NETWORK VIDEO RECORDER

User Manual

SNK-D5081

CE

SAMSUNG

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SAFETY INSTRUCTION

Please carefully read the following safety instructions 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 the NVR 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 NVR. (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 NVR, unplug the power cable and contact technical support.
7. Do not try to remove the NVR cover to avoid electrical shock.
8. Handle with care.
   If NVR does not work properly, please contact technical support for repair or replacement.
9. Install and place the equipment in a well ventilated area. The NVR 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 NVR).
10. The power adapter should only be connected to the NVR. Do not connect it to additional equipment or else the NVR 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 call 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.
18. This equipment is indoor use and all the communication wiring are limited to inside of the building.
19. CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

Standards Approvals

- 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.

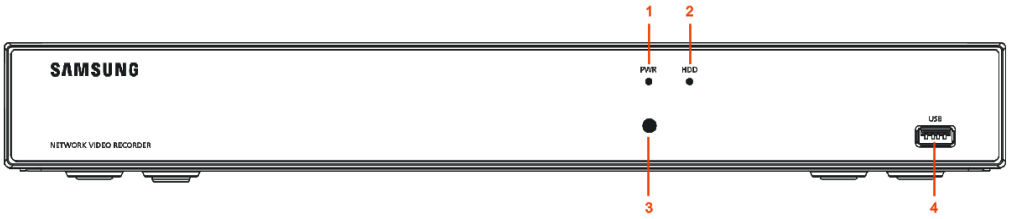
  This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Chapter 1 Get Close to NVR

1.1 Front Panel

Tips: NVR is the abbreviation of Network Video Recorder.

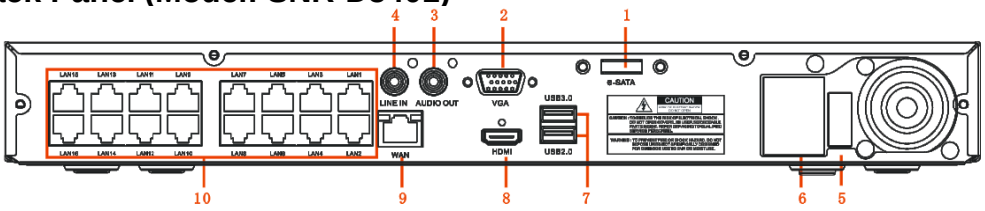
NVR Front Panel (Model: SNR-D5401)



SN	Key or LED	Mark	Function
1	Power indicator lamp	PWR	When the indicator lamp turns on in green color, it means that the NVR is powered normally.
2	Hard drive indicator lamp	HDD	If the “Red” indicator flashes, the hard drive is being read or written to.
3	IR Signal Reception Port		For reception of IR remote control signal
4	USB	USB	USB Port

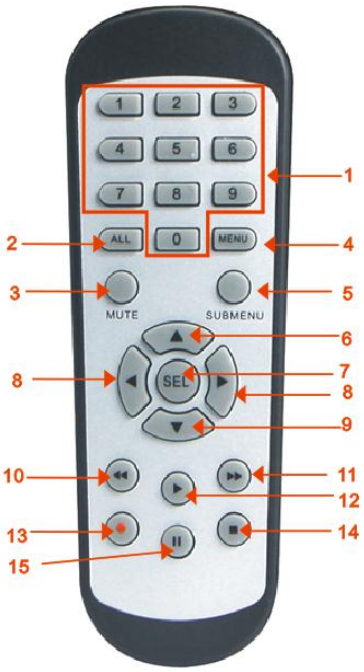
1.2 Back Panel

NVR Back Panel (Model: SNR-D5401)



SN	Physical Interface	Connection Instructions
1	e-SATA	Connect to a e-SATA HDD
2	VGA Output	Connect VGA display device, such as PC monitor.
3	AUDIO OUT	No Function
4	LINE IN	No Function
5	Power Switch	Power the NVR on/off
6	Power Port	Connect to power cable provided along with the device.
7	USB	USB Port
8	HDMI Port	Connect to monitor
9	WAN Port	Router network I/O port/for connection to network camera
10	LAN Port	LAN: network port, PoE compliant, and capable of supplying power to camera.

1.3 Remote Controller



Item	Key title	Key function
1	0-9	Numeric key
2	ALL	Multiple display mode
3	Mute	No Function
4	Menu	Enter into Main menu/Exit
5	Submenu	Go to Submenu
6	▲	Up arrow key
7	SEL	Select key/Edit key
8	◀/▶	Left/Right key; Decrease/increase parameter value of control bar.
9	▼	Down arrow key
10	◀◀	Rewind key
11	▶▶	Forward key
12	▶	Enter into record search menu / Play key
13	●	Record key
14	■	Stop manual record; stop playing
15	▌▌	Pause/Step forward key

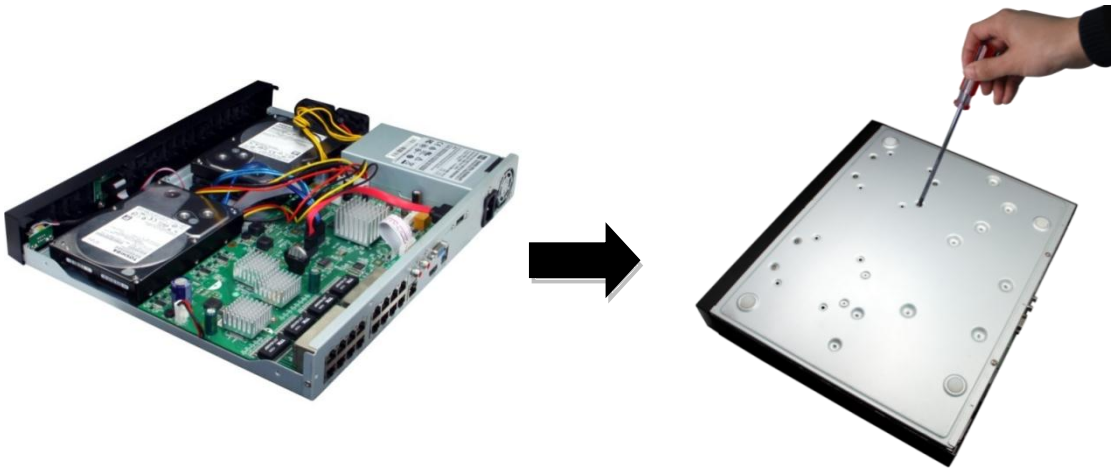
1.4 Install Hard Drive

Notes: Do not remove the hard drive when NVR is operating.

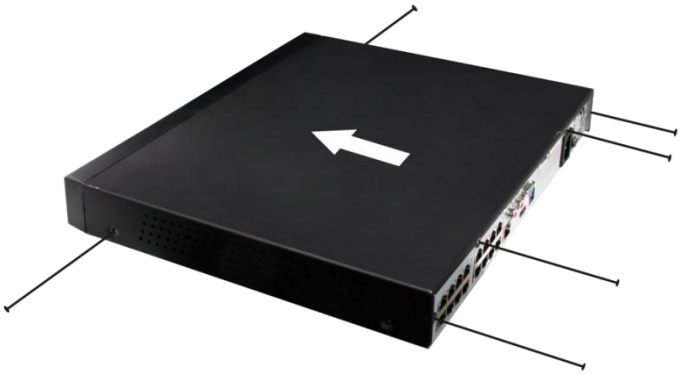
Installation of Hard Drive:

(1) When power supply is disconnected, remove the screws at both sides with screwdriver, then remove the screws on the rear board, and then remove top cover of NVR.

