HD VIDEO RECORDER SERIES

User Manual

Please read instructions thoroughly before operation and retain it for future reference.

Online manual download: www.surveillance-download.com/user/h0401.swf

0401_304a_504p_0801_408P_504_408_516a_316_315_manual_V1.4

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

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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We are pleased to provide our modifications to the Linux Kernel, as well as a few new commands, and some tools to get you into the code. The codes are provided on the FTP site, and please download them from the following site or you can refer to your distributor:

http://download.dvrtw.com.tw/GPL/NVR/T-Series/linux.tar.gz

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1. HARDWARE OVERVIEW

1.1 Front Panel

Note: The functions on the front panel and rear panel may vary, depending on the mode you have.

1) LED indicators

Alarm or	An alarm event occurs.
Internet or	The device is connected to Internet.
e-SATA	An external disk array is connected.
*	This device is power-supplied.
*	This device is connected to LAN.
Record*	Recording is on.
HDD*	Hard disks are installed in the device and connected well.

**** For Selected models only***

2) USB port
Insert a compatible USB flash drive for video backup.

Note: For the compatible list of USB flash drives, please refer to "APPENDIX 1 COMPATIBLE USB FLASH DRIVE LIST" at page 39.

3) Mouse port
Insert a mouse for function operation.

1.2 Rear Panel

1) eSATA
This port is used to connect a storage device supporting eSATA interface; for instance, an external disk array.

Note: Please purchase a disk array supporting Linux system to ensure your device works properly. For the compatible list, please refer to "APPENDIX 7 DISK ARRAY COMPATIBLE LIST" at page 48.

Note: If the disk array is not connected or detected well, check the mode of your disk array, or do a reset default on your disk array and try again.

2) HDMI
This port is used to connect the monitor which supports HDMI interface.

Note: Direct connection to the monitor, which supports VGA or composite interface, is not supported. Please prepare a converter in advance.

3) VGA *(for selected models only)*
This port is used to connect the monitor which supports VGA interface.

4) WAN (or INTERNET)
This port is used to connect your device to Internet.

5) DC IN
Connect the device to power with the regulated adapter.

6) (Power switch)
Switch to "–" to turn on the power, and "O" to turn off the power.

7) AUDIO OUT *(for selected models only)*
Connect to a speaker.

8) Video Input (w/PoN) *(for selected models only)*
They are used to connect IP cameras locally. This device supports PoN (power-over-network), which could provide power to all connected cameras. No power adapters are needed for cameras.

9) Video Input (w/PoE) *(for selected models only)*
They are used to connect IP cameras locally. This device supports PoE (power-over-ethernet), which could provide power to all connected cameras. No power adapters are needed for cameras.

1) LAN *(for selected models only)*
This port is used to connect IP cameras to this device with a hub (if necessary) locally.

10) EXTERNAL I/O *(for selected models only)*
Insert the supplied external I/O block, and users are able to connect external devices.

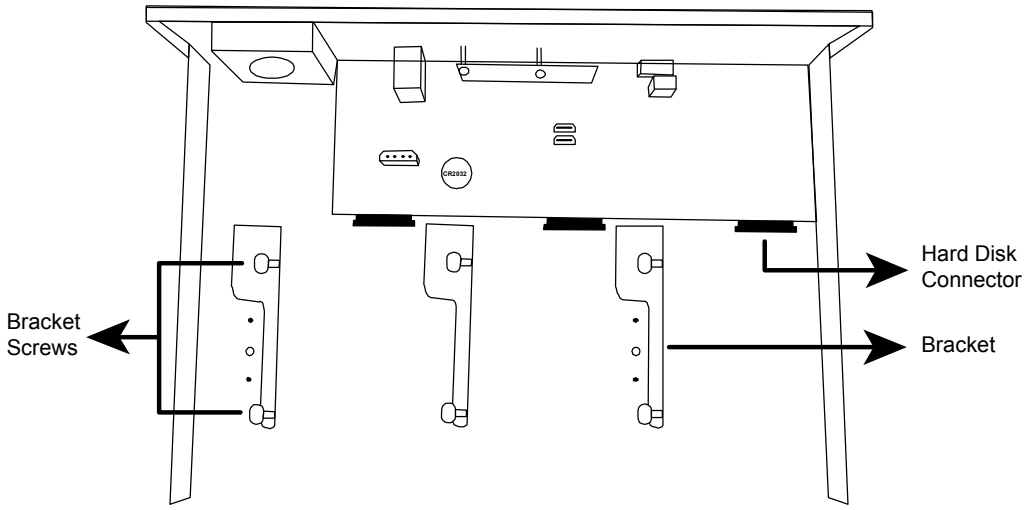
2. CONNECTION

2.1 Hard Disk Installation

A hard disk is necessary for the recorder to save video footage, and firmware upgrade might be failed if there's no hard disk installed in this recorder.

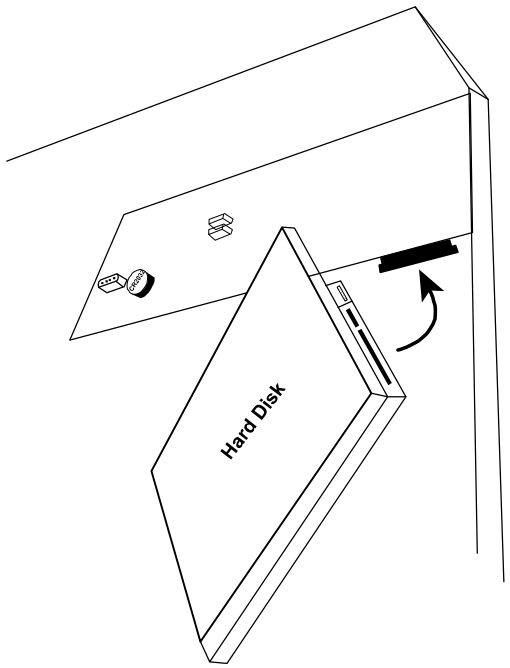
Note: Here takes a 16CH model as an example of how to connect a hard disk to your device.

Step1: Remove the top cover, and find the hard disk connector and bracket in the device.

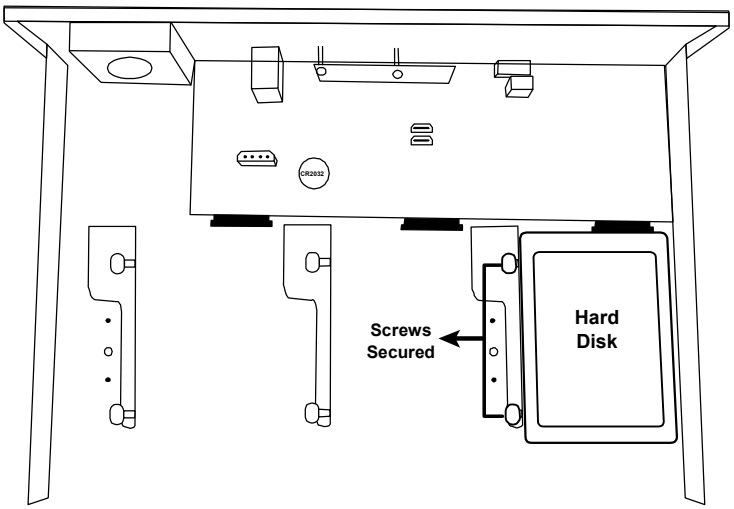


Step2: Get a compatible hard disk. With the PCB side facing down, insert the hard disk to one of the hard disk connector.

Note: To use a green hard disk, use **ONLY** the hard disk designed especially for surveillance to ensure the device works properly.



Step3: Fasten the hard disk to the bracket by securing the screws on the bracket.



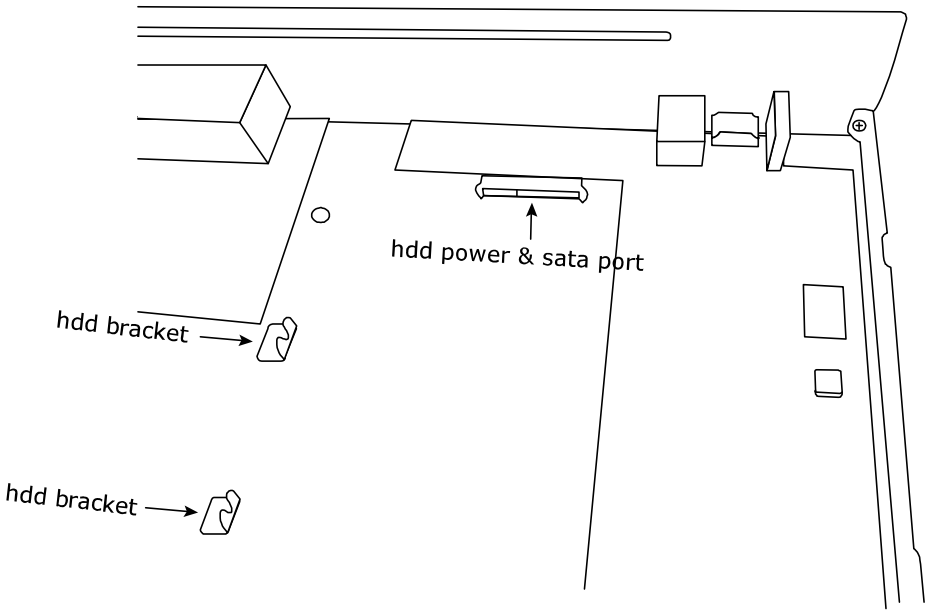
Note: For the 16CH model, you may purchase a bracket accessory separately to install two more hard disks in this device.

Step4: Replace the top cover and fasten the screws you loosened in Step1.

- **Type 2**

Note: It's necessary to install a hard disk first before firmware upgrade to ensure the upgrade process works properly.

Step1: Remove the top cover, and find the hard disk connector and bracket in the device.

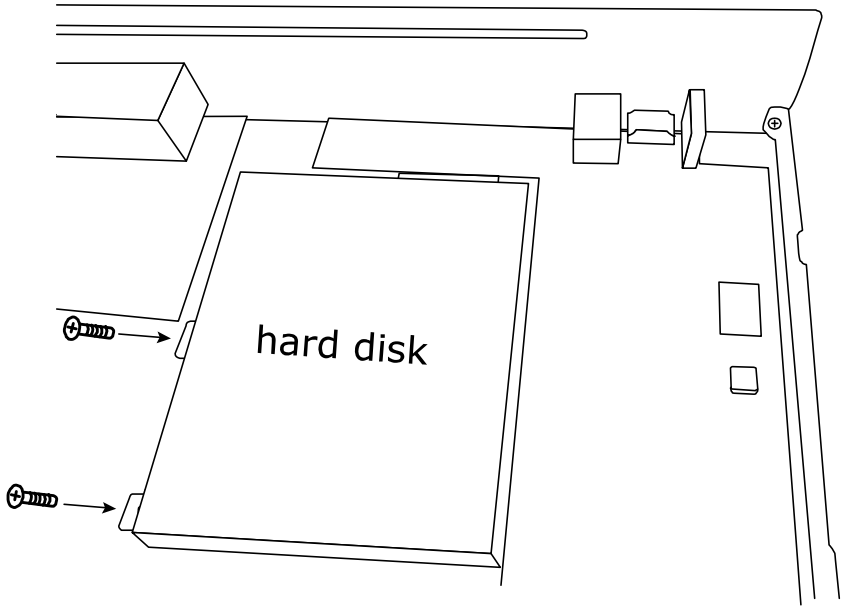


Step2: Get a compatible hard disk. With the PCB side facing down, align the hard disk with the hard disk power & sata port, and insert the hard disk.

Note: To use a green hard disk, use **ONLY** the hard disk designed especially for surveillance to ensure the device works properly.

Step3: Fasten the hard disk to the bracket by securing the screws on the bracket.

Note: You may find screws in the sales package.



Step4: Replace the top cover and fasten the screws you loosened in Step1.

2.2 Camera IP Configurations by LAN

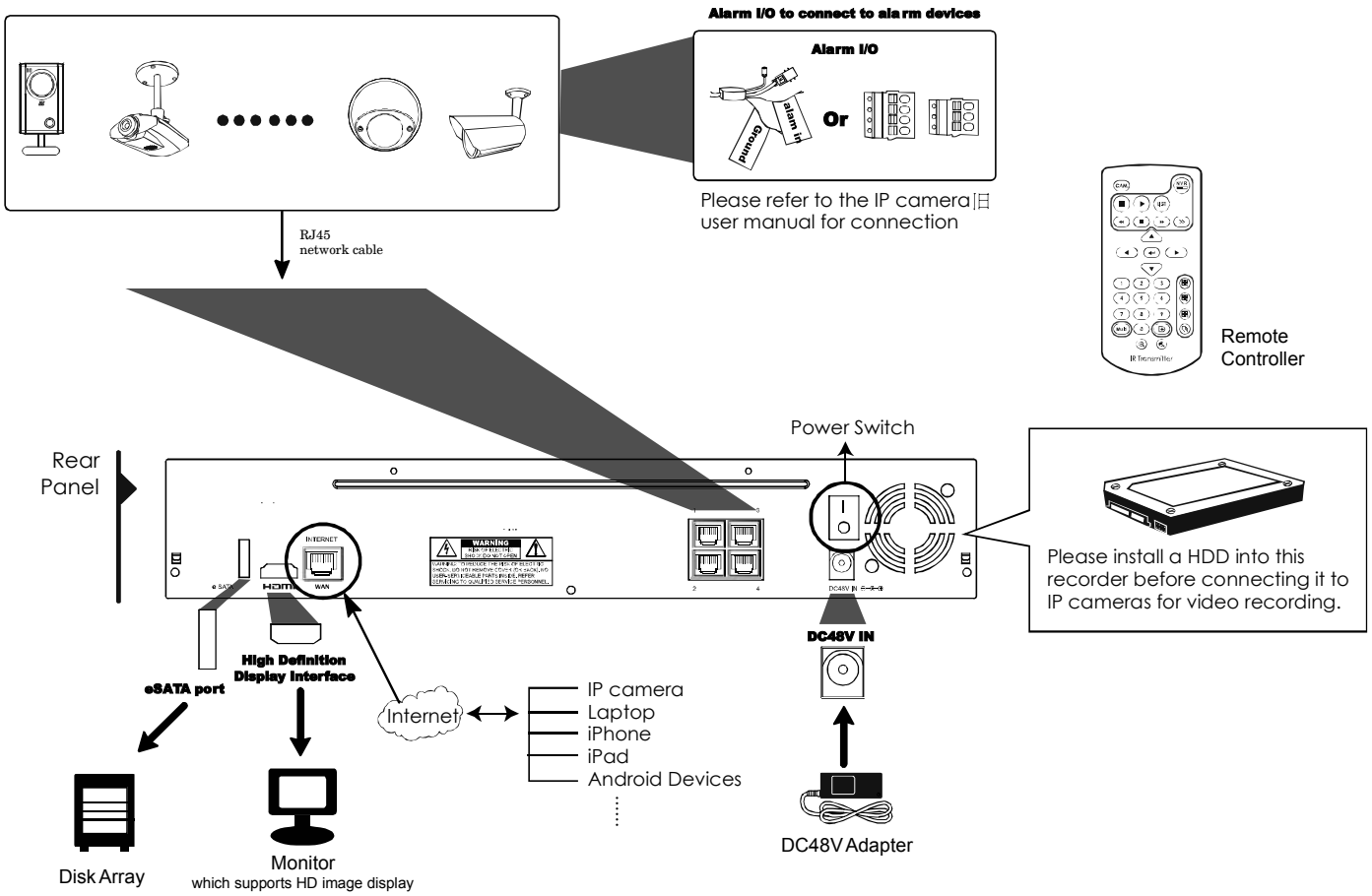
2.2.1 AUTO Mode

Auto mode is to simplify the complicated network settings within three minutes. The connection mode of the LAN port is “AUTO” by default. This mode is suitable when the LAN port of the device is connected to a hub.

