

WISENET

DIGITAL VIDEO RECORDER
User Manual

SDR-84305/SDR-85305/SDR-85307

CE

Overview of DVR

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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. Please use the power supply enclosed or specified by the manufacturer.
Never operate the equipment by using unspecified power supply.
2. Never push objects of any kind through openings of DVR so as to avoid electric shock or other accidents.
3. Do not put the equipment in a dusty location.
4. Do not place the equipment under the rain or humid environment like the basement.
If the equipment is accidentally in contact with water, please unplug the power cable and immediately contact technical support.
5. Keep the surface of the equipment clean and dry.
Use a soft damp cloth to clean the outer case of the DVR. (Do not use liquid aerosol cleaners.)
6. Do not operate if any problems are found.
If there is a strange smell or sound from the DVR, unplug the power cable and contact technical support.
7. Do not try to remove the DVR cover to avoid electrical shock.
8. Handle with care.
If DVR does not work properly, please contact technical support for repair or replacement.
9. Install and place the equipment in a well ventilated area. The DVR system includes a HDD, which produces large amount of heat during operation. As a result, do not block the ventilation vents (on the top, bottom, sides and the back of the DVR).
10. The power adapter should only be connected to the DVR. Do not connect it to additional equipment or else the DVR may restart repeatedly due to insufficient power.
11. Do not install near any heat sources such as radiator, stove, and other machinery or devices (including speakers) that produce large amount of heat.
12. If the provided plug does not fit your outlet, please technical support for assistance.
13. Protect the power cord from being walked on or pinched particularly at the plug level and each ends of the cord.
14. Only use attachments/accessories specified by the manufacturer.
15. Only use the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the system.
When a cart is used, use caution when moving the cart and the device to avoid injury from tip-over.
16. Unplug the device during lightning storms or when unused for long periods of time.
17. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is broken, liquid has been spilled or objects have fallen onto the device, exposed to rain or moisture, does not operate normally, or has been dropped.



Standards Approvals



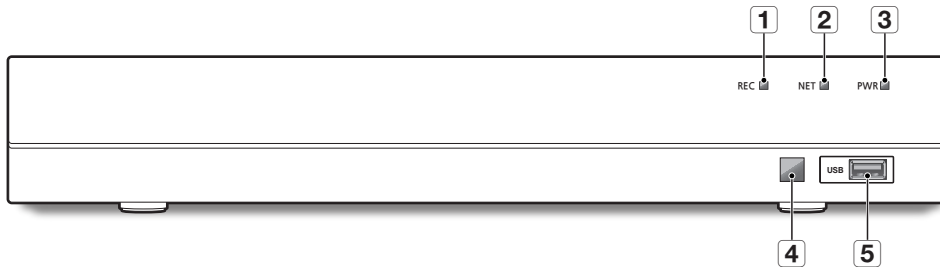
- Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Overview of DVR

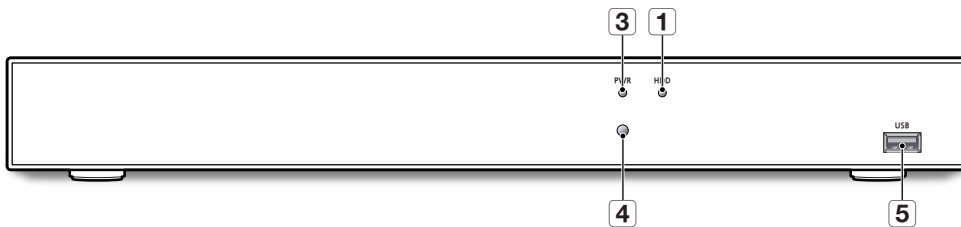
FRONT PANEL

DVR is short for Digital Video Recorder.

SDR-84305



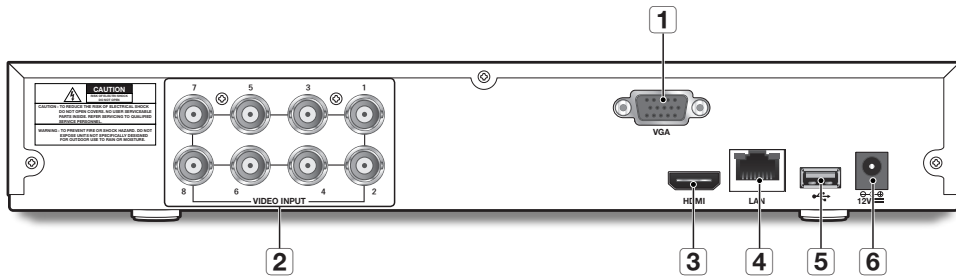
SDR-85305/SDR-85307



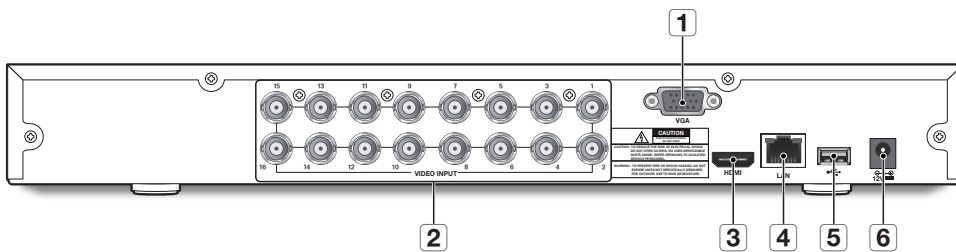
Type	Key or indicator	Identification	Functions
1	Status lamp	HDD indicator	REC
			HDD
			HDD
2	Network indicator	NET	Display network connection and data transfer status.
3	Power indicator	PWR	If the "Blue" indicator is on, DVR is getting power normally. (SDR-84305)
		PWR	If the "Yellow" indicator is on, DVR is getting power normally. (SDR-85305)
4	IR port	□/○	Receive IR signal from Remote Controller.
5	USB port	USB	USB port

REAR PANEL

SDR-84305



SDR-85305/SDR-85307

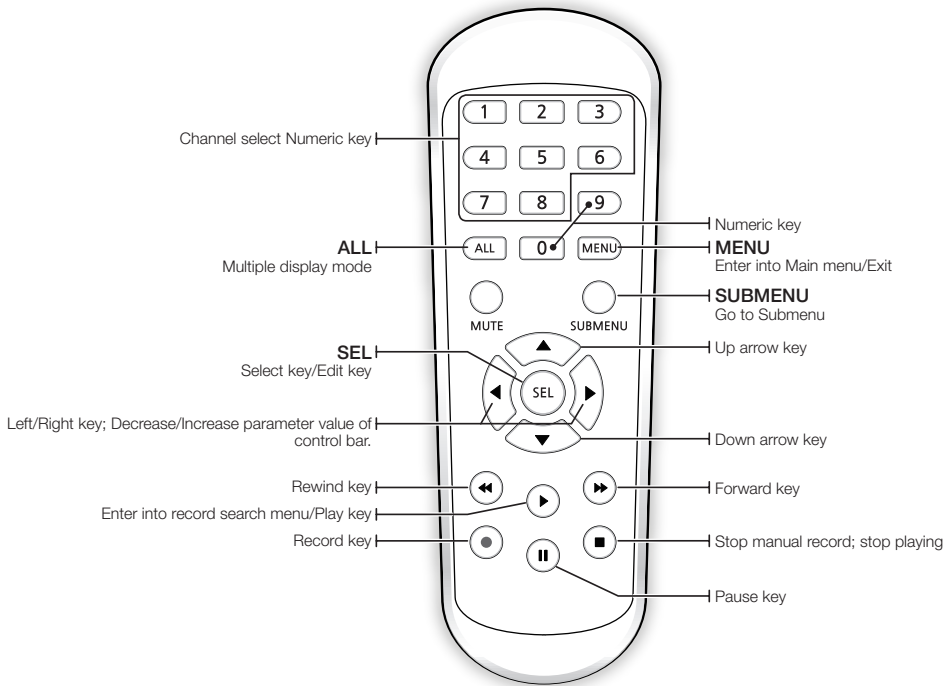


Physical Interface	Connection
1 VGA port	Connect with VGA display devices, such as PC monitor.
2 VIDEO INPUT	Connect with (analog) video input device, standard BNC port.
3 HDMI	Connect with HDMI display devices, such as PC monitor.
4 LAN: (RJ45) Network port	Connect with LAN, Ethernet cable.
5 USB port	Connect with USB.
6 Power port	Connect with the power supply, included with the device. - SDR-84305 : DC 12V 2A - SDR-85305/SRD-85307 : DC 12V 3A

Overview of DVR


REMOTE CONTROLLER

Operation of remote controller



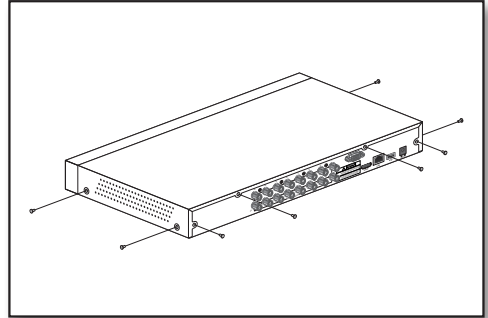
- There is no function of Mute button.
- The administrator is recommended to store the remote control carefully in order to initialize it if the password is lost.

INSTALL HARD DRIVE

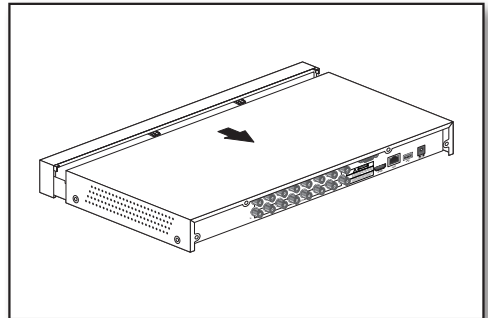
-  ■ HDD is pre-installed. If you want to replace hard disk drive, please refer to the following instruction. Please do not remove the hard drive when DVR is operating.

Installation of Hard Drive

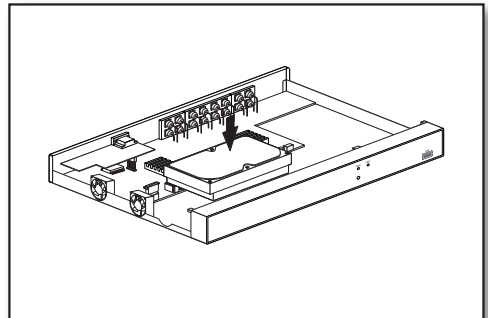
1. Using a screwdriver, remove the screws from the side and back panels.



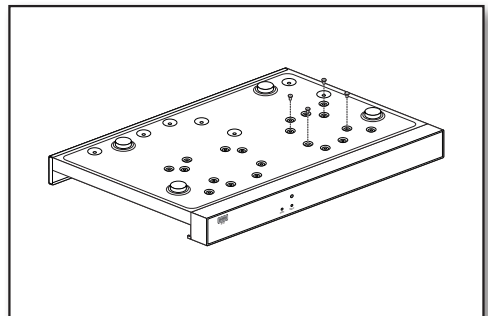
2. Remove the top cover.



3. Connect data and power cables of hard drive to the motherboard. Mount the hard drive by mounting it onto the rack and connecting the power and data cables.



4. Multiple groups of screw mounting holes are provided on the bottom of the DVR. Screw the hard drive in place according to the size of your hard drive.

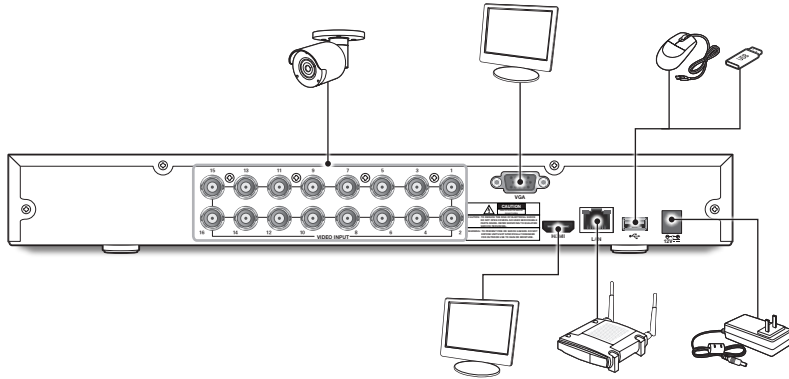


Overview of DVR

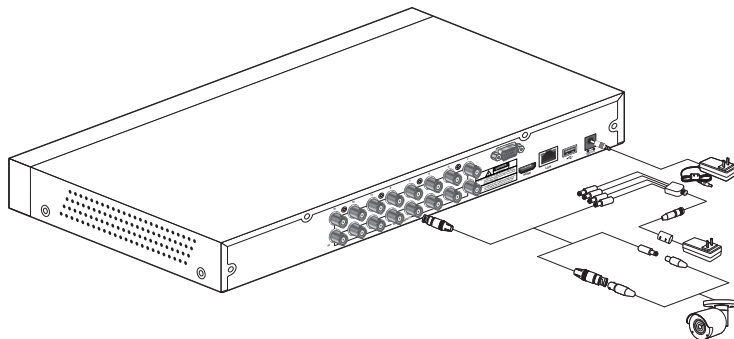
CONNECT EXTERNAL EQUIPMENT

Connect your monitor to the DVR using the VGA or HDMI video cable. Connect DVR to the power supply adapter provided. After all connections are completed, plug the DVR in to perform function checks.