(2) Connect data and power cables of hard drive to motherboard. Mount the hard drive by mounting it onto the rack and connecting the power and data cables. Two groups of screw mounting holes are provided in the base frame of the NVR, respectively for installation of 3.5' hard drive and 2.5' hard drive. User should make selection based on their hard drive size.

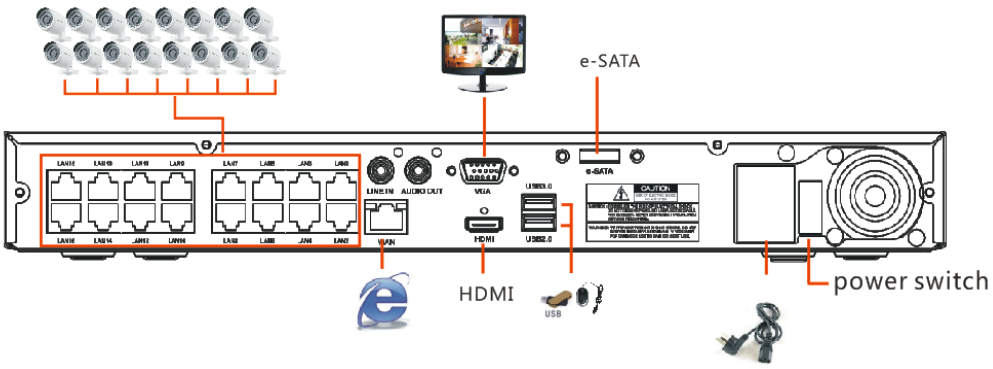


(3) First mount the screws onto the rear board and then mount the sides.



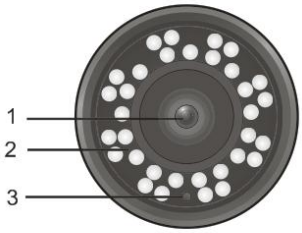
1.5 Connect external equipment

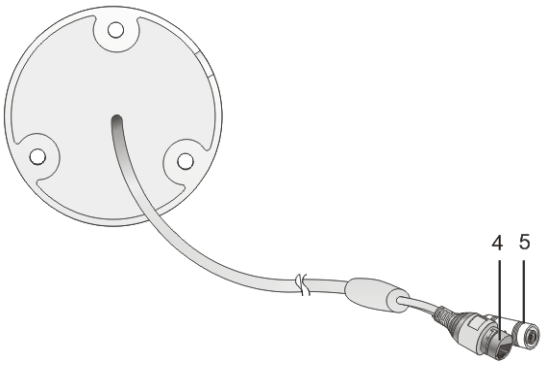
Connect the cameras to the NVR via the network cables. If you choose not to power the cameras via the LAN ports, be sure to use a 12V power adapter for power each camera.
Connect your monitor to the NVR using a VGA or HDMI cable to its respective port.
Connect the NVR to the power cable that's supplied with the system.



1.6 Connect Camera

Connecting the Camera (SNC-4241BE)
Equipped with the IR LED and the illumination sensor, the camera enables you to monitor at all times, day and night. The camera is suitable for both indoor and outdoor use.
Do not fully expose the camera to rain. The camera must be installed under a shelter to avoid exposure to excessive rain or moisture.

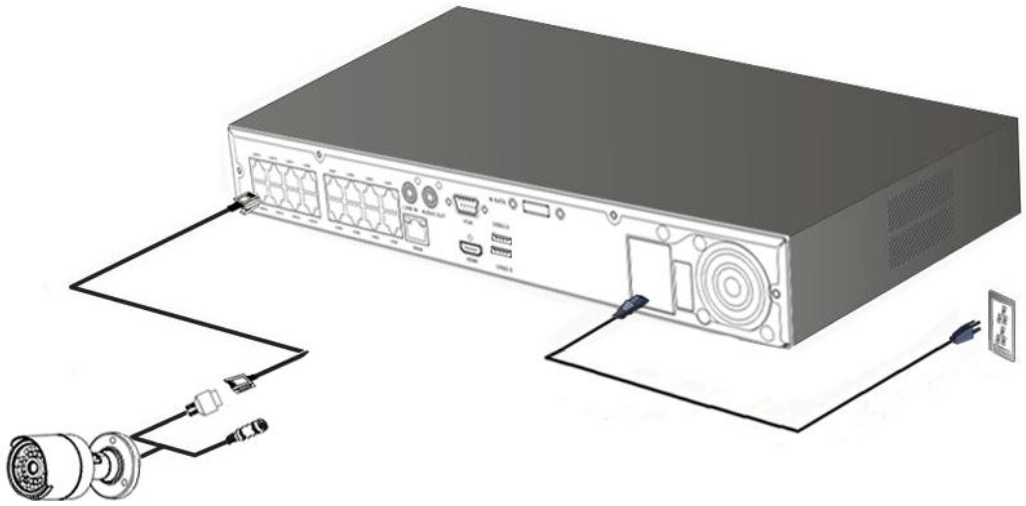




	Name	Description
1	Lens	3.6mm focal length enables you to monitor at a wider field of view.
2	IR LED	Infrared LED lights are controlled by the illumination sensor.
3	Illumination Sensor	Detects incoming light to control the IR LED.
4	IPC Network Port	Connect to NVR via POE port or switch
5	Power Cable	Use to power the camera if you would l like to power up the camera by using separate DC 12V power adaptor.

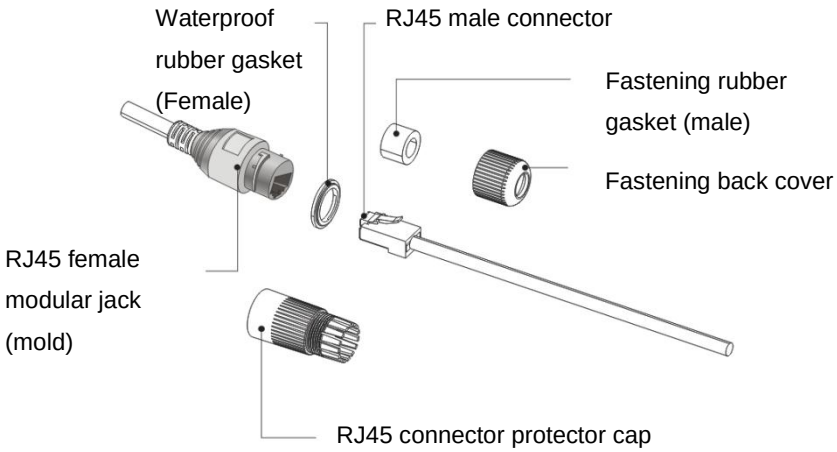
1.7 Connect NVR

The following figures are based on Model SNR-D5401.



