

# ***NVS365***

## ***NETWORK VIDEO SERVER***



*The NVS365 Network Video Server is a low cost option for single channel video viewing via a PC. The client software can record video in DVR365 MPEG4 format and offers remote PTZ control.*

*Now supplied with sightBOSS-2 client software.*

***Version 6.0***

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## **1. Safety Precautions**

**(Please read this page before installation)**

- 1.1 This manual is intended for use by both the installer and end user of this Network Video Server.
- 1.2 The manual contains information about installing, configuring and using this product and must only be used in accordance with the manufacturers' instructions.
- 1.3 The installation must be performed by qualified service personnel in accordance with safety regulations.
- 1.4 To prevent any fire hazard, do not install this unit externally, in an un-ventilated cabinet or cupboard, in extreme temperatures of heat or cold or in areas of humid, damp or wet conditions.
- 1.5 Avoid installing the unit in direct sunlight.
- 1.6 Only install this unit horizontally and never vertically.
- 1.7 Ensure the unit is not exposed to vibration and do not place other equipment on top or below this unit or reduce ventilation to the cooling fan.
- 1.8 Always disconnect the power supply before opening the unit's case.
- 1.9 During the warranty period of one year, we will repair or replace this Network Video Server free of charge subject to the above conditions. In order to invoke the warranty it will be necessary to provide details of the model number and serial number on the product barcode sticker.
- 1.10 Any changes made to components or use of this unit, electrical power supply faults or surges, storms, lightening strike or physical damage will void the warranty.
- 1.11 Please inform the installer of this equipment about service or technical assistance.

## **2. Checking the Accessories**

One user's manual

One 12v DC 1.5A Power Supply

One CD containing Client Software and standalone Player program.

### 3. Product Technical Specifications

Function	Technical Specifications
Operation system	Embedded Linux operation system
Interface	SightBOSS-2 client software
Model	NVS365
Video Input	1channel composite video (NTSC/PAL) , BNC 1.0V p-p , 75Ω
Audio Input	1channel audio input, input voltage<2.5Vpp,/input impedance >10KOhm. single track plug MIC available Vbias=3.3v*3/4 inside20dB amplifier input impedance >3K ohm. single track plug
Audio output	1channel audio output output<4Vpp,power<1W, load>8Ohm single track plug
Video display	1window
Video standard	PAL 625 lines 50f/s or NTSC 525 lines 60f/s
Image resolution	Real-time monitor PAL/NTSC VGA/QVGA/HD1/CIF/QCIF
Motion detection	Area setting:192(16×12) detection areas on the screen; Detection sense settings: 3 levels
Video compression	MPEG-4(VBR) MPEG-4(CBR)
Audio compression	PCM
Video recording speed	Real-time mode NTSC 1f/s-30f/s for each channel adjustable. PAL 1f/s-25f/s for each channel adjustable
Image quality	6 levels selectable
Alarm input	4-channel grounding alarm input
Alarm output	1-channel relay outputs
Alarm relay	30VDC 1A 125V 0.5A
Console port	RS232 transparent series output
Network connection	RJ45 10M/100M Ethernet adapter
Pan-tilt control	RS485
Power Supply	Input AC100-240V 50/60hz Output DC12V/1000mA
Power consume	5W
Working temperature	5°C ~ 50°C
Working humidity	20% ~ 80%
Barometric pressure	86kpa ~ 106kpa
Size	132 x 136.8 x 30
Weight	1.2KG
Installation	Shelf installation; Flat installation

#### 3.1 Product Overview

The NVS365 Video Server has one video and one audio input channel and through the SightBoss-2 software can be connected locally through a LAN connection via a P.C. The software controls a schedule or event driven triggers to record direct to the P.C hard drive in MPEG4 format. The frame rate can be set at 25 FPS or slower. The data stored on the PC can be played back using the SightBoss-2 software or by using a standalone Player and the software can be used to control some PTZ functions.

## 4. Product Features

<b>User Management</b>	·Logon via a User Group. Each User group has different management powers, which can be edited freely. Each User Group is exclusive.
<b>Storage</b>	·Video data can be stored on the P.C hard drives. Two hard drive volumes are required with data storage on the second drive.
<b>Alarm</b>	·Alarm inputs can be triggered using the pre-defined relay setup, which can prompt the user on screen via sightBOSS-2 client. ·The user can setup an automatic prompt or alarm on video loss. ·A 9Mb memory buffer stores a pre-recorded image and audio when an event is triggered, sends the related data to recorded file.
<b>Network monitoring</b>	·The Network Video Server sends compressed audio/video data to the PC end, where the data is decompressed and displayed. ·Providing there is sufficient bandwidth, the latency period is normally less than 1 second. ·Maximum of 8-10 simultaneous connections are normally possible. ·Audio/video data is transmitted by TCP.
<b>Network management</b>	·Allows device configuration via sightBOSS-2 client
<b>Controlling peripherals</b>	·Supports control of peripherals – setting up protocol and port of peripherals. ·Supports data transfer through RS232 and RS485. (Note RS232 is not supported.)
<b>Auxiliary</b>	·Supports switching between NTSC and PAL. ·Display system resources info and running statistics in real-time. ·Creates a runtime log for information and problem resolution.

### 4.1 Resilience Tests

The insulating resistance between power supply (ac) terminal and the metal shell of the Network Video Server is more than 100M $\Omega$ , and in a humid and hot environment it is generally more than 10M $\Omega$ .

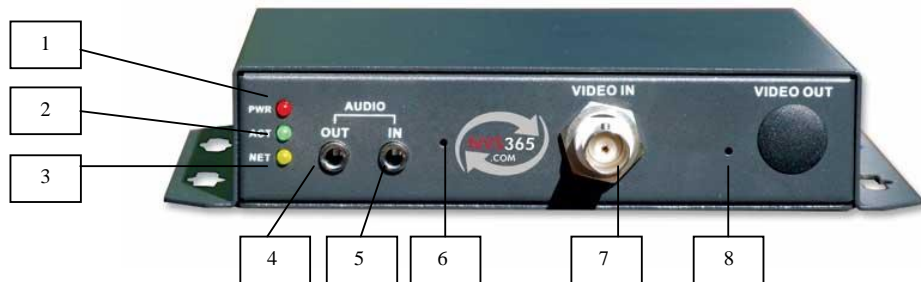
Voltage of plug and voltage between power supply (ac) terminal and metal shell of the Network Video Server can withstand AC 50Hz 1500V for up to one minute. Leakage Current is less than 5mA. AC peak.

NVS performs consistently in normal working conditions. There are no dangers from operating this unit.

In normal conditions, the shell temperature is less than 65°C. Measurements on generated heat after four hours continuous running show elevated temperature is lower than prescribed value. Tests reveal that when the non-metallic shell has been fired 5 times, each time for 5 seconds, no combustion or self-ignition has occurred with this product.

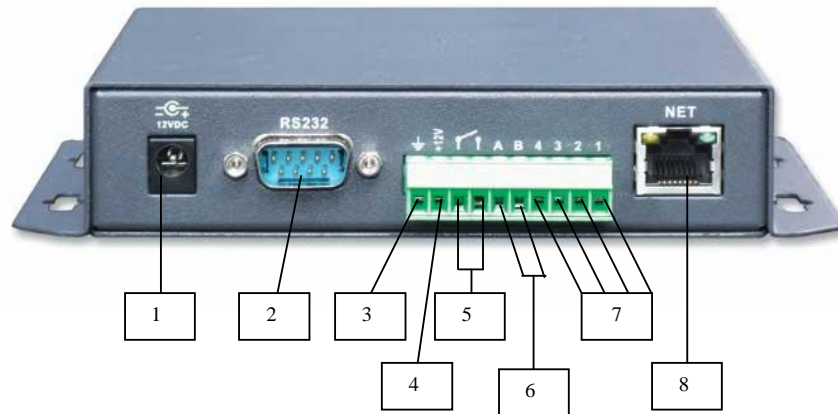
## 5. Installation & Operation

### 5.1 Front Panel



1. Power Supply indicator light
2. Status indicator light
3. Network indicator light
4. Audio Output
5. Audio Input
6. Audio selection input switch (cable input or microphone)
7. Video input BNC
8. Reset switch

## 5.2 Rear Panel



1. Power Supply in 12v DC
2. RS232 connector (not supported)
3. Ground connection
4. Power output 12v DC
5. Alarm Output (always on)
6. RS485 connections (A+ and B-) for PTZ operation
7. Alarm Inputs x 4
8. Ethernet connection 10M/100M

## 5.3 Connecting NVS Server

Connect a camera to 'Video In' BNC and an ethernet network cable to the RJ45 NET connection on NVS. Connect 12vDC power supply using 2.1 power jack. The NVS unit requires a 12vDC regulated power supply unit rated at 1.5Amps. If using a PTZ unit, connect a CAT5 twisted pair (or similar) to the A and B connections on the green terminal strip. Note that A is the A+ line (Orange cable) and B is the B- line (Yellow cable) on the PTZ605. The NVS when setup can record to the PC hard drives. The PC must have at least two hard drive letters. This can be two partitions on one hard drive, two hard drives or one hard drive and one additional external server used by the PC.



## 6. Networking Configuration

### 6.1 P.C Minimum Configuration

We recommend the following configuration:

**Hardware**

CPU P4 2.0G

2 x 250Gb Hard Drives or two partitions on one 500Gb Hard Drive

**Display card:**

Supports graphics cards such as ATI, TNT2 PRO etc. We recommend ATI9800 or above dual channel. 128M/128bit

**Network card:**

10/100/1000M auto-sensing

**System Software:**

Windows 2000 SP4 or XP service pack 2/3. Please note that sightBOSS-2 is not specifically Vista or Windows 7 aware so should be run as an administrator.

**PTZ Operation:**

The NVS has been tested with a high speed Excel PTZ605 that has a PTZ and camera menu. The following have been successfully tested: Presets, Tour, Autoscan and Pattern. The presets and tour initiation can be accomplished using presets. The Autoscan and Pattern can only be initiated through the PTZ menu. The slow speed PTZ505 can only set and call presets as it has no PTZ menu.

### 6.2 SightBoss-2 Installation

The CD contains the SightBoss-2 software, the standalone player and a copy of the NVS365 manual. The SightBoss-2 software requires a user and password to logon and the is User **admin** Password **admin**. Follow the on screen instructions for loading software.

### 6.3 Uninstall


There are two ways for you to un-install the SightBoss-2 software.

Click on **Start**, then **Programs**, then select **SightBoss-2**. Now right click mouse and select **Un-installation**.

Click on **Start, Control Panel** and then select **Add or remove programs**. Select SightBoss-2 and select **Un-installation**.

## 7. SightBoss-2 Client Software

### 7.1 Log In

Double left click the SightBoss-2 icon  on the desktop to start the program.

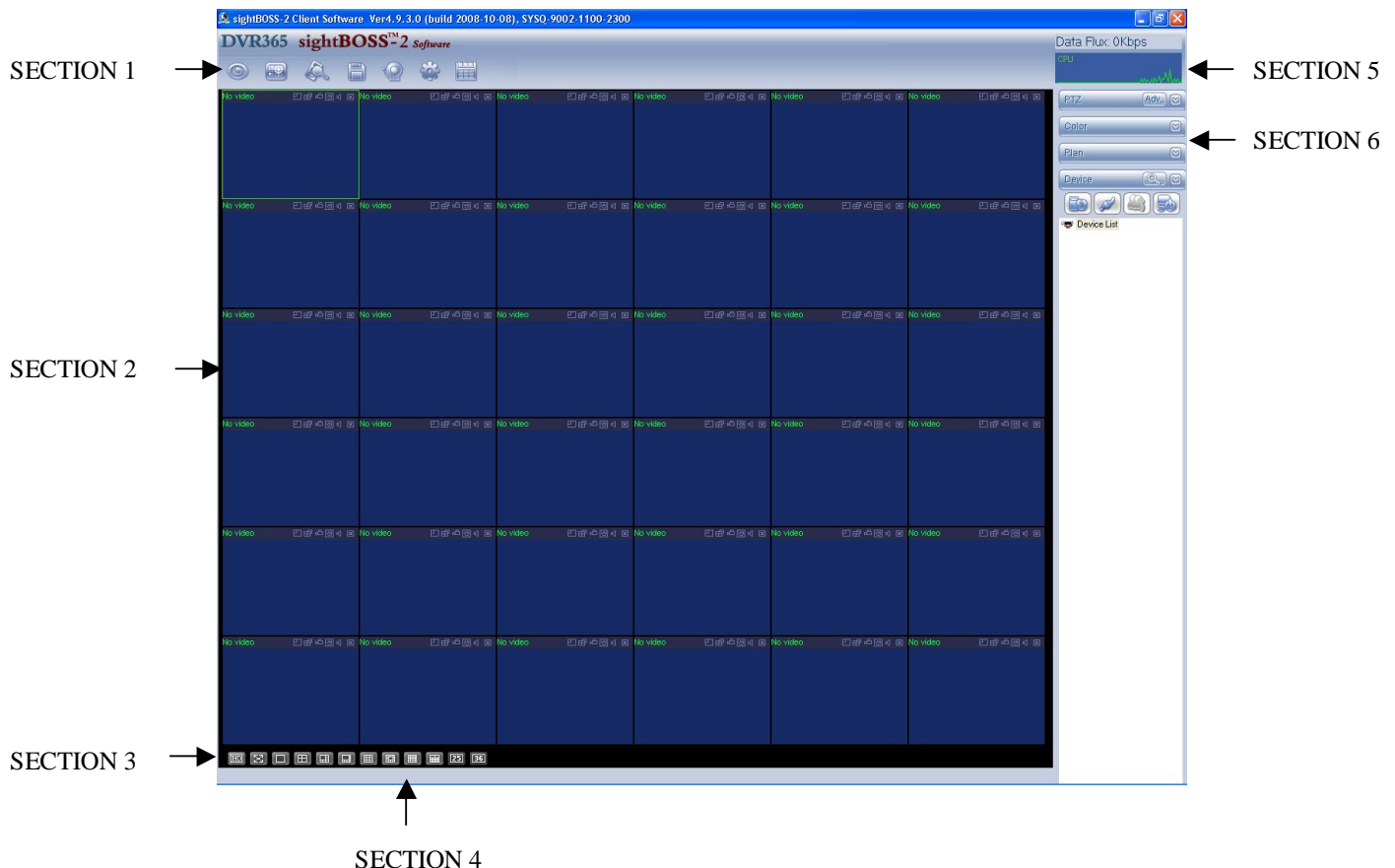
The following logon screen will be displayed.



The Default User is **admin** and the default password is **admin**.  
If you wish to save the password then tick the Save Password box.  
Enter **OK** to log in.

## 7.2 Main Monitor Screen

After your login, you can see the Main Monitor screen below.



The SightBoss-2 client software consists of five functional units or modules: Network Monitor Unit, Network File Unit, Network Alarm Unit, Network Management Unit and Log Unit.

There are in total six sections:

**Section 1:** There are seven function keys: **Monitor, E-map, Record, Save, Alarm, Log and System.**

**Section 2:** This is where you view video channels.

**Section 3:** This is where you select display mode. System supports various display screen modes but as the NVS is a single stream video server generally full screen mode is used. The HD item is for you to select priority between High or Low video quality.

**Section 4:** This is where you view current help information. This will be displayed in red.

**Section 5:** This displays data flux and CPU status.

**Section 6:** Here are four function buttons: **PTZ, Colour, Plan and Device.** Please note system only supports one window in full-screen. Hence we recommend resolution 1024\*768.

### 7.3 Networking your NVS Unit

Ensure you have powered the NVS server and have connected the network cable.

Please make sure your NVS and network are connected correctly. Refer to Rear Panel diagram earlier in manual which includes the location of the RJ45 port (net) used to connect to PCs.

The default IP address set in the NVS unit is **192.168.1.108**

#### Direct Connection

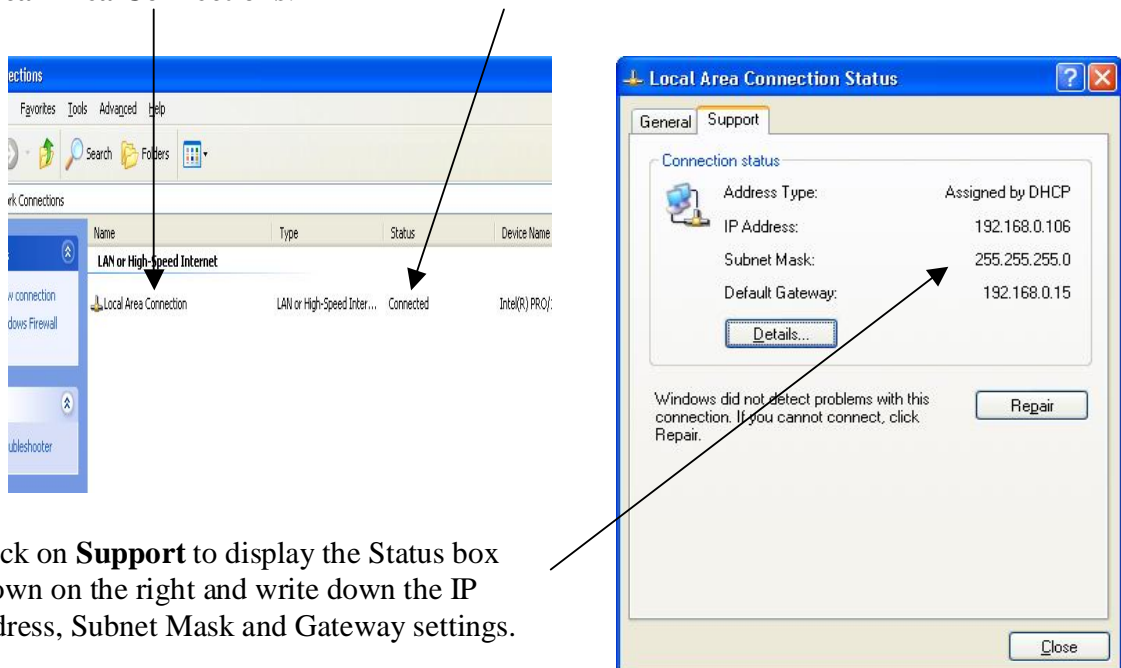
If you are connecting directly between the NVS server and PC, you must connect using a crossover cable.

#### LAN Connection

If you are connecting to a modem/router/switch ensure you have connected a patch/LAN cable from that device to NVS unit. The PC or laptop should also be connected to the modem/router/switch by another patch/LAN cable.

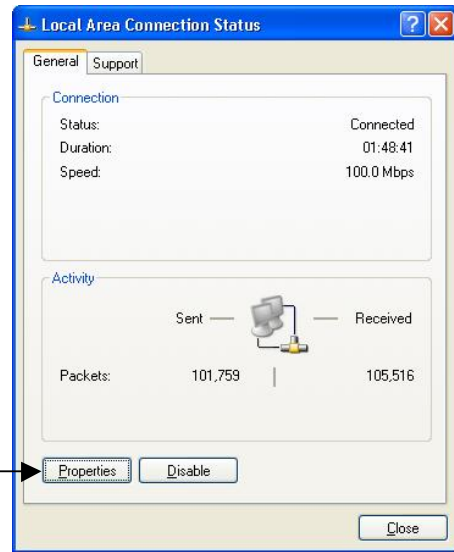
#### 7.3.1 Establishing PC IP address settings

In order that the PC can connect to the NVS server, both units must be in the same network range as defined by the Subnet Mask. As the NVS server has a default IP address of 192.168.1.108 it will be necessary to set the PC to the same range. For example set the PC to 192.168.1.100. In some cases the PC will already be networked and may not be in the same range as the default network server. The PC may have been connected automatically to the network as the IP address has been allocated using DHCP and is not displayed. To find out the current IP address, click on Control Panel, click on Network Connections and selecting the line showing **Connected**, double left click on **Local Area Connections**.

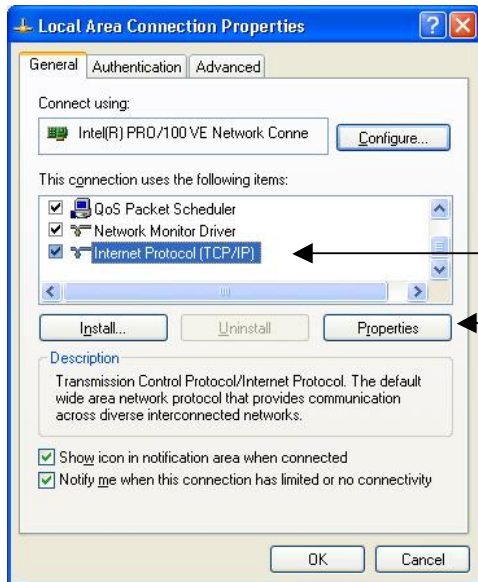


Click on **Support** to display the Status box shown on the right and write down the IP address, Subnet Mask and Gateway settings.

Now connect a crossover cable between the PC and the NVS server, enter Control Panel, select Network Connections and click on Local Area Connection Status.



