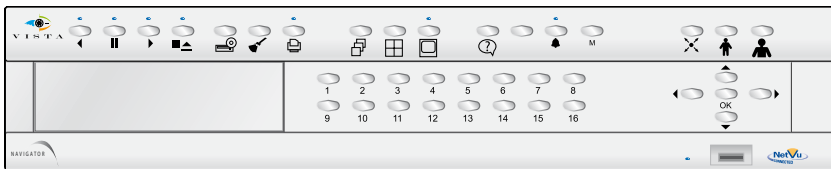




Navigator

Instruction and Installation Manual



Contents

Introduction

Introduction	3
What is the Vista Navigator ?	3
Daily Checks.....	3
General Maintenance notes	3
Passwords	3
Features	4
Important Safeguards	5
A quick overview of digital recording	6

Operation Guide

Unit Overview	9
Rear Panel connections	9
Video	9
Audio	9
Data	9
Alarms and relays.....	9
Camera selection.....	10
Monitor control.....	10
Playback buttons	10
Menu Navigation.....	11
Other buttons.....	11
How Do I ...?.....	13

Installation Guide

Installing the Unit.....	20
Before you start	20
Check the contents of the box	20
Choosing a location for installation.....	20
Quick Connection	22
Connect Cameras.....	22
Connect Monitors	22
Connect Power.....	23
Quick Setup menu	24
Quick Archive.....	25
Navigating the Menus.....	26
Archive Menu.....	27
Archive - Event Search.....	27
Camera Menu Pages.....	35
Alarm Menu Pages.....	41
System Menu Pages	50
System - Information	60
Problem Solving	62

Whilst every attempt is made to ensure these manuals are accurate and current, Norbain reserve the right to alter or modify the specification of the machine described herein without prejudice.

Introduction



What is the Vista Navigator ?

The Vista Navigator provides true flexibility for professional CCTV security solutions. An intuitive interface allows easy local user operation, whilst IP connectivity provides remote monitoring and system configuration via 'NetVu Connected' software.

High quality recordings are accessible locally to the user at the touch of a button or via powerful GOTO and event recall facilities.

Remote operators can utilise the latest MPEG-4 compression technology to view images via NetVu ObserVer.

The Vista Navigator includes built-in co-axial & twisted pair telemetry to enhance the range of applications. Variable alarm configuration allows remote notification of alarms from a Vista Navigator through a variety of communication channels.

Pre-event alarm recording in JPEG ensures images are captured before the incident occurs whilst on-site communication can be maintained through high quality bi-directional audio.

A built in DVD-R writer provides a quick and easy way of copying key events to DVD or CD on-site while FTP archiving allows evidence transfer over the network.

The Navigator provides a self-contained local security solution whilst ensuring that the requirements of remote 24 hour surveillance are met using the 'NetVu Connected' solution deployed over new or existing IP enabled networks.

Daily Checks

General Maintenance notes

1. The maximum operating temperature must not exceed 104°F (40°C).
2. Ensure there is reliable earthing of the mains outlet when fitted to the supply connections, other than direct connections, to the branch circuit.
3. Any branch circuit supplying the unit must be rated 15Amps.
4. It is recommended that an uninterruptable power source be connected to the unit in case of power failure, to ensure continuous operation.
5. To avoid damage, do not move the unit whilst it is powered up.

Passwords

Passwords control access to your unit. For optimum security, passwords should be changed from the defaults settings as soon as practical. Unique passwords should be assigned to every machine. Lost passwords will require the unit be sent back to Vista for resetting. Keep a record of your passwords.

<i>Unit</i>	<i>Username</i>	<i>Password Access (Playback or Web)</i>
-------------	-----------------	--

Features

Local operation

- Local main monitor output
- Main monitor VCR output
- Front panel keys
- Vista remote keyboard control
- Archive to external media (USB)
- Archive to DVD
- Archive as Raw AVI or digitally signed data
- Built-in DVD-R writer
- USB for flash drive
- Local audio playback
- Triplex capability
- Mouse Operation
- Application on Flash memory

Network control

- Live viewing & playback across networks
- Telemetry control over network
- Remote configuration
- Transcoding - MPEG transmission
- User access accounts for viewing & control

Recording

- Auto record on power up
- Auto camera detect on power up
- JPEG recording
- MPEG recording
- 2CIF Maximum record resolution
- QCIF Minimum record resolution
- Real Time Clock Scheduling
- Covert Camera option
- Digitally signed recordings
- Programmable record settings per camera
- JPEG Pre-alarm recording
- 25PPS Maximum record rate per camera
- 2CIF Resolution at max record rate

Audio

- Record audio
- Network replay live and recorded audio

Telemetry

- Integrated telemetry control
- Single RS485 Telemetry bus
- Coax Telemetry

Video Motion Detection

- Activity Detection
- 16x16 Activity Grid

Alarms

- 10/16 input unit - 16 alarms and 2 relays
- 4 input unit - 4 Alarms and 2 relays
- Alarm reporting by e-mail
- Alarm log
- Activate telemetry presets on alarm
- Alarm reporting to RVRC on LAN

Integration

- Spot monitor output (independent of main)
- Serial ports (Telemetry, text/alarm, Baxnet)

Video input Options

- 4, 10 or 16 Video inputs

Hard Drive support

- Internal support of SATA drives
- (1 on 4 way, up to 3 on other models)

Displays

- Support up to 8 multi-screen displays
- Real time display updates

Scheduling capability

- Flexible schedule arrangements
- Option for Holiday periods to be assigned

Network viewing package

- NetVu connected package
- Full Live and Playback controls
- Event search
- Telemetry

External Drive Support

- Managed storage
- Ancillary disk array supporting up to 3.75GB (ADA)

Important Safeguards

Read Instructions

All the safety and operating instructions should be read before the unit is operated.

Power Sources

This unit should be operated only from the type of power source indicated on the manufacturer's label.

Servicing

Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards.

Refer all servicing to qualified service personnel.

Ventilation

Ensure unit is properly ventilated to protect from overheating.

All the safety and operating instructions should be read before the unit is operated.



To prevent fire or shock hazard, do not expose this equipment to rain or moisture. The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user of this equipment that there are dangerous voltages within the enclosure which may be of sufficient magnitude to constitute a risk of electric shock.

WARNING

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Lightning Strike

The unit has some inbuilt protection for lightning strike, however it is recommended that isolation transformers be fitted to the system in areas where lightning is a common occurs.

CE Mark



If this product is marked with the CE symbol it indicates compliance with all applicable directives. Directive 89/336/EEC.

Laser



The unit supports an integrated CD/DVD writer, the following are additional warnings associated with installing and operating the CD/DVD writer, please pay particular attention to this information.

- Caution - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- To prevent exposure to laser emanations (harmful to the eyes), do not attempt to disassemble this unit.

WEEE Status



All our products that are covered by the WEEE directive are marked with the 'wheeled bin' logo as required by the Directive. Where we have a producer responsibility under the WEEE Directive, we plan to join a national WEEE Producer Compliance Scheme in the UK and in Malta when their WEEE legislation is finalised.

Anybody responsible for importing this product from the UK into another EU member state will have to ensure that they comply with the WEEE laws applicable in that country.

RoHS Status



From 1st July 2006 new electrical and electronic equipment put onto the market in the EU must not contain any of the restricted substances referred to in Article 4(1) of the RoHS Directive at concentrations in excess of those permitted under the Directive unless covered by an Exemption. Based on information provided by our suppliers and our understanding of the Directive, all products shipped after 30th June 2006 comply with the requirements of the RoHS Directive.

Memory backup

There is a lithium battery in the unit to stop the configuration settings being lost if the main power supply is removed. When this requires replacing, the unit power must be applied before the battery is inserted to prevent battery drain. If the battery is inserted with the power applied, the current drain is guaranteed to be less than the maximum allowed.

Caution should be exercised due to the internal voltages present during this operation. This procedure should only be carried out by a suitably qualified engineer or installer.

Caution: *Always replace batteries with the same type. There is a risk of explosion if an incorrect type is used.*

Caution: *Always dispose of used batteries according to the instructions.*

A quick overview of digital recording

Digital multiplex recorders work in exactly the same way as analogue multiplexers except that they use hard disks to store video, instead of VCR tapes. Analogue recording uses time-lapse recording to extend the length of time recorded onto 2 or 3-hour tape - recording fewer pictures every second.

Adjusting the number of pictures recorded every second also extends the length of time recorded onto the hard disk of a unit. However, other factors also determine the amount of time that can be stored on the disk of a digital multiplex recorder:

- The image quality.
- The record rate.
- The hard disk capacity.

Image quality

Digital multiplex recorders store images in a compressed format, allowing images to be recorded more efficiently. The higher the compression, the smaller the file size, but the image quality will suffer. The DVR offers a range of compression options and image storage formats to give the end user the flexibility to balance between image quality and storage capability.

Kilobytes and Gigabytes are units of storage, 1GB = 1000 Megabytes (MB) and 1MB = 1000 Kilobytes (KB), according to modern hard drive specifications. (Now specified under SI units as one kilobyte (1 kB) = 1000 bytes, whereas one kibibyte (1 KiB) = 1024 bytes to clear the confusion caused by the term kilobyte simultaneously being used to refer to both 1,000 and 1,024 bytes)

With analogue recording, the image quality is dependent on the type of VCR being used; VHS or S-VHS. The unit allows the image quality to be altered by adjusting the image size. There are three sizes available which conform to CCTV industry standards; CIF(352 x 288 pixels), 2CIF(704 x 288 pixels) and QCIF(176 x 144 pixels).

Hard disk capacity

Using a larger hard disk will allow image quality, recording rate, or recording time to be increased.

Typical High Quality Recording Settings

To record MPEG-4 at 12pps using 2CIF would require

*10.3GB * 4 cameras = 41.2GB per day.*

Recording 2CIF @12pps on four cameras, a 160GB drive would record for 12 days before overwriting the oldest images.

Typical Long Duration Recording Settings

To record MPEG-4 at 1pps using QCIF would require

*0.2GB * 4 cameras = 0.8GB per day.*

Using the lower table, recording QCIF @1pps on four cameras, a 160GB drive would record for 233 days before overwriting the oldest images.

Design of this manual

The manual has three parts:

1. Introduction – Giving basic information regarding the unit.
2. Operating – Giving quick reference details on how to control the unit.
3. Installation – Giving details of how to install the unit and connect external devices.

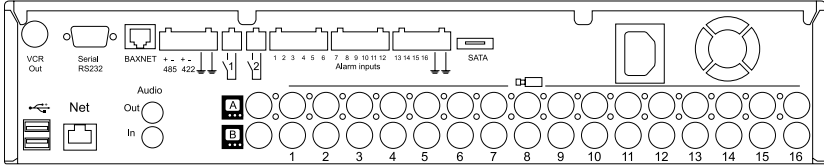
Operation Guide

Unit Overview	9
Rear Panel connections	9
Front Panel.....	10
How Do I ...?.....	13
... power the system up safely ?	13
... shutdown the system safely ?	13
... view a single camera ?	13
... view multiple cameras ?	13
... view a sequence of cameras ?	13
... set up a Schedule ?	13
... playback recorded images ?	14
... exit playback ?	15
... use the Event Log ?	15
... filter Events ?	15
... operate the Internal CD/DVD-R ?	16
... copy Images to media ?	16
... watermark a CD for use as evidence ?	16
... check the software version using the Microbrowser ?	16
... access the unit web pages ?	16
... check/set the IP address of the DVR using the Microbrowser ?	17
... change/edit the IP address ?	17
... adjust video coverage ?	17
... access the installer menus ?	17
... perform a Motion search ?	17
... unprotect video ?	18
... connect to an Ethernet network ?	18
... set the unit to a specific IP address ?	18

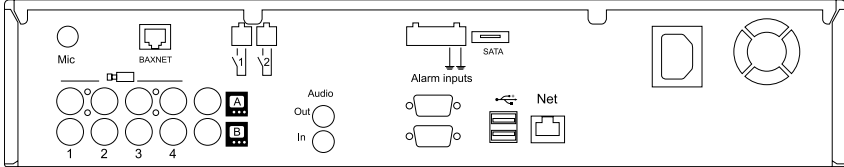
Unit Overview

Rear Panel connections

The illustration below shows the rear panel connections for the 16 input unit.



The illustration below shows the rear panel connections for the 4 input unit.



Video

VID1 to VID16

75Ω BNC composite camera connections (1V pk-pk) with loop through. Unit is available as a 4, 10 or 16 channel.

MON A

Main monitor, 75Ω BNC composite monitor connection (1V pk-pk).

MON B

Spot monitor, 75Ω BNC composite monitor connection (1V pk-pk).

VCR Out *

75Ω BNC composite monitor connection (1V pk-pk).

*Not available on 4 way unit

Audio

AUDIO IN

RCA (phono) socket, 22KHZ sampling, 47 KΩ input impedance.

AUDIO OUT

RCA (phono) socket.

Data

NET

RJ-45 100-baseT Ethernet connection.

SERIAL RS232

9-way (Male) D-type RS-232 serial port.

RS485

Terminal connection.

BAXNET

1x RJ45 connector.

SATA

Connection for external SATA backup drive.

USB

2x USB2.0 ports.

Alarms and relays

Relays

2x Screw terminal, alarm relay dry contact, NO/NC, configurable for alarm.

485/422**

Screw terminal.

ALARM INPUTS

10 way & 16 way units support:

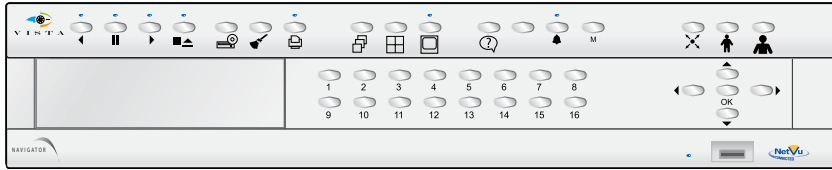
16x Screw terminal connector.

4 way unit supports:

4x Screw terminal connector.

**Screw terminal via add on converter board connected to 9 pin D-type interface.

Front Panel



The main user interface is located on the front panel of the unit. The unit will also accept a USB mouse for ease of configuration. It is possible to connect a Vista remote keyboard and have the same level of operator control.

Camera selection



Camera keys for camera selection.

Note: The number of camera keys will depend on the number of video inputs supported on the product.

Monitor control

Sequence



The button above this symbol will initiate a sequence on Main or Spot Monitor.

Multi-screen



The button above this symbol will step through three alternative display settings, Picture in Picture, Quad and Multi-screen view on the Main monitor.

Monitor Selection



The button above this symbol will toggle between main monitor and spot monitor control.

Playback buttons

Reverse Play



Reverse play and Rewind is incorporated into one button with toggle i.e. press once to rewind, press again to increase reverse scan speed (1x, 2x, 4x, 8x, 16x, 32x).

