NVR USER GUIDE AND MANUAL





Contents

CHAPTER 1 OVERVIEW OF NVR	6
1.1 FRONT PANEL	
1.3 REMOTE CONTROLLER (FOR REFERENCE ONLY)	7
CHAPTER 2 NVR CONNECTION	8
2.1 HDD INSTALLATION	8
2.2 IP CAMERA AND MONITOR CONNECTION	8
2.3 Power Supply Connection	8
CHAPTER 3 NVR COMMON OPERATIONS	9
3.1 USING THE SUPPLIED MOUSE	9
3.2 Using the Virtual Keyboard	9
3.3 Password & Locking the Screen Operation	10
CHAPTER 4 NVR BOOT UP	11
4.1 Startup Wizard	11
4.2 Main Interface	
CHAPTER 5 NVR MENU	15
5.1 OVERVIEW	19
5.2 DISPLAY	
5.2.1 IP Camera	
5.2.2 Live	
5.2.3 Output	
5.2.4 Image Control	
5.2.5 Privacy Zone	
5.3 Record	
5.3.1 Record	26
5.3.2 Record Schedule	27
5.3.3 Mainstream	27
5.3.4 Sub stream	29
5.3.5 Mobile stream	30
5.4 Network	31
5.4.1 Network	31
5.4.2 Switch	32
5.4.3 Email	32
5.4.4 Email Schedule	34
5.4.5 DDNS	34
5.4.6 RTSP	35
5.4.7 FTP	36
5.5 ALARM	37

LaView NVR User Guide and Manual

5.5.1 Motion	37
5.5.2 Alarm	39
5.5.3 PTZ Linkage	40
5.6 RECORD SEARCH	41
5.6.1 General	41
5.6.2 Events	41
5.6.3 Playback Video Recordings	42
5.6.4 Play Backup Files	47
5.7 DEVICE	50
5.7.1 HDD	50
5.7.2 Disk Group	51
5.7.3 PTZ	53
5.8 Sysтем	55
5.8.1 General	55
5.8.2 DST	55
5.8.3 NTP	57
5.8.4 Users	57
5.8.5 Info	59
5.8.6 Log	60
5.9 Advanced	61
5.9.1 Maintain	61
5.9.2 Events	61
5.10 Intelligent	63
5.10.1 Schedule	63
5.10.2 PID(Perimeter Intrusion Detection)	64
5.10.3 LCD(Line Crossing Detection)	65
5.10.4 SOD(Stationary Object Detection)	
5.10.5 PD(Pedestrian Detection)	
5.10.6 FD(Face Detection)	72
5.10.7 CC(Cross-Counting)	74
5.10.8 View Log of Intelligent Analysis	77
5.11 Shutdown	77
CHAPTER 6 WEB APPLICATION MANAGER	79
6.1 WEB PLUGIN DOWNLOAD AND INSTALLATION	79
6.2 WEB CLIENT MANAGER	
6.2.1 Live Interface	
6.3.1 Playback	
6.3.2 Remote Setting	
6.3.3 Local Setting	
CHAPTER 7 REMOTE ACCESS VIA MOBILE DEVICES	
CHAPTER 8 APPENDIX	94
9 1 TROUBLESHOOTING	0.4

LaView NVR User Guide and Manual

8.2 Usage Maintenance	95
8.3 System Connection Diagram	95

SAFETY INSTRUCTION

Please carefully read the following safety instruction so as to avoid personal injuries and prevent the equipment and other connection devices from being damaged.

1. Power sources (note: please use the power supply attached or specified by the manufacturer)

Never operate the equipment by unspecified power supply.

2. Never push objects of any kind through openings of NVR;

Never push objects of any kind through openings of NVR so as to avoid electric shock or other accidents.

3. Do not put the equipment in the dusty field;

Do not put the equipment in the dusty field.

4. Do not place the equipment under rain or humid environment

Do not place the equipment under humid environment like basement. If the equipment is in contact with water, please unplug the power cable and immediately contact your local dealer.

5. Keep the surface of the equipment clean and dry

Use soft damp cloth to clean the outer case of NVR (do not use liquid aerosol cleaners)

6. Do not operate if any problems are found

If there are any strange smell or sound, unplug the power cable and contact the authorized dealer or service center.

7. Do not try to remove the upper cover

Warning: Do not remove the cap of NVR so as to avoid electric shock.

8. Handle with care

If NVR does not work normally because of hitting on the hard object, please contact the authorized dealer for repair or replacement.

9. Use standard lithium battery (Note: Use the batteries attached or specified by the manufacturer)

After cutting off the power supply, if the system clock cannot continue to work, please replace the standard 3V lithium battery on the main board.

Warning: Turn off NVR before replacing the batteries, or you may be suffered from serious electric shock. Please properly dispose of the used batteries.

10. Put the equipment in a place with good ventilation.

The NVR system includes HDD, which produces large amount of heat during operation. As a result, do not block the ventilation openings (on the top, bottom, both sides and the reverse side) for cooling the system during operation. Install or put the equipment in the place with good ventilation.

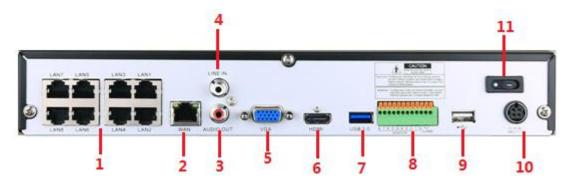
- 11. The attached power adapter can only be used for 1 set of NVR. Do not connect more equipment, or NVR may be restarted repeatedly because of insufficient power.
- 12. Prevent the equipment from water dropping or splashing. Do not place objects containing water, such as flower vase, on the equipment.

Chapter 1 Overview of NVR

1.1 Front Panel



1.2 Rear Panel



Item	Physical Port	Connection Method	
1	LAN Port	LAN network interface, support POE, can supply power to the camera.	
2	WAN Port	Network input interface of the router/Connect to IP camera.	
3	Audio Output	Audio signal output, RCA interface	
4	LINE IN	Intercom voice input	
5	VGA Port	Connect to VGA monitor, such as PC monitor	
6	HDMI Port	HDMI high definition port	
7	USB Port	Connect USB devices, such as USB mouse and USB flash disk.	
8	Alarm	Connect to alarming device	
9	USB Port	Connect USB devices, such as USB mouse and USB flash disk.	
10	Power Port	Connect the attached power supply	
11	Power Switch	Startup and shutdown	

1.3 Remote Controller (For reference only)

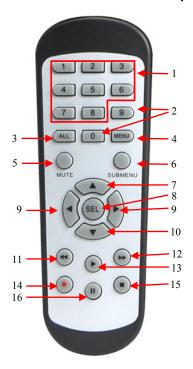


Table 1-3

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Item	Key title	Key function	
1	1-8	Channel select 1-8; Numeric key	
2	9、0	Numeric key	
3	ALL	Multiple display mode	
4	Menu	Enter into Main menu/Exit	
5	Mute	Mute On/off	
6	Submenu	Go to submenu	
7	A	Up arrow key, volume increase	
8	SEL	Select key/Edit key	
9	◄/▶	Left/Right key; Decrease/increase parameter value of control bar.	
10	▼	Down arrow key, Volume decrease	
11	₹	Rewind key	
12	*	Forward key	
13	•	Enter into record search menu / Play key	
14	•	Record key	
15	•	Stop manual record; stop playing	
16	Ш	Pause/Sequence key	

Chapter 2 NVR Connection

2.1 HDD Installation

Caution: Please do not take out hard drive when NVR is running! HDD Installation:

- (1) Cut power firstly, and then remove screws on both sides and rear panel and open NVR upper cover.
- (2) Connect HDD data cable and power cable to the main board. Install the HDD and fix it on the bracket and then connect the HDD power cable and data cable.
- (3) Put the upper cover back carefully

Note: If user requires higher performance HDD, it is strongly recommended to use hard drive for security.

2.2 IP Camera and Monitor Connection

Transmit signals of IP camera to NVR by the network cable and connect VGA port and HDMI port for output (Refer to section 2.2 Rear Panel). Refer to Chapter 6 System Connection Diagram.

2.3 Power Supply Connection

Please use attached power adapter to connect NVR. Before power on, make sure network port is well connected.

Chapter 3 NVR Common Operations

3.1 Using the Supplied Mouse

Left Button of Mouse	Right Button of Mouse		
Click once to choose an item in the menus and confirm your	Click once to open the pop-up		
selection.	menu on the Live Viewing		
Click once upon a channel on Live Viewing screen to open	screen and to exit from the		
Camera Quick Toolbar	menus.		
Double-click on the channel on the exit from the menus. Live			
Viewing screen to view the channel in full screen mode.			
Double-click again to exit the full screen mode.			
Click and hold to drag an area on motion mode or adjust the			
values of sliders and scales on menu mode.			

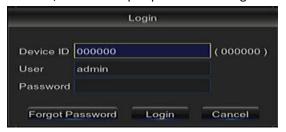
3.2 Using the Virtual Keyboard

You will see the virtual keyboard automatically on the screen anytime you need to enter data



3.3 Password & Locking the Screen Operation

When you run the DVR for the first time, you are required to set your password immediately in order to protect your privacy. Please be sure to record your username and password and save them in a secure place. If you forget your password, you will be unable to login the system, please contact your reseller to reset the password. If you forget your password, you will be unable to login the system. You can click forgot Password on the login interface, access to super-password through the mailbox.

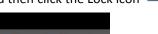


If you don't set the mailbox, please contact your reseller to reset the password. You would need to tell the system date & your NVR's MAC address. The MAC address can be check by clicking i icon in the pop-up menu.



The screen will be locked to protect unauthorized OSD operation while the NVR is not in menu operation for a while. If necessary, you can also lock the screen operation manually. To do so, right-click

on the Live Viewing screen to make the Pop-up menu bar visible, and then click the Lock icon



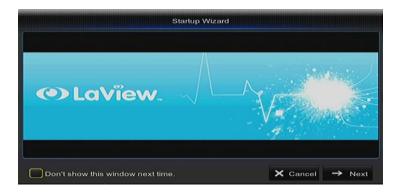
Chapter 4 NVR Boot up

4.1 Startup Wizard

After NVR startup is completed, the startup wizard will be displayed. If you do not want to make any setting, you may click "Don't show this window next time" to cancel.

Wizard setting menu includes Startup Wizard, Network, IPC setup, Record Schedule and HDD Management.

1) Startup Wizard



2) HDD Management

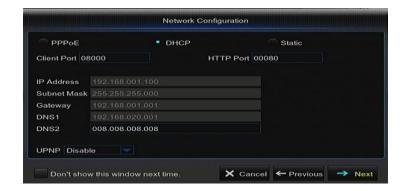
If the HDD is installed in the NVR for the first time, it will be needed to be format. Select the HDD which you want to format, and then click "Format HDD" button to format the HDD.



Overwrite: Use this option to overwrite the old recordings on the HDD when the HDD is full. For example, if you choose the option 7 days then only the last 7 days recordings are kept on the HDD. To prevent overwriting any old recordings, select Disable. If you have disabled this function, please check the HDD status regularly, to make sure the HDD is not full.

3) Network

This menu allows you to configure network parameters, such as PPPoE, DHCP, and Static. The most common types are DHCP or Static. Most probably your network type is DHCP, unless the network is manually addressed (usually called- Static). If you need an authentication username and password to the Internet, then choose PPPoE.



4) IPC Setup

This menu allows you to add and modify IP cameras configurations. For more details, please check **5.2.1 IP Camera.**



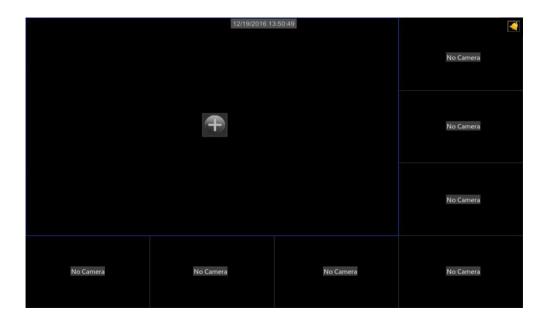
5) **Record Schedule**: This menu allows you to specify when the NVR records video and define the recording mode for each channel. The recording schedule lets you set up a schedule like, daily and hourly by Normal (continuous) recording, Motion recording, and Alarm recording. To set the recording mode, click first on the mode radio button (Normal, Motion, or Alarm), then drag the cursor to mark the slots.



