the **auto, NTSC** or **PAL Video Systems**, and between **Video Colour Format** options. The **Video Colour Format** options apply only to the n-Vi **BNC** output sockets, the choices being **RGB, and YPbPr.** To change the options proceed as described in the following paragraph.

Press and hold the handset **setup** key to put the n-Vi into **Front Panel Setup** mode. Use the handset or front panel menu **navigation** buttons (see Paragraph 6.1.2) to select **Video** from the main menu. Select **System** from the next menu and then **auto**, **NTSC** or **PAL,** depending on the format required by the display.

Note: *NTSC/PAL selection is only likely to require a specific choice (i.e not auto) if the display is not capable of displaying both.*

Use the **navigation** buttons to return to the previous menu and select **Format** followed by either **YPbPr** or **RGB** as required by the display. Use the navigation buttons to return to the main menu.

A **naim** logo visible in the centre of the display screen confirms that the Initial Video Options are set correctly.

8.2 Speaker, Input and Audio Setup

Front Panel Setup provides Speaker, Input Label and Audio setup routines. If these setup stages have been completed through On Screen Setup it is not necessary to repeat them.

8.2.1 Speaker Size

From the Speaker menu select **Size** followed by **Front.** Select either **Small, Large, Ext Large** or **Ext Small.**

Use the front panel **navigation** buttons to return to the previous menu and select **Centre** followed by **None**, **Small** or **Large**. Continue by selecting **None**, **Small** or **Large** for the surround speakers and **Off** or **On** for the subwoofer.

8.2.2 Speaker Distance

Return to the Speaker menu and select **Distance** followed by **Units** followed by **Feet** or **Metres**. Selection of **Feet** or **Metres** defines the distance measurement units used. Return to the Distance menu and select each speaker in turn specifying the approximate distance of each one from the listening position.

8.2.3 Speaker Levels

Return to the Speaker menu and select **Test Signal** to switch the test signal **On** then access the level adjustment menu for each speaker channel. Begin with the Centre speaker level set to O then select each speaker channel in turn and, seated at the listening position, adjust each volume level so that the speakers sound approximately equally loud.

Note: *If the test signal is either too loud or too quiet the overall system volume can be adjusted with the handset volume keys.*

When all the speaker levels have been set use the **navigation** keys to switch the test signal **Off** and return to the Main menu.

8.2.4 Input Labels

Select **Input Labels** from the main menu and use the **navigation** keys to select each input in turn and then to select from the presented list of label options.

8.2.5 Audio Setup

Select **Audio** from the Main menu to enter the audio menu.

Bass Mix routes front left and right loudspeaker bass information additionally to the subwoofer.

Panorama diverts a proportion of the front stereo signal to the surround channels.

Width adjusts the balance between the centre channel and the left and right channels. Selection of a higher value increases the volume of the left and right channels.

Dimension adjusts the balance between the front and surround channels. Selection of a higher value increases the relative strength of the surround channels.

Neo:6 Centre Gain provides independent adjustment of the centre channel volume level.

Midnight compresses the volume and reduces the bass level of movie soundtrack material and can help reduce disturbance to others from late night listening.

Note: *Width, Panorama Dimension and Midnight functions are only effective with Dolby Pro Logic II Music encoded material.*

Note: *Midnight can also be selected directly during normal operation from the remote handset.*

Note: *Neo:6 Centre Gain is only effective when DTS Neo:6 Music Mode is selected.*

8.3 Miscellaneous Setup

Select **Other Settings** from the main menu to enter the other settings menu.

The other settings menu provides access to two further display interface options - **OSD Volume Bar** and **OSD Decode Info**.

Selecting **OSD Volume Bar** switches on a temporary status bar indication of volume on the display screen.

Selecting **OSD Decode Info** switches on a temporary status bar indication of the audio-visual decode mode on the display screen.

Return to the previous menu after each selection and then back to the main menu when each option is set.

8.4 Clock Setup

Note: *Clock functions are only available if the FM/DAB tuner module is fitted.*

Select **Clock** from the Main menu to enter the clock menu. The n-Vi internal clock can be set manually or take its time automatically from the digital radio signal.

To set the clock manually select **Set Time** from the Clock menu and use the **navigation** keys to select and adjust the date, day, hours and minutes.

To set the time using the DAB signal select **Set Time** from the Clock menu and **Use DAB Clock** then use the **navigation** keys to select **Yes** or **No**.

Return to the previous menu after each selection and then back to the main menu when the clock options are set.

8.5 Alarm Setup

Note: *Alarm functions are only available if the FM/DAB tuner module is fitted.*

Select **Alarm** from the Main menu to enter the alarm setup routine.

The alarm function switches the n-Vi out of standby mode and selects a signal source at a specified time. Five different alarm points can be set, as can alarm **Frequency** (Daily, Day, Weekdays, Weekends), **Source**, **On Time**, **Off Time**, **Volume**, **Volume Ramp** and **Ramp Rate**. Use the **navigation** keys to select the required alarm (1 to 5), the required options for each one and finally to select **On** or **Off**.

