TeleEye

RX800 Series

Ultra-high Resolution

Video Recording Server

RX806 / RX812 / RX816

User Guide

Table of Contents

Section 1:   Introduction

TeleEye RX800 Series is a range of 6-, 12- and 16-channel ultra high resolution video recording servers designed for professional video surveillance and event management applications. With its state-of-art video compression engine supporting dual compression
algorithms, TeleEye RX800 series delivers both video streaming and recording performance with a truly "no compromise" approach.

With the high resolution footages recorded, it is equally important to ensure the security of the information. TeleEye Hacker Resistant technology is able to prevent any unauthorised access into the video surveillance systems.

1. Max. resolution: 960x576 (PAL) and 960x480 (NTSC) (33% higher than D1)
2. Real-time recording up to 400fps (PAL) and 480fps (NTSC)
3. Dual compressions: SMAC-M and H.264
4. 4 video streams with independent recording stream
5. Hacker Resistant
6. Excellent video streaming performance via LAN, broadband & mobile network
7. Main (HD/VGA) + Spot (BNC) video outputs
8. Video loop-through
9. Support 4 internal SATA Hard Drives
10. USB Port for fast video extraction
11. Up to 16-channel audio input
12. British Standard BS8418 compliant

RX800

Model	Description
RX806	6-Video, 16-Alarm, Max. Recording: 150 / 180fps, 4 Internal SATA, BS 8418 Compliant, Ultra Hi-Res Video Recording Server
RX812	12-Video, 16-Alarm, Max. Recording: 300 / 360fps, 4 Internal SATA, BS 8418 Compliant, Ultra Hi-Res Video Recording Server
RX816	16-Video, 16-Alarm, Max. Recording: 400 / 480fps, 4 Internal SATA, BS 8418 Compliant, Ultra Hi-Res Video Recording Server

Accessories

Model	Description
RX-KB03	TeleEye RX & DM Keyboard with Joystick
RX-ALM	TeleEye Alarm Break-Out box
LTV-8A / LTV-8B	TeleEye Video Loop through cable
AIC-16	TeleEye Audio input cable

1.1. Functional Features

1. Dual codec operation for recording and streaming

2. Real-time video recording

3. Configurable recording frame rate

4. Supporting up to 4 SATA hard drives

5. USB video extraction

6. Flexible connections: LAN, broadband & mobile network

7. Support both static & dynamic IP

8. IP filtering

9. Mobile video monitoring

10. Triplex operation: simultaneous video monitoring, recording & playback

11. HD video output

12. Multiple login accounts

13. Compliance with BS 8418

14. Sophisticated event management

15. Multi-language OSD

16. Mouse control

1.2. Package Contents

Make sure the following items are included within the package
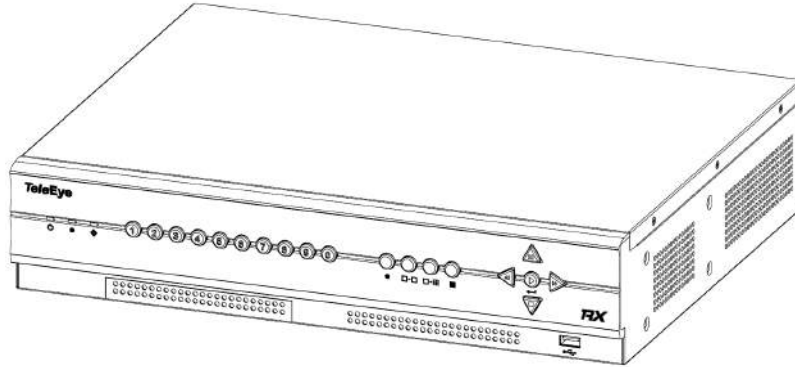
TeleEye RX800 HD Video Recording Server

Item	Description		Item	Description
	Quick start guide			Power adaptor
	Registration code sheet			HDD screws

	HDD recommendation sheet		Straight-through Ethernet cable
	Warranty card		Alarm port connector & alarm port cover
	Software CD		Resistors (for tamper detection)
	Mouse		

1.3. Hardware Feature
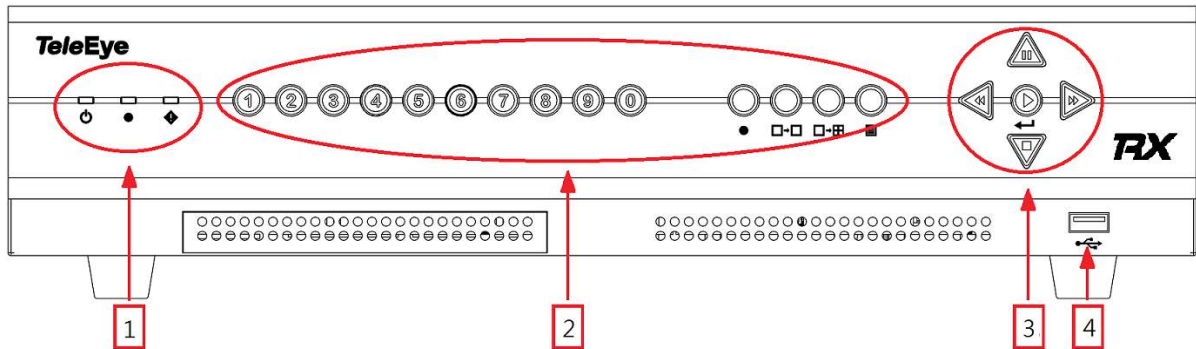
Front View

1. Notification LEDs

LED	Description
⏻	Light up when power on
●	Light up when performing recording
◆	Blink when an event is triggered

2. Main control buttons

Button	Description
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩	Select camera / Enter password
●	Quick button for recording
□→□	Display next camera / Start sequential mode

Button	Description
◎ □→⊞	Change to next screen mode (e.g. Full □ 2x2)
◎ ▤	Open main OSD menu / Back to previous menu

3. Menu control / local playback control buttons

Button	Description	
	Menu mode	**Playback mode**
△ ▯▯	Up	Pause
▽ □	Down	Stop
◁ ◀◀	Left	Rewind
▷ ▶▶	Right	Fast forward
◎ ▷ ↵	Enter	Play

4. Front USB port
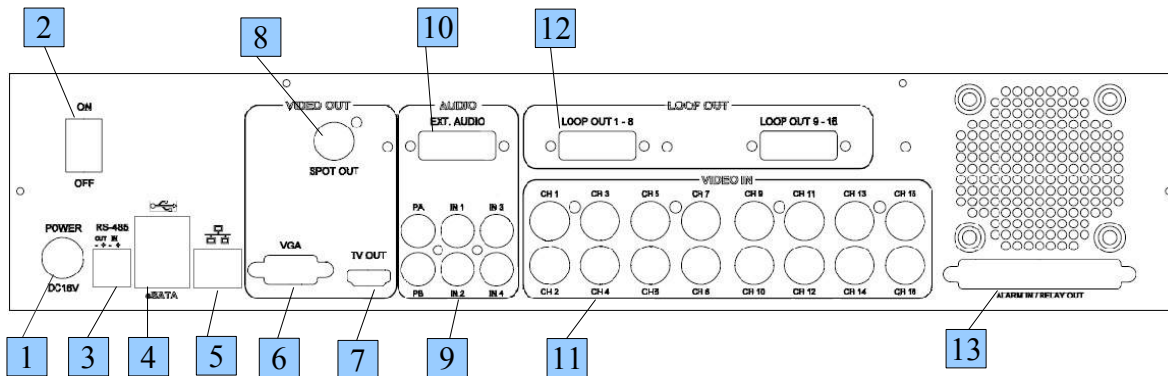
Back View

1. Power input (16V DC)
2. Power switch
3. RS-485 in/out port
4. USB ports
5. Ethernet jack (10/100 Base-T)
6. VGA output
7. HDTV output
8. SPOT video output
9. Audio in/out port, PA
10. External Audio input (require optional cable)
11. Video input ports (BNC)
12. Video loop-through outputs (require optional cable)
13. Alarm/switch port

1.4.　Convention Used in This Manual

[ ]	Menu or buttons in On Screen Display (OSD) menu or software
" "	Option in On Screen Display (OSD) menu or software
☞	Remarks

Section 2: Hard Disk Installation, Formatting and Scanning

2.1. Hard Disk Installation

1. Make sure that the video recording server is turned off.
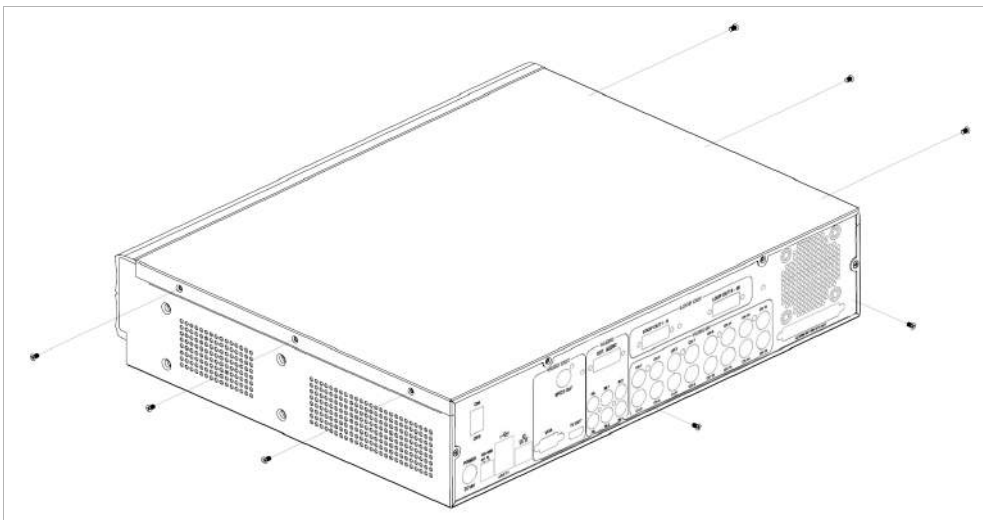
2. Loosen the screws that hold the cover.
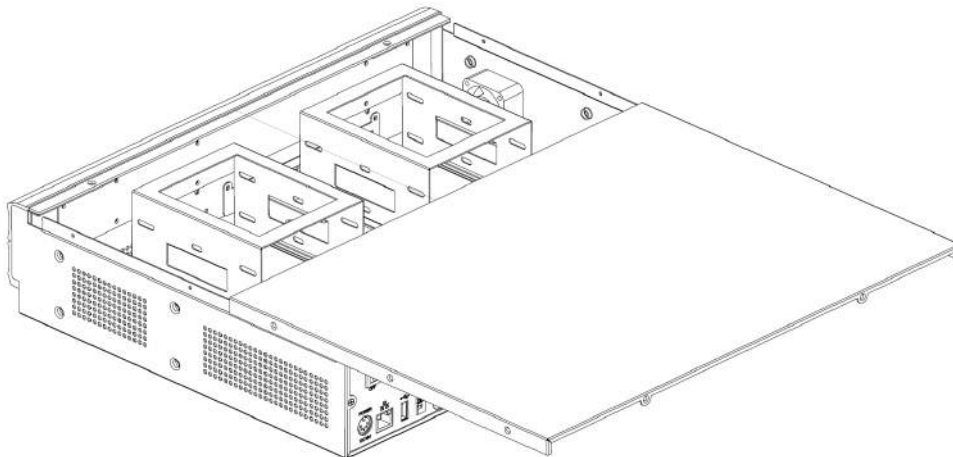
3. Pull the cover off.
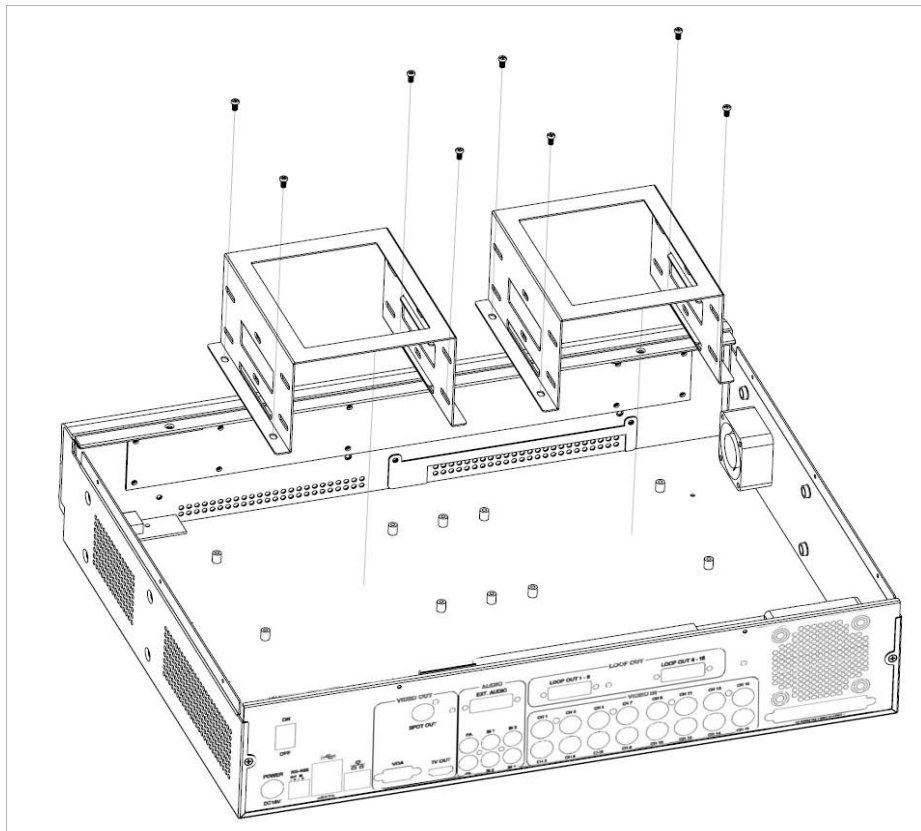
4. Loosen the screws of the hard disk holder and take them out.
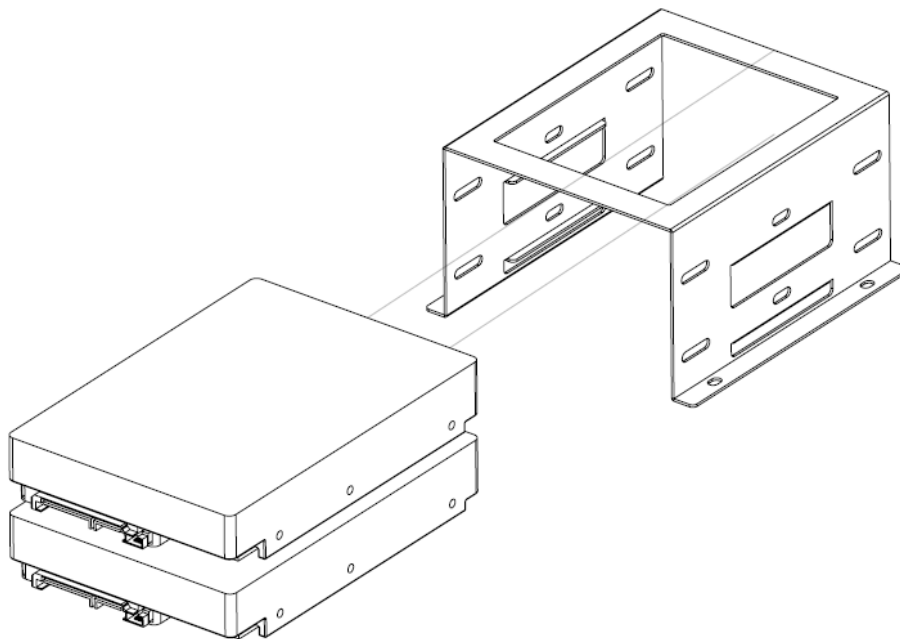
5. Insert HDD into one of the available holders. Maximum 4 HDD can be installed.
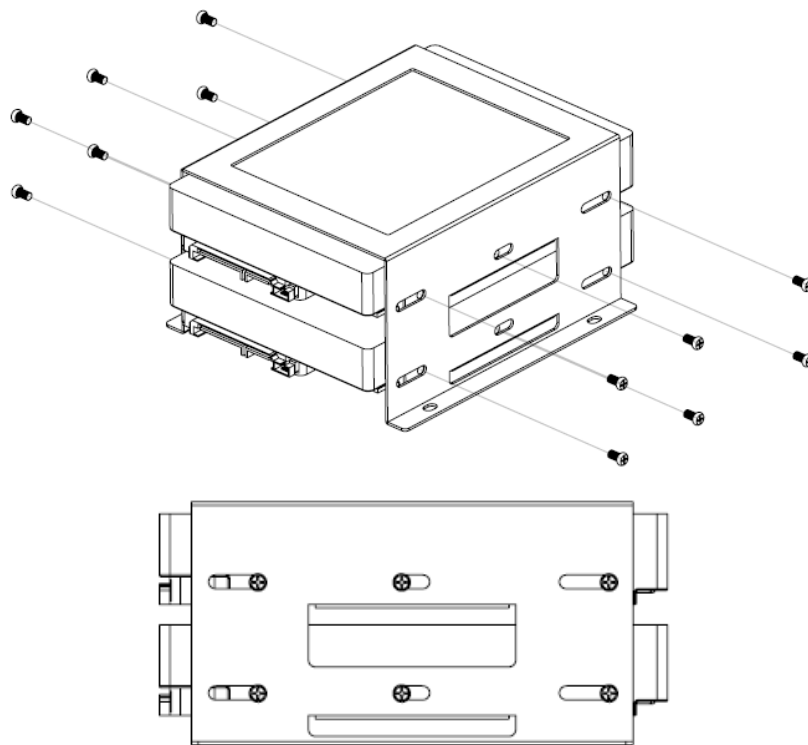
6. Mount the HDD to holder with attached screws.
7. Remount the hard disk holder to TeleEye RX.
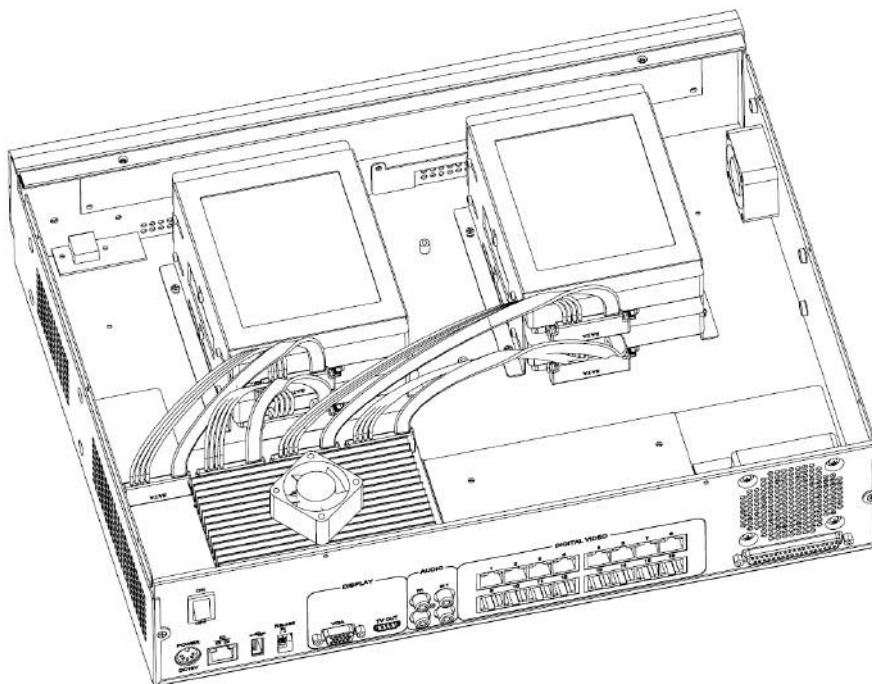
8. Connect the SATA cable to the HDD.

2.2. Format Hard Disk

Formatting is required when the format of an installed hard disk cannot be recognised by the video recording server, most likely a hard disk that has not been used by the video server. Another purpose of disk formatting is to clean up recording space and redeem the file allocation.

An unrecognised hard disk will be formatted automatically after TeleEye RX starts up. Formatting will erase all data inside the disk. Hence make sure that important data has been backed up before performing this function. Once it is reconstructed, it would be readable and writable by the video recording server.

User can also perform disk formatting manually. The function can be found in the OSD menu: [**Main Menu**] → [**HDD/Recording**] → [**Disk Management**]
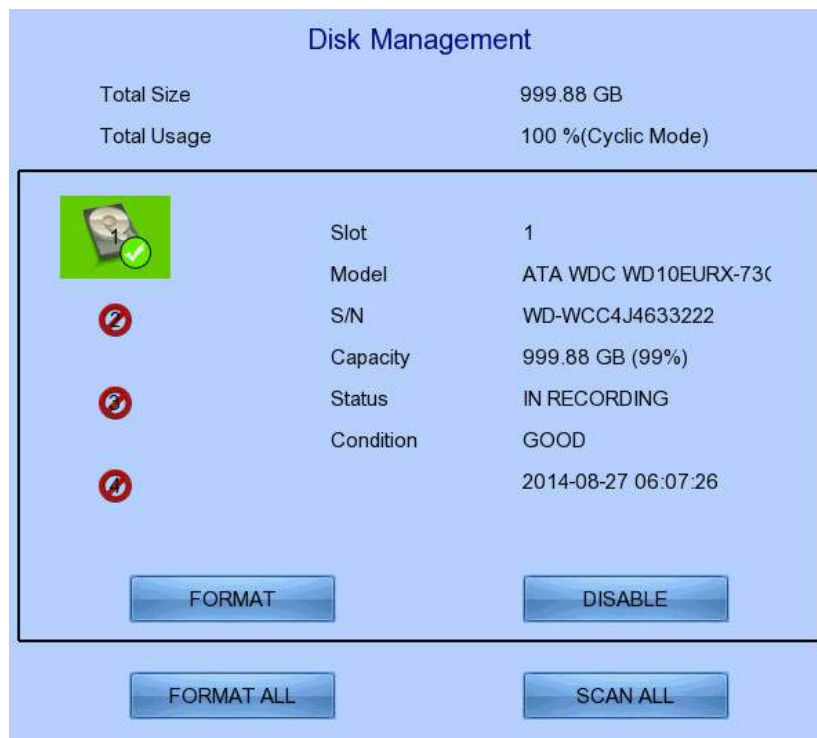
Format: Format the selected hard disk
Format All: Format all installed hard disks

2.3. Hard Scan Hark Disks

Hard disk scanning is a maintenance function similar to the Scan Disk function provided by the operating system of a personal computer. This function is provided in an attempt to rescue the hard disk in case errors are found, and to enhance its performance and reliability.

 The function can be found in the OSD menu: [**Main Menu**] → [**HDD/Recording**] → [**Disk Management**]. Clicking on the [**Scan All**] button will start scanning all installed hard disk.

Section 3:   Setup for Local and Remote Monitoring

3.1. Setup for Local Monitor

Equipment:

- TeleEye RX HD video recording server and its power adaptor

- Cameras and their power adaptors

- Coaxial cable

- VGA / TV monitor

- VGA / HDTV cable

Setup Procedures:
1. Install a hard disk to the TeleEye RX
   ☞ *If there is no hard disk installed, Recording and Playback are not functional*
2. Connect cameras to the video ports of TeleEye RX
3. Connect a monitor to the TV output of TeleEye RX
4. Plug in the power adaptors to TeleEye RX, cameras and monitors.
5. Switch on the power of TeleEye RX. A startup screen will appear on the connected monitor.

6. If all installed hard disks are not in TeleEye RX recognised format, they will be formatted automatically when startup is completed.
7. TeleEye RX is ready for operation. Live video should appear on the monitor. By default, manual recording will be started automatically.

3.2. Setup for LAN Connection

Equipment:

- TeleEye RX HD video recording server and its power adaptor

- Cameras and their power adaptors

- Coaxial cable

- Network switch or router

- PC

PC Requirements:

- CPU: Intel ® Core i3 Processor

- RAM: 2 GB

- HDD: 10 GB free space

- Display: Direct 3D, Nvidia GeForce GT 220 / ATI Radeon HD 5450 or above

- OS: Windows XP, Windows Vista or Windows 7

Other Requirements:

- Java: Sun Microsystems Java 2 runtime Version 1.5.0 or above

- IE: Windows Internet Explorer Version 6 or above

Setup Procedures on RX Side:
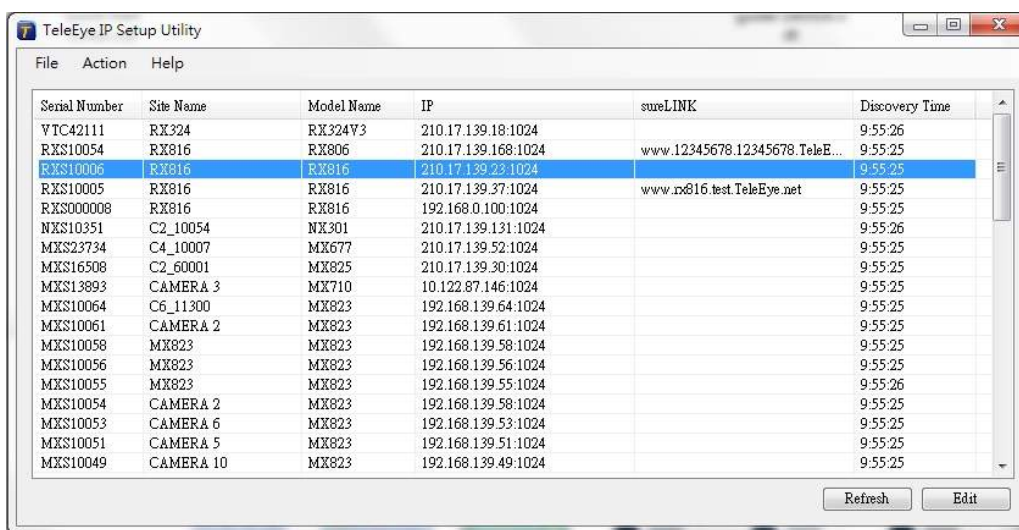
1. Install a hard disk to the TeleEye RX

☞ *If there is no hard disk installed, Recording and Playback are not functional*

2. Connect cameras to the video ports of TeleEye RX

3. Plug in the power adaptors to TeleEye RX and cameras.

4. Connect TeleEye RX to the network switch.

5. Switch on the power switch of TeleEye RX.

6. If all installed hard disks are not in TeleEye RX recognised format, they would be formatted automatically when startup completes.