Pause/Freeze



Pause the image in Live and Playback mode.

Forward Play



Forward play and fast forward incorporated into one button with toggle press once to play, press twice to fast forward, press again to increase forward scan speed (1x, 2x, 4x, 8x, 16x, 32x).

Stop/Eject



In Playback, stops the playback of recorded images and returns to live view, or eject a DVD. When Navigating menus, acts as return.

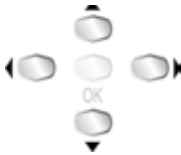
Menu Navigation

Menu Button



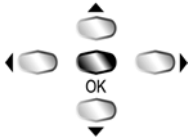
Opens the on-screen menus.

Menu Navigation buttons



Used to move cursor input when in menu mode.

Menu Select button



The centre button acts as a select.

Other buttons

Acknowledge Alarms



Ends an alarm when the unit is in acknowledge mode, *refer to Alarms menu.*

Presets



Preset commands.

Zoom in



Zooms in (when using telemetry camera).

Zoom out



Zooms out (when using telemetry camera).

Quick Archive



Opens the quick archive facility, *refer to How to... copy Images to media.*

Search



Launches the Search pages, *refer to... How to filter Events.*

Print



This function is under development.

Help



Launches the embedded help files.

How Do I ...?

... power the system up safely ?

If the unit has been powered down:

1. Unplug the power lead from the wall socket and switch the wall socket off.
2. Connect the power lead to the back of the unit.
3. Plug the power lead into the wall socket and switch on.

The unit will run a self check and then power up. The monitor will default to quad screen mode and record using the last good configuration.

... shutdown/reboot the system safely ?

If the unit needs to be switched off for any reason, the power should be switched off at the wall.

To reboot the system:

1. Select 'System->Unit' on the microbrowser.
2. Click on 'Reboot' to commence reset of the unit. The unit will be operational again in a few minutes.

... view a single camera ?

Pressing a camera button will display a full screen image of that camera (*refer to Camera selection*).

... view multiple cameras ?

Press the multi-screen button (*refer to Monitor control*). Press the button again to cycle through the three alternative display settings, Picture in Picture, Quad and Multi-screen view on the Main monitor.

... view a sequence of cameras ?

A sequence is when the video feeds from the cameras are displayed on the monitor one after the other (in sequence).

- Press the Sequence button (*refer to Monitor control*) to toggle the main monitor sequence on or off.

... set up a Schedule ?

(*Refer to System - Record and Cameras - Schedules Pages*)

What do I need?

- Know whether to record in MPEG or MJPEG (refer to Differences between MPEG-4 and MJPEG[JPEG]).
- Know what coverage is required from each camera (Pictures per second/Profile).
- Know the hours each element of a schedule will have to cover.

Information

The daily recording schedule for each camera is made up of 48 half hour blocks. Each one of these blocks can have one of the eight available recording profiles assigned to it.

The eight profiles are displayed at the top of the screen.

To assign a profile to a time period, select the profile and then point either using cursor keys or another pointing device. This creates the daily recording schedule for the selected camera.

The Week Day schedule will be used for Monday to Friday, the Weekend Schedule will be used on Saturday, Sunday and any dates nominated as Holidays.

Each profile is defined in terms of PPS and Quality. The quality settings are defined as per the table displayed overleaf:

Quality Setting	Resolution PAL	Resolution NTSC
5 - 18	QCIF 176 x 144	QCIF 176 x 128
19 - 32	CIF 352 x 288	CIF 352 x 256
33 - 45	2CIF 704 x 288	2CIF 704 x 256

Scenario 1

Cameras are to be recorded at 6PPS across all cameras during the working day and at 18PPS during the night and all day at the weekends.

On the **Camera Schedules & Profiles** page:-

- 1) Navigate to *Cameras* -> *Schedules* Page.
- 2) Select Camera 1 using the camera keys (press camera key 1).
- 3) Type '6' into the PPS for Profile 1.
- 4) Type '18' into the PPS for Profile 2.
- 5) Use the Profile 1 colour to paint between 8am (opening time) and 6pm (closing time). Paint both Normal and Event rows.
- 6) Use the Profile 2 colour to paint between 0 (midnight) and 8am, then from 6pm to midnight and all of the Weekend Normal and Event rows.
- 7) Use the 'Copy To Cameras' button to duplicate the profile across all connected cameras.
- 8) Navigate to *Cameras* -> *Weekends and Holidays* Page.
- 9) Ensure *Weekend Enable* is set to 'On'.
- 10) Set the *Weekend Duration* to Start at midnight on Friday and End at midnight on Sunday.

Scenario 2

Till cameras (1&2) are to be recorded at 12PPS during the working day. Other cameras will record at 1PPS. Saturday morning is normal working time. An alarm will increase recording to 12PPS across all cameras. At night and at weekends, recording is set at 6PPS but an alarm at night will increase recording to 18PPS across all cameras.

- 1) Navigate to *Cameras* -> *Schedules* Page.
- 2) Select Camera 1 using the camera keys (press camera key 1).
- 3) Type '12' into the PPS for Profile 1.
- 4) Type '1' into the PPS for Profile 2.
- 5) Type '6' into the PPS for Profile 3.
- 6) Type '18' into the PPS for Profile 4.
- 7) Use the Profile 1 colour to paint the Normal row between 8am (opening time) and 6pm (closing time). Paint all of the Event row using the same profile.
- 8) Use the Profile 3 colour to paint between 0 (midnight) and 8am, then from 6pm to midnight and all of the Weekend Normal row.
- 9) Use the Profile 4 colour to paint all of the Weekend Event row.
- 10) Use the 'Copy To Cameras' button to duplicate the profile to camera 2.
- 11) Select Camera 3 (using the camera 3 button). Use Profile 2 colour to paint the Normal row between 8am (opening time) and 6pm (closing time).
- 12) Use the 'Copy To Cameras' button to duplicate the profile to all remaining cameras.
- 13) Navigate to *Cameras* -> *Weekends and Holidays* Page.
- 14) Ensure *Weekend Enable* is set to 'On'.
- 15) Set the *Weekend Duration* to Start at closing time on Saturday and End at midnight on Sunday.

... playback recorded images ?

- To playback images, press ◀◀ to rewind to the desired location and then press ▶. Press ▶ for review mode or press and hold ▶ for the GOTO option. The 'PLAY' LED will illuminate.
- When in playback, press ◀◀ or ▶▶ to search rewind or fast forward, multiple presses will increase the search speed.

- Press **II** to pause the current image. Pressing **◀** or **▶** whilst paused will advance or rewind a frame at a time.

... go to a specific time ?

Press and hold **▶** to play back from a specific time or date.

Enter the required time and date in the 'playback from' period on the System Recording Menu

... exit playback ?

Press the **STOP/EJECT** button to exit playback mode. The 'PLAY' LED will go out.

... use the Event Log ?

It is possible to search for various events from the archive and search menus.

... filter Events ?

Filter Event button (**FE**)

It is possible to filter the search by selecting a particular function (alarm, VMD, keyword or system) within the time and date and on a specific camera. To enter this option, with the Event Log displayed (press the **FE** button to display the Event log). To display the Event Search Filter menu, press **M**.

Tip: You can enter this menu by pressing and holding the **FE** button.

To search for an event:

Press and hold the **M** button, the Event Search Setup screen will be displayed.

Search type

This option dictates what kind of Search is performed, Text, Event log or Activity data.

Event type

This option dictates what kind of Event is searched for, Alarm, VMD, Keyword, System or All

It is possible to filter the recorded images to find images associated with the following options:

- Alarm - any external alarms that have associated recorded images.
- System - any system functions that has associated video recordings.
- VMD - Activity triggered recorded images.
- Keyword - Any event triggered on an exception defined in the Alarm menu.
- All - this will select all of the above options and find all associated recordings.

Filter from (Start)

Enter the time and date to search from. The default is the earliest recorded time on the disk.

Filter to (Stop)

Enter the end time and date for the search.

Once the Event Search Filter screen has been completed; press **Search** to begin the filter.

The unit will search the hard disk for the relevant recorded images as configured. Once it has generated events, the Event List will be displayed in the Event Search Results table.

Use the **↑** **↓** to move the cursor up or down the list of events. The image on the right of the screen will be automatically updated as the cursor highlights each event.

From this screen you have access to the following options:

Play an event back full-screen

Highlight the relevant event and select Playback to play it back in full-screen mode.

Copy an event to the Archive List

Highlight the event that is to be copied and press the **Add to Archive** button. The Event will be copied to the archive list (See 'How Do I ... copy images to media' below for details on using the Archive List).

View more events

Use the 'next' button to view the next page of events.

Start a new search

To start a new search filter, return to the previous menu and re-enter data in the Event Search Filter menu as described in the first step.

... operate the Internal CD/DVD-R ?

Images are recorded to the internal hard disk for instant playback and searching by the operator. The capacity of the internal disk affects the amount of images and time that can be recorded.

The internal hard disk is classed as a temporary storage device, as the images are constantly being overwritten after a certain period of time. If images need to be kept for longer, then external storage is required. The internal CD/DVD writer can be used to archive.

Images can be copied from the internal hard disk onto CD-R or DVD-R disks for long term storage. These images can be played back on any PC supporting a CD/DVD drive.

The unit's built in CD/DVD writer, offers simple and easy archiving of recorded images. The CD/DVD writer is accessible from the front panel.

To insert a CDR:

1. Press the stop / eject button above the CD/DVD drawer and the draw will slide open.
2. Insert a blank CD-R or DVD-R.
3. Push the drawer back.

To remove a CDR:

1. Press the stop eject button above the CD/DVD drawer and the draw will slide open.
2. Hold the media between thumb and forefinger and lift to remove.
3. Push the drawer back in until it latches.

... copy Images to media ?

Using the Quick Archive Finalise Menu

1. Press and hold the **Quick Archive** button to enter the installer menus.
2. Using the \uparrow \downarrow to highlight the event to be copied.
3. Confirm the files have been added to the archive list by selecting the Archive Finalise menu.

... watermark a CD for use as evidence ?

The unit automatically watermarks each archive. This can be checked using the watermark check tool. Load the watermark check tool on the accompanying CD and set watermark step size to 255 (not 256 default). Press select files and select archived .PAR files. Press Call Watermark and compare this with value in .USER Files_xx.txt.

... check the software version using the Microbrowser ?

1. Press the **M** button and select System->Information.

... access the unit web pages ?

The unit can be configured using the on-board web pages. To access these:

Note: *The unit should already have been configured with an IP address (via the serial port or the OSD menus) and connected to an Ethernet network.*

1. Launch a web browser (Internet Explorer, Firefox, Netscape Navigator).
2. Type the IP address of the unit into the address bar.
3. The Main Menu page will be displayed. The unit will prompt for a username and password if enabled.

Note: *The user name and password are case sensitive; they should be changed from the default username and password and kept safe. Mislaidd usernames and passwords could result in the unit having to be returned for password reset.*

... check/set the IP address of the DVR using the Microbrowser ?

The unit IP address is configured in the Network menu. This can only be accessed using the Installer password, ensure you have the correct password for this level of access.

1. Press and hold the **M** button to enter the installer menus.
2. Press the **Navigation** buttons until the '**Network Options**' menu is displayed.

There are three submenus available; 'Basic', 'Advanced' and 'Notification'. Basic allows the Installer to force an IP Address, Subnet Mask and Gateway. Advanced allows DHCP functionality to be enabled; whilst the Notification menu allows configuration of E-mail/LAN notification functions.

The IP address is displayed on the menu page.

... change/edit the IP address ?

1. Press and hold the **M** button to enter the installer menus.
2. Open the menus and click on '**Network->Basic**'.
Press \downarrow to highlight the menu item '**IP Address**'.
3. Highlight the IP address.
4. Press **OK**, this will bring up the on-screen keyboard.

Note: *DHCP must be disabled to configure a static IP address.*

The unit requires a unique IP address and subnet mask to communicate over a network. It is possible to switch DHCP on via the Advanced Network Settings page to obtain an available IP address and then switch it off again once an IP address has been assigned.

... adjust video coverage ?

It is possible to adjust the number of images recorded by the DVR, thereby improving the quality of the video coverage. It is also possible to set the DVR up to change these settings when an alarm or event occurs.

... access the installer menus ?

Press and hold the **M** button. After three seconds the unit will request the installer password. This password gives access to the higher levels of machine menus.

... perform a Motion search ?

This searches the disk for motion in a particular area of a picture, even if Video Motion Detection was not being used when the pictures were recorded.

To start a Smart Search (from live viewing mode).

1. Press **EVENT** and select the Motion submenu in the main menu.
2. Enter the Search period you require via the Search Start and Search Stop fields.
3. Select the camera you wish to search.
4. Now edit the Activity Region. Setting/Unsetting all VMD zones can be achieved by selecting the relevant button. For more intricate VMD edits; select Edit VMD grid, an interpretation of a grid will then be overlaid on the camera image. To edit the grid; move the cursor keys to the point on the screen you wish to edit. This will navigate the yellow cursor grid. Use 'OK' to toggle between add (blue) and delete (red).
5. Press the **M** button to return to the Motion Search menu once VMD edit is complete.
6. Press the **SEARCH** button.
7. The Search results will now be displayed in a similar format to that outlined in the; "...filter Events ?" section.

... unprotect video ?

Video recorded during Events and Activity can be manually and automatically protected from overwriting by the system. Once this video has been viewed, it should be unprotected to make the hard disk space available for overwriting. Having protected images on the system reduces the recording capacity of the unit.

1. Press and hold the **M** button to enter the installer menus.
2. Navigate to System - Record.
3. Navigate to Auto Delete and set the number of days you wish to protect the saved video for.
4. Note: All non-event video data will be deleted after this point. All event data is also deleted unless protected. To protect event data complete following steps:
5. Select Alarms - Protection. Set Protect Alarms to Yes and add the time period alarms should be protected for.
6. In maximum disk space, enter the maximum % of disk storage that will be utilised for holding events data before events are unprotected.
7. Set warning type if % of event storage required is exceeded. This can be OSD or OSD and Buzzer.

... connect to an Ethernet network ?

The unit can be connected to a network to allow complete control from a remote location. This includes the ability to view live and recorded images, download archives and control of telemetry functions.

To connect to an Ethernet network.

1. Press and hold the **M** button to enter the installer menus.
2. Navigate to the 'Network Options' menu.

Note: If DHCP (Dynamic Host Configuration Protocol) is Enabled, the unit will automatically obtain an IP address every time it is powered up. This will result in the unit having a different IP address if it is rebooted. Vista recommend that DHCP is disabled once a valid IP address has been obtained.