1.8 How to connect the RJ45 waterproof cable to a LAN cable

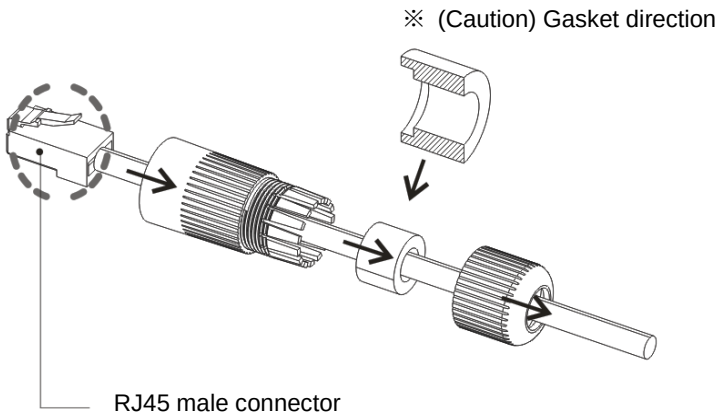
Components Introduction



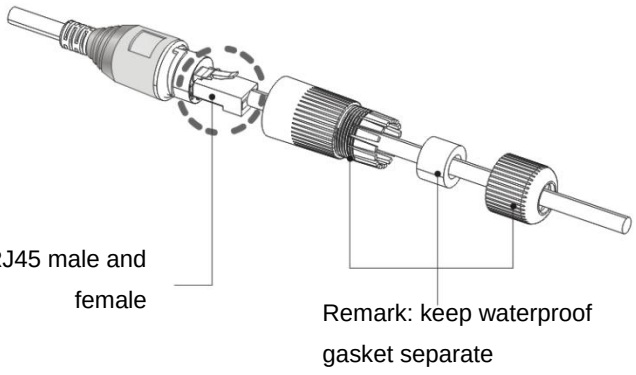
Install step-1

Pass the LAN cable through each components as shown below:

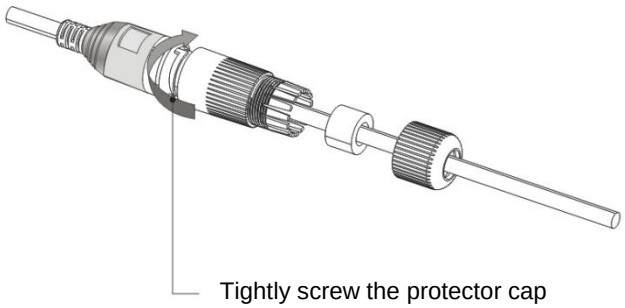
Fastening back cover ⟶Waterproof rubber gasket ⟶RJ45 connector protector cap



Install step-2



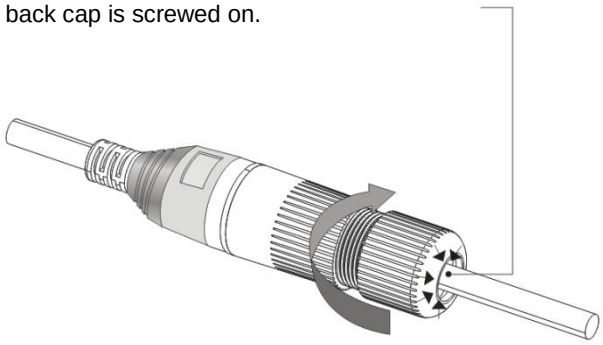
Install step-3



Tightly screw the protector cap

Install step-4

Fit the rubber gasket into the RJ45 connector protector cap so that the inner diameter of waterproof rubber gasket is tighten when the back cap is screwed on.



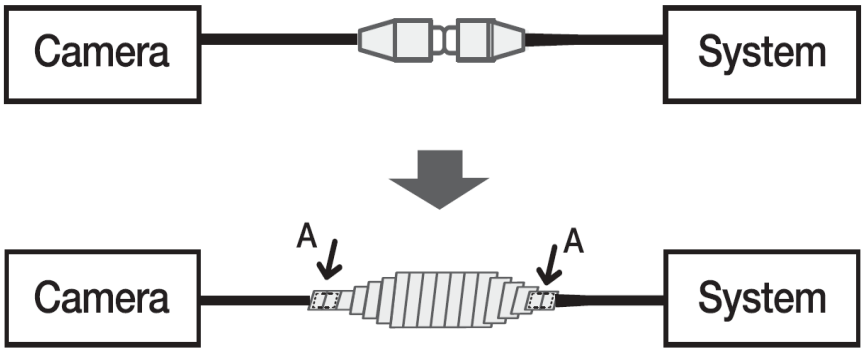
Tightly screw the back cap clockwise.

1.9 Power cable Water Proofing

When you install it outside of the building, please waterproof the power cable with waterproof butyl rubber tape (can be purchased in hardware stores) so that water does not leak to the gap of the cable.

1. Connect the power cables.
2. Wrap the cable jacket (Area A) and the cable connection area with waterproof (butyl rubber) tape so that more than half of the butyl rubber tape is overlapped.

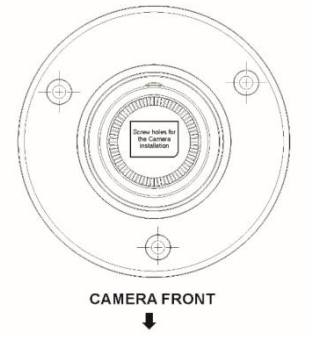
- If the connected cable jacket is poorly wrapped, water can leak into the connectors causing damage to the camera.
- Waterproofing butyl tape is made of butyl rubber that can extend twice as long as its original length.
- If the power cable terminal is not in use, wrap it with waterproofing tape.



1.10 Installing the camera

The camera can be installed on the wall, ceiling, shelf or a desired position using the provided mounting bracket.

1. Adhere the installation template onto the ceiling and use it as installation locating tool. (Please refer to Page 17 of Quick Guide.)
2. Choose an installation site that can sufficiently support the weight of the camera to be installed.



3. Attach the camera bracket to the wall using the supplied screws.
4. Adjust the direction of the camera to the desired direction, and tighten the bracket.
5. Adjust the camera angle as needed.

6. Connect the camera cable to the camera.

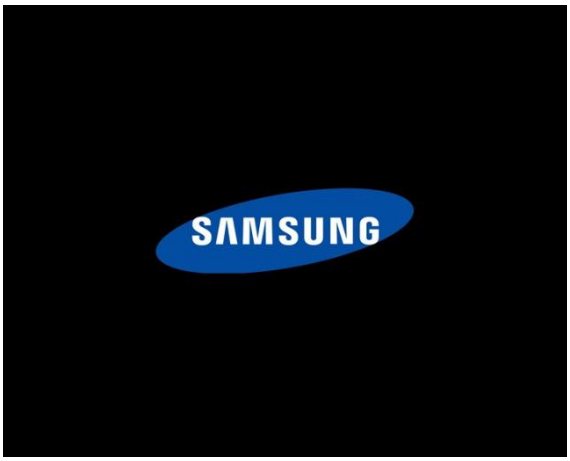
Take caution when installing the camera outdoors because the cable connectors may be wet with moisture or with dirt buildup.

Although the camera is IP66 rated, direct exposure to water or moisture may cause problem such as condensation.

Chapter 2 NVR Boot up

2.1 System Initialization

After connecting the NVR power cable to the wall outlet, press the power button and the the initializing screen will appear.



