





GE
Security

DVSR xU User manual



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1. Product overview

Product description

The second generation of DVSR uses H.264, the latest video compression standard. This standard offers 25 frames per channel per second at CIF resolution. This compression technology delivers compact but excellent quality images.

The DVSR xU offers 4, 8 or 16 channels of analog recording, all up to 4CIF resolution (704 x 576). The dual streaming functionality allows the user to set up different settings for recording and streaming video. DVSR xU supports both variable bit rate and variable frame rate. The dual streaming functionality allows the user to set up different settings for recording and streaming video. DVSR xU incorporates Triplex functionality for simultaneous transmitting, viewing live video, and recording.

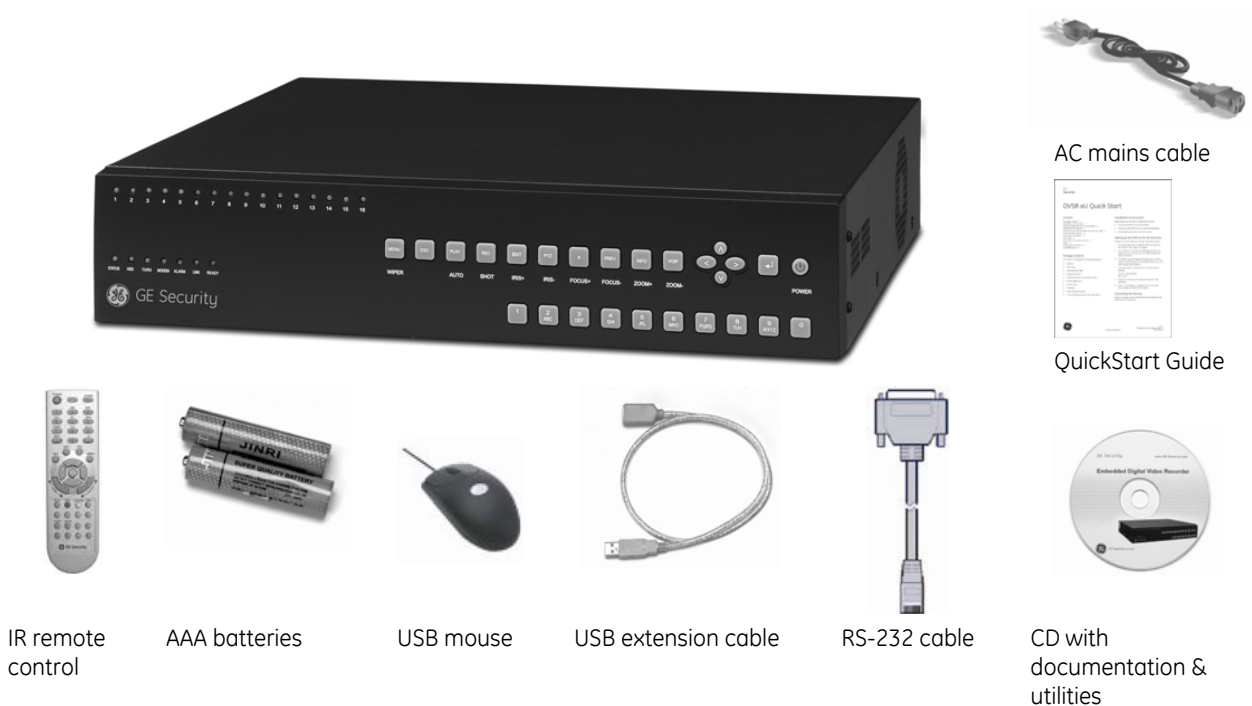
The DVSR xU series embedded digital video recorder is a digital surveillance product. It uses an embedded microcontroller DVSR xU (MCU) and an embedded real-time operating system (RTOS), combining the most advanced technology in the information industry, such as video and audio encoding/decoding, hard disk recording, and TCP/IP. The firmware is burned into the flash, making it more stable and reliable.

DVSR xU series has the features of both a digital video recorder (DVR) and a digital video server (DVS). It can be used as a standalone device but also to build a powerful surveillance network, such as widely used in the banking, telecommunications, manufacturing, and transportation sectors.

Unpacking the DVSR xU and its accessories

When you receive the product check the package and contents for damage, and that all the items are included. There is an item list in the package. If any of the items are damaged or missing, please contact your local supplier.

Figure 1: Items shipped with product



Installation environment

Ventilation: Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Ensure that the location planned for the installation of the unit is well ventilated. Regularly clean the unit by gently brushing it.

Temperature: Consider the DVSR xU's operating temperature (-10 to 50°C) and non-condensing humidity specifications (10 to 90%) before choosing an installation location. Extremes of heat or cold beyond the specified operating temperature limits may cause the DVSR xU to fail. Do not install the DVSR xU on top of other hot equipment. Leave space between rack mounted DVSR xUs.

Moisture: Do not use the unit near water. Moisture can damage the internal components. To reduce the risk of fire or electric shock, do not expose this unit near to rain or moisture.

Chassis: Other equipment may be placed on top of the DVSR xU if it weighs less than 16 kg.

WARNING: Before installing the DVSR, please ensure that the power to the DVSR is switched off.

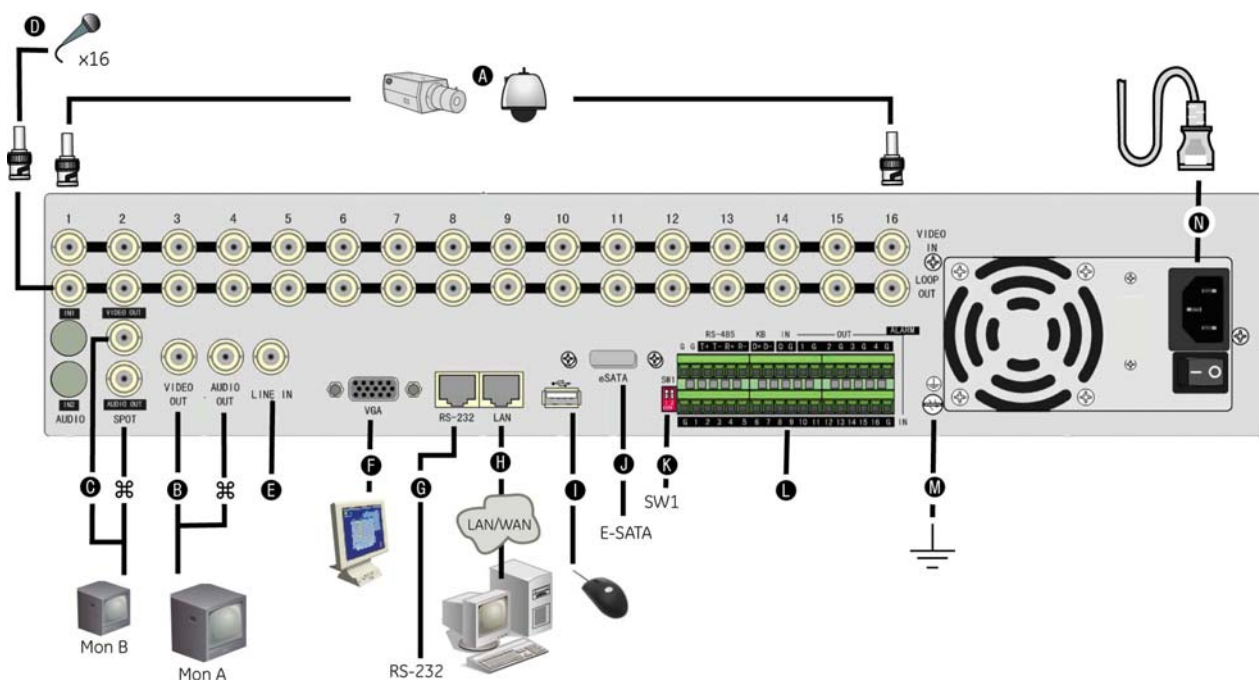
2. DVSR xU installation

This section describes how to connect the DVSR xU unit.

Connecting the devices

Figure 2 shows the back panel connections and describes each connector. There are variations between the different model types.

Figure 2: DVSR16 xU back panel connections



Required connections

- A. Connect up to 16 cameras to the standard BNC video inputs.
Note: If a camera is incorrectly connected to the DVSR xU, the monitor shows a Video Loss message. Check the connection and reconnect the camera if necessary.
- B. Connect monitor A (main) to the output VIDEO OUT. Connect the audio output (🔊) to AUDIO OUT if required. You can use either analog or VGA output. Both outputs will display the same video information.

Optional connections

- C. Connect a spot monitor (Mon B) to the DVSR xU. Connect the monitor video to VIDEO OUT. Connect the monitor audio (if used) to AUDIO OUT (🔊).
- D. Connect up to 16 audio signals to the standard BNC audio inputs (315 mV).
- E. For future use.
- F. Connect the VGA display (max. 1024 × 768 @ 60 Hz).
- G. Connect an ATM or optional ProBridge using the supplied RS-232 cable.
- H. Connect the network devices.
- I. Connect the USB mouse (supplied).
- J. Connect the E-SATA for archive and storage expansion.

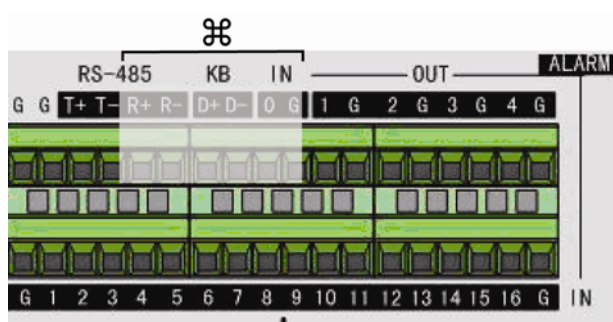
- K. Terminate the line using this RS-485 switch. The default setting is OFF.
- L. Connect the external data and alarm input/output (I/O) cable. See Figure 3 on page 4 for more information.
- M. Connect the DVSR xU to ground.

Power connection

- N. Connect the power cord to the DVSR xU. Be sure all devices are connected and turned on before you turn on the DVSR xU.

Connecting alarm inputs and outputs

Figure 3: Connecting the external data and alarm I/O cable



⌘: Not used

RS-485 T+ T-: Connect PTZ camera data

Alarm output port:

1-G to 4-G: 4 relay ports

Alarm input port:

G: Common ground)

1 to 16: Alarm inputs, NO/NC supported

Connecting the DVSR xU to a PC

Use a RS-232 cable to connect the unit to a PC. Figure 4 describes the pin connections to use when connecting the serial port of the DVSR to a device using a DB9 connector such as on a PC.

Figure 4: The pin connections of a RS-232 cable



Pin configuration

RJ45	DB9 (DTE)
DCD 1	4 DTR
RXD 2	3 TXD
TXD 3	2 RXD
CTS 4	7 RTS
RTS 5	8 CTS
DTR 6	1 DCD
GND 7	5 GND
DTR 8	6 DSR

Turning on the DVSR xU

The DVSR xU is delivered with preconfigured settings. You only need to connect the cameras and the monitors. After powering up, the DVSR xU will start to record immediately.

Note: The default video standard is PAL. For information on changing the standard, see section *To select the video standard* on page 32.

The DVSR xU is equipped with a universal power supply that will auto-sense 100/240 V, 60/50 Hz.

Turn on the connected equipment. When you turn on the DVSR xU it automatically displays all connected cameras. The DVSR xU shows the number of HDDs installed then displays live views from each connected camera. It automatically begins recording.

To get the unit into operation quickly

1. Connect all the devices required to the back panel of the DVSR xU. See Figure 2 on page 3.
2. Turn on the unit. The unit automatically carries out a diagnostic test of the devices. The video images then appear onscreen.
3. To modify the preconfigured settings, press the Menu button on the front panel to access the main menu. The login dialog screen appears.
4. Enter the default administrator user ID and PIN. The main screen appears.
User ID = Administrator
PIN = 3477
5. Modify the DVSR xU parameters as required in the submenus.
6. When customization is complete, press Esc to exit menu mode and return to live mode.

3. Controlling the DVSR xU

There are four ways to control the DVSR xU menu options:

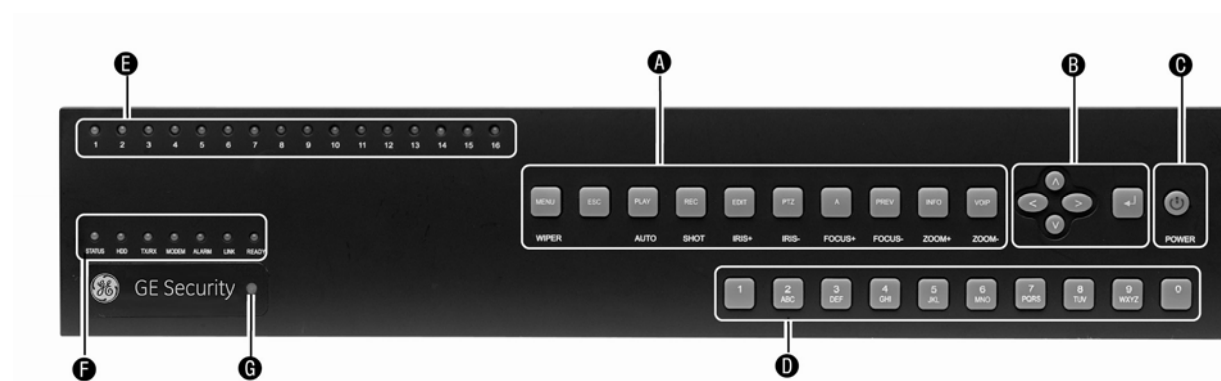
- Front panel control
- IR remote control
- Mouse control
- Web browser control

These options are described in the following sections.

Using the front panel

The buttons on the front panel control all functions. The LED indicators light up or flash to alert you to various conditions. See Figure 5.

Figure 5: Description of the DVSR xU front panel



Buttons	Description
A. Function	<div> <div>MENU</div> Main menu button. Opens the programming menus. </div> <div> <div>ESC</div> ESC button. Cancels the current operation and returns to the previous menu. </div> <div> <div>PLAY</div> Playback button. Opens the Search menu to search for recorded video files. </div> <div> <div>REC</div> Record button. Opens the manual record menu. The privileged user can then start, select, deselect, or stop manual recording for each video channel. </div> <div> <div>EDIT</div> Edit button. A multifunctional button. Its function depends on the current usage of the unit. </div> <div> <div>PTZ</div> PTZ button. Activates the PTZ control of the selected camera, if PTZ is supported. </div> <div> <div>A</div> Input method button. In an alphanumeric window, toggles through the different character types. In live mode, activates or deactivates the status bar. </div> <div> <div>PREV</div> Preview button. <ul style="list-style-type: none"> - Cycle through the multiscreen displays. Inactive cameras display NO VIDEO SIGNAL.. - Switch from Cycles through the multiscreen displays. Inactive cameras display <i>No Video Signal</i>. - Switches from any menu to return to viewing live video. </div> <div> <div>INFO</div> System information button. Information. For future use. </div> <div> <div>VOIP</div> VOIP button. Toggles between monitors A and B. </div>
B. Direction controls	<div> <div> <div><</div> <div>></div> <div> <div>↖</div> <div>↗</div> </div> </div> <ul style="list-style-type: none"> - Arrow buttons move the cursor in the programming menus to select and change settings. - If the PTZ option is activated, the arrows control the PTZ camera. - Control the playback video. </div>
C. POWER	Power switch. Press the button for at least 5 seconds to turn off the DVSR xU. You will be asked for your PIN.
D. Alphanumeric	Select video channels. Select full-screen display for the selected channel. Enter text and numbers in programming submenus.

LED	Description
E. Channels	Green indicates recording. Red indicates remote viewing. Orange indicates both recording and remote viewing.
F. Status	Status: Green indicates that the unit is linked to an IR remote control. HDD: Red indicates that the DVSR xU is accessing the HDD. TX/RX: Flashing green indicates data transmission. Modem: Green indicates that the unit is currently connected to a network. Alarm: Steady red indicates an alarm. Link: Green indicates that the unit is linked to a network.
G. IR remote receiver	This is the receiver for the IR remote control.
C. Power	Steady green indicates DVSR xU is operational. Red indicates manual shutdown. No light indicates that there is no power.


To silence the audible button feedback

At any time press and hold down the **MENU** button for at least five seconds. The audible button feedback will activate or deactivate depending on the current status. Press **ESC** to return to the live viewing screen.

Using the IR remote control

The IR remote control operation is similar to front panel operation.

Figure 6: Description of the IR remote control

No.	Name	Description
A.	POWER	Turn the DVSR on/off.
B.	DVSR#	Enable/Disable the IR remote control
C.	Alphanumeric buttons	Same as the alphanumeric button on the front panel
D.	EDIT	Same as the EDIT button on the front panel
E.	A	Same as the A button on the front panel
F.	INFO	Same as the INFO button on the front panel
G.	ESC	Same as the ESC button on the front panel
H.	PTZ	Same as the PTZ button on the front panel
I.	MENU	Same as the MENU button on the front panel
J.	 OK	Same as the < , > , ^ , v buttons and the Enter button on the front panel
K.	Lens control	IRIS, FOCUS ZOOM for lens control
L.	REC	Same as the REC button on the front panel
M.	PLAY	Same as the PLAY button on the front panel
N.	VOIP/MON	Same as the VOIP button on the front panel
O.	PREV	Same as the PREV button on the front panel
P.	SHOT	Same as the REC-SHOT button on the front panel
Q.	AUTO	Same as the PLAY-AUTO button on the front panel
R.		Reserved

To insert batteries into the IR remote control

1. Remove the battery cover on the remote control.
2. Insert the batteries. Observe the correct battery polarity (+ and -).
3. Replace the battery cover.

To connect the remote control to the DVSR xU:

1. Press the DVSR# button on the remote control.
2. Enter the device ID. The DVSR xU default ID is 1.

Note: See page 31 on how to change the device ID.

3. Press OK. The Status LED will light up on the DVSR xU front panel.

To switch off the IR remote control

1. When IR remote control STATUS LED on the DVSR front panel is lit, press the **DVSR#** button. The STATUS LED switches off and the IR control cannot be used to operate the DVSR.

To switch off the DVSR with the remote control

1. When IR remote control STATUS LED on the DVSR front panel is lit, press the **POWER** button for several seconds. The DVSR will be switched off.

When the IR remote control does not function properly

- Check the battery polarities
- Check that the batteries are sufficiently charged
- Check that the IR remote control sensor is not masked

If the problem persists, please contact your local supplier.

Using the mouse

Use the USB mouse provided with the DVSR xU. It can carry out the same operations as the front panel and remote control.

Connect the mouse to the DVSR by simply plugging the mouse USB connector into the USB port on the back of the DVSR xU. The mouse is immediately operational.

To use it in live view

1. **Scroll forwards and backwards between cameras:** When in full-screen view use the scroll button on the mouse to scroll forwards and backwards through the cameras.

Toggle between full-screen and multiview: When in multiview double-click the left button of the mouse on a camera to open it in full-screen view. Double-click again to return to multiview.

To access the mouse control menu

1. In live view right-click the mouse to open its control menu. It has eight menu options, which are listed in Table 1.

Table 1: Mouse control menu

Menu option	Description
Menu	Jump to the main menu.
Camera	Select a specific individual camera.
Multi Screen	Select multiview. The multiview selection presented depends on the number of cameras connected to the DVSR.
PTZ Control	Control a PTZ camera. See Table 4 on page 25 for the description of the PTZ control icons. Right-click the mouse to get the following options: <ul style="list-style-type: none"> • Channel: Select the camera to control • Preset: Select a preset number to use • Exit: Return to live view
Instant Replay	Get an instant replay of the last five minutes recorded from all cameras in either full-screen view or multiview. See section <i>To playback a recorded file</i> on page 18 for more information. During the playback, right-click the mouse to jump to the Playback menu.
Search	Jump to the Playback menu. See Fig 12 on page 17. Select for recordings with specific criteria, such as particular camera, type of event, time, and text. Right click mouse to return to live view.

Menu option	Description
Manual Record	Manual Record menu screen appears. See Fig 11 on page 16.
Status Bar	Toggle onscreen status bar on/off.
Swap Monitor	Toggle between monitors A and B.

Using the Web browser

The DVSR xU Browser lets you easily view, record, and playback video as well as manage all aspects of the system from any Internet location. It has easy-to-use controls that give you quick access to the functions you require. See Figure 7 below for the layout.

Figure 7: DVSR xU Browser layout (Live view shown)



- A. **Viewer:** View live and recorded video.
- B. **Navigation bar:** Access live and playback video. Explore the DVSR xU internal log, and carry out comprehensive remote maintenance.
- C. **Navigator:** Access all DVSR xU cameras.
- D. **Viewer controller:** View or edit the properties of the currently selected objects in the Navigator.
- E. **Camera controller:** Control PTZ cameras or edit properties of the currently selected cameras.

To access the DVSR xU Browser

Open Internet Explorer and type the IP address assigned to the DVSR xU. In the *Login* screen enter the user ID and PIN.

User ID = Administrator

PIN = 3477

4. Basic operations

This chapter describes the everyday usage of the DVSR xU. It explains:

- Login using PINs
- Live mode
- Full and multiscreen mode
- Manual recording
- Searching and playing back video
- Archiving recorded files
- Controlling a PTZ camera
- Overview of the menu structure
- Turning off the DVRS xU

Login using PINs

Use PINs to limit access to the DVSR xU. Only authorized users should be able to modify menu settings or carry out certain tasks. See section *User settings* on page 76 for information on managing users.

Note: You will hear an audible warning when an incorrect user name or PIN is entered. After three incorrect entries, the unit returns to live mode.

Description of live mode

In live mode, you watch live video from a camera. Live mode is the normal operating mode of the unit. From live mode you can switch to playback mode or to the system menu.

The way the monitors display video depends on how you set up the system.

In live mode, the DVSR xU displays the status of each video channel at the bottom of the screen. See Figure 8. The number of channels displayed (4, 8, or 16) depends on the DVSR xU model.

Figure 8: Example of live mode with recording status displayed (for 16 cameras)



If the letter is grey letter, the monitor is inactive

Caution: DVSR xU has no camera autodetection mode. The unit records a channel even if no camera is connected to it. A black picture with the message "Video Loss" is displayed when the channel is selected in either live mode or playback mode.

The color of the camera numbers displayed in the status bar represents the channel status. It is consequently easy to see the current status of each channel during live mode. The status color code is described in Table 2.

Table 2 Description of the status color code

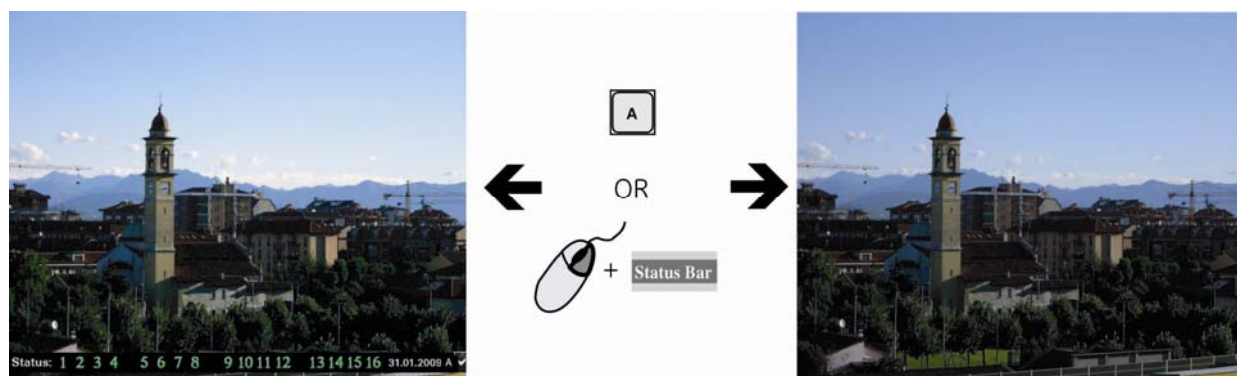
Icon	Icon color	Status description
1	Blue	No video signal
1	Yellow	Camera tampered
1	Grey	Camera disabled
1	Green	Real time recording
1	Orange	Motion detection
1	Red	External alarm

The status bar can be set to appear by default. See section *To setup the status bar* on page 32.

To activate/deactivate the onscreen status bar

Front panel/remote control	Press the A button on the front panel to activate or deactivate the status bar.
Mouse	Right-click the mouse and select <i>Status Bar</i> from the menu.

Figure 9: Activate or deactivate the status bar



Selecting live view

You can select from which monitor to display the camera views in live mode as well to display full or multiview screens on the monitor.

To select between monitor A and B

Front panel/remote control	Press the VOIP button to select between monitor A and B.
Mouse	Right-click the mouse and select <i>Swap Monitor</i> from the menu shown.