Note: *An alarm symbol will show in the n-Vi front panel display at all times while an alarm is set.*

8.6 Exit Front Panel Setup

Setting the Alarm options completes Front Panel Setup. Use the **clr** (clear) key, or press **setup** to exit Front Panel Setup.

9 Operation

Once all the system setup options described in Section 7 and 8 are selected the n-Vi is ready for use. Control of disc transport and selection of disc dependent display options can be carried out from either the player front panel or from the handset. The following paragraphs describe both the control functions and the front panel and handset operations.

The n-Vi supports NTSC and PAL DVD, "Red Book" Audio CD, DVD-A Stereo, DVD-A multi-channel, DVD±R, DVD±RW, CD-R, CD-RW and most copy protected Audio Discs.

Note: *Use the front panel stop button to open the drawer.*

Note: *The large variety of disc manufacturing processes and formats available means that on rare occasions a disc apparently falling into the one of the above categories may not play correctly. You should return the disc to the retailer if this occurs.*

Note: *DVD region coding is sales territory dependent and is specified on the rear panel of the n-Vi.*

Note: *The front panel display will switch off after two minutes of inactivity.*

9.1 Input Selection and Volume Control

To select an input use the handset **input** key. The front panel **input** button will also sequentially select inputs. When a new input is selected the n-Vi display will sequentially show the input source and the current decode mode settings if appropriate.

Note: *The n-Vi may take a moment to display inputs and decode modes when new inputs are selected as it locks-on to and identifies any signals.*

To adjust the overall volume use the handset **vol▲** and **vol▼** keys or front panel **vol+** and **-vol** buttons.

9.2 Playback Control

9.2.1 Play

Front Panel: Press the **play** button once.
Handset: Press the **play** key once.

9.2.2 Stop

Front Panel: Press the **stop** button once.
Handset: Press the **stop** key once.

Note: *Play will normally re-start from the point at which a disc was last stopped. Pressing stop while a disc is already stopped will clear this "resume" memory for the specific disc. The resume memory holds "stop point" data for the last 10 discs played.*

9.2.3 Next Chapter (or track)

Front Panel: Press the **next** button once.
Handset: Press the **next** key once.

9.2.4 Previous Chapter (or track)

Front Panel: Press the **prev** button once.
Handset: Press the **prev** key once.

9.2.5 Pause and Resume

Front Panel: Press the **play** button (while play is underway).
Handset: Press the **pause** key once.

9.2.6 Single Frame Advance

Handset Only: Press the **play** key once while player is paused.

9.2.7 Fast Forward

Front Panel: For 2 X speed press and hold the **next** button while **play** is underway. Further presses of the **next** button will cycle through 4 X, 8 X, 16 X, 30 X, 60 X (for DVDs) or 4 X, 8 X, 16 X and (for CDs). To resume normal play scroll through to play speed or press **play** on the front panel or handset.

Handset: Press the **ffwd** (▶▶) key once for 2 X speed. Further presses generate fast forward speeds as described above.

9.2.8 Fast Reverse

Front Panel: For 2 X speed press and hold the **prev** button while **play** is underway. Further presses will cycle through 4 X, 8 X, 16 X, 30 X, 60 X (for DVDs) or 4 X, 8 X, 16 X (for CDs). To resume normal play scroll through to play speed or press **play** on the front panel or handset.

Handset: Press the **frwd** (◀◀) key once for 2 X speed. Further presses generate fast reverse speeds as described above.

9.2.9 Slow Forward/Reverse (DVDs only)

Handset Only: Press the **slow** key once for half speed playback followed by the **ffwd** (▶▶) and **frwd** (◀◀) keys to select further slow forward or reverse speed options.

9.2.10 Drawer Open and Close

Front Panel: To open the drawer press the **stop** button when the player is stopped. When open, press the **stop** or **play** buttons to close the drawer.

Handset: Press the **open** key to open or close the drawer, or the **play** or **stop** keys to close the drawer.

9.2.11 Repeat

Handset Only: Press the **rpt** key to set a repeat start point and again at the desired time to set a repeat end point. The player will continuously repeat the programme between the two selected points. Press **rpt** a third time to cancel. Press

and hold the **rpt** key to access the **repeat disc** mode. While the repeat disc status bar is showing press the **rpt** key to cycle through and select **repeat disc**, **repeat title** and **repeat chapter** functions.

9.2.12 Direct Track/Chapter, Title/Group Selection

Handset Only: To select a specific track or chapter while a disc is loaded simply press the appropriate handset **numeric** key. To select a title or group add a zero before the number.

9.2.13 Mem Function

Handset Only: The mem function allows the user to store and recall a specific point on a maximum of five discs.

To store a mem bookmark press and hold the handset **mem** key at the desired time point.