- The appearance of power adaptor differs depending on sales region.



CONNECT DVR



- Images may differ depending on the model.
- Camera's shape can be different depending on AIO Kit you purchased.
- Power splitter differs depending on the number of camera connected.

DVR Boot up

SYSTEM INITIALIZATION

After connecting the DVR power cable to wall outlet, the DVR system initializing screen will appear.

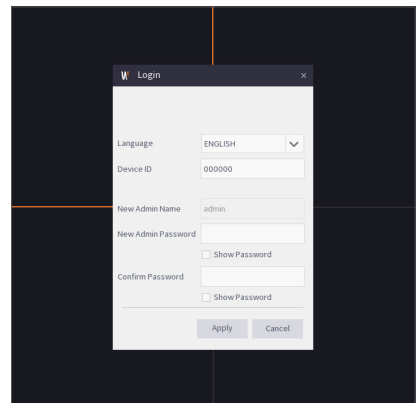
- It may take 40 seconds to start up, and the screen may beep 5~6 times.



LOGIN

1. The login dialog appears.
2. The password setting window appears for the first time. If you have changed your password, enter your new password.
3. Click the [Apply] button.

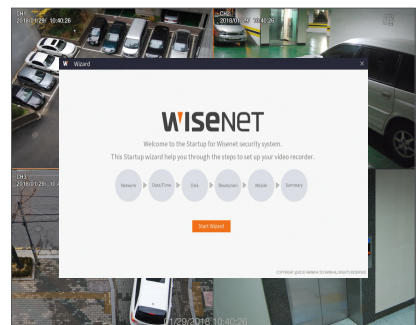
- Please create a user name and password for your device. Password MUST be 8~13 characters long. When password is 8~9 characters long, it should be with at least a combination of letters, digits and special symbols. If it is 10~13 characters long, it should be with at least a combination of two types of characters. 4 or more contiguous or repeated characters or key arrangement are prohibited, for example 1111, 1234, abcd, qwerty.
- Change your password on a regular basis.



STARTUP WIZARD

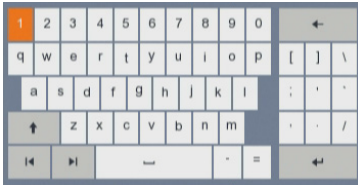
After the DVR startup is complete, the startup wizard will display.

Wizard setting menu includes: Network, Date/Time, Disk, Resolution, Mobile and System summary.



DVR Boot up

Use Virtual Keyboard

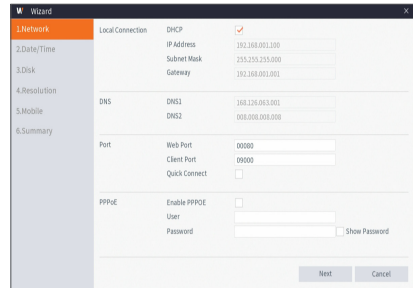


Virtual keyboard window will be displayed for input. Click on the desired characters to apply them. Press < ↑ > to switch to input of upper-case letters.

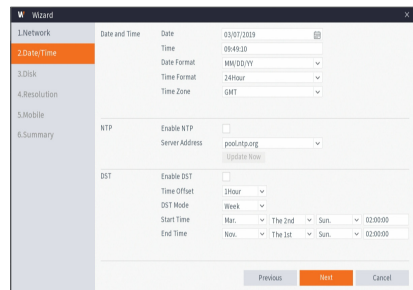
Press < ↑ > again to switch to input of special characters. The virtual keyboard is used in the same way as with physical keyboard.

For input of password, use letters and special characters other than < \ > and < " >.

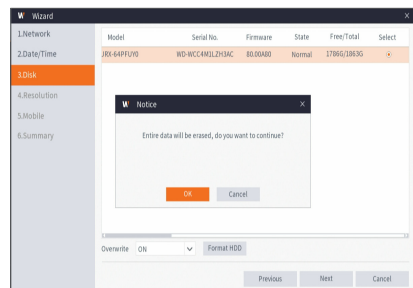
1. Network (DHCP): In DHCP mode the router will automatically assign an IP address to DVR. If the DVR fails to obtain an IP address, refer to the DVR Router Guide. If the problem still cannot be resolved, contact technical support.



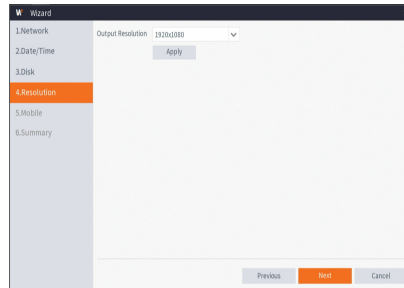
2. Date/Time: Set the date, time, date format, time, NTP, DST.




3. Disk: Any new disk connected must be formatted before use. Click on "Select" to highlight the hard drive to be formatted. Click on "Format HDD" and the user login box will appear. Enter the password to log in. Click on "OK" to format the disk when the "Entire data will be erased, do you want to continue?" dialog box appears. Formatting process is complete when the progress bar is full.

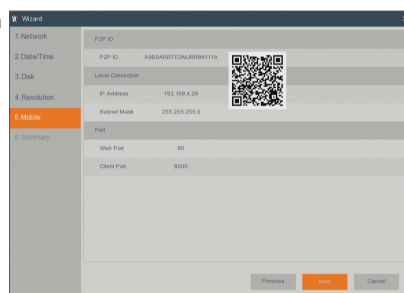


- Resolution : Select the resolution for the VGA output or HDMI output of your monitor.



- Mobile : If you scan a QR code using Wisenet Life, the device ID displayed in the DVR will be automatically reflected in the Mobile Viewer ID, and you can use the Mobile Viewer immediately by entering the ID/password of the DVR.

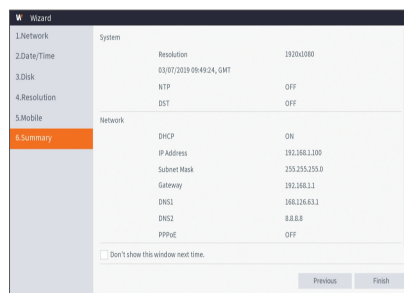
-  ■ Remote monitoring can only be performed by an operator with an admin account.
- Please refer to the separate manuals for the Web and mobile viewer.



- Summary : Shows system and network status of DVR.

- Click on "**Finish**" to finish setting of startup wizard.

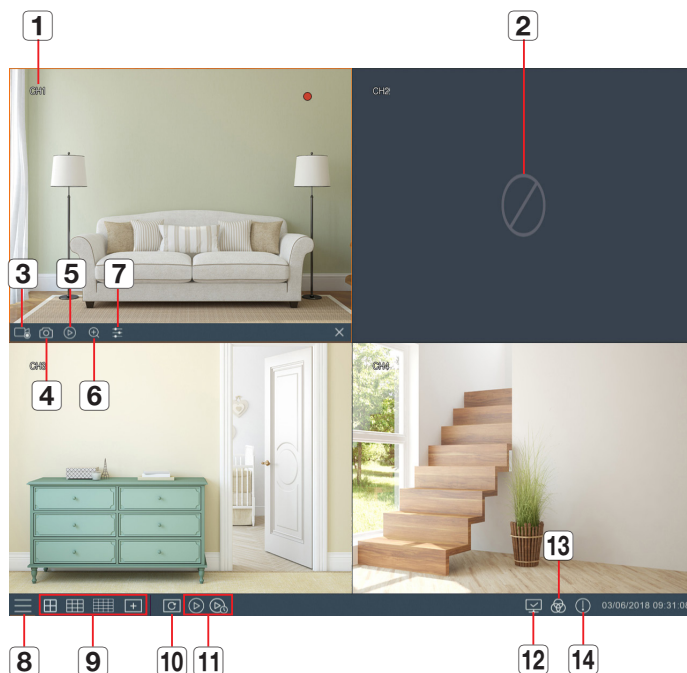
-  ■ You can click on "**Don't show this window next time**" if you do not wish to have the wizard setting to appear next time.



DVR Boot up

MAIN INTERFACE

In real-time preview mode: right click on any area to access the desired menu. Right click on it to open a context menu, whose menu items may vary depending on the specific condition, such as sign-in, sign-out, split screen mode and various operation conditions. Left click on any channel to access shortcut menu, where operations such as image capture, recording and image zoom-in are available.



The video recording marks are as shown below:

- : means common Recording.
- 👤 : means Motion detection.

Component Name	Function
1 Channel Name	Display channel name
2 Video Loss	Camera is off-line
3 Manual Recording	Enable or disable manual recording
4 Manual Capture	Make a snapshot of current video
5 Instant Playback	Playback of the last five minutes of the video
6 Zoom	Hold and drag mouse cursor to select a frame of current video to zoom in
7 Color Setting	Set hue, brightness, contrast and saturation of current channel
8 Main Menu	Access the main menu

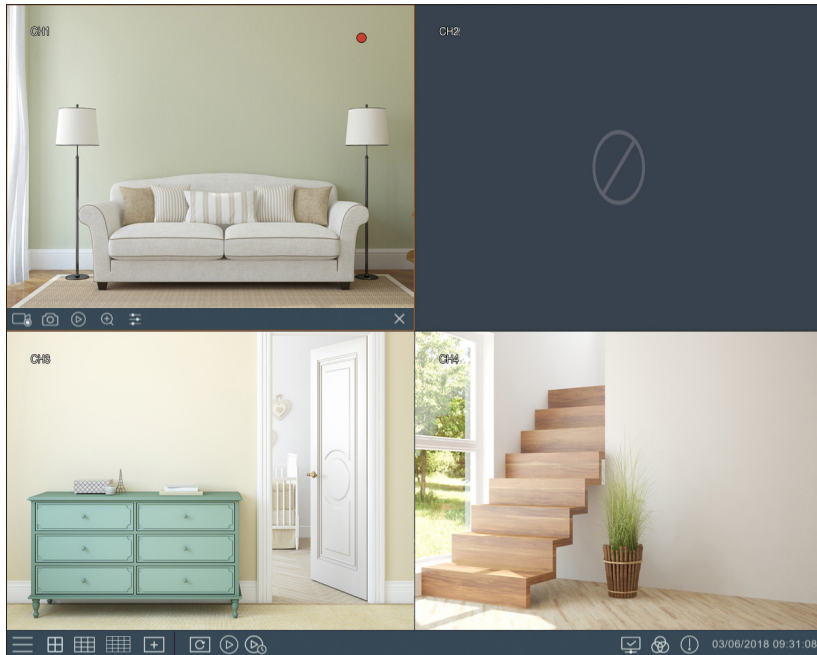
	Component Name	Function
9	4-Channel Layout	Display 4 channels of video
	9-Channel Layout	Display 9 channels of video
	16-Channel Layout	Display 16 channels of video
	More Layout	Display 8/10/13/14 channels of video
10	Auto SEQ	Press this button to switch the screen mode in sequence
11	Play	Replay video recorded
12	Connection state	Display the network connection status
13	Manual mode	Set manual recording mode
14	System	System Information

DVR Menu

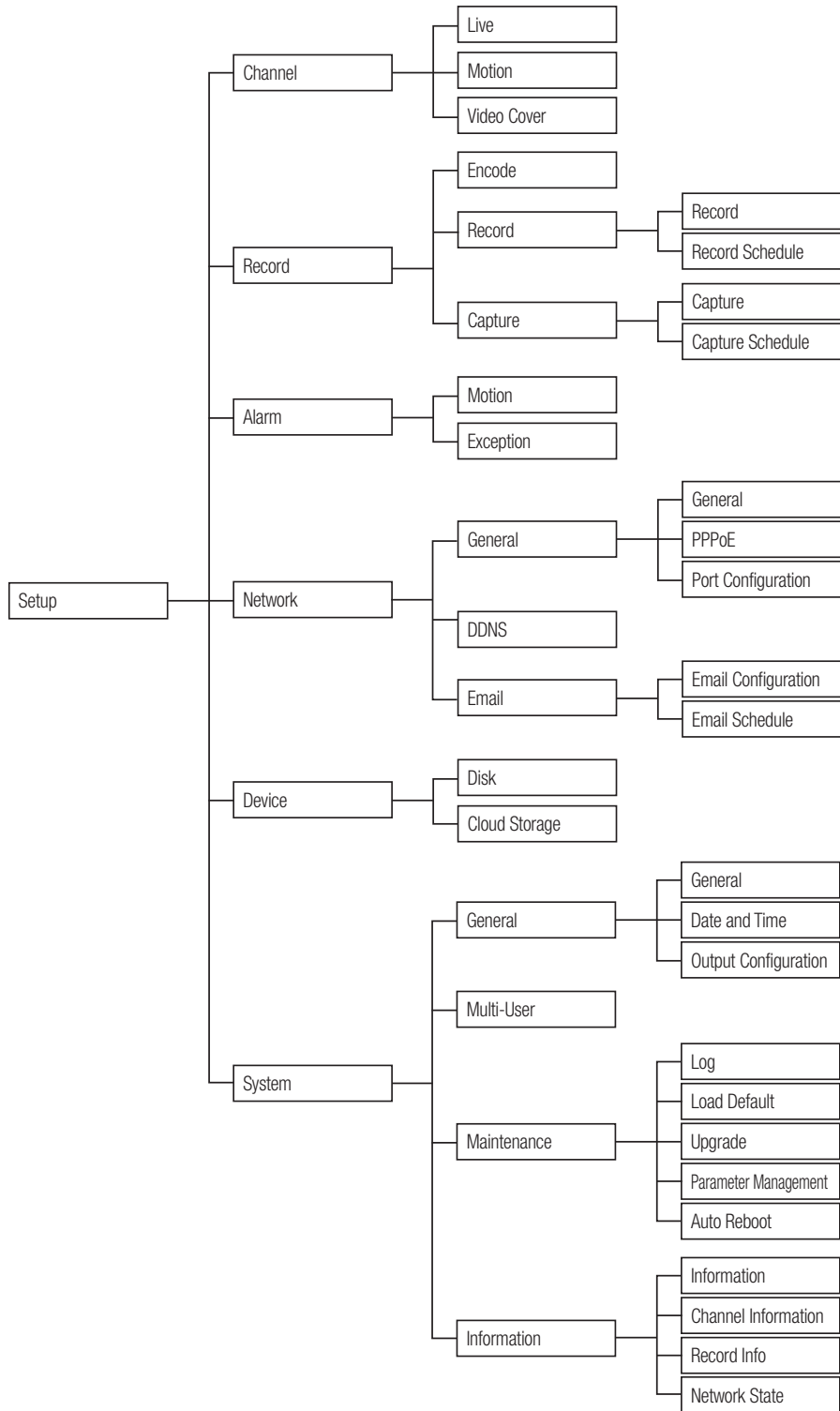
POPUP MENU

After finishing system initialization, right click the mouse on preview interface or slide the mouse to the bottom of screen to enter into Pop-up Menu. Now you could perform parameter setting and operate on Main Menu, Multi-screen, Record Search, Sequence and Brightness settings.