Note: SETTING Path: (ADVANCED CONFIG) → NETWORK → LAN → MODE.

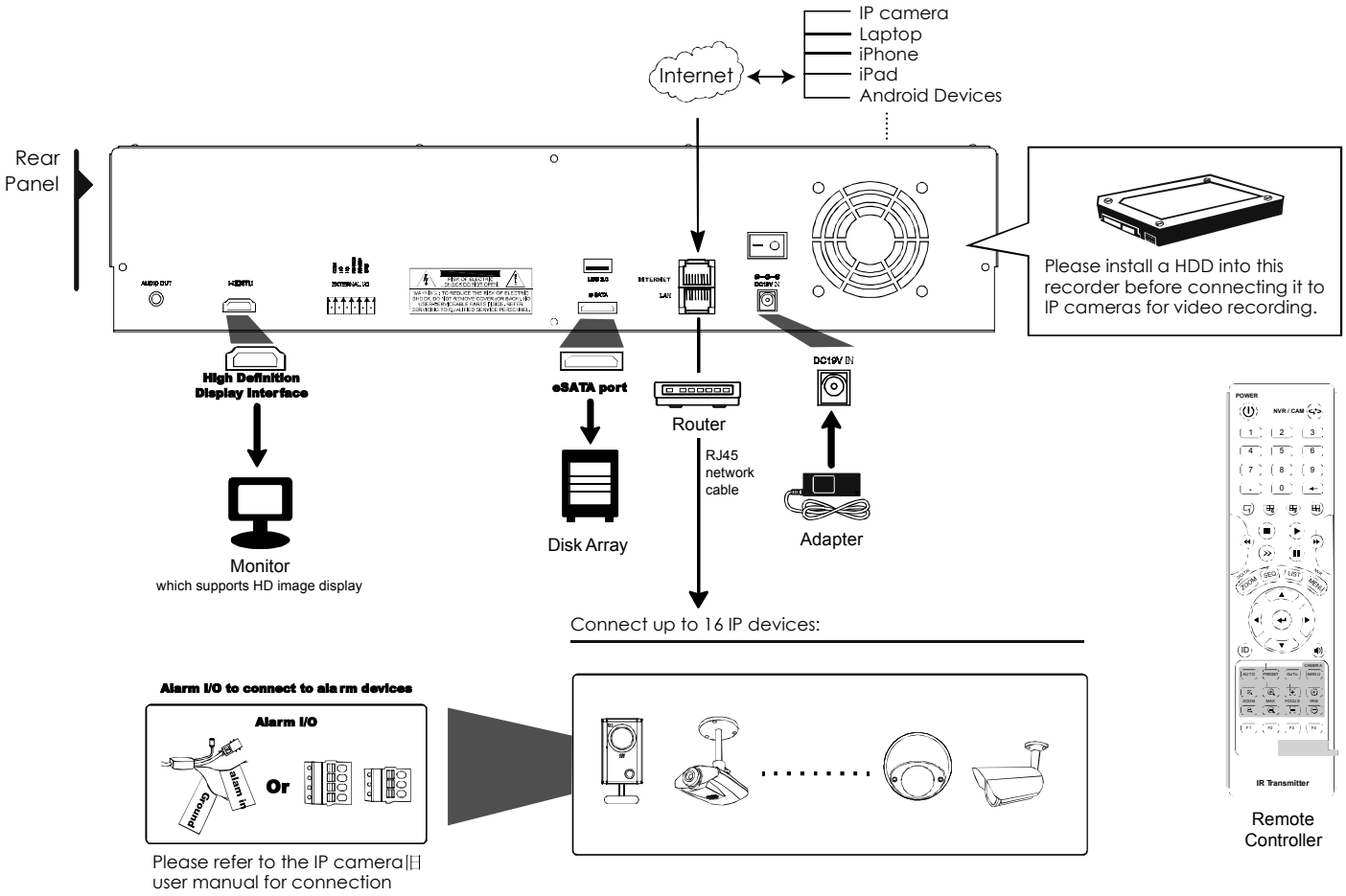
Type 1

Connect IP cameras as many as your recorder supports:



Note: For access this recorder remotely with your mobile device or laptop, you need to connect this recorder to Internet. For details, please get the setup manual from the supplied CD or from www.surveillance-download.com/user/network_setup/network_setup_recorder.pdf.

Type 2



Note: For access this recorder remotely with your mobile device or laptop, you need to connect this recorder to Internet. For details, please get the setup manual from the supplied CD or from www.surveillance-download.com/user/network_setup/network_setup_recorder.pdf.

The recorder will ***automatically*** configure the IP address of a camera connected by LAN if:

- The connected IP camera is our brand's IP camera.
- Reset the IP camera to default value (the default IP configuration method of the camera is "DHCP").
- The camera is powered on before the recorder is powered on.

If the recorder **doesn't** configure the IP address of your camera automatically as described above, your IP camera might **NOT** be:

- Our brand's IP camera.
- Set to "DHCP" as its default IP configuration method.

To solve this, use our brand's IP camera, and reconfigure its IP address to 10.1.1.*xx* (*xx* ranges from 11 ~ 253), in the same network segment as the recorder.

a) Move your mouse to the left to call the quick bar, and select " ". You'll see the list of every connected IP camera with its connection status to this recorder and MAC address.

b) Select the IP address which is not used, and select "SETUP".

IP SEARCH

IP	PORT	MAC	TYPE	PROTOCOL	STATUS
10.1.1.12	88	00:0e:53:e5:9a:f1	IP CAMERA	AVTECH	CONNECTED TO CH1
10.1.1.12	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH1
10.1.1.13	88	00:0e:53:a6:91:18	IP CAMERA	AVTECH	CONNECTED TO CH2
10.1.1.13	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH2
10.1.2.14	88	00:0e:53:a5:9f:a2	SWITCH	AVTECH	UNUSED
10.1.2.14	88	00:0e:53:a5:9f:a2	SWITCH	AVTECH	UNUSED
10.1.1.15	88	00:0e:53:e1:4e:k5	IP CAMERA	AVTECH	CONNECTED TO CH3
10.1.1.15	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH3
10.1.1.16	88	00:0e:53:s5:3e:h6	IP CAMERA	AVTECH	CONNECTED TO CH4
10.1.1.16	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH4
10.1.1.17	88	00:0e:53:e6:4b:26	IP CAMERA	AVTECH	CONNECTED TO CH5
10.1.1.17	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH5

CONNECT | SETUP | EXIT

c) Select "DHCP" in "NETWORK TYPE".

d) Click "APPLY" and "EXIT" to save your changes.

SETUP

NETWORK TYPE	DHCP
IP	10.1.1.14
PORT	88
USER NAME	admin
PASSWORD	*****
NETMASK	255.0.0.0
GATEWAY	10.1.1.10
PRIMARY DNS	168.95.1.1

APPLY | EXIT

e) The recorder will then detect the IP camera and display images soon.

2.2.2 Static / DHCP Mode

Note: SETTING Path: (ADVANCED CONFIG) → NETWORK → LAN → MODE.

When the LAN port of the recorder is connected to a router (not a hub), you can:

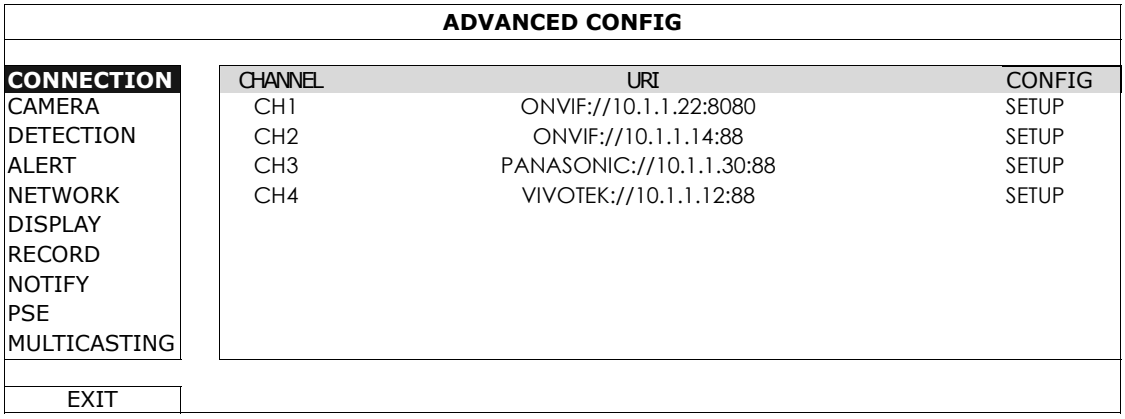
- Choose “Static” when you know the network segment of your router.
  For example, the IP address of your router of *192.168.0.1*, and the network segment of your router will be *192.168.0.xx* (*xx* is ranged from 2 ~ 254).

  You can assign the IP address of the connected IP camera(s) by yourself.
- Choose “DHCP” when your router supports the DHCP function, and you do not know the network segment of your router.
  The IP address of the connected IP camera(s) will be assigned by your router.

2.3 Manual Connection Setup

Note: SETTING Path: (ADVANCED CONFIG) → CONNECTION.

To manually assign the address of your camera connected locally, click “URI” to modify.



Note: To configure this recorder to access other IP camera connected remotely for live viewing or video backup, you need to connect this recorder to Internet first. For details, please get the setup manual from the supplied CD or from www.surveillance-download.com/user/network_setup/network_setup_recorder.pdf.

3. USER INTERFACE

3.1 Local Access

Connect your USB mouse to one of the USB ports on the front panel, and check if there's a mouse icon ( ) on the screen, indicating the USB mouse is detected properly.

Move your mouse to enter the password with the password keypad. The default user name and password are both "**admin**". The status will be changed from (key lock) to (unlock).

Note: You may configure four different user levels to have different access privileges in "SYSTEM" → "ACCOUNT". For details, please refer to "4.3 User Level Creation" at page 13.

Password Input

3.2 Local

3.2.1 Device Status

Note: The functions shown may vary based on the model or the access user level you use.

	Key lock		Key unlock
	Channel lock		Channel unlock
	USB flash drive / device connected		No USB device connected
	Timer record on		Timer record off
	Overwrite on		Overwrite off
	Sequence mode on		Sequence mode off
	PTZ mode on		PTZ mode off
	Backup event queued and USB flash drive needed		USB flash drive full
	CPU loading		

Network Status:

	(WAN) Internet connected		(WAN) Internet disconnected
	(WAN) Local connection		
	(LAN) Auto mode –Mbit/s		(LAN) Auto mode – Gbit/s
	(LAN) DHCP / Static IP mode		(LAN) Camera disconnected

3.2.2 Channel Status

Note: The functions shown may vary based on the model or the access user level you use.

	Auto search on		Auto search off		Original size		Fit to screen
	Live audio on		Audio off		Audio playback on		Audio playback off
	Recording		PTZ control		Alarm event		Motion event
	Live information		Playback information		Digital zoom		Channel Playback
	Quick camera control						

3.2.3 Quick Operation

Move to the arrow mark to extend the quick menu bar and show the four functions as follows:

	Click to show the channel switch panel and select the channel you want.
	Click to display the playback control panel, and click to play the latest recorded video clip, or click to enter the search list.
	Click to open the IP search window and check the current connection status of each channel.
	Click to show the power off panel to either halt or reboot the system.

3.2.4 Main Menu

Right-click anywhere on the screen to show the main menu as follows, and right-click again to exit.

	QUICK START	Click to set the status display, image settings, and date & time.
	SYSTEM	Click to set the system configurations.
	EVENT INFORMATION	Click to enter the event search menu.
	ADVANCED CONFIG	Click to set CONNECTION, CAMERA, DETECTION, ALERT, NETWORK, DISPLAY, RECORD, NOTIFY*, PSE* and MULTICASTING*.
	SCHEDULE SETTING	Click to set record timer and event timer.

** For selected models only*

3.2.5 Playback Panel

	Fast Forward	Increase the speed for fast forward.
	Fast Rewind	Increase the speed for fast rewind.
	Play / Pause	Click to play the latest recorded video clip immediately, and click again to pause. In the pause mode, click once to get one frame forward, and click to get one frame rewind.
	Stop	Click to stop the video playback.
	Slow Playback	Click once to get 1/4X speed playback, and click twice to get 1/8X speed playback.
	Previous / Next Hour	Click to jump to the next / previous time interval in an hour, for example, 11:00 ~ 12:00 or 14:00 ~ 15:00, and start playing the earliest event video clip recorded during this whole hour.
	Quick Search	Click to enter the quick search menu for specific record data search.
	Repeat	Click to set point A and point B in a video clip, and the system will play only the specified range in that clip.
	Backup	Click to open the backup menu for video backup.

4. FREQUENTLY-USED FUNCTIONS

4.1 Key Lock / Unlock

To lock or unlock local operation, click (unlock) or (lock) on the device status bar to change the status to (lock) or (unlock).

To unlock local operation, you'll be prompted to enter the user name and password to access.

Note: The default user name and password are both "admin", which is the highest user level

Note: Different user level has different access privilege for certain functions. For details, please refer to "4.3 User Level Creation" at page 13.

4.2 IP Device Search

Note: This function is available only for "SUPERVISOR". To know more details, please refer to "4.3 User Level Creation" at page 13.

Click (IP Search) to start searching IP camera(s) connected in the same network segment as the recorder (i.e. *10.1.1.xx* by default).

You'll see the list of every connected IP camera with its connection status to this recorder and MAC address.

IP SEARCH

IP	PORT	MAC	TYPE	PROTOCOL	STATUS
10.1.1.12	88	00:0e:53:e5:9a:f1	IP CAMERA	AVTECH	CONNECTED TO CH1
10.1.1.12	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH1
10.1.1.13	88	00:0e:53:a6:91:18	IP CAMERA	AVTECH	CONNECTED TO CH2
10.1.1.13	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH2
10.1.2.14	88	00:0e:53:a5:9f:a2	SWITCH	AVTECH	UNUSED
10.1.2.14	88	00:0e:53:a5:9f:a2	SWITCH	AVTECH	UNUSED
10.1.1.15	88	00:0e:53:e1:4e:k5	IP CAMERA	AVTECH	CONNECTED TO CH3
10.1.1.15	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH3
10.1.1.16	88	00:0e:53:s5:3e:h6	IP CAMERA	AVTECH	CONNECTED TO CH4
10.1.1.16	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH4
10.1.1.17	88	00:0e:53:e6:4b:26	IP CAMERA	AVTECH	CONNECTED TO CH5
10.1.1.17	88	UNKNOWN	IP CAMERA	ONVIF	CONNECTED TO CH5

CONNECT | SETUP | EXIT

To fix the camera IP address, or allow the recorder to assign an IP address to your IP camera, select "SETUP", and select "STATIC IP " or "DHCP" for "NETWORK TYPE".

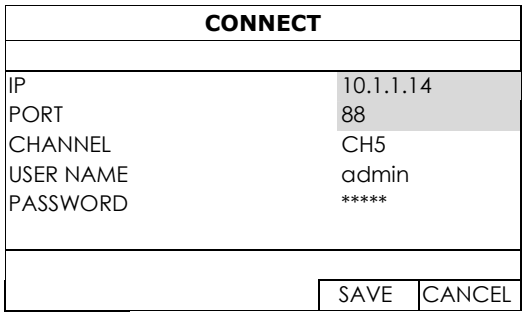
Click "APPLY" and "EXIT" to save your changes.

