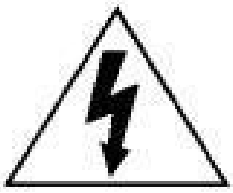



H.264 Network DVR

User Manual

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

IMPORTANT SAFEGUARD

	CAUTION RISK OF ELECTRIC SHOCK	
<p>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.</p>		

Graphic Symbol Explanation



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.

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](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 refer to your distributor:

<ftp://ftp.dvrtw.com.tw/GPL/AV074/>

Disclaimer

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.

The product & company names mentioned herein may be the registered trademarks or tradenames of their respective owners.

Version

Firmware: 1083-1028-1009-1013-02-0000;

Video Viewer: 0099

TABLE OF CONTENTS

1. OVERVIEW.....	1
1.1 Product Description	1
1.2 Features.....	1
1.3 Specifications.....	2
1.4 Package Contents	3
2. FRONT AND REAR PANELS	4
2.1 Front Panel	4
2.2 Rear Panel.....	6
3. CONNECTIONS AND SETUP	8
3.1 SATA HDD Installation	8
3.2 Camera Connection.....	10
3.2.1 Regular Camera Connection	10
3.2.2 Speed Dome Camera Connection	10
3.3 Power Setup	11
3.4 Date and Time Setting	11
3.5 Password Setting.....	12
4. BASIC OPERATION.....	13
4.1 Live Page.....	13
4.2 Recording	13
4.3 Playback	14
4.4 Key Lock and Unlock.....	15
4.5 Upgrade.....	15
4.6 Search	15
5. MAIN MENU	16
5.1 Menu Configuration	16
5.2 Menu Operation Instruction.....	16
6. QUICK START MENU	17
6.1 Status.....	17
6.2 Manual Record	18
6.3 Timer.....	19
6.4 Date	20
7. ADVANCED MENU	22
7.1 Advanced Configuration.....	22
7.1.1 Camera.....	22
7.1.2 Detection	23
7.1.3 Alert	25
7.1.4 Network	26
7.1.5 SNTP	28
7.1.6 Display.....	28
7.1.7 Record	29
7.1.8 Remote.....	30
7.2 System Info.....	30
7.3 Event Info.....	32

7.3.1 Quick Search	32
7.3.2 Event Search	33
7.3.3 HDD Info	33
7.3.4 Event Log	34
7.4 Backup	34
7.4.1 USB BACKUP	35
7.4.2 DISK BACKUP (<i>Selected Models Only</i>)	36
8. REMOTE OPERATION	37
8.1 Supplied Licensed Software	37
8.1.1 Installation & Network Connection	37
8.1.2 Control Panel	38
8.1.3 General Operation	39
Record	39
Playback	39
Network Backup	40
8.1.4 Detailed Functions	41
Image Display	41
Address Book	41
Miscellaneous Control	42
Information	58
DVR Control	59
8.2 IE Web Browser	61
8.3 Quick Timer Player	63
APPENDIX 1 PIN CONFIGURATION	64
APPENDIX 2 RECORDING TIME TABLE (For 4CH Model Only).....	67
APPENDIX 3 COMPATIBLE USB FLASH DRIVE BRAND	68
APPENDIX 4 COMPATIBLE HDD BRAND.....	69
APPENDIX 5 TROUBLESHOOTING	70
APPENDIX 6 RS485 PROTOCOL	71

1. OVERVIEW

1.1 Product Description

This H.264 DVR series greatly maximizes the video quality and minimizes the file size (expand the storage capacity) with the feature of H.264 video compression technology. To quickly backup, the DVD writer (optional) and USB port are built in for your convenience, or the network backup is also available. It also supports the connection to the SATA HDD & keyboard controller for your easy operation.

1.2 Features

- **H.264 Video Compression Technology**
 - At the local site, the file size is minimized and the record time is lengthened
 - At the remote site, with the features of small file size and low bit rate, it will be more adaptive to different kinds of network environment compared with conventional codec designs
- **Graphical & Multi-language OSD**
- **Remote Independent Operation**
 - Allows single-channel viewing of live displays without changing display settings on the licensed software AP provided
- **Free Upgrade to Advanced Functions**
 - Allows you to upgrade DVR functions without any charges
- **Multiplex Operation**
 - Allows live display, record, playback, backup, and network operations at the same time
- **Excellent Image Quality and Performance**
 - The CIF image quality is excellent for clear and detailed image
- **Intelligent Motion Trigger Recording**
 - R.E.T.R. (Remote Event Trigger Recording)
 - Activates event recording automatically when alarm is triggered, and sends alerts with images to the designated e-mails / FTP address
 - Customizable security settings are achieved with the advanced motion detection, the scheduled motion detection recording (with 4 individually adjustable parameters), and the quick search function
 - Supports pre-alarm recording (8MB)
- **Backup Devices**
 - Supports USB 2.0 flash drive, DVD writer (optional), and network
- **Remote Surveillance**
 - Supports remote surveillance up to 20 users simultaneously with the licensed software “Video Viewer”, Internet Explorer / Mozilla Firefox web browser, and QuickTime player.
- **Covert Recording**
 - Blank screen replaces live displays to achieve covert recording
- **A/V Support**
 - For 16CH & 8CH: Supports 4 audio-in, 2 audio-out to record sounds
 - For 4CH: Supports 4 audio-in, 1 audio-out to record sounds
 - Supports VGA output to monitor (VGA interface built-in / output resolution up to 1600 x 1200)
- **General**
 - Supports SATA HDDs
 - Supports IR remote controller and keyboard controller
 - System auto recovery after power failure
 - Supports PTZ camera operations through RS-485, and PTZ Hot Point function
 - Supports daylight saving function
 - Supports manual / timer / motion / alarm / network recording
 - Supports TCP/IP, PPPoE, DHCP and DDNS network connection.

1.3 Specifications

MODEL	16CH	8CH	4CH
Video System	NTSC / PAL (auto detection)		
Video Compression Format	H.264		
Video Input (Composite video signal 1 Vp-p 75Ω BNC)	16 Channels	8 Channels	4 Channels
Video Loop Output (Composite video signal 1 Vp-p 75Ω BNC)	16 Channels	8 Channels	4 Channels
Video Output (BNC)	Main Monitor Output: for stable display Call Monitor Output: for sequence display		
Video Output (VGA)	Built-in VGA output for LCD monitor (up to 1600 x 1200)		
Audio Input	4 Channels (Mono)		4 Channels (Mono)
Audio Output	2 Channels (Mono)		1 Channel (Mono)
Multiplex Operating	Supports live display, record, playback, backup, and network simultaneously		
Maximum Recording Rate (Frame)	120 IPS @ 704×480 <NTSC> 100 IPS @ 704×576 <PAL>	60 IPS @ 704×480 <NTSC> 50 IPS @ 704×576 <PAL>	30 IPS @ 704×480 <NTSC> 25 IPS @ 704×576 <PAL>
Maximum Recording Rate (Field)	240 IPS @ 720×240 <NTSC> 200 IPS @ 720×288 <PAL>	120 IPS @ 704×240 <NTSC> 100 IPS @ 704×288 <PAL>	60 IPS @ 704×240 <NTSC> 50 IPS @ 704×288 <PAL>
Maximum Recording Rate (CIF)	480 IPS @ 360×240 <NTSC> 400 IPS @ 360×288 <PAL>	240 IPS @ 360×240 <NTSC> 200 IPS @ 360×288 <PAL>	120 IPS @ 352×240 <NTSC> 100 IPS @ 352×288 <PAL>
Recording Mode	Manual / Timer / Motion / Alarm / Remote		
Recording Quality Options	Super Best, Best, High & Normal		
Pre-alarm Recording	YES (8 MB)		
HDD Type	SATA		
HDD Storage * HDDs are optional ** Supports up to 1TB per HDD	Accommodates up to two SATA HDDs		Accommodates up to two SATA HDDs * For the model with DVD writer built-in, only one SATA HDD is supported
HDD Quick Cleaning	Delete HDD Data Efficiently (1TB within 2 seconds)		
Quick Search	Time / Motion / Alarm search mode		
USB Flash Drive Backup	YES		
DVD Writer Backup	Selected Models Only		
Playback on PC	Windows Media Player compatible		
Network Transfer Format	H.264		
Ethernet	10/100 Base-T.		
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS (Dynamic IP)		
Network Surveillance Interface	Licensed Software "Video Viewer" / Internet Explorer & Firefox web browser / QuickTime (20 users on-line simultaneously)		
Remote Independent Operation	YES		
Network Alarm Notification	E-mail and FTP server		
CMS (Central Management System)	YES (Maximum: 16 different IP addresses)		
R.E.T.R. (Remote Event Trigger Recording)	YES		
Operating System for Network Function	Windows Vista / XP / 2000; Apple Mac		
IR Remote Control	YES		
Multilingual OSD	YES		
Motion Detection Area	16 × 12 grids per channel		
Motion Detection Sensitivity	4 adjustable parameters for accurate detection		
PTZ Control	Pelco-D / Our own protocol		
External Alarm	16 inputs, 1 output	8 inputs, 1 output	4 inputs, 1 output
Picture Zoom	2X digital zoom		
Key Lock (Password Protection)	YES		
Video Loss Detection	YES		
Camera Title	Supports up to 6 letters		
Video Adjustable	Hue / Color / Contrast / Brightness		
Date Display Format	YY/MM/DD, DD/MM/YY, MM/DD/YY, and Off		
Daylight Saving	YES		
Power Source (±10%)	DC 19V		
Power Consumption	< 64 W	< 64 W	< 42 W
Operating Temperature	0°C ~ 40°C (32°F~104°F)		10°C ~ 40°C (50°F~104°F)
Dimensions (mm)**	432(W) × 90(H) × 326(D)		375(W) × 61(H) × 281(D)
System Recovery	System auto recovery after power failure		
Optional Peripherals	Keyboard controller		

* The specifications are subject to change without notice.

1.4 Package Contents







- | | |
|---|---|
| <input type="checkbox"/> Digital video recorder (DVR) | <input type="checkbox"/> HDD bracket screws (spare parts) |
| <input type="checkbox"/> Adapter and power cord | <input type="checkbox"/> DSUB PIN connector |
| <input type="checkbox"/> quick start & IR remote control manual | <input type="checkbox"/> AAA size battery * 2 |
| <input type="checkbox"/> CD-ROM (including manual & licensed software "Video Viewer") | |

Note: Before using the IR remote control, please install the batteries first.

2. FRONT AND REAR PANELS

2.1 Front Panel

1) LED Indicators

-  HDD is reading or recording.
-  DVR is powered on.
-  An alarm is triggered.
-  Timer recording is on.
-  Under playback status (For 4CH model only).
-  HDD is full (For 16CH / 8CH models only).

2) MENU

Press "MENU" to enter the main menu.

3) ENTER

Press "ENTER" to confirm the setting.


4) SLOW

Under the playback mode, press "SLOW" to show slow playback.

5) ZOOM

Press "ZOOM" to enlarge the picture of selected channel (under the live mode).

6)

Press "" to show the 4 channel display mode.

7) SEQ

Press "SEQ" to activate the call monitor function and press "SEQ" again to escape the call monitor mode.

8) POWER

Press to turn on / off the DVR.

(Under the recording mode, please stop recording before turning off the DVR).

9) CH1 ~ 16 / CH1 ~ 8 / CH1 ~ 4

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

10) PLAY

Press to playback the recorded data.

11) ▲ (PAUSE/+) / ▼ (STOP/-) / ◀ (REW) / ▶ (FF)

Press ▲ / ▼ / ◀ / ▶ to move the cursor up / down / left / right.

Under the playback mode, press "PAUSE" to pause playback.



Under the playback mode, press "STOP" to stop playback.


Under the playback mode, press "FF" to fast forward.


Under the playback mode, press "REW" to fast rewind.

12) AUDIO (SLOW + ZOOM)

Press “SLOW” + “ZOOM” to select live or playback sounds of the audio channels.

 Live audio of the 1st audio channel	 Playback audio of the 1st audio channel
 Live audio of the 2nd audio channel	 Playback audio of the 2nd audio channel
 Live audio of the 3rd audio channel	 Playback audio of the 3rd audio channel
 Live audio of the 4th audio channel	 Playback audio of the 4th audio channel
 The audio channel is not selected.	

13) P.T.Z. ( + SEQ)

Press “” + “SEQ” at the same time to enter / exit the PTZ control mode.

In the PTZ control mode,

* Zoom in: Press "SEQ"

* Zoom out: Press "

* Adjust PTZ angle: Press ▲ / ▼ / ◀ / ▶

14) MENU + ENTER

Press “MENU” + “ENTER” on the DVR front panel to lock keys and to log in another username.

15) LIST (Event List Search)

To quick search the recorded files by event, press to show all types of the event lists.

16) SNAP

Press “SNAP” to take a snapshot.

Note: Before taking a snapshot, insert a compatible USB flash drive into the DVR USB port for snapshot saving. For the compatible USB flash drive list, please refer to “APPENDIX 3 COMPATIBLE USB FLASH DRIVE BRAND” at page 68.

17) EJECT (*Selected Models Only*)

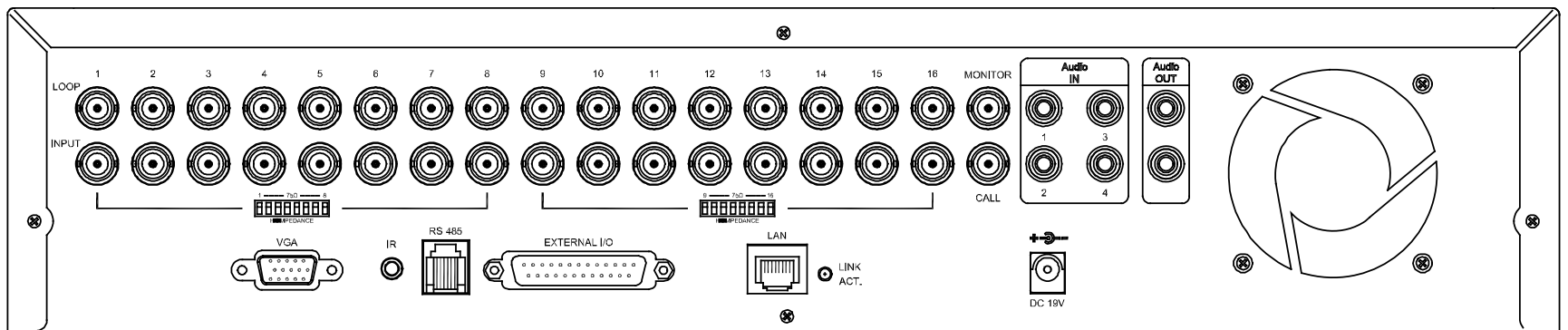
Press “EJECT” to open / close the DVD Writer.

18) USB

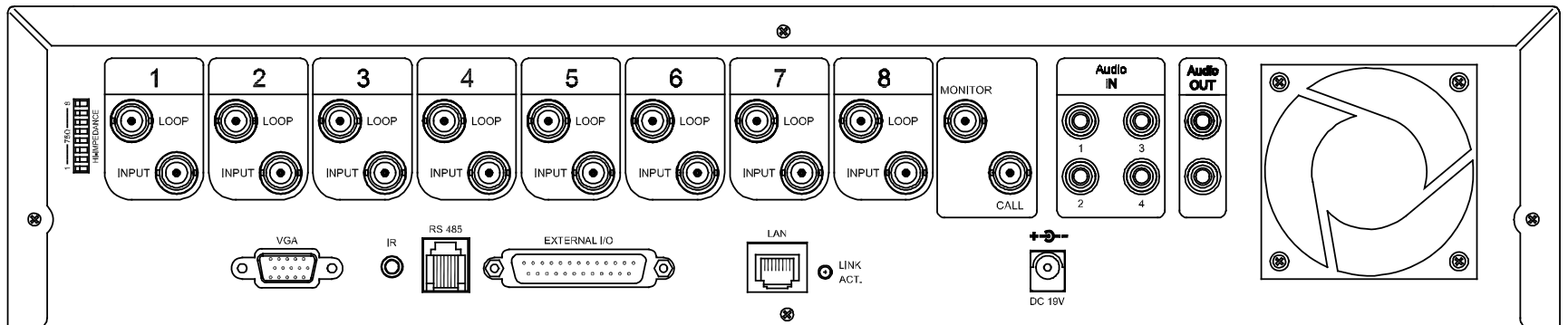
Supports firmware / OSD upgrade and file backup.

2.2 Rear Panel

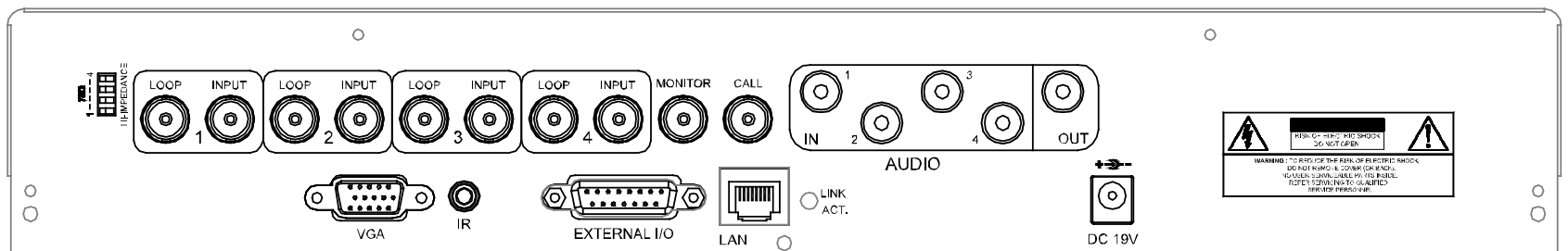
- 16CH



- 8CH



- 4CH



1) 75Ω / HI-IMPEDANCE

When using Loop function, please switch to HI-IMPEDANCE. When you don't use Loop function, please switch to 75Ω.

2) INPUT (1 ~ 16 / 1 ~ 8 / 1 ~ 4): Connect to video sources, such as cameras.

LOOP (1 ~ 16 / 1 ~ 8 / 1 ~ 4): Video output connector.

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.

3) MONITOR

Connect to a CRT monitor for video output.

4) CALL

Connect to a call monitor.

5) Audio IN

Connect to audio sources, such as cameras equipped with the audio function.

When users start recording, the audio input will also be recorded with corresponding video channel.

Note: The audio source connected to the "Audio 1" will be recorded with the video of the "CH1".
 The audio source connected to the "Audio 2" will be recorded with the video of the "CH2".
 The audio source connected to the "Audio 3" will be recorded with the video of the "CH3".
 The audio source connected to the "Audio 4" will be recorded with the video of the "CH4".

6) Audio OUT

Connect to a monitor or speaker with 1 mono audio output.

7) VGA

Connect to a LCD monitor directly.

8) IR

Connect the IR receiver extension line for remote control.

9) RS485 *(For 16CH & 8CH Models Only)*

Connect to external devices (such as speed dome cameras) with RS485-A and RS485-B wires.

10) EXTERNAL I/O

Insert the supplied 15 / 25 PIN DSUB to this port for connecting external devices (external alarm, etc).

For detailed I/O port PIN configuration, please refer to "APPENDIX 1 PIN CONFIGURATION" at page 64.

11) LAN

Connect to Internet by LAN cable.

12) LINK / ACT LED light:

When the Internet is activated, the LED light will be on.

13) DC 19V

Connect to the supplied adapter.

3. CONNECTIONS AND SETUP

3.1 SATA HDD Installation

The SATA HDDs must be installed before the DVR is turned on.

Note: The following description takes a 4CH DVR model **WITHOUT** a DVD writer built-in as an example.
For the 4CH DVR model with a DVD writer built-in, please ignore STEP2.1.

STEP1: Remove the screws on the top cover of DVR, and remove the top cover.

There are two places to install HDDs for this DVR: one is on the right, and the other one is on the left.



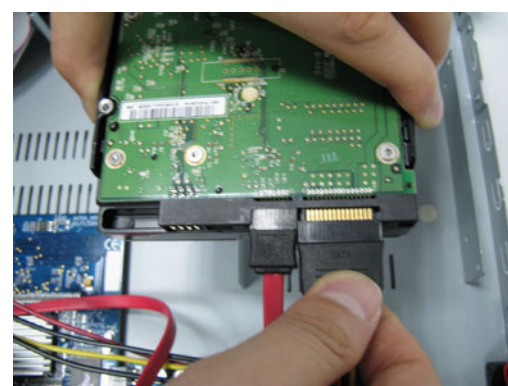
STEP2: Turn the DVR real panel facing you.

2.1. To install the HDD on the right (For the DVR model without a DVD writer built-in only):

a) Find the two HDD brackets in the accessory pack, and fix them onto the DVR base.



b) Get a compatible SATA HDD, and connect it to the power connector and data bus connector.



c) Put the HDD to the DVR, and have the SATA HDD fixed in the DVR.



2.2. To install the HDD on the left side:

a) Remove the HDD bracket as indicated below.



b) Get a compatible SATA HDD. Slide the HDD to the bracket, and fix it with two screws for each side. There are three screw holes per side on the bracket, and you can choose two of them to secure the HDD.



c) Connect the HDD to the power connector and data bus connector.



d) Screw the HDD bracket back to the DVR base.



STEP3: Replace the top cover and fasten the screws you loosened in STEP1.



3.2 Camera Connection

The cameras must be connected and power-supplied before the DVR is turned on. Connect the camera with the indicated power supply. And then connect the camera video output to the DVR video input port with a coaxial cable or RCA lines with BNC connectors (**The DVR will automatically detect the video system of the camera**).


Note: For detailed DVR video input / output ports, please refer to "2.2 Rear Panel" at page 6.
For detailed camera operation, please refer to its own manual.

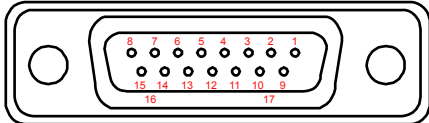

3.2.1 Regular Camera Connection

- 1) Connect the camera with indicated power supply.
- 2) Connect the camera video output to the DVR video input port with a coaxial cable and BNC connector.

3.2.2 Speed Dome Camera Connection

The following description is taking our brand's speed dome camera as an example. For detailed PIN / port connection, please refer to "APPENDIX 1 PIN CONFIGURATION" at page 64; for DVR setting to control the speed dome camera, please refer to "7.1.8 Remote" at page 30.

