HD CCTV DVR

USER MANUAL

■ 2MP ~ 5MP Video Recording

Please read instructions thoroughly before operation and retain it for future reference.
For the actual display & operation, please refer to your device in hand.

Free PC CMS software
(CMS Lite)

z2116_d2016_manual_V1.0

IMPORTANT SAFEGUARD

	CAUTION	
	RISK OF ELECTRIC SHOCK	

CAUTION:

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture. Only operate this apparatus from the type of power source indicated on the label. The company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.

The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste. Contact your local dealer for procedures for recycling this equipment.

This apparatus is manufactured to comply with the radio interference requirements.

Federal Communications Commission Interference Statement

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.

Trademark Acknowledgements

(EagleEyes) - The trademark application is filed and under process in the U.S. and other countries.

iPhone®, iPad® and iOS® are the registered trademark of Apple Inc., and Apple holds the intelligential property rights to the iPhone, iPad and iOS content.

Microsoft®, Windows®, Internet Explorer®, Google Chrome™ & QuickTime® mentioned in this document are the registered trademarks of their respective holders.

Disclaimer

The information in this manual was current when released. We reserve the right to revise or remove any content in this manual at any time. We do not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this manual. For the actual display & operation, please refer to your DVR in hand. The content of this manual is subject to change without notice.

Grounding

This is a Safety Class 1 Product (provided with a protective earthing ground incorporated in the power cord). The mains plug shall only be inserted in a socket outlet provided with a protective earth contact. Any interruption of the protective conductor inside or outside of the instrument is likely to make the instrument dangerous. Intentional interruption is prohibited.

Water & Moisture

Do not expose this product to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the product.

MPEG4 Licensing

THIS PRODUCT IS LICENSED UNDER THE MPEG-4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER FOR (i) ENCODING VIDEO IN COMPLIANCE WITH THE MPEG-4 VISUAL STANDARD (“MPEG-4 VIDEO”) AND/OR (ii) DECODING MPEG-4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED BY MPEG LA TO PROVIDE MPEG-4 VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL INTERNAL AND COMMERCIAL USES AND LICENSING MAY BE OBTAINED FROM MPEG LA, LLC. SEE HTTP://WWW.MPEGLA.COM.

GPL Licensing

This product contains codes which are developed by Third-Party-Companies and which are subject to the GNU General Public License (“GPL”) or the GNU Lesser Public License (“LGPL”).

The GPL Code used in this product is released without warranty and is subject to the copyright of the corresponding author.

Further source codes which are subject to the GPL-licenses are available upon request.

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 check with your distributor:

http://download.dvrtw.com.tw/GPL/DVR/TVI/linux-3.3-fa.tgz

TABLE OF CONTENTS

1. HARDWARE OVERVIEW 1

1.1 Package Content 1
1.2 Front Panel 1
1.3 Rear Panel 2

2. CONNECTION AND SETUP 4

2.1 SATA Hard Disk Installation 4
2.2 Camera Connection 5
2.2.1 HD CCTV camera & our brand's speed dome camera 5
2.2.2 Other brand's speed dome camera 6
2.2.3 IP Camera 6
2.3 DVR Power On 7

3. FOR INITIAL USE 8

3.1 Setup Wizard 8
3.2 Clear Hard Disk 10
3.3 Change User Name and Password 11

4. USER INTERFACE 12

4.1 DVR Access 12
4.2 Live Page 12
4.2.1 DVR Status 12
4.2.2 Channel Status 13
4.2.3 Record-related Icons 13
4.3 Quick Menu Bar 14
4.4 Main Menu 14

5. FREQUENTLY-USED FUNCTIONS 15

5.1 Key Lock / Unlock 15
5.2 User Level Creation 15
5.3 PTZ Control 17
5.4 Playback 19
5.4.1 Playback Control 20
5.4.2 Event Search 20
5.4.3 Audio Playback 20
5.5 Video Backup 20
5.6 Video Playback on PC (.dv5) 21
5.6.1 Convert the file format to AVI 22
5.7 Digital Zoom 22

6. MAIN MENU 23

6.1 QUICK START 23
6.1.1 GENERAL 23
6.1.2 TIME SETUP 25
6.1.3 DAYLIGHT 25
6.1.4 EaZy 26
6.2 SYSTEM 26
6.2.1 ACCOUNT 26
6.2.2 TOOLS 27
6.2.3 SYSTEM INFO 28
6.2.4 ONLINE 30
6.2.5 BACKUP DATA 30
6.2.6 BACKUP LOG 32

6.3 EVENT INFORMATION 33
6.3.1 QUICK SEARCH 33
6.3.2 HDD INFO 34
6.3.3 EVENT LOG 34
6.4 ADVANCED CONFIG....35
6.4.1 CAMERA 35
6.4.2 DETECTION....36
6.4.3 ALERT 38
6.4.4 NETWORK 39
6.4.5 DISPLAY....41
6.4.6 RECORD 43
6.4.7 DEVICES....44
6.4.8 DCCS 44
6.4.9 IVS....45
6.4.10 NOTIFY 49
6.4.11 JOYSTICK 54
6.5 SCHEDULE SETTING....54
6.5.1 RECORD / DETECTION / ALARM IN / ALARM OUT / PUSH VIDEO / BUZZER....54
6.5.2 REGULAR REPORT 55
6.5.3 AUTO BACKUP 55
6.5.4 REGULAR REBOOT 57
7. REMOTE OPERATION.... 58
7.1 Web Browser 58
7.1.1 IVS Statistics....60
7.1.2 PTZ Panel....61
7.2 Mobile Devices....62
7.2.1 Prerequisites....62
7.2.2 Where to download....62
7.2.3 Manual Setup 62
APPENDIX 1 SPECIFICATIONS.... 64
APPENDIX 2 PUSH VIDEO CONFIGURATION 66
A2.1 Alarm Sensor Connection 66
A2.2 Configuration 67
A2.3 Enable Push Video 67
A2.3.1 From iOS Mobile Device (iPhone / iPad)....67
A2.3.2 From Android Mobile Device 68
APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST 69
APPENDIX 4 COMPATIBLE SATA HDD LIST.... 70
APPENDIX 5 MAIN MENU STRUCTURE.... 71
APPENDIX 6 DVR BATTERY REPLACEMENT 73
APPENDIX 7 EAZY NETWORKING 74
A7.1 Via EagleEyes on iOS / Android Device 74
A7.2 Via Internet Explorer on PC / Laptop....80
A7.3 Icons....85

1. HARDWARE OVERVIEW

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

1.1 Package Content

➢ **Standard Package**

☐ DVR	☐ HDD screws
☐ Adapter & power cord	☐ Quick Start

➢ **Optional Accessories**

☐ USB Mouse	☐ IR Remote Controller

1.2 Front Panel

1) LED Indicators

DVR is powered on.

HDD The hard disk is reading or recording.

An alarm is triggered.

2) CH1 ~ 16 / 1 ~ 8 / 1 ~ 4

Press the channel number buttons to select the channel to display.

3)

Press to show the 4 channel display mode.

4) SEQ

Press to display each channel in full screen one by one starting from CH1. When the last channel is displayed, it will repeat from CH1 again. To exit this mode, press **SEQ** again.

5) SLOW

In the playback mode, press to show slow playback.

6) ZOOM

Press to enlarge the picture of selected channel in the FRAME or FIELD recording mode.

7) PLAY

Press to playback the latest recorded data.

8) LIST (Event List Search)

Press to quickly search the recorded files by event types, or select **FULL** to show all the event logs.

To quickly search the time you want, select **QUICK SEARCH**. For details, please refer to “5.4.2 Event Search” at page 20.

9) ENTER

Press **ENTER** to confirm the setting.

10) MENU

Press **MENU** to enter the main menu.

11) ▲ (+ / PAUSE) / ▼ (- / STOP) / ◄ (REW) / ► (FF)

Press ▲ / ▼ / ◄ / ► to move up / down / left / right.

In the playback mode:

Press ▲ to pause playback.

Press ▼ to stop playback.

Press ► to fast forward.

Press ◄ to fast rewind.

12) AUDIO (SLOW + ZOOM)

Press **SLOW** + **ZOOM** to select live or playback audio from audio channel 1~4.

Live audio from audio channel 1~4 (indicated in white).

Playback audio from audio channel 1~4 (indicated in yellow).

Audio channel unselected

13) P.T.Z. (⊞ + SEQ)

Press ⊞ + **SEQ** at the same time to enter / exit the PTZ control mode.

14) USB port

There are two USB ports on the front panel, one for connecting your USB mouse for mouse control, and the other one for connecting your USB flash drive for video backup.

Note: It's not allowed to have two USB mice or two USB flash drives connected on the front panel.

Note: For the compatible USB flash drive list, please refer to "APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST" at page 69.

1.3 Rear Panel

1) VIDEO IN

Connect to the video connector of a camera.

Note: The DVR will automatically detect the video system of the camera, please make sure that the cameras are properly connected to the DVR and power-supplied before the DVR is turned on.

2) VIDEO OUT

Connect to a CRT monitor for main or spot monitor output.

3) AUDIO IN

Connect to the audio connector of a camera if the camera supports audio recording.

Note: To make a video backup with audio, make sure the camera which supports the audio function is connected to the video-in channel and audio-in channel. For example, the audio data from audio CH1 will be recorded with the video data from video CH1.
For 16CH models, the audio CH1 ~ CH4 are corresponding to video CH1 ~ CH4 respectively.

4) AUDIO OUT

Connect to a speaker with 1 mono audio output.

5) HDMI

Connect to the HDMI port of the monitor which supports HDMI video output for main or spot monitor output.

6) VGA

Connect to the VGA port of the monitor which supports VGA video output for main or spot monitor output.

7) USB port (USB 3.0 / For selected models only)

Used for connecting your USB flash drive for video backup.

Note: For the compatible USB flash drive list, please refer to "APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST" at page 69.

---

8) External I/O (Alarm IN / Alarm Out / RS485)

These ports are used to connect external devices (such as speed dome cameras or external alarm, etc).

9) LAN

Connect to Internet by LAN cable.

10) DC IN

Connect to the supplied adapter.

11) Power Switch (For selected models only)

Switch to "—" to turn on the power, and "O" to turn off the power.

2. CONNECTION AND SETUP

Before the DVR is powered on, make sure you have installed a hard disk, connected at least one camera and a HDMI monitor. For details, please refer to the following sections.

Note: The DVR is designed to automatically detect the video system of the connected cameras (NTSC or PAL). To make sure the system detection is correct, please check if the cameras are connected to the DVR and power-supplied before the DVR is powered on.

2.1 SATA Hard Disk Installation

At least 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.

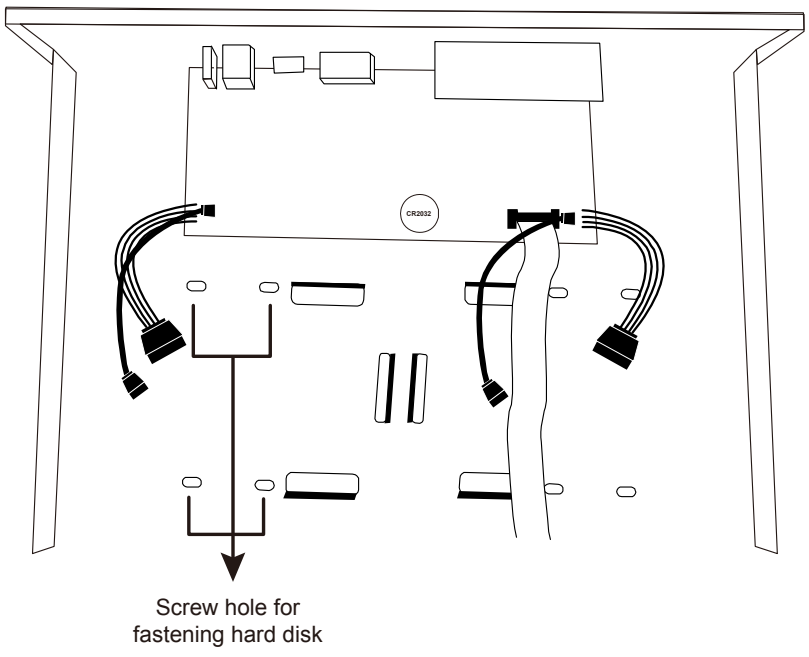
Either of the following two types of hard disk installation is applicable for your DVR model. Please check the instructions below to see which installation method is the right one for your DVR to install a hard disk.

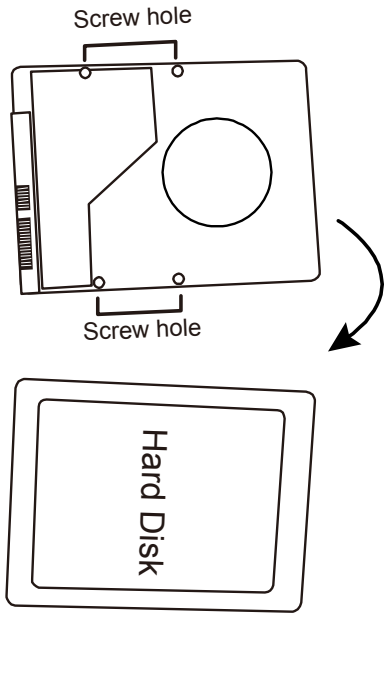
Note: Here takes an 8CH model as an example of how to connect a hard disk to your device. To know how many hard disks could be installed, please refer to the specifications of your device.

Step1: Remove the top cover, and find where to install a hard disk.

Step2: Get a compatible hard disk. With the PCB side facing down, find the screw holes on the DVR base, and place the hard disk in the DVR.

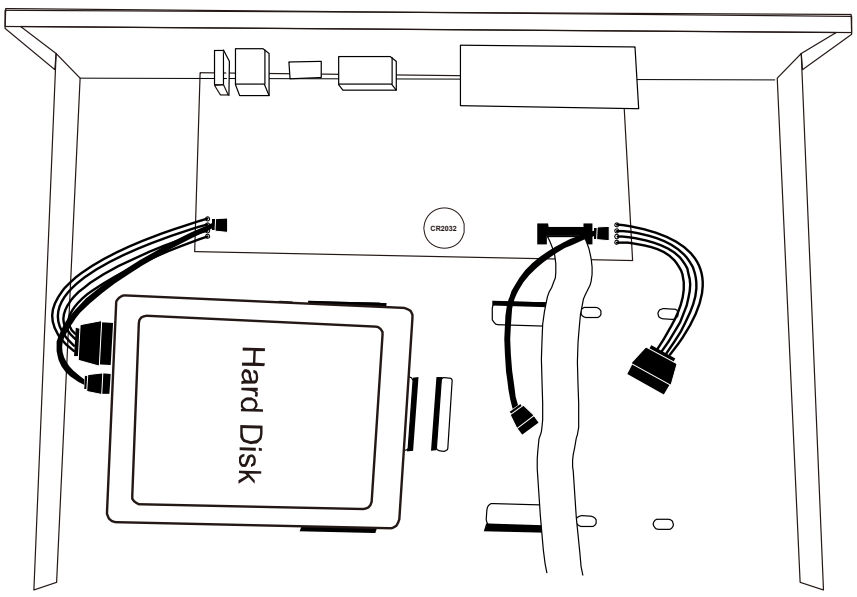
Note: To use a green hard disk, use **ONLY** the hard disk designed especially for surveillance to ensure the device works properly.





Step3: Align the screw holes on the DVR base and the hard disk. Then, fasten the hard disk o the DVR base with the supplied screws from the bottom side of the DVR.

Step4: Connect the data bus and power cable for the hard disk.



Step5: Replace the top cover and fasten the screws you loosened in Step1.

Step6: Remove the protective film on the bottom of the DVR if any to ensure the heat dissipation can work normally.

2.2 Camera Connection

Install the camera on the wall or ceiling based on your installation environment and camera type. For installation details, please refer to the user manual of your camera.

2.2.1 HD CCTV camera & our brand's speed dome camera

STEP 1: Connect the coaxial cable to the recorder.
STEP 2: Get a regulated adapter to connect the camera and power it on.

EZUM Camera Series

If the cameras you connected are our EZUM camera series, we have also designed a series of icons for quick camera setup. Based on the EZUM camera type connected, you may find some of the icons as listed below for quick camera configurations, and the sub-functions of each icon may also vary based on the camera connected.

Path: Bottom left on each camera channel view → .

	Day & Night Configure the day and night modes of the camera		**IR Management** Manually adjust the brightness of IR LEDs.
	Noise Reduction Reduce image noise if needed.		**Optics** Manually change the shutter speed if needed.
	Color Manually adjust the color-related parameters if needed.		**Image Enhancement** Enhance the image performance for better sharpness and overall identification even in overexposure areas.
	Zoom Used with the motorized lens cameras for optical zoom.		**Hot Point** Click on the screen to move the surveillance area to the point just clicked.
	PTZ Control Open the PTZ control panel to pan, tilt, zoom and cruise the camera.		**Advanced** Set other camera parameters such as camera system, and mirroring or flipping camera images.

2.2.2 Other brand's speed dome camera

Note: The recorder must support RS485 connection to connect a speed dome camera. Please check the specifications of your recorder for details.

STEP 1: Connect the coaxial cable to the recorder.

STEP 2: Find where the connectors of RS485-A and RS485-B are located on the recorder rear panel, and follow the instructions of your camera manual to connect to the recorder. Then, power on the camera.

STEP 3: On the recorder side, right click to show the main menu, and go to (ADVANCED CONFIG) → **DCCS** → **OSD MENU** to set the camera:

a) Select the device to **PTZ**.

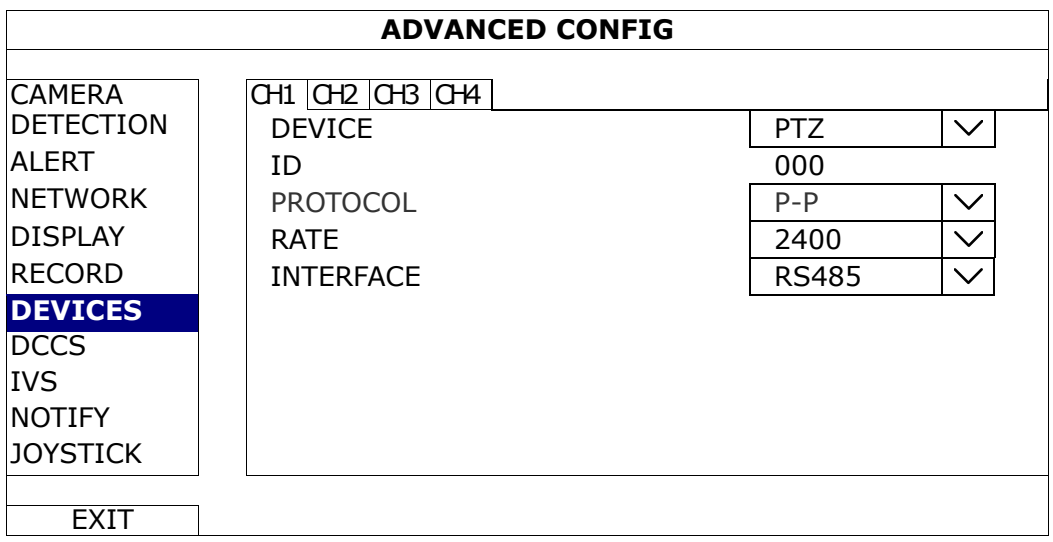
b) Set the ID to the value the same as the one set in the camera.

c) Select the protocol to **P-P**, **P-D**, **S-T** or **S-E**.

Note: **P-P** and **P-D** are protocols used Pelco, and **S-T** and **S-E** are protocols used by Samsung.

d) Set the baud rate to the value the same as the one set in the camera.

e) Set the interface to **RS485**.



2.2.3 IP Camera

Note: Check the specifications of your recorder and see if your recorder supports IP camera connection.

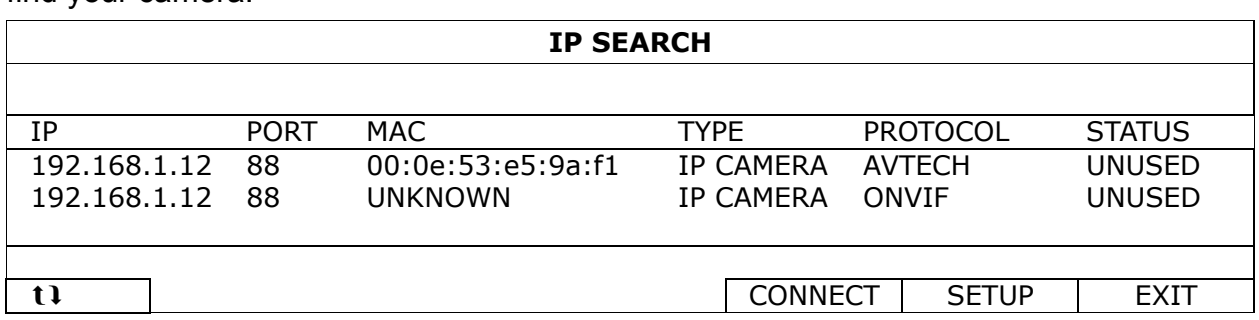
STEP 1: Prepare a switch / router, and connect the recorder and the IP camera to the router with RJ45 network cables.

STEP 2: Make sure your camera supports DHCP function to allow the connected router to assign an IP address to the camera.

If your camera doesn't support this function, please check its user manual to know how to manually change the IP address of your camera and make sure its IP address is in the same network segment as the one your router uses.

STEP 3: Power on the camera.

STEP 4: On the recorder side, move the cursor to the left to show the quick bar, and choose (IP Search) to find your camera.



STEP 5: Select the IP address which is not used and select **CONNECT** to assign which channel the live video should be displayed.

2.3 DVR Power On

This device should be operated only with the type of power source indicated on the manufacturer's label. Connect the indicated AC power cord to the power adapter, and plug into an electrical outlet.

If your device has a power switch on the rear panel, turn it to "—". The power LED will be on. If your device doesn't have a power switch on its rear panel, the power is on once the power source is connected.

Note: Before the DVR is powered on, make sure (1) the cameras are connected and power-supplied for the detection of the camera video system to be correct, and (2) a monitor is connected to the DVR for correct video output detection.

Note: To ensure that your DVR works constantly and properly, it's recommended to use an UPS, Uninterruptible Power Supply (Optional), for continuously operation.

Note: When your DVR is powered on, please check the chapter of "3. FOR INITIAL USE" in the user manual to know how to configure this device and change the default user name and password. To download the user manual, please scan the QR code on the first page, or go to www.surveillance-download.com/user/z2116.swf.

3. FOR INITIAL USE

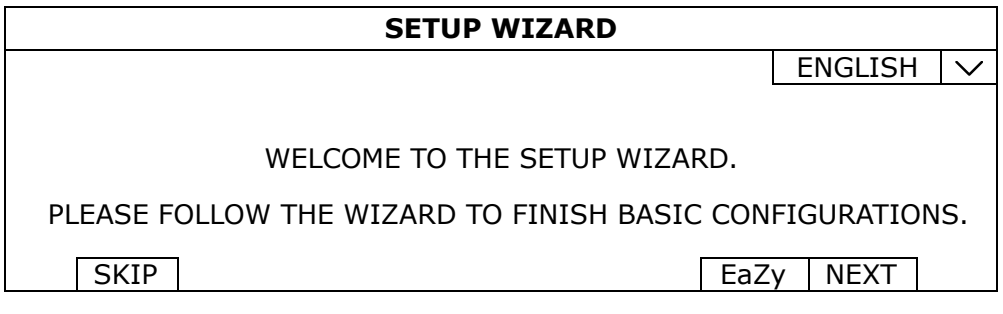
For the first time to power on this device, you might be prompted to:

- Go through the setup wizard
- Clear hard disk
- Change default user name and password

3.1 Setup Wizard

The setup wizard is prompted to guide you finishing the most common settings you might need to do.

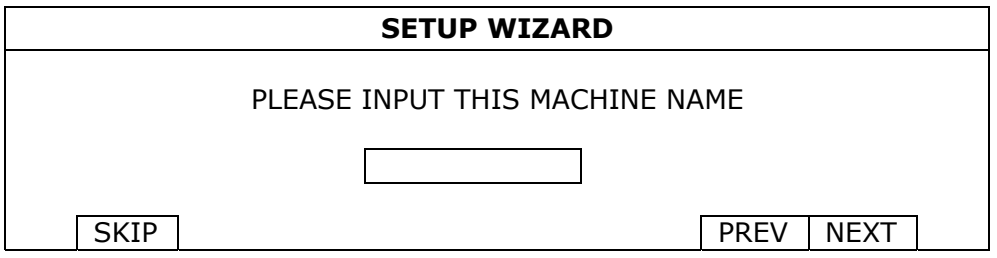
Note: It's okay to skip the wizard. You can configure the following settings later in their respective menus.



Choose **EaZy** (EaZy Networking) to directly go to the EaZy Networking setting page, and refer to "APPENDIX 7 EAZY NETWORKING" at page 74 for details.

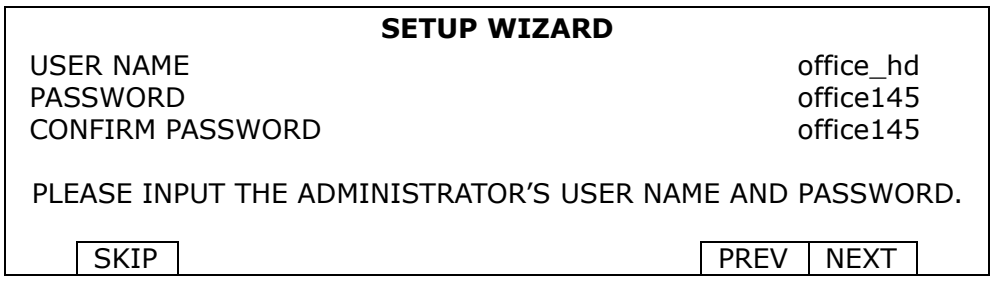
Note: To configure network setup by using EaZy Networking later, please go to **QUICK START → EaZy**.

Or select "NEXT" to go to the next step.



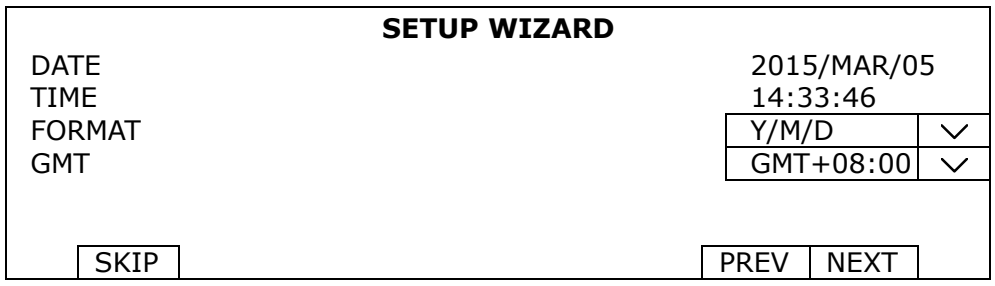
Name the device. If you don't want to name the device, just skip to the next step.

Note: To name the device later, please go to **SYSTEM → SYSTEM INFO**.



Change the default user name and password. If you don't change the user name and password here, you're not able to go to the next step. This step is compulsory.

Note: To change or edit user name and passwords, please go to **SYSTEM → ACCOUNT**.



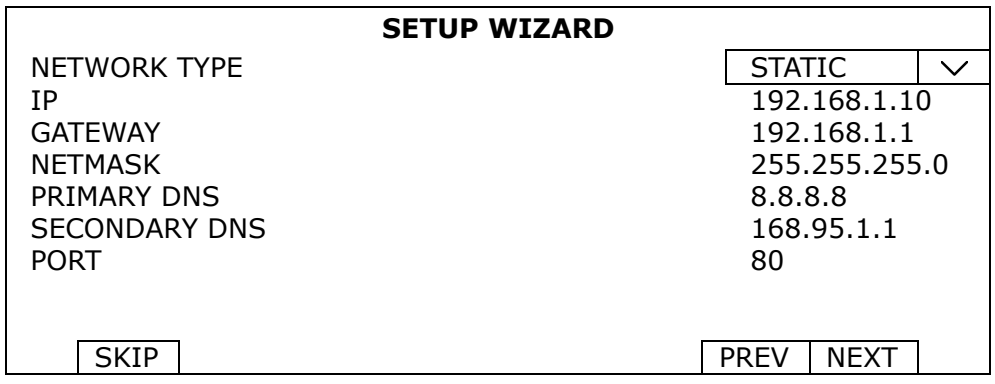
Set the date and time.

If you don't want to set the date and time now, just skip to the next step. However, it's necessary to keep the date and time right to ensure the accuracy of the recorded data.

Note: To set the date and time later, please go to **QUICK START** → **TIME SETUP** ("6.1.2 TIME SETUP" at page 25). When the date and time are changed, you'll be prompted to clear the hard disk(s). Select **YES** to erase the previous recorded data, or there might be data disorder and you wouldn't find the footage you need.

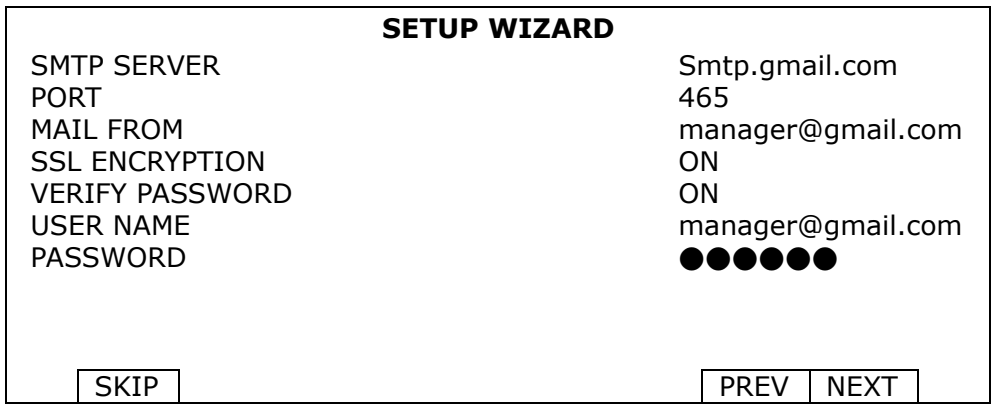
Configure if you want to connect this device to an NTP server to get the right time online.

Note: To set the date and time later, please go to **QUICK START** → **TIME SETUP** ("6.1.2 TIME SETUP" at page 25).



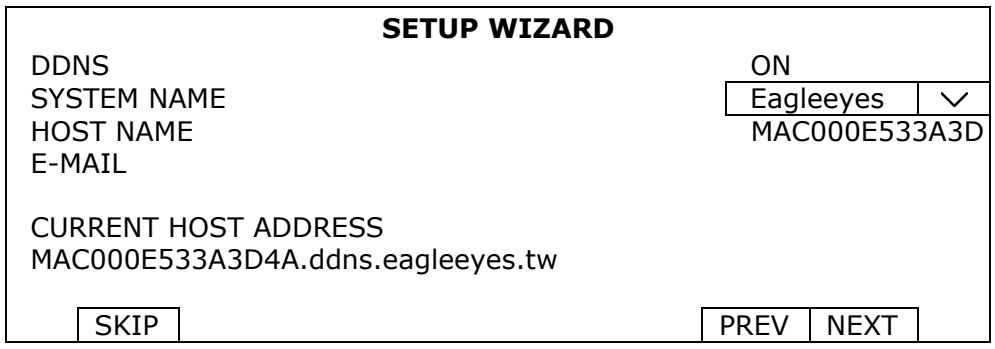
Configure network setup by using the traditional method. For details, please download www.surveillance-download.com/user/network_setup/network_setup_recorder.pdf.

Note: To configure network setup by using the traditional method later, please go to **ADVANCED CONFIG** → **NETWORK** ("NETWORK" at page 39).



Configure event notifications by email.

Note: To configure email notifications later, please go to **ADVANCED CONFIG** → **NETWORK** -> **EMAIL** ("E-MAIL" at page 39).

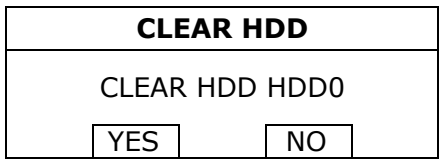


Enable DDNS if needed.

Note: To enable the DDNS later, please go to **ADVANCED CONFIG** → **NETWORK** → **DDNS** ("NETWORK" at page 39).

3.2 Clear Hard Disk

When this device is powered on, hard disk detection will be on, and you'll be prompted to clear the hard disk(s):

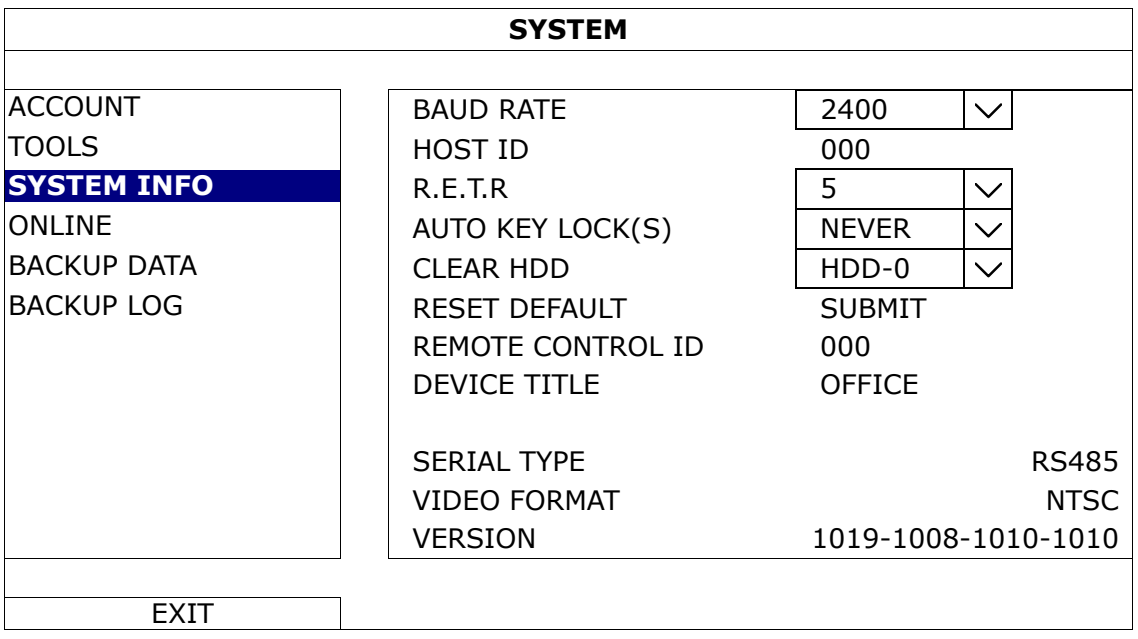


Please choose "YES" to clear the connected hard disk(s), or this device will not detect hard disks properly for video recording.