To disable DHCP;

- 2a Press the cursor buttons $\leftarrow \uparrow \downarrow \rightarrow$ until the option 'DHCP' is highlighted.
- 2b Press the \Rightarrow button to highlight the parameter.
- 2c Press the $\uparrow \downarrow$ buttons to disable this function.
3. It is possible to set the unit to a specific IP address. Ensure DHCP is disabled.

... set the unit to a specific IP address ?

- 3a Press the cursor buttons to highlight the option 'TCP/IP address'.
- 3b Press the **OK** button to highlight the parameter.
- 3c Using the on-screen keyboard; edit the IP address (including dots).

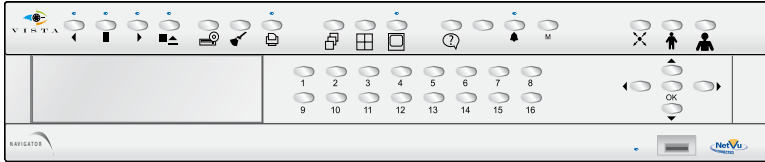
Note: This process can be used to set the Subnet mask and Default gateway to the particular requirements of your Network Administrator.

4. To accept changes, move to another menu.

Installation Guide

- Installing the Unit 20
- Before you start 20
- Check the contents of the box 20
- Choosing a location for installation 20
- Quick Connection 22
- Connect Cameras 22
- Connect Monitors 22
- Connect Power 23
- Quick Setup menu 24
- Quick Archive 25
- Navigating the Menus 26
- Archive Menu 27
- Archive - Event Search 27
- Camera Menu Pages 35
- Alarm Menu Pages 41
- System Menu Pages 50
- System - Information 60
- Problem Solving 62

Installing the Unit



Before you start

Check the contents of the box

The following items are included in the box:

- Unit.
- Mains cable with plug fitted (North America).
- Mains cable with plug fitted (European).
- Setup Guide and Operator Guide (downloadable from the Web interface).

Choosing a location for installation

The unit is designed to be desk mounted. The following precautions must be taken during installation:

- Openings in the unit's case are provided for ventilation. To prevent overheating, these openings should not be blocked or covered.
- Ensure there is a 1" (2.54 cm) gap on either side of the unit.
- When stacking units, ensure there is at least a ½" (1.3 cm) gap between each unit.
- Ensure the unit is not located in an area where it is likely to be subjected to mechanical shocks.
- The unit should be located in an area with low humidity and a minimum of dust. Avoid places like damp basements or dusty hallways.
- If the unit is to be installed in a closed assembly, the maximum operating temperature must not exceed 104°F (40°C).
- Ensure there is reliable earthing of the mains outlet when fitted to supply connections, other than direct connections, to the branch circuit.
- Any branch circuit supplying the unit must be rated 15Amps.
- It is recommended that an uninterruptible power source be connected to the unit in case of power failure, to ensure continuous operation of the unit.

Recommended PC Specification

The following is the recommended PC specification to allow configuration and viewing of the unit using the network interface and also viewing and control from the NetVu Observer application:

	Minimum	Recommended
Operating System	Window 2000	Windows XP Pro
Processor	1GHz Intel Pentium 3 or equivalent	2GHz Intel Pentium 4 or equivalent
System RAM	512MB	1024MB
Screen Resolution	800 x 600*	1024x 768 or higher*
Colour Depth	24bit*	24bit or 32bit*
Browser	Internet Explorer 6 Netscape Navigator 7.1 Firefox 1.5	
JRE	J2SE Runtime Environment 5.0 Update 4	

* Although the system will operate on lower specification computers the above is recommended to provide high performance video quality and update rates. If lower specification processors are used this could affect the overall performance of the computer.

WARNING: *For a web browser to correctly operate with the units Java Virtual Machine (JVM), the Java Runtime Environment (JRE) must be installed on each PC that will be used to access the unit. The JVM enables Java components contained in the web pages to operate as intended. A version of Java Runtime Environment may be downloaded from <http://java.sun.com>.*

The Java Virtual Machine is one aspect of Java software used in web interaction. The Java Virtual Machine is built into the Java software download and helps the Sun JRE run Java applications.

Administration rights will be required to install JRE onto a Windows 2000 or Windows XP machine. The JRE can be loaded using one of three methods, Automatic, Manual or Offline.

The automatic installation option will require the machine to stay connected to the internet whilst the software is loaded directly from the web. This method requires no user intervention.

Manual installation downloads a small program from the web, which will fetch the required files from the web when it is run. It offers more control over the installed options than the Automatic method.

Offline installation will download all the required files onto the computer before commencing installation. This file can then be run when the computer is not connected to the internet and copied onto other machines without internet access, if necessary.

The software on the unit is written for the Sun Java Machine and the Microsoft Java Machine should be disabled for optimum reliability.

You can switch between the Sun Java Virtual Machine and the Microsoft VM. The Sun JVM can be enabled and disabled without having to uninstall it. Switching back and forth between these Virtual Machines can be done through the Advanced tab in your Windows Internet Options Control Panel, OR by using the Java Control Panel.

Note: *It is good practice to check both locations.*

To switch between the Sun JVM and Microsoft VM using Internet Options:

- 1 Open Control Panel by clicking Start->Settings->Control Panel.
- 2 Open the Internet Options window by double clicking Internet Options.
- 3 Click the Advanced Tab.
- 4 Find the "Java (Sun)" item and check or uncheck the checkbox which says; "Use Java 2 v 1.4.x for applet (requires restart)".
- 5 Check or uncheck the box next to Microsoft VM.
- 6 Save your changes by clicking the OK button.
- 7 Restart the browse.

Instructions for switching between the Sun JVM and Microsoft VM using the Java Control Panel:

- 1 Open the Windows Control Panel by clicking Start->Settings->Control Panel.
- 2 Open the Java Control Panel by double clicking the icon labelled "Java Plug-in".
- 3 In the Java Control Panel, click the Browser Tab.
- 4 Under the Browser Tab you will see checkboxes next to installed Web browsers.
- 5 Check or uncheck the checkbox next to the Web browser you want enable or disable from using the Sun JVM.
- 6 Click the Apply button to save your settings.
- 7 Restart Internet Explorer.

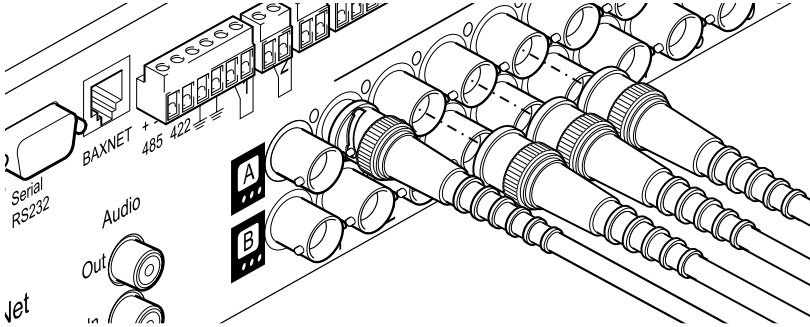
Quick Connection

Sixteen Camera input version shown.

The procedure is the same for all variants, but the location of the sockets will differ.

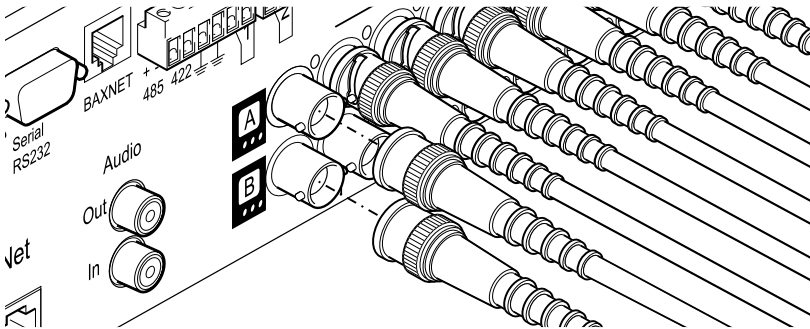
Connect Cameras

Connect cameras to the video inputs, starting from input 1.



Connect Monitors

Connect the video output marked MON A to the Main monitor (digital live, playback and multi-screens).
Connect output marked MON B to the optional Spot monitor (analogue full-screen images).



Connect to the Network

The unit supports a 10/100Mbps auto-detecting network port. Use a properly screened Ethernet cable to connect the unit to the network.

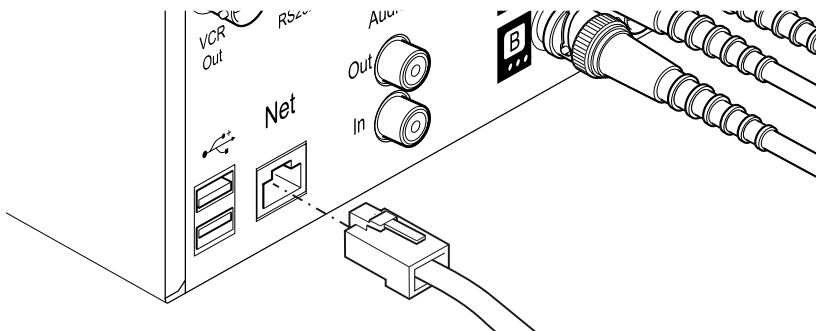
The unit disables DHCP by default and is configured with these default settings:

IP Address - 192.168.2.1

Subnet Mask - 255.255.255.0

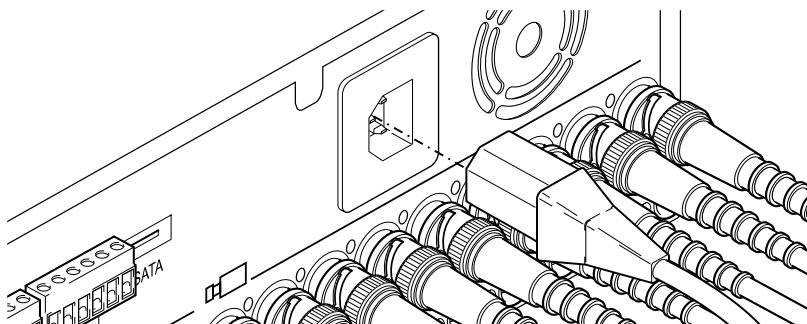
Hostname - Serial number of the unit.

These should be changed from the default settings as soon as possible.



Connect Power

Once the unit is in its final position and any external devices have been fitted and powered, connect the power to the rear of the unit. The blue POWER LED on the front panel (next to the USB port) will illuminate. The power-up process may take up to one minute. The unit will be ready to use once it is complete.



The Quick Setup menu will now be displayed.

Quick Setup menu

This menu will only appear on initial power up (or after a factory reset). It is designed to enable quick installation and basic configuration of the unit. To abort the quick setup, press the M button on the front panel and click 'Exit'.

The unit is factory configured to record using MJPEG. The Quick Setup menu allows the user to assign recording settings based on the storage space available. The recording settings that can be adjusted are duration, rate, quality and number of cameras. The system recalculates the storage requirements using new settings as they are edited and any impractical configuration will be highlighted.



- Single Camera Record Rate: Displays the camera record rate in pictures per second (PPS).
- Duration: Details the time period recorded images will be retained.
- Quality: Displays the record quality settings.
- Priority: Define which of the above three fields is 'most important' to the user. The unit will utilise this priority information during configuration.
- Cameras Connected: Displays number of cameras connected.
- Set Date: Set date and choose display format.
- Set Time: Set time and choose display format.
- Time-zone: Select time-zone from drop down menu.
- Language: Select language from drop down menu.
- Auto Delete: In addition to the record settings, it is possible to configure the unit to auto-delete after a set number of days. This will delete all recorded event information.

Note: This menu will appear on a local monitor only.

Quick Archive

Press the Quick Archive button to access the menu shown below. To use this feature, the required media should already be inserted/connected. The unit will first check the DVD-R drive. If archiving via USB, simply ensure the USB media is inserted. The unit will then calculate the amount of video the media is able to store. If no media is present, simply insert and toggle the destination or exit the menu and re-enter. The nature of constant quality MPEG recording is such that the volume of recorded data can change considerably depending on the activity in the recorded scene. Therefore the volumes provided in this calculation are based on a typical scene and should therefore be taken as an estimate only.

The screenshot shows a dark-themed menu titled "Quick Archive" on a device labeled "VISTA". On the left, a "Main Menu" sidebar contains "Exit", "Help", and "Log out". The main content area includes:

- Destination:** A dropdown menu set to "CD/DVD R".
- Required Space:** A text field showing "2050 MB".
- Free Space:** A text field showing "Insert blank media".
- Start:** A time selection interface with fields for Day (25), Mon (09), Year (2007), Hour (20), Min (50), and Sec (18).
- Stop:** A time selection interface with fields for Day (25), Mon (09), Year (2007), Hour (21), Min (50), and Sec (18).
- Archive:** A large button at the bottom center.

Destination
Start/Stop
Archive

CD/DVD-R or USB (CD assumed initially)
Times auto-calculated based on media or can be edited after calculation.
Begin archive.

Note: This menu will appear on a local monitor only.

Navigating the Menus

To change menu settings via the user interface located on the unit's front panel, firstly press the **M** button to access the menu screens. Use the Navigation buttons to select and navigate within a menu. To enter numeric field data, highlight the relevant data field and press the **OK** button. Use the Up/Down Navigation buttons to incrementally increase/decrease a numeric value by 1. Use the Left/Right Navigation buttons to incrementally increase/decrease a numeric value by 10. When data has been entered, press the **OK** button and navigate away from the data field.

For text data entry, an on-screen arrow key editor is displayed. Highlight a textbox and press the **OK** button. The Arrow Key Editor will then be shown. Use the Navigation buttons to move between characters. To select a character press the **OK** button. Entered text will be shown in the Arrow Key Editor text bar. To enter details and exit the Arrow Key Editor, select the **OK** option. To enter details and return to the Arrow Key Editor, select the **Submit** option. To exit the Arrow Key Editor without entering any text, select the **Cancel** option.

To change menu settings remotely (on a PC via an internet connection), enter the required menu and highlight the option to be modified with the left mouse button. Enter data via the PC's keyboard.


Note: When accessing the menu screens via a local monitor, a 'Log out' option will be shown in the left-hand menu bar along with an 'Exit' option. These options will not be displayed when the menus are accessed remotely i.e. via an internet connection. Please note that the majority of menu screens displayed in this manual refer to the web page layout.