RJ11 Line
RS485-A: Red wire
RS485-B: Green wire

<i>The RJ11 line is not supplied in the sales package.</i>

15 PIN D-Sub Connector	RS-485 Port
RS485-A: PIN 11 RS485-B: PIN 10	RS485-A: PIN 2 RS485-B: PIN 3
<p>Solder Side of 15-pin D-Sub connector</p> <p>RS485 -A: PIN11 / RS485-B: PIN10</p> 	
<i>D-Sub connector is supplied with the DVR package.</i>	<i>Example of RS485 port on the DVR rear panel.</i>

STEP 1: Get a RJ11 line with the proper length to your connection.

Different RJ11 connector may have different wire layout, so the connection might be different. If you cannot control the DVR after connection, please reverse the RJ11 line connection with the DVR.

STEP 2: Remove one end of the insulating coating of the RJ11 line.

Remove one end of the insulating coating of the RJ11 line to find the RS485-A and the RS485-B wires, and remove the insulating coating to reveal the naked wires for further connection.

STEP 3: Twist the RS485-A and RS485-B wires of the RJ11 line and the speed dome camera together.

Twist the RS485-A (red) and RS485-B (green) wires of the RJ11 line to the RS485-A (brown) and

RS485-B (orange) wires of the speed dome camera. To protect the naked wires, use the insulation tape to cover on the twisted wires.

STEP 4: Connect the other end of the RJ11 line to DVR.

When there's an RS485 port on the DVR real panel

Connect the other end of the RJ11 line without removing the insulating coating directly to the RS485 port on the DVR real panel.

When there's an external I/O port on the DVR real panel

Solder the RS485-A (red) and RS485-B (green) wires of the RJ11 line to the corresponding pins on the solder side of the 15 PIN D-Sub connector (as shown in the picture above).

STEP 5: Set the speed dome camera at the DVR side.

Go to "ADVANCE" → "REMOTE" to set the speed dome camera.

- a) Select the device to "PTZ".
- b) Set the ID to the value the same as the one set in the speed dome camera. The default ID of the camera is 000.
- c) Select the protocol to "NORMAL".
- d) Set the baud rate to the value the same as the one set in the speed dome camera. The default baud rate of the camera is 2400.

REMOTE				
TITLE	DEVICE	ID	PROTOCOL	RATE
CH1	PTZ	000	NORMAL	2400
CH2	CAMERA	000	NORMAL	2400
CH3	CAMERA	000	NORMAL	2400
CH4	CAMERA	000	NORMAL	2400
CH5	CAMERA	000	NORMAL	2400
CH6	CAMERA	000	NORMAL	2400
CH7	CAMERA	000	NORMAL	2400
CH8	CAMERA	000	NORMAL	2400
CH9	CAMERA	000	NORMAL	2400
CH10	CAMERA	000	NORMAL	2400
Next				
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING				
↑↓ SELECT ← BACK → NEXT ↵ ENTER				

3.3 Power Setup

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. Press "POWER", and the LED "Ⓛ" will be on as blue. It takes approximately 10 to 15 seconds to boot the system.

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

3.4 Date and Time Setting

Before operating your DVR, please set the date and time on your DVR **FIRST**

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.

Note: For the first time to use the DVR, please charge the DVR for at least 48 hours continuously after the date & time is set correctly.

Press "MENU" and enter the password to go to the quick-start menu list. The default admin password is 0000.



Move to the icon and you can set the date / time / daylight saving in this menu list.

QUICK START			
	CHANNEL TITLE		ON
	EVENT STATUS		ON
	DATE DISPLAY		ON
	IMAGE SIZE		CIF
	QUALITY		BEST
	IMAGE PER SECOND		120
	RECORD TIMER		OFF
	DETECTION TIMER		OFF
	DATE	2008 / APR / 23	11 : 20 : 45
	FORMAT		Y / M / D
	DAYLIGHT SAVING		OFF
ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER			

3.5 Password Setting

Press "MENU" and enter the password to go to the quick-start menu list. Then, move to "ADVANCE" to enter the advanced setting menu.



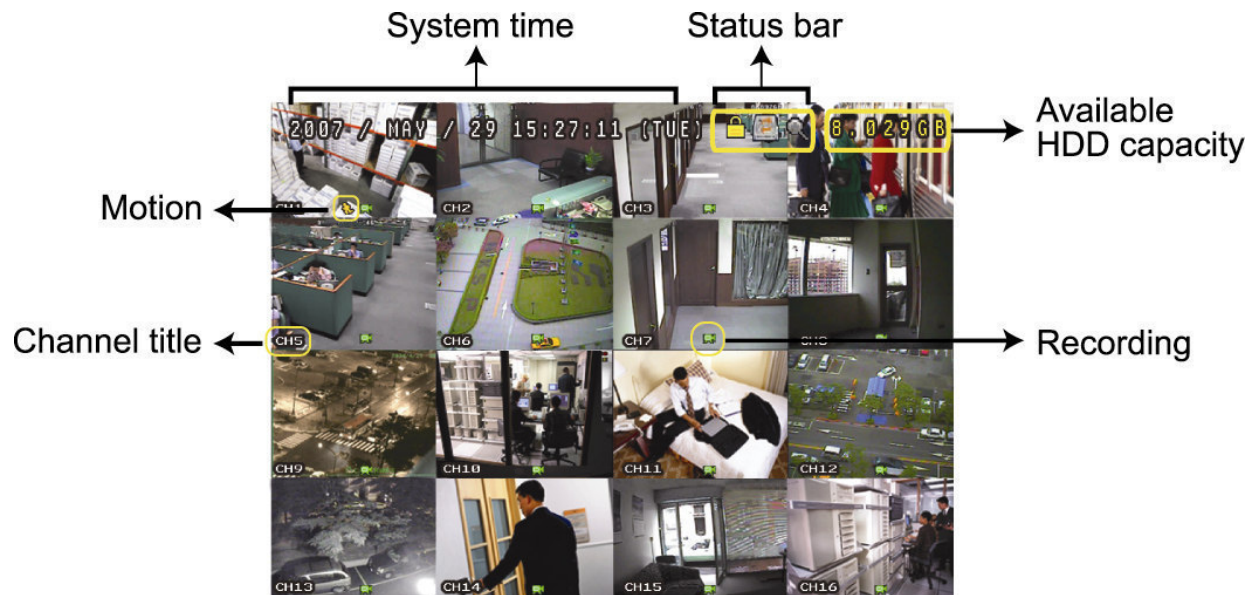
In the "ADVANCE" menu, move to "SYSTEM INFO". Select "PASSWORD" and press "ENTER" to enter the submenu to set the password (four digits).

SYSTEM INFO			
	SERIAL TYPE		RS485
	BAUD RATE		2400
	HOST ID		0
	PASSWORD		XXXX
	RESET DEFAULT		RESET
	CLEAR HDD		HDD-MASTER-1
	UPGRADE		START
	R.E.T.R. (MIN)		05
	AUTO KEYLOCK (SEC)		NEVER
	LANGUAGE		ENGLISH
	VIDEO FORMAT		PAL
	VERSION		1083-1028-1009-1013-02-0000
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING			
↑↓ SELECT ← BACK → NEXT ↵ ENTER			

4. BASIC OPERATION

4.1 Live Page

In this live page of the DVR, you can see the live viewing of 1- / 4- / 9- / 16-cut screen.



Icon	Function	Icon	Function	Icon	Function	Icon	Function
	Key lock		Key unlock		1 st live audio channel		2 nd live audio channel
	3 rd live audio channel		4 th live audio channel		1 st playback audio channel		2 nd playback audio channel
	3 rd playback audio channel		4 th playback audio channel		Audio channel unselected		Digital zoom mode
	Digital zoom unselected		Timer recording		Motion		Recording
	Alarm		HDD overwrite		R.E.T.R. ON		R.E.T.R. Delay

4.2 Recording

When the HDD overwrite function is activated, this device will overwrite 8GB data from the oldest for continuous recording without notice.

1) Continuous Recording Icon

When the DVR is properly connected with camera, you can see the icon “” (recording) on the screen.

2) Event Recording Icon

When the motion / alarm detection is activated, once motion or external alarm happens, you will see the icon “” (motion) or “” (external alarm) on the screen.


3) Timer Recording Icon

When the timer record is activated, you will see the icon “” (timer) on the screen.

Note: The audio source connected to the “Audio 1” will be recorded with the video of the “CH1”.
 The audio source connected to the “Audio 2” will be recorded with the video of the “CH2”.
 The audio source connected to the “Audio 3” will be recorded with the video of the “CH3”.
 The audio source connected to the “Audio 4” will be recorded with the video of the “CH4”

Note: A new log will be added in the system log when the HDD data is overwritten or the recording starts after DVR reboots.

4) HDD Overwritten Icon

The HDD overwritten function can be set to ON / OFF. When this function is enabled (ON), the  icon will display on the monitor screen.

4.3 Playback

Press “PLAY” on the DVR control panel, and the device will playback the latest recorded video.

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.

Note: The playback at the local site might not be so smooth if there’s any remote surveillance simultaneously going on.

1) Fast Forward / Fast Rewind

You can increase the speed for fast forward and rewind on this device. In the playback mode:

Press “FF” once to get 4X speed forward and press twice to get 8X speed, etc. And the maximum speed is 32X.

Press “REW” once to get 4X speed rewind and press twice to get 8X speed, etc. And the maximum speed is 32X.

Note: During playback, the image size of the recording (Frame, FIELD or CIF) will be shown on the screen.

2) Pause / Image Jog

Press “PAUSE” to pause the playback.

In the Pause mode:

Press “FF” once to get one frame forward.

Press “REW” once to get one frame rewind.

3) Stop



Press “STOP” under playback mode, and the screen will return to live monitoring mode.

4) Slow Playback

Press “SLOW” to get 1/4X speed playback and press twice to get 1/8X speed playback.

5) Audio Playback (SLOW + ZOOM)

Use “SLOW” + “ZOOM” to select the live or playback sound of the audio channels.

	Live audio of the 1st audio channel		Playback audio of the 1st audio channel
	Live audio of the 2nd audio channel		Playback audio of the 2nd audio channel
	Live audio of the 3rd audio channel		Playback audio of the 3rd audio channel
	Live audio of the 4th audio channel		Playback audio of the 4th audio channel
	The audio channel is not selected.		

Note: If you want to make a video backup with audio, please connect audio cameras to the channels which support the audio function (CH1, CH2, CH3 and CH4).

4.4 Key Lock and Unlock

1) Key Lock On

Press “MENU” + “ENTER” on the DVR front panel to lock keys.

Or set the time-out after which the key lock function is activated (Never / 10 SEC / 30 SEC / 60 SEC). Please refer to “7.2 System Info” at page 30.

2) Key Lock Off

Enter the DVR password to exit “Key Lock” mode.

Note: For the password setting, please refer to “3.5 Password Setting” at page 12.

4.5 Upgrade


• Firmware / Multilanguage OSD Upgrade

1) Use USB to upgrade firmware or OSD

Step 1. Format the USB memory device as FAT 32 format first.

Step 2. Get the upgrade files from your distributor, and save the upgrade files in your USB flash device (do not change the file name).



Step 3. Insert your USB flash drive into the USB port. Wait till the DVR detects your USB flash drive.

Step 4. Press “MENU”, and move to “ADVANCE” →  (SYSTEM INFO). Select “UPGRADE” → “START”, and press “ENTER”.

Step 5. Select “YES”, and press “ENTER” to confirm the upgrade.

2) Use AP software to remotely upgrade firmware or OSD

Step 1. Save the upgrade files at your PC (do not change the file name), and log into the Video Viewer.

Step 2. Click  (Miscellaneous Control) to show the miscellaneous control panel. In the miscellaneous control panel, click  (Tools) on the miscellaneous control panel to enter the upgrade window.

Step 3. Enter the user name, password, IP address and port number of the DVR.

Step 4. Click “Firmware” or “Language” tab as needed, and click “Add” to select the firmware or OSD files to upgrade.

Step 5. Click “Update Firmware” or “Update Language” button to start the upgrade.


Note: For remote upgrade details, please see “Tools” at page 55.

4.6 Search

1) Search by List









Press “LIST” on the DVR control panel to show the list for all types of the recorded files. Choose the item you want to view, and press “ENTER” to start playback.

2) Search by Time

In the  (EVENT INFO) menu list, move to “QUICK SEARCH”, and press “ENTER” to enter the quick search menu. You can search any specific events by time (Year / Month / Day / Hour / Min) and directly play the file you find.

5. MAIN MENU

5.1 Menu Configuration

QUICK START MENU		STATUS	CHANNEL TITLE	
			EVENT STATUS	
			DATE DISPLAY	
		RECORD	IMAGE SIZE	
			QUALITY	
			IMAGE PER SECOND	
		TIMER	RECORD TIMER	
			DETECTION TIMER	
		DATE	DATE	
			FORMAT	
			DAYLIGHT SAVING	
	ADVANCED MENU		ADVANCE CONFIG	CAMERA
DETECTION				
ALERT				
NETWORK				
SNTP				
DISPLAY				
RECORD				
REMOTE				
		SYSTEM CONFIG	SERIAL TYPE	
			BAUD RATE	
			HOST ID	
			PASSWORD	
			RESET DEFAULT	
			CLEAR HDD	
			UPGRADE	
			R.E.T.R. (MIN)	
			AUTO KEYLOCK (SEC)	
			LANGUAGE	
		EVENT LOG	VIDEO FORMAT	
			VERSION	
			QUICK SEARCH	
			EVENT SEARCH	
		BACKUP	HDD INFO	
			EVENT LOG	
			USB BACKUP	
				DISK BACKUP <i>(Selected Models Only)</i>

5.2 Menu Operation Instruction


ITEM	FUNCTION
QUICK START MENU:	View & change the settings of the quick start menu items.
MENU	Enter / exit the quick start menu
▲ ▼	Make the selection / Change the setting
◀ ▶	Go to the upper layer or sub-layer / Make the selection
ENTER	Confirm the password entering
▼ ADVANCED MENU:	In the quick start menu, move to “▼”, and press “▼” to enter the advanced setting menu.
ENTER	Go to the sub-layer of the advanced menu
MENU	Under the sub-layer of the advanced setting menu, use this button to confirm the settings and go back to the upper layer.
→ NEXT	Move to this item and press ENTER to go the next page.
← BACK	Move to this item and press ENTER to go the previous page.
	Other operations in the advanced menu are the same as in the quick start menu.






6. QUICK START MENU

Press MENU” and enter the password to go to the quick-start menu list. The default admin password is 0000. Users can change the password later. Please refer to the section “7.2 System Info” at page 30.

6.1 Status

In this menu list, you can check and change some display settings.

Move to , and you will see the following screen:


QUICK START			
	CHANNEL TITLE		ON
	EVENT STATUS		ON
	DATE DISPLAY		ON
	IMAGE SIZE		CIF
	QUALITY		BEST
	IMAGE PER SECOND		100
	RECORD TIMER		OFF
	DETECTION TIMER		OFF
	DATE	2008 / APR / 24	10 : 20 : 24
	FORMAT		Y / M / D
	DAYLIGHT SAVING		OFF
	ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER		






The submenu items are described below:

- 1) CHANNEL TITLE
Select to display the channel title or not (ON / OFF).
- 2) EVENT STATUS
Select to display the symbols of the event or not (ON / OFF).
- 3) DATE DISPLAY
Select to display the date or not (ON / OFF).

6.2 Manual Record

In this menu list, you can set record settings.

Move to , and you will see the following screen:

QUICK START			
	CHANNEL TITLE EVENT STATUS DATE DISPLAY		ON ON ON
	IMAGE SIZE QUALITY IMAGE PER SECOND		CIF BEST 100
	RECORD TIMER DETECTION TIMER		OFF OFF
	DATE FORMAT DAYLIGHT SAVING	2008 / APR / 24	10 : 29 : 00 Y / M / D OFF
	ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER		

The submenu items are described below:

1) IMAGE SIZE

Select one of the image sizes: FRAME, FIELD or CIF.

2) QUALITY

Select one of the 4 quality options: SUPER BEST, BEST, HIGH and NORMAL.

3) IMAGE PER SECOND

Select the images per second for MANUAL RECORD.


Take 16CH model as an example:






NTSC	IPS	PAL	IPS
FRAME	15, 30, 60, 120	FRAME	12, 25, 50, 100
FIELD	30, 60, 120, 240	FIELD	25, 50, 100, 200
CIF	60, 120, 240, 480	CIF	50, 100, 200, 400

Note: For different model's actual recording IPS, please see "1.3 Specifications" at page 2.

6.3 Timer

In this menu list, you can schedule different sets of time for recording and detection function.



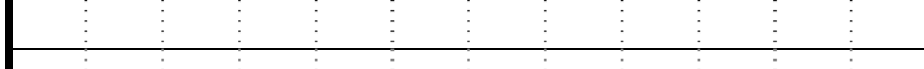
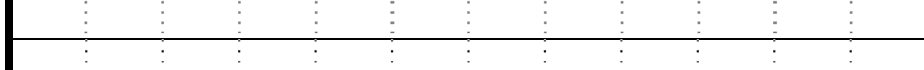
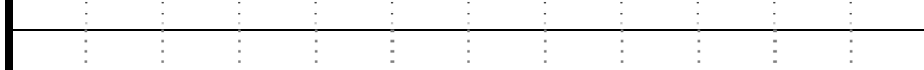


Move to , and you will see the following screen:

QUICK START			
	CHANNEL TITLE		ON
	EVENT STATUS		ON
	DATE DISPLAY		ON
	IMAGE SIZE		CIF
	QUALITY		BEST
	IMAGE PER SECOND		100
	RECORD TIMER		OFF
	DETECTION TIMER		OFF
	DATE	2008 / APR / 24	10 : 29 : 00
	FORMAT		Y / M / D
	DAYLIGHT SAVING		OFF
 ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER			

The submenu items are described below:

1) RECORD TIMER

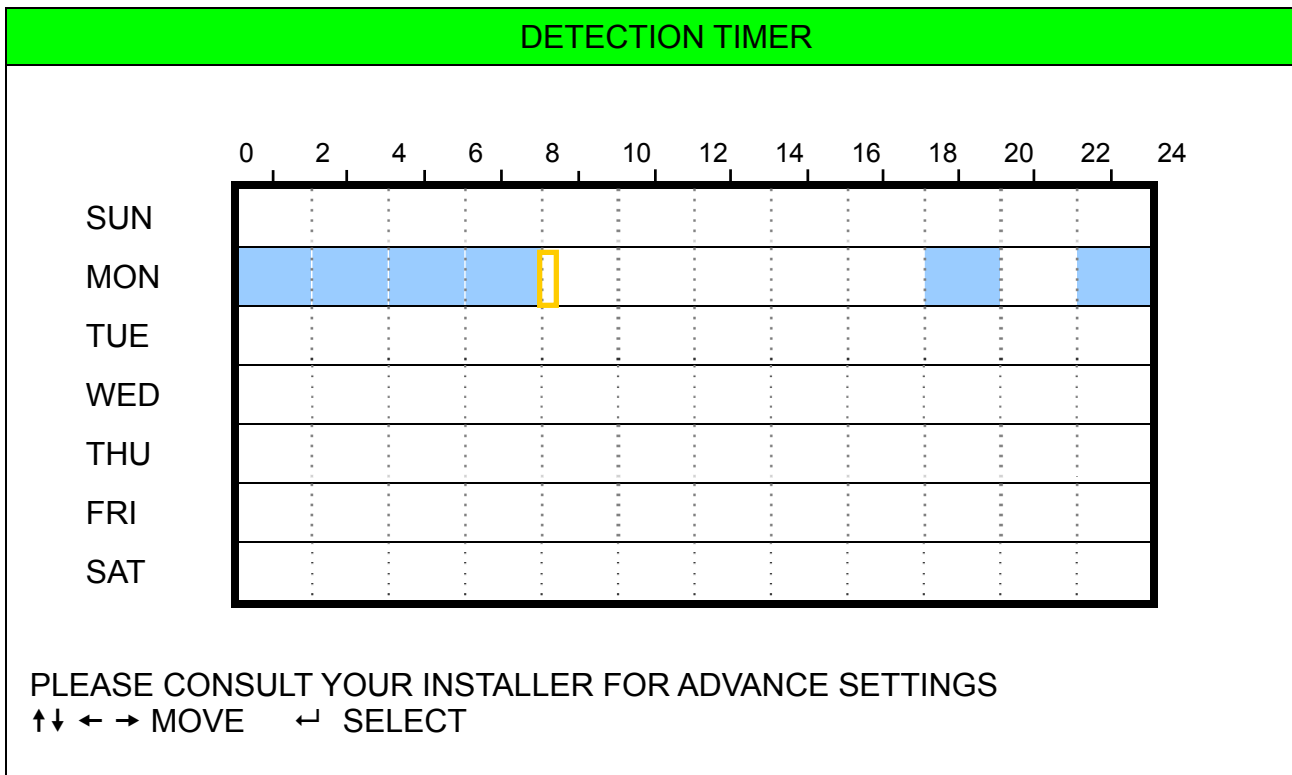
Use ▲ / ▼ to change the setting (ON / OFF). When it's set to "ON", press "ENTER" to go to its submenu for further settings.

RECORD TIMER	
	0 2 4 6 8 10 12 14 16 18 20 22 24
SUN	
MON	
TUE	
WED	
THU	
FRI	
SAT	
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTINGS	
↑↓ ← → MOVE ↵ SELECT	

- X axis** 0 ~ 24 hours. Each time interval within a square is two hours (divided into four 30-minutes).
- Y axis** Monday ~ Sunday.
- Operation** Move to the start time point, and press enter to set the start time point (marked in red color). Then, press ▲ / ▼ / ◀ / ▶ to set the timer-recording schedule. After setup, press "ENTER" again to create an ending time point (marked in yellow color) and press "MENU" to exit.

2) DETECTION TIMER

Use ▲ / ▼ to change the setting (ON / OFF). When it's set to "ON", press "ENTER" to go to its submenu for further settings.



X axis 0 ~ 24 hours. Each time interval within a square is two hours (divided into four 30-minutes).

Y axis Monday ~ Sunday.

Operation Move to the start time point, and press enter to set the start time point (marked in red color). Then, press ▲ / ▼ / ◀ / ▶ to set the timer-recording schedule. After setup, press "ENTER" again to create an ending time point (marked in yellow color) and press "MENU" to exit.


Note: This function here is only for event record timer setup and activation. For motion detection function setup and activation, please refer to section "7.1.2 Detection" at page 23.






6.4 Date

In this menu list, you can set up the system date and time for this device.

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.

Note: For the first time to use the DVR, please charge the DVR for at least 48 hours continuously after the date & time is set correctly.