Setup Procedures on PC Side:

1. Install TeleEye IP Setup Utility. .NET framework is also needed for the operations. Both can be found in the included software CD.

2. Run IP Setup Utility.

3. Find the TeleEye RX according to the serial number provided by the provider.

4. By default, TeleEye RX obtains the IP address, netmask and gateway automatically through DHCP. To assign a static value, deselect the "**Obtain an IP address automatically**" checkbox and enter the corresponding information. The gateway should be the IP address of the router.

☞ *The DNS setting is used for sureLINK, time synchronisation and e-mail notification.*

5. To access the TeleEye RX, double click the row representing the video recording server. A web browser should be opened automatically.

☞ *The first 3 fields of IP address of the PC should be the same as that of TeleEye RX.*

6. Besides accessing through IP Setup Utility, user can also open a web browser and type the IP address plus port number in the format http://IPAddress:PortNumber (e.g.

http://192.168.0.12:1024) or *sure*LINK address in address bar directly.

Enter user name and password and press [**Connect**]. (Default user name and password can be found in the registration code sheet)
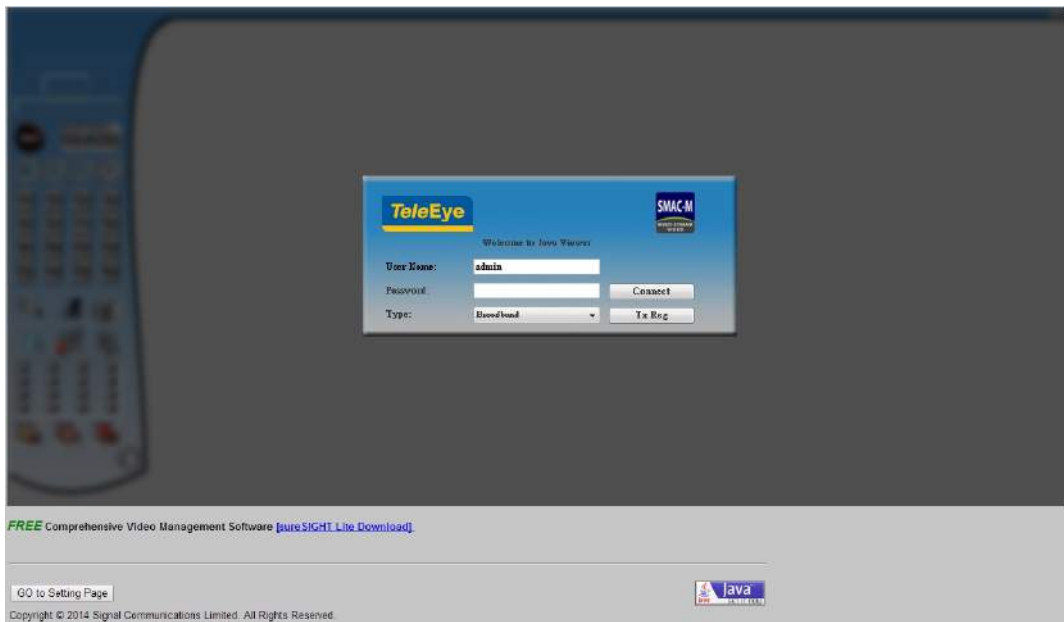
7. Live video is shown after successful connection.

3.3. Setup for Broadband Internet Connection

Equipment:

- TeleEye HD RX video recording server and its power adaptor

- Cameras and their power adaptors

- Coaxial cable

- Network switch or router

- PC

PC Requirements:
- CPU: Intel ® Core i3 Processor
- RAM: 2 GB
- HDD: 10 GB free space
- Display: Direct 3D, Nvidia GeForce GT 220 / ATI Radeon HD 5450 or above
- OS: Windows XP, Windows Vista, Windows 7 or Windows 8

Other Requirements:
- Java: Sun Microsystems Java 2 runtime Version 1.6.0 or above
- IE: Windows Internet Explorer Version 8 or above

Setup Procedures on RX Side:

1. Install a hard disk to the TeleEye RX
   ☞ If there is no hard disk installed, Recording and Playback are not functional

2. Connect cameras to the video ports of TeleEye RX
3. Plug in the power adaptors to TeleEye RX and cameras.
4. Connect TeleEye RX to the network switch.
5. Switch on the power of TeleEye RX.
6. If all installed hard disks are not in TeleEye RX recognised format, they would be formatted automatically when startup completes.

Setup Procedures on PC Side:

1. Configure the network settings of TeleEye RX through PC with LAN connection.

2. Install TeleEye IP Setup Utility. .NET framework is also needed for the operations. Both can be found in the included software CD.

3. Run IP Setup Utility.

4. Find the TeleEye RX according to the serial number provided by the provider.

5. By default, TeleEye RX obtains the IP address, netmask and gateway automatically through DHCP. To assign a static value, deselect the "Obtain an IP address automatically" checkbox and enter the corresponding information. The gateway should be the IP address of the router.

   ☞ The DNS setting is used for sureLINK, time synchronisation and
      e-mail notification.

6. Reconnect the video recording server to the Internet network.

7. Configure other network settings for TeleEye RX and the PC if necessary, such as router port mapping, firewall, etc. Please refer to the manual of the router.

8. Open a web browser and type the IP address plus port number in the format http://IPAddress:PortNumber (e.g. http://192.168.0.12:1024) or sureLINK address in address bar directly.

9. Enter user name and password and press [**Connect**]. (Default user name and password can be found in the registration code sheet)
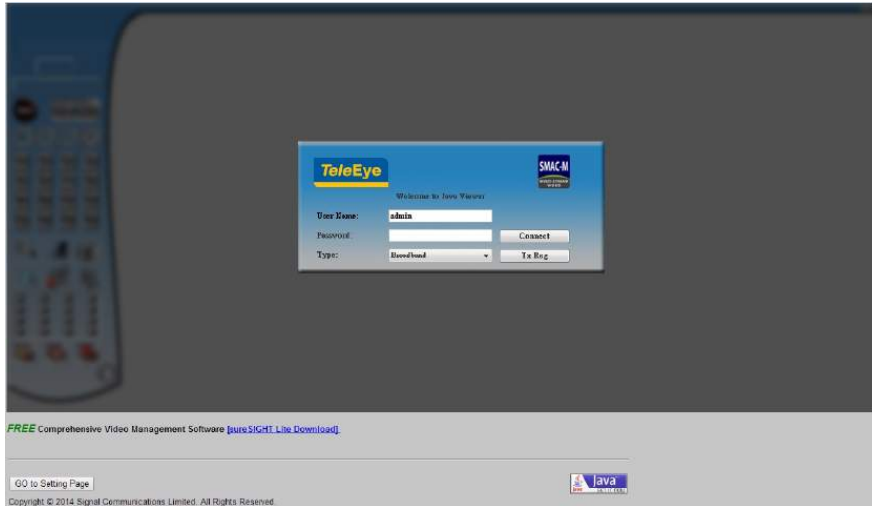
10. Live video is shown after successful connection.

Section 4:   Local Operation

4.1.   Icons Description

When observing video from local monitor, icons may be shown on the screen. Each of the icons has its special meaning. A summary of their meanings can be found in the following table :

Icon	Representation		Icon	Representation
	Tamper event			Arm/disarm control
	Alarm event			Security switch control
	Motion event			Recording
	Video loss event			Playback
	Power failure event			Pause in playback
	Disk usage alert event			Fast Forward in playback
	HDD fault event			Backward in playback
	Audio enabled			Digital /Analogue PTZ control
	PTZ tilt up			PTZ tilt down
	PTZ pan left			PTZ pan right
	PTZ function (only for analogue PTZ)			PTZ command subtract (only for analogue PTZ)
	PTZ command add (only for analogue PTZ)			PTZ command up (only for analogue PTZ)
	PTZ command down (only for analogue PTZ)			OSD object selection
	PTZ command box (only for analogue PTZ)			Disk scanning
	Disk formatting			Recovering recording

4.2. OSD Menu

Most local operations are controlled through the on screen display (OSD) menu. A detail explanation on its operation and structure will be given in this section.

4.2.1. OSD Menu Operation

User can connect a mouse to the USB port or use the control buttons on the front panel to perform different operations.

A.   By Front Panel Buttons

Press button 1 to 9 to select Camera 1 to 9.
Press button 0 first, then press button 0 to 6 to select Camera 10 to 16.
Quick button to change recording to on, off or schedule.

Display next page of cameras (e.g. Cam 2 ➔ Cam 3).
Hold down the button for a few seconds to start sequential mode.
Switch to next screen mode (e.g. Full ➔ 2x2).

Menu button: used to open and close main OSD menu, or navigate backward to previous menu.
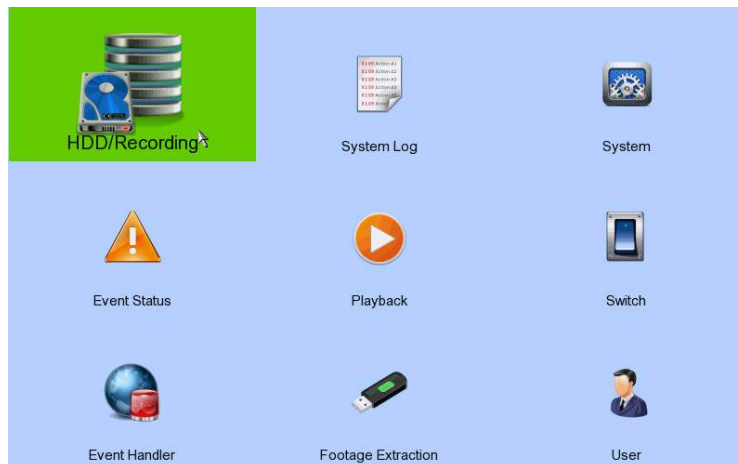
Select a menu item.
☞ *Selected item will be highlighted.*
Select a value for the menu option.

Enter a sub-menu.
Confirm the selection.

B. By Mouse

(Left click)

Enter a sub-menu.

Select a value for menu option.

Double click on a recording log to select playback cameras.

Double click on a system log to perform searching.

Double click on an IP filtering entry to edit.

(Right click)

Used to open and close the OSD menu, or navigate backward to previous menu.

When getting through the OSD, user will see different types of item. Their properties are listed one by one below:

Item	Name	Description
No	Yes/No box:	2 options only
		Click on it to toggle the option
720P	Spin box:	3 or more options available
		Click on the arrows to choose another option
5 MINS	Drop down box:	Multiple options available
		Click on it to show all available options
		Click on an option to select it
11:00	Edit box:	Require user to enter a value
		Click on it to prompt a virtual keypad for inputting
...	Link:	Click on it to enter a sub-menu
☐	Tick box	Click on it to toggle the option

4.2.2.OSD Menu Structure

Local operations are performed through the OSD Menu. The menu architecture and brief description on each option will be given in this section.

[**Screen Selection**]

This menu is for mouse operations and can only be opened by right clicking the mouse.

|	
Camera Selection Panel	Show currently displaying cameras
	Click to display selected camera in full screen
All	Display all cameras on screen
Mode	Change display mode
Next	Change next page of videos in same display mode
Sequential	Start sequential mode
Switch 1 – Switch 4	Toggle the status of the switch
Playback	Display recording log
Recording	Change recording to on, off or schedule
OSD Menu	Open main OSD menu

[**Screen Selection**] → [**Recording**]

Recording	Quick menu for selecting recording mode
	- Off: Disable recording
	- On: Enable recording of all cameras
	- Schedule: Enable schedule recording

[**Main Menu**]
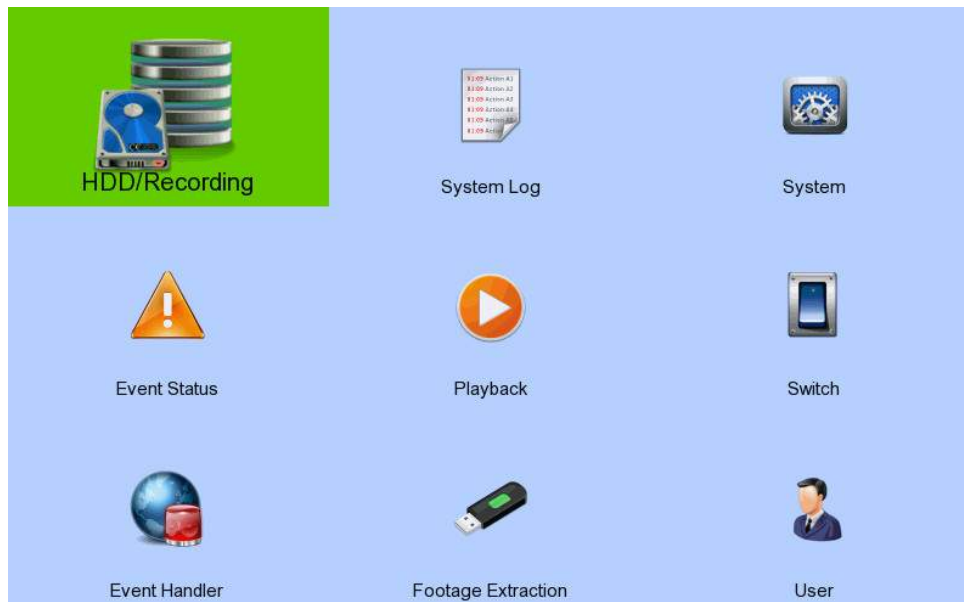
HDD/Recording	Change recording and hard disk settings
System Log	Display event, connection, operation and setting log
System	View server information
	Change system settings (e.g. IP, date time, language)
Event Status	Display event status
	Clear event status
Playback	Display recording log
	Start video playback
Switch	Control the switches
	Change switch settings
Event Handler	Change event settings
Footage Extraction	Extract recorded video to USB flash device
User	Change security mode
	Change user settings

[**Main Menu**] → [**HDD/Recording**]
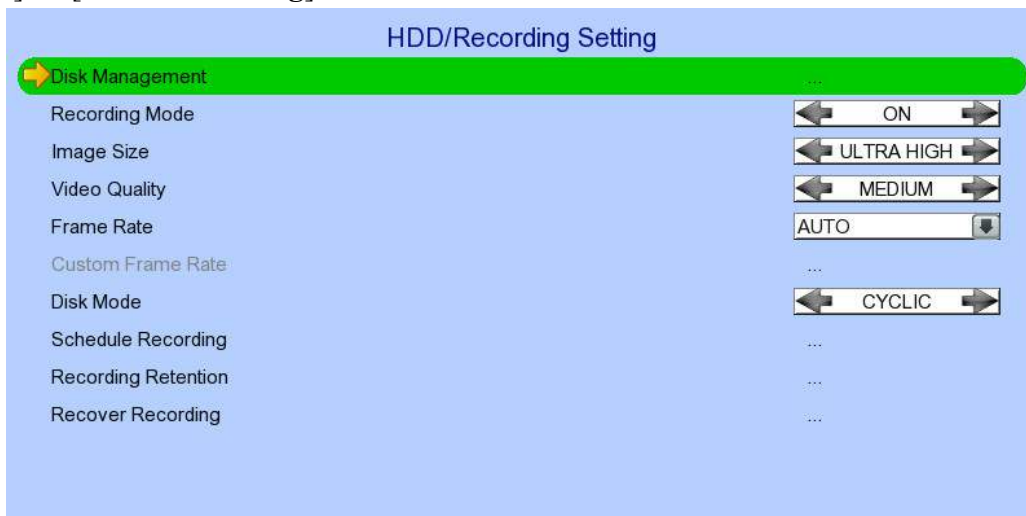
Disk Management   View hard disk information
             Format, scan or turn on/off disk

Recording Mode   Select recording mode
- Off: Disable recording
- On: Enable recording of all cameras
- Schedule: Enable schedule recording

Image Size   Set recording resolution
- Ultra High : 960 x 576
- QUAD: 320 x 240

Video Quality   Set video quality

Frame Rate   Set recording frame rate, applied to all cameras
- Auto: Record at highest achievable frame rate
- X fps: Record at X frames per second
- Custom: Enable custom frame rate for individual camera

Custom Frame Rate   Set recording frame rate of individual cameras

Disk Mode   Set disk mode
- Cyclic: Remove oldest data when hard disk full
- Fixed: Stop recording when hard disk full

Schedule Recording   View or change recording schedules

Recording Retention   Set recording retention settings

Recover Recording   Recover damaged recorded video

[**Main Menu**] → [**HDD/Recording**] → [**Disk Management**]

Format	Format the selected hard disk *
Enable/ Disable	Enable hard disk for recording purpose *
Scan All	Scan all installed hard disks *
Format All	Format all installed hard disks *

(* local password of current user required)

[**Main Menu**] → [**HDD/Recording**] → [**Schedule Recording**]

Add	Add a new recording schedule
Edit	Edit the selected schedule
Delete	Delete selected schedule
Delete Day	Delete all schedules on the same day as the selected schedule

[**Main Menu**] → [**HDD/Recording**] → [**Schedule Recording**] → [**Add**]

Weekdays	Select the weekdays to apply the schedule
Start Time	Set the start time of the schedule
End Time	Set the end time of the schedule
Frame Rate	Set recording frame rate of the schedule
	(not applicable for Custom frame rate)
Recording Type	Type of recording schedule

- Normal: Record when within schedule
- Motion: Record when motion detected and within schedule
- Custom: Record based on individual camera setting

Camera	Select the cameras to apply the schedule
ADD	Confirm add the schedule setting
Motion Setting	Set motion detection settings

[**Main Menu**] → [**HDD/Recording**] → [**Schedule Recording**] → [**EDIT**]

Most settings are the same as [**Add**] menu.

| EDIT | Confirm EDIT the schedule setting |

[**Main Menu**] → [**HDD/Recording**] → [**Recording Retention**]

Enable   Enable / disable recording retention
Retention Period   Remove recorded video after selected days
Schedule Time for Retention Remove recorded video at selected time

[**Main Menu**] → [**HDD/Recording**] → [**Recover Recording**]

 Press "MENU" button can hide or display progress bar during recovering.

OK   Start recover (local password of current user is required)
CANCEL Back to previous page

[**Main Menu**] → [**System Log**]
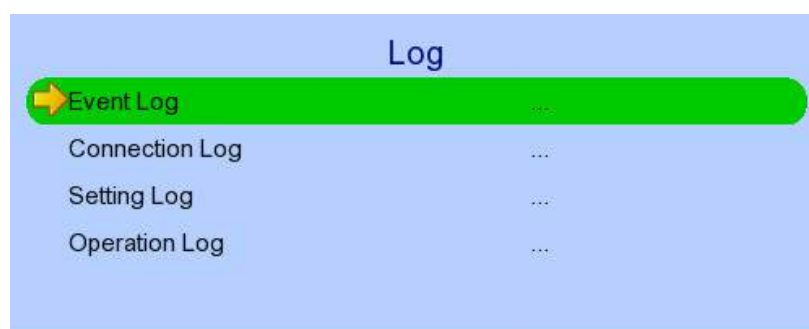
Event Log   Display event log
Connection Log   Display remote connection log
Setting Log   Display setting log
Operation Log   Display operation log

[Main Menu] → [System Log] → [Event Log]

Date/Time		Show event date and time
Ch		Show event channel number
Status		Show event status
	- Trigger:	Event triggered
	- Reset:	Event reset
	- Tamper:	Event tampered
	- Arm:	System armed
	- Disarm:	System disarmed
	- Secu Switch On:	Security switch turned on
	- Secu Switch Off:	Security switch turned off
	- Entry:	Event trigger within entry delay
	- Exit:	Event trigger within exit delay
Action		Show event associated actions
← →		Show previous / next page of log
(icons)		Show different types of event log

[**Main Menu**] → [**System Log**] → [**Connection Log**]

Date/Time	Show connection date and time
Access	Show IP of the remote host
Status	Show connection status
Remark	Show type of connection

- Dial in: Triggered by user
- Dial back: Triggered by dialback action

User	Show the user connected to video server through remote software
← →	Show previous / next page of log

[**Main Menu**] → [**System Log**] → [**Setting Log**]

Date/Time	Setting	CH	Remark	Access	User
2014-08-26 12:27:03	DNS	2	8.8.8.8	Local	POWER ON RIGHT
2014-08-26 12:27:03	DNS	1	8.8.8.8	Local	POWER ON RIGHT
2014-08-26 12:27:03	Gateway	-	210.17.139.78	Local	POWER ON RIGHT
2014-08-26 12:27:03	IP Address	-	210.17.139.23	Local	POWER ON RIGHT
2014-08-26 12:25:18	DNS	2	8.8.8.8	Local	POWER ON RIGHT
2014-08-26 12:25:18	DNS	1	8.8.8.8	Local	POWER ON RIGHT
2014-08-26 12:25:18	Gateway	-	210.17.139.78	Local	POWER ON RIGHT
2014-08-26 12:25:18	IP Address	-	210.17.139.23	Local	POWER ON RIGHT
2014-08-26 12:25:13	DNS	2	202.14.67.4	Local	POWER ON RIGHT
2014-08-26 12:25:13	DNS	1	202.14.67.14	Local	POWER ON RIGHT

Date/Time	Show date and time of the change
Setting	Show setting that is changed
Ch	Show channel number of setting if available
Remark	Show new value of the setting
Access	Show IP of the remote host or "Local" for local host
User	Show the user performed the change
	Show previous / next page of log

[**Main Menu**] → [**System Log**] → [**Operation Log**]

Date/Time	Operation	Access	User
2014-08-27 16:02:51	Remote Logout	210.17.139.153	ADMIN
2014-08-27 14:07:58	Remote Login	210.17.139.153	ADMIN
2014-08-27 14:07:29	System Startup	Local	POWER ON RIGHT
2014-08-27 14:06:29	Power Off	Local	-
2014-08-26 12:27:13	Remote Login	210.17.139.153	ADMIN
2014-08-26 12:27:03	Remote Logout	210.17.139.153	ADMIN
2014-08-26 12:26:14	Remote Login	210.17.139.153	ADMIN
2014-08-26 12:25:58	System Startup	Local	POWER ON RIGHT
2014-08-26 12:25:18	System Restarted	Local	POWER ON RIGHT
2014-08-26 12:25:18	Restore Factory	Local	POWER ON RIGHT

Date/Time	Show date and time of the operation
Operation	Show operation that is done
Access	Show IP of the remote host or "Local" for local host
User	Show the user performed the operation
	Show previous / next page of log

[Main Menu] → [System Log] → Any Log → [Search Log]

Press enter or double click on any log entry to enter [**Search Log**] menu.

Date	Set the search date
Time	Set the search time
Search	Search for log closest to the date and time

[Main Menu] → [System Log] → [Event Log] → [Log Option]

If an event log entry is associated with the recording action, pressing enter or double clicking will enter [**Log Option**] menu.