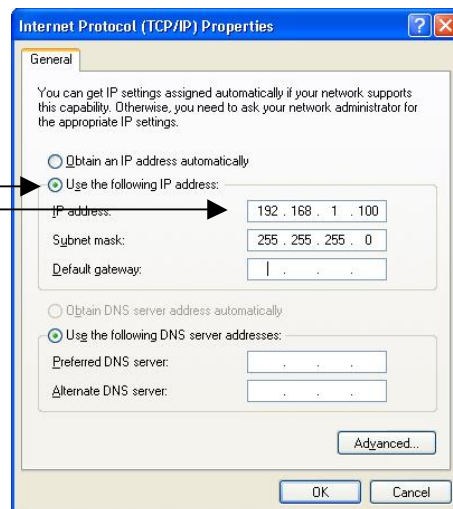
Now click on Properties.



Now highlight Internet Protocol (TCP/IP) and click on Properties again.

Click **Use the following IP address** and set an IP address of **192.168.1.100** then click **OK**

This will allow you to connect to the NVS server and use SightBoss to change the IP address, Subnet Mask and Gateway to the range required. See Network menu change below.



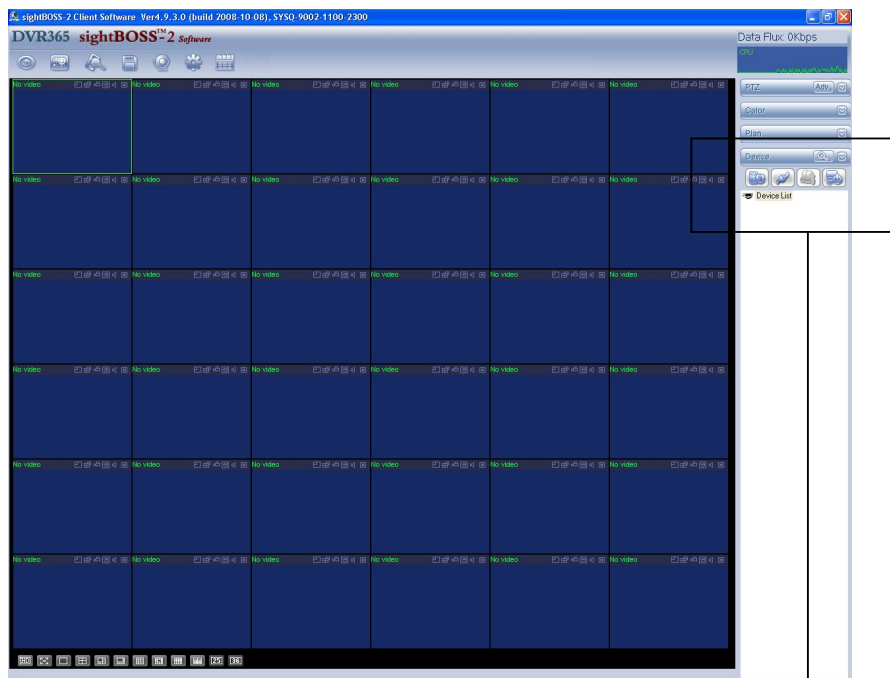
### 7.3.2 Using SightBoss-2 to change IP address in NVS Server

Now fire up SightBoss-2 software by double left clicking SightBoss-2 icon on desktop.

The following will be displayed.

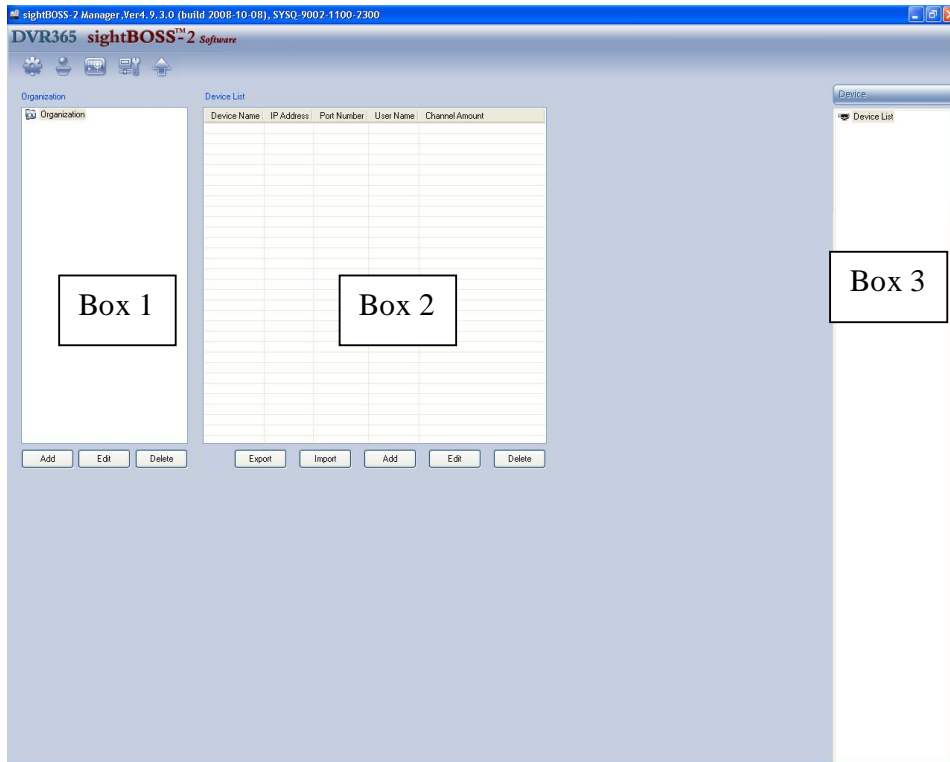


Then click on OK to display the SightBoss-2 main screen below.

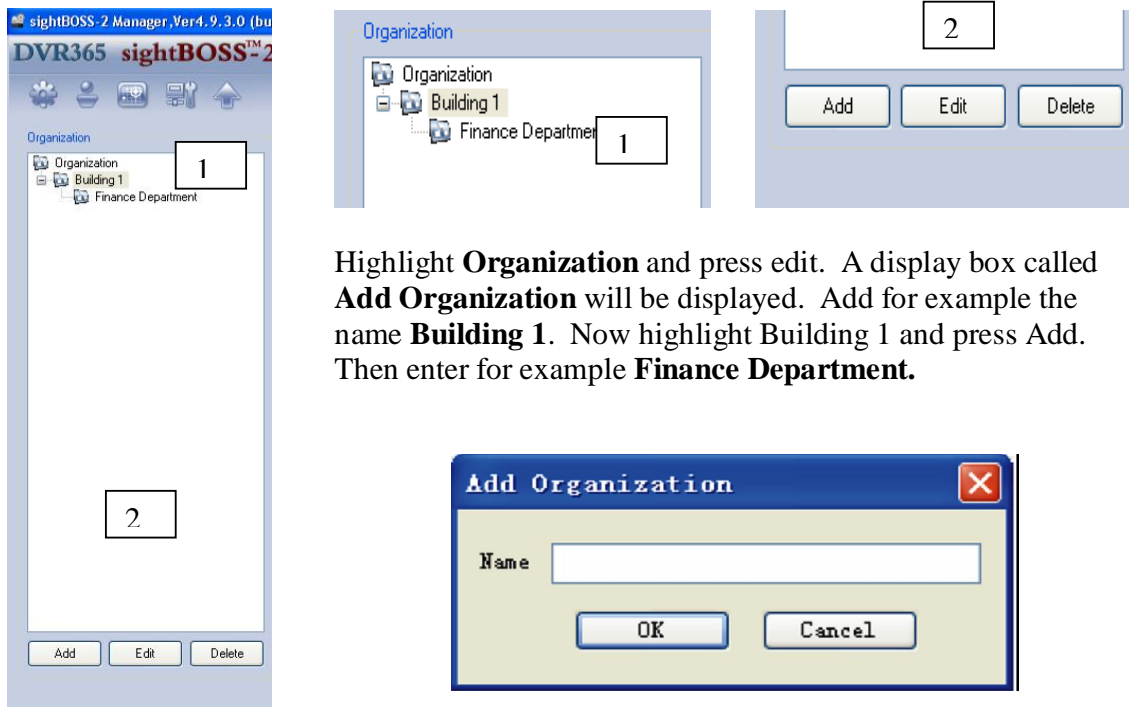


Now click on Device Management icon to display the Network Management screen.

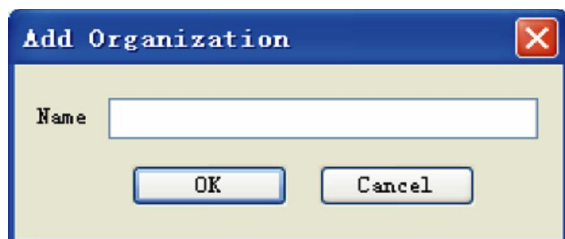




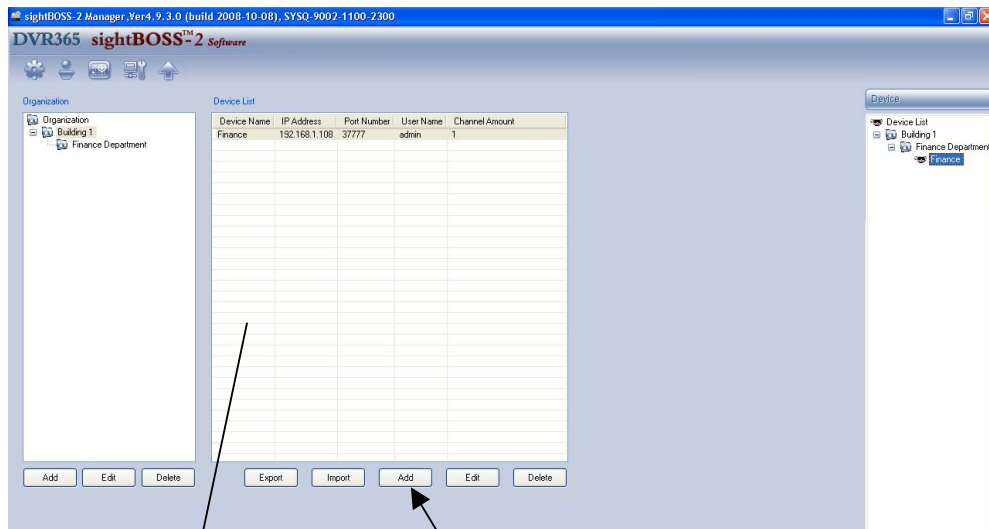
This is the **Network Management** screen. Box 1 is for setting the organisation tree. This allows you to control a number of NVS servers within your own network. Use the Add, Edit or Delete commands to build the hierarchical tree. See example below.



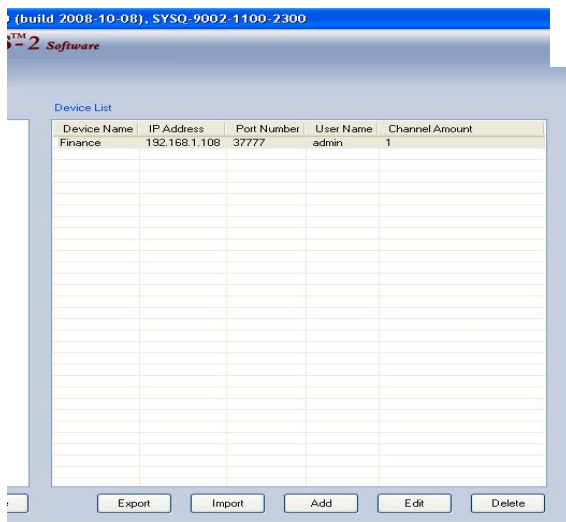
Highlight **Organization** and press edit. A display box called **Add Organization** will be displayed. Add for example the name **Building 1**. Now highlight Building 1 and press Add. Then enter for example **Finance Department**.



The next step is to add the device. This relates to the Box 2 shown in the **Network Management** screen.



Click on Add and a box called **Add a device** will be displayed.



The 'Add a device' dialog box contains the following fields and options:

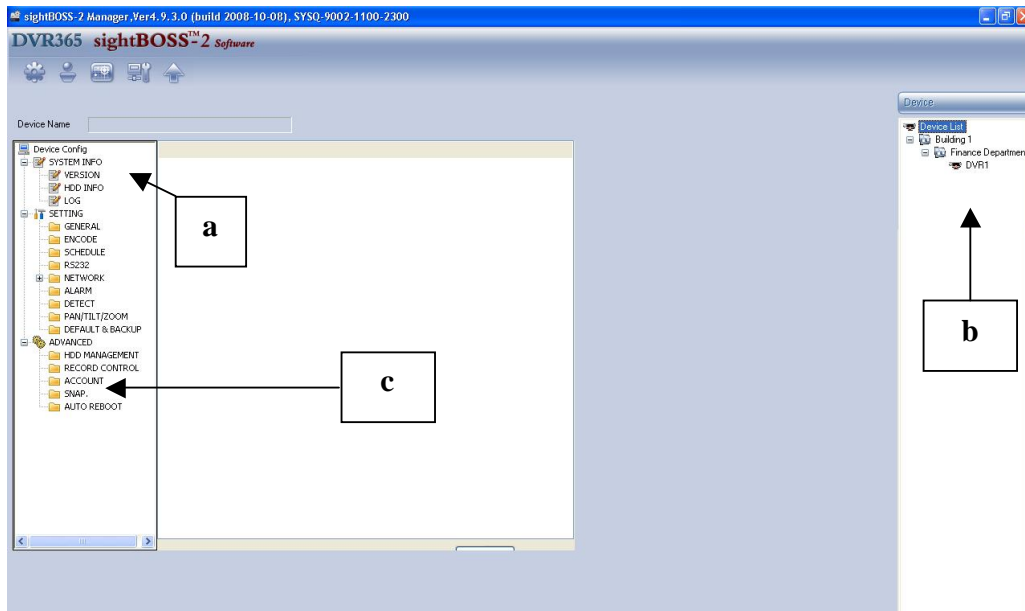
- Device Name: [Text input field]
- IP Address: [Text input field with value 0 . 0 . 0 . 0]
- Port Number: [Text input field with value 37777]
- Domain Name:  [Text input field]
- User Name: [Text input field with value admin]
- DDNS:  [Text input field]
- Password: [Text input field]
- DDNS Port: [Text input field with value 0]
- Total: [Text input field with value 8]
- Modify camera type: [Text input field]
- Buttons: Save, Cancel

### Example of Adding a Device

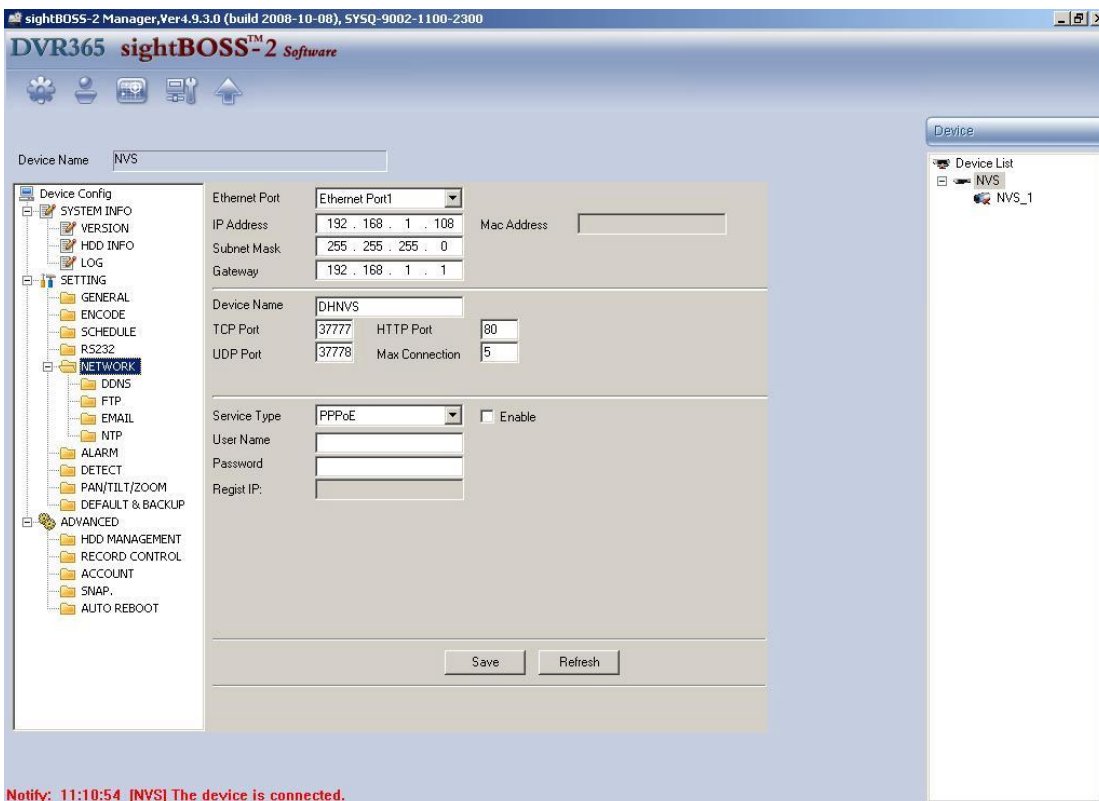
1. **Device Name** Enter a name unless using name in Organisation that has been highlighted.
2. **Password** Enter password in NVS unit (default is **admin**)
3. **IP Address** Enter the IP address of the NVS server. The default IP address is **192.168.1.108**.
4. **Total** Enter the number of channels on this unit. The NVS is 1.
5. **Alarms** Set alarms to 4.



Now enter Device Management **a** to select Network settings in order to change the NVS IP address to that required. Then ensure you have connected to the NVS **b** by clicking on device. Then select the Network menu **c**



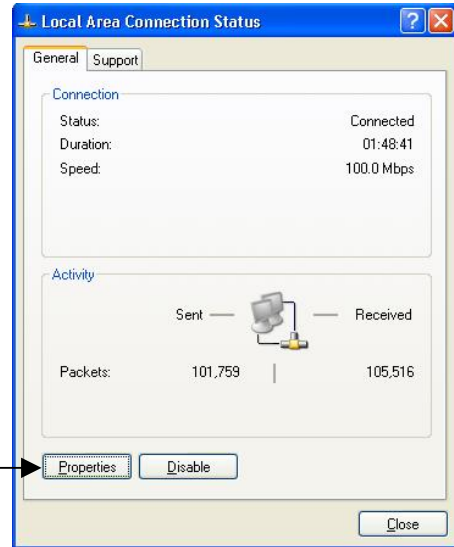
Now change the IP address settings in the NVS unit to those required.



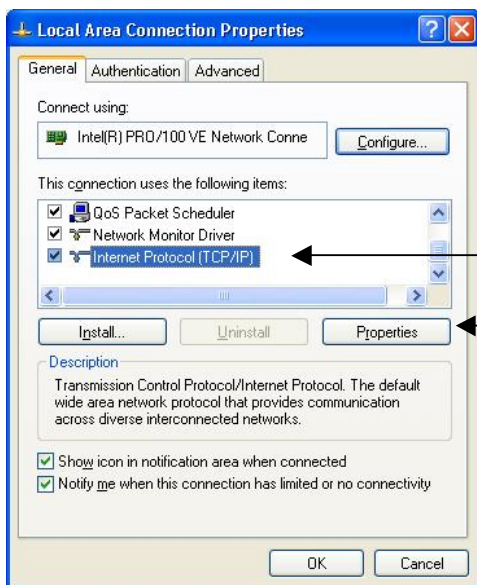
### 7.3.3 Resetting IP address settings in PC

Having changed the IP address settings in the NVS unit you will need to press SAVE and exit the SightBoss-2 software.

Now reconnect the PC and the NVS server to the original network using original network cables, enter Control Panel, select Network Connections and click on Properties.

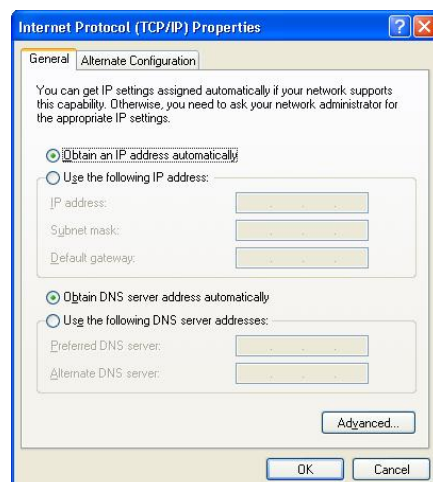


Now click on Properties.



Now highlight Internet Protocol (TCP/IP) and click on Properties again.

Now change the PC IP address settings back to the original settings, then click **OK**. Now you need to amend the network settings in SightBoss.



