

# HDoCS

(Digital Video Recorder)

**SETUP GUIDE ( DT-P1600 )**

# TABLE OF CONTENTS

<b>DVR Pre-Installation .....</b>	<b>4</b>
<b>DVR Installation.....</b>	<b>4</b>
<b>Hard Disk Installation.....</b>	<b>4</b>
<b>Front Panels .....</b>	<b>6</b>
<b>Rear Panels .....</b>	<b>9</b>
<b>Specifications .....</b>	<b>10</b>
Table 1 Specification for STD Series .....	10
<b>HDD Storage Calculation Chart.....</b>	<b>11</b>
<b>Accessing by Web Browser .....</b>	<b>12</b>
Logging In .....	12
Live View .....	13
Recording.....	14
Playback.....	15
Log.....	16
<b>Menu Operation .....</b>	<b>17</b>
Menu Structure.....	17
Startup and Shutdown.....	17
Live View .....	18
Record Settings.....	19
Instant Recording.....	19
Playback.....	19
Backup .....	21
Alarm .....	23

## Regulatory information

### FCC information

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

### FCC conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.



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[www.recyclethis.info](http://www.recyclethis.info).



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Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer.  
This manual is applicable to the models listed in the following table.

Series	Model	Type
DT-P	16-ch	HD-TVI

## DVR Pre-Installation

The HD-TVI DVR is highly advanced surveillance equipment that should be installed carefully. Please take into consideration the following precautionary steps before installation of the DVR.

1. Keep all liquids away from the DVR.
2. Install the DVR in a well-ventilated and dust-free area.
3. Ensure environmental conditions meet factory specifications.
4. Install a manufacturer recommended HDD.

## DVR Installation

During the installation of the DVR:

1. Use brackets for rack mounting.
2. Ensure there is ample room for audio and video cables.
3. When installing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
4. Connect both the alarm and RS-485 cable.
5. Allow at least 2cm (≈0.75-inch) of space between racks mounted devices.
6. Ensure the DVR is grounded.
7. Environmental temperature should be within the range of -10 °C ~ 55 °C, 14°F ~ 131°F.
8. Environmental humidity should be within the range of 10% ~ 90%.

## Hard Disk Installation

### *Before you start:*

Before installing a hard disk drive (HDD), please make sure the power is disconnected from the DVR.

A factory recommended HDD should be used for this installation.

Up to 2 SATA hard disks can be installed on your DVR.

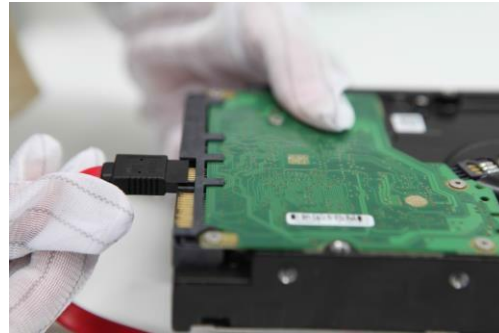
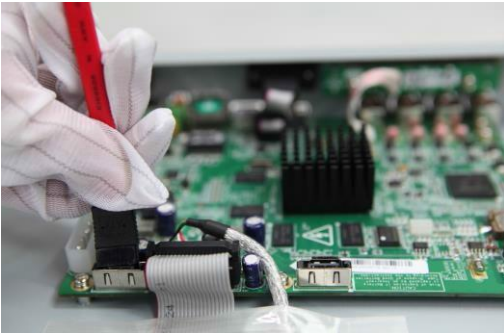
**Tools Required:** Screwdriver.

**Steps:**

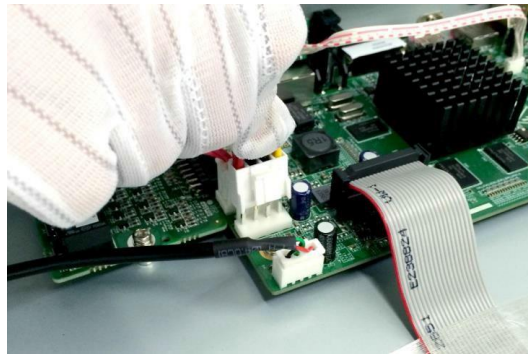
1. Remove the cover from the DVR by unfastening the screws on the back and side.



2. Connect one end of the data cable to the motherboard of DVR and the other end to the HDD.



3. Connect the power cable to the HDD.



4. Place the HDD on the bottom of the device and then fasten the screws on the bottom to fix the HDD.



5. Re-install the cover of the DVR and fasten screws.

## Front Panels



Figure 1. 1 Front Panel of 16ch DVR

Table 1. 1 Description of Front Panel

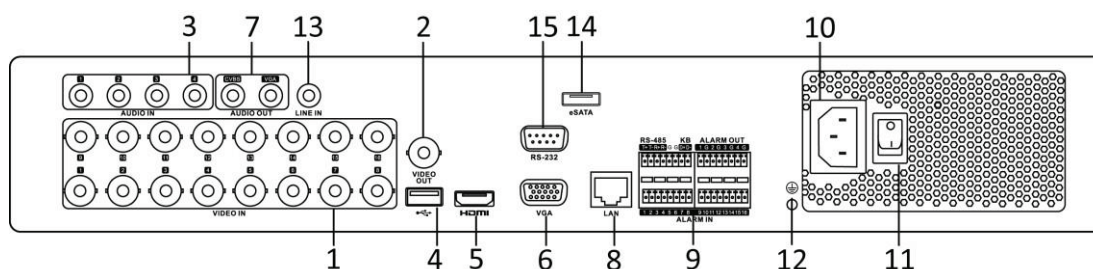
No.	Name	Function Description
1	<b>POWER</b>	Power indicator lights in green when DVR is powered up.
	<b>READY</b>	Ready indicator is normally green, indicating that the DVR is functioning properly.
	<b>STATUS</b>	Indicator turns green when DVR is controlled by an IR remote control with the address from 1~254; Indicator turns red when the SHIFT button is used; Indicator does not light when the DVR is controlled by a keyboard or by the IR remote control with the address of 255; Indicator turns green when the DVR is controlled by IR remote control (with the address from 1~254) and keyboard at the same time , and the SHIFT button is not used; Indicator turns orange : (a) when the DVR is controlled by IR remote control (with the address from 1~254) and keyboard at the same time and the SHIFT button is used as well; (b) when the DVR is controlled by IR remote control (with the address from 1~254) and the SHIFT button is used.
	<b>ALARM</b>	Alarm indicator turns red when a sensor alarm is detected.
	<b>HDD</b>	HDD indicator blinks in red when data is being read from or written to HDD.
	<b>Tx/Rx</b>	Tx/Rx indicator blinks in green when network connection is functioning properly.
2	<b>DVD-R/W</b>	Slot for DVD-R/W.
	<b>SHIFT</b>	Switch between the numeric or letter input and functions of the composite keys. (Input letter or numbers when the light is out; Realize functions when the light is red.)
	<b>1/MENU</b>	Enter numeral "1"; Access the main menu interface.
	<b>2/ABC/F1</b>	Enter numeral "2";
		Enter letters "ABC";
		The F1 button when used in a list field will select all items in the list.
		In PTZ Control mode, it will turn on/off PTZ light and when the image is zoomed in, the key is used to zoom out.
		In live view or playback mode, the F1 button can be used to switch between main and spot video output.
		Enter numeral "3";