	Enter [**Search Log**] menu
	Enter [**Recording Log**] menu with date and time of event log

[**Main Menu**] → [**System**]
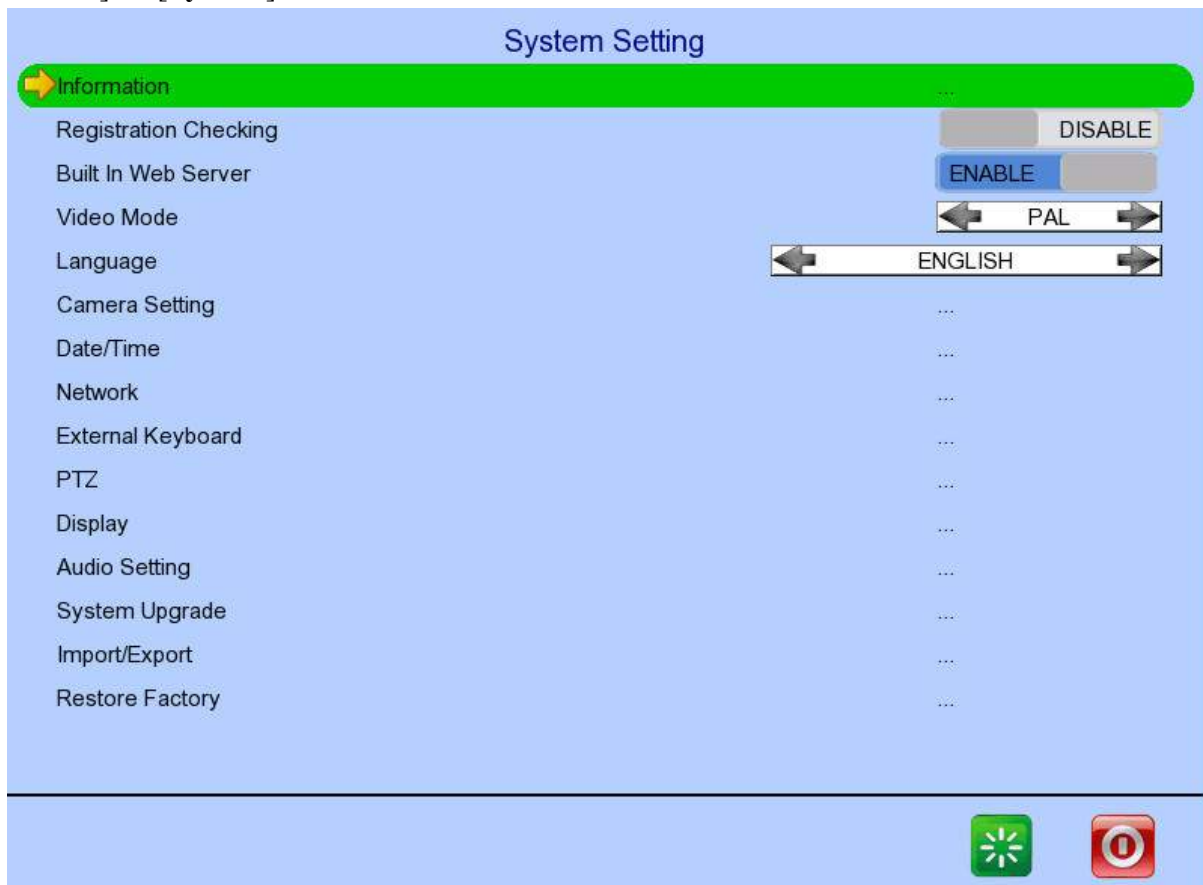
Information	Display general information of the video recording server
Registration Checking	Enable / disable remote registration check
Built In Web Server	Enable / disable built in web server
Language	Set display language
Camera Setting	Change camera settings
Date Time	Change date and time settings
Network	Change connection, throughput and 3G modem settings
External Keyboard	Set external keyboard settings
PTZ	Set PTZ arguments
Display	Change local monitoring and audio settings
Audio Setting	Set audio input and output
Lock Keys	Change key lock settings
System Upgrade	Upgrade firmware from USB device
Import Export	Import or export setting files
Restore Factory	Restore default settings

[**Main Menu**] → [**System**] → [**Information**]

Server Name	Display name of the video recording server
Model Name	Display model of the video recording server
Serial Number	Display serial number of the video recording server
Firmware Version	Display firmware version of the video recording server
CPLD Version	Display CPLD version
IP	Display IP address of the video recording server
Port	Display port number of the video recording server
Subnet	Display subnet mask of the video recording server
Gateway	Display gateway of the video recording server
Primary DNS	Display primary DNS of the video recording server
Secondary DNS	Display secondary DNS of the video recording server

[Main Menu] → [System] → [Date/Time]

Time Synchronisation Enable	Enable / disable time synchronisation
Time Zone	Set the time zone
Country	Select a country
Date	Set system date (Time sync disabled only)
Time	Set system time (Time sync disabled only)
CHANGE TIME	Save the time settings (Time sync disabled only)
Primary Time Server	Set the primary time server (Time sync enabled only)
Secondary Time Server	Set the secondary time server (Time sync enabled only)
Synchronise Time	Perform time synchronisation (Time sync enabled only)

[**Main Menu**] → [**System**] → [**Network**]

Auto IP	Enable / disable auto IP from DHCP
IP Address	Set IP address of the video recording server
Port	Set port number of the video recording server
Subnet	Set subnet mask of the video recording server
Gateway Enable	Enable / disable the gateway
Gateway	Set gateway of the video recording server
Auto DNS	Enable / disable auto DNS
Primary DNS	Set primary DNS of the video recording server
Secondary DNS	Set secondary DNS of the video recording server
LAN Stream Throughput	Set the data rate of LAN connection
Broadband Stream Throughput	Set the data rate of broadband connection
Narrowband Stream Throughput	Set the data rate of narrowband connection
Mobile Stream Throughput	Set the data rate of mobile connection
sureLINK Setting	Change sureLINK settings
IP Filtering	Change IP filtering settings
3G USB Modem	Change 3G modem settings

[**Main Menu**] → [**System**] → [**Network**] → [**sureLINK Setting**]

Enable	Enable / disable sureLINK function
sureLINK Address	Set the sureLINK address of video recording server
Refresh Period	Set the sureLINK refresh rate

[**Main Menu**] → [**System**] → [**Network**] → [**IP Filtering**]
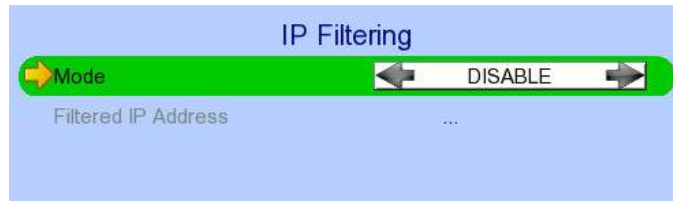
Mode	Set the IP filtering mode
	- Disable: Disable IP filtering
	- Allow: Only allow selected IP address to connect
	- Deny: Disallow selected IP address to connect
Filtered IP Address	Set the IP range to be filtered

[**Main Menu**] → [**System**] → [**Network**] → [**IP Filtering**] → [**Filtered IP Address**]

No.	Show the IP filtering entry number
Start IP Address	Show starting IP of the filtered IP range
End IP Address	Show ending IP of the filtered IP range
Add	Add an IP filtering entry
Delete	Delete the selected IP filtering entry
Delete All	Delete all IP filtering entries
← →	Show previous / next page of filtered IP address

[**Main Menu**] → [**System**] → [**Network**] → [**IP Filtering**] → [**Filtered IP Address**]
□ [**Add**]

Start IP Address	Set starting IP to be filtered
End IP Address	Set ending IP to be filtered
Add	Add the filter entry

[**Main Menu**] → [**System**] → [**Network Setting**] → [**IP Filtering**] → [**Filtered IP Address**]
□ [**Edit IP Filter**]

Press enter or double click on an existing entry to enter [**Edit IP Filter**] menu.

Start IP Address	Change starting IP of the filtering range
End IP Address	Change ending IP of the filtered range
Edit	Edit the filter entry

[Main Menu] → [System] → [Network] → [3G USB Modem]

Manufacturer	Manufacturer name
Model	Model
Revision	Firmware version
Operator	3G network operator
Signal Strength	3G network signal strength from 0 to 100
IP Address	3G network IP
Driver Version	Modem driver version
Enable	Enable/ disable 3G modem
Dialup By	Set dialup mode
	- SMS EVENT: Dialup triggered by sms message
	- STARTUP: Dialup after GX startup
Active Profile	Set profile for 3G dialup
Profile Setting	Change profiles settings
Dialup Test	Start dialup test
UPGRADE DRIVER	Upgrade 3G modem driver from USB device

[**Main Menu**] → [**System**] → [**Network**] → [**3G USB Modem**] → [**Profile Setting**]

Access Point Name	Dialup Access Point Name
Dial Number	Dialup Number
User Name	3G network login user name
Password	3G network login password

[**Main Menu**] → [**System**] → [**External Keyboard**]

Support External Keyboard	Display support of external keyboard
Server ID	Set DVR id for PTZ control
Mode	Select to set PTZ or server mode

[**Main Menu**] → [**System**] → [**Camera Setting**]

Camera	Select a camera
Installed	Enable / disable the video channel
Name	Change the name of camera
Brightness	Set video brightness
Contrast	Set video contrast
Saturation	Set video saturation
Sharpness	Set the sharpness to make video more sharp
Undo	Undo current change

[[**Main Menu**] → [**System**] → [**PTZ**]

Camera	Selected video channel
Pan Speed	Set pan speed
Tit Speed	Set tilt speed
Patrol Speed	Set patrol speed
Dwell Time	Set dwell time for patrol

[**Main Menu**] → [**System**] → [**Display**]
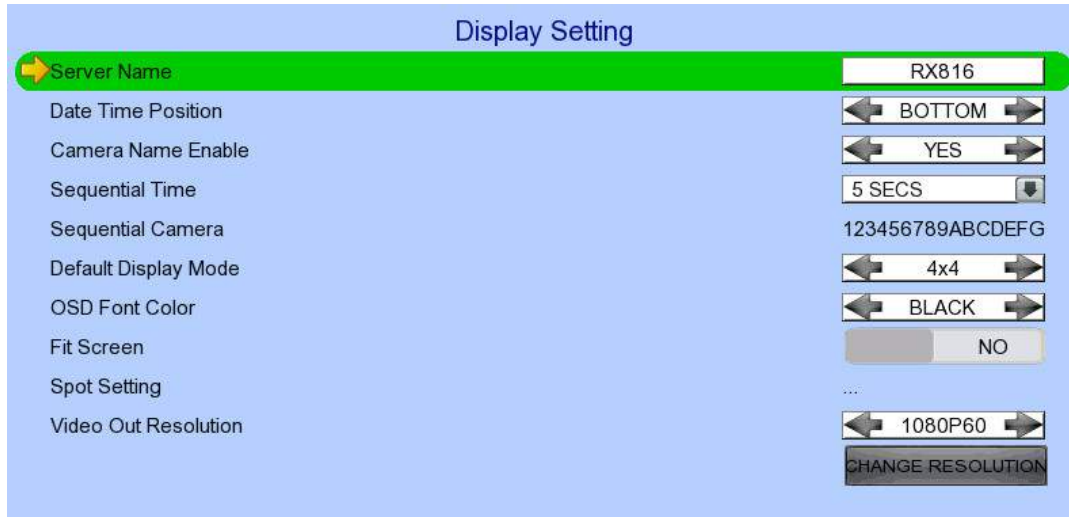
Server Name	Set name of video server
Date Time Position	Set the position for displaying system time
Camera Name Enable	Display / hide camera name
Sequential Time	Set the switch time between cameras in sequential mode
Sequential Camera	Choose cameras displayed in full screen sequential mode
Default Display Mode	Set the default display mode
OSD Font Color	Set the font color of OSD items
Fit Screen	Set to fit screen or keep aspect ratio
Video Out Resolution	Set the output display resolution
Change Resolution	Confirm the change in output resolution
Display Refresh	Refresh the display in case something goes wrong

[**Main Menu**] → [**System**] → [**Audio Setting**]
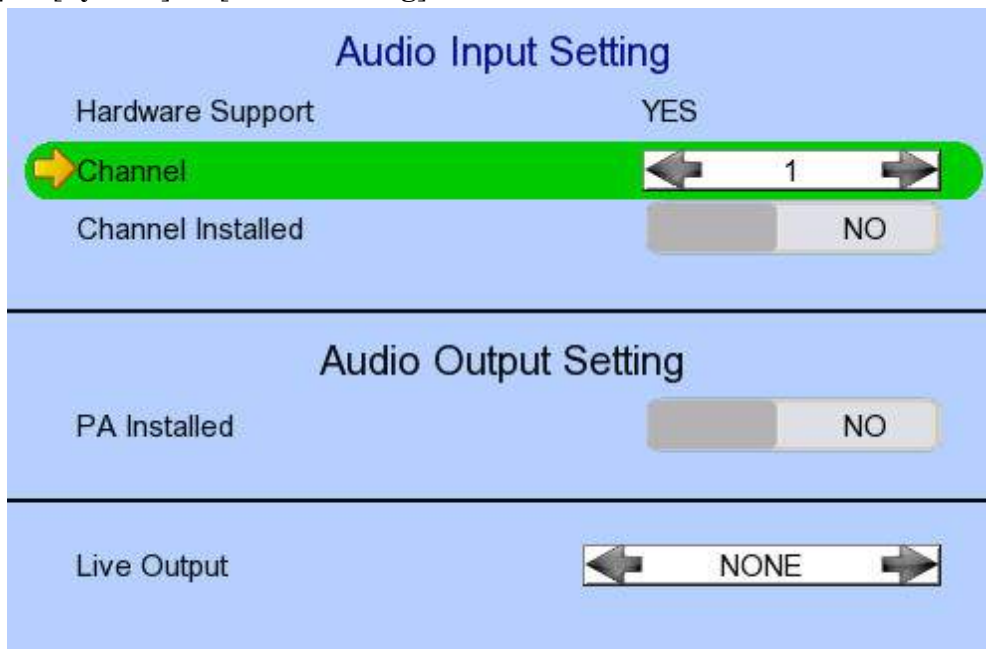
Hardware Support	Display audio feature is supported by video server
Channel	Set input audio channel
Channel Installed	Enable /disable audio selected input channel
PA Channel	Set PA channel
PA Installed	Enable /disable PA channel
Live Output	Enable /disable audio live output channel

[**Main Menu**] → [**System**] → [**System Upgrade**]

Progress Bar	Display the upgrade progress
Upgrade	Upgrade the firmware from USB flash device

[**Main Menu**] → [**System**] → [**Import Export**]

Import	Import settings from USB flash device
Export	Export settings to USB flash device

[Main Menu] → **[System]** → **[Import Export]** → **[Export]**

Video	Export camera settings if selected
Recording	Export recording settings if selected
Switch	Export switch settings if selected
Date/Time	Export date/time settings if selected
Connection	Export network settings if selected
Event Handler	Export event settings if selected
E-mail/SMS/Dialback	Export e-mail, SMS and dialback settings if selected
Server	Export server settings if selected
OSD	Export OSD settings if selected
Select/Deselect All	Select / deselect all settings
Export	Export the selected settings to USB flash device

[**Main Menu**] → [**Event Status**]
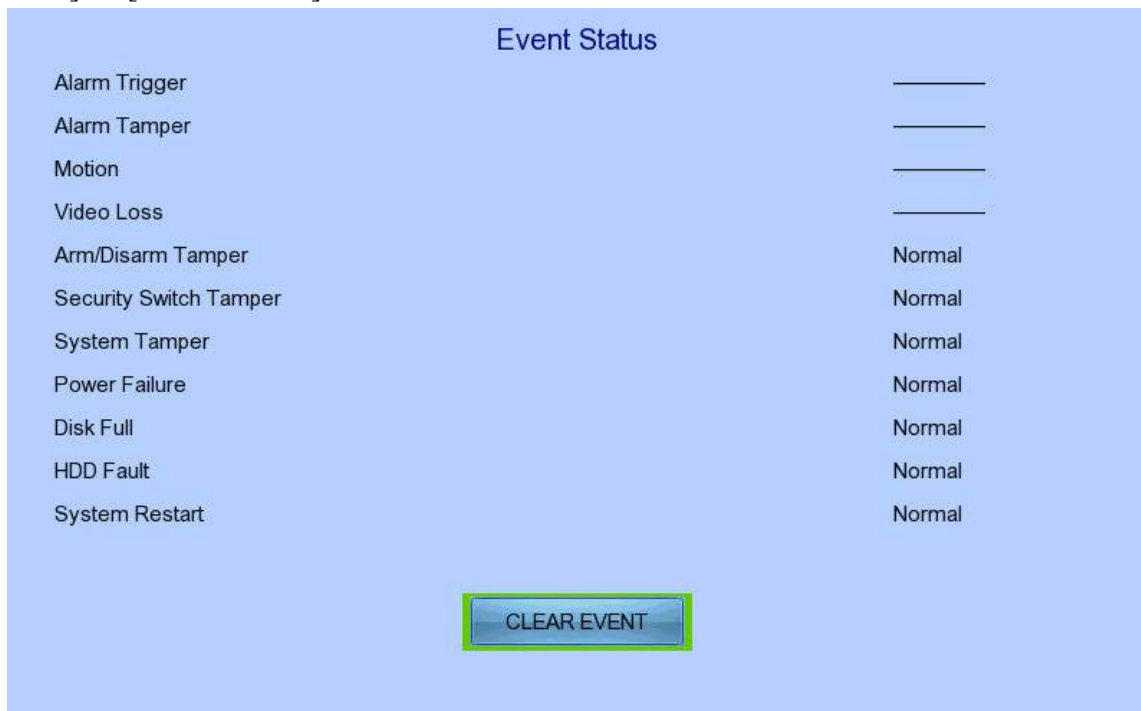
Alarm Trigger	Show alarm trigger status
Alarm Tamper	Show alarm tamper status
Motion	Show motion status
Video Loss	Show video loss status
Arm/Disarm Tamper	Show arm/disarm tamper status
Security Switch Tamper	Show security switch tamper status
System Tamper	Show system tamper status
Power Failure	Show power failure input status
Disk Full	Show hard disk usage status
HDD Fault	Show hard disk available status
System Restart	Show system restart status
Clear Event	Clear event that has already reset

[**Main Menu**] → [**Playback**]
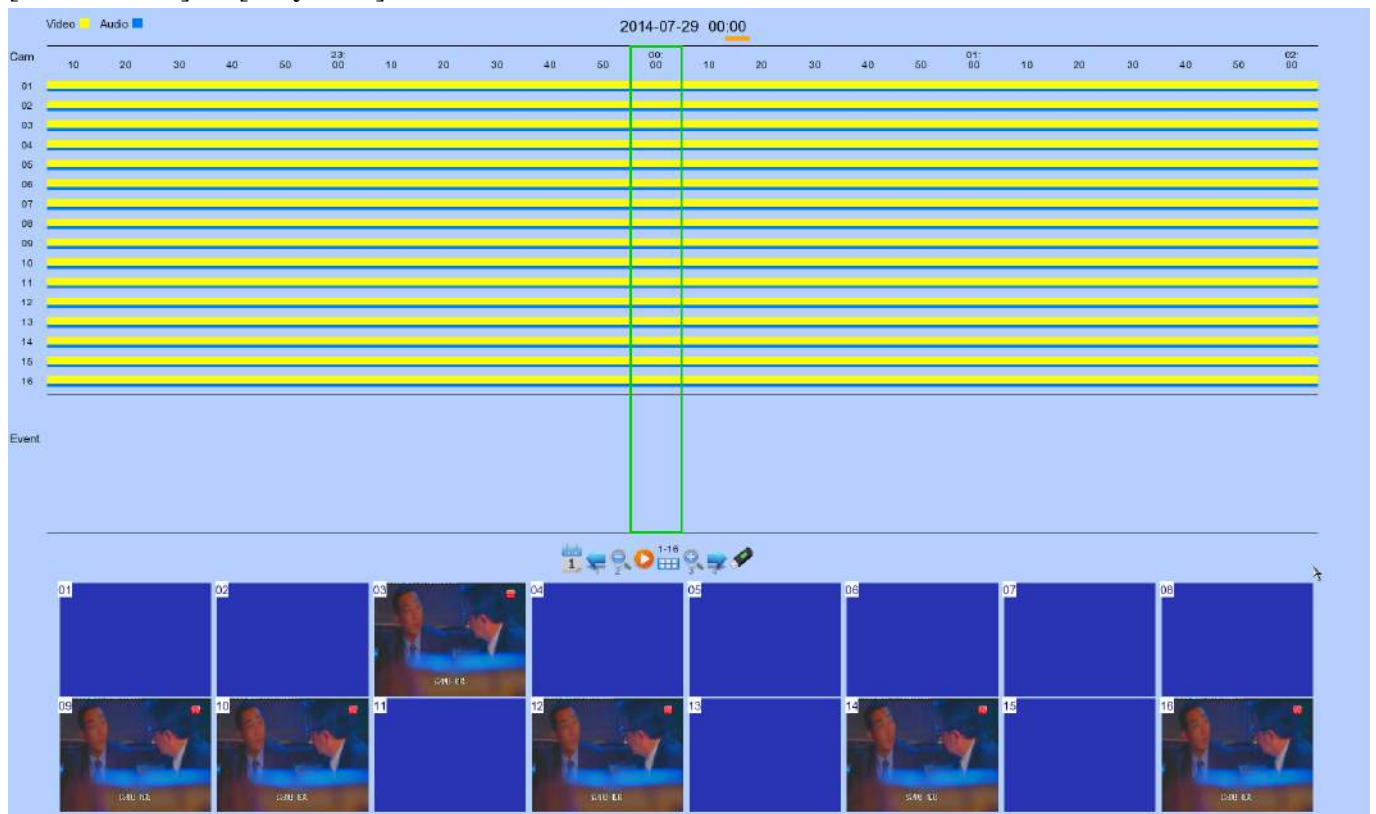
Date	Show date of recording log
Time	Show time of recording log
1, 2, ... 16	Show cameras that performed recording in red bars
Event Select	Display detail of the selected event
← →	Show previous / next page of recording log
⊕	Display recording log in smaller time scale
⊖	Display recording log in bigger time scale
📅	Search recording log by date and time
🖊	Extract video from selected time slot
▦	Set Spot Search View

[**Main Menu**] → [**Playback**] → [**Playback Search**]
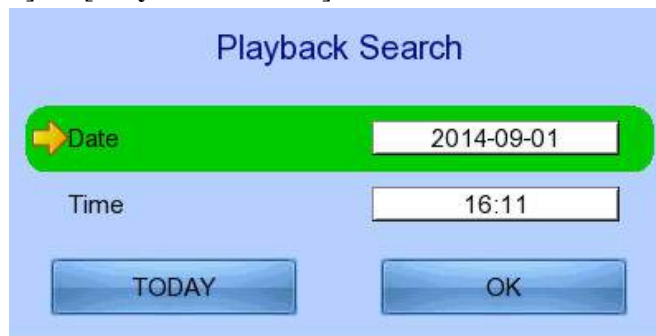
Date	Set the search date
Time	Set the search time
Today	Set date and time to current time
OK	Search for log closest to the date and time

[**Main Menu**] → [**Switch**]

Switch 1 – Switch 4	Toggle the status of the switch
Switch Setting	Change switch settings

[**Main Menu**] → [**Switch**] → [**Switch Setting**]

ID	Select switch X to edit
Switch X Name	Change the name of switch X
Switch X Type	Change the type of switch X
	- Latching: Turn on for a period of time
	- Push button: Turn off 1 second after it is turned on
Switch X Normal State	Change the normal state of switch X
	- N.O.: Normal open
	- N.C.: Normal close
Action Delay	Action setting - set the time between turning off and on
Latch Duration	Action setting - set the time for turning on the switch

[**Main Menu**] → [**Event Handler**]
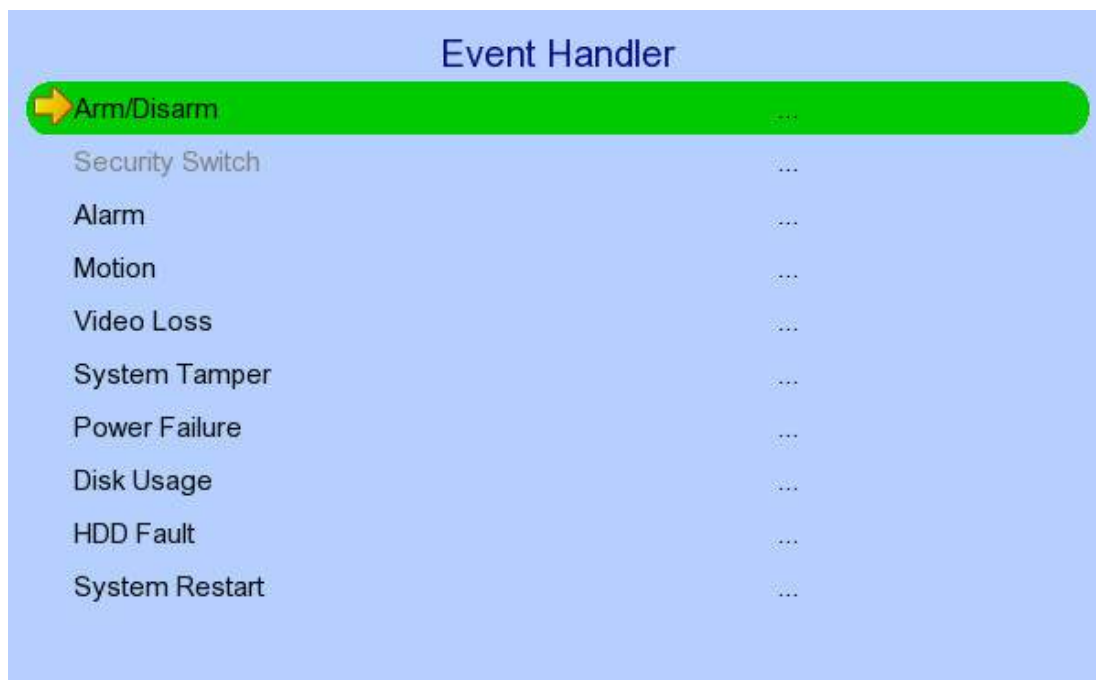
Arm/Disarm	Change arm/disarm settings
Security Switch	Change security switch settings
	(Arm/Disarm enabled with Hardware Arm mode only)
Alarm	Change individual alarm settings
Motion	Change motion detection settings
Video Loss	Change video loss event settings
System Tamper	Change system tamper event settings
Power Failure	Change power failure event settings
Disk Usage	Change disk usage warning event settings
HDD Fault	Change HDD fault event settings
System Restart	Change system restart event settings

[**Main Menu**] → [**Event Handler**] → [**Arm/Disarm**]

Enable	Enable / disable the arm/disarm control	
Mode	Select the arm/disarm mode	
Arm State	Select circuit open/close as system armed	(Hardware Arm only)
Tamper Type	Set the tamper detection type	(Hardware Arm only)
Tamper Action	Set actions taken when arm input tampered	(Hardware Arm only)
Associate Switch	Associate switch 1 to arm/disarm control status	
Schedule Arm/Disarm	Enable / disable schedule arm/disarm	(Schedule Arm only)
Normal Arm Schedule	Set weekly arm/disarm schedule	(Schedule Arm only)
Holiday Arm Schedule	Set holiday arm/disarm schedule	(Schedule Arm only)

[**Main Menu**] → [**Event Handler**] → [**Arm/Disarm**] → [**Normal Arm Schedule**]

No.	Show the schedule number
Start Time	Show the start time of system armed
End Time	Show the end time of system armed
Weekdays	Show the weekdays the schedule applied to
Add	Add a normal arm schedule
Delete	Delete the selected normal arm schedule
⬅ ➡	Show previous / next page of schedules

[**Main Menu**] → [**Event Handler**] → [**Arm/Disarm**] → [**Normal Arm Schedule**] → [**Add**]