6) **General System Configuration**: This menu allows you to configure the general parameters of the system, such as Date, Time, Date Format, Time Format, Language, Menu Timeouts.



4.2 Main Interface



Note: When internal HDD is not connected to NVR or the HDD is not formatted, first channel of the live screen and accompany buzzer alarm. If you want to close the buzzer alarm, please enter into [Advanced→Events] to set HDD loss, HDD space not enough and alarm output to "off".

Chapter 5 NVR Menu

Popup Menu

After finishing system initialization, click right key of mouse on preview interface or slide the mouse to the top of screen to enter into Pop-up Menu. Now you could perform parameter setting and operate on Main Menu, Multi-screen (Quad, Nine), More Layout, Stream switch, Preview Policy, Start SEQ, Mute, Playback, Info.

The options in the pop-up menu may be varied slightly according to different parameter settings. The options in the menu will be explained in detail in the following chapters.



Status Icons

- This indicates that the NVR is currently recording.
- M The motion icon in Green indicates that the NVR is detecting motion from the camera but not recording.
- M This icon appears when the camera has detected motion and triggers recording.
- The I/O alarm icon in Green indicates that the external sensor device is triggered but not recording.
- The I/O alarm icon in Red indicates that the external sensor device is triggered for recording.
- The Intelligent icon in Green indicates that the NVR is detecting Intelligent from the camera but not recording.
 - This icon appears when the camera has detected Intelligent and triggers recording.
 - The HDD icon indicates that the NVR cannot detect a HDD or the HDD is not formatted.

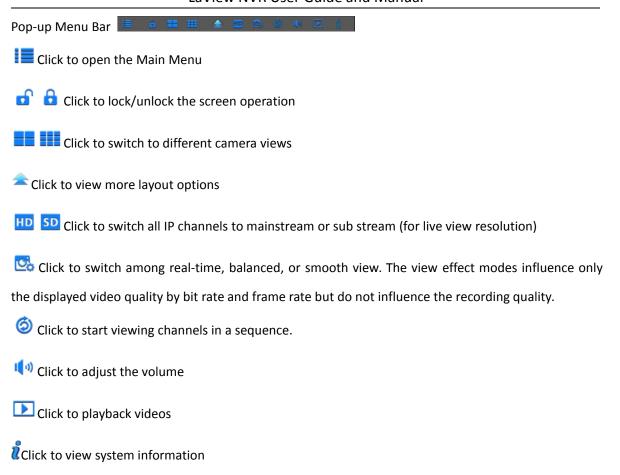
VIDEO LOSS: Connection to the camera has been lost.

Off-line: The added IP camera is offline or disconnected.

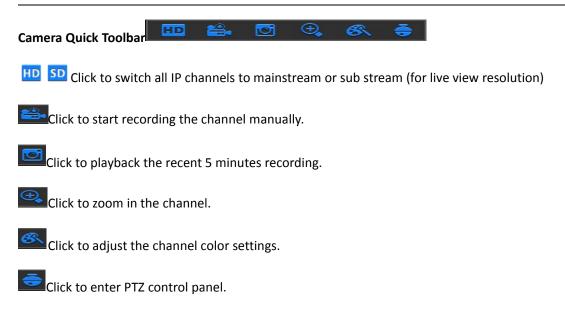
No Camera: IP Camera has not been connected to the NVR.

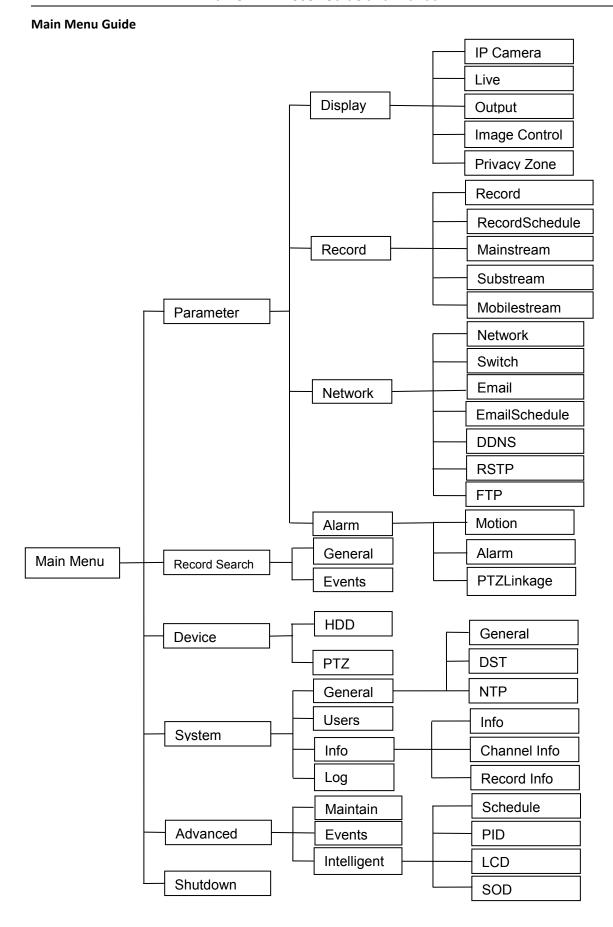
No HDD: HDD is not installed.

LaView NVR User Guide and Manual



LaView NVR User Guide and Manual





5.1 Overview



In Main Menu mode, you can make settings for **Parameter**, **Record Search**, **Device**, **System**, **Advanced**, and **Shutdown**.

Alarm – To set the motion detection function and/or I/O alarm function

Network - To configure the NVR's access parameters to the network, configure email settings, DDNS parameters, etc.

Record – To configure the recording options and set the recording schedule

Display – To configure how many channels are displayed on the Live Viewing screen, for example color setup, video output resolution, privacy areas, etc.

Record Search – To search for recordings, events, and captured images

Device – HDD Management, set the PTZ configuration parameters.

System - To modify general NVR settings, such as date and time, User management, view system info, etc.

Advanced – Advanced settings, for example load default, Firmware update, etc.

Shutdown - To shut down or reboot the NVR

Copy (Parameters) To - Click to copy the current settings to all channels or one specific channel.

Default - To restore the default settings

Save - Click to save the modifications

Cancel - Click to discard the modifications.

NOTE :After making modifications to the channel status, click Save to save the changes. You are prompted to confirm the modifications. Click OK to confirm.

5.2 Display

5.2.1 IP Camera

This NVR supports to connect IP camera inputs. In this menu, you can add, edit or delete the IP cameras.



Auto Assign IP to Camera(s): Click to reassign an IP address to the IP camera that is already connected to the NVR.

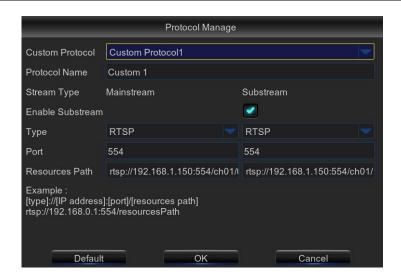
Add All: Click to add local ONVIF cameras (NVR and IP cameras are connected to the same router). To complete the connection, enter user name and password of the IP cameras, and click OK.

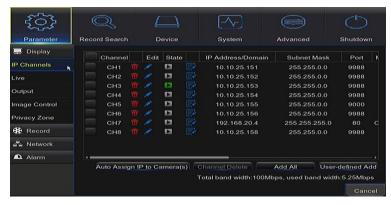
User-defined Add: Click to add remote ONVIF cameras over the Internet.

Enter the connection parameters of the IP camera: IP Address/Domain, Port, Protocol, User Name, and Password. Then click Add.



With the Protocol Manage button, you can edit your own RTSP protocol to connect to IP cameras.





In the Added IP Camera List, you can view the IP Camera Channel title, Delete IP Camera, Edit.

IP Camera, Check the connection State, view the IP address/Domain / Subnet Mask / Port, view the Manufacturer of the added IP cameras, view the Device Type, check the Protocol, MAC Address & Software version of IP cameras.

5.2.2 Live

This menu allows you to configure channel parameters.



Channel: Select the channel you want to modify. **Channel Name**: Enter the name of the channel.

Show Name: Enable to display the channel name on the live screen.

Record Time: Disable if you do not want to see the recording time on the channel.

Date Format: Set date format such as m/d/y, y/m/d or d/m/y.

Time Format: 12 hour or 24 hour. **Refresh Rate**: 60Hz or 50Hz.

OSD Position: Click Setup to determine where you want the channel name and current date to be displayed when you are viewing the channel. Drag the channel name box and the date/time box to the desired location on the channel view.

Color: Click Setup to configure video color settings.



HUE: Changes the color mix of the image.

BRIGHT: Defines how bright the image appears on the display.

CONTRAST: Increases the difference between the darkest black and the whitest white in the image. Modify the contrast if the sections of the image look "grey out".

SATURATION: Alters how much color is displayed in the image. The higher the saturation, the brighter and vivid colors will appear to be. Setting this parameter too high can degrade the image quality.

5.2.3 Output

This menu allows you to configure video output parameters.



Video Output: This is the monitor that you use for live view display.

Sequence Mode: Choose your favorite layout from the drop-down menu for viewing channels in a sequence on live view.

SEQ Time: Set how long you want the live view from a channel to be displayed in a sequence.

VGA/HDMI Resolution: Select the highest resolution your monitor/TV supports. The higher the resolution, the more details you will see on your images. The NVR will restart after you change the resolution.

5.2.4 Image Control

This menu allows you to configure the camera settings. Some IP cameras may not support this feature and the IP camera settings cannot also be changed using the NVR.



Channel: Select the channel you want to modify.

IR-CUT Mode: Select the desired built-in filter switch-over mode to ensure the camera work sproperly both in the daylight and night.

IR-CUT Delay: Set the IR-CUT switching time delay.

Lens Flip/Angle Flip: Check to enable automatic lens flip and/or angle flip.

Angle Trad: Set the flip angle.

Back Light: Enable this feature to compensate the darkness of the subject when shooting against bright light sources. For example, sunlight.

BLC Level: Set the backlight compensation level.

3D Noise Reduction: Enable this feature to digitally minimize video noise and extend the NVR storage.

Level: Set the noise reduction level.

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WDR (Wide Dynamic Range): Enable to allow automatically adjust the brightness and contrast of the video when shooting in the darkness with bright light sources.

Level: Set the WDR level.

AGC (Automatic Gain Control): Configure when shooting in changing lightning environments. The video image is brightened in dark areas.

White Balance: Choose the white balance level between Auto (automatic adjustment), Manual (manual adjustment of red and blue gain), indoor (optimized according to the indoor environment).

Red/Green/Blue: Adjust the red/green/blue value.

Shutter: Set the shutter mode.

Time Exposure: Choose the exposure time of the camera.

Defog Mode: Use in foggy environments to improve the video quality.

Level: Set the defog level.

5.2.5 Privacy Zone

This menu allows you to create Privacy Zone(s) if you want to partially cover up part of the image. You can create up to four privacy zones in any size and location on the channel view. These zone(s) appear as "red box rectangle areas". Just click inside the default red-lined rectangle and drag it where you want to create a privacy zone.



Select the Channel where you want to set privacy zone(s), then Enable **Mask Area**. Decide how many privacy areas you want to set and check the area(s) in **Area Setup**, and click **Setup** to open the channel in full screen mode and start marking the privacy zones. Depending on the number of areas you have chosen in **Area Setup**, you will see areas covered with black rectangles on the channel view. When you have finished marking the areas, right-click to return to the Main Menu.



5.3 Record

5.3.1 Record

This menu allows you to configure the channel recording parameters.



Channel: Select the channel to set its recording parameters.

Record Switch: Enable in order to allow the video to be recorded to the HDD.

Stream Mode: Choose the recording resolution. The available options are Mainstream and Dual stream.