3	Composite Keys	3/DEF/F2	Enter letters “DEF”;
			The F2 button is used to change the tab pages.
			In PTZ control mode, it zooms in the image.
		4/GHI/ESC	Enter numeral “4”;
			Enter letters “GHI”;
			Exit and back to the previous menu.
		5/JKL/EDIT	Enter numeral “5”;
			Enter letters “JKL”;
			Delete characters before cursor;
			Check the checkbox and select the ON/OFF switch;
		6/MNO/PLAY	Start/stop record clipping in playback.
			Enter numeral “6”;
			Enter letters “MNO”;
			In Playback mode, it is used for direct access to playback interface.
No.	Name	Function Description	
	7/PQRS/REC	Enter numeral “7”;	
		Enter letters “PQRS”;	
		Manual record, for direct access to manual record interface; manually enable/disable record.	
	8/TUV/PTZ	Enter numeral “8”;	
		Enter letters “TUV”;	
		Access PTZ control interface.	
	9/WXYZ/PREV	Enter numeral “9”;	
		Enter letters “WXYZ”;	
		Multi-channel display in live view.	
	0/A	Enter numeral “0”;	
4	DIRECTION	The DIRECTION buttons are used to navigate between different fields and items in menus.	
		In the Playback mode, the Up and Down button is used to speed up and slow down recorded video. The Left and Right button will select the next and previous record files.	
		In Live View mode, these buttons can be used to cycle through channels.	
		In PTZ control mode, it can control the movement of the PTZ camera.	
	ENTER	The ENTER button is used to confirm selection in any of the menu modes.	
		It can also be used to <i>tick</i> checkbox fields.	
		In Playback mode, it can be used to play or pause the video.	
		In single-frame Playback mode, pressing the button will advance the video by a single frame.	
		In Auto-switch mode, it can be used to stop /start auto switch.	
5	POWER	Power on/off switch.	
6	JOG SHUTTLE Control	Move the active selection in a menu. It will move the selection up and down.	
		In Live View mode, it can be used to cycle through different channels.	
		In the Playback mode, it can be used to jump 30s forward/backward in video files.	
		In PTZ control mode, it can control the movement of the PTZ camera.	

7	<b>USB Interface</b>	Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
8	<b>IR Receiver</b>	Receiver for IR remote control.



## Rear Panels



No.	Item	Description
1	<b>VIDEO IN</b>	BNC interface for TVI and analog video input.
2	<b>VIDEO OUT</b>	BNC connector for video output.
3	<b>AUDIO IN</b>	RCA connector
4	<b>USB Port</b>	Universal Serial Bus (USB) port for additional devices.
5	<b>HDMI</b>	HDMI video output connector.
6	<b>VGA</b>	DB15 connector for VGA output. Display local video output and menu.
7	<b>AUDIO OUT</b>	RCA connector
8	<b>Network Interface</b>	Connector for network
9	<b>RS-485 Interface</b>	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- D+, D- pin connects to Ta, Tb pin of controller. For cascading devices, Connector for alarm input. Connector for alarm output.
10	<b>Power Supply</b>	100 ~ 240VAC power supply.
11	<b>Power Switch</b>	Switch for turning on/off the device.
12	<b>GND</b>	Ground
13	<b>LINE IN</b>	BNC connector for audio input.
14	<b>eSATA</b>	Connects external SATA HDD, CD/DVD-RW.
15	<b>RS-232 Interface</b>	Connector for RS-232 devices.

**To connect PTZ to the DVR:**

1. Disconnect *pluggable block* from the RS-485 terminal block.
2. Press and hold the orange part of the *pluggable block*; insert signal cables into slots and release the orange part. Ensure signal cables are in tight.
3. Connect A+ on PTZ to T+ on terminal block and B- on controller to T- on terminal block. Fasten stop screws.
4. Connect *pluggable block* back into terminal block.

**To connect a controller to the DVR:**

1. Disconnect *pluggable block* from the KB terminal block.
2. Press and hold the orange part of the *pluggable block*; insert signal cables into slots and release the orange part. Ensure signal cables are in tight.
3. Connect Ta on controller to D+ on terminal block and Tb on controller to D- on terminal block. Fasten stop screws.
4. Connect *pluggable block* back into terminal block.



Make sure both the controller and DVR are grounded.

## Specifications

**Table 1 Specification for HD DVR**

<b>Video/Audio input</b>	<b>Video compression</b>	H.264
	<b>Analog and HD-TVI video input</b>	16-ch
		BNC interface (1.0Vp-p, 75 Ω)
	<b>Supported camera types</b>	720P25, 720P30, 720P50, 720P60, 1080P25, 1080P30, CVBS
	<b>Audio compression</b>	G.711u
	<b>Audio input / Two-way audio in</b>	4-ch Audio In/ 1ch Out, RCA (2.0 Vp-p, 1 KO)
<b>Video/Audio output</b>	<b>HDMI / VGA output</b>	1920 × 1080 / 60 Hz, 1280 × 1024 / 60 Hz, 1280 × 720 / 60 Hz, 1024 × 768 / 60 Hz
	<b>Encoding resolution</b>	Main stream: 1080P(non-real-time) / 720P / VGA / WD1 / 4CIF / CIF
		Sub-stream: WD1(non-real-time) / 4CIF(non-real-time) / CIF / QCIF / QVGA
	<b>Frame rate</b>	Main stream: 1/16 fps ~ Real time frame rate
		Sub-stream: 1/16 fps ~ Real time frame rate
	<b>Video bitrate</b>	32 Kbps-6 Mbps
	<b>Audio output</b>	1-ch, RCA (Linear, 1KO)
	<b>Audio bitrate</b>	64 Kbps

	<b>Dual-stream</b>	Support
	<b>Stream type</b>	Video, Video & Audio
	<b>Synchronous playback</b>	16-ch
	<b>Playback resolution</b>	1080P / 720P / VGA / WD1 / 4CIF / CIF / QVGA / QCIF
<b>Network management</b>	<b>Remote connections</b>	128
	<b>Network protocols</b>	TCP/IP, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, SNMP, NFS, iSCSI, UPnP™, HTTPS
<b>Hard disk</b>	<b>SATA</b>	4 SATA interfaces
	<b>Capacity</b>	Up to 4 TB capacity for each disk
<b>External interface</b>	<b>Network interface</b>	1; 10M / 100M / 1000M self-adaptive Ethernet interface
	<b>Serial interface</b>	1; standard RS-485 serial interface, half-duplex
	<b>USB port</b>	2 × USB2.0
<b>General</b>	<b>Power supply</b>	100 ~ 240VAC
	<b>Consumption (without hard disks)</b>	≤ 50W
	<b>Working temperature</b>	-10 °C ~ +55 °C (14 °F ~ 131 °F)
	<b>Working humidity</b>	10% ~ 90%
	<b>Chassis</b>	
	<b>Dimensions (W × D × H)</b>	17.3 x 15 x 2.7inches
	<b>Weight (without hard disks)</b>	≤ 2Kg (4.4lb)

## HDD Storage Calculation Chart

The following chart shows an estimation of storage space used based on recording at one channel for an hour at a fixed bit rate.