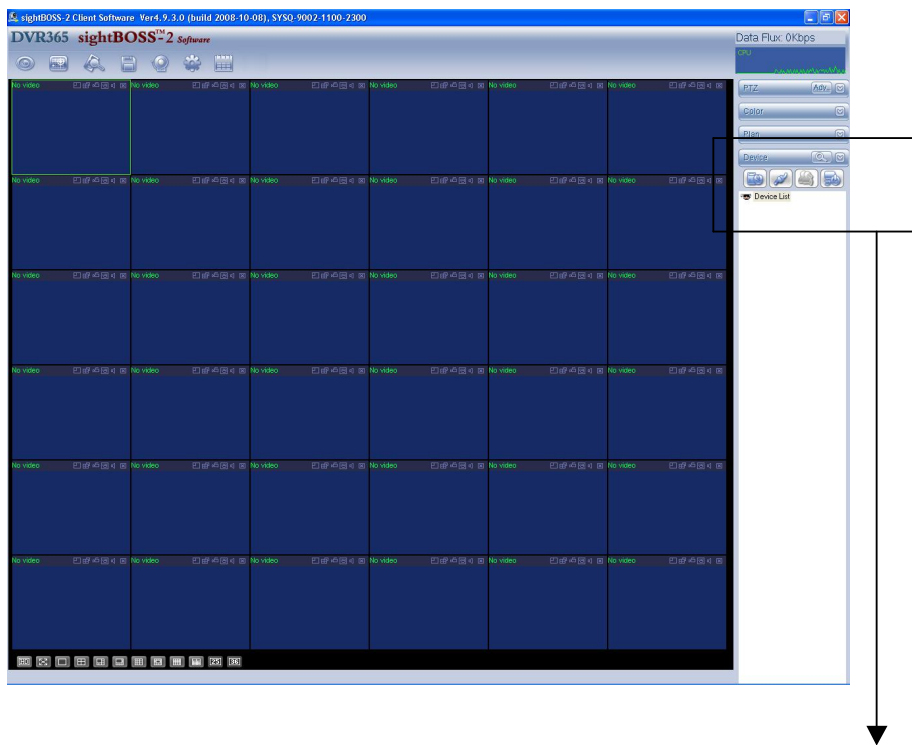
### 7.3.4 Setting IP settings in SightBoss-2

Now fire up SightBoss-2 software by double left clicking SightBoss-2 icon on desktop.

The following will be displayed.

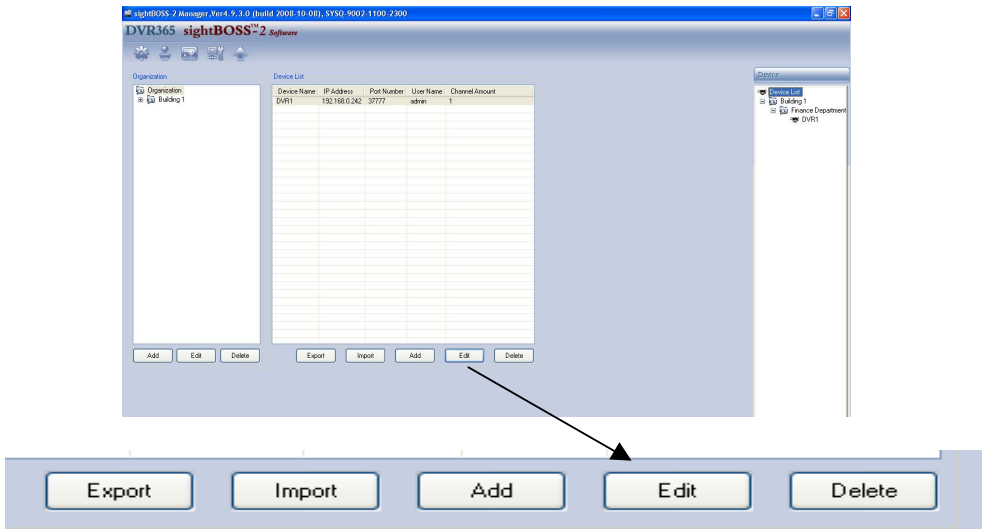


Then click on OK to display the SightBoss-2 main screen below.

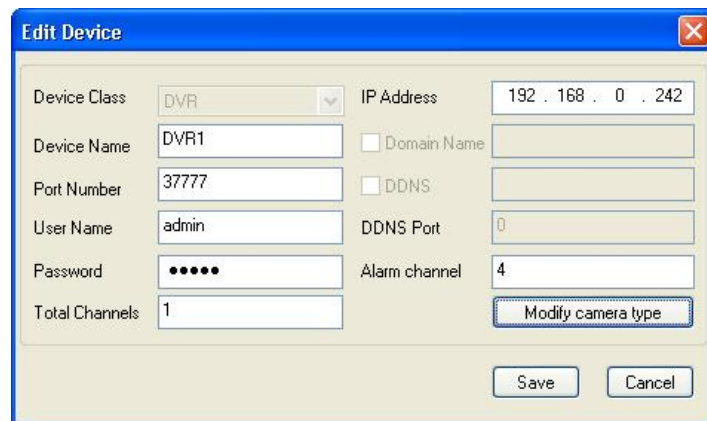


Now click on Device Management icon to display the Network Management screen.





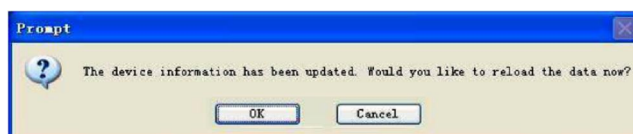
In the **Network Management** screen use the Edit command under the Device List box to change to the new IP address.



Click on Modify camera type and click on Speed Dome if PTZ is connected to NVS. Click OK.

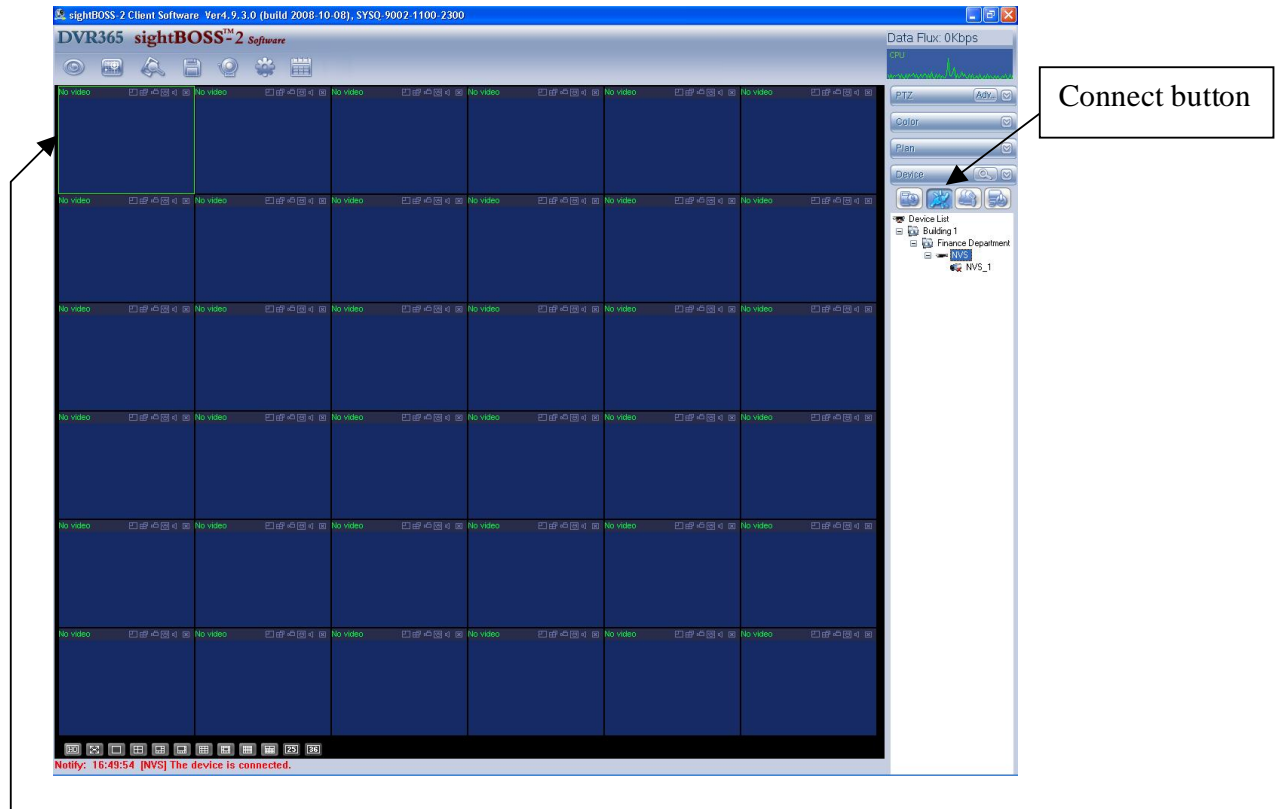


After finishing setup, click the save button on the top right corner and system then displays the following interface. Please click OK to update the information.



## 8. NVS Operation

### 8.1 Connecting and Disconnecting NVS server

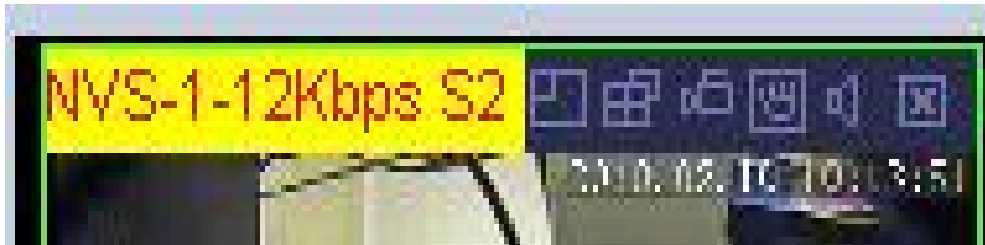


To connect to the NVS server first select a window where you wish you display the camera picture which will be highlighted. Now click on the NVS. You will see a small X if the NVS is not connected. Then click on Connect button to display a picture of the camera connected to the NVS in the window highlighted. Note that a message will display at the bottom of the screen to confirm if the DVR is connected.

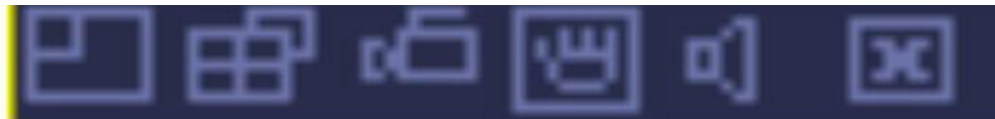


## 8.2 Display screen functions

At the top of the video picture there is a display on the left and buttons on the right. These are explained below:



The display refers to the unit name, transfer rate and file type. The six function buttons are detailed as follows:



1                    2                    3                    4                    5                    6

1. **Local Zoom In:** Click this button and using the left mouse button, drag the mouse in the zone to zoom in. A right click returns to the original status.
2. **Switch display mode:** Resize or switch to full screen mode.
3. **Manual record:** If you click the local record button, the system begins recording and this button highlights. Go to system – local record to set video file path.
4. **Capture picture:** You can capture a single picture frame. This is held in system client folder \download\picture by default.
5. **Audio:** Turn audio on or off. (note it has no relationship with system audio setup).
6. **Close Video**

There are four function keys



1                    2                    3                    4

1. **Device Management:** Provides the file structure and network login for the NVS.
2. **Connect/Disconnect:** Select a device and then click this to connect or disconnect.
3. **Talk:** Select a device and click this to enable audio talk function.
4. **Reboot:** This can be used to reboot current device.

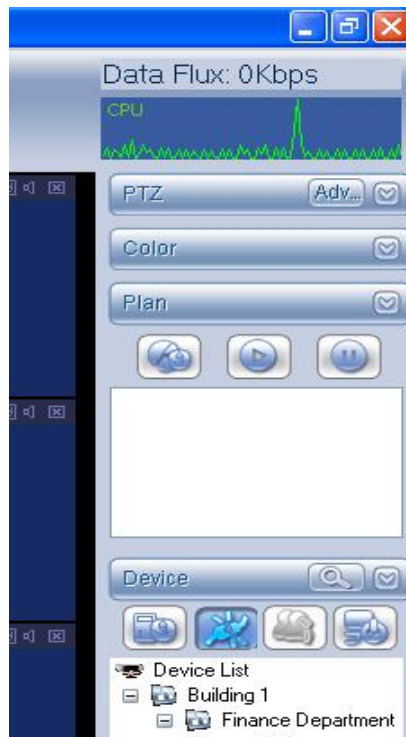
On the right side of the main display screen you will see three selection buttons.

They are:

**PTZ** for controlling a PTZ camera

**Color** for setting brightness, contrast, hue and saturation.

**Plan** for setting a schedule plan



### 8.3 PTZ Operation

Special Note: Before you attempt to control a PTZ camera you must set the Protocol, Baud Rate and Address in the PTZ menu. This is detailed later in this manual. The following gives details of operation only after menu change.

Click PTZ button to display the following interface:

There are eight direction keys and a SIT button. The SIT button takes you back to single screen mode. Drag the mouse in the screen to adjust section size.

The Speed control supports eight levels of speed control. You can select from the dropdown list. The higher the number the faster the speed.

The ZOOM, FOCUS and IRIS controls provide different functions They are explained below:

NAME	KEY	FUNCTION	KEY	FUNCTION
ZOOM	—	NEAR	+	FAR
FOCUS	—	NEAR	+	FAR
IRIS	—	CLOSE	+	OPEN



**Setup:** If you click this button the following display is shown:

### Preset

Using the arrow keys move to the first preset position and then click Preset button. The Value button below now can be given the preset number required. Then click ON. Move to another camera position and by clicking on preset number camera will move to that preset point.

**If using the PTZ high speed dome the following options can be used through the PTZ menu:**

**Set Preset 95 and then click ON.**  
This will display the PTZ menu.

Use the down arrow button to move down the menu and the right arrow key to select the option. Use the IRIS+ button to enter the change.

### Tours

Select the PTZ menu preset 95 option to set the tour and then run the tour. Alternatively enter preset 91 and then ON to start the tour. Touch any direction key to stop tour.

### Auto-Scan

Select the PTZ menu preset 95 option to set the autoscan and set the start and stop points. Then initiate the Autoscan through the PTZ menu. Touch any direction key to stop the auto-scan.

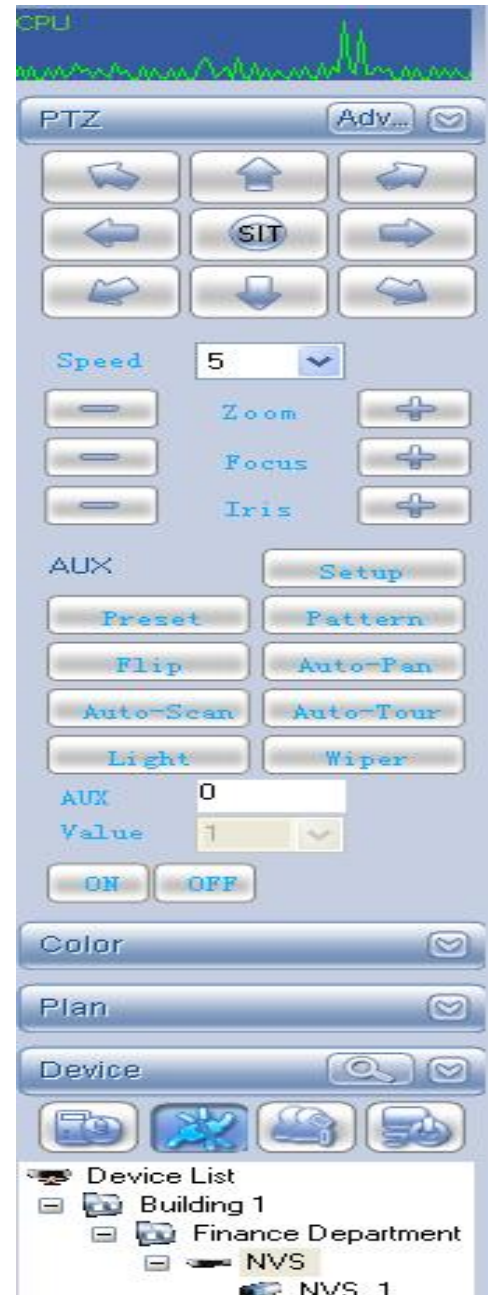
### Pattern

Select the PTZ menu preset 95 option to set the pattern. Initiate the pattern using the PTZ menu. Touch any direction key to stop the pattern.

**SPECIAL NOTE: THE PTZ OPTIONS DEPEND ON THE PTZ CAMERA OPTIONS AVAILABLE ON THE PTZ.**

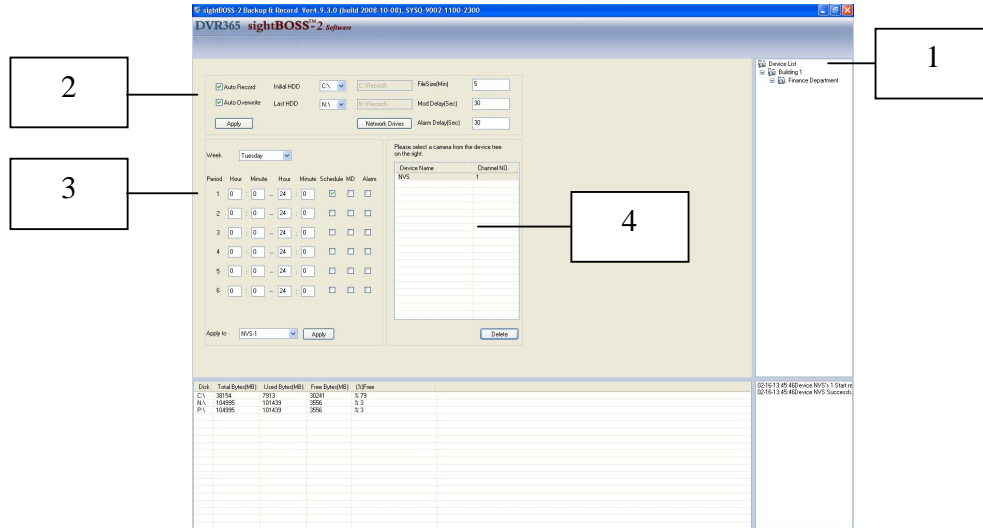
## 8.4 Plan

This option is not available using NVS.





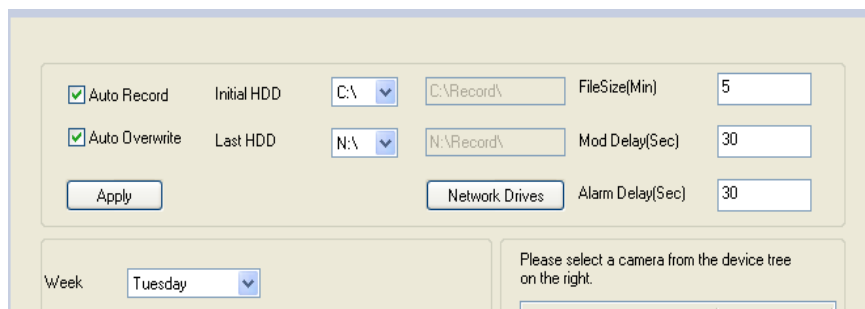
## 8.5 Recording



1. First ensure that the NVS unit is enabled in menu.



2. Now specify two hard drives Initial and Last. Tick Auto Record and Auto Overwrite. Set file size in minutes and if necessary Motion and Alarm Detect delay time in seconds.

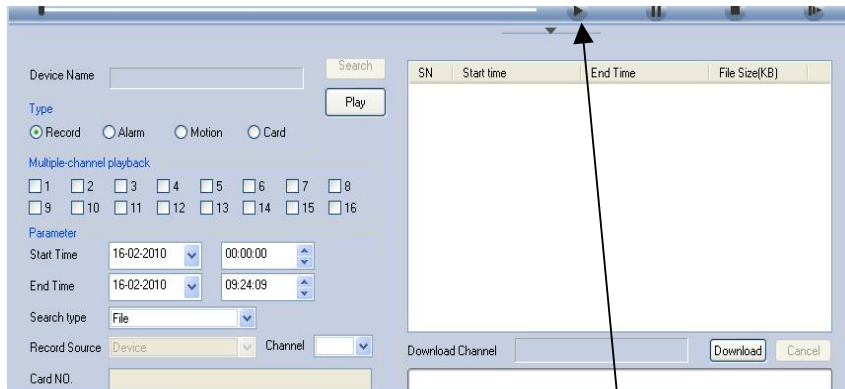




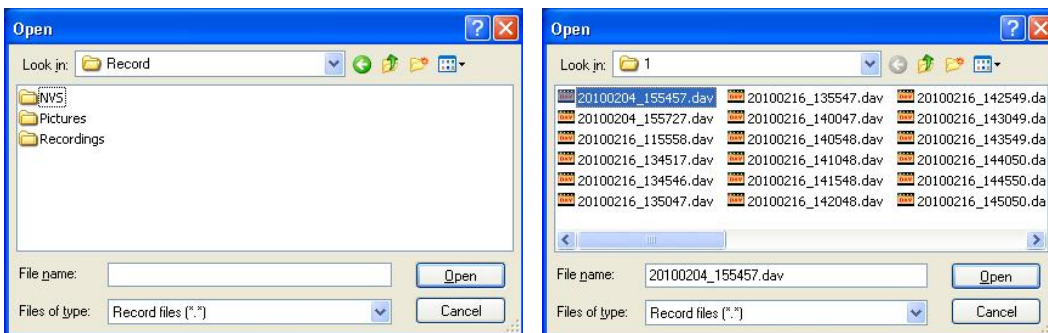
## 8.6 Search and Playback



Click on the Record button to access the menu screen below.