Weekdays	Set the weekdays the new schedule applied to
Start Time	Set the start time of new schedule
End Time	Set the end time of new schedule
Add	Add the new normal arm schedule

[Main Menu] → [Event Handler] → [Arm/Disarm] → [Holiday Arm Schedule]

Holiday Arm Schedule

No.	Start Date	End Date	Start Time	End Time
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

ADD   DELETE

No.	Show the schedule number
Start Date	Show the start date of schedule
End Date	Show the end date of schedule
Start Time	Show the start time of system armed
End Time	Show the end time of system armed
Add	Add a holiday arm schedule
Delete	Delete the selected holiday arm schedule
← →	Show previous / next page of schedules

[Main Menu] → [Event Handler] → [Arm/Disarm] → [Holiday Arm Schedule] → [Add]

Add Holiday Arm Schedule

Start Date	2014-08-27
End Date	2014-08-27
Start Time(MIN 00:00)	00:00
End Time(Max 24:00)	00:01

ADD

Start Date	Set the start date of new schedule
End Date	Set the end date of new schedule
Start Time	Set the start time of new schedule
End Time	Set the end time of new schedule
Add	Add the new holiday arm schedule

[**Main Menu**] → [**Event Handler**] → [**Security Switch**]

Enable	Enable / disable the security switch
On State	Select circuit open/close as security switch on
Tamper Type	Set the tamper detection type
Associate Switch	Associate switch 2 to security switch status
Tamper Action	Set actions taken when security switch is tampered

[**Main Menu**] → [**Event Handler**] → [**Alarm**]
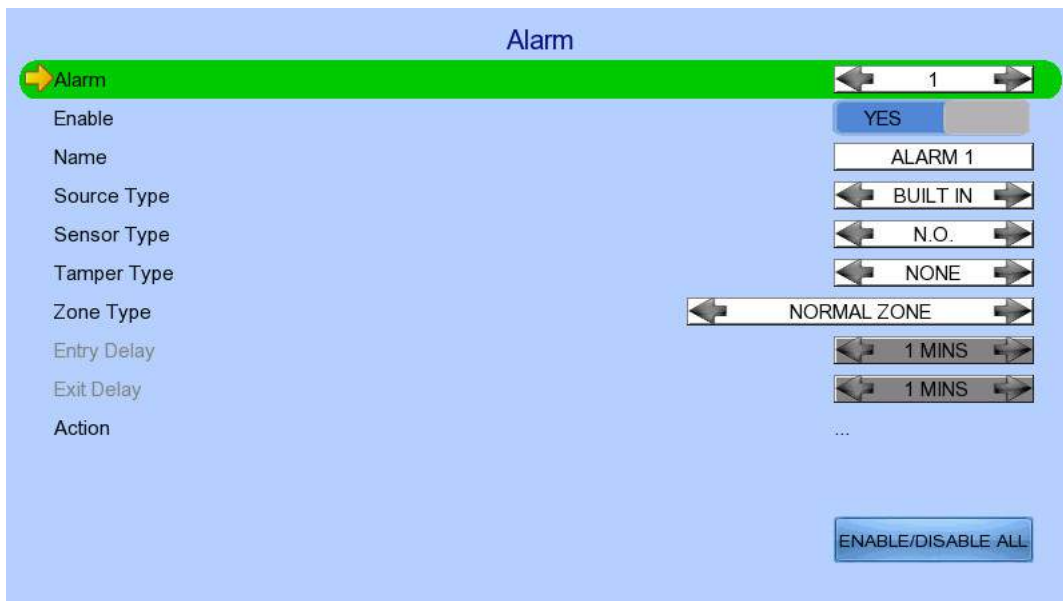
Alarm	Select an alarm
Enable	Enable / disable selected alarm
Name	Change the name of alarm
Source Type	Select source of alarm
	- BUILT IN: use video server on board alarm
	- CAMERA: use external camera alarm

Sensor Type	Select circuit open/close as normal alarm state
Tamper Type	Set the tamper detection type
Zone Type	Set the zone type:
Entry Delay	Set the entry delay time (Entry/Exit Zone only)
Exit Delay	Set the exit delay time (Entry/Exit Zone only)
Action	Set actions taken when alarm is triggered or tampered
ENABLE/DISABLE ALL	Enable / disable all alarm

[**Main Menu**] → [**Event Handler**] → [**Motion**]

Camera	Select a camera
Enable	Enable / disable motion event
Motion Detection Setting	Set motion detection settings
Zone	Set the zone type:
Entry Delay	Set the entry delay time (Entry/Exit Zone only)
Exit Delay	Set the exit delay time (Entry/Exit Zone only)
Action	Set actions taken when motion is detected
ENABLE/DISABLE ALL	Enable / disable all motion

[**Main Menu**] → [**Event Handler**] → [**Motion**] → [**Motion Detection Setting**]

Select	Select motion blocks
Deselect	Deselect motion blocks
Select All	Select all motion blocks
Deselect All	Deselect all motion blocks
Sensitivity	Set the sensitivity level
Area	Set the area sensitivity (Custom sensitivity only)
Level	Set the light sensitivity (Custom sensitivity only)
OK	Save the motion detection settings

[**Main Menu**] → [**Event Handler**] → [**Video Loss**]

Camera	Select a camera
Enable	Enable / disable video loss event
Action	Set actions taken when video loss is detected

[**Main Menu**] → [**Event Handler**] → [**System Tamper**]

Enable	Enable / disable system tamper event
Sensor Type	Select circuit open/close as normal state
Action	Set actions taken when system tamper is triggered

[**Main Menu**] → [**Event Handler**] → [**Power Failure**]

Enable	Enable / disable power failure event
Sensor Type	Select circuit open/close as normal state
Action	Set actions taken when power failure is detected

[**Main Menu**] → [**Event Handler**] → [**Disk Usage**]
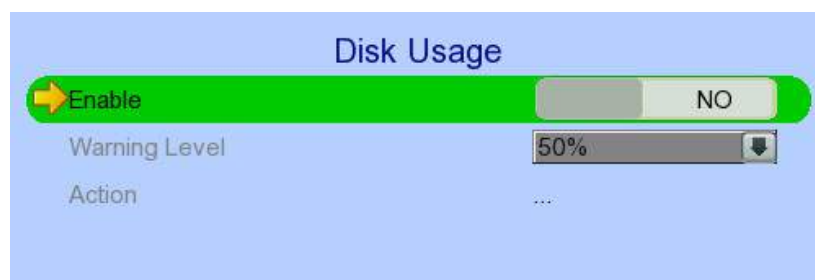
Enable	Enable / disable disk full event
Warning Level	Set the warning level
Action	Set actions taken when disk usage exceeds warning level

[**Main Menu**] → [**Event Handler**] → [**HDD Fault**]
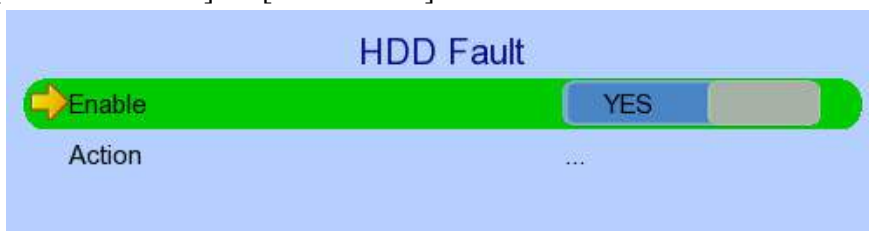
| Enable | Enable / disable the HDD Fault event |
| Action | Set actions taken when disk failure or lost |

[**Main Menu**] → [**Event Handler**] → [**System Restart**]
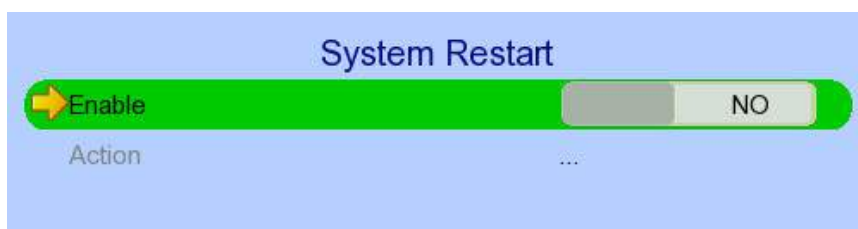
| Enable | Enable / disable the system restart available event |
| Action | Set actions taken when system restart abnormally |

[**Main Menu**] → [**Event Handler**] → Any Event → [**Action**]
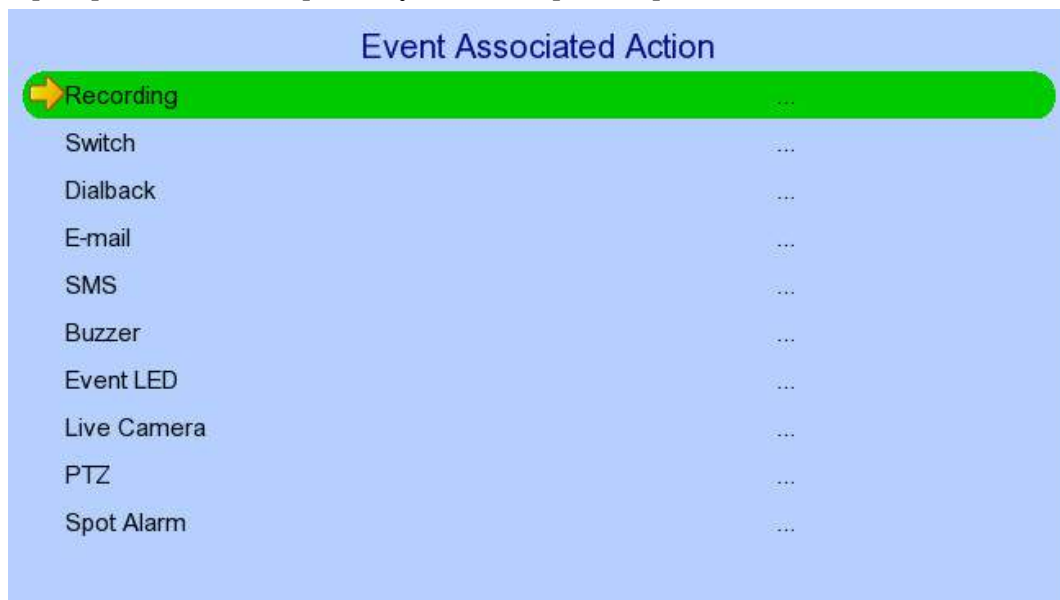
Recording	Change event recording settings
Switch	Change event switch settings
Dial Back	Change dialback settings
E-mail	Change e-mail settings

SMS	Change SMS settings
Buzzer	Change buzzer settings
Event LED	Change event LED settings
Live Camera	Change event associated live camera settings
PTZ	Change event associated PTZ camera settings

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Recording**]

Enable	Enable / disable event recording of that event
Recording Mode	Set event recording frame rate

- Auto: Record at highest achievable frame rate. The storage size is large.
- 1 fps: Record at 1 frame per second. Storage size is comparably small

Duration After Event Clear	Set the post-event recording time
Recording Camera	Select cameras performing event recording

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Switch**]

Enable	Enable / disable switch action of that event
Switch	Select switches turning on when event triggers
General Switch Setting	Set the latch duration and action delay

[**Main Menu**] → [**Event Handler**] → Any Event → [**Action**] → [**Dialback**]

Enable   Enable / disable dialback action of that event
Retry Duration (Sec)   Set the time between each dialback retrial
Retry Count   Set the number of retrial if dialback fails
Entry X   Change the settings of dialback entry X
Dial Back Test   Start the dial back test

[**Main Menu**] → [**Event Handler**] → Any Event → [**Action**] → [**Dialback**]
        □ [**Dialback Entry**]

Enable   Enable / disable the dialback entry
IP Address   Set the dialback IP address when event triggers
Port   Set the dialback port when event triggers

[Main Menu] → **[Event Handler]** → **Any Event** → **[Action]** → **[E-mail]**

Enable	Enable / disable e-mail action of that event
Image Attachment Associate Camera	Change event associated camera for image attachment
SMTP Server	Change SMTP settings
E-mail X	Set the e-mail address of recipient X
Sender E-mail	Set the e-mail address of sender
Action Delay	Set the minimum time between 2 e-mails of the same event
Max Number of E-mail	Set the maximum e-mails of an event until event clear
E-mail Test	Start the e-mail test

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**E-mail**] → [**SMTP Server**]

Server Address	Set the SMTP server address
Port	Set the SMTP server port
Authentication	Is authentication required for the SMTP server
User Name	Set user name used in authentication
Password	Set password used in authentication
Network Setting	Change the network settings
Time Out	Set the allowed time of sending an e-mail in each trial (in minute)
Retry	Set the number of retrial if fails to send the mail

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**SMS**]

| Enable | Enable / disable SMS action of that event |

Phone Number	Set recipient phone number
Action Delay	Set the minimum time between 2 SMS of the same event
Max SMS	Set the maximum SMS of an event until event clear
Voice Call	Dial to the phone number while sending SMS notification
SMS Test	Start the SMS test

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Buzzer**]
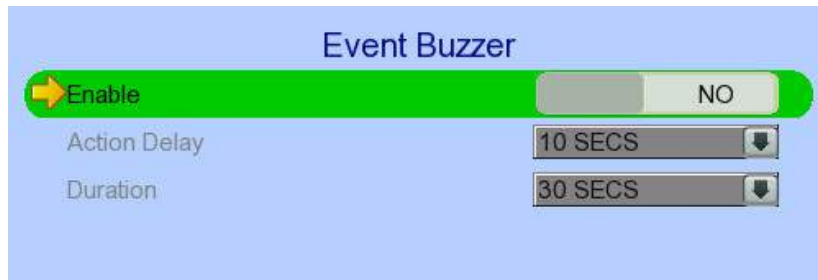
Enable	Enable / disable buzzer action of that event
Action Delay	Set the time between turning off and next turning on
Duration	Set the time for turning on the buzzer

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Event LED**]

Enable	Enable / disable LED action of that event

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Live Camera**]

Enable	Enable / disable live camera action of that event
Associate Camera	Select cameras to be displayed when event triggers

[**Main Menu**] → [**Event Handler**] → Any Event → [**Action**] → [**PTZ**]
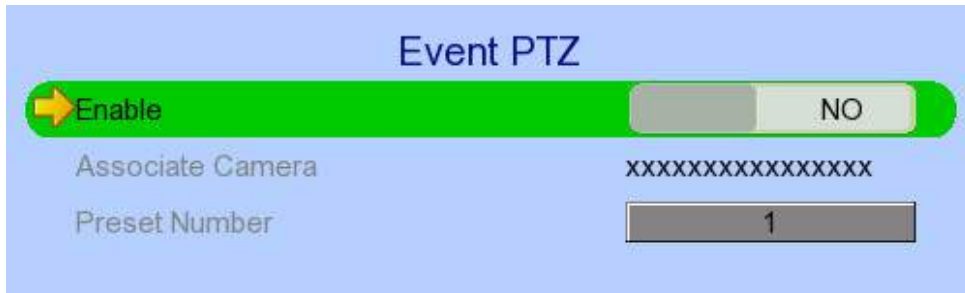
Enable	Enable / disable live camera action of that event
Associate Camera	Select PTZ cameras to be displayed when event triggers
Preset Number	Select preset position of PTZ camera when event triggers

[**Main Menu**] → [**Footage Extraction**]

USB Storage Device	Select device for saving the footage
FORMAT	Format the selected USB device
Mode	Set extraction mode
	- Normal: Extract at the same recording frame rate, with audio
	- Quick: Extract selected cameras at low frame rate, no audio

Channel	Choose video channels to extract (Select or Quick mode only)
Start Date	Set start date of the footage
Start Time	Set start time of the footage
Duration	Set video length of the footage
Protection	Enable / disable password protection
Password	Set extraction password (Password protection enabled only)
EXTRACT	Start backup using above settings

[**Main Menu**] → [**User**]

Current User	Display current log in user
Add Account	Add new account
Edit/Delete Account	Edit or remove an account
Power On Default Right	Access right when not logged in
Log out	User log out
Log In As Other User	User log in

[**Main Menu**] → [**User**] → [**Add Account**]

User Name	User name of new account	(4 – 16 characters)
Local Password	Password for local log in	(4 – 10 characters)
Retype Local Password	Confirming the password	
Local Time Out	Set the auto log out time when no local operation	
Account Setting Enable	Access right setting	
System Setting Enable	Access right setting	
Recording Setting Enable	Access right setting	
Video Backup Enable	Access right setting	
Event Control Enable	Access right setting	
Camera Control Enable	Access right setting	
Playback Enable	Access right setting	
Audio Enable	Access right setting	
Video Monitoring Enable	Access right setting	
Switch Enable	Access right setting	
CONFIRM	Create the account	

[**Main Menu**] → [**User**] → [**Edit/Delete Account**]

Modify Account

Local Login Enable	YES
User Name	ADMIN
Local Password	******
Retype Local Password	******
→ Local Time Out	15 MINS
Account Setting Enable	YES
System Setting Enable	YES
Recording Setting Enable	YES
Video Backup Enable	YES
Event Control Enable	YES
Camera Control Enable	YES
Playback Enable	YES
Audio Enable	YES
Video Monitoring Enable	123456789ABCDEFG
Switch Enable	1234

SAVE   DELETE

Most settings are the same as [**Add Account**] menu.

Local Log in Enable	Enable / disable local log in (with remote log in right only)
SAVE	Save the account settings
DELETE	Delete the account
← →	Show settings of previous / next account

[**Main Menu**] → [**User**] → [**Power On Default Right**]

Most settings are the same as [**Add Account**] menu.

SAVE   Save the access rights when server startup or local user log out

4.3. Basic Operation

4.3.1. View Live Video

Depends on the model of the TeleEye RX HD video recording server, user can view up to 16 live videos at the same time. User can also choose to supervise the video channel one by one using the sequential mode function.

A. By Front Panel Buttons

Press button 1 to 9 to select Camera 1 to 9.

Press button 0 first, then press button 0 to 6 to select Camera 10 to 16.

Hold down button 0 for a few seconds to change the display resolution.

Display next page of cameras (e.g. Cam 2 ➔ Cam 3).

Hold down the button for a few seconds to start sequential mode.

Switch to next screen mode (e.g. Full ➔ 2x2).
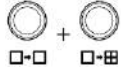
Hold down both buttons for a few seconds to refresh the local display.

☞ *When OSD menu is opened, the control buttons won't take effect*

B. By Mouse

Open the [**Screen Selection**] menu

(Right click)

(Left click)

[**1**] to [**16**] to display that camera in full screen.

[**Mode**] to toggle display in 2x2, 3x3 and 4x4 mode respectively

[**Next**] to show next set of cameras

[**Sequential**] to start sequential mode.

4.3.2. Recording

To suit different situations, TeleEye RX supports 3 recording modes: manual recording, schedule recording and event recording. When a camera is recording, the icon will be shown next to its name and the LED will light up in red color.

- **Manual Recording**:   The start/stop operation is controlled manually by operator. Recording will be performed on all cameras once started. When manual recording is on, schedule recording will be disabled.

- **Schedule Recording**:   Recording will be started and stopped according to user defined schedules. Schedules are set on a weekly basis. When schedule recording is enabled, manual recording will be disabled.

- **Event Recording**:   Event recording will be activated if an event is triggered with its recording action enabled. It can be performed with manual recording or schedule recording simultaneously. Detail description and setup procedure will be given later in the Advanced Operation section.

To change recording mode quickly, either press on the front panel, or right click mouse to open [**Screen Selection**] and click [**Recording**]

Recording   Quick menu for selecting recording mode
- Off: Disable recording
- On: Enable recording of all cameras
- Schedule: Enable schedule recording

To change other recording settings or edit recording schedules, go to the following menus:

[**Main Menu**] → [**HDD/Recording**]
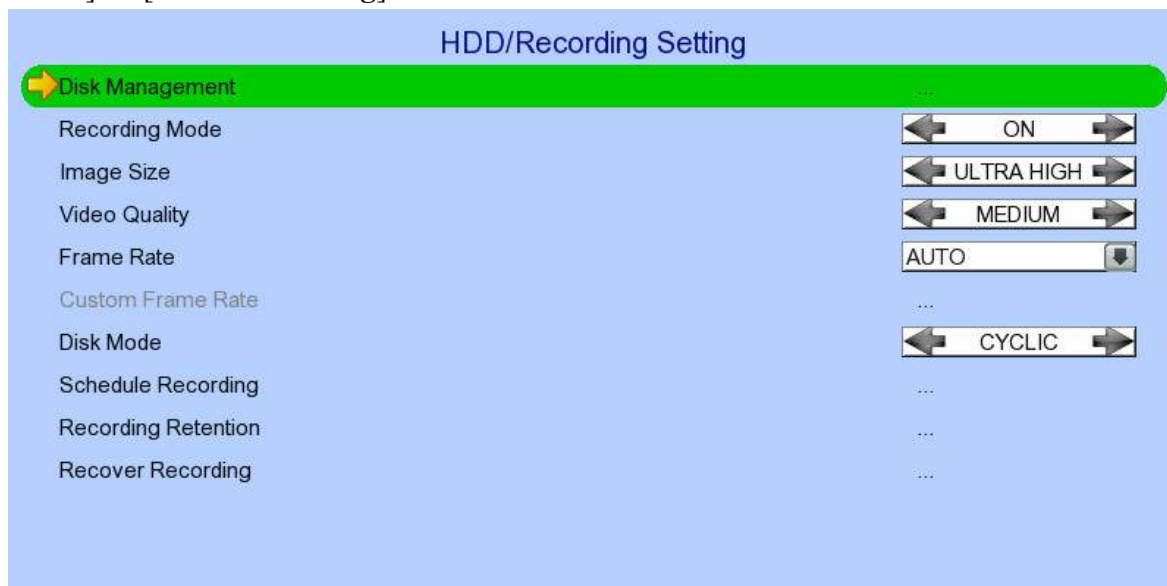
Disk Management	View hard disk information
	Format and scan disk
Recording	Select the recording mode
Image Size	Set recording resolution
	- Ultra-high: 960 x 576
	- QUAD: 360 x 288
Video Quality	Set video quality
Frame Rate	Set recording frame rate, applied to all cameras
	- Auto: Record at highest achievable frame rate
	- X fps: Record at X frames per second
	- Custom: Enable custom frame rate for individual camera
Custom Frame Rate	Set recording frame rate of individual cameras
Disk Mode	Set disk mode
	- Cyclic: Remove oldest data when hard disk full
	- Fixed: Stop recording when hard disk full
Schedule Recording	View or change recording schedules
Recording Retention	Set recording retention settings
Recover Retention	Recover damaged recorded video

[Main Menu] → [HDD/Recording] → [Schedule Recording]

Add	Add a new recording schedule
Edit	Edit the selected schedule
Delete	Delete selected schedule
Delete Day	Delete all schedules on the same day as the selected schedule

[**Main Menu**] → [**HDD/Recording**] → [**Schedule Recording**] → [**Add**]

Recording Type	Type of recording schedule
	- Normal: Record when within schedule
	- Motion: Record when motion detected and within schedule
	- Custom: Record based on individual camera setting
Weekdays	Select the weekdays to apply the schedule
Start Time	Set the start time of the schedule
End Time	Set the end time of the schedule
Camera	Select the cameras to apply the schedule
Frame Rate	Set recording frame rate of the schedule (not applicable for Custom frame rate)
ADD	Confirm add the schedule setting
Motion Setting	Set motion detection settings

[**Main Menu**] → [**HDD/Recording**] → [**Schedule Recording**] → [**EDIT**]

Most settings are the same as [**Add**] menu.

EDIT	Confirm EDIT the schedule setting

4.3.3. Playback

TeleEye RX supports user to view recorded video while not affecting the recording process. A maximum of 4 video channels can be played at the same time.

[**Main Menu**] → [**Playback**]

Date	Show date of recording log
Time	Show time of recording log
1, 2, ... 16	Show cameras that performed recording in red bars
Event Select	Display detail of the selected event
← →	Show previous / next page of recording log
⊕	Display recording log in smaller time scale
⊖	Display recording log in bigger time scale
📅	Search recording log by date and time
🖊	Extract selected time slot on the log

[**Main Menu**] → [**Playback**] → [**Search By Date**]
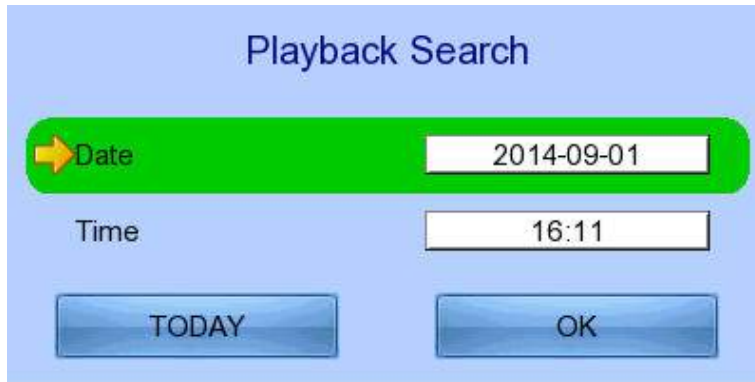
Date	Set the search date	
Time	Set the search time	
Today	Set date and time to current time	
OK	Search for log closest to the date and time	

4.3.4. PTZ

When observing video from local monitor, user can select individual video channel by using panel keys △, ▽, ◁, ▷ or 🖱 (mouse left click). Selected video channel will be pointed by 👆 icon. User can press ◎ or 🖱 (mouse left click) to take PTZ control, then the selected channel will be highlighted by icon (Only digital PTZ control can be taken, ◎ or If the video channel not support analogue PTZ control). For analogue PTZ supported channel, User can click ◎ or 🔵 for taking PTZ command after the command box pop-up on video monitoring screen. User can deselect the PTZ control channel by using ◎ or 🖱, then the video channel will be pointed by 👆 icon.