Bit Rate	Storage Used
96K	42M
128K	56M
160K	70M
192K	84M
224K	98M
256K	112M
320K	140M
384K	168M
448K	196M
512K	225M
640K	281M
768K	337M
896K	393M
1024K	450M
1280K	562M

1536K	675M
1792K	787M
2048K	900M
4096K	1800M
8192K	3600M
16384K	7200M

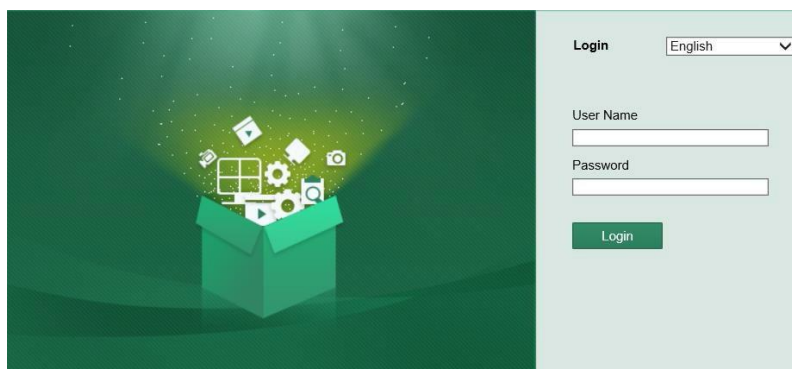


Please note that supplied values for storage space used are just for reference. Storage space used is estimated by formulas and may have some deviation from actual value.

## Accessing by Web Browser

### Logging In

You can get access to the device via web browser. Open web browser, input the IP address of the device and then press Enter. The login interface appears.



Input the user name and password, and click the **Login** button.

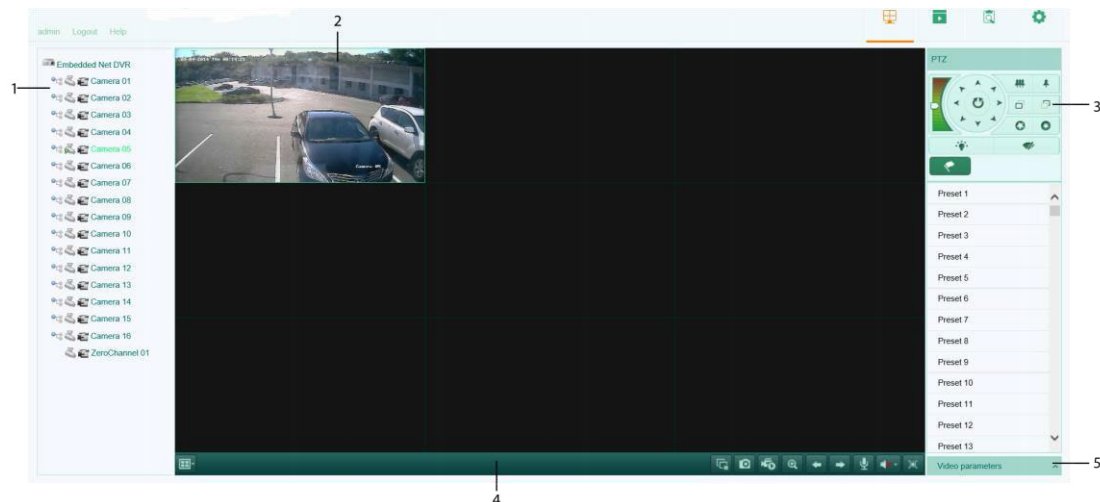


- ◆ You may use one of the following listed web browsers: Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Internet Explorer 10.0, Apple Safari, Mozilla Firefox, and Google Chrome.
- ◆ The supported resolutions include 1024\*768 and above.
- ◆ The default IP address is 192.168.0.222
- ◆ The default user name is admin, and password is 000000.
- ◆ You are highly recommended to change the default password right after the first login to avoid safety problem.


When you log in for the first time, the system will remind you to install the Plug-in control. After the installation, you can configure and manage the device remotely.

## Live View

The live view interface appears by default when you log in the device.




### Interface Introduction



No.	Name	Description
1	Channel List	Displays the list of channels and the playing and recording status of each channel.
2	Live View Window	Displays the image of channel, and multi-window division is supported.
3	Play Control Bar	Play control operations are supported.
4	PTZ Control	Pan, tilt, zoom operations are supported, as well as preset editing and calling.  PTZ function can only be realized if the connected camera supports PTZ control.
5	Video Parameters Configuration	Brightness, contrast, saturation and hue of the image can be edited.









### Start Live View

#### Steps:

1. In the live view window, select a playing window by clicking the mouse.
2. Double click a camera from the device list to start the live view.
3. You can click the  button on the toolbar to start the live view of all cameras on the device list.

Refer to the following table for the description of buttons on the live view window:

Icon	Description	Icon	Description
	Select the window-division mode		Previous page

	Start/Stop all live view		Next page
	Capture pictures in the live view mode		Open/Close audio
	Start/Stop all recording		Start/Stop two-way Audio
	Enable/Disable digital zoom		Adjust volume

## Recording

### Before you start

Make sure the device is connected with HDD or network disk, and the HDD or network disk has been initialized for the first time to use.

Two recording types can be configured: Manual and Scheduled. The following section introduces the configuration of scheduled recording.