Press "MENU" to enter the main menu list. Move to , and you will see the following screen:

QUICK START		
	CHANNEL TITLE EVENT STATUS DATE DISPLAY	ON ON ON
	IMAGE SIZE QUALITY IMAGE PER SECOND	CIF BEST 100
	RECORD TIMER DETECTION TIMER	OFF OFF
	DATE FORMAT DAYLIGHT SAVING	2008 / APR / 23 11 : 20 : 45 Y / M / D OFF
 ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER		

The submenu items are described below:

- 1) DATE
Set the current date and time. The default order is "YEAR – MONTH – DATE HOUR : MIN : SEC".
- 2) FORMAT
Select one date format from the following 3 options: Y-M-D, M-D-Y, D-M-Y.
- 3) DAYLIGHT SAVING
Use the ▲ / ▼ to specify whether to use daylight-saving time (ON / OFF). When it's set to "ON", press "ENTER" to go to its submenu for further settings.

DAYLIGHT SAVING		
START TIME	4TH - SUN - MAR	24 : 00 : 00
END TIME	4TH - SUN - OCT	24 : 00 : 00
ADJUST		01 : 00
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING		
↑↓ SELECT ← BACK → NEXT ↵ ENTER		

Set the start time and end time, and adjust the daylight saving time in hour. The above example means during the daylight-saving time period (starting from the 4th Sunday of March and ending on the 4th Sunday of October), the system time will plus one hour. After setup, press "ENTER" again to create an ending time point and press "MENU" to exit.

7. ADVANCED MENU


Note: The following menu display takes 16CH DVR as an example, and some display may differ from the actual display when users are using a 8CH or 4CH DVR.

Press “MENU” and enter the password to go to the quick-start menu list. Then, move to “ADVANCE” to enter the advanced setting menu. The default admin password is 0000. Users can change the password later. Please refer to the section “7.2 System Info” at page 30.





It is recommended that consult your installer to setup this advanced menu.

7.1 Advanced Configuration

In this menu list, you can check or change CAMERA / DETECTION / ALERT / NETWORK / SNTP / DISPLAY / RECORD / REMOTE settings.

Move to , and you will see the following screen:

ADVANCE CONFIG

   	CAMERA DETECTION ALERT NETWORK SNTP DISPLAY RECORD REMOTE
--	--

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
 ↑↓ SELECT ← BACK → NEXT ↵ ENTER

7.1.1 Camera

In this submenu, you can make advanced camera settings, such as changing the camera title, or adjust the brightness. Move to “CAMERA”, and press “ENTER”. You will see the following screen:

CAMERA

TITLE	BRIG	CONT	SATU	HUE	COV.	REC
CH1	128	098	128	128	OFF	ON
CH2	128	098	128	128	OFF	ON
CH3	128	098	128	128	OFF	ON
CH4	128	098	128	128	OFF	ON
CH5	128	098	128	128	OFF	ON
CH6	128	098	128	128	OFF	ON
CH7	128	098	128	128	OFF	ON
CH8	128	098	128	128	OFF	ON
CH9	128	098	128	128	OFF	ON
CH10	128	098	128	128	OFF	ON
NEXT						

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
 ↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below. While you changing the camera setting, you can **preview** the changing on the screen.

1) TITLE

You can change the default camera naming here. The default title is the channel number.

Move to the camera title you want to change, and press “ENTER” on the control panel of the DVR to access the character selection screen. Assign a new name to the camera up to six characters (letters or symbols or numbers).


2) BRIG / CONT / SATU / HUE

You can adjust the brightness/contrast/saturation/hue of each channel here. The default value of CONT is 098, and others are 128. The value is adjustable from 0 to 255.

3) COV

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

4) REC

Select if you want to enable recording for the selected channel (ON / OFF). When this function is activated, the symbol “” will be shown on the channel screen.

7.1.2 Detection

In this submenu, you can set up detection-related functions.

Move to “DETECTION”, and press “ENTER”. You will see the following screen:

DETECTION							
TITLE	DET	AREA	LS	SS	TS	RE	ALARM
CH1	OFF	SETUP	07	03	02	10	OFF
CH2	OFF	SETUP	07	03	02	10	OFF
CH3	OFF	SETUP	07	03	02	10	OFF
CH4	OFF	SETUP	07	03	02	10	OFF
CH5	OFF	SETUP	07	03	02	10	OFF
CH6	OFF	SETUP	07	03	02	10	OFF
CH7	OFF	SETUP	07	03	02	10	OFF
CH8	OFF	SETUP	07	03	02	10	OFF
CH9	OFF	SETUP	07	03	02	10	OFF
CH10	OFF	SETUP	07	03	02	10	OFF
NEXT							

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
 ↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) TITLE

Show the camera title of each channel set in “CAMERA”.

2) DET

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

3) 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.

Press “ENTER” on the control panel of the DVR to set the detection area. You will see similar screens as the following:



Transparent blocks are the area under detection.



Press "ENTER" to confirm the start area.



Press ◀ / ▶ to choose the width of the area



Press ▲ / ▼ to choose the height of the area.



You can also set up multi-detection



When the motion is triggered, you will grids are flashing.

4) 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.

5) 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.

6) 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.

7) RE (Reference)

"RE" is to set a reference for detection. The default value is 10, which means the DVR will compare 10 continuous images at one time according to the sensitivity of LS, SS, TS simultaneously.

The bigger the value is, the higher sensitivity for motion detection. The highest sensitivity is 61.

8) ALARM

Select N.C./ N.O. for the alarm polarity. The default alarm value is OFF.

7.1.3 Alert

In this menu list, you can set alerts for different kinds of situations, such as when HDD is full. Move to "ALERT", and press "ENTER". You will see the following screen:

ALERT	
EXT. ALERT	ON
INT. BUZZER	ON
KEY BUZZER	ON
VLOSS BUZZER	ON
MOTION BUZZER	ON
ALARM BUZZER	ON
HDD BUZZER	ON
ALARM DURATION (SEC)	05
HDD NEARLY FULL (GB)	05
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

The submenu items are described below:

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 the internal buzzers: KEY BUZZER, VLOSS BUZZER, MOTION BUZZER, and ALARM BUZZER.

Note: When this item is set to OFF, item 3) to item 6) will be disabled even though they are set to ON.

3) KEY BUZZER

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

4) VLOSS BUZZER

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

5) MOTION BUZZER

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

6) ALARM BUZZER

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

7) HDD BUZZER

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

8) ALARM DURATION (SEC)

Press ▲ / ▼ to set the duration time of alarm recording in second (5 / 10 / 20 / 40).

9) HDD NEARLY FULL (GB)

If HDD BUZZER is enabled, press ▲ / ▼ to have a buzzer notification when the HDD available capacity is 5/10/15/20 GB left.

7.1.4 Network

In this menu list, you can set up the network.

Move to "NETWORK", and press "ENTER" to enter the submenu. You will see the following screen:

NETWORK	
NETWORK TYPE	STATIC
IP	192 . 168 . 001 . 080
GATEWAY	192 . 168 . 001 . 080
NETMASK	255 . 255 . 255 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

The submenu items are described below:

- **STATIC**

- 1) NETWORK TYPE

Select the network type as STATIC and set all the information needed in the DVR.

- 2) NETWORK INFORMATION (IP / GATEWAY / NETMASK)

Key in all the network information obtained from your ISP (Internet Service Provider).

- 3) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

- 4) PORT

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

STATIC	
NETWORK TYPE	STATIC
IP	192 . 168 . 001 . 080
GATEWAY	192 . 168 . 001 . 080
NETMASK	255 . 255 . 255 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

- **PPPOE**

- 1) NETWORK TYPE

Select the network type as PPPOE.

- 2) USER NAME / PASSWORD

Set "username" and "password" subscribed from your ISP supplier

- 3) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

- 4) PORT

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

PPPOE	
NETWORK TYPE	PPPOE
USER NAME	ac123456
PASSWORD	tech123456
IP	000 . 000 . 000 . 000
GATEWAY	000 . 000 . 000 . 000
NETMASK	000 . 000 . 000 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

Note: The PPPOE function needs to have one "username" and one "password" subscribed from one ISP supplier and a "DDNS account" to transforming the dynamic IP corresponding to a specific "Hostname".

For detailed PPPOE settings, please refer to "Network" at page 48.

For detailed DDNS settings, please refer to "DDNS" at page 49.

• **DHCP**

1) NETWORK TYPE

Select the network type as DHCP.

2) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

3) PORT

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

DHCP	
NETWORK TYPE	DHCP
IP	000 . 000 . 000 . 000
GATEWAY	000 . 000 . 000 . 000
NETMASK	000 . 000 . 000 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

Note: This DHCP function needs to be supported by a router or a cable modem network with DHCP services and a "DDNS account" to transforming the dynamic IP corresponding to a specific "Hostname".

For detailed DHCP settings, please refer to "Network" at page 48.

For detailed DDNS settings, please refer to "DDNS" at page 49.

7.1.5 SNTP

In this menu list, you can set to synchronize your DVR time with the networked computer systems.

Note: Before using this function, please connect your DVR to Internet.

Move to "SNTP", and press "ENTER" to enter the submenu. You will see the following screen:

DISPLAY	
GMT	(GMT+08:00) TAIPEI
NTP SERVER	tock.stdtime.gov.tw
SYNC PERIOD	DAILY
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

- 1) GMT
Select your time zone. There are 75 time zones for you to choose.
- 2) NTP SERVER
Users can change the default NTP server to another server they're familiar with.
- 3) SYNC PERIOD
Select to synchronize the DVR time everyday (DAILY), or turn this function off (OFF).

7.1.6 Display

In this menu list, you can set up the settings of display.

Move to "DISPLAY", and press "ENTER" to enter the submenu. You will the following screen:

DISPLAY	
DE-INTERLACE	ON
QUAD DWELL DURATION (SEC) <i>(Selected Models Only)</i>	03
FULL SCREEN DWELL DURATION (SEC)	03
VGA OUTPUT	1024 x 768
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

The submenu items are described below:

- 1) DE-INTERLACE
Select to enable or disable the de-interlace function (ON / OFF).

Note: If you set the recording image size as "FRAME", please TURN ON de-interlace function.

If you set the recording image size as "CIF", please TURN OFF the de-interlace function.

- 2) QUAD DWELL DURATION (SEC) *(Selected Models Only)*
Set the quad dwell duration time (3 / 5 / 10 / 15 seconds).
- 3) FULL SCREEN DWELL DURATION (SEC)
Set the full screen dwell duration time (3 / 5 / 10 / 15 seconds).
- 4) VGA OUTPUT
Select the VGA output resolution. There are seven options for your choice:
800 x 600 / 1024 x 768 (default) / 1280 x 1024 / 1440 x 900 / 1400 x 1050 / 1680 x 1050 / 1600 x 1200

Note: To have the best image quality on your LCD monitor, make sure (1) the selected DVR VGA output resolution is supported by your monitor, and (2) the VGA 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 LCD monitor.

7.1.7 Record

In this menu list, you can set up the settings of display.

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.

Move to “DISPLAY”, and press “ENTER” to enter the submenu. You will the following screen:

RECORD	
MANUAL RECORD ENABLE	ON
EVENT RECORD ENABLE	ON
TIMER RECORD ENABLE	ON
EVENT RECORD IPS	100
TIMER RECORD IPS	100
PRE-ALARM RECORD	ON
OVERWRITE	ON
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

The submenu items are described below:

1) MANUAL RECORD ENABLE

Set the manual recording function on / off.

2) EVENT RECORD ENABLE

Set the event recording function on / off.

3) TIMER RECORD ENABLE

Set the timer recording function on / off.

4) EVENT RECORD IPS

Select the images per second for EVENT RECORD (Recording that is triggered by alarm or motion).

Take 16CH model as an example:

NTSC	IPS	PAL	IPS
FRAME	15, 30, 60, 120	FRAME	12, 25, 50, 100
FIELD	30, 60, 120, 240	FIELD	25, 50, 100, 200
CIF	60, 120, 240, 480	CIF	50, 100, 200, 400

Note: For different model’s actual recording IPS, please see “1.3 Specifications” at page 2.

5) TIMER RECORD IPS

Select the images per second for TIMER RECORD (Recording that is activated according to the scheduled time).

Take 16CH model as an example:

NTSC	IPS	PAL	IPS
FRAME	15, 30, 60, 120	FRAME	12, 25, 50, 100
FIELD	30, 60, 120, 240	FIELD	25, 50, 100, 200
CIF	60, 120, 240, 480	CIF	50, 100, 200, 400

Note: For different model's actual recording IPS, please see "1.3 Specifications" at page 2.

6) 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 any alarm / motion is triggered.

7) OVERWRITE

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

7.1.8 Remote

In this menu list, you can set up remote devices to work properly.
Move to "REMOTE", and press "ENTER". You will see the following screen:

REMOTE				
TITLE	DEVICE	ID	PROTOCOL	RATE
CH1	PTZ	000	NORMAL	2400
CH2	CAMERA	000	NORMAL	2400
CH3	CAMERA	000	NORMAL	2400
CH4	CAMERA	000	NORMAL	2400
CH5	CAMERA	000	NORMAL	2400
CH6	CAMERA	000	NORMAL	2400
CH7	CAMERA	000	NORMAL	2400
CH8	CAMERA	000	NORMAL	2400
CH9	CAMERA	000	NORMAL	2400
CH10	CAMERA	000	NORMAL	2400
NEXT				
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING				
↑↓ SELECT ← BACK → NEXT ↵ ENTER				

The submenu items are described below:

1) TITLE

Show the camera title of each channel set in "CAMERA".

2) DEVICE

Select the device type (CAMERA / PTZ) according to the connected camera for each channel.

3) ID

Set the ID number (0 ~ 255) for a PTZ camera.

After connecting to a PTZ camera correctly, the default ID of the PTZ camera will be shown on the screen.

4) PROTOCOL

Select NORMAL (our protocol), P-D (PELCO-D) or P-P (PELCO-P) protocol.


5) RATE





Set the baud rate of each channel (2400 / 4800 / 9600 / 19200 / 57600 / 115200).

For the connected cameras, such as PTZ and speed dome cameras, etc., please make sure their baud rate setting is the same as the setting here.

7.2 System Info

In this menu list, you can check or change some system settings.

Move to , and you will see a similar screen as the following:

SYSTEM INFO		
	SERIAL TYPE	RS485
	BAUD RATE	2400
	HOST ID	0
	PASSWORD	XXXX
	RESET DEFAULT	RESET
	CLEAR HDD	HDD-EXT-252
	UPGRADE	START
	R.E.T.R. (MIN)	05
	AUTO KEYLOCK (SEC)	NEVER
	LANGUAGE	ENGLISH
	VIDEO FORMAT	PAL
	VERSION	1083-1028-1009-1013-02-0000
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING		
↑↓ SELECT ← BACK → NEXT ↵ ENTER		

The submenu items are described below:

1) SERIAL TYPE

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

2) BAUD RATE

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

3) HOST ID

Set the ID of the DVR (0 ~ 254).

4) PASSWORD

Reset the password for accessing the DVR system. You can set the password up to 4 digits.

5) RESET DEFAULT

Press "ENTER" to reset all settings as default, and select "YES" to confirm or "NO" to cancel.

6) CLEAR HDD

Select the HDD. Press "ENTER" and select "YES" to confirm to clear HDD or "NO" to cancel.

7) UPGRADE (For upgrading firmware / OSD)

Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first.

Save the upgrade file in a compatible USB flash drive, and insert it into the USB port at the front panel.

Then, press "ENTER" and select "YES" to confirm upgrade or "NO" to cancel.



Note: For the list of compatible USB flash drives, please refer to "APPENDIX 2 RECORDING TIME TABLE" at page 67.

8) R.E.T.R. (MIN)

Select the timeout after which the R.E.T.R. function will be activated (03 / 05 / 10 / 30).

• **R.E.T.R. On**

Press the R.E.T.R. key on the IR remote controller to enable the timeout function. Key in the password, and the

R.E.T.R. delay icon "" (in green background) will be shown on the screen. When the RETR function is activated, the R.E.T.R. on icon "" (in red background) will be shown on the screen.

• **R.E.T.R. Off**

Press any key (except "POWER") and enter the password to turn off the RETR function.

9) AUTO KEYLOCK

Set the time-out in second after which the key lock function is activated (Never / 10 / 30 / 60).

10) LANGUAGE (Multilingual OSD)

Select the language of the OSD.

11) VIDEO FORMAT

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

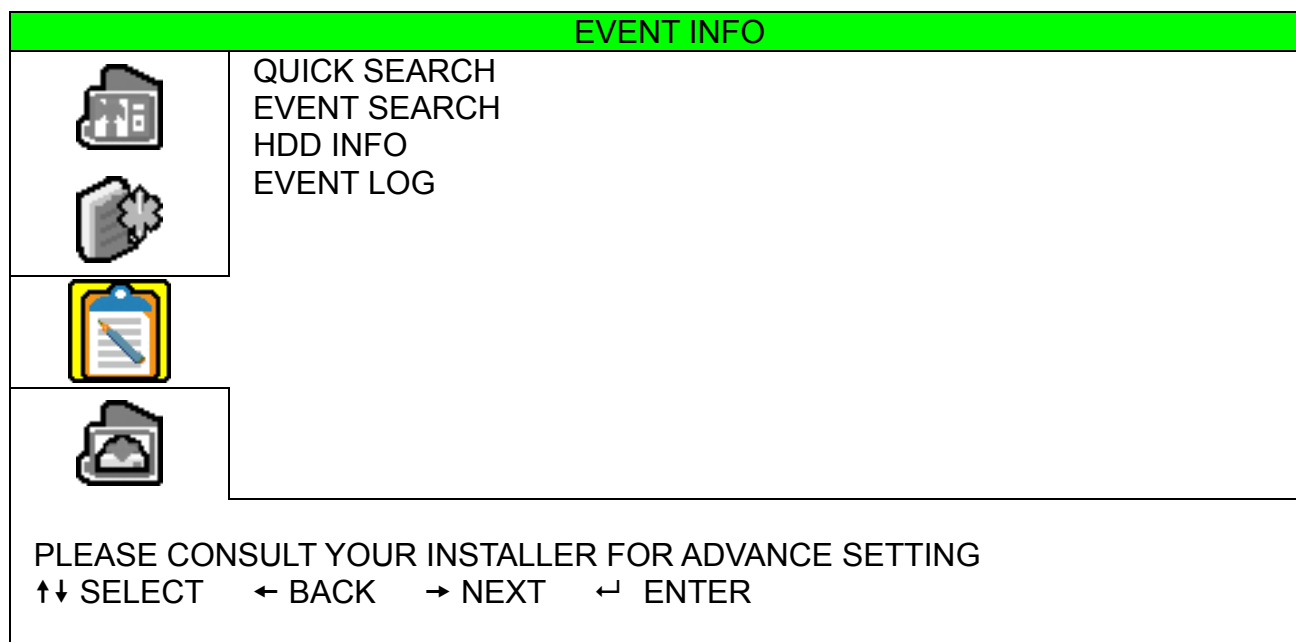
12) VERSION

Here shows the firmware version information

7.3 Event Info

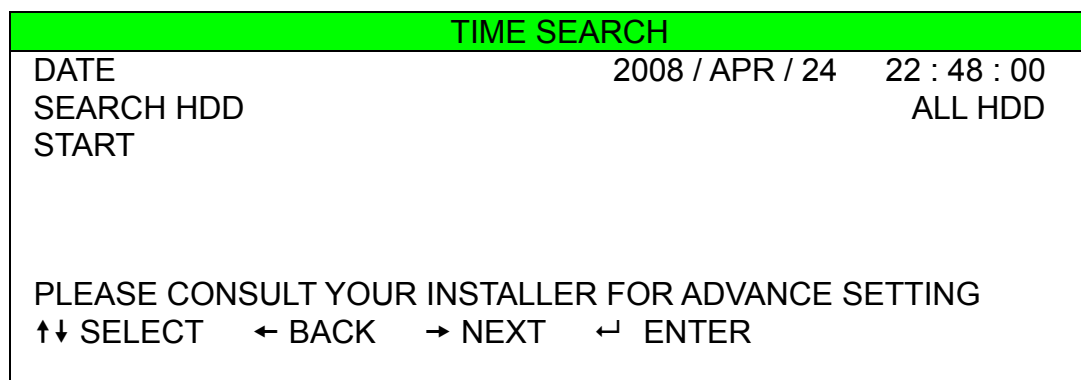
In this menu list, you can quickly search the recorded file by time or event, and check all the HDD and event information (event type, time and channel).

Move to , and press "ENTER". You will see the following screen:



7.3.1 Quick Search

In this menu list, you can search any specific events by time and directly play the file you find. Move to "QUICK SEARCH", and press "ENTER". You will see a similar screen as the following:



The submenu items are described below:

1) DATE

Select the specific time period (YEAR / MONTH / DAY / HOUR / MIN) that you want to search.

2) SEARCH HDD

Change to the HDD you want to search if there are more than one HDD in your DVR by pressing ▲ / ▼.

3) START

Move to "START" and press "ENTER" to search and directly playback the recorded files.

7.3.2 Event Search

Move to "EVENT SEARCH", and press "ENTER". You will see the following screen:

EVENT SEARCH			
DATE	2008 / JUN / 17	22 : 48 : 00	
CHANNEL		01	
EVENT		MOTION	
SEARCH HDD		ALL HDD	
START			
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING			
↑↓ SELECT ← BACK → NEXT ↵ ENTER			

The submenu items are described below:

- 1) DATE
Set the date and time you want to search for events.
- 2) CHANNEL
Press ▲ / ▼ to select the channel.
- 3) EVENT
Select the event type: MOTION or ALARM.
- 4) SEARCH
Change to the HDD you want to search if there are more than one HDD in your DVR by pressing ▲ / ▼.
- 5) START
Move to "START" and press "ENTER" to search and directly playback the recorded files.

7.3.3 HDD Info

In this menu list, you can view the remaining capacity of all the connected HDDs in this device.