👆	OSD object selection			Digital /Analogue PTZ control
⬆ △	PTZ tilt up		⬇ ▽	PTZ tilt down
⬅ ◁	PTZ pan left		➡ ▷	PTZ pan right

	PTZ function (only for analogue PTZ)			PTZ command subtract (only for analogue PTZ)
	PTZ command add (only for analogue PTZ)			PTZ command box (only for analogue PTZ)
	PTZ command down (only for analogue PTZ)			PTZ command up (only for analogue PTZ)

For analogue PTZ control, user can select different PTZ command by   buttons, and control

the value by   buttons.

ZOOM	Control zoom in or out
RECALL PRESET:X	Recall saved preset position
PROGRAM PRESET:X	Edit preset position
AUTO PAN	Start auto pan
FOCUS	Control focus near or far
IRIS	Control iris on or off
RECALL PATROL:X	Recall saved patrol
STOP PATROL	Stop patrol
CLEAR PATROL	Clear patrol 1
START TOUR REC	Start tour recording
STOP TORU REC	Stop tour recording
SET LIFT LIMIT	Set life limit position for auto pan
SET RIGHT LIMIT	Set right limit position for auto pan

[**Main Menu**] → [**System**] → [**General PTZ Setting**]

Camera	Selected video channel
Pan Speed	Set pan speed
Tit Speed	Set tilt speed
Patrol Speed	Set patrol speed
Dwell Time	Set dwell time for patrol

[**Main Menu**] → [**System**] → [**External Keyboard**]

Support External Keyboard	Display support of external keyboard
Server ID	Set DVR id for PTZ control
RS-485 Baud Rate	Set RS-485 input baud rate

4.4. Advanced Operation

4.4.1. Install Alarm Sensors and Relay Control Port

TeleEye RX supports up to 16 alarm ports with tamper detection for connecting with alarm sensors, 4 additional input sensors and 4 relay ports for control. The definitions of alarm and relay control ports are shown in the following diagram.
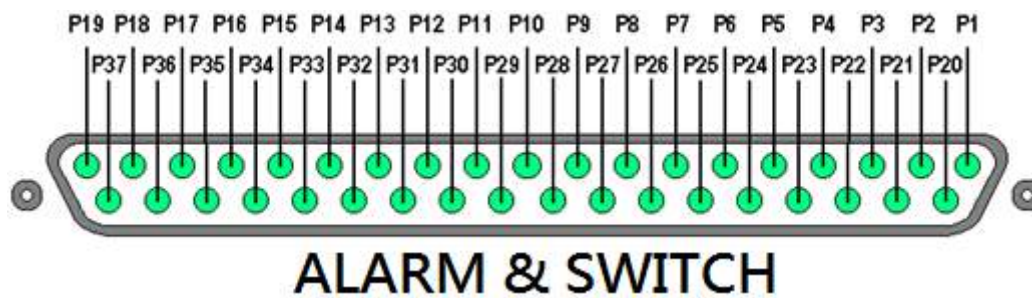
Pin assignment for TeleEye RX

Pin 1	Alarm 1	Pin 20	GND
Pin 2	Alarm 2	Pin 21	GND
Pin 3	Alarm 3	Pin 22	GND
Pin 4	Alarm 4	Pin 23	GND
Pin 5	Alarm 5	Pin 24	GND
Pin 6	Alarm 6	Pin 25	GND
Pin 7	Alarm 7	Pin 26	GND
Pin 8	Alarm 8	Pin 27	GND
Pin 9	Alarm 9	Pin 28	Arm/Disarm
Pin 10	Alarm 10	Pin 29	Security Switch
Pin 11	Alarm 11	Pin 30	Power Failure
Pin 12	Alarm 12	Pin 31	System Tamper
Pin 13	Alarm 13	Pin 32	Alarm 14
Pin 14	Alarm 15	Pin 33	Alarm 16
Pin 15	Relay 0a	Pin 34	Relay 0b
Pin 16	Relay 1a	Pin 35	Relay 1b
Pin 17	Relay 2a	Pin 36	Relay 2b
Pin 18	Relay 3a	Pin 37	Relay 3b
Pin 19	N/A		

4.4.2. Install Tamper Circuit and External Resistors

TeleEye RX supports tamper detection on all alarm inputs including arm/disarm input, security switch input, system tamper and power failure input.

DEOL : Dual End of Line termination with NC and NO connection
SEOL : Single End of Line termination with NC and NO connection
NC/NO : Alarm and other input ports without tamper detection circuit connection

For example: By connecting the tamper circuit with DEOL, the circuit is in the normal close condition if the resistance between point A and B detects 1.2kΩ (shown as below), whereas the circuit is in normal open condition if the resistance between point A and B detects 7.2kΩ. The resistance transition from 1.2kΩ to 7.2kΩ is generated by an alarm tamper event for normal close circuit. The setup configuration of those alarms and input ports are shown in the following diagrams. The circuit debouncing time between each sensor is 20 milliseconds.

Dual End of Line Configuration

Term	Status	Description
S/C	Tamper	Wire short (point A and B)
LoZ	Normal	Sensor drive output close (point B and C)
HiZ	Alarm	Sensor drive output open (point B and C)
O/C	Tamper	Wire open (point A and B)

Normal Close (NC)
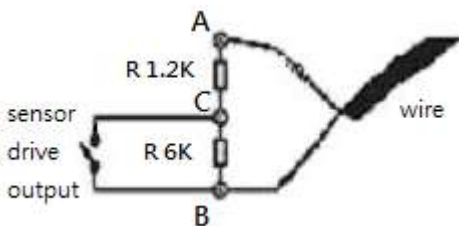
Term	Status	Description
S/C	Tamper	Wire short (point A and B)
LoZ	Normal	Sensor drive output close (point B and C)
HiZ	Alarm	Sensor drive output open (point B and C)
O/C	Tamper	Wire open (point A and B)

Normal Open (NO)

Single End of Line Configuration
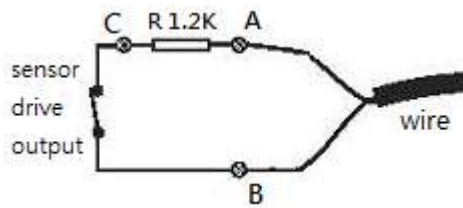
Term	Status	Description
S/C	Tamper	Wire short (point A and B)
LoZ	Normal	Sensor drive output close (point B and C)
O/C	Alarm	Sensor drive output open (point B and C)

Normal Close (NC)
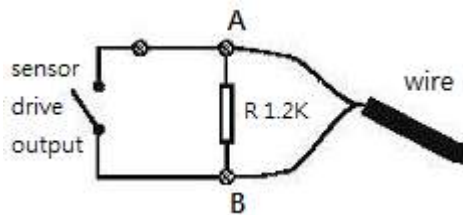
Term	Status	Description
S/C	Alarm	Sensor drive output close (point A and B)
LoZ	Normal	Sensor drive output open (point A and B)
O/C	Tamper	Wire open (point A and B)

Normal Open (NO)

Without Tamper Detection Circuit Configuration
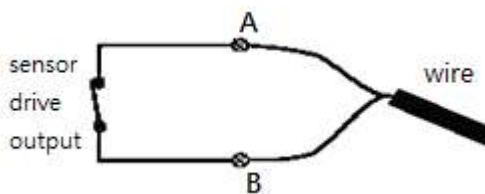
Term	Status	Description
S/C	Normal	Sensor drive output close (point A and B)
O/C	Alarm	Sensor drive output open (point A and B)

Normal Close (NC)
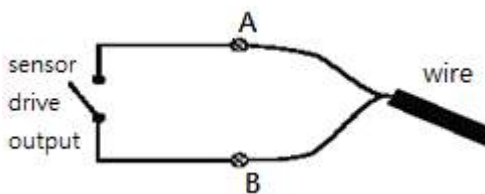
Term	Status	Description
S/C	Alarm	Sensor drive output close (point A and B)
O/C	Normal	Sensor drive output open (point A and B)

Normal Open (NO)

Legend	
NO	Normally open alarm
NC	Normally close alarm
O/C	Open circuit
S/C	Close circuit
LoZ	Low impedance
HiZ	High impedance

The table below shows the summary between the resistance network and the condition result.

☞ *This table is provided as a reference. There may be a 10% tolerance for the resistance value.*

Condition	Resistance (Ω)			
	0 - 400	**401 - 2780**	**2781 – 29.5k**	**29.5k - infinity**
DEOL (Normal Close)	Tamper Short	Normal (Close)	Alarm (Open)	Tamper Open
DEOL (Normal Open)	Tamper Short	Alarm (Close)	Normal (Open)	Tamper Open
SEOL (Normal Close)	Tamper Short	Normal (Close)	Alarm (N/A)	Alarm (Open)
SEOL (Normal Open)	Alarm (Close)	Normal (Open)	Alarm (N/A)	Tamper Open
NC without tamper	Normal (Close)	Alarm (N/A)	Alarm (N/A)	Alarm (Open)
NO without tamper	Alarm (Close)	Alarm (N/A)	Alarm (N/A)	Normal (Open)

Alarm (N/A): Alarm is not applicable

4.4.3. Event Handling

4.4.3.1. Arm/Disarm

Arm/Disarm input is used for enhancing security level of the surveillance area. This input introduces the concept of 3 zone types of alarm and motion: fire zone, normal and entry/exit zone.

Armed

If the system is armed, alarm sensor and motion that is set as normal zone can be triggered immediately if someone triggers the sensor or motion detected. It is usually used when there is no operator at surveillance area.

Disarmed

If the system is disarmed, alarm and motion events detected from sensors will not result in an alarm and motion except the fire zone type alarm, motion and arm/disarm tamper. If there are operators at surveillance area, it is usually disarmed.

Arm/Disarm Mode

TeleEye RX supports 3 different modes of arm/disarm operation:

- Hardware: Use Arm input to arm/disarm, suitable for local operation
- Software: Use software to arm/disarm, suitable for remote operation
- Schedule: Follow preset schedule to arm/disarm, suitable for unmanned location

☞ *Under software and schedule mode, the security switch is not applicable.*

There are 2 types of arm schedules:

- Normal Schedule:	User can set the arm period in terms of weekday. The system would arm according to this weekly schedule.
- Holiday Schedule:	User can set the arm date and period for specially handled holiday. If the date is set to holiday schedule, it will follow holiday schedule instead of normal schedule.

Arm/Disarm Tamper Type ✂

Arm/Disarm tamper event triggers if someone cuts the wire between the arm/disarm input and the video recording server. This event can be triggered once the wire is being cut. Arm/Disarm tamper type has choice of none, SEOL and DEOL.

Arm State

If arm state is set to close, it indicates arm of TeleEye RX when the state of the circuit is close and disarm of TeleEye RX when the circuit is open. Oppositely, if arm state is set to open, it indicates arm and disarm of TeleEye RX when the state of the circuit is open and close respectively.

Physical Configuration for Arm/Disarm

The arm/disarm input and ground of TeleEye RX video recording server needs to connect to a control unit which is commonly a switch or password panel for arm/disarm input.

[**Main Menu**] → [**Event Handler**] → [**Arm/Disarm**]

Enable	Enable / disable the arm/disarm control	
Mode	Select the arm/disarm mode	
Arm State	Select circuit open/close as system armed	(Hardware Arm only)
Tamper Type	Set the tamper detection type	(Hardware Arm only)
Tamper Action	Set actions taken when arm input tampered	(Hardware Arm only)
Associate Switch	Associate switch 1 to arm/disarm control status	
Schedule Arm/Disarm	Enable / disable schedule arm/disarm	(Schedule Arm only)
Normal Arm Schedule	Set weekly arm/disarm schedule	(Schedule Arm only)
Holiday Arm Schedule	Set holiday arm/disarm schedule	(Schedule Arm only)

[**Main Menu**] → [**Event Handler**] → [**Arm/Disarm**] → [**Normal Arm Schedule**]

No.	Show the schedule number
Start Time	Show the start time of system armed
End Time	Show the end time of system armed
Weekdays	Show the weekdays the schedule applied to
Add	Add a normal arm schedule
Delete	Delete the selected normal arm schedule
← →	Show previous / next page of schedules

[**Main Menu**] → [**Event Handler**] → [**Arm/Disarm**] → [**Normal Arm Schedule**] → [**Add**]

Weekdays	Set the weekdays the new schedule applied to
Start Time	Set the start time of new schedule
End Time	Set the end time of new schedule
Add	Add the new normal arm schedule

[Main Menu] → [Event Handler] → [Arm/Disarm] → [Holiday Arm Schedule]

No.	Start Date	End Date	Start Time	End Time
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

No.	Show the schedule number
Start Date	Show the start date of schedule
End Date	Show the end date of schedule
Start Time	Show the start time of system armed
End Time	Show the end time of system armed
Add	Add a holiday arm schedule
Delete	Delete the selected holiday arm schedule
⬅ ➡	Show previous / next page of schedules

[Main Menu] → [Event Handler] → [Arm/Disarm] → [Holiday Arm Schedule] → [Add]

Start Date	Set the start date of new schedule
End Date	Set the end date of new schedule

Start Time	Set the start time of new schedule
End Time	Set the end time of new schedule
Add	Add the new holiday arm schedule

4.4.3.2. Security Switch 🔒 🔓

It is an input to the video recording server for wiring a security switch. The purpose of the security switch is to terminate the exit delay for exit zone alarm. If the security switch is on and the system is armed, all exit delay will be terminated. If the security switch is off and an entry alarm is triggered, entry delay will start.

Security Switch Tamper Type ✂
Security switch tamper event triggers if someone cuts the wire between the security switch input and the video recording server. This event can be triggered once the wire is being cut. Security switch tamper type has choice of none, SEOL and DEOL.

On State
If security switch on state is set to close, it indicates security switch on and off of TeleEye RX when the state of the circuit is closed and open respectively. Oppositely, if security switch on state is set to open, it indicates security switch on and off of TeleEye RX when the state of the circuit is open and closed respectively.

Physical Configuration for Security Switch
The security switch input and ground of TeleEye RX video recording server needs to connect to a control circuit which is commonly the lock of the surveillance area for security switch input.

[**Main Menu**] → [**Event Handler**] → [**Security Switch**]

Enable	Enable / disable the security switch
On State	Select circuit open/close as security switch on
Tamper Type	Set the tamper detection type
Associate Switch	Associate switch 2 to security switch status
Tamper Action	Set actions taken when security switch is tampered

4.4.3.3. Alarm 🚨

It is an input to the video recording server from external alarm sensors. Alarm can be used to detect many events occur at the surveillance area, such as fire and illegal entering by someone. The alarm event supports BS 8418:2003 which has arm/disarm and security switch functions.

Sensor Tamper Type ✂

Alarm tamper event will be triggered if someone cuts the wire between the alarm input and the video recording server. This event behaves as fire zone type that can be triggered once the wire is being cut. Alarm tamper type has choice of none, SEOL and DEOL.

Sensor Type

If the alarm sensor input circuit type is normal close (NC), when the state of the circuit is opened, it indicates alarm trigger of TeleEye GX, while nothing happens when the state of the circuit is closed. If the alarm sensor input circuit type is normal open (NO), when the state of the circuit is closed, it indicates alarm trigger of TeleEye GX, while nothing happens when the state of the circuit is open.

Zone Type

All alarm sensors can be associated with zone types if Arm/Disarm input is installed.
-   Normal Zone: This zone allows alarms to be triggered after system armed.
-   Fire Zone: This zone allows alarms to be triggered no matter which arm state of the system is, i.e. armed or disarmed. It is suitable for installation of fire detectors
-   Entry/Exit Zone: This zone allows user to set the delay time for entering or leaving the surveillance area without triggering any alarm event. If alarm recording action is enabled, recording starts at entry or exit time throughout the delay.

Example of Entry/Exit Zone WITH Security Switch Usage
For Entry Zone:
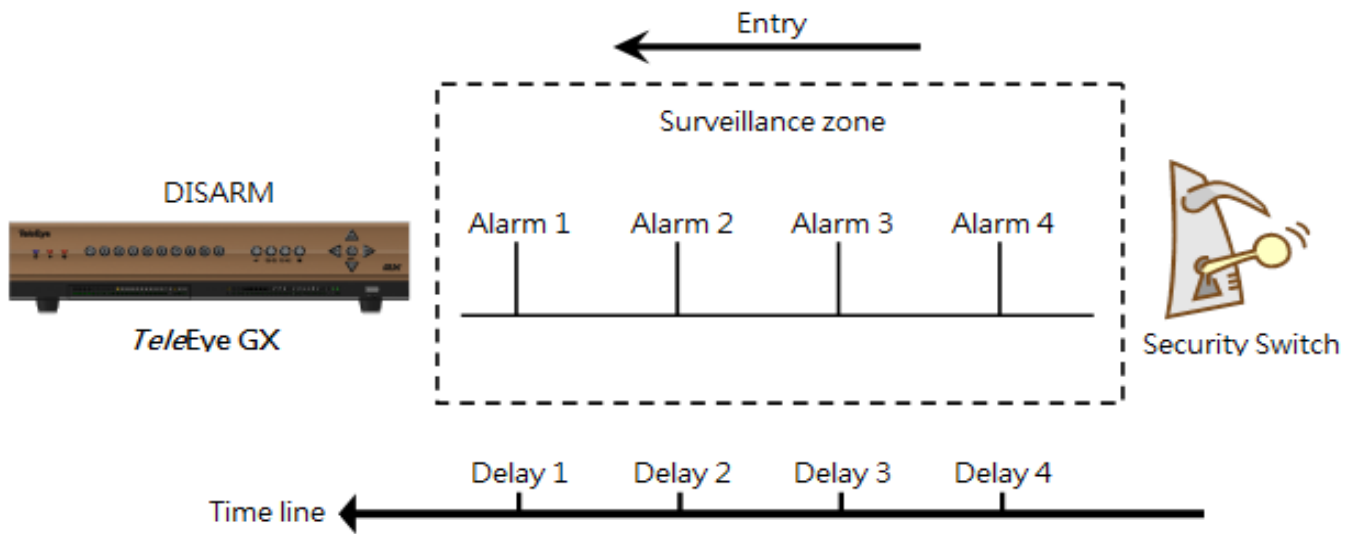
The entry delay is the period of time between entering the surveillance zone and reaching the video recording server. In order to disarm the system for maintenance or repair, user / installer needs to turn off the security switch and enter the surveillance zone. The delay timer starts from the 1st trigger by the 1st alarm sensor (i.e. Alarm 4). Note that if user enables recording action, recording action is automatically activated during entry delay.

The detail description is shown as follows:
1. User turns off security switch
2. The alarm is set at entry delay
3. The 1st trigger is made by Alarm 4 (i.e. user enters the surveillance zone and the entry delay time begins)
4. 2nd, 3rd and 4th trigger are made and each entry delay starts respectively
5. User disarms the system for maintenance

For example: If the time for going from security switch to video recording server is about 8 minutes, Delay 4 should be around 8 minutes, while Delay 3 should be longer than the time for going from security switch to Alarm 3, and so on.

For Exit Zone:

The exit delay is the period of time for leaving a surveillance zone without making false alarm (i.e. Alarm 1 to Alarm 4). The purpose is to let the user / installer have enough time to leave the surveillance zone after the video recording server is armed. User / installer can set the delay time for each alarm. Note that if user enables recording action, recording will be activated when an alarm is triggered during exit delay.

The detail description is shown as follows:
1. User arms the system
2. The alarm is set at exit delay and timer of all alarms begin
3. The 1st trigger is made by Alarm 1 (i.e. user leaves the surveillance zone)
4. 2nd, 3rd and 4th triggers are made respectively
5. User turns on the security switch or waits for all alarm exit delays to expire

For example, if the time for leaving the surveillance zone is about 8 minutes, user should adjust the delay time so that Delay 1 = leaving time between video recording server and Alarm 1, Delay 2 = leaving time between video recording server and Alarm 2, Delay 3 = leaving time between video recording server and Alarm 3 and Delay 4 should be 8 minutes. The alarm will be activated after the exit delay expired.

Example of Entry/Exit Zone WITHOUT Security Switch Usage
For Entry Zone:
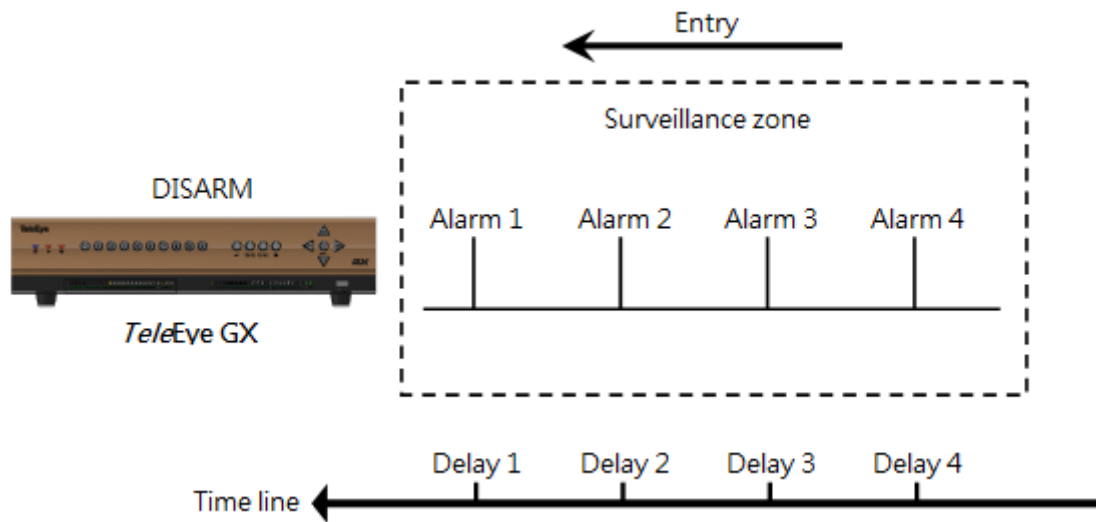
The entry delay is the period of time between entering the surveillance zone and reaching the video recording server. In order to disarm the system for maintenance or repair, user / installer enters the surveillance zone. The delay timer starts from the 1st trigger by the 1st alarm sensor (i.e. Alarm 4). Note that if user enables recording action, recording action is automatically activated during entry delay.

The detail description is shown as follows:
1. The alarm is set at entry delay
2. The 1st trigger is made by Alarm 4 (i.e. user enters the surveillance zone and the entry delay time begins)
3. 2nd, 3rd and 4th trigger are made and each entry delay starts respectively
4. User disarms the system for maintenance

For example: If the time for going from security switch to video recording server is about 8 minutes, Delay 4 should be around 8 minutes, while Delay 3 should be longer than the time for going from security switch to Alarm 3, and so on.

For Exit Zone:

The exit delay is the period of time for leaving a surveillance zone without making false alarm (i.e. Alarm 1 to Alarm 4). The purpose is to let the user / installer have enough time to leave the surveillance zone after the video recording server is armed. User / installer can set the delay time for each alarm. Note that if user enables recording action, recording will be activated when an alarm is triggered during exit delay.

The detail description is shown as follows:
1. User arms the system
2. The alarm is set at exit delay and timer of all alarms begin
3. The 1st trigger is made by Alarm 1 (i.e. user leaves the surveillance zone)
4. 2nd, 3rd and 4th triggers are made respectively
5. User waits for all alarm exit delays to expire

For example, if the time for leaving the surveillance zone is about 8 minutes, user should adjust the delay time so that Delay 1 = leaving time between video recording server and Alarm 1, Delay 2 = leaving time between video recording server and Alarm 2, Delay 3 = leaving time between video recording server and Alarm 3 and Delay 4 should be 8 minutes. The alarm will be activated after the exit delay expired.