### Steps:

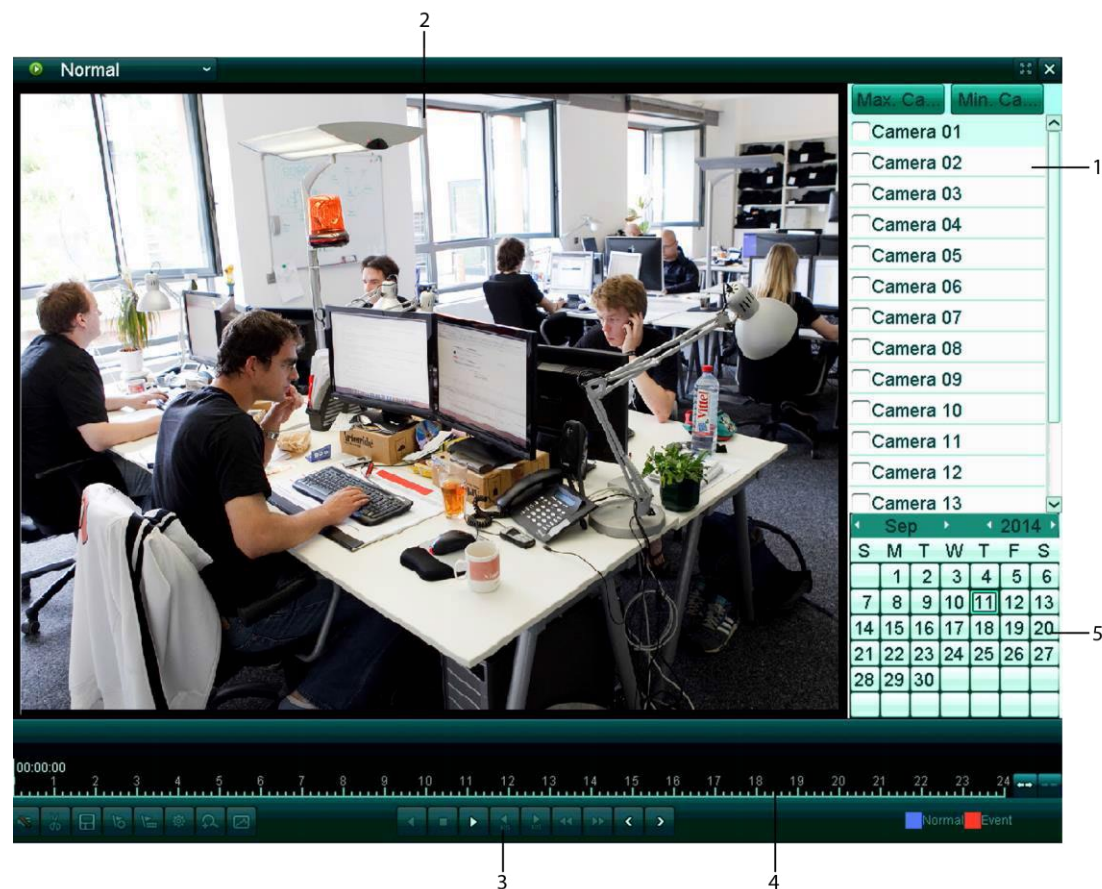
1. Click **Remote Configuration> Camera Settings> Record Schedule** to enter Record Schedule settings interface.
2. Select the camera to configure the record schedule.
3. Check the checkbox of **Enable Record Schedule** to enable recording schedule.
4. Click **Edit** to edit record schedule.
5. Choose the day in a week to configure scheduled recording.
  - 1) Configure All Day or Customize Record:
    - ◆ If you want to configure the all-day recording, please check the **All Day** checkbox.
    - ◆ If you want to record in different time sections, check the **Customize** checkbox. Set the Start Time and End Time.



The time of each segment cannot be overlapped. Up to 8 segments can be configured.

- 2) Select a **Record Type**. The record type can be Continuous, Motion, Alarm, Motion & Alarm, and Motion | Alarm.
- 3) Check the checkbox of **Select All** and click **Copy** to copy settings of this day to the whole week. You can also check any of the checkboxes before the date and click **Copy**.
- 4) Click **OK** to save the settings and exit the Edit Schedule interface.
6. Click **Advanced** to configure advanced record parameters.
7. Click **Save** to validate the above settings.

## Playback



### Interface Introduction













No.	Name	Description
1	Channel List	Displays the list of channels and the playing status of each channel.
2	Playback Window	Displays the image of channel.
3	Play Control Bar:	Play control operations are supported.
4	Time Line	Displays the time bar and the records marked with different colors.
5	Calendar	You can select the date to play.

### Start Playback

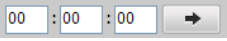

#### Steps:

1. Click **Playback** on the menu bar to enter playback interface.
2. Click the camera from the device list for playback.
3. Select the date from the calendar and click **Search**.
4. Click the **Play** button to play the video file searched on the current date.
5. Use the buttons on the toolbar to operate in playback mode.

Button	Description	Button	Description
--------	-------------	--------	-------------

	Play/Pause		Stop
	Slow down		Speed up
	Play by single frame		Capture
	Stop all playback		Download
	Video clip		Open/Close audio
	Full Screen		Reverse play

6. You can drag the progress bar with the mouse to locate the exact playback point. You can also input the time

in the textbox  and click  button to locate the playback point.

The color of the video on the progress bar stands for the different video types.



## Log

You can view and export the log files at any time, including operation, alarm, exception and information of device.

### Before you start


The Log function can be realized only when the device is connected with HDD or network disk. And make sure the HDD or network disk has been initialized for the first time to use.

### Steps:

1. Click **Log** on the menu bar to enter the Log interface.
2. Set the log search conditions to refine your search, including the Major Type, Minor Type, Start Time and End Time.
3. Click the **Search** button to start searching log files.
4. The matched log files will be displayed on the list shown below.



Up to 100 log files can be displayed on each page.

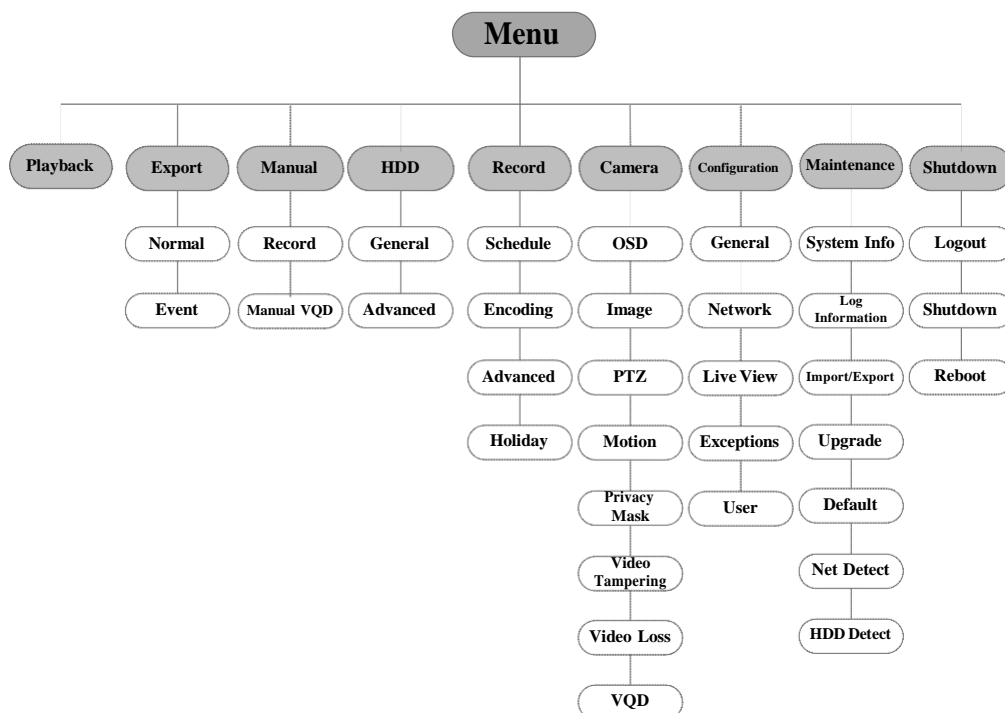
You can click the  button to save the searched log files to local directory.