It might take some time to clear the connected hard disk(s). When it's done, you'll see the remaining hard disk capacity on the top right corner of the screen.

Note: It's necessary to clear hard disks in order to format the connected disks to the right format to save video data. The format used for this device can **NOT** be read directly on a PC. Please do not install the hard disk directly to a PC and try to copy the video data saved in the hard disk. The video data might be impaired.

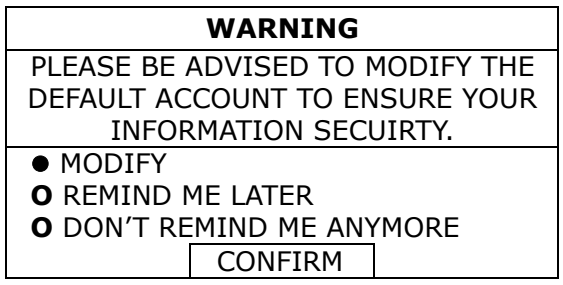
To change later, right click to show the main menu, and select (SYSTEM) → **SYSTEM INFO** → **CLEAR HDD**. The DVR will reboot when hard disk data are cleared.



3.3 Change User Name and Password

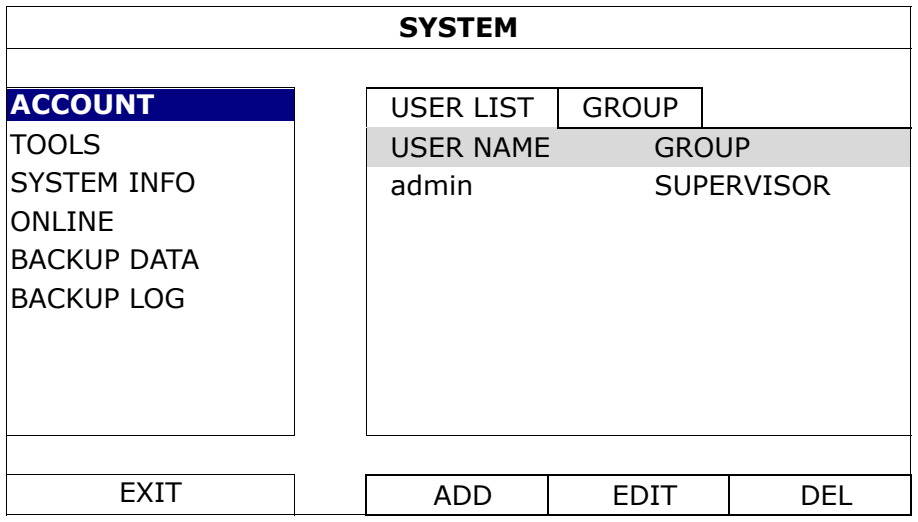
It's highly recommended to change the user name and password of this device to keep your account safe. Otherwise, any person could access this device if he knows the default user name and password.

If you didn't go through the setting wizard at the first place, you'll be prompted to change the user name and password:



Choose **MODIFY** to start the change immediately.

To change later, right click to show the main menu, and select (SYSTEM) → **ACCOUNT** to change the default user name and password of **SUPERVISOR**.



4. USER INTERFACE

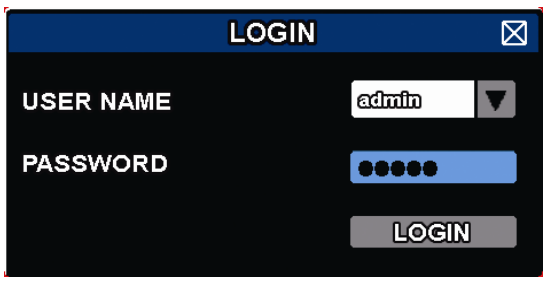
4.1 DVR Access

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

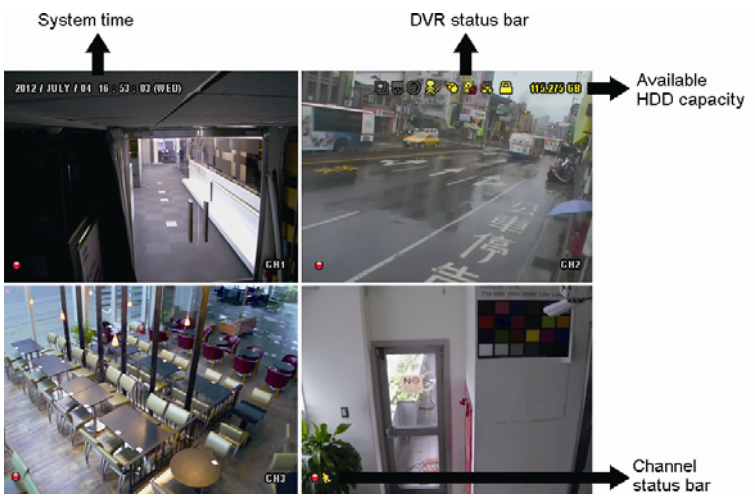
Move your mouse to enter the DVR password with the password keypad. The default user name and password are both "**admin**". The status will be changed from (key lock) to (unlock).

Note: You may configure four different user levels to have different access privileges in **SYSTEM** → **ACCOUNT**. For details, please refer to "5.2 User Level Creation" at page 15.

Password Input



4.2 Live Page



4.2.1 DVR Status

Note: Certain icons are for selected models only.

	Key lock		Key unlock
	Overwrite on		Overwrite off
	Internet disconnected		Internet connected
	Local connection		USB mouse connected
	USB flash drive / device connected		No USB device connected
	IVS on		Click to mute an alert buzzer when it sounds
	Timer record on		Timer record off
	PTZ mode on		PTZ mode off
	Sequence mode on		Sequence mode off
	Backup event queued and USB flash drive needed		USB flash drive full

4.2.2 Channel Status

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

For Analog Camera

	Live audio on		Audio off		Audio playback on		Audio playback off
	Recording		PTZ control		Motion event		Alarm event
	PIR event		Virtual fence event		One way pass event		Scene Change event
	Camera quick setup						

For IP Camera

	Auto search on		Auto search off	1:1	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		Quick camera control		

4.2.3 Record-related Icons

1) Manual Recording

   By defaults, manual recording is on ( ) when the DVR is powered on and a hard disk is installed.

2) Event Recording

   The event icons, / / / / / , show on the channel status bar when their respective events occur and the related record function is on.

3) Timer Recording

   When timer recording is on, you will see " " on the screen.

4) HDD Overwritten

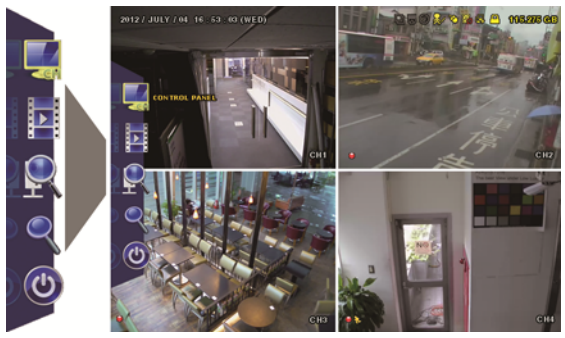
   Be defaults, the HDD overwritten function is set to ON, and " " will be shown on the screen.

Note: To disable this function, right click to display the main menu in the live view, and go to " " (ADVANCED CONFIG.) → **RECORD** → **OVERWRITE**.

4.3 Quick Menu Bar

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

Quick Menu: Open

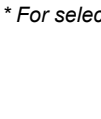


	Click to show the channel switch panel and select the channel you want.
	Click to display the playback control panel, and click to play the latest recorded video clip, or click to enter the search list.
	Available only for models which support IP camera connection. Search for any IP camera(s) connected and assign the camera to a specific channel. For details, please check “For IP Camera” at page 13.
	Switch to the channel you want first, and click to enter the zoom-in mode. In this mode, click and drag the red frame on the bottom left of the screen to move to the place you want to see. To exit this mode, click ☒.
	Click to show the power off panel to either halt or reboot the system.

4.4 Main Menu

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

Main Menu

	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 CAMERA, DETECTION, ALERT, NETWORK, DISPLAY, RECORD, DEVICES*, DCCS, IVS*, NOTIFY* and JOYSTICK.
	SCHEDULE SETTING	Click to set timer for record, motion detection, alarm (in and out)*, Push Video*, buzzer, regular report*, auto backup*, and regular reboot*.

** For selected models only*

5. FREQUENTLY-USED FUNCTIONS

5.1 Key Lock / Unlock

To lock or unlock local operation, click (unlock) or (lock) on the DVR 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.

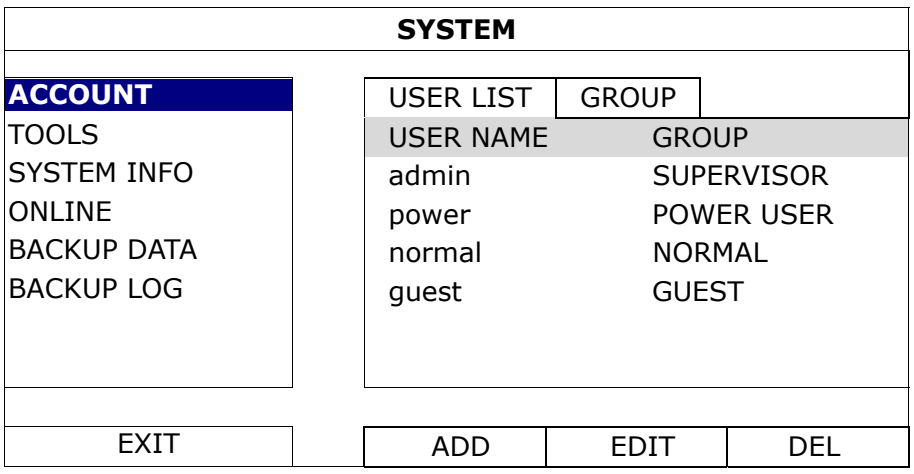
Note: The default user name and password are both **admin**, which is the highest user level.

Note: Different user level has different access privilege for certain DVR functions. Please refer to "5.2 User Level Creation" at page 15.

5.2 User Level Creation

Note: This function is available only for **SUPERVISOR**.

To create different user account for different access privilege, click (SYSTEM), and select **ACCOUNT** to enter **USER LIST**.



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

Note: It's also available to create a new user group and customizing its access rights. For details, please refer to "GROUP" at page 27.

	Function	User Group			
		SUPERVISOR	POWER USER	USER	GUEST
■ DVR status					
/	Key lock / unlock	✓	✓	✓	✓
■ Channel status					
/	Live audio on / off	✓	✓	✓	
/	Playback audio on / off	✓	✓	✓	
/	Full screen / original size display	✓	✓	✓	✓
	PTZ Control	✓	✓		
	Manual alarm out	✓	✓		
	Camera quick setup	✓	✓		

	Function	User Group			
		SUPERVISOR	POWER USER	USER	GUEST
■ Quick menu bar					
	Channel Selection	✓	✓	✓	✓
	Playback	✓	✓		
	IP Search	✓			
	Digital Zoom	✓	✓	✓	✓
	Power	✓			
■ Main menu					
	Quick Start	✓			
	System	✓			
	Event Information	✓			
	Advanced Config.	✓			
	Schedule Setting	✓	REGULAR REBOOT	REGULAR REBOOT	REGULAR REBOOT
■ Playback control					
	Fast Forward	✓	✓		
	Fast Rewind	✓	✓		
/	Play / Pause	✓	✓		
	Stop	✓	✓		
	Slow Playback	✓	✓		
/	Previous / Next Hour	✓	✓		
	Quick Search	✓	✓		

5.3 PTZ Control

Note: This function is available only for **SUPERVISOR** and **POWER USER**. To know more details, please refer to "5.2 User Level Creation" at page 15.

Note: For our brand's HD CCTV motorized camera series, click might only show specific icons for focal length and focus adjustment. For details, please refer to its own user manual.

In the full view

In the split view, click the channel you want to switch to the full screen mode, and click to show the PTZ control panel.

↵	Enter	Click to confirm your selection / enter the menu.
▲ / ▼ / ◀ / ▶	Up / Down / Left / Right	Click the arrow keys (▲ / ▼ / ◀ / ▶) to more the camera lens up / down / left /right.
/	Iris + / Iris -	This two buttons are designed for the PTZ camera which uses Pelco-D to control. To know the actions after clicking Iris + and Iris -, please refer to the camera's user manual.
+ / —	Zoom in / out max	Click to zoom in on the image to the largest / zoom out on the image to its original size.
/	Zoom in / out	Click to zoom in / out on the image. Users could also zoom in / out on the image by simply drawing a square on the screen, and the zoom ratio depends on how large the square is. ■ Zoom in: Draw the square from top left to bottom right. ■ Zoom out: Draw the square from bottom right to left top.
/	Focus near / far	Click to adjust the focus of the image.
	Auto mode	Click to activate the auto function. Before using it, you need to assign a specific function that will be enabled when is clicked. For details, please refer to the user manual of the camera.
	Auto tracking	Click to start auto tracking when your speed dome camera supports this function.
	Preset point	Click to enter the PTZ preset point you want to see.
	Camera Menu	Click to enter the camera main menu. For details about each camera menu, please refer to its own user manual.
	Manual Focus	This function is used to memorize the focus parameters you've made after you use / / / to manually adjust the focal length and focus. The next time when you move to the same focal length, the camera will use the parameters as the ones for Auto Focus.
	Auto Focus	Click to automatically adjust the focus of the camera.
	Joystick	Click to control the movement of a speed dome camera or a motorized-pan camera. Drag and hold the mouse on the screen to move the camera. You'll see ● and on the screen. The farther these two icons, the faster the movement.
	Config.	Click to configure the speed to pan / tilt the speed dome camera.

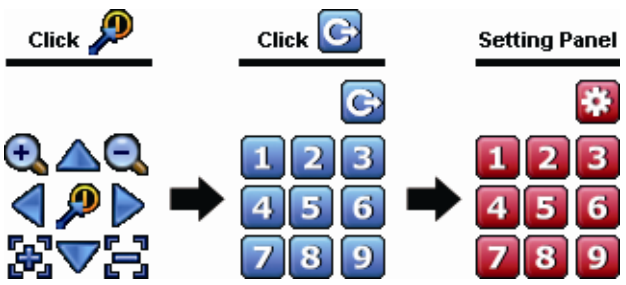
In the split view

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:



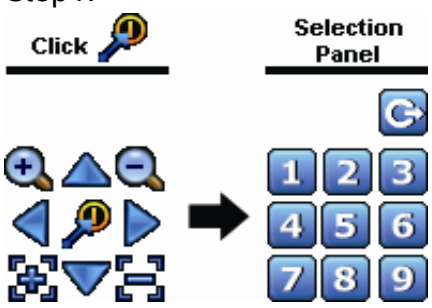
Step2: Click or to the proper ratio you need, and click / / / to move to the point you want to configure as a preset point.

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



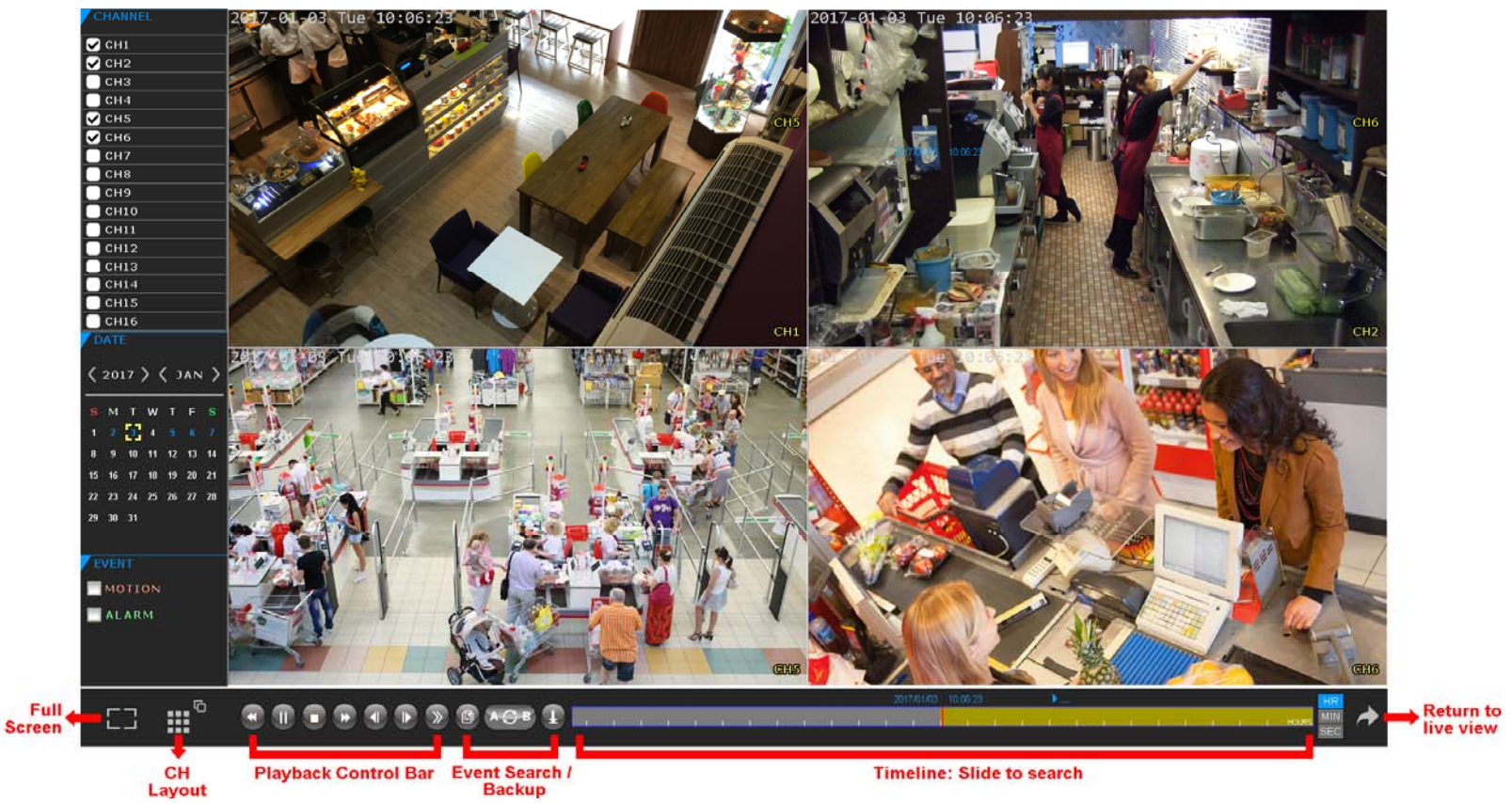
Step2: Select the numbering within which saves the camera view you want to see, and wait till you see (command sending) appearing and disappearing on the DVR status bar.

5.4 Playback

Note: This function is *NOT* available for **GUEST**. Please refer to "5.2 User Level Creation" at page 15.

Click "" on the quick menu bar to display the playback control panel, and click ▶ to play the latest recorded video clip, or click to enter the search list.

Note: There must be at least 8192 images of recorded data for playback to work properly. If not, the device will stop playback. For example, if the IPS is set to 30, the recording time should be at least 273 seconds (8192 images / 30 IPS) for the playback to work properly.



Step1: In **CHANNEL**, choose the channel(s) you want to search.

Step2: In **DATE**, the date(s) which includes video footage of the selected channel(s) will be marked in blue. Choose the date you want.

Step3: (Optional) In **EVENT**, choose the event type(s) to narrow down the search if needed.

Step4: Slide the timeline to search the time segment within which includes video footage. The time segment within which includes video footage is marked in yellow-green.

Step5: Move to the time segment you want and video playback starts automatically.

5.4.1 Playback Control

⏩	Fast Forward	Increase the speed for fast forward. Click once to get 4X speed forward and click twice to get 8X speed, etc., and the maximum speed is 32X.
⏪	Fast Rewind	Increase the speed for fast rewind. Click once to get 4X speed rewind and click twice to get 8X speed, etc., and the maximum speed is 32X.
▶ / ⏸	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.
A ↻ B	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.

5.4.2 Event Search

Click 🗎 to quickly search the recorded files by event types, or select **FULL** to show all the event logs.
To quickly search the time you want, select **QUICK SEARCH**.

5.4.3 Audio Playback

In the playback mode, click 🔊 or 🔇 on the channel status bar to play or mute audio recording.

Note: To make a video backup with audio, or play a recording with audio, make sure the camera which supports the audio function is connected to the video-in channel and audio-in channel. For example, the audio data from audio CH1 will be recorded with the video data from video CH1. For 16CH models, the audio CH1 ~ CH4 are corresponding to video CH1 ~ CH4 respectively.

5.5 Video Backup

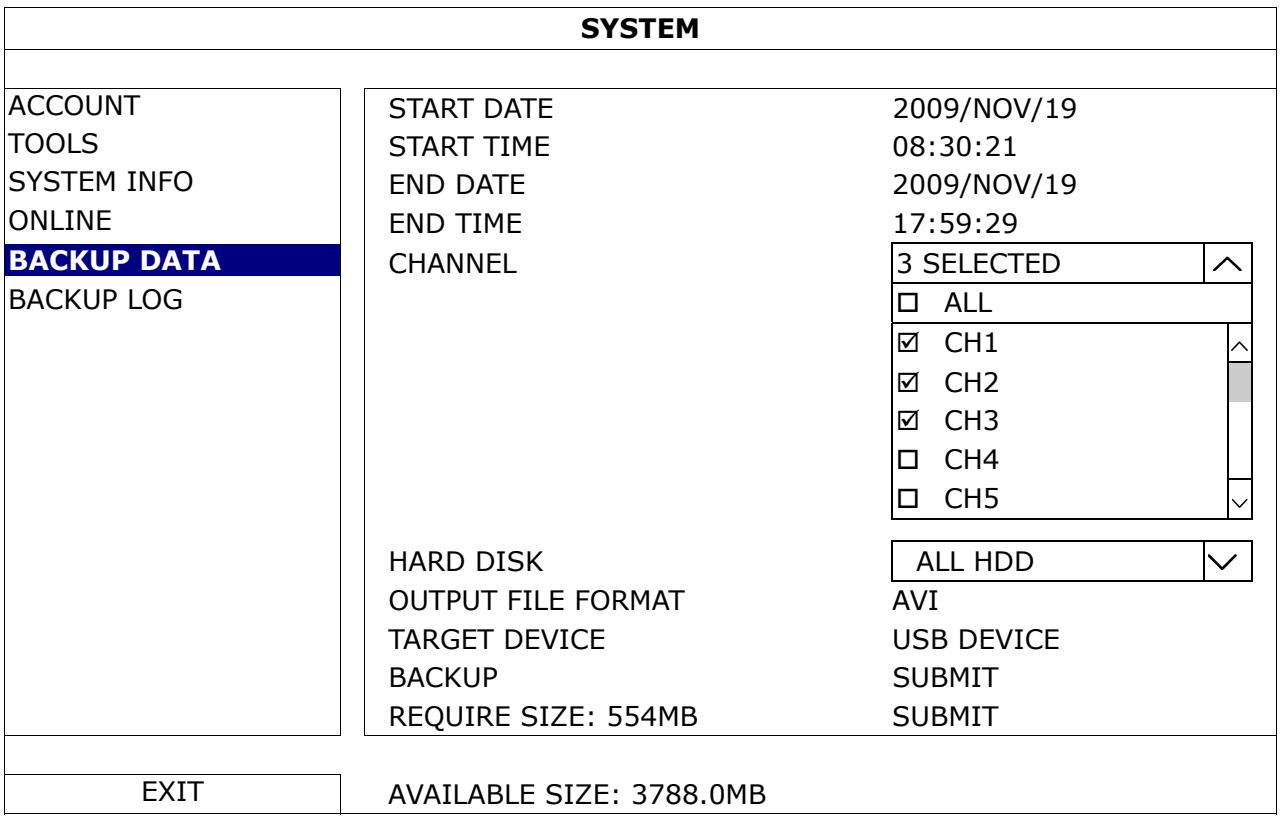
Note: This function is available for **SUPERVISOR**. For details, please refer to "5.2 User Level Creation" at page 15.

Note: Before using your USB flash drive for video backup, please format it to "FAT32" first with your PC or laptop. For the list of compatible USB flash drives, please refer to "APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST" at page 69.

Note: Video backup could be made via a USB flash drive or the Internet. It's **NOT** allowed to connect the hard disk to your PC / laptop directly for it may impair the recorded data saved in the hard disk.

To copy video data for video backup, click (SYSTEM), and select **BACKUP DATA**.

Note: Or you can click ⬇ when you're in the playback page.



Step1: Select the time within which includes the video data you want to backup.

Step2: Select the channel(s) within which includes the video data you want to backup.

Step3: In **OUTPUT FILE FORMAT**, select the output video format: **DEFAULT** / **AVI**.

- When **DEFAULT** is selected, the footage is saved to "**.dv5**", and you can only open it with our own video player on PC. For details, please check the section, "5.6 Video Playback on PC (.dv5)".

Note: It's recommended to save the file to the default format for security reasons. Only specific video player supports the default format and not everyone can see the video footage.

- When **AVI** is selected, the footage will be converted to "**.avi**", and you can open it with any media player which supports the "avi" format on PC.

Step4: In **TRAGET DEVICE**, select **USB DEVICE** for video backup.

Step5: In **REQUIRE SIZE**, select **SUBMIT** to know the file size of the selected footage.

Step6: In **BACKUP**, select **SUBMIT** to start copying footage to your USB flash drive, and wait till the backup successful message appears.

5.6 Video Playback on PC (.dv5)

For video backup with the format ".dv5", you can only use our own player to play.

Note: It's **NOT** allowed to remove the hard disk installed in the DVR and connect it directly to your PC to check recorded video clips. It might impair the files saved in the hard disk, causing the loss of those files even when the disk is replaced back to the DVR.

To play ".dv5" video on your PC:

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

Note: The supported PC operating systems are Windows 10, Windows 8, Windows 7 & Windows Vista.

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/z2116.swf.

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

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

5.6.1 Convert the file format to AVI

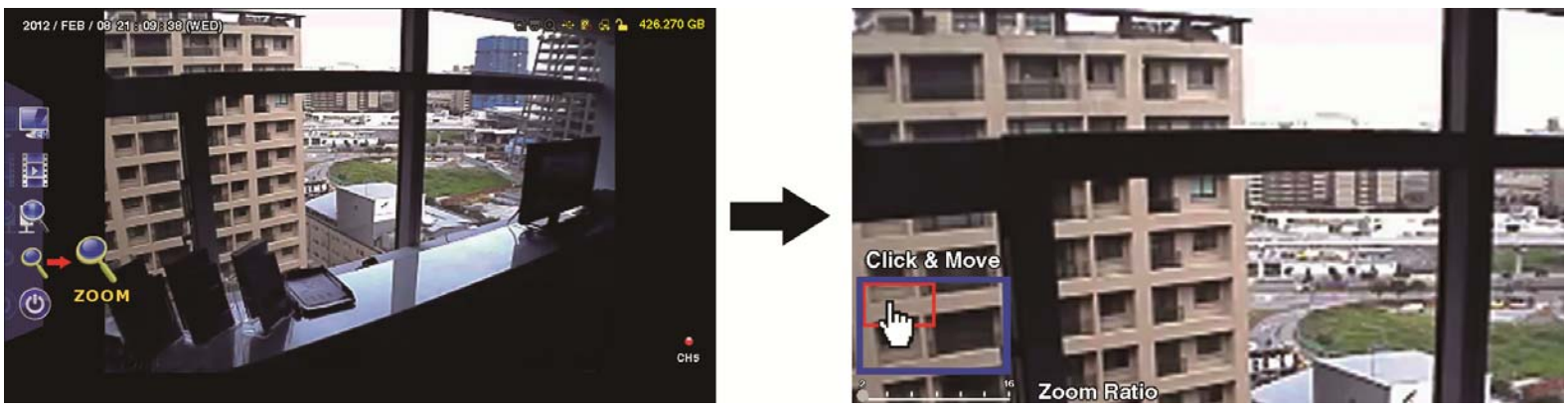
To convert the video file format to AVI, click **AVI** from the playback panel to start file conversion.

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

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

5.7 Digital Zoom

Switch to the channel you want to zoom in, and move to the left side of the screen to show the quick start bar. Click to enter the zoom-in mode. In this mode, click and drag the red frame on the bottom left of the screen to move to the place you want to see.



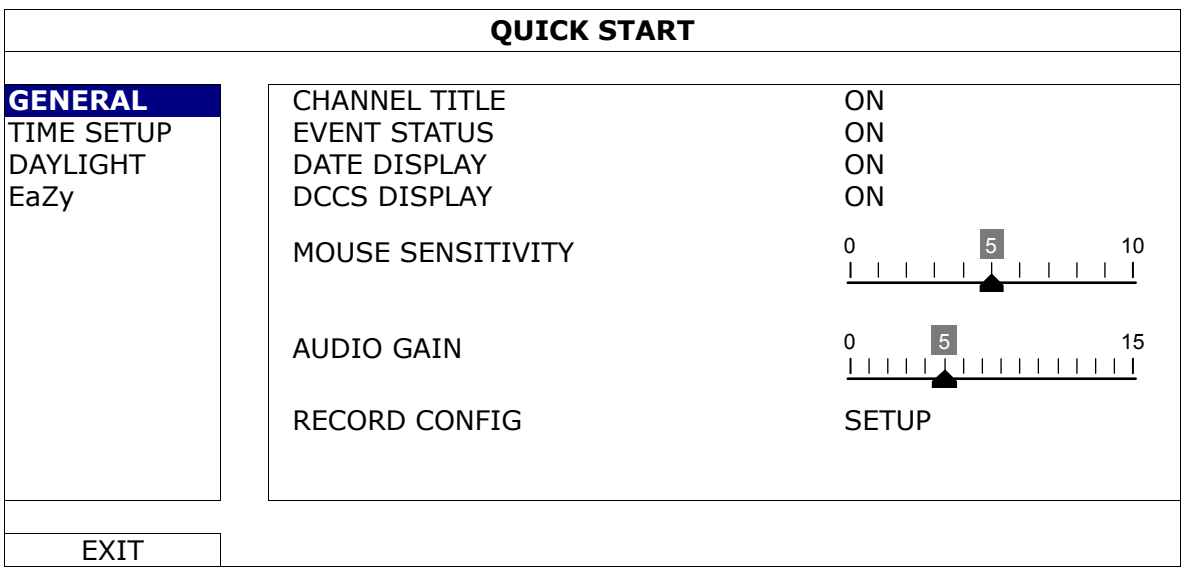
To exit this mode, right-click anywhere on the screen.

Note: You need to exit the zoom mode first to use other DVR functions.

6. MAIN MENU

6.1 QUICK START

6.1.1 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 "4.2 Live Page" at page 12.

3) DATE DISPLAY

Select to display the date or not (**ON** / **OFF**).

4) DCCS DISPLAY

Select to display the OSD or not (**ON** / **OFF**) when users are using specific camera functions.

Note: This function is available only when the connected HD CCTV camera is the same brand as this recorder.

5) MOUSE SENSITIVITY

Select the mouse sensitivity. The higher the value, the more sensitive the mouse.

6) AUDIO GAIN

Select the level to enhance the audio signals. The higher the value, the stronger the signals.

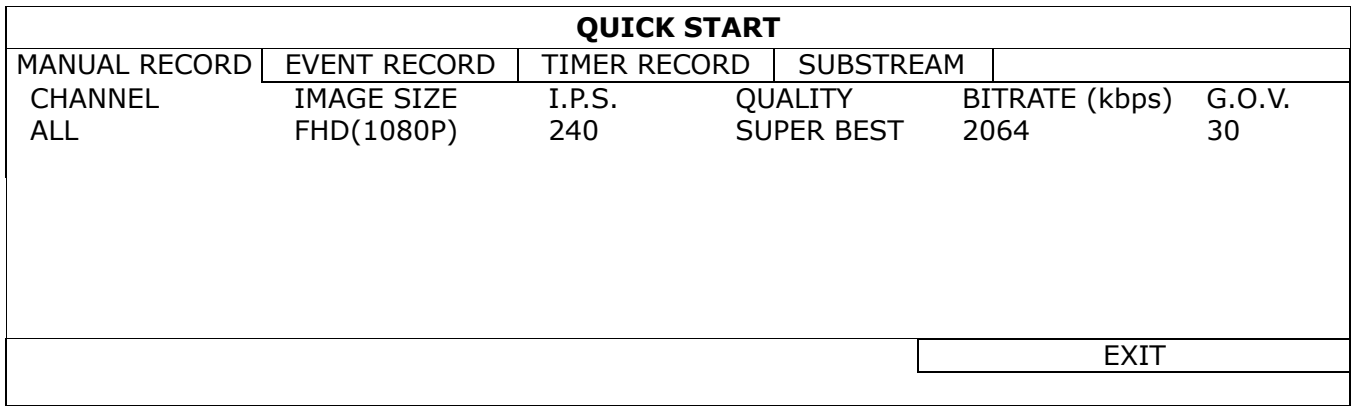
7) RECORD CONFIG

Click **SETUP** to enter the setting page individually for manual record, event record and timer record.

a) Select the record type you want to set.

b) In **CHANNEL**, select **ALL** to apply the changes here to all channels.

Note: The I.P.S. section is based on NTSC system.



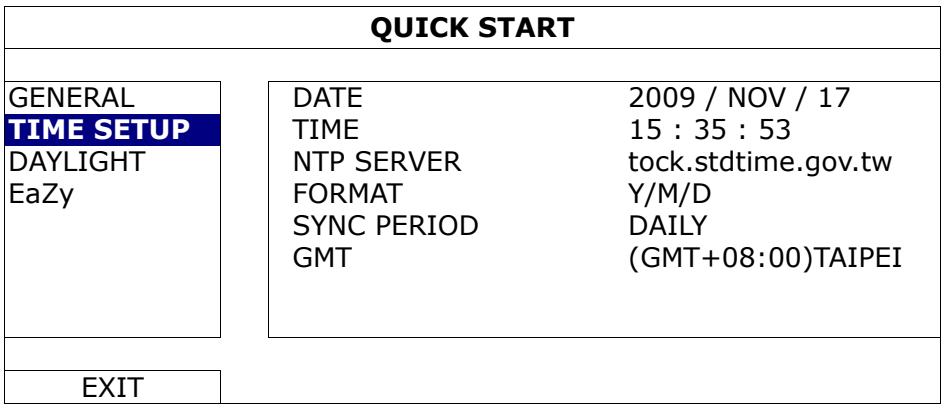
Or, select **BY CHANNEL** to set the image size, image per second & image quality individually for each channel.

Note: The available options for **IMAGE SIZE** depend on the recorder you have.

Note: The video recording is up to 1080P even when the camera you're connected is a camera with 3MP resolution or more.