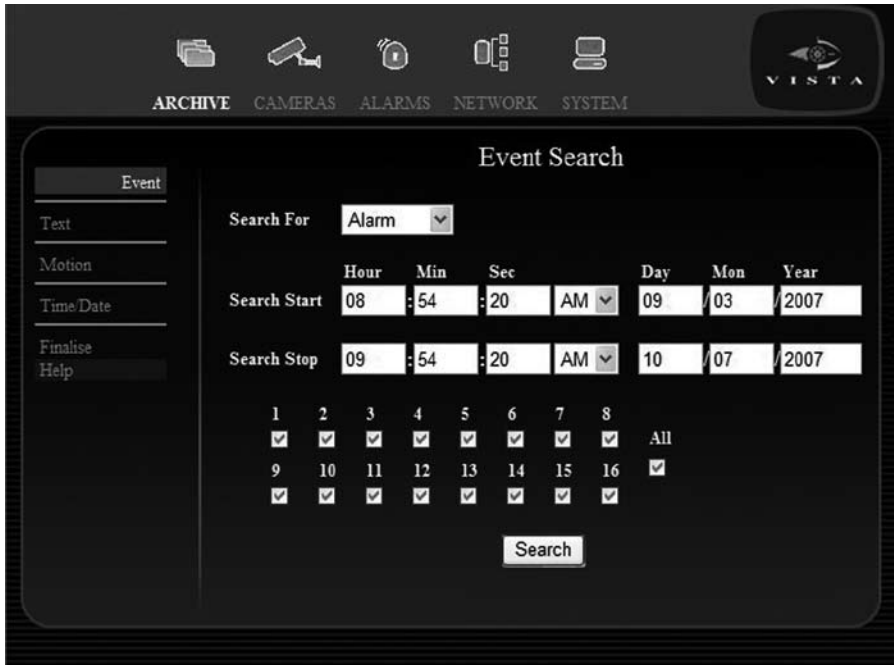
Archive Menu

Alarms and activity detection are tagged and stored in the event log for easy retrieval. Each event is labelled with event type (system, keyword, alarm or activity), its camera title, time and date. Events can then be searched using these parameters.

There is the option to perform more advanced searches based upon the content of the text field, or by movement detection in certain defined areas of a static camera and then to save these images to a DVD, CD or a USB device.

Archive - Event Search

It is possible to filter the search by selecting a particular function (alarm, activity or system) within the time and date and on a specific camera. To display the Event Search Filter menu, click on Archive->Search or press the  button on the front panel.



Item	Description
Search For	It is possible to filter the recorded images to find images associated with the following options; <ul style="list-style-type: none"> Alarm Any external alarms that have associated recorded images. System Any system functions that has associated video recordings. VMD Video Motion triggered recorded images. Keyword Keywords can be configured as an event trigger for a camera to be used as a zone trigger.
Search Start	Enter the time and date you wish to search from. The default is one hour prior to the current time.
Search Stop	Enter the end time and date for the search. The default is the current time.
Cameras to Search	Events are stored according to the camera that captured them. Select which cameras will be searched.

Search Button

This will begin the search using the selected parameters and navigate to the Search results page, refer to Search.

Archive - Event Search Results

This page will display the results of any search performed in the archive pages.

Date	Time	Description	
10/07/07	09:54:06	Zone 5	<input type="checkbox"/>
10/07/07	09:53:05	Zone 5	<input type="checkbox"/>
10/07/07	09:52:31	Zone 5	<input type="checkbox"/>
10/07/07	09:51:17	Zone 5	<input type="checkbox"/>
10/07/07	09:51:02	Zone 5	<input type="checkbox"/>
10/07/07	09:50:51	Zone 5	<input type="checkbox"/>
10/07/07	09:50:17	Zone 5	<input type="checkbox"/>
10/07/07	09:49:02	Zone 5	<input checked="" type="checkbox"/>
10/07/07	09:47:12	Zone 5	<input type="checkbox"/>

Item

Date
Time
Description

Description

This column shows the system date when the recording was made.
This column shows the system time when the recording was made.
There are four types of event that can trigger recording; the event that started the recording will be displayed using a colour code.

Green System
Yellow Keyword
Blue VMD Zone
Pink Alarm

Prev/Next

Also highlighted in the text is the exact source of the trigger event.

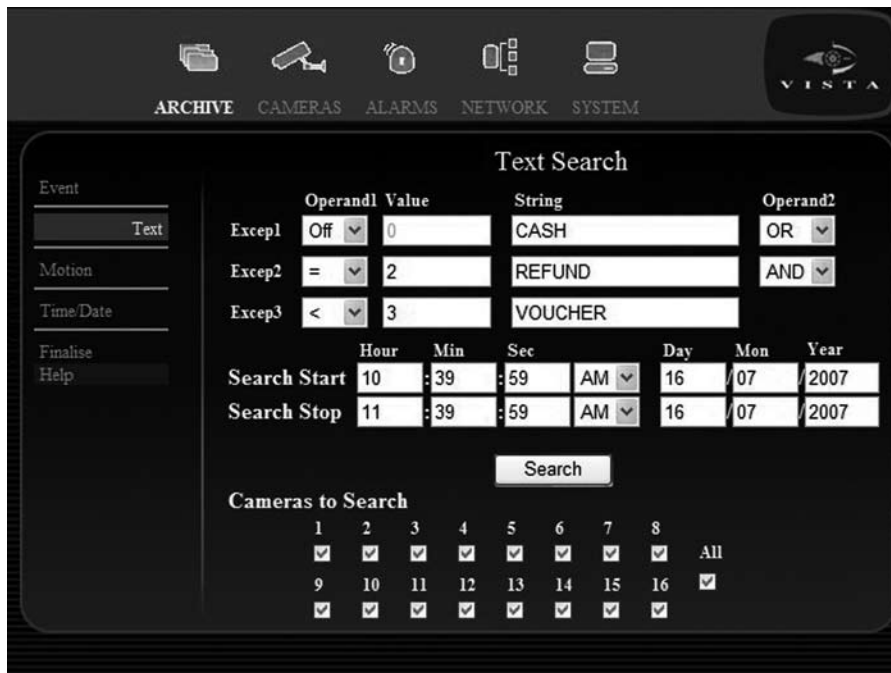
Playback
Return to Search
Copy to Archive

The 'Previous' and 'Next' buttons are displayed when there are more than eight entries on a page and can be used to navigate between pages.
This button will show the video in the playback window on-screen.
This button will navigate to the previous page.
This button will copy the highlighted entry to the Archive list, ready to be archived to CD/DVD or USB media.

Archive - Text Search

The unit can be configured to react to defined keywords appearing in text data and treat them as alarm zone inputs, which in turn generates events in the event database. Keyword events are recorded in the event database with alarm zone events. This feature allows the user to see exactly which keyword triggered an alarm in the event database and to search on a single word, or a combination of words and numeric values.

For instance, a manager can search for high cash payments or refunds, unusual voucher quantities, multiple refunds, sale of age restricted items (lighter fluid/knives etc.) or any other keyword passed from the POS that has been set-up in the keyword system.



Item	Description
Operand1	The initial condition that the search will use. The options are: Off Disabled = (equals) If the text matches the parameter in the Value column it will be returned. <(less then) All text matches under the parameter in the Value column will be returned. >(greater than) All text matches over the parameter in the Value column will be returned. <=(less than or equal to) All text matches equal to or under the parameter in the Value column will be returned. >(greater than or equal to) All text matches equal to or over the parameter in the Value column will be returned.
Value	The parameter to be searched for.
String	This is the text that will be searched for and should match the data string that would have been sent by the POS till.
Note:	A search string can contain the question mark symbol as a wildcard. Searching with ??ple would return apple.
Operand2	It is possible to refine the search using the AND/OR operand, by specifying two conditions are met (AND) or that two conditions do not coincide (OR) before the event is returned in the list.
Search Start	Enter the time and date you wish to search from. The default is the earliest recorded time of the disk.
Search Stop	Enter the end time and date for the search.

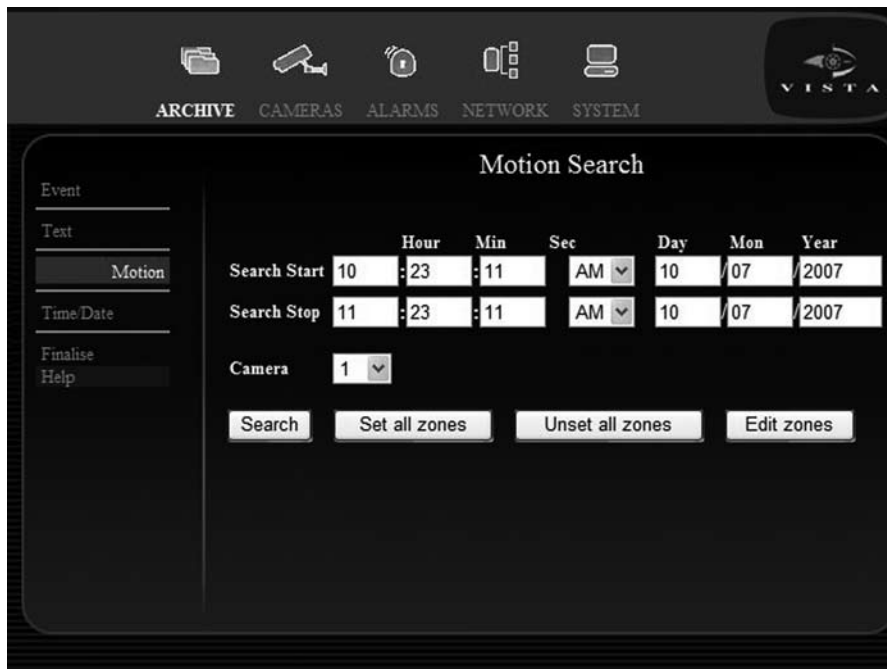
Search Button	This will begin the search using the selected parameters and navigate to the Search results page, <i>refer to Search</i> .
Cameras to Search	Events are stored according to the camera that captured them. Select the camera to search. Clicking 'All' would apply the search to all cameras.

Archive Text Search Results

Item	Description
Date	This column shows the system date when the recording was made.
Time	This column shows the system time when the recording was made.
Trigger	This column shows the exact source of the trigger event.
Prev/Next	The 'Previous' and 'Next' buttons are displayed when there are more than eight entries on a page and can be used to navigate between pages.
Playback	This button will show the video in the playback window on-screen.
Return to Search	This button will navigate to the previous page.
Copy to Archive	This button will copy the highlighted entry to the Archive list, ready to be archived to CD/DVD or USB media.

Archive - Motion Search

The unit can search the stored images retrospectively for motion in defined areas (Motion Zones). This feature can only be practically used on static cameras.

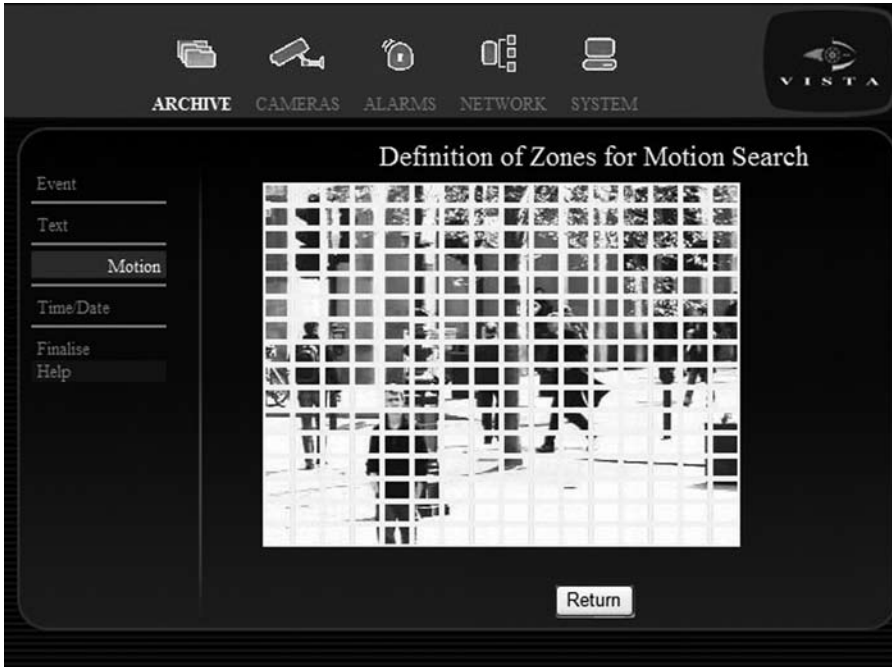


Item	Description
Search Start	Enter the time and date you wish to search from. The default is one hour prior to the current time.
Search Stop	Enter the end time and date for the search. The default is the current time.
Camera	Select the camera to be searched.
Search	Search will begin using selected parameters.
Set all zones	Sets all VMD zones to active.
Unset all zones	Unsets all VMD zones.

Edit zones

Will open the page enabling motion zones to be defined for the selected camera (please see example of the Definition of Zones for Motion Search screen below).

- Green = Enabled
- Blank = Disabled
- Blue = Add Zone
- Red = Delete Zone
- Yellow = No Action



Note: The above menu is displayed when accessed via the web page menu. When accessed via a local monitor, the camera image and grid overlay will appear full-screen.

Archive - Motion - Search Results

The screenshot shows the Vista software interface. At the top, there is a navigation bar with icons for Archive, Cameras, Alarms, Network, and System. The main area is titled "Motion Search Results". On the left, there is a sidebar with options: Event, Text, Motion (highlighted), Time/Date, Finalise, and Help. The central part of the screen displays a table with the following data:

Date	Time	Reason	Add
11/10/07	11:45:07	Act_ON	<input type="checkbox"/>
11/10/07	11:37:28	Act_ON	<input type="checkbox"/>
11/10/07	11:37:13	Act_ON	<input type="checkbox"/>
11/10/07	11:35:38	Act_ON	<input type="checkbox"/>
11/10/07	11:30:29	Act_ON	<input type="checkbox"/>
11/10/07	11:28:41	Act_ON	<input type="checkbox"/>
11/10/07	11:25:23	Act_ON	<input type="checkbox"/>
11/10/07	11:24:58	Act_ON	<input type="checkbox"/>
11/10/07	11:20:33	Act_ON	<input type="checkbox"/>
11/10/07	11:20:18	Act_ON	<input type="checkbox"/>

Below the table are buttons for "Prev", "Next", "Playback", "Return to Search", and "Copy to Archive". On the right, a video preview window shows a camera feed from "DEREK-UNIT 1:Camera 1 11-Oct...".

Item

Date

Time

Reason

Prev/Next

Playback

Return to Search

Copy to Archive

Description

This column shows the system date when the recording was made.

This column shows the system time when the recording was made.

This column shows the exact source of the trigger event.

The 'Previous' and 'Next' buttons are displayed when there are more than eight entries on a page and can be used to navigate between pages.

This button will show the video in the playback window on-screen.

This button will navigate to the previous page.

This button will copy the highlighted entry to the Archive list, ready to be archived to CD/DVD or USB media.

Archive - Time/Date Search

This screen allows the user to define a set of images to be added to the archive list, allowing a selective archive to be generated. Selective archive is used when a limited number of cameras will be archived for a chosen period of time.