To recall a bookmark, with the bookmarked DVD loaded, press the handset **mem** key. The DVD will jump to the bookmark.

9.3 Playback Options

9.3.1 Camera Angle

Handset Only: Press the **angle** key to scroll through the available camera angle options.

Note: *This function can also be found in the main setup menu.*

9.3.2 Subtitle

Handset Only: Press the **subt** key to scroll through the available subtitle options.

Note: *This function can also be found in the main setup menu.*

9.3.3 Audio Track

Handset Only: Press the **audio** key to scroll through the available audio tracks.

Note: *This function can also be found in the main setup menu.*

9.3.4 Zoom Function

Handset Only: Press the **zoom** key to scroll through the available zoom levels. Use the arrow keys (◄ ► ▲ ▼) to navigate around the picture.

9.4 Accessory Functions

The n-Vi has four accessory functions accessible at all times from the handset. The display will temporarily indicate selection or de-selection of these functions.

9.4.1 Mute

The **mute** key immediately reduces the volume to zero. A second operation restores the volume to its previous level.

Note: *The volume can also be restored after a mute command by turning the front panel volume control to zero and then up to a normal listening level.*

9.4.2 Display

The **disp** key switches the n-Vi front panel display off. When switched off the display will temporarily flash information when changes are made. A second operation will restore the display.

9.4.3 Midnight

The **midn** key compresses the signal and reduces the bass content. It can help reduce disturbance to others from late night listening.

Note: *Midnight Mode is not available with analogue material.*

9.4.4 Standby

The **standby** key returns the n-Vi to standby mode. The standby button only will remain illuminated.

9.5 Decode Modes - Selection and Availability

The signal decoding behaviour and options of the n-Vi are dependent on both the source programme material and the speaker setup. With some digital programme material, decoding options are user definable - although the results of processing for example, music material with movie decoding mode are unpredictable. In other cases however the n-Vi will automatically identify encoded material and only make available the appropriate decoding option or options. The n-Vi front panel and on screen display will show each decoding mode selected or imposed.

Stereo analogue inputs to the n-Vi are always routed direct to the front left and right speaker outputs and cannot be decoded.

To select a decode mode use the handset **mode** key or the front panel **mode** button. The n-Vi will store the last selected decode mode for each type of signal and for each input. The decoding options and display for each type of programme material, and the speaker channel schemes for each are detailed in Tables 9.5 and 9.6

9.6 Channel Schemes and Speakers

The term "channel scheme" describes the array of speakers in use. The channel scheme operating at any time is linked to the input signal, speaker setup and decode mode and is illustrated on the n-Vi front panel display by an icon in the bottom right hand corner (See Diagram 6.1.3). The icon changes as different input signals and decode modes are selected (either manually or automatically) or speaker setups are specified.

The icon represents a listening room with front left, centre, front right, surround left, surround right and subwoofer speakers. Each speaker element within the icon shows or hides to denote presence in the speaker setup, grows or shrinks to reflect "large" or "small" specification (see Paragraph 7.6.1), or is filled or empty to denote its presence or absence in the channel scheme.

Note: *Channel schemes are also expressed by terms such as "5.1" or "3/2.1" Taking 5.1 as an example, the "5" refers to the number of conventional speaker channels and the ".1" refers to a subwoofer. In 3/2.1 the "3" refers to the number of front channels employed (in this case, left, right and centre), the "2" refers to the number of surround channels and the ".1" refers to a subwoofer. Tables 9.5 and 9.6 refer to channel schemes in this manner.*

Table 9.5

Source Material, Decode Modes and Channel Schemes

Source Format	Decode Mode	Speaker Channels					
		Left Front	Centre	Right Front	Left Surround	Right Surround	Subwoofer
Analogue	Analogue Direct	Yes		Yes			Note*
Digital Stereo	Mono		Yes				Yes ("small" or Bass Mix selected)**
Digital Stereo	Stereo	Yes		Yes			Yes ("small" or Bass Mix selected)**
Digital Stereo	Dolby PL II Music	Yes	Yes	Yes	Yes	Yes	Yes ("small" or Bass Mix selected)**
Digital Stereo	Dolby PL II Movie	Yes	Yes	Yes	Yes	Yes	Yes ("small" or Bass Mix selected)**
Digital Stereo	DTS Neo:6 Cinema	Yes	Yes	Yes	Yes	Yes	Yes ("small" or Bass Mix selected)**
Digital Stereo	DTS Neo:6 Music	Yes	Yes	Yes	Yes	Yes	Yes ("small" or Bass Mix selected)**
Dolby Digital/DTS 5.1	Auto (5.1 source)	Yes	Yes	Yes	Yes	Yes	Yes

*Note: *An alternative dedicated subwoofer (or dual input subwoofer) can be connected via the analogue output or speaker output sockets if required.*

**Note: *The subwoofer channel will only operate if Bass Mix (Paragraph 7.5.3) or "small" speakers (Paragraph 7.6.1) are selected.*