# Menu Operation

## Menu Structure

The menu structure of the HD DVR is shown below:



## Startup and Shutdown

Proper startup and shutdown procedures are crucial to expand the service time of the DVR.

### To start the DVR:

Check the power supply is plugged into an electrical outlet. It is **HIGHLY** recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. Turn on the power switch on the rear panel; the Power indicator LED on the front panel should be yellow.

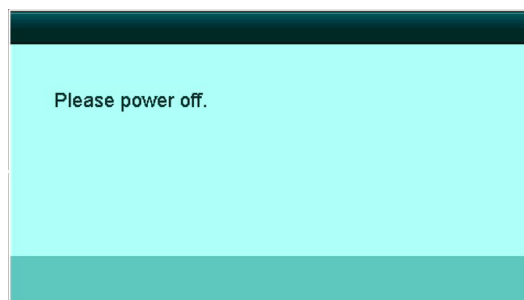
### To shut down the DVR:

#### Steps:

1. Enter the Shutdown menu.  
Menu > Shutdown



2. Select the **Shutdown** button.
3. Click the **Yes** button.
4. Turn off the power switch on the rear panel when the note appears.



After the device starting up, the wizard will guide you through the basic settings, including editing password, date and time settings, network settings, HDD initializing, and recording.

## Live View

Some icons are provided on screen in Live View mode to indicate different camera status. These icons include:

### Live View Icons

In the live view mode, there are icons at the right top of the screen for each channel, showing the status of the record and alarm in the channel, so that you can find problems as soon as possible.



Indicating that there is an alarm or are alarms. Alarm includes video loss, tampering, motion detection or sensor alarm, etc.



Recording (manual record, continuous record, motion detection or alarm triggered record)



Alarm & Recording



Event/Exception (event and exception information, appears at the lower-left corner of the screen.)

## Record Settings

### *Before you start:*

Make sure that the HDD has already been installed. If not, please install a HDD and initialize it. You may refer to the user manual for detailed information.

### *Purpose:*

Two kinds of record types are introduced in the following section, including Instant Record and All-day Record. And for other record types, you may refer to the user manual for detailed information.







After rebooting all the manual records enabled are canceled.

## Instant Recording

On the live view window of each channel, there is a quick setting toolbar which shows on the bottom of the window when you click on it.




Click the  icon to enable the record, and the icon turns to . And click  icon to disable the record, then the icon turns to .

## Playback

Play back the record files of a specific channel in the live view menu.

### ◆ OPTION 1:

Choose a channel under live view using the mouse and click the  button in the shortcut operation menu.

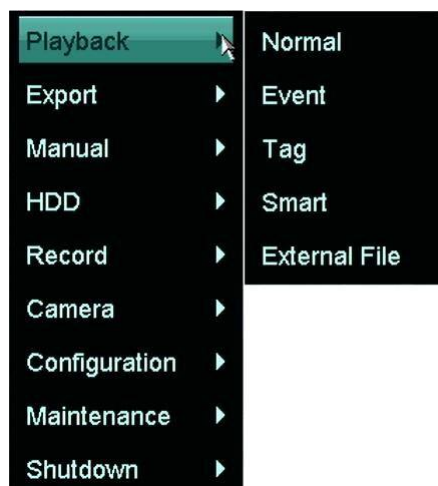


Only record files recorded during the last five minutes on this channel will be played back.



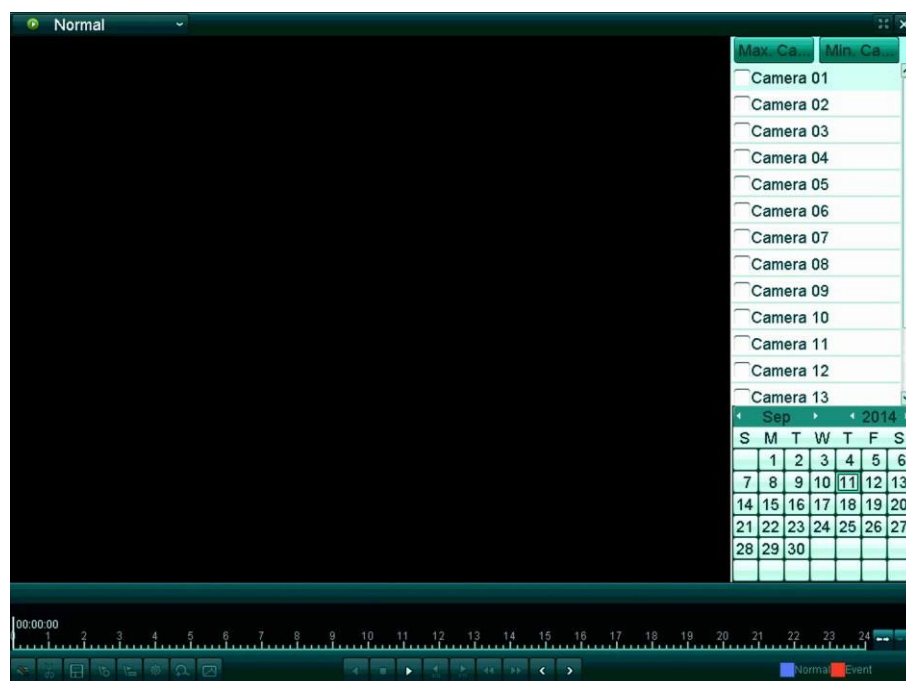
## ◆ OPTION 2:

1. Enter the Playback menu and select **Playback** from the menu.



2. Playback management.

The toolbar in the bottom part of Playback interface can be used to control playing process.



Just check the channel or channels if you want to switch playback to another channel or execute simultaneous playback of multiple channels.