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



MAIN MENU GUIDE



DVR Menu

SETUP

On LIVE mode, click the mouse Right button, or [Menu] button on the remote controller, and select [] icon on the toolbar to enter the main menu screen.


If system interface is locked, refer to page 32 to unlock by entering your password.

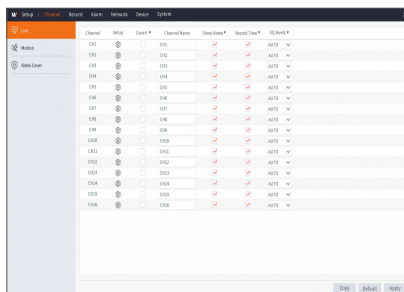
In Main Menu mode, you can make settings for Parameter, Record Search, Device, System, Advanced and Shutdown.

Channel

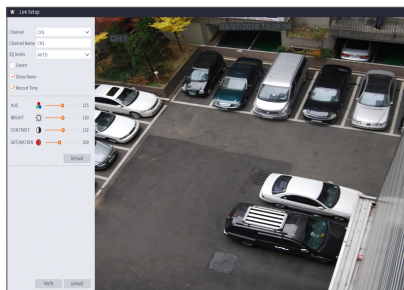
Live

Go to "Setup" → "Channel" → "Live" to enter into the interface.

- **Channel** : Select the channel in the drop-down list.
- **Setup** : Click [] to display the detailed setting window.
- **Covert** : Enable/Disable Video hiding.
- **Channel Name** : Can be up to 40 characters in length.
- **Show Name** : Showing Channel name
- **Record Time** : Enable or disable displaying system time in recording.
- **EQ levels** : Set the camera EQ levels. It allows you to set the EQ levels according to the distance between camera and DVR.




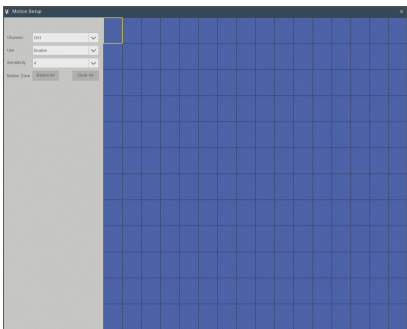
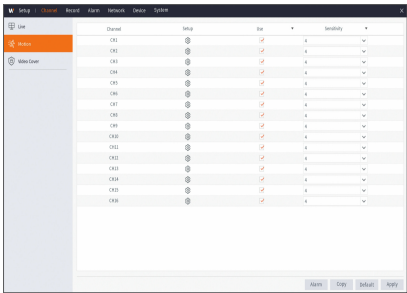
- **HUE** : Adjust the chromaticity of video
- **BRIGHT** : Adjust the brightness of video
- **CONTRAST** : Adjust the contrast of video
- **SATURATION** : Adjust the saturation of video



Motion

Go to "Setup" → "Channel" → "Motion" to enter into the interface.

- **Channel** : Select Channel.
- **Setup** : Click [] to display the detailed setting window.
- **Use** : You can select whether or not to use the use.
- **Sensitivity** : Support 1-8 level, 8 is the highest level.
- **Motion Zone** : Set an area where motion is detected.

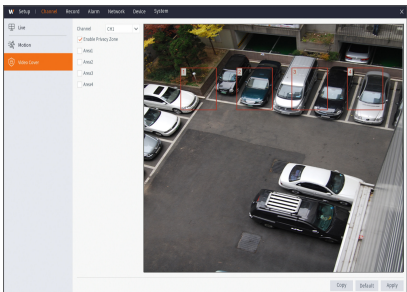


Video Cover

Go to "Setup" → "Channel" → "Video Cover".

Privacy Zone is to block certain area(s) in the camera's field of view on live video of selected channel.

1. Click "Enable Privacy Zone" and select the number of the Area(s) to be blocked.
2. Adjust the position and zone of the Area(s).
3. Click "Apply" to save the setting.



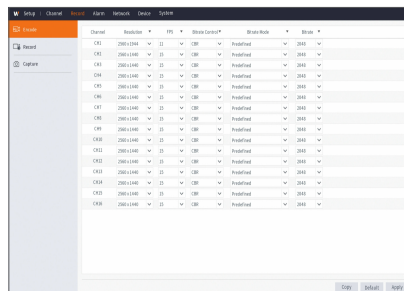
DVR Menu

Record

Encode

Go to "Setup" → "Record" → "Encode" to enter into the interface.

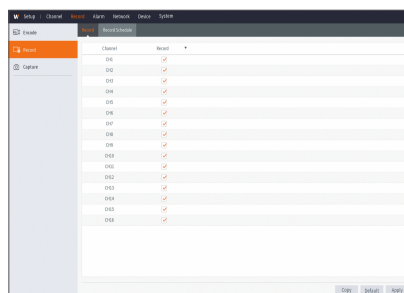
- **Channel** : Set the desired channel in the drop-down menu.
- **Resolution** : 960x 480 / 1280x720 / 1920x1080 / 2048x1536 / 2560x1440 / 2560x1944
- **FPS** : 1-15FPS
- **Bitrate Control** : Select either constant (CBR) / variable (VBR) bitrate.
- **Bitrate Mode** : Select default/custom bitrate.
- **Bitrate** : Bitrate setting.



Record

Go to "Setup" → "Record" → "Record" → "Record" to enter into the interface.

- **Channel** : Set the desired channel in the drop-down menu
- **Record** : Enable/disable record



Record Schedule

Go to "Setup" → "Record" → "Record" → "Record Schedule" to enter recording schedule for the DVR.

Schedule interface

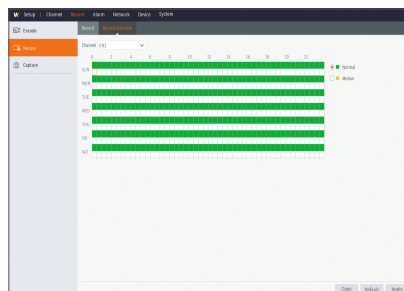
Select the channel and the date to be set.

One week's schedule can be set.

The record schedule of the current channel can be copied to any other channel or all channels.





- In the Record menu and Record Search menu, when no colors are presented, it means there are no recordings during that time;
- "Green" stands for normal record and "yellow" stands for motion record.

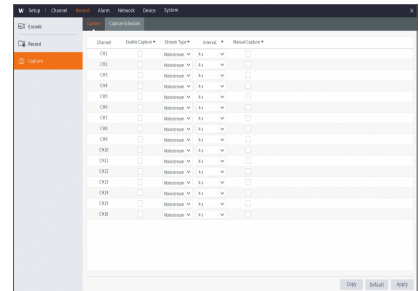


Capture

Go to "Setup" → "Record" → "Capture" → "Capture".

- **Channel** : Select capture channel
- **Enable Capture** : Enable/Disable auto capture.
- **Stream Type** : Select MainStream or SubStream.
- **Interval** : 4s / 8s / 25s / 1Min / 10Min / 30Min / 1Hour
- **Manual Capture** : Enable/Disable manual capture

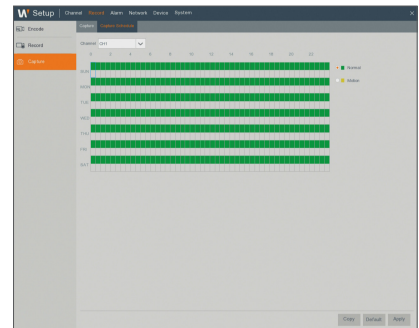
 ■ You can click on the icon  in the live window to manually capture the image with your mouse.



Capture Schedule

Go to "Setup" → "Record" → "Capture" → "Capture Schedule".

- **Normal** : Conventional capture setting
- **Motion** : Motion detect capture setting



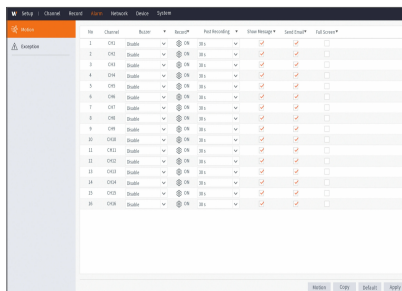
DVR Menu

Alarm

Motion

Go to "Setup" → "Alarm" → "Motion" to enter into the interface.

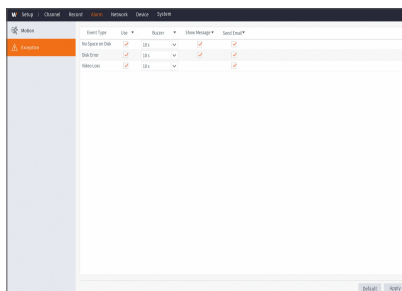
- **Buzzer** : When detecting object moving, buzzer makes alarms (disable, 10 seconds, 20 seconds, 40 seconds and 60 seconds).
- **Record** : When object motion is detected, the record channel setting will be activated.
- **Post Recording** : After the alarm finishes, the duration time of the alarm recording can be set as 30 seconds, 1 minute, 2 minutes and 5 minutes.
- **Show Message** : Messages will be displayed on the screen when moving object is detected and alarms are made.
- **Send Email** : When moving object is detected, send Email to the specified Email address.
- **Full Screen** : If motion is detected, the channel where the motion occurred is changed to a full screen view.



Exception

Go to "Setup" → "Alarm" → "Exception" to enter recording schedule for the DVR.

- **Event Type** : Support three abnormal types: No Space on Disk, Disk Error and Video Loss.
 - **No Space on Disk** : When camera detects object moving, alarm will be activated. Sensitivity is subject to the actual application environment test. Sensitivity is adjusted according to the sensitivity of moving object detection and parameters are modified by combining the area setting.
 - **Disk Error** : Alarm will appear when the HDD does not work due to damage, power failure, HDD auto-overwrite off and insufficient space.
 - **Video Loss** : When the DVR fails to receive video signals due to some problems (camera damage, wireless signal is weak, power failure), the alarm will appear.
- **Use** : Active alarms for abnormal situations.
- **Buzzer** : How long the buzzer will sound (10s, 20s, 40s, 60s).
- **Show Message** : You can set show message on the screen when alarm is detected.
- **Send Email** : Select to send Email to specified Email address when abnormal events appear.



Network

General

Go to "Setup" → "Network" → "General" → "General" to enter the interface.

Select the network connection option (PPPoE, DHCP, Static) to set the port. User can view and do the recording, playback or backup of the video remotely.

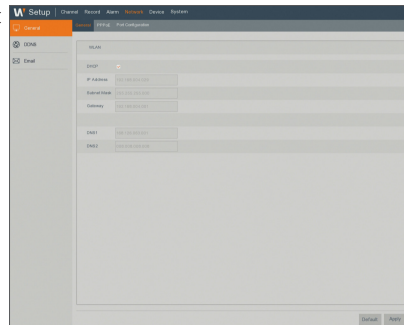
Take DHCP as an example. In this mode, the router automatically assigns IP address for the DVR. After restarting the DVR or DHCP server, the IP address obtained by the DVR may be different. As a result, you need to check the IP address and port numbers before remote access to the DVR every time. The operation procedure is as follows:

1. Select DHCP, click Save and restart the DVR. Input Client Port and Web Port (the two ports must be different).

For PPPoE, Static and DHCP, after setting the IP address for the DVR, the extranet port shall be mapped in the router before visiting DVR through public network.



- Save the setting to apply the changes made. If there are multiple DVRs in a LAN, make sure their MAC addresses are different.

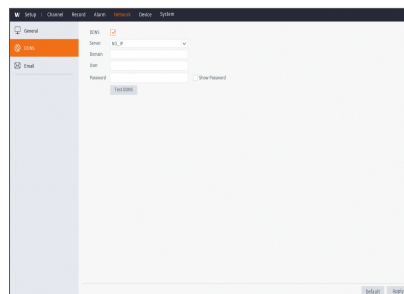


DDNS

Go to "Setup" → "Network" → "DDNS" → "DDNS" to enter into the menu interface.