Move to "HDD INFO", and press "ENTER". You will see a similar screen as the following:

HDD INFO			
HDD NUM	HDD SIZE (GB)	HDD NUM	HDD SIZE (GB)
HDD-MASTER-1	233	HDD-SLAVE-1	NO HDD
HDD-MASTER-2	NO HDD	DISK-RW	NO DISK
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING			
↑↓ SELECT ← BACK → NEXT ↵ ENTER			

7.3.4 Event Log

In this menu list, you can view all the event information (event type, time and channel) or clear all log records. Move to “EVENT LOG”, and press “ENTER”. You will see a similar screen as the following:

EVENT LOG		
EVENT	TIME	COMMENT
NET LOGIN	2008 / APR / 24 10:36:50	
NET LOGIN	2008 / APR / 24 10:33:12	
NET LOGIN	2008 / APR / 24 10:28:15	
KEY UNLOCK	2008 / APR / 24 10:27:14	
VLOSS	2008 / APR / 24 10:23:34	04
VLOSS	2008 / APR / 24 10:23:34	03
VLOSS	2008 / APR / 24 10:23:34	02
VLOSS	2008 / APR / 24 10:23:34	01
POWER ON	2008 / APR / 24 10:23:30	
KEY UNLOCK	2008 / APR / 23 14:37:30	
PREV	NEXT	CLEAN
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING		
↑↓ SELECT ← BACK → NEXT ↵ ENTER		





7.4 Backup

In this menu list, you can choose to make a copy for a specified period time to a compatible USB flash drive for your own purpose.

The backup file can be played directly in your PC via the supplied licensed software “Video Viewer” or Internet Explorer browser. For detailed Video Viewer playback, please refer to the section “Playback Screen” at page 58.



Move to , and press “ENTER”. You will the following screen:

BACKUP	
   	USB BACKUP DISK BACKUP <i>(Selected Models Only)</i>
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING ↑↓ SELECT ← BACK → NEXT ↵ ENTER	

7.4.1 USB BACKUP

Before making USB backup, please check if:

- a) The USB flash drive is supported by your DVR. If not, the message "USB ERROR" will be shown on the screen.
For the list of the compatible USB flash drives, please refer to "APPENDIX 3 COMPATIBLE USB FLASH DRIVE BRAND" at page 68.
- b) The format of your USB flash drive must be "FAT 32". If not, please format it to "FAT 32" in your PC.
- c) There is no data in the USB flash drive. If yes, it's recommended to clear all data in the USB flash drive before starting the backup.

Note: When USB backup starts, it's not allowed for OSD menu operation or network backup in order to keep the consistency of the video data.

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.

Move to "USB BACKUP", and press "ENTER". You will see a similar screen as the following:

USB BACKUP				
START TIME	2008 / APR / 24		13:00:05	
END TIME	2008 / APR / 24		13:10:05	
AVAILABLE SIZE	1960.0MB			
CHANNEL	<input checked="" type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04
	<input checked="" type="checkbox"/> 05	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08
	<input checked="" type="checkbox"/> 09	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12
	<input checked="" type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
HDD NUM	ALL HDD			
START				
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING				
↑↓ SELECT ← BACK → NEXT ↵ ENTER				

The submenu items are described as below:

- 1) START TIME
Select the start time of the backup.
- 2) END TIME
Select the end time of the backup.
- 3) AVAILABLE SIZE
Display the available capacity in the inserted USB flash drive.
- 4) CHANNEL
Select channels by pressing "ENTER" to change the symbol in front of the channel number.
Symbol " " means that this channel is selected to backup.
Symbol " " means that this channel is not selected to backup.
- 5) HDD NUM
Press "ENTER" to select the HDD containing the data you need.
- 6) START
Press "ENTER" to start copying the chosen data to the USB flash drive.

7.4.2 DISK BACKUP *(Selected Models Only)*

Before making disk backup, please check if the type of your CD or DVD is CD-R or DVD-R. The maximum number of backup files in the CD or DVD is 41.

Note: During the backup process, a file player will also be copied into your disk, and you will see a message "BACKUP PLAYER" shown on the screen.

Move to "DISK BACKUP", and press "ENTER". You will see a similar screen as the following:

DISK BACKUP				
START TIME	2008 / APR / 24		19:00:05	
END TIME	2008 / APR / 24		21:00:05	
AVAILABLE SIZE	3.79 GB			
CHANNEL	<input checked="" type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04
	<input checked="" type="checkbox"/> 05	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08
	<input checked="" type="checkbox"/> 09	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12
	<input checked="" type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16
HDD NUM	ALL HDD			
START				
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTINGS				
↑↓ SELECT ← BACK → NEXT ↵ ENTER				

The submenu items and their functions are almost the same as USB BACKUP. For the description of the submenu items, please refer to the previous page.

The process below describes how to make a disk backup:

- Press "EJECT" to open the disk tray. Put the CD or DVD into the DVD writer, and press "EJECT" again to close the disk tray..
- Go to "DISK BACKUP", and set the start time, end time, channels and HDD.
- Move to "START", and press "ENTER" to start backup.
While disk backup is processing, users will see the backup completed percentage on the screen.
- After disk backup is completed, "BACKUP SUCCESS" will be prompted on the screen. Press "EJECT" to eject the disk tray and get your disk.
- Put the CD or DVD into the DVD-ROM drive of your PC. Install the file player "PLAYER.EXE", and double click any backup file to play it directly in your PC and see if the backup is successful.

Note: The supported PC operation systems are Windows Vista, XP & 2000.

8. REMOTE OPERATION

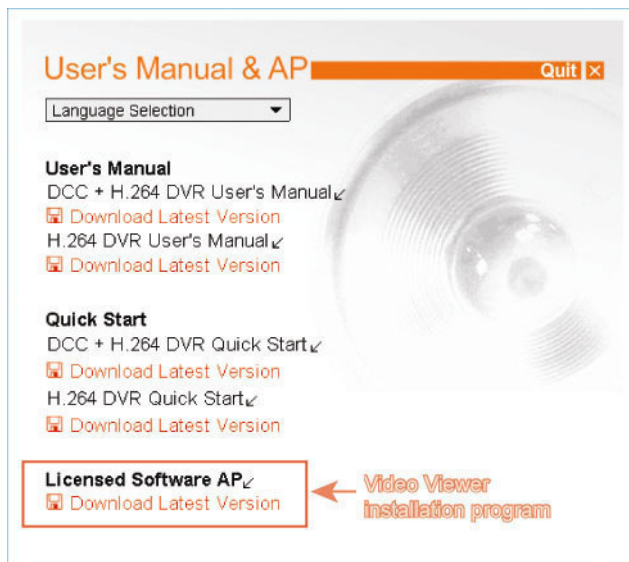
You can also control the DVR remotely via the supplied licensed software “Video Viewer”, Internet Explorer web browser, and Apple’s QuickTime player.

8.1 Supplied Licensed Software


8.1.1 Installation & Network Connection

1) Install the software

Step1: Place the supplied CD into your CD-ROM or DVD-ROM drive. The program will be automatically run.



Step2: Click “Licensed Software AP” to install Video Viewer, or click “Download Latest Version” under “Licensed Software AP” to download the latest version of Video Viewer from the Internet.



Step3: follow the on-screen instructions to finish the installation. When the installation is completed, a shortcut icon  will be placed on your PC desktop.



2) Network Connection

➤ Local Connection (via LAN)




a) Connect the DVR to your PC via a RJ-45 network line. The default DVR IP address is “192.168.1.10”, and the default user name and password are both “admin”.

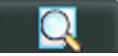
b) Set the PC’s IP address as “192.168.1.XXX ” (1~255, except 10) in order to make the PC and DVR under the same domain.

c) Double-click  icon on your PC desktop to enter the control panel. By defaults, the “Address Book” () panel will be displayed on the right side of the control panel.

d) Click  (Address Book) →  (Add) button to key in the default IP address, user name, password, and port number of the DVR you intend to connect.

OR

Click  (Search) →  (Refresh) to search the available IP address(es) of other DVR(s) under the same domain as your PC’s IP address. The found address(es) will be listed, and can be added into the address book by clicking  (Add into address book).


For details, please see  (Search) at page 42.


e) Double-click the IP address you just added into the address book to log in.

The default DVR values are as follows:

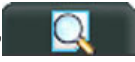


Item	Default Value
IP address	192.168.1.10
User name	admin
Password	admin
Port	80

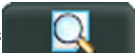
➤ Remote Connection (via Internet)

a) Double-click  icon on your PC desktop to enter the control panel. By defaults, the “Address Book” panel will be displayed on the right side of the control panel.

b) Click  (Address Book) →  (Add) button to key in the IP address, user name, password, and port number of the DVR you intend to connect.


OR

Click  (Search) →  (Refresh) to search the available IP address(es) of other DVR(s) under the same domain as your PC’s IP address. The found address(es) will be listed, and can be added into the address book by clicking  (Add into address book).


For details, please see  (Search) at page 42.









c) Double-click the IP address you just added into the address book to log in. When you’re logged in, the “Event” panel will be shown by defaults.

8.1.2 Control Panel

After setting up the network information, login user name and password, double-click  on the PC desktop to open and log into the control panel. You will see a screen similar to the following with 7 major sections:





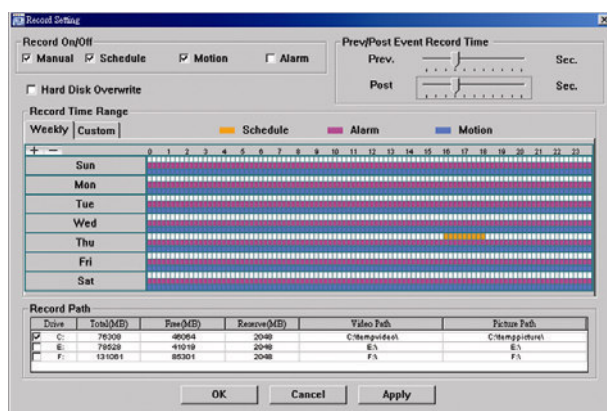
Button	Function	Description
N/A	Image Display	The place where the images are displayed. For details, please see “Image Display” at page 41.
	Address Book	Click this button to show the predefined IP address(es). You can add, remove or search the IP address to log in the DVR remotely.

		Two sub-functions are available for this button: Address Book and Search. For details, please see “Address Book  ” at page 41.
	Miscellaneous Control	Click to show the main operation functions: audio channel selection, manual record enabling, snapshot, record setting, DVR setting, upgrade firmware, and find event logs. For details, please see “Miscellaneous Control  ” at page 42.
	Record On / Off	Click it to start / stop video recording manually.
	Snapshot	Click to take a snapshot of the current view. The snapshot will be saved in the path you specified in “Record Setting”. Please refer to “Record Setting” at page 44 for details.
	Information	Click this button to show the current network connection details. For details, please see “Information  ” at page 58.
	DVR Control	Click this button to go to the DVR control panel to operate the DVR remotely. For details, please see “DVR Control” at page 59.

8.1.3 General Operation


Record

To record remotely at the same time when any event alarm is triggered at the DVR side, click  (Miscellaneous Control) →  (Record Setting) to go to the “Record Setting” page.



In the “Record Setting” page, you can set the following items:



- Record type
- Hard disk overwriting
- Pre- / post-alarm record time
- Record time setting
- Record path

If “Manual” is checked, click  (Record) on the main control panel to start the manual recording immediately, and the recordings will be saved in the specified location.

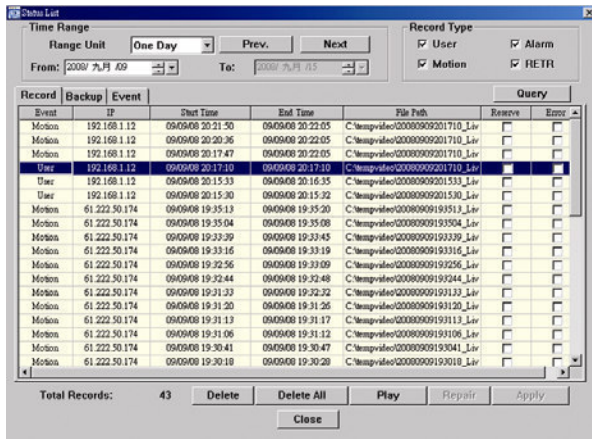
If “Motion” and / or “Alarm” are checked, the recording function will also be enabled at the remote side when any event is triggered at the DVR side, and the recordings will be saved in the specified location.

For details, please see “Record Setting” at page 44.

Playback

To play a recording, click  (Miscellaneous Control) →  (Status List), and select the “Record” tab or “Backup” tab. A list of all the recordings will be shown by defaults, and you can also sort out the logs you want to speed up the search time.

For details, please see “Status List” at page 57.





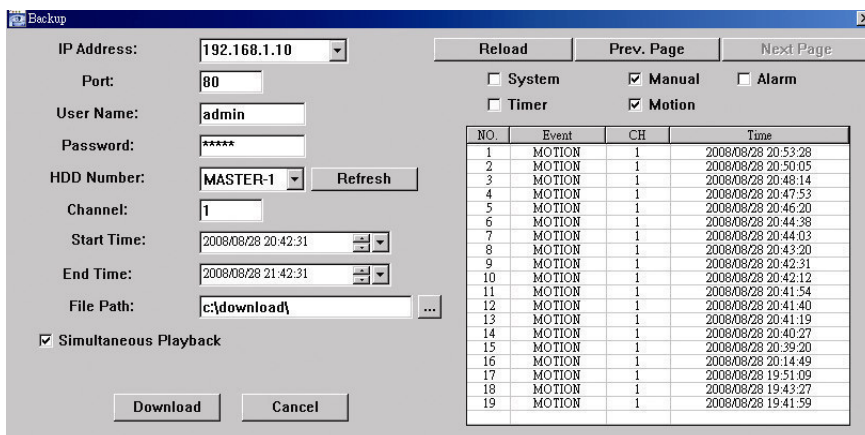
To immediately play a recording, select a log from the list, and click “Play”, or double-click the selected log. Then, the playback control panel will be shown at the bottom of the main control panel similar to the following.



For the playback control panel details, please see “Playback Screen” at page 58.

Network Backup

Click “” (Miscellaneous Control) → “” (Backup) to go into the “Download” page as follows, and you can select a specific time range or event to make a video backup remotely. For details, please see “Backup” at page 43.



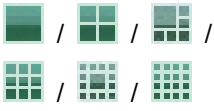




8.1.4 Detailed Functions

Image Display

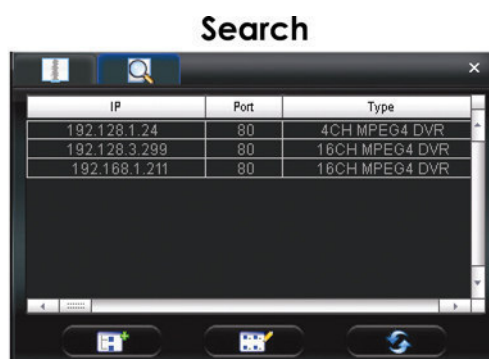
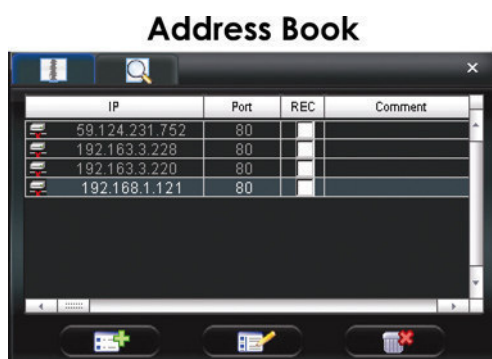
You can see the 3 kinds of display views here, and a few buttons are available.



Button	Function	Description
	Live / Playback / Download Display Switch	If you want to switch among the live view, playback view and download view, click the blue tab "Live1", "Play1" or "Download" to make a switch. Live1: When you are logged in, this tab with the live view is displayed by defaults. Play1: When a video clip is selected in "Status List" and played, this tab with the palyback view is displayed. Download: When the downloaded video clip is selected in "Status List" and played, this tab with the downloaded video clip is displayed.
	Original Size	Click to return to original size of the monitoring view.
	Expand All Views	To see all views in the image display area if you have many views and do not want to switch each view by clicking the blue tab described above, click to choose a proper split view (1-cut / 4-cut / 6-cut / 9-cut / 13-cut / 16-cut) which best suits your needs. The selected view will be indicated with a red frame around it.
	Close	Click to close the current image display view. If the last image display view is closed, you will be logged out automatically.
	Close All	Click to close all the image display views.

Address Book



This view is displayed when Video Viewer is activated for you to log in / out the DVR from the current address list, or search the available IP address as follows:






➤  **(Address Book)**

Click to view the pre-defined DVR access details.

To log in, choose one IP address from the address list, and click the address twice; to log out, click the connected IP address twice.




Tip: You can also click “” or “” in the image display section to log out or log out all. For details, please refer to “Image Display” at page 41.

You can also create new IP address information, or modify or remove the current IP address information.

Button	Function	Description
	Add	Click to directly add one IP address for login. Key in the DVR access information needed, and click “Apply” and “Close”.
	Edit	Select one current IP address from the address list, and click this button to modify the DVR access information as needed.
	Remove	Select one IP address from the address list, and click this button to delete it.
N/A	REC	When the video viewer is connected to more than one device, and not all devices are necessary to enable the manual record function, check REC for the connected device(s), and its manual record function will be on.

➤  **(Search)**







Click to search and view the available IP address (es) for the DVR connection. You can choose one address to add into the address book, edit the details, or update the address list.

Button	Function	Description
	Add into address book	Select from the available IP address list, and click this button to add the selected address to the address book.
	Setting	Select from the available IP address list, and click this button to edit the setting.
	Refresh	Click to update the available IP address list.


Miscellaneous Control 

Click “” (Miscellaneous Control) on the control panel and 7 functions are available as follows:



Button	Function	Description
	Color Setting	Click this button to adjust the brightness / contrast / hue / saturation for a single channel or the whole channels. For details, please see "Color Setting" at page 43.
	Backup	To make a video backup remotely, click this button, and you will go to the download setting page. For details, please see "Backup" at page 43.
	Record Setting	Click to go to the detailed record setting. Please refer to "Record Setting" at page 44 for details.
	Dvr Setting	Click to go into the detailed DVR setting. Please refer to "Dvr Setting" at page 46 for details.
	Tools	Click to update the firmware version, multilingual OSD and boot display of your DVR remotely. Please refer to "Tools" at page 55 for details.
	Status List	Click to view all event and recording logs, search the desired log(s) by date, or playback the recording of the selected log. For details, please refer to "Status List" at page 57.

➤ **Color Setting**

Click "" to go into the "Color Setting" page, and you can adjust the brightness / contrast / hue / saturation for a single channel or all channels.




Choose the desired channel from the drop-down list, and click and drag the slider to make adjustment.

Click "" to apply the change to the selected channel, or "" to apply to all channels.

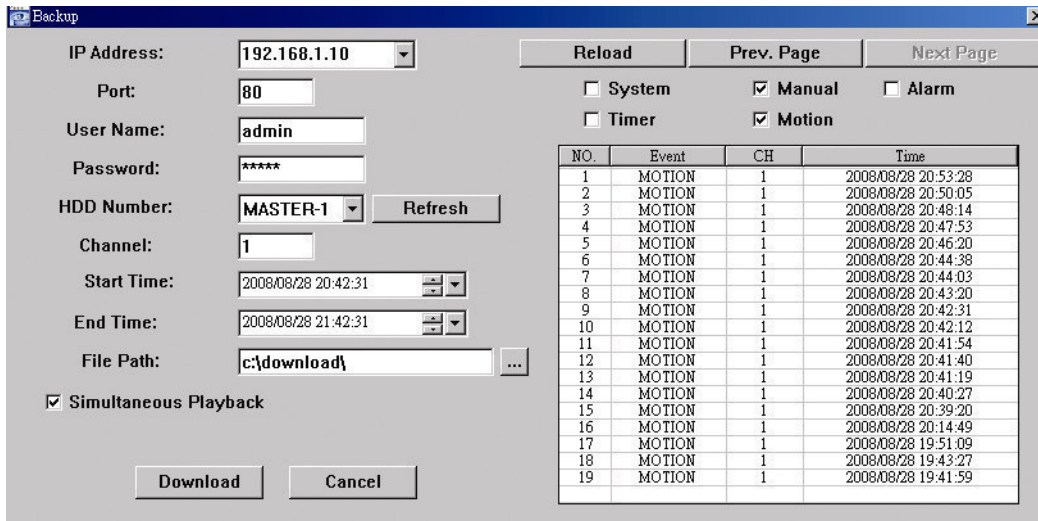
To restore to default values, click ".

Note: You need to be a supervisor to operate this function. For details, please see "Account" at page 47.

➤ **Backup**

Click "" (Backup) to go into the "Download" page, and you can select a specific time range or event to make a video backup remotely.

Note: You need to be a supervisor to operate this function. For details, please see "Account" at page 47.

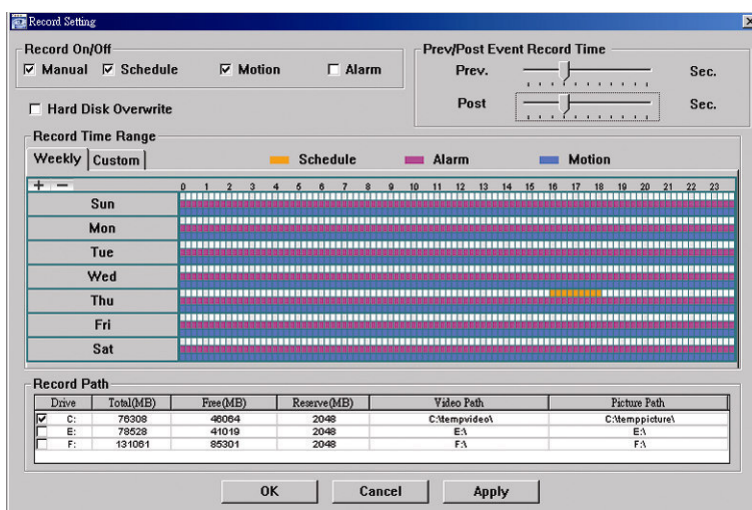


Function	Description
IP Address / Port / User Name / Password	Check if the network connection information of the DVR within which contains the video data you need is correct.
HDD Number / Channel	Specify the hard disk (HDD Number) and channel number (Channel) within which have the video data you need.
Download by Time	Specify the time range within which has the video data you want in the "Start Time" and "End Time" columns.
Download by Event	Select an event log from the event list. This list shows all logs in the specified DVR from the latest to the earliest. <ul style="list-style-type: none"> To quickly find the events you need, check or uncheck the event type "System" / "Manual" / "Alarm" / "Motion", and select the log you want. To view the earlier or later logs that are not shown in the current page, click "Prev. Page" or "Next Page". To refresh the event list, click "Reload".
File Path	Assign the location where the backup files are saved.
Simultaneous Playback	To view the backup images simultaneously when the download process is in progress, select Simultaneous Playback. You will see the backup images while the images are being downloaded to the PC or notebook. To simply backup images without previewing, deselect Simultaneous Playback. You will only see a message box indicating the total time needed, the current status and the saving location.
Download / Cancel	Click "Download" to start or "Cancel" to discard the video backup.