SETUP

NETWORK TYPE	DHCP
IP	10.1.1.14
PORT	80
USER NAME	admin
PASSWORD	*****
NETMASK	255.0.0.0
GATEWAY	10.1.1.10
PRIMARY DNS	168.95.1.1

APPLY | EXIT

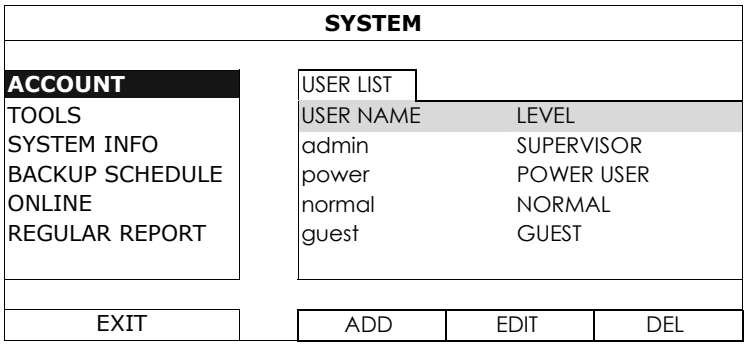
To connect to another IP camera, select the unused IP camera from the IP search list, and select “CONNECT”. Select the channel you want to display the camera images, and click “SAVE” to start connection.



4.3 User Level Creation

Note: This function is available only for “SUPERVISOR”.

To create different user account for different access privilege, right-click to show the main menu, select “ ” (SYSTEM), and select “ACCOUNT” to enter “USER LIST”.



Different user level has different access privilege for certain functions as described below:

	Function	User Level			
		SUPERVISOR	POWER	NORMAL	GUEST
■ Screen control					
Quick channel switch by mouse-click		✓	✓	✓	
■ Recorder status					
/	Key lock / unlock	✓	✓	✓	✓
/	Channel switch lock / unlock	✓			
■ Channel status					
/	Auto search on / off	✓			
/	Live audio on / off	✓			
/	Playback audio on / off	✓			
/	Original size / Fit to screen	✓			
/	Live / Playback information	✓			
	Digital zoom	✓	✓		
	Single channel playback	✓	✓		
	DPTZ Control	✓	✓		
	Quick camera control	✓			

	Function	User Level			
		SUPERVISOR	POWER	NORMAL	GUEST
■ Quick operation					
	Channel Switch	✓	✓	✓	✓
	Playback	✓	✓		
	IP Search	✓			
	Power	✓			
■ Main menu					
	Quick Start	✓			
	System	✓			
	Event Information	✓			
	Advanced Config.	✓			
	Schedule Setting	✓			
■ Playback control					
	Fast Forward	✓	✓		
	Fast Rewind	✓	✓		
	Play / Pause	✓	✓		
	Stop	✓	✓		
	Slow Playback	✓	✓		
	Previous / Next Hour	✓	✓		
	Quick Search	✓	✓		
	Repeat	✓	✓		
	Backup	✓	✓		

4.4 PTZ Control (1CH mode)

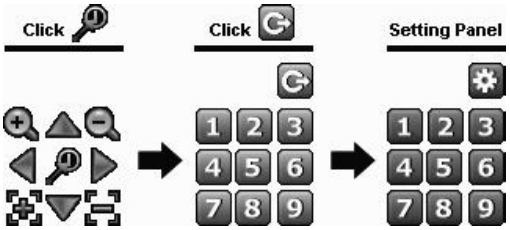
Note: This function is available only for "SUPERVISOR" and "POWER USER". To know more details, please refer to "4.3 User Level Creation" at page 13.

Click on the channel status bar to display the panel as follows:

		Up / Down / Left / Right	Click to move your selection up / down / left / right, or change settings.
		Digital zoom in / out	Click to zoom in / out the camera image digitally.
		Focus near / far	Click to adjust the focus of the image.
		Preset point	Click to display the preset point panel for preset point viewing or setting. For details, please refer to the section below.

How to set a preset point:

Step1:



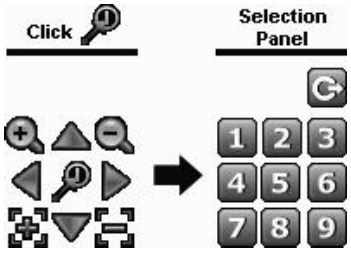
Step2: Click or to the proper ratio you need, and click / / / to move to the point you want to configure as a preset point.

Step3: Click the numbering you want to configure for this point, and wait till you see (command sending) appearing and disappearing on the device status bar.

Step4: Repeat from Step1 again to set other points if needed, or click to return to the preset point selection panel

How to go to a preset point:

Step1:

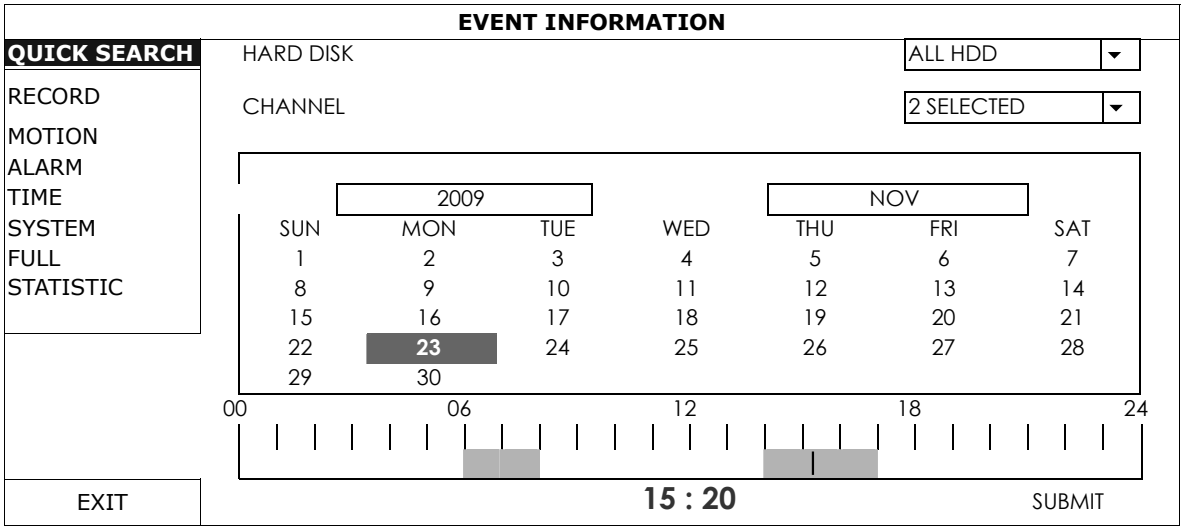


Step2: Select the numbering within which saves the camera view you want to see, and wait till you see (command sending) appearing and disappearing on the device status bar.

4.5 Event Search

Note: This function is not available for "NORMAL" and "GUEST". For details, please refer to "4.3 User Level Creation" at page 13.

In the playback control bar, click to enter the search list.



- To quickly search the time within which might include the recorded data you want to see:
  - Select the channel(s) and month you want to search. You'll see the date(s) with recorded data is highlighted.
  - Select the date you want to search. You'll see the time with recorded data is highlighted from the timeline bar.
  - Click the time to start playback.
- To search the recorded data by event, select RECORD / MOTION / ALARM / TIME, or select FULL to show all the event logs. Select the log you want to start playback.

Note: During video playback, you might click to check the recorded data details, or click to play the recorded audio (if any) on the channel you want.

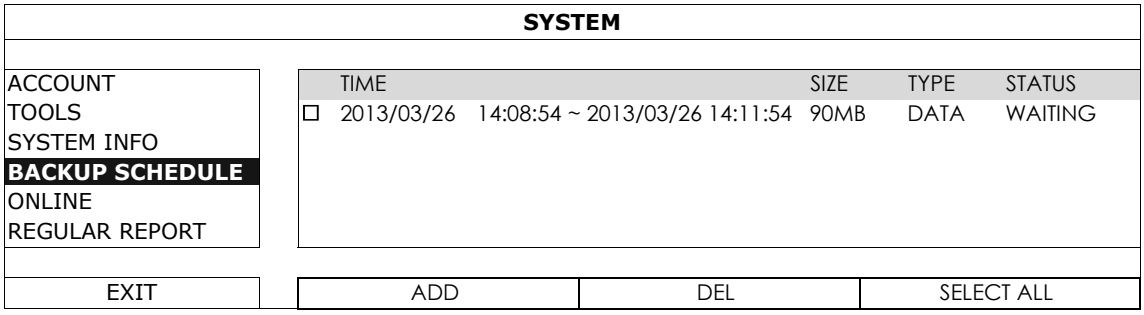
4.6 Video Backup

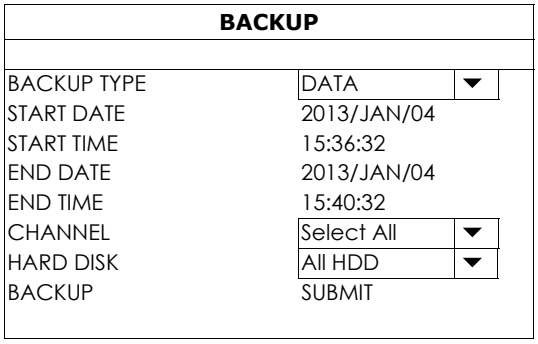
Note: This function is available for "SUPERVISOR". For details, please refer to "4.3 User Level Creation" at page 13.

Note: Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first. For the list of compatible USB flash drives, please refer to "APPENDIX 1 COMPATIBLE USB FLASH DRIVE LIST at page 39.

Note: For video backup, please use USB flash drive or back your data up over the Internet. It's not recommended to connect the HDD to your PC directly.

To copy recorded data for video backup, click (SYSTEM), and select "BACKUP SCHEDULE".





Step1: Select the type of information you want to backup. "DATA" is video footages, and "LOG" is record logs.

Step2: Select the time within which includes what you want to backup.

Step3: Select the channel(s) and hard disk within which includes what you want to backup.

Step4: In "BACKUP", select "SUBMIT" to start backup to your USB flash drive, and wait till the backup successful message appears.

4.7 Video Playback on PC

The backup file is the unique video format for security reasons, and you can only use our own player to play.

To play video backup on your PC:

Step1: Insert the USB flash drive with recorded data into your PC.

Note: The supported PC operating systems are Windows 7, Windows Vista & Windows XP.

Step2: Find the program "PLAYER.EXE" in the USB flash drive, and double-click it to install.

Note: "PLAYER.EXE" can also be downloaded from www.surveillance-download.com/user/h0401.swf.

Step3: Run the program, *VideoPlayer_NVR*, and browse to where you save the recorded data.

Step4: Select the file you want to start video playback.

4.7.1 Convert the file format to AVI

To convert the video file format to AVI, click “AVI” from the playback panel to start file conversion.

Note: The recorded audio (if any) will be removed when the file format is converted to AVI.

Note: If the backup video includes data for multiple channels, click to a specific channel for this function to work properly.

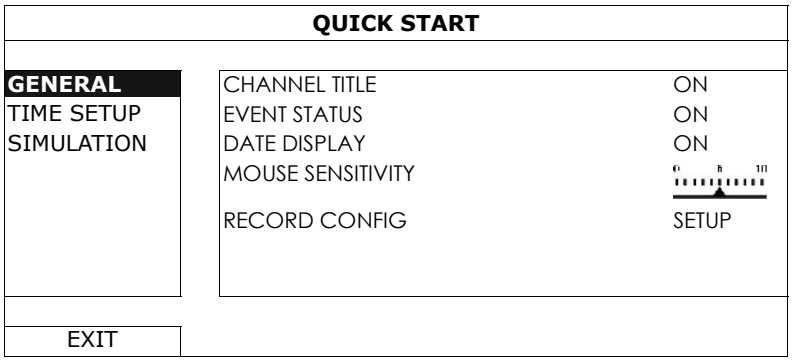
5. MAIN MENU

Note: This menu is available only for "SUPERVISOR". To know more details, please refer to "4.3 User Level Creation" at page 13.

Note: The menu shown here takes a 4CH model as an example. The actual display may vary.

5.1 QUICK START

5.1.1 GENERAL



1) CHANNEL TITLE
   Select to display the channel title or not (ON / OFF).

2) EVENT STATUS
   Select to display the event icons or not (ON / OFF).

Note: For details about each event icon, please refer to "3.2 Local" at page 10.

3) DATE DISPLAY
   Select to display the date or not (ON / OFF).

4) MOUSE SENSITIVITY
   Select the mouse sensitivity by 10 levels.

5) RECORD CONFIG
   Click "SETUP" to enter the setting page individually for live display, manual record, event record and timer record.

Note: The settings shown below depend on the setting tab you selected in this setting page.

a) **IMAGE SIZE**: Select the image size for each channel.

Note: The options selectable for "IMAGE SIZE" depend on the camera you're intended to connect, and the options for selected 8CH models are up to 1280 x 720.

b) **QUALITY**: Select the video quality for each channel. The higher the value, the better the image quality.

c) **I.P.S.**: Image per Second, the higher the value, the more fluent the video.

Note: The options selectable for "I.P.S." depends on the camera you're intended to connect.

d) **BITRATE (kbps)**: Select how much data to process per unit of time for each channel. The higher the value, the better the video quality.

e) **BITRATE CONTROL**: Configure the upper bit rate limit for the selected channel if necessary.
   VBR - When the bit rate of the camera exceeds the value you set, the video fluency may be affected;
   CBR - When the bit rate of the camera exceeds the value you set, the image quality may be affected.

f) **G.O.V.**: "Group of VOPs" is used to configure the length of G.O.V. The greater of the value, the less the bandwidth for transmission, and the poorer the image quality.

■ LIVE

QUICK START

LIVE | MANUAL | EVENT | TIMER

CHANNEL	TYPE	QUALITY	I.P.S.	BITRATE (kbps)	G.O.V.
CH1	H.264		30	2048	30
CH2	H.264		30	2048	30
CH3	H.264		30	2048	30
CH4	H.264		30	2048	30

REMAINING CAPACITY: 11%

EXIT

■ MANUAL

QUICK START

LIVE | MANUAL | EVENT | TIMER

CHANNEL	IMAGE SIZE	QUALITY	I.P.S.	BITRATE (kbps)	BITRATE CONTROL	G.O.V.
CH1	720 X 480		30	2048	VBR	30
CH2	1280 x 1024		30	2048	VBR	30
CH3	1280 x 1024		30	2048	VBR	30
CH4	1280 x 1024		30	2048	VBR	30

REMAINING CAPACITY: 11%

APPLY | EXIT

■ EVENT

QUICK START

LIVE | MANUAL | EVENT | TIMER

CHANNEL	IMAGE SIZE	QUALITY	I.P.S.	EVENT	ENABLE
CH1	720 X 480		30	MOTION	☑
CH2	1280 x 1024		30	MOTION / ALARM	☑
CH3	1280 x 1024		30	MOTION / ALARM	☑
CH4	1280 x 1024		30	MOTION	☑

REMAINING CAPACITY: 11%

EXIT

■ TIMER

QUICK START

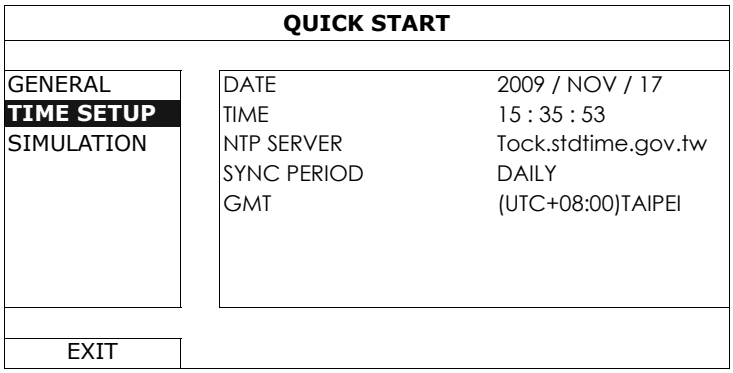
LIVE | MANUAL | EVENT | TIMER

CHANNEL	IMAGE SIZE	QUALITY	I.P.S.	ENABLE
CH1	720 X 480		30	☑
CH2	1280 x 1024		30	☑
CH3	1280 x 1024		30	☑
CH4	1280 x 1024		30	☑

REMAINING CAPACITY: 11%

EXIT

5.1.2 TIME SETUP



1) DATE
   Set the current date. The default display format is YEAR – MONTH – DATE (Y-M-D).