User may set DDNS in any one of the above 3 network connection types after applying dynamic domain service. User may remotely access the DVR through domain by using User may remotely access the DVR through domain by using CMS. When using DDNS domain name to access the DVR, user must confirm that the port can be normally connected to current IP on the public network and the settings for server address/host name/user/password/setting should be consistent with the DVR local setting.

- **Server** : Select dynamic domain name server provider. Available domain name servers (HANWHA-SECURITY, DDNS_3322, DYNDNS, NO_IP, CHANGEIP, DNSEXIT)
- **Domain**: dynamic domain name of the host obtained from dynamic domain name service provider upon registration, for example, http://ddns.hanwha-security.com/snb5000
- **User** : The user name registered upon application for dynamic domain name.
- **Password**: The password set upon registration.
Click on "Test DDNS". If connection succeeds, it will be indicated that "DDNS Test is Successful!"



REGISTERING WITH DDNS

To register your product with the Wisenet DDNS

1. Visit the Wisenet DDNS web site (<http://ddns.hanwha-security.com>) and sign in with a registered account.

Sign-Up
Complete the following form to use the Wisenet DDNS service.

Required Information * Fill out all required information

User ID *
* Consists of 6 characters (upper, lower, digit, #, -, _). Allowed characters are not used in account ID, password or e-mail address.

Password *
Password Check *
* Consists of 6 alphanumeric characters.
* The input not enter your ID or your e-mail address (alphanumeric characters) in your password.

Name *

E-mail *

Country *

Personal / Business Address *

2. From the top menu bar, select <MY DDNS>.



3. Click the [Register Product] tab.

4. Select DDNS button.

5. Enter the product ID.

Register Product
Check real-time video feeds, and use the management services after registering your product.

WEB SERVICE * On-line Off-line
URL (<http://ddns.hanwha-security.com/>)
* Consists of 6 alphanumeric characters.
* Change real-time video feeds for selected product ID and product name within the settings page (e.g. 1962-1176) on the same.
* The URL consists of 6 characters (alphanumeric).
* Consists of 6 characters (upper, lower, digit, #, -, _). Allowed characters are not used in account ID, password or e-mail address.
* The service time consists of 6 characters (alphanumeric).

Type *
* Select product type.

Model *
* Select product type.
* If model name is unavailable, select IPTEL.

Location
* Enter abbreviation for product management.
* Up to 20 Korean characters and numbers or up to 30 alphanumeric characters.

Description
* Enter abbreviation for product management.
* Up to 20 Korean characters and numbers or up to 30 alphanumeric characters.

Product Registration

6. Select a <Type> and specify the <Model>.

7. Specify the product location with a description if necessary.

8. Click [Product Registration].

The product will be added to the product list that you can check.

MY DDNS
Below is a list of your currently registered products. You may use video verification, product management, and video tagging services for each DDNS. If a listed product is not displayed, register the product you want on the Register Product page.

Product ID

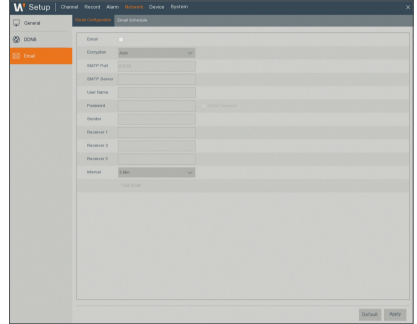
Search for abbreviation or product.

No.	Product ID	Model	Connection Status	Product Management	View	Video Tagging
1	1962-1176		OFF	EDIT / DELETE	View >	
2	1962-1176		OFF	EDIT / DELETE	View >	

E-mail

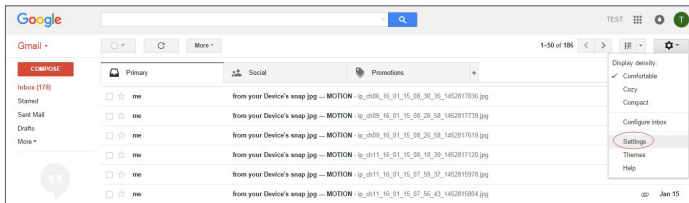
Go to "Setup" → "Network" → "Email" → "Email Configuration" to enter into the menu interface. Receive or Send DVR alarm Email and set parameters like Email address, SSL, Email Enable, and Interval.

- **Encryption:** Disable, SSL, TLS and Auto optional. Auto means it can detect the encryption type automatically. It is recommended to set the encryption type as Auto.
- **SMTP Port:** Mail sending port used by SMTP (Simple Mail Transfer Protocol). Server is generally Port 25 or Port 465 when SSL is used by Gmail.
- **SMTP Server:** Enter the address of the server for the mailbox in use.
- **User Name:** Enter a server to connect to. For example, email "aaa@gmail.com" should correspond to server "smtp.gmail.com"
- **Password:** Enter the password of the SMTP server user.
- **Sender:** Sender's mail address, which must correspond to the server used. For example, mailbox "aaa@gmail.com" should correspond to server "smtp.gmail.com".
- **Receiver 1/2/3:** Recipient's mail address, used to receive alarm image and message from DVR side. If system alarms continually and sends email images frequently, save the images to another location or remove them, so as to avoid excessive space occupation and thereby affect your normal use of mailbox.
- **Interval:** A mail will be sent every three minutes by default. If the time interval for mail notification is set too short, email server may deem mails as junk mails, so they cannot be transferred normally.



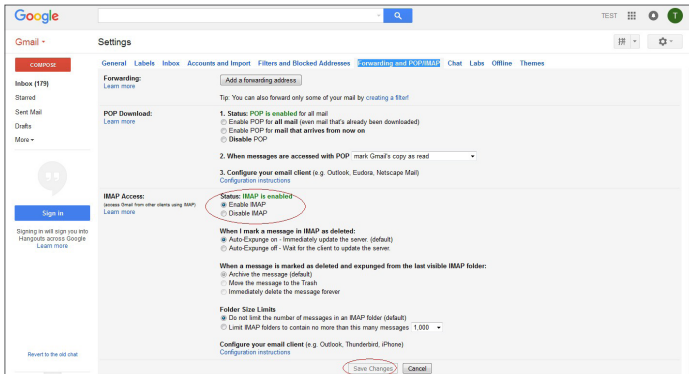
Mailbox Setting:

For example, if you are using Gmail, sign in to the GMAIL mailbox. <https://mail.google.com>



DVR Menu

Click on "settings--Forwarding and POP/IMAP"



Click on "Enable IMAP--Save Changes"



E-mail Schedule

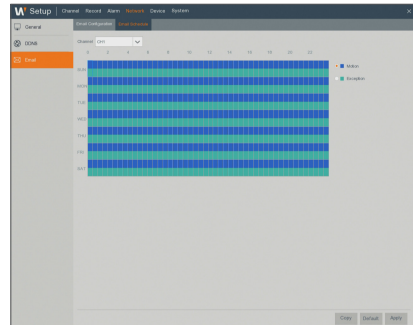
Go to "Setup" → "Network" → "Email" → "Email Schedule" to make Email schedule.

Select the channel and the date to be set.

One week's schedule can be set.

The record schedule of the current channel can be copied to any other channel or all channels.

-  Blue stands for Motion: Email will be sent in case of object motion;
-  Green stands for System: Email will be sent in case of System, e.g. No Space on Disk, Disk Error, Video loss, etc.



Device

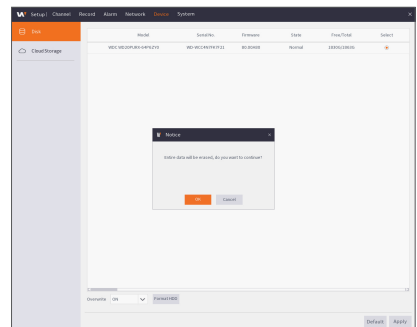
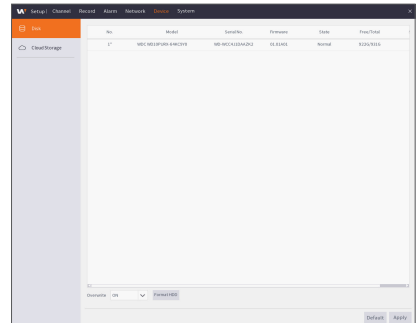
Disk

Go to "Setup" → "Device" → "Disk" to enter into the interface.

When HDD is connected, the system will automatically detect if the HDD is OK or not; if the HDD needs to be formatted, select the HDD and format it. If the system detects the HDD is OK, the HDD status will be shown as "OK".

- **No.** : Number of HDD connected to system.
- **Model** : Displays HDD model name.
- **Serial NO.** : Displays the HDD serial number.
- **Firmware** : Displays the HDD firmware version.
- **State** : It shows the current status of the HDD. It will be available only when the HDD is "OK".
- **Free/Total** : Remaining or total space of the HDD
- **Overwrite** : When set to ON and the hard drive is full, the DVR will overwrite the oldest files on the hard drive. When set to OFF and the hard drive is full, the DVR will stop recording.
- **Format HDD** : Format HDD for the first use.

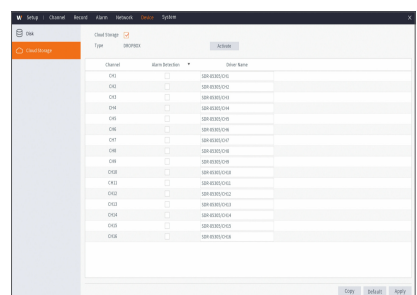
 ■ Recording can only be performed when the HDD is in "Normal" state.



Cloud Storage

Cloud Storage

- **Cloud** : It can upload the captured pictures to Dropbox at normal time, or when motion detection happens.
 - 1) To use the cloud backup, you need to register your email first. For the detail, please refer to the page 23.
 - 2) Register an account on <https://www.dropbox.com/>.
 - 3) Configure network to ensure DVR is under network.
 - 4) Configure Cloud: Enable Cloud and set the channel. Enable Motion Detection to have it capture pictures when motion detection happens.
 - 5) Driver Name refers to the name created in the folder of Dropbox and the name can be defined by the user, e.g. CloudDVR000. The folder is to store captured pictures from the DVR.
 - 6) Click [Activate Cloud] to activate Cloud and Email for the user verification will be sent. Click the link in the email and then log in to your dropbox account, and click permit. DVR cloud storage function will be activated. If you have logged in your dropbox account before Cloud storage activation, then no need to relogin. Just click Permit to complete the activation. Please finish the activation within 3 minutes. After activation is completed, you can use the Cloud storage function.
 - 7) Click the icon at the upper-left of dropbox account interface to view the folder made in the 5th step.
 - 8) Open the Dropbox folder to view the DVR captured pictures.



DVR Menu

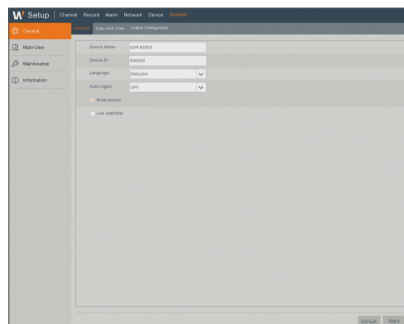
System

General

Go to "Setup" → "System" → "General" → "General" to enter into the interface.

User may set Device Name, Device ID, Language, Menu Timeouts and Show Wizard on this page.

- Live restriction : If you want to use the permission setting of Live View when turning the power on/off, please check.



Date and Time

Go to "Setup" → "System" → "General" → "Date and Time".

Date and Time

User may set Date, Time, Date Format, Time Format and Time Zone.

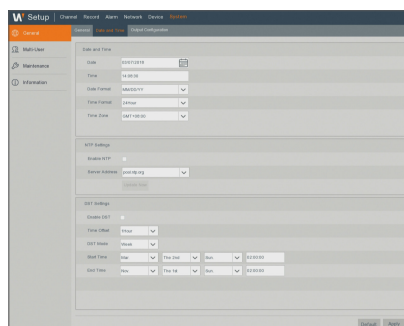
NTP Settings

- **Enable NTP** : Enable/Disable NTP function.
- **Server Address** : Select NTP server (time.windows.com, time.nist.gov, pool.ntp.org).

- ✍ ■ When NTP function is set to "Enable", system will calibrate the system time at every 00:07:50 and every start-up.

DST Settings

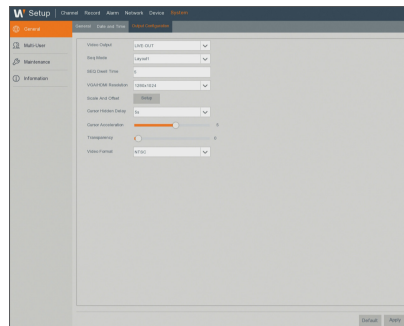
Enter into the interface to set DST, Time Offset, Start Time and End Time.



Output Configuration

Go to "Setup" → "System" → "General" → "Output Configuration" to enter into the interface.

- **Video Output** : Live Output
- **Seq Mode** : Sets the Layout1, 4, 6, 8, 9, 10, 10-1, 12, 13, 13-1, 14
- **SEQ Dwell Time** : Sequence time is set 5 seconds by default. User may set it as required up to 300 seconds
- **VGA/HDMI Resolution** : For VGA output or HDMI output, the optional resolution includes.
 - VGA (1024x768, 1280x1024, 1280x720, 1440x900, 1920x1080)
 - HDMI(1024x768, 1280x1024, 1280x720, 1440x900, 1920x1080, 2560x1440, 3840x2160)
- **Scale and Offset** : Sets the scale and offset.
- **Cursor Hidden Delay** : Sets the Cursor Hidden Delay time.
- **Cursor Acceleration** : Sets the cursor speed.
- **Transparency** : Adjust menu transparency in the range of 0-128.
- **Video Format** : Sets the NTSC or PAL.