Table 9.6

Decode Modes - Availability with Programme Material Types

Decode Modes	Programme Material				
	Analogue	Stereo PCM (digital)	Dolby Digital (2/0)	Dolby Digital (3/2.1)	DTS (Digital) (3/2.1)
Analogue Direct	Yes	N/A	N/A	N/A	N/A
Mono	N/A	Yes	Yes	Yes	Yes
Stereo	N/A	Yes	Yes	Yes	Yes
Dolby PL II Music	N/A	Yes	Yes	No	No
Dolby PL II Movie	N/A	Yes	Yes	No	No
DTS Neo:6 Cinema	N/A	Yes	Yes	No	No
DTS Neo:6 Music	N/A	Yes	Yes	No	No
Auto	N/A	Yes	Yes	Yes	Yes

9.7 Surround Encoding Technology

Some feature films have carried the multi-channel sound tracks necessary for "surround sound" since the 1950s. But only since the mid 80's has surround sound been available to domestic consumers. The technology that first enabled four channels of audio to be decoded from the stereo soundtrack of consumer media such as video cassette is Dolby Surround Pro Logic. Since Dolby Surround Pro Logic, and especially following the introduction of digital products such as DVD, enhanced encode and decode technologies have been introduced that enable a greater number of higher quality channels of audio to be encoded. With digital encoding techniques such as Dolby Digital and DTS Surround, appropriately encoded feature films, music and even computer games can be reproduced in full-bandwidth surround sound with up to eight audio channels (left, right, centre, surround left, surround right, surround extra, low-frequency effects).

The following few paragraphs provide a short description and explanation of encoding technologies. Further technical information can be found at www.dolby.com and www.dtsonline.com.

9.7.1 Dolby Surround Pro Logic

Dolby Surround Pro Logic is a matrix decoding process that generates four output signals (left, right, centre, surround) from a Dolby Surround encoded stereo input signal. It is built into virtually every home theatre audio system. The nature of Pro Logic decoding constrains the single surround channel to relatively narrow bandwidth.

9.7.2 Dolby Surround Pro Logic II

Dolby Surround Pro Logic II is an improved analogue matrix technology that provides improved surround performance on Dolby Surround encoded program material. While earlier surround programme material is fully compatible with Pro Logic II, appropriately encoded soundtracks can take full advantage of its enhancements - which include full bandwidth left and right surround channels. Pro Logic II also features two distinct decoding options for "music" and "movie" programme material.

9.7.3 Dolby Digital

Dolby Digital is a fully digital decoding technology that provides three full bandwidth front channels, two full bandwidth surround channels, and one low-frequency effects channel - a channel scheme known generically as "3/2.1" (or "5.1"). The encoding technique for Dolby Digital, known as Dolby AC-3, has since 1995 been used on many Video Laser Discs and more recently on DVD. Dolby AC-3 encoding can also be found on digital television services. In addition to encoding audio for six channel replay, Dolby AC-3 incorporates compression techniques that

ease audio data storage and transmission demands and can enable, for example, a single DVD to carry a complete movie.

9.7.4 Dolby Digital 2/0

A variation of Dolby Digital 3/2.1 is Dolby Digital 2/0. Dolby Digital 2/0 takes advantage of Dolby AC-3 data compression in order to reduce the data storage demands of stereo programme material. The "2/0" denotes the use of just two main audio channels with no low frequency effects channel. Programme material encoded for a "2.1" (two main channels with one subwoofer channel) scheme is also available and can be handled within Dolby 2/0 decoding.

9.7.5 DTS Surround

DTS Surround is an alternative digital audio encoding format that has become popular with feature film producers and can therefore be found on many DVDs. The first feature film to be DTS encoded was Jurassic Park in 1993. DTS Surround provides a similar 3/2.1 channel scheme to Dolby Digital with the encoding technology also providing data compression. The DTS data compression ratio is lower than that in AC-3 however and it is argued that DTS can provide better audio quality. The downside of any quality improvement over AC-3 is however higher data storage requirements.

10 Video Formats Explained

In the early days of domestic video and home theatre the issue of different video formats and interfaces did not really arise. There was only one way of connecting a VCR to a TV - via the aerial cable. However the growth in domestic high quality video, along with the introduction of widescreen and non-CRT displays has meant that video interface issues, once of concern only to professionals, have become significant in domestic systems.

The following few paragraphs provide an explanation of some of the issues and technologies that impinge on the n-Vi, its installation and operation.

10.1 Interlaced and Progressive Scan Video

Video is nothing more than a series of still pictures displayed sequentially at such a rate that the brain perceives continuous motion. A video signal comprises elements that describe the colour and brightness of each individual display pixel and an element that describes the necessary timing information required to create an image. Each picture is "drawn", pixel by pixel and line by line, across and down the screen - again at a rate such that the brain does not distinguish the segmented nature of the information.