## Backup

Recorded files can be backed up to various devices, such as USB flash drives, USB HDDs or USB DVD writers. To export recorded files:

1. Enter Video Export interface.  
Choose the channel(s) you want to back up and click the **Quick Export** button.

<input checked="" type="checkbox"/> Analog	<input checked="" type="checkbox"/> A1	<input checked="" type="checkbox"/> A2	<input checked="" type="checkbox"/> A3	<input checked="" type="checkbox"/> A4	<input checked="" type="checkbox"/> A5	<input checked="" type="checkbox"/> A6	<input checked="" type="checkbox"/> A7	<input checked="" type="checkbox"/> A8
	<input checked="" type="checkbox"/> A9	<input checked="" type="checkbox"/> A10	<input checked="" type="checkbox"/> A11	<input checked="" type="checkbox"/> A12	<input checked="" type="checkbox"/> A13	<input checked="" type="checkbox"/> A14	<input checked="" type="checkbox"/> A15	<input checked="" type="checkbox"/> A16
Start/End time of record	08-30-2014 05:41:44 -- 09-11-2014 09:41:57							
Record Type	All							
File Type	All							
Start Time	09-11-2014				00:00:00			
End Time	09-11-2014				23:59:59			

2. Enter Export interface, choose backup device and click the **Export** button to start exporting.

Export

Device Name

USB1-1

Refresh

Name	Size	Type	Edit Date	Delete	Play
HD DVR		Folder	08-08-2014 12:23:16		
System Volume Inf...		Folder	01-22-2014 11:10:38		
~\$Mobile APP SIG...	0KB	File	05-28-2014 16:05:22		

Free Space

12,699MB


New Folder

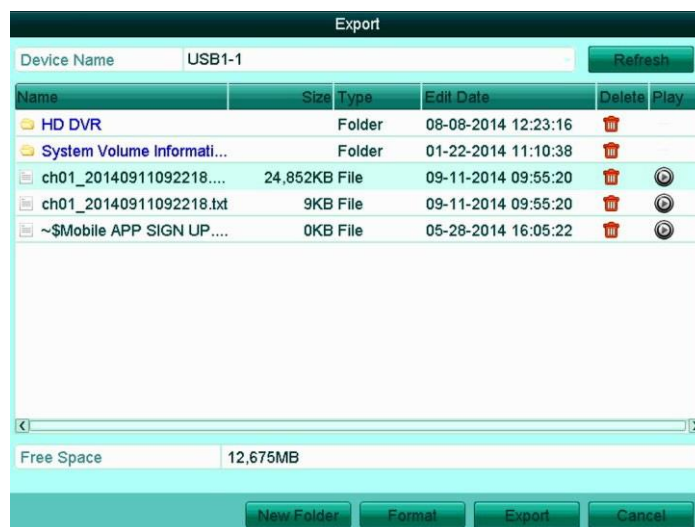
Format

Export

Cancel

3. Check backup result.

Choose the record file in Export interface and click  button to check it.



# Alarm Settings

## Setting Motion Detection


### Steps:

1. Enter Motion Detection interface of Camera Management and choose a camera you want to set up motion detection.

Menu> Camera> Motion

- 
2. Set detection area and sensitivity.

Check ☒ checkbox to enable motion detection, use the mouse to draw detection area(s) and drag the sensitivity bar to set sensitivity.

Click  to set alarm response actions.

- 
3. Click **Trigger Channel** tab and select one or more channels which will start to record or become full-screen monitoring when motion alarm is triggered.

- 
4. Set arming schedule of the channel.

Select **Arming Schedule** tab to set the channel's arming schedule.

Choose one day of a week and up to eight time periods can be set within each day. Or you can click the **Copy** button to copy the time period settings to other day(s).



Time periods shall not be repeated or overlapped.

- 
1. Click **Linkage Action** tab to set up alarm response actions of motion alarm (please refer to *Chapter 8.7 Setting Alarm Response Actions*).

Repeat the above steps to set up arming schedule of other days of a week.

Click the **OK** button to complete the motion detection settings of the channel.

2. If you want to set motion detection for another channel, repeat the above steps or just copy the above settings to it.



You are not allowed to copy the "Trigger Channel" action.

## Setting Sensor Alarms

### **Purpose:**

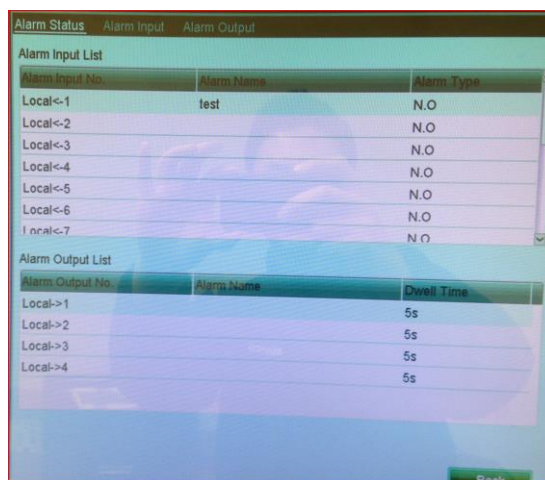
Set up handling method of an external sensor alarm.

### **Steps:**

3. Enter Alarm Settings of System Configuration and select an alarm input.

Menu> Configuration> Alarm

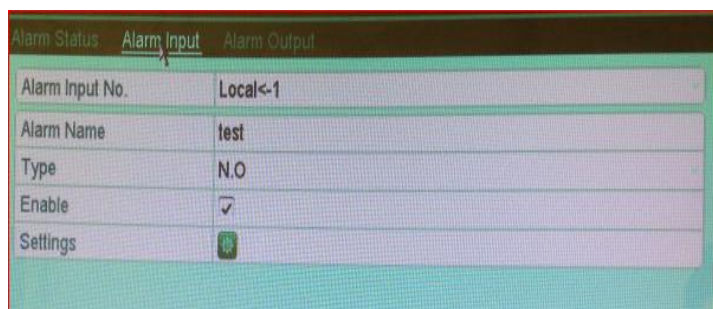
Select Alarm Input tab to enter Alarm Input Settings interface.



Alarm Status Interface of System Configuration

4. Set the handling method of the selected alarm input.

Check the **Setting** checkbox and click  button to set its alarm response actions.



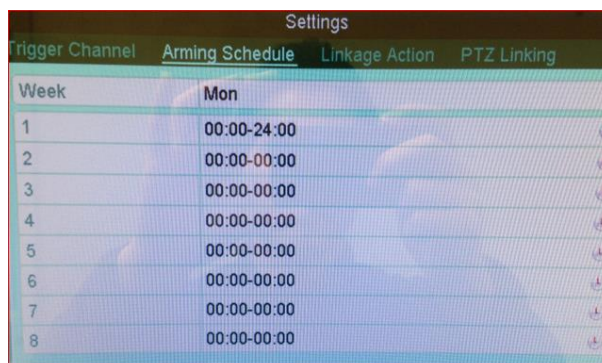
Alarm Input Settings Interface

5. Select Trigger Channel tab and select one or more channels which will start to record or become full-screen monitoring when an external alarm input is triggered.
6. Select **Arming Schedule** tab to set the channel's arming schedule.  
Choose one day of a week and Max. eight time periods can be set within each day.



Time periods shall not be repeated or overlapped.