Multi-User

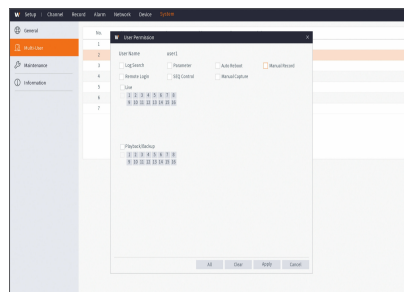
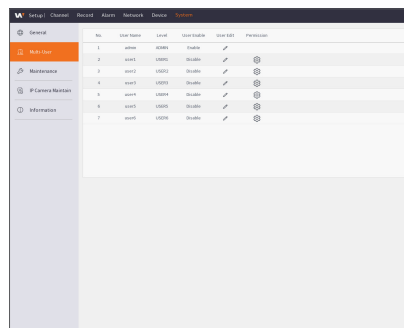
Go to "Setup" → "System" → "Multi-User" to enter into the User interface.

It supports up to seven users, including one administrator and six users. Click [/] button to enter into the [User Edit] interface to input user name and password.

User Name consists of 8 characters. Password MUST be 8~13 characters long. When password is 8~9 characters long, it should be with at least a combination of letters, digits and special symbols. If it is 10~13 characters long, it should be with at least a combination of two types of characters. 4 or more contiguous or repeated characters or key arrangement are prohibited, for example 1111, 1234, abcd, qwerty.

Set user password. Administer is authorized to set user common user's authority.

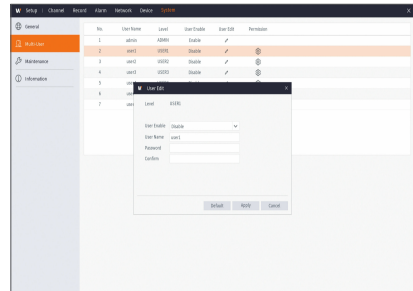
- **Log Search** : Allow you check all the system logs.
- **Parameter** : Allow you set all the parameters.
- **Auto Reboot** : Allow you to update firmware, reboot and shutdown the DVR.
- **Manual Record** : Allow you manually start/stop record.
- **Remote Login** : Allow you CMS login DVR.
 - You can only log in to the Cloud Web/Mobile with an admin account.
- **SEQ Control** : Allow you sequence live screens for all the channels.
- **Manual Capture** : Allow you to manually take a snapshot
- **Live** : Tick-select the ENABLE "√" option and select a channel and the user is allowed to view all the live images in the selected channel.
- **Playback / Backup** : Tick-select the ENABLE "√" option and select channel for playback/backup, the user is allowed to playback/backup the record in the selected channel.



DVR Menu

User Edit

User may enable or disable the function or set password.

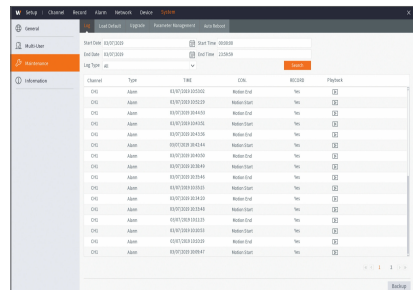


Maintenance

Log

Go to "Setup" → "System" → "Maintenance" → "Log".

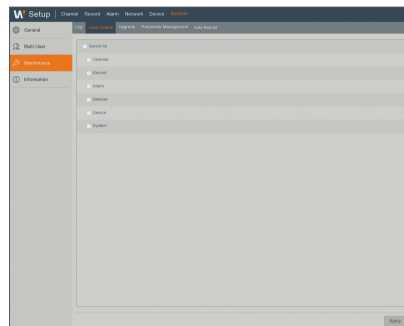
User may search log information in different period of time. Click "Backup" to save all the log information.



Load Default

Go to "Setup" → "System" → "Maintenance" → "Load Default" to enter into the interface.


If [Load Default] is selected, you can initialize the system to the ex-factory default. Click "Load Default" and select items to be restored. You can restore the Channel, Record, Alarm, Network, Device, System of wireless DVR to ex-factory default.



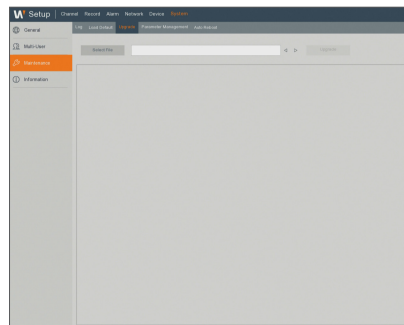
Upgrade

Go to "Setup" → "System" → "Maintenance" → "Upgrade" to enter into the interface.

Click Upgrade to enter the Device interface and select the updating file in USB to execute.

- 

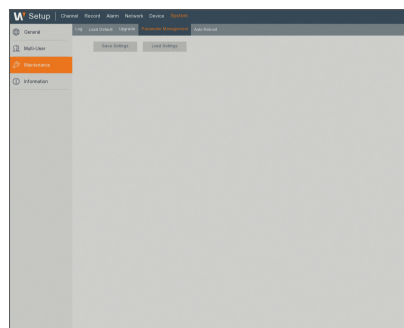
 Do not take out the USB memory or cut off the power during upgrading. When the update is done, system will be automatically restarted. After about 5 minutes, the upgrading will be finished. It is recommended to load ex-factory default after upgrading.



Parameter Management

Go to "Setup" → "System" → "Maintenance" → "Parameter Management" to enter into the interface.

- **Load Settings** : Load parameters in the removable storage device to DVR.
- **Save Settings** : Save the set parameters of user's DVR to the removable storage device.




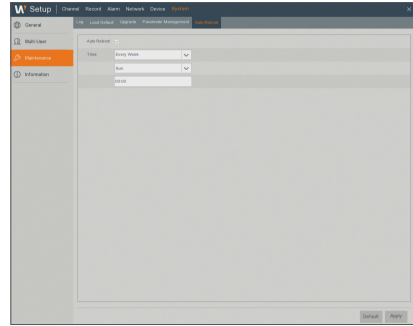
DVR Menu

Auto Reboot

Go to "Setup" → "System" → "Maintenance" → "Auto Reboot" to enter into the interface.

Enable the auto maintenance function to reboot system regularly at every day/week/month. When Auto Reboot is enabled, DVR should be in the main interface and no user operation.

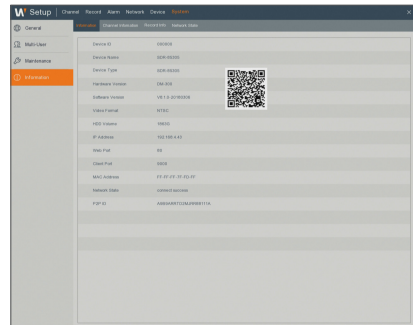
-  The auto maintain function can be effective only when DVR returns back to Preview mode with no any operation within the set auto maintain time.



Information

Information

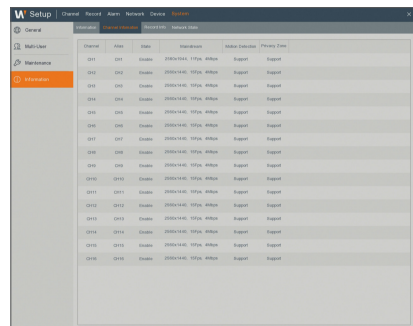
Go to "Setup" → "System" → "Information" → "Information" to enter into the interface.



Channel Information

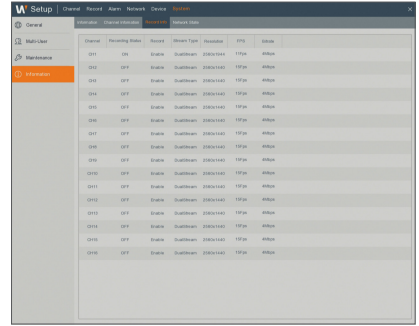
Go to "Setup" → "System" → "Information" → "Channel Information" to enter into the interface.

Displays the Channel Information.



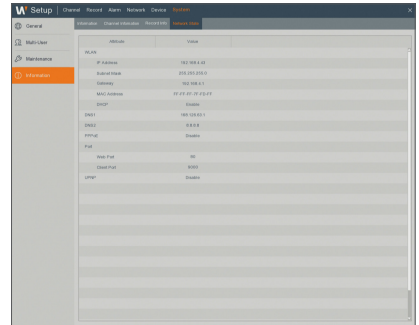
Record Information

Go to "Setup" → "System" → "Information" → "Record Info" to enter into the interface.
Displays the Record Information per channel.



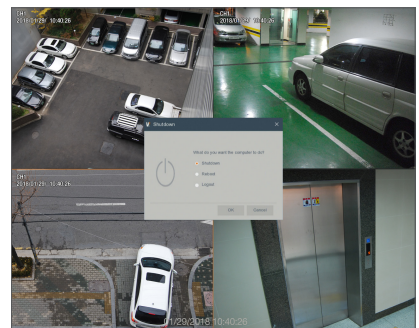
Network State

Go to "Setup" → "System" → "Information" → "Network State" to enter into the interface.
Displays the network connection status.




Shutdown

Click [] icon → "Shutdown" to enter into the interface.

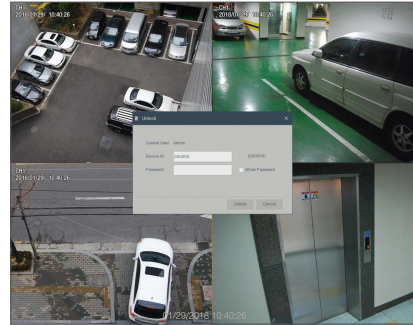


DVR Menu

MENU LOCK

In consideration of system safety, user may click the icon [] on the toolbar when he leaves away from DVR and the system interface will be locked. User has to input Device ID, User Name and Password on the login interface to unlock. In case that the password is forgotten, contact the technical personnel.

- Administrator has all authorization of menu operation and users have limitations for authorization and have to get authorization from administrator.



SPLIT MODE

There are many display modes in video channel, including single channel display, SEQ display and split mode.

RECORD SEARCH

Click [] icon on the toolbar to enter into the Record Search interface to search and playback. Refer to former section for specific operating method.

START SEQUENCE

After set channel sequence time, click Start Sequence icon [] on the toolbar to start sequence.

Search

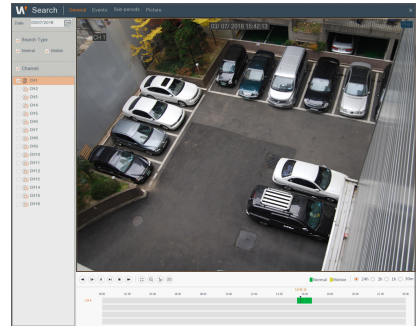
SEARCH

Record Search

General

Go to "Search" → "General" to enter into the interface.

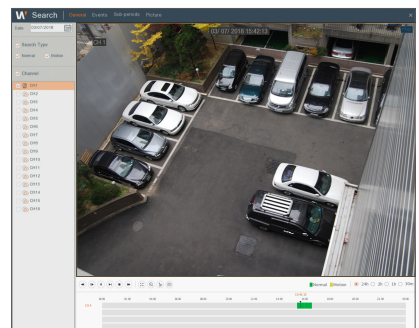
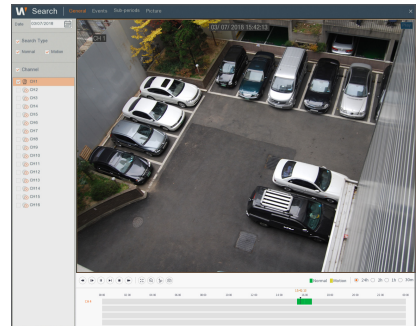
- **Channel:** Select the channel you want to search.
- **Search Type:** Select the type the playback record. There are three options: All, Normal and Motion.
- **Playback Channel:** Click a date and select corresponding channel in Playback Channel.
The selected channels must not be more than 8.
 - 8CH : Max. 4CH
 - 16CH : Max. 8CH
- **Playback interface:** You can use the Playback Control bar to operate the Fast Forward (X2, X4, X8 and X16), Rewind (X2, X4, X8 and X16), Slow play (1/2, 1/4, 1/8 and 1/16 speed), Play, Pause/Frame. When playback ends, DVR will remain in the playback interface.



Time Axis setup, file clip and zoom in/out

The DVR supports the processing control bar function when playing back record files.

- **Time Axis zoom:** Default value is 24hours. Allow user to select 2 hours, 1 hour, 30 minutes or user-defined.



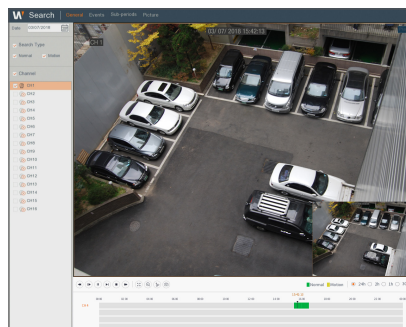
Search

• Detailed Operation

Fixed time axis: If you select [2h] option, that means the processing control bar covers two hour of video content. The time range refers to 1 hour before and after the middle point.

• **Clip and backup:** When it is playback, the [] icon will appear in the Play Control bar. Click the icon to start video clip function, click the icon again to end the function and pop up the dialog. Now, you may save the clipped video file.