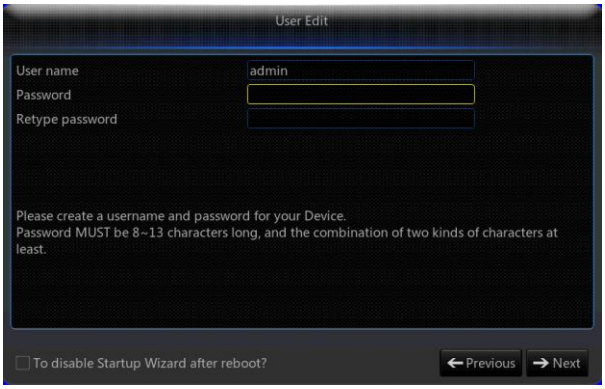
Note: The illustration in the user manual may not be the same as the menu interface in your monitor. All the illustrations are for users' reference.

2.2 Startup Wizard

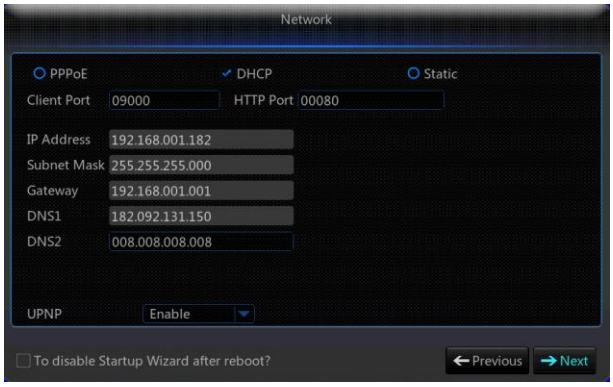
After the NVR startup is complete, the startup wizard will be displayed. If no changes will be made in the future after you turn the system on, you may click on "To disable Startup Wizard after reboot?" to cancel.

Wizard setting menu includes: Homepage, Network setup, IPC setup, Record Schedule and hard disk maintenance.

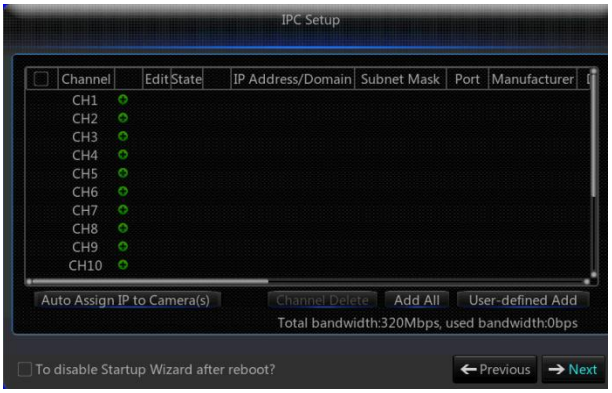
1. Homepage. Set admin password. Please create a user name and password for your Device. Password MUST be 8-13 characters long, and the combination of two kinds of characters at least (ex. Letter, number and special character). After restart, use the user name and password set above to log in.



Network setup. In network setup page, user may set the network for the NVR.

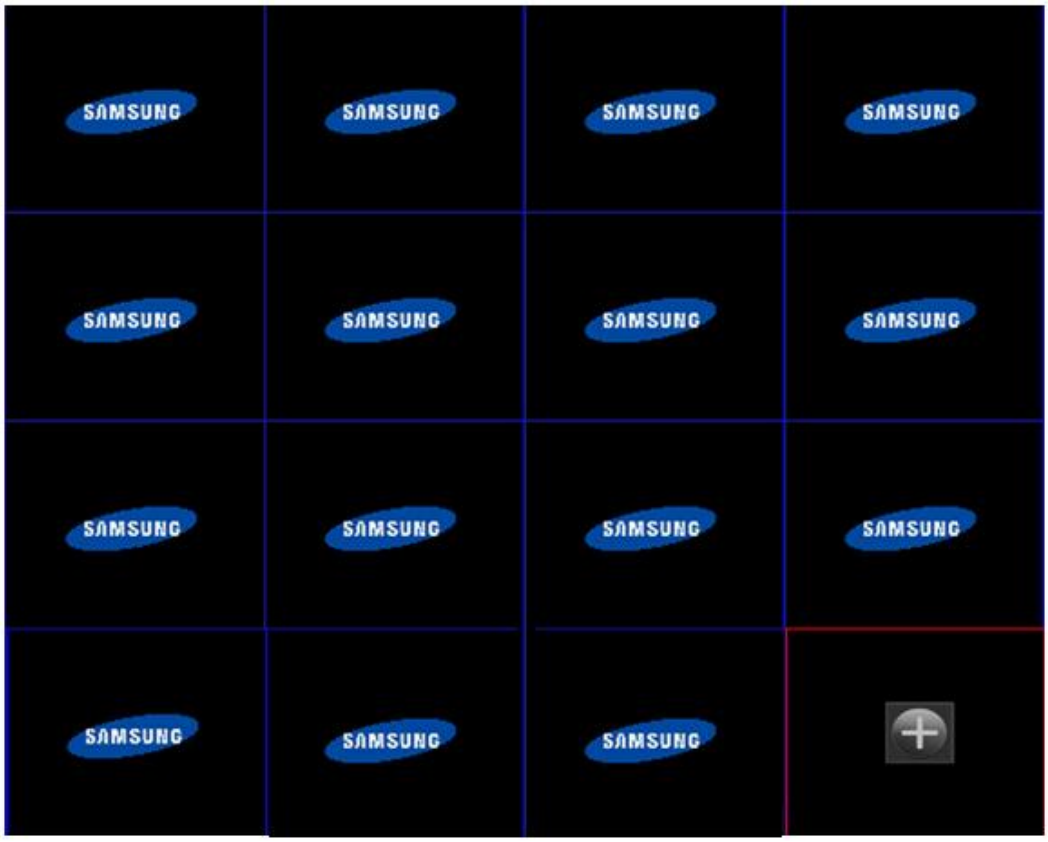


2. User may add and delete IPC; Record Schedule Picture. In this page, user may set recording time and scheduled recording for the NVR.



3. HDD formatting and overwriting type.

2.3 Main Interface



Note: When there is no HDD pre-installed or pre-installed HDD is not formatted, buzzer will be activated. If you want turn off the buzzer, please go to [Advanced→Events→Disk Full or Disk Error] to set the buzzer to 'Off'.