Different Combination of Cases of Arm/Disarm, Security Switch and Alarm for the 3 Zone Type

Initial State			Step 1	Step 2	Step 3	Result
Alarm	Arm	Security Switch				
Fire Zone						
No trigger	Arm	On	Trigger alarm	\	\	Alarm trigger
	Arm	Off	Trigger alarm	\	\	Alarm trigger
	Arm	Uninstall	Trigger alarm	\	\	Alarm trigger
	Disarm	\	Trigger alarm	\	\	Alarm trigger
	Uninstall	\	Trigger alarm	\	\	Alarm trigger
	Uninstall	Uninstall	Trigger alarm	\	\	Alarm trigger
Normal Zone						
No trigger	Arm	On	Trigger alarm	\	\	Alarm trigger
	Arm	Off	Trigger alarm	\	\	Alarm trigger
	Arm	Uninstall	Trigger alarm	\	\	Alarm trigger
	Disarm	\	Trigger alarm	\	\	No alarm trigger
	Uninstall	\	Trigger alarm	\	\	Alarm trigger
	Uninstall	Uninstall	Trigger alarm	\	\	Alarm trigger
Entry/Exit Zone						
No trigger	Arm	On	Trigger alarm	\	\	Alarm trigger
	Disarm	Off	Arm. Exit delay starts	Trigger alarm. Recording starts if action enabled	Security switch on. Exit delay ends. Recording stops	Alarm can be triggered any time after that
					Exit delay ends after preset exit time. Recording stops	Alarm can be triggered any time after that
	Arm	On	Security switch off	Trigger alarm. Entry delay starts. Recording starts if action enabled	Disarm	No alarm trigger. Recording stops
					Entry delay ends after preset entry time	Alarm trigger. Recording don't stop unless disarm
	Disarm	Uninstall\	Arm. Exit delay starts	Trigger alarm. Recording starts if action enabled	Exit delay ends after preset exit time. Recording stops	System enter entry delay automatically after next alarm trigger
	Arm	Uninstall	Trigger alarm. Entry delay starts. Recording starts if action enabled	Disarm	\	No alarm trigger. Recording stops
				Entry delay ends after preset entry time	\	Alarm trigger. Recording don't stop unless disarm
	Disarm		Trigger alarm	\	\	No alarm trigger
	Uninstall		Trigger alarm	\	\	Alarm trigger
	Uninstall	Uninstall	Trigger alarm	\	\	Alarm trigger

Physical Configuration for Alarm

The alarm input and ground of TeleEye RX video recording server need to connect to various kinds of sensors which are commonly installed at entrance or sensitive parts of the surveillance area.
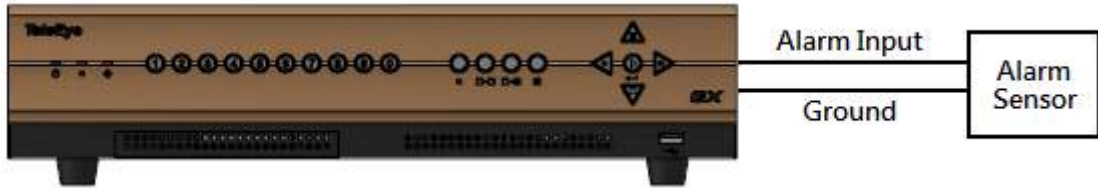
[**Main Menu**] → [**Event Handler**] → [**Alarm**]
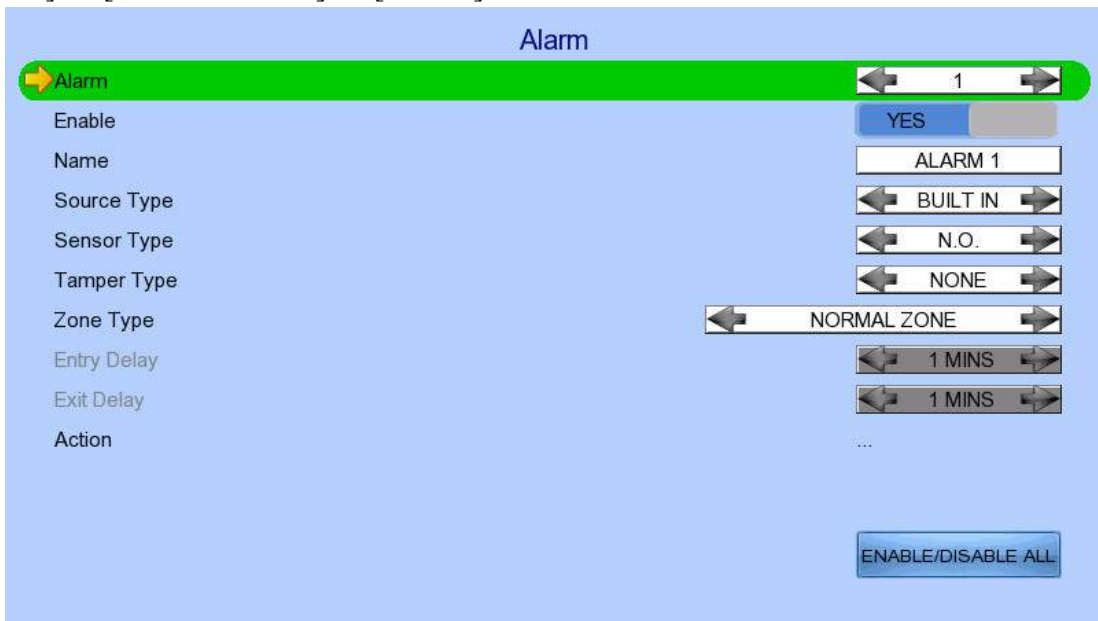
Alarm	Select an alarm
Enable	Enable / disable the alarm
Name	Change the name of alarm
Source Type	Select source of alarm
	- BUILT IN: use video server on board alarm
	- CAMERA: use external camera alarm
Sensor Type	Select circuit open/close as normal alarm state
Tamper Type	Set the tamper detection type
Zone	Set the zone type:
Entry Delay	Set the entry delay time (Entry/Exit Zone only)
Exit Delay	Set the exit delay time (Entry/Exit Zone only)
Action	Set actions taken when alarm is triggered or tampered
ENABLE/DISABLE ALL	Enable / disable all alarm

4.4.3.4. Motion

Motion detection can be triggered when motion occurs on the camera. Motion detection has different sensitivity levels, which can be set up individually on each video input channel. There are generally 4 options: high, middle, low and custom. Custom option allows user to select the sensitivity level and detection area themselves.

Motion detection example:

The selected motion detection area is the crossed area in green color. The motion block will turn to red colour when movement is detected.

The normal display area cannot detect any motion.

Sensitivity

- Level: The definition of level in motion detection is the difference in luminance level between current and reference field. The level range is 1 to 10, with 1 being the most sensitive and 10 being the least sensitive.
- Area: In motion detection, one selected motion block is internally divided into four sub-blocks. The definition of area is how many sub-blocks have detected motion in order to trigger a motion event. Any value between 1 and 4 can be set. The more sub-blocks are selected, the lower the motion sensitivity is.

[**Main Menu**] → [**Event Handler**] → [**Motion**]

Camera	Select a camera
Enable	Enable / disable motion event
Motion Detection Setting	Set motion detection settings
Zone	Set the zone type:
Entry Delay	Set the entry delay time (Entry/Exit Zone only)
Exit Delay	Set the exit delay time (Entry/Exit Zone only)
Action	Set actions taken when motion is detected
ENABLE/DISABLE ALL	Enable / disable all motion

[**Main Menu**] → [**Event Handler**] → [**Motion**] → [**Motion Detection Setting**]

Select	Select motion blocks
Deselect	Deselect motion blocks
Select All	Select all motion blocks
Deselect All	Deselect all motion blocks
Sensitivity	Set the sensitivity level
Area	Set the area sensitivity (Custom sensitivity only)
Level	Set the light sensitivity (Custom sensitivity only)
OK	Save the motion detection settings

4.4.3.5. *Video Loss*

Video loss event will be triggered when the video channel input disappears, or the video recording server receives no signal from the camera. When this happens, a blue screen would be displayed on the local monitor.

[**Main Menu**] → [**Event Handler**] → [**Video Loss**]

Camera	Select a camera
Enable	Enable / disable video loss event
Action	Set actions taken when video loss is detected

4.4.3.6. *System Tamper* ✂

It is an input to the video recording server for wiring a tamper switch of the external cabinet outside the video recording server and its accessories. The purpose of system tamper event is to prevent someone from breaking into the cabinet and destroying the video recording server.

Sensor Type

If the system tamper input circuit type is normal close (NC), when the state of the circuit is opened, it indicates system tamper of TeleEye RX, while nothing happens when the state of the circuit is closed. If the alarm sensor input circuit type is normal open (NO), when the state of the circuit is closed, it indicates system tamper of TeleEye RX, while nothing happens when the state of the circuit is open.

Physical Configuration for System Tamper

The system tamper input and ground of TeleEye RX video recording server need to connect to an external cabinet which is used for protecting the video recording server and its accessories.
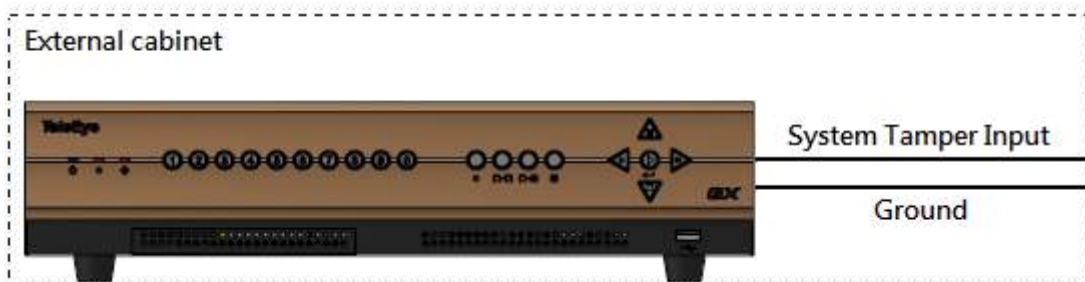
[**Main Menu**] → [**Event Handler**] → [**System Tamper**]

Enable	Enable / disable system tamper event
Sensor Type	Select circuit open/close as normal state
Action	Set actions taken when system tamper is triggered

4.4.3.7. *Power Failure* 🔋

It is an input to the video recording server typically used for wiring the output signal pin from an uninterruptible power supply (UPS).

Sensor Type

If the power failure input circuit type is normal close (NC), when the state of the circuit is opened, it indicates power failure of TeleEye RX, while nothing happens when the state of the circuit is closed. If the alarm sensor input circuit type is normal open (NO), when the state of the circuit is closed, it indicates power failure of TeleEye RX, while nothing happens when the state of the circuit is open.

Physical Configuration for Power Failure Input

The power failure input and ground of TeleEye RX video recording server need to connect to an universal power supply circuit UPS in order to detect any power failure condition.
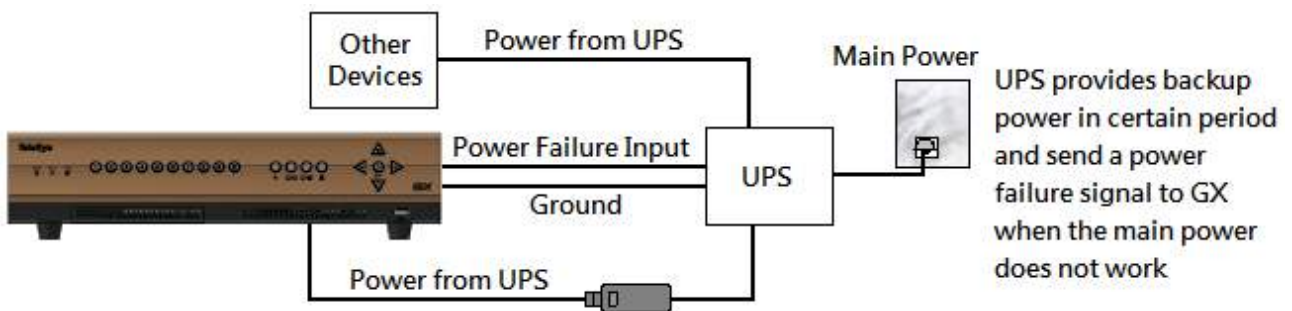
☞ *The UPS circuit setup above is used as an example. Not all UPS have signal output. Some UPS have self-testing for a period of time. Their signal output may toggle during test.*

[**Main Menu**] → [**Event Handler**] → [**Power Failure**]
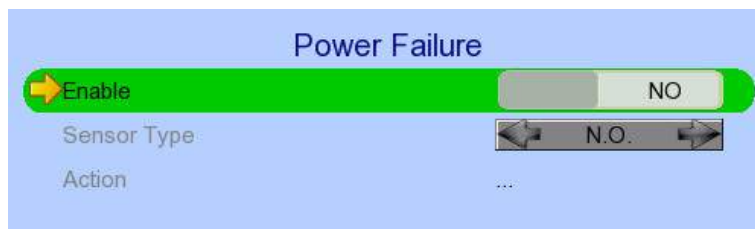
Enable	Enable / disable power failure event
Sensor Type	Select circuit open/close as normal state
Action	Set actions taken when power failure is detected

4.4.3.8. *Disk Usage*

Disk full event will be triggered if hard disk usage exceeds user specified warning level. A total of 6 warning levels can be selected: 50%, 60%, 70%, 80%, 90% and 100%.

[**Main Menu**] → [**Event Handler**] → [**Disk Usage**]
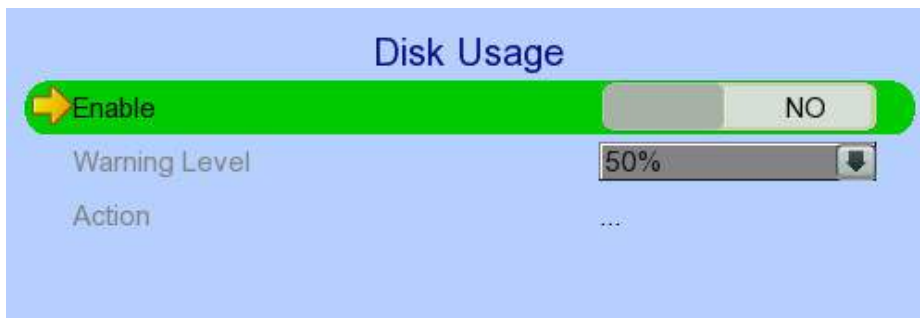
Enable	Enable / disable disk full event
Warning Level	Set the warning level
Action	Set actions taken when disk usage exceeds warning level

4.4.3.9. *HDD Fault*

HDD fault event will be triggered when hard disk failure, bad health or hard disk change with respect to checklist is detected.

[**Main Menu**] → [**Event Handler**] → [**HDD Fault**]
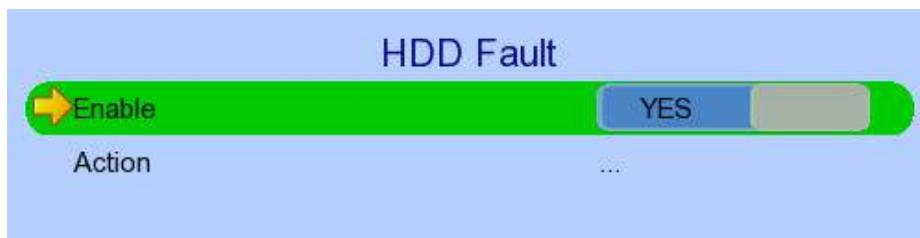
Enable	Enable / disable the HDD fault event
Action	Set actions taken when disk failure or lost

4.3.1.1. **System Restart** 🌀

System restart event will be triggered when abnormal restart of video server is detected.

[**Main Menu**] → [**Event Handler**] → [**System Restart**]

Enable	Enable / disable the system restart event
Action	Set actions taken when system restarted abnormally

4.4.4. Event Action

TeleEye RX HD video recording server supports 9 types of actions that can be activated by any events mentioned in above section.

1. Recording
2. Switch
3. Dialback
4. E-mail
5. SMS
6. Buzzer
7. Event LED
8. Live Camera
9. PTZ

4.4.4.1. Recording

When an event is triggered, video recording will be performed on user selected cameras with selected recording mode.

Pre-Event Recording

Pre-event recording allows video recording before an event is triggered. The period of pre-event recording is between 1 and 2 minutes before the event is detected. User can find that there is at least 1 more minute of video in the recording log before event triggering.

Post-Event Recording

After the event is reset, recording will continue until user defined duration time is reached.

Go to [**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Recording**]

Enable	Enable / disable event recording of that event
Recording Mode	Set event recording frame rate
	- Auto: Record at highest achievable frame rate. The storage size is large.
	- 1 fps: Record at 1 frame per second. Storage size is comparably small
Duration After Event Clear	Set the post-event recording time
Recording Camera	Select cameras performing event recording

4.4.4.2. Switch

The switch action allows the recording server to control 4 external relays which are defined by user.

Switch Type

Two types of switch are supported:
- Latching: The switch turns on for a period of time.
- Push-button: The switch turns off 1 second after it is turned on.

Latch Duration

Latch duration is the period of time for turning on the latching type switch.

Action Delay

Action delay is the period of time after the switch is turned off and before turning on again.

Example of Latch Duration and Action Delay

Assuming that the latch duration is 10sec and action delay is 10sec. If an event is triggered, the on/off status of the switch versus time is shown below.
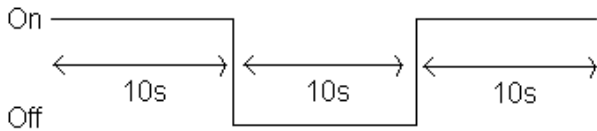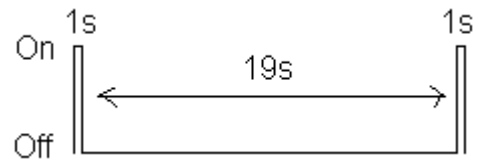
Latching type switch   Push-button type switch

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Switch**]

Enable	Enable / disable switch action of that event
Switch	Select switches turning on when event triggers
General Switch Setting	Set the latch duration and action delay

4.4.4.3. Dialback

Dialback allows the video recording server to connect to one remote PC through TCP/IP and displays live video in case an event is triggered. As a result, remote operator can recognize what situation is at the surveillance area.

☞ *The Java web page can't respond to this request, software like TeleEye sureSIGHT or sureGUARD needs to be installed to the PC to perform dialback.*

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Dial Back**]

Enable	Enable / disable dialback action of that event
Retry Duration (Sec)	Set the time between each dialback retrial
Retry Count	Set the number of retrial if dialback fails
Entry X	Change the settings of dialback entry X
Dial Back Test	Start the dial back test

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Dial Back**]
　　　　□ [**Dial Back Entry**]

Enable	Enable / disable the dialback entry
IP Address	Set the dialback IP address when event triggers
Port	Set the dialback port when event triggers

4.4.4.4.E-mail

The e-mail action supports user to send e-mails to recipient address in order to notify the status of triggered event.

[**Main Menu**] → [**Event Handler**] → Any Event → [**Action**] → [**E-mail**]

Enable	Enable / disable e-mail action of that event
Image Attachment Associate Camera	Change event associated camera for image attachment
SMTP Server	Change SMTP settings
E-mail X	Set the e-mail address of recipient X
Sender E-mail	Set the e-mail address of sender
Action Delay	Set the minimum time between 2 e-mails of the same event
Max Number of E-mail	Set the maximum e-mails of an event until event clear
E-mail Test	Start the e-mail test

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**E-mail**] → [**SMTP Server**]

SMTP Server

➡ Server Address	
Port	25
Authentication	NO
User Name	
Password	
Network Setting	...
Time Out	⬅ 1 ➡
Retry	⬅ 1 ➡

Server Address	Set the SMTP server address
Port	Set the SMTP server port
Authentication	Is authentication required for the SMTP server
User Name	Set user name used in authentication
Password	Set password used in authentication
Network Setting	Change the network settings
Time Out	Set the allowed time of sending an e-mail in each trial (in minute)
Retry	Set the number of retrial if fails to send the mail

4.4.4.5. SMS

The SMS action supports user to send SMS to recipient phone number in order to notify the status of triggered event.

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**SMS**]
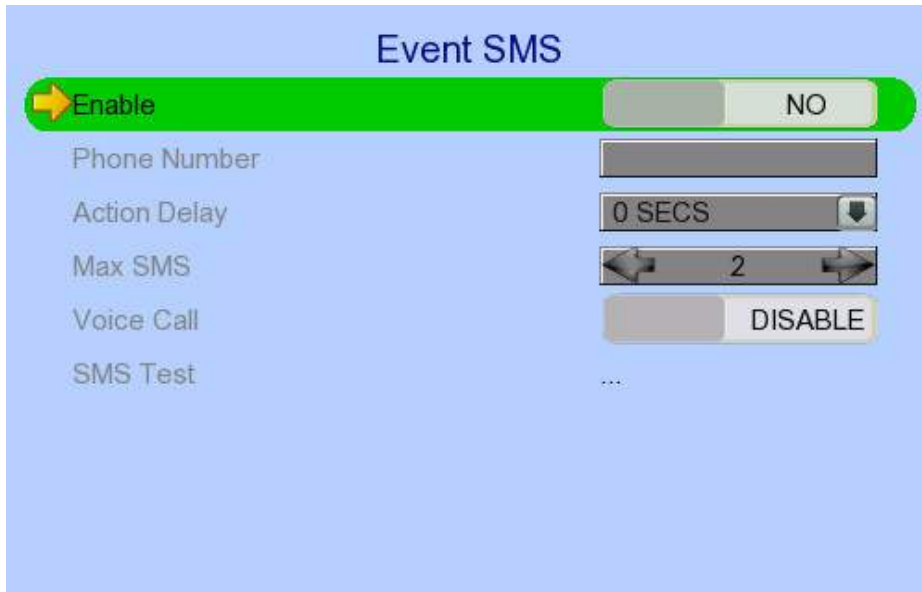
Enable	Enable / disable SMS action of that event
Phone Number	Set recipient phone number
Action Delay	Set the minimum time between 2 SMS of the same event
Max SMS	Set the maximum SMS of an event until event clear
SMS Test	Start the SMS test

4.4.4.6.Buzzer

The built-in buzzer of the video recording server can give "Beep" sound that draws nearby operator's attention when an event is triggered.

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Buzzer**]
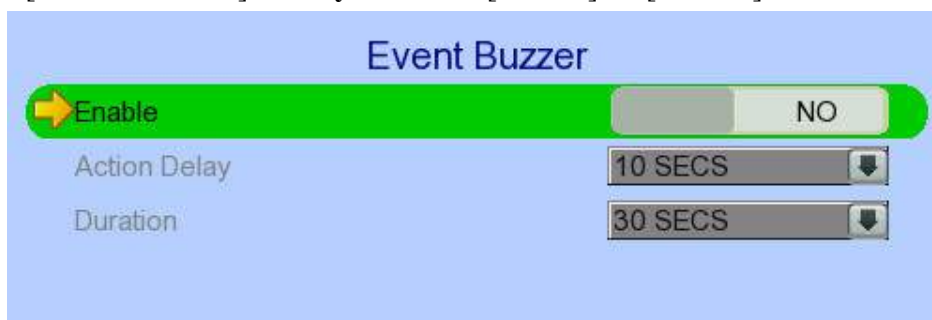
Enable	Enable / disable buzzer action of that event
Action Delay	Set the time between turning off and next turning on
Duration	Set the time for turning on the buzzer

4.4.4.7. Event LED

The event LED is the LED ⬜⧫ built on the front panel of TeleEye RX. If an event is triggered, the LED will keep blinking until the event is cleared.

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Event LED**]
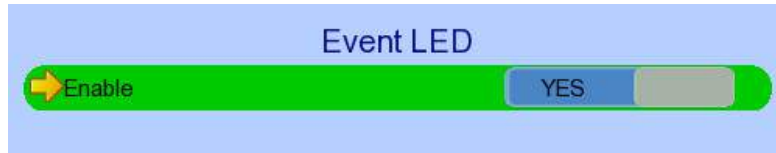
    Enable   Enable / disable LED action of that event

4.4.4.8. Live Camera

Event associated live camera displays real time live video of pre-selected cameras when an event is triggered. Operator can immediately know what is happening at the site. The live camera action would only be performed once until user clears the event.

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**Live Camera**]
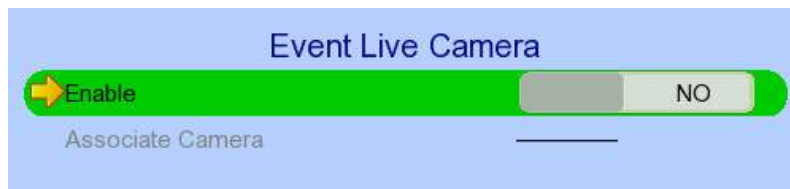
    Enable   Enable / disable live camera action of that event
    Associate Camera   Select cameras to be displayed when event triggers

4.4.4.9. PTZ

Event associated PTZ camera will move to set preset position when an event is triggered. Operator can immediately know what is happening at the site. The PTZ action would only be performed once until user clears the event.

[**Main Menu**] → [**Event Handler**] → **Any Event** → [**Action**] → [**PTZ**]

Enable	Enable / disable live camera action of that event
Associate Camera	Select PTZ cameras to be displayed when event triggers
Preset Number	Select preset position of PTZ camera when event triggers

4.4.5. Footage Extraction

Video footage can be extracted to USB flash device for evidence purposes. Back up video can be played in any PC without special software.

There are 2 extraction modes available:
- Normal mode: Extract recording at original frame rate, with audio
- Quick: Extract recording at lower than it's frame rate without audio, so that this mode can save extracted file size

[**Main Menu**] → [**Footage Extraction**]

USB Storage Device	Select device for saving the footage
FORMAT	Format the selected USB device
Mode	Set extraction mode
	- Normal: Extract at the same recording frame rate, with audio
	- Quick: Extract selected cameras at low frame rate, no audio
Channel	Choose video channels to extract (Select or Quick mode only)
Start Date	Set start date of the footage
Start Time	Set start time of the footage

Duration	Set video length of the footage
Protection	Enable / disable password protection
Password	Set extraction password (Password protection enabled only)
EXTRACT	Start backup using above settings

4.4.6. Throughput Control

Video monitoring performance can be affected by network speed. Throughput control can limit the output data rate of the video recording server according to user setting, which should be configured to fit the network bandwidth to avoid delay or rusty video.

[**Main Menu**] → [**System**] → [**Network Setting**]

Auto IP	Enable / disable auto IP from DHCP
IP Address	Set IP address of the video recording server
Port	Set port number of the video recording server
Subnet	Set subnet mask of the video recording server
Gateway Enable	Enable / disable the gateway
Gateway	Set gateway of the video recording server
Auto DNS	Enable / disable auto DNS
Primary DNS	Set primary DNS of the video recording server
Secondary DNS	Set secondary DNS of the video recording server
Broadband Stream Throughput	Set the data rate of broadband connection
Narrowband Stream Throughput	Set the data rate of narrowband connection
Mobile Stream Throughput	Set the data rate of mobile connection
sureLINK Setting	Change sureLINK settings
IP Filtering	Change IP filtering settings
3G USB Modem	Change 3G modem settings

4.4.7. Switch Control

The external switches connected to the video recording server can be controlled through the switch control function. The switch won't follow the latch duration and action delay. It will remain at that state until user toggles it again or an event associated with switch action has triggered.

[**Main Menu**] → [**Switch**]

Switch 1 – Switch 4   Toggle the status of the switch
Switch Setting   Change switch settings

4.4.8. Time Synchronisation

The time in TeleEye RX can be synchronised with timeserver in the network using the time synchronisation function. The RX can work as a timeserver if internal time server is enabled.