• **Zoom 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.



Events

Go to "Search" → "Events" to enter into the interface.

In this page, user may search details by date, time, channel and record type. The relevant operations are as follows:

◀ Previous page : Click the button to go to previous page when viewing events (except the first page). When viewing the first page, click this button to display the event list in the first page.

▶ Next page : Click the button to go to next page when viewing events (except the last page). When viewing the last page, click this button to display the event list in the last page.

1 2 Jump : If you click on a number, you will move to that number's page.

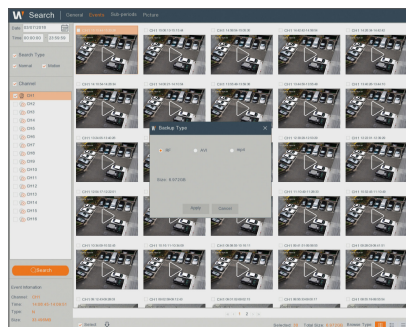
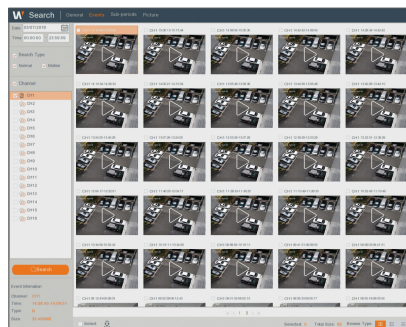
Two types of backup: Quick Backup and Backup

If you want to back up a record in the detailed file list, you may check the checkbox at the left of the record ("√" means it has been selected) and click "Backup" to enter into "Select backup type" (Make sure USB flash drive or other portable storage device are connected).






















If you want to back up with USB, select USB and click OK to start processing and you will see the backup progress.

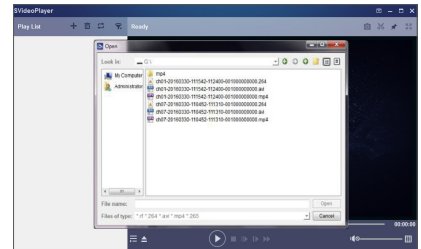
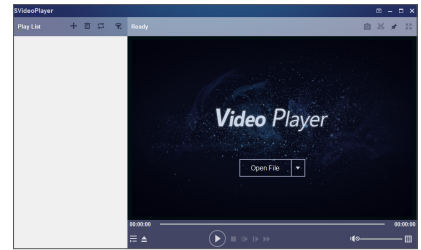
After backup finishes, message Backup Finishes will appear at down-right corner.

- ✍ Before backup, connect devices for backup (USB flash drive or other mobile storage devices with USB interface)

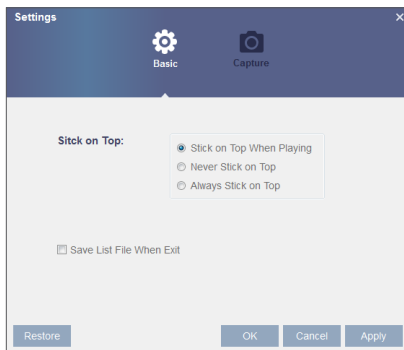


Play Backup Files

1. Copy backup files to the computer.
2. Open SVideo player and click [+] or [Open File ▾].
For example, if you want to choose *.264, *.avi, *.mp4, add backup file and select a file to play.
 -  Play: Click to play file
 -  Pause: Click to pause.
 -  Stop: Click to stop playback.
 -  Frame Forward: step forward by frame
 -  Slow Play: Click to play at 1/2, 1/4, 1/8, 1/16 speed.
 -  Fast forward: Click to play at 16x, 8x, 4x, 2x speed.
 -  Open file/Open Directory
 -  Expand/pack up the list.
 -  Screenshot: Save path: C:\Users\Administrator\SVideoPlayer\picture
 -  Cut: Save path: C:\Users\Administrator\SVideoPlayer\video
 -  Full screen display
 -  Never on top
 -  Always on top
 -  On top during playing
 -  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

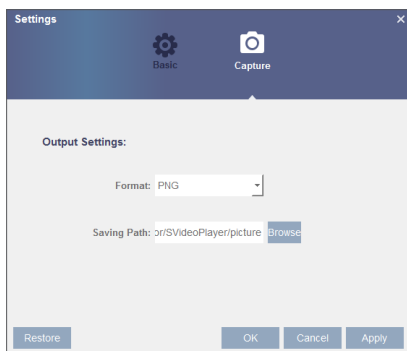


Basic Settings: Set on-top mode



Search

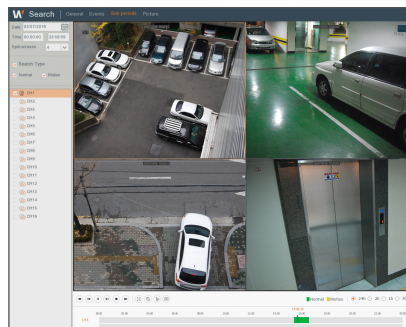
Capture Settings: Set the path to save image



It is recommended to use SVideo Player contained in compact disk for playback. Use of any other player may cause compatibility problem.

Sub-periods

Go to "Search" → "Sub-periods" to enter into the interface.



Picture

Go to "Search" → "Picture"

Support search picture for 5000pcs each time. If the picture number greater than this value, please adjust the date (time) of the current search and search again.

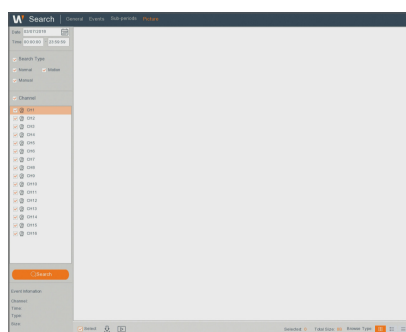
In this page, user may search details by date, time, channel and record type. The relevant operations are as follows:

« Previous page: Click the button to go to previous page when viewing events (except the first page). When viewing the first page, click this button to display the event list in the first page.

>> Next page: Click the button to go to next page when viewing events (except the last page). When viewing the last page, click this button to display the event list in the last page.

1 2 Jump: If you click on a number, you will move to that number's page.

Two types of backup: Quick Backup and Backup



SYSTEM ENVIRONMENT REQUIREMENTS

The minimum requirements for hardware and OS required to run Web Application are given below.

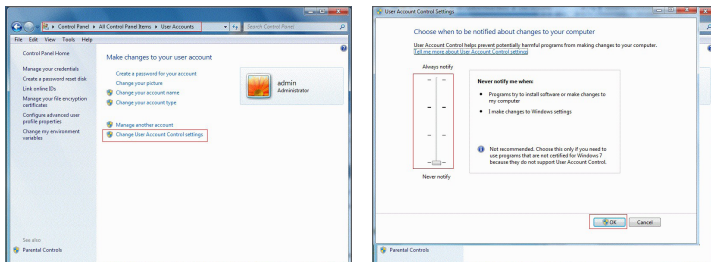
	Minimum	Recommended
CPU	Intel i3	Intel i7 or higher
RAM	4GB or more	8GB or more
Hard Drive	500GB or more	1000GB or more
Display RAM	2GB or more	4GB or more
Display Resolution	1280*1024	1920*1080
OS	- Windows® 7, Windows® 8.1, Windows® 10 - Mac OS X® 10.13.5 or lower (Safari®11.1.1 or lower)	
DirectX	DirectX 11	
Direct3D	Acceleration Function	
Ethernet Adapter	10/100M Ethernet Adapter	

WISENET CLIENT Download and Installation

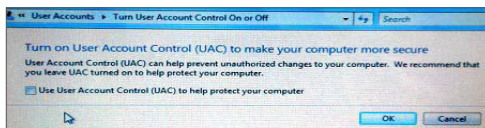
If your computer system is Windows 7, you may need to setup the user authority for remote control, or you may be unable to backup or record.

Vista System: Start → Setup → Control Panel. Set user authority in control panel as the following picture. Remove the Tick "√" in front of the option "Use UAC to help protect your computer" and confirm OK.

WIN7

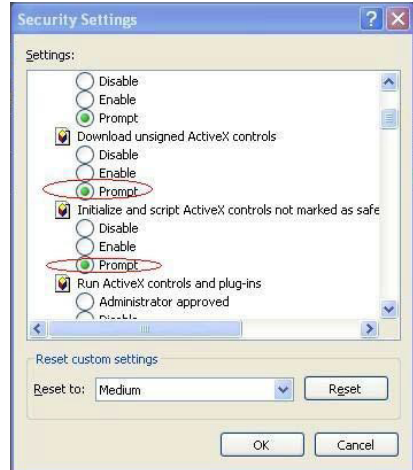


Vista



Wisenet Client

- If the plugins is not downloaded successfully, please check if your browser's safety level or firewall setting is set too high. Please open IE browser → [Menu Bar] Tools → Internet options → Security → Internet → Custom level → Enable the options.

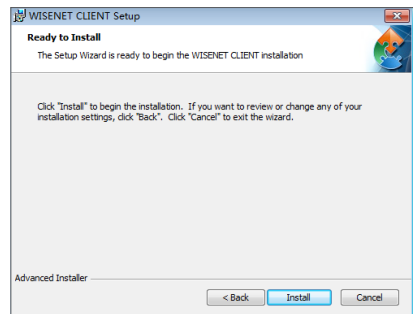


Download and installation of WISENET CLIENT for IE

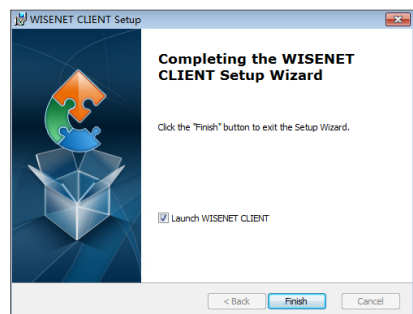
1. Click to run the WISENET CLIENT program from the CD or from the user PC.
2. When the program opens, click the [Next >] button.



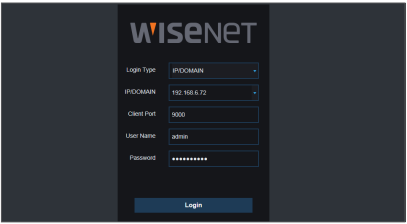
3. Click on "Install" in the dialog box "WISENET CLIENT Setup".



4. Upon completion, click the [Finish] button.

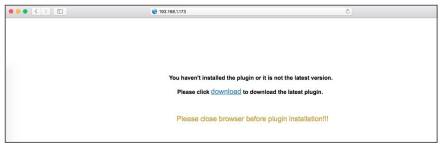


5. Shut down IE browser and restart it, and then enter IP address of DVR in address bar to access login page.

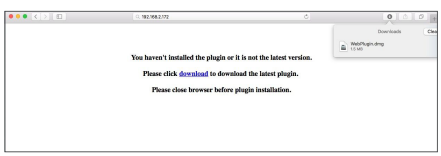


Download and installation of WISENET CLIENT for Mac SAFARI

1. Enter IP address of DVR in address bar of Mac SAFARI, for example, `http://192.168.2.173:80`, and click on "download" to download the WISENET CLIENT.



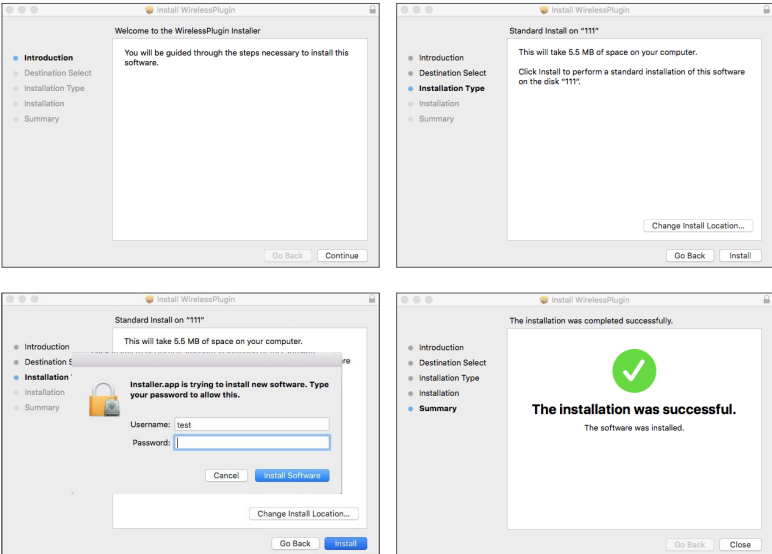
2. Locate the downloaded "WISENET CLIENT.dmg" and double click on it



3. Install the plugin by double clicking on "WISENET CLIENT.pkg".



4. Click on "Continue" > "Install". Enter user name and password for login to Apple computer. Click on "Install" > "Shut down" to finish installation.



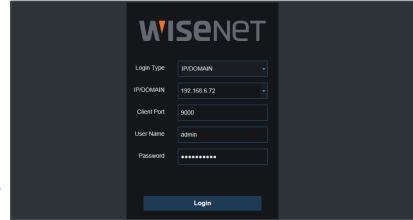
Wisenet Client

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

- The above instruction is to install the initial plug in. You can use the same plugin for IE and Firefox. If plugin for windows OS was installed on IE, Firefox once, you can use IE which needs to be run as administrator, Firefox to log in to DVR.

When you download and install plugin on Firefox, please close Firefox when it is prompted to. After installation is finished, you can restart Firefox to log in to the DVR.