Note: To change the date display format, please refer to "5.2.1 DATE INFO".

2) TIME
   Set the current time in HOUR : MIN : SEC.

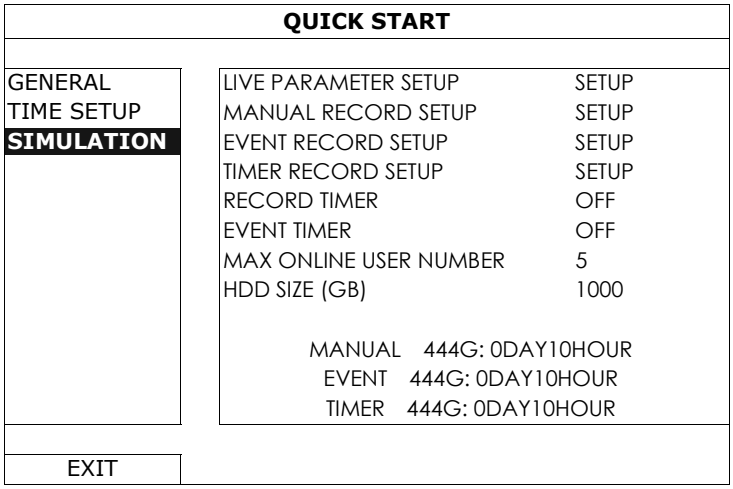
3) NTP SERVER
   Click to change the default NTP server to another server they're familiar with, or keep the default NTP server.

4) SYNC PERIOD
   Select to synchronize the device time everyday (DAILY), or turn this function off (OFF).

5) GMT
   Select your time zone.

5.1.3 SIMULATION

"SIMULATION" is where you can see CPU loading and performance when certain functions are enabled and how the number of online users affects the performance of the device.

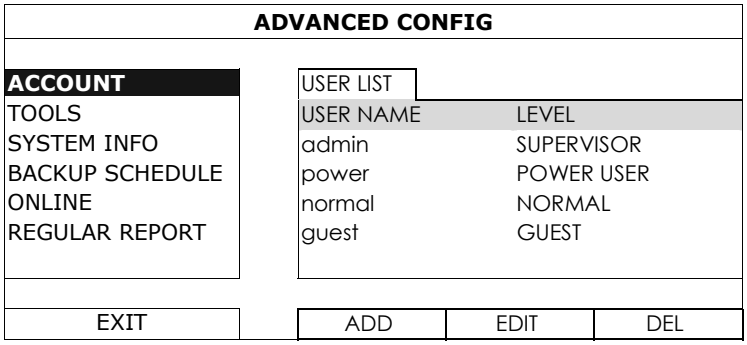


5.2 SYSTEM

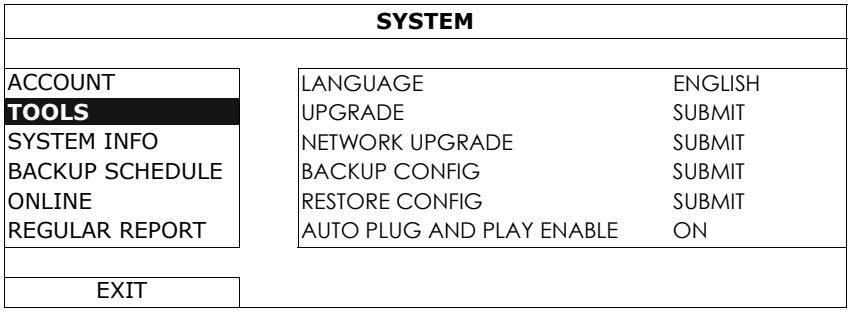
5.2.1 ACCOUNT

This function is used to create a new user account, or modify or delete an existing account for different access privilege.

Note: For details about available local operations of each user level, please refer to "4.3 User Level Creation" at page 13.



5.2.2 TOOLS



1) LANGUAGE
   Select the language of the OSD.

2) UPGRADE
   Save the upgrade files obtained from your installer or distributor in a compatible USB flash drive, and insert it into the USB port at the front panel. Then, click "SUBMIT" to start upgrading.

Note: Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first. For the list of compatible USB flash drives, please refer to "APPENDIX 1 COMPATIBLE USB FLASH DRIVE LIST" at page 39.

Note: After upgrading firmware, it's recommended to clear all hard disk data for the system to work more stably. Before clearing all hard disk data, please remember to make video backup.

Note: Before remote firmware update, please install a hard disk into your recorder first to make sure the firmware update works properly.

3) NETWORK UPGRADE
   Click "SUBMIT" for perform system upgrade via Internet.

Note: This function requires Internet access. Please make sure your recorder is connected to Internet before using this function.

4) BACKUP CONFIG / RESTORE CONFIG

To keep the current configurations after upgrade, insert a compatible USB flash drive into the USB port, and select “SUBMIT” in “BACKUP CONFIG” to copy the current configurations to a file “System.bin” and save to your USB flash drive.

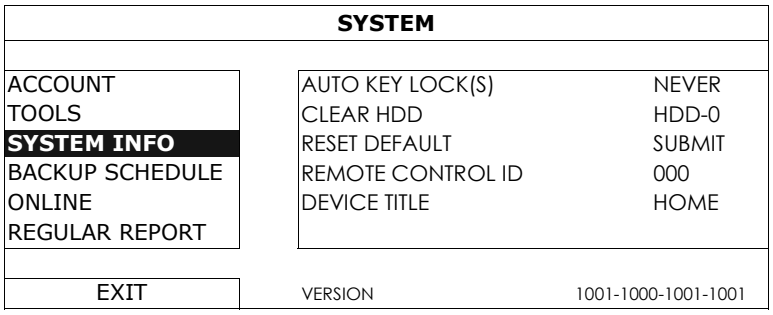
To restore the configurations, insert the USB flash drive including “System.bin” to the USB port, and select “SUBMIT” in “RESTORE CONFIG”.

5) AUTO PLUG AND PLAY ENABLE

Switch to “ON” allow the camera to be detected and configured automatically when it’s connected to this device.

Note: This function is available only when the brand of the cameras connected is the same as this device.

5.2.3 SYSTEM INFO



1) AUTO KEY LOCK(S)

Set the time-out in second after which the key lock function is activated (NEVER / 30 / 60 / 120).

2) CLEAR HDD

Select the hard disk you want to clear, and click “YES” to confirm or “NO” to cancel.

It’s recommended to clear all data in the hard disk when:

- It’s the first time to use this recorder to ensure the recorded data are not mixed with other data previously saved in the same hard disk.
- The firmware is upgraded for the system to work more stably. Before clearing all data, please remember to make video backup.
- The date and time are changed accidentally when the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search.

3) RESET DEFAULT

Click “SUBMIT” to reset all settings as default, and select “YES” to confirm or “NO” to cancel. The recorder will reboot after reset.

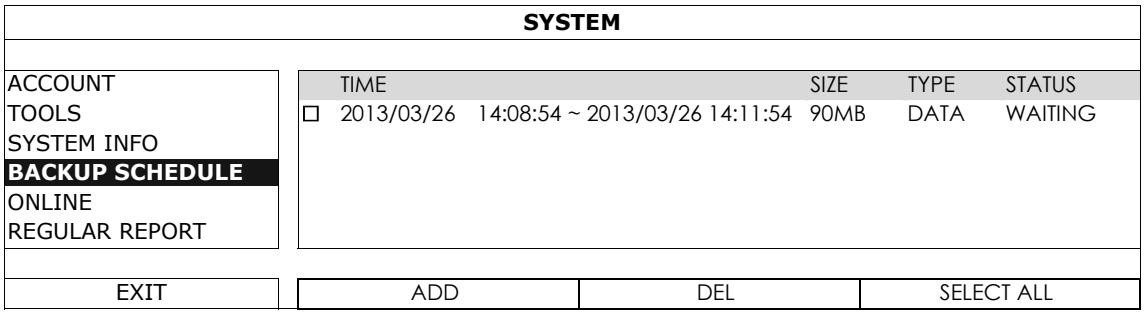
5.2.4 BACKUP SCHEDULE

This function is used to copy recorded video data or logs from the recorder to a USB flash drive. You might arrange several backup events in the schedule if you want, and the backup starts when a compatible USB flash drive is inserted to this recorder.

Note: Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first. For the list of compatible USB flash drives, please refer to "APPENDIX 1 COMPATIBLE USB FLASH DRIVE LIST" at page 39.

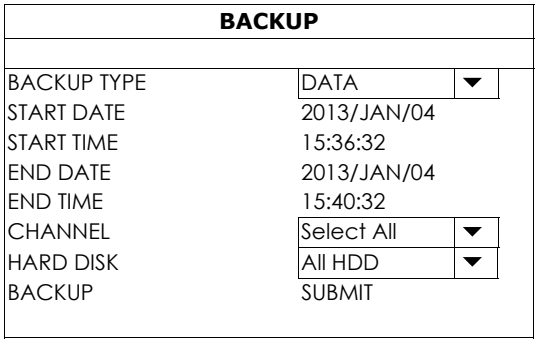
Note: The backup video can be played on the PC. For details, please refer to "4.7 Video Playback on PC" at page 16.

Note: Data backup could be done via a USB flash drive or over the Internet. It's not recommended to connect the hard disk to your PC directly. The data might get lost and can't be repaired even when the hard disk is replaced back to the recorder.



To add a backup event

Step1: Select "ADD" to show the backup page.



Step2: In the backup page, select "DATA" if you need to copy video footages; select "LOG" is you want to copy record logs.

Step3: Select the time, channel(s) and hard disk in which save the data you need.

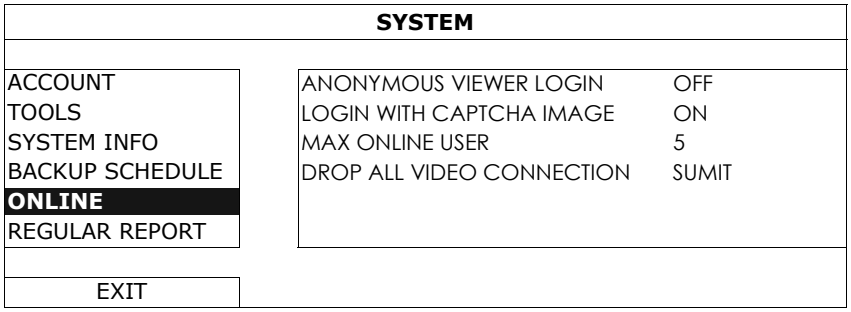
Step4: Select "SUBMIT" to put this backup event into the schedule.

To remove a backup event

Select the event you want to delete in the backup schedule, and click "DEL".

5.2.5 ONLINE

This function is used to configure how the remote access should work.



1) ANONYMOUS VIEWER LOGIN
   Switch to “ON” to allow anonymous login, meaning there’s no need to enter user name and password for remote access.

2) LOGIN WITH CAPTCHA IMAGE
   To allow image code verification at login to avoid malicious attack, switch to “ON”; to disable image code verification at login, switch to “OFF".

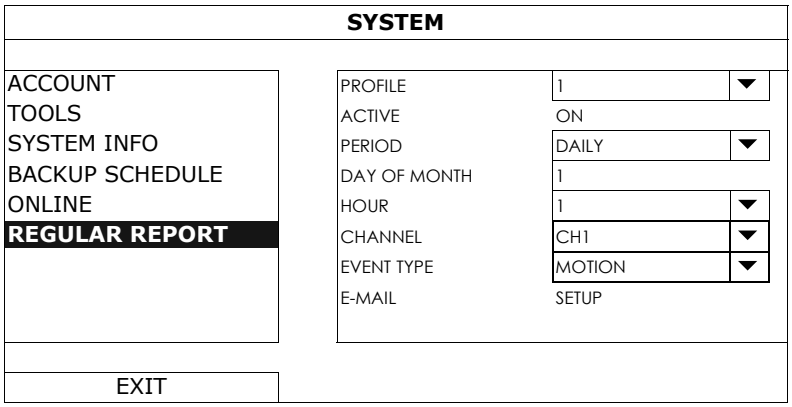
3) MAX ONLINE USER
   Select how many users could be accessed to this device at the same time. The more the users, the lower the transmission might be.

4) DROP ALL VIDEO CONNECTION
   Click “SUBMIT” to force disconnection of all remote logins when needed.

5.2.6 REGULAR REPORT

This function is used to send event reports to the specified E-mail address. Users could configure up to 5 profiles to receive different reports about specific channels at different time.

Note: This function is available only when a hard disk is installed.



Step1: Select the profile you want to configure, and enable it.

Step2: Select the frequency to send reports in “PERIOD”: DAILY / MONTH / WEEK.

Step3: When MONTH or WEEK is selected, select which date or day from “DAY OF MONTH” or “DAY OF WEEK”.

Step4: Then, select which time you want to receive reports, which channel(s) you want to see, and which event type(s) you want to see (ALARM / MANUAL / MOTION / SYSTEM / TIMER / INFLOW / OUTFLOW / VIRTUAL FENCE / ONEWAY / SCENE CHANGE / HUMAN DETECTION).

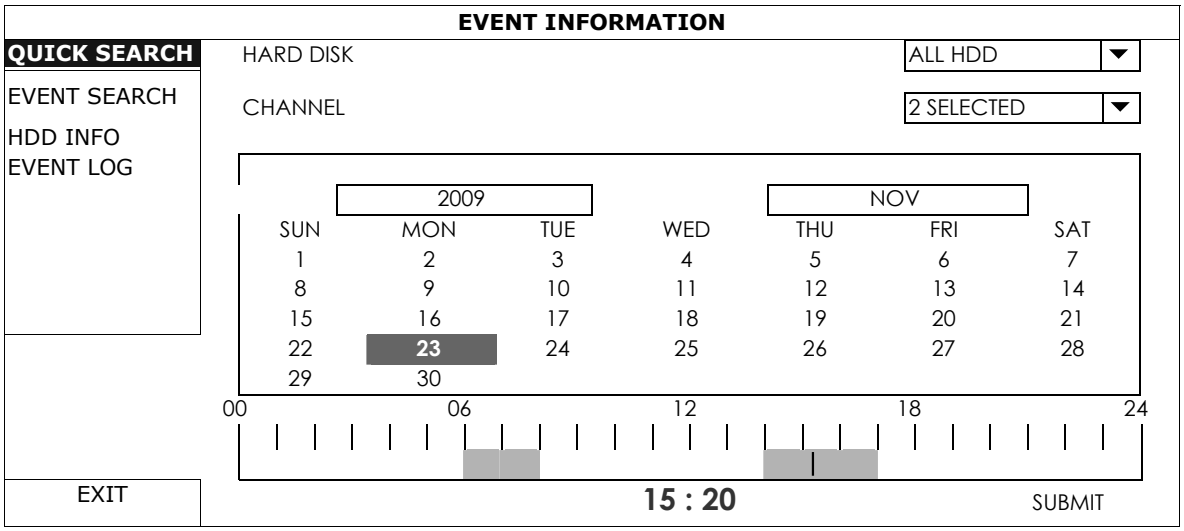
Note: Some event types are available only for selected models.

Step5: Configure the email address to receive reports.

Note: The sender E-mail should be configured in "ADVANCED CONFIG" → "NETWORK" → "E-MAIL" for this function to work properly. For details, please refer to "E-MAIL" at page 31.

5.3 EVENT INFORMATION

5.3.1 QUICK SEARCH



Step1: Select the hard disk and channel including the video data you want to search.