IMAGE SIZE	The pixels of the image, for example, FHD(1080P) = 1920 x 1080. The more the pixels, the clearer the image but the more the file size.
I.P.S.	Image per second. The more the I.P.S., the more fluent the video but the more the file size.
QUALITY	Image quality. ■ For IP cameras, the quality is scaled from 0 to 10. The higher the value, the better the image quality. ■ For CCTV cameras, the quality has four levels: SUPER BEST, BEST, HIGH and NOTMAL.
BITRATE	It is used to set the upper limit of the transmission number per second. The value could be configured from 256 up to 8192 depending on the DVR model you have. The value set here is related to the image size. For example, here are the recommended values: ■ FHD(1080P) => 2048 ■ HD(720P) => 1024 The more the value, the bigger the file size, but the system stability might go down. The less the value, the smaller the file size, but the image quality might go down.
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.

6.1.2 TIME SETUP



1) DATE

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

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.

Note: This function works only when this device is configured to the Internet.

4) FORMAT

Select one date format from the following three options: **Y/M/D**, **M/D/Y** or **D/M/Y**.

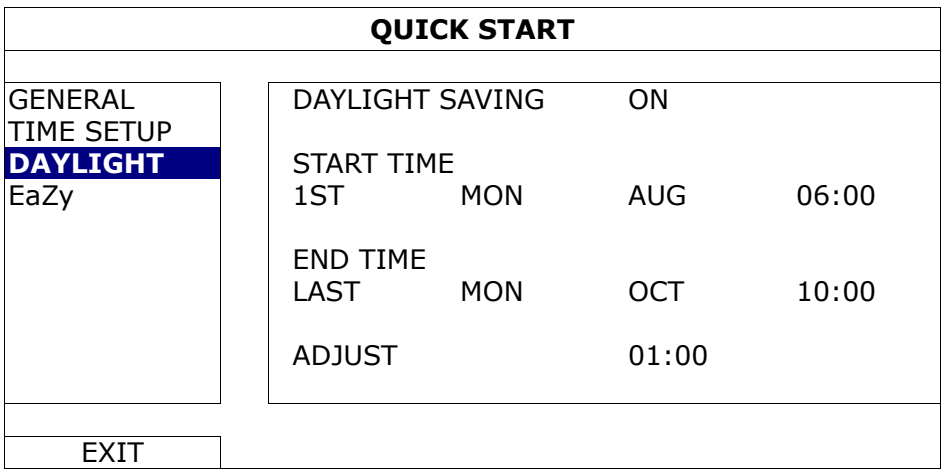
5) SYNC PERIOD

Select to synchronize the time every day (**DAILY**), or turn this function off (**OFF**).

6) GMT

Select your time zone.

6.1.3 DAYLIGHT



Depending on the time zone you're in:

1) DAYLIGHT SAVING

Select to enable (**ON**) or disable (**OFF**) this function.

2) START TIME / END TIME

Set the start time and end time.

3) ADJUST

Set the time in HOUR : MIN.

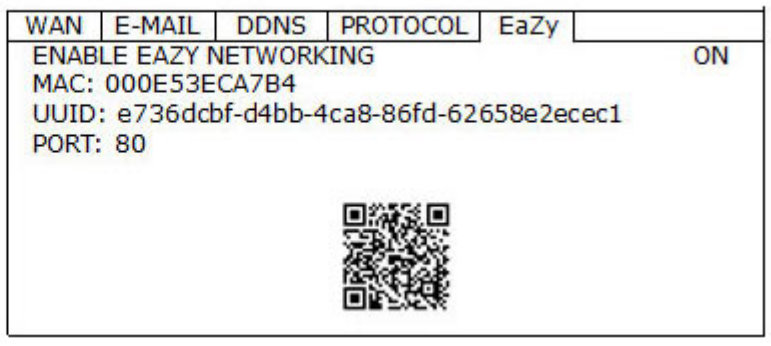
6.1.4 EaZy

EaZy Networking is a cloud service to connect your devices to the Internet automatically through our free mobile app, EagleEyes, in a few steps without going through the complicated network setup including port forwarding.

You'll see either of the following displays for EaZy. For details, please refer to "APPENDIX 7 EAZY NETWORKING" at page 74.

Type 1 ("EaZy" on EagleEyes)

Type 2 (Both "EaZy" and "QR Code" on EagleEyes)



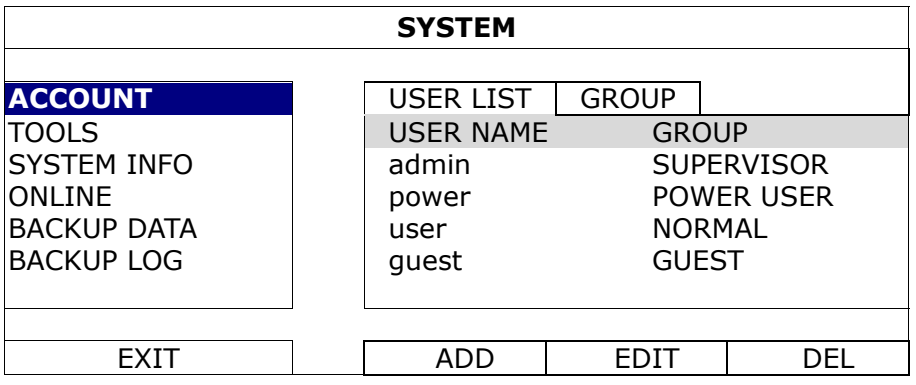
6.2 SYSTEM

6.2.1 ACCOUNT

USER LIST

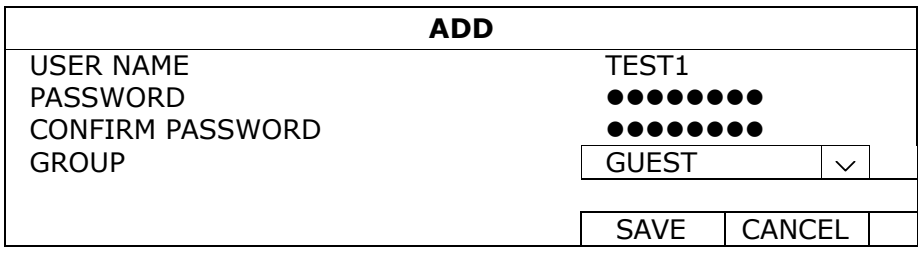
This function is used to create a new user account, or modify or delete an existing account for different access privilege.

Note: For details about available local operations of each user level, please refer to "5.2 User Level Creation" at page 15.



■ How to create an account

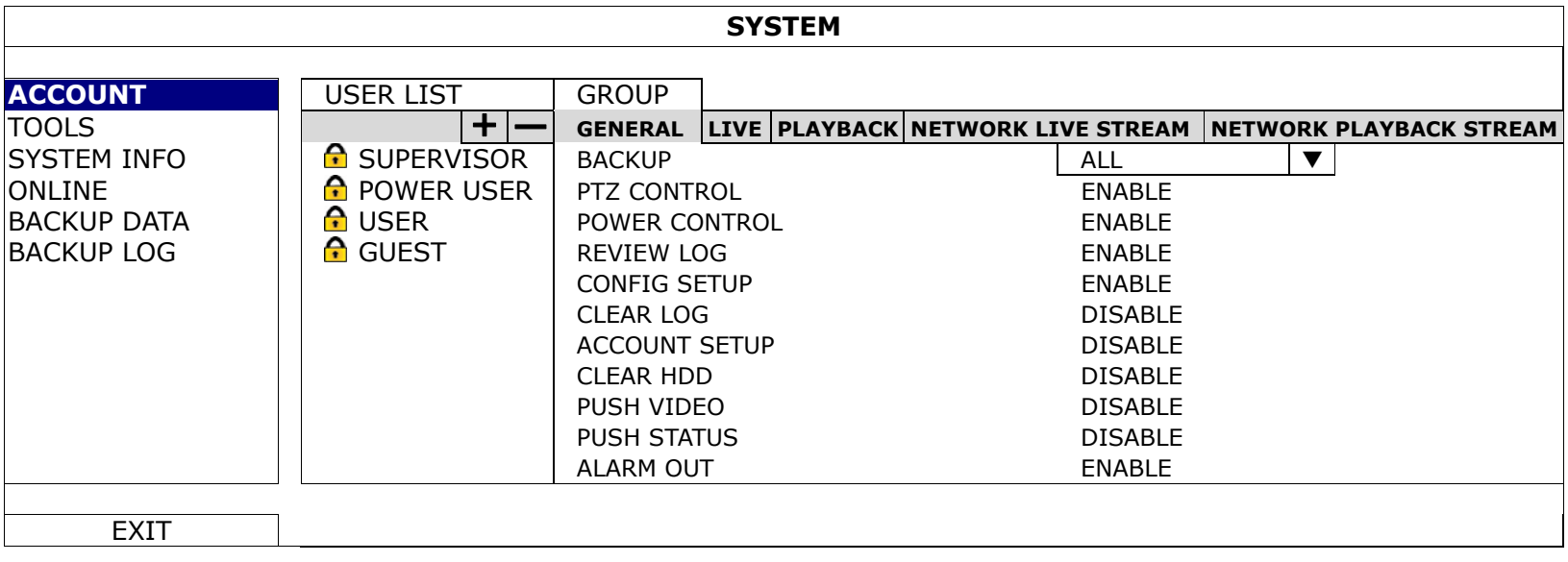
Select **ADD**, enter a user name and its password, and assign a user group in which includes the access rights you wish to grand to this new account. Then, select **SAVE** to create and return to the user list page.



GROUP

This function is used to create a new group with customized user access rights for different functions if needed, and you can create a user account and assign it to your customized group.

Note: The default user groups are **SUPERVISOR**, **POWER USER**, **USER** and **GUEST**, and they're not allowed to be removed. For details about available local operations of each user group, please refer to "5.2 User Level Creation" at page 15.



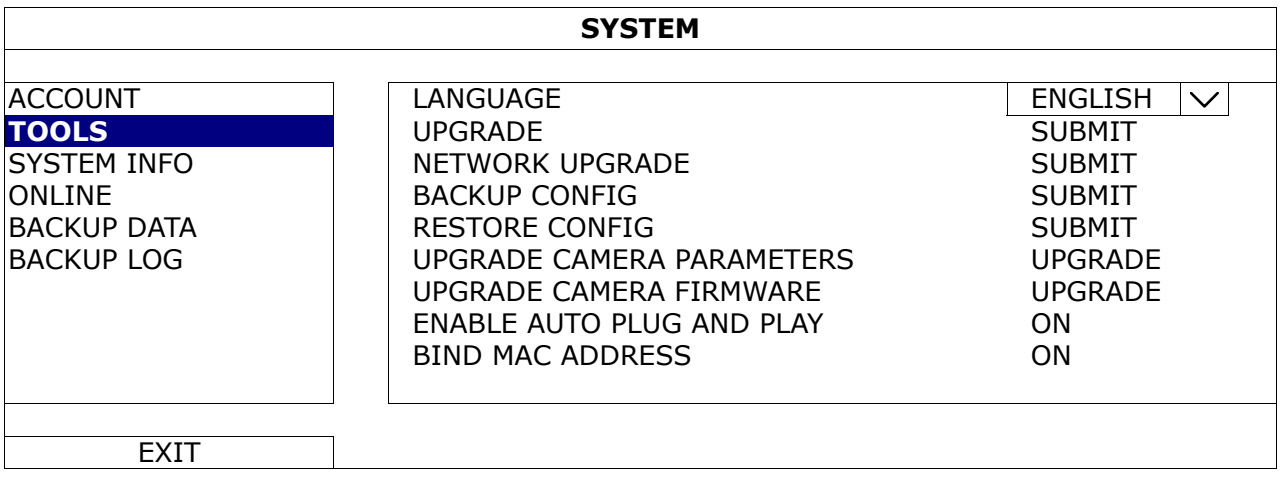
■ How to create a group and customize access rights

Step1: Enter a name in the column next to **+**, and select **+** to create a group. You'll find it added in the group list.

Step2: Select the group you just added in the group list, and select the tabs of **GENERAL**, **LIVE**, **PLAYBACK**, **NETWORK LIVE STREAM** and **NETWORK PLAYBACK STREAM** to choose the corresponding functions you want to enable or disable.

Step3: Return to **USER LIST**, and create an account or modify an existing account to assign it to the group you just added.

6.2.2 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 5 COMPATIBLE USB FLASH DRIVE LIST" at page 69.

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

3) NETWORK UPGRADE

Click **SUBMIT** for perform system upgrade via Internet.

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

4) BACKUP CONFIG / RESTORE CONFIG

To save the DVR current configurations for later use, such as restoring after DVR upgrade or applying to another DVR, insert a compatible USB flash drive into the USB port, and select **SUBMIT** in **BACKUP CONFIG** to copy the current DVR configurations to a file “System.bin” and save to your USB flash drive.

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

5) UPGRADE CAMERA PARAMETERS / UPGRADE CAMERA FIRMWARE

This function is used only to upgrade the parameters / firmware of our brand’s HD CCTV camera when necessary.
Get the upgrade file from our installer or distributor and save it to a USB flash drive. Then, select **UPGRADE** to start the upgrade.

6) ENABLE AUTO PLUG AND PLAY

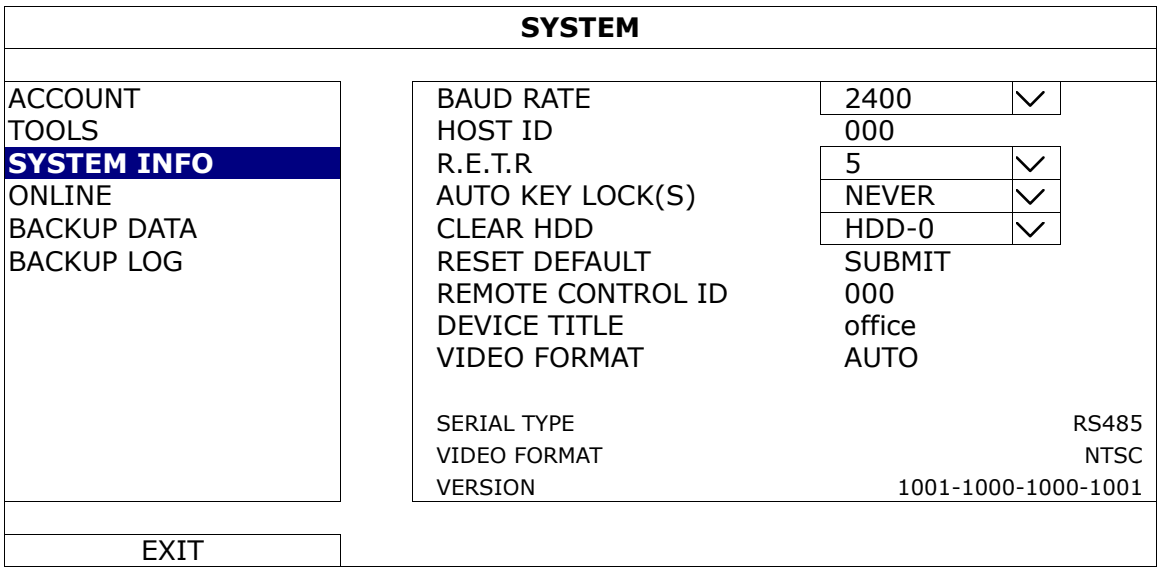
Switch to **ON** allow the camera to be detected and configured automatically when it’s connected to this device.

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

7) BIND MAC ADDRESS

This function is recommended to be used when your surveillance system is more than 256 cameras. It would be helpful for the system to get the address of each connected camera quickly if the system accidentally shuts down and needs to recover.

6.2.3 SYSTEM INFO



1) BAUD RATE

Set the baud rate of the DVR (**2400** / **4800** / **9600** / **19200** / **38400** / **57600** / **115200**).

Note: This function is used when an external controller is connected to this DVR and further configurations should be made for this DVR to work with the controller. For details, please check the user manual of the external controller.

2) HOST ID

Set the ID of the DVR (000 ~ 254).

Note: This function is used when an external controller is connected to this DVR and further configurations should be made for this DVR to work with the controller. For details, please check the user manual of the external controller.

3) R.E.T.R (Remote Event Trigger Recording)

Select the timeout in minute after which the R.E.T.R. function will be activated (**3** / **5** / **10** / **30**).

4) AUTO KEY LOCK(S)

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

5) CLEAR HDD

Select the HDD 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 DVR to ensure the recorded data are not mixed with other data previously saved in the same hard disk.
- The DVR firmware is upgraded for the system to work more stably. Before clearing all HDD data, please remember to make video backup.
- DVR 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.

6) RESET DEFAULT

Click "SUBMIT" to reset all settings as default, and select **YES** to confirm or **NO** to cancel. The DVR will reboot after reset.

7) REMOTE CONTROL ID

This function is available when users need to control two or more DVRs with one IR remote controller. The ID set here is used to identify the DVR the remote controller is going to control. Please also read the user manual of the IR remote controller for details.

8) DEVICE TITLE

Enter a title for this device.

9) VIDEO FORMAT

Allow the DVR to detect the video format automatically (**AUTO**), or choose **NTSC** or **PAL** manually.

10) SERIAL TYPE

Here shows the serial type of the DVR (**RS-485**).

11) VIDEO FORMAT

Here shows the information of the DVR video format (**NTSC** / **PAL**).

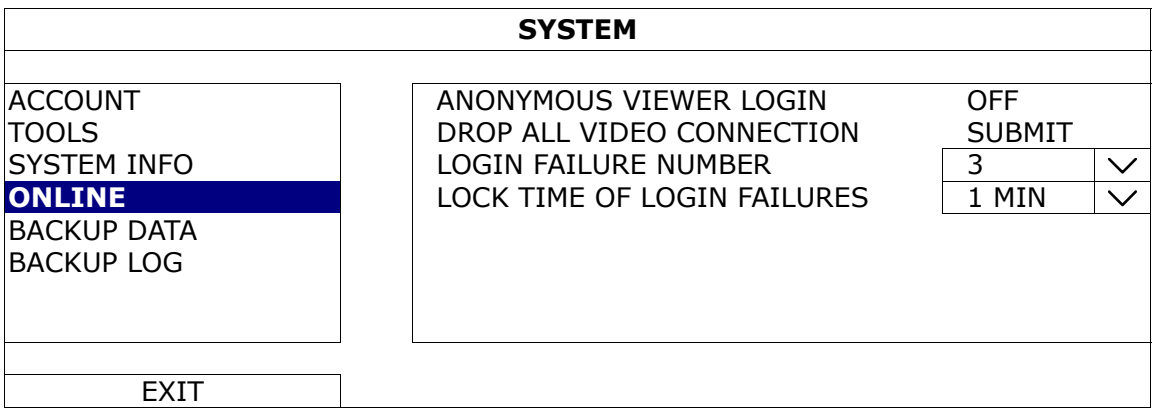
12) VERSION

Here shows the firmware version information.

6.2.4 ONLINE

Insert a compatible USB flash drive to the USB port at the front panel.

Note: Before using your USB flash drive for video backup, please format it to "FAT32" first with your PC or laptop. For the list of compatible USB flash drives, please refer to "APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST" at page 69.



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) DROP ALL VIDEO CONNECTION

   Click **SUBMIT** to force disconnection of all remote logins when needed.

3) LOGIN FAILURE TIMES

   Select how many times of remote login failures (1 ~ 20) to enable device lock automatically for security reasons.

4) LOCK TIME FOR LOGIN FAILURES

   Select the device lock time (**1 MIN** / **2 MINS** / **3 MINS** / **5 MINS** / **10 MINS** / **30 MINS** / **1 HOUR**) when remote login failures reach to the number specified in **LOGIN FAILUTRE TIME(S)**. You'll be unable to see the login page of this device until the specified time is up.

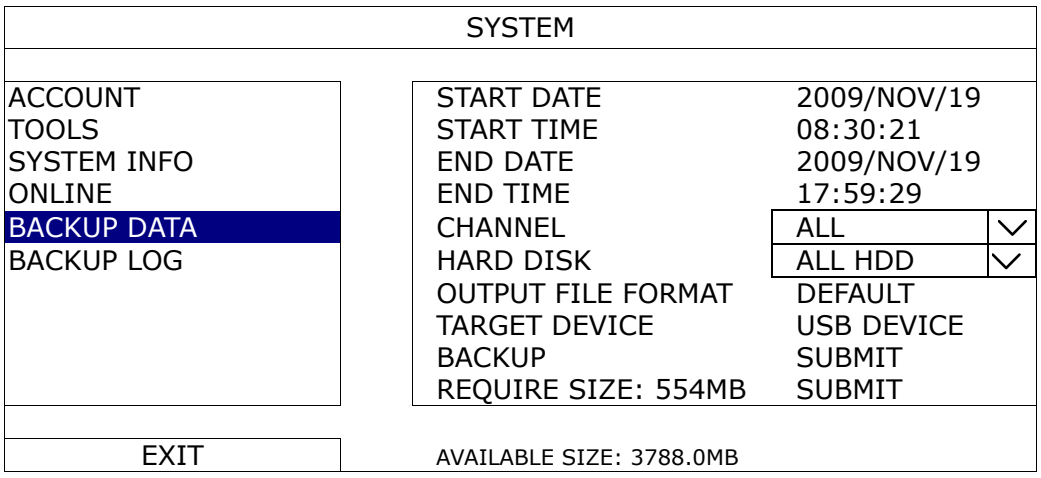
6.2.5 BACKUP DATA

Note: It's **NOT** allowed to remove the hard disk installed in the DVR and connect it directly to your PC to check video footage. It might impair the files saved in the hard disk, causing the loss of those files even when the disk is replaced back to the DVR.

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

Insert a compatible USB flash drive to the USB port at the front panel.

Note: Before using your USB flash drive for video backup, please format it to "FAT32" first with your PC or laptop. For the list of compatible USB flash drives, please refer to "APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST" at page 69.



1) START DATE / START TIME

Select the start date & time.

2) END DATE / TIME

Select the end date & time.

3) CHANNEL

Click to select the channel(s).

4) HARD DISK

Select the hard disk containing the video data you need or **ALL HDD**.

5) OUTPUT FILE FORMAT

Select the file format for backup video: **DEFAULT** or **AVI**.

- When **DEFAULT** is selected, the copied video is saved to "**.dv5**", and you can only open it with our own video player on PC. For details, please check the next section, "Video Playback on PC (.dv5)".

Note: It's recommended to save the file to the default format for security reasons. Only specific video player supports the default format and not everyone can see the video footage.

- When **AVI** is selected, the copied footage will be converted to "**.avi**", and you can open it with any media player which supports the "**.avi**" format on PC.

6) TARGET DEVICE

Select the device you want to use for video backup: **USB DEVICE**.

7) BACKUP

Click **SUBMIT** to start backup.

8) REQUIRE SIZE

To know the size of the expected backup video before backup, click **SUBMIT** to start calculating.

Video Playback on PC (.dv5)

For video backup with the format "**.dv5**", you can only use our own player to play.

Note: It's **NOT** allowed to remove the hard disk installed in the DVR and connect it directly to your PC to check recorded video clips. It might impair the files saved in the hard disk, causing the loss of those files even when the disk is replaced back to the DVR.

To play ".dv5" video on your PC:

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

Note: The supported PC operating systems are Windows 10, Windows 8, 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/z2116.swf.

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

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

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 footage includes data for multiple channels, click to a specific channel for this function to work properly.

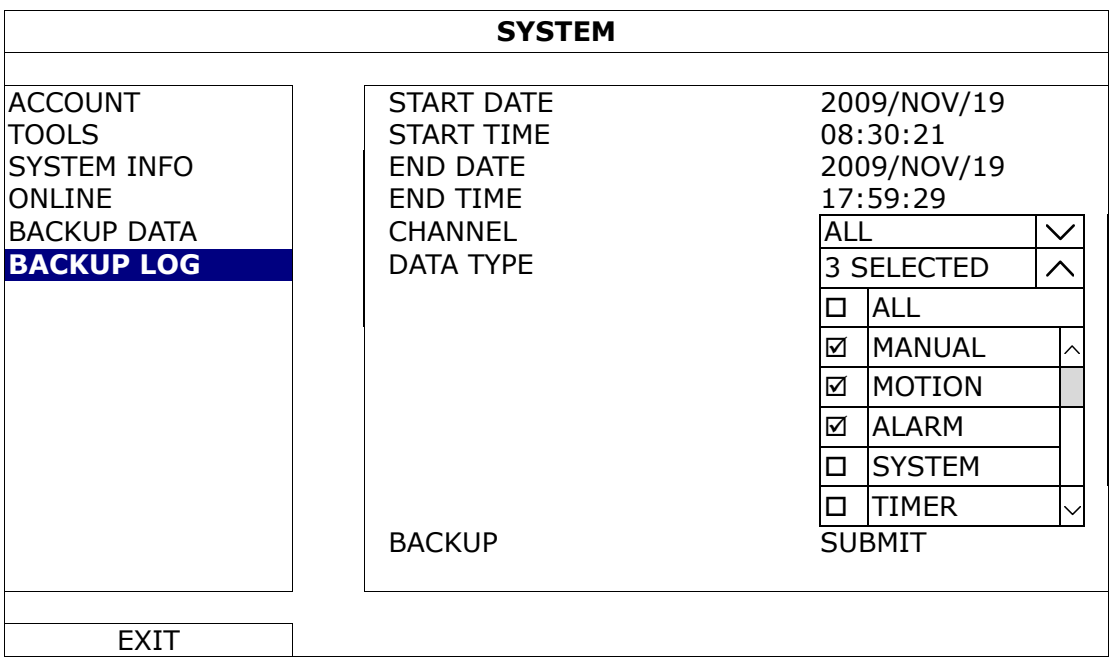
6.2.6 BACKUP LOG

This function is used to export event logs for quick checking or backup. A .csv file will be exported to your USB flash drive. You can open it with a text editor to see the logs.

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

Insert a compatible USB flash drive to the USB port at the front panel.

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 3 COMPATIBLE USB FLASH DRIVE LIST” at page 69.



1) START DATE / START TIME

Select the start date & time.

2) END DATE / TIME

Select the end date & time.

3) CHANNEL

Click to select the channel(s).

4) DATA TYPE

Click “SETUP” to select the event type you want: **MANUAL** / **MOTION** / **ALARM** / **SYSTEM** / **TIMER** / **HUMAN DETECTION** / **INFLOW** / **OUTFLOW** / **VIRTUAL FENCE** / **ONEWAY** / **SENCE CHANGE**, or select **ALL** to choose all event types.

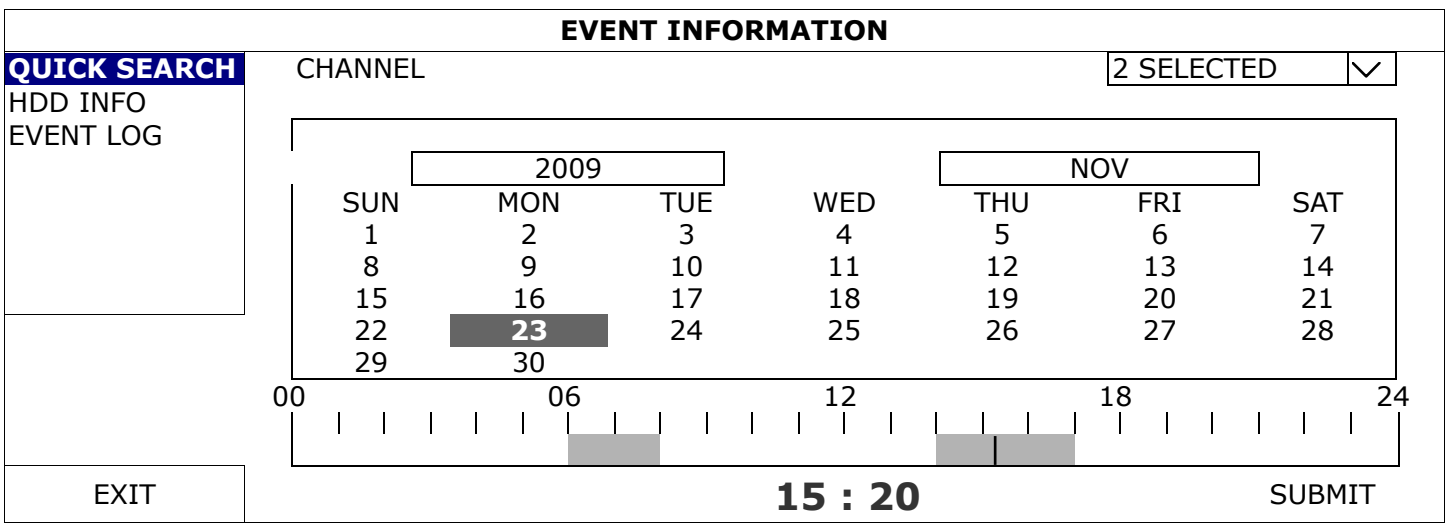
Note: The event types available depend on the model you have.

5) BACKUP

Click **SUBMIT** to start backup. You’ll see a log file (.csv) in the flash drive. You may open it with any txt editor, such as NotePad.

6.3 EVENT INFORMATION

6.3.1 QUICK SEARCH



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

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

Note: To select the year and month, move your mouse to the display bar. Then, click and hold to drag up or down.

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 “5.4 Playback” at page 19.

6.3.2 HDD INFO

You can check the remaining capacity of the connected hard disk in this device and its current status.
If the healthy status goes to:

- **GOOD** - This hard disk works normal.
- **BELOW AVERAGE** - The hard disk might work with some errors. Please pay attention and do video backup if needed.
- **REPLACEMENT NEEDED** – Please replace this hard disk immediately to ensure continuous video recording.

EVENT INFORMATION

QUICK SEARCH
HDD INFO
EVENT LOG

EXIT

ID	TYPE	STATUS	SIZE	TEMP.	SERIAL NUMBER	FREE SIZE	FORMAT TIME	HEALTHY STATUS
HDD-0	NORMAL	READY	890.562GB	46°C	ST31000526SV	864.832GB	2011/DEC/13 18:18:53	GOOD

6.3.3 EVENT LOG

You can check all system events (**SYSTEM**) and backup logs (**BACKUP**), or clear all log records.

EVENT INFORMATION

QUICK SEARCH
HDD INFO
EVENT LOG

EXIT

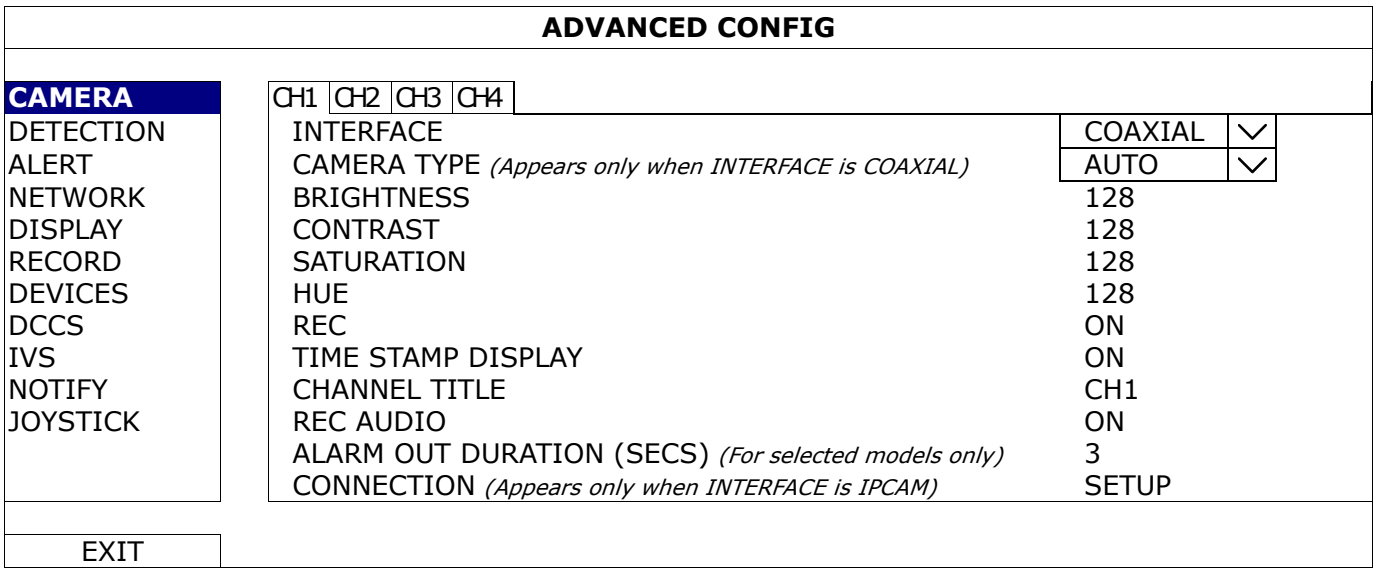
SYSTEM | BACKUP

EVENT	TIME	COMMENT
KEY UNLOCK	2009/NOV/19 15:49:07	
VIDEO LOSS	2009/NOV/19 15:32:05	04
POWER ON	2009/NOV/19 15:32:02	

PREV NEXT CLEAN

6.4 ADVANCED CONFIG

6.4.1 CAMERA



1) INTERFACE

Here shows how the camera is connected to this device: **COAXIAL** or **IPCAM**.
Usually this function will be detected automatically unless you want to change the camera type from an IP camera to an analog camera.
If an IP camera was previously connected and now you want to replace it with an analog camera, please manually change **IPCAM** to **COAXIAL** for the camera detection to work properly.

2) CAMERA TYPE *(Appears only when INTERFACE is COAXIAL)*

When **INTERFACE** is **COAXIAL**, you'll see **CAMEA TYPE** and the options are **AUTO** (default) / **TVI** / **ANALOG HD**.

3) BRIGHTNESS / CONTRAST / SATURATION / HUE *(Appears only when INTERFACE is COAXIAL)*

Click the current value to manually adjust the brightness/contrast/saturation/hue of each channel here.

4) 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**.

---

5) TIME STAMP DISPLAY

Enable this function and the recording time will be shown on the video during video playback.

6) CHANNEL TITLE

Click the channel title column to change the channel title (up to 12 characters). The default title is the channel number.

7) REC AUDIO

Enable or disable audio recording for the selected channel if the connected camera supports audio recording.

8) ALARM OUT DURATION (SECS) *(For selected models only)*

Select the duration time in second when an alarm-out event occurs (**3** / **5** / **10** / **20** / **30**).

9) CONNECTION *(Appears only when INTERFACE is IPCAM)*

When **INTERFACE** is **IPCAM**, you'll see **CONNECTION** to further configure the IP camera.

CONNECTION – CH1	
VENDOR	ONVIF
MODEL	
STREAM PROTOCOL	RTP-Unicast
METHOD	HTTP
URI	182.168.1.10
PORT	88
SUB STREAM PATH	
RECORD STREAM PATH	
USER NAME	test
PASSWORD	test
CACHE TIME (MSEC)	0 5 20

6.4.2 DETECTION

ADVANCED CONFIG

	CH1 CH2 CH3 CH4	
CAMERA	LS	07
DETECTION	SS	03
ALERT	TS	02
NETWORK	MOTION	OFF
DISPLAY	ALARM	OFF
RECORD	AREA	EDIT
DEVICES	PRIVACY MASK	EDIT
DCCS	INTERNAL ALARM *(For selected models only)*	ON
IVS	CAMERA GUARD	SETUP
NOTIFY		
JOYSTICK		
EXIT		

1) LS (Level of Sensitivity)

LS is to set the sensitivity of comparing two different images. The smaller the value is, the higher sensitivity for motion detection. The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default value is 07.