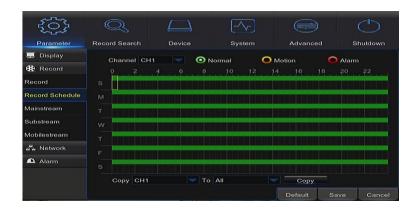
Pre Record: If this option is enabled, the NVR starts recording a few seconds before an event occurs.

Use this option if your primary recording type is motion based.

Note: The recorder supports Dual stream recording.

5.3.2 Record Schedule

This menu allows you to specify when the NVR records video and define the recording mode for each channel. The recording schedule lets you set up a schedule like, daily and hourly by normal (continuous) recording, motion recording, and alarm recording. To set the recording mode, click first on the mode radio button (Normal, Motion, or Alarm), then drag the cursor to mark the slots. The recording schedule is valid only for one channel. If you want to use the same recording schedule for other channels, use **Copy To** function.



Channel: Select the channel to set its recording parameters.

Normal: When the time slot is marked green, this indicates the channel performs normal recording for that time slot.

Motion: When the time slot is marked yellow, this indicates the channel records only when amotion is detected during that time slot.

Alarm: When the time slot is marked red, this indicates the channel records only when the sensoris triggered during that time slot.

Note:

- 1. In the Record menu and Record Search menu, No Color stands for no record.
- 2. "Green" stands for normal record and "yellow" stands for motion record.
- 3. "Red" stands for alarm record.
- 4. No Record: A time slot marked black means that there is no recording scheduled for the time slot.
- 5. To use the motion detection, you must enable and configure the motion settings for the channel in Alarm menu. Please see 5.5.1 Motion

5.3.3 Mainstream

This menu allows you to configure the recorded video parameters. All the modifications you apply to these settings will affect the recorded video saved into the HDD.



Channel: Select the channel to configure recording related information.

Resolution: This parameter defines how large the recorded image will be.

FPS: This parameter defines the number of frames per second the NVR will record.

Video Encode type: H.264 OR H.265.

Bitrate Control: Select the bitrate level based on the complexity of the scene. For a simple scene, such as a gray wall is suitable constant bitrate (CBR). For more complex scene, such as a busy street is suitable variable bitrate (VBR).

Bitrate Mode: If you want to set the bitrate by yourself, then choose User-defined mode. If you want to select the predefined bitrate, choose Predefined mode.

Bitrate: This parameter corresponds to the speed of data transfer that the NVR will use to record video. Recordings that are encoded at higher bitrates will be of better quality.

Audio: Select this option if you want to record audio along with video and have a microphone connected to the NVR or using a camera with audio capability.

5.3.4 Sub stream

This menu allows you to configure the settings of a particular channel if the channel is being viewed via remote access, for example Web Client.



Channel: Select the channel to configure recording related information.

Resolution: This parameter defines how large the recorded image will be.

FPS: This parameter defines the number of frames per second the NVR will record.

Video Encode type: H.264 OR H.265.

Bitrate Control: Select the bitrate level based on the complexity of the scene. For a simple scene, such as a gray wall is suitable constant bitrate (CBR). For more complex scene, such as a busy street is suitable variable bitrate (VBR).

Bitrate Mode: If you want to set the bitrate by yourself, then choose User-defined mode. If you want to select the predefined bitrate, choose Predefined mode.

Bitrate: This parameter corresponds to the speed of data transfer that the NVR will use to record video. Recordings that are encoded at higher bitrates will be of better quality.

Audio: Select this option if you want to record audio along with video and have a microphone connected to the NVR or using a camera with audio capability.

5.3.5 Mobile stream

This menu allows you to configure the settings of a particular channel if the channel is being viewed via mobile devices



Channel: Select the channel to configure recording related information.

Enable: Enable to allow to use mobile streaming on this channel

Resolution: This parameter defines how large the recorded image will be.

FPS: This parameter defines the number of frames per second the NVR will record.

Video Encode type: H.264 or H.265.

Bitrate Control: Select the bitrate level based on the complexity of the scene. For a simple scene, such as a gray wall is suitable constant bitrate (CBR). For more complex scene, such as a busy street is suitable variable bitrate (VBR).

Bitrate Mode: If you want to set the bitrate by yourself, then choose User-defined mode. If you want to select the predefined bitrate, choose Predefined mode.

Bitrate: This parameter corresponds to the speed of data transfer that the NVR will use to record video. Recordings that are encoded at higher bitrates will be of better quality.

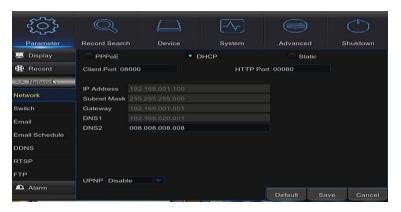
Audio: Select this option if you want to record audio along with video and have a microphone connected to the NVR or using a camera with audio capability

5.4 Network

This menu allows you to configure Network parameters, Switch, E-mail setup, DDNS, RTSP & FTP.

5.4.1 Network

This menu allows you to configure network parameters, such as PPPoE, DHCP, and Static. The most common types are DHCP or Static. Most probably your network type is DHCP, unless the network is manually addressed (usually called- Static). If you need an authentication username and password to the Internet, then choose PPPoE.



Network Type: Select the network type you are using.

PPPoE: This is an advanced protocol that allows the NVR to connect to the network more directly via DSL modem.

DHCP: This is the network type when a device on your network (usually a router) assigns automatically all the network parameters for your NVR.

Static: Requires all the network parameters to be filled in manually.

HTTP Port: This is the port that you will use to log in remotely to the NVR (e.g. using the Web Client). If the default port 80 is already taken by other applications, please change it.

Client Port: This is the port that the NVR will use to send information through. If the default port 9000 is already taken by other applications, please change it.

IP Address: The IP address identifies the NVR in the network. It consists of four groups of numbers between 0 to 255, separated by periods. For example, "192.168.001.100". You need to enter the IP address manually only if your network type is Static.

Subnet Mask: Subnet mask is a network parameter which defines a range of IP addresses that can be used in a network. If IP address is like a street where you live then subnet mask is like a neighborhood. The subnet address also consists of four groups of numbers, separated by periods. For example, "255.255.000.000". Alike IP address, you need to enter the subnet mask manually only if your network type is Static.

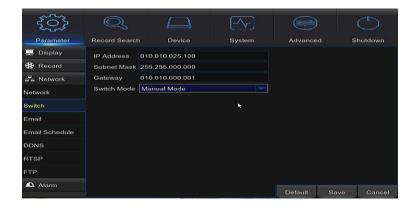
Gateway: This address allows the NVR to access the Internet. The format of the Gateway address is the same as the IP Address. For example, "192.168.001.001". Alike IP address, you need to enter the gateway address manually only if your network type is Static.

DNS1/DNS2: DNS1 is the primary DNS server and DNS2 is a backup DNS server. Usually should be

enough just to enter the DNS1 server address.

UPNP: If you want to log in remotely to the NVR using Web Client, you need to complete the port forwarding. Enable this option if your router supports the UPnP. You need to enable UPnP both, on NVR and router. In this case, you do not need to configure manually port forwarding on your router. If your router does not support UPnP, make sure the port forwarding is completed manually.

5.4.2 Switch



IP Address: The default IP address of the POE interface.

Subnet Mask: The default Subnet Mask of the POE interface.

Gateway: The default Gateway of the POE interface.

Switch Mode: Auto Mode, Manual Mode, When set to Auto Mode, the channel automatically connects to the IPC on all POE interfaces of the NVR. The user cannot delete or add the network IPC to the channel. When set to Manual Mode, the user can delete or add the network IPC.

5.4.3 Email

This menu allows you to configure email settings. Please complete these settings if you want to receive the system notifications on your email when a motion is detected, HDD becomes full, HDD is in error state, or Video Loss occurs.



LaView NVR User Guide and Manual

Email: Enable this feature.

Encryption: Enable if your email server requires the SSL or TLS verification. If you are not sure, set to be

Auto.

SMTP Port: Enter the SMTP port of your email server.

SMTP Server: Enter the SMTP server address of your email.

User Name: Enter your email address.

Password: Enter the password of your email.

Receiver 1~3: Enter the email address where you want to receive the event notifications from the NVR. **Interval**: Configure the length of the time interval between the notification emails from the NVR. To make sure all settings are correct, click Test Email. The system sends an automated email message to your inbox. If you received the test email, it means the configuration parameters are correct.

5.4.4 Email Schedule



The color codes on email schedule have the following meanings:

Green: Slot for Motion. Yellow: Slot for I/O Alarm.

Red: Slot for Exception (HDD full, HDD error, or Video Loss).

Sky blue: stands for Intelligent (PID, LCD or SOD).

5.4.5 DDNS

This menu allows you to configure DDNS settings. The DDNS provides a static address to simplify remote connection to your NVR. To use the DDNS, you first need to open an account on the DDNS service provider's web page.



DDNS: Enable the DDNS service.

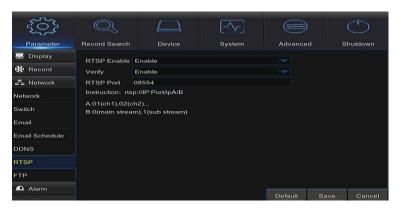
Server: Select the preferred DDNS server (DDNS_3322, DYNDNS, NO_IP, CHANGEIP, and DNSEXIT).

Domain: Enter the domain name you created on the DDNS service provider's web page. This will be the address you type in the URL box when you want to connect remotely to the NVR via PC. Fox example: dvr.no-ip.org.

User/Password: Enter the user name and password you obtained when creating an account on the DDNS service provider's web page. After all parameters are entered, click Test DDNS to test the DDNS settings.

5.4.6 RTSP

The NVR can be remotely viewed via RTSP protocol.



RTSP Enable: Enable/Disable.

Verify: Enable/Disable.

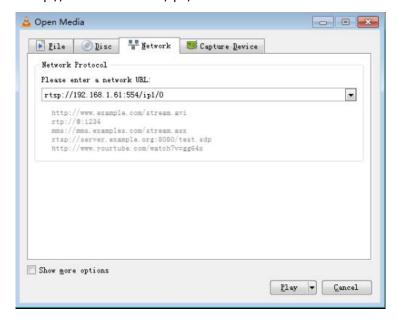
RTSP Port: Default is 554, if the default port 554 is already taken by other applications, please change

Instruction: rtsp://IP:Port/ipA/B.

A: 01(ip1), 02(ip2)....8(ip16)

B: 0(main stream), 1(sub stream)

For example, the NVR IP address is 192.168.1.61, and you want to view CH1 with mainstream, then the RTSP address will be: rtsp://192.168.1.61:554/ip1/0



Note: RTSP user name and password is same with NVR user name, password and permissions. Follow the instruction to input IP and port to preview video.

5.4.7 FTP

This menu allows you to enable FTP function to view and load captured snapshots from NVR to your storage device over FTP.



FTP Enable: Enable the feature in NVR.

Server IP: Enter your FTP server IP address or domain name.

Port: Enter the FTP port for file exchanges.

User Name/ Password: Enter your FTP server user name and password.

Directory Name: Enter the default directory name for the FTP file exchanges.

Test FTP: Click to test the FTP settings.

5.5 Alarm

In these sections, you can configure the Motion Detection, I/O Alarm & PTZ Linkage.

5.5.1 Motion

This menu allows you to configure motion parameters. The motion detection is pretty straight forward; the NVR simply compares one frame to another. A sufficient amount of difference is interpreted as motion. When the motion is detected, the system can be set to automatically initiate recording. In this menu you can select the channels where you want the motion detection recording to take place.



If you set the motion detection at a high sensitivity level ("8" is the most sensitive) then the frequency of false alarm events increases. If the sensitivity level is too low ("1" is the least sensitive), you might increase the risk that a significant motion event will not trigger the motion detection to record.

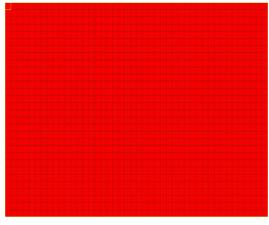
Channel: Select the channel you want to set the motion detection.