➤ **Record Setting**

Click "🔧" to go into the "Record Setting" page and you can set the following items:

- Record type
- Hard disk overwriting
- Pre- / post-alarm record time
- Record time setting
- Record path



Record type

In this section, you can select which type of the recording will be enabled. There are 4 options: Manual / Schedule / Motion / Alarm.

Hard disk overwriting

To overwrite the recorded data from the earliest to the latest when the hard disk is full, check “Hard Disk Overwrite” checkbox.

Pre- / post-alarm record time

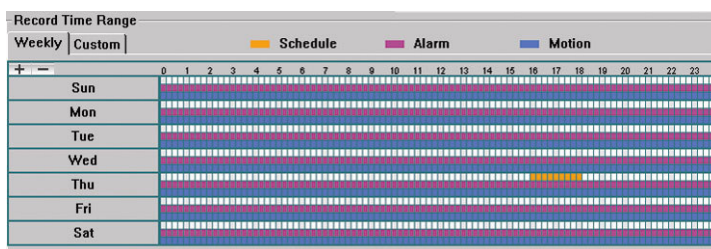
Select the pre-/post-alarm recording time from 0 sec. to 10 sec.

Record time setting

There are two ways to set the record time: Weekly and Custom.

◆ Weekly

Click “Weekly” tab, and you will see a weekly time table indicating the week days (Mon ~ Sun) and hours (0 ~ 24), similar to the figure below:



X axis: 0 ~ 24 hours. Each time interval within a square is 15 minutes.

Y axis: Monday ~ Sunday.

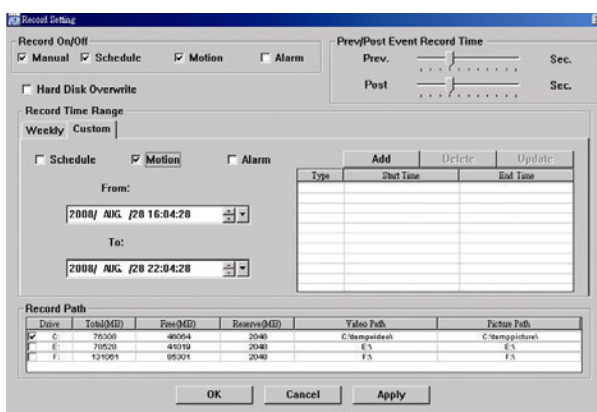
Operation: You can set the record schedule for 3 record types as needed in this time table:

- 1st timeline – Schedule I recording, indicated in yellow,
- 2nd timeline -- Alarm recording, indicated in magenta, and
- 3rd timeline -- Motion recording, indicated in cyan.

Click and hold the start time point, and drag to the end time point to set the record time range.

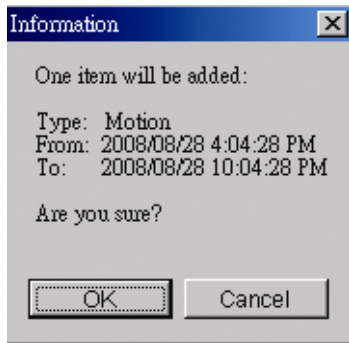
◆ Custom

Click “Custom” tab, and you can set a more specific record time range for the 3 record types: Schedule, Motion, and Alarm.



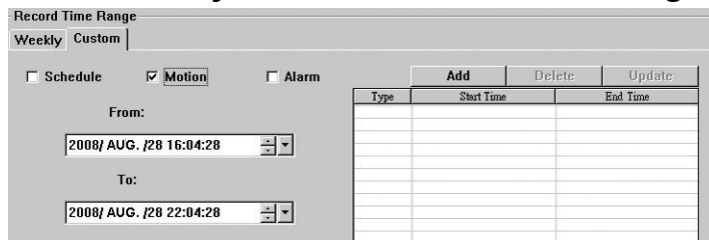
How to add a new time setting:

- i. Check the record type you want to schedule the recording.
- ii. Set the start time (From) and end time (To).
- iii. Click “Add” to add the time range you just set into the schedule table. Before adding the time range, you will be prompted to confirm as follow:



- iv. Check if the information shown is correct. Click “OK” if the information is correct. Click “Cancel” if the information is wrong.

How to modify / delete a current time setting:




1. Select the schedule setting you want to modify from the schedule table. The setting will be displayed in the left setting panel.
2. Modify the setting in the left setting panel, and click “Update”.
3. You will be prompted to confirm the setting. Click “OK” if the information is correct. Click “Cancel” if the information is wrong.
4. To delete one schedule setting, select it, and click “Delete”.

Record Path

Select and view the location for saving the recorded video and snapshot pictures.

To change the saving path for the recorded video clips or snapshots, check the drive you want, click the cell of “Video Path” or “Picture Path” twice, and select a new path for saving the video clips or snapshots.

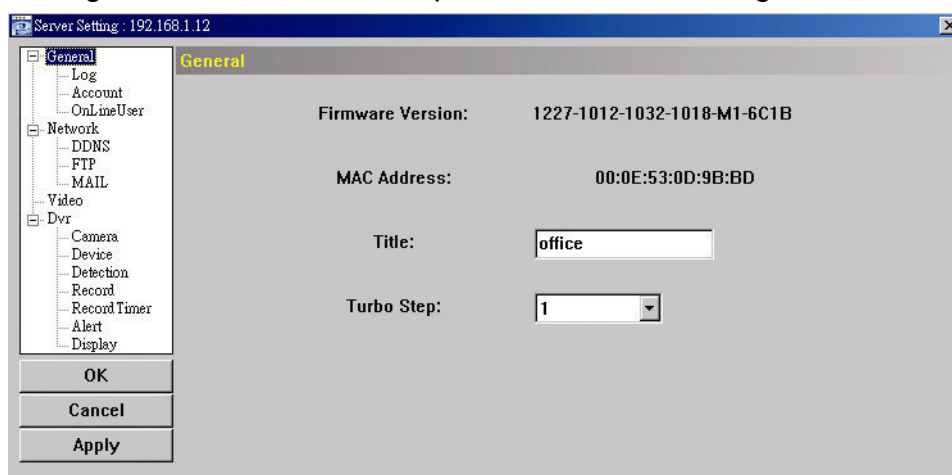
➤ **Dvr Setting**

Click “” to view, set or modify the DVR setting. All the changes you make here will be applied to the connected DVR.


Note: You need to be a supervisor to operate this function. For details, please see “Account” at page 47.

◆ **General**

In “General” and its sub-menus, “Log”, “Account” and “Online User”, you can view and set some common settings, such as the turbo step, make account setting, and check the information for all current on-line users.

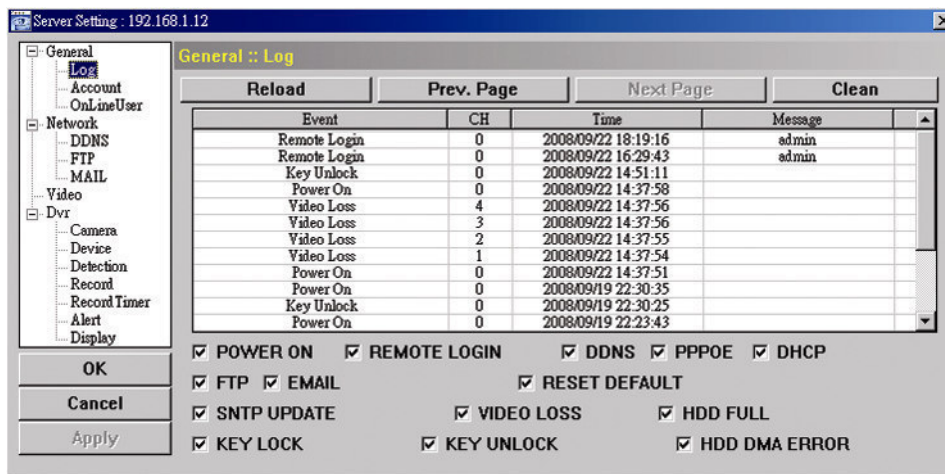


In “General”, you will see the following items:

Item	Description
Firmware Version	Display the current firmware version of your DVR.
MAC Address	Display the MAC address.
Title	Provide a title for this DVR. Only 16 characters are allowed.
Turbo Step	Speed up the menu selection from 1 to 30. Ex: If the value of the turbo step is set to 5, one mouse-click will function as 5 mouse-clicks when you click one of the buttons  in the DVR control panel.

◆ Log

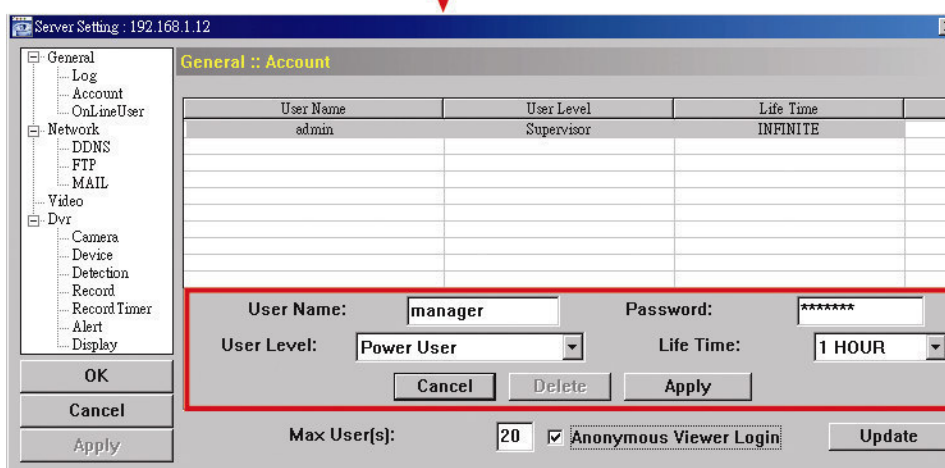
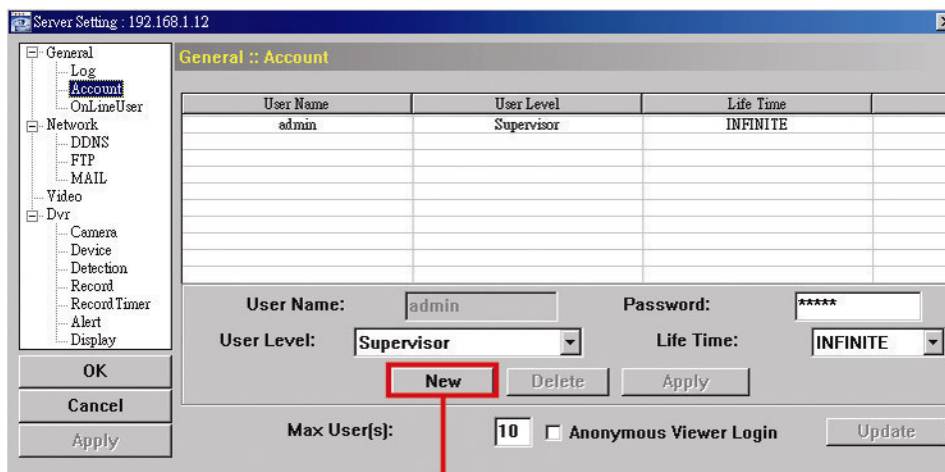
In “General” → “Log”, you can view the system event log(s) of the connected DVR for reference. To check the previous / next page if there are more than one page, click “Prev. Page” / “Next Page”. To refresh the event list, click “Reload”; to clear all log(s), click “Clean”.



◆ Account

In “General” → “Account”, you can create a new account for login, or delete or modify the existing account setting.

- To add an account, click “New”, and fill in the following columns. Then, click “Apply” to save your setting and create a new account.

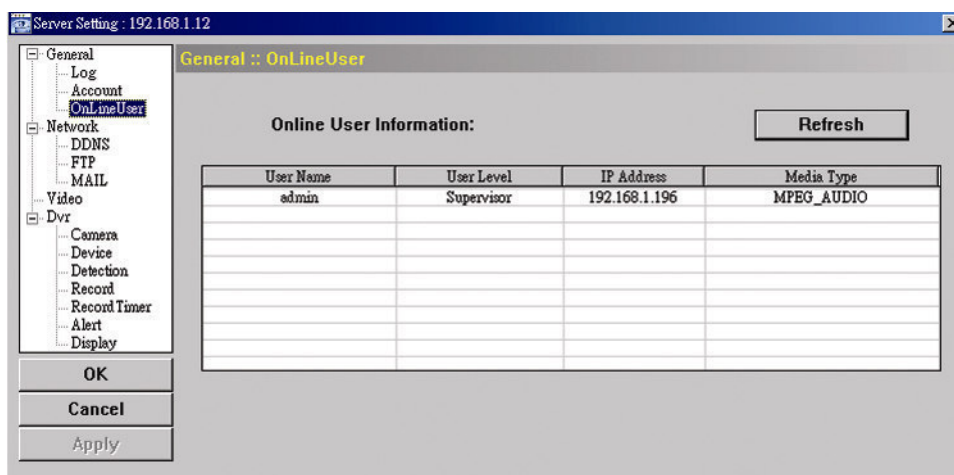


Column	Description																																																																	
User Name	Set a user name that will be used for remote login. The user name allows up to 16 characters.																																																																	
Password	Set the password that will be used for remote login. The password allows up to 16 characters.																																																																	
User Level	<p>Set the security level of an account to give the permission to control different AP functions. There are 4 user levels: Supervisor, Power User, Normal User and Guest.</p> <p>For the functions each level is allowed to use, please see the information below:</p> <table border="1"> <thead> <tr> <th></th> <th>Supervisor</th> <th>Power User</th> <th>Normal User</th> <th>Guest</th> </tr> </thead> <tbody> <tr> <td>Address Book</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> </tr> <tr> <td>Miscellaneous Control</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Color Setting</td> <td>●</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Backup</td> <td>●</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Record Setting</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> </tr> <tr> <td>Server Setting</td> <td>●</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Tools</td> <td>●</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Status List</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> </tr> <tr> <td>Record</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> </tr> <tr> <td>Snapshot</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> </tr> <tr> <td>Information</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> </tr> <tr> <td>Dvr Control</td> <td>●</td> <td>●</td> <td>●</td> <td>X</td> </tr> </tbody> </table>		Supervisor	Power User	Normal User	Guest	Address Book	●	●	●	●	Miscellaneous Control					Color Setting	●	X	X	X	Backup	●	X	X	X	Record Setting	●	●	●	●	Server Setting	●	X	X	X	Tools	●	X	X	X	Status List	●	●	●	●	Record	●	●	●	●	Snapshot	●	●	●	●	Information	●	●	●	●	Dvr Control	●	●	●	X
	Supervisor	Power User	Normal User	Guest																																																														
Address Book	●	●	●	●																																																														
Miscellaneous Control																																																																		
Color Setting	●	X	X	X																																																														
Backup	●	X	X	X																																																														
Record Setting	●	●	●	●																																																														
Server Setting	●	X	X	X																																																														
Tools	●	X	X	X																																																														
Status List	●	●	●	●																																																														
Record	●	●	●	●																																																														
Snapshot	●	●	●	●																																																														
Information	●	●	●	●																																																														
Dvr Control	●	●	●	X																																																														
Life Time	Select how long this account is allowed to stay online (1 MIN / 5 MIN / 10 MIN / 1 HOUR / 1 DAY / INFINITE)																																																																	

- To modify an existing account, select the account you want, change the setting, and click “Save”.
- To remove an existing account, select the account you want, and click “Delete”.
- To save your changes, click “Save”.
- To define the maximum account creation number, key in the number in “Max User(s)” column from 1 to 20, and click “Update”.

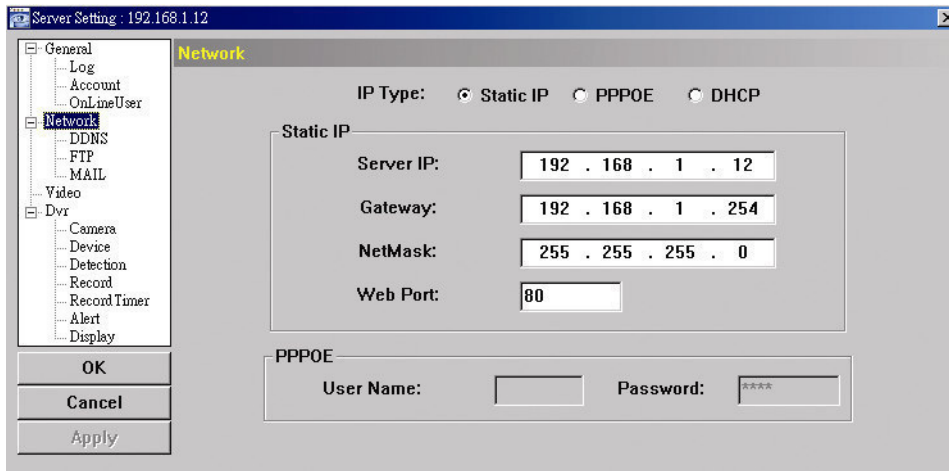
◆ OnLineUser

In “General” → “Online User”, you can check all the online user information. To update the user information, click “Refresh”.



Network

In “Network” and its sub-menu, “DDNS”, you can set the DVR network configuration. The network configuration allows the DVR to connect to the LAN or Internet.

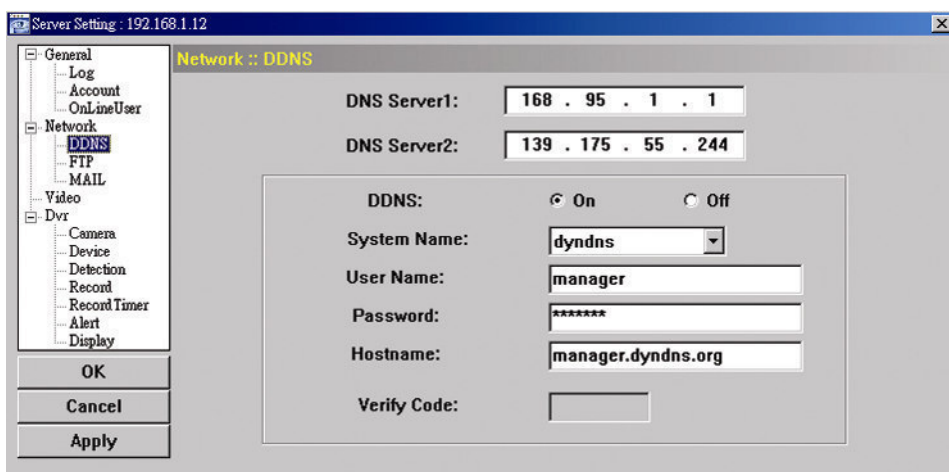


Select the network type you will be using for DVR connection. There are 3 network connection types: Static IP, PPPOE and DHCP. For details about each connection type, please refer to “7.1.4 Network” at page 26.

Note: PPPOE and DHCP network connection types are required to apply the DDNS service to get a “Hostname” to correspond to a dynamic IP address. Please refer to “DDNS” at page 49 for details.

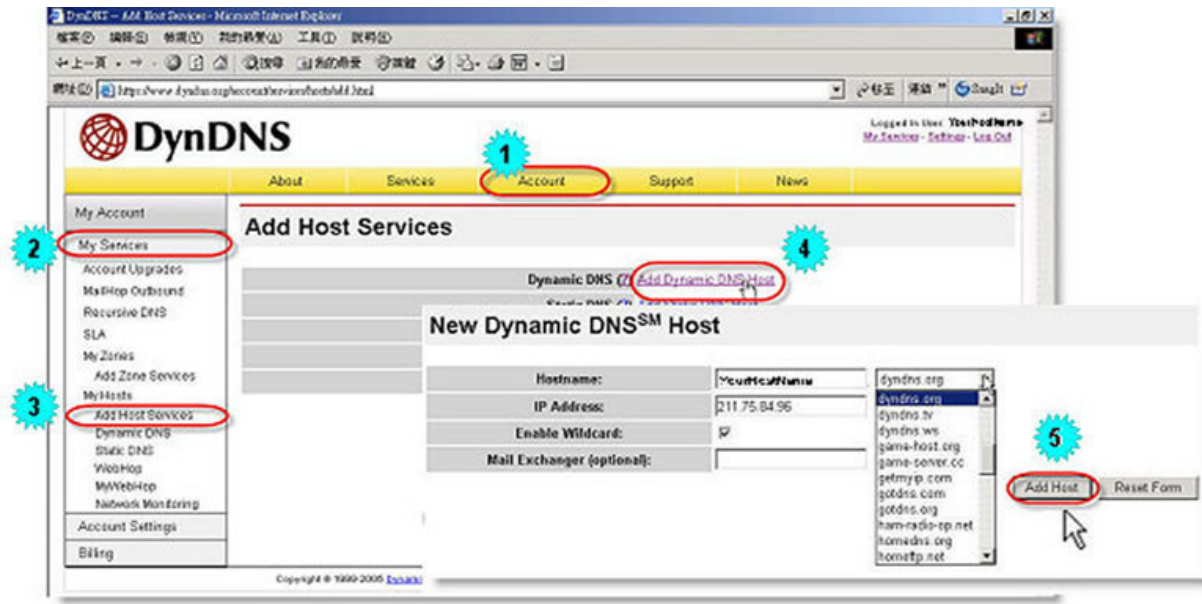
◆ DDNS

You need to apply a DDNS account before setting PPPOE or DHCP connection. DDNS is a service for transforming the dynamic IP corresponding to a specific “host name”. Go to a website which provide free DDNS services and apply a host name.