2) SS (Spatial Sensitivity)

SS is to set the sensitivity for detecting the size of one object (the number of the grids) on the screen. The smaller the value is, the higher sensitivity for motion detection.
The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 03.

Note: The default setting of SS is 03, which means once an object is detected more than 3 grids, the system will get triggered. So the value of SS must be less than the number of grids that you set up for the motion detection area.

3) TS (Time of Sensitivity)

TS is to set the sensitivity regarding how long one object stays in the detection area and triggers the recording. The smaller the value is, the higher sensitivity for motion detection.
The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 02.

4) MOTION

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

5) ALARM

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

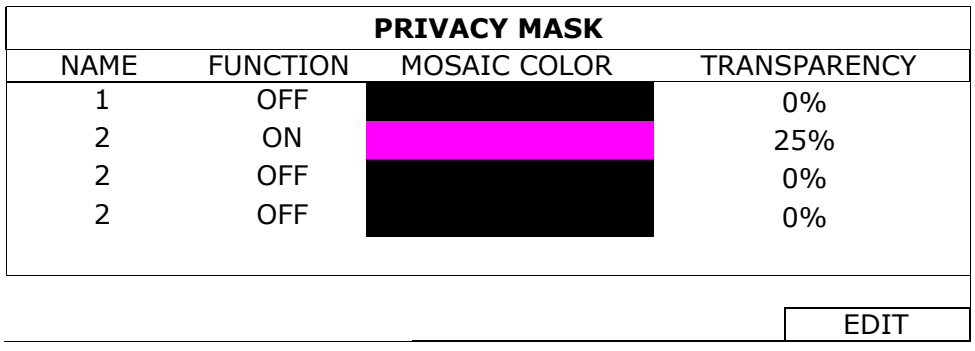
6) AREA

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.

7) PRIVACY MASK

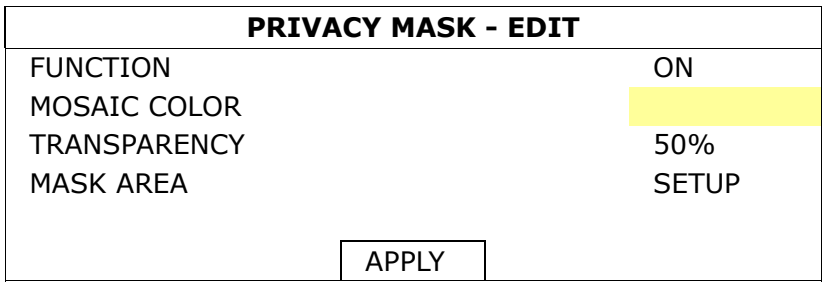
You can cover certain areas on the camera image with privacy masks.

Note: Up to 4 areas could be added.



Select one existing profile, and choose **EDIT** to modify it.

■ EDIT



Item	Description
MOSAIC SIZE	Choose the mosaic size of the privacy mask. The options are: 8×8, 32×32, and 64×64.
MOSAIC COLOR	Select the color for the privacy mask.
TRANSPARENCY	Select the transparency for your privacy mask. The options are: 0%, 25%, 50%, and 100%.
MASK AREA	Select “SETUP” to enter the area selection page. To exit, right click on the mouse.

8) INTERNAL ALARM *(For selected models only)*

This function is available only when an HD CCTV camera with a PIR sensor built-in is connected to this device. You could enable or disable the PIR detection here.

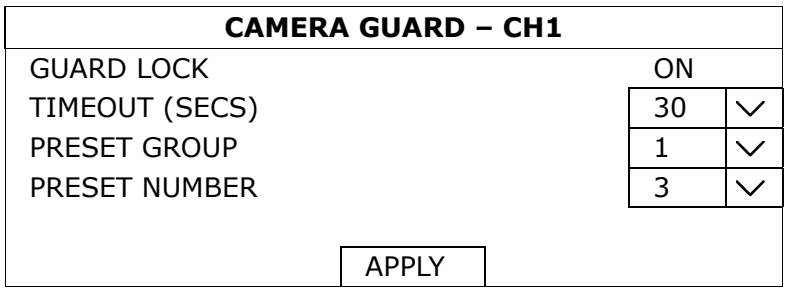
Note: To know which camera could work with this function, please check with your installer or distributor.

9) CAMERA GUARD

This function is available only for the camera which supports motorized-pan. It will temporarily disable the pan function of the camera and move the camera angle to a preset area for surveillance when **Guard** is enabled on the mobile app, EagleEyes, remotely.

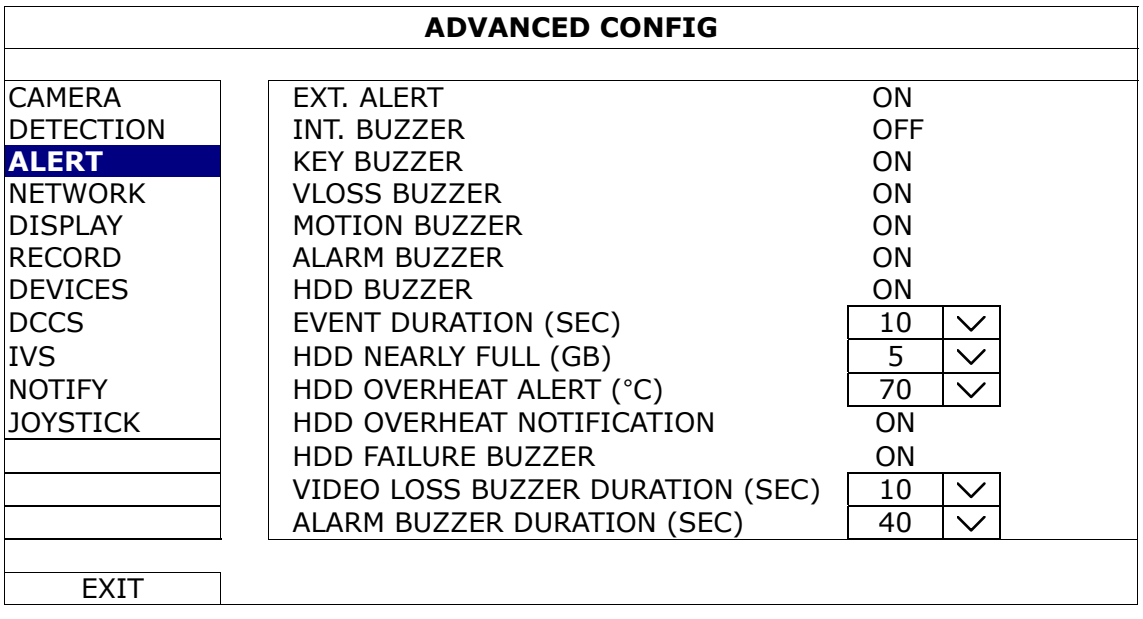
To use this function, you need to at least have one preset point and preset group configured on your camera, and have the mobile app, EagleEyes, installed on your mobile device.

Note: To know how to configure preset points and preset groups, please refer to the user manual of your camera. To know where to download the app, EagleEyes, please refer to “7.2 Mobile Devices” at page 62.



Enable **GUARD LOCK**, choose the preset group and point you want to monitor, and configure the timeout after which the camera will be fixed to the selected point. Any attempt to pan the camera to another point will be failed when **GUARD** on the mobile app, EagleEyes, is enabled.

6.4.3 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) EVENT 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.

11) HDD OVERHEAT NOTIFICATION

Select to enable or disable the alert when your hard disk temperature reaches the temperature you specified in **HDD OVERHEAT ALERT (°C)**.

12) HDD FAILURE ALERT

Select to enable or disable the sound when any of the installed hard disk(s) fails to work normally (**ON** / **OFF**).

13) VIDEO LOSS BUZZER DURATION (SEC)

Select the duration time for video loss buzzer in second (**5** / **10** / **20** / **40** / **CONTINUOUS**).

14) ALARM BUZZER DURATION (SEC)

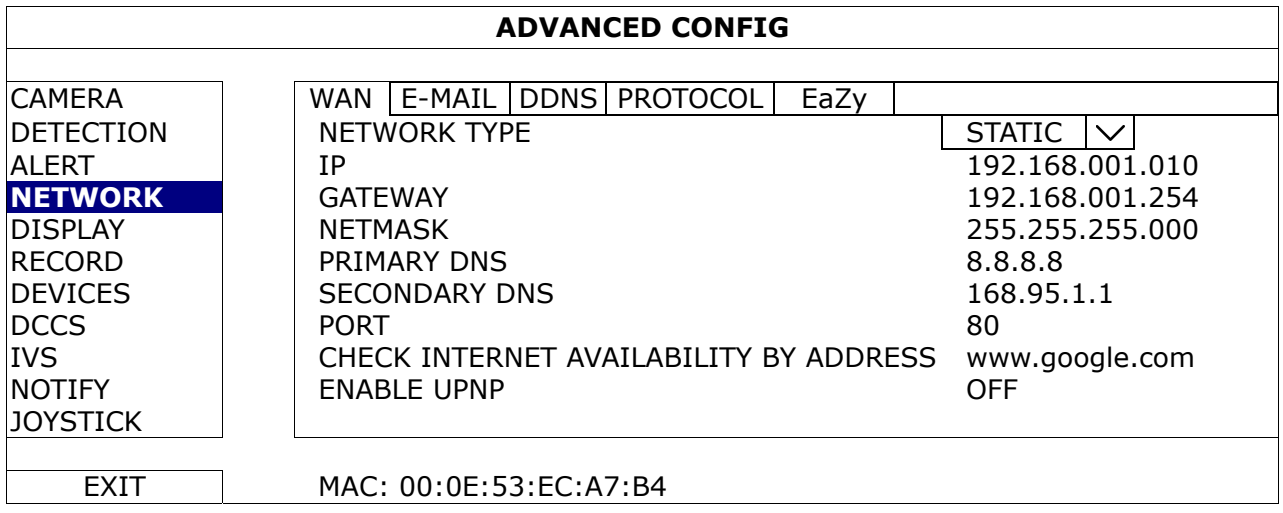
Select the duration time for the alarm buzzer in second (**5** / **10** / **20** / **40** / **CONTINUOUS**).

6.4.4 NETWORK

NETWORK

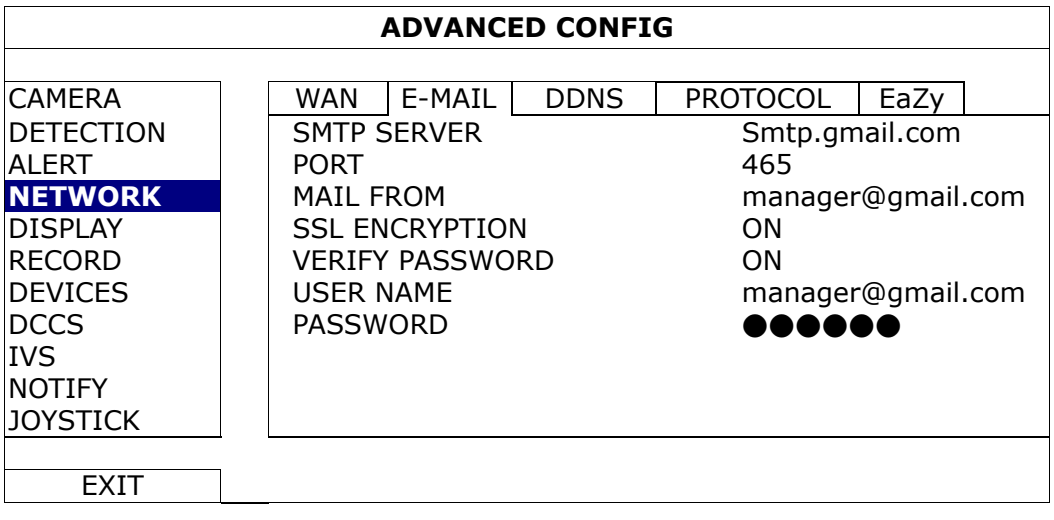
- ***WAN*** is used to connect this recorder to Internet for remote access from anywhere as long as Internet access is available.
- ***DDNS*** is used when the Internet access is available.

Note: For more details about these two functions and network configurations, please click here get the setup manual.



E-MAIL

When this function is enabled and an event occurs, a html file including a link will be sent to the specified E-mail address. Click the link to access to this DVR and check the event recording.



1) SMTP SERVER

Enter the SMTP server address provided from your e-mail system supplier.

2) PORT

Enter the port number provided from your e-mail system supplier. If this column is left blank, the e-mail server will use port 25 to send e-mails.

3) MAIL FROM

Enter the email address which will be used to send Email notifications.

4) SSL ENCRYPTION

Select **ON** if your e-mail server is using SSL encryption to protect your e-mail content from unauthorized access.

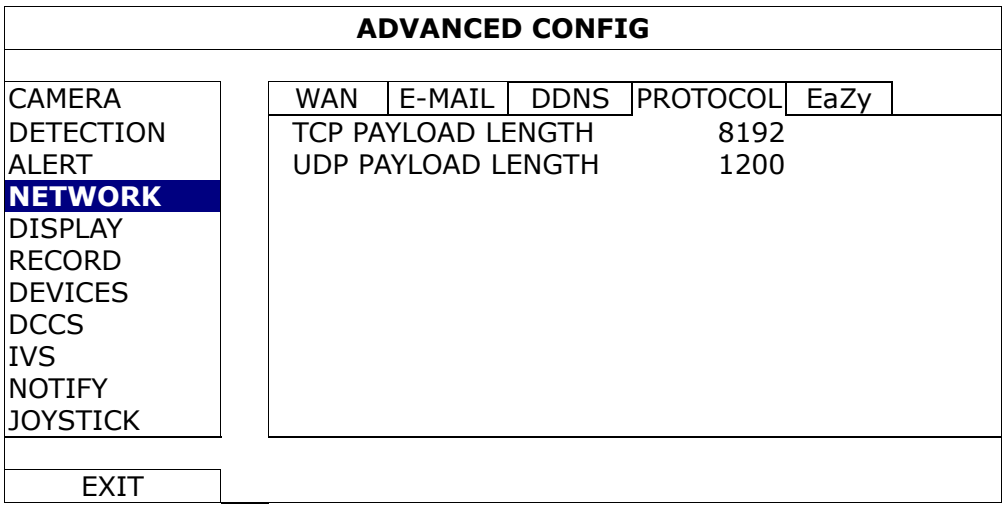
5) VERIFY PASSWORD

Some mail servers are required to verify the password. Please enter the “user name” and “password”.

6) USER NAME / PASSWORD

Enter the “user name” and “password” to access the email address entered in **MAIL FROM** when **VERIFY PASSWORD** is set to **ON**.

PROTOCOL



1) TCP PAYLOAD LENGTH / UDP PAYLOAD LENGTH

Configure the payload length from 100 ~ 10000.

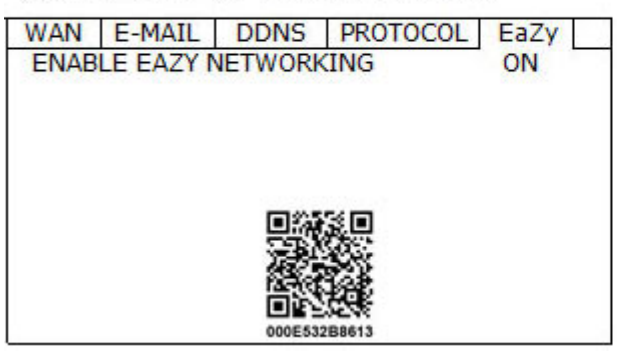
The higher the value, the larger data packet is carried, and the longer time is needed for the video to display.

The lower the value, the less data packet is carried, and the more possibility you might see video lag.

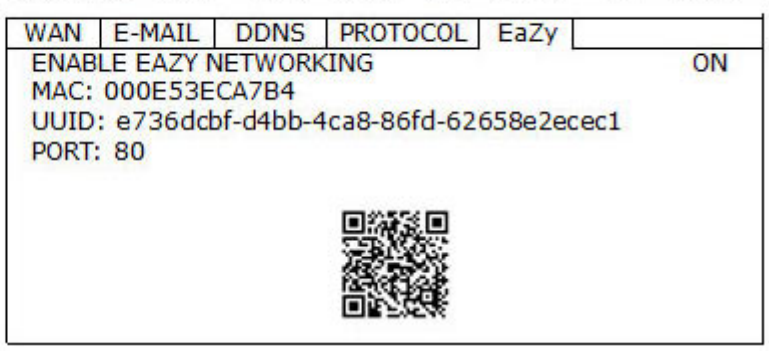
EaZy

This function is used to connect this recorder to Internet by using EaZy Networking. You’ll see either of the following displays for EaZy. For details, please refer to “APPENDIX 9 EAZY NETWORKING” at page 74.

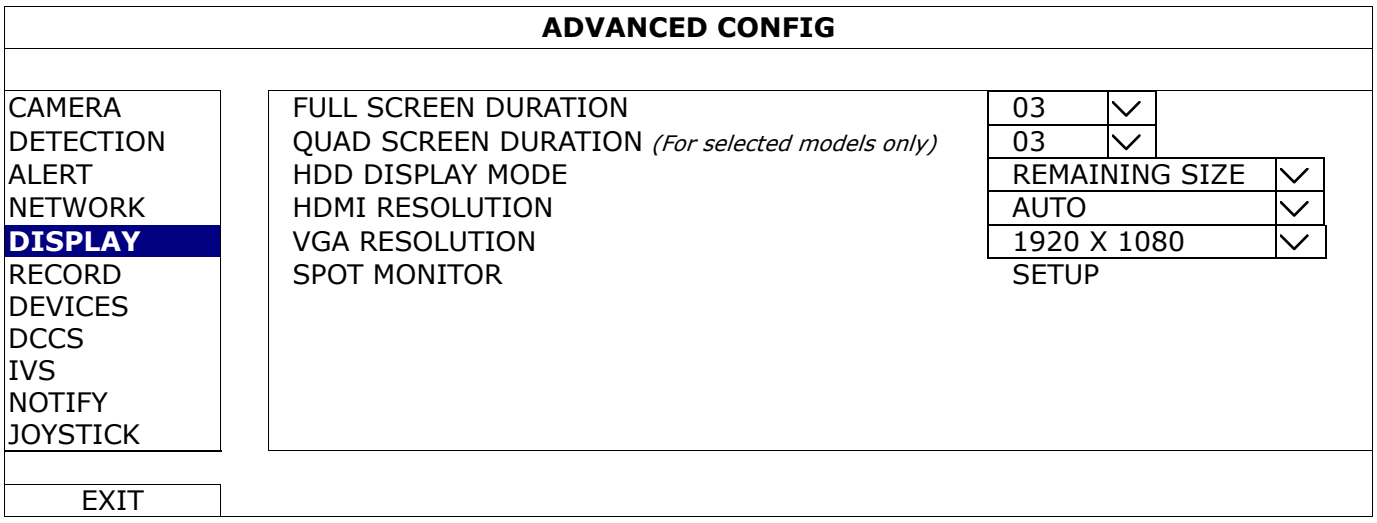
Type 1 (“EaZy” on EagleEyes)



Type 2 (Both “EaZy” and “QR Code” on EagleEyes)



6.4.5 DISPLAY



1) FULL SCREEN DURATION

Select the full screen dwell duration time in second (**03** / **05** / **10** / **15**).

2) QUAD SCREEN DURATION *(For selected models only)*

Select the quad screen dwell duration time in second (**03** / **05** / **10** / **15**).

3) HDD DISPLAY MODE

Select **REMAINING SIZE** to show the remaining HDD capacity for recording, **REMAINING TIME** to show the remaining recording time, or **DAYS KEPT** to show how many recording data are saved in day.

4) HDMI RESOLUTION

Select the display resolution you want. The default value is **AUTO**. This is used for the main display output.

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.

Note: When the 4K resolution, 3840 x 2160, is selected, the VGA output will be disabled.

5) VGA RESOLUTION

Select the display resolution you want. The options are 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.

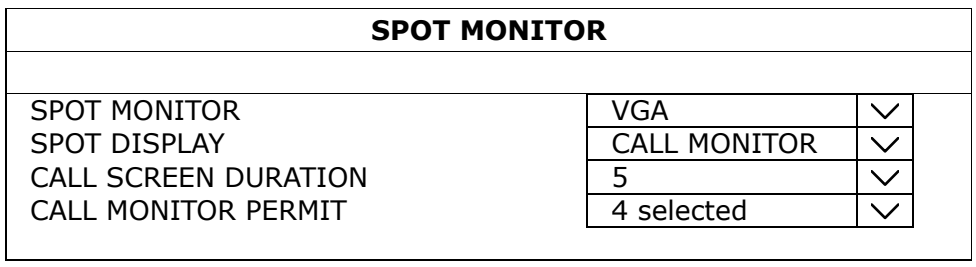
Note: When the 4K resolution, 3840 x 2160, is selected, the VGA output will be disabled.

6) SPOT MONITOR

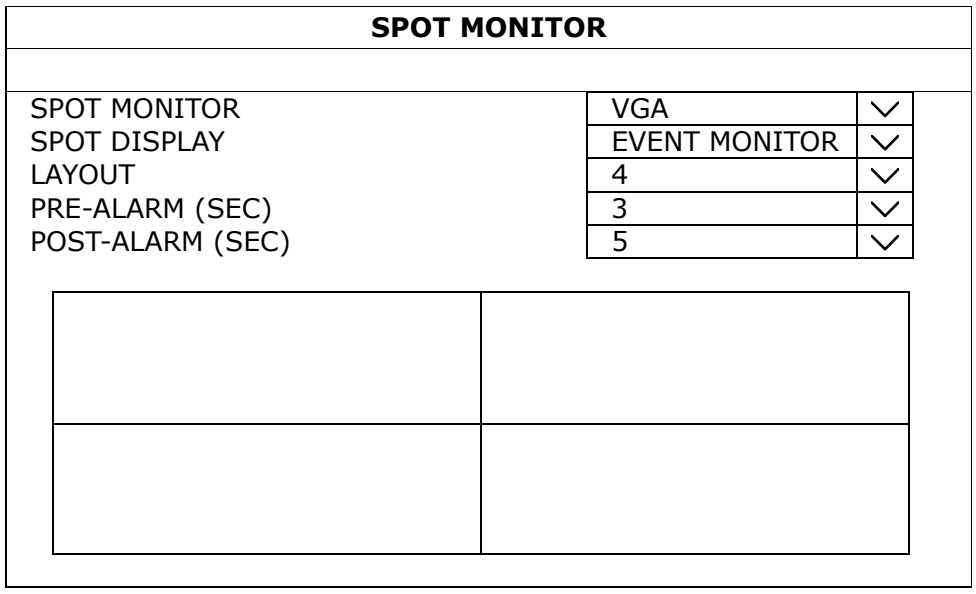
Specify how VGA / composite port is used for video output: **CALL MONITOR** / **EVENT MONITOR** / **LIVE**.

Note: For some models, only the composite port supports this function. The available output options are depending on the model you have.

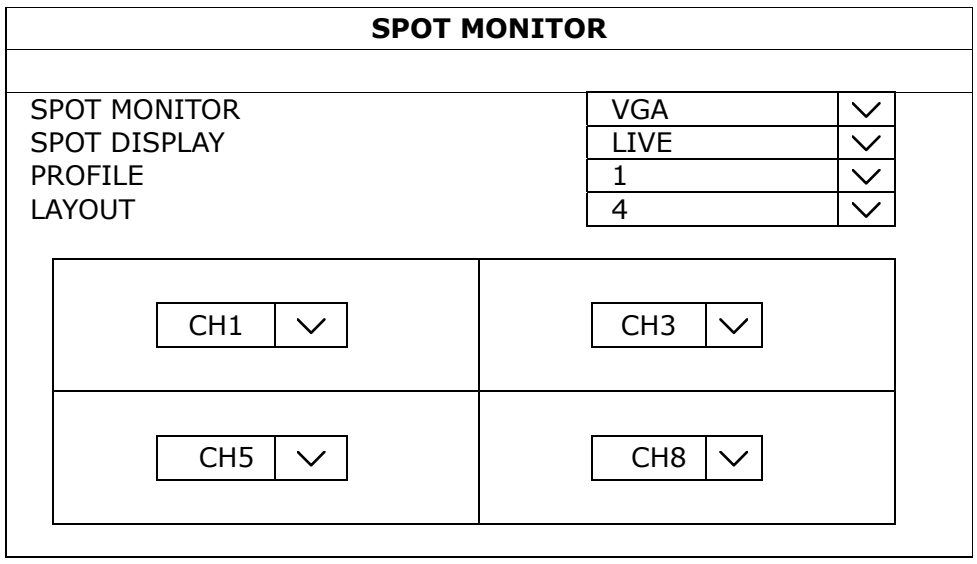
- **CALL MONITOR** is used for sequence display. When this option is selected, go to "**CALL SCREEN DURATION**" to select the duration time in second (**03** / **05** / 1**0** / **15**) and "**CALL MONITOR PERMIT**" to choose the channel(s) you want for sequence display.



- **EVENT MONITOR** is used when any alarm event occurs. When this option is selected, go to "**LAYOUT**" to select how many channels you want to see, and "**PRE-ALARM (SEC)**" and "**POST-ALARM (SEC)**" to set how many seconds you'd like to see before (**0** ~ **5**) and after (**3** ~ **10**) the event starts.

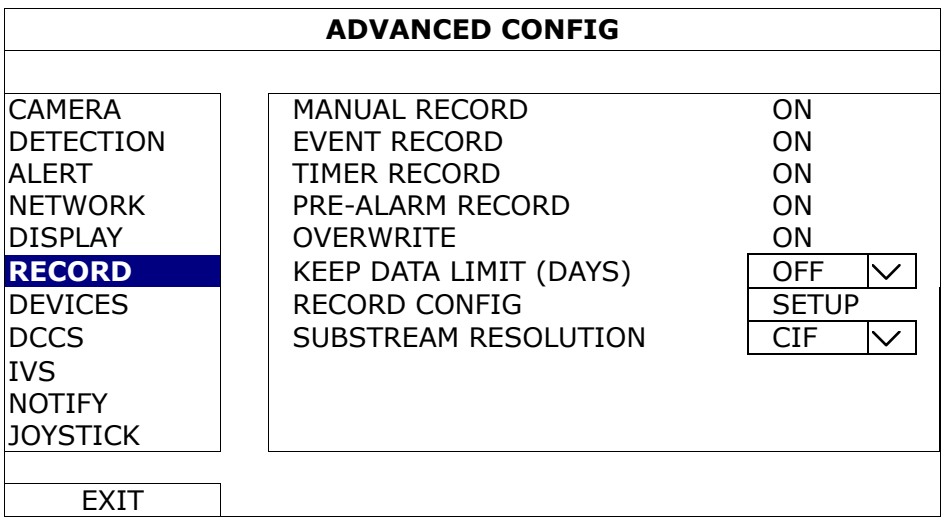


- **LIVE** is used to select how many channels you'd like to show on the spot monitor. You can have up to 7 layout patterns saved in PROFILE. For example, if you choose "2" in "PROFILE" and the layout is "4" with 4 channels selected, this layout setting will be saved in PROFILE 2.



6.4.6 RECORD

Note: Please DO NOT change the date or time of your DVR 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 HDD data, and start recording again.



1) MANUAL RECORD

Set the manual recording function on / off.

2) EVENT RECORD

Set the event recording function on / off.

3) TIMER RECORD

Set the timer recording function on / off.

4) 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 DVR will record 8MB data before an alarm / motion event is triggered.

5) OVERWRITE

Select **ON** to overwrite previous recorded data in your hard disk when the hard disk is full. When this function is on and the hard disk is full, the DVR will clear 8GB data from the oldest for continuous recording without notice.

6) KEEP DATA LIMITS (DAYS)

Assign how many days to save the recording data from **1** to **31** days. After the assigned day(s), the recorded data will be removed. Select **OFF** to disable this function.

7) RECORD CONFIG

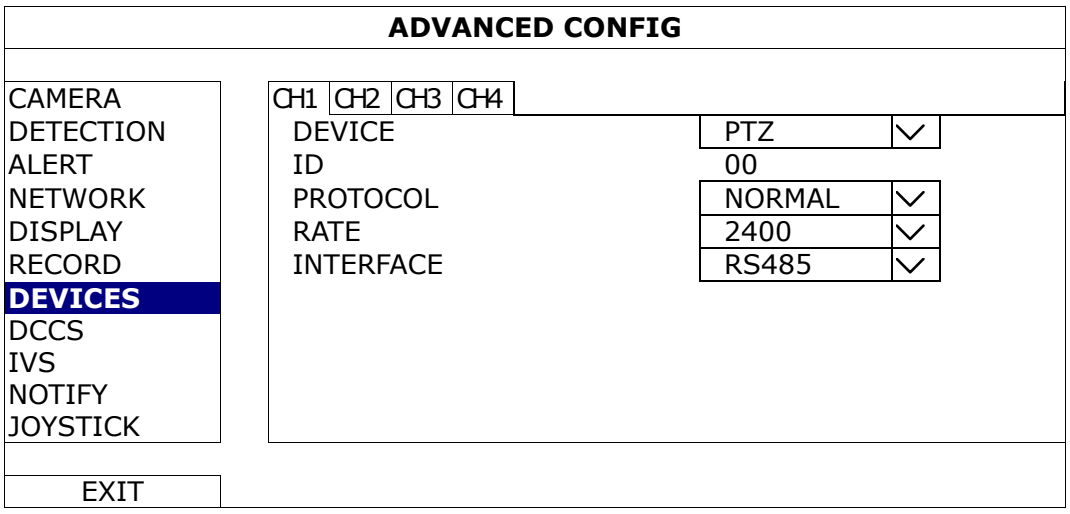
Click **SETUP** to enter the setting page individually for manual record, event record and timer record.
For details, please refer to "6.1.1 GENERAL" at page 23.

8) SUBSTREAM RESOLUTION

Select the resolution for sub-streams: **FRAME** / **CIF**.
Sub-streams are used for remote surveillance from a PC or mobile device. When the bandwidth is low, choose a lower resolution helps to quickly view the video, but the video quality might get low.

6.4.7 DEVICES

Note: This function is used when the DVR supports RS485 connection, and you want to connect other brand's speed dome camera.



1) DEVICE

For connecting other brand's speed dome camera, select **PTZ**.

2) ID

Click the current value to set the ID number (0 ~ 255) for the connected camera if necessary.
Make sure the ID setting of the camera is the same as the setting here, or the DVR will not be able to control the device.

Note: To know the default ID of the speed dome camera, please refer to its user manual.

3) PROTOCOL

Select **NORMAL** (our protocol), **P-D** (PELCO-D), **P-P** (PELCO-P), **S-T** (SAMSUNG-T) or **S-E** (SAMSUNG-E) protocol.

4) RATE

Select the baud rate for the connected speed dome camera (**2400** / **4800** / **9600** / **19200** / **38400** / **57600** / **115200**).
Make sure the baud rate setting of the camera is the same as the setting here, or the DVR will not be able to control the device.

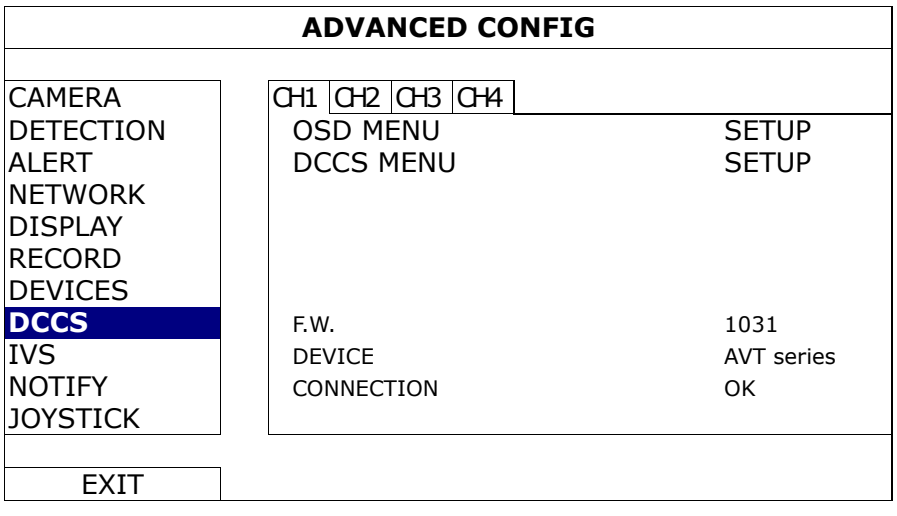
Note: To know the default baud rate of the speed dome camera, please refer to its user manual.

5) INTERFACE

Select **RS485** if the connected speed dome camera uses RS485 wires to transmit control signals.

6.4.8 DCCS

This function is used for our brand's HD CCTV camera series. Users could access the setup menu of the camera itself for further configurations.



1) OSD MENU

When the connected camera is properly recognized, click **SETUP** to enter the setup page of the camera itself.

2) DCCS MENU

This menu appears when the camera is properly recognized, and it is used to enter the additional function setup page designed for the connected camera.

Note: Functions additionally designed are not available for every HD CCTV camera. Please check the camera user manual for details.

6.4.9 IVS

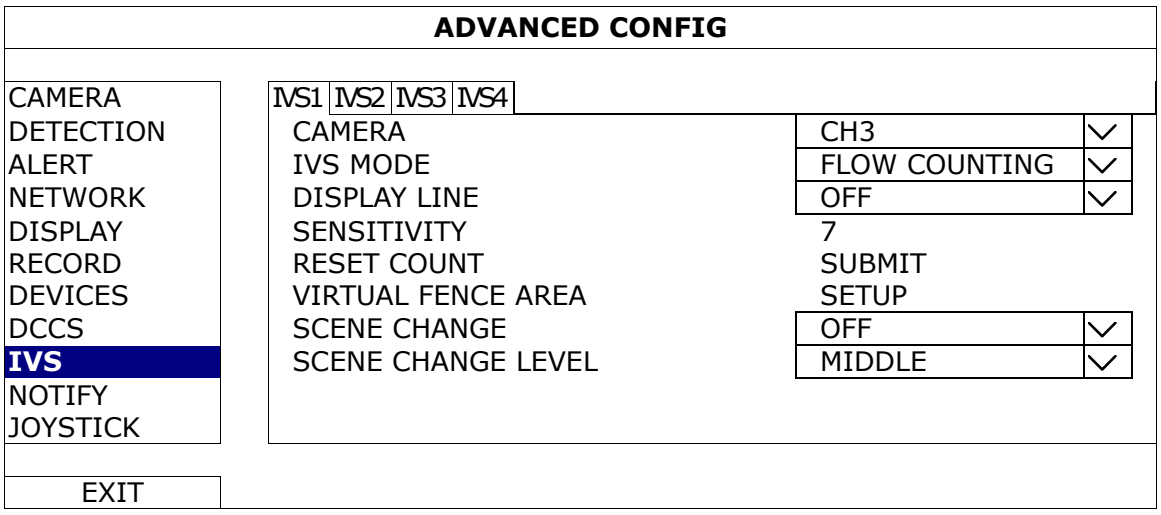
Note: This function is for selected models only.