Enable: Enable or disable the function.

Buzzer: The NVR can use its internal buzzer to emit an alarm tone. You can set the buzzer duration in seconds when the motion is detected.

Sensitivity: Set the sensitivity level.

Area: To setup motion area, click Setup. By default, the whole screen is marked for motion detection (red blocks). If you want to disable the motion detection on an area, you need to click the grid cursor and then drag the mouse to highlight the scope to unmark the area (transparent block). After setting is completed, right click the mouse button to return and click Save to make the area setup effective.



LaView NVR User Guide and Manual

Post Recording: You can set how long after an event occurs that the NVR will continue to record. The recommended recording length is 30 seconds but it can be set higher up to 5 minutes.

Alarm Out: Optional function. If your NVR support to connect to external alarm device, you can set to emit an alarm tone.

Latch Time: To configure the external alarm time when motion is detected.

Show Message: Check the box to display "M" icon on the screen when the motion is detected.

Send Email: You can let the NVR to send you an auto-email when the motion is detected.

Full Screen: If this function is enabled and a motion is detected in a channel, you will see that channel in full screen

Record Channels: Here you can select which channels you want to include to the motion detection. If the motion is detected, the recording will start immediately on those channels.

5.5.2 Alarm

This is an optional function. If the NVR you purchased doesn't support connect external sensor I/O alarm devices, you will not find this section in your NVR OSD menu.



Alarm In: User may set four groups of alarm inputs

Alarm Type: There are 3 types for your choice: Normally-Open, Normally-Close, and OFF. Choose the one to match your sensor type, or Choose OFF to close the sensor trigger function.

Latch Time: you can set how long the buzzer will sound when external sensor is triggered (10s, 20s, 40s, and 60s).

Buzzer: The NVR can use its internal buzzer to emit an alarm tone. You can set the buzzer duration in seconds when a sensor is triggered.

Post Recording: You can set how long alarm record will last when alarm ends (30s, 1minutes, 2minutes, 5minutes).

Alarm out: Tick to enable external alarm device to emit an alarm tone when a sensor is triggered.

Show Message: Display the alarm messages on the screen when sensor is triggered.

Send Email: Set to send email to specified email when sensor is triggered.

Full Screen: When sensor is triggered, the corresponding channel will be switched to the full screen mode.

Record Channels: Select which channels you want to record when sensor is triggered.

5.5.3 PTZ Linkage

If you had connected the PTZ cameras, you can set the linkage between PTZ cameras and Motion Alarm and/or external I/O sensor alarm. With the linkage function, you can turn your PTZ cameras focus to the preset point when a motion or I/O alarm happens.



Channel: Select the channel to set.

Switch: Enable or disable the PTZ linkage function.

Alarm Type: Choose what kind of alarm will trigger the PTZ linkage function.

PTZ: Associates the PTZ camera with preset points. View preset point at 5.7.3.2 PTZ control

5.6 Record Search

This section allows you to search and playback the recorded videos based on recording type, channel, date and time parameters. You can also view and backup events and captured images.

5.6.1 General



- 1) Select the channel & the recording type (All / Normal / Alarm (including preset point & IO) / Motion / IO / Manual).
- 2) Determine the recording date.
- 3) Click Search.
- 4) Select the recording from the table.

NOTE: Dates marked with orange triangles have video recordings.

- 5) Select the channels you want to playback.
- 6) Modify the start time and end time if necessary and then click Play.

Enter the playback interface, to view 5.7.3 Playback Video Recordings.

5.6.2 Events

This section is used to check the recording file lists and make backup.

- 1) Select the recording Date & Time.
- 2) Select the Channel and Type (All / Normal / Alarm (including Motion & IO) / Motion / IO).
- 3) Click Search.
- 4) If you want to make backup for all recording files you had searched, click Quick Backup.
- 5) If you want to make backup for individual files, select the recording list(s) from the table.
- 6) If you want to move to other page, click << or >> to move to previous or next page. Or input the number of page, and then click
 to jump to the page.
- 7) After selecting the files, click Backup to start the backup. There are 3 kinds file formats for your backup files: original RF, AVI and mp4. The total size of the backup files will be displayed, please make sure not to exceed the available capacity of your USB flash device.





Note: Please make sure you have inserted your USB flash device to the NVR USB port before you want to make backup.

5.6.3 Playback Video Recordings



- 1. Recording Calendar: Dates marked with orange triangles have recordings.
- 2. Playback Type: Select the playback type among General, Events, Picture & Sub-periods
- 3. Channels: Check the channels to playback.
- 4. Playback Control Bar.



LaView NVR User Guide and Manual

44	Fast Rewind: x2, x4, x8 and x16	⊕,	Digital Zoom: Click to zoom in
I	Slow Play: 1/2, 1/4 and 1/8 speed	[%	Trim Video: view 5.7.4.2 Trim Video
	Play & Pause		31
II =	Pause, Play frame by frame Stop		Volume Control: Slide the slider barto increase or decrease volume. Click to mute audio.

- **5. Time Bar**: The color indicates the video recording type:
- Motion recording (Yellow)
- Normal recording (Green)
- I/O sensor recording (Blue)
- Alarm recording (Red)
- Intelligent recording (Sky blue)
- 6. Time Frame: Select Playback timeline. View 5.7.4.3 Time Frame
- 8. Recording Type Indicator: Motion, Smart, Normal, IO & Alarm.
- 9. **Recording Playback Screen**: Video recordings from selected channels.

10.zoom in/out: When it is under single channel playback, the icon will appear in the Play Control bar. Click the icon to zoom in certain area of the playback screen and right click mouse to return the Playback page.



5.6.3.1 Trim Video

Use this function if you need to backup just a certain section of the video recording.

- 1) Connect a USB flash drive to the NVR.
- 2) Double-click on the channel (to display in full screen during video playback) that you wish to backup.
- 3) Click on the Time Bar to mark the beginning of the video footage you wish to backup.
- 4) Click to start selecting the footage.

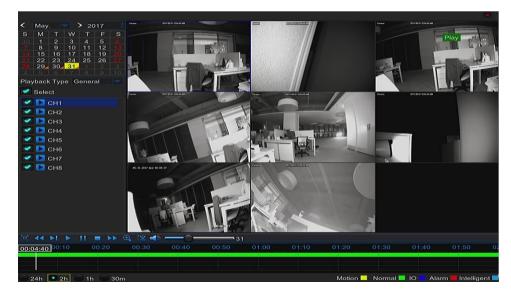
- 5) Click on the Time Bar to mark the end of the video footage you wish to backup. The marked up area is now displayed within the red arrows.
- 6) Click to save the footage.
- 7) Select the channel to be backed up.
- 8) A video type selection message appears. Select the file format and click





5.6.3.2 Time Frame

During video playback, the time bar is displayed in 24 Hours (00:00~24:00) by default.



You can shorten the time bar to be displayed in 2 Hours, 1 Hour or 30 Minutes in order to make an accurate position to the time bar.



5.6.3.3 Sub-periods Playback

This function will allow you to divide a recording video into average separate segments and play together in the same screen.

- 1) In the video playback interface, choose Sub-periods from Playback Type section.
- 2) Select a channel you want to play.
- 3) Choose the Split Screens. If you have a 4 Channel NVR, the max. Split screens will be 4. And 8 for 8 Channel NVR as well 16 for 16 Channel NVR.

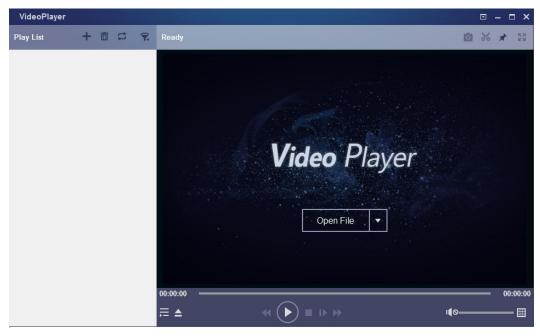
For example, if the video you want to play is 60 minutes in length, and the split screen is 4, the video will be divided in to 4 segments, and each segment will be 15 minutes in length. All the 4 segments will be played in the same screen.



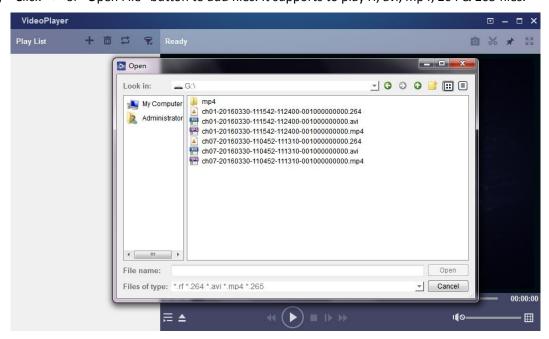
5.6.4 Play Backup Files

This section will help you to play the backup files.

1) Install the Video Player software in the CD and run.



- 2) Copy the backup files to your computer.
- 3) Click "+" or "Open File" button to add files. It supports to play rf, avi, mp4, 264 & 265 files.



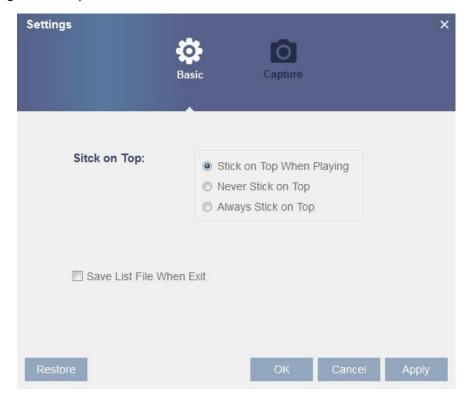
Function Description:

- Play: Click to play file
- Pause: Click to pause.
- Stop: Click to stop playback.
- Frame Forward: step forward by frame
- Slow forward: Click to play at 8x,4x,2x,1x,1/2,1/4,1/8,1/16 speed.
- Fast forward: Click to play at 16x,8x,4x,2x,1x,1/2x,1/4x,1/8x speed
- Open file/Open Directory
- Expand/pack up the list.
- Screenshot: Save path: C:\Users\Administrator\VideoPlayer\picture
- Cut: Save path: C:\Users\Administrator\VideoPlayer\video
- Full screen display
- Mever on top
- Always on top
- On top during playing
- Adjust volume
- Window Division

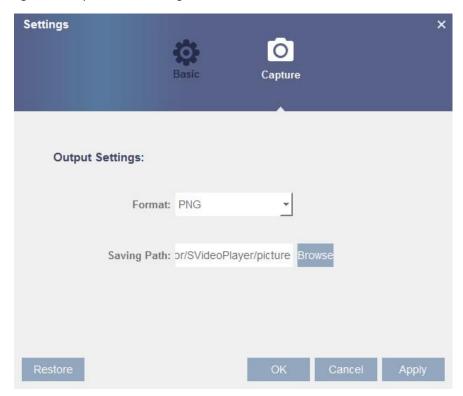
1/4/9/16 channels optional.

- Add folder or file.
- Playback mode, Single, Order, Repeat one, Repeat ALL are optional
- Delete all files in the list.
- Search File
- Language/Settings

Basic Settings: Set on-top mode



Capture Settings: Set the path to save images



5.7 Device

In this section, you can configure the internal HDD, PTZ setup.

5.7.1 HDD

Go to "Main Menu" \rightarrow "Device" \rightarrow "HDD" to enter into the interface.





When HDD is connected, the system will automatically detect if HDD is normal or not; If HDD need to be formatted, status will be shown as "Not formatted". Select the HDD and format the HDD. If the system detects HDD is normal state, the HDD status will be shown as "Normal".