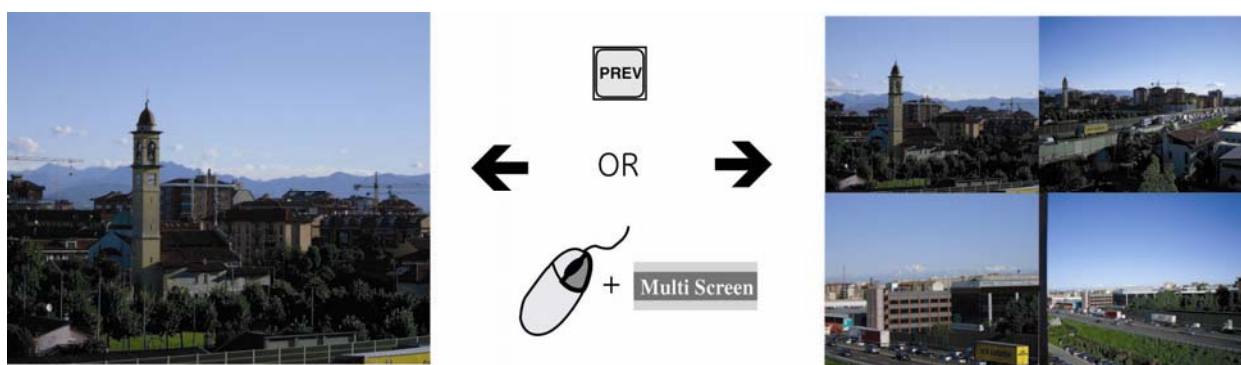
To view a full screen display

Front panel/ remote control	DVSR xU with 4 or 8 cameras:	Press the number button that corresponds to the camera number. For example, press button 2 to preview camera number 2.
	DVSR xU with 16 cameras	Press the two number buttons that correspond to the camera number. For example, press buttons 0 2 to preview camera number 2, and press buttons 1 2 to preview camera number 12.
Mouse	Right-click the mouse and select <i>Camera</i> from the menu shown. Select the camera you need.	

To view a multiscreen display

Front panel/remote control	Press the PREV button to switch to multiscreen live viewing. If the multiscreen display does not include all the cameras you want to see, keep pressing the PREV button to increase the number of screens displayed.
Mouse	Right-click the mouse and select <i>Multi Screen</i> from the menu. Select the desired display layout.

Figure 10: Change the number of screens on view



To manually cycle through live views

Front panel/remote control	Press the EDIT button to manually step through the live views. You can set the auto multiscreen mode in the Display menu. See section <i>To change live view layout</i> on page 33 for further information.
Mouse	Use the mouse wheel to scroll forwards and backwards through the live views.

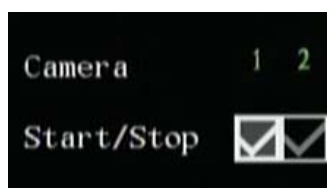
Figure 11: Manually cycle through live views



Manual recording

When a channel is recording its corresponding LED on the front panel is green. This green LED is also repeated in the manual record menu. You can start or stop a channel recording by pressing the REC button and entering into the Manual Record menu.

Figure 12: What the options mean in the Manual Record menu



When the status of the camera number is:

- **Green** indicates the channel is recording
- **Red** indicates remote viewing
- **Orange** indicates both recording and remote viewing
- **Grey** the channel is not recording

Start/Stop options:

- ✓ indicates recording is enabled

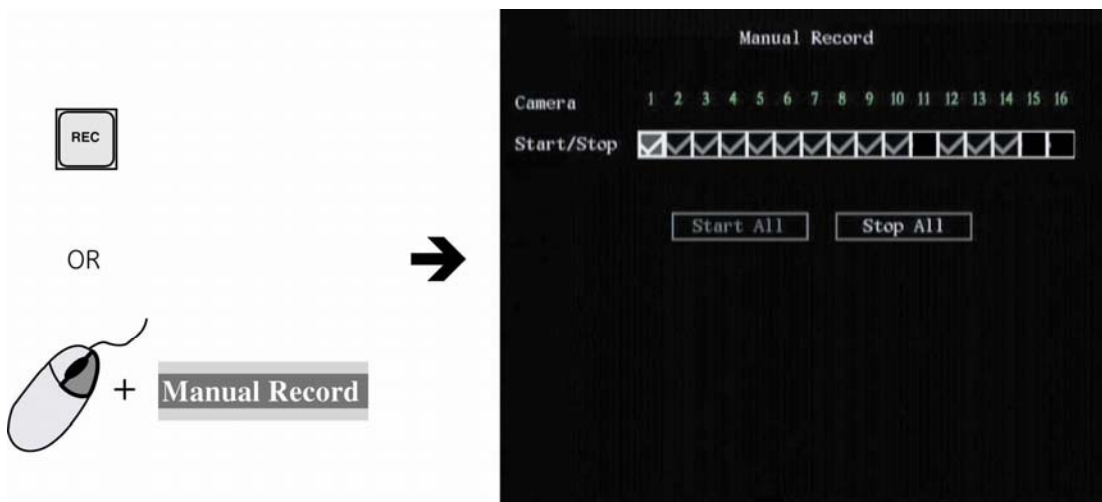
To manually start or stop a recording

1. Press the REC button on the front panel of the DVSR or the IR remote control, or right-click the mouse, and select *Manual Record*. Enter your user name and PIN, if requested.

Note: You must have Record rights to change the manual recording status. See section *To add or modify user operational rights* on page 79 for more information.

The manual record screen appears, listing all the channels. The Camera status line shows which channels are currently recording. See Figure 13.

Figure 13: The manual record menu with 16 channels (13 recording)



2. On the Start/Stop line press Enter or left-click the mouse to activate (✓) a channel that is not recording. Press or click again to de-activate.

The channel status LED on the front panel and the camera number in the status bar on screen turn green. The Start/Stop button in the Manual Record screen displays a "✓".

Recording now starts from the selected channel.

3. Select the next channel from which you want to start or stop recording.
4. If you want all channels to start recording, select *Start All*. All the channel status LEDs on the front panel and the onscreen camera numbers in the status bar turn green.

Select *Stop All* to switch off all channels.

5. Press the ESC button or right-click the mouse to save changes and return to the live mode.

Searching and playing back recorded video

You can search for and playback recorded video. You must be in live mode to playback video. You can search recorded videos by several different options, such as:

- Manually, motion detection, or alarm recorded files
- Start and end time of recording
- Text (from an ATM, for example)

Note: You must have playback rights to playback recorded images. See section *To add or modify user operational rights* on page 79 for more information.

The system also lets you playback channels simultaneously so that multiple images appear onscreen.

To search for recorded video

1. In live mode press the PLAY button on the front panel of the DVSR xU or the IR remote control, or right-click the mouse and select *Search*. Enter your user name and PIN, if requested. The playback menu appears. See Figure 14.

Figure 14: The Playback menu



2. In the *Camera* list box select the channel you want to search.
3. In the *Search for* list box select the type of recorded videos to be searched. See Table 3.

Table 3 Video type options

Option	Search for recorded file types
All	All recordings
All Time	Only scheduled time recorded files
Manual	Only manually recorded files
Alarm	Only alarm recorded files
Motion Det.	Only motion detected files
Motion & Alarm	Only files where motion and alarm were detected at the same time
Motion Alarm	Only files where motion or alarm was detected

4. For the *Start* and *Stop* recording periods go to each edit box and enter the start and end dates and times:

Front panel or remote control	Press EDIT. Use the arrows buttons to change the numeric value. Press Enter when completed and move to the next edit box.
Mouse	Click the edit box and select the number from the onscreen numeric list that appears.

Note: The date has the format DD-MM-YYYY. Time has a 24-hour format. The default stop values shown are the current time and date.

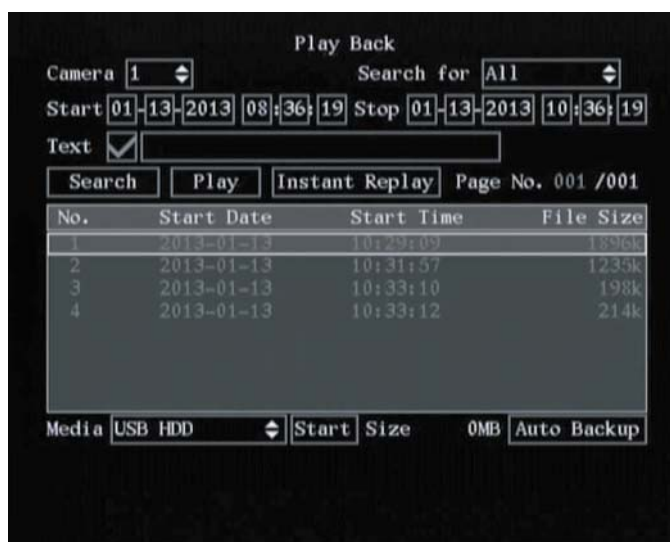
- If you want to search for video from a particular ATM, for example, go to *Text* and press Enter or left-click the mouse to activate (✓). In the edit box alongside the check box type the text to be searched (for example, the text that appears on an ATM screen.)

Front panel or remote control	Press EDIT. Press A to change the type of character to be entered, which is shown on the bottom of the screen. Use the alphanumeric buttons to enter the text. Press Enter when completed.
Mouse	Click the edit box and select the text from the onscreen alphanumeric list that appears.

- Go to *Search* and press Enter or left-click the mouse to start the search.

When the search is completed a list of all the files found appears. The list may extend over several pages. The most recent file is listed first. See Figure 15 for an example of a search result.

Figure 15: Example of a search result



Note: If you get a message saying that there are no recordings but you were expecting some to be listed, check that you have selected the correct recorded file type option for your search.

- Press ESC or right-click the mouse to quit playback mode and return to live mode.

To playback a recorded file

- Search for the files you want to playback. See section *To search for recorded video* on page 17.
- In playback mode (see Figure 15 on page 18) there are three ways to playback a recorded file:
 - Select *Play*. The system will play each file listed, starting with the first file.
— or —
 - In the search window select the video file you want to play and press Enter or left-click the mouse. Only the selected file will be played back.
— or —
 - Select *Instant Replay* and press Enter or left-click the mouse. The system will play the last 5 minutes recorded by the selected camera.

3. Press ESC or right-click the mouse to return to the Play Back menu. All the files you selected for playback are now deselected.
4. Press ESC again or right-click the mouse to quit playback mode and return to live view.

Archiving recorded files

You can archive recorded files on external devices. As well as being able to archive a complete recorded file, you can also archive specific incidents in a file. You must be in live mode to playback a recorded file.

Note: You must have playback rights to playback recorded images. See section *To add a new user on page 78* for more information. Avoid moving the external recording device when backing up information onto it.

Description of the Playback toolbar

A toolbar appears on screen during playback to help select the portions of recordings to be archived. It also displays playback progress.

There are two parts to the toolbar. The top row of icons let you control how you playback the video and what portions to archive. See Figure 16. The icons are controlled using the mouse.

The bottom row shows you the playback progress and speed. See Figure 17.

Figure 16: Description of the Playback toolbar icons













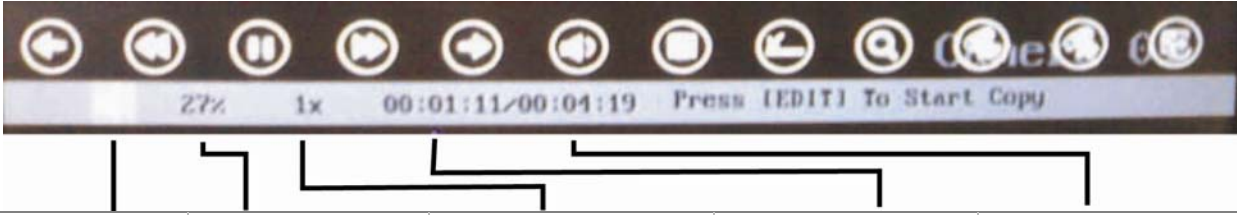
Icon	Description	Icon	Description
	Jump back 30 seconds in the playback video.		Start archiving the video.
	Decrease the playback speed. See Figure 17 for the list of speeds available.		Remove the Playback toolbar. To make it reappear onscreen, right-click the mouse and select Display.
	Pause the playback.		Digital zoom. Double left-click the mouse to zoom in. Double left-click again to return to normal view.
	Increase the playback speed. See Figure 17 for the list of speeds available.		To view full screen when in multiscreen mode, double-click the mouse on the desired screen. It appears as full screen.
	Jump forward 30 seconds in the playback video.		Left-click the mouse on one of the icons to move backwards or forwards through the full screens.
	Turn on or off audio.		Left-click the mouse to scroll through the number of multiscreens displayed.

Figure 17: Playback information on a recorded file

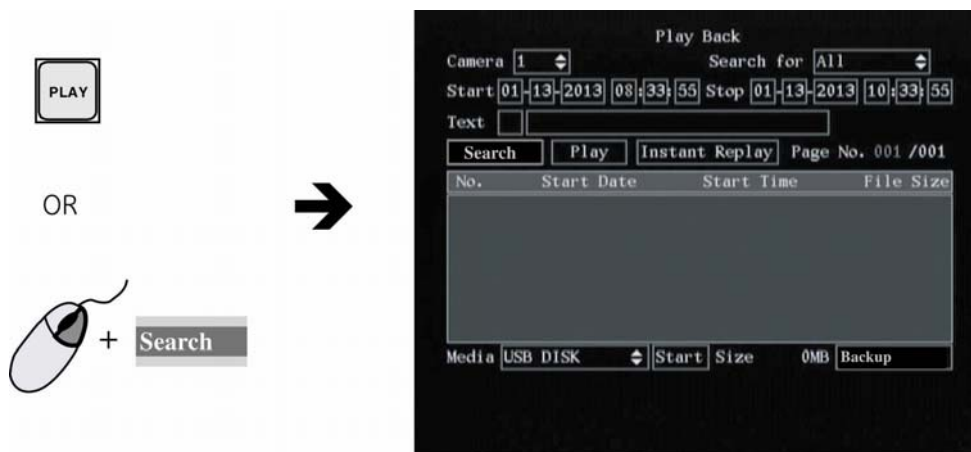


Audio	Playback progress	Playback speed	Current playback time	Total playback time
<p>Press PLAY to silence the audio recording associated with this video. Press PLAY again to reactivate the audio.</p> <p>Audio in this example is on.</p>	Shows how far you have progressed through the recorded file.	<p>Press the arrow buttons to change the rate of playback. Nine options are available:</p> <p>Single: Press Enter to advance one frame at a time.</p> <p>1/8x: An eighth of actual speed.</p> <p>1/4x: Quarter of actual speed.</p> <p>1/2x: Half of actual speed.</p> <p>1x: Actual speed.</p> <p>2x: Twice actual speed.</p> <p>4x: Four times actual speed.</p> <p>8x: Eight times actual speed.</p> <p>MAX: Maximum speed.</p>	<p>Playback always starts from time zero. The actual time of the recording is shown on the top of the screen.</p> <p>Press the arrow buttons to jump backwards 30 seconds, or to jump forwards 30 seconds.</p>	Shows the duration of the recorded file. In this example, it is 4 minutes 19 seconds.

To archive a recorded file

1. In live mode press the PLAY button on the front panel of the DVSR or the IR remote control, or right-click on the mouse and select Search. Enter your user name and PIN, if requested. The playback menu appears. See Figure 18.

Figure 18: The Playback menu



2. Search for the recorded files you want to copy. See *To search for recorded video* on page 17 for more information.
3. Press the EDIT button or left-click the mouse to select the video file you want to copy from the list. The file will be highlighted.
4. Select other files you want to archive. Each selection must be highlighted.
Note: Press ESC or right-click the mouse to quit playback mode at any time to return to live view.
5. Select *Media* and then the desired medium on which to archive.
6. Select *Start* to write the files to the medium selected. A message appears when copying is completed.
7. Press ESC or right-click the mouse to quit playback mode and return to live view.

To backup recorded files

Manually select the recordings that you want to backup.

1. Press the PLAY button, or right-click on the mouse and select Search. Enter your user name and PIN, if requested. The Play Back menu appears. See Figure 18 on page 20.
2. Go to *Media* and select eSATA HDD on which to do the backup.
Note: eSATA must be set to Record in the recording menu in order to record video on an DVSR-eSATA-DVD drive. See section *Recording* on page 49 for more information.
3. Go to OMB and press Enter or left-click the mouse. The Backup submenu appears.
4. Select the cameras you want to back up. The numbers of the selected cameras are highlighted.
5. Set start and stop times of the cameras you want to backup.
6. Go to *Backup* and press Enter or left-click the mouse to start the backup. A message will appear when completed.

Note: Avoid moving the external recording device when backing up information onto it.

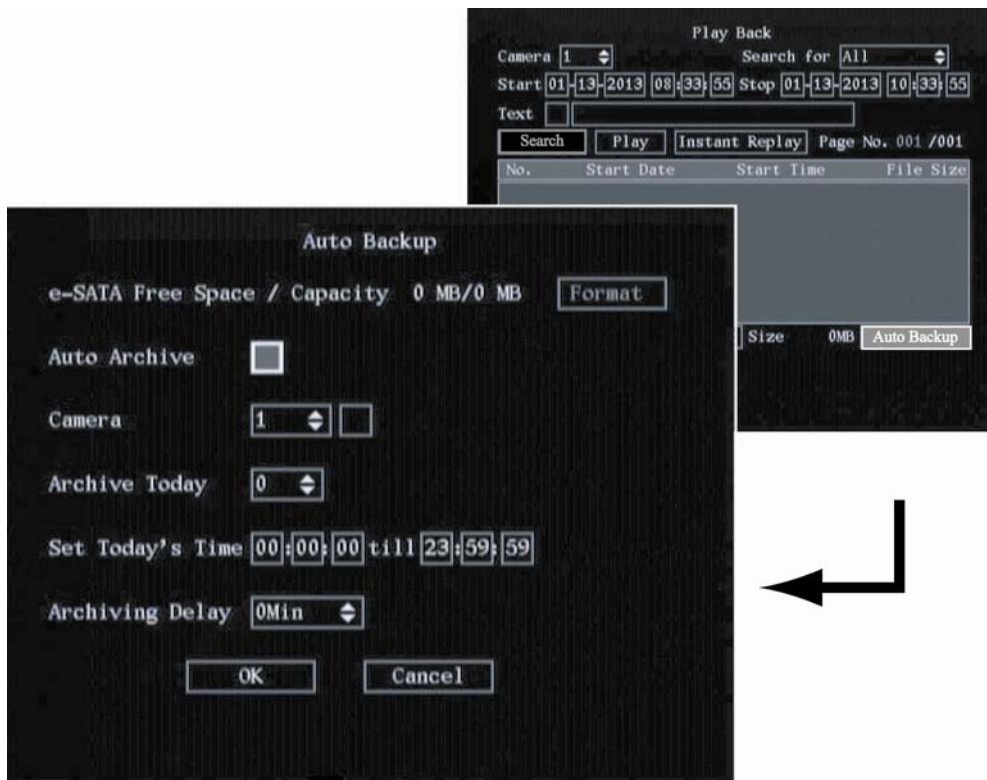
To auto backup recorded files

Recordings are automatically backed up according to a set schedule. For example, every morning the previous day's recordings are automatically backed up.

1. Press the PLAY button, or right-click on the mouse and select Search. Enter your user name and PIN, if requested. The *Play Back* menu appears. See Figure 18 on page 20.
2. Go to the *Media* edit box and select the option *eSATA HDD* on which to do the auto backup.
3. Go to the *Auto Backup* edit box and press Enter or left-click the mouse. The Auto Backup submenu appears. See Figure 19.

Note: If the OMD option shown on the playback menu is *Backup*, this means that eSATA has been set to *Record* in the recording menu. It should be changed to the *Backup* option. See section *Recording* on page 49 for more information.

Figure 19: Auto Backup menu



4. Go to the *e-Sata Free Space* Format button and press Enter or left-click the mouse to format the external drive.

Note: This action needs only to be done the first time you use the device.

5. Go to the *Auto Archive* check box and press Enter or left-click the mouse to enable Auto Archive.
6. Go to the *Camera* list box and select the camera whose recordings are to be archived and also enable the check box beside the camera number box. Do this for each camera's recordings to be archived.
7. Go to the *Archive Today* list box to set the number of days back to be automatically archived. Up to 6 days can be selected.
8. Go to the *Set Today's Time* edit boxes and enter the period of time during the day to be archived.

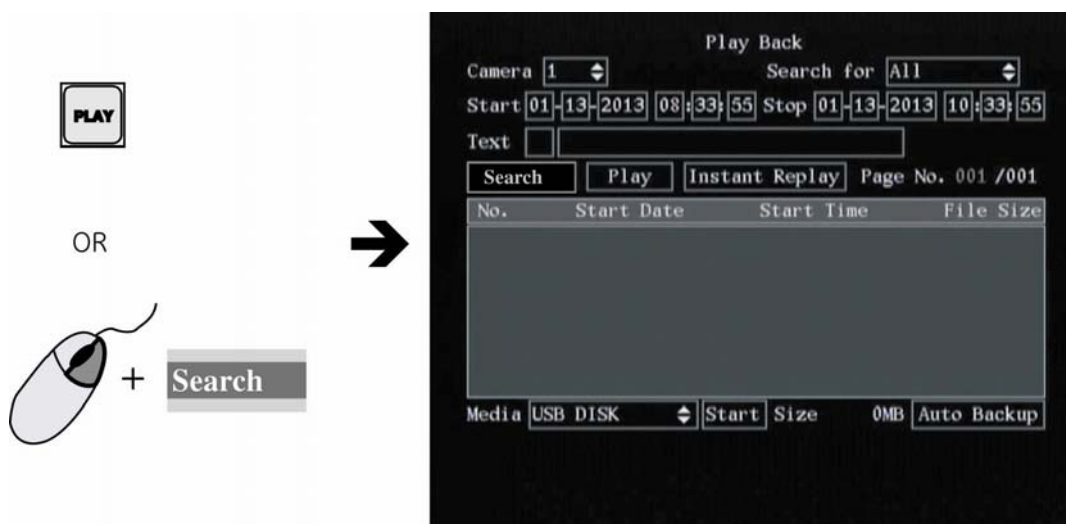
Note: Time has a 24-hour format.

9. Go to the *Archiving Delay* list box and select the time after activating the DVSR xU for auto backup to start.
10. Select OK to save your changes and return to live mode.

To archive all recorded files found in a search

1. Press the PLAY button, or right-click the mouse and select Search. Enter your user name and PIN, if requested. The playback menu appears. See Figure 20.

Figure 20: The Playback menu



2. Search for the recorded files you want to copy. See *To search for recorded video* on page 17. The oldest file is listed first.
3. Press the A button to select all the video files listed. All files will be highlighted. To deselect all the files, press A again.
4. Go to *Media* and select the desired medium on which to copy.
5. Go to *Start* and press Enter or left-click the mouse to write the files to the medium selected. A message appears when copying is completed. Press OK.
6. Press ESC or right-click the mouse to quit playback mode and return to live mode.

To archive specific incidents in a recorded file

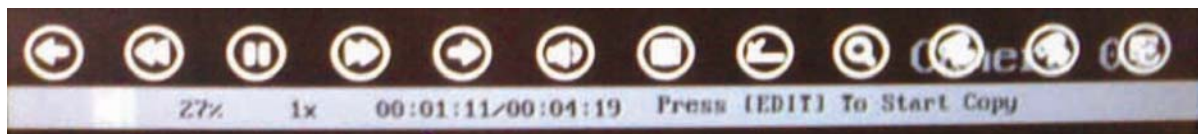
1. Press the PLAY button, or right-click the mouse and select Search. Enter your user name and PIN, if requested. The playback screen appears. See Figure 20 on page 23.
2. Search for the recorded files you want to copy. See *To search for recorded video* on page 17. The oldest file is listed first.
3. If you want to save the copy to a medium that is different from that listed under Media, go to *Media* and select the desired medium on which to copy.
4. Select the video file(s) in the search results list that you want to archive.

If using the front panel or remote control, press EDIT and select the file you want. Press Enter to start playback.

If using the mouse, double click the file you want. Playback starts.

On the bottom of the playback screen you will see information on the playback progress of the selected file. See Figure 21.

Figure 21: Playback tool bar



5. When you reach the part of the playback that you want to copy, press EDIT to start copying. A red radio button appears in the right hand corner of the screen when copying is taking place.
Press EDIT again to stop copying. The red radio button disappears. You can copy several sections of the same playback file.
6. Using the mouse, adjust the playback variables as required. See section *Description of the Playback toolbar* on page 19 for the description of the icons. Playback can also be paused by pressing Enter, and then pressing it again to restart it.
7. When finished copying this recording, press ESC or right-click the mouse to exit. A message appears asking you to confirm that you want to copy the file. Select OK.
8. Press ESC or right-click the mouse to quit playback mode and return to live mode.

Controlling a PTZ camera

You can control the PTZ operation of the cameras. It is entered from live mode.

It can be controlled using buttons on front panel and IR remote control as well using the PTZ control icons accessed with the mouse. See Figure 22 for the PTZ control icons onscreen and Table 4 for the descriptions on how to control PTZ using the front panel, IR remote control and mouse.

	To enter PTZ mode	To exit PTZ mode
Front panel/remote control	Press the PTZ button.	Press the ESC or Enter buttons to return to live mode.
Mouse	Right-click the mouse and select the menu option PTZ.	Right-click the mouse to return to live mode.