Note: Before using the IVS function, make sure the event record function is enabled on your DVR.

IVS, Intelligent Video Surveillance, is the advanced application for motion detection, but more precise and smarter. It can be applied to different situations with one of the following three modes: FLOW COUNTING, VIRTUAL FENCE, and ONE WAY.

When anyone crosses the detection line (virtual fence), the recording will be on.

Note: Four camera channels are supported for this function.



1) CAMERA

Select the camera channel that you want to use the IVS function.

2) IVS MODE

Select one of the following three modes depending on your environment:

MODE	DESCRIPTION
FLOW COUNTING	A virtual detection line is set to detect the moving direction of pedestrians for flow counting.
VIRTUAL FENCE	A virtual detection line is set to detect intruders crossing the detection line, and an alarm will be triggered.
ONE WAY	A virtual detection line is set to detect intruders from the specified direction, and an alarm will be triggered.

3) DISPLAY LINE

Select to display the detection line for IVS on the screen or not.

4) SENSITIVITY

Set the sensitivity for IVS from 00 ~ 15. The larger the value, the more sensitive the IVS will be.

5) RESET COUNT

Click **SUBMIT** to reset the flow counting number to 0 when the IVS mode is set to **FLOW COUNTING** and activated.

6) VIRTUAL FENCE AREA

Click **SETUP** to draw the detection line for IVS, and set the detection direction from left to right, or right to left. This area setting is the detection base for **IVS MODE**.

Note: There are some tips to draw the detection line. For details, please check www.surveillance-download.com/user/IVS_setup.pdf**.**

---

7) SCENE CHANGE

Select **ON** to trigger a motion event when the camera is sensed to be moved and the camera scene is changed. At the same time, the icon " " will be also shown on the screen in addition to the motion icon " ".

8) SCENE CHANGE LEVEL

Set the detection sensitivity for **SCENE CHANGE** to **HIGH**, **MIDDLE** or **LOW**.

IVS APPLICATION

➢ FLOW COUNTING

Step1: Go to **VIRTUAL FENCE AREA** to draw a detection line with your mouse, and decide the detection direction by selecting **REVERSE**.

Step2: Click **APPLY** to finish the IVS setting and return to the live view. The IVS icon " " will be shown on the status bar. Click it to show the flow counting on the top left side.

When anyone walks across the detection line, the system will determine his movement is in or out, and add one count to the corresponding channel on the flow counting panel.

IN	People coming from the opposite direction to the arrow mark.
OUT	People coming from the same direction as the arrow mark.

➢ VIRTUAL FENCE and ONE WAY

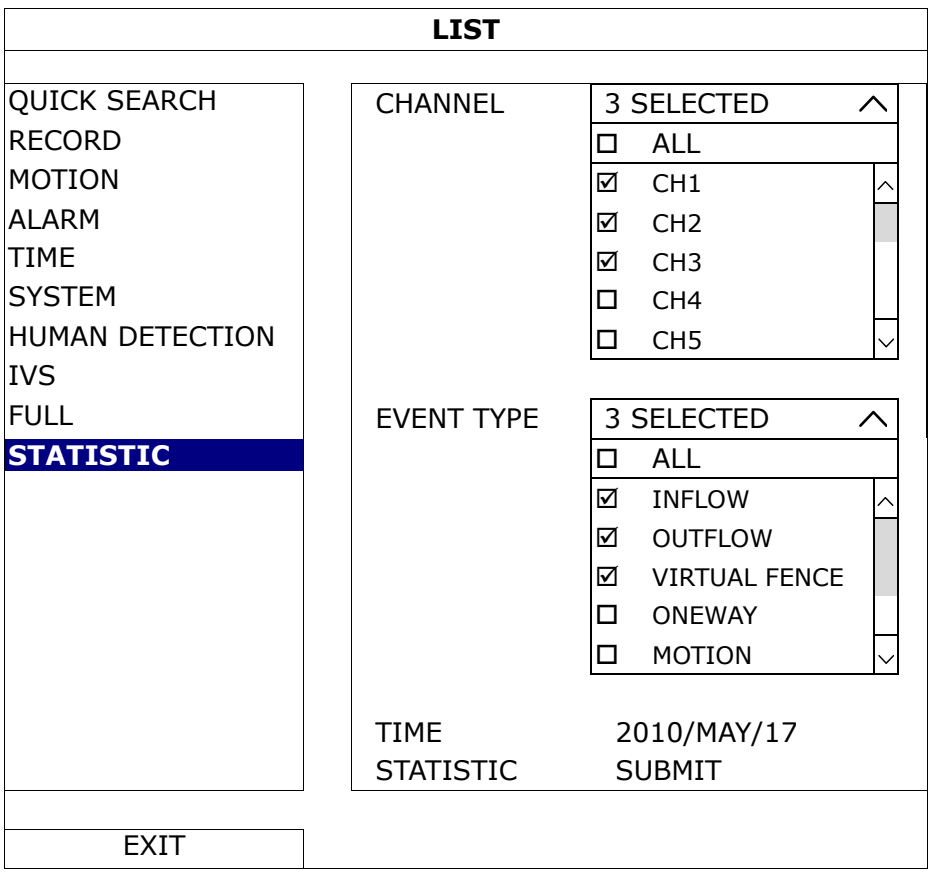
Step1: Go to **VIRTUAL FENCE AREA** to draw a detection line with your mouse, and decide the detection direction by selecting **REVERSE**.

Step2: Click **APPLY** to finish the IVS setting and return to the live view.
When anyone walks across the detection line, the system will determine his movement is in or out, and:

VIRTUAL FENCE	An event happens for anyone walking across the detection line, and "" will be shown on the screen.
ONE WAY	An event happens for anyone walking from the opposite direction to the arrow mark, and "" will be shown on the screen.

IVS STATISTICS

Click " " → " " to enter the event search menu. Then, select **STATISTIC**



Set all the criteria you want to search, and click **SUBMIT** in **STATISTIC** to show the event statistics by **DAY** in **LIST** (default) or **CHART**.

- To check the statistics in the bar chart, click **CHART**.
- To switch to the **MONTH** or **HOUR** view, click **DAY** at the bottom.

List View

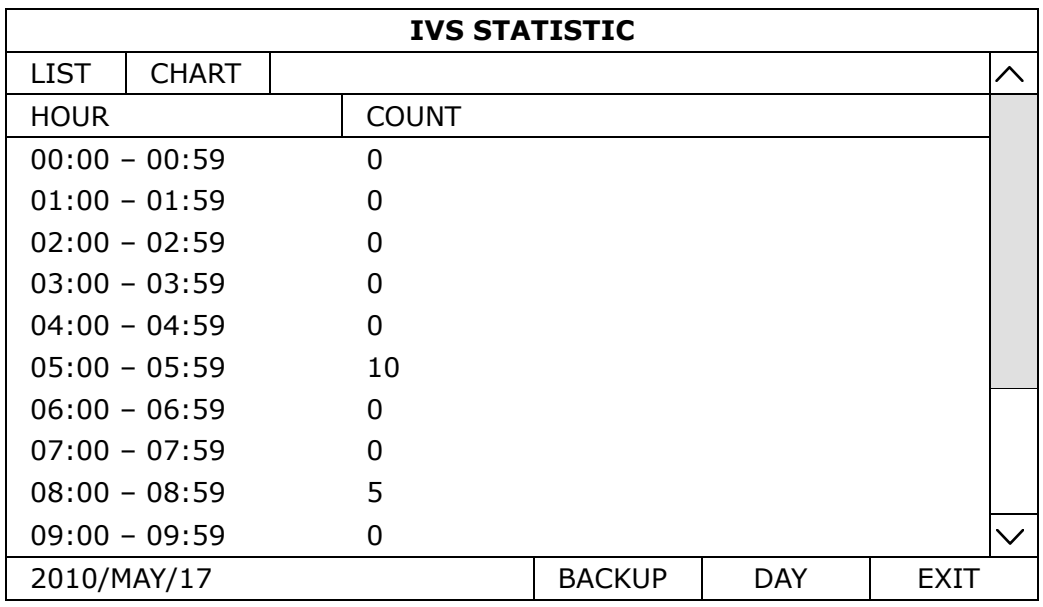
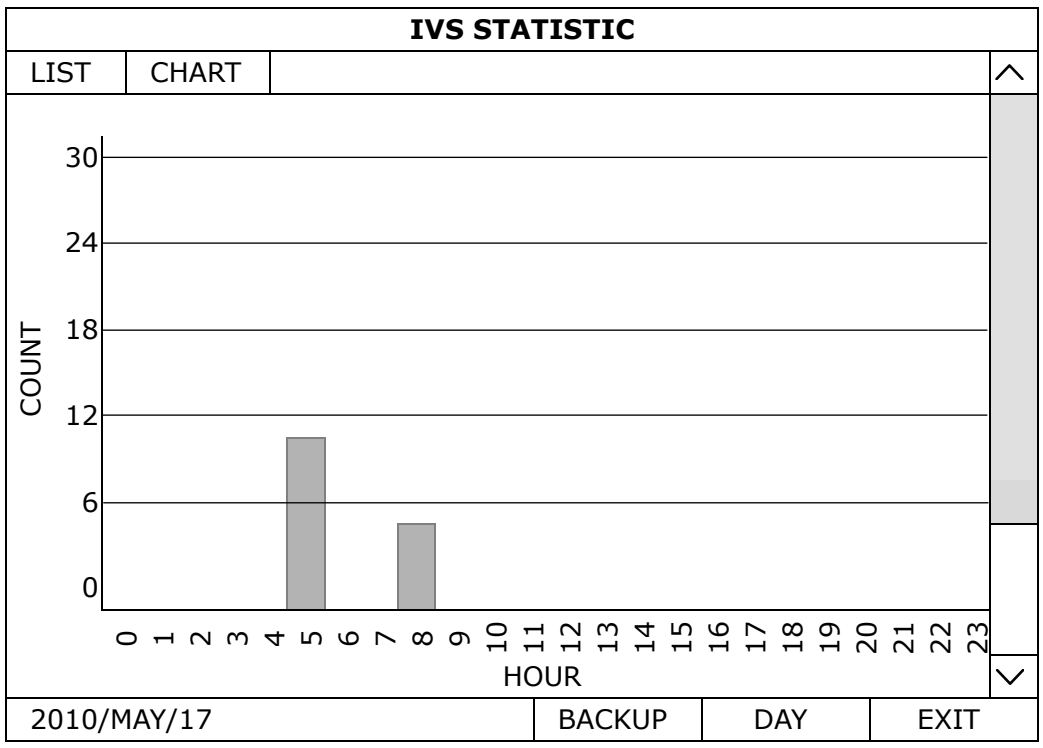


Chart View



6.4.10 NOTIFY

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

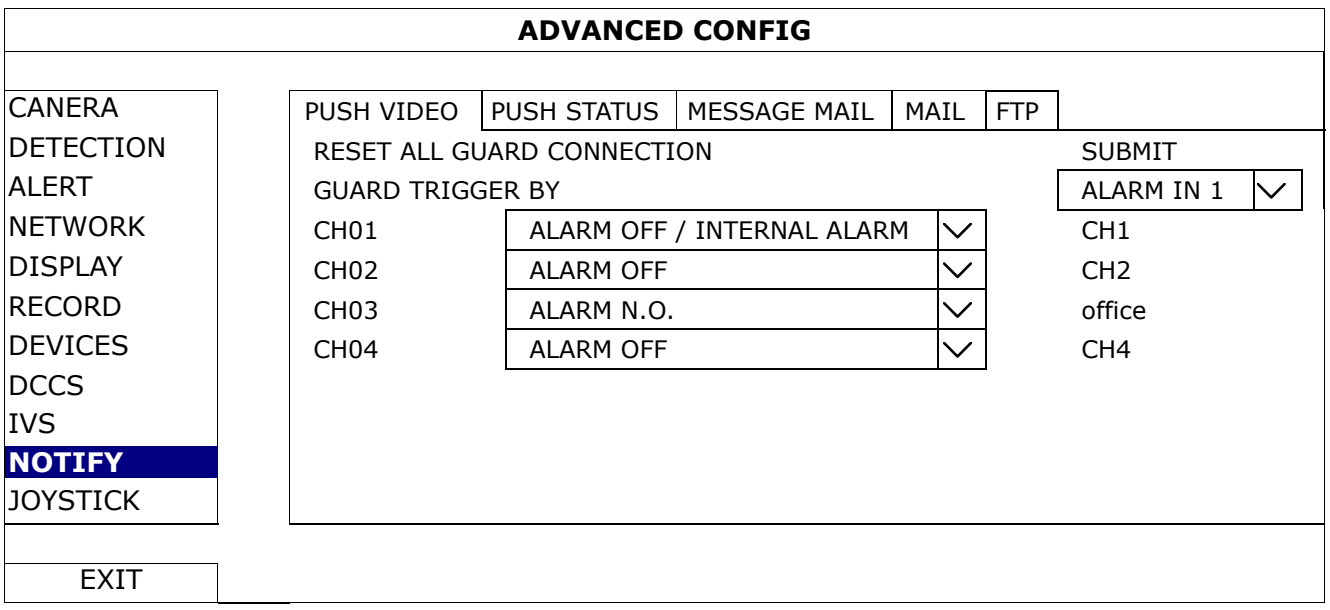
PUSH VIDEO

Note: This function is for selected models only.

Before using this function, make sure:

- An external alarm is connected to the alarm-in port on the rear panel.
- You have an iOS 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 “7.2 Mobile Devices” at page 62.
- You have configured EagleEyes to access this DVR, and **Guard** is enabled. For details, please refer to “A2.3 Enable Push Video” at page 67.

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



1) RESET ALL GUARD CONNECTION

When there’re more than 2 users who have the authority to enable Push Video on their mobile devices and configure its related settings, it might be confusing to know whose command is working. In this case, use this function could force the camera to discard all Push Video setup and reconfigure it.

2) GUARD TRIGGER BY

Specify which alarm device (alarm-in) should be used when **GUARD** is enabled from your iOS or Android mobile device.

3) ALARM TYPE

Select the external alarm type to **ALARM NO.**, **ALARM N.C.** and **INTERNAL ALARM**.

4) CH01 ~ 04

Enter the text you want to see when your iOS or Android mobile device receives Push Video. The default text is the channel number.

PUSH STATUS

Before using this function, make sure:

- You have an iOS 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 "7.2 Mobile Devices" at page 62.
- You have configured EagleEyes to access this DVR, and **Guard** is enabled. For details, please refer to "A2.3 Enable Push Video" at page 67.

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

ADVANCED CONFIG

CANERA
DETECTION
ALERT
NETWORK
DISPLAY
RECORD
DEVICES
DCCS
IVS
NOTIFY
JOYSTICK

EXIT

PUSH VIDEO | PUSH STATUS | MESSAGE MAIL | MAIL | FTP

ACTION ON

EVENT
- ☐ ALL
- ☑ VIDEO LOSS
- ☐ HDD FULL
- ☐ POWER ON
- ☑ HDD (CLEAR / NO HDD / OVER TEMPERATURE)
- ☐ NET LOGIN
- ☑ KEY UNLOCK
- ☐ UPS
- ☐ SYSTEM ABNORMAL

Step1: Switch **ACTION** to **ON**.

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

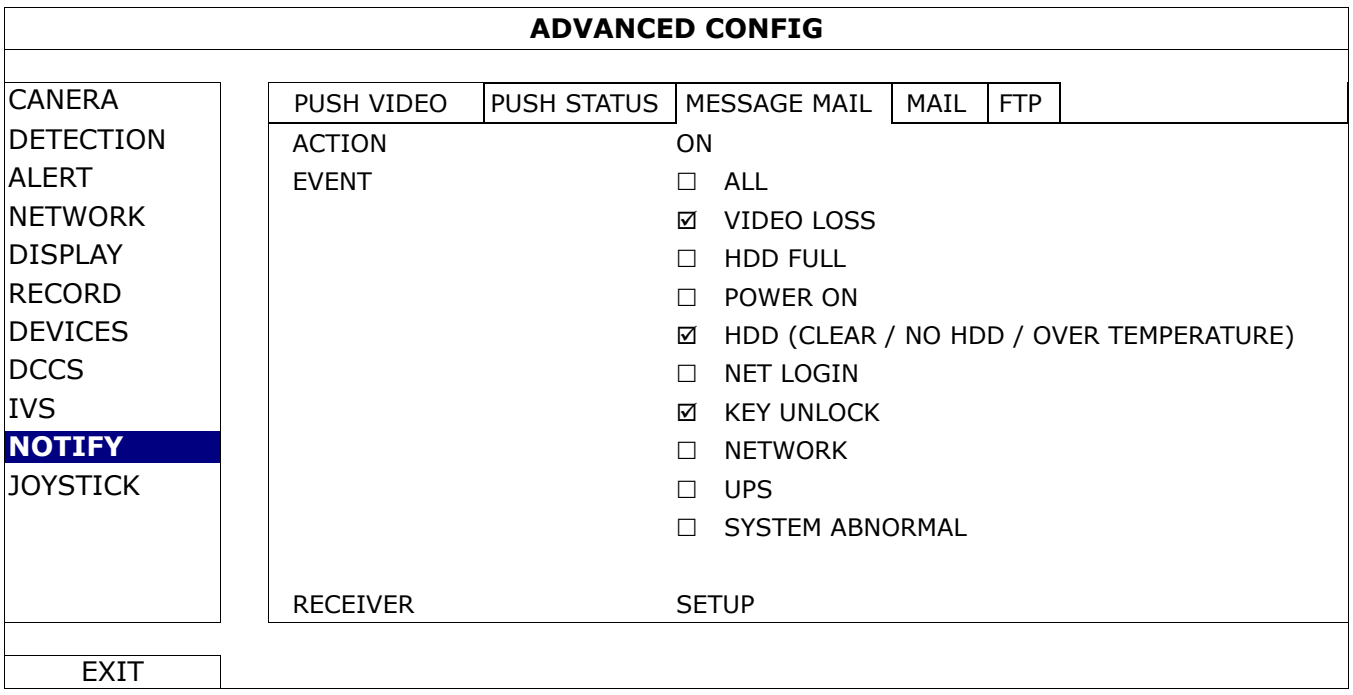
Step3: Enable **GUARD** in EagleEyes on your mobile device, and try to trigger a system event to see if you'll get Push Status.

MESSAGE MAIL

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

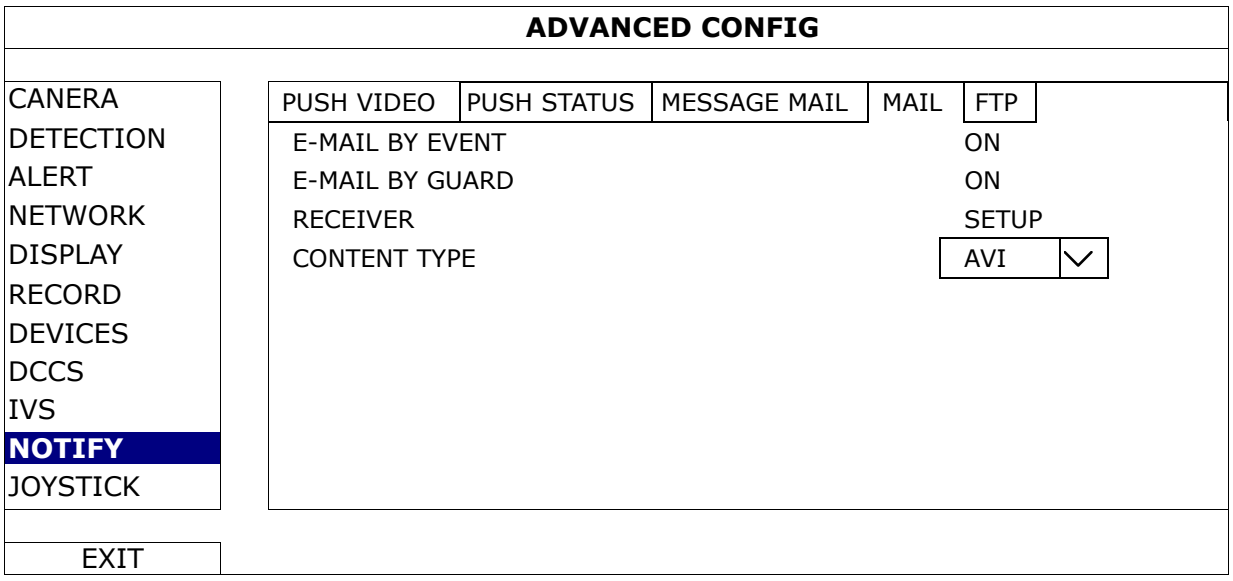
Enable this function in **ACTION**, select the event type(s) you want to send notifications in **EVENT**, and add the E-mail address(es) to which you want to send notifications in **RECEIVER**.

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



MAIL

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



1) E-MAIL BY EVENT

Select to receive email notifications when any event occurs.

2) E-MAIL BY GUARD

Select to receive email notifications only when Push Video and Push Status events occur.

3) RECEIVER

Click "Setup" to enter the email address(es) of the person(s) to receive email notifications.

4) CONTENT TYPE

Select which type of notifications you want to receive: **LINK**, **AVI** or **JPEG**.

- For **LINK**, you'll receive an html file. For details, please refer to the next section "How to check video footage by LINK".
- For **AVI**, you'll receive a file of video footage in the "AVI" format.
- For **JPEG**, you'll receive a snapshot in the "JPEG" format.

How to check video footage by “LINK”

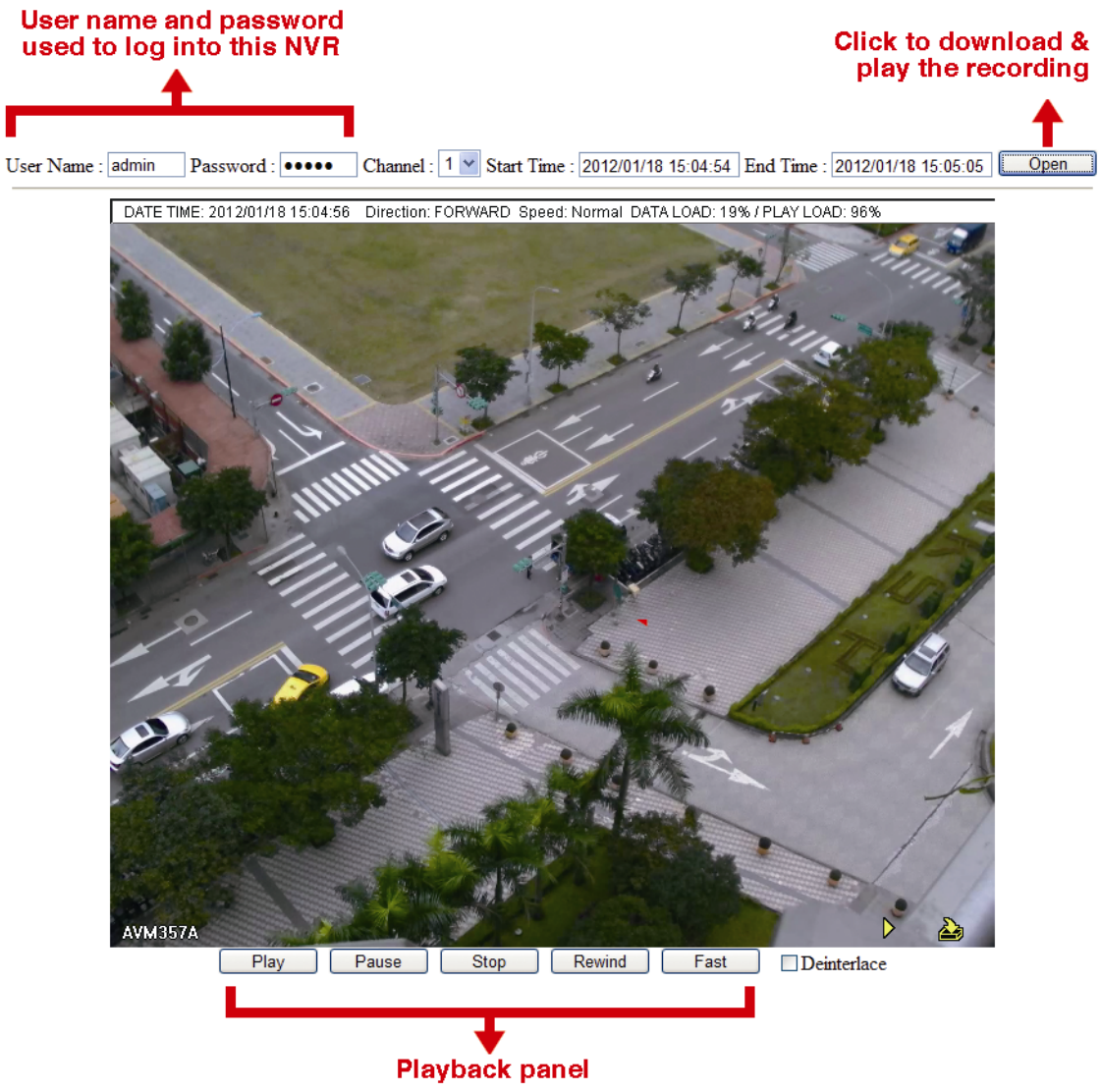
Step1: Open the html file received.

Note: Please accept and install ActiveX control on your computer. It’s recommended to use Internet Explorer to open the HTML file.

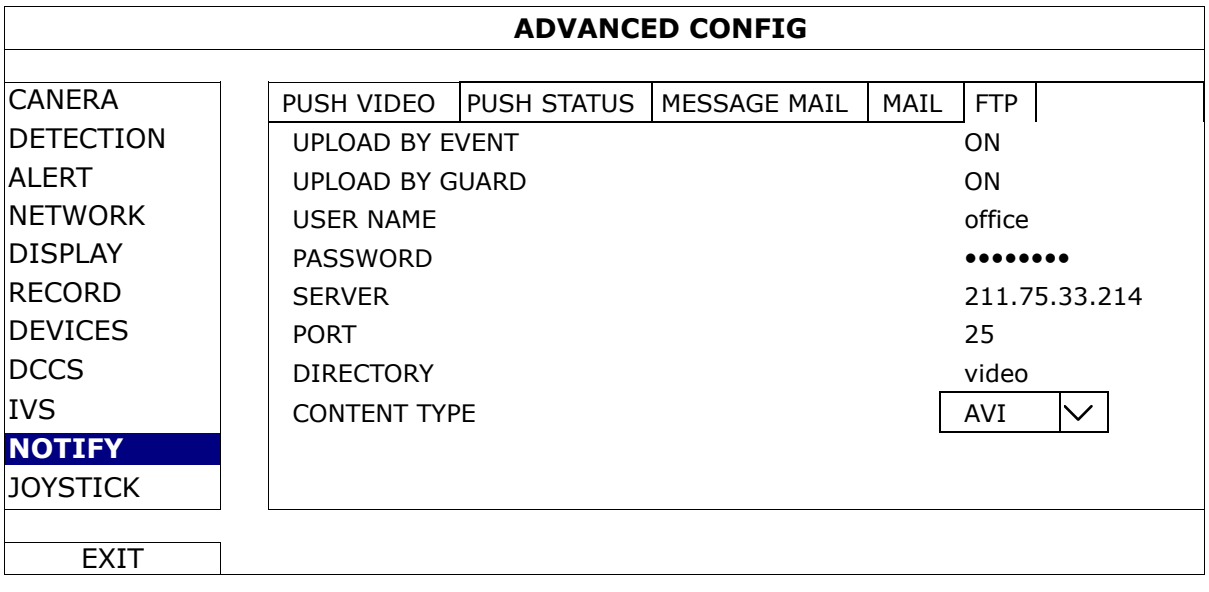
Step2: Enter the user name and password to log into this DVR, and select the channel you want.

Step3: Click **Open** to download the footage to your computer and play.

Note: The footage download and playback will be failed if either of your DVR and PC is not connected to Internet.



FTP



1) UPLOAD BY EVENT

Select to get event notifications uploaded when any event occurs.

2) UPLOAD BY GUARD

Select to get event notifications uploaded only when Push Video and Push Status events occur.

3) USER NAME / PASSWORD / SERVER / PORT / DIRECTORY

Enter the information needed for FTP uploading.

4) CONTENT TYPE

Select which type of notifications you want to receive: **LINK**, **AVI** or **JPEG**.

- For **LINK**, you'll receive an html file. For details, please refer to the next section "How to check video footage by LINK".
- For **AVI**, you'll receive a file of video footage in the "AVI" format.
- For **JPEG**, you'll receive a snapshot in the "JPEG" format.

How to check video footage by "LINK"

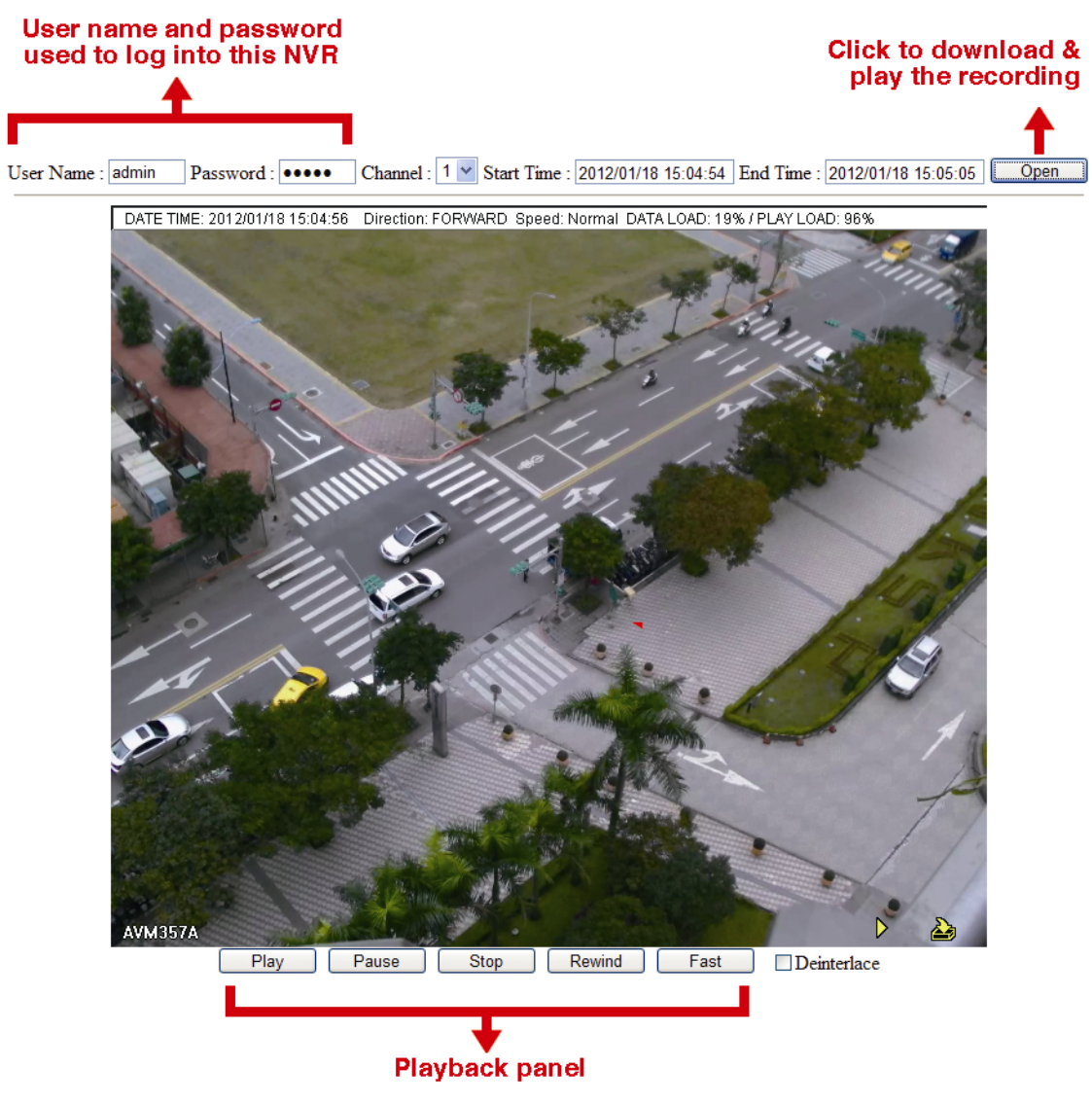
Step1: Open the html file received.

Note: Please accept and install ActiveX control on your computer. It's recommended to use Internet Explorer to open the HTML file.

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

Step3: Click "Open" to download the footage to your computer and play.

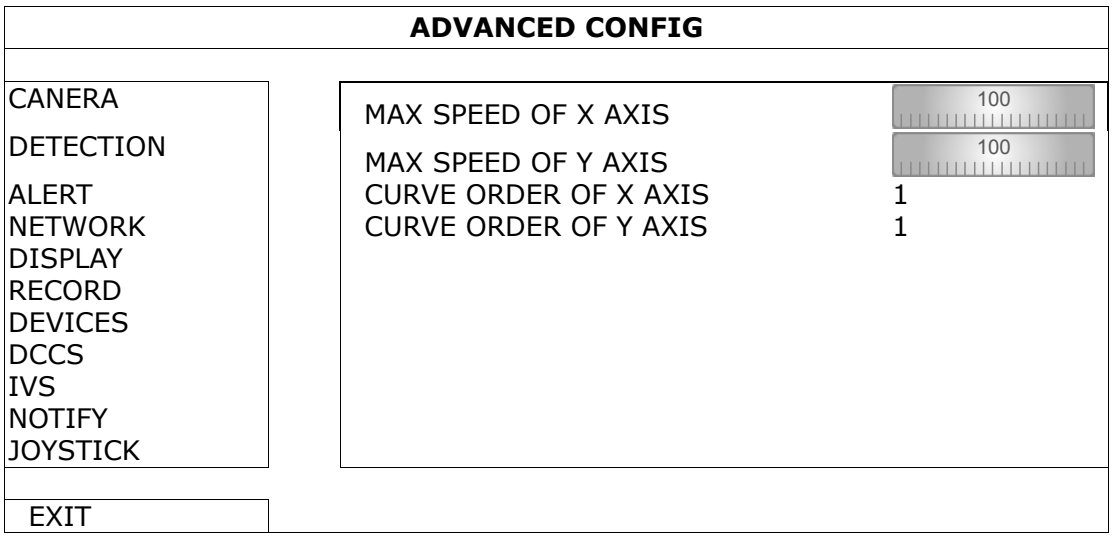
Note: The footage download and playback will be failed if either of your DVR and PC is not connected to Internet.



6.4.11 JOYSTICK

In this menu, you can adjust the speed of pan / tilt movement of the speed dome camera or a motorized-pan camera.