Week	Mon
1	00:00-24:00
2	00:00-00:00
3	00:00-00:00
4	00:00-00:00
5	00:00-00:00
6	00:00-00:00
7	00:00-00:00
8	00:00-00:00

### Set Arming Schedule of Alarm Input

7. Select **Linkage Action** tab to set up alarm response actions of the alarm input (please refer to *Chapter 8.7 Setting Alarm Response Actions*).

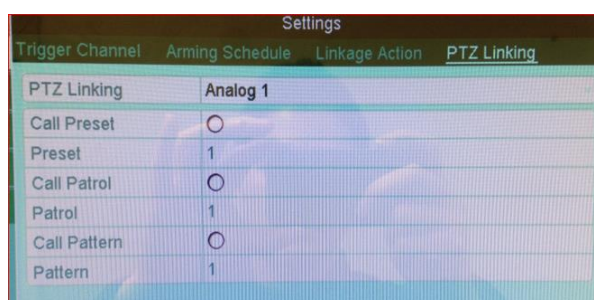
Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

8. If necessary, select **PTZ Linking** tab and set PTZ linkage of the alarm input.  
Set PTZ linking parameters and click the **OK** button to complete the settings of the alarm input.



Please check whether the PTZ or speed dome supports PTZ linkage.

One alarm input can trigger presets, patrol or pattern of more than one channel. But presets, patrols and patterns are exclusive.



PTZ Linking	Analog 1
Call Preset	<input type="radio"/>
Preset	1
Call Patrol	<input type="radio"/>
Patrol	1
Call Pattern	<input type="radio"/>
Pattern	1

### Set PTZ Linking of Alarm Input

9. If you want to set handling action of another alarm input, repeat the above steps or just copy the above settings to it.

## Detecting Video Loss

### Purpose:

Detect video loss of a channel and take alarm response action(s).


### Steps:

10. Enter Video Loss interface of Camera Management and select a channel you want to detect.

Menu> Camera> Video Loss

11. Set up handling method of video loss.

Check the checkbox of "Enable Video Loss Alarm".

Click  button to set up handling method of video loss.

12. Set arming schedule of the channel.

Select **Arming Schedule** tab to set the channel's arming schedule.

Choose one day of a week and up to eight time periods can be set within each day. Or you can click the

**Copy** button to copy the time period settings to other day(s).



Time periods shall not be repeated or overlapped.

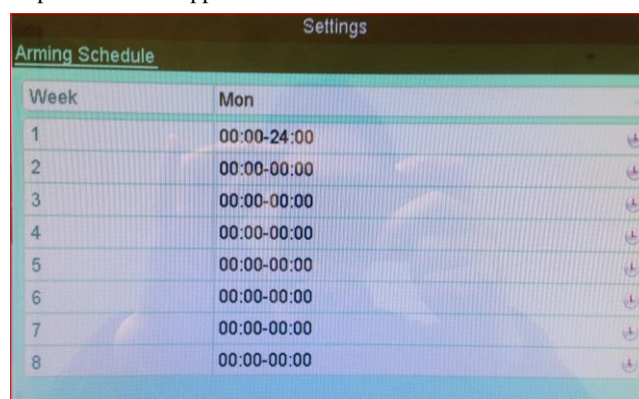


Figure 8. 11 Set Arming Schedule of Video Loss

Repeat the above steps to set arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

13. Select **Linkage Action** tab to set up alarm response action of video loss (please refer to *Chapter 8.7 Setting Alarm Response Actions*).
14. Click the **OK** button to complete the video loss settings of the channel.  
Repeat the above steps to finish settings of other channels, or click the **Copy** button copy the above settings to them.

## Detecting Video Tampering


### **Purpose:**

Trigger alarm when the lens is covered and take alarm response action(s).

### **Steps:**

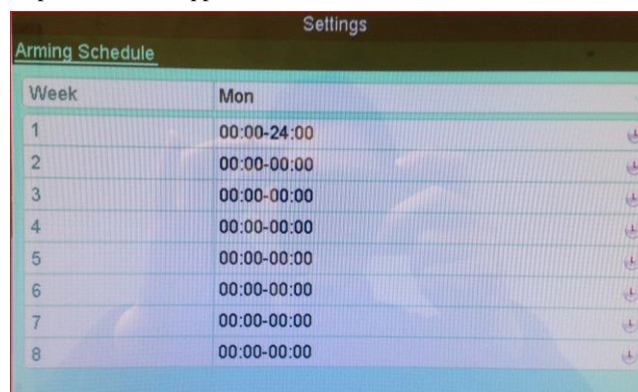
15. Enter Video Tampering interface of Camera Management and select a channel you want to detect video tampering.

Menu> Camera> Video Tampering Detection

16. Check the checkbox of "Enable Video Tampering".
17. Drag the sensitivity bar and choose a proper sensitivity level.
18. Click  to set handling method of video tampering. Set arming schedule and alarm response actions of the channel.
  - 1) Click **Arming Schedule** tab to set the arming schedule of response action.
  - 2) Choose one day of a week and up to eight time periods can be set within each day.



Time periods shall not be repeated or overlapped.



Week	Mon
1	00:00-24:00
2	00:00-00:00
3	00:00-00:00
4	00:00-00:00
5	00:00-00:00
6	00:00-00:00
7	00:00-00:00
8	00:00-00:00

Figure 8. 13 Set Arming Schedule of Video Tampering

- 3) Select **Linkage Action** tab to set alarm response actions of video tampering alarm (please refer to

*Chapter 8.7 Setting Alarm Response Actions).*

Repeat the above steps to set arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

- 4) Click the **OK** button to complete the video tampering settings of the channel.  
Repeat the above steps to finish settings of other channels, or click the **Copy** button copy the above settings to them.

19. Click the **Apply** button to save and activate the settings.

## Setting All-day Video Quality Diagnostics

### Purpose:

The device provides two ways to diagnose the video quality: manual and all-day. Perform the following steps to set the threshold of the diagnosing and the linkage actions.

### Steps:

20. Enter Video Quality Diagnostics settings interface of Camera Management and select a channel you want to detect video tampering.

Menu> Camera> Video Quality Diagnostics


21. Check the checkbox of Enable Video Quality Diagnostics.

22. Enable and set the threshold of the diagnostic types, there are Blurred Image, Abnormal Brightness, and Color Cast.

Check the corresponding checkbox of the diagnostic type, and adjust the threshold of it by clicking-and-dragging the bar.



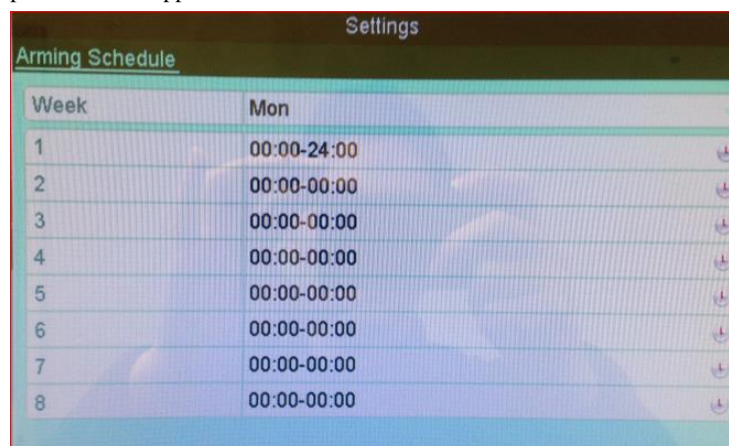
The higher the threshold you set, the harder the exception will be detected.