Figure 22: PTZ control

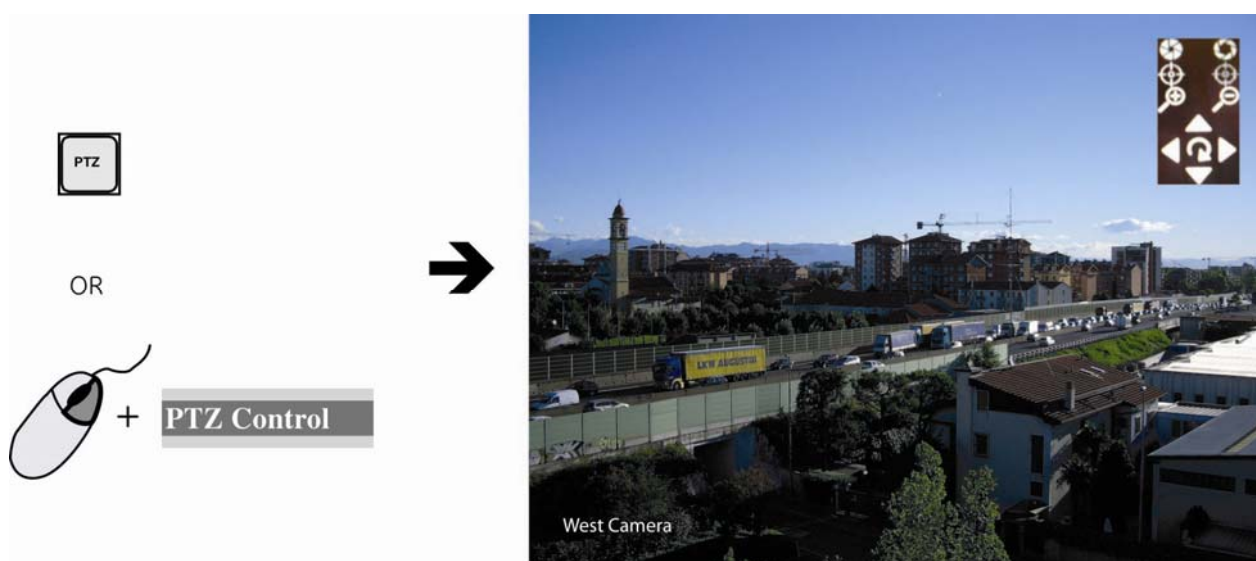


Table 4 Description of the PTZ control buttons

DVSR front panel	IR remote control	Onscreen PTZ control icons	Description
<, >, ^, v			Pan left/right and tilt up/down.
<div>INFO</div> <div>VOIP</div> <div>ZOOM+ ZOOM-</div>			Zoom in (+) and out (-).
<div>A</div> <div>PREV</div> <div>FOCUS+ FOCUS-</div>			Focus in (+) and out (-).
<div>EDIT</div> <div>PTZ</div> <div>IRIS+ IRIS-</div>			Open (+) and close (-) the iris control.
<div>REC</div> <div>SHOT</div>		Right-click the mouse and select the <i>Preset</i> menu command.	Call up preset.
<div>PLAY</div> <div>AUTO</div>			Call up autopan.
<div>MENU</div> <div>WIPER</div>			Wiper control.

To call up a PTZ preset number

1. In PTZ mode, do one of the following:

Front panel	Press the PTZ button to enter PTZ mode. Press the REC button and enter a preprogrammed three-digit preset number. Preset starts immediately. If you press a one or two-digit number (depending on DVSR xU model), you will change the selected camera. This function is only available when the mouse is not connected to the DVSR xU.
Remote control	Press the PTZ button to enter PTZ mode. Press SHOT button and enter a preprogrammed three-digit preset number. Presets start immediately. If you press a one or two-digit number (depending on DVSR xU model), you will change the selected camera. This function is only available when the mouse is not connected to the DVSR xU.
Mouse	Right-click the mouse and select <i>PTZ control</i> to enter PTZ mode. Right-click the mouse again and select the menu option <i>Preset</i> . Select one of the preset numbers listed.

Note: The PTZ preset number is preprogrammed. See section *Configuring the PTZ settings* on page 71 for further information.

The DVSR xU will adjust to the settings of this preset number.

2. If you want to use a different preset PTZ number, repeat step 1 when in the PTZ mode. The DVSR will re-adjust to that preset number.
3. To exit PTZ mode press ESC or Enter, or right-click the mouse and select Exit. You will return to live mode and the camera will stay in its current position.

To start/stop autopan in PTZ mode

Autopan is the camera moving between two limits. The function depends on the camera used.

1. In PTZ mode, do one of the following:

Front panel	Press the PLAY button to start the PTZ auto function. Press it again to stop.
Remote control	Press AUTO button to start the PTZ auto function. Press AUTO again to stop.
Mouse	Right-click the mouse and select <i>PTZ control</i> to enter PTZ mode. Click on the autopan icon to start it.

Note: If the PTZ is in autopan mode and you exit PTZ mode, PTZ will continue in autopan mode. You must re-enter PTZ mode to stop the autopan.

2. To exit PTZ mode press ESC or Enter, or right-click the mouse and select Exit. You will return to live mode and the camera will stay in its current position.

Overview of the menu structure

The DVSR xU has an icon driven menu structure that allows you to configure the unit's parameters. Figure 23 shows the DVSR xU main menu screen. Each icon symbolizes the content of the submenu. The menu icon selected has a white action frame around it.

Many of the submenus are only available to privileged users, such as the system administrator.

You must be in live viewing mode to access the menu mode where you can setup or change the DVSR xU settings in menu mode.

Figure 23: The DVSR xU main menu

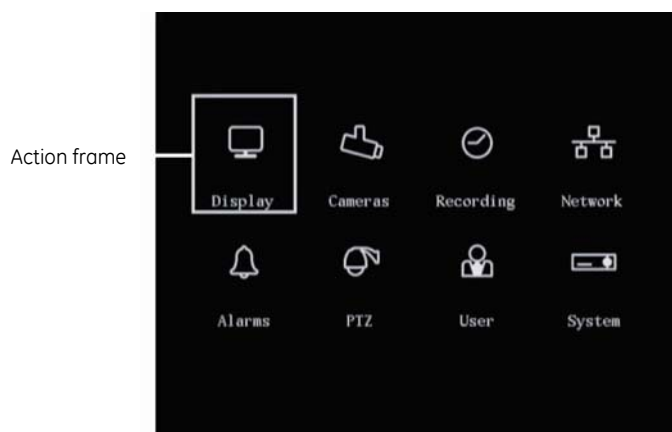


Table 5: Description of the eight menu icons

Menu icon	Description
Display	Configures the bus address, login PIN request, menu timeout, video standard, VGA, time and date, and multiscreen. See section <i>Display</i> on page 30.
Cameras	Configures the camera titles, video adjustment, advanced camera settings, time and date position, and motion detection. See section <i>Camera</i> on page 36.
Recording	Configures the recording mode, e-SATA, image resolution, recording rates, bits rates, and pre and post recording settings. See section <i>Recording</i> on page 49.
Network	Configures the standard network settings, e-mail, and advanced network settings. See section <i>Network</i> on page 56.
Alarms	Configures the alarm input type, alarm rules, alarm output type, PTZ linkage, notification settings. See section <i>Alarm</i> on page 63.
PTZ	Configures the RS-485, PTZ protocols, and PTZ addresses. Comprehensive configuration of GE domes, and basic setup of non-GE devices. See section <i>PTZ</i> on page 69.
User	Configures user rights. See section <i>User settings</i> on page 76.
System	Configures the RS-232. Manage firmware upgrade, and HDD. View log and system view. Acknowledge alarms, reboot the DVR, and power off. See section <i>System</i> on page 82.

To access the main menu

1. On the front panel of the DVSR or the IR remote control press the Menu button, or right-click the mouse and select menu. Enter your name and PIN, if requested. The main menu appears.

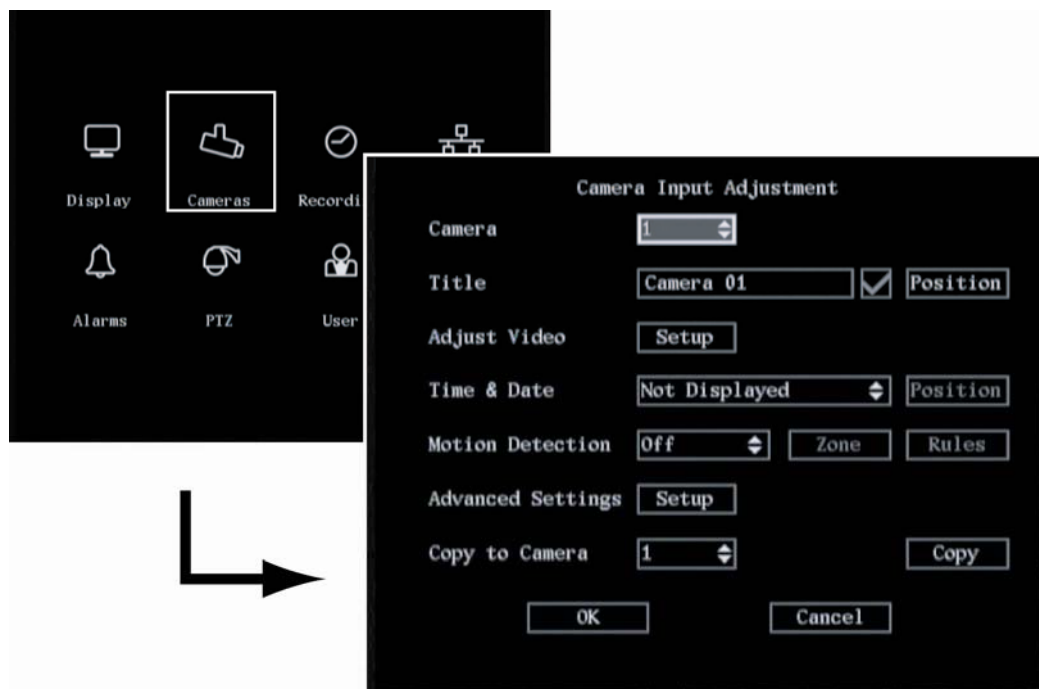
Note: The factory default Administrator name is “Administrator” and the PIN is “ 3477 ”.

2. Press the ESC button, or right-click the mouse, to quit the menu and return to the live mode.

To select a menu icon

1. In the main menu move the action frame onscreen to the desired menu icon.
2. Press Enter or left-click the mouse to enter the selected menu. The menu screen appears. Figure 24 shows the Camera menu.

Figure 24: The Camera menu



3. When you have finished changing all the menu options required, go to OK and press Enter or left-click the mouse to save the changes. To abort all changes select Cancel and press Enter or ESC, or left-click the mouse. You will return to the main menu screen.

Changing the menu settings


The DVSR xU is delivered with default settings that can be easily changed from the menus.

Caution: If there is a power failure, you will lose all user-modified settings. The systems will return to the programmed settings.

To change settings in a menu

1. There are four ways to change the menu settings:

Table 6: Changing menu entries

Item	Description
Check box	You can select either enabled (✓) or disabled. Press Enter or EDIT to toggle between them or left-click the mouse.
List box	One of the listed options can be selected. Front panel or remote control: Press Enter and then the arrow buttons to select an option. Press Enter again to accept changes made in the list box. Mouse: Position the mouse cursor on the list box arrows and left-click the mouse to scroll through the options.
Edit box	You can type characters in an entry. Front panel/remote control: Press EDIT to enter edit mode and then: <ul style="list-style-type: none"> • Press A to select the type of character required: number, upper case letter, lower case letter, or symbols. When you are in edit mode, the status bar on the bottom left of the screen shows which type of characters can be entered into the menu option selected. There are 24 different kinds of symbols to select. Press 0 to scroll between the four pages of symbols. • Press arrow buttons to navigate the cursor in the edit box. • Press the EDIT button to delete the character in front of the cursor. • Press the Enter or ESC buttons to exit edit mode. Mouse: <ul style="list-style-type: none"> • Left-click the mouse and a numeric or alphanumeric onscreen display appears. Select the characters required. When complete, left-click the mouse on the edit box to accept changes.
Setup button	You can execute a function or enter into the next submenu. A setup button is inactive until its parameter option is enabled. For example, in the Display menu (see Figure 24) the menu options Zone and Rules are grey as the <i>Motion Detection</i> is not enabled.

Exit the main menu and return to the live menu

Press the PREV or ESC button on the DVSR xU front panel or on the IR remote control, or right-click the mouse, to exit the main menu and return to live mode.

Turning off the DVSR xU

There are two ways to turn off the unit:

- Press and hold the POWER button on the front panel or on the IR remote control for at least five seconds. A power off dialog screen prompts you to confirm your selection. Enter a user name and PIN, if requested. If an incorrect user name or PIN is entered, the unit will return to live mode.
— or —
- Turn off the power switch located on the back of the unit

Note: If you turn off the power by pressing the POWER button on the front panel, and the PIN enable option has been enabled in the Display menu (page 32), you will need to enter your PIN before the DVSR xU will turn off.

5. Display settings

Use the Display menu to configure which information is displayed onscreen and how it should look. The following options can be configured:

- The language of the unit
- The device ID
- If a PIN is required
- If the status bar appears onscreen
- The menu timeout
- The video output standard
- The video scaling
- The menu transparency
- The VGA interface
- The brightness of the screen
- The system time and date
- Daylight Saving Time (DST)


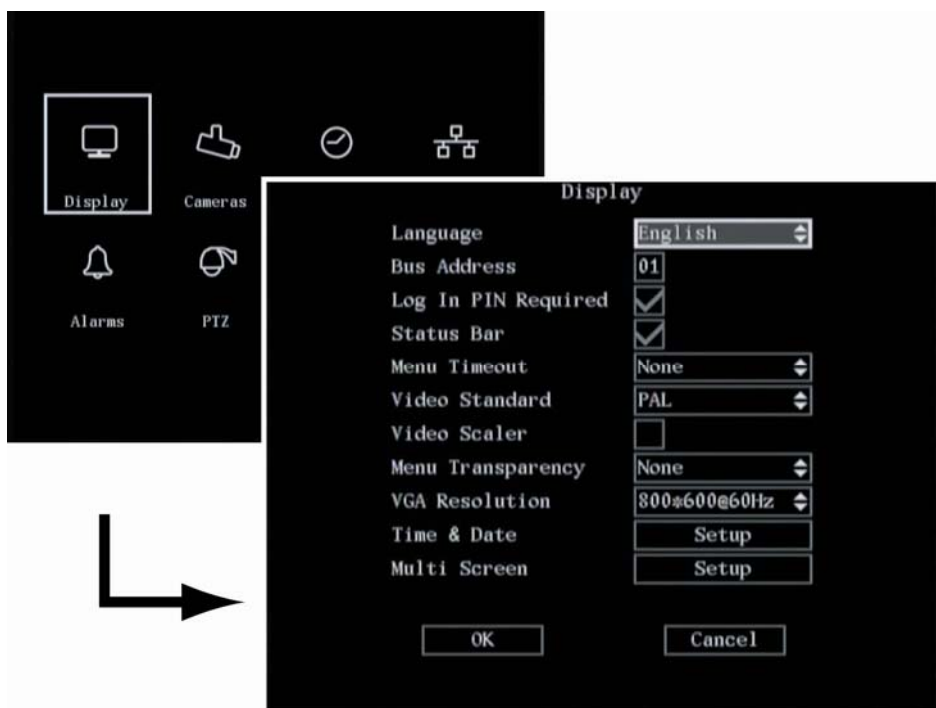
The Display menu icon  is located in the main menu. The following menu appears when you select the Display icon:

Figure 25: The Display setup menu



Configuring the display settings

The following procedures show how to change the monitor display settings from the Display menu. They can be changed in any order.

In the main menu, go to the Display menu icon and press Enter or left-click the mouse. The Display menu appears.

To save changes made in the menu

1. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all the changes. To abort the changes, select Cancel and press Enter. You will then return to the main menu.

Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the Display menu.

To select the language

1. In the Display menu go to *Language* and press Enter and use the arrow buttons, or left-click the mouse, to select the required language. The language on screen changes immediately. The default language is English.

Note: The last language used on the DVSR xU will be the unit's language when the system is rebooted.

To change the DVSR xU's bus ID

When you use the IR remote control to operate the DVSR xU, the DVSR xU must have a device ID. The default device ID is "01". If there is more than one DVSR used, each unit must have its own unique device ID as otherwise the IR remote control will control all the DVSRs together.

Front panel or remote control	Go to the <i>Bus Address</i> edit box and press EDIT. Using the number buttons, enter the number of the device ID.
Mouse	Go to the <i>Bus Address</i> edit box and left-click the mouse. Select the number from the onscreen numeric display.

To setup the PIN requirement

A PIN is required by default to access the DVSR xU. See section *To modify a user's PIN* on page 78 for information on PINs.

1. In the Display menu go to the *Log In PIN Required* check box and press Enter or left-click the mouse to enable or disable it (✓).

To setup the status bar

The status bar appears onscreen by default.

1. In the Display menu go to the *Status Bar* check box and press Enter or left-click the mouse to enable or disable it (✓).

To setup the menu timeout

This is the time after which the screen saver appears.

1. In the Display menu go to the *Menu Timeout* list box and press Enter or left-click the mouse. Select the time.

To select the video standard

DVSR can support PAL or NTSC video output. PAL is the default format.

1. In the Display menu go to the *Video Standard* list box and press Enter or left-click the mouse. Select either NTSC or PAL video output format.

Note: If you are using default settings but the images on screen flicker, there is a NSTC/PAL mismatch. Check the NTSC/PAL option selected in the Display menu.

To adjust the screen scaling

You can change the settings of the monitor display size to accommodate for differently sized monitors.

1. In the Display menu go to the *Video Scaler* and press Enter or left-click the mouse to enable the check box (✓) When disabled, the video output display resolution is 704 x 576 PAL (or 704 x 480 NTSC). When activated the display resolution becomes 640 x 576 PAL (or 640 x 480 NTSC).

To change the menu transparency

You can modify the transparency of menu items on screen relative to the background to make the text on screen easier to read.

1. In the Display menu go to the *Menu Transparency* list box and press Enter or left-click the mouse. Select the transparency level. The screen transparency changes as you scroll through the list of options.

To setup the VGA interface

You can define the VGA resolution and refresh frequency.

1. In the Display menu go to the *Menu Transparency* list box and press Enter or left-click the mouse. Select one of the options available:
 - 1280*1024@60 Hz
 - 1024*768@60 Hz (default)
 - 800*600@60 Hz

To set the system time and date

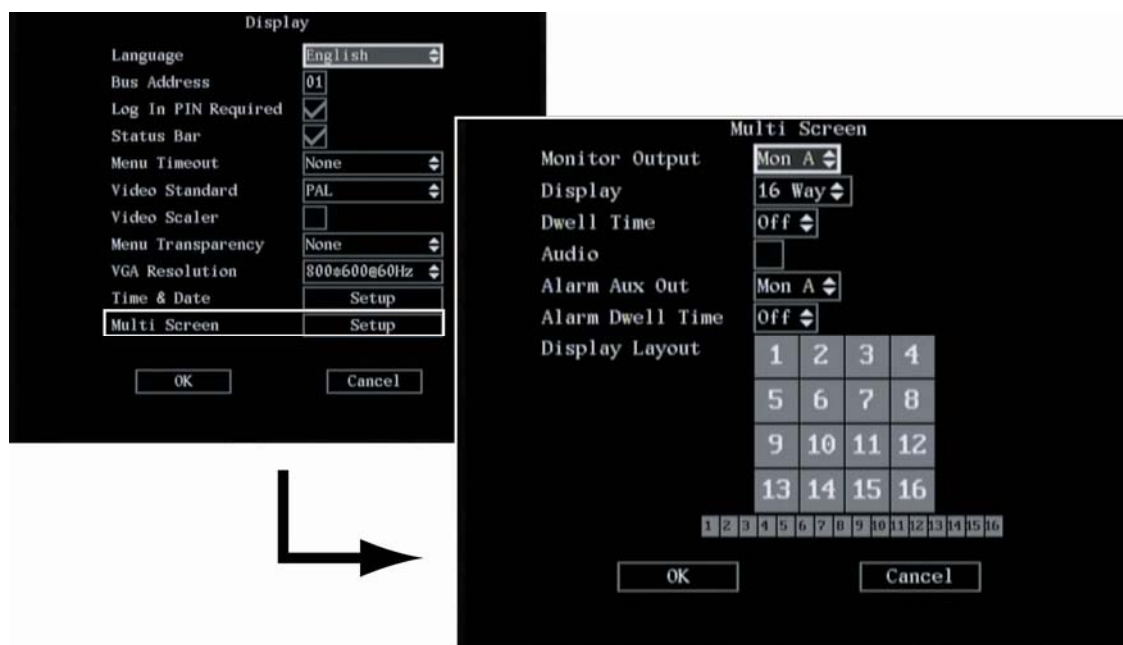
You can setup the DVSR xU date and time as well as the Daylight Saving Time (DST). This is the date and time that will appear on screen. You can setup when DST for the DVSR starts and stops in the year. It is deactivated by default.

1. In the Display menu go to the *Time & Date* setup button and press Enter or left-click the mouse. The Time & date submenu appears.
2. Go to the *Date* edit box and press Enter or left-click the mouse and use the number buttons to enter the date. The default date format is dd-mm-yyyy.
3. Go to the *Time* edit box and use the number buttons to enter the time. The time format is 24-hour format as hh-mm-ss.
4. Go to the *Enable Daylight Savings* check box and press Enter or left-click the mouse to enable. Once enabled, the dates become active.
5. Select the month and day when Daylight Savings starts and stops.
8. Go to OK and press Enter or left-click the mouse to confirm the changes and return to the Display menu.

To change live view layout

1. In the Display menu go to *Multi Screen* setup button and press Enter or left-click the mouse. The Multi Screen menu appears. See Figure 26.

Figure 26: Multi screen submenu



2. Go to the *Monitor Output* list box. Select between monitor output A or B. Monitor A is default.
3. Go to the *Display* list box. Select the desired multi screen mode from the drop-down list.

Table 7: Multi screen options available

Number of DVSR xU channels	Multi screen options
4	1 screen
	4 screen
6 to 8	1 screen
	4 screens
	6 screens
	8 screens
16	1 screen
	4 screens
	6 screens
	8 screens
	9 screens
	12 screens
	16 screens

4. Go to the *Dwell Time* list box. Select the desired mode from the drop-down list.

Table 8: List of dwell time options

Options	Description
off	The live display will not automatically switch.
5S	The live display will automatically switch after 5 seconds.
10S	The live display will automatically switch after 10 seconds.
20S	The live display will automatically switch after 20 seconds.
30S	The live display will automatically switch after 30 seconds.

For example: If a 16-channel DVSR xU has the 4-screen live mode and the 20-second switch time mode selected, the DVSR xU will cycle four camera displays every 20 seconds.

5. Go to the *Audio* check box and press EDIT or left-click the mouse to enable (✓).
6. Go to *Alarm Aux Out* to select which monitor should work as an alarm spot monitor. If there is an alarm, the video will pop up on this monitor.
7. Go to the *Alarm Dwell Time* edit box and select the time delay required: Off, 3, 4, 5, or 10 seconds. This is the time delay before the alarm video appears onscreen. If there is more than one alarm, there is also the delay switching between the alarm videos.
8. Go to *Display Layout*. Select in which order the cameras will be displayed by going to the first square and press the number button(s) that correspond to the number of the camera you want displayed first. Continue for each camera. The order they will be previewed is displayed in the bar underneath.

Note: It is recommended that you first select the layout order and then the live mode.

9. When complete, go to OK and press Enter or left-click the mouse to accept all the changes and return to the Display menu.

6. Camera settings

Use the Camera menu to configure the cameras. The following options can be configured:

- The name of each camera
- The position of the camera name on screen
- The camera brightness, contrast, saturation and hue
- The display properties of each camera (OSD)
- The area on screen to be masked
- When to view a tamper alarm
- The video loss alarm
- The motion detection alarm


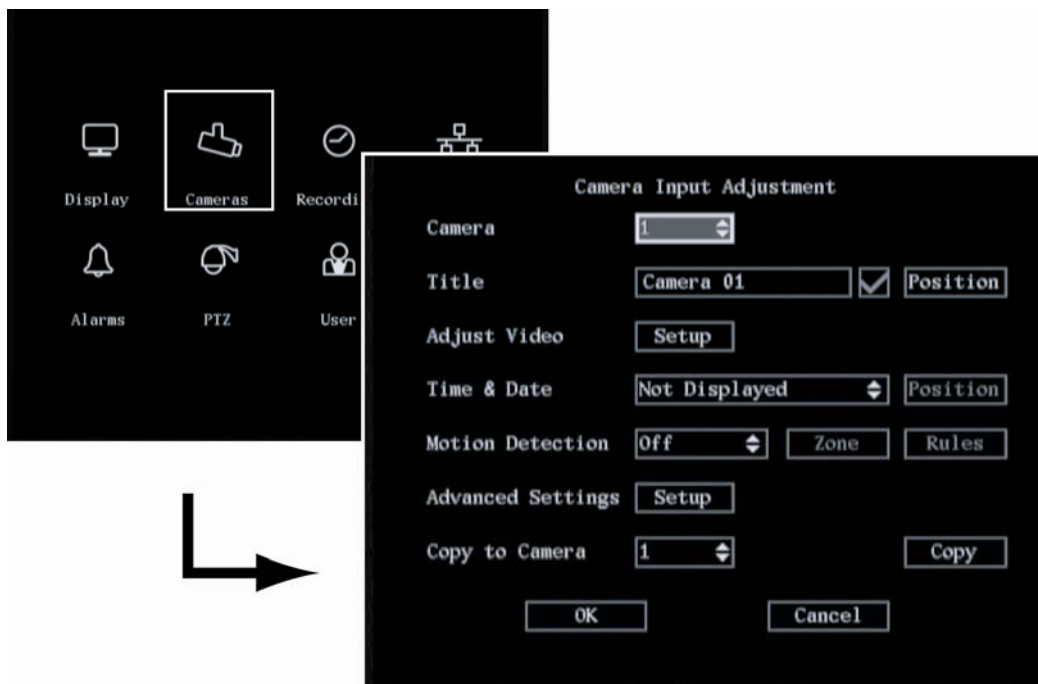
The Camera icon  is located in the main menu. The following menu appears when you select the Camera icon:

Figure 27: The Camera menu



Configuring camera settings

The following procedures show how to change camera settings from the Camera menu. They can be changed in any order.