- No.: Number of HDD connected to system.
- > Type: Hard disk read and write types, divided into: read and write, redundant and read-only.
- > **Disk Group:** Disk group number
- Status: It shows the current status of HDD. It will be available only when HDD is "Normal".
- Free/Total Space: Remaining or total space of HDD
- Free Time: Remaining time for HDD recording according to currently set "Resolution", "Encoding Rate" and "Frame Rate" of image.
- Auto-overwrite: When set to ENABLE, the NVR will overwrite the oldest files on the hard drive if hard drive space is full. When set to DISABLE, the NVR will stop recording if hard drive space is full. Overwrite time: 1 day, 3 days, 7 days, 14 days, 30 days and 90 days. It means the longest storage time of records in HDD. If the time is over, the records will be deleted. For example, if the time is set as 3 hours and the data in HDD include 12, 13, 14, 15, 16, 17, 18, 19 and 20 o'clock, then data 18, 19 and 20 will be saved and data 12, 13, 14, 15, 16 and 17 will be deleted.
- > Record On ESATA: Enable/disable record on eSATA.
- Format HDD: Format HDD for the first use.

Note: 1. Recording can only be performed when HDD is in "Normal" state.

- 2. After the Record On ESATA is turned on, the eSATA backup will not be available. Turn off Record On ESATA to turn on ESATA backup.
- 3. Click below Edit corresponding to disk serial number to be modified, and modify the data and parameter accordingly.



Tip: All hard disk group number are the default 1, one can only choose a hard disk to set.

Disk Type: Read-write, read-only, and redundant.

To prevent important video data from being overwritten during cyclic recording, you can protect the hard disk by setting it to "read-only" mode. The hard disk is set to "redundant", can be achieved in the read and write disk for video at the same time, in the redundant disk also redundant recording, to improve the reliability of the video.

5.7.2 Disk Group

This menu allows you to accord their actual situation, the video channel assigned to the corresponding disk group. Make sure that each channel has at least one disk group association. Otherwise, the

recording will be abnormal when the channel is opened.



5.7.3 PTZ

5.7.3.1 PTZ set

This menu allows you to configure the PTZ (Pan-Tilt-Zoom) settings for the dome camera.



Channel: Choose a channel where is connected a dome camera.

Signal Type

Digital: no parameter setting is required and no connecting the RS-485 control cable.

Analog: need parameter setting is required and connecting the RS-485 control cable.

Baudrate: The speed of the information sent from the NVR to the PTZ-capable camera. Make sure it matches the compatibility level of your PTZ-capable camera.

DataBit / StopBit: The information between the NVR and PTZ-capable camera is sent in individual packages. The DataBit indicates the number of bits sent, while the DataBit indicates the end of the package and the beginning of the next (information) package. The available parameters for DataBit are: 8, 7, 6, 5. the available parameters for the StopBit are 1 or 2.

Parity: For error check. See the documentation of your PTZ-capable camera, to configure this setting.

Cruise: Enable to allow to use the Cruise mode. In order to use the Cruise mode, you need to set a number of preset points.

Address: Set the command address of the PTZ system. Please be noted that each PTZ-capable camera needs a unique address to function properly

5.7.3.2 PTZ control

After finishing the PTZ setup, you can use the PTZ function to control your PTZ camera.

- 1) Left click your mouse upon a channel on Live Viewing screen to open Camera Quick Toolbar , and click the PTZ control icon .
- 2) PTZ control panel will be displayed. Click to active PRESET points setup page.



No.	Icon	Item	Description	
1	CH1	Channel	Click to select the channel of the PTZ camera.	
2		Cruise	Start / stop PTZ cruise by preset points. Make sure you had enable the Cruise function for this channel in 5.8.3 PTZ Setup	
3	Speed	Speed	Adjust the PTZ speed	
4		Pointer Panel	A) Click the direction arrow to select the direction of the PTZ camera B) Click up/down/left/right arrow to move cursor in UTC OSD menu C) Click to switch to auto pan mode	
5	- ZOOM +	Zoom	Click to zoom in/out.	
	- FOCUS +	Focus	Click to adjust the focus	
	- IRIS +	Iris	Click to adjust the iris setting	
6		PRESET	To display or hide the preset point panel	
7	No	No.	Number of preset point	
8	Total	Total	Display the total number of preset points	
9	Time	Time	Set the time how long the camera will stay in the preset	

LaView NVR User Guide and Manual

			point	
10	Save	Save	Click to save the settings and preset points	
11	Clear	Clear Click to delete the selected preset point		
12 G(CO TO	Go to	Enter the number of a specific preset point, click this button	
	GO_TO		to move your PTZ camera to the preset point	
13	Set	Set	Click to set a specific preset point on a PTZ camera.	
			You can add up to 255 preset points for the NVR. However,	
			the actual preset quantity varies depending on the PTZ	
			camera performance.	

5.8 System

You are able to configure general parameters of the system, such as date and time, OSD language, menu timeouts, DST, NTP, User Management, check system information & system log here.

5.8.1 General



Date/Time: Enter the date and time manually.

NOTE: For date/time automation over the Internet, enable NTP.

Date Format: Set the date format here. **Time Format**: Set the time format here. **Language**: Choose the OSD language.

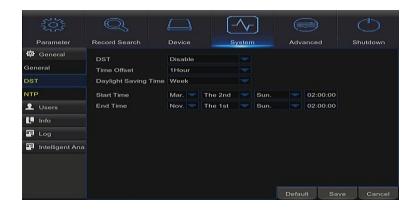
Video Format: Choose the video format between NTSC and PAL. If the NVR's picture is flickering or has only black screen, it may be that the video format is not correct.

Menu Timeouts: Set the time out the NVR will exit the menus when they are not in use.

Show Wizard: Check if you want the Startup Wizard to reappear each time you start up the NVR.

5.8.2 DST

DST stands for Daylight Savings Time.



DST: Enable if Daylight Saving Time (DST) is observed in your region.

Time Offset: Select the amount of time to offset for DST.

Daylight Saving Time: Choose to set the daylight saving time in weeks or in days.

Start Time/End Time: Set the start time and end time for daylight saving.

5.8.3 NTP

NTP stands for Network Time Protocol. This feature allows you to synchronize the date and time automatically on the NVR over Internet. Therefore the NVR needs to be connected to the Internet.



NTP: Enable if you want the NVR to update the date and time automatically.

Server Address: Select the NTP (Network Time Protocol) server.

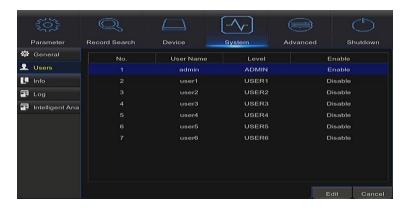
Time Zone: Select the Time Zone in your location.

Update Time: Click here to update the system date and time immediately.

Note: When NTP function is enabled, system will update the system time at 00:07:50 every day, or every time when the system is started up.

5.8.4 Users

This menu allows you to configure the user login information.



Edit: To enable/disable the user account, modify the user name and password, click on the user account you wish to edit, then click **Edit**.



Permission: To modify user access permissions, click on the user account you wish to modify, and then click Permission. The user in Admin level has all permissions to the system. After modify the permissions, click **Save** to save the modifications.



5.8.5 Info

This menu allows you to view the summary of the system, channel information & record information.



Device ID: Enter the desired ID for your NVR. The device ID is used to identify the NVR, and can only be composed of numbers, and cannot be the same with other IDs when multiple NVRs are connected in the same network.

Device Name: Enter the desired name for your NVR. The name can include both letters and numbers.

MAC Address: Display the MAC address of the NVR. When multiple NVRs are connected to the same network, each NVR must have a unique MAC address to ensure that the NVR can connect to the network.

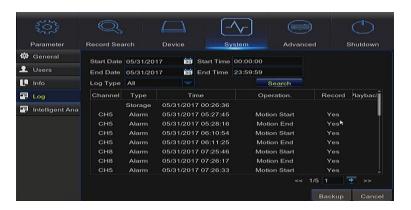
Note: If your NVR support P2P function, you will find a QR code in the info page. You can scan this QR cord with mobile app to remote access this NVR, view more on Chapter 7 Remote Access via Mobiel Devices.

Channel Info: To view the information summary on the channels.

Record Info: To view the recording information summary by channel, record state, stream type, FPS, bitrate, and resolution.

5.8.6 Log

This menu allows you to view a list of events of system operation.



- To search for a log, enter the start time/end time to the respective fields and click **Search**.
- To display log details, double-click on the item.
- To backup a log entry, connect an external USB disk to the NVR, click on the log event and click **Backup**.

Log Type: Select the log type.

Start Time/End Time: Specify the start and end date/time of the logs you want to review and/or save on an external USB storage device. Click **Search**. The logs will be listed on the table.

5.9 Advanced

5.9.1 Maintain

This menu allows you to configure automatic system maintenance, load factory defaults, update the firmware settings, upgrade the IPC, etc.



Default User: If you want to log in to the NVR automatically for live view after each startup, then only administrator user account can be set for auto login.

Auto Reboot: Set enable to reboot the NVR based on a schedule.

Reboot: Set the rebooting schedule based on day, week, or month.

Update: Click to load the update file and then upgrade the firmware. Please do NOT power off the NVR or remove the USB during the upgrading.

Load Settings: Select this option to import the setting that you have saved earlier, using the Save Settings function.

Load Default: Use this feature to restore the factory default settings of the NVR. It is recommended to load defaults for all options, after upgrading the firmware.

Save Settings: Select this option to save the NVR current settings, such as the video recording settings, network configurations, and etc. to the USB device.

IPC Load Default: Use this feature to restore the factory default settings of IP cameras.

Reboot IPC: To reboot IP cameras.

IPC Upgrade: To upgrade IP cameras firmware. Some IP cameras may not support this feature.

5.9.2 Events

This menu allows you to set the type of events that you want the NVR to inform you.



Event Type: Select the event type. Options are:

-No Space on Disk: When HDD is full.

- **Disk Error**: If HDD is not detected properly.

- Video Loss: If camera is not detected properly.

Enable: Check the box to enable the monitoring of the event.

Show Message: Check the box to display a message on the screen when Disk Full, Disk Error, or Video Loss event happens.

Send Email: Let the NVR to send you an auto-email when an event occurs.

Alarm Out: Click to enable the external alarm device to sound. This is an optional function. **Latch Time**: Determine how long the external sensor alarm device to sound (10s, 20s, 40s, and 60s).

Buzzer: Set the buzzer duration when the event occurs (Off/10s/20s/40s/60s). To disable buzzer, select OFF.

5.10 Intelligent

The NVR provides super performance intelligent functions, including **Perimeter Intrusion Detection**, **Line Crossing Detection**, **Stationary Object Detection**, **Pedestrian Detection**, **Face Detection**, and **Cross Counting**.

5.10.1 Schedule

You are able to config the schedule for intelligent detection function. The schedule will be active in 24 hours x 7 days.

To set the schedule, choose one channel then drag the cursor to mark the slots. The sky-blue blocks in the time slots will be active for intelligent detections. The schedule is valid only for the selected channel each time when you set. If you want to use the same schedule for other channels, use **Copy To** function. Click **Save** to save your settings.



5.10.2 PID(Perimeter Intrusion Detection)

Perimeter Intrusion Detection function detects people, vehicle or other objects which enter and loiter in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.



Channel: to select the channel you want to configure

Enable: to enable or disable the PID function

Buzzer: to disable or to active the buzzer to emit an alarm tone in 10,20,40 or 60 seconds when the detection is triggered

Sensitive: The sensitivity level is from 1 to 4, with a default value of 2. Higher sensitivity will be easier to trigger the detection.

Scene: Scene setting includes Indoor and Outdoor. Please choose the scene to match with the place your camera installed.

Post Recording: You can set how long after an event occurs that the NVR will continue to record.

Latch Time: To configure the external alarm time when the detection is triggered.

Alarm Out: If your NVR support to connect to external alarm device, you can set to emit an alarm tone.

Show Message: A letter "S" will be displayed on the screen when the PID function is triggered.

Send Email: If an alarm is triggered, an Email will be sent to your preset email account.

Full Screen: When the detection is triggered, the channel will be enlarged into full screen.

Record Channel: to select the channel(s) you want to record when a detection is triggered.

Area: Click [Setup] to draw a virtual region in the camera picture.