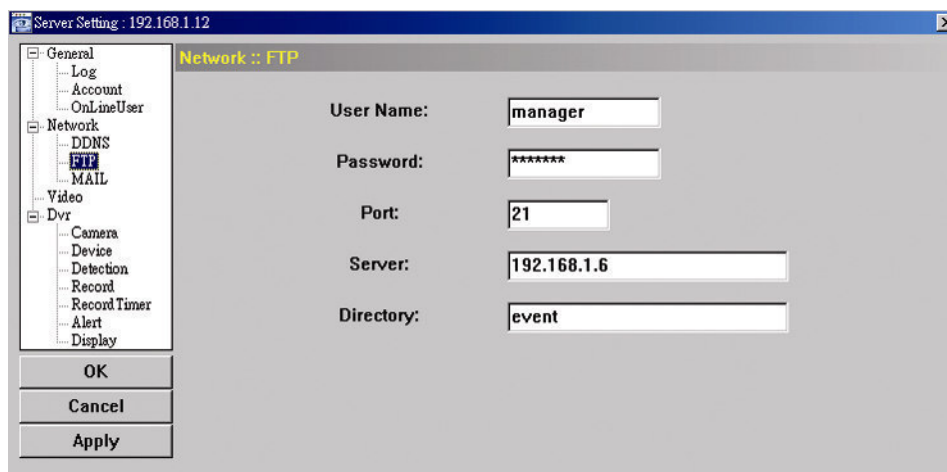
DDNS Apply:

- a). Go to a website which provide the free DDNS service, for example, <http://www.dyndns.org>.
- b). Create an account in DynDNS.
- c). After creating one account, users will receive a confirmation E-mail within a few minutes. To complete the registration, please follow the instructions received.
Users must complete these steps within 48 hours to complete the registration. If the confirmation E-mail was not received within an hour, request “password reset” (<http://www.dyndns.org/account/resetpass/>).
- d). Use the DDNS username and password to log into the DynDNS.
- e). Create a host name:
After login, click “Account” → “My Service” → “Add Host Services” → “Add Dynamic DNS Host”. Enter and choose a host name, and click “Add Host”. Then, your DDNS host name is created.



◆ FTP

If the FTP notification function is activated, the DVR will upload the captured images to the specified FTP site once alarm-trigger or motion-trigger recording happened. Please enable the function of FTP notification in the “Alert” menu first.

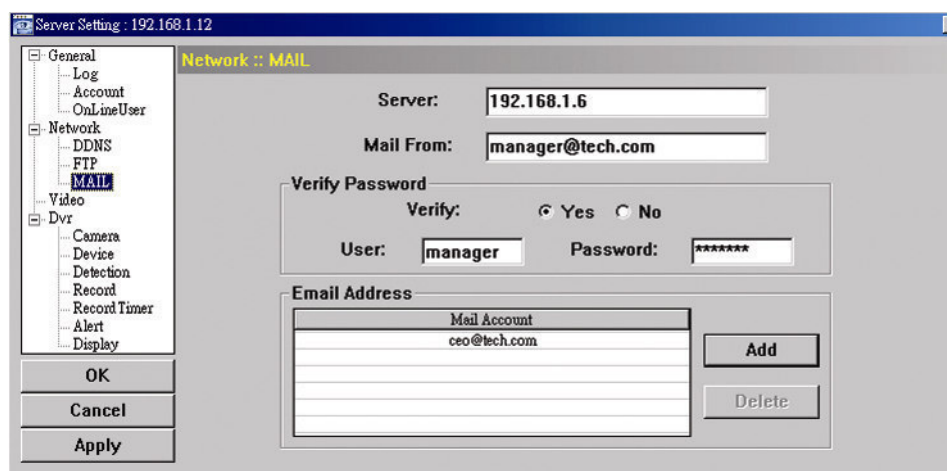


FTP Notification Function:

- a. Enter the detailed FTP information.
- b. After finishing the setting, click “APPLY” to confirm.

◆ MAIL

If the e-mail notification function is activated, the DVR will send an e-mail notification to the specified recipients once alarm-trigger or motion-trigger recording happened. Please enable the function of e-mail notification in the “Alert” menu first.



Mail Notification Function:

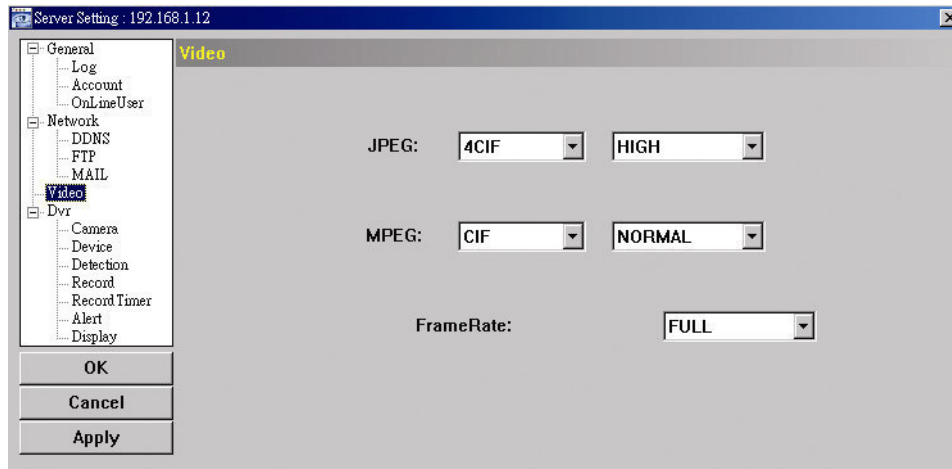
- a. Add the recipients’ E-mail accounts in “Mail Account” column.
Please type the entire E-mail address in the “Mail from” column to ensure E-mails will not be blocked by SMTP.
For detailed information (SMTP server, username and password), please check with your E-mail service supplier.
- b. Some mail servers are required to verify the password. Please enter the “user name” and “password”.

c. After finishing the setting, click “APPLY” to confirm.

Note: Mail addresses can be added up to 4.

Video

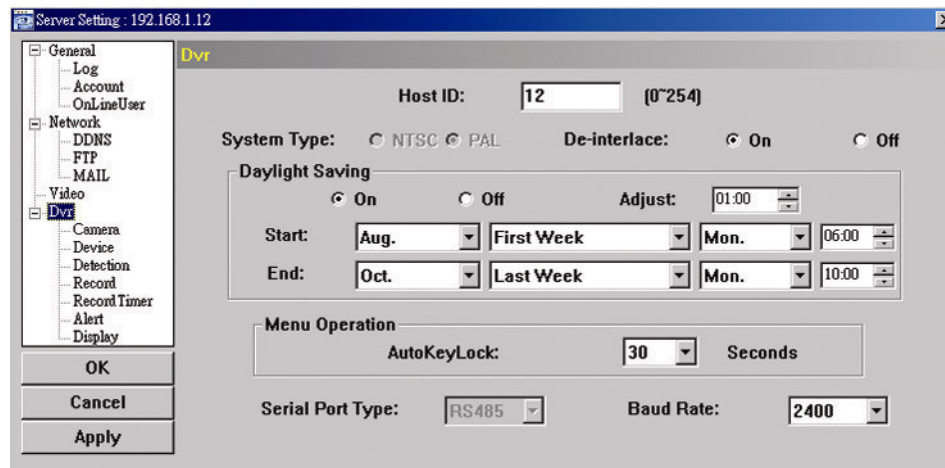
In “Video”, you can set the video web transmission size and quality, and the frame rate for transmitting.



Function	Description
JPEG	Choose the image size (4CIF / CIF) and picture quality (BEST / HIGH / NORMAL / BASIC) when the web transmission format is JPEG.
H264	Choose the image size (4CIF / CIF) and picture quality (BEST / HIGH / NORMAL / BASIC) when the web transmission format is MPEG.
FrameRate	Choose the frame rate for transmitting (FULL, 1/2, 1/3, 1/4, 1/5, 1/10, 1/15, 1/20, 1/25, 1/30).

Dvr

In “Dvr” and its sub-menus, “Camera”, “Device”, “Detection”, “Record”, “Record Timer”, “Alert” and “Display,” you can set DVR general functions, such as the host ID, the record schedule, alerts, motion detection, and text or icon display, etc.



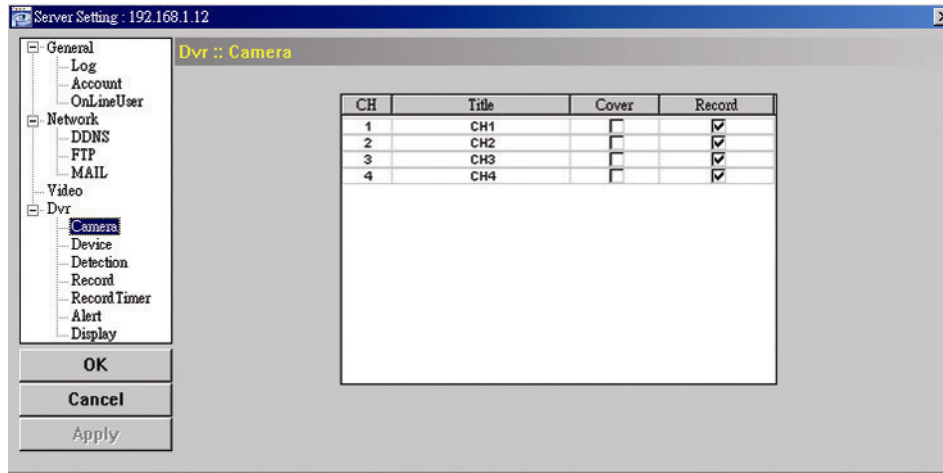
In “Dvr”, you can see the following items:

Function	Description
Host ID	Set the host ID from 0 to 254. The default value is 0.
System Type	Display the current system type (NTSC / PAL). It's automatically detected.
De-interlace	Choose to reduce (ON) or ignore (OFF) the vibration of the paused picture.
Daylight Saving	Specify whether to use daylight saving time (ON / OFF). If this function is enabled, set the time period (START / END), and adjust the daylight saving time in hours (ADJUST).
Menu Operation	Select the time-out in seconds after which the DVR keys will be automatically locked when no one is operating the DVR for a period of time (0 / 30 / 60 / 120). The default value is 30.
Serial Type	Display the serial type (RS485) used by this DVR. It's automatically detected.
BaudRate	Choose a baud rate used by this DVR from the drop-down list (2400 / 9600 / 19200 / 38400 / 57600 / 115200). The default value is 2400.

◆ Camera

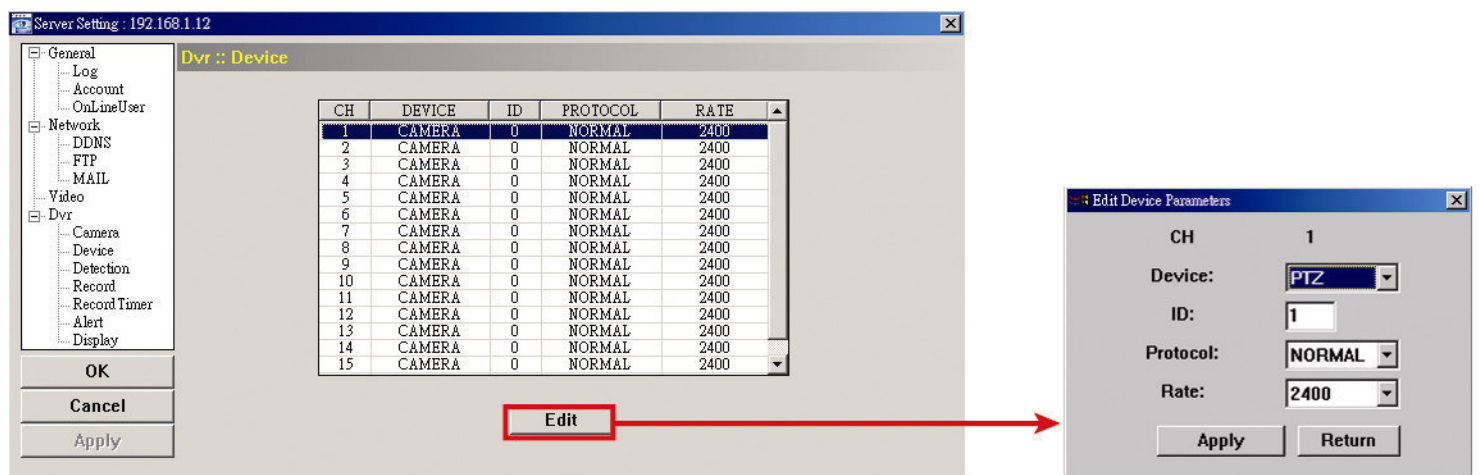
In “Dvr” → “Camera”, you can specify a channel to enable the recording function by selecting the check

box “Record”, choose to activate the “Covert Recording” function by selecting the check box “Cover”, and rename the channel title which will be displayed in the live view screen by double-clicking the channel title.



◆ Device

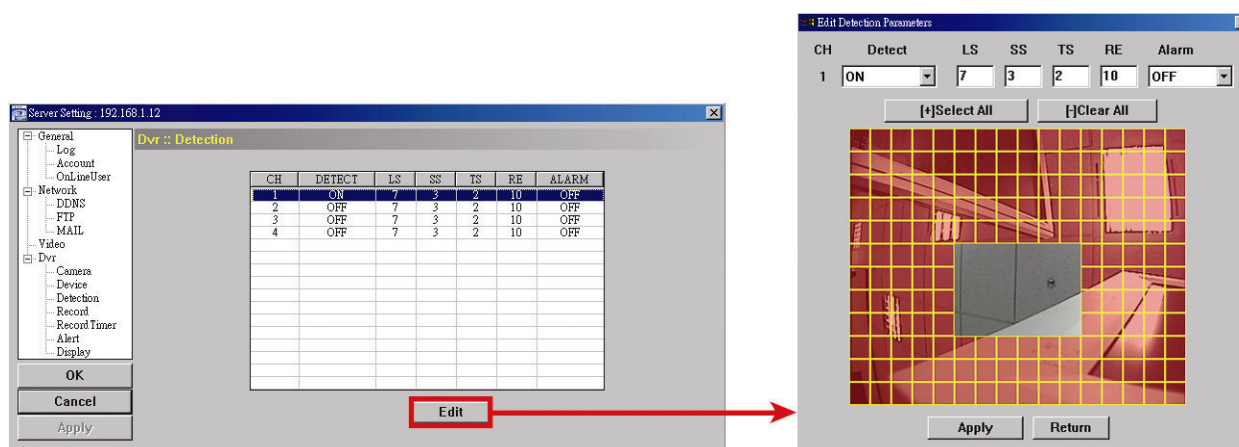
Select the device type (CAMERA / PTZ) according to the connected cameras for each channel. Click “Edit” or double click the item to enter the setting box.



Function	Description
DEVICE	Choose either normal camera or PTZ camera.
ID	Set the ID number (0 ~ 255) of the connected PTZ camera.
PROTOCOL	Choose “NORMAL” or “P-D” protocol. It is recommended to select PELCO-D protocol for the connected PTZ camera of other brands. Please choose Normal if it’s our own PTZ camera
RATE	Set the baud rate of each channel (2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200).

◆ Detection

Select the desired channel, and click “Edit” or double click the item to enter the motion detection sensitivity and area-setting page.



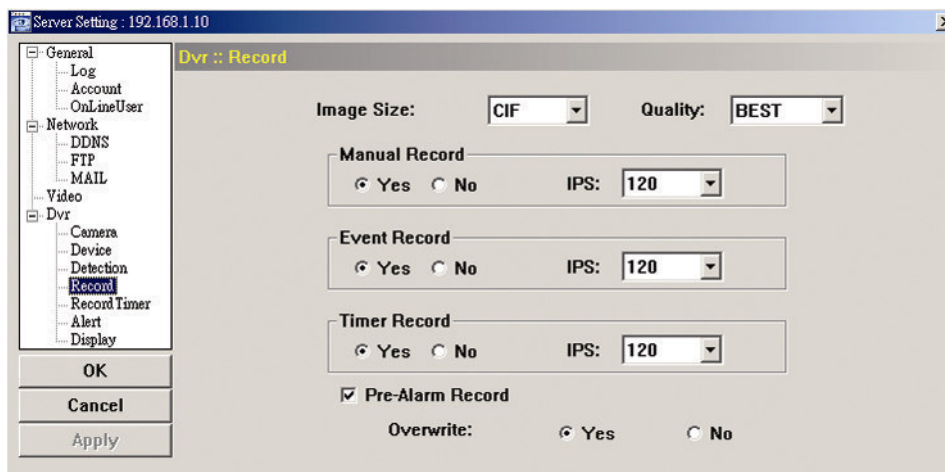
Please see the description below for each function:

Function	Description
DETECT	Enable (ON) or disable (OFF) the function of “Motion Detection”.

Function	Description
	If this function is enabled, you might need to set the motion detection sensitivity or simply keep the default values. For details, please see the description below.
Motion Detection Sensitivity (LS / SS / TS / RE)	Set the detection sensitivity in 4 different adjustable parameters (LS / SS / TS / RE). For details about each parameter, please refer to "7.1.2 Detection" at page 23.
Alarm	Select N.C. (normal closed) / N.O. (normal opened) / OFF for the alarm polarity. For N.C. / N.O. contact details, please refer to "APPENDIX 1 PIN CONFIGURATION" at page 64.
Motion Detection Setting Area	Set the motion detection area by selecting the area grids with your mouse. Pink grids represent the area that is not being detected while the transparent grids are the area under detection. You can set multiple areas under detection. Click "-" (Clear All) to set the whole area undetected. Click "+" (Select All) to set the whole area under detection.
Apply / Return	To save the setting, click "Apply" and return to "Server Setting" window. To discard the setting, click "Return" to directly return to "Server Setting" window without saving.

◆ Record

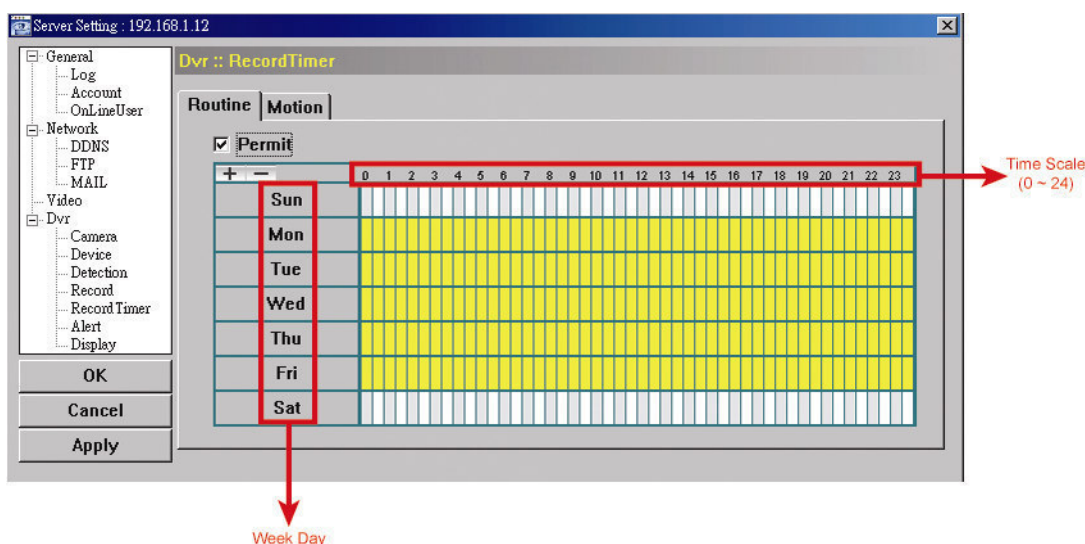
In "Dvr" → "Record", you will see the following items for DVR record settings.



Function	Description
Image Size / Quality	Choose the image size (FRAME / FIELD / CIF) and quality (BEST / HIGH / NORMAL / BASIC).
Manual Record / Event Record / Timer Record	Select the record type that the DVR will take recording (Yes / No), and select the IPS setting for the selected record type.
Pre-Alarm Record	Check this option if you want to enable the pre-alarm recording function. When any alarm is triggered, the DVR will record 8MB video data before the alarm event is actually happened.
Overwrite	Select "Yes" to enable the HDD overwrite function when the HDD is full, or "No" to disable this function. When this function is on, and the recording and the pre-alarm function are activated, the DVR will overwrite 8GB data from the oldest for continuous recording without notice.

◆ Record Timer

In this menu list, you can set the record schedule for normal recording or motion recording.



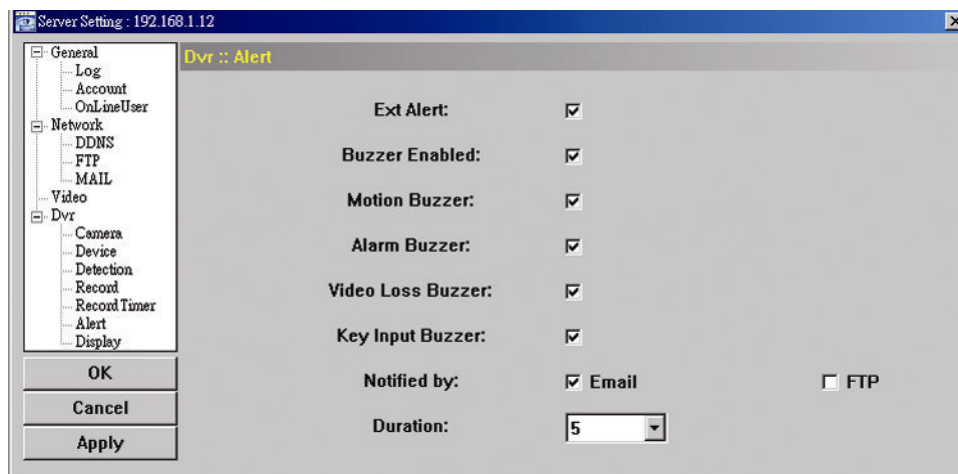
- Permit

Select this checkbox to allow the record timer setting to be applied to the connected DVR. If this checkbox is deselected, the setting will not be applied to the connected DVR even when you click “Apply” and “OK”.

- Routine / Motion
Click “Routine” tab to select the time range for continuous recording, or “Motion” tab to select the time range within which the recording will be on when any movement is detected.
- Time Table
Find the day and time you want to enable the recording. Then, click to select the time interval(s). Each interval represents 30 minutes.
To enable the recording all the time, click “+”; to clear the record timer setting, click “-”.

◆ Alert

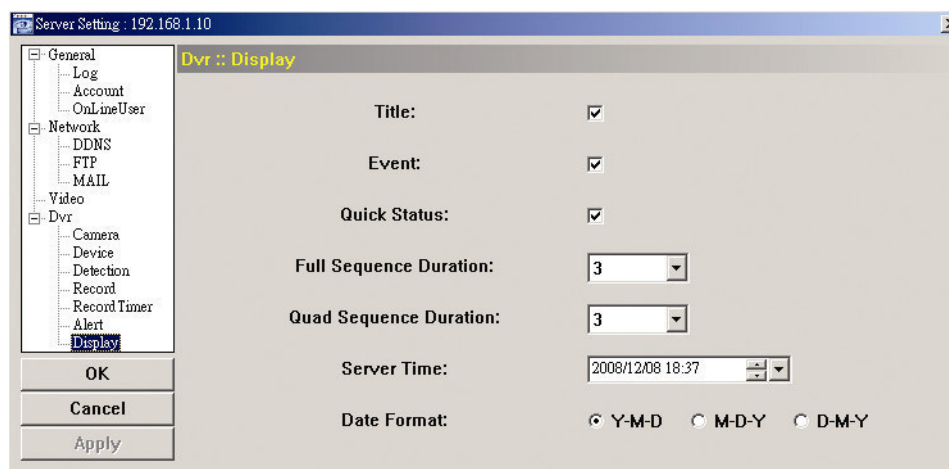
In “Alert”, you can set the DVR to beep for notification when there’s any alert happened. Check the buzzer option you want, and set how long the beep sound will be lasted.