In conventional "interlaced" video, each still picture is drawn half a screen at a time in two sections (or scans) constructed from sets of alternate lines. This technique is used to reduce the amount of information required for each frame. In "progressive scan" video, rather than being constructed from two sections, pictures are constructed in a single top to bottom scan. The result is a significantly sharper, more detailed and more stable image.

10.2 Video Interface Formats

Table 5.3 lists the video interface formats supported by the n-Vi in order of preference defined by the display quality potential of each. There are fundamental technical reasons why alternative formats can provide different levels of display quality and an explanation of these provides a useful introduction to the techniques and technologies of video. The formats are described, in reverse quality order, over the following paragraphs.

10.2.1 Interlaced Composite Video (SCART, analogue)

The SCART (Syndicat des Constructeurs d'Appareils Radiorécepteurs et Téléviseurs) connector first became familiar on the introduction of high quality domestic video recorders. These recorders were able to generate both "composite" and "component" video signals and both, along with stereo analogue audio, are carried by the SCART. Component video generally describes those formats that carry the various elements of the signal on separate cables - sometimes known as channels.

Composite video is a signal that encodes the three elements of a moving image - colour, brightness and timing - in a single signal carried by a single cable. Two different encoding formats are common - NTSC generally in America and the Far East, and PAL in Europe. Encoding the signal brings the advantages of single-wire simplicity and convenience, but the necessary downstream decoding produces unavoidable and visible artifacts. Composite video thus offers the lowest display quality of the options available and should be used if there is really no other option. Very few contemporary displays or TVs will offer a composite video input only.

10.2.2 S-Video (4 Pin mini-DIN, analogue)

The S-Video format offers the next higher quality video connection. S-Video is a two channel based connection with the colour and brightness information separated, and the timing signal combined with the brightness signal. The separation of colour and brightness reduces the need for downstream processing to decode the signals and results in potentially a sharper image.

10.2.3 YPbPr and RGB (SCART, analogue)

In addition to carrying a composite video signal the SCART interface also carries a set of "RGB" or "YPbPr" video signals selectable via the video setup menu. RGB denotes the fundamental Red, Green and Blue components that define a colour image. A timing signal is combined with the Green signal. YPbPr is mathematically derived from RGB and denotes brightness (Y) and two colour difference signals (Pb & Pr). The video timing signal for the YPbPr format is combined with the brightness signal. YPbPr carries the same information as RGB but does so with reduced bandwidth demands. Both RGB and YPbPr offer a further potential quality increase over S-Video by again reducing the demands on downstream decoding. It is marginally preferable to use RGB over YPbPr.

10.2.4 Progressive Scan YPbPr (3 x BNC, analogue)

The first connection interface from which a Progressive Scan signal is available. YPbPr Progressive Scan can be selected for the BNC interface via the video setup menu.

10.2.5 Progressive Scan RGB (3 x BNC, analogue)

A Progressive Scan RGB signal is also selectable via the video setup OSD menu and available from the same three BNC connectors described in paragraph 10.2.4. RGB is the native video format of most displays and potentially provides better quality than YPbPr thanks to reduced demands for downstream signal processing. As with the SCART RGB interface, the video timing signal is combined with Green signal.

Note: *RGB progressive scan output is disabled (and the screen will appear blank) when replaying Macrovision encoded material.*

10.2.6 Progressive Scan DVI (DVI multi-pin, Digital)

The DVI interface provides the greatest potential video quality. DVI is a direct digital connection for digital displays (LCD, Plasma etc.) and analogue displays with internal digital to analogue converters. With DVI and a digital display, no downstream decoding or signal conversion is required so the display quality potentially matches that inherent in the source material. The DVI output is HDCP (High-bandwidth Digital Content Protection) encrypted and only compatible with HDCP capable displays (the majority of computer DVI displays are not HDCP capable). HDMI (High Definition Multimedia Interface) compatible displays can be used with the n-Vi via an adaptor cable.

11 DAB/FM Tuner

The optional n-Vi DAB/FM radio tuner module provides access to DAB and FM radio broadcasts. An appropriate aerial (or aerials) must be connected to the aerial input before using the DAB/FM module. See Section 5.7 for advice on aerials.

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

The n-Vi treats DAB/FM radio as an internal digital audio source therefore any appropriately encoded programme material can be decoded for multi-channel reproduction.

DAB and FM setup and operational menus are only available through the n-Vi Front Panel display.

With the DAB/FM module installed, clock and alarm functions become available. These are set up within the Front Panel Setup routine. See Sections 8.4 and 8.5.

A total of 30 stations, split between DAB and FM, can be stored as presets.

11.1 DAB Menu and Operation

With the DAB/FM module installed the n-Vi input list will include a DAB option. Use the handset **input** key to select this option. If the DAB/FM module has not been used before the display will request "scan for stations?" Use the handset **ok** key to commence the scan (or **clear** key to decline). The n-Vi will proceed to scan through the DAB radio band searching for "live" stations. This may take a few minutes.