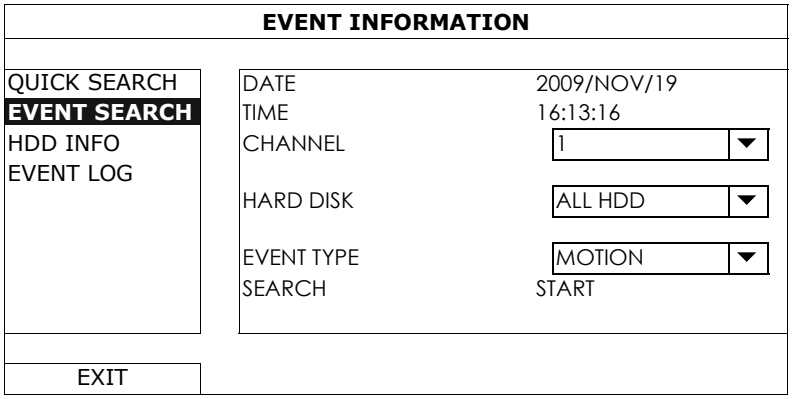
Step2: Select the month including the video data you want to search from the calendar, and the date with recorded data will be highlighted.

Step3: Select the date you want from the calendar, and the time with recorded data will be highlighted from the time scale bar.

Step4: To immediately play the video clip, click "SUBMIT".
To choose the start time for video playback, move your mouse cursor to the highlighted time, and click to confirm the time when the time display below is the time you want. The video playback is activated right away when you confirm the time.

Note: For video playback operations, please refer to "3.2.5 Playback Panel" at page 11.

5.3.2 EVENT SEARCH



1) DATE / TIME
   Select the specific time period that you want to search.

2) CHANNEL
   Select the video channel you want to search.

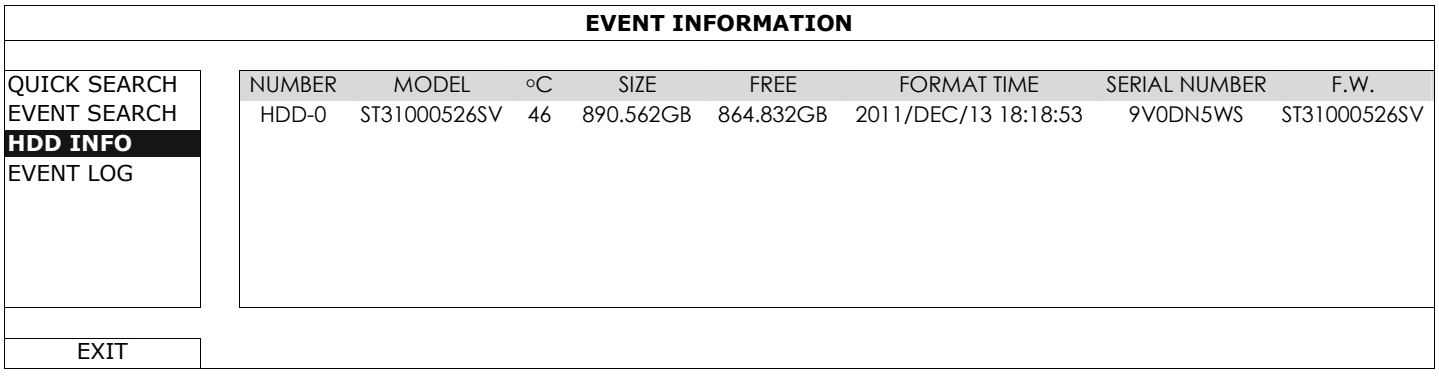
3) HARD DISK
   Select the hard disk including the video data you want to search, or select “ALL HDD”.

4) EVENT TYPE
   Select the event type you want to search: MOTION / ALARM / HUMAN DETECTION.

5) SEARCH
   Click “START” to start search and play the video data immediately.

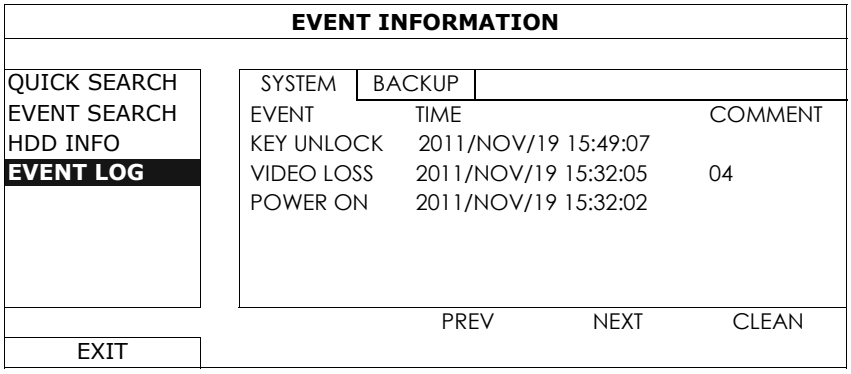
5.3.3 HDD INFO

You can check the information of the connected hard disk(s) in this device.



5.3.4 EVENT LOG

You can check all the event information (event type, time and channel), or clear all log records.



5.4 ADVANCED CONFIG

5.4.1 CONNECTION

To manually assign the address of your camera connected locally, click “URI” to modify.

ADVANCED CONFIG

CONNECTION
CAMERA
DETECTION
ALERT
NETWORK
DISPLAY
RECORD
NOTIFY
PSE
MULTICASTING
EXIT

CHANNEL	URI	CONFIG
CH1	AVTECH://ip_office.ddns.eagleeyes.tw:80	SETUP
CH2	ONVIF://10.1.1.14:88	SETUP
CH3	AVTECH://10.1.1.30:88	SETUP
CH4	AVTECH://10.1.1.12:88	SETUP

Then, click “SETUP” to enter the access information of the camera:

CONFIG-CH1

CACHE TIME (MSEC)	0 10 20
VENDOR	AVTECH
DEVICE	IPCAM(FIXED)
PROFILE	PROFILE-3
TYPE	H264
IMAGE SIZE	720 X 480
QUALITY	0 5 10
I.P.S.	30
AUDIO	ON
RESOLUTION LIST *(For selected models only)*	Select All

EXIT

Step1: Click “DEVICE” to detect and make sure the access information you’re intended to connect is correct.

Step2: Select the image size, image quality, and I.P.S.

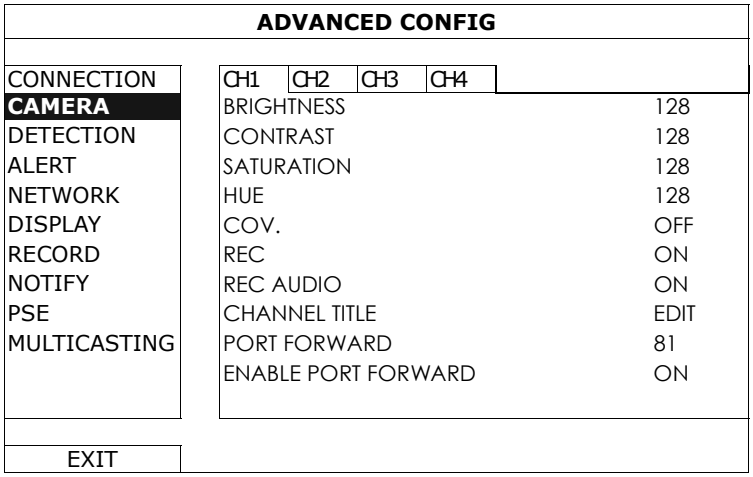
Note: The options selectable for “IMAGE SIZE” and “I.P.S.” depends on the camera you’re intended to connect.

Note: The “IMAGE SIZE” options for selected 8CH models are up to 1280 x 720.

Step3: (Optional) For the camera with audio recording, select “ON” or “OFF”.

Step4: (For selected models only) Assign the resolution you could choose based on you need. This change will affect the resolution options you could choose for live viewing and recording.

5.4.2 CAMERA



1) BRIGHTNESS / CONTRAST / SATURATION / HUE
   Click the current value to manually adjust the brightness/contrast/saturation/hue of each channel here.

2) COV.
   Select if you want to mask the selected channel under recording (ON / OFF). When this function is activated, the wording "COV." will be shown on the channel screen.

Note: To hide the wording "COV." when this function is on, go to "DISPLAY", and set "DISPLAY COVERT" to "OFF". For details, please refer to "5.4.6 DISPLAY" at page 32.

3) REC
   Select if you want to enable recording for the selected channel (ON / OFF).

Note: When this function is disabled, no manual, event or timer recording will be activated even if any of these three record functions is set to "ON".

4) REC AUDIO
   Select if you want to enable audio recording for the selected channel (ON / OFF).

Note: This function is available only when your connected device supports audio recording.

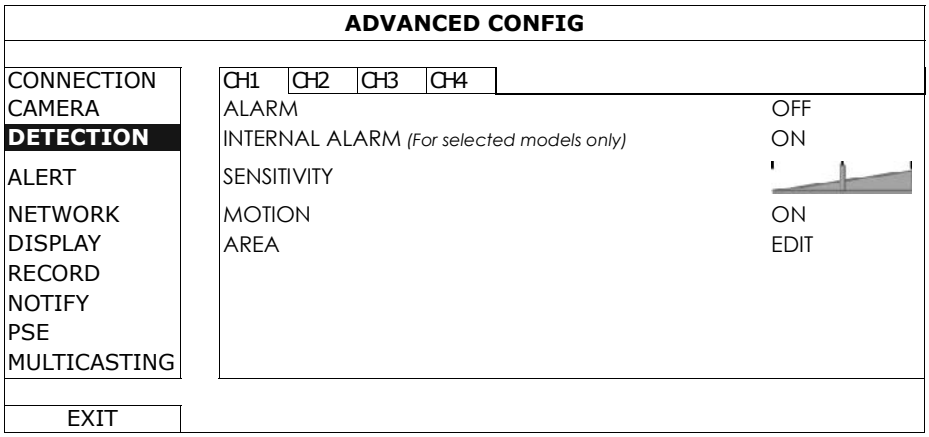
5) CHANNEL TITLE
   Click "EDIT" to input the channel title (up to six characters). The default title is the channel number.

6) PORT FORWARD / ENABLE PORT FORWARD
   These two functions are used when you only want to see a single channel of this recorder remotely.
   a) Set the port number for the channel in "PORT FORWARD". The default value for CH1 is 81, and the default value for CH2 is 82… etc. If you want to change the port number to other value, the range is from 1 ~ 65535.
   b) Select "ON" in "PORT FORWARD ENABLE".

   The address of the channel will be "http://*recorder_address*:*port_number*". Enter the address in Internet Explorer, and see if you can access the device connected channel individually.

Note: The user name and password are still required to access the device connected to the channel. Make sure you know the user name and password to access the device. For details, please refer to its user manual.

5.4.3 DETECTION



1) ALARM
   Select N.C./ N.O depending on your installation need. The default alarm value is OFF.

2) INTERNAL ALARM *(For selected camera models only)*
   This function appears only when the camera connected supports human detection.
   Select “ON” to enable human detection, or “OFF” to disable it.

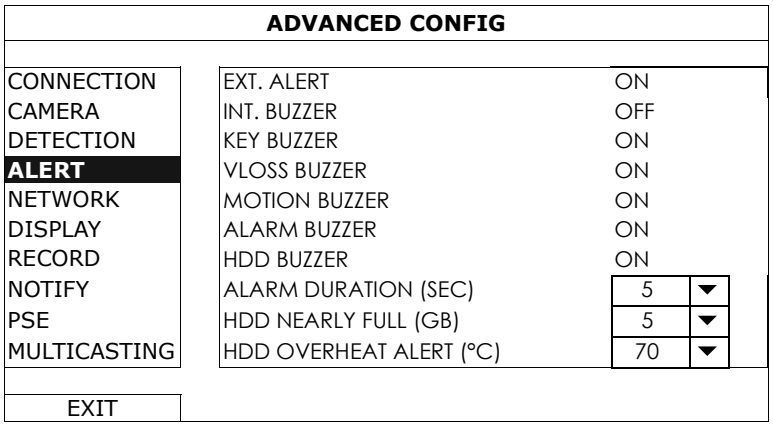
3) SENSITIVITY
   Select the detection sensitivity of the selected channel.

4) MOTION
   Select if you want to activate the motion detection function for the selected channel (ON/OFF).

5) AREA
   Click “EDIT” to set the motion detection area.
   There are 16 × 12 grids per camera for all channels. Pink blocks represent the area that is not being detected while the transparent blocks are the area under detection.

Note: To exit area setting and return to the detection page, right click your mouse.

5.4.4 ALERT



1) EXT. ALERT
   Select to enable or disable the sound when any external alarm is triggered (ON / OFF).

2) INT. BUZZER
   Select to enable or disable the sound (ON / OFF) for all internal buzzers: KEY BUZZER, VLOSS BUZZER, MOTION BUZZER, ALARM BUZZER, and HDD BUZZER.

Note: When this item is set to “OFF”, item 3) to item 7) will be disabled even though they are set to ON.

3) KEY BUZZER
Select to enable or disable the sound when pressing the buttons on the front panel (ON / OFF).

4) VLOSS BUZZER
Select to enable or disable the sound when video loss happened (ON / OFF).

5) MOTION BUZZER
Select to enable or disable the sound when any motion alarm is triggered (ON / OFF).

6) ALARM BUZZER
Select to enable or disable the sound when any internal alarm is triggered (ON / OFF).

7) HDD BUZZER
Select to enable or disable the sound (ON / OFF) when the HDD remaining capacity reaches to the value set in “HDD NEARLY FULL (GB)”.

8) ALARM DURATION (SEC)
Select the duration time for alarm buzzer in second (5 / 10 / 20 / 40).

9) HDD NEARLY FULL (GB)
If HDD BUZZER is enabled, select the duration time for buzzer notifications when the hard disk available capacity is 5/10/15/20 GB left.

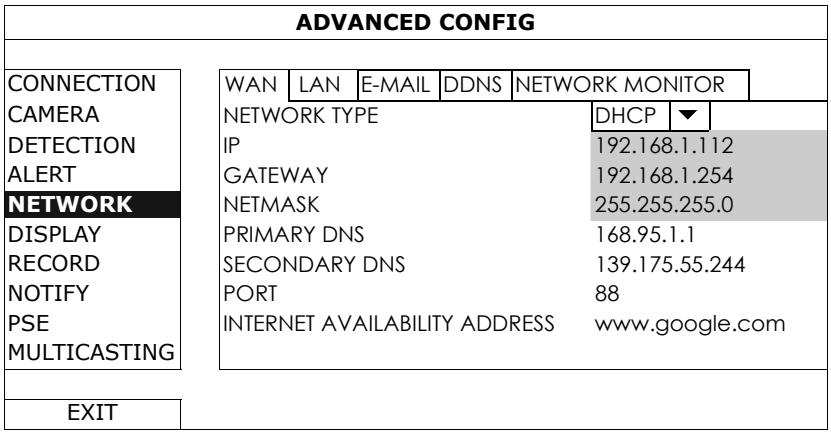
10) HDD OVERHEAT ALERT (°C)
Select the temperature alert for your hard disk to be aware of the possible overheat of your hard disk.

5.4.5 NETWORK

There are two RJ45 ports on the rear panel: WAN and LAN.

- ***WAN*** is used to connect this recorder to Internet for remote access from anywhere as long as Internet access is available.
- ***LAN*** is used to connect to IP cameras locally.
- ***DDNS*** is used when the Internet access is available.

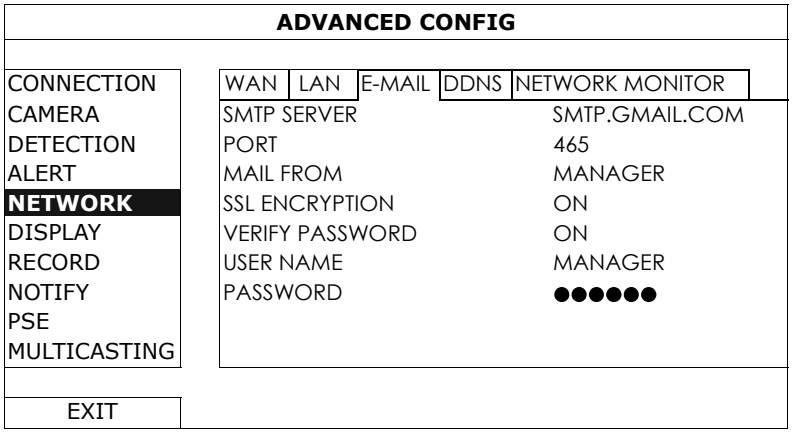
Note: For more details about these three functions and network configurations, please get the setup manual from the supplied CD or from www.surveillance-download.com/user/network_setup/network_setup_recorder.pdf.