Chapter 3 NVR Menu

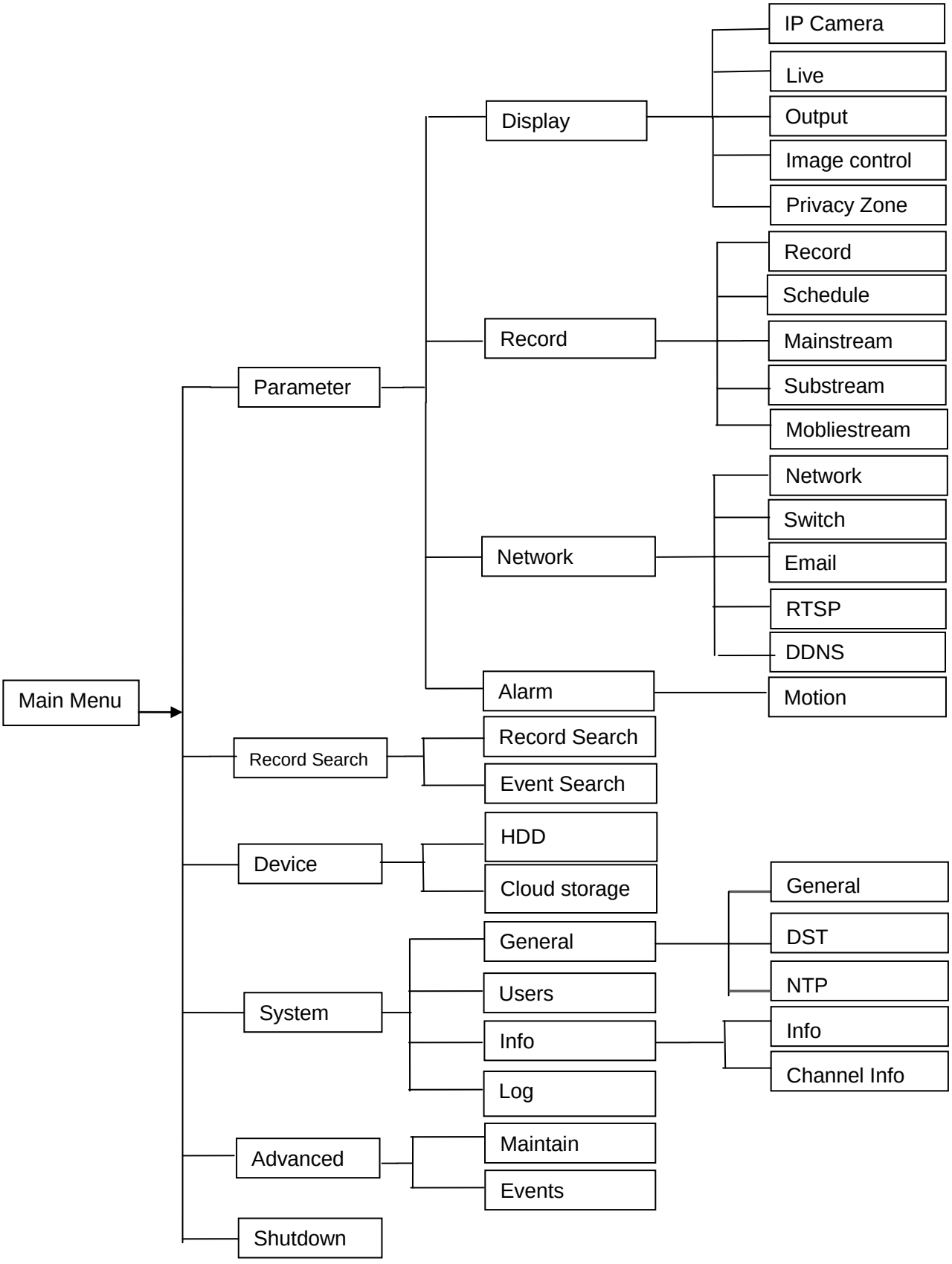
Popup Menu

After finishing system initialization, right click the mouse to 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-Pics, Record Search, Sequence and Stream switching.

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.

Component Name		Function
1	Main Menu	Access the main menu
2	Manually Lock Screen	Sign out or access sign-in page
3-5	Four-Channel Layout/Nine-Channel Layout/Sixteen-Channel Layout	Display four channels of video/ Display nine channels of video/ Display sixteen channels of video
6	More Layout	Displays different channel layout
7	Stream Switch	Switch between Main Stream and Sub Stream
8	View Image Quality	Switch among Realtime, Balanced and Smooth
9	SEQ	Start or stop SEQ
10	Playback	Replay video recorded
11	Record	Enable or disable manual recording
12	Instant Playback	Display channel name Quick playback of video of last 5 minutes
13	Zoom	Hold and drag mouse cursor to select a frame of current video to zoom in
14	Color	Adjust the color of video

Main Menu Guide

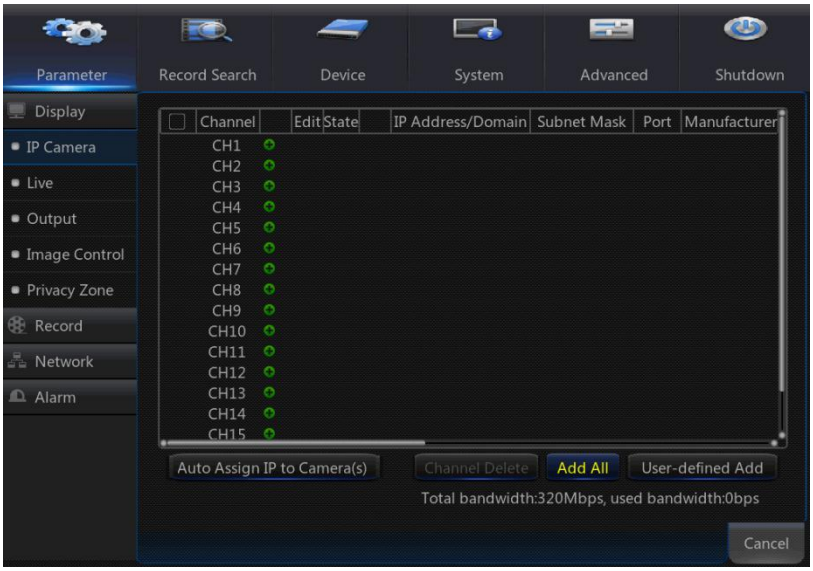


3.1 Main Menu

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

If system interface is locked, please enter the password to log in. If you forgot your password, please contact technical support.

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

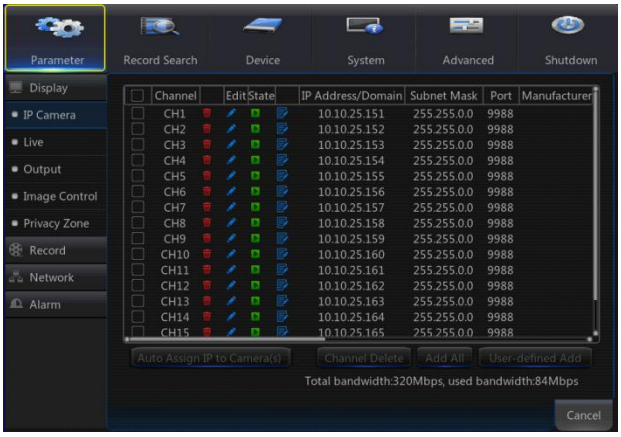


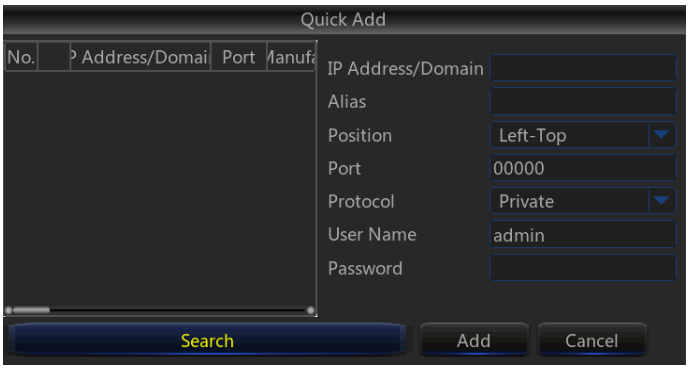
3.2 Parameter

3.2.1 Display

3.2.1.1 IP Camera

Go to “Main Menu”→“Display”→“IP Camera” to enter into the interface.