If the display does not request "scan for stations?" but the n-Vi has been physically relocated it is advisable to re-scan anyway by pressing the handset **menu** key (while the DAB input is selected) and selecting **re-scan for stations.** Press the **ok** key to begin the scan. The scan may take a few minutes.

Note: *Always re-scan if the n-Vi has been moved to a different location.*

When the station scan is complete the DAB menu provides options to select either **tune mode** or **preset mode**. In tune mode stations are selected simply by scrolling through the full list using the handset ◀ (left) or ▶ (right) keys.

In **preset mode** stations previously stored as presets can be selected either from the handset **numeric** keys, from the ◀ (left) or ▶ (right) keys or the **next** and **prev** keys.

Note: *Some DAB stations do not broadcast at all times and may be listed as unavailable.*

To store a station as a preset select the station followed by **save preset** from the DAB menu. Input a preset number from the handset **numeric** keys. Alternatively, presets 1-9 can be assigned to a station at any time by pressing and holding the desired handset **numeric** key number while the station is selected. Any station (DAB or FM) previously assigned to that number will be overwritten.

To delete a station preset select **clear preset** from the DAB menu and input the preset number from the handset **numeric** keys followed by the **ok** key.

Note: *The DAB menu can be selected at any time by pressing the handset menu key while the DAB input is selected.*

With the DAB input selected the handset ▲ (up) or ▼ (down) keys scroll through the display options of Preset Number, Station Name, Scrolling Station Info, Programme Genre, Bit-rate and Signal Strength.

11.2 FM Menu and Operation

With the DAB/FM module installed the n-Vi input list will include an FM option. Use the handset **input** key to select this option. With the FM input selected use the handset **menu** key to enter the FM menu.

Note: *The FM menu can be selected at any time by pressing the handset menu key while the FM input is selected.*

The FM menu provides options to select either **tune mode** or **preset mode**. In tune mode stations are tuned by scrolling through the FM band using the handset ◀ (left) or ▶ (right) keys or entering a frequency using the **numeric** keys.

In **preset mode** selection, storing and deletion of presets works in exactly the same way as described above in Section 11.2 (DAB menu and Operation).

With the FM input selected the handset ▲ (up) or ▼ (down) keys scroll through the display options of Preset Number (in preset mode), Frequency (in tune mode), Station Name (RDS), Scrolling Station Info (RDS), Programme Genre (RDS) and Signal Strength.
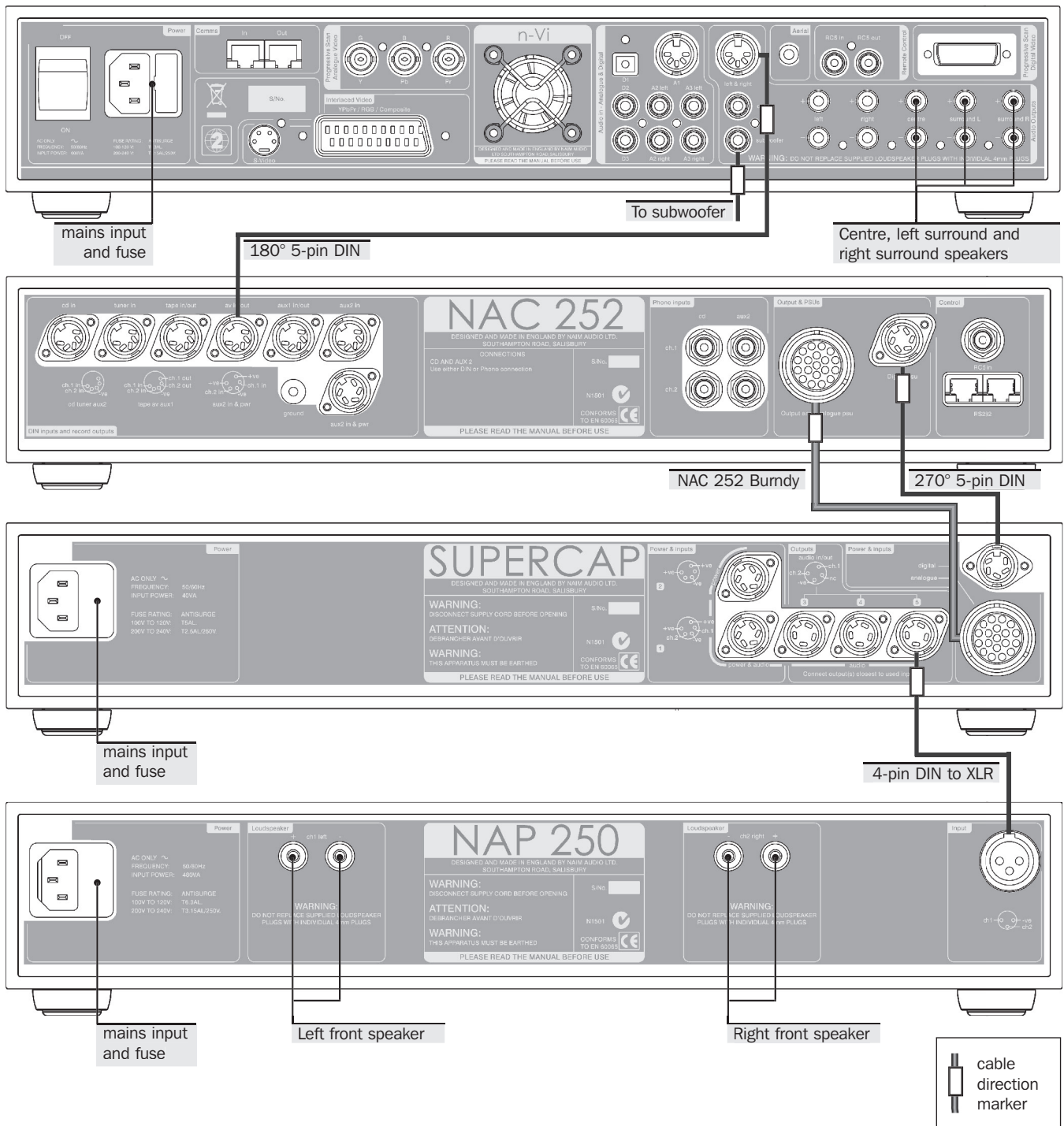
12 System Connections