Function	Description
Ext Alert	Check this option to enable the external alert.
Buzzer Enabled	This option must be checked for “Motion Buzzer”, “Alarm Buzzer”, “Video Loss Buzzer”, and “Key Input Buzzer” to take effects.
Motion Buzzer / Alarm Buzzer / Video Loss Buzzer / Key Input buzzer	Check one of these 4 options, and you will hear the beep sound when any movement is detected / the alarm is triggered / video loss occurs / any DVR key is pressed.
Notified by	Select the notification method when any event occurs: Email or FTP.
Duration	Set the alert and buzzers to beep for 5 / 10 / 20 / 40 seconds.

◆ Display


In “Display”, you can choose whether to display some text indication or icons, set the channel display switch time-out, set the DVR time remotely, and select the date format (Y-M-D / M-D-Y / D-M-Y).



Function	Description
Title	Select to display the channel title in the live view.
Event	Select to display the event symbol in the live view.

Quick Status	Select to display the quick status in the live view.
Full Sequence Duration / Quad Sequence Duration	Set the time-out in seconds (3 / 5 / 10 / 15) after which the channel display will be switched by one channel (Full Sequence Duration) or by four channels (Quad Sequence Duration). Note: “Quad Sequence Duration” is disabled for the 4CH DVR model.
Server Time	Set the DVR time remotely.
Date Format	Choose the date display format appropriate to your location (Y-M-D, M-D-Y and D-M-Y).

➤ **Tools**

Click “” to upgrade your DVR (Update Server), or select the language of the video viewer (Language).

Note: You need to be a supervisor to operate this function. For details, please see “Account” at page 47.

Note: Do not disconnect the power of your DVR while the upgrade process is in progress, or the DVR functions may not work properly or be unable to use.

◆ Update Server

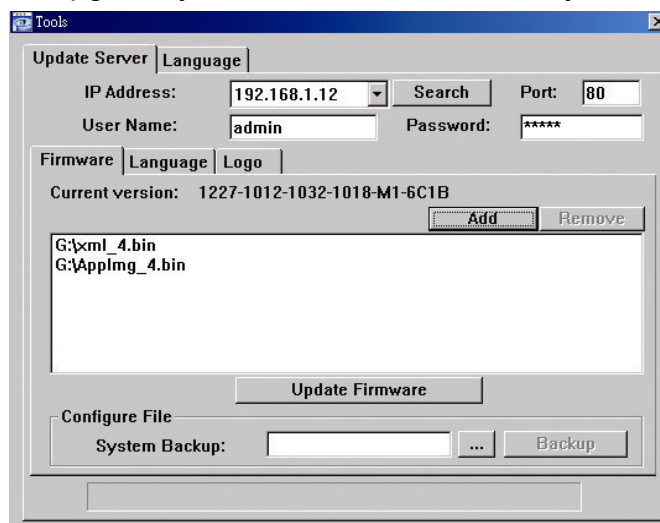
3 update options are available for this function: Firmware, Language and Logo.

Before performing any update, finish the following settings first:

- 1) Choose the IP address of the DVR whose firmware needs to be updated from the drop-down list, or click “Search” to find.
- 2) Key in the user name, password and port number used to access your DVR remotely.
- 3) Select the update option (Firmware / Language / Logo) you want. For details, please see the description below.

• **Firmware**

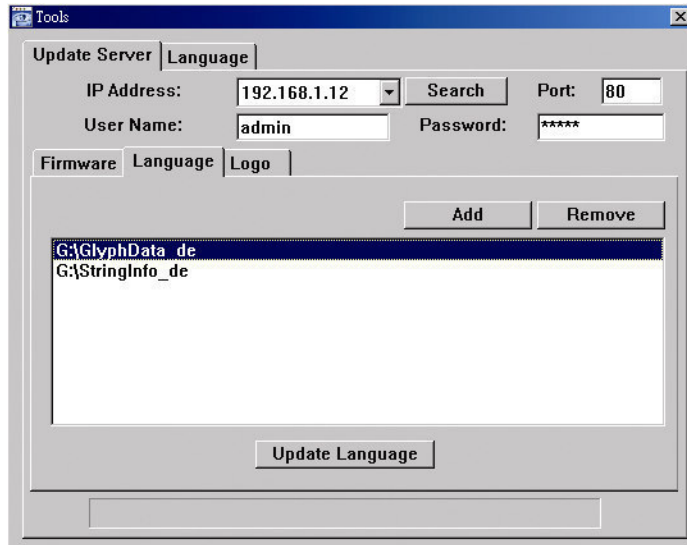
To upgrade your DVR firmware remotely, click “Firmware” tab, and follow the steps below:



- a). In the “Firmware” section, you will see the current firmware version. To upgrade the firmware version of your DVR, click “Add” to locate and select the firmware file. The file will be shown in the firmware list.
- b). If you want to backup your system before upgrading the firmware version of your DVR, select “System Backup” in the “Configure File” section, click “...” to specify the location for saving system backup, and click “Backup” to start the backup process.
- c). To start upgrading the DVR firmware, choose the file from the firmware list, and click “Update Firmware” to start the upgrade process.

• **Language**

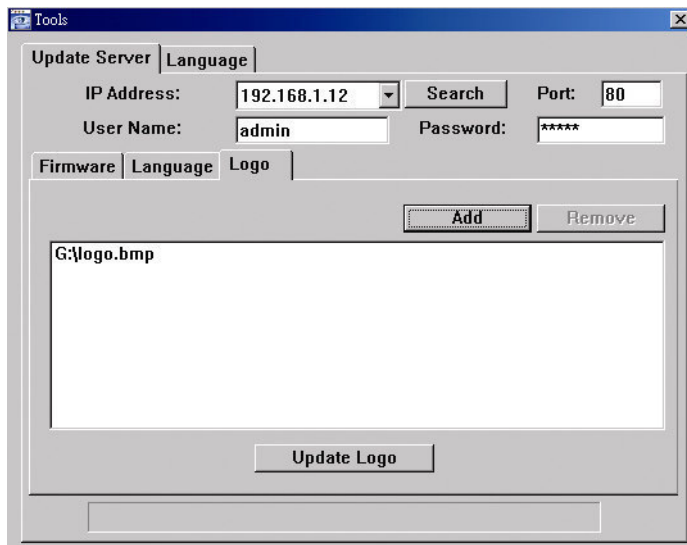
To update the DVR OSD language, click “Language” tab, and follow the steps below:



- a). Get the language files you want to update from your distributor.
- b) Click “Add” to locate and select the files needed. The files will be shown in the list. If you add the wrong file, select it and click “Remove”.
- c). To start updating the OSD language, choose the files from the list, and click “Update Language” to start the upgrade process.

• **Logo**

To replace the logo shown in the DVR boot display, click “Logo” tab, and follow the steps below:



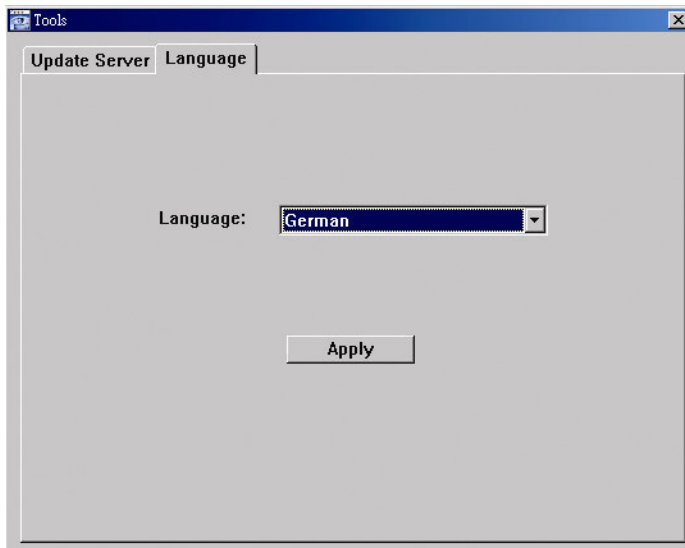
- a). Prepare a graphic file in the “BMP” format for replacement.

Note: Use the image software to set the image size to 320 * 240, and save the image as an 8-bit (64-color) image in the "BMP" format.


- b) Click “Add” to locate and select the graphic file. The file will be shown in the list. If you add the wrong file, select it and click “Remove”.
- c). To start updating the logo, choose the file from the list, and click “Update Logo” to start the upgrade process.

◆ **Language**

This software is available in English / Chinese / French / German / Portuguese / Spanish / Japanese. Select a language from the drop-down list, and click “Apply”. You will be prompted to restart the application for this change to take effect.

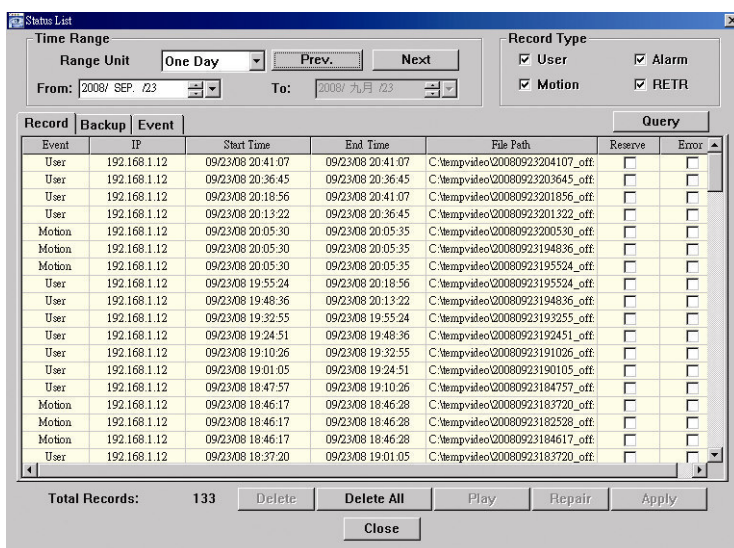


➤ **Status List**

Click  to view all the event and record logs, or search for the specific log(s) by date or by record type.


There are three types of logs: Record, Backup and Event. To playback the recorded data for a specific record or backup log, select the log, and double-click to start the video playback.

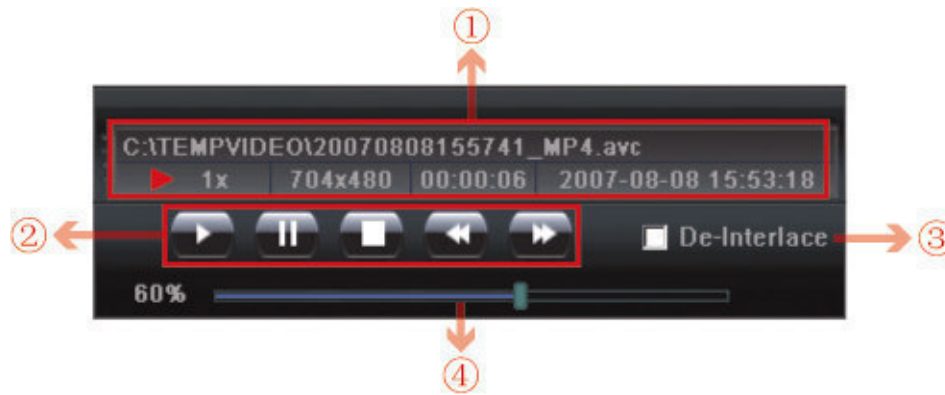
For detailed playback operation, please refer to “Playback Screen” at page 58.








Function	Description
Time Range	To find the specific logs, set the time range (From / To), and the range unit here.
Record Type	Select the record type you want to search (User / Alarm / Motion / RETR).
Query	Click to start sorting the logs specified.
Delete / Delete All	Click “Delete” to remove the selected log(s), or click “Delete All” to clear the current log list. Tip: To select more logs all at once, press and hold the “Ctrl” key on your keyboard, and click to select the logs you want to remove.
Play	Click to play the selected record log. The playback panel will be shown for your further operation. For playback details, please refer to Playback Screen” at page 58.
Repair	Click to fix the log with errors.
Close	Click “Close” to quit this window.

◆ Playback Screen

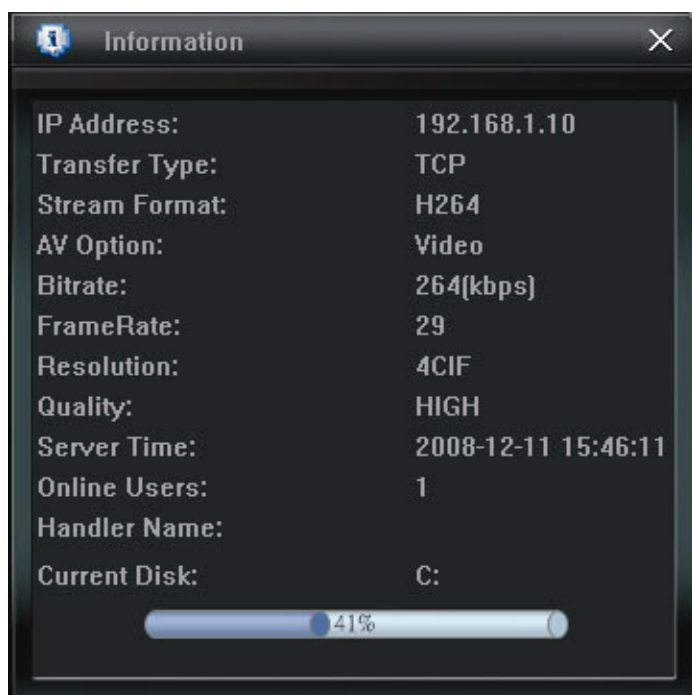
When you select and play the recorded data for a specific log in “” (Status List) → “Record” or “Backup”, you will immediately go into the playback mode, and the following playback panel appears. For the function of each part on the panel, please refer to the following description.



NO.	Function	Description
①	Playback / Download Info Display	This area shows the detailed playback / download information, such as the file name, record date and time, and the speed, etc.
②	Playback Operation	This area is enabled only when the playback is started.  (Rewind) /  (Forward) /  (Stop) /  (Pause) /  (Play) Rewind / Forward Click once to get 2X fast rewind / forward, twice to get 4X, three times to get 8X, and four times to get 16X the highest.
③	De-Interlace	Click to reduce the vibration of the paused picture.
④	Playback Progress Bar	This area shows the playback progress and the progress percentage.

Information 

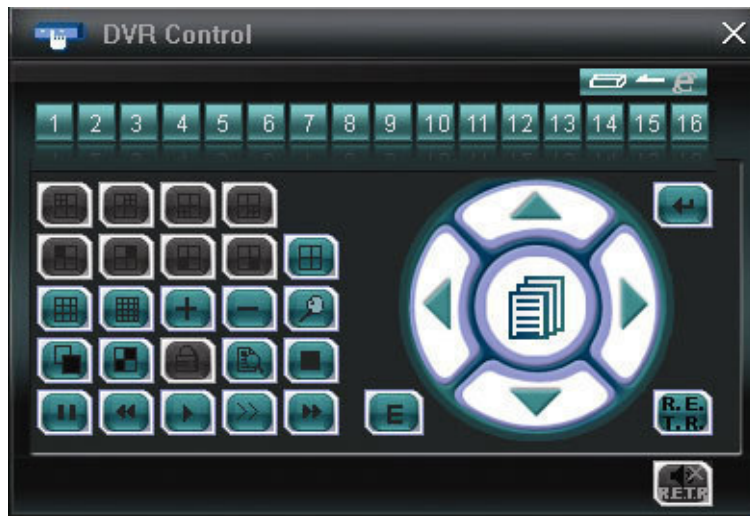
To view the current network connection details, click this button.






























DVR Control

When Video Viewer is connected to the DVR, this DVR control panel will be enabled, and you can control the DVR remotely. For the function of each button, please refer to the following description.

Note: The control panel below is taking 16CH DVR model as an example. Some buttons may not be enabled for 8CH or 4CH DVR models.



Function	Description
Channel Selection	<p>Click the channel No. (depending on the DVR model you have) to see the live view of the selected channel.</p> <p> Click to switch the 4-cut channel display.</p> <p> Click to see the 9-cut channel display.</p> <p> Click to see the whole 16 channels.</p> <p>You can also click “” or “” to go to the previous / next channel of the selected channel.</p>
Digital Zoom	<p>Click  to zoom in / out the selected channel image.</p>
Full Sequence / Quad Sequence	<p>Quad Sequence </p> <p>Click to display the 4 quad display modes one by one.</p> <p>The 1st view is CH1, CH2, CH5 & CH6, the 2nd view is CH3, CH4, CH7 & CH8, the 3rd view is CH9, CH10, CH13 & CH14, and the 4th view is CH11, CH12, CH15 & CH16.</p> <p>When the 4th view is displayed, it will start from the 1st view again.</p> <p>To exit from this display mode, click any other channel display button.</p> <p><i>Note: This button is disabled for 4CH DVR model.</i></p> <p>Full Sequence </p> <p>Click to display each channel one by one, starting from CH1. When the last channel is displayed, it will start from CH1 again.</p> <p>To exit from this display mode, click any other channel display button.</p>
Search	<p>Click “” to enter the DVR Full List.</p> <p>You can check all the logs here, and select one of them to playback.</p>
Playback	<p> (Stop) /  (Pause) /  (Rewind) /  (Play) /  (Slow Playback) /  (Forward)</p> <p>Rewind / Forward Click once to get 4X fast rewind / forward, twice to get 8X, three times to get 16X, and four times to get 32X the highest.</p> <p>Slow Playback Click once to get 4X slow playback and twice to get 8X slow playback.</p>
Menu and Arrow Keys	<p>Click “” (Menu) to enter the menu / exit the menu mode.</p>

Function	Description
	<p>Click the arrow keys to move the cursor and make the selection:</p> <p> /  : Move up / down to select the previous / next menu or sub-menu function, or change the setting.</p> <p> /  : Move left / right to the previous / next sub-menu items.</p>
Network Independent On/Off	<p> : Click it to activate / inactivate the network independent function. The related buttons will turn to blue.</p>
Enter	<p>Click "" to confirm the setting or enter your selection.</p>
R.E.T.R.	<p>Click  to activate the R.E.T.R. function.</p>
R.E.T.R. Audio	<p>When  is selected and activated, the R.E.T.R. audio function will be on () , too. If you don't want to activate this function, click the red icon again to disable this function ().</p>
Event Search	<p>Click  to get access to the time & event search mode.</p>

8.2 IE Web Browser

You can view the images or operate your DVR with IE web browser.

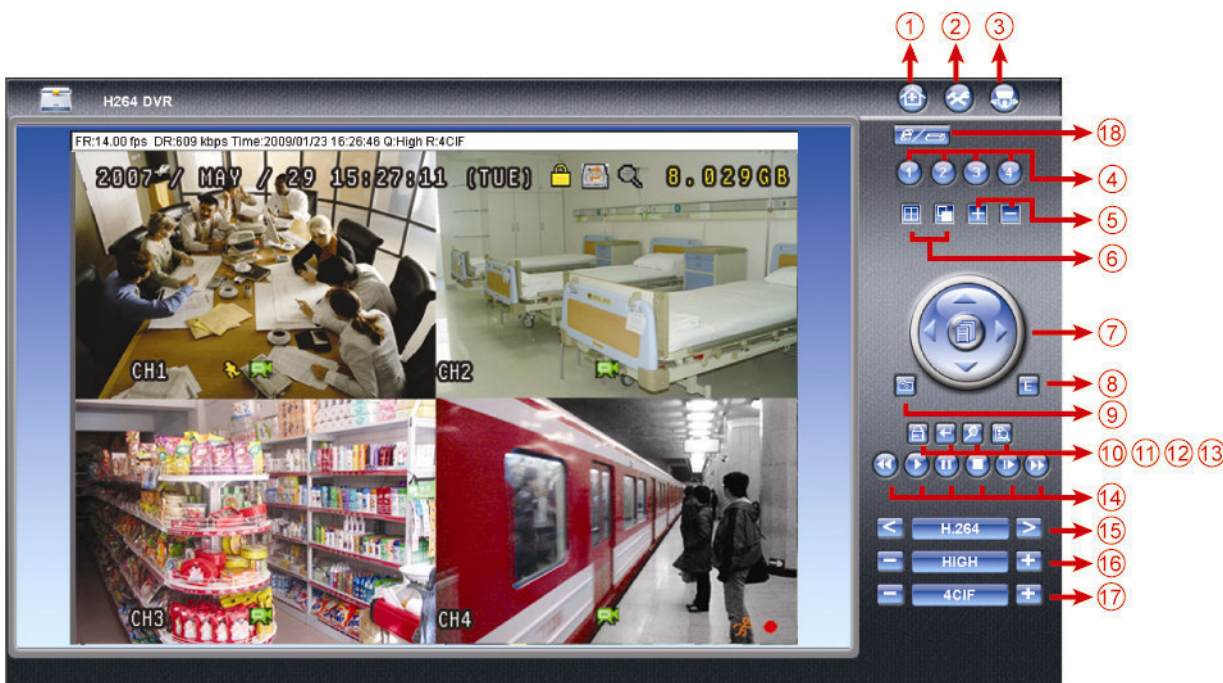
Note: The supported PC operation systems are Windows 2000 and Windows XP and Vista













Step 1: Key in the IP address used by your DVR 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 DVR.














If the port number your DVR used is NOT 80, you need to key in the port number additionally. The format is **ipaddress:portnum**. For example, for 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, the same as the ones used at AP login, and click "OK". You will see a similar screen as the following when the login information is correct.

Note: The buttons and functions described below are taking 4CH DVR model as an example.



NO.	Function	Description
1	Home	Click  to go to the main page of the DVR
2	Config.	Click  to go to the detailed DVR setting.
3	PTZ	Click  to enter the PTZ mode.
4	Channel Selection	 Click one of the number to switch to the channel you want to see in full screen.
5	Selection	Click  or  to go to the previous / next channel, or change setting.
6	Display Mode	 : Click to show 4-cut display.  : 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.
7	Menu and Arrow Keys	 : Click to enter the menu / exit the menu mode.  : Move up / down to select the previous / next menu or sub-menu function, or change the setting.  : Move left / right to the previous / next sub-menu items.
8	Event	Click  to enter the playback search settings screen.