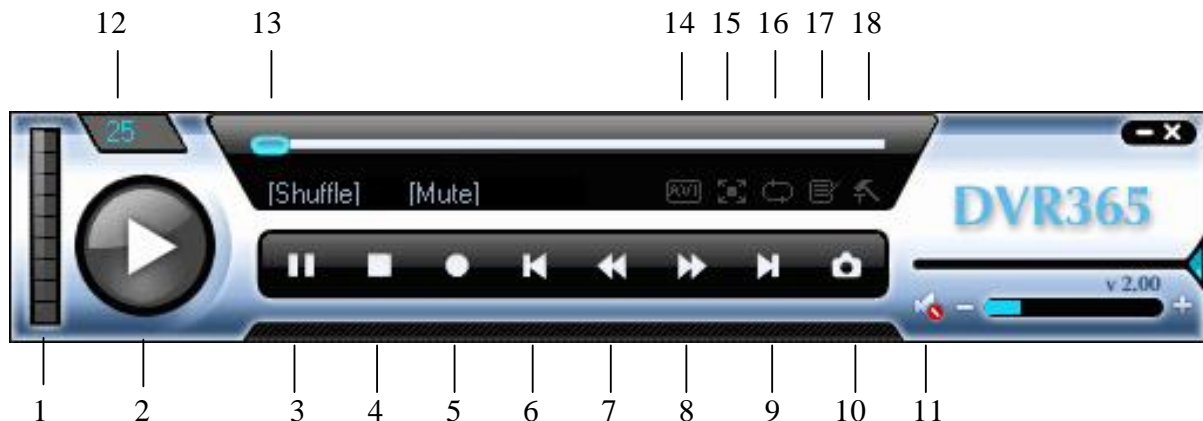
As the NVS unit does not have its own hard disk storage space you need to access recorded files by clicking on the playback arrow as shown.



**Note files are saved into three different directories. RECORD** for continuous recording, **MOD** for motion detection and **ALARMRECORD** for alarm recording. Files are all given date and time filenames. Date is reversed. Highlight file and click Open to start playing. Multiple files can be played back.

## 9.0 Using the standalone Player software

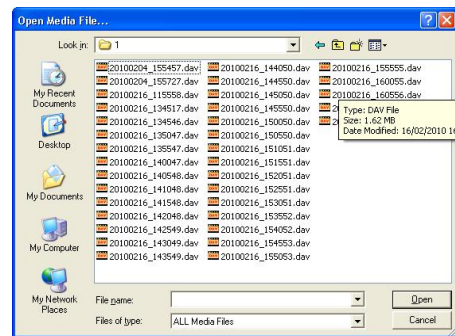
The first step is to load the Player software supplied on the CD to the PC. This will create a DVR365 Player icon on the desktop. Double left click to initiate program. The following will be displayed.



- 1:** Frame rate. There are nine options:1f/2f/3f/6f/12f/25f/50f/75f/100f. You can click corresponding pane to select.
- 2 :**Play (Select second Hard Drive and click on Record, then NVS name to produce list of files recorded)

Double click file to play, or single click and press open.

- 3:** Pause
- 4:** Stop
- 5:** Start record (records part of file)
- 6:** Previous file
- 7:** Backward
- 8:** Forward
- 9:** Next file
- 10:** Capture: Here you can take a snapshot of an important image.
- 11:** Sound: + is to increase volume, - is to decrease volume. Click icon to turn on or off volume.
- 12:** Current frame rate: Here you can view current frame rate.
- 13:** Current status: Here you can view play status bar, play mode and volume status (on or off).
- 14:** Convert to AVI: System can convert the video file of suffix name such as mp4, Dav, mpeg, 264 to AVI format. Click on box  and enter source file.
- 15:** Full-screen: There are two ways: click full-screen button to review in full-screen mode. The other way is to double click current window to review in full-screen.



**16:** Play mode: shuffle or repeat.

**17:** Change language: The player supports two languages: English/Chinese. System pops up dialogue box asking for a restart. Click OK and system automatically restarts.

**18:** Parameter setting. You can set parameter setup.

This allows setting of frame rate and brightness control.

Here you can change the Picture Path so that using the Player will take you automatically to the recorded files in the correct folder on the correct drive.



**Note files are saved into three different directories. RECORD** for continuous recording, **MOD** for motion detection and **ALARMRECORD** for alarm recording. Files are all given date and time filenames. Date is reversed.

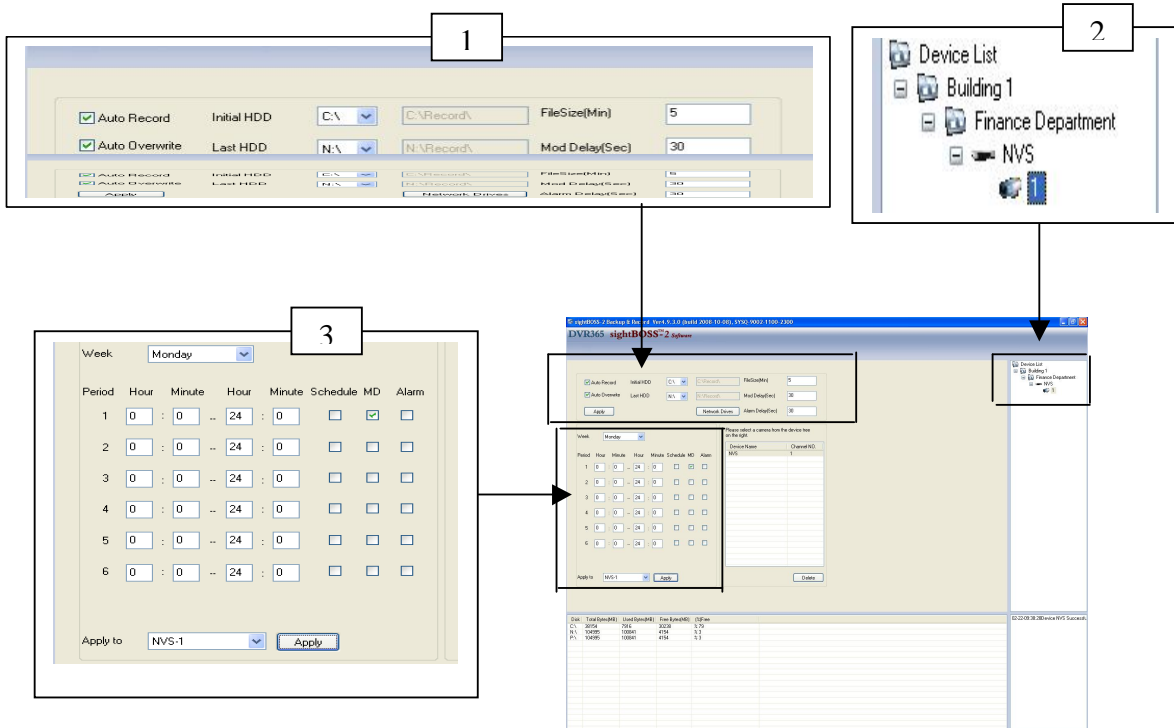
# 10. Motion Detection

## 10.1 Setting the Motion Detection record function

First click on the Backup & Record menu

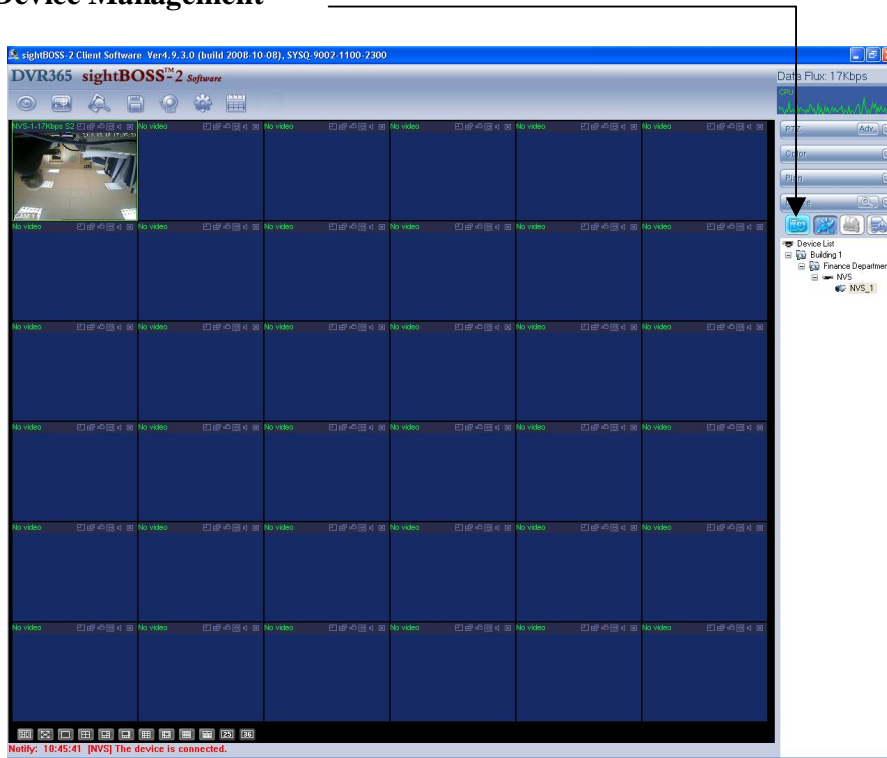


The following menu example is displayed:

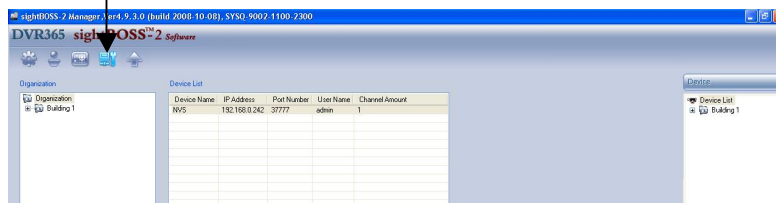


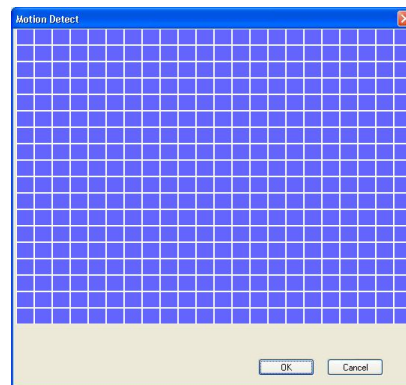
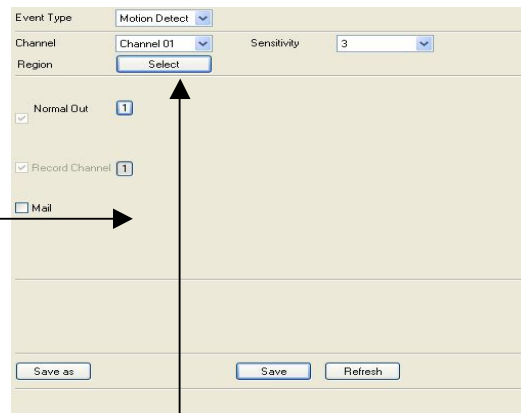
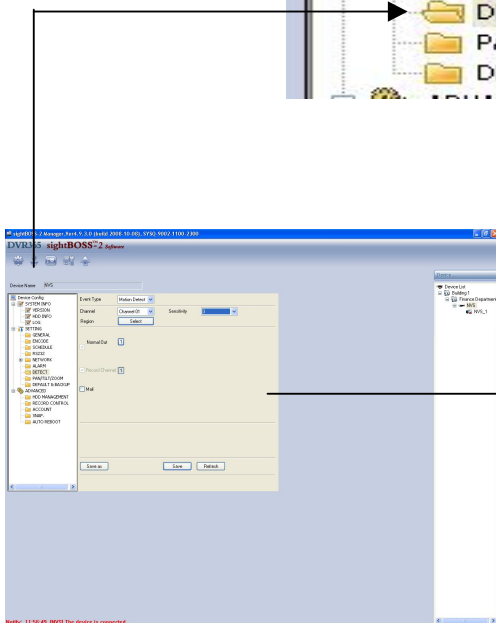
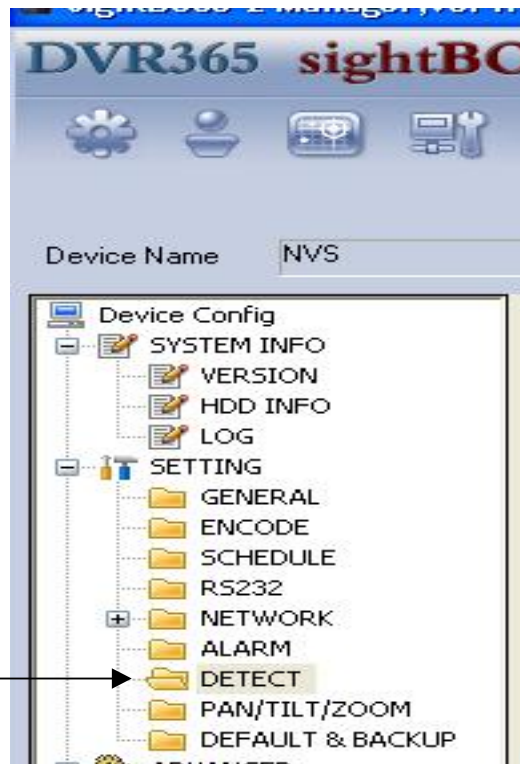
1. Tick Auto Record and Auto Overwrite.  
**Ensure 2 HDDs are setup for recording.**  
 Set Mod Delay in seconds ( this time is added to motion trigger time)  
 Click on Apply to confirm changes accepted.
2. Check the device is connected (shown in device list)
3. Set time period/s and ensure Motion option ticked for time period selected.  
 Ensure ALL is selected if time period applies to whole week.  
 Now click on Apply.
4. If changes accepted a message will confirm changes are accepted.

**Click on Device Management**



Now click on  **Device Configuration**



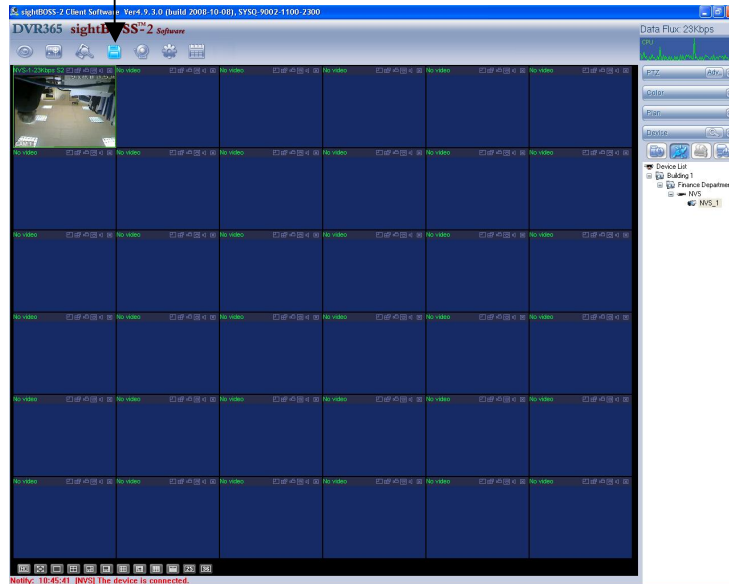


Select Motion Detection  
 Set Sensitivity level 1 ~ 6  
 (Recommend starting at 3)  
 Click on region **Select** to select  
 detection area and press OK.  
 Note the detectable area displays as  
 a picture in this detect window.  
 If detect page is as shown on right, no  
 detection will take place.



## 10.2 Checking Motion Detection is recording

Click on the Backup & Record menu



The following menu example is displayed:

1. Trigger motion by moving in front of camera.

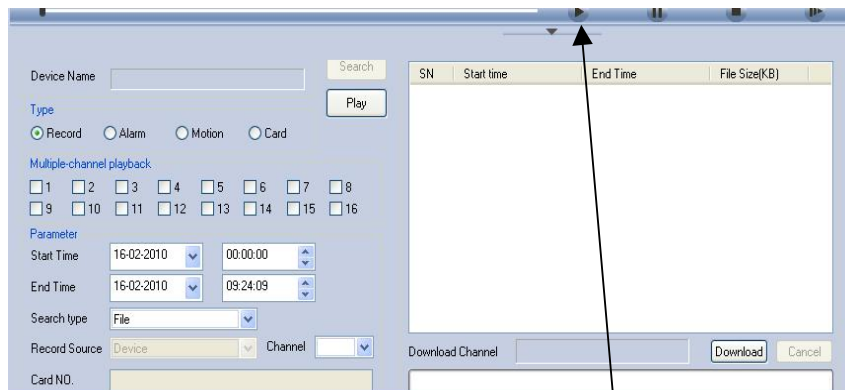
2. Check that the NVS does not have a red cross next to it as this means camera is not connected.

3. Look at bottom right hand corner to see that motion file has been opened.

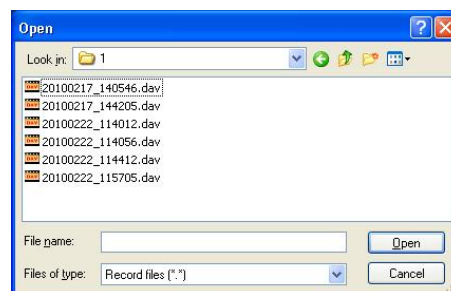
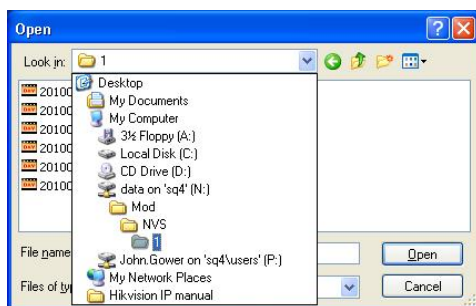
### 10.3 Playing back Motion Detection recordings



Click on the Record button to access the menu screen below.



As the NVS unit does not have its own hard disk storage space you need to access recorded files by clicking on the playback arrow as shown.



Note Motion Detect files are saved in a **MOD** directory and are given date and time filenames. Date is reversed. Highlight file and click Open to start playing. Multiple files can be played back. The standalone Player can also be used to play these files.