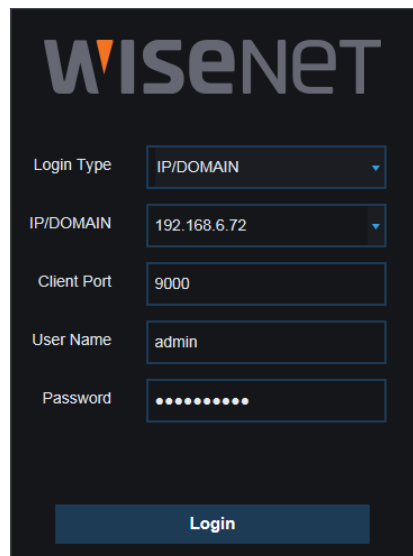
When you do a firmware upgrade, please close the browsers in order to have the new plug in replace the old one. Depending on your situation, the plugin may not be work on your browser. In this case, please install the plugin unavailable on the CD provided. (Web_plugin_Windows_YYYY_MM_DD.exe for Windows system, and WebPlugin_Mac_YYYY_MM_DD.dmg for Mac).



WISENET CLIENT LOGIN

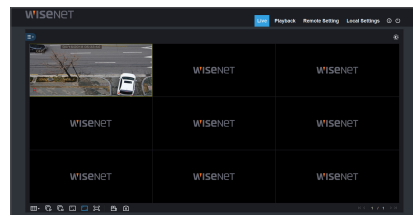
After plugins installation, please input user name and password, select Main Stream or Sub Stream (In general, select main stream for intranet and sub stream for extranet), and input HTTP port number. There is an option for opening all channel preview, select it to open all live pictures. Press Login to log in client and remotely visit DVR. The default password is blank and administer is authorized to modify the password. Set password as per introductions of user management in system setting.

After successfully log in, it will enter the real-time monitoring interface and connect video automatically.



LIVE INTERFACE

Log in and enter into the live interface.



Menu Bar

Menu Bar: Live, Playback, Remote Setting, Local Setting and Logout.

Live Display Video Control

Log in the Wisenet Client, system will be defaulted to enter into <Live> interface. You can click [Play] button to Open/close live images, on-spot record, capture, and many live display modes.

Buttons on a single live interface

Channel List : Open the channel list for quick camera function.

Click [] button to display the Channel List.

Click [] button to hide the Channel List.

Live Video Stream Options:

- **Mainstream**: View all live videos using high-quality mainstream video settings.
- **Substream**: View all live videos using middle-quality substream video settings.
- **Mobile Stream**: View all live video using lower-quality mobile stream video settings to conserve bandwidth. Available for IP channels only.

 : Open or close the images on Live window.

 : Click to select how many channels appear on screen at a time.


 : Open the video on Live window.

 : Close all the Live channels

 : Shows the playing video at the original proportions.

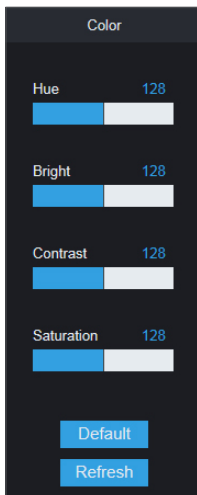
 : Stretch the playing video to fit the full area for each channel on screen.

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

 : Record switch: the remote record switch of client. Record will be automatically saved to a specified position on PC after the function is enabled.

 : Capture the selected live image and save it to a specified position on PC. The image is saved as *.bmp format.

Video Control



Hue: Adjust the chromaticity of video

Bright: Adjust the brightness of video

Contrast: Adjust the contrast of video

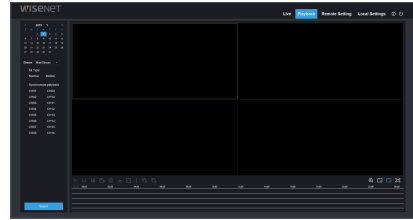
Saturation: Adjust the saturation of video

Wisenet Client

Playback

Click [**Playback**] to enter into Playback interface to remotely view the records in DVR HDD.

It supports 1 to 4 channel record playback.



Record Search

Record playback procedure

Firstly, select the date you want to check and tick 1 to 4 channels. Any record files in current channel at current date will be displayed in the status bar of the interface.

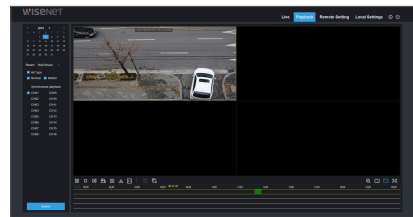
Secondly, select record type (Normal record, Motion and All) and channels, and then click [**Search**], and time axis panel will display specific time quantum. On the time axis, red part stands for Motion, yellow stands for normal record and original part stands for no record during this period.

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, start playback

Click [**▶**] to start record playback. When mouse cursor is moving on the time axis, the time point of current position will be displayed on the time axis screen. Click to locate the record.



Playback Control

Playback control bar



Detailed brief description is shown as below:

Key	Description	Key	Description
	Play		Slow playing x1/2, 1/4, 1/8, Fast Forward x1/2/4/8
	Pause		Open all the playback channels
	Stop		Stop playing all the playback
	Frame by frame		Digital ZOOM
	Record Clip		Original proportions
	Image Snapshot		Stretch
	Download		Full Screen

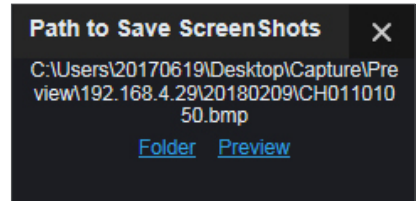
Record file clip

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 can be saved as H.264, AVI or MP4. H.264 is set as default.

Snapshot function

Move the mouse cursor 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.

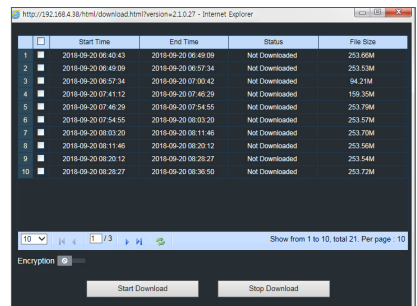
The captured file will be saved as .bmp format.



Record file download

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

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.



Wisenet Client

Remote Setting

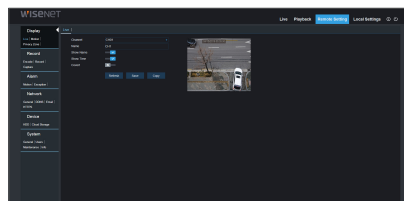
Click Remote Setting to enter into the interface shown, including Display, Record, Alarm, Network, Device and System.

Display

When you click the <Display> option, sub-options of Display Settings and Schedule are displayed.

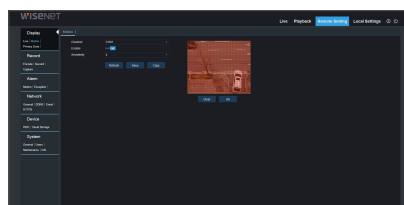
Live

Displays the currently playing live screen.



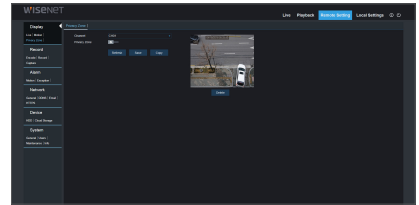
Motion

You can set the Motion area.



Privacy Zone

You can set the Privacy Zone.

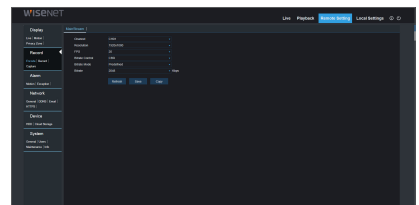


Record

Click <Record> option to unfold its sub-options: Record parameter and Schedule.

Encode

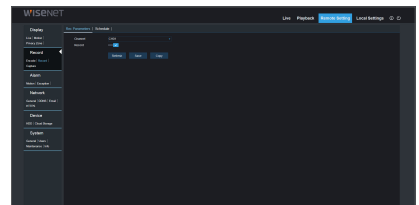
This menu allows you to configure the recording video or network transmission picture quality.



Record

Record Parameters

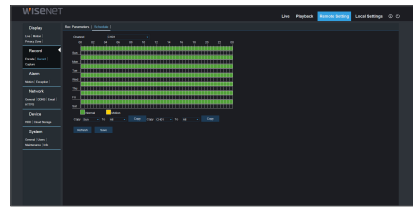
The parameters should be consistent with DVR local setting.



Wisenet Client

Record Schedule

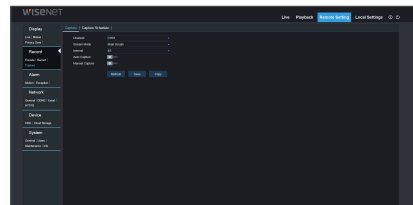
The parameters should be consistent with DVR local setting.
Green stands for Normal record; Yellow stands for Motion detection.



Capture

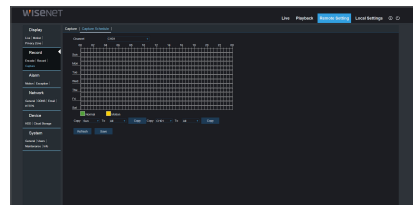
Capture

- **Channel:** Select channel.
- **Stream Type :** Select MainStream or SubStream.
- **Interval :** 4s / 8s / 25s / 1Min / 10Min / 30Min / 1Hour
- **Auto Capture:** Enable/Disable auto capture.
- **Manual Capture:** Enable/Disable manual capture.



Capture Schedule

- **Channel:** Select channel.
- **Normal:** Conventional capture setting.
- **Motion:** Motion detect capture setting.

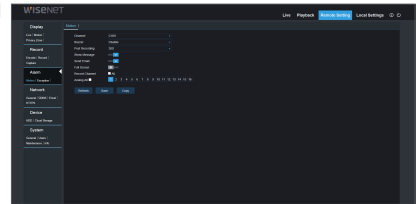


Alarm

Alarm setting includes Motion Detection Parameters.

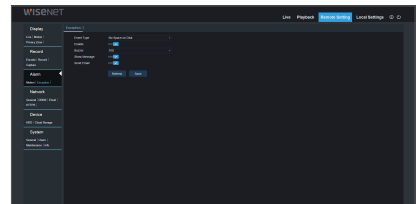
Motion

Configure Sensitivity, Alarm out, Alarm Record and Alarm Capture, etc. Detailed setting should be consistent with DVR local setting.



Exception

User may configure Event Type, Buzzer, Send Email, Show Message and other parameters. Detailed setting should be consistent with DVR local setting.

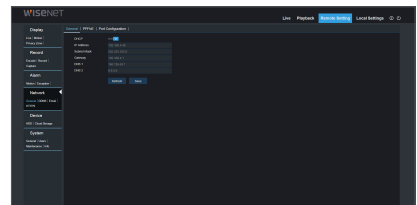


Network

Unfold <Network> to show its sub-options: Network, DDNS, and Email configuration.

General

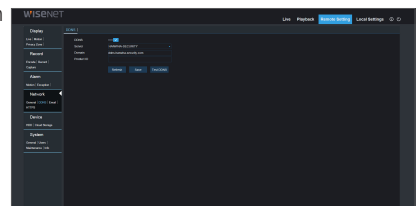
DVR supports Static/DHCP/PPPoE modes. System default network type is <DHCP>. User can set parameters as required. If you change Network type to PPPoE, DVR will automatically restart to make the setting effective.



DDNS

DDNS: After user applies for DDNS service, you could enable <DDNS> function under any one network type mode (Static, DHCP and PPPoE). And you may remotely visit the DVR through domain name (http://domain name: HTTP port No.). When visiting DVR by using DDNS, user should make sure port and current IP can be normally connected in public network. Details settings, including server address, host, user, and password, should be consistent with DVR local setting.

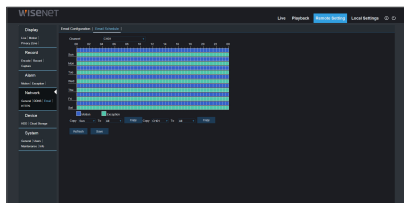
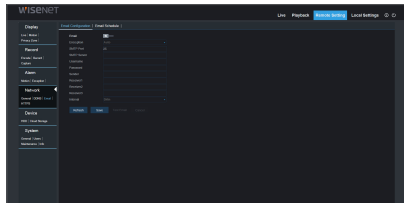
Click on "Test DDNS". If connection succeeds, it will be indicated that "DDNS Test is Successful!"



Wisenet Client

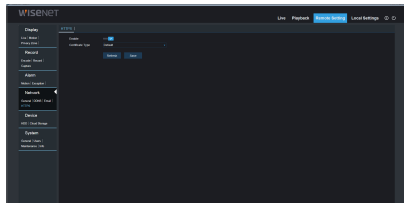
Email

Email: Set DVR alarm Email configuration parameters, including Email address, Encryption, Email Enable, and Interval etc. Detailed parameters should be consistent with DVR local setting.