NO.	Function	Description
9	Snapshot	Click  to take a snapshot for the current view, and open another browser window to display the captured image.
10	Key Lock	Click  to enable the DVR key lock function. To unlock the DVR, key in your password, and press  .
11	Enter	Click  to confirm the setting or enter your selection.
12	Digital Zoom	Click  to zoom in / out the selected channel image.
13	Search	Click  to enter the DVR full search menu. You can check all the logs here, and select one of them to playback.
14	Playback control buttons	 (Stop) /  (Play) /  (Rewind) /  (Forward) /  (Pause) /  (Slow Playback) Rewind / Forward Click once to get 4X fast rewind / forward, twice to get 8X, three times to get 16X, and four times to get 32X the highest. Slow Playback Click once to get 4X slow playback and twice to get 8X slow playback.
15	Web Transmission	H.264 / M-JPEG / QuickTime (Depending on the model you have) QuickTime is Apple Inc.'s multimedia software. You need to have QuickTime installed in your 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.
16	Change Quality	BEST / HIGH / NORMAL / BASIC Click to change the image quality.
17	Change Resolution	4 CIF / CIF Click to change the image resolution (4CIF: 704*480 / CIF: 352*240)
18	Remote Independent Operation Off / On	 Click it to disable / enable the network independent function.

8.3 Quick Timer Player

You can also use the QuickTime player to remotely log into the DVR and check the live view only.

Note: QuickTime is Apple’s multimedia software. You need to have QuickTime installed in you operation system first, and you can access the DVR to see the live view.
If you have installed QuickTime, please skip Step 1.

Note: The latest version of QuickTime is V6.4 at the time this manual goes to press, and the supported operation systems are Windows Vista / XP / 2000, and Apple Mac.

Step 1: Go to Apple’s official website to download QuickTime. The website address is as follows:

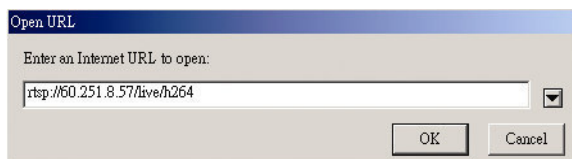
<http://www.apple.com/quicktime/win.html>

- a). Click “Free Download” to go into the download page, and select to download the free player.
- b). Leave your Email address, and click “Free Download Now” to download the latest QuickTime player.
- c). When the download is completed, execute the “QuickTimeInstaller.exe” file, and follow the on-screen instructions to finish the installation procedure.

Step 2: Open your QuickTime player. Select “File” → “Open URL in New Player...”, and key in the URL address.



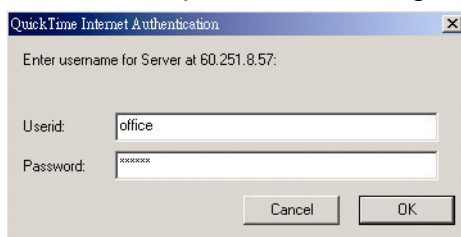
The URL format is “rtsp://ipaddress:portnum/live/h264” (For example, “rtsp://60.251.8.57:88/live/h264”).



Click “OK” to continue.

Step 3: A pop-up window will appear and prompt you to enter the authentication information.

Key in the user name and password for accessing your DVR. The user name and password are the same as the ones you use to log into Video Viewer. If the information is correct, click “OK” to go on. If not, click “Cancel” to quit the accessing.

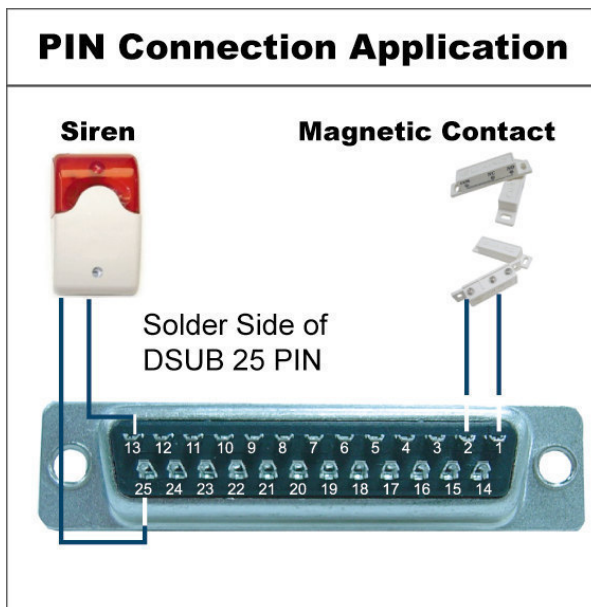


Note: If you’re not prompted to enter the authentication information, and the error message 10060 appears, go to “Edit” → “Preferences” → “QuickTime Preferences”, and select “Streaming Transport” front he drop-down list. Select “Use HTTP”, and keep the port ID as 80.

Step 4: When the login is successful, you will see the live view.

APPENDIX 1 PIN CONFIGURATION

- For 16CH DVR

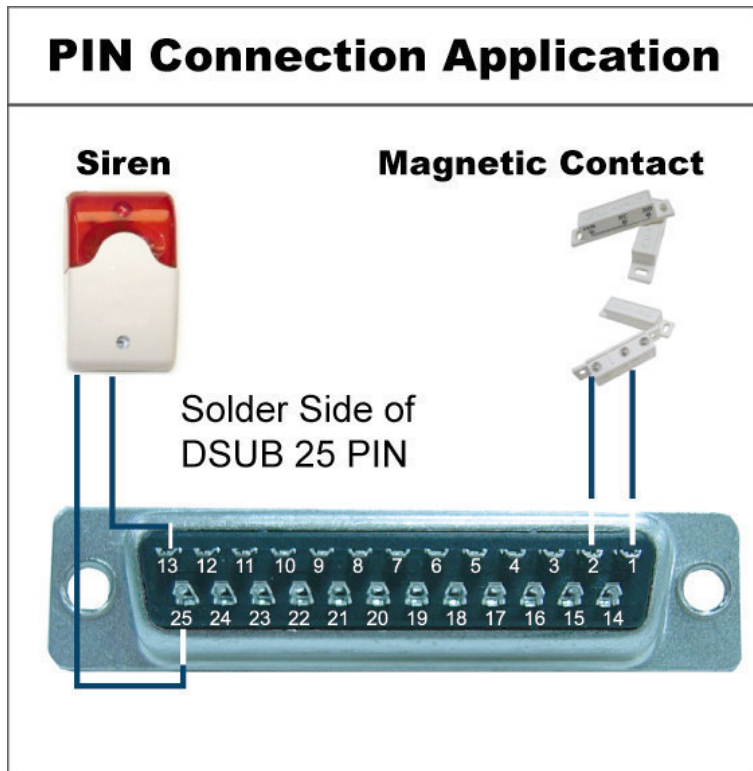


Siren: When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

Magnetic Contact: When the magnetic contact is opened, the alarm will be triggered and the recording is on.

PIN	FUNCTION	DESCRIPTION
1	GND	GROUND
2~9	ALARM INPUT	Connect ALARM INPUT (PIN 2 -- 9) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on. PIN 2 is Alarm 1. Once the alarm is triggered, the CH1 of the DVR will start alarm-triggered recording. PIN 3 is Alarm 3. Once the alarm is triggered, the CH3 of the DVR will start alarm-triggered recording. PIN 4 is Alarm 5. Once the alarm is triggered, the CH5 of the DVR will start alarm-triggered recording. PIN 5 is Alarm 7. Once the alarm is triggered, the CH7 of the DVR will start alarm-triggered recording. PIN 6 is Alarm 9. Once the alarm is triggered, the CH9 of the DVR will start alarm-triggered recording. PIN 7 is Alarm 11. Once the alarm is triggered, the CH11 of the DVR will start alarm-triggered recording. PIN 8 is Alarm 13. Once the alarm is triggered, the CH13 of the DVR will start alarm-triggered recording. PIN 9 is Alarm 15. Once the alarm is triggered, the CH15 of the DVR will start alarm-triggered recording.
10~12	PIN OFF	NA
13	EXTERNAL ALARM NO	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.
14	PIN OFF	NA
15~22	ALARM INPUT	Connect ALARM INPUT (PIN 15 – 22) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on. PIN 15 is Alarm 2. Once the alarm is triggered, the CH2 of the DVR will start alarm-triggered recording. PIN 16 is Alarm 4. Once the alarm is triggered, the CH4 of the DVR will start alarm-triggered recording. PIN 17 is Alarm 6. Once the alarm is triggered, the CH6 of the DVR will start alarm-triggered recording. PIN 18 is Alarm 8. Once the alarm is triggered, the CH8 of the DVR will start alarm-triggered recording. PIN 19 is Alarm 10. Once the alarm is triggered, the CH10 of the DVR will start alarm-triggered recording. PIN 20 is Alarm 12. Once the alarm is triggered, the CH12 of the DVR will start alarm-triggered recording. PIN 21 is Alarm 14. Once the alarm is triggered, the CH14 of the DVR will start alarm-triggered recording. PIN 22 is Alarm 16. Once the alarm is triggered, the CH16 of the DVR will start alarm-triggered recording.
23~24	PIN OFF	NA
25	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.

- For 8CH DVR

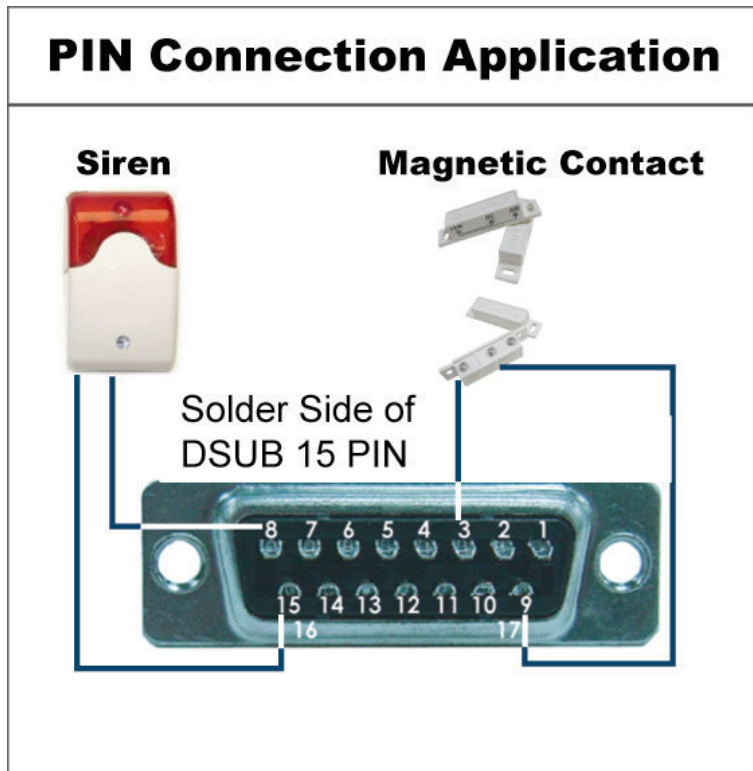


Siren: When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

Magnetic Contact: When the magnetic contact is opened, the alarm will be triggered and the recording is on.

PIN	FUNCTION	DESCRIPTION
1	GND	GROUND
2~5	ALARM INPUT	Connect ALARM INPUT (PIN 2 – 5) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on. PIN 2 is Alarm 1. Once the alarm is triggered, the CH1 of the DVR will start alarm-triggered recording. PIN 3 is Alarm 3. Once the alarm is triggered, the CH3 of the DVR will start alarm-triggered recording. PIN 4 is Alarm 5. Once the alarm is triggered, the CH5 of the DVR will start alarm-triggered recording. PIN 5 is Alarm 7. Once the alarm is triggered, the CH7 of the DVR will start alarm-triggered recording.
6 ~ 12	PIN OFF	NA
13	EXTERNAL ALARM NO.	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.
14	PIN OFF	NA
15~18	ALARM INPUT	Connect ALARM INPUT (PIN 15 – 18) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on. PIN 15 is Alarm 2. Once the alarm is triggered, the CH2 of the DVR will start alarm-triggered recording. PIN 16 is Alarm 4. Once the alarm is triggered, the CH4 of the DVR will start alarm-triggered recording. PIN 17 is Alarm 6. Once the alarm is triggered, the CH6 of the DVR will start alarm-triggered recording. PIN 18 is Alarm 8. Once the alarm is triggered, the CH8 of the DVR will start alarm-triggered recording.
19~24	PIN OFF	NA
25	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.

- For 4CH DVR



Siren: When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

Magnetic Contact: When the magnetic contact is opened, the alarm will be triggered and the recording is on.

PIN	FUNCTION	DESCRIPTION
1~2	PIN OFF	NA
3~6	ALARM INPUT	Connect ALARM INPUT (PIN 3 – 6) and GND (PIN 9) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on. PIN 3 is Alarm 1. Once the alarm is triggered, the CH1 of the DVR will start alarm-triggered recording. PIN 4 is Alarm 2. Once the alarm is triggered, the CH2 of the DVR will start alarm-triggered recording. PIN 5 is Alarm 3. Once the alarm is triggered, the CH3 of the DVR will start alarm-triggered recording. PIN 6 is Alarm 4. Once the alarm is triggered, the CH4 of the DVR will start alarm-triggered recording.
7	NC	Under the normal operation, COM connects with NC and disconnects from NO. But when any alarm is triggered, COM disconnects with NC and connects with NO. Attention: The voltage restriction is under DC24V 1A.
8	NO	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.
9	GND	GROUND
10	RS485-B	Using RS-485 serial communication signals, DVR can be controlled by keyboard controller.
11	RS485-A	Using RS-485 serial communication signals, DVR can be controlled by keyboard controller.
12~14	PIN OFF	NA
15	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.

APPENDIX 2 RECORDING TIME TABLE (For 4CH Model Only)

The recording time below is tested under the PAL system, and the testing environment is a normal office, just for reference only.

For the recording time under the NTSC system, it'll be similar as the data below, and just for reference only.

The recording time may vary depending on the following three factors:

- Different camera resolution;
- Different picture complexity;
- Different frequency of the object movement

Record mode	Quality	IPS	MB/Hour	750GB Record Time (day)
FRAME	SUPER BEST	25	925	33.78
		12	650	48.08
		7	520	60.10
		3	445	70.22
	BEST	25	875	35.71
		12	620	50.40
		7	475	65.79
		3	421	74.23
	HIGH	25	865	36.13
		12	600	52.08
		7	450	69.44
		3	400	78.13
	NORMAL	25	768	40.69
		12	570	54.82
		7	440	71.02
		3	385	81.17
FIELD	BEST	50	900	34.72
		25	800	39.06
		12	580	53.88
		7	460	67.93
	HIGH	50	890	35.11
		25	780	40.06
		12	540	57.87
		7	450	69.44
	NORMAL	50	865	36.13
		25	740	42.23
		12	460	67.93
		7	440	71.02
	BASIC	50	790	39.56
		25	720	43.40
		12	450	69.44
		7	430	72.67
CIF	BEST	100	1010	30.94
		50	720	43.40
		25	540	57.87
		12	455	68.68
	HIGH	100	910	34.34
		50	635	49.21
		25	510	61.27
		12	435	71.84
	NORMAL	100	875	35.71
		50	600	52.08
		25	480	65.10
		12	420	74.40
	BASIC	100	805	38.82
		50	570	54.82
		25	450	69.44
		12	410	76.22

APPENDIX 3 COMPATIBLE USB FLASH DRIVE BRAND

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, the "USB ERROR" message will be shown on the screen.

Note: Please use your PC to format the USB flash drive as "FAT 32".

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
Apacer	AH320	2G
	AH320A	8G
	AH220	1G
	AH320	4G
A-data	RB-18	1G
Transcend	JFV35	4G
	JFV30	8G
Sony	Micro Vault Tiny	1G
Sandisk	Cruzer Micro	2G
	Cruzer Micro	4G
	Cruzer4-pk	2G
MSI	F200	4G
PQI	U172P	4G
Netac	U208	1G

APPENDIX 4 COMPATIBLE HDD BRAND

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

MANUFACTURER	MODEL	CAPACITY	ROTATION
Seagate	ST3320613AS	320GB	7200 rpm
	ST33500320AS	500GB	7200 rpm
	ST3750330AS	750GB	7200 rpm
	ST31000340AS	1000GB	7200 rpm
WD	WD3200AAKS	320GB	7200 rpm
	WD5000AACS	500GB	7200 rpm
	WD6400AAKS	640GB	7200 rpm
	WD7500AAKS	750GB	7200 rpm
	WD10EACS	1000GB	7200 rpm
Maxtor	STM3500320AS	500GB	7200 rpm
	STM3750330AS	750GB	7200 rpm
Hitachi	HDT725032VLA360	320GB	7200 rpm
	HDS721010KLA330	1000GB	7200 rpm

APPENDIX 5 TROUBLESHOOTING

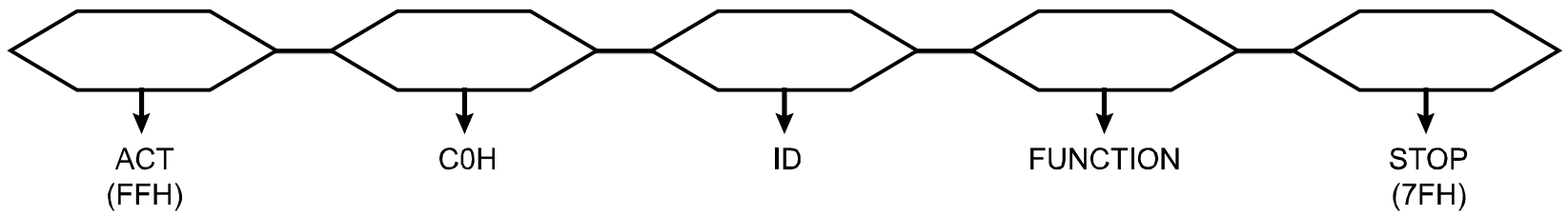
Please refer to the table below for easy troubleshooting. The table describes some typical problems and also their solutions. Please check them before calling your DVR dealer.

- **FAQ (Frequently ask question)**

Questions	Solutions
No power	Check power cord connection.
	Confirm that there is power supplied from the outlet.
DVR is not working when pressing any button	You might be under "Key Lock" mode. Press any key and enter the password to exit this mode.
HDD detection failed	Replace with another HDD for testing.
	Replace with another HDD cable for testing.
Can't detect your USB flash drive	Replace with another USB flash drive for testing.
	Format the USB flash drive as FAT 32 format and try again.
No live video	Confirm the camera is power supplied.
	Check the setting of the camera lens.
	Check the monitor's video cable and connection.
	Check the camera's video cable and connection.
No recorded video	Check if the HDD is installed and connected properly.
	Check the "MANUAL RECORD ENABLE" is set to "ON", and the record function in the "CAMERA" menu is set to "ON", too.
Timer recording is not working	Check if "TIMER RECORD ENABLE" option is set to "ON" and the timer schedule has been arranged.
Motion detection recording is not working	Check if "EVENT RECORD ENABLE" option is set to "ON".
	Check the detection function "DET" is set to "ON".
	Check the detection area "AREA" has been setup.
Can't play the recorded data on my DVR	There must be at least 8192 images of recorded data for playback to work properly. If not, your DVR will stop the 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.
Can't backup the video with audio	Make sure the audio cameras are connected to the DVR channels which support the audio function.
Can't view the DVR images over the network with IE web browser	Check the DVR firmware version.
	Please choose to allow the web browser ActiveX or applet in the pop-out message.
Failed to backup the recorded files of the DVR from remote PC side. (For details, please see "Network Backup" at page 40.)	You need to be a supervisor to operate this function. For details, please see "Account" at page 47.
	Check if the network connection information is correct (IP Address / Port / User Name / Password).
	Specify the hard disk (HDD Number) and channel number (Channel) within which have the recorded data you need.
Failed to upgrade the firmware / OSD file	Check the USB flash drive is format to FAT32.
	Check the firmware / OSD is correct.
Can't use the IR remote control	Check whether if the batteries are installed or not.
	Aiming at the IR receiving zone to control the DVR operation.

APPENDIX 6 RS485 PROTOCOL

- ◆ Use PC keyboards to simulate DVR keypads.
- ◆ Data: REMOTE PROTOCOL uses 8 bit data, 1 start bit, 1 stop bit.



FUNCTION	CODE	ASCII	FUNCTION	CODE	ASCII
KEY_MENU	0x4D	M	KEY_SET_CHANNEL	0x6e	n
KEY_ENTER	0x0D	ENTER	KEY_DWELL	0x65	e
KEY_PLUS	0x6b	k	KEY_CH1	0x31	1
KEY_MINUS	0x6d	m	KEY_CH2	0x32	2
KEY_UP	0x55	U	KEY_CH3	0x33	3
KEY_DOWN	0x4E	N	KEY_CH4	0x34	4
KEY_LEFT	0x4C	L	KEY_CH5	0x35	5
KEY_RIGHT	0x52	R	KEY_CH6	0x36	6
KEY_POWER	0x57	W	KEY_CH7	0x37	7
KEY_REC	0x72	r	KEY_CH8	0x38	8
KEY_PLAY	0x50	P	KEY_CH9	0x39	9
KEY_SLOW	0x53	S	KEY_CH10	0x41	A
KEY_ZOOM	0x5A	z	KEY_CH11	0x42	B
KEY_KEY LOCK	0x4B	K	KEY_CH12	0x43	C
KEY_AUDIO	0x64	d	KEY_CH13	0x44	D
KEY_SEARCH	0x73	S	KEY_CH14	0x45	E
KEY_PTZ_MODE	0x70	p	KEY_CH15	0x46	F
KEY_PTZ_PRESET	0x71	q	KEY_CH16	0x47	G
KEY_PTZ_ZOOM_IN	0x69	i	KEY_EJECT_DVD	0x6a	j
KEY_PTZ_ZOOM_OUT	0x66	f	KEY_IRIS_NEAR	0x67	g
KEY_MODE	0x6f	o	KEY_IRIS_FAR	0x68	h
KEY_4 CUT	0x61	a	KEY_PTZ_LIGHT	0x6c	l
KEY_9 CUT	0x62	b	KEY_PTZ_WIPER	0x77	w
KEY_16 CUT	0x63	c			