Note: To control the movement of the speed dome camera, you can choose from the PTZ control panel and move on the screen ("5.3 PTZ Control" at page 17), or simply connect the compatible joystick, AVX102, to the DVR.



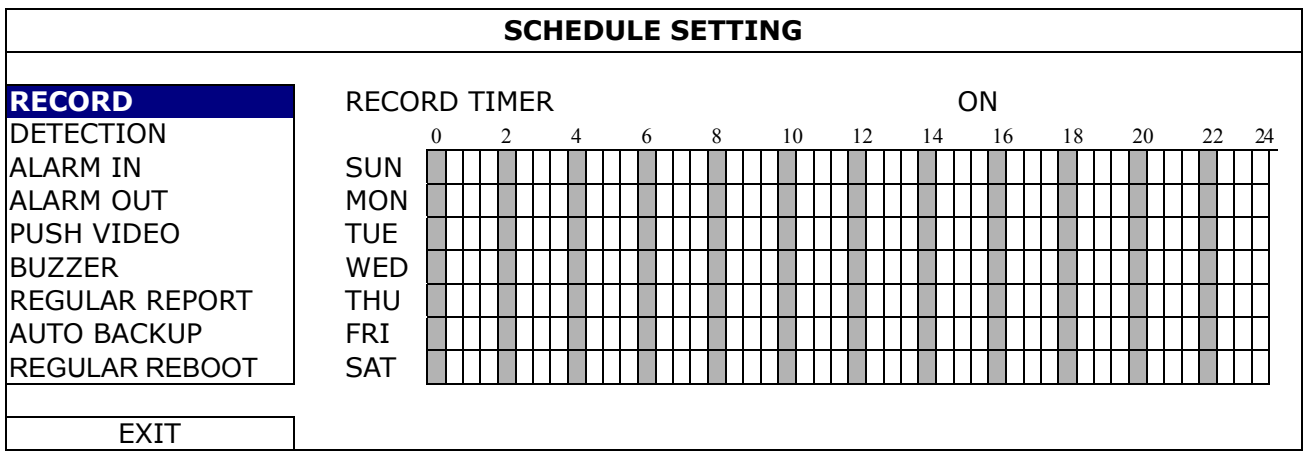
6.5 SCHEDULE SETTING

6.5.1 RECORD / DETECTION / ALARM IN / ALARM OUT / PUSH VIDEO / BUZZER

Select the timer type you want to configure (**RECORD** / **DETECTION** / **ALARM IN** / **ALARM OUT** / **PUSH VIDEO** / **BUZZER**), choose **ON** to enable the timer, and select the day and time for this function.

Note: Push Video is available for selected models only.

Note: The selected time bar is marked as blue.



X axis 0 ~ 24 hours. Each time bar is 30 minutes.

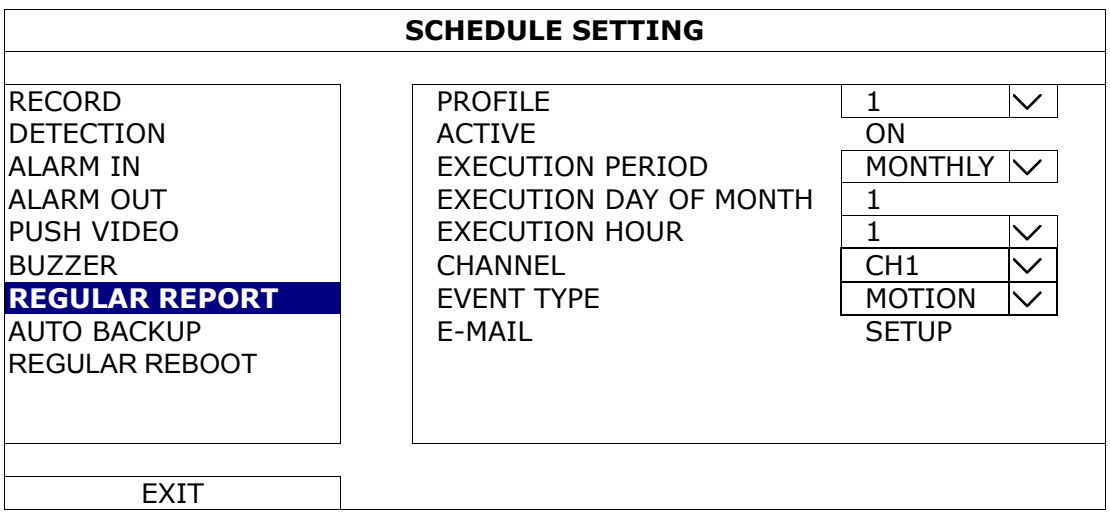
Y axis Monday ~ Sunday.

6.5.2 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 for selected models only.

Note: This function is available only when a hard disk is installed, and the DVR is connected to Internet.



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

Step2: Select the frequency to send reports in **PERIOD**: **DAILY** / **MONTHLY** / **WEEKLY.**

Step3: When **MONTHLY** or **WEEKLY** is selected, select which date or day from **EXECUTION DAY OF MONTH** or **EXECUTION 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 (**MANUAL** / **MOTION** / **ALARM** / **SYSTEM** / **TIMER** / **HUMAN DETECTION** / **INFLOW** / **OUTFLOW** / **VIRTUAL FENCE** / **ONEWAY** / **SCENE CHANGE**).

Step5: Configure the email address to receive reports.

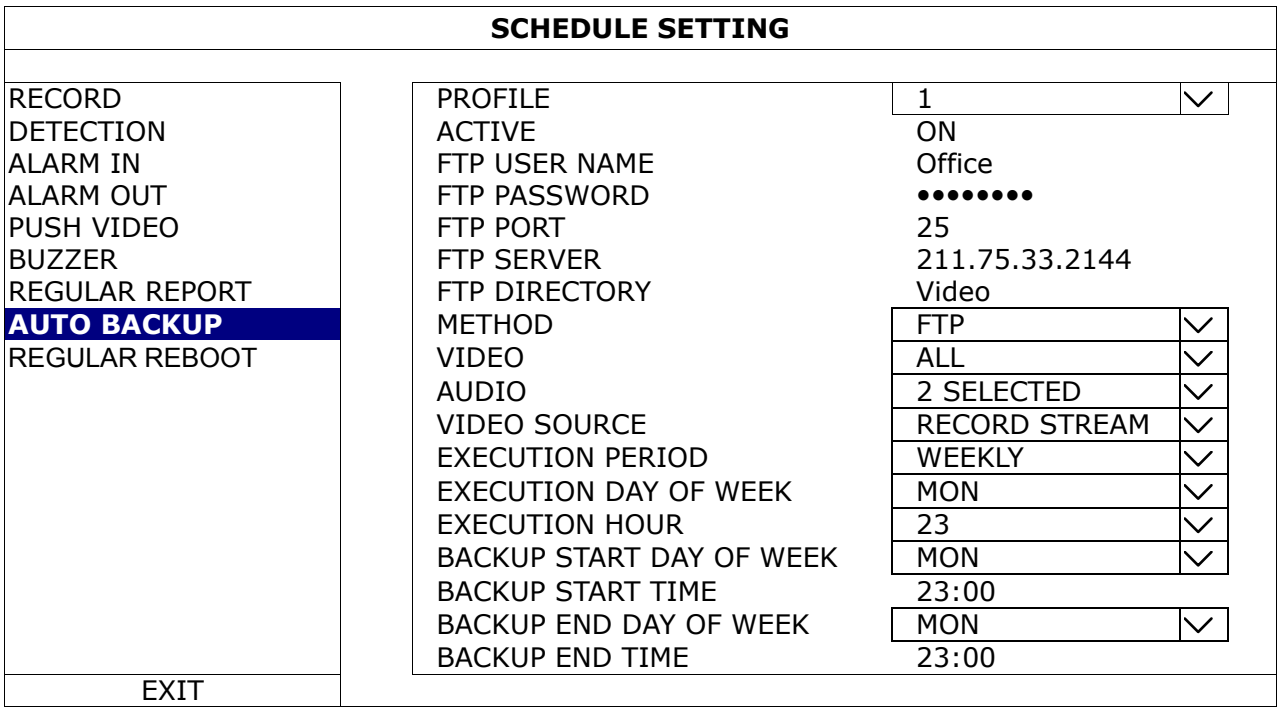
Note: The sender E-mail should be configured in **ADVANCED CONFIG** → **NETWORK** → **E-MAIL** for this function to work properly. For details, please refer to "E-MAIL" at page 39.

6.5.3 AUTO BACKUP

This function is used to schedule video backup regularly, uploading security footages to a FTP site (remotely) or saving to an USB device connected to the DVR (locally).

Note: This function is for selected models only.

You can configure up to 7 profiles and use one of them as your backup preference.



1) PROFILE

Select the profile you want to configure.

2) ACTIVE

Switch to ON to enable the selected profile.

3) FTP USER NAME / FTP PASSWORD / FTP PORT / FTP SERVER / FTP DIRECTORY

Enter all the information needed to access the FTP site you want if you want to upload those footages to an FTP site.

4) METHOD

Choose where you to save those footages: **FTP** / **USB DEVICE**.

5) VIDEO / AUDIO

Select the video / audio channels you want to backup.

6) VIDEO SOURCE

Choose **RECORD STREAM** or **SUB STREAM**:

- **RECORD STREAM**: The video quality is good, but it also consumes much storage.
- **SUB STREAM**: It consumes less storage, but the video quality might be not satisfactory.

7) EXECUTION PERIOD

Select how often you want to backup footages: **WEEKLY** or **DAILY**.

8) EXECUTION DAY OF WEEK

This option is available only when **WEEKLY** is chosen. Select one day from **MON ~ SUN**.
For example, if you want to backup video data from Monday, 01:00am to Friday, 23:59pm on every Saturday, 09:00am, choose SAT here.

9) EXECUTION HOUR

Select an exact hour to start rebooting from **0 ~ 23**.
For example, if you want to backup video data from Monday, 01:00am to Friday, 23:59pm on every Saturday, 09:00am, choose 9 here.

10) BACKUP START DAY OF WEEK

This option is available only when **WEEKLY** is chosen. Select one day from **MON ~ SUN**.
For example, if you want to backup video data from Monday, 01:00am to Friday, 23:59pm on every Saturday, choose MON here.

11) BACKUP START TIME

Enter the start time for backup.
For example, if you want to backup video data from Monday, 01:00am to Friday, 23:59pm on every Saturday, enter 01:00 here.

12) BACKUP END DAY OF WEEK

This option is available only when **WEEKLY** is chosen. Select one day from **MON ~ SUN**.
For example, if you want to backup video data from Monday, 01:00am to Friday, 23:59pm on every Saturday, choose FRI here.

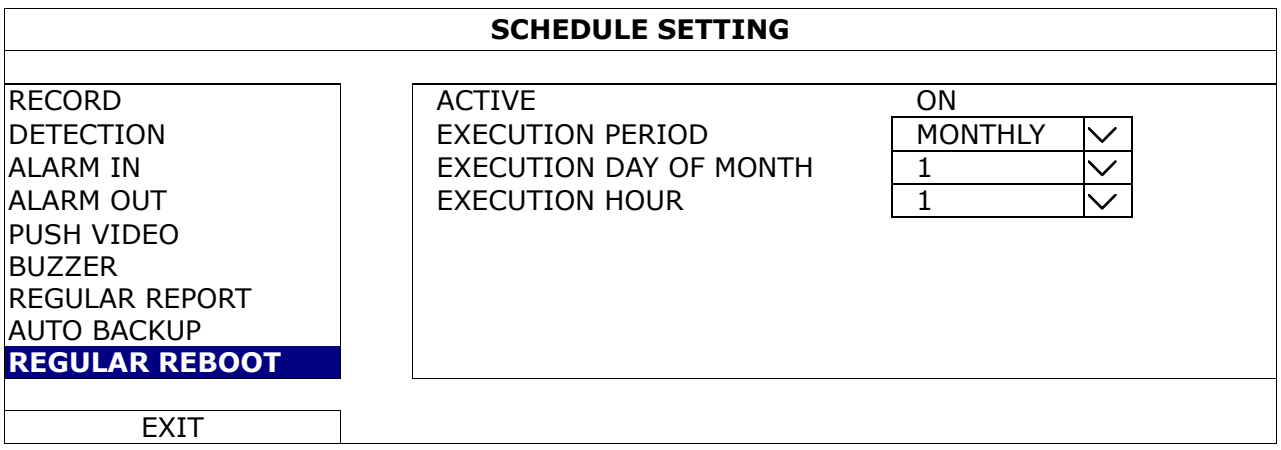
13) BACKUP END TIME

Enter the end time for backup.
For example, if you want to backup video data from Monday, 01:00am to Friday, 23:59pm on every Saturday, enter 23:59 here.

6.5.4 REGULAR REBOOT

This function is used to schedule this device to reboot regularly to free some unused cache data and make the system more reliable.

Note: This function is for selected models only.



2) ACTIVE

Switch to ON to enable this function.

3) EXECUTION PERIOD

Select how often you want to reboot the system: **MONTHLY**, **WEEKLY** or **DAILY**.

4) EXECUTION DAY OF MONTH / EXECUTION DAY OF WEEK

Depending on the option you selected in **EXECUTION PERIOD**:

- **EXECUTION DAY OF MONTH** shows when **MONTHLY** is selected. Select one day from 1 ~ 31 to reboot.
- **EXECUTION DAY OF WEEK** shows when **WEEKLY** is selected. Select one day from Monday ~ Sunday to reboot.

5) EXECUTION HOUR

Select an exact hour to start rebooting from **0** ~ **23**.

7. REMOTE OPERATION

7.1 Web Browser

You can view the images or operate your DVR with a web browser, for example, Microsoft Internet Explorer.

Note: The supported PC operating systems are Windows 10, Windows 8, Windows 7 & Windows Vista, and it's recommended to run Internet Explorer as administrator (Run as administrator).

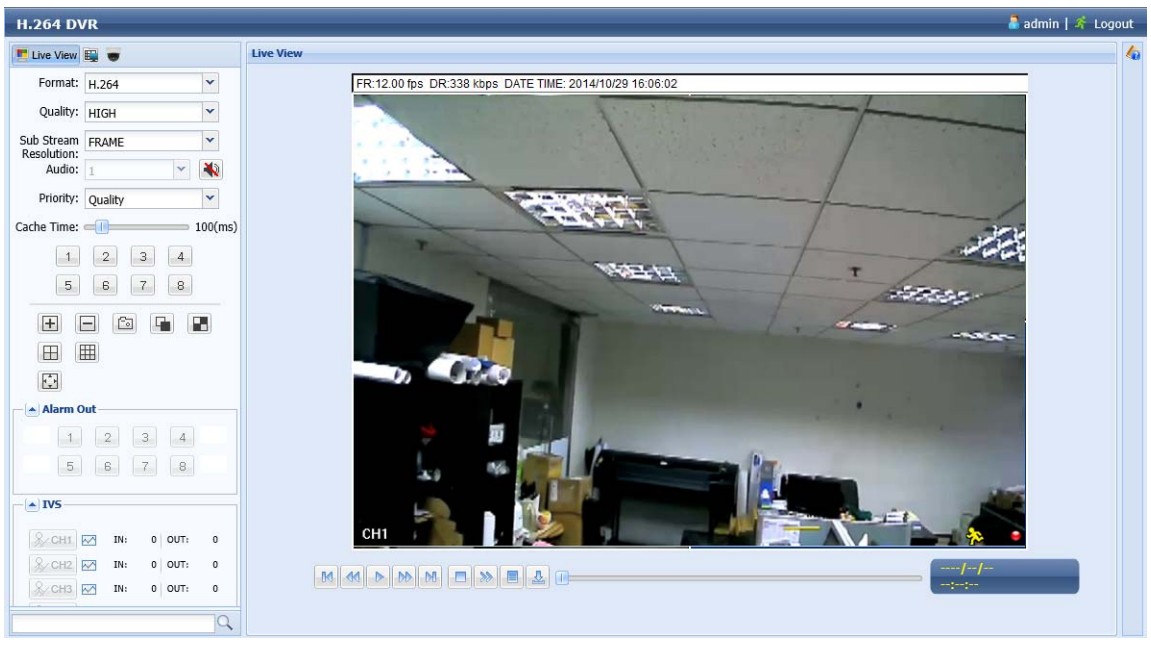
Note: The illustration below is just for your reference and may be different from what you actually see. Some functions and buttons are for selected models or certain user levels only.

Step 1: Key in the IP address used by this device in the URL address box, such as 60.121.46.236, and press Enter. You will be prompted to enter the user name and password to access the device.

If the port number this device used is NOT 80, you need to key in the port number additionally. The format is ***ipaddress*:*portnum***.
For example, for the IP address 60.121.46.236 and port No. 888, please key in "http://60.121.46.236:888" into the URL address box, and press **Enter**.

Step 2: Enter the user name and password, and click **OK**. You will see a similar screen as the following when the login information is correct.

Note: The default user name and password for remote access are both **admin**.



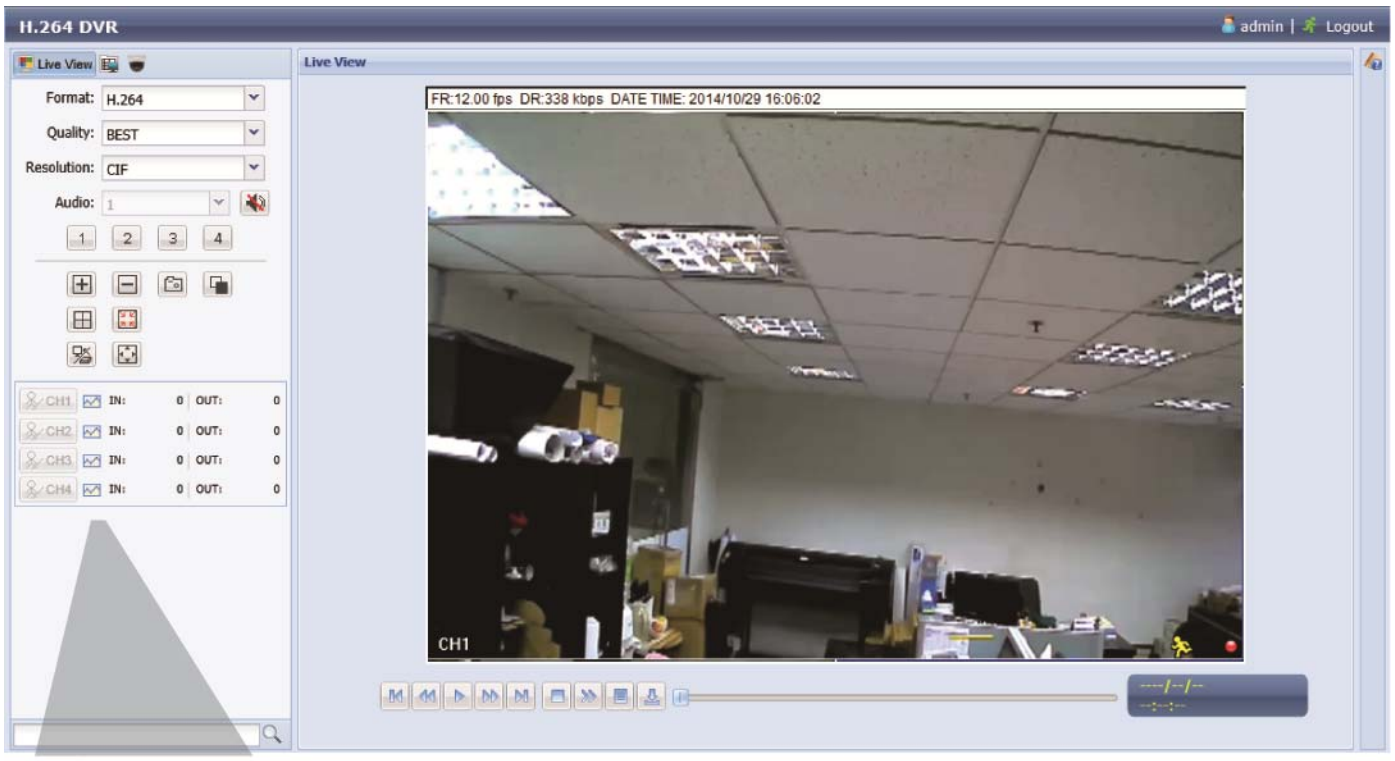
Icon	Description
	Click to go to the live view of the DVR.
	Click to go to the detailed DVR setting.
	Click to enter the PTZ mode. This function is also used for our band's HD CCTV motorized camera series to adjust its focal length and focus remotely. For details, please refer to "7.1.2 PTZ Panel" at page 61.
Video / Audio Control	
Format	**H.264 / QuickTime** QuickTime is Apple Inc.'s multimedia software. You need to have QuickTime installed in you operation system first. When "QuickTime" is selected, you will be promoted to enter the user name and password to access the server of the DVR.
Quality	**BEST / HIGH / NORMAL / BASIC** Select the image quality.
Sub Stream Resolution	**FRAME / CIF** Select the sub stream resolution (FRAME: 704*480 / CIF: 352*240) for live display.
Audio	Select the audio channel you want for listening to the live audio. Note: Your camera must support audio recording, and connect to the video channel which supports audio recording and the audio input of the DVR. For details, please refer to "1.3 Rear Panel" at page 2.

Icon	Description
	means mute. To disable the mute status, click this icon again and select the audio channel you want.
Streaming	This function shows only when a single channel is selected. Choose the stream resolution for live display. When **Sub Steam** is selected, the resolution will be the one selected in **Sub Stream Resolution**; When **Recording** is selected, the resolution will be the one selected in -> **DVR** -> **Record**. -> **Manual**.
Cache Time	Select the cache time from **0** ~ **800**ms. The higher the value, the more time it's going to be needed to wait for the image to show, but the better the image quality will be.
Channel Control	
Channel Selection (1 ~ 16 / 1 ~ 8 / 1 ~ 4)	Click one of the numbers to switch to the channel you want to see in full screen.
/	Click to go to the previous / next channel, or change setting.
	Click to take a snapshot of the current view, and save it to the specified path in your PC set in → **General**.
/	: Click to display each channel one by one, starting from CH1. When the last channel is displayed, it will start from CH1 again. : To exit from this display mode, press any other channel display button.
/ /	Click to show 4-cut / 9-cut / 16-cut display.
	Click to switch the display to full screen.
Event Search & Playback	
	Increase the speed for fast rewind. Click once to get 4X speed rewind and click twice to get 8X speed, etc., and the maximum speed is 32X.
	Increase the speed for fast forward. Click once to get 4X speed forward and click twice to get 8X speed, etc., and the maximum speed is 32X.
	Click to play the current video clip.
	Click to pause the video playback.
	Click to stop the video playback.
	Click to play the video clip slowly, once to get 4X slower, twice get 8X slower.
	Click to enter the record list and search and footage you need.
	Click to enter the backup menu and copy the footage you need to your PC. Note: To play the backup file (.avc), go to -> **General** -> **Configure**, and download the player to install.
Alarm Out*	
Channel Selection (1 ~ 8 / 1 ~ 4)	Click one of the channel numbers to command the camera to trigger the alarm-out device you want.
IVS Panel*	
CH1	This button is enabled only when the IVS mode is enabled. Click to show the detection line.
	Click to enter the IVS statistics page. For details, please refer to "7.1.1 IVS Statistics" at page 60.

** For selected models only*

7.1.1 IVS Statistics

Note: This function is for selected models only.



IVS Statistics

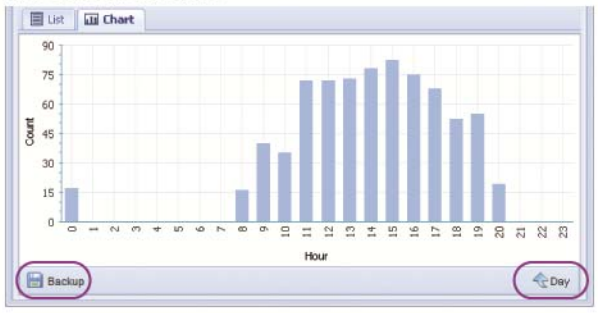
IVS Statistics: Event Search Panel

IVS Statistics: List

Click to backup the log file in a .dat format which can be opened with Notepad.

Click to switch between the Day / Month / Year view

IVS Statistics: Chart

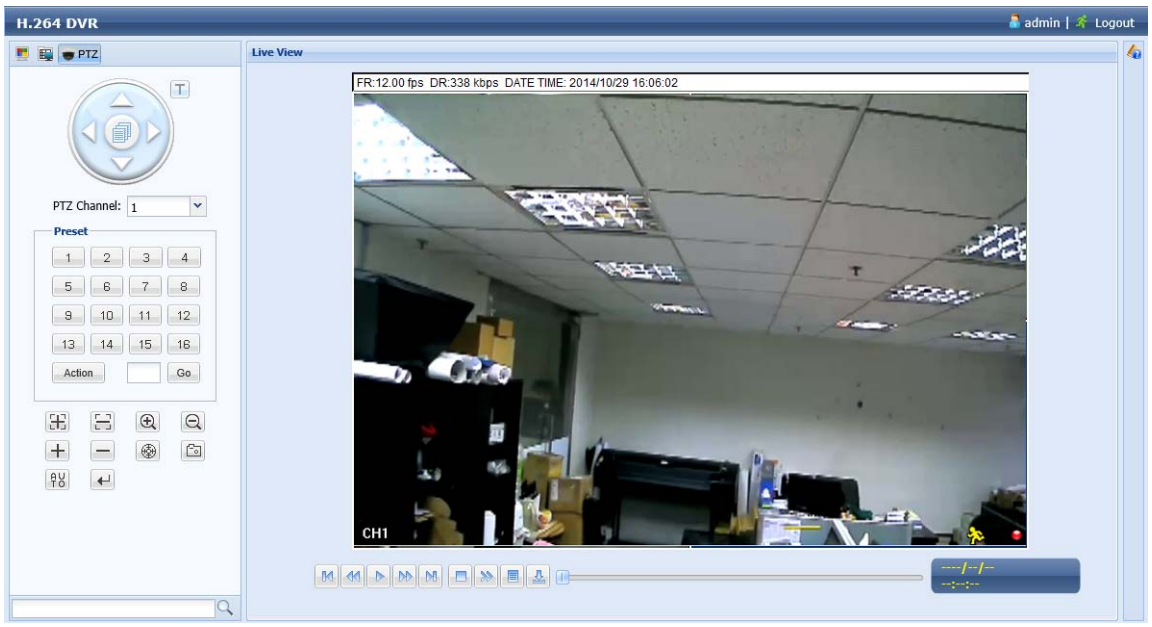


Click to backup the log file in a .dat format which can be opened with Notepad.

Click to switch between the Day / Month / Year view

7.1.2 PTZ Panel

Note: This function is for selected models only.



Function	Description
	Click to enter the camera main menu. For details about each camera menu, please refer to its own user manual.
▲ / ▼ / ◀ / ▶	Click the arrow keys (▲ / ▼ / ◀ / ▶) to more the camera lens up / down / left /right.
PTZ Channel	Select the channel which connects the PTZ camera or our brand's HD CCTV motorized camera you want to control.
Preset	Click on the preset point numbering to which you want your camera to move.
/	Click to adjust the focus of the image.
/	Click to zoom in / out the image.
/	Click to zoom in on the image to the largest / zoom out on the image to its original size.
	Click to start auto tracking when your speed dome camera supports this function.
	Click to take a snapshot of the current view, and save it to the specified path in your PC set in → **General**.
	Click to activate the auto function. Before using it, you need to assign a specific function that will be enabled when " " is clicked. For details, please refer to the user manual of your PTZ camera or our brand's HD CCTV motorized camera.

7.2 Mobile Devices

Note: For more details about mobile surveillance via your mobile device, please visit http://info.eagleeyes.tw/iphone/index.html.

EagleEyes is a mobile phone program used with our surveillance system for remote surveillance. It's compatible with iOS and Android mobile devices, and it's free (Except *EagleEyes Plus* for iOS OS, and *EagleEyes Plus*+ for Android OS).

7.2.1 Prerequisites

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

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

Note: You might be charged for Internet access via the wireless or 3G / 4G network. 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.

7.2.2 Where to download

Go to **App Store** / **Play Store** from your iOS / Android mobile devices and search *EagleEyes* to download.

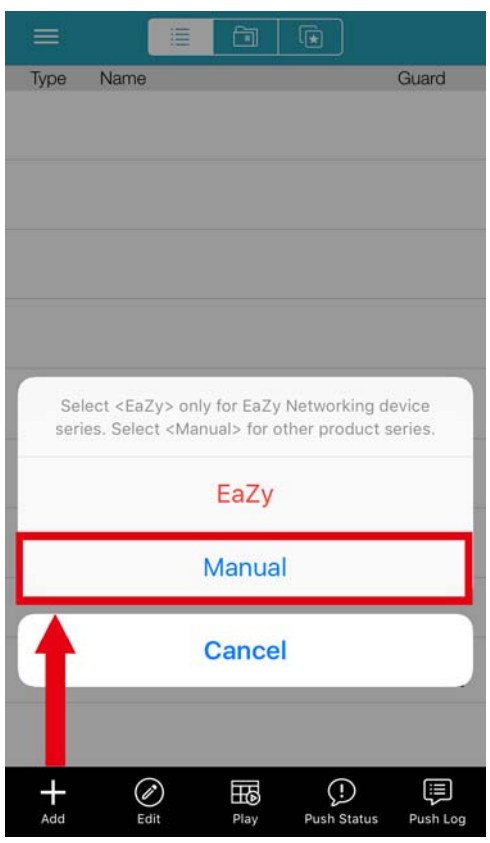
When the download is completed, *EagleEyes* will be installed automatically to the location where all applications are saved in your phone by default, or where you specify.

7.2.3 Manual Setup

Note: To know how to configure by EaZy Networking, please refer to "APPENDIX 7 EAZY NETWORKING" at page 74.

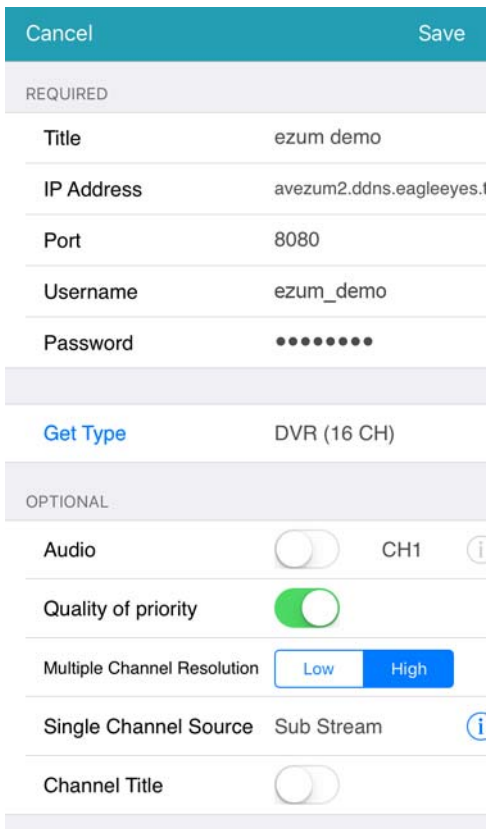
Step1: Open EagleEyes to go to the address book.

Step2: Then, click **+**, and select **Manual** to go to the setting page.



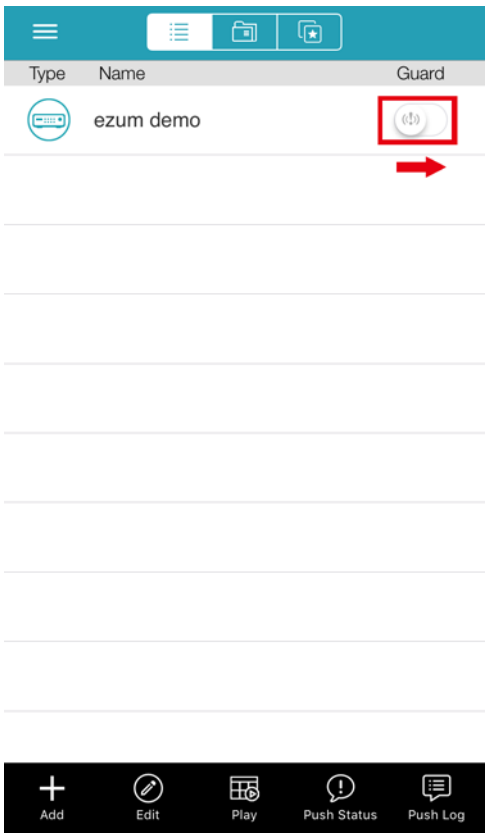
Step3: In the setting page, enter all the information needed to access this device in the **REQUIRED** column, and click **Get Type** to examine if the information you entered is correct. The device type will be detected properly.

Step4: (Optional) Configure the settings in the **OPTIONAL** column as needed.



Step5: Click **Save** to return to the address book. Enable **Guard** to receive Push Video / Push Status.

Note: Push Video / Push Status is for selected models only. Before enabling **Guard**, please make sure if your device supports this function.



Step6: Click on the item you just added in the address book to access and check the live view.