In the main menu, go to the Camera menu icon and press Enter or left-click the mouse. The Camera menu appears.

All changes made to the Camera menu apply to the selected camera. The camera settings of one camera can easily be copied to another camera.

To save changes made in the menu

1. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all the changes. To abort the changes, select Cancel and press Enter. You will then return to the main menu.

Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the Camera menu.

To setup the camera title

Each camera can be given a title, which must be unique. If you do not give a camera a title, it is automatically pre-numbered.

1. In the Camera menu go to the *Camera* list box and press Enter or left-click the mouse. Select the number of the camera you want to name.
2. Go to the *Title* setup box and press the EDIT button or left-click the mouse to enter into edit mode.
3. Enter the camera title. You can use numbers, uppercase and lowercase letters, and some special characters such as commas and colons. The camera title can have up to 32 alphanumeric characters.

Front panel and remote control	Press button A and then an alphanumeric button to change the character input type. Press the A button 1 to 4 times to scroll through the type of characters available for an alphanumeric button.
Mouse	An onscreen display appears showing the alphanumeric keys. Click <i>Shift</i> to select which type of character you want (for example, uppercase or a special character such as comma and colon).

4. Press Enter or left-click the mouse to confirm your change.

To position the camera title on screen

You can position the camera title anywhere on screen.

1. In the Camera menu enable the *Title Position* check box (✓) if you want the camera title to appear on screen. When enabled, the Position setup button alongside it becomes active.
2. Go to the *Position* setup button and press the EDIT button or left-click the mouse to enter into edit mode. A grid appears onscreen with the camera title in the bottom right corner.
3. Using the arrow buttons, move the camera title around the screen. When you are satisfied with the position, press Enter or left-click the mouse to confirm and return to the Camera menu.

To adjust the image quality of the camera video

Different cameras and backgrounds may need to have the screen image modified in order to obtain the best video image. Use this menu to configure the video image. You can setup each camera separately or copy the video parameters of one camera to another camera.

1. In the Camera menu select the camera you want to adjust. Go to the *Adjust Video* setup button and press Enter or left-click the mouse. The Adjust Video menu appears.
2. Go to the *Brightness* setup button and press Enter or left-click the mouse. A scroll bar appears at the bottom of the screen. See Figure 28.

Figure 28: The Brightness option in the camera Adjust Video submenu



3. Use the arrow buttons to adjust the brightness level. The video camera changes at the same time.
4. When you are satisfied with the real time video of the camera, press Enter or left-click the mouse.
5. Repeat steps 2 to 4 for the *Contrast* settings of this camera.
6. Repeat steps 2 to 5 for other cameras.
7. When you are completed, select OK and return to the Camera menu.

To setup a camera's displayed time and date

1. In the Camera menu select the camera you want to adjust.
2. Go to the *Time & Date* list box and press Enter or left-click the mouse to select the display mode required. See Figure 29 and Table 9 for the list of options.

Figure 29: The Time & Date display in the Camera menu

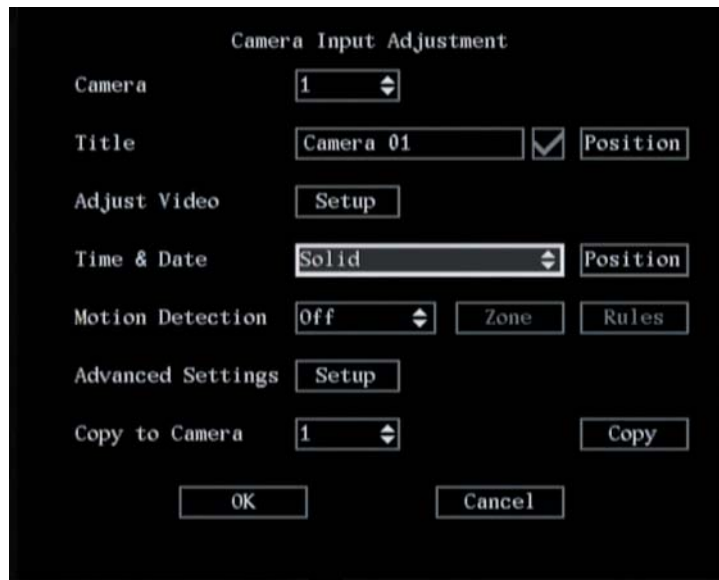


Table 9: List of display mode options for time and date

Solid	The text contrast automatically adjusts relative to the background.
Transparent	The screen image appears through the text.
Not Displayed	Nothing is displayed (Default).

3. Press Enter or left-click the mouse to confirm the entry.
4. Go to the *Position* setup button and press Enter or left-click the mouse. A grey screen with the date/time bar in white appears.
5. Press EDIT if using the front panel or remote control, or right-click the mouse and select Format, to change the information displayed: Date, day of the week and time, or Date and time.

Figure 30: Positioning date/time bar

6. Using the arrow buttons move the date/time bar around the screen. When you are satisfied with the position press Enter, or right-click the mouse and select OK, to return to the Camera menu.

To setup the DVSR xU to respond to a motion detection alarm

The DVSR can be setup to trigger an alarm if a camera detects motion. You can select the level of sensitivity to motion, where on screen the motion can be detected, and specify which cameras can record the motion when a motion alarm is detected.

1. To set the motion detection sensitivity level

In the Camera menu go to Motion Detection list box and select the desired motion detection sensitivity level required.

There are seven levels to choose from: 0 (lowest) to 6 (highest) as well as "Off". If "Off" is selected, the unit will not respond to any motion detection. If 0 to 6 is selected, motion detection Zone and Rules setup buttons become active. Press Enter or left-click the mouse to confirm the change.

2. To select the motion detection zone(s)

- a. Go to the Zone setup button and press EDIT or left-click the mouse. The Motion Zone setup screen appears. See Figure 31.

Figure 31: The Motion Zone setup screen



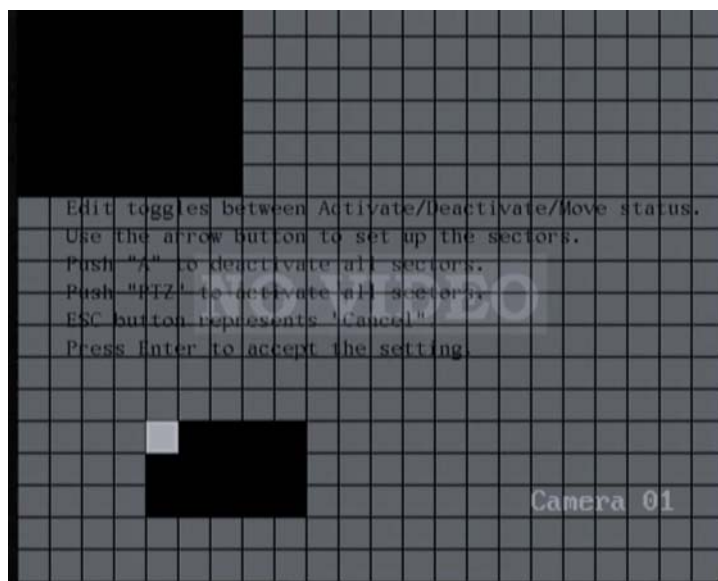
There is a solid white pane onscreen. The motion zone setup steps are the same as those for mask zone setup (see page 44).

Use the following buttons to setup the motion zones:

Button	Action
<, >, ^, v	Move the white pane to any position
EDIT	Toggle between the white and grey panes
>	Increase the size of the transparent zone from the right
<	Decrease the size of the transparent zone from the left
v	Increase the size of the transparent zone downwards
^	Decrease the size of the transparent zone from above
PTZ	Select the whole screen as a motion zone
A	Clear all motion zones
Enter	Save changes and return to the Camera menu
ESC	Cancel setup and return to the Camera menu

- b. Move the white square to the zone on screen that you want to mark as a motion detection zone. Press EDIT or left-click the mouse. The square becomes transparent. This shows the zone that will detect motion.
- c. Use the arrow buttons or drag the square with the mouse cursor to extend the transparent square. When you have finished marking out the transparent zone to be masked, press EDIT to exit and return to the solid white square to continue masking.
- d. Repeat steps b and c for each zone on screen where you want to detect motion. An example of motion detection zones on screen is shown in Figure 32.

Figure 32: Example of motion detection zones



- e. To clear part of a motion detection zone, move the solid white square to the motion detection zone that you want to delete. Press EDIT.

The white pane becomes transparent. Use the arrow keys to increase or decrease the size of the black zone. When finished, press EDIT to clear this transparent zone.

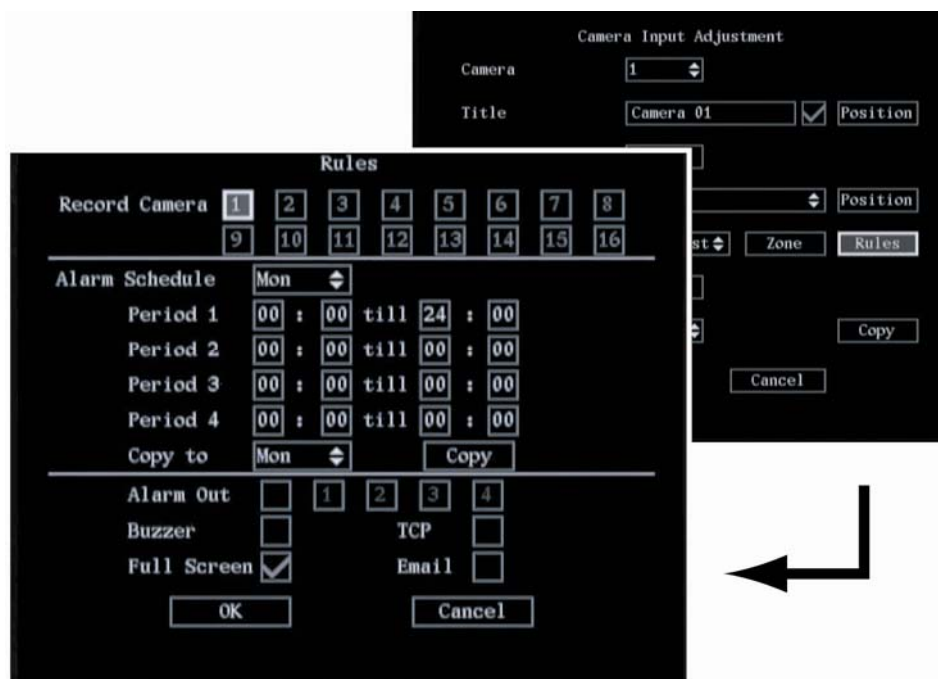
To clear all motion detection zones, press the A button.

- f. Press Enter, or right-click the mouse and select OK, to confirm and return to the Camera menu.

3. To setup the response rules to a motion alarm

- a. Go to the *Rules* setup button and press EDIT or left-click the mouse. The Rules menu appears. See Figure 33.

Figure 33: The motion alarm Rules submenu



- b. Go to the *Record Camera* check boxes and select the cameras from which you want to be able to record a motion alarm. Press Enter or left-click the mouse to enable the option. Press or click again to disable.

Note: For the cameras to be able to record a motion alarm, they must first be setup for motion recording. This is done in the Recording menu. See page 53 for more information.

- c. Go to *Alarm Schedule* and select when you want the DVSR xU to respond to a motion alarm. You can select up to seven days in a week and up to four time periods for each a day.

Note: The four daily time periods cannot overlap.

- d. Go to the notification options and press Enter or left-click the mouse to enable (✓) or disable how you want the DVSR xU to respond to a motion alarm during live mode.

Table 10: Notification options on how to respond to a camera tamper alarm

Notification option	Reponse
Alarm Out	Alarm Out is activated. Up to four alarm outputs can be enabled.
Buzzer	An audible alarm sounds
TCP	Alarm information is sent to the remote IP (see section <i>Network</i> on page 60 for more information)
Full Screen	The alarm channel will be displayed on screen
Email	Alarm information is sent to an e-mail address (see section <i>Network</i> on page 58 for more information)

The DVSR xU returns to live mode when there is no longer a motion alarm.

- e. If you want to copy the periods from one camera to another, go to the *Copy to* list box and select which day you want to copy to and then select *Copy*.
4. Select OK to confirm the changes and to return to the Camera menu.

To setup a privacy mask

You can mask a sensitive area on screen so that it remains hidden from view. An example would be when the view of a camera overlooks onto residential premises. The area hidden by the privacy mask will not be viewed live nor recorded, but will appear as a blank area on screen.

1. In the Camera menu go to *Advanced settings* setup box and press Enter or left-click the mouse. The Advanced Settings submenu appears. See Figure 34.

Figure 34: Advanced settings submenu



2. Go to the *Privacy Masking* check box and press Enter or left-click the mouse to enable (✓). The Zone option is activated. Privacy masking is disabled by default.

Note: No masked zone appears onscreen when Privacy Mask is disabled.

3. Go to the *Zone* button and press Enter or left-click the mouse.

The matrix screen appears. For PAL there are 22 x 18 panes in the matrix. In the top left-hand corner of the matrix there is a white pane. See Figure 35.

Figure 35: The mask zone matrix



4. Use the arrow buttons to move the white pane to the zone on screen that you want to mask. Press EDIT or left-click the mouse to select the first square. The pane turns transparent. The transparent pane indicates the zone that will be masked.
5. Use the arrow buttons, or drag the mouse cursor, to extend the transparent pane. When you have finished marking out the black zone to be masked, press Enter or left-click the mouse. The square pane becomes white again. Continue masking, or press ESC to cancel.

There can be up to four masked zones in a screen. The maximum size of a masked zone is 8 x 8 panes. The minimum size is one pane. See **Error! Reference source not found.**

6. Press Enter to return to the advanced settings submenu.

Note: The changes have not yet been saved. Changes are only saved when OK is selected in the Camera menu screen.

7. Repeat steps 1 to 6 for the other cameras that require masking.
8. In the Advanced Settings submenu press OK to return to the Camera menu.

To clear all masked zones

In the mark zone setup screen press the A button to clear all masked zones. It is not possible to clear a specific masked zone.

To setup the viewing of a camera tamper alarm

You can setup the system to alert you when someone has deliberately blocked a camera view, such as by spraying paint on the lens (also known as anti-masking). You can set it up so that a specific part of the screen can detect a tamper and thereby trigger an alarm. You can also setup how the system will alert you to the tamper alarm. You can only setup one anti-masking area on screen.

1. In the Camera menu go to *Advanced settings* setup button and press Enter or left-click the mouse. The Advanced Settings submenu appears. See Figure 34 on page 44.
2. **To set the detection sensitivity level to a camera tamper alarm**

Go to the *Camera Tampering* list box. Select the sensitivity level required. The options are:

- Off
- Low
- Normal (default)
- High

When Low, Normal, or High are selected, the *Zone* and *Rules* setup boxes become active.

The *Zone* submenu allows you to select in which part of the screen a tamper can be detected and trigger an alarm.

The *Rules* submenu allows you to setup how to handle warning notifications, such as alarm operational issues.

3. To set the zone on screen that can trigger a camera tamper alarm

- In the Advanced Settings submenu go to the *Zone* setup button. Press Enter or left-click the mouse to access the matrix screen.
- The setup is the same as for masking a zone. See the section on setting up a privacy mask on page 44 for further instructions.

Note: Only one zone can be masked to trigger a camera tamper alarm.

- When you have finished masking the tamper zone press Enter, or right-click the mouse and select OK, to confirm your changes and return to the Camera menu.

4. To setup the tamper alarm response

- In the *Advanced Settings* submenu go to the *Camera Tampering Rules* setup button. Press Enter or left-click the mouse to access the Rules submenu. See Figure 36.

Figure 36: The camera tampering Rules submenu

Rules	
Alarm Schedule	Mon
Period 1	00 : 00 till 24 : 00
Period 2	00 : 00 till 00 : 00
Period 3	00 : 00 till 00 : 00
Period 4	00 : 00 till 00 : 00
Copy to	Mon Copy
<hr/>	
Alarm Out	<input type="checkbox"/> 1 2 3 4
Buzzer	<input type="checkbox"/> TCP <input type="checkbox"/>
Full Screen	<input type="checkbox"/> Email <input type="checkbox"/>
OK Cancel	

- Go to the *Alarm Schedule* list box. Select the day of the week for which you want to set the response time schedule.
- Go to *Period 1* and enter the time period for the response. You can set up to four time periods for each day of the week. You must reboot the DVSR xU to make the time periods operational.

Note: The daily time periods cannot overlap.

- Go to the notification options and press Enter or left-click the mouse to enable (✓) or disable how you want the DVSR xU to respond to a camera tamper alarm. See Table 11.

Table 11: Notification options on how to respond to a camera tamper alarm

Notification option	Reponse
Alarm Out	Alarm Out is activated. Up to four alarm outputs can be enabled.
Buzzer	An audible alarm sounds
TCP	Alarm information is sent to the remote IP (see section <i>Network</i> on page 60 for more information)
Full Screen	The alarm channel will be displayed on screen
Email	Alarm information is sent to an e-mail address (see section <i>Network</i> on page 58 for more information)

- e. When you have finished modifying all the menu items required, select OK to confirm changes and return to the Camera menu.
5. Repeat steps 2 to 4 for each camera and then return to the Camera menu.

To setup a video loss alarm

The video image can be lost if a video cable or camera develops a fault. The unit can be setup so that an alarm is triggered when a video loss fault occurs. However, the video loss alarm is only triggered if it occurs during a programmed time schedule

1. In the Camera menu go to the *Camera* list box. Select the camera whose options you want to modify.
2. Go to the Advanced Settings submenu and enable (✓) the *Video loss* check box. The *Rules* setup button is activated.
3. Go to the Rules setup button and press Enter or left-click the mouse. The *video loss rules* submenu appears. See Figure 37.

Figure 37: The video loss rules submenu

Rules

Alarm Schedule Mon

Period 1 00 : 00 till 24 : 00

Period 2 00 : 00 till 00 : 00

Period 3 00 : 00 till 00 : 00

Period 4 00 : 00 till 00 : 00

Copy to Mon Copy

Alarm Out 1 2 3 4

Buzzer TCP

Full Screen Email

OK Cancel

4. Go to the Alarm Schedule and select the day of the week for which you want to set the response time schedule. Go to Period 1 and enter the time period for the response. You can set up to four time periods for each day of the week. Time is entered in the 24-hour format.

Note: The four daily time periods cannot overlap.

5. Go to the notification options and press Enter or left-click the mouse to enable (✓) or disable how you want the DVSR xU to respond to a video loss tamper alarm. See Table 12.

Table 12: Notification options on how to respond to a video loss tamper alarm

Full Screen	On Alarm channel will be displayed full
Buzzer	An audible alarm sounds
TCP	Alarm information is sent to the remote IP (see <i>Network</i> section.)
Email	Alarm information is sent to an Email address (see <i>Network</i> section.)
Alarm Out	When enabled, the Alarm Out is activated. Up to four alarm outputs can be enabled.

6. Select OK to confirm changes and return to the Camera menu.

To copy a camera's settings to another camera

1. In the Camera menu go to the *Camera* list box and select the camera whose options you want to copy.
2. Go to *Copy to Camera* and select the camera to which you want to copy the settings.
3. Go to *Copy* and press Enter or left-click the mouse. All settings will be copied to the selected camera.

Note: Motion alarm zones cannot be copied.

7. Recording settings

Use the Recording menu to setup how the DVSR xU records information. The following options can be configured:

- Handling information when the HDD is full
- eSATA record or backup
- Auto deletion
- Audio and/or video recorded
- Bit rate
- Frame rate
- Camera resolution
- Recording schedule of a camera
- Pre and post recording times for alarm recordings

Configuring the recording settings


The Recording icon  is located in the main menu. The following screen appears when you select the Recording icon:

Figure 38: The Recording menu



The following procedure shows how to change the recording settings of a selected camera in the Recording menu. They can be changed in any order.

In the main menu, go to the Recording icon and press Enter or left-click the mouse. The Recording menu appears.

To save changes made in the menu

1. When you have made all the changes required in the Recording menu, go to OK and press Enter or left-click the mouse to save all the changes. To abort the changes, select Cancel and press Enter. You will then return to the main menu.

Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the Recording menu.

To setup how the DVSR xU will respond to full HDDs

You can select how the DVSR xU responds when its HDDs become full and there is no longer sufficient space to save new data.

1. In the Recording menu go to the *Record Mode* list box and select one of the two options:

Table 13: Options on how to respond to full HDDs

Option	Description
Continuous	When all the HDDs in the DVSR xU are full, the DVSR will overwrite the earliest written recorded files and continue recording.
No Overwrite	When all the HDDs in the DVSR xU are full, the DVSR will handle the event as a "Hard Disk Full" condition and respond according to how this condition has been programmed under the Notification menu. For more information, see page 56.

To select if the e-SATA port should record or backup

You can use an external storage device, such as an e-SATA HDD, as a backup for video or add its recording capacity to that of the DVSR xU itself. If you change this option, you must reboot the DVSR xU to implement the change.

1. In the Recording menu go to the e-SATA edit box and select one of the two options:

Table 14: Options on eSATA

Option	Description
Record	Extend the recording capacity of the DVSR xU. If the e-SATA storage device is part of the total storage capacity then only the USB storage device can be used as backup.
Backup	Backup data onto an e-SATA backup device, such as a USB storage device, DVSR DVR, or DVSR backup device. For further information see also section <i>Archiving recorded files</i> on page 19. Caution: If the external storage is part of the total internal capacity (the <i>Record</i> option has been selected), the external device is no longer accessible for exporting video.

To setup the Auto Delete Mode (ADM)

You can select the number of days that recordings from a specific camera are saved before being automatically deleted. The default value is 30 days.

1. In the Recording menu go to the *Camera* list box and select the camera whose settings you want to modify.
2. Go to the *ADM* edit box and enter the number of days after which auto delete occurs.
3. Press Enter or left-click the mouse to confirm the entry.

To change the recording parameters of a camera

Use this submenu to select how the DVSR xU responds to normal and alarm events. The record type, resolution, bit rate, and image quality can all be made to be higher for when an alarm event is recorded. See Table 15 for the limitations in dual streaming.

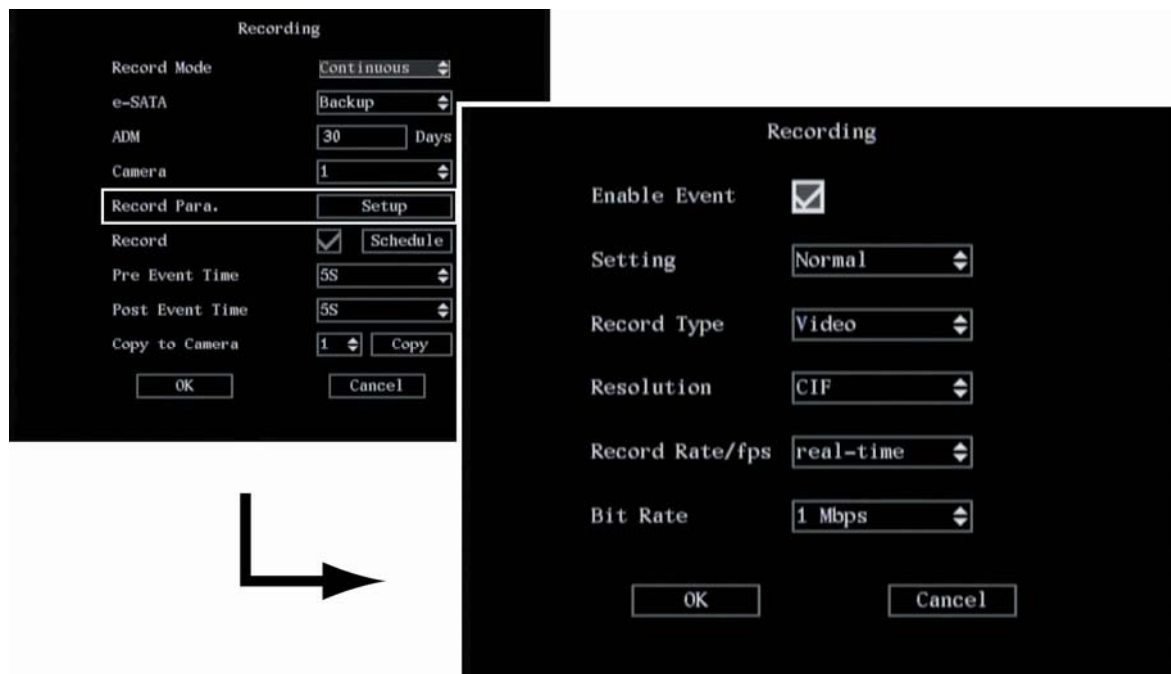
Table 15: Stream limitations

	Maximum resolution supported		Note
Main stream	2 CIF	12 fps	These can be specified from the DVSR xU unit.
	4 CIF	8 fps	
Sub stream	CIF	Real time	These cannot be specified from the DVSR xU unit. They can only be specified from the browser.
	QCIF	Real time	

1. In the Recording menu go to the *Camera* list box and select the camera whose settings you want to modify.

2. Go to the *Record Para* setup box and press Enter or left-click the mouse. The Recording submenu appears. See Figure 39.