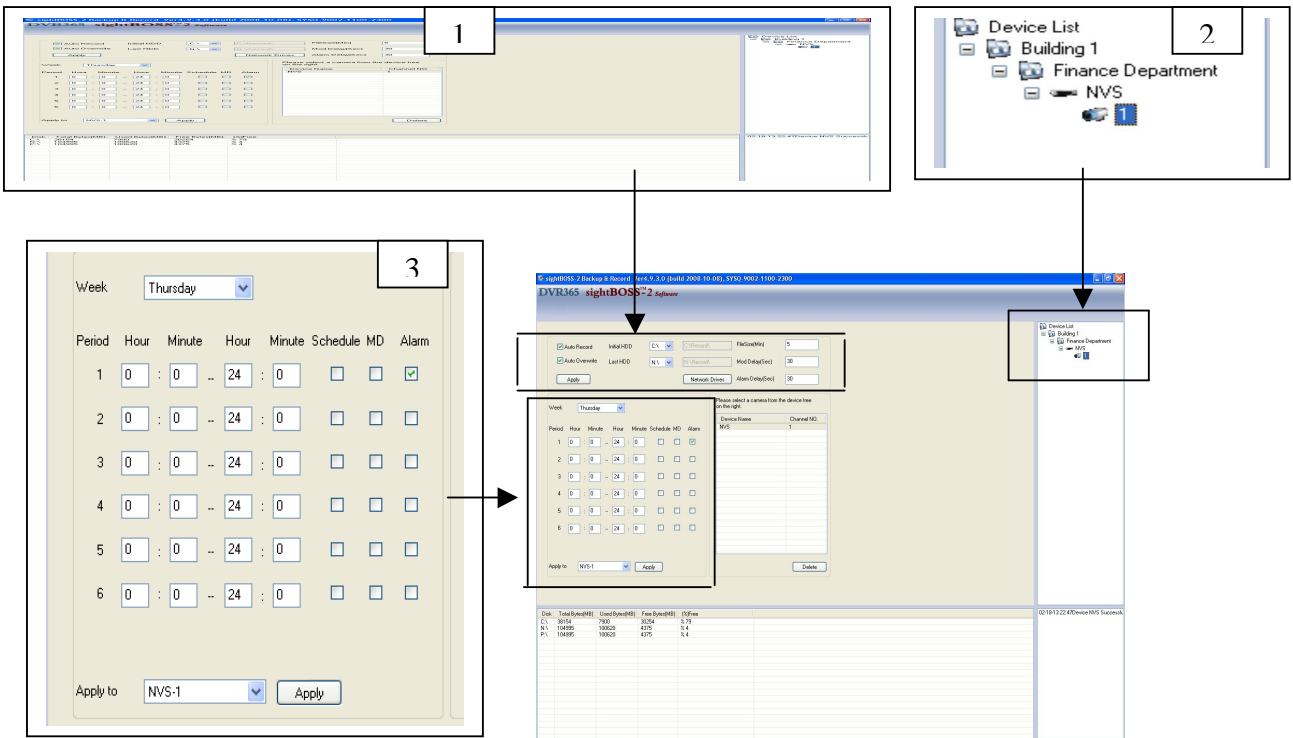
# 11. Alarm Facility

## 11.1 Setting the Alarm record function

First click on the Backup & Record menu



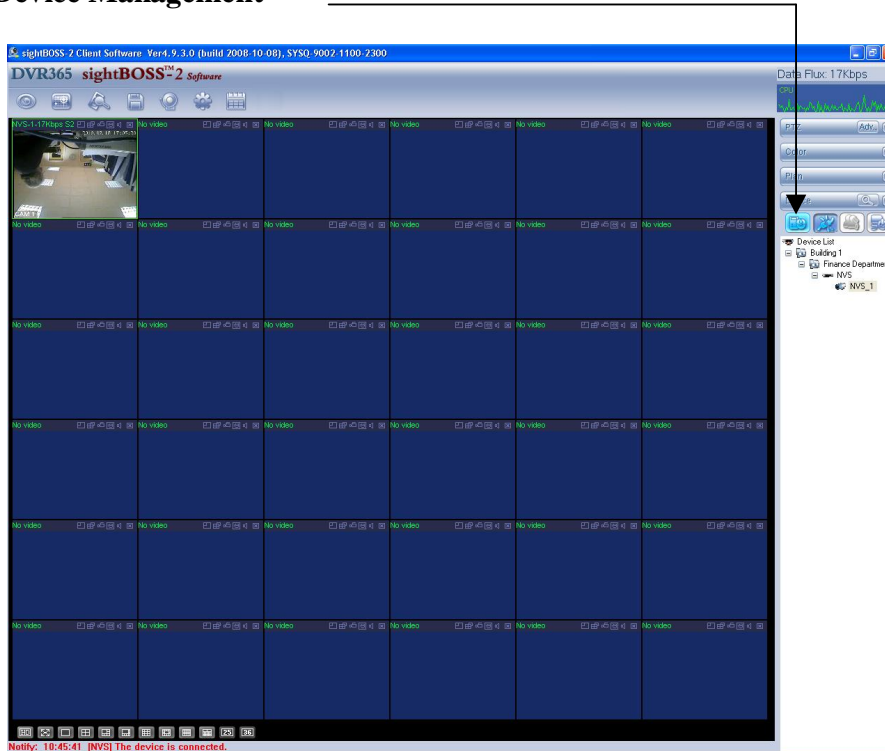
The following menu example is displayed:



1. Tick Auto Record and Auto Overwrite.  
Ensure 2 HDDs are setup for recording.  
Set Alarm Delay in seconds ( this time is added to alarm trigger time)  
Click on Apply to confirm changes accepted.
2. Check the device is connected (shown in device list)
3. Set time period/s and ensure Alarm option ticked for time period selected.  
Now click on Apply.

## 11.2 Setting the Alarm trigger

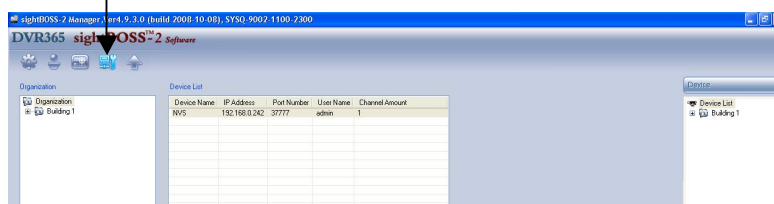
Click on Device Management

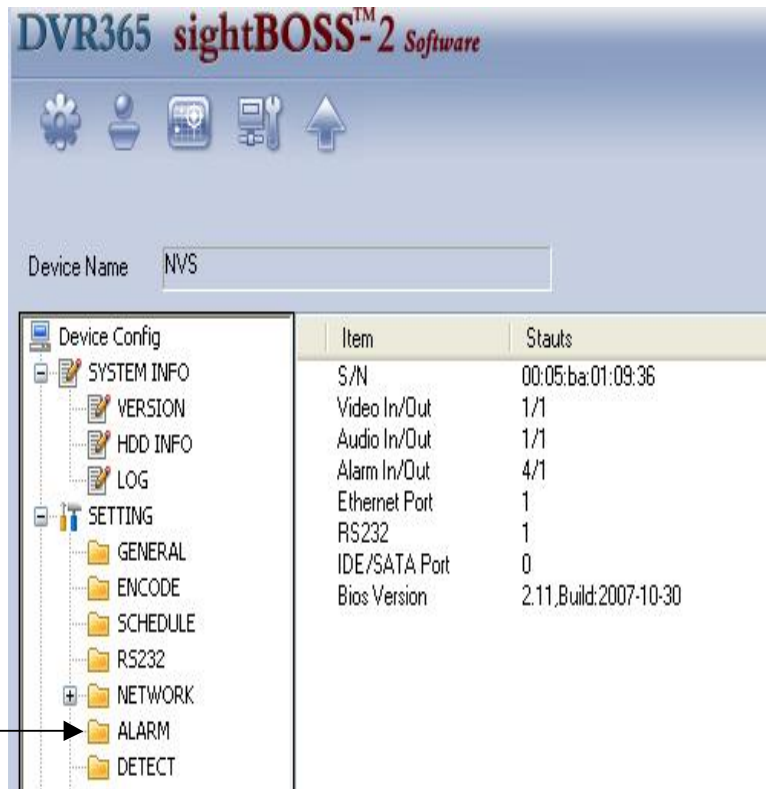


Now click on

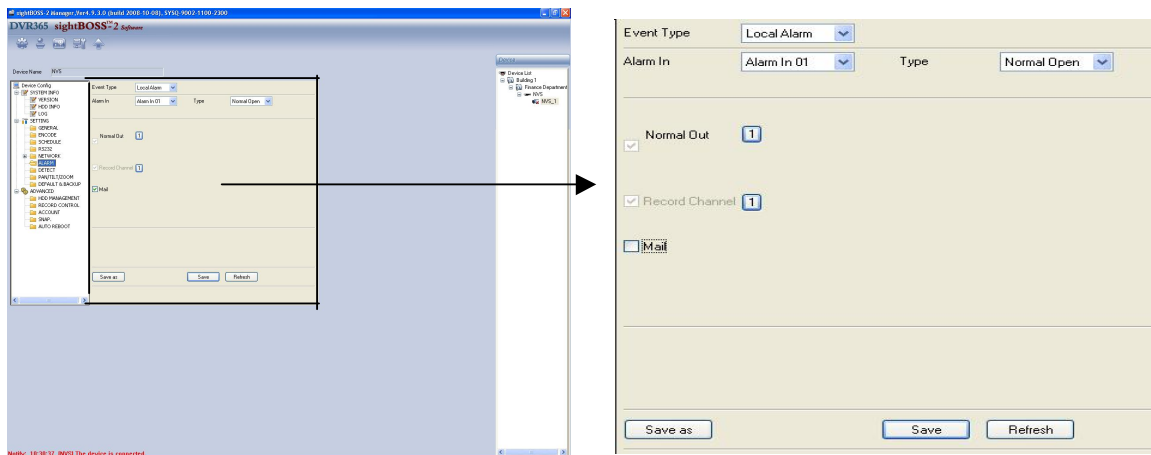


Device Configuration



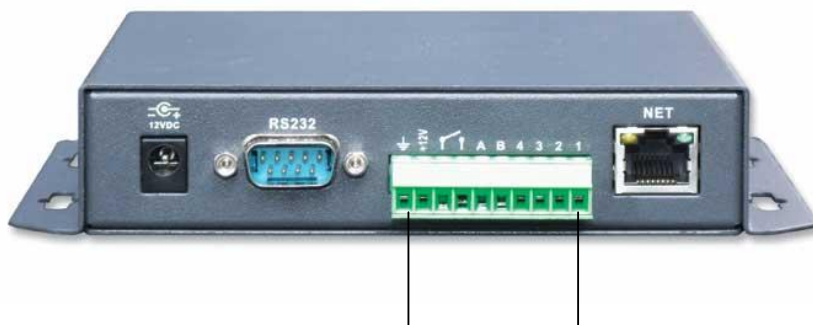


Select Alarm setting



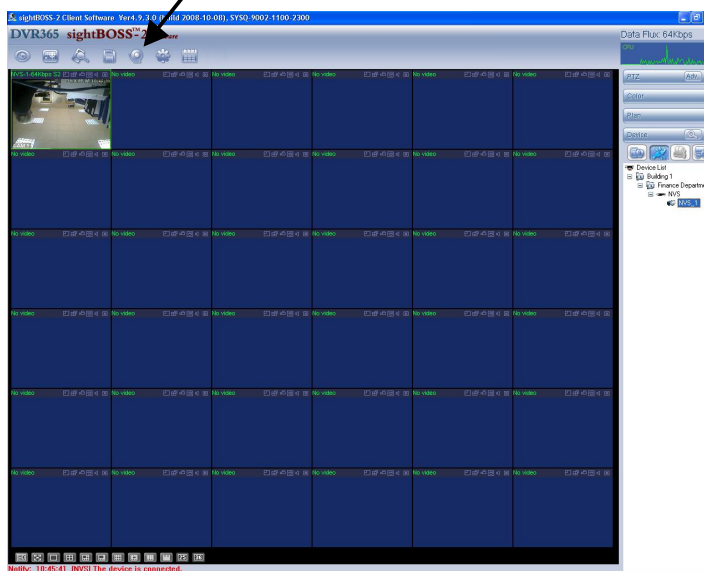
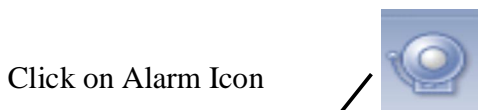
Select the alarm number to be used on the NVS server Alarm 01 ~ 04  
 Ensure Normal Open or Normal Closed is selected.  
 Enter SAVE for each alarm.

### 11.3 Setting the physical Alarm functions on the NVS server



Connect alarm connections to alarm number and ground. You can test a normally open alarm 1 connection using a paperclip between alarm and ground as shown above.

### 11.4 Alarm warning and viewing alarm log



Using this option if an alarm is triggered you can get a warning displayed on the screen as shown below. You will need to tick the Auto Pop-up box.

Time	Device Name	Warning Type	Channel No.
10:40:52	NVS	External-Alarm	Port:1
10:39:57	NVS	External-Alarm	Port:4
10:39:50	NVS	External-Alarm	Port:3
10:39:35	NVS	External-Alarm	Port:2
10:39:14	NVS	External-Alarm	Port:1
10:38:52	NVS	External-Alarm	Port:1
10:19:29	NVS	External-Alarm	Port:1
10:19:21	NVS	External-Alarm	Port:1

Auto Pop up  
 Device: All Devices [v] [Close]  
 Alarm Type: All [v] [Advanced >>]

You can select the display for just alarms, just motion detect, both or never. If you click the down arrow below the Auto Pop-up box you can select the required option.

Click Advanced button to select prompt audio sound.

<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> External alarm prompt sou	[ ]	[ >> ]
<input checked="" type="checkbox"/> Enable	<input checked="" type="checkbox"/> Motion detection prompt s	[ ]	[ >> ]
<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Video loss prompt sound	[ ]	[ >> ]
<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Camera mask prompt sound.	[ ]	[ >> ]
<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Disk prompt sound.	[ ]	[ >> ]
<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Disconnection prompt sound.	[ ]	[ >> ]

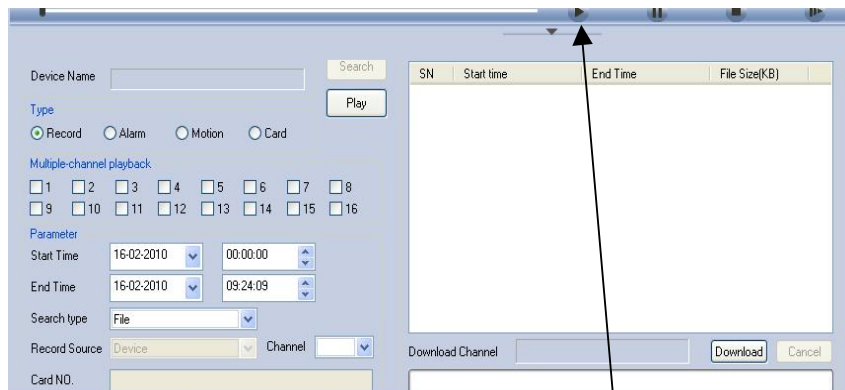
[ Save ]

Note that accessing the log in the Configuration menu provides a complete list of up to the last 200 incidents detected.

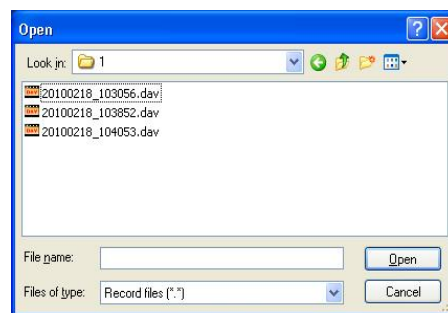
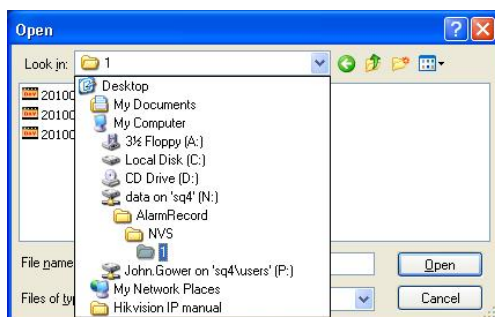
## 11.5 Playing back Alarm recordings



Click on the Record button to access the menu screen below.



As the NVS unit does not have its own hard disk storage space you need to access recorded files by clicking on the playback arrow as shown.

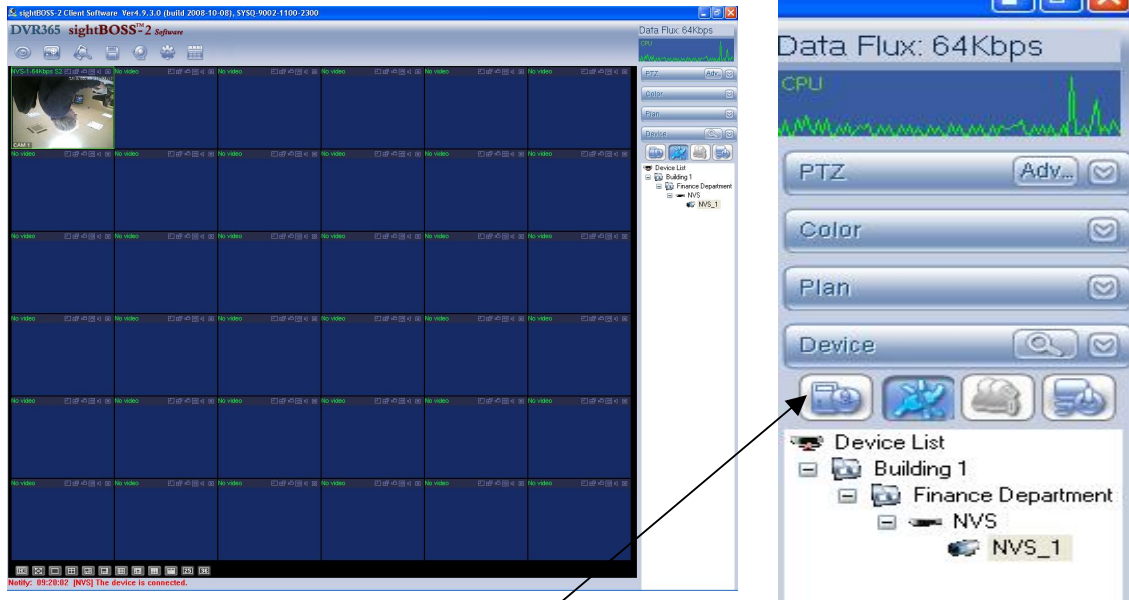


Note Alarm files are saved in an **ALARMRECORD** directory and are given date and time filenames. Date is reversed. Highlight file and click Open to start playing. Multiple files can be played back. The standalone Player can also be used to play these files.

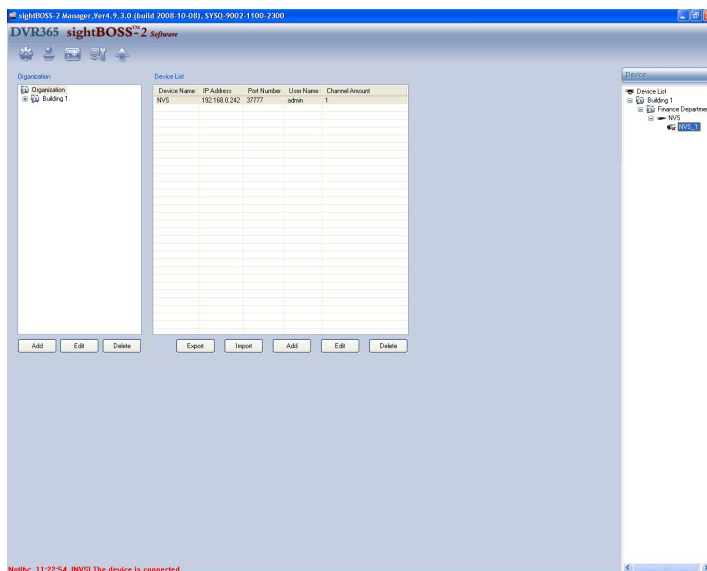


## 12. Device Configuration Management

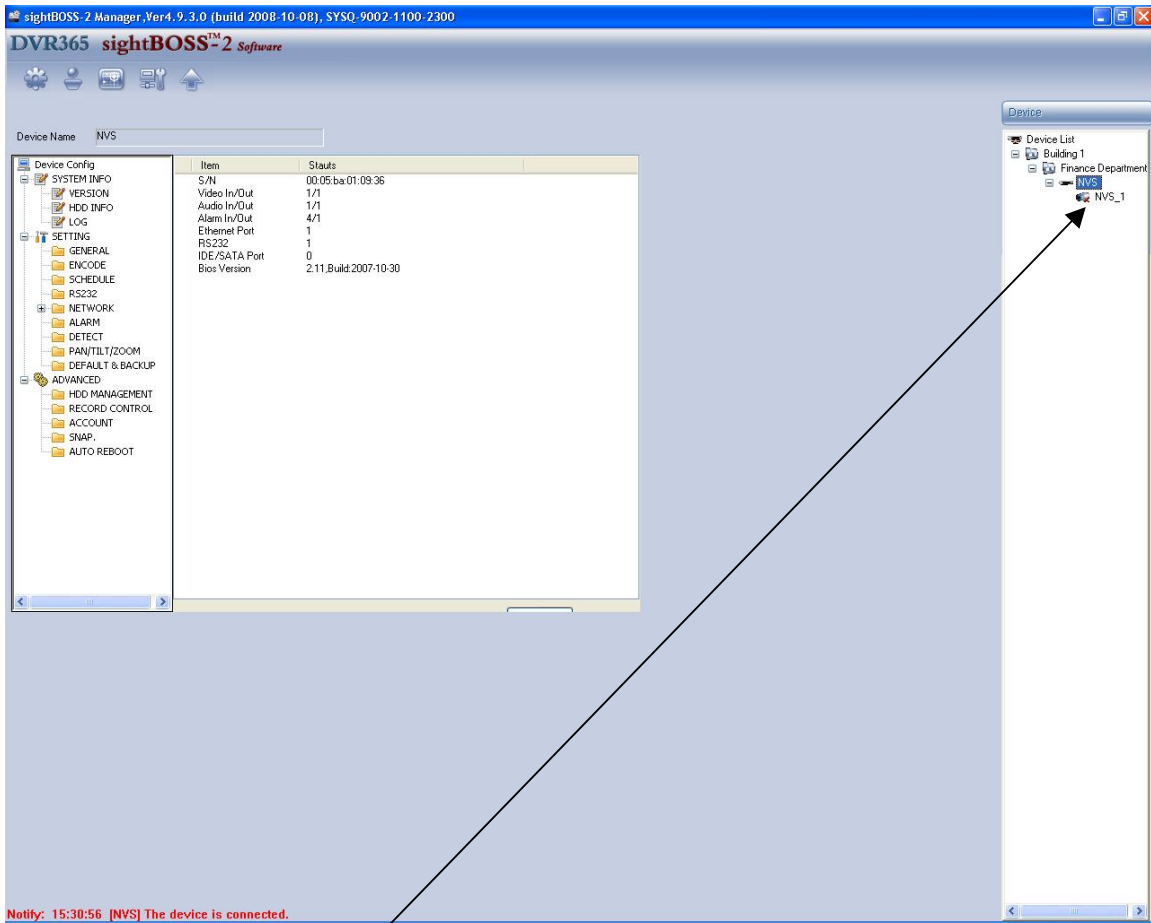
Connect the NVS to receive video as shown below.