Method to set the PID function:

- 1. Set the schedule.
- 2. Choose a channel you want to set, and enable the PID function.
- 3. Click Area **Setup**.
- 4. Choose one of the Rule Number. It is the number of PID area. Maximum 4 areas you can set for PID function.
- 5. To enable the detection in Rule Switch.
- 6. Choose a Rule Type.
 - A→B: NVR will only detect the action from side A to side B;
 - B→A: NVR will only detect the action from side B to side A;
 - $A \leftarrow \rightarrow B$: NVR will detect the action from either side B to side A or side A to side B.
- 7. Use your mouse to click 4 points in the camera picture to draw a virtual region. The sharp of the

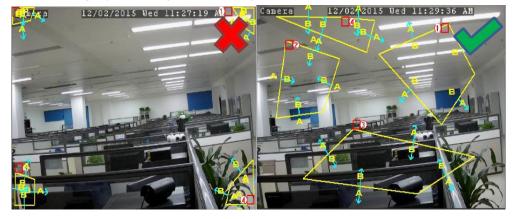
Rule Number
Rule Switch
Rule Type
Remove
Remove All
Save

region should be a convex polygon. Concave polygon will be not able to save.

- 8. Click **Save** to save your settings.
- 9. If you want to modify the position or sharp of region, click the red box in the region, the borders of the region will be changed to red color. Long press the left button of your mouse to move the position of the region, or drag the corners to resize the region.
- 10. If you want to remove one of the regions from the camera picture, click the red box in the region and then click **Remove** button. Click **Remove All** will delete all regions.

Notice:

- 1) The perimeter shall not be too close to the edges/corners of the camera picture, since it may fail to trigger the detection when the target pass through the edges/corners.
- 2) The shape of the regions shall not be too narrow/small, since it may fail to trigger the detection when the target pass through outside the perimeter.



5.10.3 LCD(Line Crossing Detection)

Line Crossing Detection function detects people, vehicle or other objects which cross a pre-defined virtual line, and some certain actions can be taken when the alarm is triggered.



Channel: to select the channel you want to configure

Enable: to enable or disable the LCD function

Buzzer: to disable or to active the buzzer to emit an alarm tone in 10,20,40 or 60 seconds when the detection is triggered

Sensitive: The sensitivity level is from 1 to 4, with a default value of 2. Higher sensitivity will be easier to trigger the detection.

Scene: Scene setting includes Indoor and Outdoor. Please choose the scene to match with the place your camera installed.

Post Recording: You can set how long after an event occurs that the NVR will continue to record.

Latch Time: To configure the external alarm time when the detection is triggered.

Alarm Out: If your NVR support to connect to external alarm device, you can set to emit an alarm tone.

Show Message: A letter "S" will be displayed on the screen when the LCD function is triggered.

Send Email: If an alarm is triggered, an Email will be sent to your preset email account.

Full Screen: When the detection is triggered, the channel will be enlarged into full screen.

Record Channel: to select the channel(s) you want to record when a detection is triggered.

Area: Click [Setup] to draw a virtual region in the camera picture.

Method to set the LCD function:

- 1. Set the schedule.
- 2. Choose a channel you want to set, and enable the LCD function.
- 3. Click Area Setup.
- 4. Choose one of the Rule Number. It is the number of LCD lines. Maximum 4 lines you can draw.
- 5. To enable the detection in Rule Switch.
- 6. Choose a Rule Type.
 - A→B: NVR will only detect the action from side A to side B;
 - B→A: NVR will only detect the action from side B to side A;
 - $A \leftarrow \rightarrow$ B: NVR will detect the action from either side B to side A or side A to side B.
- 7. Use your mouse to click 2 points in the camera picture to draw a virtual line.



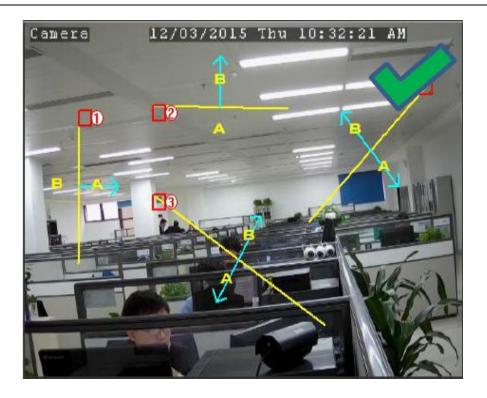


- 8. Click **Save** to save your settings.
- 9. If you want to modify the position or length of the line, click the red box in the line, the color of the line will be changed to red color. Long press the left button of your mouse to move the line, or drag the terminals to modify the length or position of the line.
- 10. If you want to remove one of the lines from the camera picture, click the red box in the line and then click **Remove** button. Click **Remove** All will delete all lines.

Notice:

- 1) The lines shall not be too close to the edges of the camera picture, to avoid any failure to trigger an alarm when the target cross through it.
- 2) The lines shall not be set too short, to avoid any failure to trigger an alarm when the target pass outside it.





5.10.4 SOD(Stationary Object Detection)

Stationary Object Detection function detects the objects left over or lost in the pre-defined region such as the baggage, purse, dangerous materials, etc., and a series of actions can be taken when the alarm is triggered.



Channel: to select the channel you want to configure

Enable: to enable or disable the SOD function

Buzzer: to disable or to active the buzzer to emit an alarm tone in 10,20,40 or 60 seconds when the

detection is triggered

Sensitive: The sensitivity level is from 1 to 4, with a default value of 2. Higher sensitivity will be easier

to trigger the detection.

Scene: Scene setting includes Indoor and Outdoor. Please choose the scene to match with the place your camera installed.

Post Recording: You can set how long after an event occurs that the NVR will continue to record.

Latch Time: To configure the external alarm time when the detection is triggered.

Alarm Out: If your NVR support to connect to external alarm device, you can set to emit an alarm tone.

Show Message: A letter "S" will be displayed on the screen when the intelligent detection is triggered.

Send Email: If an alarm is triggered, an Email will be sent to your preset email account.

Full Screen: When the detection is triggered, the channel will be enlarged into full screen.

Record Channel: to select the channel(s) you want to record when a detection is triggered.

Area: Click [Setup] to draw a virtual region in the camera picture.

Method to set the SOD function:

- 1. Set the schedule.
- 2. Choose a channel you want to set, and enable the SOD function.
- 3. Click Area Setup.
- 4. Choose one of the Rule Number. It is the number of SOD area. Maximum 4 areas you can set for SOD function.
- 5. To enable the detection in Rule Switch.
- 6. Choose a Rule Type.

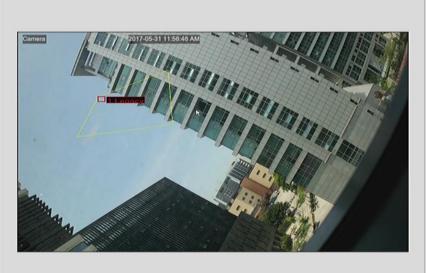
Legacy: NVR will only detect the left-over objects;

Lost: NVR will only detect the lost objects;

Legacy & Lost: NVR will detect both left-over & lost objects.

7. Use your mouse to click 4 points in the camera picture to draw a virtual region. The sharp of the region should be a convex polygon. Concave polygon will be not able to save.





- 8. Click **Save** to save your settings.
- 9. If you want to adjust the size of the region, click the red box in the region, the borders of the region will be changed to red color. Long press the left button of your mouse to move the whole region, or drag the corners to resize the region.
- 10. If you want to remove one of the regions from the camera picture, click the red box in the region

LaView NVR User Guide and Manual

and then click $\mbox{\bf Remove}$ button. Click $\mbox{\bf Remove}$ $\mbox{\bf All}$ will delete all regions.

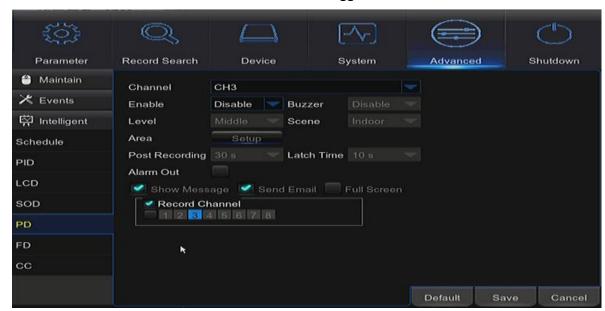
Notice:

- 1) The area for detection shall be greater than or equal to the size of the detected object, such as the detection of a white bottle.
- 2) The detected object cannot be covered.



5.10.5 PD(Pedestrian Detection)

Pedestrian Detection function detects the moving people in a pre-defined region, and a series of actions can be taken when the alarm is triggered.



Channel: to select the channel you want to configure

Enable: to enable or disable the PD function

Buzzer: to disable or to active the buzzer to emit an alarm tone in 10,20,40 or 60 seconds when the detection is triggered

Level: Small, Middle & Big. Small level is recommended to detect objects in long distance. Big level is recommended to detect objects in short distance.

Scene: Scene setting includes Indoor and Outdoor. Please choose the scene to match with the place your camera installed.

Post Recording: You can set how long after an event occurs that the NVR will continue to record.

Latch Time: To configure the external alarm time when the detection is triggered.

Alarm Out: If your NVR support to connect to external alarm device, you can set to emit an alarm tone.

Show Message: A letter "S" will be displayed on the screen when the intelligent detection is triggered.

Send Email: If an alarm is triggered, an Email will be sent to your preset email account.

Full Screen: When the detection is triggered, the channel will be enlarged into full screen.

Record Channel: to select the channel(s) you want to record when a detection is triggered.

Area: Click [Setup] to draw a virtual region in the camera picture.

Method to set the SOD function:

- 1. Set the schedule.
- 2. Choose a channel you want to set, and enable the PD function.
- 3. Click Area Setup.
- 4. Choose one of the Rule Number. It is the number of PD area. Maximum 4 areas you can set for PD function.
- 5. To enable the detection in Rule Switch.
- 6. Choose a **Rule Type**, only Normal available for this detection.
- 7. Use your mouse to click 4 points in the camera picture to draw a virtual region. The sharp of the region should be a convex polygon. Concave polygon will be not able to save.
- 8. Click **Save** to save your settings.
- 9. If you want to adjust the size of the region, click the red box in the region, the borders of the region will be changed to red color. Long press the left button of your mouse to move the whole region, or drag the corners to resize the region.
- 10. If you want to remove one of the regions from the camera picture, click the red box in the region and then click **Remove** button. Click **Remove All** will delete all regions.

Notice:

- 1) The region for detection shall not be in the area that people cannot reach.
- 2) The detected people should be completely surrounded in the region.



5.10.6 FD(Face Detection)

Face Detection function detects the faces of moving people appear in a pre-defined region, and a series of actions can be taken when the alarm is triggered.



Channel: to select the channel you want to configure

Enable: to enable or disable the FD function

Buzzer: to disable or to active the buzzer to emit an alarm tone in 10,20,40 or 60 seconds when the detection is triggered

Level: Small, Middle & Big. Small level is recommended to detect objects in long distance. Big level is recommended to detect objects in short distance.

Scene: Scene setting includes Indoor and Outdoor. Please choose the scene to match with the place your camera installed.

Post Recording: You can set how long after an event occurs that the NVR will continue to record.

Latch Time : To configure the external alarm time when the detection is triggered.

Alarm Out: If your NVR support to connect to external alarm device, you can set to emit an alarm tone.

Show Message: A letter "S" will be displayed on the screen when the intelligent detection is triggered.

Send Email: If an alarm is triggered, an Email will be sent to your preset email account.

Full Screen: When the detection is triggered, the channel will be enlarged into full screen.

Record Channel: to select the channel(s) you want to record when a detection is triggered.

Area: Click [Setup] to draw a virtual region in the camera picture.

Method to set the SOD function:

- 1. Set the schedule.
- 2. Choose a channel you want to set, and enable the FD function.
- Click Area Setup.
- 4. Choose one of the Rule Number. It is the number of FD area. Maximum 4 areas you can set for FD function.
- 5. To enable the detection in Rule Switch.
- 6. Choose a **Rule Type**, only Normal available for this detection.
- 7. Use your mouse to click 4 points in the camera picture to draw a virtual region. The sharp of the

- region should be a convex polygon. Concave polygon will be not able to save.
- 8. Click **Save** to save your settings.
- 9. If you want to adjust the size of the region, click the red box in the region, the borders of the region will be changed to red color. Long press the left button of your mouse to move the whole region, or drag the corners to resize the region.
- 10. If you want to remove one of the regions from the camera picture, click the red box in the region and then click **Remove** button. Click **Remove All** will delete all regions.