Figure 39: The Recording submenu



3. To setup normal and alarm recordings

You can select the recorded image parameters for both normal and alarm events. However, *Enable Event* must be enabled for alarm events to be recorded differently from normal events. If this option is not enabled then it is not possible to change any image parameters when *Event* is selected as a setting—all event parameters will be identical to those of normal events.

- a. If you want the recorded image parameters for alarm events to be different from those of normal events, go to the *Enable Event* check box and press Enter or left-click the mouse to enable the check box (✓). Press or click again to disable.
- b. Select which event type you want to set:

Option	Description
Normal	Records both scheduled and manual.
Event	Records all alarms.

4. To select audio and/or video recording

You can select whether the recording is video only (default), or audio and video. If you change this option, you must reboot the DVSR xU to implement the change.

Go to the *Stream Type* list box and select one of the two options:

Option	Description
Audio&Video	Records both audio and video.
Video	Records video only.

5. To change the camera resolution

You can select one of four video resolutions. A high image resolution requires that a high bit rate must also be selected. QCIF is the lowest resolution value and 4CIF the highest. If you change this option, you must reboot the DVSR to implement the change.

Go to the *Resolution* list box and select one of the options listed: QCIF, CIF (default), 2CIF, and 4CIF.

6. To select the frame rate

You can select between several different frame rates. A low bit rate can be selected when the frame rate is low.

Go to the *Record Rate/fps* list box. Use the arrow buttons to select one of the options listed: Full (PAL is 25 FPS and NTSC is 30FPS), 20, 16, 12, 10, 8, 6 (default), 4, 2, 1, 1/2, 1/4, 1/8, 1/16.

7. To select the maximum bit rate

See Table 16 for the recommended bit rate ranges by resolution option. The actual maximum bit rate must be calculated from your camera, background, and image quality requirements.

Table 16: Bit rate by resolution

Resolution	Default bit rate	Recording speed
4CIF	896 Kbps	8 fps
2CIF	896 Kbps	12 fps
CIF	1.0 Mbps	Real time
QCIF	256 Kbps	Real time

Go to the *Max Bit Rate* list box and select one of the options listed (bps):

32K, 48K, 64K, 80K, 96K, 128K, 160K, 192K, 224K, 256K, 320K (default), 384K, 448K, 512K, 640K, 768K, 896K, 1M, 1.25M, 1.5M, 1.75M, 2M, and "User defined".

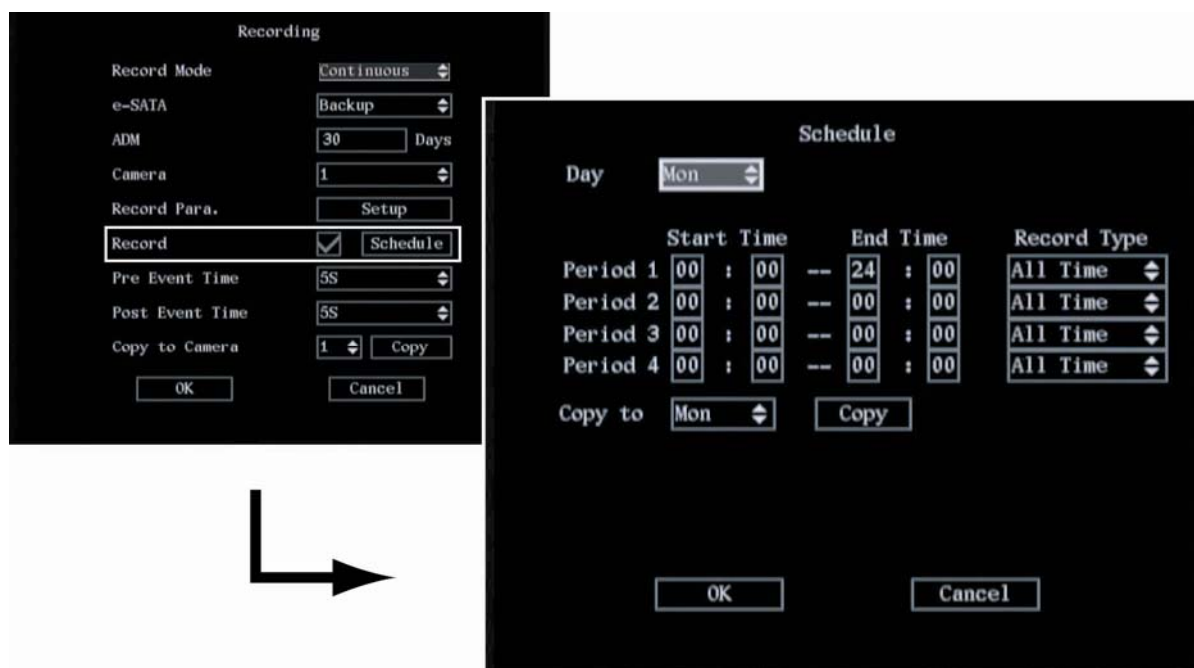
8. Select OK to confirm changes and return to the Recording menu. Select OK in the Recording menu to save changes and return to the main menu.

To setup a camera's recording schedule

You can setup a recording schedule for selected camera(s). You need to reboot the DVSR after changing this option

1. In the Recording menu go to the *Camera* list box and select the camera for which you want to do a recording schedule.
2. Go to the *Record* check box and press Enter or left-click the mouse to enable (✓) scheduled recording. When the check box is enabled, the Record schedule setup button is activated.
3. Select the *Record* schedule setup button and press Enter or left-click the mouse. The *Schedule* submenu appears. See Figure 40.

Figure 40: The camera recording schedule submenu



4. In the *Day* list box select the day of the week for which you want to set the recording schedule.
5. For period 1 select the start and end recording times for that day. Select *Record Type* and set the type of recording (All time, Motion, Alarm, Motion or Alarm, Motion and Alarm, or Command).
6. Repeat steps 3 and 4 for the other required time periods.

Note: The four daily time periods cannot overlap.

7. Select the schedules for the other days of the week for this camera as required.
8. When completed, select OK to confirm changes and return to the Recording menu.

To set the pre recording time for motion detection alarm and external alarm recordings

Before you set the prerecording time you must first enable the DVSR xU to respond to a motion detection alarm (see section *To setup the DVSR xU to respond to a motion detection alarm* on page 40) and/or an external alarm (see section *To setup an external alarm output* on page 67).

The DVSR xU is recording all the time at a defined rate. The prerecording time is the time before a motion or external alarm is triggered and which is included in the alarm data. It is related to the bit rate. The lower the selected bit rate, the longer the prerecording time can be.

1. In the Recording menu go to the *Pre Event Time* list box and select one of the time options listed (Disabled, 30S, 25S, 20S, 15S, 10S, and 5S).

To set the post recording time for motion detection alarm and external alarm recordings

Before you set the prerecording time you must first enable the DVSR xU to respond to a motion detection alarm (see section *To setup the DVSR xU to respond to a motion detection alarm* on page 40) and/or an external alarm (see section *To setup an external alarm output* on page 67).

The post recording time is the time after a motion or external alarm is triggered that is included in the alarm data.

1. In the Recording menu go to the *Post Event Time* list box and select one of the options listed (Disabled, 10 min, and 5 min).

To copy the camera settings

1. Go to the *Copy to Camera* list box and select one of the cameras listed.
2. Go to Copy press Enter or left-click the mouse.
3. DVSR xU will ask you if you want to copy the current camera settings to another Camera. Select OK or Cancel.

8. Network settings

Use the Networking menu to setup the network settings of the DVSR xU. The following options can be configured:

- IP address and settings
- Subnet mask
- Gateway IP
- DNS address
- Network communication port
- HTTP port
- E-mail notification
- PPPoE
- DDNS


The Network icon  is located in the main menu. The following screen appears when you select the Network icon:

Figure 41: The Network menu



Configuring the network settings

The following procedure shows how to change the recording settings of a selected camera in the Recording menu. They can be changed in any order.

In the main menu go to the Network menu icon and press Enter or left-click the mouse. The Network menu appears.

Caution: The DVSR xU will automatically reboot when any network parameter is changed and saved.

To save changes made in the menu

1. When you have made all the changes required in the Network menu, go to OK and press Enter or left-click the mouse to save all the changes. To abort the changes, select Cancel and press Enter. You will then return to the main menu.

Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the Network menu.

To change the IP address value

1. In the Network menu go to the *IP* edit box and press EDIT or left-click the mouse. Using the numeric buttons enter the IP address. Press Enter or left-click to the mouse to accept the changes.

The DVSR xU will use a DHCP server to find a dynamic IP address when IP 0.0.0.0 is used. If the DVSR xU uses a PPPoE function, the unit dials-up the internet and displays the dynamic Internet IP address.

To change the SubNet mask value

1. In the Network menu go to the *Subnet* edit box and press EDIT or left-click the mouse. Using the numeric buttons enter the sub net mask number. Press Enter or left-click the mouse to accept the changes.

To change the Gateway IP value

1. In the Network menu go to the *Gateway* edit box and press EDIT or left-click the mouse. Using the number buttons enter the gateway IP number to communicate with different network segments. Press Enter or left-click the mouse to accept the changes..

To change the DNS address value

If DVSR uses a PPPoE function, the DVSR xU can get a dynamic IP address. If you set DNS IP with a fixed Internet IP, DVSR xU will send information such as its name, serial number, and current IP to that fixed IP address. When seeking the DVSR xU name of a unit, the DVSR xU will automatically provide you with its dynamic IP address.

1. In the Network menu go to the *DNS* edit box and press EDIT or left-click the mouse. Using the numeric buttons enter the DNS number. Press Enter or left-click the mouse to accept the changes.

To change the Network communication port value

1. In the Network menu go and go to the *Com Port* edit box and press EDIT or left-click the mouse. Using the numeric buttons enter the address and press Enter. The number must be greater than 2000.

To change the HTTP port value

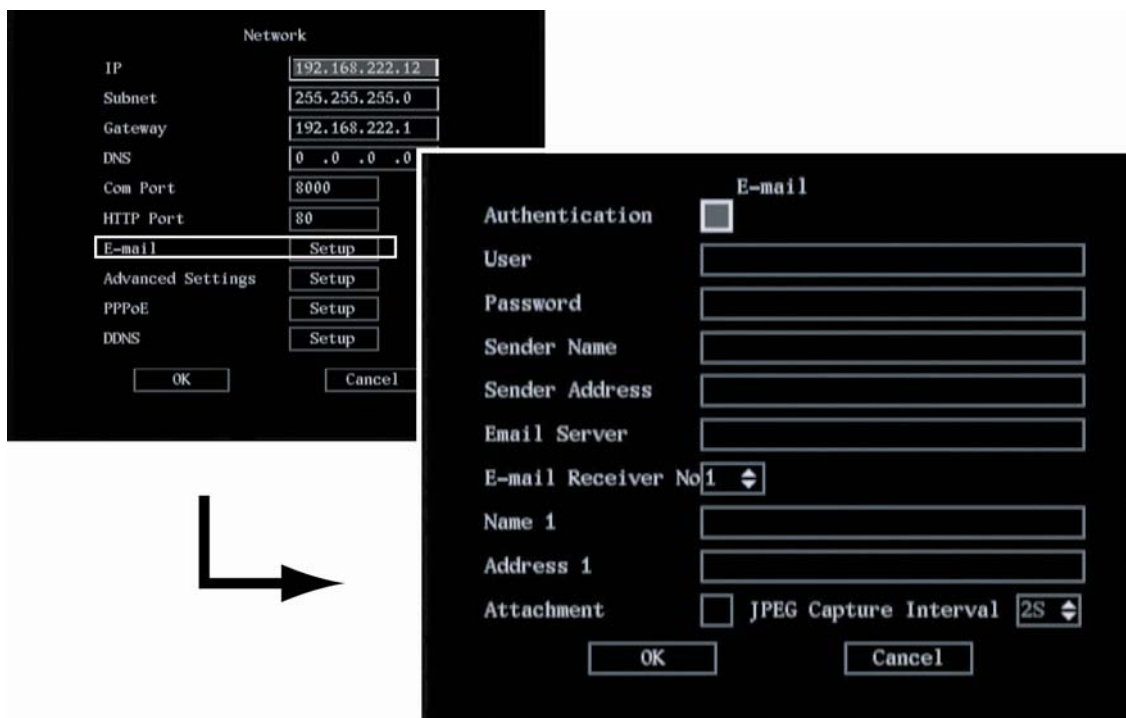
1. In the Network menu go to the *HTTP Port* edit box and press EDIT or left-click the mouse. Using the numeric buttons enter the IE browser port value. Press Enter or left-click the mouse to accept the changes. The default value is 80.

Note: If you change the http port from the default value 80 then you must also enter the port value in the IE Browser address. For example, if the http port is 81 and IP is 192.168.222.12 then in the browser enter `http://192.168.222.12:81`

To setup E-mail notification

1. In the Network menu go to the *E-mail* setup box and press Enter or left-click the mouse. The E-mail submenu appears. See Figure 42.

Figure 42: E-mail submenu



2. If your E-mail server requires a user name and PIN when you want to send an E-mail, select *Authentication* and press EDIT or left-click the mouse to enable the check box (✓). The User and Password setup boxes are activated.
3. Go to the *User* edit box and press EDIT or left-click the mouse. Enter the e-mail account user name. If using the front panel or remote control, press Enter to accept the changes.

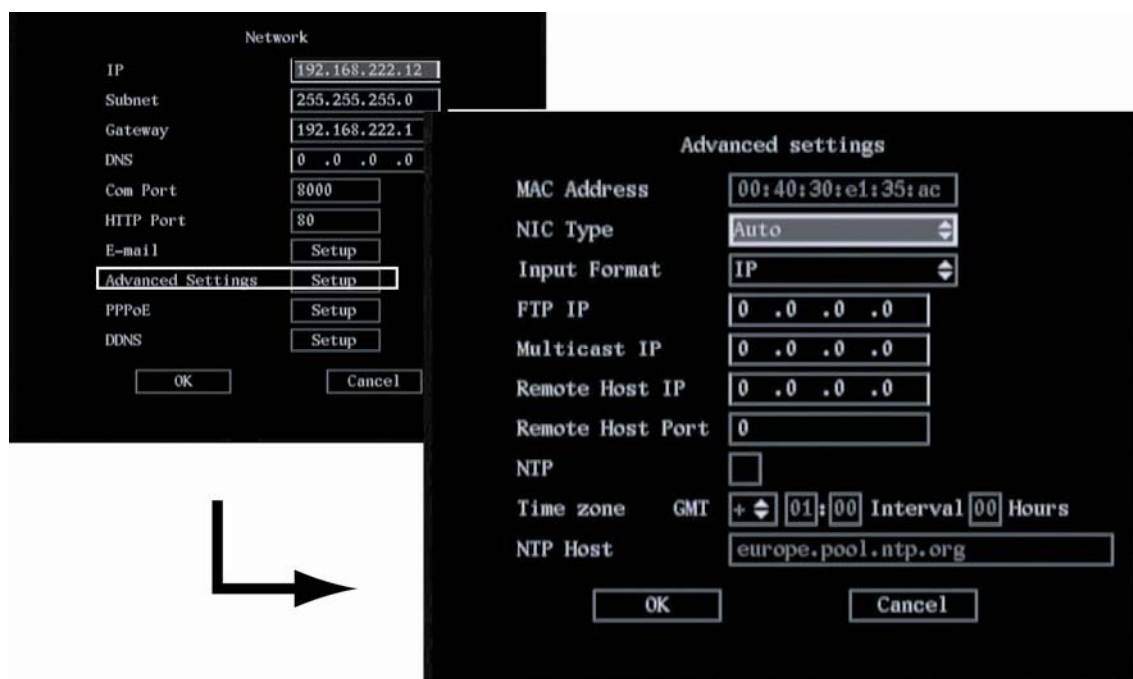
4. Go to the *Password* edit box and press EDIT or left-click the mouse. Enter the e-mail account password. If using the front panel or remote control, press Enter to accept the changes.
5. Go to the *Sender Name* edit box and press EDIT or left-click the mouse. Enter the name of the person sending the e-mail. If using the front panel or remote control, press Enter to accept the changes.
6. Go to the *Sender Address* edit box and press EDIT or left-click the mouse. Enter the e-mail address of the sender. If using the front panel or remote control, press Enter to accept the changes.
7. Go to the *Email Server* edit box and press EDIT or left-click the mouse. Enter the SMTP server address. If using the front panel or remote control, press Enter to accept the changes.
8. You can send e-mail notifications to up to two addresses. In the *Mail Receiver No.* list box select whether Receiver Number 1 or 2 will receive the notification. Depending on which is selected, the Name and Address numbers will automatically change.
9. Go to the *Name* edit box and press EDIT or left-click the mouse. Enter the name of the receiver that should appear in Email as the receiver. If using the front panel or remote control, press Enter to accept the changes.
10. Go to the *Address* edit box and press EDIT or left-click the mouse. Enter the e-mail address of the receiver. If using the front panel or remote control, press Enter to accept the changes.
11. Repeat steps 8 to 10 if there is a second receiver.
12. You can send a JPEG attachment with the e-mail. Go to *Attachment* and press Enter or left-click the mouse to enable (✓) the check box. The JPEG Capture Interval list box becomes activated.
13. The unit can send five jpeg images of a recording with the e-mail. You need to define the capture interval in seconds between each jpeg. Select the capture interval from the list.
Note: Check with your ISP or IT department for details on mail server and mail server login.
14. Select OK to return to the Network menu.

To setup the Advanced IP settings

1. In the Network menu go to the *Advanced Settings* setup box and press Enter or left-click the mouse. The Advanced Settings submenu appears. See Figure 43.

The *MAC Address* edit box shows the MAC address of the DVSR xU unit.

Figure 43: Advanced settings submenu



2. Go to the *NIC Type* list box and select one of the five options listed.
3. Go to the *Input Format* list box and select either IP or Domain Name.
If you chose the option IP, *FTP IP* appears below. For the option Domain Name, *Domain Server* appears instead.
4. Depending on which entry is shown, use the numeric buttons to enter the IP address of the *FTP IP*, or the domain server of the *Domain Name*.

Note: Use the FTP IP if the PPPoE function is being used, and the DVSR xU gets a dynamic IP address from the ISP. If you set the FTP IP you will get one fixed Internet IP, DVSR xU will send information such as its name, serial number, and current IP to that fixed IP address. This is called the Fixed Transfer Protocol IP (FTP IP). The IP server with that fixed Internet IP can receive DVR information and be used to resolve DVR dynamic IP. Contact your local supplier to obtain the IP server software.

5. Go to the *Multicast IP* edit box and press EDIT or left-click the mouse. Using the numeric buttons enter a D-class IP address between 224.0.0.0 - 239.255.255.255, and press Enter. This function is optional as not all systems use it.

Note: Some routers or network switchers do not allow the multicast function. Multicast is not supported over the internet by ISP providers.

6. Go to the *Remote Host IP* edit box and press EDIT or left-click the mouse. Using the numeric buttons enter the remote host IP address. If using the front panel or remote control, press Enter to accept the changes.
7. Go to the *Remote Host Port* edit box and press EDIT or left-click the mouse. Using the numeric buttons enter its value. If using the front panel or remote control, press Enter to accept the changes.

8. Go to the *NTP* check box and press EDIT or left-click the mouse to enable (✓) or to disable the option.
9. Go to the *Time Zone* edit boxes and set the time zone in which the DVSR xU is located.
10. Go to the *Interval* edit box and enter the number of hours after which the DVSR xU should synchronize its time with that of the network server.
11. Go to the *NTP Host* check box and press EDIT or left-click the mouse. Enter the NTP server address.

Note: For the NTP to work, the DNS IP address needs to be setup correctly.

12. When all the changes have been done, select OK to confirm the changes and return to the Network menu.

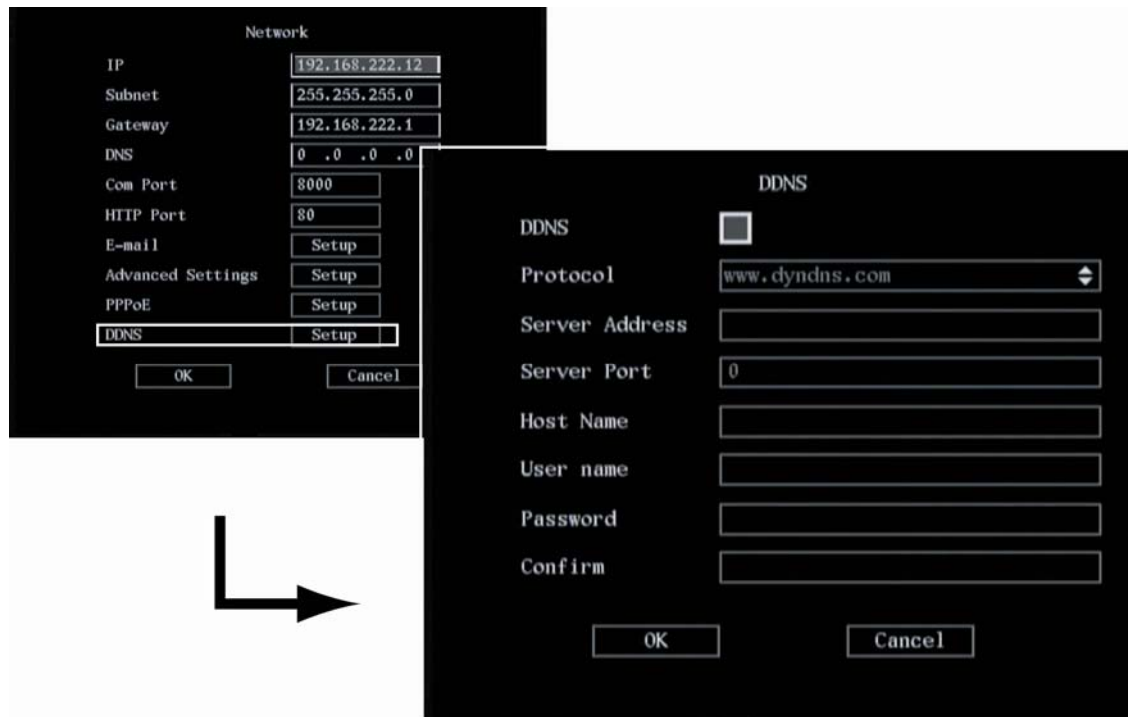
To setup a PPPoE dial-up setting

1. In the Network menu go to the *PPPoE* setup box and press Enter or left-click the mouse. The PPPoE submenu appears.
2. Go to the *PPPoE* check box and press Enter or left-click the mouse to enable (✓) or disable the option.
3. Go to the *User Name* edit box and press EDIT. Enter the user name provided by the ISP. If using the front panel or remote control, press Enter to accept the changes.
4. Select *Password* and press EDIT or left-click the mouse. Enter the password provided by the ISP. If using the front panel or remote control, press Enter to accept the changes.
5. Select *Confirm* and press EDIT or left-click the mouse. Re-enter the password and press Enter again.
6. When all the changes have been done, select OK to return to the Network menu.

To setup DDNS

1. In the Network menu go to the DDNS edit box and press Enter or left-click the mouse. The DDNS submenu appears. See Figure 44.

Figure 44: DDNS submenu



2. Go to the *DDNS* check box and press EDIT or left-click the mouse to enable (✓) or to disable the option.
3. Go to the *Server Address* list box and press EDIT or left-click the mouse. Enter the desired DDNS provider.
4. Go to *Server Port* edit box and press EDIT or left-click the mouse. Enter the desired port from the DDNS Service Provider.
5. Go to the *Host Name* edit box and press EDIT or left-click the mouse. Enter the DDNS host name.
6. Go to the *User Name* edit box and press EDIT or left-click the mouse. Enter the DDNS user name.
7. Go to the *Password* edit box and press EDIT or left-click the mouse. Enter the Password for DDNS.
8. Go to the *Confirm* edit box and press EDIT or left-click the mouse. Re-enter the password.
9. When all the changes have been done, select OK to accept the changes and return to the Networking menu.