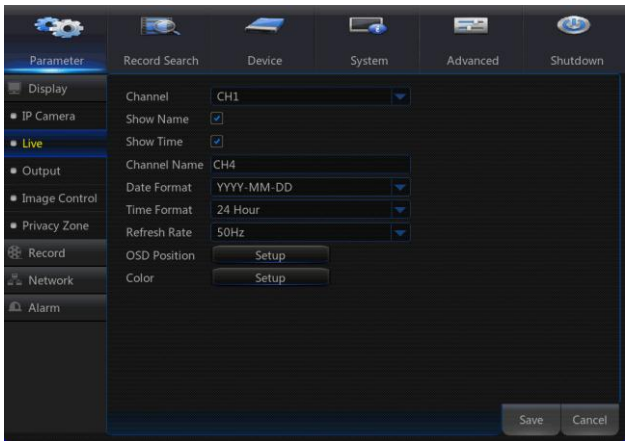


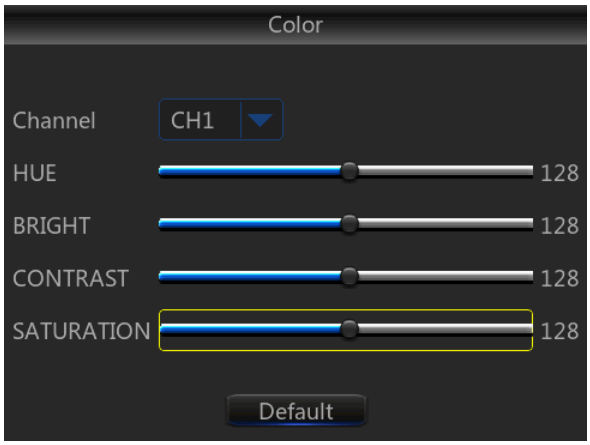


- **Channel:** IPC camera channel.
- **Edit:** Modify the name and location of channels, change other IPC or protocols, etc.
- **State:** Display IPC on-line state.
- **:** Modify IP address of IPC camera.
- **IP Address/Domain:** IP address of the IPC connected of the channel.
- **Subnet Mask:** IPC camera Subnet mask.
- **Port**: Connection port number of the currently set IPC.
- **Manufacturer**: Manufacturer for different IPC.
- **Device type**: Add IPC with different protocols.
- **Protocol**: The selected access protocol for IPC to connect to NVR.
- **MAC Address**: Physical address for device.
- **Software**: Display current version of IPC.
- **Auto Assign IP to Camera(s):** Auto Assign IP to IPC.
- **Channel Delete:** Delete IPC
- **Add All:** Add All IPC
- **User-defined Add:** User-defined

3.2.1.2 Live

Go to “Main Menu”→“Display”→“Live” to enter into the interface.

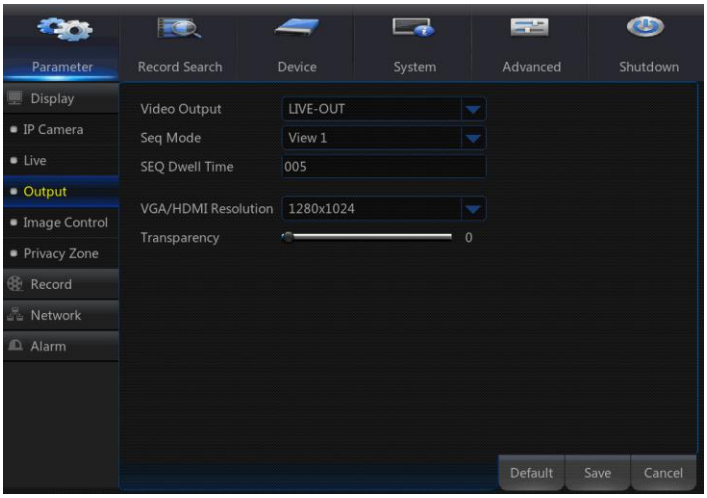




- **Channel:** Select channel number.
- **Show name:** Check the box to display channel name.
- **Show Time:** Check the box to display time.
- **Channel Name:** Name marked on IPC.
- **Date Format:** Set date format such as m/d/y or y/m/d.
- **Time Format**: 12 hour or 24 hour.
- **Refresh Rate:** IPC Refresh Rate 50Hz or 60Hz.
- **OSD Position**: Freely set the position of IPC name and time.
- **Color:** Adjust the hue, brightness, contrast and saturation of the IPC of the channel.

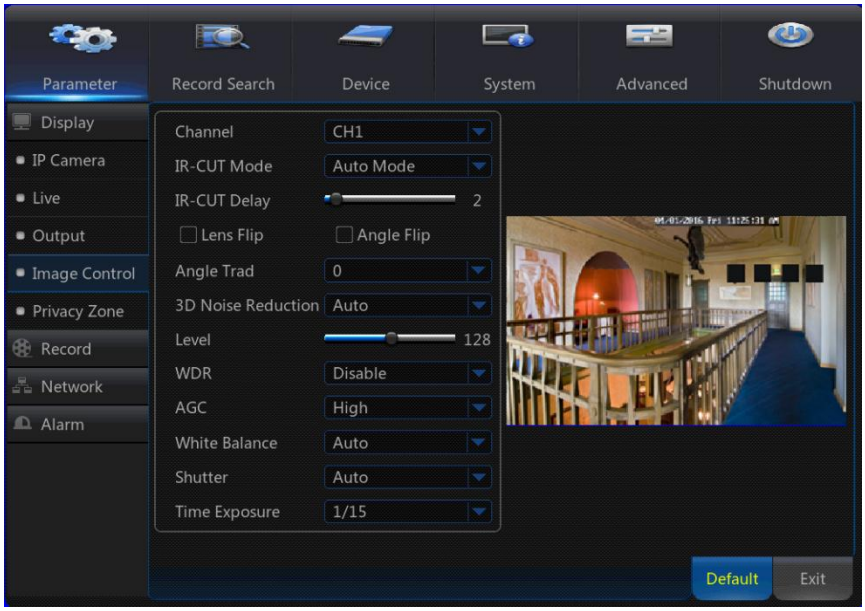
3.2.1.3 Output

Go to “Main Menu”→“Display”→“Output” to enter into the interface.



- **Video Output:** Live Output
- **Seq Mode:** Set sequence mode
- **SEQ Dwell Time:** Sequence dwell time is set 5 seconds by default. User may set it as required.
- **VGA/HDMI Resolution:** VGA output or HDMIoutput.Including1024×768, 1280×1024, 1440×900, 1280×720, 1920×1080, 1680×1050, 1600×1200, 1900×1200, 2560×1440, 3840×2160.
- **Transparency:** Set the transparency of the menu in the range of 0—128.