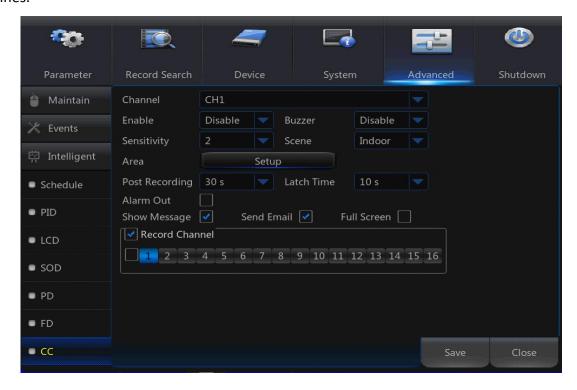
Notice:

- 1) The region for detection shall not be in the area that people cannot reach.
- 2) The region should be include the complete front face.



5.10.7 CC(Cross-Counting)

Cross-Counting function counts the times for moving objects or people across the virtual lines.



Channel: to select the channel you want to configure

Enable: to enable or disable the CC function

Buzzer: to disable or to active the buzzer to emit an alarm tone in 10, 20, 40 or 60 seconds when the detection is triggered

Sensitive: The sensitivity level is from 1 to 4, with a default value of 2. Higher sensitivity will be easier to trigger the detection.

Scene: Scene setting includes Indoor and Outdoor. Please choose the scene to match with the place your camera installed.

Post Recording: You can set how long after an event occurs that the NVR will continue to record.

Latch Time: To configure the external alarm time when the detection is triggered.

Alarm Out: If your NVR support to connect to external alarm device, you can set to emit an alarm tone.

Show Message: A letter "S" will be displayed on the screen when the intelligent detection is triggered.

Send Email: If an alarm is triggered, an Email will be sent to your preset email account.

Full Screen: When the detection is triggered, the channel will be enlarged into full screen.

Record Channel: to select the channel(s) you want to record when a detection is triggered.

Area: Click [Setup] to draw a virtual region in the camera picture.

Method to set the CC function:

- 1. Set the schedule.
- 2. Choose a channel you want to set, and enable the CC function.
- 3. Click Area Setup.
- 4. Choose one of the Rule Number. It is the number of virtual lines you can draw. Maximum 4 lines.
- 5. To enable the detection in Rule Switch.
- 6. Choose a Rule Type

Object: Will count for only moving objects.

Pedestrian: Will count only moving people.

7. Use your mouse to click 2 points in the camera picture to draw a virtual line. From Side A to Side B is Enter, from Side B to Side A is Exit.



- 8. Click **Save** to save your settings.
- 9. If you want to modify the position or length of the line, click the red box in the line, the color of the

- line will be changed to red color. Long press the left button of your mouse to move the line, or drag the terminals to modify the length or position of the line.
- 10. If you want to remove one of the lines from the camera picture, click the red box in the line and then click **Remove** button. Click **Remove** All will delete all lines.

Notice:

- 1) The lines shall not be too close to the edges of the camera picture, to avoid any failure to trigger an alarm when the target cross through it.
- 2) The lines should be in the area that detected object can be reach.
- 2) The lines shall not be set too short, to avoid any failure to trigger an alarm when the target pass outside it.





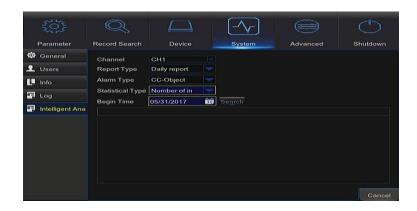




View the Cross-Counting Result

To System → Intelligent Analysis menu, you will be able to search & view the statistical result of cross counting.

The statistical result can be queried by Daily / Weekly / Monthly / Annual.



5.10.8 View Log of Intelligent Analysis

Click the icon in the upper right corner of the preview interface, you can view the alarm events of intelligent analysis.



5.11 Shutdown

Manually turn off or reboot the NVR.



Chapter 6 Web Application Manager

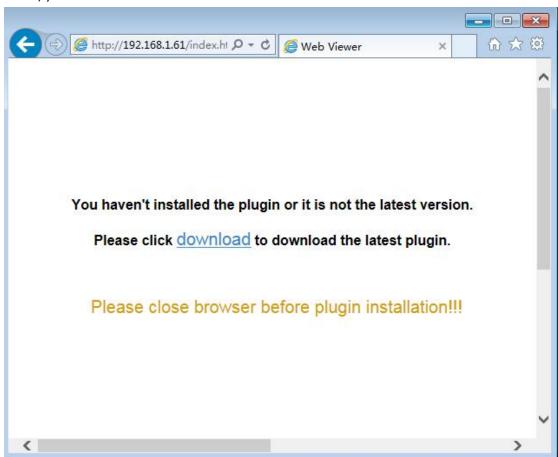
Use the Web Client to remotely access your NVR at any time via a PC. Before you access the Web Client, you need to ensure that the network settings of the NVR are configured properly. The most convenient and easiest way is if you have set the NVR a static IP address (please see"5.4.1 Network"). It means you only need to open the web browser on your PC and type in the static IP address you have set on the NVR. However, if the IP address of the NVR is assigned by a DHCP server (see"5.4.1 Network"), then it means that each time you reboot the NVR, the IP address changes. In this case, ask if your ISP can provide you a static IP address. If not, then configure the DDNS service. See the network settings in "5.4.5 DDNS".

6.1 Web Plugin Download and Installation

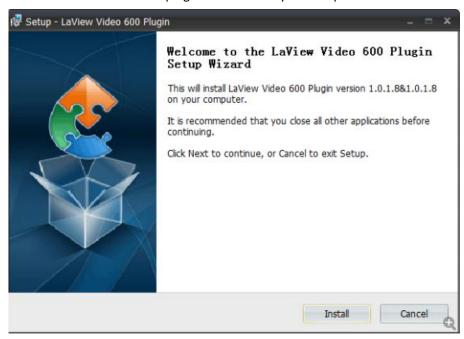
To access the Web Client, do the following:

For IE/Chrome/Firefox:

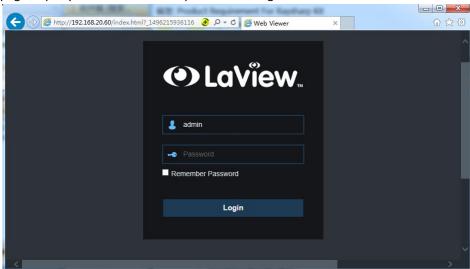
1) Launch the explorer on your PC and enter the NVR static IP address or DDNS domain name (Host Name) you have set on NVR in the URL box.



2) For the first time when you run the web client, system will require to install the web client plugin. Click download to download the plugin and install to your computer.



3) After installing the plug-in, close & launch again your browser and repeat step 1 to open the login page. Input your user name and password to login the web client.



4)

Note: If you use Google Chrome, please use Version V41 or below. If you use V42 to V44, you need to enable NPAPI plugins. Please enter chrome://flags/#enable-npapi on URL bar to find and enable NPAPI. It doesn't support V45 or above so far

For Mac SAFARI:

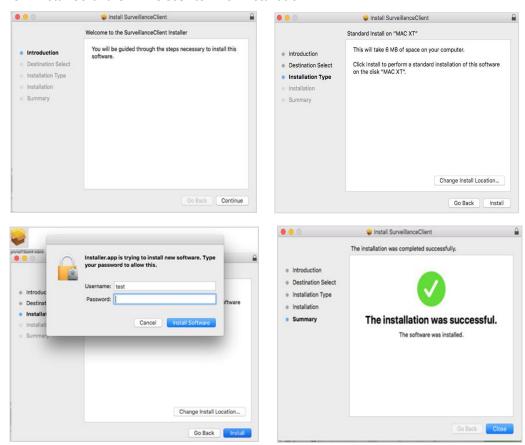
1) Launch the Safari on your Mac, and enter the NVR static IP address or DDNS domain name (Host Name) you have set on NVR in the URL box.



2) Download the plug-in "SurveillanceClient.dmg", locate the downloaded file and double click it.



3) Click on "Continue" -->"Install". Enter user name and password for Mac computer, Click on "Install Software" -->"Close" to finish installation.



4) Shut down Mac SAFARI browser and restart it, and then enter IP address of NVR in address bar to access login page.

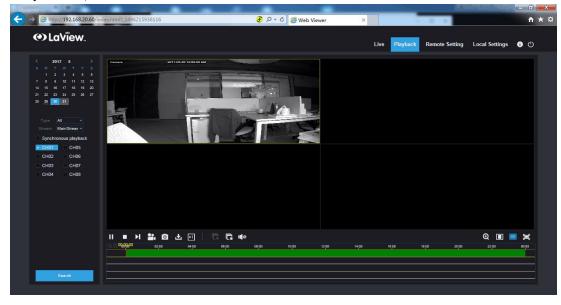


6.2 Web Client Manager

The web client supports to full control the NVR with administrator account. Please make sure to protect your user name & password for preventing illegal login.

6.2.1 Live Interface

This is the first screen that opens after you have logged in to the Web Client. Here you can open or close live preview, record video to local computer manually, take snapshots of the screens, PTZ control, color adjustment, etc.



1. Buttons on a single live interface:

LaView NVR User Guide and Manual

: Volume switch
: Record switch: the remote record switch of client. Record will be automatically saved to a
specified position on PC after the function is enabled.
: Snapshot: Capture the selected live image and save it to a specified position on PC. The
image is saved as *.bmp format.
① : Digital ZOOM.
: Open the images on Live window.

: Close all the Live channels

: Switch display mode in channel window

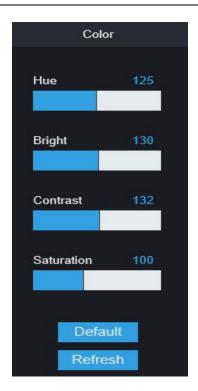
: Open the images on Live window.

: Stretch.

: Original proportions.

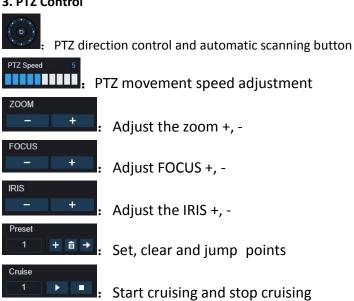
: Click to maximize the current window to full screen. Right click to popup menu option and select Exit Full Screen.

2. Video Control



Hue: Adjust the chromaticity of video Bright: Adjust the brightness of video Contrast: Adjust the contrast of video Saturation: Adjust the saturation of video

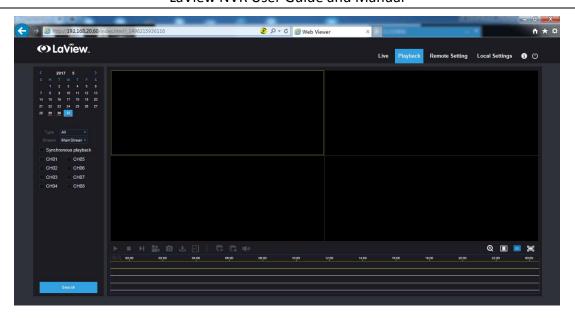
3. PTZ Control



6.3.1 Playback



to enter into Playback interface to remotely view the records in NVR HDD.



Note: It supports 4 channels playback.

6.3.1.1Record Search

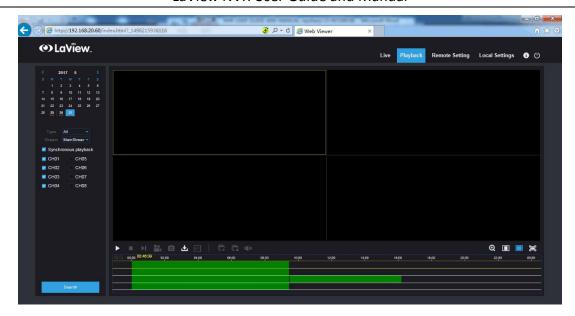
Record playback procedure

Firstly, select the date you want to check and select 4 channels. Any record files in current channel at current date will be displayed in the status bar of the interface.