HTTPS

- Enable : Enable/Disable
- Certificate Type : Default/Custom

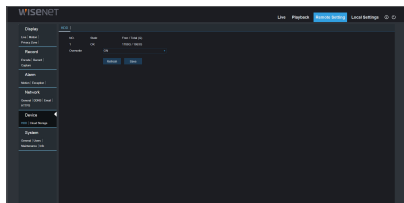


Device

Click <Device> to unfold its sub-options: HDD

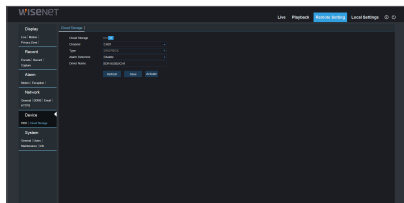
HDD

User may check HDD status of DVR and overwritten time. Detail setting should be consistent with DVR local setting.



Cloud Storage

User may set the relevant parameters of Cloud Storage. Detail setting should be consistent with DVR local setting.

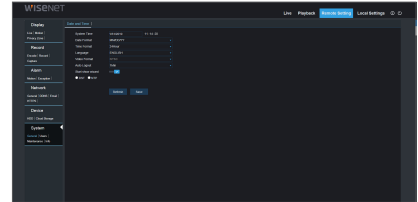


System

Click <System> option to unfold its sub-options: General, Users and Info.

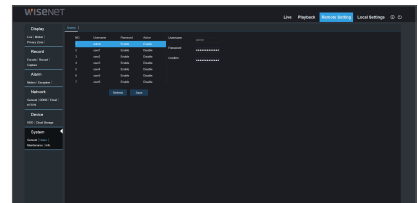
General

User may check DVR language and video system and date format, menu display time, DST and NTP parameters. Detailed setting should be consistent with DVR local setting.



Users

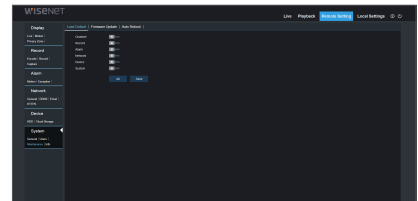
User may configure user name and password and detailed setting should be consistent with DVR local setting.



Maintenance

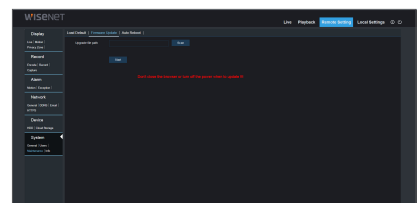
Load Default

User may remotely restore default parameters of DVR, with same setting method as that of DVR.



Firmware Update

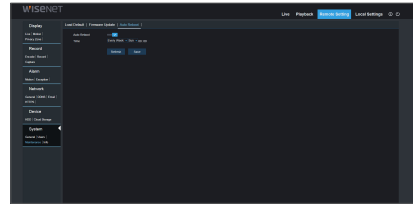
User may remotely update DVR system.



Wisenet Client

Auto Reboot

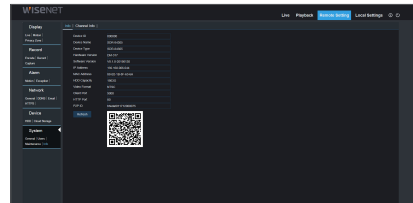
Allow you remotely set auto maintain time for DVR. Detailed setting should be consistent with DVR local setting.



Info

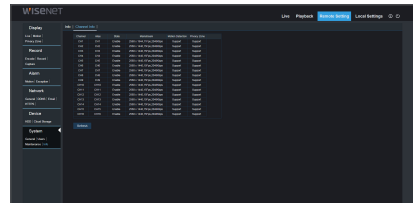
Info

User may search device name, device number, device type, MAC address, software version, IE version and hardware version of DVR.



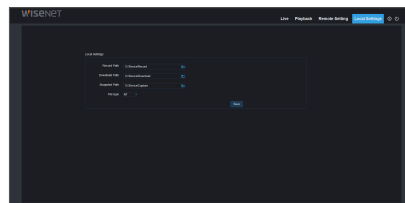
Channel Info

Displays all channels camera relevant information.




Local Setting

User may set Record Path (save Live record and Playback clip file), Download Path for remote file, Snapshot Path for captured pictures, Interval for switching record files (Packaging time), and File type (RF, AVI and MP4).



Logout

Click [] to log out and return to the login interface.

Appendix

TROUBLESHOOTING

Symptom	Countermeasures
What can I do if the system does not detect the HDD?	<ul style="list-style-type: none">• 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.
I have changed the password but forget the new password, how can I access the system?	<ul style="list-style-type: none">• If you forget system password, please consult with our technical personnel. We strongly suggest user to set password easily to be remembered and relatively safe.
We see abnormal video signal or even no video signal by connecting the DVR and camera together. Power supply for both devices is OK. What is wrong?	<ul style="list-style-type: none">• Check network cable on DVR side to see if the cable is firmly connected and if it is worn out and needs to be replaced, or to check if NTSC or PAL is selected consistently.
How to prevent DVR from being influenced by heat?	<ul style="list-style-type: none">• The DVR needs to dissipate heat while it is running. Please place the DVR in a place with good air circulation and away from heat sources to ensure stability and life of the DVR.
The remote controller of DVR doesn't work while the monitor screen is OK and panel keys are functional. Why?	<ul style="list-style-type: none">• 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.
I want to take out HDD from my PC and install it in DVR. Can it work?	<ul style="list-style-type: none">• All HDDs supported by the system can be used. But remember, once DVR runs, the data on your HDD will be lost.
Can I playback while recording?	<ul style="list-style-type: none">• Yes. The system supports the function of playing while recording.
Can I clear some records on HDD of DVR?	<ul style="list-style-type: none">• 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.
Why can't I log in DVR client?	<ul style="list-style-type: none">• Please check if the network connection settings are correct and check if your account and password are correctly input.
Why can't I find any records during playback?	<ul style="list-style-type: none">• 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.
Why doesn't dynamic detection work?	<ul style="list-style-type: none">• Please check if the motion detection sensitivity level set is too low and motion detection area setting is correct.
Why does buzzer keep alarming?	<ul style="list-style-type: none">• Please check the alarm setting, check if motion detection function is enabled and object motion is detected all the time. Besides, refer to corresponding HDD alarm setting.

Usage Maintenance

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

Appendix

SPECIFICATIONS

Item		Details
Description		
Video	Inputs	8CH/16CH BNC
	Resolution	2560×1944(5MP)
Live	Frame rate	8CH : Max 160fps@5MP 16CH : Max 320fps@5MP
	Resolution	2560×1944(5MP)
	Multi Screen display	1/4/6/8/9/10/13/14/16/SEQ
Performance		
Operating System		Linux
Installation wizard		Support
Recording	Compression	H.264
	Recording bandwidth	8CH : 48M (total) 16CH : 96M (total)
	Record Rate	- Main stream : Max. 11fps@5MP per channel - Sub stream : 10fps@1280x720 for 2 channels, 10fps@640x480 for Other Channels
	Mode	Manual, Schedule (Continuous/Event), Motion Detection
	Event type	- MD(Sensitivity Level 1~8) - Video loss - HDD (Full, Failure) - System (Reboot)
	Privacy Zone	Up to 4 (RECT)
	Overwrite modes	Off/On
	HDD full event	Beep, Email, Push notification to Mobile APP
	Pre-event	Up to 8sec
Post-event	Up to 5min (30 sec, 1/2/5min)	

Item		Details
Search & Playback	Playback bandwidth	8CH : 24M (total, Max. 4CH playback) 16CH : 48M (total, Max. 8CH playback)
	Search mode	Normal, Motion
	Playback function	- Stop, Pause, Play - Fast forward / backward (2x, 4x, 8x, 16x) - Slow forward (1/2x, 1/4x, 1/8x, 1/16x) - Step forward / backward
	Frame rate	- Single channel view : Max. 11fps@5MP per channel - Multi channel view up to 4 channels : Max. 11fps@5MP per channel - Multi channel view above 4 channels : 8CH : Max. 4CH playback, 16CH : Max. 8CH Max. 11fps@5MP per channel
Network	Transmission bandwidth	8CH : total 48M 16CH : total 96M
	Live stream	- Main stream : Max. 11fps@5MP per channel - Sub stream : 10fps@1280x720 for 2 channels, 10fps@640x480 for Other Channels
	Protocol support	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, DHCP, SMTP, DNS, DDNS, UPNP
Storage	Internal HDD	8CH : 1TB 16CH : 2TB
	USB (Back-up)	2 USB Ports
	File Format (Back-up)	RF, AVI, MP4
Interface		
Monitors	VGA	1 VGA (1024x768, 1280x1024, 1280x720, 1440x900, 1920x1080)
	HDMI	1 HDMI (1024x768, 1280x1,024, 1280x720, 1440x900, 1920x1080, 2560x1440, 3840x2160) ※ EDID (monitor resolution auto detection)
	Simulatneous Output	VGA and HDMI
Connections	Ethernet	1 RJ45 10/100/1000 Base-T
	USB	2 USB Ports (Front/Rear)
	Application Support	Mouse, Remote control

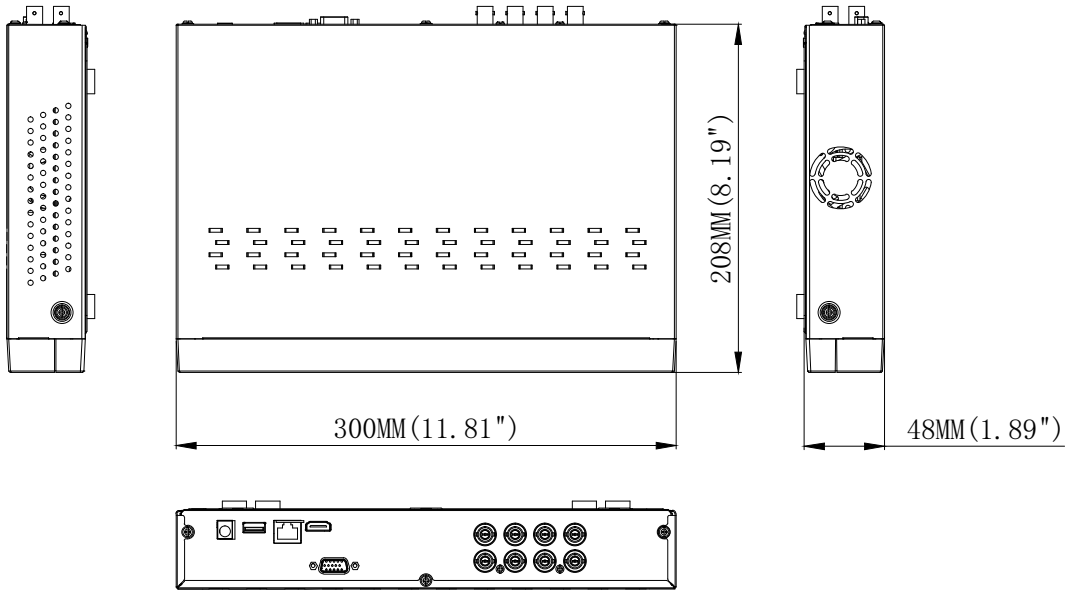
Appendix

Item		Details
General		
Color / Material		Black / Metal
Electrical	Input Voltage/Current	8CH : 12V/2A 16CH : 12V/3A
	Power consumption	8CH : 20W 16CH : 30W
Environmental	Operating Temperature/ Humidity	0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH
Mechanical	Dimension (WxDxH)	8CH : 300 X 208 X 48mm (11.81" x 8.19" x 1.89") 16CH : 378 X 317 X 50mm (14.88" x 12.48" x 1.97")
	Weight (With hard disks)	8CH : 1.65kg 16CH : 2.96kg
OSD Language		English, French, Spanish, Portuguse, German

DIMENSION

SDR-84305

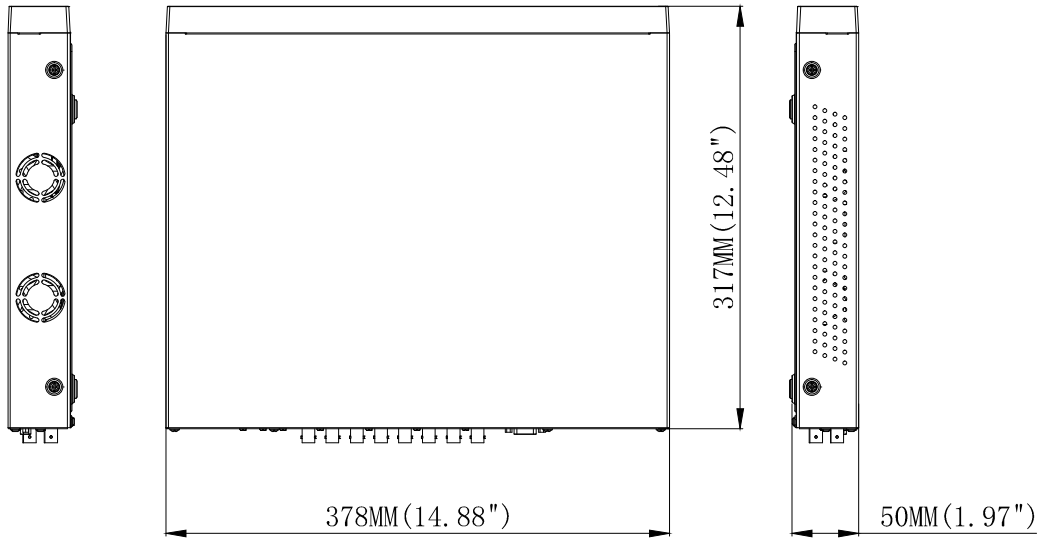
Unit: mm (inch)



Appendix

SDR-85305/SDR-85307

Unit: mm (inch)



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Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

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