E-MAIL

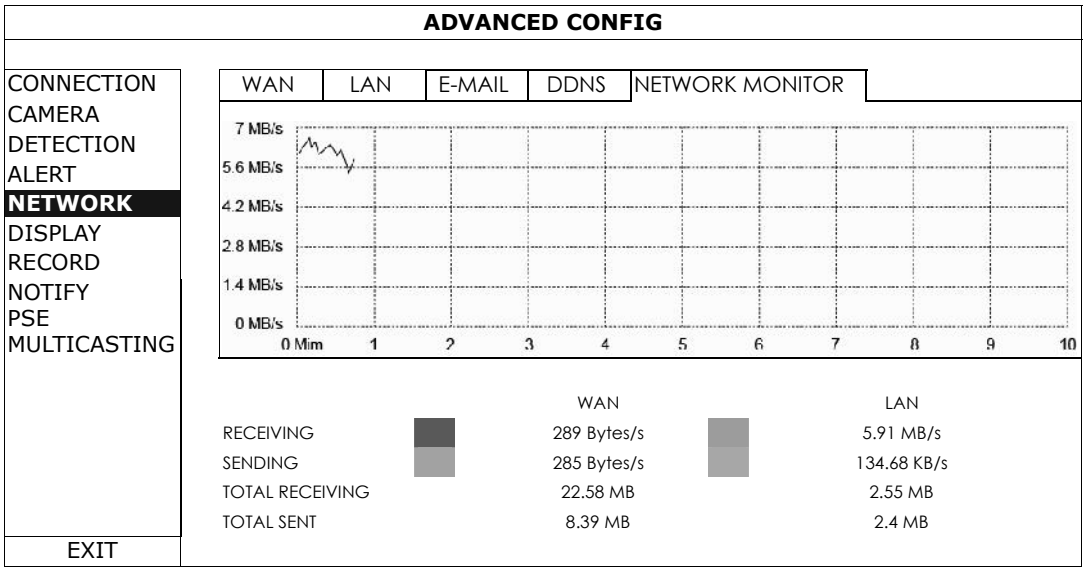
Configure your E-mail account here to send event notifications to the E-mail address(es) specified in “NOTIFY”.

Note: To know the SMTP server and port number you should use, please check with your E-mail service provider.

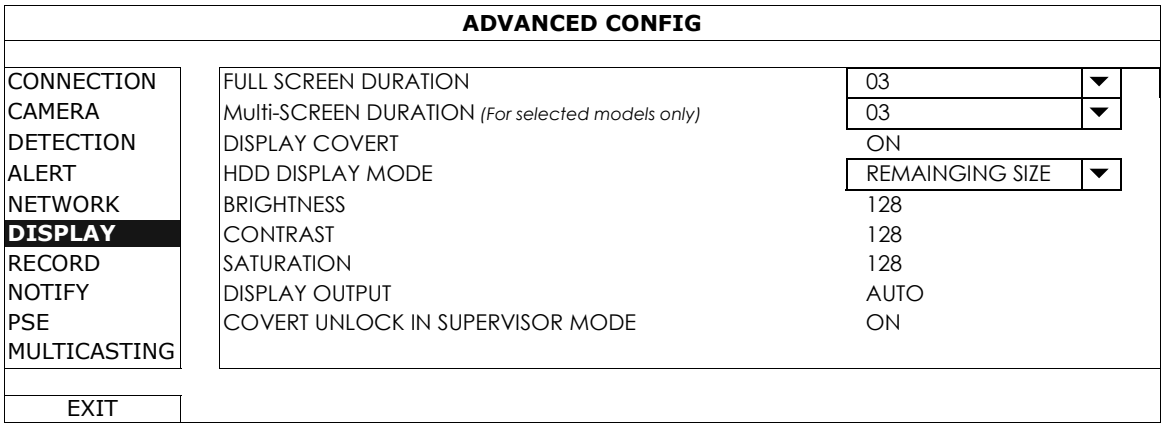


NETWORK MONITOR

Check the network activity of this recorder.



5.4.6 DISPLAY



1) FULL SCREEN DURATION
   Select the full screen dwell duration time in second (03 / 05 / 10 / 15).

2) MULTI-SCREEN DURATION *(For selected models only)*
   Select the dwell duration time for different channel display modes in second (03 / 05 / 10 / 15).

Note: The display modes available depend on the model you have and how many channels of it.

3) DISPLAY COVERT
   Select “ON” or “OFF” to display or hide the wording “COV.” when covert recording is activated in “CAMERA”.

4) HDD DISPLAY MODE
   Select “REMAINING SIZE” to show the remaining HDD capacity for recording in GB, or “REMAINING TIME” to show the remaining recording time.

5) BRIGHTNESS / CONTRAST / SATURATION
   Click the current value to manually adjust the brightness/contrast/saturation/ of the screen.

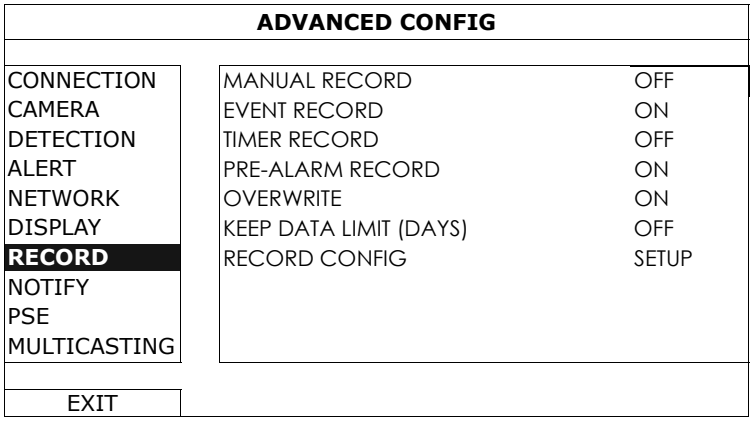
6) DISPLAY OUTPUT
   Select the display resolution you want. There are four options as follows:
   - AUTO (default)
   - 1920 x 1080
   - 1280 x 720
   - 1024 x 768

Note: To have the best image quality on your monitor, make sure (1) the selected DVR output resolution is supported by your monitor, and (2) the output settings on both the LCD monitor and DVR are consistent.
If the image is not positioned or scaled properly, please go to your monitor’s menu for adjustment. For details, please refer to the user manual of your monitor.

7) COVERT UNLOCK IN SUPERVISOR MODE
   Enable this function to allow the supervisor user to see live view even when the channel is set “COV.” to “ON” in “ADVANCED CONFIG” → “CAMERA”.

5.4.7 RECORD

Note: Please DO NOT change the date or time of your recorder after the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search. If users change the date or time accidentally when the recording function is activated, it's recommended to clear all hard disk data, and start recording again.



8) MANUAL RECORD
   Set the manual recording function on / off.

9) EVENT RECORD
   Set the event recording function on / off.

10) TIMER RECORD
    Set the timer recording function on / off.

11) PRE-ALARM RECORD
    Select to enable or disable the pre-alarm function (ON / OFF).

    When pre-alarm and event recording functions are both activated, the recorder will record 8MB data before an alarm / motion event is triggered.

12) OVERWRITE
    Select "ON" to overwrite previous recorded data in your HDD when the HDD is full. When this function is on and the HDD is full, the recorder will clear 8GB data from the oldest for continuous recording without notice.

13) KEEP DATA LIMITS (DAYS)
    Assign the maximum recording days from 01 to 31 after which all the recorded data will be removed, or select "OFF" to disable this function.

14) RECORD CONFIG
    Click "SETUP" to enter the setting page individually for manual record, event record and timer record.

    For details, please refer to "5.1.1 GENERAL" at page 18.

5.4.8 NOTIFY

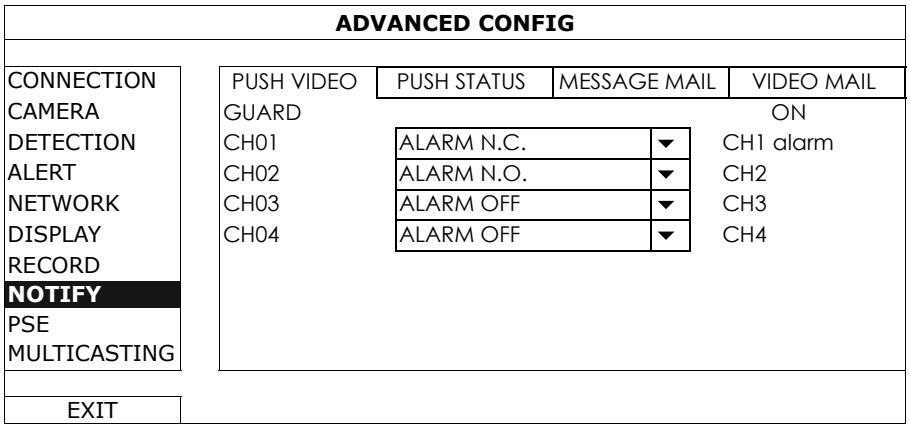
You can configure this recorder to send notifications for certain events to mobile devices with our mobile app, EagleEyes, installed, or to the specified E-mail address(es).

PUSH VIDEO *(for selected models only)*

Before using this function, make sure:

- The camera connected to this recorder is our ETS network camera series.
- You have iPhone®, iPad®, or Android™ mobile phone or tablet.
- You have subscribed the mobile network service from your mobile service provider.
- The mobile app, EagleEyes, is installed in your mobile device. For details, please refer to "APPENDIX 4 MOBILE SURVEILLANCE VIA EAGLEEYES" at page 42.
- You have configured EagleEyes to access this recorder, and Push Video is enabled. For details, please refer to "APPENDIX 5 SET PUSH VIDEO" at page 43.

You'll get an active event notification with video telling you the occurrence of alarm event(s).



Step1: Switch "GUARD" to "ON".

Step2: Select the channel number with our ETS network camera connected, and select the alarm type to "ALARM N.C.", "ALARM N.O.", or "INTERNAL ALARM" (shown only when the connected ETS camera has an alarm sensor built-in).

Step3: Customize the notification message you want to see after alarm type setting, or keep the default message, which shows only the channel numbering.

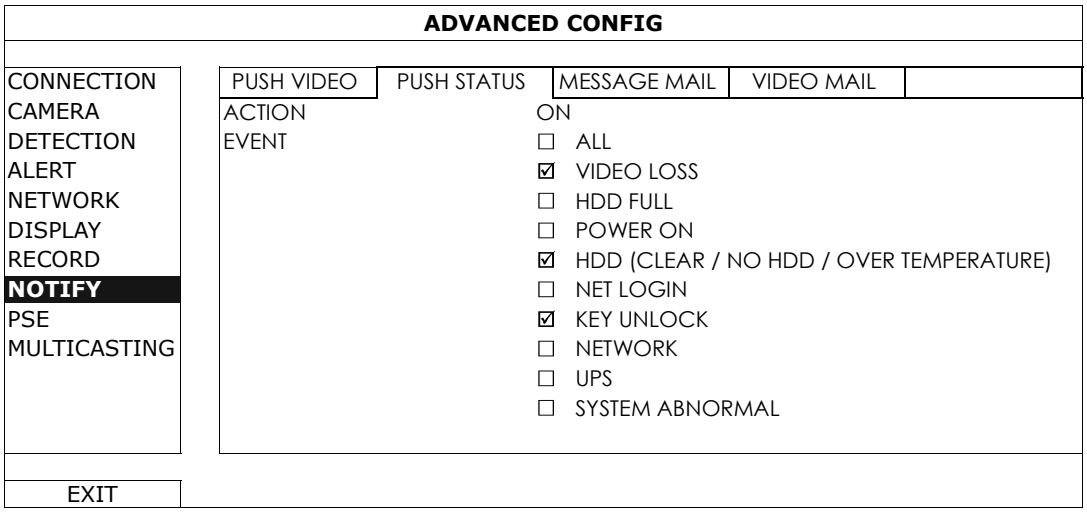
Step4: Enable "Push Video" in EagleEyes on your mobile device, and try to trigger an alarm event to see if you'll get Push Video.

PUSH STATUS (for selected models only)

Before using this function, make sure:

- You have iPhone®, iPad®, or Android™ mobile phone or tablet.
- You have subscribed the mobile network service from your mobile service provider.
- The mobile app, EagleEyes, is installed in your mobile device. For details, please refer to "APPENDIX 4 MOBILE SURVEILLANCE VIA EAGLEEYES" at page 42.
- You have configured EagleEyes to access this recorder, and Push Video is enabled. For details, please refer to "APPENDIX 5 SET PUSH VIDEO" at page 43.

You'll get a text message telling you the occurrence of selected system event(s).



Step1: Switch "ACTION" to "ON".

Step2: Select the system event(s) you want to get notified via your mobile device.

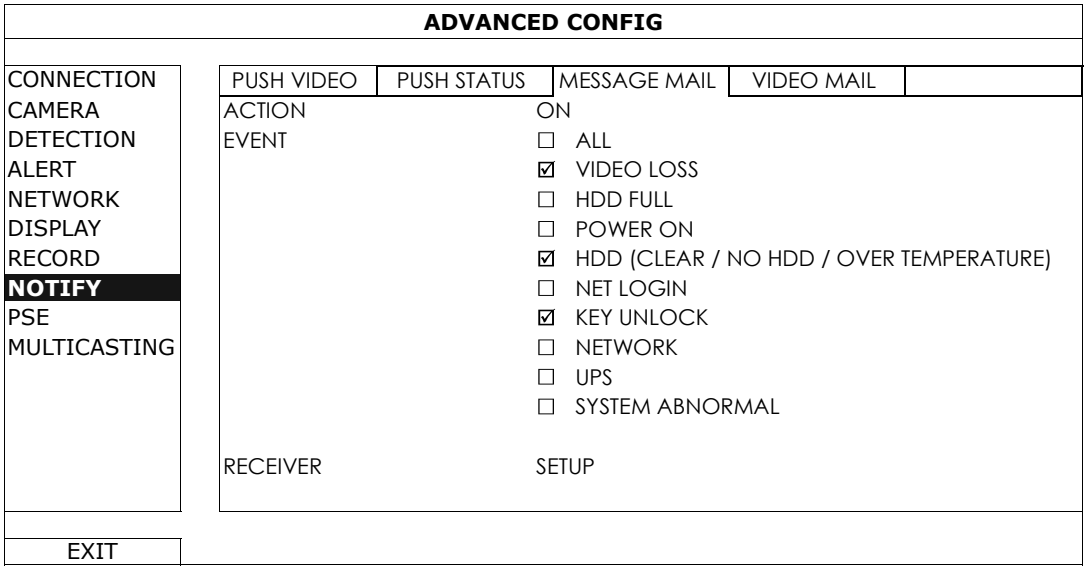
Step3: Enable "Push Status" in EagleEyes on your mobile device, and try to trigger an alarm event to see if you'll get Push Status.

MESSAGE MAIL

Note: For E-mail notifications, make sure you have configured an E-mail account in "NETWORK" → "E-MAIL" to send the notifications.

Enable this function in "ACTION", select the event type(s) you want to send notifications in "EVENT", and add the E-mail address(es) to which you want to send notifications in "RECEIVER".

You'll get an E-mail telling you the occurrence of your selected event(s).



VIDEO MAIL

Note: For E-mail notifications, make sure you have configured an E-mail account in "NETWORK" → "E-MAIL" to send the notifications.