The screenshot shows the 'Time / Date Archive Selection' screen. At the top, there is a navigation bar with icons for ARCHIVE, CAMERAS, ALARMS, NETWORK, and SYSTEM, along with the VISTA logo. The main content area has a title 'Time / Date Archive Selection' and a search form. The form includes a sidebar with options: Event, Text, Motion, Time/Date (selected), Finalise, and Help. The search form has three rows: 'Search Start' with fields for Hour (10), Min (:46), Sec (:37), AM/PM (AM), Day (16), Month (/07), and Year (/2007); 'Search Stop' with similar fields (Hour: 11, Min: :46, Sec: :37, AM/PM: AM, Day: 16, Month: /07, Year: /2007); and 'Search For' with a dropdown menu set to 'Block'. An 'Add to Archive' button is located at the bottom center of the form.

Item

Search Start

Description

Enter the time and date you wish to search from. The default is one hour prior to the current time.

Search Stop

Enter the end time and date for the search. The default is the current time.

Search For

There are two options;

Block

Block Archive is for all cameras and will take the standard partition file archive method.

Selective

Selective archive allows the archiving of a single camera.

Add to Archive

This button will add the chosen data block to the archive pending list *refer to Archive - Finalise*.

Archive - Finalise

All Events copied to the 'archive pending' listing are available on this page, prior to being archived onto the selected media. It is possible to view all the events and then delete all or some of these from the list as required.

Raw Archives will be watermarked and the unit can export the file watermark information as a print report when exporting the data. The archived material will have Replay Viewing Software stored on the media with the files, which will auto-run if the archive is opened on a PC that does not have the viewer. The Raw archive will automatically incorporate all text, audio and other associated data. During archiving, the unit is fully usable with a progress indicator bar displayed on the live page.

Archive Finalise

Destination:

Required Space:

Free Space:

Date	Start	Duration	Source	Cameras	Include
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

Item

Destination
Required Space

Description

The three options that the system can archive to are DVR, CD or USB.

This field shows how much space is required to archive the files in the archive pending list.

Calculate

This button will display the media usage, based upon the archiving of the events and the block of data added via the Time / Date Search. It will update the Required Space and Free Space fields, in line with the Destination selection.

Free Space

This field shows how much space is available, based on the media selected in the Destination field.

Clear All

This button will clear all pending archive list entries.

Prev/Next

The 'Previous' and 'Next' buttons are displayed when there are more than eight entries on a page and can be used to navigate between pages.

Delete

This button will remove the highlighted Event from the Archive list. It will not delete the video on the unit.

Archive

This button will start the archive process. This archive will include a watermark report which will also contain login details of the user generating the file.

Date

Date of video to be archived.

Start

Start time of video.

Duration	Length of recording to be archived.
Source	Details source of archived images i.e. Event or Motion.
Cams Archived	Which camera(s) images are to be archived.
Include	Tick the checkbox of those corresponding recordings which require archiving.

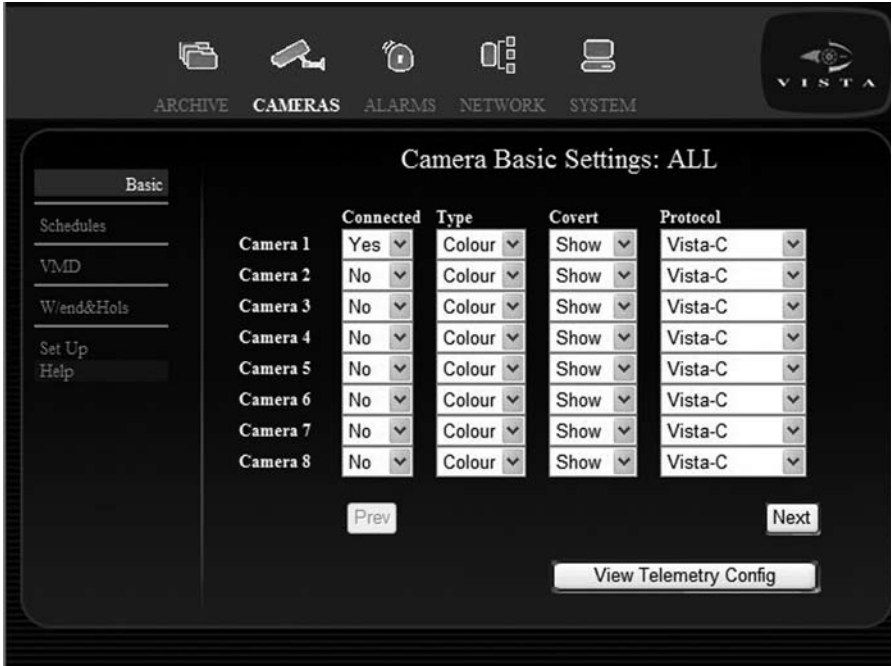
Camera Menu Pages

The unit can record each camera at a range of resolutions, from QCIF to 2CIF, up to a total of 100pps in 2CIF resolution across all cameras for 10 way and 16 way units and up to 100pps in CIF for 4 way units. The basic camera setup menu allows the installer to configure whether each camera is enabled, specify colour or mono, define a Telemetry Protocol for active cameras and also to make a camera covert.

Schedules exist to support two main settings, split into Weekdays and Weekend periods. The settings for Weekdays are common across all Weekdays, similarly the settings for weekends apply to both days. Holiday periods can be specified, which will use the weekend schedule.

Cameras - Basic

The basic settings of the attached cameras are edited using this page.



Item	Description
Camera	Every camera detected by the system will be displayed in this column to enable adjustment of basic settings.
Connected	The unit can automatically detect if a camera source is present. This detection can be over ridden using this box if required.
Type	The camera type can be set to clour or mono.
Covert	A camera can be hidden from an operator if required. However it will still be recorded and available via the web interface.
Protocol	A telemetry camera can be controlled using one of the available protocols, selected serial or Vista C, BBV, Dennard, Pelco and Vicon coaxial telemetries. To select RS485 telemetry, go to System>Serial>Protocol.
Prev/Next	The 'Previous' and 'Next' buttons are displayed when there are more than eight entries on a page and can be used to navigate between pages.
View Telemetry Config	This will display the telemetry configuration page.
Apply Covert Cameras	This will apply the covert cameras function as defined within this menu.

Cameras - Basic - Telemetry Configuration

This page will enable the telemetry settings associated with each camera to be displayed. They can be edited via the System - Serial page.

Serial Telemetry Configuration

Protocol	Vista PD 485
Baud	9600
Parity	None
Data Bits	8
Stop Bits	1
Flow control	None
Set Presets	On

Item	Description
Protocol	<p>485/422 Protocols</p> <p>Vista PowerDome, DM 2040/2050/2055/2060, Pelco P Spectra II, Spectra III, Sensormatic Speeddome™ IV, Ademco / VCL Orbiter & Jupiter Microspheres™, Bosch/Philips G3, Panasonic WV-CS850A/ WV-CS854/WV-CW860, AD Speeddome™ V (Using 4-wire RS-422), Ultrak Ultradome™ KD6, JVC TK-C675BE/TK-C676/TK-C553E, Panasonic CSR600, BBV RS485, Mark Mercer, Airtech/Kalatel CyberDome™, Samsung SCC-641 and Vicon.</p> <p>Supported functions</p> <p>Wash/Wipe, PTZ, Iris Control, Zoom, Preset Control, Auto Focus, Dome Menus.</p>
Baud	This is a measure of the number of symbols sent every second.
Parity	Parity indicates whether the number of bits with value of one in a given set of bits is even or odd. It is the simplest level of error checking.
Data Bits	In asynchronous serial communications, a group of bits; either 7 or 8, are used to represent a single character of data for transmission.
Stop Bits	Stop bits are used to signal the end of a transmission in asynchronous serial communication.
Flow Control	Flow control manages the exchange of data between two computers.
Set Presets	This shows whether the Vista keyboard presets are enabled or not.
Serial Menu	Selecting this button sends the user to the System - Serial menu.
Return	Selecting this button returns the user to the Camera - Basic menu.

Cameras - Schedules

The daily recording schedule for each camera is made up of 48 half hour blocks. Each one of these blocks can have one of the eight available recording profiles assigned to it.

The eight profiles are displayed at the bottom of the page.

To assign a profile to a time period, select the profile and then paint either using cursor keys or another pointing device. This creates the daily recording schedule for the selected camera.

The Week Day schedule will be used for Monday to Friday, the Week End Schedule will be used on Saturday, Sunday and any dates nominated as Holidays.

The screenshot shows the 'Camera Schedules & Profiles' configuration window. At the top, there's a navigation bar with icons for Archive, Cameras, Alarms, Network, and System. The main window title is 'Camera Schedules & Profiles'. Below the title, there's a 'Camera' dropdown menu set to '1' and a text field containing 'Camera 1'. On the left, there's a sidebar with 'Basic' selected, and sub-items: Schedules, VMD, W/nd&Hols, Set Up, and Help. The main area contains a table of profiles:

Name	Col	PPS	Qty	Name	Col	PPS	Qty
Profile1		25	35	Profile5		1	35
Profile2		25	35	Profile6		1	35
Profile3		1	35	Profile7		1	35
Profile4		1	35	No		N/A	N/A

Below the table, there are two sections for 'W/DAY' and 'W/END' schedules. Each section has a timeline from 0 to 23 hours. Under each timeline, there are two rows: 'Normal' and 'Event'. The 'Normal' rows are filled with vertical bars representing the recording schedule. To the right of the table, there are buttons for 'Pre Alarm' (set to 0 Sec), 'Copy To Cameras', 'W/day Overview', and 'W/end Overview'.

Item	Description
Camera	Use this drop down to select which camera settings to edit.
Copy to Cameras	The completed schedule and profile can be copied to other cameras.
Weekday Overview	Calls up a simple display of the completed profile.
Weekend Overview	Calls up a simple display of the completed profile.
Name	This displays the name assigned to the profile.
PPS	This column will set the number of pictures per second that will be captured using the profile being edited. The pps range is 0 - 25.
Qty	This sets the level of detail that will be captured by this profile. The quality setting ranges from 5-45. For JPEG this represents the file size of each frame.
PreAlarm	The unit can capture up to 50 recorded jpeg images buffered immediately before the alarm; and store them with the alarm image (only available with JPEG recording).

Cameras - VMD

The VMD is used for activity detection and can be set to activate at different levels of change within the image, called Sensitivity. There are five levels of Sensitivity which should be configured based on the environmental conditions of the camera.

The VMD setup page allows each camera to be assigned a VMD grid with a desired sensitivity profile. Detected activity can be highlighted in a live view.

The detected VMD can then be used to trigger a specific alarm.

There is the facility to test the current settings to ensure they are correct for the environment and meet the requirements.

Item	Description
Camera	Use this drop down to select which camera settings to edit.
Link to Alarm	There are 16 preconfigurable actions (or alarms) the unit can use when it detects motion, which are configurable via the Alarms - Responses page. These include LAN notifications, sending an e-mail, tripping a relay and sending specific cameras to preset positions. This drop down box allows one of the alarm actions to be associated with this camera.
Walk Test	The current camera image will be displayed showing all the VMD detection zones. Any VMD triggers will be displayed on the image to ensure all required areas are covered and the zones are sensitive enough.
Sensitivity	This option allows the sensitivity of the activity grid to be configured. There are five sensitivity settings to select from, ranging from the most sensitive down to the least. These are Indoor high, Indoor low, Outdoor high, Outdoor low and Very low.
Detection	Detection on the camera can be disabled if it is not required.
Set all VMD cells	Sets all VMD zones to active.
Unset all VMD cells	Unsets all VMD zones.
Edit VMD grid	Will open the page enabling motion zones to be defined.
	Green = Enabled Blank = Disabled Blue = Add zone
	Red = Delete zone Yellow = No action

Cameras - Weekend and Holidays

This page is used to define whether a separate common recording schedule will be used for weekends and holidays, what period that schedule will record for and which weekdays will be nominated as holidays and have the weekend schedule applied to them.

The screenshot shows the 'Weekends and Holidays' configuration page in the Vista software. At the top, there is a navigation bar with icons and labels for ARCHIVE, CAMERAS, ALARMS, NETWORK, and SYSTEM. The 'CAMERAS' section is active. The main content area is titled 'Weekends and Holidays' and contains several settings:

- Weekend and Holiday Enable:** A dropdown menu set to 'On'.
- Weekend Duration:** Two time range selectors. The first is 'From: Sunday 00:00 AM' and the second is 'To: Sunday 00:00 AM'.
- List of Holiday Dates:** A list box containing '25 Dec 2007' and several empty lines. Below it are 'Prev' and 'Next' buttons.
- Add New Date:** A section with input fields for '16', a dropdown for 'July', and '2007', followed by an 'Add' button and a 'Delete' button.

On the left side, there is a sidebar menu with options: Basic, Schedules, VMD, W/nd&Hols (selected), Set Up, and Help.

Item	Description
Weekend Enable	Select if a separate schedule is required for the weekends.
Weekend Duration	Select the Day and Time when the unit will use the Weekend setting
From	Select the Day and Time the unit will switch to Weekday mode.
To	Select the Day and Time the unit will switch to Weekday mode.
List of Holiday Dates	This is a list of dates that have been entered as Holidays. The Weekend schedule setting will be used for each of these dates.
Add New Date	It is possible to update the new date section with day / month / year information. To enter a date for every year, simply enter 1900 into the year column.

Cameras - Setup

This page is used to edit the basic camera configuration settings.

Item	Description
Camera Title	Each camera can be nominated a title up to 20 characters long.
Camera	Use this drop down to select which camera settings to edit.
Termination	Termination can be set Yes (on) or No (off).
Note: Termination must be 'Off' if cameras are looped through to other devices	
Contrast	Use the arrows to reduce and increase the contrast.
Colour	Use the arrows to reduce and increase the colour.

Alarm Menu Pages

The 10 way and 16 way units have 16 hardware alarm inputs on the rear panel as normally open or normally closed contacts.

The alarms consist of inputs 1-16 on board hardware alarms (Alarm 1 - 16) and 16 text soft alarm inputs (Text1 - 16). One VMD per camera can also be added into the alarm as an input.

The 4 way unit has four hardware alarm inputs.

The alarms consist of inputs 1-4 on board hardware alarms (Alarm 1 - 4) and 4 text soft alarm inputs (Text1-4). One VMD per camera can also be added into the alarm as an input.

On Alarm, the unit can switch an associated primary camera into alarm recording. Each Alarm input can also be used to trigger upto three secondary cameras into alarm mode.

The primary camera will enable alarms. Secondary alarm cameras do not enable alarms.