[**Main Menu**] → [**System**] → [**Date/Time**]

Time Synchronisation Enable	Enable / disable time synchronisation
Time Zone	Set the time zone
Country	Select a country
Date	Set system date (Time sync disabled only)
Time	Set system time (Time sync disabled only)
CHANGE TIME	Save the time settings (Time sync disabled only)
Primary Time Server	Set the primary time server (Time sync enabled only)
Secondary Time Server	Set the secondary time server (Time sync enabled only)
Synchronise Time	Perform time synchronisation (Time sync enabled only)

[**Main Menu**] → [**System**]

Server Information	Display general information of the video recording server
Registration Checking	Enable / disable remote registration check
Built In Web Server	Enable / disable built in web server
Built In Time Server	Enable / disable time server function
Language	Set display language
Date Time	Change date and time settings
Network Setting	Change connection, throughput and 3G modem settings
External Keyboard	Set external keyboard settings
Camera Setting	Change camera settings
Privacy Mask Setting	Set PTZ privacy mask
General PTZ Setting	Set PTZ arguments
Display Setting	Change local monitoring and audio settings
Audio Setting	Set audio input and output
Lock Keys	Change key lock settings
Firmware Upgrade	Upgrade firmware from USB device
Setting Import Export	Import or export setting files
Restore Factory Setting	Restore default settings
Restart System	Restart the system
Shutdown System	Safe shutdown the system

4.4.9. Import and Export

Configurations of the video recording server can be exported to an USB flash device for backup purpose, or to copy the settings to another video server. When something goes wrong, previously exported settings can be applied through the import function.

[**Main Menu**] → [**System**] → [**Setting Import Export**] → [**Import**]
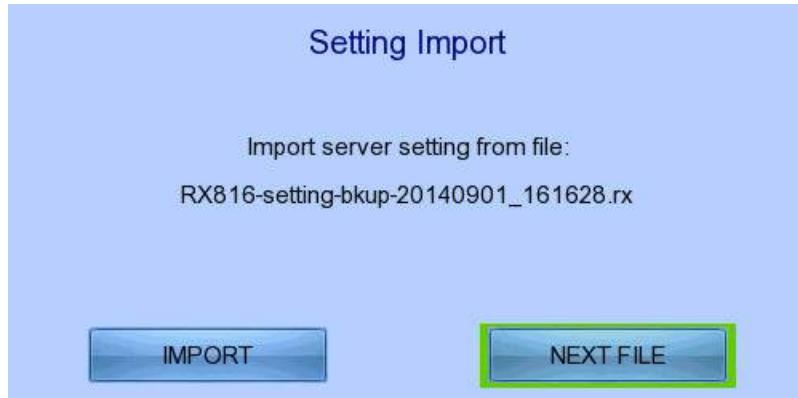
Import	Import the setting files from USB flash device
Cancel	Cancel the operation

[**Main Menu**] → [**System**] → [**Setting Import Export**] → [**Export**]

Video	Export camera settings if selected
Recording	Export recording settings if selected
Switch	Export switch settings if selected

Date/Time	Export date/time settings if selected
Connection	Export network settings if selected
Event Handler	Export event settings if selected
E-mail/Dialback	Export e-mail and dialback settings if selected
Server	Export server settings if selected
OSD	Export OSD settings if selected
Select All	Select / deselect all settings
Export	Export the selected settings to USB flash device

4.4.10. User Account

TeleEye RX supports multiple user accounts with flexible access rights.

Users with the "User Account" access right can add new account, modify existing account, or delete an account. When system startup or local user logout, access right of local menu will follow the setting of "Power On Default Right". Please refer to the appendix for detail of each security mode.

[**Main Menu**] → [**User**]

Current User	Display current log in user
Add Account	Add new account
Edit/Delete Account	Edit or remove an account
Power On Default Right	Access right when not logged in
Log out	User log out
Log In As Other User	User log in

[**Main Menu**] → [**User**] → [**Add Account**]

User Name	User name of new account	(4 – 16 characters)
Local Password	Password for local log in	(4 – 10 characters)
Retype Local Password	Confirming the password	
Local Time Out	Set the auto logout time when no local operation	
Account Setting Enable	Access right setting	
System Setting Enable	Access right setting	
Recording Setting Enable	Access right setting	
Video Backup Enable	Access right setting	
Event Control Enable	Access right setting	
Camera Control Enable	Access right setting	
Playback Enable	Access right setting	
Audio Enable	Access right setting	
Video Monitoring Enable	Access right setting	
Switch Enable	Access right setting	
Confirm	Create the account	

[**Main Menu**] → [**User**] → [**Edit/Delete Account**]

Most settings are the same as [**Add Account**] menu.

Local Login Enable	Enable / disable local log in (with remote log in right only)
Save	Save the account settings
Delete	Delete the account
← →	Show settings of previous / next account

[**Main Menu**] → [**User**] → [**Power On Default Right**]

Most settings are the same as [**Add Account**] menu.

Power On Default Right

Account Setting Enable	YES
System Setting Enable	YES
Recording Setting Enable	YES
Video Backup Enable	YES
Event Control Enable	YES
Camera Control Enable	YES
Playback Enable	YES
Audio Enable	YES
Video Monitoring Enable	123456789ABCDEFG
Switch Enable	1234

SAVE

Save   Save the access rights when server startup or local user log out

4.4.11. SMS

User can operate 3G network connection of video server or make the video server dialback to assigned IP and port through sending SMS message when compatible 3G modem is connected to the server. For SMS dialback operation, established 3G connection will close automatically about 10 minutes if no dialback user connect to GX under SMS EVENT mode .

The formats of SMS messages and functions are list in table:

Format	Function
teip<ip>:<port>endip	Establish 3G connection by 3G dialup profile, then dialback to assigned ip and port. (try dialback only 3G connection established successfully)
hang	Disconnect 3G network immediately (only take effect in SMS EVENT mode)
profile X	Set 3G dialup profile to X (1 or 2)

[**Main Menu**] → [**System**] → [**Network Setting**] → [**3G USB Modem**]

Manufacturer   Manufacturer name

Model	Model
Revision	Firmware version
Operator	3G network operator
Signal Strength	3G network signal strength from 0 to 100
IP Address	3G network IP
Driver Version	Modem driver version
Enable	Enable/ disable 3G modem
Dialup By	Set dialup mode
	- SMS EVENT: Dialup triggered by sms message
	- STARTUP: Dialup after RX startup
Active Profile	Set profile for 3G dialup
Profile Setting	Change profiles settings
Dialup Test	Start dialup test
UPGRADE DRIVER	Upgrade 3G modem driver from USB device

Section 5:   Remote Operation

5.1.   Network Setup

5.1.1.   Port Mapping Setup

Port mapping, also called port forwarding or punch-through, enables you to create a permanent translation entry that maps a protocol port on your gateway machine to an IP address and protocol port on your private LAN. This process enables you to run a public Internet service on a machine that is otherwise hidden from the Internet by your gateway.

To access your TeleEye RX video recording server outside your private LAN, you need to do port mapping for your TeleEye RX. For detail setup procedure, please refer to user manual of your router. After finishing the port mapping, you can access your TeleEye RX anytime and anywhere by the IP address and port number through web browser. The address should be in this format: http://IPAddress:Port.

☞ *The default port number is 1024, which can be used for port mapping.*
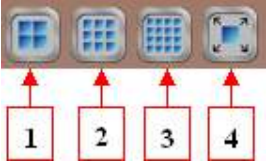
5.1.2. sureLINK Setup
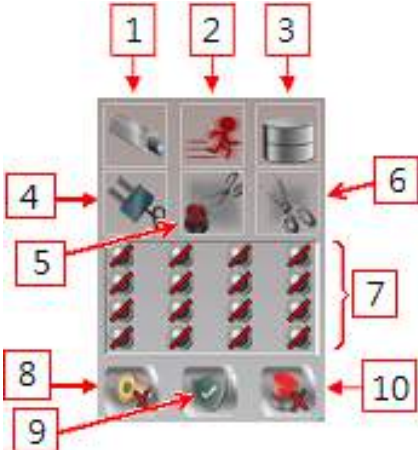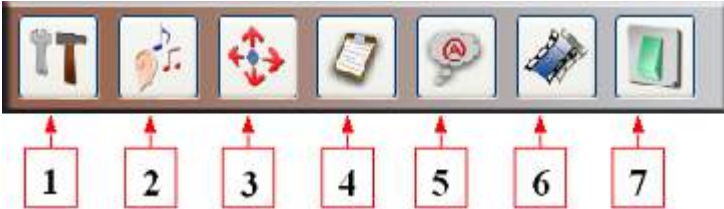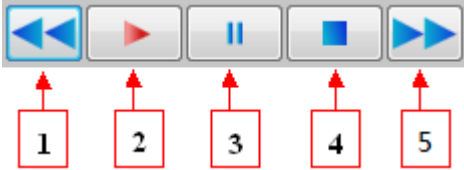
sureLINK technology is a group of additional functions and services available in TeleEye RX so as to make it connect to the Internet in any connection methods. With a sureLINK address, you don't have to memorize the IP address and port number of the transmitter, or worry about the dynamically changed IP address. If you can only use broadband dial-up account to connect to the Internet through your computer, sureLINK provides a solution for sharing the Internet connection between your computer and the video recording server.

Please refer to the appendix for procedures and configurations on setting up sureLINK.

5.2. Icons Description

When monitoring using web browser, user may see different icons on the control panel or the video. A summary of their meanings can be found in the following table

Icon	Description
	Go to setting page
	Logout
	Recording
	Playback
	Screen mode selection panel 1. Quad screen\ 2. 3x3 screen 3. Hex screen 4. Full screen
	Camera selection panel

	Event status panel 13. Video loss event 14. Motion event 15. HDD event 16. Power failure event 17. Alarm tamper event 18. System tamper event 19. Alarm event 20. Siren on/off 21. Armed / Disarmed 22. Clear event
	Show menu panel
	Menu panel 1. Server Setting 2. Audio 3. PTZ 4. View log 5. Advanced 6. Footage extraction 7. Switch
	On screen event status 1. Motion 2. Video loss
	Playback panel 1. Rewind 2. Play 3. Pause 4. Stop 5. Fast forward
	Digital PTZ
	Analogue PTZ

5.3. Basic Operation

5.3.1. View Live Video

With the built-in web server function enabled, user can access the TeleEye RX video recording server easily through web browser.

1. Enter IP address plus port number in the format http://IPAddress:PortNumber (e.g. http://192.168.0.12:1024) or *sure*LINK address in web browser address bar. Procedures for getting a *sure*LINK address can be found in the appendix.

2. By default, basic security mode is applied and user name is not required. Enter password and press [**Connect**]. (The default administrator password is "000000", details can be found in the registration code sheet)

3. Use screen mode selection panel and camera selection panel (circled in red color in below figure) to view video.

☞ *If a cross sign is shown at the top left corner of the web page, it implies that Java JVM is not installed in the computer. It can be obtained through the following methods*

- *Install through the software CD in the package*
- *Download from http://www.java.com and install it*

If the camera setting does not fit the environment, select [**Server]** → [**Video/Audio Setting**] → [**Video Properties**] to change the configuration.

5.3.2. Recording

According to different situations, user can select suitable recording mode.

A.   Manual Recording

The start/stop operation is controlled manually by operator. Recording will be performed on all cameras once started

1. To start or stop manual recording, click on [**Recording**] button on the main panel.

2.   To change recording settings, go to [**Server**] → [**Recording**] in setting page.

B. Schedule Recording

TeleEye RX supports 2 types of recording schedule: Normal and Motion. Motion recording records video only when motion is detected in selected surveillance area.

1. To start or stop schedule recording, click on [**Recording**] button on the main panel.
2. To view or edit the schedules, go to [**Server**] →[**Recording**] → [**Scheduled Recording**].
3. To select a schedule, simply click on the graphical representation of the schedule. A list of that day's schedules will show on the right hand side.

C. Recording Rebuild

Recording log can be recovered by using recording rebuild function when user can not play back the recording. User can go to [**Server**]→[**Recording**], under part of [**Maintenance**] click "Start " to start rebuild process.

5.3.3. Playback

Recorded video can be played back through web browser without affecting the recording process

1. Click on [**Playback**] button to show the recording log.

2. Choose a log entry and select a camera to start playback.

Select one camera for playback in Turbo / QUAD 400fps recording mode

CAM 1

確定　　取消
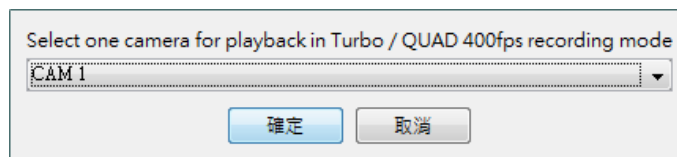
5.4. Advanced Operation

5.4.1. Hard Disk Formatting

Hard disk formatting is done to reconstruct the disk in recognisable format, clean up the recording space, and redeem the file allocation. Beware, formatting will erase all data within the hard disk, backup important data beforehand. Remote login password is required for this operation.

1. Go to [**Server**]→ [**HDD Management**] in remote setting page.

  ☞ *Do not close the browser or alter the hard disk until the process is complete.*

5.4.2. Hard Disk Scanning

Disk scanning is performed in an attempt to fix noticeable hard disk error, and to enhance its performance and reliability. Remote login password is required for this operation.

1. Go to [**Server**]→ [**HDD Management**], click "Scan all disk" in remote setting page.
  ☞ *Do not close the browser or alter the hard disk until the process is complete.*

5.4.3. Hard Disk Turn On/OFF

Problematic disk can be drawn from recording disk list by turning it off, so that the disk will not affect reliability of system. Remote login password is required for this operation.

1. Go to [**Server**]→ [**HDD Management**], click 🔒 icon to unlock disk list, then turning on/off any

  disk in remote setting page.
  ☞ *Restart system is required for any disk turn on or off*

5.4.4. Event Handling

5.4.4.1. Arm/Disarm

Arm/Disarm input is used for enhancing security level of the surveillance area.

1. Go to [**Server**], select [**Event Matrix**] → [**Event**] → [**Arm/Disarm Input**].

2. To change arm/disarm settings, click on [**Arm Setting**].

3. To add or remove arm schedules, click on [**Schedule Arm/Disarm Setting**]. Use the tap [**Normal**] and [**Holiday**] on the top left corner to select normal schedule or holiday schedule.

5.4.4.2. Security Switch

Security switch is only configurable when Arm/Disarm is enabled and set to hardware mode. It is used to activate entry delay and terminate exit delay for entry/exit zone alarm.

1. Go to [**Server**], select [**Event Matrix**]→ [**Event**] → [**Security Switch**].

2. To configure security switch settings, click on [**Switch Setting**].

5.4.4.3.Alarm

Alarm can be used to detect many events, such as fire and illegal entering by unauthorised personnel.
1. Go to [**Server**], select [**Event Matrix**] → [**Event**] → [**Alarm**].
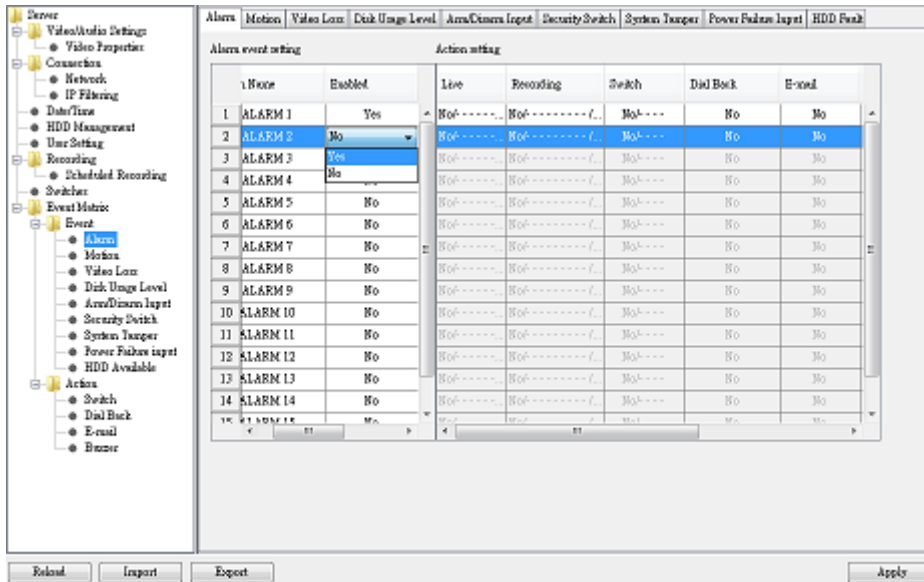
2. Click on [**Alarm Setting**] and select appropriate settings in the pop up menu.
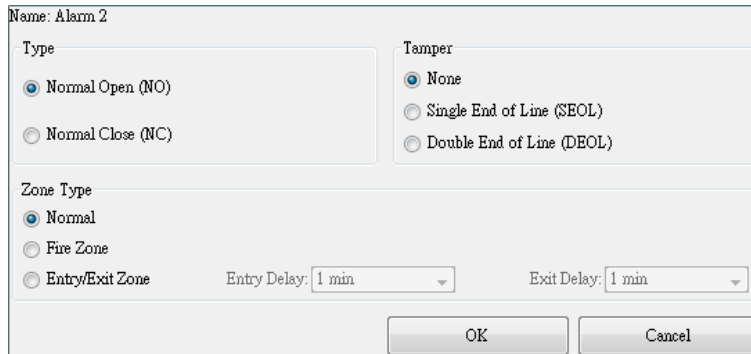
5.4.4.4. Motion

Motion event is triggered when movement is detected inside the surveillance area of a camera.
1. Go to [**Server**], select [**Event Matrix**]→ [**Event**]→ [**Motion**].

2. Click on [**Setting**] to pop up [**Motion Setting**] menu. Left click mouse and drag to select the surveillance area or right click mouse and drag to deselect the area. Outlines of selected blocks will be displayed in red colour. Blocks filled with red colour means motion is detected.

3. Click on [**Zone Type**] to change the operational zone.

5.4.4.5. Video Loss

Video loss event is triggered when the video recording server receives no signal from the camera. A blue screen would be displayed when this happens.
1. To enable video loss detection, go to [**Server**]→ [**Event Matrix**]→ [**Event**]→ [**Video loss**].

5.4.4.6. System Tamper

System tamper prevents someone from breaking into the cabinet and destroying the video recording server.
1. To change the event settings, go to [**Server**]→ [**Event Matrix**]→ [**Event**]→ [**System Tamper**].

5.4.4.7. Power Failure

This event is triggered when any power failure condition is detected.
1. To change the event settings, go to [**Server**]→ [**Event Matrix**]→ [**Event**]→ [**Power Failure Input**].

5.4.4.8. Disk Usage

Disk usage event is triggered if hard disk usage exceeds user specified warning level.
1. To change the event settings, go to [**Server**]→ [**Event Matrix**]→ [**Event**] → [**Disk Usage Level**].

5.4.4.9. HDD Fault

HDD available event is triggered when hard disk change or failure is detected. This event is enabled by default.
1. To disable the event, go to [**Server**]→ [**Event Matrix**]→ [**Event**] → [**HDD Fault**].

5.4.4.10.   System restart

The system restart event will be triggered if the TeleEye RX recording server is restarted or powered off abnormally. Pre-selected actions will be taken immediately after the system is started up again.
1. To enable the event, go to [**Server**]→ [**Event Matrix**]→ [**Event**] → [**System Restart**].

5.4.5. Event Action

User can define the set of actions to be taken by TeleEye RX when an event is triggered. This section shows the configuration of action settings.
☞ *Please refer to 4.4.4. Event Action for descriptions of different actions and their settings*

5.4.5.1. Recording

If an event is associated with recording action, recording will be performed on pre-selected cameras when this event is triggered.
1. To change the settings, go to [**Server**] → [**Event Matrix**] → [**Event**]. Choose an event and click on [**Recording**] column.

5.4.5.2. Switch

If an event is associated with switch action, user selected switches will turn on when this event is triggered.

1. To change the switch properties, go to [**Server**] → [**Event Matrix**] → [**Action**] → [**Switch**].
2. To enable the switch action, go to [**Server**] → [**Event Matrix**] → [**Event**]. Choose an event and click on [**Switch**] column.

5.4.5.3. Dialback

If an event is associated with dialback action, the video recording server will request for connection automatically when this event is triggered.

1. To change the settings, go to [**Server**] → [**Event Matrix**] → [**Action**] → [**Dial Back**].

2. To enable the action, go to [**Server**] → [**Event Matrix**] → [**Event**]. Choose an event and click on [**Dial Back**] column.

☞ *The Java web page can't respond to dialback request, software like TeleEye sureSIGHT or sureGUARD needs to be installed to the PC to perform dialback.*

5.4.5.4. E-mail

If an event is associated with e-mail action, a notification e-mail will be sent when this event is triggered.

1. To change e-mail settings, go to [**Server**] → [**Event Matrix**] → [**Action**] → [**E-mail**].

2. To enable the action, go to [**Server**] → [**Event Matrix**] → [**Event**]. Choose an event and click on [**E-mail**] column

5.4.5.5. SMS

If an event is associated with SMS action, a notification sms will be sent when this event is triggered.

1. To change SMS settings, go to [**Server**] → [**Event Matrix**] → [**Action**] → [**SMS**].
2. To enable the action, go to [**Server**] → [**Event Matrix**] → [**Event**]. Choose an event and click on [**SMS**] column

5.4.5.6.Buzzer

If an event is associated with buzzer action, a "Beep" sound will be produced to draw nearby operator's attention when this event is triggered.

1. To change buzzer settings, go to [**Server**] → [**Event Matrix**] → **[Action]** → **[Buzzer]**.

2. To enable the action, go to [**Server**] → [**Event Matrix**] → **[Event]**. Choose an event and click on [**Buzzer**] column.

5.4.5.7.Event LED

If an event is associated with LED action, the LED built on the front panel of TeleEye RX will blink when this event is triggered. This action is enabled by default.

1. To disable the action, go to [**Server**] → [**Event Matrix**] → **[Event]**. Choose an event and click on [**LED**] column.

5.4.5.8.Live Camera

If an event is associated with live camera action, real time live video of pre-selected cameras will be displayed immediately when this event is triggered.

1. To change the settings go to [**Server**] → [**Event Matrix**] → **[Event]**. Choose an event and click on [**Live**] column.

5.4.5.9.PTZ

If an event is associated with PTZ camera action, associated PTZ camera will move to preset position when this event is triggered.

1. To change the settings go to [**Server**] → [**Event Matrix**] → **[Event]**. Choose an event and click on [**PTZ**] column.
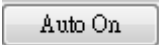
5.4.6. *Pan Tilt Zoom (PTZ)*
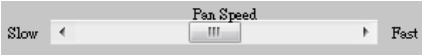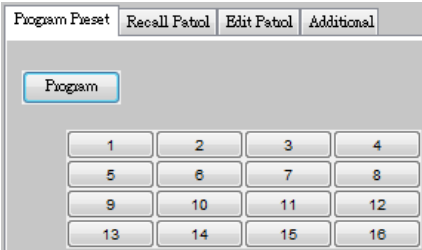
PTZ operations can be performed easily when a PTZ supported camera is connected to TeleEye RX video recording server.

1. Go to [**Menu**] → [**PTZ**] to open the PTZ control panel.

The meaning of each icon is summarized in the following table:

Button	Description
▲	Tilt the camera up
▼	Tilt the camera down
◄	Pan the camera left
►	Pan the camera right
Zoom in (+)	Zoom in
Zoom out (−)	Zoom out
Auto On	Pan automatically until [**Auto Off**] is clicked

Auto Off	Stop the auto pan operation
Pan Speed — Slow ◄ ▬ ► Fast	Set the pan speed
Tilt Speed — Slow ◄ ▬ ► Fast	Set the tilt speed
Program Preset | Recall Patrol | Edit Patrol | Additional — Program — 1 2 3 4 / 5 6 7 8 / 9 10 11 12 / 13 14 15 16	Configure the desired direction and lens' settings as the preset positions for recall preset and patrol operation
Recall Preset — 1 2 3 4 / 5 6 7 8 / 9 10 11 12 / 13 14 15 16	Move to the pre-defined preset location by clicking the 16 numeric buttons
Program Preset | Recall Patrol | Edit Patrol | Additional — Add Delete — 1 2 3 4 / 5 6 7 8 / 9 10 11 12 / 13 14 15 16	Add or delete preset positions associated with patrol tour using the 16 numeric buttons
Program Preset | Recall Patrol | Edit Patrol | Additional — Patrol 1 Patrol 2 / Patrol 3 Patrol 4 / Stop Patrol	- Start the patrol operation when [**Patrol 1**] is clicked - Stop the patrol operation when [**Stop Patrol**] is clicked
Program Preset | Recall Patrol | Edit Patrol | Additional — Set Default Limit R/L / Clr. Patrol 1 Tour Rec. / Home On A9 / Home Off A8 / OSD A10	- Restore default setting by clicking [**Set Default**] - Delete the patrol 1 by clicking [**Clr. Patrol 1**] - Move to preset 1 automatically when left idle for a certain time, with [**Home On**] activated - Cancel the [**Home On**] operation by clicking [**Home Off**]

5.4.7. Footage Extraction

Video footage can be extracted through network.

1. Go to [**Menu**] → [**Footage Extraction**]

2. When extraction completes, open the selected folder and double click "**TPPlayer.exe**" to view the extracted video

5.4.8. Throughput Control

Throughput control can limit the output data rate of the video recording server. To avoid possible downgrade in video monitoring performance, this setting should be configured to fit the network bandwidth.

1. Go to [**Menu**] → [**Connection**].

5.1.1. Switch Control

Besides controlling through event action, user can also control the external switches directly.

1. Go to [**Menu**] → [**Switch**] and click on a button to toggle the switch status.

2. If user wants to change the switch settings, go to [**Server**] → [**Switches**].

5.4.9. Time Synchronisation

The time in the video recording server can be synchronised with timeserver using the time synchronisation function.