APPENDIX 1 SPECIFICATIONS

		Model 1	Model 2
▼ Video			
Video System		NTSC / PAL (auto detection)	
Video Compression Format		H.264	
Video Signal		IP / TVI / CVI / Analog HD / 960H	TVI / CVI / Analog HD / 960H
Video Input		16 pentabrid channels (IP / TVI / CVI / Analog HD / 960H), which IP channels are up to 4 channels	16 quadbrid channels (TVI / CVI / Analog HD / 960H)
Video Input Interface	Analog Mode	Composite video signal 1 Vp-p 75Ω BNC	
	IP Mode	Ethernet, 10/100 Base-T	--
Video Output	BNC	YES (Spot Monitor Supported)	YES (Live / Call Monitor Selectable)
	VGA**	YES (1080P / Spot Monitor Supported))	YES (1080P)
	HDMI	YES (4K2K)	
Video Resolution	Analog Mode	4MP / 3MP / 1080N / 720P / 960H / Frame / Field / CIF	
	IP Mode	2560 x 1440 / 2048 x 1536 / 1920 x 1080 / 1280 x 720 / 640 x 480 / 320 x 240	--
▼ Record & Backup			
Max. Recording Rate***	Analog Mode	Up to 480 IPS @ 1920 x 1080 (16 channels)	Up to 240 IPS @ 960 x 1080 (16 channels)
	IP Mode	UP to 180 IPS @ 1920 x 1080 (12 channels)	--
Recording Mode		Manual / Timer / Motion / Alarm / Remote	
Pre-alarm Recording		YES	
Playback Channel		16CH	4CH
Quick Search		Time / Motion / Alarm search mode	
Backup Device		USB flash drive / Network	
Regular Backup		YES (USB hard drive or FTP)	
▼ Audio			
Audio Input		4	1
Audio Output (Mono)		1	1
▼ External I/O			
RS485		YES	
Alarm In		4	1
Alarm Out		1	--
▼ General			
Hard Disk Storage		10TB SATA HDD x 2	
SATA Interface		YES	
Image Quality Setting		SUPER BEST / BEST / HIGH / NORMAL	
USB Mouse Control		YES	
Motion Detection Area		16 × 12 grids per channel	
Motion Detection Sensitivity		3 adjustable parameters for accurate detection	
Event Notification		Push Video / Push Status / FTP / E-Mail	Push Status / FTP / E-Mail
Picture Zoom		2X digital zoom	
PTZ Control		YES	
IR Remote Control		YES (IR receiver built-in)	
Key Lock (Password Protection)		YES	
User Level		4 user levels for different access privilege	
Video Loss Detection		YES	
Camera Title		Supports up to 25 letters	
Video Adjustable		Hue / Saturation / Contrast / Brightness	
Date Display Format		YY/MM/DD, DD/MM/YY & MM/DD/YY	

	Model 1	Model 2
▼ General		
Daylight Saving	YES	
Power Source (±10%)	19V / 3.42A	12V / 3A
Operating Temperature	10℃ ~ 40℃ (50℉~104℉)	
Operating Humidity	10% ~ 85%	
Dimensions (mm)****	375(W) × 61(H) × 281(D)	375(W) × 77(H) × 273.8(D)
▼ Network		
Ethernet	10/100 Base-T. Supports remote control and live view via Ethernet	
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS	
▼ Remote Surveillance from PC		
Compatible Operating System	Windows & MAC	
Compatible Program	Web Browser: Internet Explorer & Safari	
	CMS Lite: 32CH central management software for Windows OS	
	QuickTime: For both Windows and MAC operating systems	
Max. online users	20	
Web Transmitting Compression Format	H.264	
Network Live Audio	YES	
Remote Event Download & Playback	YES	
▼ Mobile Surveillance		
App	EagleEyes	
Compatible Devices	iOS & Android mobile devices	
Push Video	YES (16CH)	--
Push Status	YES	
▼ Others		
EaZy Networking	YES	
IVA Support	YES (4 channels in analog mode)	--
Spot Monitor Support	YES (VGA & Composite)	--
DCCS Support	YES	
Free DDNS service	YES	
Privacy Mask	YES	
Multiplex Operation	Live display / record / playback / backup / network operations	
System Recovery	System auto recovery after power failure	
Optional Peripherals	HDMI Matrix (HDM02) / USB Joystick (AVX102)	

* The specifications are subject to change without notice.

** For 4K2K is chosen for HDMI output, VGA output is disabled.

*** For video recording, the resolution is up to 1080P even when the camera you're using is a 3MP or 4MP camera.

**** Dimensional tolerance: ±5mm

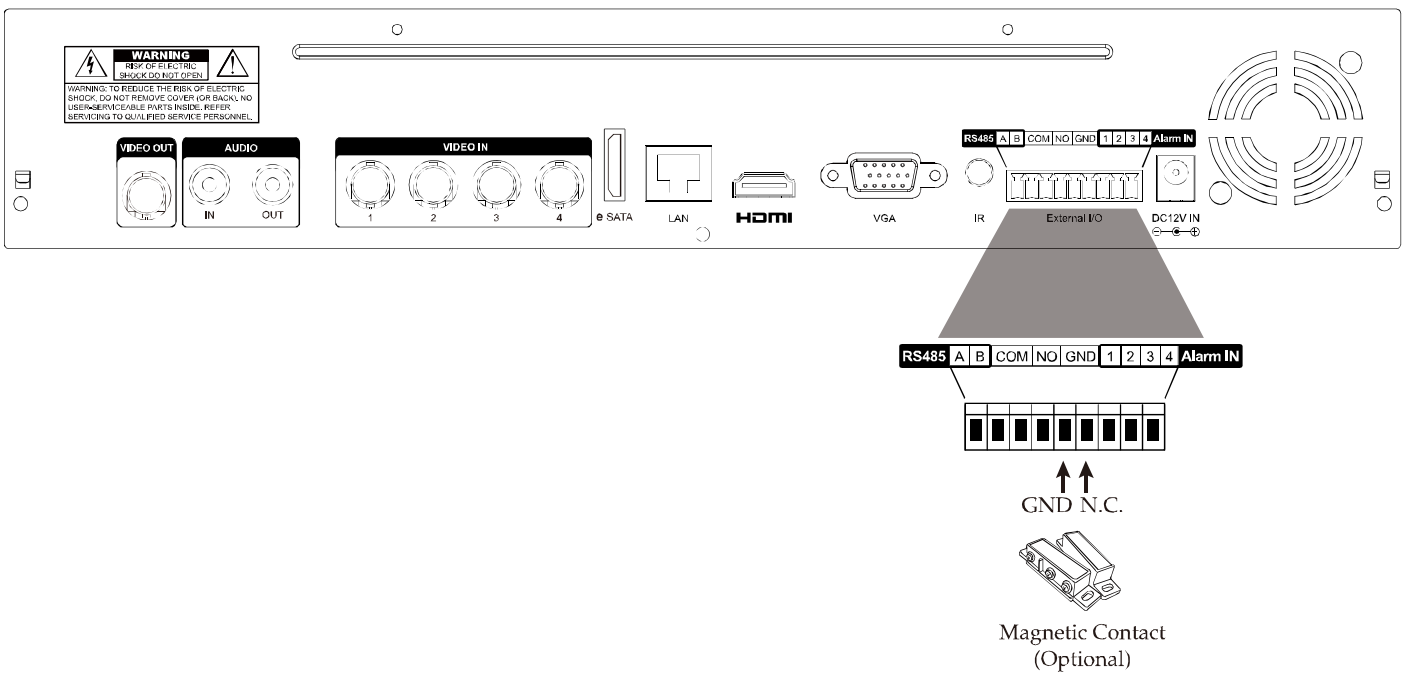
APPENDIX 2 PUSH VIDEO CONFIGURATION

Note: This function is for selected models only.

A2.1 Alarm Sensor Connection

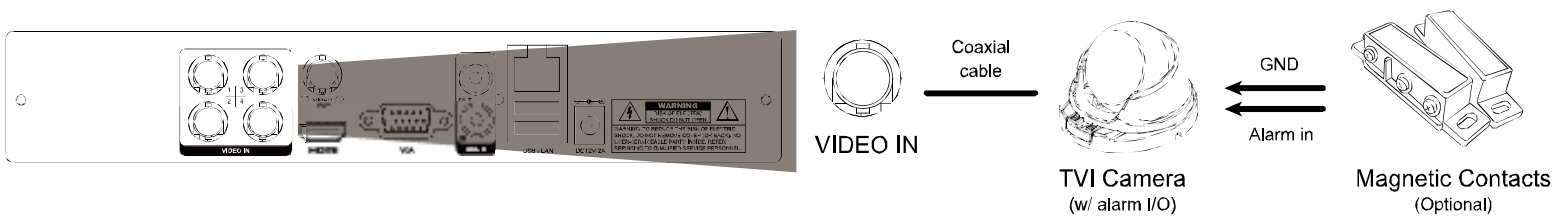
Connect the alarm sensor, such as magnetic contacts, to the alarm-in port on the rear panel. Alarm-in 1 corresponds to video channel 1, alarm-in 2 corresponds to video channel 2, and so on.

Note: The voltage restriction for alarm-in device connection is under DC24V 1A.



If the connected camera is our brand's camera with alarm I/O support, you can also connect the alarm sensor to the camera.

Note: Please check the user manual of the camera to know voltage restriction for alarm-in device connection.



Then, go to (ADVANCED CONFIG.) ➔ **DETECTION** and make sure:

1. MOTION is set to **ON**.
2. **ALARM** is configured (**N.C.** / **N.O.**) when an external alarm device is connected, or **INTERNAL ALARM** is set to **ON** when the connected camera has a PIR sensor built-in.

ADVANCED CONFIG

	CH1 CH2 CH3 CH4	
CAMERA		
DETECTION	LS	07
ALERT	SS	03
NETWORK	TS	02
DISPLAY	MOTION	ON
RECORD	ALARM	N.C.
DEVICES	AREA	EDIT
DCCS	PRIVACY MASK	EDIT
IVS	INTERNAL ALARM *(For selected models only)*	ON
NOTIFY	GUARD LOCK	SETUP
JOYSTICK		
EXIT		

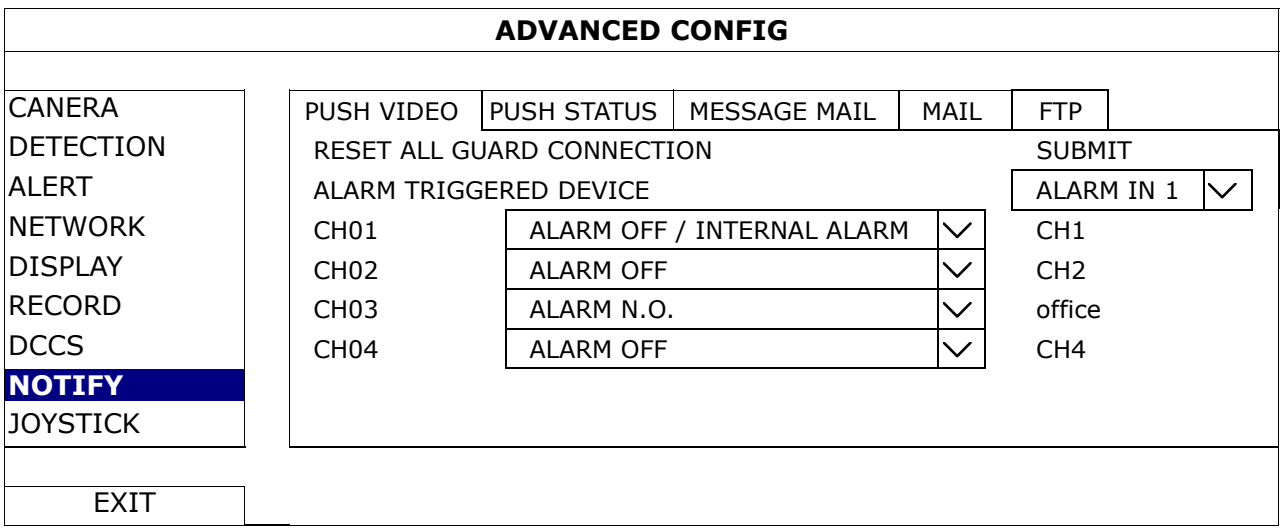
A2.2 Configuration

Before configuring Push Video, make sure:

1. The DVR system is set up as described in “2. CONNECTION AND SETUP” at page 4.
2. The DVR is connected to Internet.
3. You’ve installed the app, EagleEyes, on your iOS or Android mobile devices.
   For details, please refer to “7.2 Mobile Devices” at page 62.

Step1: Right click to show the main menu.

Go to (ADVANCED CONFIG.) → **NOTIFY**. In PUSH VIDEO, select the alarm device you want, and configure the alarm type. For details, please refer to “PUSH VIDEO” at page 49.

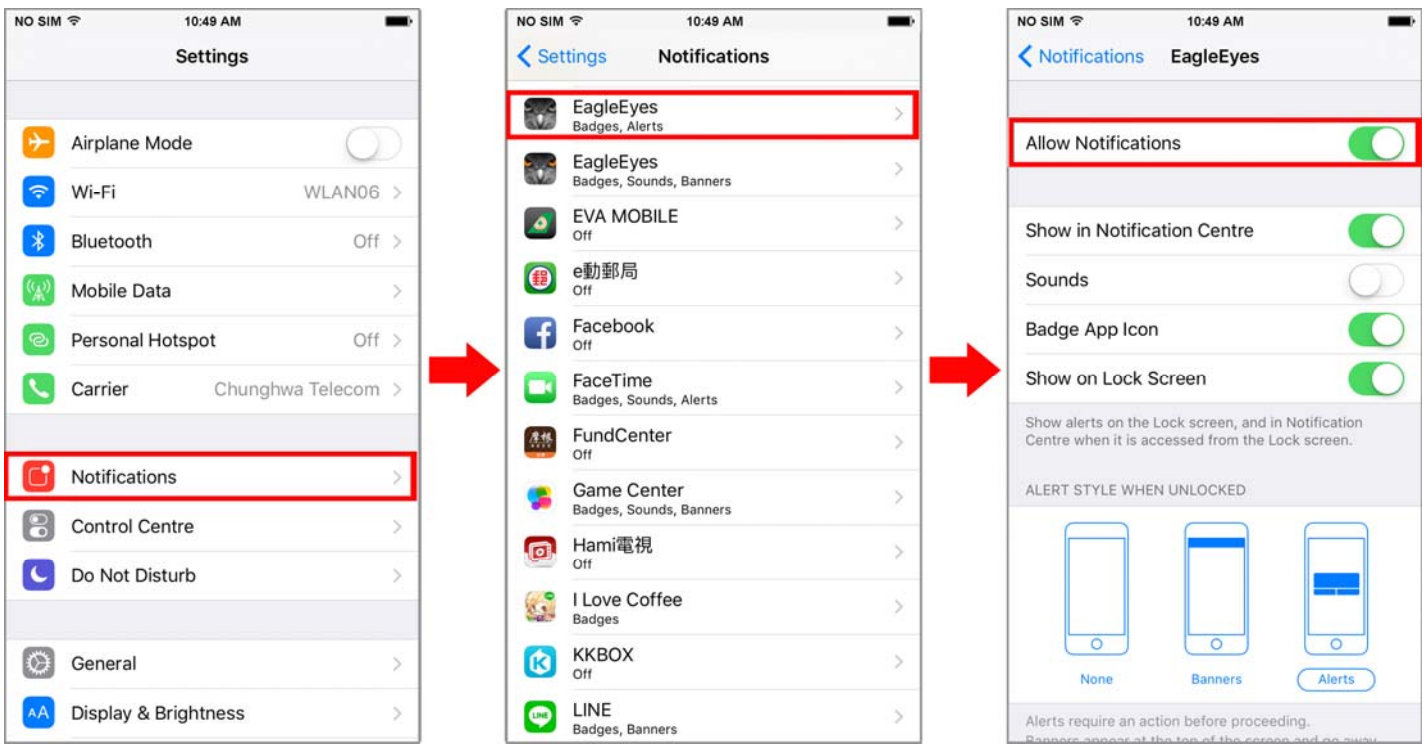


Step2: Open EagleEyes, and add this DVR to the EagleEyes address book.

A2.3 Enable Push Video

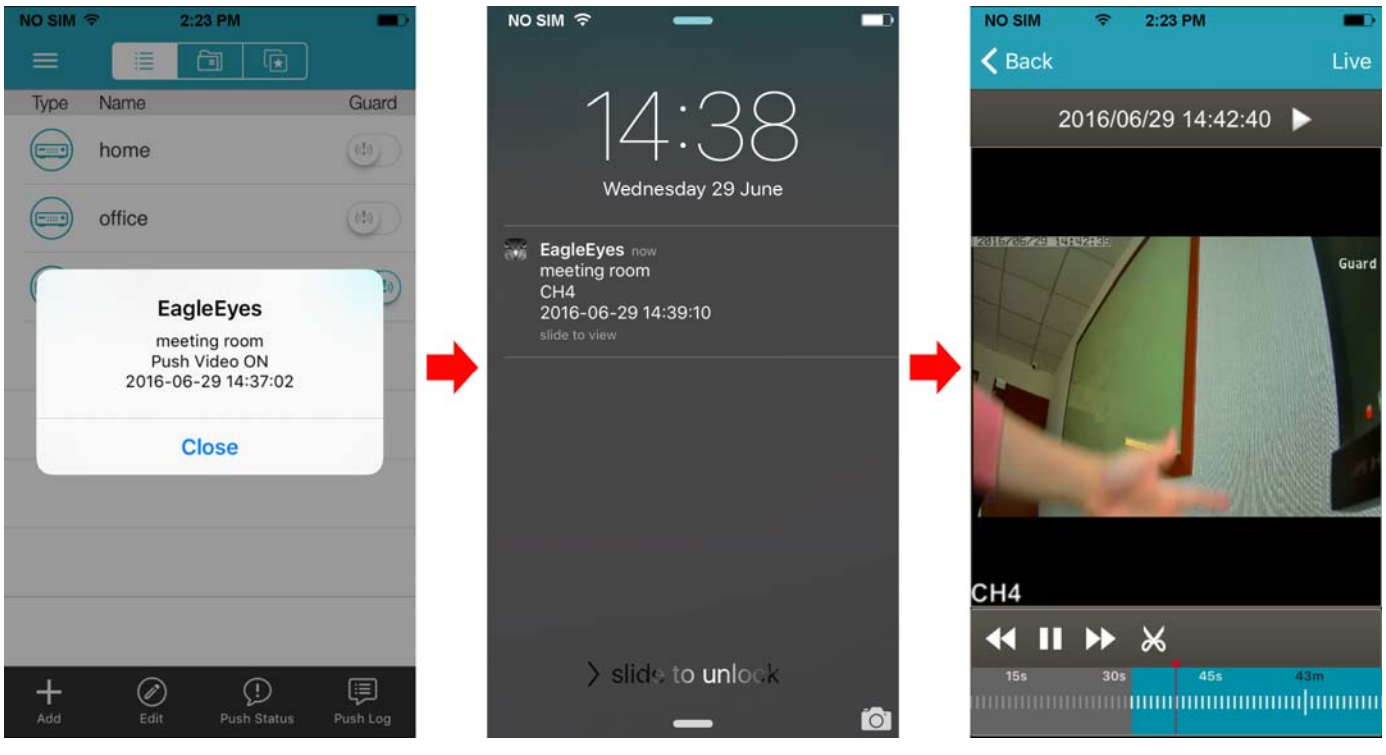
A2.3.1 From iOS Mobile Device (iPhone / iPad)

Step1: In the iPhone / iPad main menu, select **Settings** → **Notifications**. Select **EagleEyes**, and make sure the notification is set to on.



Step2: Open **EagleEyes**, and switch **Guard** to **ON**. You'll receive the message indicating that Push Video is on.

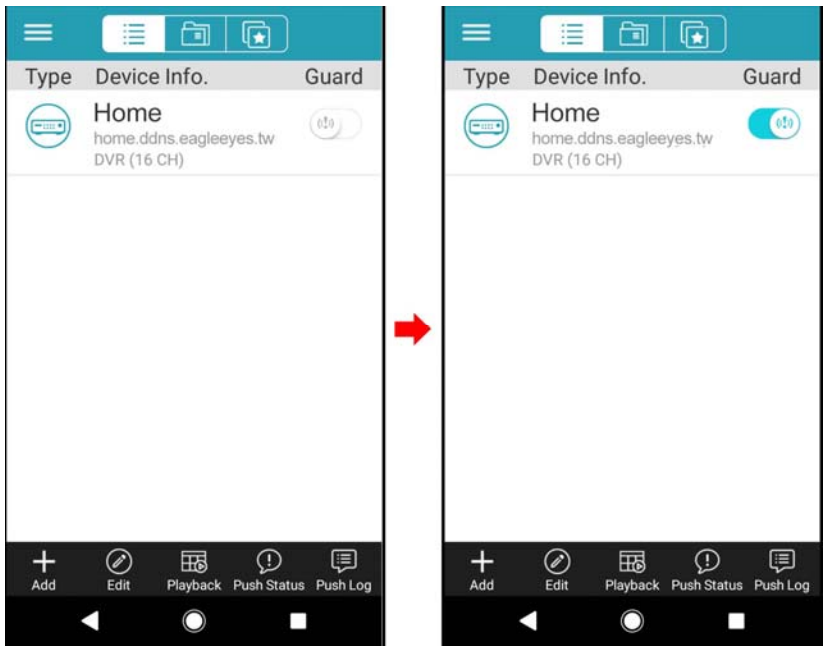
Step3: Return to the main page or standby page of iPhone / iPad. You'll receive event notifications when there's an alarm event. Follow the on-screen instruction to immediately play the recorded clip.



A2.3.2 From Android Mobile Device

Step1: Open **EagleEyes**, and switch **Guard** from **OFF** to **ON**. You'll receive the message indicating that Push Video is on.

Step2: Return to the main page or standby page. You'll receive event notifications when there's an alarm event. Follow the on-screen instruction to immediately play the recorded clip.



APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST

Please upgrade the firmware of the DVR to the latest version to ensure the accuracy of the following table. If the USB flash drive is not supported by the DVR, 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 4 COMPATIBLE SATA HDD 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.

Seagate*			
MODEL	**CAPACITY**	**MODEL**	**CAPACITY**
Pipeline HD ST3500312CSS	500GB	ST3000VX004	3TB
Pipeline HD ST500VT000	500GB	ST3000VX005	3TB
Pipeline HD ST1000VM002	1TB	ST3000VX006	3TB
Pipeline HD ST1000VM002	1TB	ST3000VX000	3TB
ST31000525SV	1TB	ST4000VM000	4TB
ST31000340AS	1TB	ST4000VX000	4TB
ST1000VX000	1TB	ST4000VX002	4TB
ST1000VX002	1TB	ST4000VX007	4TB
ST1000VX001	1TB	ST6000VX0001	6TB**
ST1000VX005	1TB	ST6000VX0011	6TB**
ST2000VX000	2TB	ST6000NM0024	6TB**
ST2000DM001	2TB	ST8000VX002	8TB**
ST2000VX004	2TB	ST8000VX0022	8TB**
ST3000VM002	3TB	ST100000VX0004	10TB**
WD			
MODEL	**CAPACITY**	**MODEL**	**CAPACITY**
WD10PURX	1TB	WD30EFRX	3TB
WD20PURX	2TB	WD40PURX	4TB
WD20EURS	2TB	WD40EURX	4TB
WD20EURX	2TB	WD60EURX	6TB**
WD20EFRX	2TB	WD60PURX	6TB**
WD2002FAEX	2TB	WD6001FFWX	6TB**
WD30PURX	3TB	WD6001FSYZ	6TB**
WD30EURX	3TB		
TOSHIBA			
MODEL	**CAPACITY**	**MODEL**	**CAPACITY**
DT01ACA050	500GB	MD03ACA200V	2TB
DT01ABA050V	500GB	DT01ABA300V	3TB
DT01ACA100	1TB	DT01ACA300	3TB
DT01ABA100V	1TB	MD03ACA300V	3TB
DT01ACA200	2TB	MD03ACA400V	4TB
DT01ABA200V	2TB	MD04ABA500V	5TB

* To know more details about SRS and its related support and service, please contact your local Seagate representative directly.

** Please be advised to pay attention to the heat dissipation of the hard disk which is over 4TB because it might generate much heat during operation. It's recommended that ambient temperature is not over 35°C.

APPENDIX 5 MAIN MENU STRUCTURE

	QUICK START	GENERAL	CHANNEL TITLE
			EVENT STATUS
			DATE DISPLAY
			DCCS DISPLAY
			MOUSE SENSITIVITY
			AUDIO GAIN
			RECORD CONFIG
		TIME SETUP	DATE
			TIME
			NTP SERVER
			FORMAT
			SYNC PERIOD
			GMT
		DAYLIGHT	
		EaZy	
	SYSTEM	ACCOUNT	
		TOOLS	LANGUAGE
			UPGRADE
			NETWORK UPGRADE
			BACKUP CONFIG
			RESTORE CONFIG
			UPGRADE CAMERA PARAMETERS
			UPGRADE CAMERA FIRMWARE
		SYSTEM INFO	BAUD RATE
			HOST ID
			R.E.T.R.
			AUTO KEY LOCK(S)
			CLEAR HDD
			RESET DEFAULT
			REMOTE CONTROL ID
			DEVICE TITLE
			SERIAL TYPE
			VIDEO FORMAT
			VERSION
		ONLINE	ANONYMOUS VIEWER LOGIN
			LOGIN WITH CAPTCHA IMAGE
			DROP ALL VIDEO CONNECTION
			LOGIN FAILURE TIMES
			LOCK TIME FOR LOGIN FAILURES
		BACKUP DATA	
		BACKUP LOG	
	EVENT INFORMATION	QUICK SEARCH	
		EVENT SEARCH	
		HDD INFO	
		EVENT LOG	
	ADVANCED CONFIG	CAMERA	INTERFACE
			CAMERA TYPE* / CONNECTION*
			BRIGHTNESS
			CONTRAST
			SATURATION
			HUE
			REC
			TIME STAMP DISPLAY
			CHANNEL TITLE
			REC AUDIO
			ALARM OUT DURATION (SECS)

	ADVANCED CONFIG	DETECTION	LS
			SS
			TS
			MOTION
			ALARM
			AREA
			PRIVACY MASK
			INTERNAL ALARM*
			CAMERA GUARD
		ALERT	EXT. ALERT
			INT. BUZZER
			KEY BUZZER
			VLOSS BUZZER
			MOTION BUZZER
			ALARM BUZZER
			HDD BUZZER
			EVENT DURATION (SEC)
			HDD NEARLY FULL (GB)
			HDD OVERHEAT ALERT (°C)
			HDD OVERHEAT NOTIFICATION
			HDD FAILURE BUZZER
			VIDEO LOSS BUZZER DURATION (SEC)
			ALARM BUZZER DURATION (SEC)
		NETWORK	WAN
			E-MAIL
			DDNS
			PROTOCOL
			EaZy
		DISPLAY	FULL SCREEN DURATION
			QUAD SCREEN DURATION*
			HDD DISPLAY MODE
			HDMI RESOLUTION
			VGA RESOLUTION
			SPOT MONITOR*
		RECORD	MANUAL RECORD
			EVENT RECORD
			TIMER RECORD
			PRE-ALARM RECORD
			OVERWRITE
			KEEP DATA LIMIT (DAYS)
			RECORD CONFIG
			SUBSTREAM RESOLUTION
		DEVICES	
		DCCS	
		IVS*	
		NOTIFY	PUSH VIDEO*
			PUSH STATUS
			MESSAGE MAIL
			MAIL
			FTP
		JOYSTICK	
	SCHEDULE SETTING	RECORD	
		DETECTION	
		ALARM IN	
		ALARM OUT	
		PUSH VIDEO*	
		BUZZER	
		REGULAR REPORT	
		AUTO BACKUP	
		REGULAR REBOOT	

**For selected models only*

APPENDIX 6 DVR BATTERY REPLACEMENT

DVR 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 DVR time from resetting, a non-chargeable lithium battery, *CR2032*, is installed in the DVR.

However, the DVR time might still get reset when the DVR battery is low or even running out of power. If so, please replace the DVR 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 DVR recording **immediately** to prevent the disorder of the recorded data. Then, back up the recorded data if necessary.

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

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

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

Step5: Get a new battery with the side of “CR2032” facing up, and install it to the mainboard.

Step6: Replace the DVR cover and connect to power.

Step7: Set DVR date & time, and resume recording. For details, please refer to “6.1.2 TIME SETUP” at page 25, and “6.4.6 RECORD” at page 43.

APPENDIX 7 EAZY NETWORKING

EaZy Networking is a free P2P cloud service to connect AVTECH devices to the Internet automatically by plug-and-play, enabling you to check the live view via your mobile device or laptop at anytime.

In most cases, the device is connected via P2P. Connection via the relay server is only applied to some complex environments such as the private IP-based network environment used by a large enterprise. There is no speed limitation of P2P connection. For connection via the relay server, the speed is up to 10FPS@512kbps. To obtain stable transmission, it's recommended to purchase our data plan of 1GB or 7GB. Each device will enclose a 2GB data plan for a free trial.

EaZy Networking could be configured via EagleEyes on an iOS / android device, or via Internet Explorer.

Before using this function, make sure:

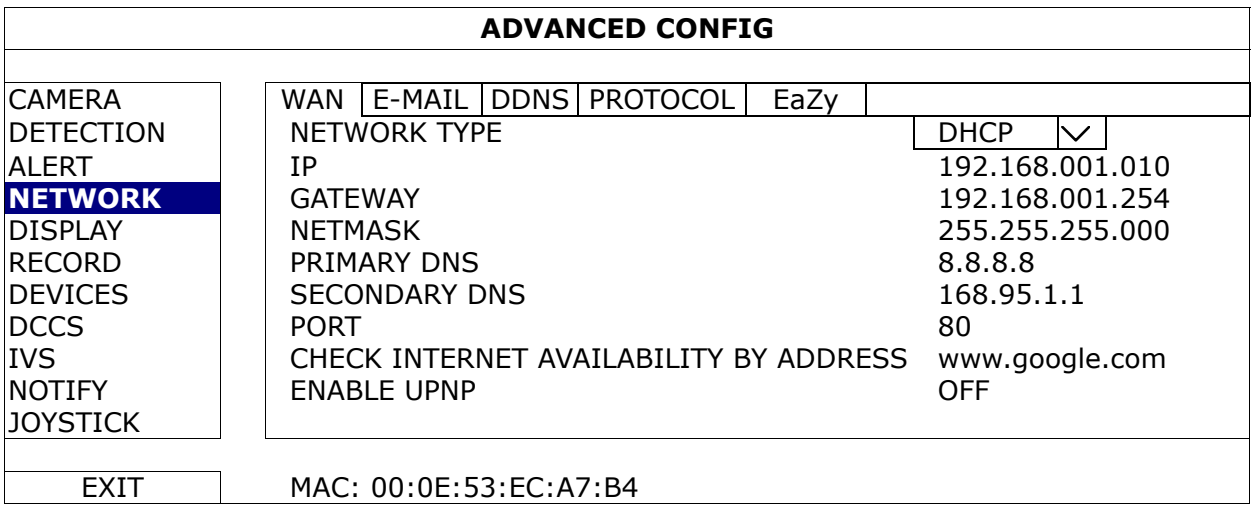
- This DVR is connected to a switch or router, and the switch or router is ready for Internet connection.
- The network icon on the top right corner is , not .
- You have an iOS / Android mobile device with EagleEyes installed.

A7.1 Via EagleEyes on iOS / Android Device

A7.1.1 Setup

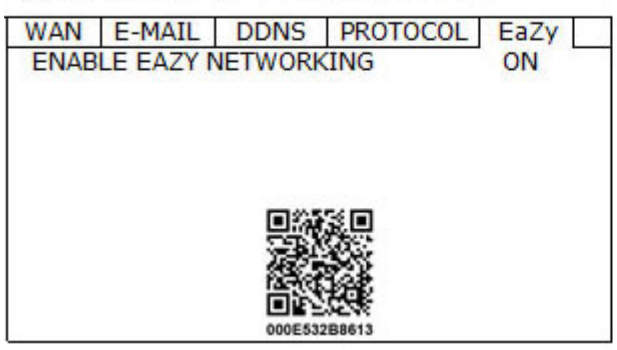
Step1: Right-click to show the main menu, and select **NETWORK** → **WAN**. Set **NETWORK TYPE** to **DHCP**, and make sure the network icon on the top right corner is changed from to .

Note: **DHCP** allows your router to assign an IP address for your device automatically. There are also **STATIC** and **PPPOE** to choose for the network type. Please choose the one needed for your network environment and get the information needed from your installer or network service provider.

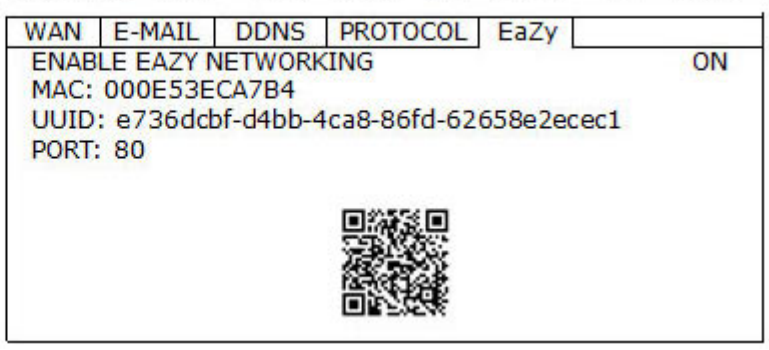


Step2: In the same menu, select **EaZy**. Enable EaZy Networking, and leave this page open. You'll need to scan the QR code later. You'll see either of the setup pages below. Go to "A7.1.2 EagleEyes Setup" to know which option you should choose during setup.

Type 1 ("EaZy" on EagleEyes)



Type 2 (Both "EaZy" and "QR Code" on EagleEyes)



A7.1.2 EagleEyes Setup

Two options can be chosen for EaZy Networking: **EaZy** and **QR Code**. **EaZy** is used for both recorders and IP cameras while **QR Code** is used only for recorders.

When a device is configured to the internet via **EaZy**, the person who configures the device has the administrator permission of this device and also has the power to assign who can access the device remotely, by the web browser of Internet Explorer or the mobile app of EagleEyes.

When a device is configured to the internet via **QR Code**, everyone has the right to access the device as long as he/she is able to scan the QR code of the device. However, he/she can only access the device via the mobile app of EagleEyes. Internet Explorer is not supported.

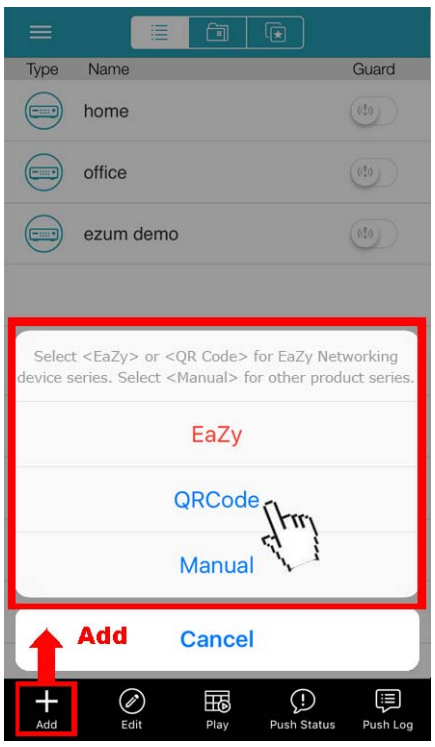
- By QR Code *(For Type 2 only)*

Step1: Open EagleEyes on your mobile device, and select "**...**" on the top left corner in the address book. Then, click **QR Code**.

Step2: Scan the QR code shown on your recorder, and enter the title of this device and its user name and password.

Step3: Make sure you see the device type when you tap **Get Type**. If not, the device is not connected properly. Then, Tap **Apply** to complete the process, and you're ready to see the live view.

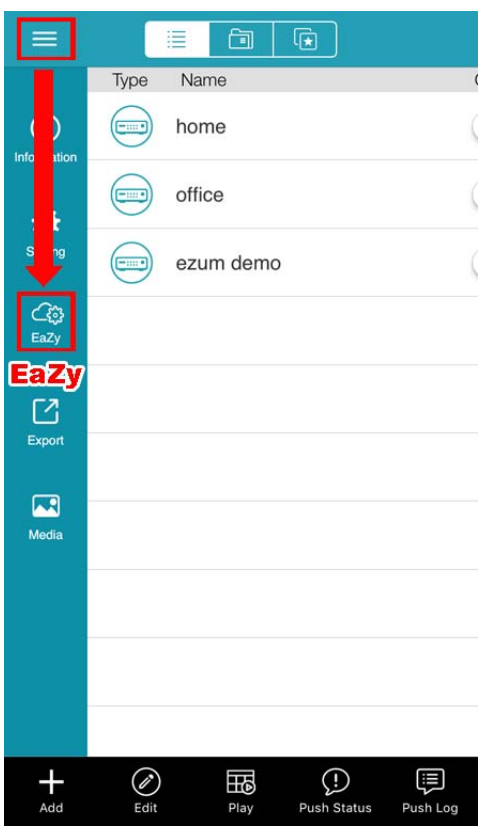
Note: For the first time to connect your device to the internet, the default user name and password are both ***admin***. If it's been configured before, make sure you've known its current user name and password since they may be changed for security purpose.