If the camera Event profile is switched Off, any alarms using that camera as a Primary camera will be inhibited completely. The key switch will act as a global alarms inhibit independent of any Event Profiles that switch off alarms. If no primary camera is selected for an alarm, then the alarm can only be inhibited by the key switch, if the key switch function is armed.

If the Event profile is set to Off on a camera, then any alarms that have that camera as a Primary camera will be inhibited completely.

Alarms - Global

This page will set up how the unit will handle all alarms it receives.



Item

Monitor Response

Description

When an Alarm occurs it is possible to set how the alarm images will be displayed. There are three display options available.

Quad

If an alarm is triggered the unit will automatically switch to a quad display to allow the primary alarm camera and all the secondary alarm cameras to be viewed.

	Single	If an alarm is triggered the unit will automatically switch to display just the primary alarm camera.
	Off	No change.
Alarm Mode	This setting controls how the unit handles the recording of the alarm images. There are three modes of alarm.	
	Trans	The alarm is active only when the alarm input is in a triggered state. The unit will use the alarm rate to record any pre-alarm images available along with the event and will return to normal recording when the alarm has ended.
	Ack	The alarm response finishes when the alarm is acknowledged. The unit will use the alarm rate to record any pre-alarm images available along with the event and will return to normal recording when the alarm is acknowledged. The alarm contact or VMD could still be active, but alarm recording will be stopped.
	Timed	The alarm is active for the time it is latched, it is then automatically silenced and acknowledged. The Alarm Time Out is measured from the end of the alarm trigger. The unit will use the alarm rate to record any pre-alarm images available along with the event. Alarm recording will be extended by the Alarm Time Out period before returning to normal recording. The Alarm Time Out will then become active, preventing any possible double triggers (<i>refer to Alarm Time Out</i>).
Alarm Time Out	It should be noted that pressing the acknowledge alarms button on the front panel of the unit will cancel the buzzer in Trans and Timed alarm modes. The Alarm Time Out extends the trigger period to avoid double alarm triggers from occurring, i.e. If a second trigger occurs on the same alarm input within the Alarm Time Out, the unit will not create a new event.	
Relay 1 / Relay 2	The relays are either normally open or normally closed.	
Keyswitch	If a key switch is installed, it should always be connected to alarm input 16. There are four modes of keyswitch operation: Disable, Enable Alarms, Enable VMD and Enable Alarms & VMD.	

Alarms - Text Inputs

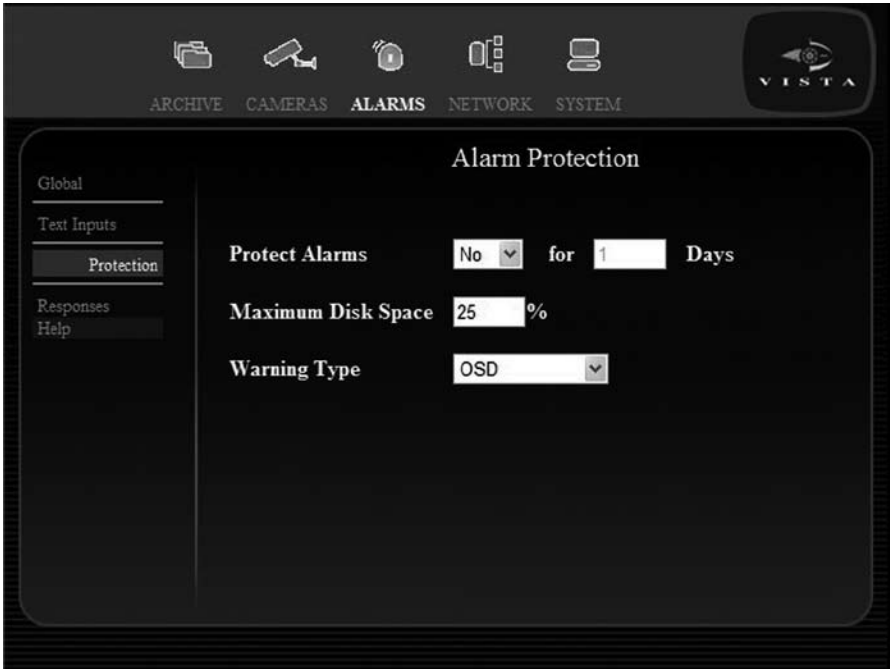
These are configurable exceptions responding to TEXT input from the RS232. Each exception consists of an operand, a value and a keyword. When an exception is detected, it can either be added to a specific alarm or added as a Tag, which means it will be entered into the Database and then searched for as a keyword event. The operands are used in conjunction with the value field.

	Operand	Value	String	Link
Excep1	Off	NaN		Tag
Excep2	Off	NaN		Tag
Excep3	Off	NaN		Tag
Excep4	Off	NaN		Tag
Excep5	Off	NaN		Tag
Excep6	Off	NaN		Tag
Excep7	Off	NaN		Tag
Excep8	Off	NaN		Tag

Item	Description
Operand1	The initial condition that the unit will use. The options are Off Disabled = (equals) If the text matches the parameter in the Value column it will be returned. <(less than) All text matches under the parameter in the Value column will be returned. >(greater than) All text matches over the parameter in the Value column will be returned. <=(less than or equal to) All text matches equal to or under the parameter in the Value column will be returned. >(greater than or equal to) All text matches equal to or over the parameter in the Value column will be returned.
Value String	The parameter to be searched for. This is the text that will be searched for and should match the data string that would have been sent by the POS till.
Note:	A string can contain the question mark symbol as a wildcard. Searching with ??ple would return apple.
Link	An exception can either be added to a specific alarm (1 - 16) or may be added to the database as a Tag.

Alarms - Protection

The Alarm Protection page configures if and for how long the alarmed events are protected on the disk. The menu allows the maximum disk space allowed for alarms to be defined before the oldest events are overwritten. A warning can be configured for when the alarms are about to be overwritten.



Item	Description
Protect Alarms	Alarms can be protected from being over written for a specified time. This will include any VMD or Text input added to the alarm. After this time, files will be overwritten.
Maximum Disk Space	The maximum disk space allowed for alarms before alarm protection no longer occurs. This is specified as a % of total disk space. A warning message 'Protection Limit Reached' will appear on the main monitor screen when the protection limit is reached. To cancel the alarm, either reduce the alarm protection duration or increase the maximum disk space.
Warning Type	The unit can deliver a warning on the OSD or as a buzzer when alarms are about to be overwritten.

Alarms - Responses

Each of the available alarms can be configured individually to perform certain predetermined actions, including Dial On Alarm, E-mail On Alarm, Relay Outputs 1 and 2 and moving cameras to preset positions. There are 16 available alarms on the 10 and 16 video input models and 4 on the 4 input model.

Item	Value	Linked Cameras	Preset
Response For	Alarm1		
Input	N/O		
LAN Notification	<input type="checkbox"/>		
E-mail On Alarm	<input type="checkbox"/>	Primary	Camera 1 0
		Secondary	None 0
		Secondary	None 0
Relay Output 1	<input checked="" type="checkbox"/>		
Relay Output 2	<input type="checkbox"/>		
Sound buzzer	No		

Item	Description
Response For	Select which alarm response is being programmed.
Input	This can be normally open (N/O), normally closed (N/C) or disabled.
LAN Notification	Select whether the Unit will contact a remote viewing and receiving centre on alarm. The RVRC contact details are set up in the Network Pages, refer to <i>Network - Notification Page</i> .
E-mail on Alarm	Select whether the unit will send an e-mail on alarm. The destination and content of the e-mail are set up in the Network Pages, refer to <i>Network - Notification Page</i> .
Relay Output 1 / 2	The unit is capable of triggering relays on alarm.
Linked Cameras	The unit can trigger specific cameras to record at the alarm rate and send telemetry cameras to preset positions, on receipt of an alarm. They will all be added to the event database under that alarm. The Primary camera will be used to send a thumbnail image in an e-mail (if configured) and will be the camera displayed on the monitor if 'Monitor 1 Response' is set to 'Single'. Any Secondary cameras will also switch to alarm mode recording and move to the programmed presets (if possible). If secondary cameras have the event off profile selected, the camera will not go into recording mode, but will continue in background recording (alarm inputs will be unaffected).
Presets	The unit can instruct a correctly configured telemetry camera to go to an onboard pre-programmed preset position on alarm.
Sound Buzzer	Toggle Yes/No to sound the units buzzer on alarm.

Network Menu Pages

There are three pages to the network menus: Basic Network Settings, Advanced Network Settings and E-mail LAN Notification.

Basic Network Page

Basic Network Settings allow the user to configure the IP address, Subnet Mask and Gateway and Bandwidth. If DHCP is enabled the fields for IP address, subnet mask and gateway shall be unavailable.

The screenshot shows the 'Basic Network Settings' page. At the top, there is a navigation bar with icons for Archive, Cameras, Alarms, Network, and System. The 'Network' menu is selected. On the left, there is a sidebar with 'Basic' selected, and other options like 'Advanced', 'Notification', and 'Help'. The main content area displays the following settings:

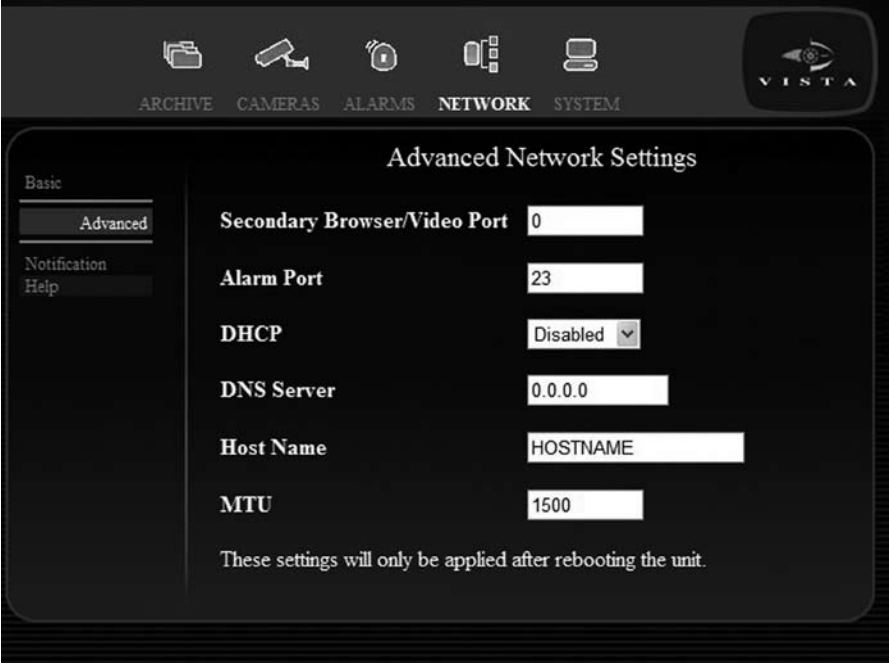
- IP Address:** 192.168.2.1
- Subnet Mask:** 255.255.255.0
- Gateway:** 0.0.0.0
- Bandwidth:** 4800 Kb
- DHCP Allocated Address:** 0.0.0.0

At the bottom of the settings area, a note reads: "These settings will only be applied after rebooting the unit."

Item	Description
IP Address	The unit needs a unique IP address and subnet mask to communicate over a network. The unit can be installed in a DHCP network environment where an IP address, subnet mask and default gateway will be automatically allocated from the network DHCP Server. This is enabled by default. Disabling this option requires a static IP address and subnet mask be manually configured.
Note:	<i>A DHCP address is temporary and can change, therefore it is recommended that the unit be allocated a fixed (permanent) IP address, subnet mask and default gateway. Alternatively power up with DHCP enabled and once an address has been assigned, disable DHCP. The assigned IP address will then be permanent.</i>
Subnet Mask	On an existing network this information is often obtained from the network Administrator.
Gateway	Obtain this information from the network Administrator. A default Gateway will be required if the unit is to be accessed from a remote location, such as via a WAN.
Bandwidth (kb)	It is possible to set maximum limits for the bandwidth utilisation on the Network port of the unit.
DHCP Allocated Address	If DHCP is enabled, the IP address allocated by the Server will be displayed in this box.

Network - Advanced

This page allows the port number for Video, Alarm and the Web Browser to be set. Note that these are secondary ports as the factory set will remain. It also allows the enable and disable of DHCP and the setup of DNS to provide a Host name. It is also possible to configure the Maximum Transmission Unit used to send video images.



Advanced Network Settings

Basic

Advanced

Notification

Help

Secondary Browser/Video Port

Alarm Port

DHCP

DNS Server

Host Name

MTU

These settings will only be applied after rebooting the unit.

Item	Description
Browser/Video port	Allows the secondary Browser/Video port to be configured.
Alarm Port	Allows the secondary Alarm Port to be configured.
DHCP	The unit needs a unique IP address and subnet mask to communicate over a network. The unit can be installed in a DHCP network environment where an IP address, subnet mask and default gateway will be automatically allocated from the network DHCP Server. This is enabled by default. Disabling this option requires a static IP address and subnet mask be manually configured.
DNS Server	Enter the IP address of the Domain Name Server if the facility is going to be used.
Host Name	The unique name by which a network attached device is known on a network. The hostname, used to identify a particular host on the World Wide Web or e-mail, is obtained from a DNS server.
MTU	The Ethernet MTU (Maximum Transmission Unit) is the largest physical packet size, measured in bytes, that a network can transmit. Any messages larger than the MTU are divided into smaller packets before being sent. Every network has a different MTU, which is set by the Network Administrator. Ideally, the MTU should be the same as the smallest MTU of all the networks between the viewing machine and the final destination. If the MTU figure is too large they will be broken up (fragmented), which slows down transmission speeds and in some cases cause a 'Connection to Unit Timed Out' message when viewing over a network.

MTU sizes can vary for each connection and it may be necessary to use trial and error to find the optimal MTU. Suggested MTU sizes are as follows; Consult the Internet Service Provider who will provide the optimal figure.