3.2.1.4 Image control

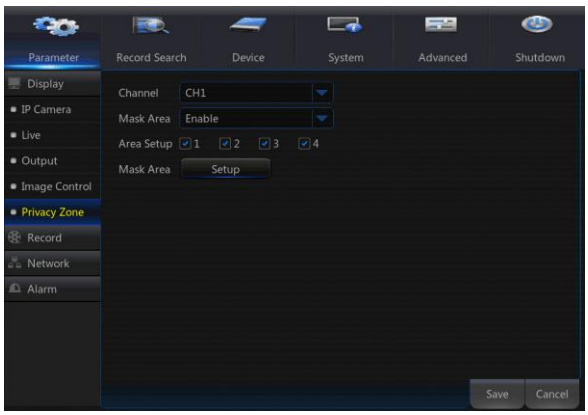


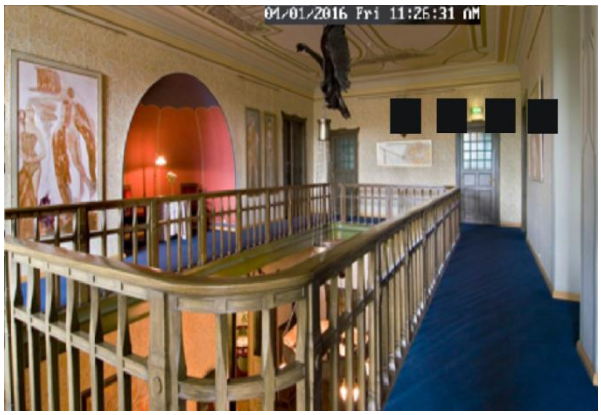
You can configure some settings of IPC, such as white balance, 3D noise reduction and image reversal etc.

3.2.1.5 Privacy Zone

Privacy Zone is a feature to block certain area(s) in the camera's field of view from recording in the selected channel.

1. Select the number of the zone(s) to be blocked (maximum of 4 zones can be set for single channel).
2. Click "Setup" to adjust the position of the zone.
3. After finish setting, right click the mouse to return to the **"Privacy Zone"** page.
4. Click "Save" to save the setting.

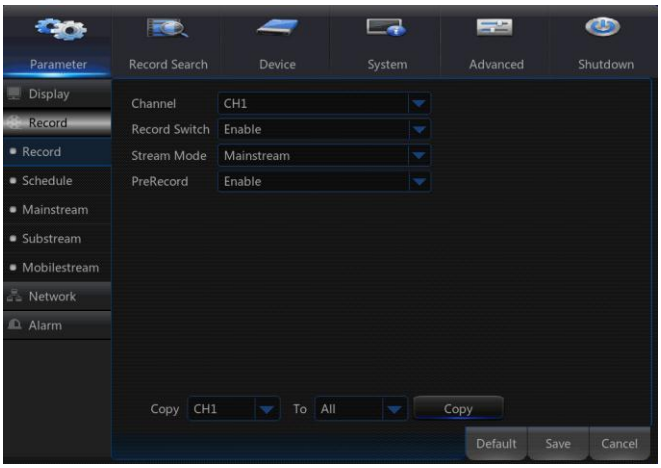




3.2.2 Record

3.2.2.1 Record

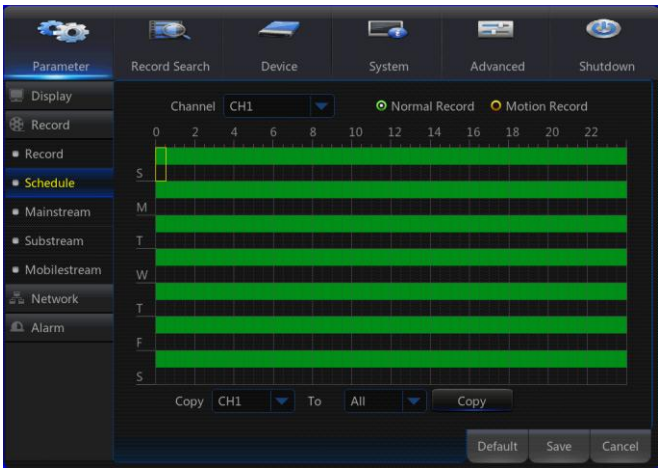
Go to “Main Menu”→“Record”→“Record” to enter into the interface.



- **Channel:** Set the desired channel in the drop-down menu.
- **Record:** Set up the record status (Enable/Disable) of each channel.
- **Stream Mode:** Select Mainstream or Substream.
- **PreRecord:** “Enable” status supports pre-record for motion detection record.

3.2.2.2 Schedule

Go to “Main Menu”→“Record”→“Schedule” to set the recording schedule of the NVR.

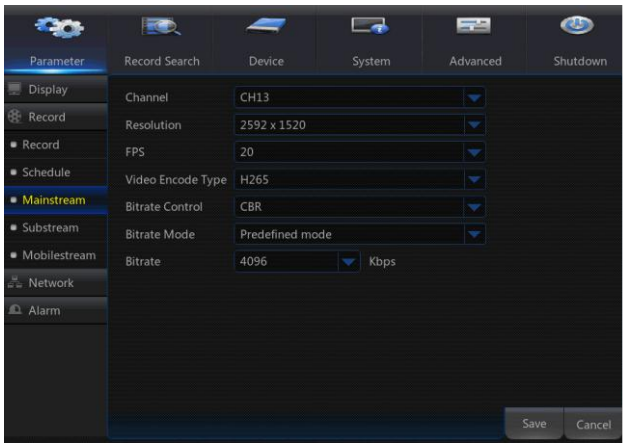


Select the channel and the date to be set.
One week’s schedule can be set.
The record schedule of the current channel can be copied to any other channel or all channels.

Note:
In the Record menu and Record Search menu, No Color stands for no record;
“Green” stands for normal record and “yellow” stands for motion record .

3.2.2.3 Mainstream/Substream/Mobilestream

Go to “Main Menu”→“Record”→“Mainstream/Substream/Mobilestream” to enter into the menu interface.



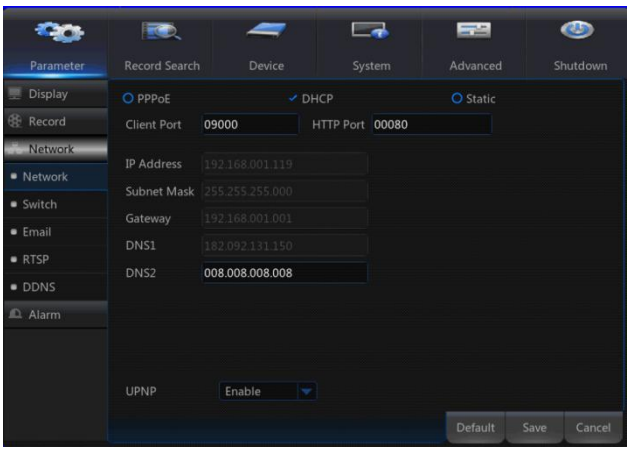
Mainstream, Substream and Mobile stream are the three video streams of IPC. Mainstream is mostly used for recording and the Substream and the Mobilestream is mostly used for remote network monitoring.

- **Channel:** Select a channel
- **Resolution:** Set IPC resolution as required
- **FPS:** Min 1 and max 20
- **Video Encode Type:** H.264 or H.265
- **Bitrate Control:** Dynamic and Statics
- **Bitrate Mode:** predefined mode or user-defined mode
- **Bitrate:** Set IPC bitrate

3.2.3 Network

3.2.3.1 Network

Go to “Main Menu”→ “Parameter”→ “Network” to enter into the interface.
Select the type of network connection (PPPoE, DHCP, Static) and set Port, then user may remotely control the monitoring, recording, playback or backup of the NVR through the network.