9. Alarm settings

Use the Alarm menu to setup how the DVSR xU handles alarms. You can select how the alarm settings should be handled such as:

- An external alarm input
- An internal alarm input
- Notification settings


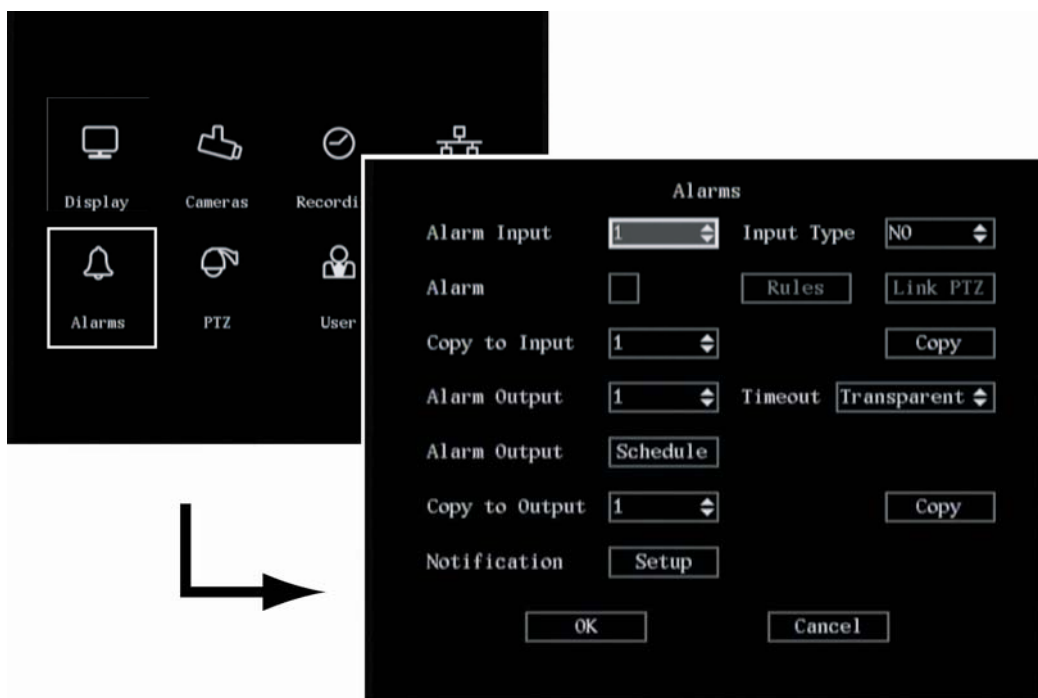
The Alarms icon  is located in the main menu. The following screen appears when you select the Alarms icon:

Figure 45: The Alarms menu



Alarm relay outputs

- The 4-channel DVSR xU has 4 external alarm inputs and 4 alarm relay outputs
- The 8-channel DVSR xU has 8 external alarm inputs and 4 alarm relay outputs
- The 16-channel DVSR xU has 16 external alarm inputs and 4 alarm relay outputs

When setting up the alarm relay output, you need to set the alarm output time delay. This delay is the time that the alarm output continues after the alarm itself has been deactivated. Consequently the actual alarm output time consists of the alarm input time and alarm output time delay.

Configuring the alarm settings

The following procedure shows how to change the Alarm menu settings. They can be changed in any order.

In the main menu, go to the Alarms menu icon and press Enter or left-click the mouse. The Alarms menu appears.

To save changes made in the menu

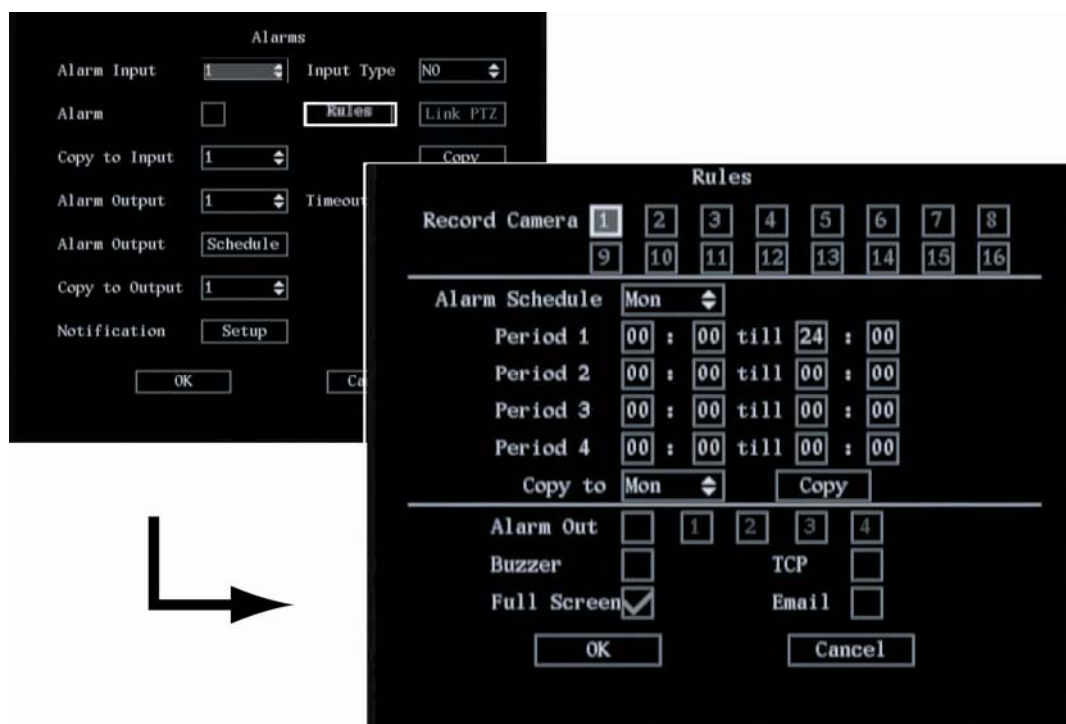
1. When you have made all the changes required in the Alarms menu, go to OK and press Enter or left-click the mouse to save all the changes. To abort the changes, select Cancel and press Enter. You will then return to the main menu.

Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the Alarms menu.

To setup an external alarm input

1. In the Alarms menu go to the *Alarm Input* list box and select one of the alarm inputs listed.
2. Go to the *Input Type* list box and press EDIT or left-click the mouse. Depending on the sensor type, select either NO or NC. Default is NO.
3. Select the *Alarm* check box and press Enter or left-click the mouse to enable (✓) the selected alarm input. If the alarm input is enabled, the Rules and PTZ Link setup buttons become activated.
4. **To set the alarm schedule**
 - a. In the Alarms menu go to the *Rules* setup button and press Enter or left-click the mouse. The Alarm Input *Rules* submenu appears. See Figure 46.

Figure 46: Alarm Input Rules submenu



- b. Select the cameras from which you want to record an alarm input. Press Enter or left-click the mouse to enable (✓) or to disable the camera channel.

Caution: For a channel to be able to record an alarm, the recording option and the record type must first be enabled in the Record Schedule menu, such as Alarm or one of the other options available. See section *To setup a camera's recording schedule* on page 53 for further information.

- c. Under *Alarm Schedule* select the schedule for when the DVSR xU will respond to an external alarm.

Select the day of the week and then for *Period 1* enter the start and end time periods for the selected day. Each day can have up to four time periods.

Note: The time format is 24-hour.

- d. Select how the alarm should be indicated. Enable or disable each option by pressing Enter or left-clicking the mouse. See Table 17.

Table 17: Alarm indications

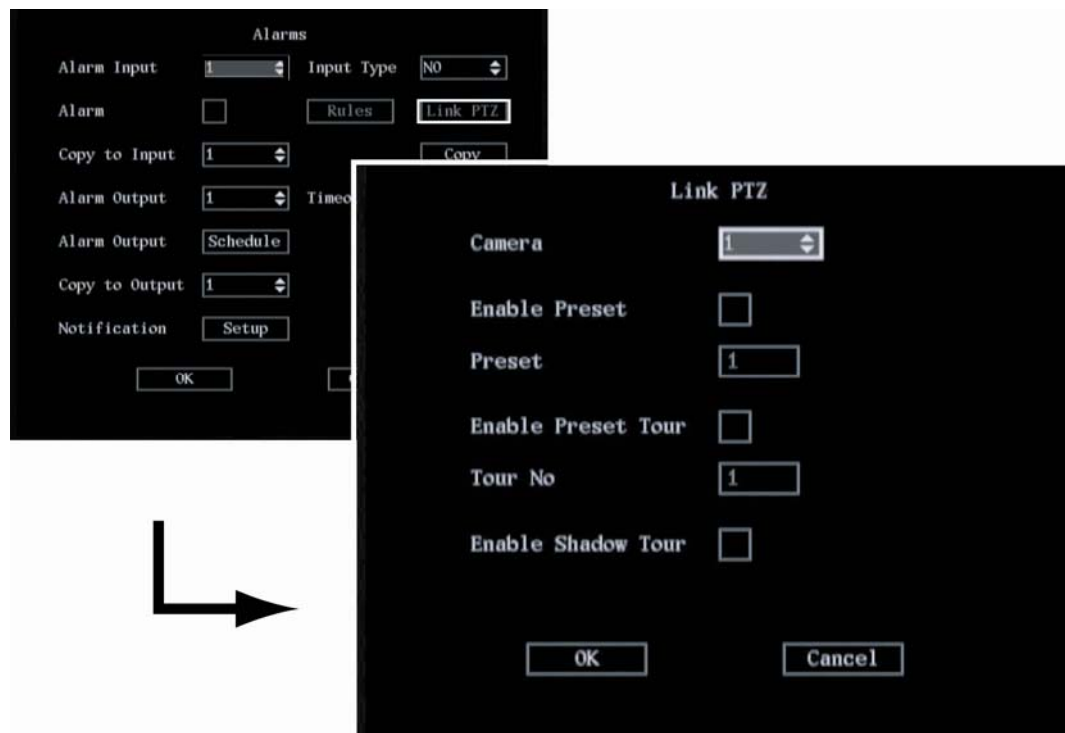
Alarm Out	When enabled, the Alarm Out is activated. Up to four alarm outputs can be enabled.
Buzzer	An audible alarm sounds.
TCP	The alarm information is sent to the remote IP (see section <i>To change</i> the IP address on page 57) .
Full Screen	On Alarm channel will be displayed in full screen.
Email	The alarm information is sent to an Email address (see section <i>To setup E-mail notification</i> on page 58) .

- e. Select OK and press Enter to return to the Alarms menu, or press CANCEL or ESC to abort and return to the Alarm menu.

5. To set a PTZ link to the alarm

- a. In the Alarms menu go to the *Link PTZ* setup button and press Enter or left-click the mouse. The *Link PTZ* submenu appears. See Figure 47.

Figure 47: Link PTZ submenu



- b. Go to the *Camera* list box and select the camera for which you want to set the PTZ link when there is an alarm.
- c. Select one of the PTZ options listed by pressing Enter or left-clicking the mouse to enable (✓) or to disable: Preset, Preset Tour, or Shadow Tour. When Preset or Preset Tour is enabled, enter its pre-programmed number. See chapter *PTZ settings* on page 69 for further information.

Note: Ensure that the PTZ you are using can support Preset, Preset Tour and Shadow Tour functions. An external alarm input can trigger one camera's PTZ linkages.

- d. Select OK and return to the Alarms menu.

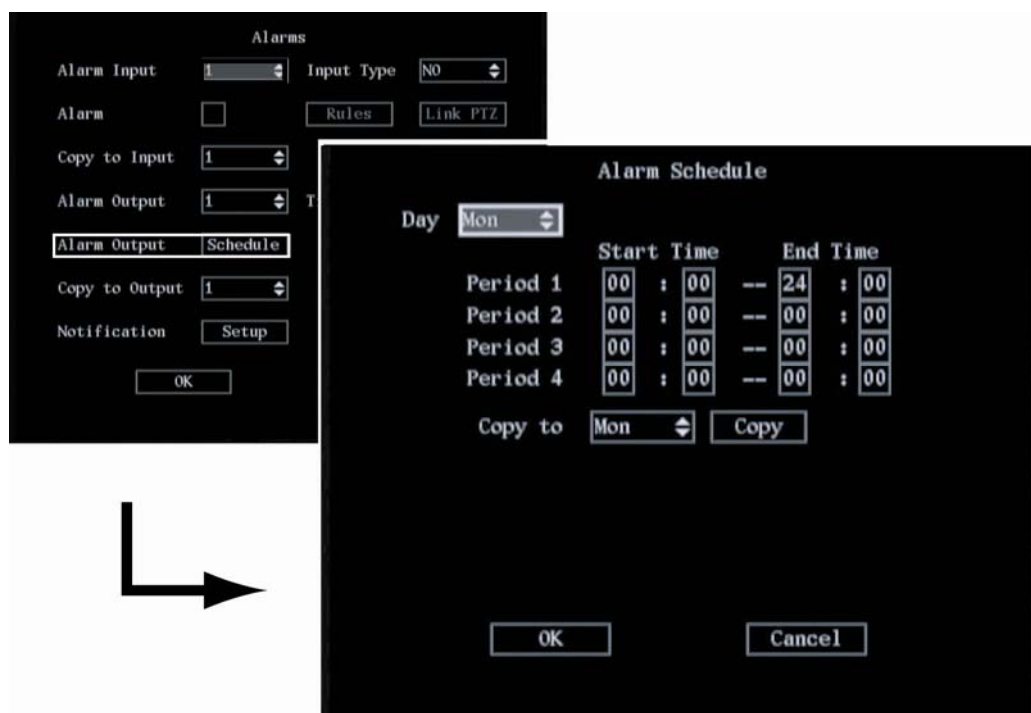
6. To copy settings to another external alarm input

- a. In the Alarms menu go to the *Copy to Alarm In* list box and select one of the inputs listed.
- b. Go to the *Copy button* and press Enter or left-click the mouse. A message appears about the copying of the parameters. Select OK to accept.
7. Go to OK and press Enter or left-click the mouse to return to the Alarms menu.

To setup an external alarm output

1. In the Alarm menu go to the *Alarm Output* list box. Press Enter or left-click the mouse to select one of the alarm outputs listed.
 2. Go to the *Timeout* list box. Select the time delay for the alarm output from the list shown. The time delay options are:
 - Transparent mode (default): If there is an alarm input, there will be an alarm output.
 - Acknowledge: The alarm output will not stop until the menu option *Alarm Output Stop* is activated in the System menu. See page 93 for further information.
-
- Caution:** An alarm can only be acknowledged locally. Do not select this option if the DVSR xU is controlled over a network.
-
- 5 seconds
 - 10 seconds
 - 30 seconds
 - 1 minute
 - 2 minutes
 - 5 minutes
 - 10 minutes
 - 15 minutes
3. Go to the *Alarm Output* schedule button and press Enter or left-click the mouse. The Alarm Output Schedule submenu appears. See Figure 48.

Figure 48: The Alarm output schedule submenu



4. Select the day of the week and then for *Period 1* enter the start and end time periods for the selected day. Each day can have up to four time periods.

Note: The time format is 24-hour.

5. Repeat step 4 for each day of the week.

If the desired times for this alarm output are identical to those of other days, select *Copy to* and select the day of the week to which you want to copy this schedule. Select *All* if the same schedule is used all week. Select *Copy* and press Enter twice.

7. Select OK and press Enter or left-click the mouse to return to the Alarms menu.
8. To copy the settings to another external alarm input, select *Copy to Output* in the Alarms menu. Select one of the outputs listed and press Enter or left-click the mouse. Go to *Copy* and press Enter or left-click the mouse. A message appears about copying the parameters. Select OK to accept.

To setup the notification settings

For each alarm notification type, you can specify up to several ways to handle an alarm event.

1. In the Alarm menu go to the *Notification* setup button and press Enter or left-click the mouse. The *Notification* submenu appears.
2. Go to the *Notify on* list box and select one of the exceptions listed. See Table 18.

Table 18: List of notification exception options

Condition	When alarm occurs
HDD Full	Hard drives are full (only in <i>No overwrite</i>)
PAL/NTSC Mismatch	The input and output have a different video format
Illegal Access	Login failed on the unit Local as Remote
IP Address Conflict	Two devices on the network have the same IP address
Network Failure	Network connection is lost
Video Exception	A distorted video signal is connected to the video input

3. For each option on how to respond to triggers and alarm outputs press Enter or left-click the mouse to enable (✓) or to disable.
4. When completed, select OK to return to the Alarms menu.

10. PTZ settings

You can control the PTZ functions of the cameras connected to the DVSR xU. The PTZ menu allows you to setup the RS-285 and PTZ parameters to match your PTZ protocol such as:

- RS-285 parameters (Baud rate, data bits, stop bits, parity, and flow control)
- PTZ protocol
- PTZ address
- Preset parameters
- Preset tour function
- Shadow tour function


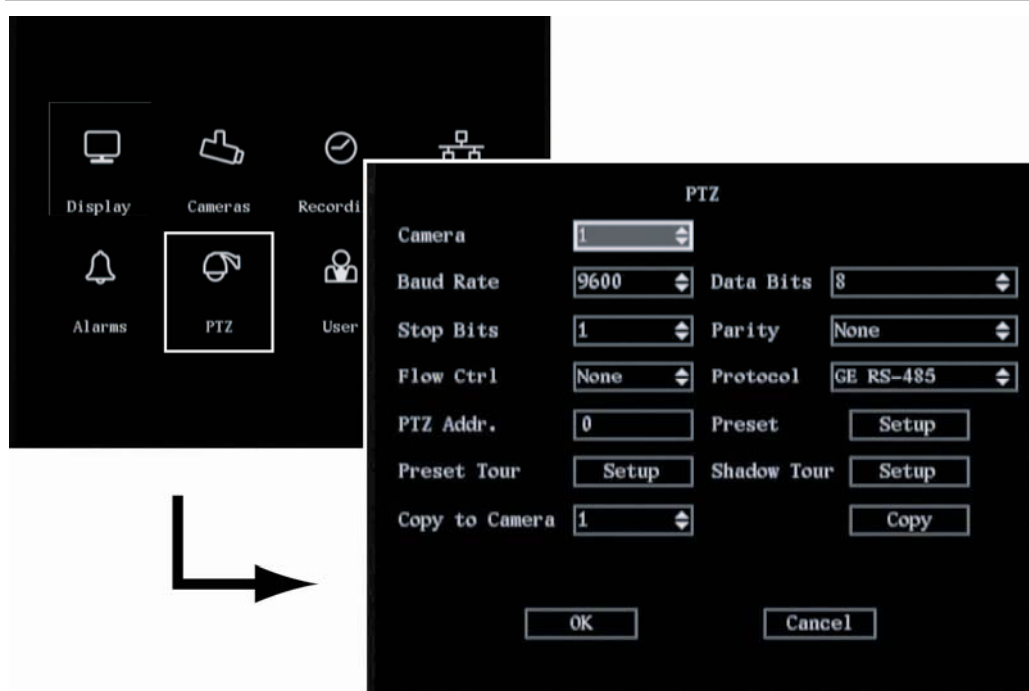
The PTZ icon  is located in the main menu. The following screen appears when you select the PTZ icon:

Figure 49: The PTZ menu



Description of preset, preset tour, and shadow tour options

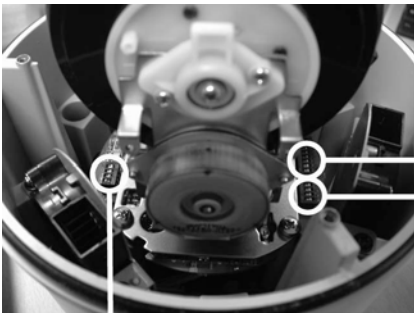
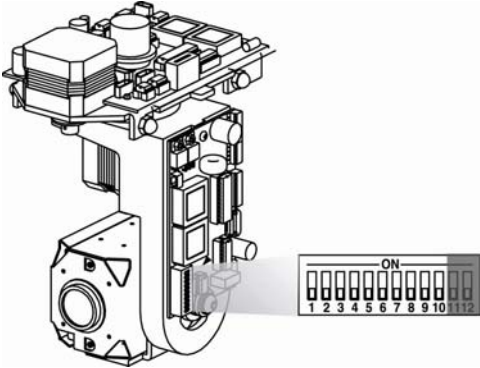
Preset	<p>This 3-digit number represents the camera's position, zoom, focus, and iris. You can save up to 128 preset numbers.</p> <p>Note: The PTZ used must be able to support a preset function.</p>
Preset tour	<p>Each preset tour has several cruise points. A preset point has:</p> <ul style="list-style-type: none"> • A preset number. • A dwell time. This is the time the PTZ camera stays at the preset number. • A dwell speed. This is the speed at which the PTZ moves to the preset number. <p>You can save up to 16 sequences.</p> <p>Note: The PTZ used must be able to support a sequence function.</p>
Shadow tour	<p>The ShadowTour function remembers the PTZ movement track.</p> <p>Note: The PTZ used must be able to support a ShadowTour function.</p>

Configuring the PTZ protocols of GE Security cameras

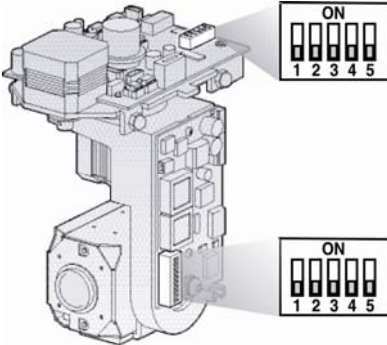
Before the PTZ cameras are assembled in their housings, set their protocol and address DIP switches for the DVSR xU. See Table 19 for the different GE Security's PTZ camera configurations.

If you are using PTZ cameras from another company, please refer to their configuration instructions.

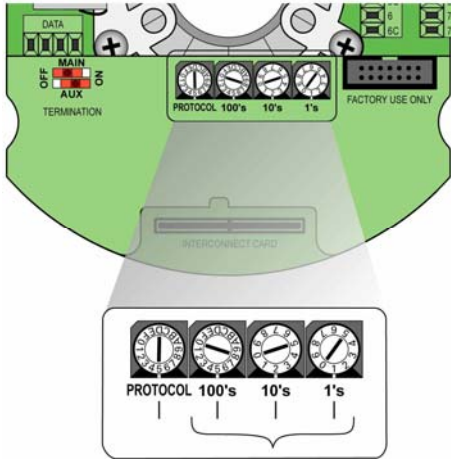
Table 19: Configuring GE Security PTZ cameras for the DVSR xU

Camera	Switch setting	
TruVision Dome 16 PTZ	Protocol switches	1011
	Address switches	0000
	Baud rate	0000
		
Protocol switches		
CyberDome	Protocol switches	Auto
	Address switches:	0000000000
		

Camera	Switch setting	
CyberDome II	Protocol switches	0000
	Address switches:	0000



Legend	Protocol switches	5
	Address switches:	0000



Configuring the PTZ settings

The following procedure shows how to change the PTZ menu settings. They can be changed in any order.

In the main menu, go to the PTZ menu icon and press Enter or left-click the mouse. The PTZ menu appears.

To save changes made in the menu

1. When you have made all the changes required in the PTZ menu, go to OK and press Enter or left-click the mouse to save all the changes. To abort the changes, select Cancel and press Enter. You will then return to the main menu.

Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the PTZ menu.

To set the PTZ camera

1. In the PTZ menu go to the *Camera* list box and select the PTZ camera whose settings you want to change.

To set the RS-485 settings

1. In the PTZ menu set up the Baud Rate, Data Bits, Stop Bits, Parity, and Flow Ctrl. For each one in turn, select the required configuration as provided by the dome manufacturer. For example, the configuration for GE Security is: (default)
 - Baud rate – 9600
 - Data bits – 8
 - Stop bit – 1
 - Parity – None
 - Flow Ctrl - None

To set the PTZ protocol

1. In the PTZ menu go to the *Protocol* list box and select one of the built-in PTZ protocols listed. See Table 20.

Table 20 Built-in PTZ protocols

GE RS-485 (default)	LG
VideoTec	Infinova
VCL SpeedDome	HIKVISION
Techwin	DM DynaColor
EVI-D30	DennardDome
Samsung	DeltaDome
Siemens	BBV
Philips 3	Tyco AD
Philips 2	AD
Philips	Pelco D
Panasonic	Pelco P

To set the PTZ address

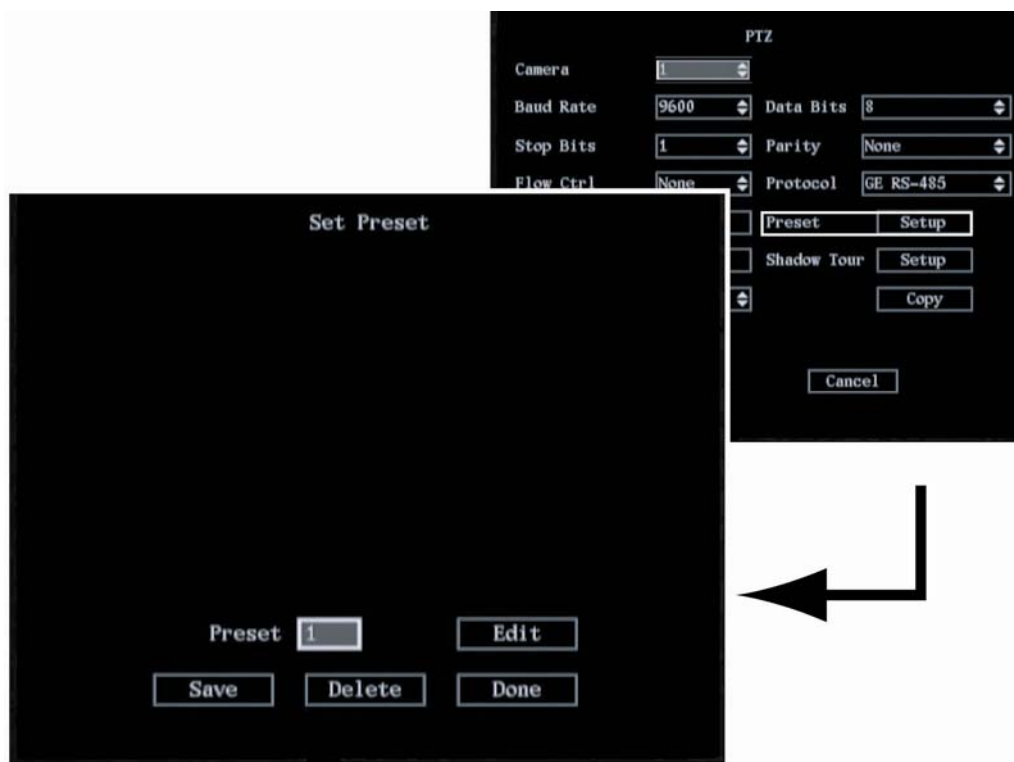
1. In the *PTZ Addr.* box enter a number for your PTZ address. If using the front panel or remote control, press EDIT to delete a preceding number and Enter to confirm the entry. If using the mouse, an onscreen numeric keypad appears.