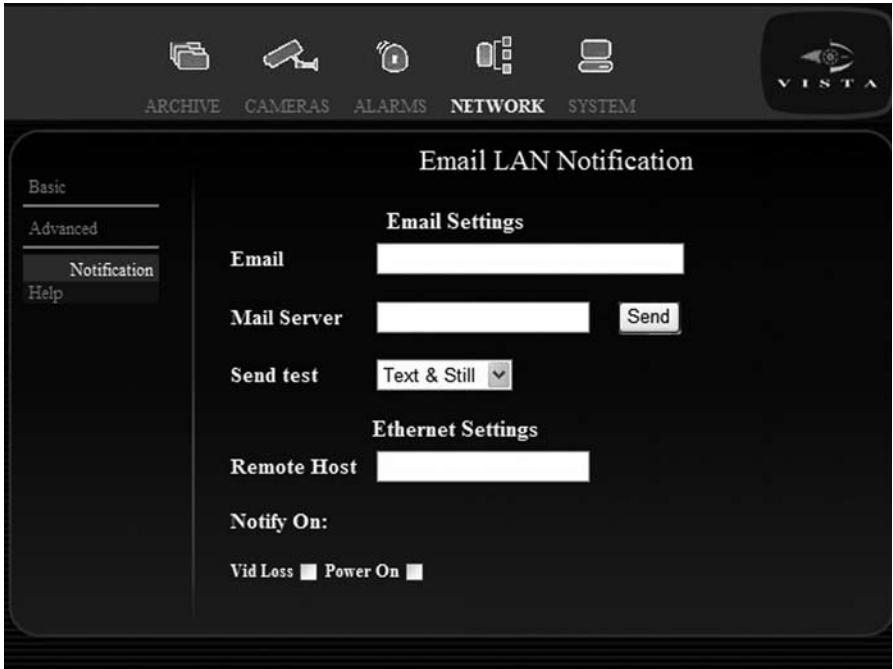
Maximum Transmission Unit	
Network Connection	MTU Size
PPP (ISDN/PSTN routers)	576
Ethernet	1500 (default)
PPPoE (PPP over Ethernet, ADSL, Cable)	1458
PPPoA (PPP over ATM, ADSL)	1458
VPN	1350

Network - Notification

The Notification page allows the user to set the e-mail address that the unit contacts on selected alarms. It configures the mail server via the IP address and allows the unit to send either plain text messages or text messages with a still attachment.

The only configuration required for Ethernet notification (to an RVRC) is the IP address of the host. The unit will try to send an alarm to this IP address 10 times over a period of 10 minutes.

Alarms can be sent for Camera Fail, VMD, Alarms, Stop Recording, Hard Disk Failure, Disk Full and Power On.



Item
E-mail Settings

Description
These settings will be used if the unit is set up to send an e-mail on alarm or VMD.

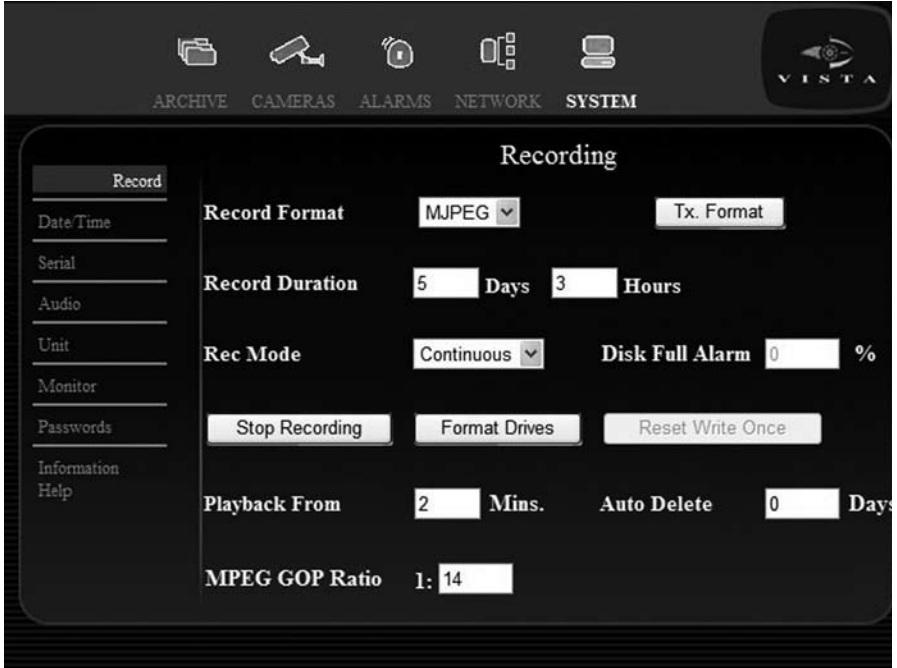
E-mail	This is the e-mail address of the nominated recipient.
Mail Server	This is the IP address of the mail server that the unit will use.
Send	The unit can attach a thumbnail image from the primary camera to the e-mail if required. Alternatively it can send a plain text mail.
Send test	This button will test the connection settings.
Ethernet Settings	These settings are used if the unit is going to communicate alarms to a remote location like an RVRC or alarm receiving centre.
Primary Remote Host	This is the IP address of the Gateway for the RVRC.
Notify On	The unit can send an alarm e-mail when it detects any or all of the following conditions; Video Loss and Power On.

System Menu Pages

The system menus provide the global configuration settings for the unit. The menu pages control the global settings for the Recording, Date/Time, Global Serial Port, Audio, Global Unit Settings, Monitor Display Settings, Passwords and Information.

System - Record

The Recording Menu allows Global configuration of camera settings for both live and playback.



Item	Description
Record Format	The recording format can be set to either MPEG or MJPEG. Both MPEG and MJPEG settings need to be configured to be compatible with the Viewing Software RVRC on the Tx Format page.
Tx Format	Live and recorded images captured by the local unit can be made available for remote network viewing, using the provided software. It is possible to specify the format of these images, refer to System - Record - Tx Format.
Record Duration	This is the calculation of the number of days possible recording, based on the record format and configured schedules.
Rec Mode	The unit can either record in Write Once or Continuous Mode. When the 'Write Once' option is selected, the system creates a marker on the loop recording to mark the start of the write once record mode. A warning will be displayed when before the marker is reached to say archiving is required. If this warning is ignored, all recording will stop when the unit reaches the marker. This is used in covert operation, where access to the recorded files can only be obtained at certain times and ensures vital information is never overwritten. Continuous mode is the default setting for the unit. The recorded images will be saved on the hard disk in a 'loop'. Once the hard disk reaches maximum capacity, the images that were stored at the start of the 'loop' will be automatically overwritten with the latest recordings (unless protected).

Disk Full Alarm	This sets a % threshold for the maximum disk space. When this threshold is exceeded, an alarm is activated stating 'Disk Low' in the event list .
Note:	<i>This option is a percentage of the overall hard disk of the unit, the equivalent in Gigabytes will be automatically calculated and displayed.</i>
Stop Recording	This button will stop recording to the unit. This action will require a high-level password.
Format Drives	This allows the unit to be reformatted. All recordings will be erased. This action will require a high level password.
Reset Write Once	This option resets the write once alarm function and resumes overwriting previously recorded data (oldest data will be overwritten first).
Playback From (Mins)	This setting determines the point the camera will commence playback.
Auto Delete (Days)	This setting will specify the minimum age of recording at which events are auto deleted in the event of the disk getting full.
MPEG GOP Ratio	The GOP ratio is the number of I frames to P frames when using MPEG recording, <i>refer to Differences between MPEG-4 and MJPEG(JPEG) for more information.</i>

Differences between MPEG-4 and MJPEG(JPEG)

MPEG-4 is a standard used primarily to compress audio and visual (AV) digital data (moving images and sound). MJPEG is an informal name for multimedia recording where each video frame is separately compressed as a JPEG image.

A video sequence of a scene consists of a number of pictures or frames. In a static scene, the initial frame contains an image. If there is no movement in the scene, all subsequent frames will contain the same data. MJPEG recording will record and compress each image individually.

If this redundancy were removed and only the changes in scene were recorded, it would be possible to get a better compression ratio.

MPEG-4 recording uses a keyframe (I-Frame) to record the full scene, then uses the following frames to record the differences between the I-Frame and each subsequent frame (P-Frames) i.e. the difference between I-Frame and frame 1, then the difference between frame 1 and frame 2, etc. These frames become less representative of the scene as time elapses until a new I-frame is recorded which refreshes the whole 'scene'.

The advantage of MPEG-4 recording is that, in static scenes, it requires less disk space to record a time-period than the equivalent JPEG recording. It is important to select an I-frame rate sufficient for accurate recording whilst maintaining the lower recording requirement of MPEG-4.

MPEG-4 is better suited to recording static scenes with little or no movement.

JPEG is better suited to recording high-motion scenes.

System - Record - Tx Format

Live and recorded images captured by the local unit can be made available for remote network viewing, using the provided software. It is possible to view images over a network in High, Medium or Low Quality, in either MPEG or MJPEG format. Viewing quality is based on the preset profiles used for recording.

This page allows transmission (live and playback) settings to be configured.

The screenshot shows the 'Tx Format' configuration page in the Vista software. The interface is dark-themed with a top navigation bar containing icons for Archive, Cameras, Alarms, Network, and System. A left sidebar lists menu items: Record, Date Time, Serial, Audio, Unit, Monitor, Passwords, Information, and Help. The main content area is titled 'Tx Format' and contains two sections: 'MPEG Tx Profiles' and 'MJPEG Tx Profiles'. Each section has a table with columns for Quality, Bitrate, and PPS. The 'Return to Recording' button is located at the bottom right of the main content area.

MPEG Tx Profiles			
	Quality	Bitrate	PPS
High	CBR	2048 Kbits/s	5
Medium	CBR	2048 Kbits/s	5
Low	CBR	2048 Kbits/s	5

MJPEG Tx Profiles		
	Quality	PPS
High	35	5
Medium	25	5
Low	15	5

Return to Recording

Item

MPEG Tx Profiles
Quality
Bitrate

Description

These settings will be adopted if MPEG is used for remote viewing. Establish the quality setting for transferred images.

This parameter dictates the rate at which data will be transferred and will effect the quality of the image being sent. An image that has a lot of movement will require more bandwidth to transmit. Setting a bitrate will limit the bandwidth available to this image. Therefore this setting is best used for static cameras viewing calm scenes. Select the Bitrate to be used with the selected camera profile. This box will only be available if Constant Bitrate (CBR) is selected in 'MPEG Tx Profiles (Quality)'.

PPS

Select the number of pictures per second to be transmitted using the selected camera profile. This box will be filled in automatically if Constant Bitrate (CBR) is selected in 'Camera Profile Used'.

MJPEG Tx Profiles

The MJPEG setting will only be available to edit if MJPEG Recording setting is configured.

Return to Recording

This button will navigate to the Previous menu page.

System - Date/Time

Sets date and time including their formats, also allowing for the setting of the time-zones for daylight saving and Network Time Protocol Server (NTP) set-up.

Record

- Date/Time
- Serial
- Audio
- Unit
- Monitor
- Passwords
- Information
- Help

Date/Time Settings

Date 16 / 07 / 2007 **Format:** dd/mm/yyyy

Time 01 : 30 : 04 **PM** **Format:** 12 Hour

Time zone No Daylight Savings

NTP Sync server [Empty Field]

The Timezone will only be applied after rebooting the unit.

Item	Description
Date	As default, the date is entered dd:mm:yy, this can be changed using the Date format option.
Format	The date can be entered in an alternative format if preferred, such as mm:dd:yy.
Time	The time should be entered in 24-hour format (HH:MM). If 12-hour format is selected, the drop down box will enable AM or PM to be selected.
Format	The time can be displayed in 12-hour or 24-hour format.
Time-zone	There are numerous time-zones supported on the unit. Select the zone to match where the unit is installed, so the time and date will update to reflect the local-time and will change in conjunction with Daylight Saving Time.
NTP Sync server	Enter the IP address of a Network Time Protocol server which will be used to automatically update the system time on the unit. The NTP update will occur daily at 2am local-time.

System - Serial

The Global Serial Port menu allows the serial port Protocol, Baud rate, Parity, Stop Bits and Flow Control to be configured. It shall also be possible to set Vista Keyboard Presets active and to configure the Vista keyboard Baud Rate. The RS232 may also be configured for Baud, Text, Remote Alarms or Debug usage and the baud rate can be set for each of these options.



Item	Description
Telemetry	
Protocol	The unit supports a number of serial and coaxial protocols, this menu allows the peripheral serial protocol to be selected. 485/422 Protocols Vista PowerDome, DM 2040/2050/2055/2060, Pelco P Spectra II, Spectra III, Sensormatic Speeddome™ IV, Ademco / VCL Orbiter & Jupiter Microspheres™, Bosch/Philips G3, Panasonic WV-CS850A/WV-CS854/WV-CW860, AD Speeddome™ V (Using 4-wire RS-422), Ultrak Ultradome™ KD6, JVC TK-C675BE/TK-C676/TK-C553E, Panasonic CSR600, BBV RS485 StarCard, Mark Mercer, Airtech/Kalatel CyberDome™, Samsung SCC-641, Sanyo and Vicon.
Baud	This is a measure of the number of symbols sent every second and can be set between 1200 and 115200.
Keyboard	
Set presets	This setting enables or disables the Vista keyboard presets.
Bax-Net(Kbd)	This sets the baud rate for the Vista keyboard and can be set between 9600 and 19200.
Relay follow on	Yes/No.
RS232 Port	
Usage	The RS232 Port can be used for Text (POS Applications), Remote Alarms (to receive alarms) or Debug.

Parity	Parity indicates whether the number of bits with value of one in a given set of bits is even or odd. It is the simplest level of error checking. Select 'None' to disable the function.
Stop Bits	Stop bits are used to signal the end of a transmission in asynchronous serial communication. Select '0' to disable the function.
Baud	This is a measure of the number of symbols sent every second and can be set between 1200 and 115200.
Data Bits	Data is transmitted as a series data bits and can be set at 7 or 8.
Flow Control	Flow control manages the exchange of data between two computers and can be Disabled, None, or be controlled by Hardware (Hard) or Software (Soft).

System - Audio

This page allows control of the systems Audio functions.

Item	Description
Record Audio	Select whether Audio is to be recorded alongside the Video images. The audio is linked to Camera 1.
Lan Audio	Select whether audio will be available when images are viewed over the LAN using the viewing software.
Record Volume Level	The recording volume level can be set between L1 and L10.
Output Volume Level	The playback volume can be set between L1 and L10.

System - Unit

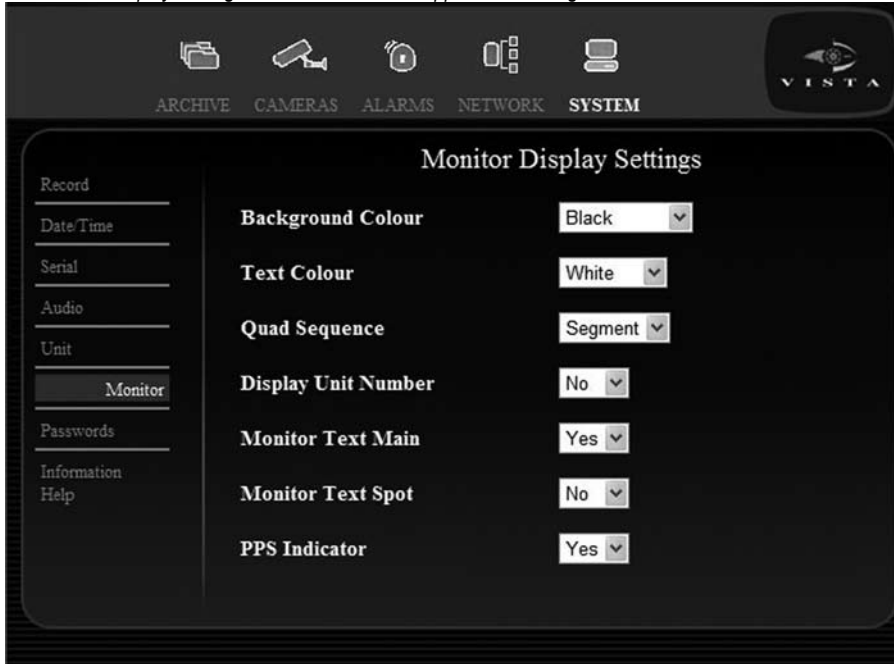
The Global Unit Settings menu allows a number of general features to be configured.