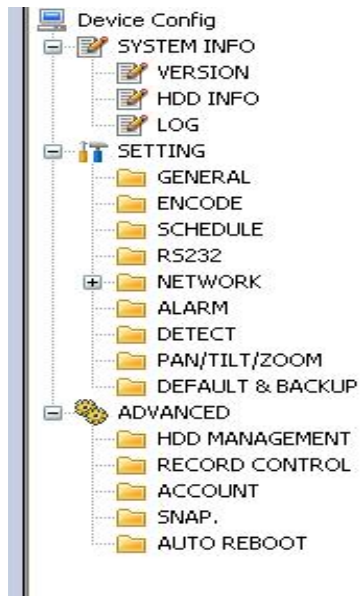
Click on Device Management button.



Now click on Device Management menu.



Ensure the device is connected. The screen above will be displayed.



The **SYSTEM INFO** menu has the following submenus:

### **VERSION**

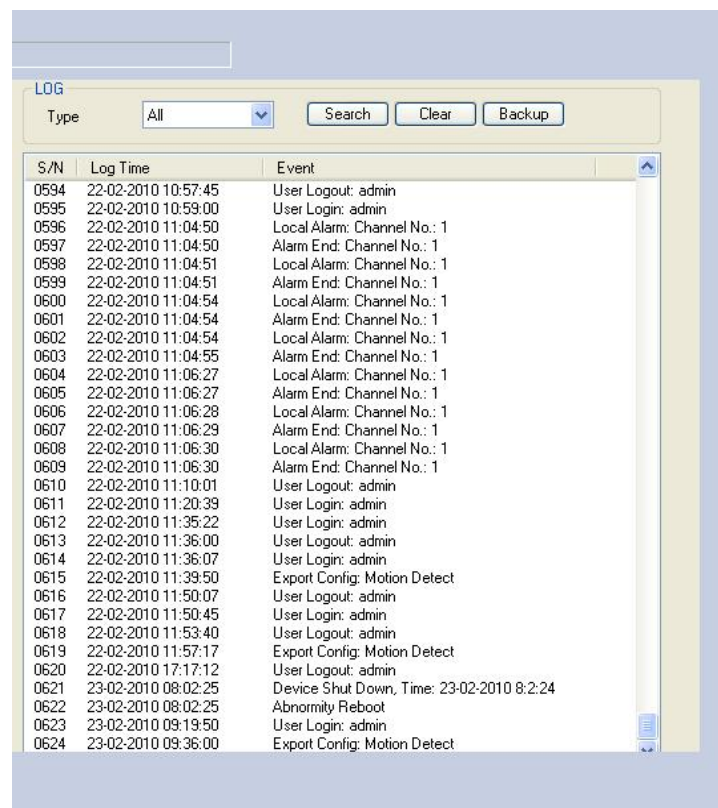
Click version button, you can see corresponding product information for your reference.

### **HDD INFO**

N/A

### **LOG**

Click log button to view current device log information.



The screenshot shows a web-based interface for viewing system logs. At the top, there is a 'LOG' title and a 'Type' dropdown menu set to 'All'. To the right of the dropdown are three buttons: 'Search', 'Clear', and 'Backup'. Below this is a table with three columns: 'S/N', 'Log Time', and 'Event'. The table contains 30 rows of log entries, starting from S/N 0594 and ending at 0624. The events include user logins and logouts, local alarms, alarm ends, motion detection exports, and device shutdowns.

S/N	Log Time	Event
0594	22-02-2010 10:57:45	User Logout: admin
0595	22-02-2010 10:59:00	User Login: admin
0596	22-02-2010 11:04:50	Local Alarm: Channel No.: 1
0597	22-02-2010 11:04:50	Alarm End: Channel No.: 1
0598	22-02-2010 11:04:51	Local Alarm: Channel No.: 1
0599	22-02-2010 11:04:51	Alarm End: Channel No.: 1
0600	22-02-2010 11:04:54	Local Alarm: Channel No.: 1
0601	22-02-2010 11:04:54	Alarm End: Channel No.: 1
0602	22-02-2010 11:04:54	Local Alarm: Channel No.: 1
0603	22-02-2010 11:04:55	Alarm End: Channel No.: 1
0604	22-02-2010 11:06:27	Local Alarm: Channel No.: 1
0605	22-02-2010 11:06:27	Alarm End: Channel No.: 1
0606	22-02-2010 11:06:28	Local Alarm: Channel No.: 1
0607	22-02-2010 11:06:29	Alarm End: Channel No.: 1
0608	22-02-2010 11:06:30	Local Alarm: Channel No.: 1
0609	22-02-2010 11:06:30	Alarm End: Channel No.: 1
0610	22-02-2010 11:10:01	User Logout: admin
0611	22-02-2010 11:20:39	User Login: admin
0612	22-02-2010 11:35:22	User Login: admin
0613	22-02-2010 11:36:00	User Logout: admin
0614	22-02-2010 11:36:07	User Login: admin
0615	22-02-2010 11:39:50	Export Config: Motion Detect
0616	22-02-2010 11:50:07	User Logout: admin
0617	22-02-2010 11:50:45	User Login: admin
0618	22-02-2010 11:53:40	User Logout: admin
0619	22-02-2010 11:57:17	Export Config: Motion Detect
0620	22-02-2010 17:17:12	User Logout: admin
0621	23-02-2010 08:02:25	Device Shut Down, Time: 23-02-2010 8:2:24
0622	23-02-2010 08:02:25	Abnormity Reboot
0623	23-02-2010 09:19:50	User Login: admin
0624	23-02-2010 09:36:00	Export Config: Motion Detect

The **SETTING** menu includes the following submenus:

General

Encode setup

Schedule

RS232

Network

Alarm

Detect

Pan/Tilt/Zoom

Default & Backup

These are detailed as follows:

## GENERAL

The screenshot shows a settings window titled 'GENERAL'. At the top, there is a 'System Time' section with a date dropdown set to '23/02/2010', a time dropdown set to '16:26:52', and two buttons: 'Save' and 'Sync PC'. Below this is a list of settings, each with a label and a dropdown menu:

- Date Format: DD MM YYYY
- Date Separator: '.'
- Time Format: 24-HOUR
- Language: ENGLISH
- HDD Full: Overwrite
- Pack Duration: 15 Minute
- Device No.: 8
- Video Standard: PAL

At the bottom of the window, there are two buttons: 'Save' and 'Refresh'.

**System Time:** This is where you modify system time. Please click **Save** after your modification. Note there is a separate SAVE command for System Time.

**Date Format:** Select date format from dropdown list.

**Data Separator:** Please select separator such as – or /.

**Time Format:** Select either 24-H or 12-H.

**Language:** English

**HDD Full:** There are two options: Stop Recording or Overwrite the previous files when HDD is full.

**Pack Duration:** Select file size. Recommend 5 minutes. Default setup is 60 minutes.

**Device No.:** N/A

**Video Standard:** PAL

Click SAVE to save settings.

## ENCODE Setup

Channel: Channel 01 Channel Name: CAM 1

Compression: DIVX\_MPEG4

Audio/Video:  Video  Audio

Resolution: CIF

Frame Rate(FPS): 6

Bit Rate: VBR

Quality: Lower

Color Setting: Set

Overlay

Cover-Area: NEVER Set

Time Display  Channel Display

Time Transparence: 128 Channel Transparence: 0

Save as Save Refresh

**Channel:** Channel01

**Channel Name:** Modify channel name.

**Compression:** DIVX\_MPEG4

**Audio/Video:** Enable Audio. Video is enabled by default.

**Resolution:** D1/HD1/CIF/QCIF/VGA/QVGA

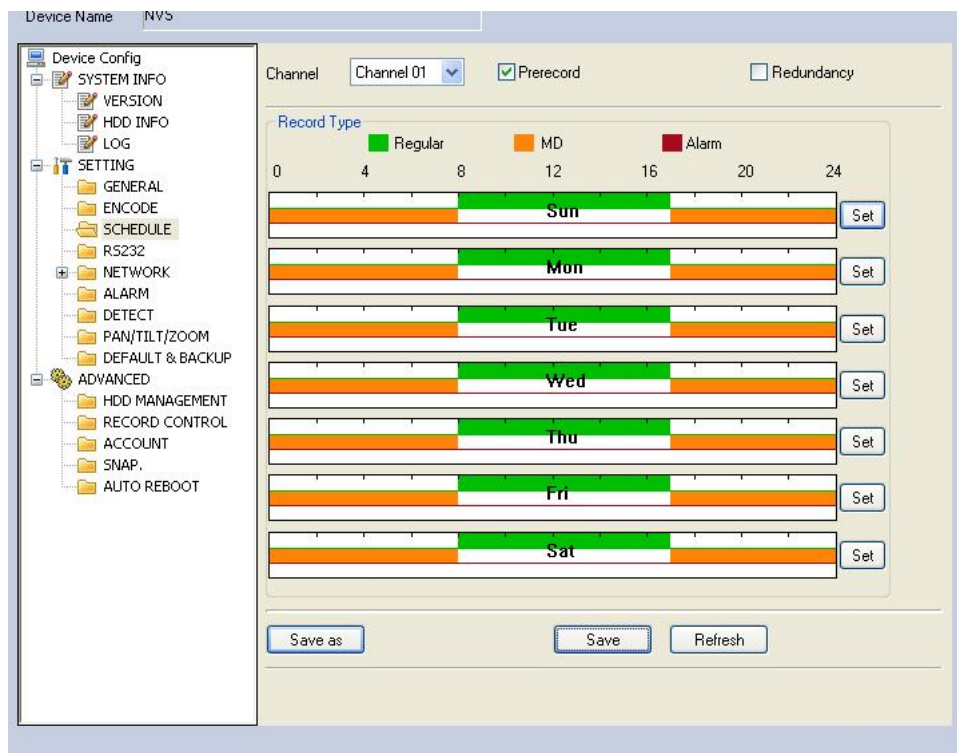
**Frame Rate(FPS):** 1, 2, 3, 6, 12, 25

**Bit Rate:** There are two options: CBR and VBR. Always use VBR for video only recording or CBR for video and audio. (See section 16.3 for audio settings).

**Quality:** The value ranges from 1 to 6. The level 6 is the best video quality.

**Special Note:** The resolution, frame rate and quality settings can increase the disk space requirement dramatically. It is recommended that you undertake a test to establish the disk usage rate over a set time period.

## SCHEDULE



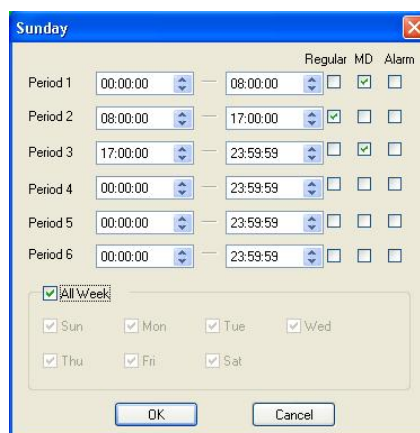
When DVR first boots up, it is in 24-hour continuous record mode. In this interface you can set record type, record time and period. Record type includes regular record(R), motion detection record (M) and alarm record (A).

**Channel:** Channel01

**Prerecord:** If ticked allows contents of video cache to be written to the beginning of any motion detection video file. This is 3 ~ 5 seconds according to file size.

**Redundancy:** N/A

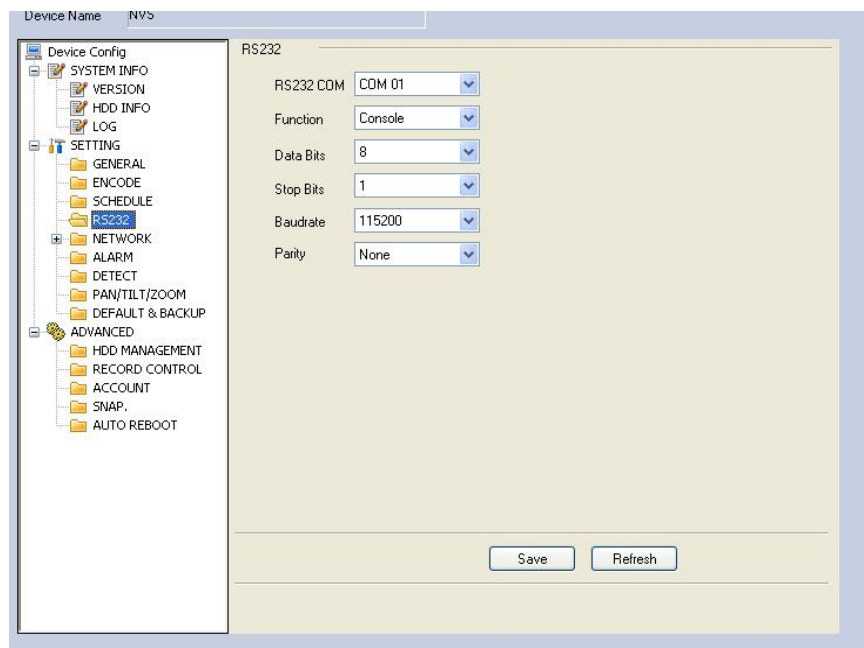
Click Set to setup a days recording. The following example is shown.



You can set up to six periods within one 24 hour period. Times must run consecutive and must not overlap. Tick the respective columns for the recording type. Regular is continuous recording, MD is motion detection and Alarm is alarm recording.

**Week:** You can tick All Week or select the appropriate day.

## RS232



Whilst the NVS does have an RS232 connection, this function is not supported.

## NETWORK

The screenshot displays the Network configuration page. On the left, a tree view shows the following categories: Device Config, SYSTEM INFO (VERSION, HDD INFO, LOG), SETTING (GENERAL, ENCODE, SCHEDULE, RS232, NETWORK, ALARM, DETECT, PAN/TILT/ZOOM, DEFAULT & BACKUP), and ADVANCED (HDD MANAGEMENT, RECORD CONTROL, ACCOUNT, SNAP, AUTO REBOOT). The 'NETWORK' category is selected. The main configuration area includes: Ethernet Port (dropdown: Ethernet Port1), IP Address (192.168.0.242), Subnet Mask (255.255.255.0), Gateway (192.168.0.1), Device Name (DHNVS), TCP Port (37777), HTTP Port (80), UDP Port (37778), Max Connection (5), Service Type (PPPoE), and an 'Enable' checkbox. At the bottom, there are 'Save' and 'Refresh' buttons.

This interface is used for setting the local IP settings in the NVS.

**Ethernet Port:** Ethernet Port 1

**IP Address:** IP address of the NVS

**Subnet Mask:** Subnet Mask

**Gateway:** Gateway address

**Device Name:** DHNVS

**TCP Port:** 37777 default address (Please note port 37778 is for UDP port use only).

**HTTP Port:** 80 HTTP default address

**UDP Port:** 37778

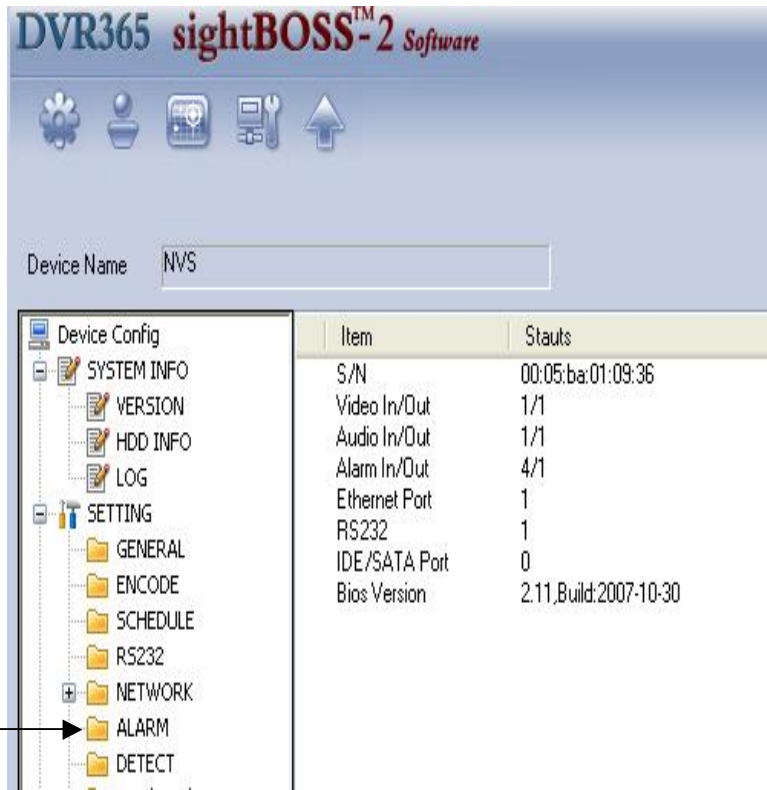
**Max Connection:** 0 ~ 10 (5 default)

**Service Type:** PPPoE N/A

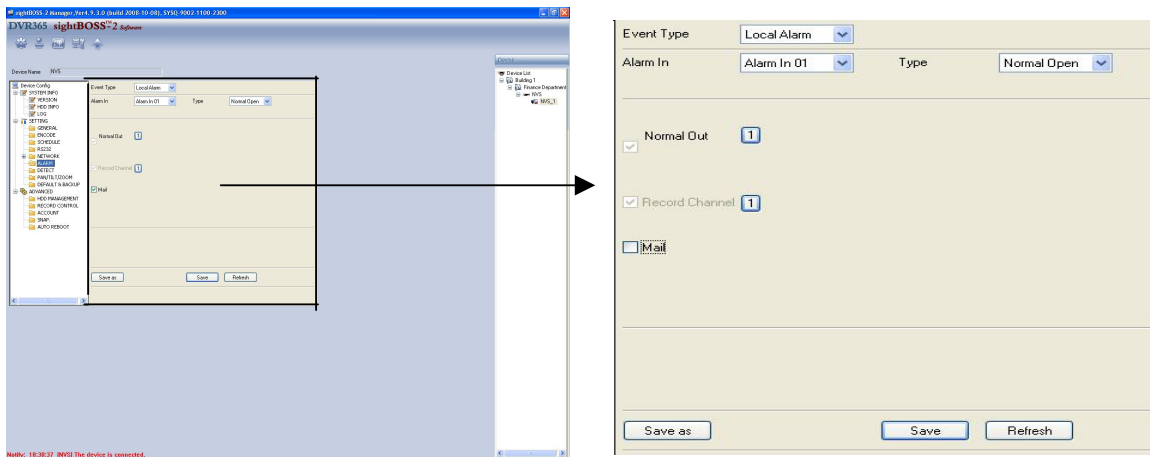
Click save button, you need to restart to activate your configuration.  
After rebooting, DVR will connect to Internet automatically.



**ALARM:**



Select Alarm setting



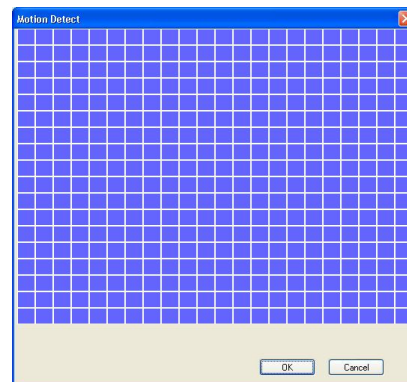
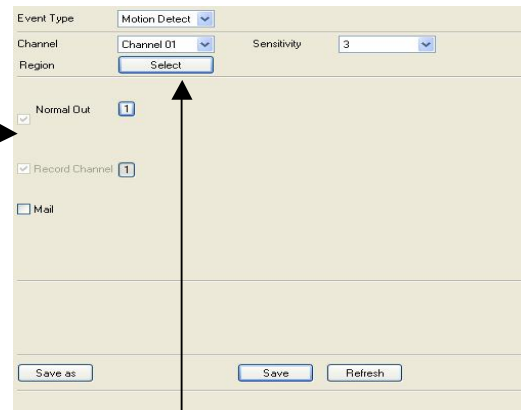
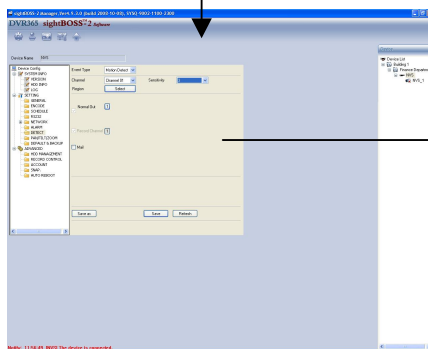
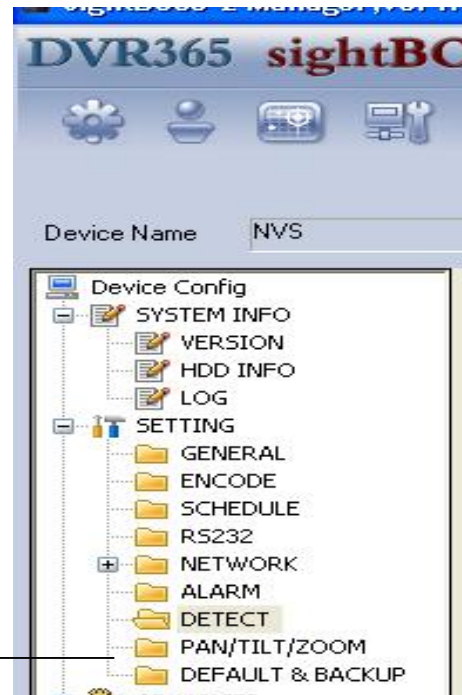
**Alarm in:** Select the alarm number to be used on the NVS server Alarm 01 ~ 04

**Type:** Ensure Normal Open or Normal Closed is selected.

Enter SAVE for each alarm.