Connection of the n-Vi in a stand-alone AV system is straightforward. Each speaker output should be connected to the appropriate speaker, the subwoofer output connected to an active subwoofer and a video display connected to the appropriate video output. (See Diagram 5.7).

12.1 n-Vi with NAC252, Supercap and NAP250

Integration of the n-Vi in an existing Naim system requires a little more care and thought however. The diagram below shows an n-Vi integrated in a system comprising a NAC252 preamplifier, Supercap power supply and NAP250 power amplifier. The principles applied in this connection scheme are similarly appropriate in any alternative systems but, if there is any doubt, your local retailer or distributor will be able to advise.

Note: *The preamplifier input must be set to unity gain mode. See the preamplifier Owner's Manual for further information.*

mains input and fuse

180° 5-pin DIN

To subwoofer

Centre, left surround and right surround speakers

NAC 252 Burndy

270° 5-pin DIN

mains input and fuse

4-pin DIN to XLR

mains input and fuse

Left front speaker

Right front speaker

cable direction marker

13 Trouble-shooting

The following list of typical problems and solutions will help ensure trouble-free n-Vi installation and use.

13.1 Video and Disc Playback

Green tint to image.

The n-Vi is set to YPbPr mode and the display is set to RGB mode. See Section 7.4.1

Pink tint to image.

The n-Vi is set to RGB mode and the display is set to YPbPr mode. See Section 7.4.1

Image has 'jaggies' on horizontals.

The n-Vi is converting from PAL to NTSC or NTSC to PAL. Set n-Vi video output to auto or PAL/NTSC to match the format recorded on the DVD in use. See Section 7.3.1

n-Vi not responding to handset.

Handset is set to the wrong mode. Press the handset **dvd** key.

Handset batteries flat?

Player intermittently responding to Handset.

Fluorescent lights, reflective surfaces (rooms with lots of windows) and LCD display panels can interfere with remote control infrared signals. Switch off lights and display panels to determine the cause. Re-positioning the n-Vi may be necessary to cure the problem.

Handset works with other Naim equipment but not n-Vi

Handset has been inadvertently re-configured to work on a different remote channel;

Press handset **dvd** key. While simultaneously holding the **open** and **subt** keys press **1** key.

Press handset **av** key. While simultaneously holding the **open** and **subt** keys press **1** key.

Video quality is poor using SCART.

SCART has two video signals, composite and YPbPr/RGB. The display may be set to composite.

Note: *Progressive scan video is only available via the BNC or DVI connections.*

No colour on s-video or composite.

The n-Vi is set to NTSC and the display is set to PAL. See Section 7.3.1

No DVI input available on the display, only HDMI.

DVI to HDMI adapters are available from accessory retailers.

Display is too far from the DVD player to use DVI.

Optical DVI leads up to 500 metres long are available.

No picture when using DVI.

The display is not HDCP compliant. To meet DVD licensing requirements the n-Vi DVI output is content protected using HDCP. The display will need updating.

The picture disappears when "play" is selected.

The n-Vi video outputs are switched off. See Section 7.3.7

A Macrovision encoded disc is loaded and the display is connected via RGB.

The image is not centred.

Check both the display and n-Vi alignment controls. See Sections 77.3.4 and 7.4.2

Previously played DVDs do not start from the beginning.