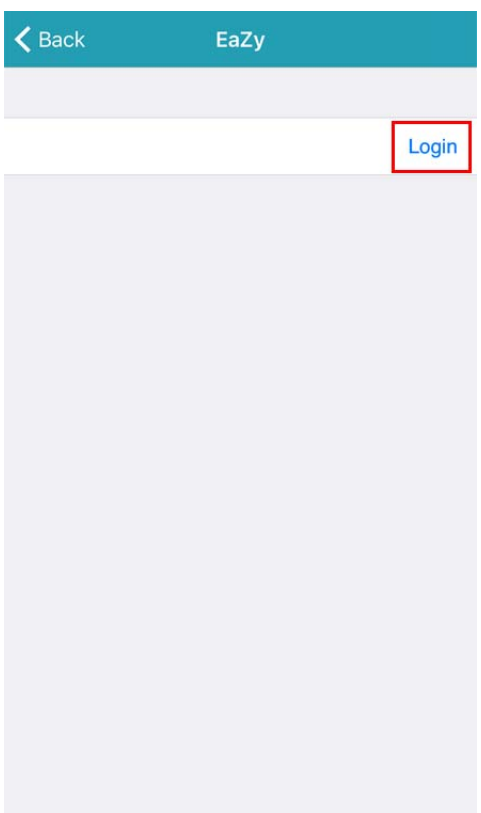


■ By EaZy *(For Type 1 and Type 2)*

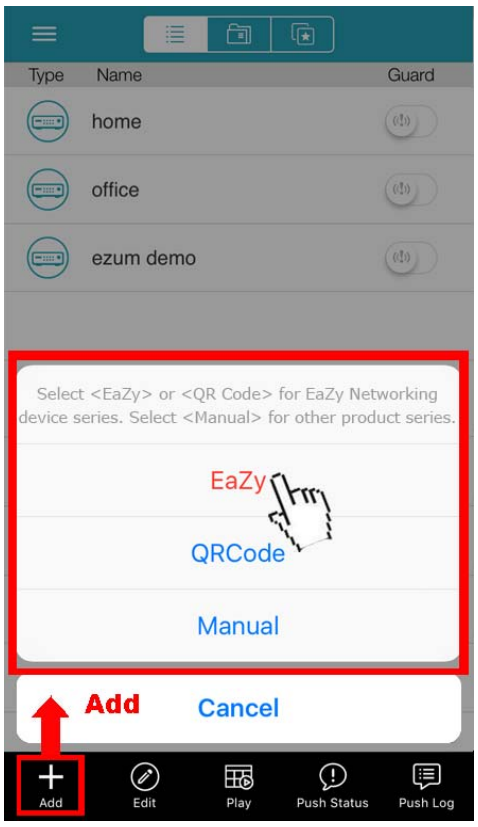
Step1: Open EagleEyes on your mobile device, and select "**...**" on the top left corner in the address book. Then, click **EaZy**.

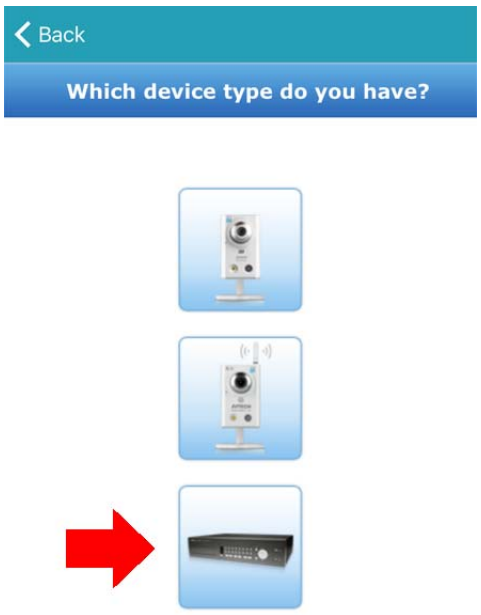
Step2: Click **Login** and register an account for "Cloud Service". If you've got an account, please just log in.





Step3: Go back to the address book and click **+** to add a new device. Select **EaZy**, and choose the recorder icon to continue.





Step6: Click in the section of **MAC address** to open the QR code scan page, and scan the QR code on the recorder screen mentioned in Step2. The MAC address will be filled automatically.

Fill in the Captcha code manually, and click **Apply**.

Step7: Follow the on-screen instruction to finish the rest of the settings, and see if this device is added successfully to the address book as a cloud device.

At the same time, you'll be prompted to confirm if you want to remove the default user name and password.

- When the default user name and password are removed, you can **ONLY** use the user name and password of the cloud service to access this recorder locally and remotely. If you forget the user name and password of the cloud service, you could only reset the recorder and do all configurations again.
- When the default user name and password are kept, other people might be able to access this recorder if they know the default user name and password of this recorder.

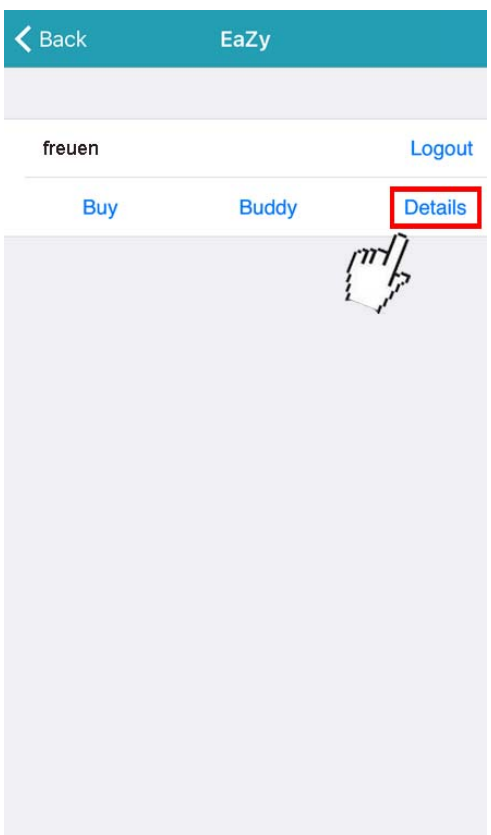
Confirm if you want to keep the default account to continue, and return to the address book. You'll see the newly-added device in the address with a cloud icon on it.

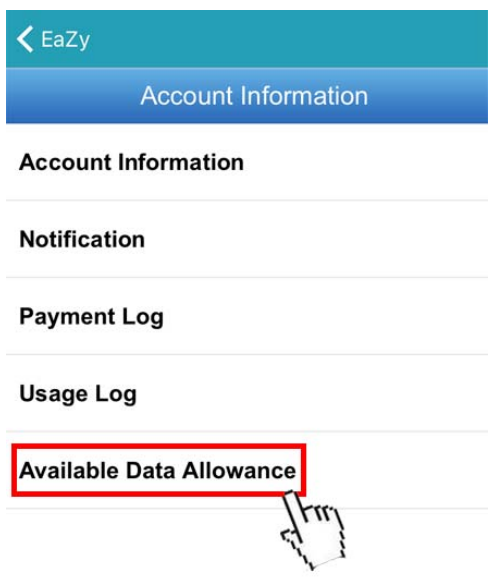
Step8: Click the newly-added device and see if you could access successfully.

A7.1.3 Checking Remaining Data Allowance

Step1: Log into the cloud service.

Step2: Select **Details** to go to account information, and select **Available Data Allowance**.



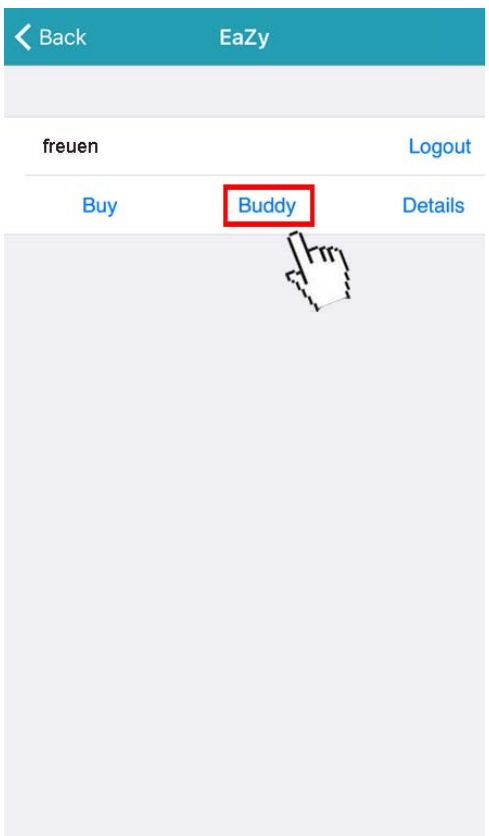


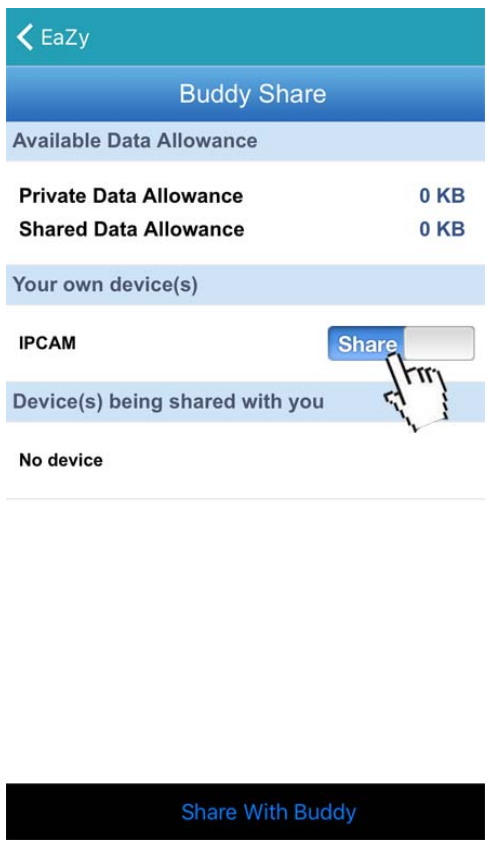
A7.1.4 Sharing Cloud Device Access with Other Account(s)

Note: One cloud device could be shared up to 30 cloud accounts, but the access to the device might be failed because it is still restricted to the maximum online user setup of the device.

Step1: Log into the cloud service.

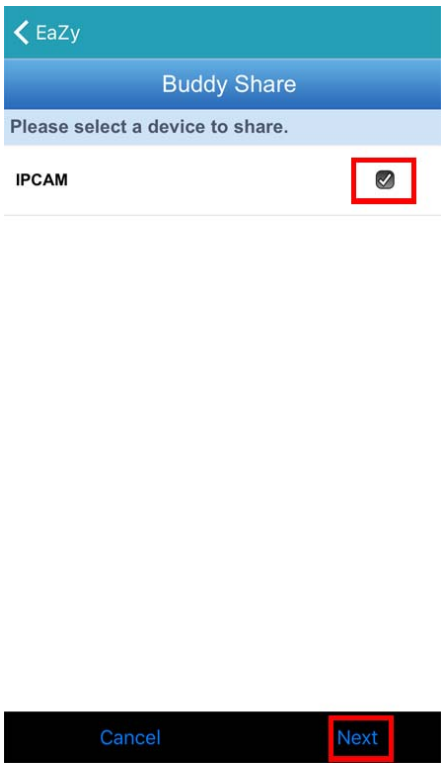
Step2: Select **Buddy** to go to the buddy sharing page. Then, choose the device you want to share with, and switch from **OFF** to “Share”.

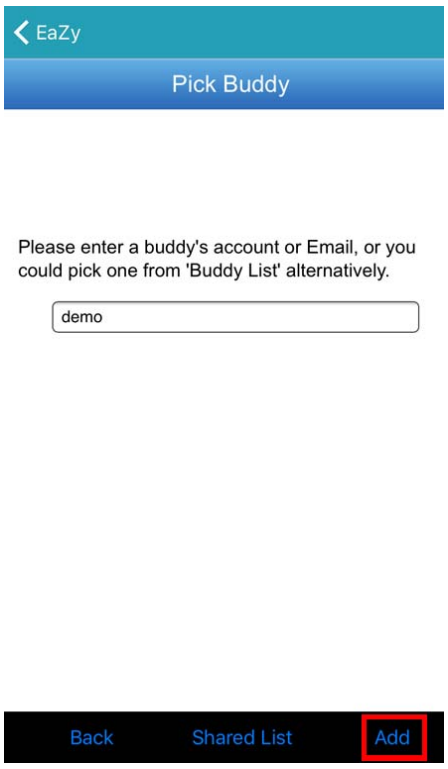




Step3: Choose the device you want to share with.

Step4: Enter the cloud account or the E-mail registered by the account, and select **Add**.





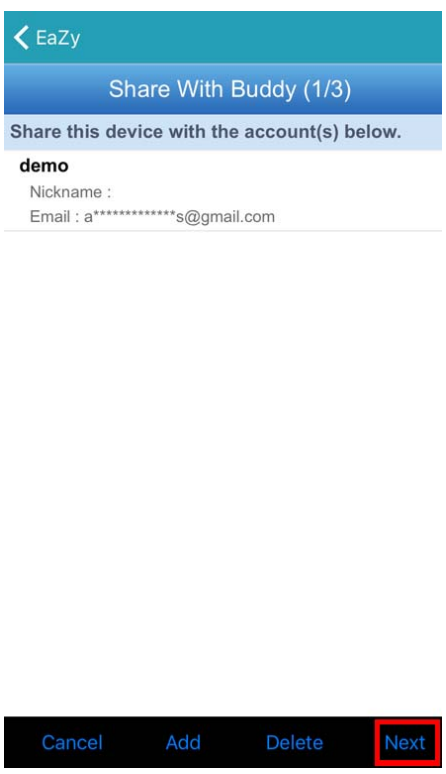
Step4: Check again the account with which you want to share your cloud device, and select **Next** to confirm and continue.

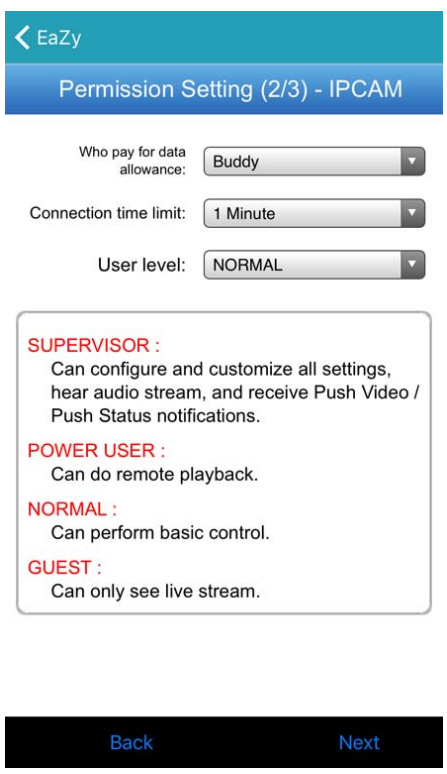
Step5: Specify the access permission of the specified account, which account's data allowance should be consumed after access successfully, and how long the account is allowed to stay after access successfully.

- Who should pay data allowance:

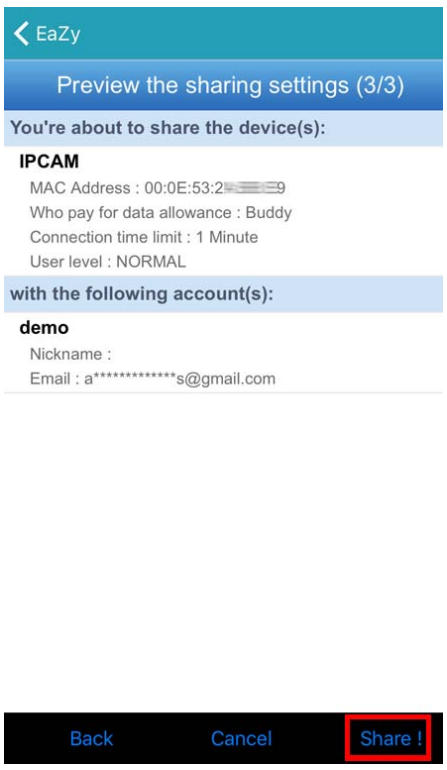
Who should pay data allowance	The order to consume data allowance
I	The free data allowance provided by the device -> The additional data allowance shared to other account(s) by the owner -> The additional data allowance of the device's owner -> The data allowance shared to other account(s) by the buddy
Buddy	The additional data allowance of the buddy -> The data allowance shared with other account(s) by the buddy

Note: When there's no data allowance to use, the network transmission will be down to 1 FPS. To restore the fluency of live view, users need to subscribe a data plan from EagleEyes, or configure the network settings by themselves.





Step6: Check again the configurations you made for the account to which you want to share your cloud device, and select **Share!** to confirm.



Step7: (Optional) Configure the data allowance shared to other accounts to use.

Step8: Return to the address book of EagleEyes. You'll see the device being shared is marked with an icon of two people.

A7.2 Via Internet Explorer on PC / Laptop

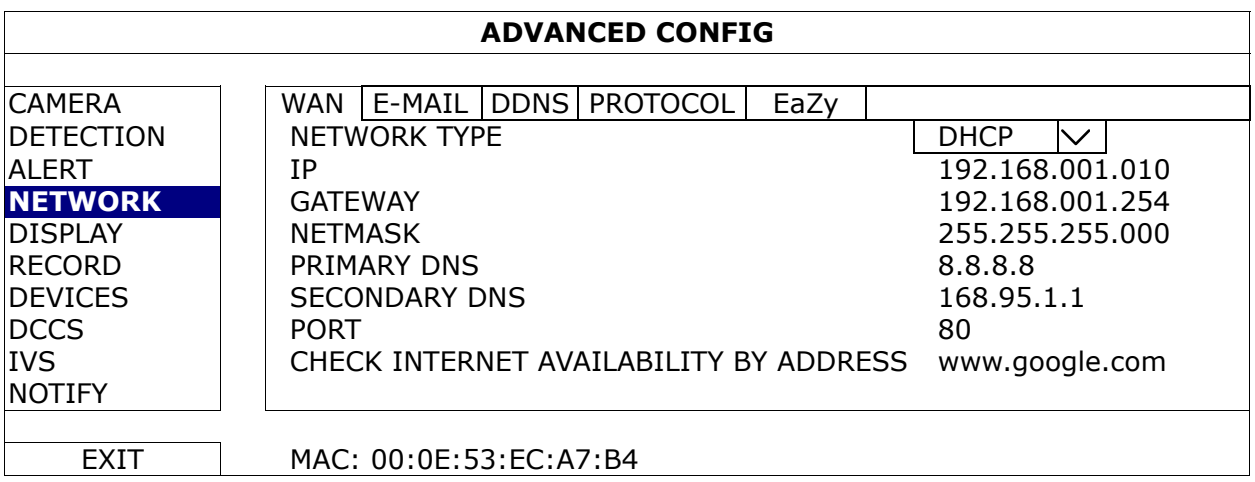
Note: EaZy Networking setup via a web browser is only available on Internet Explorer, and the direct setup via QR code scanning as described in "By QR Code (For Type 2 only)" at page 75 is not supported.

A7.2.1 Setup

Step1: Right-click to show the main menu, choose (ADVANCED CONFIG), and select **NETWORK → WAN**.

Set **NETWORK TYPE** to **DHCP**, and make sure the network icon on the top right corner is changed from to .

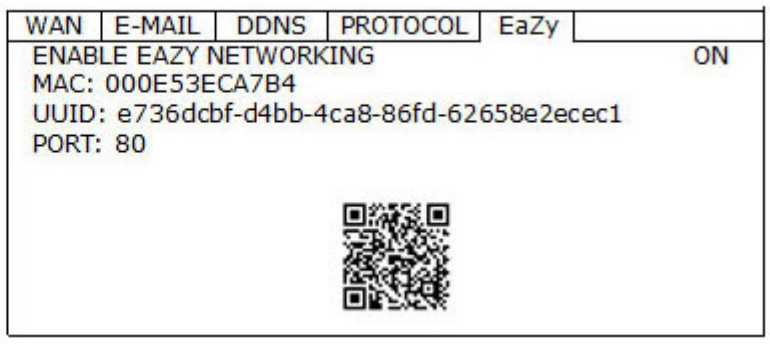
Note: **DHCP** allows your router to assign an IP address for your device automatically. There are also **STATIC** and **PPPOE** to choose for the network type. Please choose the one needed for your network environment and get the information needed from your installer or network service provider.



Step2: In the same menu, select **EaZy**. Enable EaZy Networking, and write down the MAC address starting with "000E53" under the QR code. You'll need it later.

Type 1 ("EaZy" on EagleEyes)

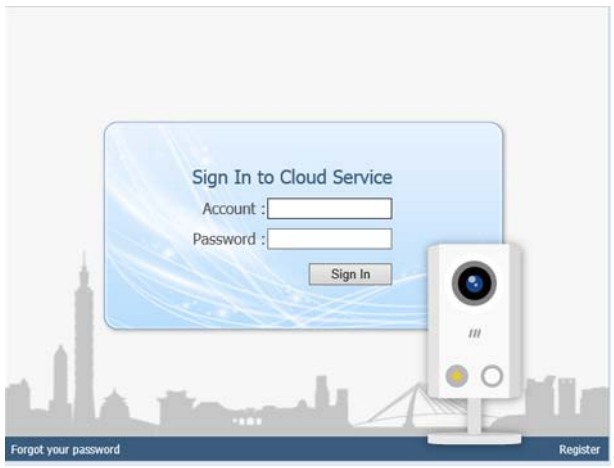
Type 2 (Both "EaZy" and "QR Code" on EagleEyes)



Step3: Open Internet Explorer on a PC / laptop, and enter https://ez.eagleeyes.tw.

In the login page, register an account for **Cloud Service**. If you've got an account, please just log in.

Note: You PC must be connected to Internet.



Step4: Click + on the left pane, and you'll be prompted to install plugins: ***EaZy Control*** and ***EaZy Wizard***. Please follow the instructions to install these two plugins to ensure the service works properly.

Note: If you're not prompted to install the plugin, please lower the security level of Internet Explorer, and try to log into the cloud service again.

Step5: Enable EaZy Wizard, and click **Start** to go to the login page. Log into the cloud service.

Step6: Select the recorder picture, or choose **DVR / NVR** on the bottom right corner. Then, enter the MAC address you wrote down in Step2, and the security code.

Click **Apply** to continue.

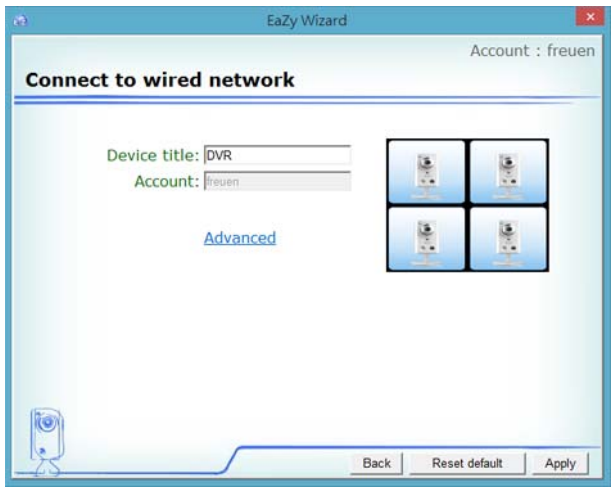
Step7: When your device is found, you'll be directed to the next page to change the device title if you want.

Note: The device name changed here will be fixed and can't be changed later.

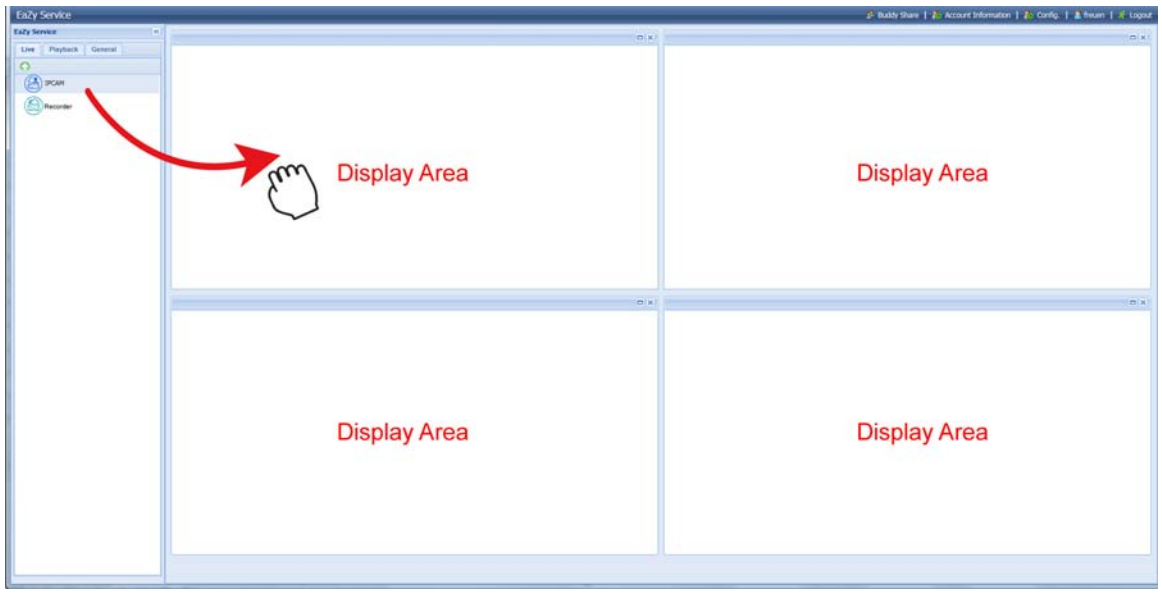
Click **Apply** to continue. You'll be prompted to confirm if you want to remove the default user name and password.

- When the default user name and password are removed, you can **ONLY** use the user name and password of the cloud service to access this recorder locally and remotely. If you forget the user name and password of the cloud service, you could only reset the recorder and do all configurations again.
- When the default user name and password are kept, other people might be able to access this recorder if they know the default user name and password of this recorder.

Confirm if you want to keep the default account, and click **Apply** to continue and return to the main page.



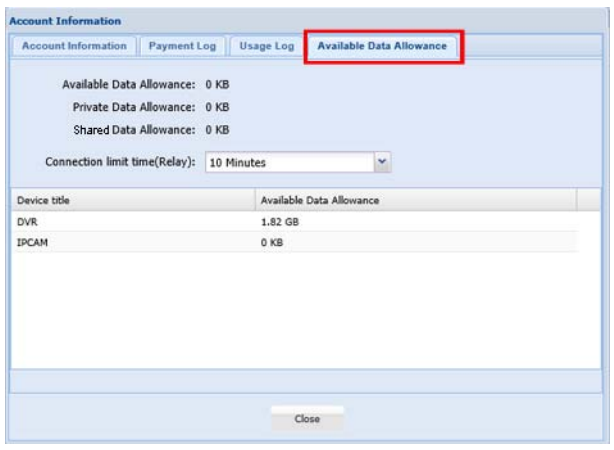
Step8: You'll see the newly-added device with a cloud icon on the left pane. Drag and hold the device to the display area on the right pane to show in the same window, or simply double-click the device to open the device view in another window.



A7.2.2 Checking Remaining Data Allowance

Step1: Log into the cloud service.

Step2: Select **Account Information** on the top right corner to go to account information, and select **Available Data Allowance**.

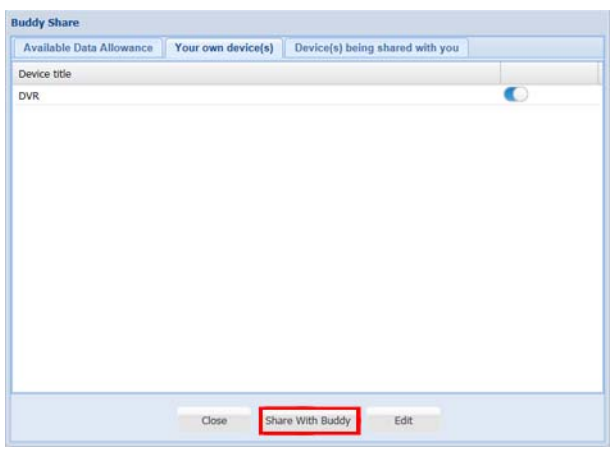


A7.2.3 Sharing Cloud Device Access to Other Account(s)

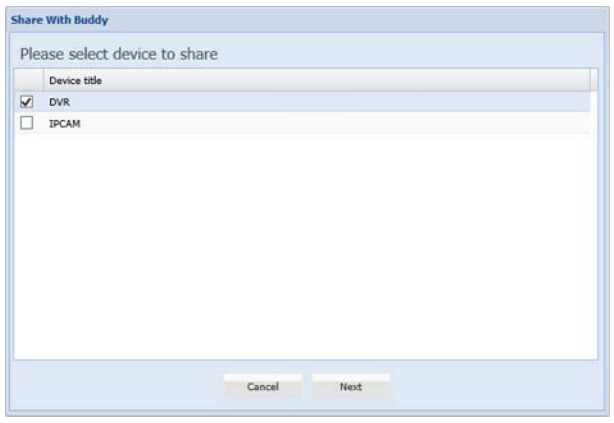
Note: One cloud device could be shared up to 30 cloud accounts, but the access to the device might be failed because it is still restricted to the maximum online user setup of the device.

Step1: Log into the cloud service.

Step2: Select **Buddy Share** to go to the buddy sharing page. Then, choose the tag **Your own device(s)**, and select **Share With Buddy**.



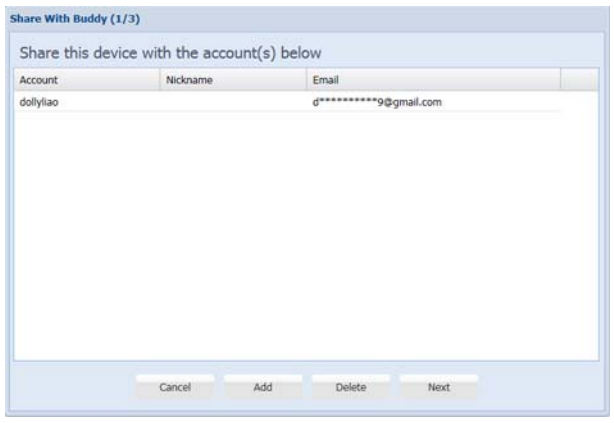
Step3: Choose the cloud device you want to share, and click **Next** to enter the cloud account or the E-mail registered by the account you want to share with. Then, select **Add**.

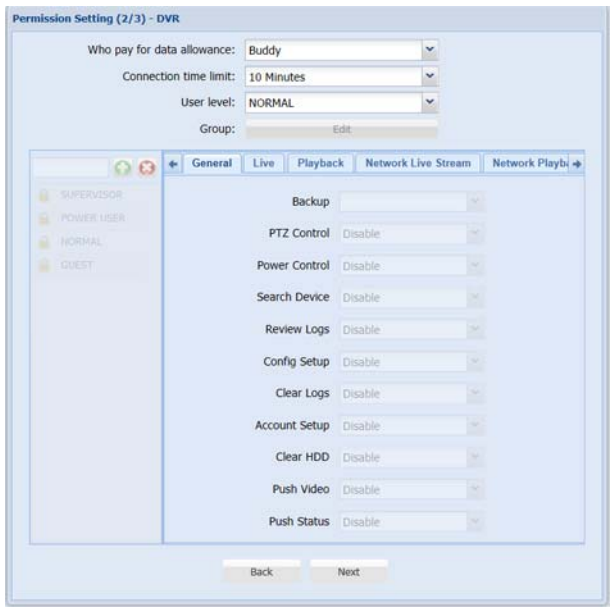


Step4: Check again the account to which you want to share your cloud device.

To add more accounts, select **Add**; to remove the existing account, select **Delete**; to continue buddy setup, select **Next**.

Step5: Specify the access permission of the specified account, which account's data allowance should be consumed after access successfully, and how long the account is allowed to stay after access successfully.





- Who should pay data allowance:

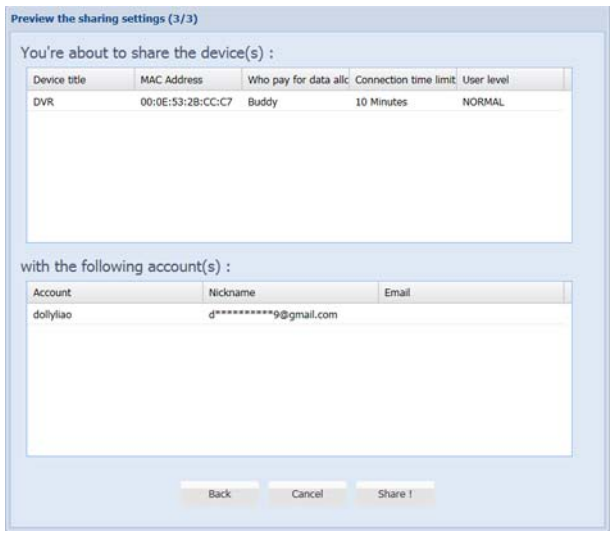
Who should pay data allowance	The order to consume data allowance
I	The free data allowance provided by the device -> The additional data allowance shared to other account(s) by the owner -> The additional data allowance of the device's owner -> The data allowance shared to other account(s) by the buddy
Buddy	The additional data allowance of the buddy -> The data allowance shared with other account(s) by the buddy

Note: When there's no data allowance to use, the network transmission will be down to 1 FPS. To restore the fluency of live view, users need to subscribe a data plan from EagleEyes, or configure the network settings by themselves.

Step6: Check again the configurations you made for the account to which you want to share your cloud device, and select **Share!** to continue.

Step7: (Optional) Configure the data allowance shared to other accounts to use.

Step8: Return to the main page. You'll see the device being shared is marked with an icon of two people.



A7.3 Icons

Icon	Color	Indication
	Teal	This device is a DVR or NVR.
	Blue	This device is a DVR or NVR.
	Orange	This device is an IP speed dome camera.
	Red	This device is disconnected and unidentified.
or	Depending on the device color	This device is configured to the Internet via EaZy Networking (AVTECH Cloud Service). The cloud icon will be grayed out if the EaZy server can't be connected.
	Depending on the device color	You've shared the access right of the device with other cloud account via Buddy (AVTECH Cloud Service). The icon will be grayed out if you disable the device share.
	Depending on the device color	The icon will be grayed out if the device share is disabled by the owner of the device.

For example, if you see as the device type, you'll know:

- This device is an IP camera.
- This device is connected to the Internet via EaZy Networking.
- You were shared with the access right of the device, but the device share is disabled now.