Enable this function in "E-MAIL ALERT", and add the E-mail address(es) to which you want to send notifications in "RECEIVER".

You'll get an E-mail telling you the occurrence of motion events attached with a html file.

ADVANCED CONFIG

	PUSH VIDEO	PUSH STATUS	MESSAGE MAIL	VIDEO MAIL
CONNECTION	E-MAIL ALERT			ON
CAMERA	RECEIVER			SETUP
DETECTION				
ALERT				
NETWORK				
DISPLAY				
RECORD				
NOTIFY				
PSE				
MULTICASTING				
EXIT				

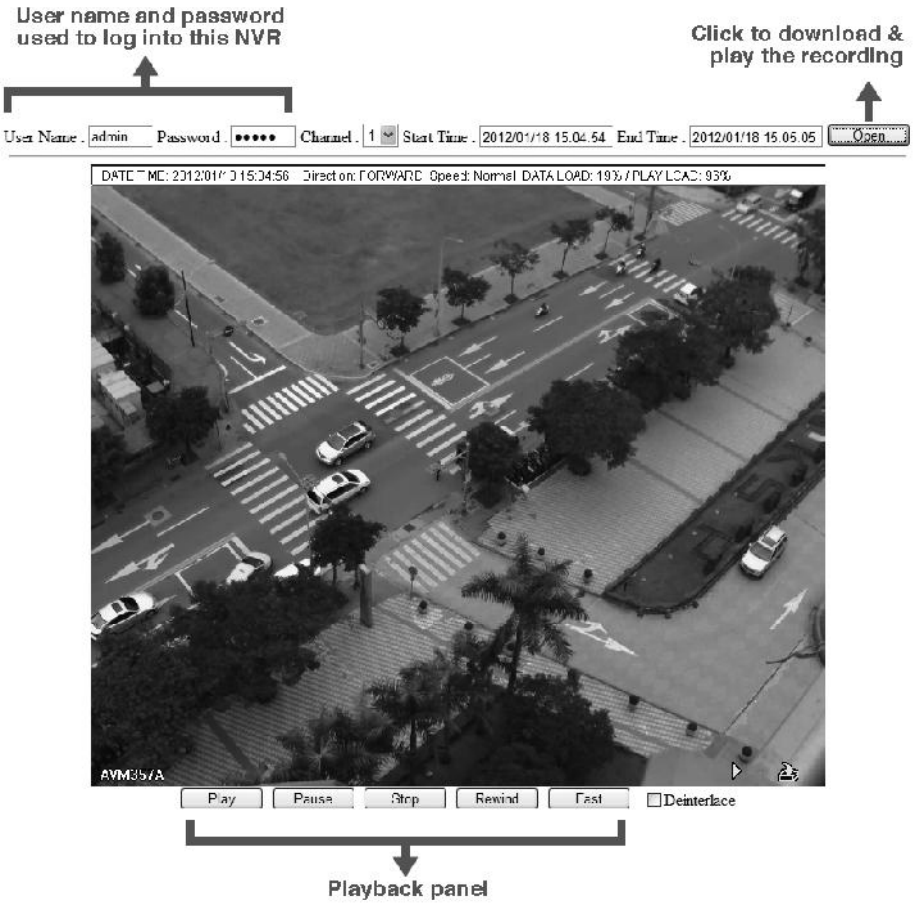
How to check video recording

Step1: Open the html file attached.

Note: Please accept to install ActiveX control on your computer.

Step2: Enter the user name and password to log into this recorder, and select the channel you want.

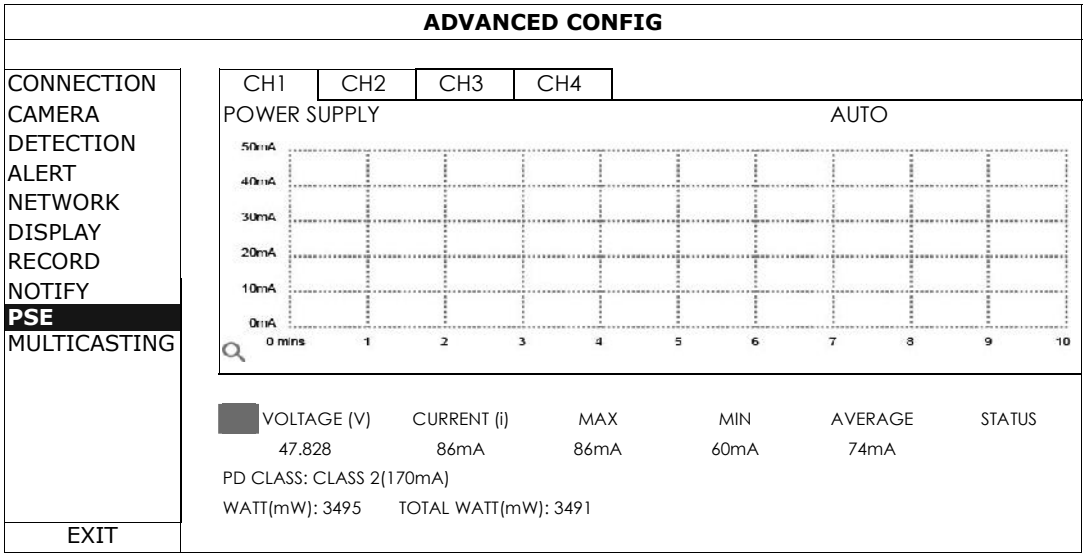
Step3: Click "Open" to download the motion recording to your computer and start playing.



5.4.9 PSE

Note: This function is available only for models with PoE or PoN function.

Users could check the power supply status in this menu, and disconnect power supply to the camera if needed.

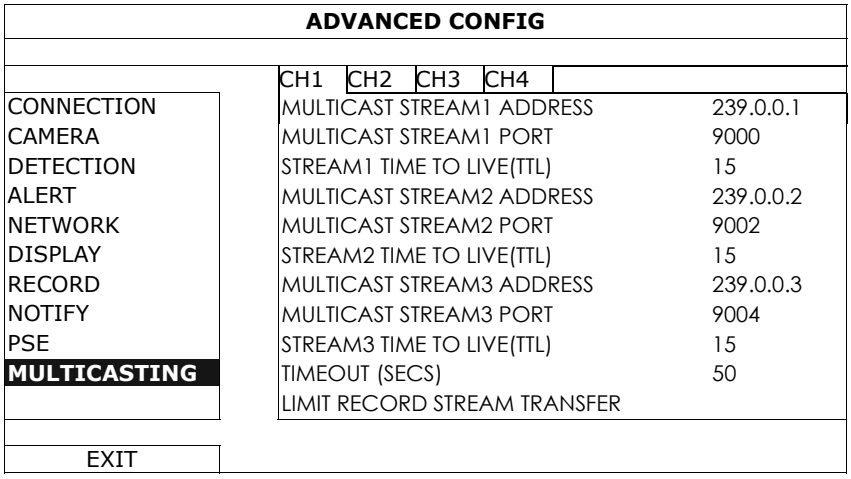


5.4.10 MULTICASTING

Note: This function is available only for selected models.

In this menu, users could configure the multicast address and port used for each channel for data streaming.

Three streams for different usage could be configured per channel. These are used for different video data requests from different clients.



1) MULTICAST STREAM ADDRESS

Configure the addresses used for the three streams per channel.

The address range for multicasting is from 224.0.0.0 to 239.255.255.255.

Note: The address for each stream per channel should be unique and can't be the same as other stream in the same channel or other channel.

2) MULTICAST STREAM PORT

Set the event recording function on / off.

Configure the ports used for the three streams per channel.

The port range is from 1 to 65535.

Note: The port for each stream per channel should be unique and can't be the same as other stream in the same channel or other channel.

3) TIME TO LIVE(TTL)
Set the connection time in second for each stream from 1 ~ 999.

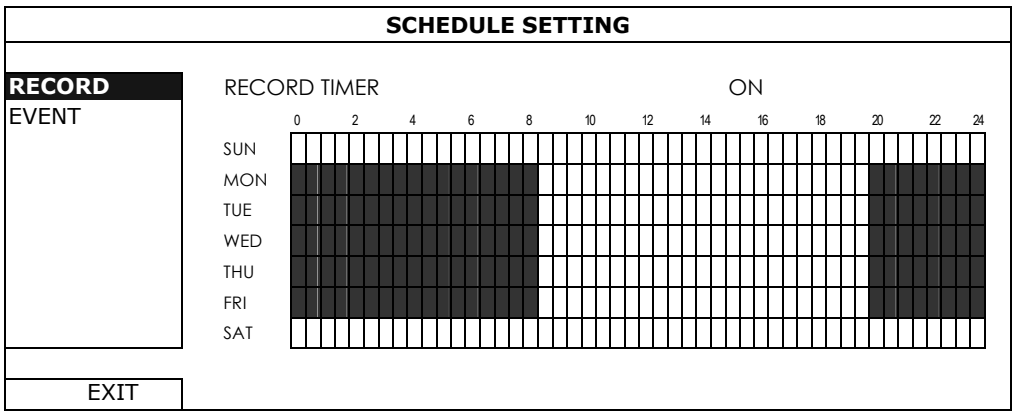
4) TIMEOUT (SECS)
Set the timeout in second for transmission attempt in second for this channel, after which the attempt will be down. The options are: 10 / 20 / 30 / 50 / 120 / 240 / 300.

5) LIMIT RECORD STREAM TRANSFER
Set the number of how many record streaming could be transferred at the same time.

5.5 SCHEDULE SETTING

5.5.1 RECORD

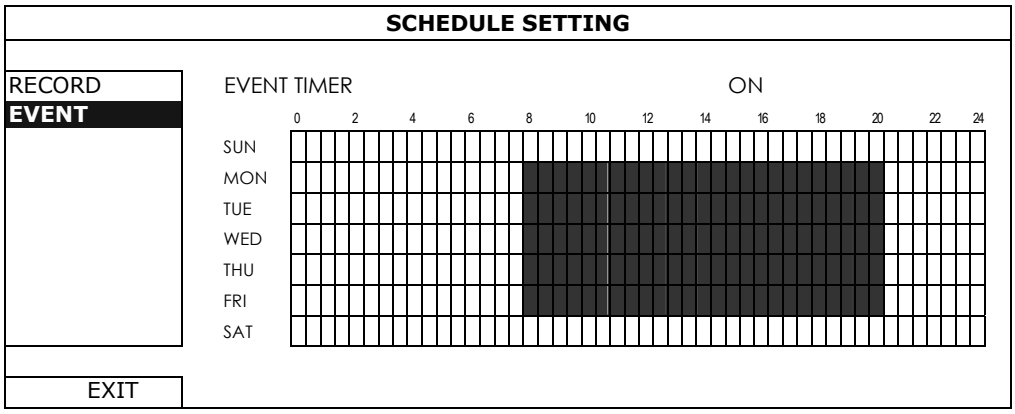
Select “ON” to enable record timer, and select the day and time for this function.



X axis: 0 ~ 24 hours. Each time bar is 30 minutes.
Y axis: Monday ~ Sunday.

5.5.2 EVENT

Select “ON” to enable event timer, and select the day and time for this function.



X axis: 0 ~ 24 hours. Each time bar is 30 minutes.
Y axis: Monday ~ Sunday.

APPENDIX 1 COMPATIBLE USB FLASH DRIVE LIST

Please upgrade the firmware of the recorder to the latest version to ensure the accuracy of the following table. If the USB flash drive is not supported by the recorder, you will see on the screen.

Note: Please use your PC to format the USB flash drive as "FAT32".

Note: You can backup up to 2GB video data for one-time USB backup. To backup more data, please set the time & channel(s) you want, and start USB backup again.

MANUFACTURER	MODEL	CAPACITY
Transcend	JFV35	4GB
	JFV30	8GB
Kingston	DataTraveler	1GB
PQI	U172P	4GB
Apacer	AH320	2GB
	AH320A	8GB
	AH220	1GB
	AH320	4GB
A-data	RB-18	1GB
Sandisk	Cruzer Micro	2GB
	Cruzer Micro	4GB
	Cruzer4-pk	2GB
Netac	U208	1GB
MSI	F200	4GB
SONY	Micro Vault Tiny 2GB	2GB
	Micro Vault Tiny 4GB	4GB
	Micro Vault Tiny	1GB

APPENDIX 2 COMPATIBLE HARD DISK LIST

Please upgrade the firmware of the device to the latest version to ensure the accuracy of the following table.

Note: It's necessary to install a hard disk first before firmware upgrade to ensure the upgrade process works properly.

Note: To use a green hard disk, use **ONLY** the hard disk designed especially for surveillance to ensure the device works properly.

MANUFACTURER	MODEL	CAPACITY	ROTATION
Seagate	ST250DN000	250GB	7200 rpm
	ST3320613AS	320GB	7200 rpm
	ST33500320AS	500GB	7200 rpm
	ST3500410SV	500GB	7200 rpm
	ST3750330AS	750GB	7200 rpm
	ST31000525SV	1000GB	7200 rpm
	ST31000340AS	1000GB	7200 rpm
	ST2000DM001	2TB	7200 rpm
	ST2000VX000	2TB	7200 rpm
	ST3000VX000	3TB	7200 rpm
	ST1000VM002	1TB	7200 rpm
WD	WD2500AAKX	250GB	7200 rpm
	WD2500AAKX	250GB	7200 rpm
	WD3200AAKS	320GB	7200 rpm
	WD5000AACS	500GB	7200 rpm
	WD5000AZRX	500GB	7200 rpm
	WD6400AAKS	640GB	7200 rpm
	WD7500AAKS	750GB	7200 rpm
	WD10EADS	1TB	7200 rpm
	WD10EALX	1TB	7200 rpm
	WD10EURX	1TB	7200 rpm
	WD15EADS	1.5TB	7200 rpm
	WD20EADS	2TB	7200 rpm
	WD20EURS	2TB	7200 rpm
	WD2002FAEX	2TB	7200 rpm
	WD20EARS	2TB	7200 rpm
	WD30EURX	3TB	7200 rpm
	WD30EFRX	3TB	7200 rpm
	WD20EFRX	2TB	7200 rpm
Maxtor	STM3500320AS	500GB	7200 rpm
	STM3750330AS	750GB	7200 rpm
HITACHI	HDT725032VLA360	320GB	7200 rpm
	HDS7211050DLE630	500GB	7200 rpm
	HDS721010KLA330	1000GB	7200 rpm
	HDS723020BLA642	2TB	7200 rpm
TOSHIBA	DT01ACA050	500G	7200 rpm
	DT01ABA050V	500G	7200 rpm
	DT01ABA100V	1TB	7200 rpm

*For 4CH & 8CH models only

APPENDIX 3 BATTERY REPLACEMENT

The time reset after power failure, for example, caused by a power outage, will cause the disorder of the recorded data, and users may have problems in searching the event clip they want. To keep the device time from resetting, a non-chargeable lithium battery, *CR2032*, is installed in the device.

However, the device time might still get reset when the battery is low or even running out of power. If so, please replace the device battery, CR2032, **right away** as instructed below.

➢ **How to replace CR2032**

Note: The lithium battery, CR2032, is a non-chargeable battery, and should be purchased separately. Please replace only with the same or equivalent type battery in case of danger.

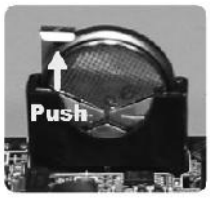
Step1: Stop all recording **immediately** to prevent the disorder of the recorded data. Then, back up the recorded data if necessary.

Step2: Power off the device, and disconnect the power.

Step3: Remove the device cover, and find the battery on the mainboard.

Step4: Push the release as indicated below to remove the battery.

Type1



Type 2

Step5: Get a new battery and install it to its slot on the main board.

- For Type 1, install it with the side of “CR2032” facing up as shown above.
- For Type 2, install it without the side of “CR2032” facing you as shown above.

Step6: Replace the cover and connect to power.