The screenshot shows the 'Global Unit Settings' window. At the top, there are icons for ARCHIVE, CAMERAS, ALARMS, NETWORK, and SYSTEM, with SYSTEM being the active tab. The window title is 'Global Unit Settings'. On the left is a sidebar menu with options: Record, Date/Time, Serial, Audio, Unit (highlighted), Monitor, Passwords, Information, and Help. The main content area is divided into two columns. The left column contains: Unit Title (text input: UNIT1), 1st Camera (text input: 1), Language (dropdown: English), Factory Default (button: Restore), Config source (dropdown: USB2), and buttons for Restore and Save. The right column contains: Unit Number (text input: 1), Auto Cam Detect (dropdown: On), Vloss (dropdown: On), VLBuzz (dropdown: Off), and Relay (dropdown: Off). At the bottom right is a Reboot button. At the bottom left is an Upgrade button.

Item	Description
Unit Title	Each unit can be allocated a relevant 20 character name to identify the unit to the Operator or System Administrator. It will also be sent to an Alarm receiving centre to identify the unit to the operator.
1st Camera	This parameter lets the user determine where to start camera numbering. The number is for the purpose of telemetry and offsets camera numbers in all the menus.
Unit Number	This parameter enables the unit to be assigned a number.
Auto Cam Detect	The Auto Cam Detect feature can be toggled Off/On.
Language	The menus on the unit can be displayed in a number of different languages. Select the most appropriate for the installation.
Vloss	The unit can trigger an alarm if video is lost.
Configuration Source	Local/DVD/USB2/Ext.HDD/Default.
VLBuzz	The unit can trigger warning buzzer if video is lost.
Restore	This will set the unit back to the factory settings.
Save	The changes to configuration settings can be saved to the selected configuration source.
Relay	The unit can trip one of the relays if video is lost.
Upgrade	The unit can be upgraded from various media sources.
Reboot	This button will cycle the power on the unit, reloading all the menus and applying any changed settings.

System - Monitor

The Monitor Display Settings menu allows various appearance changes to the live screens.



Item	Description
Background Colour	A box appears by default behind the onscreen menu and POS text. It is possible to change the colour of the box to Black, Blue, Red, Magenta, Green, Cyan, Yellow, White or make it Transparent.
Text Colour	The on-screen menu and POS text can be displayed in Black, Blue, Red, Magenta, Green, Cyan, Yellow or White.
Quad Sequence	It is possible to set the sequence format of the Quad display (feature only available on 10 and 16 camera input units). Paged A whole page (all segments) can sequence 1, 2, 3, 4, then 5, 6, 7, 8. Segment A single segment at the bottom right of the screen e.g. 1, 2, 3, 4 then 5, 6, 7, 8.
Display Unit Number	The unit number can be displayed in the top right hand side of the image.
Monitor Text Main	The main monitor (monitor 1) can display status information at the top and bottom of the screen including camera number, camera name, camera record icon, camera status (FAIL, ALM, ACT, VMD, HOLD, SEQ, PLAY, REVIEW, PAUSE, F REW, F ADV), unit date and time, unit number, keyboard mode, telemetry status and the logged in username.
Monitor Text Spot	The camera recording icon, camera status (SEQ, ALM and VMD only) and camera title fields can be displayed at the top of the screen on Monitor 2. The date and time is shown towards the bottom of the screen. The telemetry status is shown at the top of the page.
PPS Indicator	This option will turn On/Off the PPS indicator displayed in the Live screen.

System - Passwords

The System menus allow configuration of the user defined passwords. The passwords can either be 8 digit numeric only or 20 character alphanumeric.



Item
User Role

Description

It is possible to set separate passwords for Viewer, Installer, Manager and Web access. Each logon name will give different levels of access for configuration and viewing (displayed at the foot of the page).

When the unit is first booted up, it is not necessary to log in. In order to maintain security, the following steps should be taken at the earliest convenience:

1. Create an installer for the local client.
2. Create an installer for the remote webpages.
3. Log in as the installer and create other users as required.

Note: In addition to the Viewer, Installer and Manager passwords, there are additional required passwords for FTP and Telenet functions.. These are defaulted to:

VistaFtp 3477

Vista 3477

To change these defaults, FTP transfer: USERS.ini from /hdd0/etc/USERS.ini

Enter Vistaftp=**** and Vista=**** (where **** is the new password). Finally re-transfer this data to the unit.

Username
Add New

This field will identify an individual user to the unit

New users can easily be added, refer to System - Passwords - Add/Edit Username.

Edit

Users can easily be edited, refer to System - Passwords - Add/Edit Username.

Access Rights

The current level of camera access associated with the selected User Role is displayed for easy reference via the Live and Playback textboxes.

System - Passwords - Add/Edit Username

This page allows individual accounts to be set up by associating a username to permitted levels of access.

Item	Description
User Role	Displays the user role (level of access) selected for the new account on the previous page.
Username	A new username should be added to this field, or enter the username to be edited.
Old password	An existing username account being modified will need to provide the existing password.
New Password	An existing user changing the associated password will have to enter the password in this field. A new user will create a password using this field.
Confirm Password	The new password should be re-entered to ensure it is correct.
Access Rights	Users can be restricted to just viewing recorded or live images if preferred, or allowed access to both.
Camera Number	Users can be restricted to viewing certain cameras.
Cancel	This option will cancel any current password edit.

System - Information

The information page shows details of the system setup. The page also allows all log files to be exported to external media.

The log files shall include:

Connection Log	The connection log details all FTP and telnet connections made to the unit. Having this log containing the above information ensures ease of identification of Operators/Administrators that have logged into the system.
Anonymous FTP Log	The anonymous FTP log accounts for the fact that it is possible to disable the password allowing any user access to the Server via FTP. If the password is disabled then any user accessing the unit will be logged in the Anonymous FTP log.
Security Log	The Security Log identifies the users that have attempted to access the Configuration pages or any password protected page on the unit Web interface and have entered an incorrect password.
e-mail Log	This log holds information on the e-mails sent from the unit on receipt of an alarm. It follows the complete transaction from receipt of alarm to acknowledgement that the e-mail has been sent and the SMTP link has been dropped.
FTP Download Log	This log holds information on all Downloads from the unit.
Logfile	The Logfile stores all information on every action that is carried out by the unit; when alarms are received and actioned, resets, failed outward bound alarm connections, etc. This is the current file and will continue to store data until it reaches its maximum size limit. This file then writes over the top of the Logfile Backup to become the backup file, at which point a new logfile is created.
Logfile Backup	The previous version of the Logfile.
Item	Description
Export Log Target	The Logfiles can be exported as a text file to DVD-R, USB or PC.

Export

Begins the export process to the selected media.

Problem Solving

This is a list of common problems encountered using Digital Video recording technology in a CCTV environment, with suggested solutions for each scenario.

I keep getting two alarms for one event. How can I prevent this ?

A pulse extension extends the trigger period to avoid double alarm triggers from occurring, i.e. If a second trigger occurs on the same alarm input within the pulse extension time period, the unit will not create a new event. This is activated by setting the Alarm Mode to 'Timed' and then setting the 'Alarm Time Out' parameter to alarm ignore time.

Answer Go to the Alarms -> Global page and change the Alarm Mode parameter, or extend the Alarm Time Out period.

My images are faint / dark ?

Ensure the camera has been set up correctly. Signals from the cameras can be adjusted within the unit to compensate for a variety of conditions. The contrast and colour can be altered.

Answer Modify the camera settings via the Camera -> Setup page and modify the colour and contrast parameters.

Also If the camera feed was previously looped through and then disconnected, check the camera has been correctly terminated. Press and hold the menu (M) button and select Camera -> Setup. Check the Termination parameter is set to 'Yes'.

How do I identify which unit I am viewing over a network ?

Each unit can be allocated a relevant 20 character name to identify the unit to the Operator or System Administrator.

Answer Go to the System -> Unit page and edit the 'Unit Title' parameter.

How do I make sure I delete images after a certain time period ?

Images recorded onto disk can be made unavailable after a user-defined number of days and hours. This is designed to help operators comply with legislation on the retention of images for a set period of time. Once the timed expiry has been set, all images older than the selected time will be no longer available.

Answer Go to the System menu and modify the Auto Delete parameters.

How do I protect Alarm and VMD images from being overwritten ?

It is possible to protect images stored on the unit hard drives. These images will not be overwritten.

Answer Go to the Alarms -> Protection page and utilise the 'Protect Alarms' function, refer to the notes in the manual for more information.

I cannot select a specific camera

Answer Check that the camera video input in the Camera-> Basic page is set to 'Connected'.

Answer Check that the camera has not been made covert in the Camera-> Basic page.

Cannot display any other cameras apart from the one currently displayed

Answer Check that the monitor is connected to the Monitor A output and that the spot light is not lit

All of my cameras are being displayed in monochrome

The solution can either be a hardware or software issue.

Answer Check that the monitor being used is a colour monitor.

Answer Reboot the unit (using the menus) with a camera connected to input one, as the unit may have started in NTSC mode if no cameras were connected when it was initially booted.

I have a single camera being displayed in monochrome

Answer Check that the camera type is set as colour in the Camera -> Basic page.

My camera image is either too bright or too dark.

The solution can either be a hardware or software issue.

Answer Toggle the state of input termination in the Camera -> Setup page.

Answer Check the contrast settings in the individual Camera -> Setup Page.

My unit is not recording.

Answer Check that the Event rate is not set to zero in the Cameras -> Schedule page.

Answer Check that the unit is not in a permanent alarm condition.

Index

... access the installer menus ?	17
... access the unit web pages ?	16
... adjust video coverage ?	17
... change/edit the IP address ?	17
... check/set the IP address of the DVR using the Microbrowser ?	17
... check the software version using the Microbrowser ?	16
... connect to an Ethernet network ?	18
... copy Images to media ?	16
... exit playback ?	15
... go to a specific time ?	15
... operate the Internal CD/DVD-R ?	16
... perform a Motion search ?	17
... playback recorded images ?	14
... power the system up safely ?	13
... set the unit to a specific IP address ?	18
... set up a Schedule ?	13
... shutdown/reboot the system safely ?	13
... unprotect video ?	18
... use the Event Log ?	15
... view a sequence of cameras ?	13
... view a single camera ?	13
... view multiple cameras ?	13
... watermark a CD for use as evidence ?	16
Acknowledge Alarms	11
Alarm Menu Pages	41
Alarms	4
Alarms - Global	41
Alarms - Protection	44
Alarms - Responses	45
Alarms - Text Inputs	43
Alarms and relays	9
A quick overview of digital recording	6
Archive - Event Search	27
Archive - Event Search Results	28
Archive - Finalise	33
Archive - Motion - Search Results	31
Archive - Motion Search	30
Archive - Text Search	28
Archive - Time/Date Search	32
Archive Menu	27
Archive Text Search Results	30
Audio	9
Basic Network Page	46
Before you start	20
Camera Menu Pages	35
Cameras - Basic	35
Cameras - Basic - Telemetry Configuration	36
Cameras - Schedules	37
Cameras - Setup	40
Cameras - VMD	38
Cameras - Weekend and Holidays	39
Camera selection	10
Check the contents of the box	20
Choosing a location for installation	20
Connect Cameras	22
Connect Monitors	22
Connect Power	23
Contents	2
Copy an event to the Archive List	15
Daily Checks	3
Data	9
Design of this manual	7
Differences between MPEG-4 and MJPEG(JPEG)	51

Displays	4
Enter the end time and date for the search.	15
Event type.....	15
External Drive Support	4
Features	4
Filter from (Start)	15
Filter to (Stop)	15
Forward Play	10
General Maintenance notes	3
Hard disk capacity	7
Hard Drive support	4
Help	12
How Do I ...?.....	13
Image quality	6
Important Safeguards.....	5
Installing the Unit.....	20
Instructions for switching between the Sun JVM and Microsoft VM using the Java Control Panel:	21
Integration.....	4
Introduction.....	3
Local operation	4
Memory backup	6
Menu Button	11
Menu Navigation.....	11
Menu Navigation buttons.....	11
Menu Select button.....	11
Monitor control.....	10
Monitor Selection.....	10
Multi-screen	10
Navigating the Menus.....	26
Network - Advanced	47
Network - Notification	48
Network control.....	4
Network Menu Pages	46
Network viewing package.....	4
Other buttons	11
Passwords.....	3
Pause/Freeze	10
Play an event back full-screen.....	15
Playback buttons	10
Power Sources	5
Presets	11
Print	12
Problem Solving	62
Quick Archive.....	11
Quick Connection.....	22
Quick Setup menu.....	24
Read Instructions.....	5
Rear Panel connections	9
Recording	4
Reverse Play	10
RoHS Status.....	6
Scheduling capability.....	4
Search	11
Search type	15
Sequence	10
Servicing.....	5
Start a new search.....	16
Stop/Eject	10
System - Audio	55
System - Date/Time.....	53
System - Information	60
System - Monitor	57
System - Passwords.....	58
System - Passwords - Add/Edit Username.....	59
System - Record.....	50

System - Record - Tx Format	52
System - Serial	54
System - Unit	56
System Menu Pages	50
Telemetry	4
To connect to an Ethernet network	18
To disable DHCP:	18
To insert a CDR:	16
To remove a CDR:	16
To search for an event:	15
To start a Smart Search (from live viewing mode).....	17
To switch between the Sun JVM and Microsoft VM using Internet Options:	21
Typical High Quality Recording Settings	7
Typical Long Duration Recording Settings	7
Unit Overview	9
Using the Quick Archive Finalise Menu	16
Ventilation	5
Video	9
Video input Options	4
Video Motion Detection	4
View more events	16
WEEE Status	6
What is the Vista Navigator ?	3
Zoom in.....	11
Zoom out	11

Vista,
Norbain House, Eskdale Road,
Winnersham Triangle, Wokingham
Berkshire RG41 5TS
Tel ++44(0)118 944 0123
Fax ++44(0)118 944 0999
www.vista-cctv.com