To set camera preset positions

The preset position is the function to program monitoring positions (preset positions) associated with position numbers. By entering the position number, you can move cameras automatically to the preset positions. You can set up to 128 preset numbers. A preset number must have three digits. This option is only available with cameras provided with the preset feature.

1. In the PTZ menu go to the *Preset* setup button and press Enter or left-click the mouse. The Set Preset submenu appears. See Figure 50.

Figure 50: The PTZ Set Preset submenu



2. Select the *Preset* setup button and press EDIT or left-click the mouse. Enter your preset number (between 1 and 16) and press Enter or left-click the mouse to accept.
3. Using the arrow buttons IRIS+, IRIS-, FOCUS+, FOCUS-, and ZOOM adjust the PTZ to the desired position. Press Enter.
4. Select *Save* to save the preset number.
5. Repeat steps 2 to 5 for each preset number.
6. When all the preset numbers have been saved, select *Done* and press Enter or left-click the mouse to return to the PTZ menu.

To delete camera preset settings

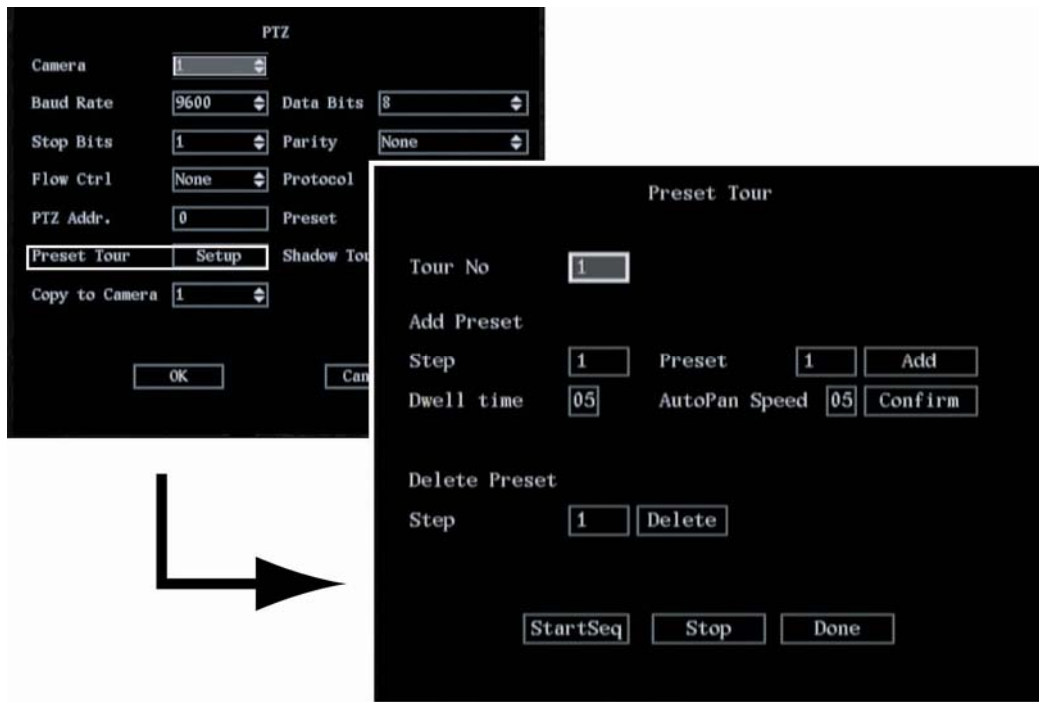
1. In the PTZ menu go to the *Preset* setup button and press Enter or left-click the mouse. The Set Preset submenu appears. See Figure 50.
2. Select the *Preset* edit box and press EDIT or left-click the mouse. Enter your preset number (between 1 and 16) and press Enter or left-click the mouse to accept.
3. Go to *Delete* and press Enter or left-click the mouse to delete the number.
4. When all the required preset numbers have been deleted, select *Done* and press Enter or left-click the mouse to return to the PTZ menu.

To tour the preset positions

You can tour all preset positions in a camera. First you need to save the steps of preset positions to include in a tour.

1. In the PTZ menu go to the *Preset Tour* setup box and press Enter or left-click the mouse. The Sequence submenu appears. See Figure 51.

Figure 51: The PTZ Preset Tour submenu



2. Select the *Tour No.* edit box, and enter the sequence number you want to add or delete (between 1 and 16) . Press Enter or left-click the mouse.

Each preset tour consists of steps. A step consists of a preset number, a dwell time, and an auto pan speed.

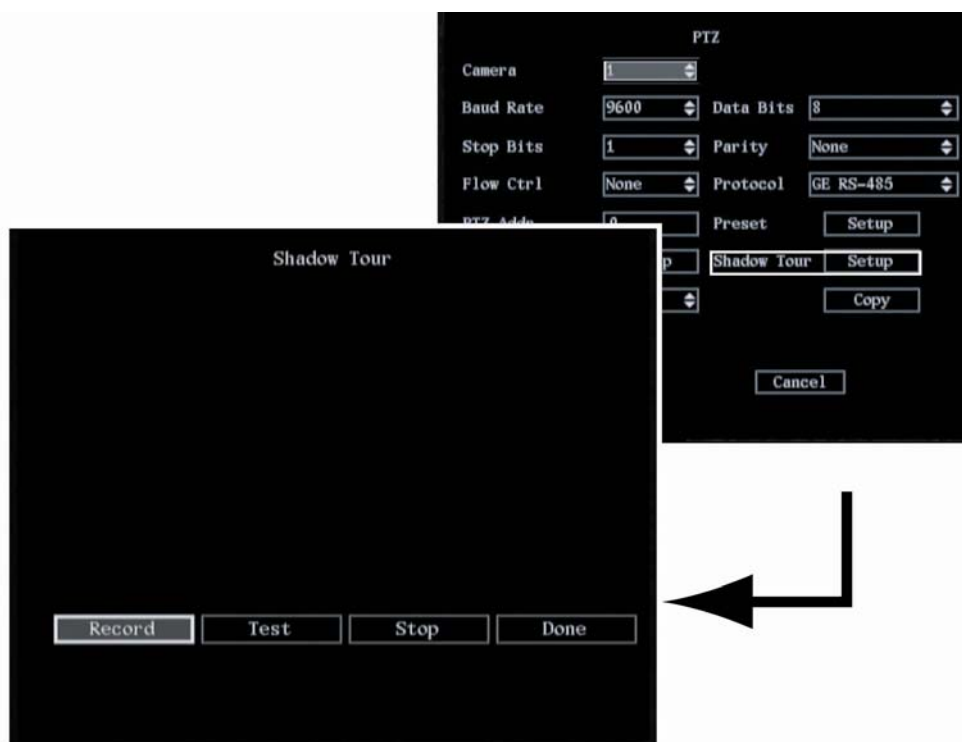
Note: The PTZ camera used must be able to support a preset function.

3. To add a step, go to *Step*. For each of the step settings (step number, preset number, dwell time number, and auto pan number) add the number and press Enter or left-click the mouse. When completed, select to *Add*.
4. Select *Confirm* to save the step settings into the selected preset.
5. Check the sequence by selecting the *StartSeq* button. The preset will then run. To stop the preset running, select *Stop*.
6. To delete a step, go to *Delete Preset*., Enter the step number you want to delete and select the *Delete* button.
7. When completed, select the *Done* button to return to the PTZ menu.

To setup a ShadowTour

1. In the PTZ menu go to the *ShadowTour* setup button and press Enter or left-click the mouse. The Shadow Tour submenu appears. See Figure 52.

Figure 52: The PTZ Sequence submenu screen



2. Select the *Record* button and press Enter or left-click the mouse. The PTZ control appears on screen.
- Note:** The PTZ camera used must be able to support a ShadowTour function.
3. When you are satisfied with the PTZ track, press Enter or left-click the mouse to save it and to return to the Set Shadow Tour submenu.
 4. Go to *Test* and press Enter or left-click the mouse. The PTZ track will be repeated until you select *Stop*.
 5. Go to *Done* and press Enter or left-click the mouse to return to the PTZ menu.
 6. To copy settings to another external alarm input:
 - a. In the PTZ menu go to *Copy to Camera*. Select one of the outputs listed.
 - b. Go to *Copy* and press Enter or left-click the mouse.

11. User settings

This section describes how to

- Change user PINs
- Add new users
- Add or modify operational rights of users


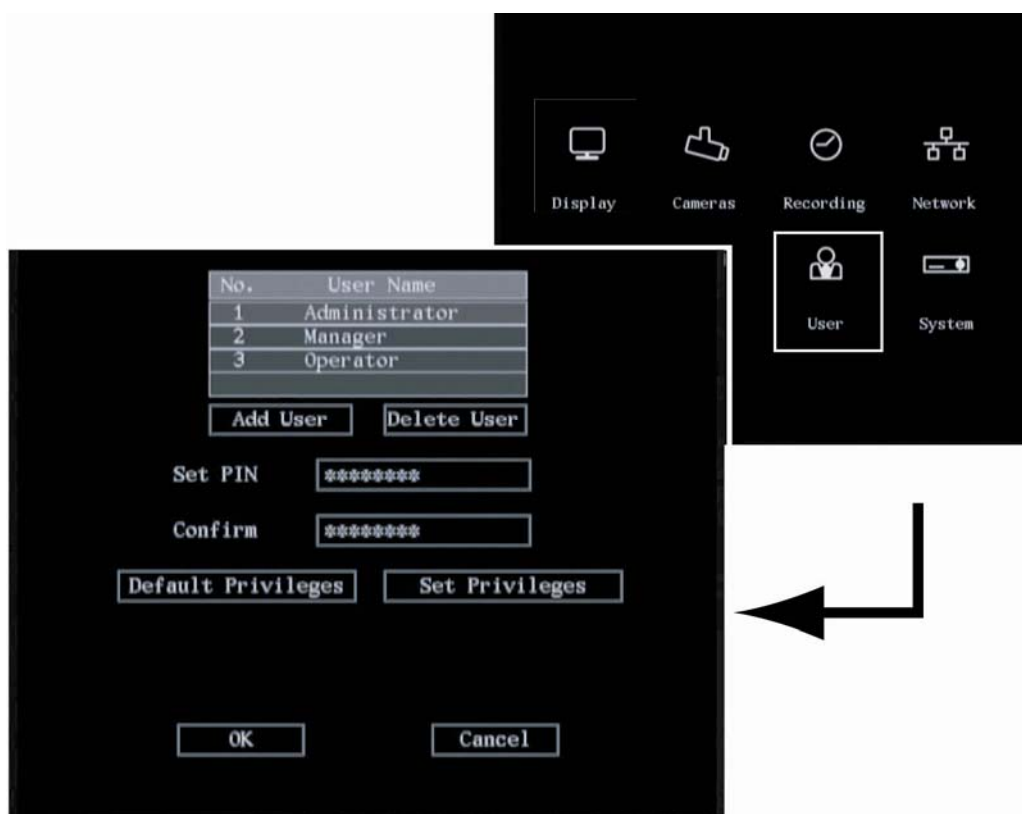
The User icon  is located in the main menu. The following screen appears when you select the User icon:

Figure 53: The user menu



Overview of users and PINs

The DVSR xU is shipped with three predefined users: Administrator, Manager, and Operator. The system administrator is the Admin user and can carry out all operations. Only the system administrator can manage users. The system administrator can create up to 13 additional individual users and allocate privileges to each of them.

See Table 21 for the list of default users and their PINs.

Table 21 Default users and their PINs

Default user name	Default PIN
Administrator	3477
Manager	2222
Operator	3333

The factory default User ID is “Administrator” and its PIN is “3477”. This factory default Administrator name cannot be changed. However, once you have completed the installation and setup you should change the admin PIN to protect against unauthorized access.

Caution: Keep the Admin PIN in a safe place. If you should forget it, you must return the DVSR xU unit to our service center to be reconfigured.

Note: You hear an audible warning when an incorrect user name or PIN is entered. After three incorrect entries, the unit returns to live mode.

When new users are added to the list, you can give them their own PINs or they can use a default PIN. All new users must be given user rights as these are not given automatically by the system. Users can be given local rights to do playback, remote playback, and view logs. You can also give them more extensive rights that cover both local and remote rights.

Local rights allow you to do local operations of the DVSR xU, such as using the front panel and the IR remote control. Remote rights allow you to use the DVSR xU through the network. See Table 22 for the list of rights available.

Table 22: Description of user operational rights

Local rights	Description
Record	Manual start/stop recording
Edit Menu	Locally setup the DVSR xU settings
View Log	Locally view the log on DVSR xU
System	Locally upgrade firmware, format HDD, reboot DVR and shut down DVSR, etc.
Remote rights	Description
PTZ	Remote PTZ control
Record	Remote manual start/stop recording
Playback	Remote playback, download the recorded files on DVSR xU
Edit menu	Remote setup the DVSR xU settings
View Log	Remote views of the log on DVSR xU
System	Remote upgrade firmware, format HDD, reboot DVSR and shut down DVSR xU, etc.
VOIP	Client can talk with DVSR
Alarm	Remote control DVSR alarm output
Preview	Network live viewing
Local video play	Remote control DVSR xU video output
Com Control	DVSR xU RS-232 transparent channel function

Configuring the user settings

The following procedure shows how to manage users. The options can be changed in any order.

In the main menu, go to the User menu icon and press Enter or left-click the mouse. The User menu appears.

To save changes made in the menu

1. When you have made all the changes required in the Users menu, go to OK and press Enter or left-click the mouse to save all the changes. To abort the changes, select Cancel and press Enter. You will then return to the main menu.

Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the Users menu.

To modify a user's PIN

PINs are used to limit access to the DVSR xU. Only the administrator can create or delete a PIN.

The same PIN can be used by several users. When you create a new user, the default PIN is 0000.

Caution: When you have completed the installation of the DVSR xU you must change the Administrator PIN. Only authorized users should be able to modify menu settings.

1. In the User menu select the user whose PIN you want to change. The user name is highlighted.

Note: When a user's name is highlighted the PIN and Verify boxes display *****. If there are no symbols displayed in these boxes, the selected user does not have a PIN.

2. Go to the *Set PIN* edit box.
3. Using the number buttons, enter the new PIN. A PIN can have up to 16 numbers. When finished, press Enter or left-click the mouse to exit edit mode.
4. Go to the *Confirm* edit box and re-enter the new PIN. When finished, press Enter or left-click the mouse to exit edit mode.

If the two PINs entered are identical, the PIN is saved and becomes effective immediately. However, if they are different a warning message appears. Press Enter to confirm. You will return to the PIN edit box and must re-enter the new PIN again.

5. Go to OK and press Enter or left-click the mouse to accept the save and return to the main menu.

To add a new user

Only the system administrator can add or delete users.

1. In the User menu go to the *Add User* button and press Enter or left-click the mouse. The Add pop-up dialog box appears (see Figure 54). The cursor is in the User Name entry box.

Figure 54: The add user dialog box



Using the alphanumeric buttons, enter the new user name (see Table 6 on page 29 for how to enter characters) and press Enter to confirm. The user menu appears with the new name listed.

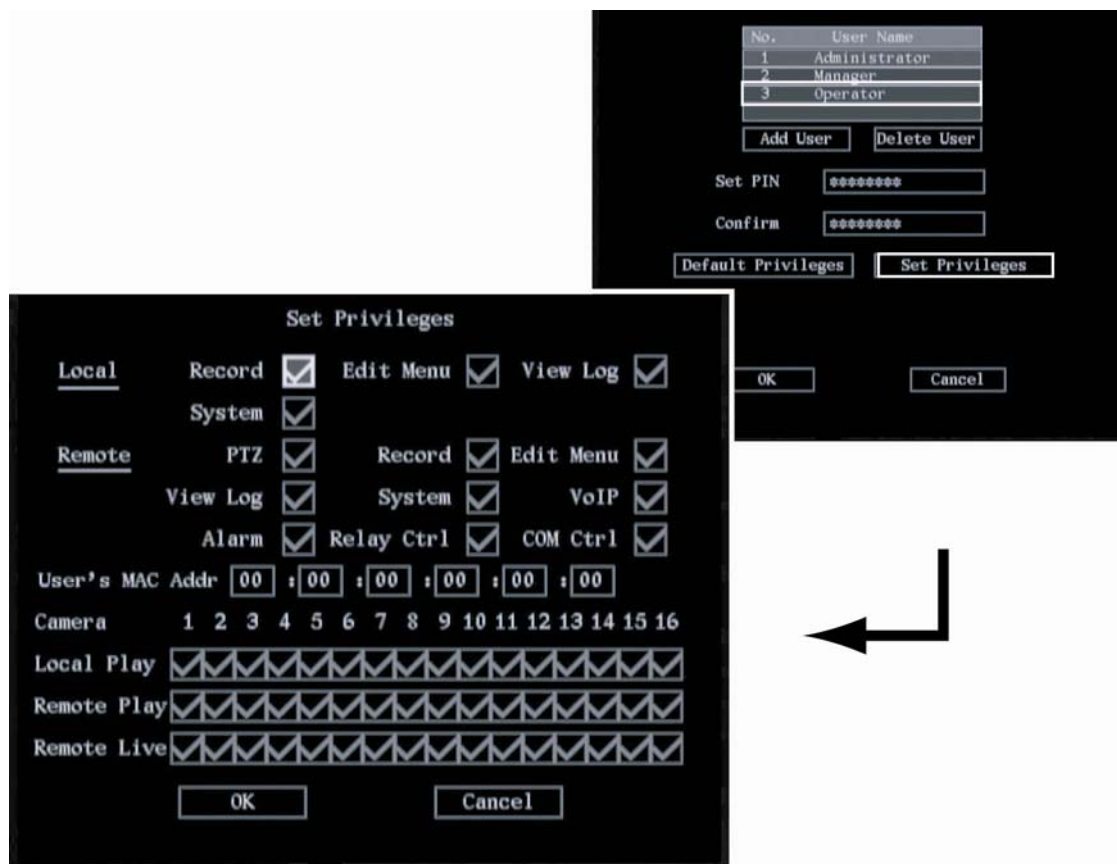
Caution: A new user has no operational rights. They must be allocated.

2. In the user menu go to OK. Press Enter or left-click the mouse to save the changes and return to the main menu.

To add or modify user operational rights

1. In the User menu select the user you want to delete from the list.
2. Select the *Default Privileges* button and press Enter or left-click the mouse. The user is then allocated default rights. Default rights allow local playback, remote playback, and viewing logs.
3. To allocate more detailed user rights, select the *Set Privileges* button and press Enter or left-click the mouse. The Set Privileges submenu appears. See Figure 55.

Figure 55: The Set Privileges submenu (default shown)



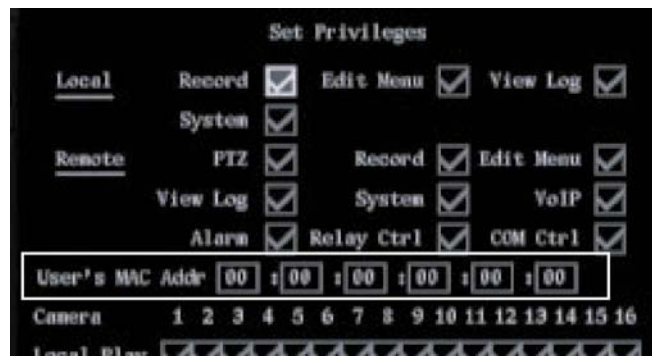
- Users can be given local and remote rights. See Table 22 on page 77 for the list. Select each item that you want to assign to the user and press Enter or left-click the mouse to enable (✓) or disable.
- Go to OK and press Enter or left-click the mouse to return to the user menu. Go to OK and press Enter or left-click the mouse to save the changes and return to the main menu.

To setup a MAC address

The MAC address is not the DVSR xU address but that of the PC which will access the DVSR xU. If you setup a MAC address, only the PC with that MAC address can access the DVSR xU.

- At the PC in DOS prompt use the "ipconfig" command to get the PC MAC address (6 bytes).
- In the User menu select *Set Privileges* and press Enter or left-click the mouse. The Set Privileges submenu appears. See Figure 56.

Figure 56: User's MAC address



3. Go to the *User's MAC Addr.* and press EDIT or left-click the mouse. Use the number buttons to enter the MAC address. Press Enter to accept the entry if using the front panel or remote control.
4. Go to OK and press Enter or left-click the mouse to return to the user management menu. Select OK and press Enter or left-click the mouse to save the changes and return to the main menu.

To delete a user

Only the system administrator can add or delete users.

1. In the user management screen select the user you want to delete.
2. Go to *Delete User* and press Enter or left-click the mouse. The Delete pop-up dialog box appears.
3. Go to OK and press Enter or left-click the mouse to delete the user, or select Cancel and press Enter or ESC to abort. You will return to the user management menu.
4. In the user management menu select OK to save the changes and return to the main menu.

12. System settings

The System menu allows you to setup the following parameters such as:

- Handle transaction information
- Configure RS-232 settings
- Upgrade the firmware
- Restore factory defaults
- Reboot the DVSR xU
- Manage HDD
- View logs
- Reboot the DVSR xU
- View system information
- Power off
- Acknowledge an alarm


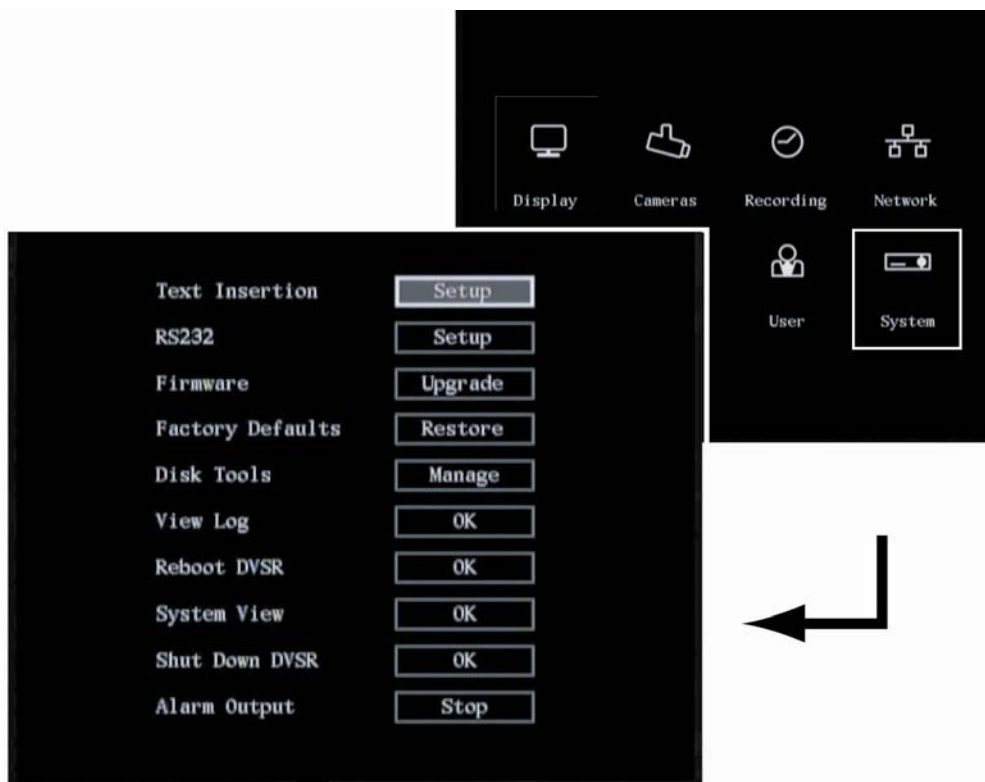
The System icon  is located in the main menu. The following screen appears when you select the System icon:

Figure 57: The system configuration screen



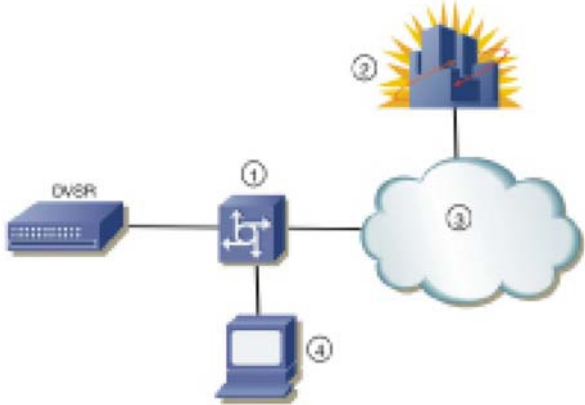

Capturing text insertions

The DVSR xU can actively obtain or passively receive text information from other devices linked through a network or a serial port. This information can then be overlaid on live video, recorded, and played back. The function is largely used for ATMs.

The following instructions describe how to setup the parameter for different links to ATMs and POS. ATM includes NCR, DIEBOLD, WINCOR-NIXDORF, Siemens, OVLIVETTI, FUJITSU, Hitachi, etc and POS support through GE ProBridge. The transaction types include query, withdraw, deposit, PIN modification and money transfer etc.

The DVSR xU permits the capture of four types of text insertions (see Table 23.)