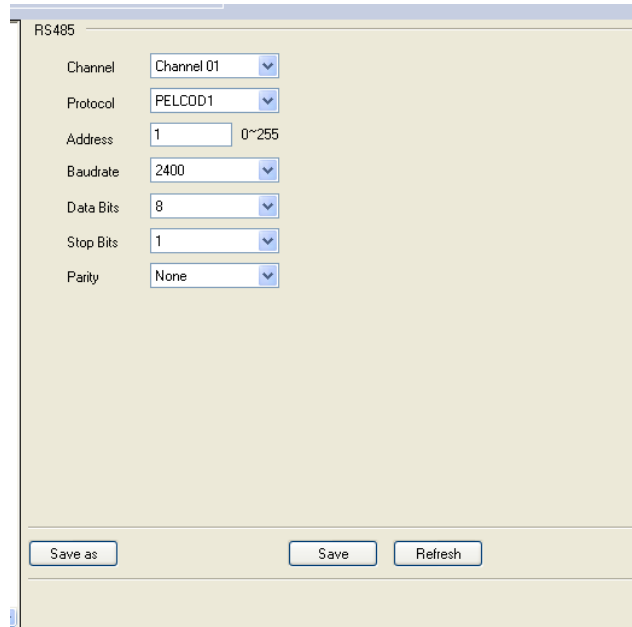
Note that you need to set alarm record in DVR schedule and enable schedule function in manual record. Channel 3 is used to control +12v output.

## DETECT:



Select Motion Detection  
Set Sensitivity level 1 ~ 6  
(Recommend starting at 3)  
Click on region **Select** to select  
detection area and press OK.  
Note the detectable area displays as  
a picture in this detect window.  
If detect page is as shown on right, no  
detection will take place.

## PAN/TILT/ZOOM:



RS485

Channel: Channel 01

Protocol: PELCOD1

Address: 1 (0~255)

Baudrate: 2400

Data Bits: 8

Stop Bits: 1

Parity: None

Save as Save Refresh

When you have connected the PTZ physical connections for telemetry to the A and B connections on the rear of the NVS to a CAT5 pair, ensuring that A connects to the A+ line on the PTZ and B connects to the B- line on the PTZ, set the PTZ menu as follows:

**Channel 01:** Channel 01.

**Protocol:** Protocol selected on the PTZ (PelcoD1 for PTZ605)

**Address:** Address set in PTZ (default = 1)

**Baudrate:** Baud rate set in PTZ (default = 2400)

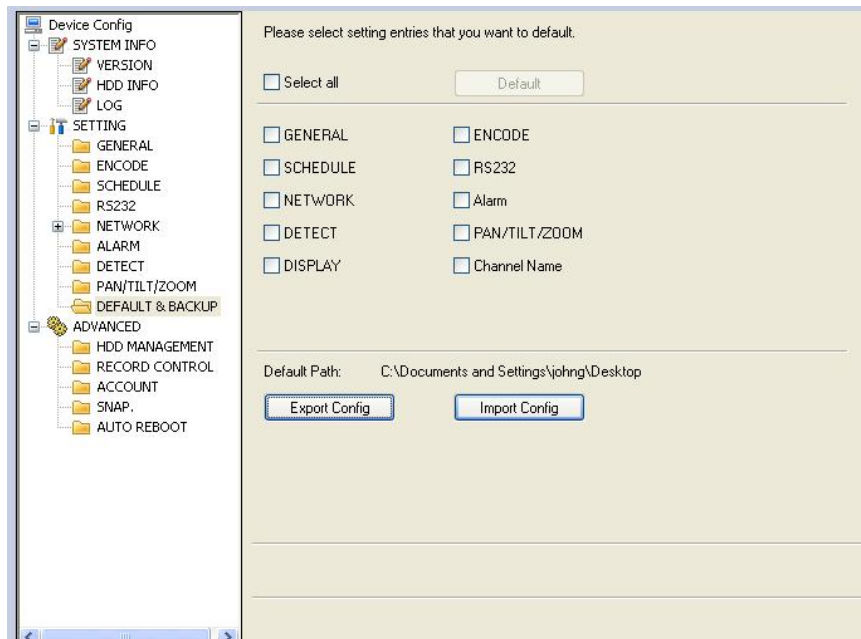
**Data Bits:** 8

**Stop Bits:** 1

**Parity:** None

Then press SAVE.

## DEFAULT & BACKUP:



Here you can export or import configuration table information.

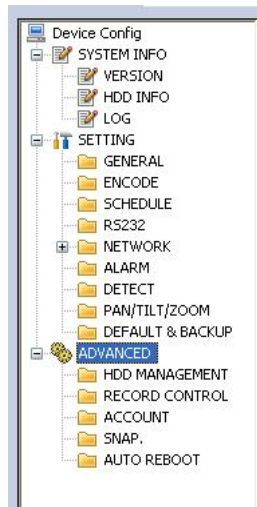
You can either select all or you can tick individual settings.

**Save configuration data:** Click Export Config button to save current setup as a file. Extension filename is CFG. You can change file path as required.

**Load configuration data:** Click Import Config button to load a configuration file. You can select the file from the required file path.

The Advanced menu contains the following submenus:

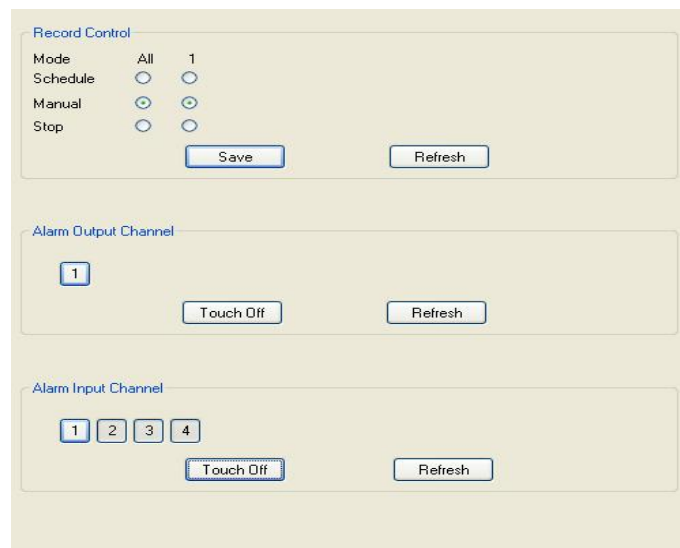
- HDD Management
- Record Control
- Account
- Snap
- Auto Reboot



**HDD MANAGEMENT:**

This menu is N/A for the NVS unit.

**RECORD CONTROL:**

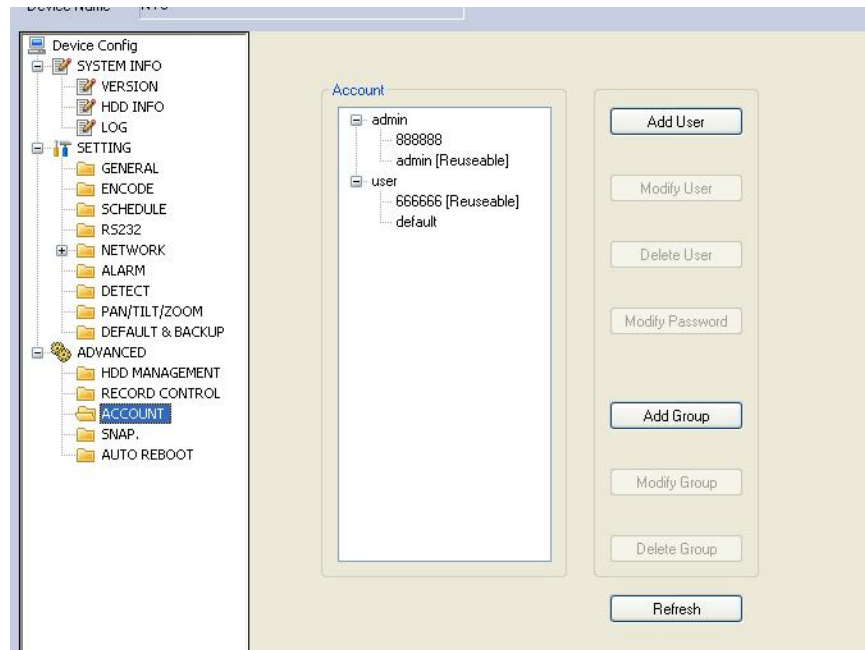


**Schedule or Manual:** If set to Manual overrides Schedule.

**Stop:** Stops all recording

**Alarm Output/Input Channel:** Allows alarm suspension by selecting channel then clicking on Touch Off.

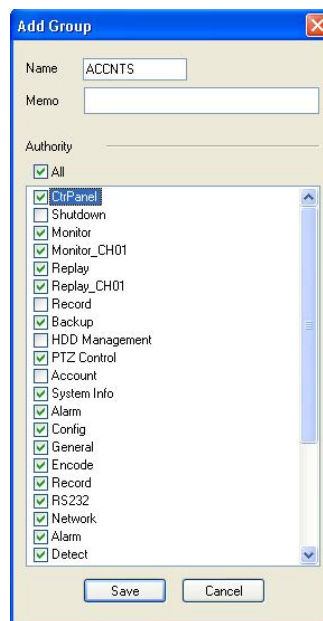
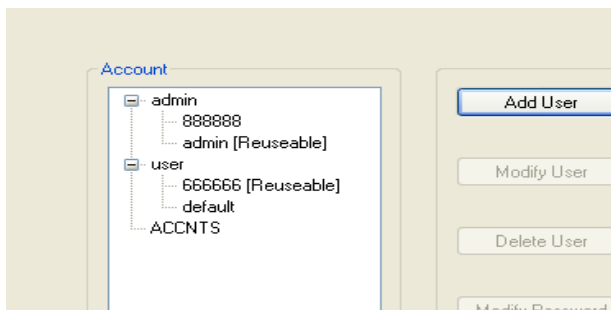
## ACCOUNT:



In the Account interface shown above you can add/delete a user, add/delete a group, modify user or group rights and modify user password.

## ADD GROUP

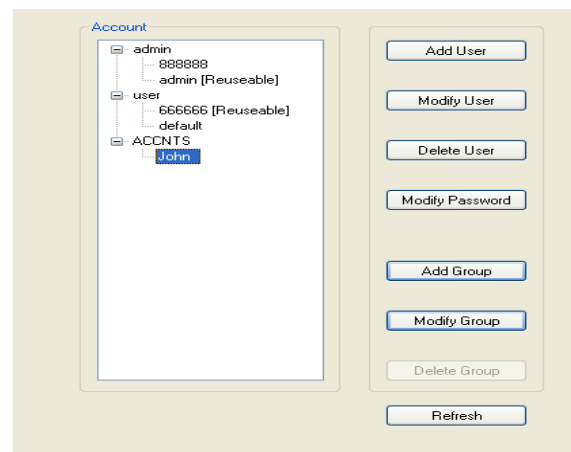
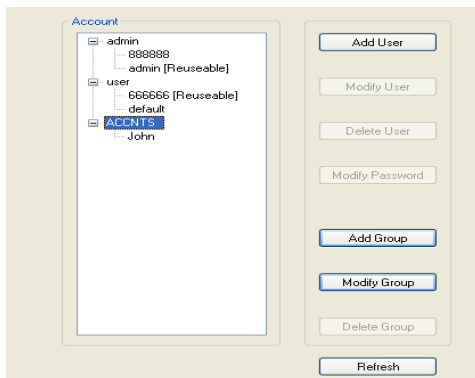
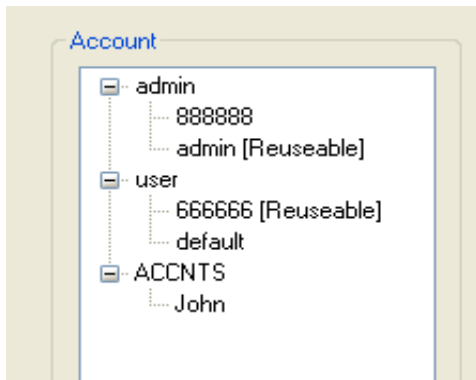
This allows you to add a new group and then select corresponding rights. The example shown shows the adding of a new ACCNTS group that is associated with the admin group (i.e has full user rights to start with). Click Save button.



## ADD USER

Click on Add User and the example box will be displayed. Enter a User Name and password and then confirm the password. If you tick the Reusable box more than one person can use the same logon at the same time. You can select from the user rights made available within the group to restrict user rights for this user and password.

Click save button.



To modify new group click on new group name and to modify or delete user, click on new user as shown above.

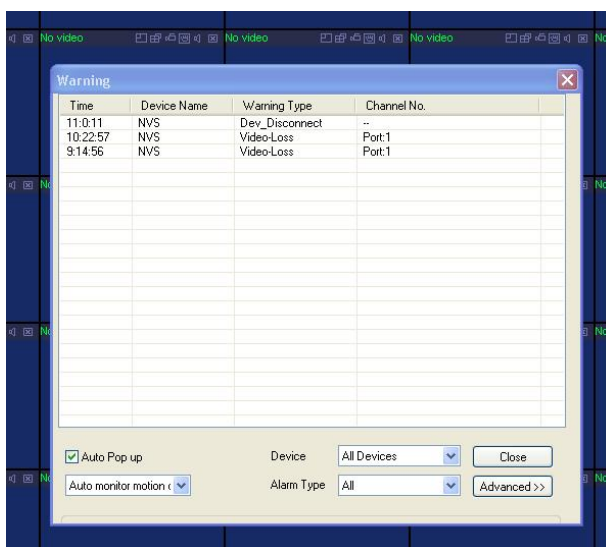
## SNAP:

This option is not available on the NVS.

**AUTO REBOOT:**

This option allows an auto reboot.  
This option is only applicable to a DVR and does not apply to the NVS.  
If used on the NVS unit it will disconnect the camera at the allocated time but will not reboot.

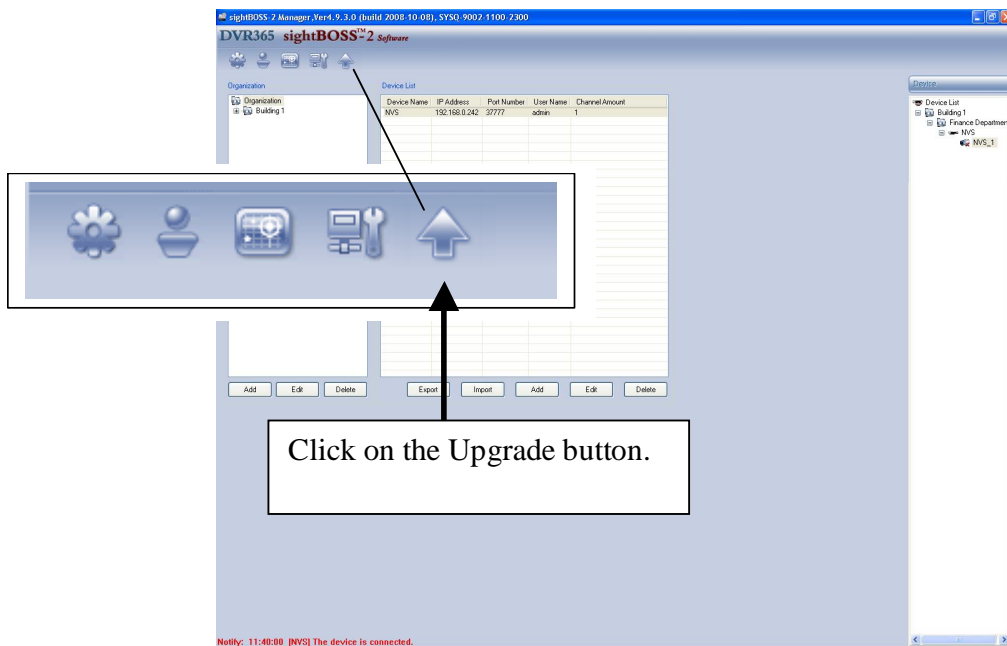
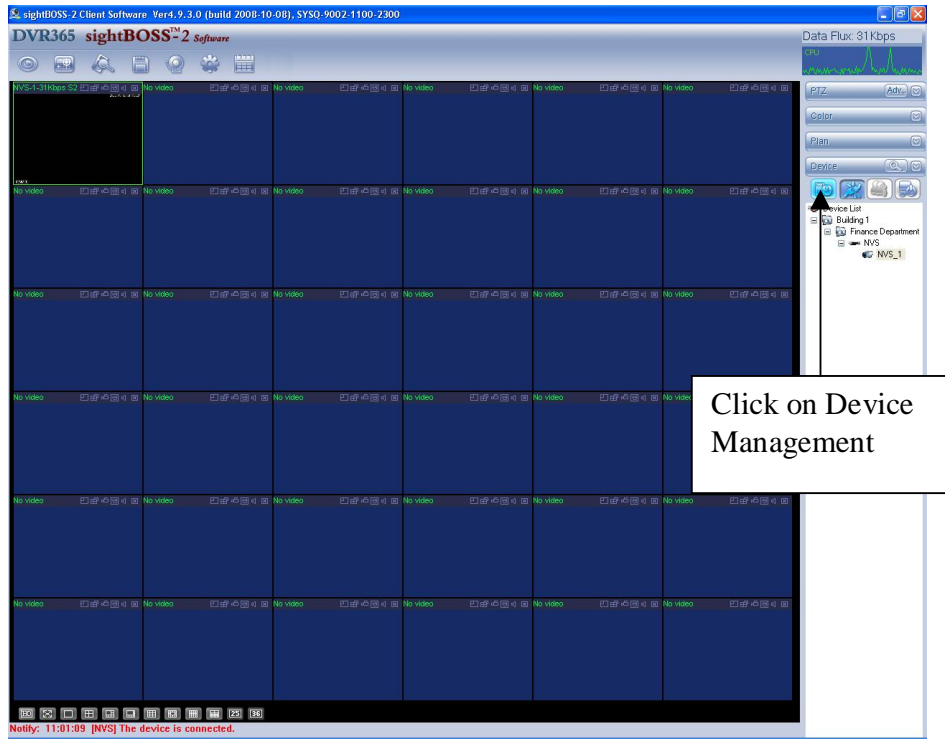
Note that this option and file removal do not apply as the hard drive used is external to the NVS unit.





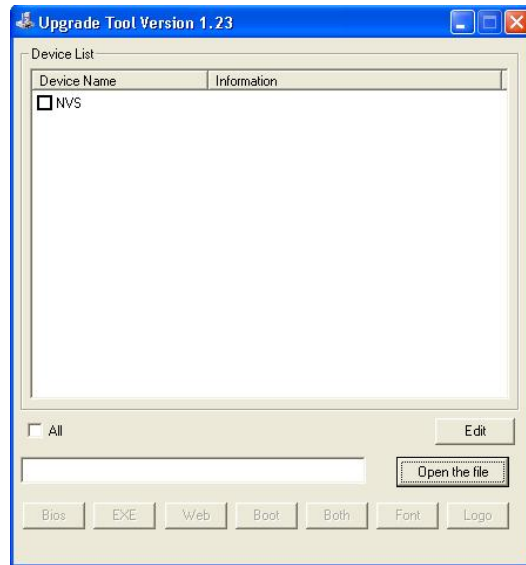
### 13. Upgrade

This option provides facilities for upgrading the NVS firmware and must only be used as instructed by your supplier. Incorrect loading of firmware can disable the unit leaving it unusable.