Section 14:   Go to [**Server**] → [**Date/Time**].

Section 15:   After changing the time settings, user can click [**Time Synchronisation Test**] to perform testing.

5.4.10. Import and Export

Settings of the video recording server can be exported to or imported from a remote PC through network. The procedure is shown as follows:

A. **Import**

Note that the video recording server will be restarted automatically after import process is completed.

1. Go to Setting page, select [**Import**] at the lower left corner of the page

2. In the pop up menu, select the setting file to be imported.

B. **Export**

1. Go to Setting page, select [**Export**] at the lower left corner of the page. Select the configurations to be exported.

Upon completion, a message box will pop up and show the path of the exported file.

Upon completion, a message box will pop up and show the path of the exported file.

5.4.11. User Account

Different users are allocated with their own account and corresponding access rights. Only accounts with the "**User Account**" access right have the privilege to modify the account settings. Please refer to the appendix for details.

2. Go to [**Server**] → [**User Setting**].

3. To add new account, click [**Add**]. To modify or remove an account, select an existing account and click [**Edit**] or [**Delete**] respectively.

☞ *User name of an account cannot be changed after creation.*

5.4.12.   Maintenance Log Backup

Maintenance log of the video recording server can be extracted.

Appendix A : Go to [**Server**] → [**Maintenance Log Backup**], click "start" to start backup process.

Appendix A : Safety Instruction

Read the following instructions carefully, and save them for future reference.

1. Follow all warnings and instructions marked on the product and this user guide.
2. Do not place this product on unstable cart, stand, or table. The product may fall, causing serious damage to the product.
3. Slot and openings of the casing are provided for ventilation; to ensure reliable operation of the product and to prevent it from overheating, these openings must not be blocked or covered. The openings should never be placed near a radiator or heat source, or in a built-in installation unless proper ventilation is provided.
4. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
5. The hard disk holder contains metal parts that may cause injury to user. Handle with care when installing and removing hard disk.
6. Do not attempt to service this product yourself, to avoid possible exposure to dangerous voltage points or other risks.

Appendix B : Limited Warranty

Conditions, limitations and liabilities of this warranty:

1. Signal Communications Ltd. (hereinafter called TeleEye) provides free repairing labour and free repairing parts for the first 12 months. Please present the Warranty Card and the original invoice when you are asking for service support.

2. When necessary, TeleEye staff shall request a remote access inspection or trouble shooting through internet or mobile media.

3. When service is required, the Customer is responsible for all the transportation costs.

4. Outdoor services are not included. Subject to TeleEye, outdoor services will be provided at extra charges.

5. This warranty does not extend to cover any damages or malfunction resulting from disaster, environmental factor, abnormal humidity/temperature, improper voltage, electrostatic discharge, misuse, negligence, ignorance, accident, mold, or repairs /modifications made by any person(s) other than the authorised personnel of TeleEye.

6. TeleEye reserves the right to charge Customer an inspection fee, on-site service fee or cost of parts if (i) no fault in the equipment can be found during inspection or (ii) the defect is caused at conditions those mentioned in point 5 above or (iii) Customer fail in providing access methods to the site or the equipment, e.g. specified access permit or key. Such determination is up to the sole discretion of TeleEye.

7. The warranty is void if any of the cabinet seal has been removed or opened if there is any such sign not being made by any authorised personnel of TeleEye.

8. Under no circumstance shall TeleEye be liable for any damages to any parties so caused by the usage of the above specified equipment or so caused during service provision.

9. The conditions, limitations and liabilities of this warranty card may be extended to further terms and conditions or superseded by other terms and conditions when otherwise specified on any of the products.

10. Customer shall be responsible for backing up the data contained in the disk products.

11. TeleEye shall have no responsibility arising out of any damage to, or loss of the data contained in the disk products.

12. All the above determinations are up to the sole discretion of TeleEye.

Appendix C : sureLINK Technology

sureLINK technology is available in TeleEye RX which enables you to connect to the video recording server with broadband dynamic IP Internet connection. If you can only use broadband dial-up account to connect to the Internet through your computer, sureLINK provides a solution for sharing the Internet connection between your computer and the video recording server.

sureLINK is a group of additional functions, services and software provided for the video recording server so as to make it connect to the Internet in any connection methods. Such function can only be used if you have applied for this service though. After you have done so, you also need to configure the video recording server to make sureLINK available. This section will help you configure and use it.

With the sureLINK technology, the powerful TeleEye RX can work on broadband Internet economically and cost effectively, and perform remote live video monitoring anytime and anywhere conveniently.

sureLINK Address
You can apply for a sureLINK address (domain name), such as www.hkpublic.TeleEye.TeleEye.net, for your video recording server. You can use this name to login or browse the built-in web server. One of the advantages is that you are not required to memorize the IP address and port number (e.g. 210.177.50.156:1024) of the video recording server. Since the sureLINK address is fixed while the IP address may change periodically (in case dynamic IP is used), you do not need to worry about the expiration of the IP address. The sureLINK address can be used in video recording server web browsing to see live video on standard web browser (e.g. IE, Netscape).

Refreshing Rate
When sureLINK address feature is enabled, your RX video recording server will periodically update its current IP address to our database to ensure that the sureLINK address is always forwarded to a valid IP. This update period can be set through OSD menu or web browser.

A. sureLINK Application

You can apply for sureLINK by visiting our web site at http://www.TeleEye.com. Follow the steps below:

1. Enter http://www.TeleEye.com in your web browser address bar to access our web site. Click on [**Customer Login**] button.
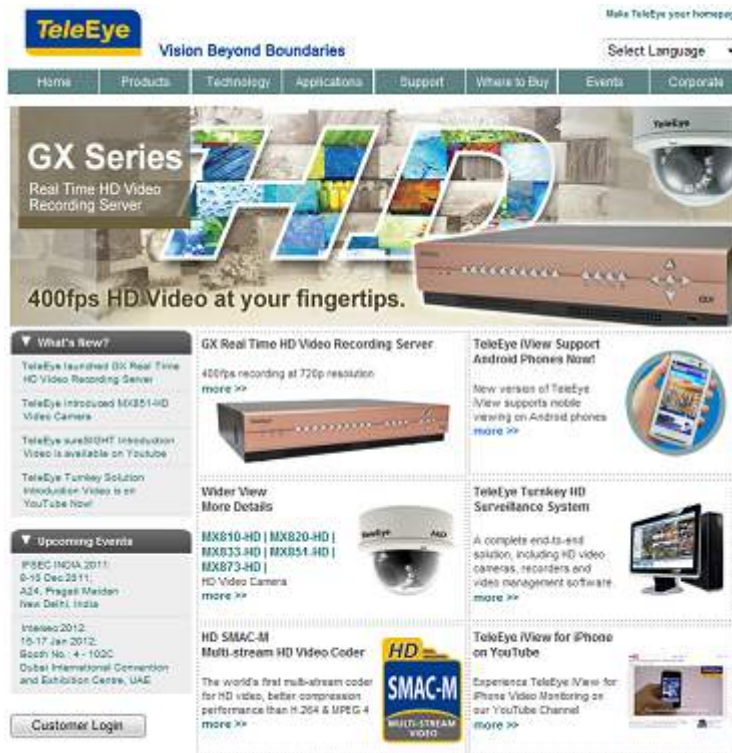
2. Login using your registered name and password. New customers need to sign up first.
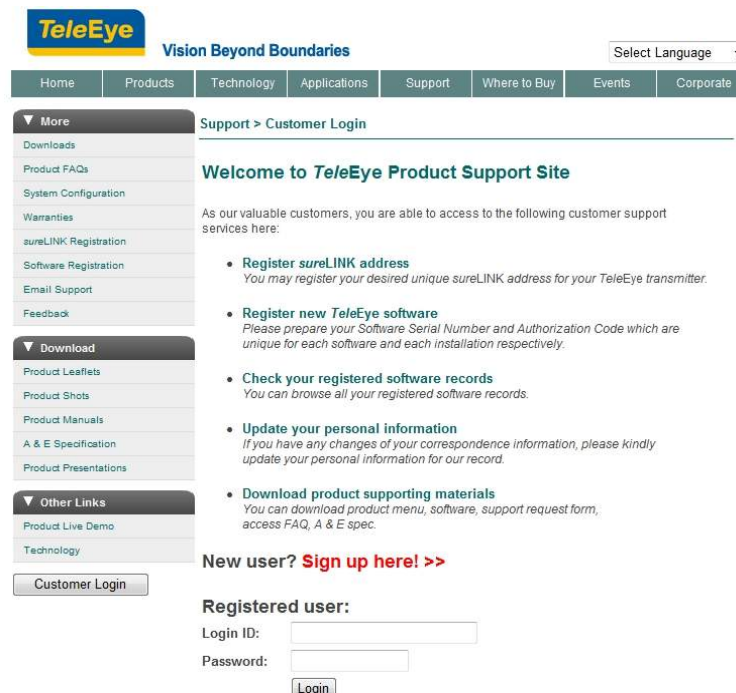
3. Select [**sureLINK Registration**].

Click on [**sureLINK Address Registrations**].

4. Enter a sureLINK address (Domain Name), your video server serial no. and registration code in the fields provided. Then click on [**Register**] button. The process is then completed.

The application will be processed once we received your domain name registration. Normally, it requires about 1 working day to activate sureLINK for your TeleEye RX. You will receive a notification mail when your sureLINK service is ready.

B. sureLINK Modification

Since the sureLINK (Domain name) address corresponds to a single video recording server, if you change from one video recording server to another one, you have to inform us to update our database record. To do this, you can visit our TeleEye Product Support again and follow the steps below:

1. Login in at http://www.TeleEye.com
2. Go to [**sureLINK Registration**] ➔ [**Associate Device Modification**]

3. Select a sureLINK address (Domain Name) you want to modify

4. Enter the old registration code, new video recording server serial number and new registration code in the fields provided.

5. Click [**Modify**] button to submit the form.

If the above procedure is completed successfully, the new sureLINK will become effective immediately.

C. **sureLINK Setup in TeleEye RX**

After getting a sureLINK address, configure the address to RX through web browser

1. Use IP Setup Utility to access RX web page by double clicking the row represent your RX video recording server
2. Click on [**Menu**] ➔ [**Server Setting**], select [**Connection**] ➔ [**Network**]
3. Scroll down to sureLINK section

4. Select "**Using sureLINK address**" to enable sureLINK function
5. Type in the registered address
6. Select a time period for RX to update its IP address to sureLINK server

Appendix D : Firmware Upgrade

Please follow the following procedures to upgrade the TeleEye RX to a new version of firmware. User can choose to perform the upgrade locally using USB flash device, or through a remote PC.

USB Upgrade

Step 1:	-	Get ready the TeleEye RX firmware upgrade file *.rxp.
Step 2:	-	Get ready an empty USB flash device
	-	Download the firmware upgrade file to the root directory of the USB, for example, E:*.rxp.
Step 3:	-	Turn on the RX video recording server.
	-	Plug the USB device to the USB port of the video recording server.
Step 4:	-	Enter the menu [**Main Menu**] → [**System**] → [**Firmware Upgrade**]
	-	Click [**Upgrade**] to start the upgrade.
Step 5:	-	After upgrade, the video recording server will be restarted.
	-	Enter the menu [**Main Menu**] → [**System**] → [**Server Information**] to check the firmware version.

Network Upgrade

Step 1:	-	Get ready the TeleEye RX firmware upgrade file *.rxp.
Step 2:	-	Turn on the RX video recording server.
Step 3:	-	Connect to the video recording server through web browser.
Step 4:	-	Go to the setting page, select [**Server**], click **"Upgrade Firmware"**.
	-	Click [**Browse**] to select the path of the firmware upgrade file.
	-	Click [**Start**] to start the upgrade.
Step 5:	-	After upgrade, the video recording server will be restarted.
	-	Go to the setting page, check the firmware version at [**Server**] → [**Version**].

Appendix E : Security Mode

TeleEye RX support multiple user accounts and flexible access right. The comparison of the security modes can be found in the following table:

Description	
Number of account	20
Account apply on	Remote software and local OSD
Password length	4 – 10
Password encryption	Yes
Login — Remote software	User name and password
Login — Local menu	Only password
Access right	Video monitoring
	Audio
	Playback
	Camera control
	Event control
	Switch control
	Video backup
	Recording
	System setting
	User account

☞ *Both security modes support 6 concurrent users*

User account

Account structure

Type	Description	Remark
General setting		
User name	Login user name from remote software	4 – 16 characters Case insensitive Unique between each account
Account type	Local / Network / Both	Allow user to login from local OSD / remote software / both
Access right	Access right of the user account	-
Network account type setting		
Network password	Login password from remote software	4 – 10 characters Case insensitive
Local account type setting		
Local password	Login password from local OSD	4 – 10 numeric characters Unique between each account
Local time out	Automatic log out time when keypad and mouse idle	Except in playback state

By default, 2 preset accounts: ADMINISTRATOR and USER1 are stored in the video recording server. The account ADMINISTRATOR cannot be removed. When TeleEye RX startup or local user logout, access right of local menu will follow the setting of "Power On Default Right".

Administrator account: ADMINISTRATOR

Type	Default	Remark
User name	ADMINISTRATOR	Fixed
Account type	Both	Fixed
Access right	All	Fixed
Network password	000000	Available to change
Local password	000000	Available to change
Local time out	15 mins	Available to change

Normal account: USER1

Type	Default	Remark
User name	USER1	Fixed
Account type	Both	Available to change
Access right	Video monitoring	Available to change
Network password	123456	Available to change
Local password	123456	Available to change
Local time out	15 mins	Available to change

Power on default right

Type	Default	Remark
Access right	None	Available to change

Advanced security mode – Access right

Group	Features Involved
Video monitoring [#]	Basic video monitoring with fixed cameras
	Browsing the event status **
Audio	Audio monitoring **
	PA with microphone, PA with pre-recorded voice clips
Playback	Video playback **
	Browsing event log, connection log, setting log and operation log
Camera control	PTZ **
Event control	Clear event
Switch control	Switch control
Video backup [1]	Video extraction and backup
Recording [1]	Start / stop recording
	Start / stop schedule recording
System setting [1]	Video format, camera installation
	Change live video quality brightness, contrast
	Network setting, throughput control setting
	Date/Time setting
	Hard disk formatting, scanning
	Recording setting
	Switch setting
	Event setting
	Firmware upgrade
	Shutdown / restart
User account [2]	User account setting
	Changing of security mode
	Setting import / export
	Restore factory setting

[#]   At least one camera should be selected

**   Video monitoring dependency. For example, if user has no access right on camera 2 monitoring, he cannot browse event status, control PTZ and playback on this camera.

[1]   All video monitoring, audio and playback access right groups will be enabled automatically

[2]   All access right groups will be enabled automatically

Appendix F : General Terms Discussion

Before you start configuring the video recording server, you may need to know some of the terms and information used in the video recording server.

Registration Checking

When this feature of TeleEye RX is enabled, users need to do the registration in the remotely connecting software (e.g. JAVA web page, TeleEye sureSIGHT) for authorization before the video recording server can be used. This option can be applied to improve the security protection for the organisation when higher security level is required. If the video recording server is decided to open for public use, this feature can be disabled so that public users do not need to register for viewing live video remotely through network.

Site Monitoring Method

There are two methods to link up with the video recording server to view video:
- TCP/IP in LAN
- TCP/IP on the Internet using Broadband and Internet Router

Depending on the connection method chosen, follow Section 3 to configure the video recording server before use so as to make it function properly.

The built-in web server or TeleEye surveillance applications (e.g. sureSIGHT) contains all the settings for different remote video monitoring methods. Different connection methods may have different settings, and some of the setting configured in one connection method may not be applicable to other method.

It is recommended that the above items should be configured before the first time you use the video recording server no matter which connection method you use. The setup and configuration procedures are discussed in Section 3: Setup for Local and Remote Monitoring.

Appendix G : Audit Trail Log Description

A. Audit Trail Log Description of Setting Log

Event short form: *[Event]*

ARM	Arm/disarm input
Secu Switch	Security switch input
Alarm	Alarm sensor input
Motion	Motion
Video Loss	Video loss
Disk Usage	Disk usage
Sys Tamper	System tamper input
Power Fail	Power failure input
HDD Fault	HDD fault
Sys Restart	System restart

B. Setting Log Setting Column Table

Setting	Description
Camera Installed	Install / uninstall camera
Camera Name	Change camera name
Date Time Position	Change OSD clock position
PTZ Supported	Support PTZ camera or not
PTZ Pan Speed	Change PTZ camera pan speed
PTZ Tilt Speed	Change PTZ camera tilt speed
PTZ Pan Duration	Change PTZ camera pan duration
PTZ Tilt Duration	Change PTZ camera tilt duration
PTZ Zoom Duration	Change PTZ camera zoom duration
PTZ Focus Duration	Change PTZ camera focus duration
PTZ Iris Duration	Change PTZ camera iris duration
PTZ Additional Duration	Change PTZ camera additional duration
PTZ Washer Duration	Change PTZ camera washer duration
PTZ Wiper Duration	Change PTZ camera wiper duration
PTZ Patrol Speed	Change PTZ camera patrol speed
PTZ Dwell Time	Change PTZ camera dwell time
PTZ Driver	Change PTZ driver
PTZ Baud Rate	Change PTZ camera baud rate
Camera Name Enabled	Show / hide OSD camera name
Sequential Time	Change sequential mode camera switch time
Sequential Cam	Change camera displayed in sequential mode
Default Display	Change default display mode
OSD Font Color	Change OSD font color
Rec Frame Rate	Change recording frame rate
Schedule Rec Enabled	Enable / disable schedule recording
Disk Mode	Change recording disk mode
Video Quality	Change recording quality
Image Size	Change recording resolution

Retention Enabled	Enable / disable recording retention
Retention Period	Change retention period
Retention Time	Change retention time
Rec Audio Channel	Change recording audio channel
Switch Name	Change switch name
Switch Type	Change switch type
Date Time	Change date time
Time Zone	Change time zone
Auto IP	Enable / disable auto IP
IP Address	Change IP address
Port	Change port
Subnet Mask	Change subnet mask
Gateway Enabled	Enable / disable gateway
Gateway	Change gateway
Auto DNS	Enable / disable auto DNS
DNS	Change DNS address
sureLINK Enabled	Enable / disable sureLINK
sureLINK Address	Change sureLINK address
sureLINK Refresh Rate	Change sureLINK refresh rate
Throughput	Change throughput
[Event] Enabled	Enable / disable the event
[Event] Tamper Type	Change the event tamper type
[Event] Zone	Change the event zone type
[Event] Entry Delay	Change the event entry delay
[Event] Exit Delay	Change the event exit delay
Arm State	Change arm state
Associate Switch 1	Enable / disable arm/disarm associate switch 1
Secu Switch On State	Change security switch on state
Associate Switch 2	Enable / disable security switch associate switch 2
Alarm Name	Change alarm sensor name
Alarm Sensor Type	Change alarm sensor type
Motion Block	Change motion detection block
Motion Sensitivity	Change motion detection sensitivity
Motion Level	Change motion detection level
Motion Area	Change motion detection area
Sys Tamper Sensor Type	Change system tamper sensor type
Power Fail Sensor Type	Change power failure sensor type
Disk Usage Level	Change disk usage warning level
[Event] Recording	Enable / disable recording action of the event
[Event] Rec Cam	Change event recording camera
[Event] Rec Frame Rate	Change event recording frame rate
[Event] Rec Duration	Change recording duration after event clear
[Event] Switch	Enable / disable switch action of the event
[Event] Switch Mask	Change switch associated to the event
Switch Latch Duration	Change switch latch duration
Switch Delay	Change switch action delay
[Event] Dialback	Enable / disable dialback action of the event
Dialback IP	Change dialback IP address
Dialback Port	Change dialback port

Dialback Retry Duration	Change dialback retry duration
Dialback Retry Count	Change dialback retry count
Dialback Type	Change dialback type
[Event] Email	Enable / disable e-mail action of the event
SMTP Server	Change SMTP server address
SMTP Authentication	Enable / disable SMTP server authentication
SMTP User Name	Change SMTP server user name
SMTP Password	Change SMTP server user password
Email Timeout Retry	Change e-mail timeout / retry count
Email Address	Change recipient e-mail address
Max No. of Email	Change maximum no. of email
Email Delay	Change email action delay
[Event] Buzzer	Enable / disable buzzer action of the event
Buzzer Duration	Change buzzer duration
Buzzer Delay	Change buzzer action delay
[Event] LED	Enable / disable LED action of the event
[Event] Live Cam	Enable / disable live camera action of the event
[Event] Live Cam Mask	Change camera associated to live camera action
[Event] PTZ	Enable / disable PTZ action of the event
[Event] PTZ Cam	Change camera associated to PTZ action
[Event] PTZ Preset	Change PTZ camera recall preset position
Server Name	Change video recording server name
Registration Check	Enable / disable registration checking
Web Server Enabled	Enable / disable built-in web server
Security Mode	Change security mode
Add Account	Add a new account
Delete Account	Delete an account
Edit Account	Change information of an account
Hardware Arm Mode	Change to hardware arm mode
Software Arm Mode	Change to software arm mode
Schedule Arm Mode	Change to schedule arm mode
Edit Normal Arm Schedule	Add / delete normal arm schedule
Edit Holiday Arm Schedule	Add / delete holiday arm schedule
[Event] Add Suspension	Suspend the event
[Event] Rm Suspension	Remove the suspension of the event
Alarm Src Type	Change the source of alarm
Switch Src Type	Change the source of switch
Rec Audio Src Type	Change the source of audio input
Audio PA	Enable /disable PA
Audio PA Src Type	Change the source of PA output

C. Operation Log Operation Column Table

Operation	Description
Start Recording	Start manual recording
Stop Recording	Stop manual recording
Start Playback	Start playback video
Stop Playback	Stop playback video

Network Backup	Start backup from remote interface
Backup to USB	Start backup to local USB flash device
Stop Backup	Stop backup
Scan Disk	Scan hard disk
Format Disk	Format hard disk
Switch X On	Turn on switch X
Switch X Off	Turn off switch X
Restore Factory	Restore default factory setting
Start Retention	Start recording retention
Stop Retention	Stop recording retention
Upgrade from USB	Upgrade firmware from USB
Remote Upgrade	Upgrade firmware from remote interface
Import Setting	Import settings
Export Setting	Export settings
Local Login	Local user login
Local Logout	Local user logout
Remote Login	Remote user login
Remote Logout	Remote user logout
Software Arm	Armed from remote interface
Software Disarm	Disarmed from remote interface
Enable Schedule Arm	Start schedule arm mode
Disable Schedule Arm	Stop schedule arm mode
System Startup	Start the video recording server
System Restart	Restart video recording server
System Shutdown	Shutdown video recording server
Password Reset	Reset user login password
Power Off	System shut down abnormally
Disk Turn On	Disk turn on
Disk Turn OFF	Disk turn off

D. Connection Log Column Table

Connected	Remote user connected
Disconnected	Remote user disconnected
Failed	Remote user connection fail
Unauthorized	Invalid remote user connection rejected
Timeout	Remote user connection time out

Appendix H : Specifications

Model		RX806	RX812	RX816
Video Input	No. of Channels	6	12	16
	Format	PAL: 625 lines, 25fps NTSC: 525 lines, 30fps composite video, 1Vpp, 75 ohm, BNC		
	Resolution	PAL: 960x576 NTSC: 960x480		
Video Output	Digital TV	1 Channel, 1920x1080 50p/60p		
	VGA	1 Channel, 1920x1080 50p/60p		
	Loop Through	6	12	16
	SPOT ALARM OUT	BNC x 1		
Audio Input	NO. OF CHANNELS	6	12	16
	STANDARD	Line level RCA; input impedance 30k Ohm, frequency: 200 - 3500Hz		
AUDIO OUT	NO. OF CHANNELS	Public addressing x 1, audio output x1		
	STANDARD	Line level RCA; input impedance 30k Ohm, frequency: 200 - 3500Hz		
RECORDING	INTERNAL HDD	4		
	MAX. RECORDING RATE	PAL: 150fps NTSC: 180 fps	PAL: 300fps NTSC: 360 fps	PAL: 400fps NTSC: 480 fps
	MODE	Manual, schedule, motion, event-driven		
	RETENTION	1-999 days retention period		
	PLAYBACK	Forward, backward, pause, step forward, fast forward		

VIDEO EXTRACTION	MEDIA	USB flash, HDD and TCP/IP		
	MODES	All cameras, selected cameras, quick mode		
COMMUNICAITON	NETWORK	RJ-45, 10/100 base-T Ethernet		
	CONCURRENT USERS	6	12	16
	CONNECITON STREAM	LAN / Broadband / narrowband / mobile		
	BUILT-IN WEB SERVER	JAVA		
	KEYBOARD CONTROL	RS-422 / RS-485, 1 channel input		
	USB	USB 2.0, 3 channels		
	OTHERS	Support 3G modem, sureLINK and uPNP		
EVENT HANDLING	EVENT	External alarm, tamper, motion detection, video loss, power interruption, disk full, system failure disk fault		
	ACTION	Buzzer, dial back, local recording, relay control, email notification, SMS, PTZ, spot alarm		
	EXTERNAL ALARM INPUTS	16x NC / NO (with tamper detection)		
RELAY SWITCH	NO. OF CHANNELS	4 (push button / latch)		
	MAX. RATING	24V, 1000mA		
POWER	VOLTAGE	16V DC		
	MAX.RATING	55W		
OPERATING ENVIRONMENT	AMBIENT TEMPERATURE	5oC - 50oC		
	RELATIVE HUMIDITY	<85% (non-condensation)		
MECHNICAL DESIGN	DIMENSION	420mm x 345mm x 104mm		
	WEIGHT	6.5kg		