Table 23: Text insertion capturing options

Option	Description
Network sniff	<p>The text insertion is actively sniffed through the network, such as credit card numbers. To setup the DVSR xU, you need to enter the following information:</p> <ul style="list-style-type: none"> • IP address of ATM machine • Type of ATM machine • Start and end position, length and the content of the data message • Start and end position, and length of credit card number • Start and end position, and length of transaction type • Transaction type (for example, modify PIN, deposit, withdrawal) and code <p>The network connection is as follows:</p>  <p>1. Switch; 2. Bank center; 3. Network; 4. ATM</p> <p>When the ATM machine sends the text insertion to the bank center, the DVSR captures the data package through the network, and analyzes the data format. The DVSR xU will then overlay the corresponding text onto the live video.</p>
Network receive	For future use.
Data received from ATM through the serial port	<p>To setup the DVSR xU you need to enter the following information:</p> <ul style="list-style-type: none"> • Type of ATM machine • Transaction type and code <p>The network connection is as follows:</p>  <p>The DVSR xU RS-232 must be setup in transparent channel mode (see page 67). Software must be run in the ATM to send the credit card number and transaction code to the DVSR xU through the RS-232 port.</p>
Command received from the ATM through the serial port	<p>To setup the DVSR xU, you need to enter the following information:</p> <ul style="list-style-type: none"> • Type of ATMS machine • Transaction type and code <p>Software must be run in the ATM to send the command to the DVSR xU through the RS-232 port.</p>

Configuring the system settings

The following procedure shows how to specify system parameters. The options can be changed in any order.

In the main menu, go to the System menu icon and press Enter or left-click the mouse. The System menu appears.

To save changes made in the menu

1. When you have made all the changes required in the System menu, go to OK and press Enter or left-click the mouse to save all the changes. To abort the changes, select Cancel and press Enter. You will then return to the main menu.

Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the System menu.

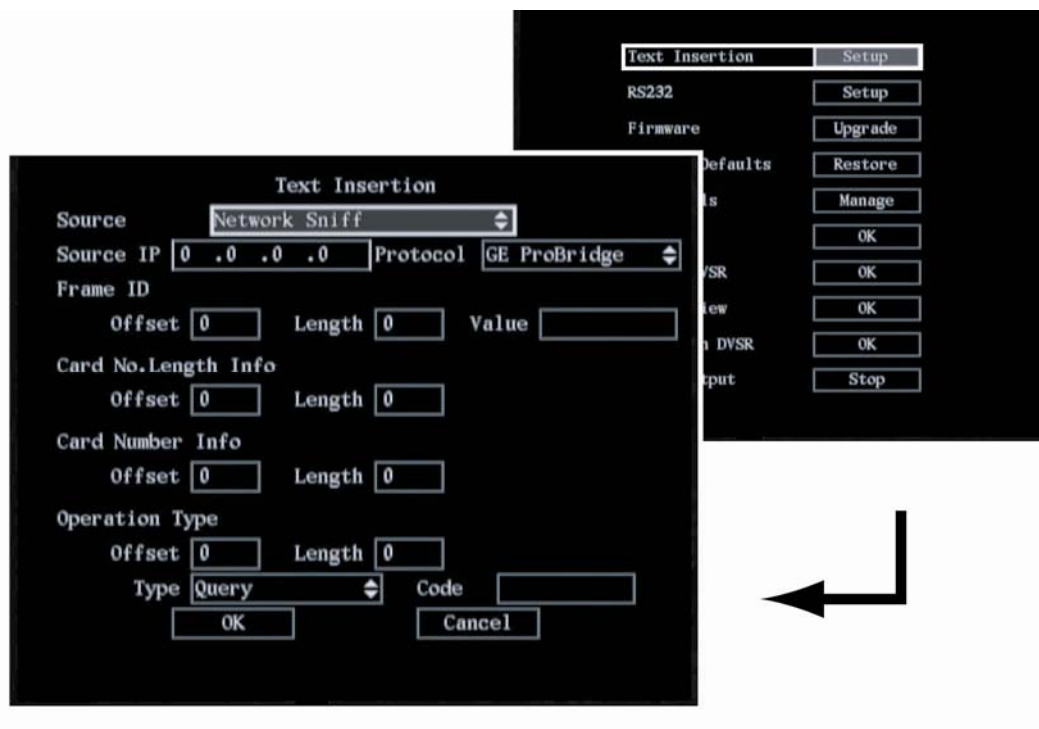
To setup how to handle transaction information

1. In the System menu go to the Text Insertion setup button and press Enter or left-click the mouse. The Text Insertion submenu appears.
2. Select one of the four text capture types from the drop-down list (see Table 23):
 - Network sniff
 - String from serial port
 - ATM CMD from serial port
 - Network receive

Depending on the text capture type selected, the menu options listed will differ.


- a. **Network Sniff:** See Figure 58. Go to each of the settings and press EDIT or left-click the mouse to enter edit mode. Enter the values. Select OK when completed and return to the System menu.

Figure 58: The Text insertion capturing options – Network Sniff



- b. **Network Receive:** Go to *Local Port* and press EDIT or left-click the mouse to enter edit mode. Enter the values. Select OK when completed and return to the System menu.
- c. **Receive data sent by ATM through serial port:** Go to the *Protocol* list box and select the protocol parameter. GE ProBridge is default. Go to the *Start String* edit box and press EDIT or left-click the mouse to enter edit mode. Enter the values. Select OK when completed and return to the System menu. See Figure 59.

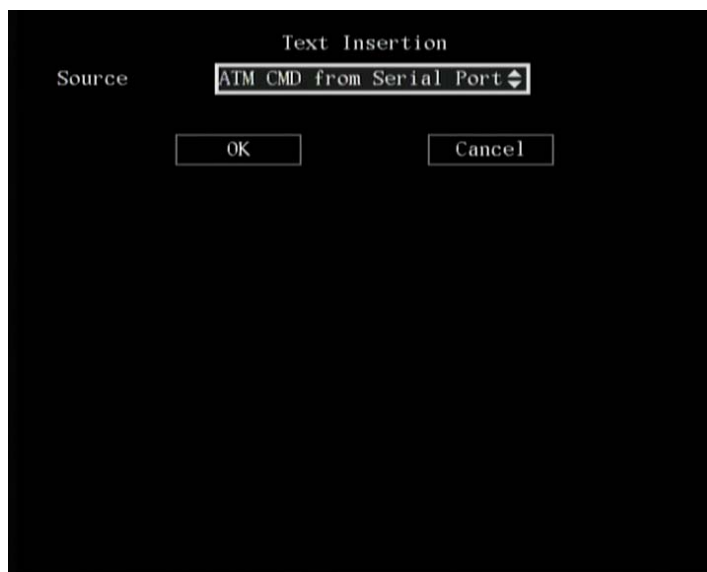
Figure 59: The Text insertion capturing options – Receive data sent by ATM/POS through serial port



The dialog box is titled "Text Insertion". It contains three labels on the left: "Source", "Protocol", and "Start String". The "Source" label is next to a dropdown menu showing "String from Serial Port". The "Protocol" label is next to a dropdown menu showing "GE ProBridge". The "Start String" label is next to an empty text input field. At the bottom of the dialog box are two buttons: "OK" and "Cancel".

- d. **Receive the command sent by ATM through serial port:** Select OK and return to the System menu. See Figure 60.

Figure 60: The Text insertion capturing options – Receive the command sent by ATM/POS through serial port



The dialog box is titled "Text Insertion". It contains one label on the left: "Source". The "Source" label is next to a dropdown menu showing "ATM CMD from Serial Port". At the bottom of the dialog box are two buttons: "OK" and "Cancel".

To configure the RS-232

The following procedure shows how to change the RS-232 settings from the RS-232 submenu. The pre-populated default values are for GE ProBridge. The RS-232 settings can be changed in any order.

1. In the System menu go to the RS-232 setup box and press Enter or left-click the mouse. The RS-232 submenu appears. See Figure 61.

Figure 61: The RS-232 submenu



2. Enter the values for each of the RS-232 parameters listed: baud rate, data bits, stop bits, parity, flow control, and mode.

There are two options for Mode: Console, and Text insert. For the console mode, connect the RS-232 port to a PC serial port for HyperTerminal control. For the text insert mode, connect serial devices such as ATM machines or GE ProBridge for point-of-service (POS) systems.

3. Select OK to accept the changes and return to the System menu.

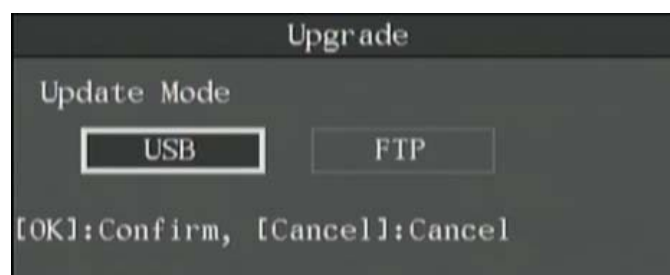
To upgrade the firmware

When you upgrade the firmware, you keep all your existing settings. Only the new features are added with their default settings.

Note: If upgrading using USB mode, disconnect the mouse beforehand. You cannot use the mouse if upgrading via the USB port.

1. In the System menu select to the *Firmware* upgrade button and press Enter or left-click the mouse. The Upgrade submenu appears. See Figure 62.

Figure 62: Firmware upgrade dialog box



2. Select either *FTP* or *USB* upgrade mode.
3. If you select *FTP* mode, the FTP Upgrade dialog box appears. Press Enter or left-click the mouse to confirm. The DVSR xU will connect with the FTP server via network and download the firmware file. Press ESC, or right-click the mouse, to cancel.

If you select the USB mode, you must connect a USB flash memory to the DVSR xU and confirm that the firmware file is in the root directory. Press Enter or left-click the mouse to start the upgrade.

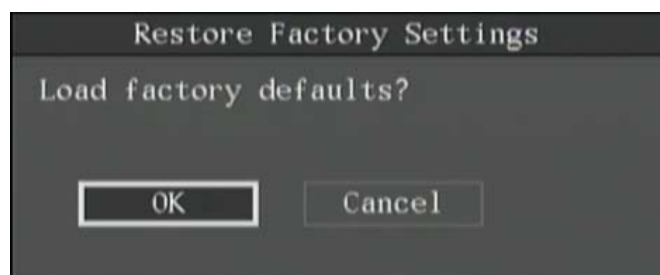
Note: The firmware must be downloaded to the USB main directory, and the file named "digicap".

4. After successfully upgrading the firmware, press ESC or right-click the mouse to return to the main menu.
5. Press OK to reboot the DVSR xU.

To restore factory default settings

1. In the System menu go to the *Factory Defaults* restore button and press Enter or left-click the mouse. The factory default dialog box appears. See Figure 63.

Figure 63: Factory default dialog box



2. Select OK. The system will automatically reboot.

Caution: If during rebooting the DVSR xU makes a lot of noise, check that the video standard is correctly set to PAL (default) in the Display menu.

To manage the HDD

1. In the System menu go to the *Disk Tools* manage button and press Enter or left-click the mouse. The Hard Disk menu appears. See Figure 64.

Figure 64: Hard Disk menu



2. **To check the HDD status**
 - a. Go to the *HDD* list box and select the HDD required. The following information on the HDD appears underneath:
 - The capacity
 - The free space available
 - Idle
 - Health status
 - b. When completed select *Done* to return to the System menu.

3. **To format the HDD**

Caution: Before formatting the HDD, stop all recording. Once formatting is completed, you must reboot DVSR xU as otherwise the unit will not function correctly.

- a. Go to the *HDD* list box and select the HDD required.
 - b. Go to *HDD Format* button and press Enter or left-click the mouse. A dialog box appears showing that formatting is in progress.
 - c. When formatting is completed, select *OK*. The Hard Disk menu appears.
 - d. Select *Done* to return to the System menu.
4. Press *ESC* to save the changes and return to the main menu.

To view the logs recorded in the DVSR xU

You can search the recorded logs by:

- **Options.** There are four log options: All, Category & Time, Time, and Category.
- **Main information types.** There are four main information types: All, Alarm, Notification, and Operation.

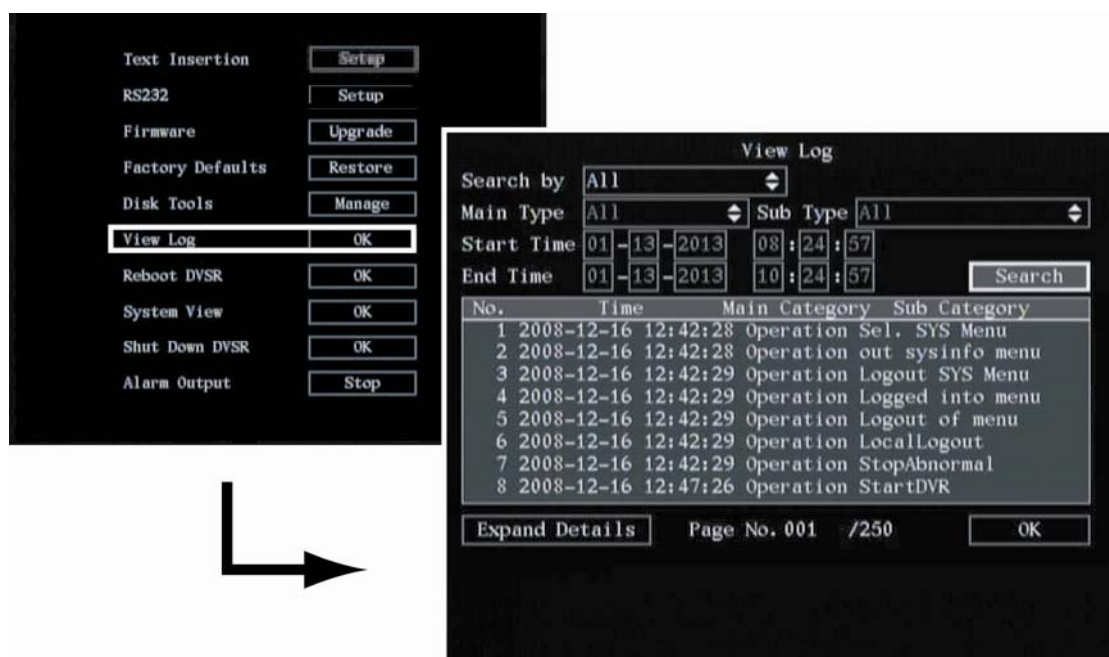
- **Sub information types.** There are several different types of sub information depending on the main type selected. See Table 24.

Table 24: Sub information types by main type

Main information types	Sub information types
All	All
Alarm	All, ViewTamper Stop, ViewTamper Start, MotDetStop, MotDetStart, Alarm Out, Alarm In
Notification	All, DCDLost, IP Conflict, HardDiskFull, HardDiskError, IllegalAccess
Operation	All, SaveToSATADISK, EndSaveToSATADISK, EndSaveToIDECDRW, EndSaveToUSBCDRW, EndSaveToUSBHD, EndSaveToUSBDISK, change, Altered, File End Time, File Start Time, Net PTZ, Net Time Play, Net File Play, Net Upgrade, BiComStop, BiComStart, Net Reboot, Alert Off, Alert On, NetGetStatus, NetGetConfig, NetGetPara, NetStopTrans, NetStartTrans, NetStopRecord, NetLogout, NetLogin, LocalFileCopy, LocalUpgrade, Panel Set Time, PanelPTZ, LocalStopRec, LocalStartRec, PanelTimePaly, PanelConfig, PanelLogout, PanelLogin, AbnormalShut, Shutdown, PowerOn

- **Date and time.** Logs can be searched by date as well as start and end recording times.
1. In the System menu select the *View Log* edit box and press Enter or left-click the mouse. The View Log menu appears. See Figure 65.

Figure 65: The View Log menu



2. **To view the default log options**

In the *View log* menu press Enter or left-click the mouse. The results are shown in the window underneath.

3. **To setup the search by type**

- a. In the *View Log* menu go to the *Search by* list box and select one of the four options: All, Category & Time, Time, and Category.

Note: If the options *All* or *Time* are selected, the main and sub type options are not be available.

- b. Go to the *Main Type* list box and select one of the types listed.
- c. Go to the *Sub Type* list box and select one of the types listed.

4. To setup the search by date and time

- a. In the *View Log* menu go to the *Start Time* edit box and press EDIT or left-click the mouse. Use the number buttons to enter start date and time. Press Enter.

Note: Time is written in the 24-hour format.

- b. Go to the *End Time* edit box and press EDIT or left-click the mouse. Use the number buttons to enter the end date and time. Press Enter or left-click the mouse.

5. To search for the logs

Go to the *Search Log* button and press Enter or left-click the mouse to start the search.

When the search is completed, the DVSR xU will list all matched log information in the window underneath.

6. If you want to see further information on the logs, such as local or remote users, select *Expand Details*. Select again to return to the original log window.
7. Go to OK and press Enter or left-click the mouse to return to the System menu.
8. Press OK to save the changes and return to the main menu.

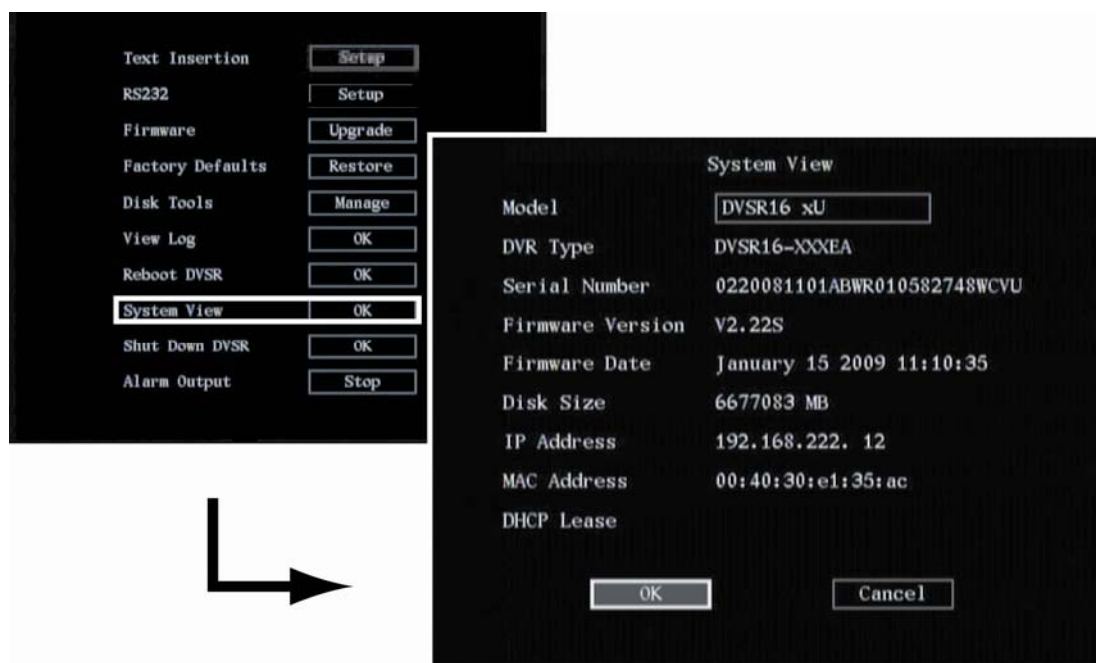
To reboot the DVSR xU

1. In the System menu go to the *Reboot DVSR* edit box and press Enter or left-click the mouse. The system reboots.

To view DVSR xU system information

1. In the System menu go to the *System View* edit box and press Enter or left-click the mouse. The System View menu appears. See Figure 66.

Figure 66: The System View menu



2. Go to OK and press Enter or left-click the mouse to return to the System menu.
3. Press ESC or right-click the mouse to return to the main menu.

To power off

1. In the System menu go to the *Shut Down DVSR* edit box and press Enter or left-click the mouse. Press OK to confirm. The DVSR xU will turn off.

Note: If you turn off the power by pressing the POWER button on the front panel, and the PIN enable option has been enabled in the Display menu (see page 32), you will need to enter your PIN before the DVSR xU will turn off.

To acknowledge an alarm

1. In the System menu go to the *Alarm Output* stop box and press Enter or left-click the mouse.

Note: This option applies only when *Alarm Output* has been set to manual (see section *To setup an external alarm output* on page 67.)

2. Press ESC or right-click the mouse to return to the main menu.

13. Troubleshooting and support

This section provides information to help you diagnose and solve various problems that may arise while configuring or using your GE Security product and offers technical support contacts in case you need assistance.

Troubleshooting your system

Problem	Possible reasons
POWER LED on front panel does not light up when the DVSR xU is turned on, and the fan does not work.	<ul style="list-style-type: none"> DVSR xU is not connected to the power supply. Check that the power cable is plugged into the DVSR xU. DVSR xU is not switched on. Check that the power switch on the back panel is switched on.
The power cable is plugged in and power is switched on. The POWER LED on front panel is green but fan does not work.	<ul style="list-style-type: none"> Front panel on/off power button is not working. The fan is broken. The DVSR xU must be sent in for repair. <p>Please contact your local supplier.</p>
The DVSR continuously reboots after start up, and makes an audible alarm every 10 seconds.	<ul style="list-style-type: none"> The wrong firmware has been used in the upgrade. DVSR xU has hardware problems and must be sent in for repair. <p>Please contact your local supplier.</p>
When using V _{OUT} no images appear on the monitor when DVSR is turned on.	<ul style="list-style-type: none"> The cable connected to the monitor is damaged. Check the cable. DVSR xU has hardware problems. Please contact your local supplier.
The system cannot find the hard disk in reboot process.	<ul style="list-style-type: none"> The HDD cable is damaged. The power cable of the hard disk is not connected. The HDD is damaged. <p>Please contact your local supplier.</p>
No response from the HyperTerminal interface.	<ul style="list-style-type: none"> The Baud rates of the DVSR xU and PC are different. RS-232 cable is damaged. The serial port of the PC is damaged. RS-232 port of the DVSR is damaged. <p>Please contact your local supplier.</p>
DVSR cannot control the PTZ through the RS-485 port.	<ul style="list-style-type: none"> RS-485 cable is incorrectly connected or is damaged. Check the cable. PTZ parameter error. PTZ settings are incorrect and should be checked. RS-485 port of DVSR is damaged. Please contact your local supplier.
Client software cannot view the DVSR live image.	<ul style="list-style-type: none"> Network error. Please contact your IT manager. DVSR incorrectly configured (for example, incorrect IP, port number, username or PIN, etc). Old version of client software. Please contact your local supplier.

Contacting technical support

For assistance installing, operating, maintaining, and troubleshooting this product, please contact your local supplier.

Our web address is: www.gesecurity.eu









Note: Be ready at the equipment before calling for technical support.

Appendix 1: Specifications

Video compression	MPEG-4AVC (H.264)
Live resolution	PAL: 704 x 576, NTSC: 704 x 480
Playback resolution	QCIF/CIF/2CIF/4CIF
Video input	4/8/16
Video input interface	BNC (Electrical Level: 1.0 Vp-p, resistance: 75 Ω)
Video output	Monitor A: One monitor A multiscreen output, BNC connector, NTSC/EIA or PAL/CCIR compatible VGA: Same display content as monitor A Monitor B: One monitor B multiscreen output, BNC connector, NTSC/EIA or PAL/CCIR compatible
Frame rate	PAL: 0.0625—25FPS, NTSC: 0.0625—30FPS
Stream type	Video/Video&Audio
Max bit rate	32 Kbps-2 Mbps, self-defined
Audio input	4/8/16
Audio input interface	BNC (Linear Electrical Level, Resistance: 1 KΩ)
Audio output	1 channel, BNC (Linear Electrical Level, Resistance: 600 Ω)
Audio compression	Ogg Vorbis
Audio compression rate	16 Kbps
Bi-directional audio	1 channel, BNC (Linear electrical level, resistance: 1 kΩ)
Communication interface	1 RS-232 serial port: RJ45 1 RJ-485 : Screw terminal strip 1 Network port: 10M/100M self-adaptive Ethernet interface 1 e-SATA port 1 USB port
VGA interface	1 VGA interface (max. 1280*1024@60 Hz)
External alarm in	4, 8 or 16 Alarm inputs: Programmable NO/NC
Alarm output	4 Alarm outputs: Form C alarm relay
Power supply	90 to 135 VAC or 180 to 265 VAC, 47 to 63 Hz
Power consumption	20 to 42 W (without HDD)
Operating temperature	-10 to +50°C
Relative humidity	10 to 90%
Size	Standard 450 x 450 x 95 mm
Weight	≤8.5 kg (without HDD)

Note: PAL: 176 x 144 (QCIF), 352 x 288 (CIF), 704 x 288 (2CIF), 704 x 576 (4CIF);
NTSC: 176 x 120 (QCIF), 352 x 240 (CIF), 704 x 240 (2CIF), 704 x 480 (4CIF).

DVSR xU Menu Map

See page 30	 Display <ul style="list-style-type: none"> Language Bus address PIN required Status bar Menu timeout Video standard Video scaler Menu transparency VGA resolution Time & date Multi screen
See page 36	 Cameras <ul style="list-style-type: none"> Title Title position Adjust video Time & date Motion detection Advanced settings Copy to camera
See page 49	 Recording <ul style="list-style-type: none"> Recording mode e-SATA ADM Time & date Motion detection Advanced settings Copy to camera
See page 56	 Network <ul style="list-style-type: none"> IP address Sub net mask Gateway IP DNS Com port HTTP port E-mail notification Advanced settings PPPoE DDNS
See page 63	 Alarms <ul style="list-style-type: none"> Alarm input Alarm output Notification settings
See page 69	 PTZ <ul style="list-style-type: none"> Baud rate Data bits Stop bits Parity Flow control Protocol PTZ address Camera preset Preset tour Shadow tour Copy to camera
See page 76	 User <ul style="list-style-type: none"> Add user Delete user Operational rights
See page 82	 System <ul style="list-style-type: none"> Text insertion RS-232 Factory default Disk tools View log Reboot DVSR System view Shutdown DVSR Acknowledge alarm