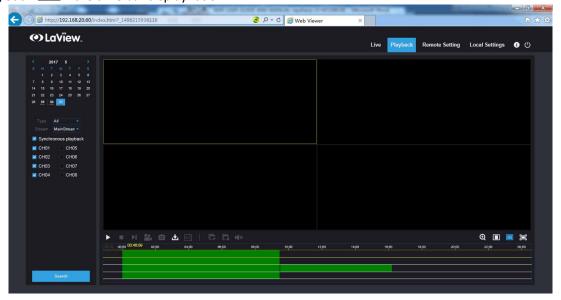
Secondly, select record type (Normal record, Alarm record and All) and channels, and select stream (Mainstream and Sub stream).

Then click "______, and time axis panel will display specific time quantum, On the time axis, red part stands for alarm record, yellow stands for normal record and original part stands for no record during this period.

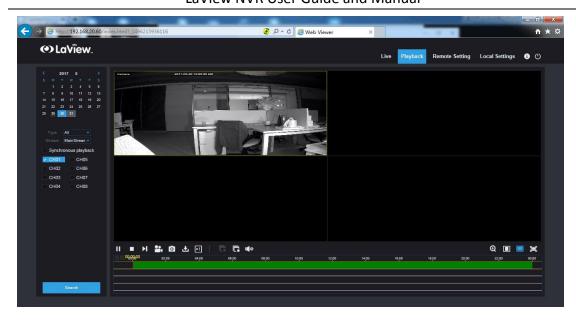
Before playback, choose to enable playback 4 channels synchronously. If you tick-select "Synchronous playback", that means the selected channel will playback synchronously; otherwise, you could separately control the channels playback.



Thirdly, click to start record playback. When mouse curse is moving on the time axis, the time point of current position will be displayed on the time axis screen. Click the icon or to zoom in/out the time bar display ratio.



"Stream" select "Sub Stream", select the channel, click search video, and click play



6.3.1.2Playback Control

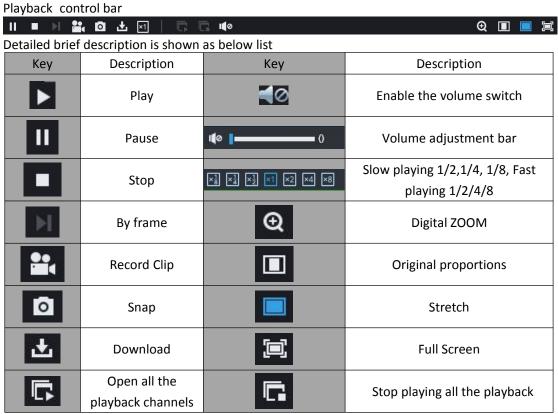


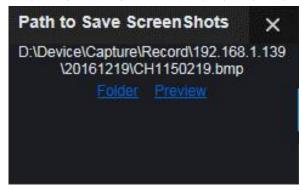
Table 5-1

Record file clip

After opening playback, click icon to clip the selected file; and click again to stop the clip function. Then playback clip is successfully done. Record clip file will be saved as *.264 format.

Snapshot function

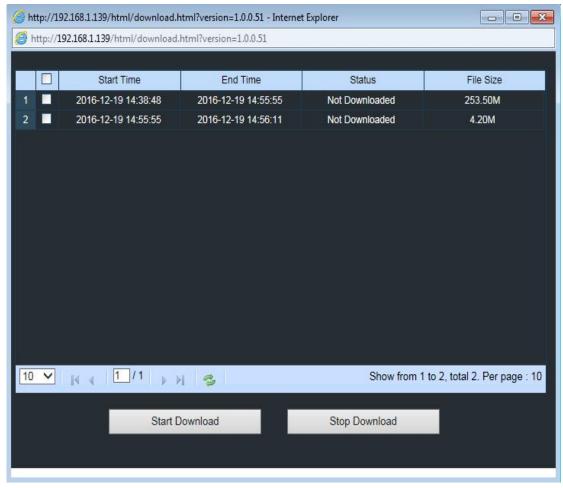
Move the mouse curse to the channel you want to capture, and click icon to capture the live images remotely. After capturing the images successfully, a path prompt box will be popped up.



The captured file will be saved as bmp format.

Record file download

Click download icon on the control bar to display all the matched record file according to the search conditions of channels.

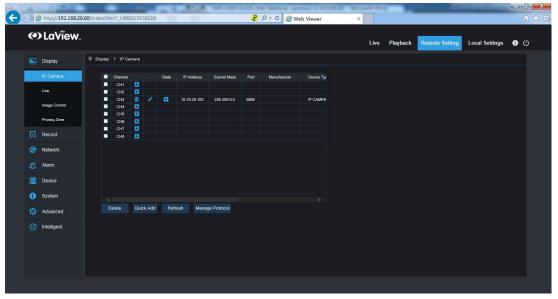


LaView NVR User Guide and Manual

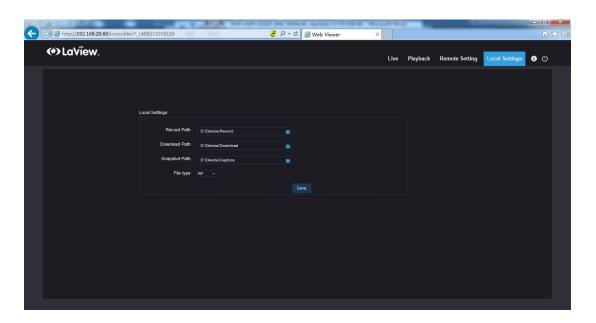
Tick-select the record file you want to download and click [Start download] .System will download the record file in sequence and save to local PC. The downloading file will be displayed in percentage form. After downloading finishes, "Complete" will be displayed on the status bar.

6.3.2 Remote Setting

Here you can remotely configure the settings of the NVR. Please see "Chapter 5 NVR Menu" for more information.



6.3.3 Local Setting



Record Path: Set the path to save manual recordings on your PC's local drive.

Download Path: Set the path on your PC's local drive where you want to download recordings from the NVR.

Snapshot Path: Set the path to save manual snapshots on your PC's local drive.

Save: Click Save to save the modifications.

File Type: Choose your preferred file type for manual recordings.

Chapter 7 Remote Access via Mobile Devices

The NVR supports to remote access via mobile devices based on Android & iOS operating system.

- 1) Search RX Cam View from Google Play Store for android devices or App Store or iOS devices and install.
- 2) Run the app, it will display the live view screen.

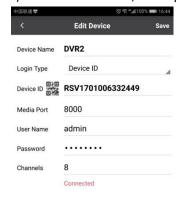


3) Touch the icon to open device list page, touch + to add device.





4) Choose "Manual", and input the NVR information.



Device Name: Input the name you want to display

Login Type: Device ID and IP/DOMAIN

-Device ID: For P2P connection.

-IP/DOMAIN: IP address or Domain name of the NVR

Device ID/IP Address: Input the P2P ID or IP address/Domain name. You can touch the icon to scan the P2P QR code to add device.

Media Port: Input the media port in NVR network setting User Name / Password: Input the user name & password of the NVR.

Channels: System will display the number of channels of the NVR after connected.



5) After all settings completed, touch **Save** to save, the app will turn to Live view display if the device is well connected.



4 pictures display
6 pictures display
8 pictures display
9 pictures display

16 pictures display

Note: The app will display max. 16 pictures in one screen. You can slip the screen to move to next screen to view other 16 pictures. Total 80 pictures can be displayed.

Snap shoot the pictures

Record the live view video to your mobile device

∯∯PTZ control

Picture quality

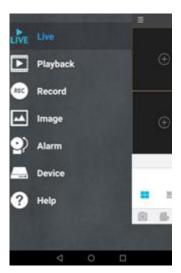
Close all live view pictures

Turn Off/On Audio

Adjust the video scale

Dual-way speaker (If your NVR support)

6) Touch icon to open the Menu list where you can check & configure the live view, playback, local recorded videos, captured pictures, push alarm notifications, Device manager, Local Setting & Help documents.



Chapter 8 Appendix

8.1 Troubleshooting

- 1. Q: What can I do if the system does not detect the HDD?
 - A: Check if the power supply system is properly connected and data cord and power cables are securely connected, and if something wrong with the HDD interface. Or you may check if your HDD is supported by referring to the specifications or descriptions.
- 2. Q: I have changed the password but forget the new password, how can I access the system?

 A: If you forget system password, please consult with our technical personnel. We strongly suggest user to set password easy to be remembered and relatively safe. If you have safety requirement, please do not set very simply password, such as 000000.
- 3. Q: We see abnormal video signal or even no video signal by connecting the NVR and camera together. Power supply for both devices is OK. What is wrong?
 - A: Check network cable at NVR side to see if the cable is firmly connected and if it is worn out and needs to be replaced.
- 4. Q: How to prevent NVR from being influenced by heat?
 - A: The NVR needs to dissipate heat while it is running. Please place the NVR in a place with good air circulation and away from heat sources to ensure stability and life of the NVR.
- 5. Q: The remote controller doesn't work while the monitor screen is OK and panel keys are functional. Why?
 - A: Operate again by aiming the remote controller at the IR receiver on front panel. If it still doesn't work, please check if the batteries in the remote controller are dying. If not, check if the remote controller is broken.
- 6. Q: I want to take out HDD from my PC and install it in NVR. Can it work?
 - A: All HDDs supported by the system can be used. But remember, once NVR runs, the data on your HDD will be lost.
- 7. Q: Can I playback while recording?
 - A: Yes. The system supports the function of playing while recording.
- 8. Q: Can I clear some records on HDD of NVR?
 - A: In consideration of the file security, you may not clear part of records. If you want to remove all the records, you can format HDD.
- 9. Q: Why can't I log in NVR client?
 - A: Please check if the network connection settings are correct and RJ-45 port is with good contact. And check if your account and password are correctly input.
- 10. Q: Why can't I find any records during playback?
 - A: Please check if the data line connection for HDD is OK and system time is properly adjusted. Try a few times and restart. If it still doesn't work, check if the HDD is broken.
- 11. Q: Why doesn't dynamic detection work?
 - A: Please check if the motion detection alarm setting at IPC side is correct and if the sensitivity is set too low.
- 12. Q: Why doesn't alarm work?
 - A: Please check if the alarm setting, alarm connection and alarm input signals are correct.
- 13. Q: Why does buzzer keep alarming?
 - A: Please check the alarm setting, check if motion detection function is enabled and object motion is detected all the time and if I/O alarm is set as Always Off. Besides, refer to corresponding HDD alarm setting.
- 14. Q: Why can't I stop recording by pressing "STOP" button or click "Stop Recording" in context menu?

A: Pressing Stop button can only stop manual record. If you want to stop Scheduled recording in certain time quantum, please change the setting to No Record. To stop Startup recording, please change record mode to scheduled recording or manual recording. Then you may stop recording by the prescribed methods. And another way of stopping recording is to set channel in record setting as off.

8.2 Usage Maintenance

- 1. To shut down NVR, please firstly shut down the system and then turn off the power. Do not turn off the power directly or HDD data will be lost or damaged.
- 2. Please keep NVR away from heat sources or places.
- 3. Clean the internal dust regularly. Make sure the good ventilation of NVR so as to ensure the good heat dissipation.
- 4. Please do not hot plugging cables at ports, or the ports may be damaged.
- 5. Please check the HDD cable and data cable regularly to see if they are ageing.
- 6. Please prevent the audio and video signals of NVR from being intervened by other electronic devices, and prevent the HDD from being damaged by static electricity and induced voltage.
- 7. If the network cable is frequently plugged, it is suggested to replace connecting line regularly, or the input signal may be unstable.
- 8. This is A class product. It maybe bring wireless interference in life. Under this situation, it need user to make measures.

8.3 System Connection Diagram