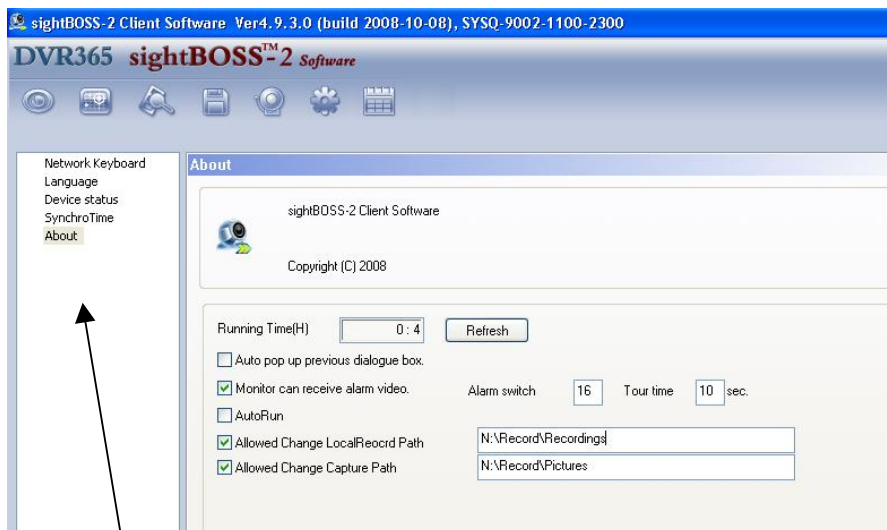
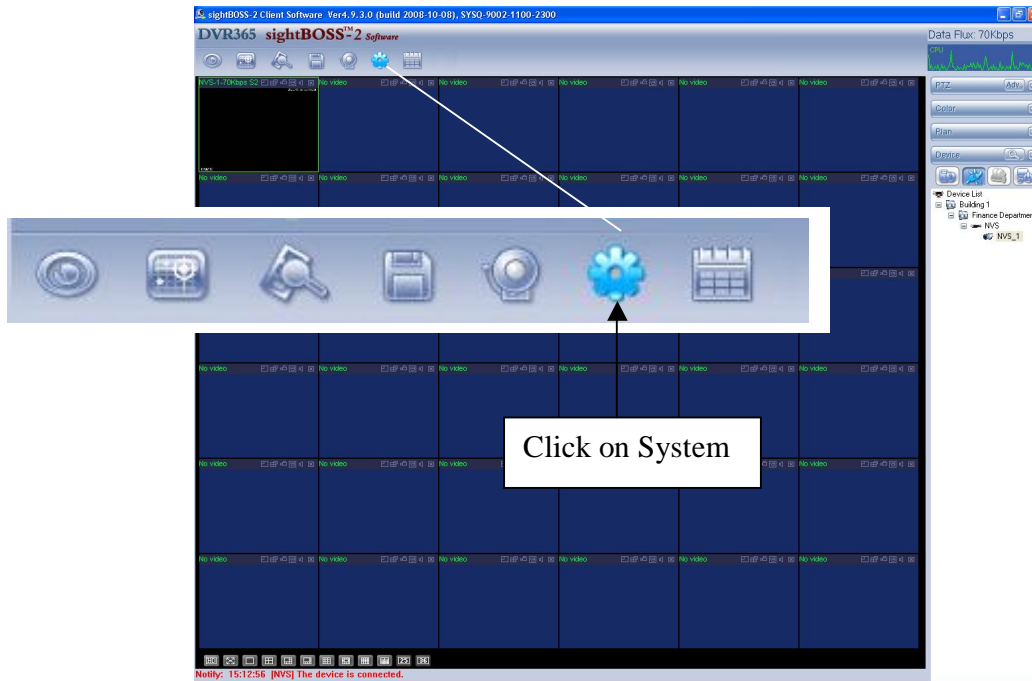


Click on the NVS box and select the upgrade button as advised by your supplier. Press the Open the file button to select the required file. Click on send button when instructed. You can view progress of upgrade. On successful completion you will be advised.

This option must only be used if supplier has provided you with instructions on use.



## 14. System Interface



System includes the following items:

**Network keyboard**

**Language**

**Device Status**

**SynchroTime**

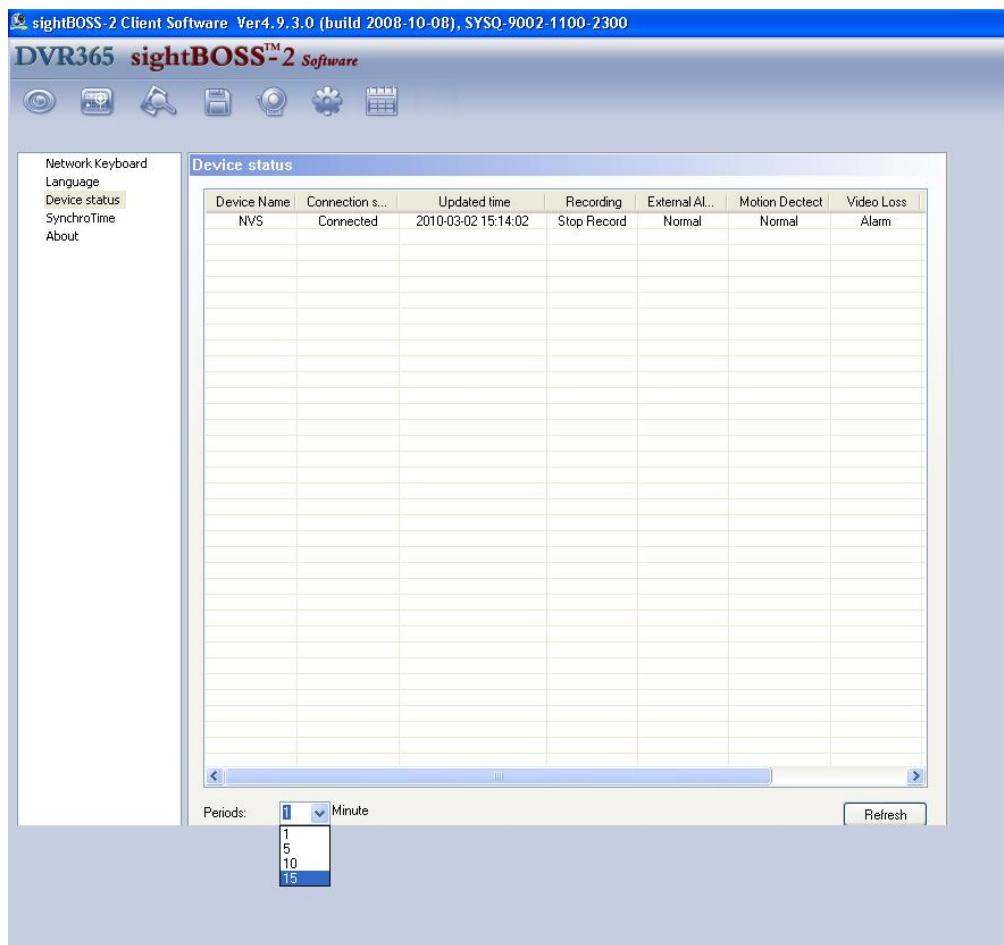
**About**

**Network Keyboard:**

This is the RS232 connection. You can use network or serial port to connect to network. Select network control you can use IP to connect. Select serial control you can use serial port to connect. The serial port connection is not supported.

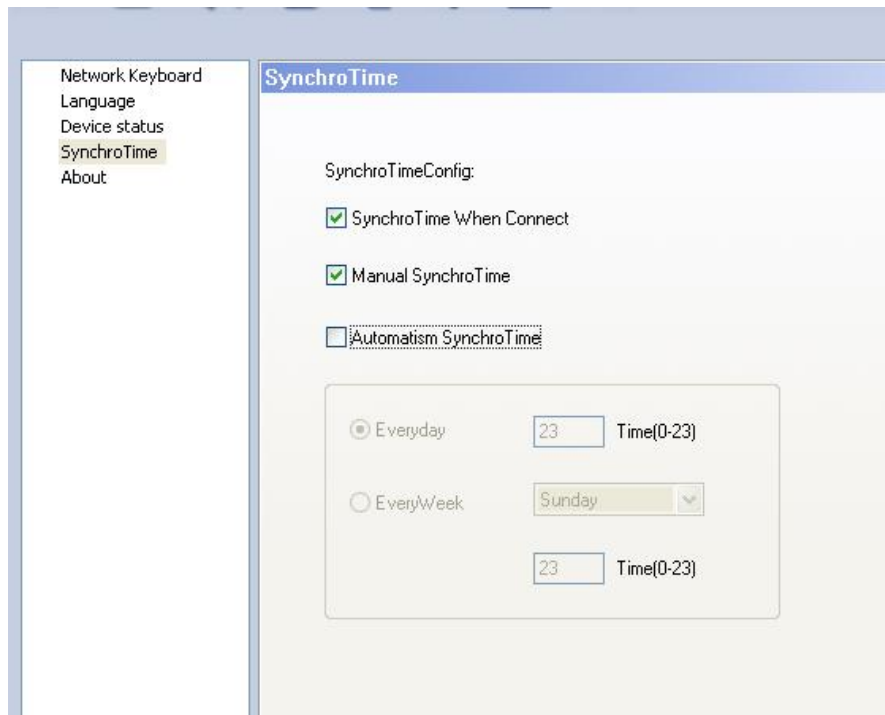
**Language:**

The NVS only supports English.

**Device Status:**

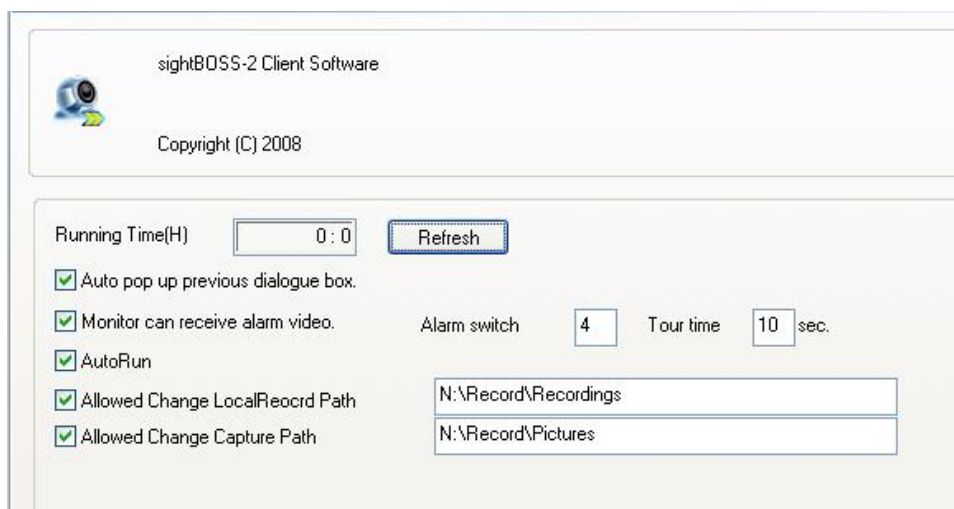
This specifies the NVS current status. At the bottom of the screen you can select the period refresh rate time period in minutes. Alternatively you can do an immediate refresh by pressing the Refresh button.

## SynchroTime:



This option allows the time in the NVS to be synchronised with the PC when the NVS is connected, when manually selected or using automation. If automation is selected the frequency can be selected for everyday at an hourly point or weekly on a specific day at a specific hour.

## About:



**Running Time:** This displays the run time since started in hours and minutes. Refresh or reboot resets time to 0:0.

**Auto pop up previous dialogue box:** If ticked this will display previous dialogue box.

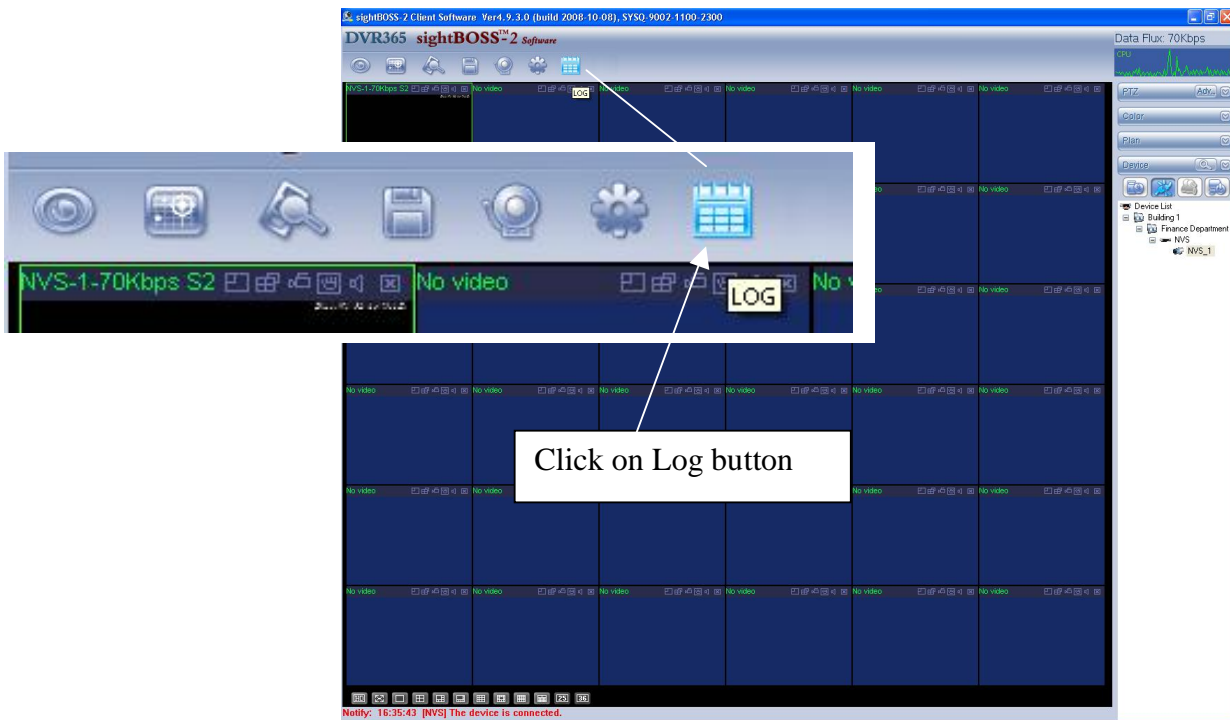
**Monitor can receive alarm video:** Set alarm switch and display time in seconds.

**AutoRun:** SightBoss-2 will automatically boot up after enabling this function.

**Allowed Change LocalRecord Path:** Set the record path manually for manual record.

**Allowed Change Capture Path:** Set the capture path manually for manual record.

## 15. Log



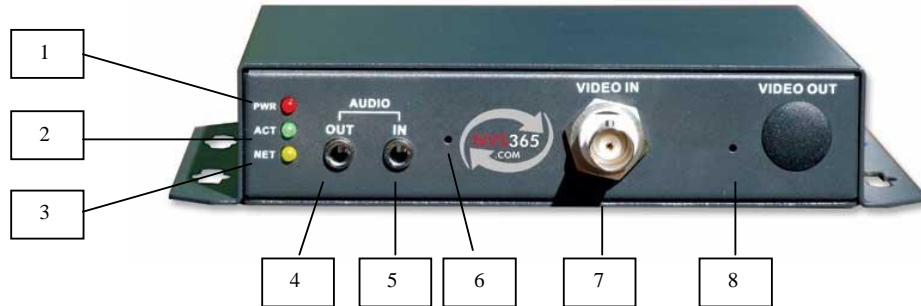
Click on Log button as shown above and populate recordings by expanding log folders.

The LOG window displays a list of events with the following columns: SN, User, Time, and Event Info. The events are sorted chronologically from 2010-3-2 10:58:24 to 2010-3-2 13:45:38. The left sidebar shows a folder structure for LOG, with subfolders for 2010, 2010-3-1, and 2010-3-2.

SN	User	Time	Event Info
1	admin	2010-3-2 10:58:24	Client_Client Successfully logged in!
2		2010-3-2 10:58:24	Client_Stream media Successfully logged in!
3	admin	2010-3-2 10:58:26	Client_Save Successfully logged in!
4	admin	2010-3-2 10:58:27	request login device NVS
5		2010-3-2 10:58:27	Device NVS Successfully logged in.
6	admin	2010-3-2 10:58:35	request login device NVS
7	admin	2010-3-2 11:2:38	Client_Client Successfully logged in!
8		2010-3-2 11:2:38	Client_Stream media Successfully logged in!
9	admin	2010-3-2 11:2:40	Client_Save Successfully logged in!
10	admin	2010-3-2 11:2:41	request login device NVS
11		2010-3-2 11:2:41	Device NVS Successfully logged in.
12	admin	2010-3-2 11:2:48	request login device NVS
13	admin	2010-3-2 11:2:51	request login device NVS
14	admin	2010-3-2 13:39:25	Client_Client Successfully logged in!
15		2010-3-2 13:39:26	Client_Stream media Successfully logged in!
16	admin	2010-3-2 13:39:27	Client_Save Successfully logged in!
17	admin	2010-3-2 13:39:28	request login device NVS
18		2010-3-2 13:39:29	Device NVS Successfully logged in.
19	admin	2010-3-2 13:39:46	request login device NVS
20	admin	2010-3-2 13:39:54	Client_Manager Successfully logged in!
21	admin	2010-3-2 13:40:8	request login device NVS
22	admin	2010-3-2 13:42:51	Client_Client Successfully logged in!
23		2010-3-2 13:42:52	Client_Stream media Successfully logged in!
24	admin	2010-3-2 13:42:53	Client_Save Successfully logged in!
25	admin	2010-3-2 13:42:54	request login device NVS
26		2010-3-2 13:42:55	Device NVS Successfully logged in.
27	admin	2010-3-2 13:43:2	request login device NVS
28	admin	2010-3-2 13:43:52	Client_Manager Successfully logged in!
29	admin	2010-3-2 13:44:4	request login device NVS
30		2010-3-2 13:44:37	Device NVS Disconnect
31	admin	2010-3-2 13:44:37	request login device NVS
32		2010-3-2 13:44:38	Device NVS Disconnect
33	admin	2010-3-2 13:45:7	request login device NVS
34		2010-3-2 13:45:8	Device NVS Disconnect
35	admin	2010-3-2 13:45:8	request login device NVS
36		2010-3-2 13:45:9	Device NVS Disconnect
37	admin	2010-3-2 13:45:38	request login device NVS

## 16. Other Functions

### Front panel



### 16.1 Reset

To reset this unit to manufacturer's settings use a thin wire pin or straighten a metal paper clip and press it into the reset hole marked '8' in the above diagram. Power on unit and push wire in for 15 seconds. The ACT light marked '2' in the above diagram will flicker. Release wire and then press immediately again for a further two seconds. The final press must be undertaken in less than 10 seconds. The unit will now restart and reset.

### 16.2 Switch between drive by wire and Mic

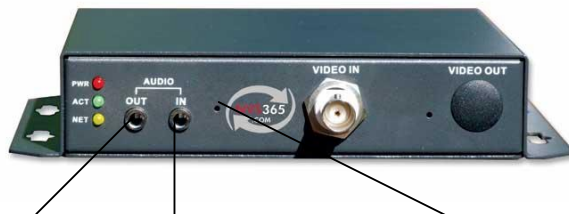
The unit can have an audio in cable input or microphone input. Use a thin wire pin or straighten a metal paper clip and press it into the reset hole marked '6' in the above diagram. Pressing selects microphone and releasing, switches to drive by wire.

### 16.3 Audio recording and playback

You will need a mono mini microphone jack plug fitted to the end of a microphone and inserted in the NVS Audio In connector. If the microphone is a 12vDC model it may be possible to use the NVS 12v+ DC for the positive connection providing load is less than 30mA. You must connect ground to the Ground connection.



Ground +12vDC

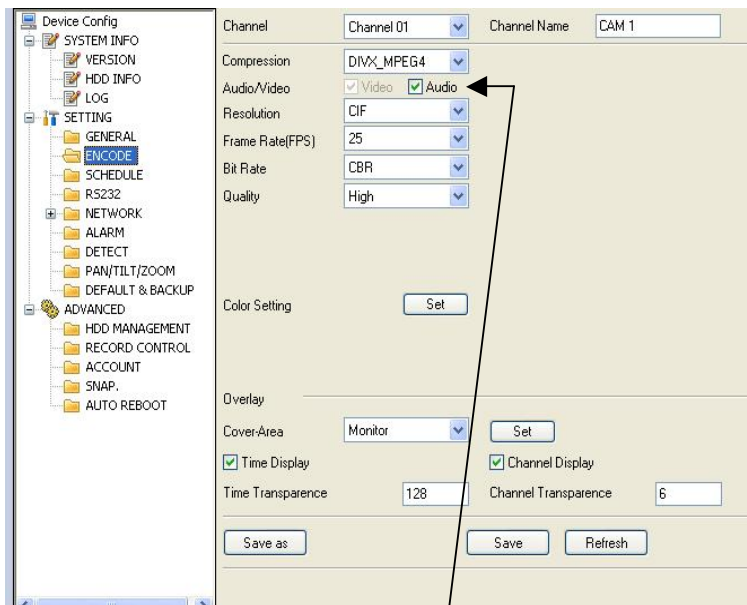


Audio Out Audio In Mic/Audio switch see 16.2

Connect the Audio Out to an amplifier with speaker, PC with sound card and speakers or monitor with audio output. Recorded audio data can be played back via the PC sound card.



Now enter the Device Configuration Menu. Refer to “Section 12 Device Configuration Management.” Select Encode setup.



Ensure device is made available to system.

Ensure that Audio box is ticked. Audio will only work on full frame rate of 25FPS. Use CIF resolution and set Bit Rate to CBR. Then click on Save.

Using the SightBoss-2 software for playback by referring to “Section 8.6 Search and Playback” ensure the audio button is highlighted and follow procedure for playing back the file.



**SPECIAL NOTE:**

As the audio is included in the video stream, video must run when audio is recorded.

Also CBR (constant bit rate) must be set for audio recording. Only use VBR (variable bit rate) when video only is recorded.

Note that audio will only work when full frame rate is set. Therefore always set 25FPS when using audio.