The n-Vi remembers the last 10 discs played and the playback position when they were ejected. To start from the beginning load the disc, ensure the n-Vi is in stop mode then press **stop** on the handset.

Drawer cannot be opened without the remote.

When in stop mode press the front panel **stop** button.

The fan comes on.

When the unit becomes warm the fan switches on to regulate the temperature. Ensure the unit is well ventilated and not directly stacked on top of any other equipment.

13.2 Audio

No sound from subwoofer (digital sources).

The only formats that have native subwoofer information are Dolby Digital and DTS 5.1 soundtracks. If you require sound from the subwoofer enable bass mix from the on-screen or front panel menu. See Section 7.5.2

No sound from subwoofer (analogue sources).

Processing modes including bass mix cannot be applied to analogue inputs. To generate subwoofer information from an analogue source the subwoofer can either be connected at line level to the n-Vi left and right output socket (line level) or directly to the loudspeaker terminals (speaker level). The subwoofer's low pass filter will have to be set manually.

Sound coming from surround speakers when playing a conventional stereo CD or stereo soundtrack.

Dolby Pro Logic II or Neo:6 surround mode is probably enabled. Use the handset **mode** key to select Stereo or auto.

No test signal.

Ensure test signal is switched on then select a speaker in the level setup menu. See Sections 7.6.4 and 7.6.5

Ensure the master volume is not set to zero. Use the the handset volume keys to adjust.

Player must be in stop mode with the disc input selected and no disc loaded.

Test signal too quiet.

Use the handset volume keys to adjust the overall volume level

Cannot get 5.1 sound.

Ensure all speakers are correctly connected and defined in the On Screen Setup. **Tip:** Press stop and listen for a very quiet hiss from each speaker. You will need to be very near the speaker to hear this. If a speaker has no hiss check the connections and the On Screen Setup.

Ensure the n-Vi is not in stereo mode.

Check the disc has a 5.1 soundtrack (normally shown on the back of the cover).

Press the audio button on the remote to cycle through the available audio tracks. Some discs prohibit change of audio format from the handset. In these cases the audio track must be changed from the DVD menu. Access the DVD menu with the handset **menu** key.

Movies are quiet with centre and surround signals lost in systems with front speakers only.

Ensure centre and surround speakers are switched off in the On Screen Setup. See Section 7.6.1

No sound from front left or right speakers.

Check they are set to 'large' or 'small' and not to external. See Section 7.6.1

Check the front panel display channel scheme icon. See Diagram 6.1.3

No sound or very quiet from front left or right speakers when using an external amplifier.

Check the preamplifier or integrated amplifier AV input is set to unity gain mode.

Front panel input socket cannot be selected.

The front input can only be selected when a plug is inserted.

Audio from front panel input is mixed with input A3.

This is normal. The front input is a duplicate of input A3. Either stop playback of the equipment attached to input A3 or disconnect it. Having equipment connected to input A3 and the front input simultaneously will not damage either the n-Vi or source equipment.

Audio cuts-out at high levels.

The n-Vi will automatically protect its amplifier circuits if the output exceeds safe levels. If this happens the sound will momentarily be muted and a warning message displayed on the front panel. If protection occurs at low volume levels contact your local retailer or distributor for advice.

14 Specification

Media Supported: NTSC and PAL DVD Video, DVD Audio, "Red Book" Audio CD, most copy protected Audio Discs, DVD±R, DVD±RW, CD-R, CD-RW.

Video Outputs: Digital Visual Interface (DVI) with HDCP content protection. RGB (for non-macrovision encoded discs) via BNC, (75Ω). YPbPr via BNC, (75Ω). RGB/YPbPr interlaced via SCART, (75Ω). S-Video via 4-pin DIN, (75Ω). Composite via SCART, (75Ω).

Audio Outputs: 5 speaker outputs, 5 x 50W in to 8Ω or 5 x 90W in to 4Ω. 1 x digital coax (SPDIF). Analogue stereo (2V) from 192kHz re-clocked DACS via 5-pin DIN socket. Subwoofer analogue line level via RCA-phono.

Audio inputs: 1 x digital optical, 2 x digital coaxial, 1 x analogue, via 5 pin DIN, 2 x analogue via stereo RCA-phono, 1x analogue via stereo 3.5mm jack.

DAB: (not available in all territories) 174MHz - 240MHz (Band III), 1452MHz - 1490MHz (L-Band).

FM: 87.5MHz -108MHz.

Communications: RS232 control for custom install and home automation. RC5 input for external control via RCA-phono.

Dimensions (H x W x D): 87 x 432 x 314mm.

Mains Supply: 100-120V or 220-240V, 50/60Hz 600VA. Max 2W standby.

Licence Notes

DOLBY

Manufactured under license from Dolby Laboratories.

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DTS

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Macrovision

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Declaration of Conformity

Manufacturer	Naim Audio Limited, Southampton Road, Salisbury, England, SP1 2LN
Products	n-Vi
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.

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.