23. Click  to set handling method of video tampering. Set arming schedule and alarm response actions of the channel.

- 1) Click **Arming Schedule** tab to set the arming schedule of response action.
- 2) Choose one day of a week and up to eight time periods can be set within each day.



Time periods shall not be repeated or overlapped.



Settings	
Arming Schedule	
Week	Mon
1	00:00-24:00
2	00:00-00:00
3	00:00-00:00
4	00:00-00:00
5	00:00-00:00
6	00:00-00:00
7	00:00-00:00
8	00:00-00:00

Figure 8. 14 Set Arming Schedule of Video Quality Diagnostics

- 3) Select **Linkage Action** tab to set alarm response actions of video tampering alarm (please refer to *Chapter 8.7 Setting Alarm Response Actions*).  
Repeat the above steps to set arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.
- 4) Click the **OK** button to complete the video tampering settings of the channel.
24. Click the **Apply** button to save and activate settings.
25. (Optional) you can copy the same settings to other cameras by clicking the **Copy** button.

## Handling Exceptions

### *Purpose:*

Exception settings refer to the handling method of various exceptions, e.g.



- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error, unformatted HDD, etc.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Input/Recording Resolution Mismatch:** The input resolution is smaller than the recording resolution.
- **Record Exception:** No space for saving recorded files.

### *Steps:*


26. Enter Exceptions interface and handle various exceptions.

Menu > Configuration > Exceptions

---

27. Check the checkbox of **Enable Event Hint** to display the  (Event/Exception icon) when an exceptional event occurs. And click the icon  to select the detailed event hint for display.



Click the icon  appears in the live view interface, and you can view the detailed information of the exceptional event. Click the button **Set**, and then you can select the detailed event hint for display.

28. Set the alarm linkage actions. For details, see *Chapter 8.7 Setting Alarm Response Actions*.

29. Click **Apply** to save the settings.

## Setting Alarm Response Actions

### **Purpose:**

Take alarm response actions will be activated when an alarm or exception occurs, including Full Screen Monitoring, Audible Warning (buzzer), Notify Surveillance Center, Send Email and Trigger Alarm Output.

### **Full Screen Monitoring**

When an alarm is triggered, the local monitor (HDMI, VGA or CVBS monitor) display in full screen the video image from the alarming channel configured for full screen monitoring.

If alarms are triggered simultaneously in several channels, their full-screen images will be switched at an interval of 10 seconds (default dwell time). A different dwell time can be set by going to Menu > Configuration > Live View.

Auto-switch will terminate once the alarm stops and you will be taken back to the Live View interface.

### **Audible Warning**

Trigger an audible *beep* when an alarm is detected.

### **Notify Surveillance Center**

Sends an exception or alarm signal to remote alarm host when an event occurs. The alarm host refers to the PC installed with Remote Client.



The alarm signal will be transmitted automatically at detection mode when remote alarm host is configured. Please refer to *Chapter 9.2.6 Configuring the Remote Alarm Host* for details of alarm host configuration.

### **Send Email**

Send an email with alarm information to a user or users when an alarm is detected.

Please refer to *Chapter 9.2.11 Configuring Email* for details of Email configuration.


### **Trigger Alarm Output**

Trigger an alarm output when an alarm is triggered.

### **Steps:**

30. Enter Alarm Output interface.

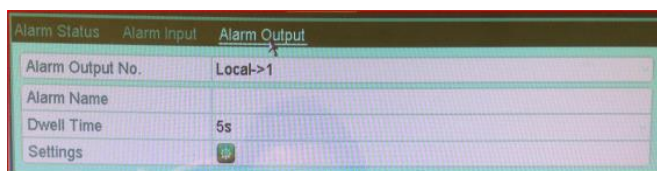
Menu> Configuration> Alarm> Alarm Output

Select an alarm output and set alarm name and dwell time. Click  button to set the arming schedule of alarm output.



If “Manually Clear” is selected in the dropdown list of Dwell Time, you can clear it only by going to Menu> Manual> Alarm.





The screenshot shows the 'Alarm Output' settings window. It has three tabs: 'Alarm Status', 'Alarm Input', and 'Alarm Output'. The 'Alarm Output' tab is active. The settings are as follows:

Field	Value
Alarm Output No.	Local->1
Alarm Name	
Dwell Time	5s
Settings	[OK button]

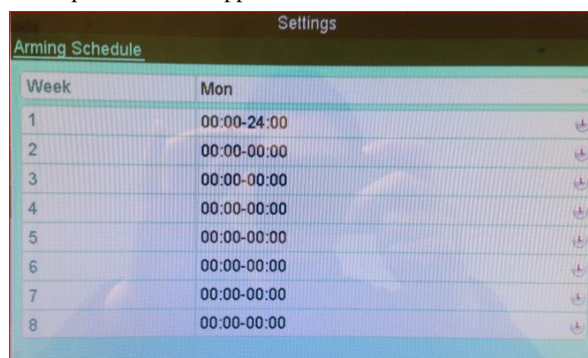
Alarm Output Settings Interface

**31. Set up arming schedule of the alarm output.**

Choose one day of a week and up to 8 time periods can be set within each day.



Time periods shall not be repeated or overlapped.



The screenshot shows the 'Arming Schedule' settings window. It has a 'Settings' tab. The 'Arming Schedule' section is active. The settings are as follows:

Week	Mon
1	00:00-24:00
2	00:00-00:00
3	00:00-00:00
4	00:00-00:00
5	00:00-00:00
6	00:00-00:00
7	00:00-00:00
8	00:00-00:00

Set Arming Schedule of Alarm Output

**32. Repeat the above steps to set arming schedule of other days of a week. You can also use Copy button to copy an arming schedule to other days.**

Click the **OK** button to complete the arming schedule setting of alarm output.

**33. Click the **Apply** button to save the settings.**

## Triggering or Clearing Alarm Output Manually

### *Purpose:*

Sensor alarm can be triggered or cleared manually. If “Manually Clear” is selected in the dropdown list of dwell time of an alarm output, the alarm can be cleared only by clicking **Clear** button in the following interface.

### *Steps:*

Select the alarm output you want to trigger or clear and make related operations.

Menu> Manual> Alarm

Click **Trigger/Clear** button if you want to trigger or clear an alarm output.

Click **Trigger All** button if you want to trigger all alarm outputs.

Click **Clear All** button if you want to clear all alarm output.



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