Step7: Set the date & time, and resume recording.

APPENDIX 4 MOBILE SURVEILLANCE VIA EAGLEEYES

EagleEyes is a mobile phone program used with our surveillance system for remote surveillance. It has several advantages:

- It's free (Except *EagleEyes Plus* for iPhone®, and *EagleEyesHD Plus* for iPad®).
- It's compatible with several popular mobile platforms, such as iOS® and Android™.

It's easy to download, install and configure. For more details about configuring and operating this program, please visit our official website www.eagleeyescctv.com.

A4.1 Prerequisites

Before installing EagleEyes to your mobile phone for remote surveillance, make sure you have checked the following:

- ✓ Your mobile platform is iOS® and Android™.
- ✓ Mobile Internet services are subscribed and available to use for your mobile phone.

Note: You might be charged for Internet access via wireless or 3G networks. For the Internet access rate details, please check with your local network operator or service provider.

- ✓ You have noted down the IP address, port number, user name and password used to access your network camera from Internet.

A4.2 Where to download

Connect to www.eagleeyescctv.com from your mobile device, and sign in.

Note: Please **DO NOT** try to download EagleEyes from your computer.

Select the mobile platform you're using to enter its individual download page.

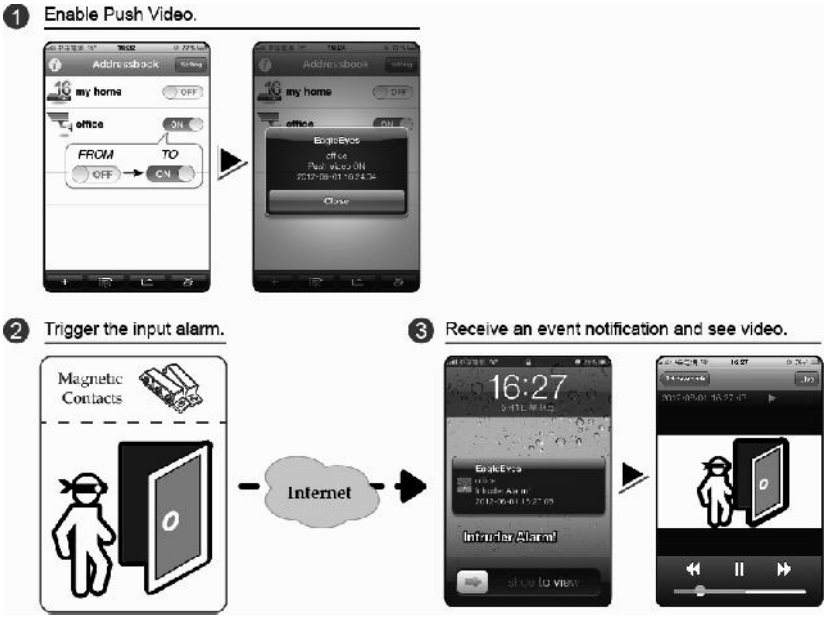
Note: You can also find *EagleEyes* on "App Store℠" / "Google Play™" from your iOS® / Android™ mobile devices.

When the download is completed, *EagleEyes* will be installed automatically to the location where all applications are saved in your phone by default, or where you specify.

APPENDIX 5 SET PUSH VIDEO

Note: Available only when your recorder supports Push Video.

This series supports instant event notifications to your iOS® / Android™ mobile device with our self-developed program, “EagleEyes”, installed when it's used with the ETS IP camera series.



A5.1 Prerequisite

Before setting this function, make sure you have checked the following:

- ✓ You have an iPhone® / iPad® / Android™ mobile device with our self-developed program, “EagleEyes”, installed. For details, please refer to the previous chapter.
- ✓ An ETS IP camera is connected to this recorder, and this camera has built-in an alarm sensor, or an alarm device, such as magnetic contacts, is connected to this camera.
- ✓ The alarm configuration is set properly in “ADVANCED CONFIG” .→ “NOTIFY” → "PUSH VIDEO”, and "GUARD" is set to “ON”.

Note: For details, please refer to “PUSH VIDEO *(for selected models only)”* at page 34.

- ✓ The recorder is connected to Internet. For details, please refer to www.surveillance-download.com/user/network_setup/network_setup_recorder.pdf.

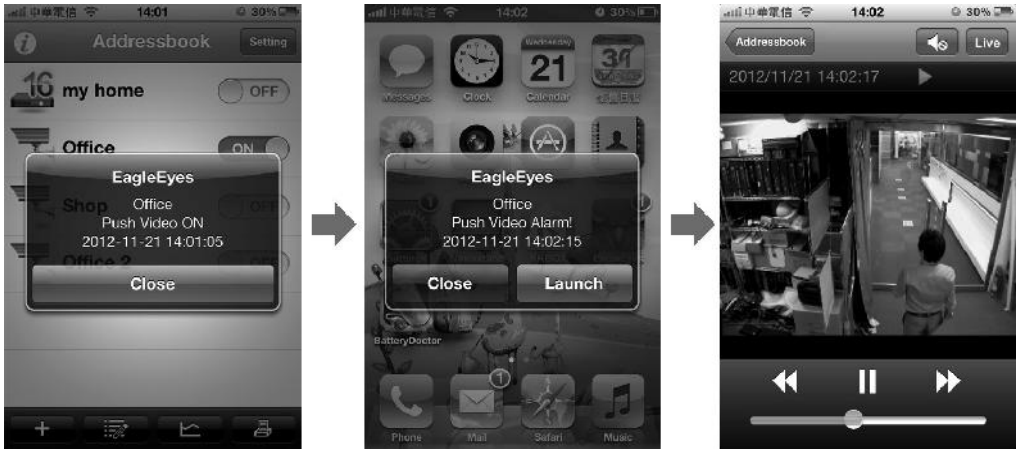
A5.2 Enable Push Video

A5.2.1 From iOS® Mobile Device (iPhone® / iPad®)

Step1: In the iPhone® / iPad® main menu, select “Settings” → “Notifications”. Select “EagleEyes”, and make sure "Notification Center” is set to “ON”.

Step2: Open “EagleEyes”, and switch the Push Video button to “ON”. You’ll receive the message indicating that Push Video is on.

Step3: Return to the main menu of your iPhone® / iPad®. You’ll receive event notifications when there’s an alarm event. Select “Launch” (or “View” base on your iOS® version) to immediately play the recorded clip.



A5.2.2 From Android™ Mobile Device

In the address book, switch “Guard” from “OFF” to “ON”.

APPENDIX 6 PRODUCT SPECIFICATIONS

■ For models with PoN & PoE

➢ 4CH

		Model 1	Model 2	Model 3
Hardware				
Video Input		4 LAN ports		
Video Output		HDMI		
Video Output Resolution		1920 x 1080		
HDD Storage**		One 4TB HDDs		Two 4TB HDDs
eSATA		YES (support up to 4-bay disk array with RAID 0 and 1)		
USB Ports		Two on the front panel: one for video backup to USB flash drive, and another for NVR control via a USB mouse		
IR Remote Control		YES		
Ethernet	LAN port	10/100Mbps with PON	10/100Mbps with POE	
	Internet (WAN) port	1000Mbps		
Software				
Video Compression Format		H.264		
Audio Compression Format		G.711		
Local / Remote Display Mode		4CH		
Local / Remote Playback Mode		4CH		
Single Channel Playback		YES		
Recording Mode		Manual / Event / Alarm / Schedule		
Recording Throughput		Up to 120IPS @ 1920 x 1080, 32 Mbps		
Pre-alarm Recording		YES		
Quick Search		Time / Event		
Event Notification		Message Mail / Video Mail	Push Video / Push Status / Message Mail / Video Mail	
Security		4 user access levels with password		
Remote Access		(1) Internet Explorer on Windows operating system (2) EagleEyes on iOS & Android mobile devices (3) Our self-developed program, Video Viewer		
Max. Online User		6		

		Model 1	Model 2	Model 3
General				
Power Source (±10%)		DC 48V / 1.25A		
Power Consumption (±10%) (without a hard disk and POE IP camera connected)		7.68W		11.5W
PoE (IEEE802.3at)***	Max Power per PoE Port	--	30W	
	Total Max PoE Power Out	--	120W	
Camera power supply over PON (Power-over-Network)		YES	--	
Operating Temperature		10℃ ~ 40℃ (50℉~104℉)		
Dimensions (mm)****		345 (L) x 225 (W) x 68.3 (H)		375(L) × 264.8(W) x 68(H)
Minimum PC Browsing Requirements		• Intel core i3 or higher, or equivalent AMD • 2GB RAM • AGP graphics card, Direct Draw, 32MB RAM • Windows 7, Windows Vista & Windows XP, DirectX 9.0 or later • Internet Explorer 7.x or later		
Peripherals		Power-over-Coaxial Converter		

* Specifications are subject to change without notice. ** Hard disks are optional *** For camera power supply **** Dimensional tolerance: ±5mm

➢ **8CH**

		Model 4	Model 5
Hardware			
Video Input		8 LAN ports	
Video Output		HDMI output	
Video Output Resolution		1920 x 1080	
HDD Storage**		One 4TB HDDs	Two 4TB HDDs
eSATA		YES (support up to 4-bay disk array with RAID 0 and 1)	
USB Ports		Two on the front panel: one for video backup to USB flash drive, and another for local control via a USB mouse	
IR Remote Control		YES	
Ethernet	1~8 port	10/100Mbps with PON	10/100Mbps with POE
	Internet (WAN) port	1000Mbps	
Software			
Video Compression Format		H.264	
Audio Compression Format		G711	
Local / Remote Display Mode		8CH	
Loca / Remote Playback Mode		4CH	
Single Channel Playback		YES	
Recording Mode		Manual / Event / Alarm / Schedule	
Recording Throughput		Up to 240 IPS @ 1280 x 720, 32 Mbps	Up to 120 IPS @ 1920 x 1080, 32Mbps
Pre-alarm Recording		YES	
Quick Search		Time / Event	
Event Notification		Push Video / Push Status / Message Mail / Video Mail	
Security		4 user access levels with password	
Remote Access		(1) Internet Explorer on Windows operating system (2) EagleEyes on iOS & Android mobile devices (3) Our self-developed program, Video Viewer	
Max. Online User		10	
General			
Power Source (±10%)		DC 48V / 2.5A	
Power Consumption (±10%)***		13.7W	12.6W
PoE (IEEE802.3at)***	Max Power per PoE Port	--	30W
	Total Max PoE Power Out	--	240W
Camera power supply over PON (Power-over-Network)		YES	--
Operating Temperature		10℃ ~ 40℃ (50℉~104℉)	
Dimensions (mm)****		345 (L) x 225 (W) x 68.3(H)	375(L) × 264.8(W) x 68(H)
Minimum PC Browsing Requirements		• Intel core i3 or higher, or equivalent AMD • 2GB RAM • AGP graphics card, Direct Draw, 32MB RAM • Windows 7, Windows Vista & Windows XP, DirectX 9.0 or later • Internet Explorer 7.x or later	

* Specifications are subject to change without notice. ** Hard disks are optional *** without a hard disk and POE IP camera connected **** Dimensional tolerance: ±5mm

■ For models without PoN & PoE

➢ 4CH & 8CH

		Model 6	Model 7
Hardware			
Video Input		One LAN port (up to 4 IP cameras)	One LAN port (up to 8 IP cameras)
Video Output		HDMI	
Video Output Resolution		1920 x 1080	
HDD Storage**		Two 4TB HDDs	
eSATA		YES (support up to 4-bay disk array with RAID 0 and 1)	
USB Ports		Two 2.0 ports	
IR Remote Control		YES	
Ethernet	LAN port	1000Mbps	
	Internet (WAN) port	10/100Mbps	
Software			
Video Compression Format		H.264	
Audio Compression Format		G711	
Local / Remote Display Mode		4CH	8CH
Loca / Remote Playback Mode		4CH	
Single Channel Playback		YES	
Recording Mode		Manual / Event / Alarm / Schedule	
Recording Throughput		Up to 120 IPS @ 1920 x 1080, 32Mbps	
Pre-alarm Recording		YES	
Quick Search		Time / Event	
Event Notification		Push Video / Push Status / Message Mail / Video Mail	
Security		4 user access levels with password	
Remote Access		(1) Internet Explorer on Windows operating system (2) EagleEyes on iOS & Android mobile devices (3) Our self-developed program, Video Viewer	
Max. Online User		6	10
General			
Power Source (±10%)		DC 12V / 3A	
Power Consumption (±10%)***		9.6W	
Operating Temperature		10℃ ~ 40℃ (50℉~104℉)	
Dimensions (mm)****		375(L) × 264.8(W) x 68(H)	
Minimum PC Browsing Requirements		• Intel core i3 or higher, or equivalent AMD • 2GB RAM • AGP graphics card, Direct Draw, 32MB RAM • Windows 7, Windows Vista & Windows XP, DirectX 9.0 or later • Internet Explorer 7.x or later	
Peripherals		Power-over-Coaxial Converter	

* Specifications are subject to change without notice. ** Hard disks are optional *** without a hard disk and POE IP camera connected **** Dimensional tolerance: ±5mm

➢ **16CH**

		Model 8	Model 9	Model 10
Hardware				
Video Input		One LAN port (up to 16 IP cameras)		
Video Output		HDMI	HDMI & VGA	HDMI
Video Output Resolution		1920 x 1080		
Audio Output		YES		
HDD Storage**		Three 4TB HDDs	Two 4TB HDDs	
eSATA		YES (support up to 4-bay disk array with RAID 0 and 1)		
USB Ports		Two 2.0 ports		
IR Remote Control		YES		
Ethernet	LAN port	1000Mbps	10/100Mbps	
	Internet (WAN) port	1000Mbps	1000Mbps	
Software				
Video Compression Format		H.264		
Audio Compression Format		G711		
Local / Remote Display Mode		16CH		
Loca / Remote Playback Mode		16CH	4CH	
Single Channel Playback		YES		
Recording Mode		Manual / Event / Alarm / Schedule		
Recording Streaming		Single	Dual	
Recording Throughput		Up to 480 IPS @ 1920 x 1080, 120Mbps	240 IPS @ 1280 x 720, up to 48Mbps 120 IPS @ 1920 x 1080, up to 48Mbps	240 IPS @ 1280 x 720, up to 48Mbps
Pre-alarm Recording		YES		
Quick Search		Time / Event		
Event Notification		Push Status / Message Mail / Video Mail		
Security		4 user access levels with password		
Remote Access		(1) Internet Explorer on Windows operating system (2) EagleEyes on iOS & Android mobile devices (3) Our self-developed program, Video Viewer		(1) Internet Explorer on Windows operating system (2) EagleEyes on iOS & Android mobile devices
Max. Online User		5	5	
General				
Power Source (±10%)		DC19V / 3.42A	DC12V / 3A	
Power Consumption (±10%)***		--	9.6W	
Operating Temperature		10℃ ~ 40℃ (50℉~104℉)		
Dimensions (mm)****		432(W) × 90(H) × 326(D)	375(L) × 264.8(W) x 68(H)	
Minimum PC Browsing Requirements		• Intel core i3 or higher, or equivalent AMD • 2GB RAM • AGP graphics card, Direct Draw, 32MB RAM • Windows 7, Windows Vista & Windows XP, DirectX 9.0 or later • Internet Explorer 7.x or later		
Peripherals		Power-over-Coaxial Converter		

* Specifications are subject to change without notice. ** Hard disks are optional *** without a hard disk connected **** Dimensional tolerance: ±5mm

APPENDIX 7 DISK ARRAY COMPATIBLE LIST

This NVR series has an eSATA interface built-in for external disk array connection. Here's the compatible list for disk arrays.

Note: For the compatible hard disks used for those disk arrays listed below, please check their respective user manuals or official websites.

Brand	Model Number
Proware	EP-D501-AA
	EP-2123-UA-R
RAIDON	GT1650-SB3
	GR3630-SB3
STARDOM	DR5-WBS3