For PPPoE, Static and DHCP, after setting IP address of NVR, the extranet port shall be mapped on the router before visiting NVR through public network.

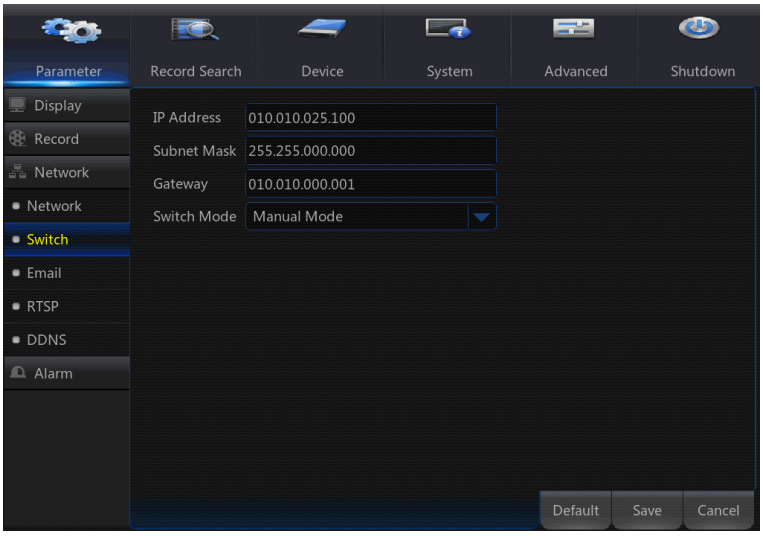
Note: Save after setting to make effective. If there are multiple NVR in a LAN, make sure their MAC addresses are different.

Take DHCP as an example. In this mode, the router automatically assigns IP address for the NVR. After restarting the NVR or DHCP server, the IP address obtained by the NVR may be different. As a result, user should check the IP address and port number for each remote access of the NVR. The operation procedure is as follows:

1. Select DHCP, click Save and refresh the NVR. Input Client Port and HTTP Port (the two values must not be the same).
2. Set obtained IP address of the NVR and the mapping port.
3. Remotely visit the NVR by IP address:
   http://Public network IP: HTTP port number (such as 00080)
   http:// Intranet IP: HTTP port number (such as 00080) (Only available in the same LAN)

3.2.3.2 Switch

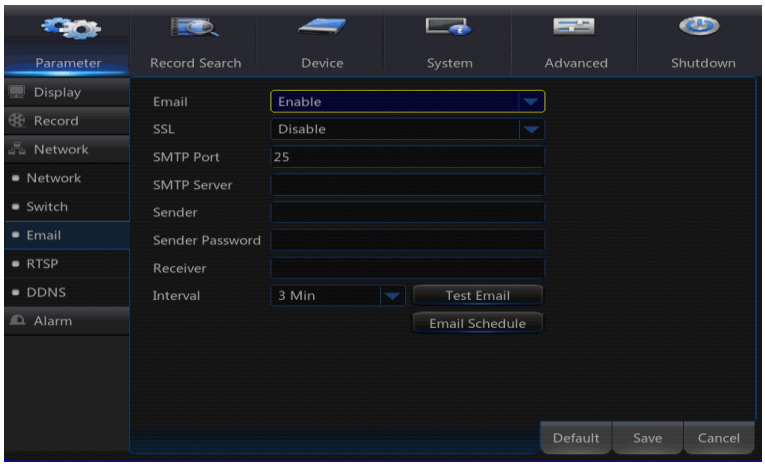
Go to “Main Menu”→“Parameter”→“Network”→“Switch” to enter into the menu interface.



IP address： Network segment of IP address of IP cameras when Switch Mode is set to Auto Mode.
Subnet mask: Subnet mask of IP cameras when Switch Mode is set to Auto Mode.
Gateway: Gateway of IP cameras when Switch Mode is set to Auto Mode.
Switch Mode:
Auto Mode: If Switch Mode is set to Auto Mode, NVR will assign IP address to the IP cameras automatically. And the IP address of IP cameras will be 10.10.25.151 to 10.10.25.166 for LAN1 to LAN16.
Manual Mode: If Switch Mode is set to Manual Mode, you need to search and add the IP cameras to the NVR.

3.2.3.3 E-mail

Go to “Main Menu”→“Parameter”→“Network”→“Email” to enter into the menu interface.
Receive or Send NVR alarm Email and set parameters like Email address, SSL, Email Enable, Interval and Email Schedule.



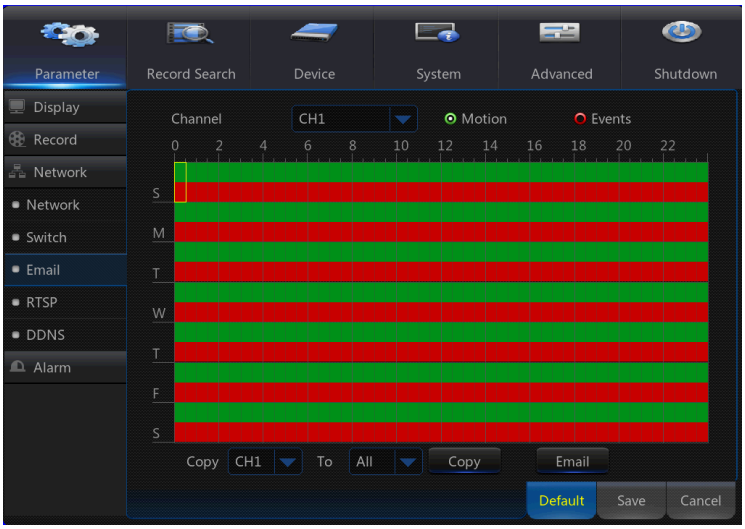
Mail Schedule:

Select the channel and the date you want to 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.

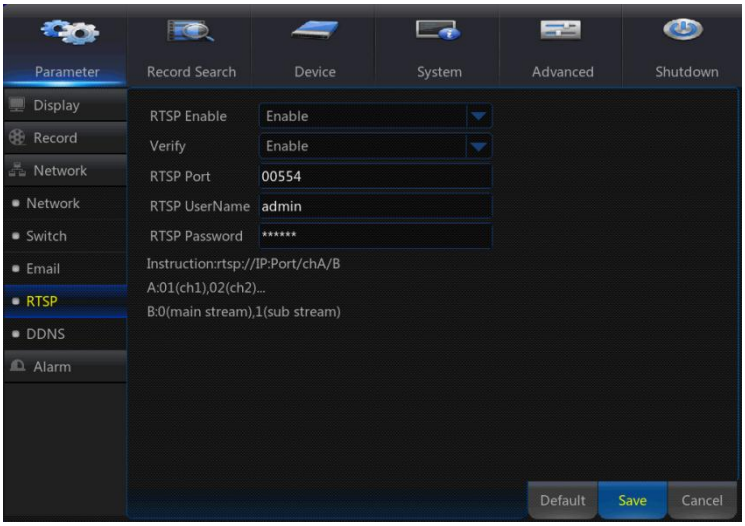
Note:

1. Green stands for Motion: Email will be sent in case of object motion;
2. Red stands for Exception: Email will be sent in case of exception, e.g. Disk Full, Disk Error, and Video Loss.



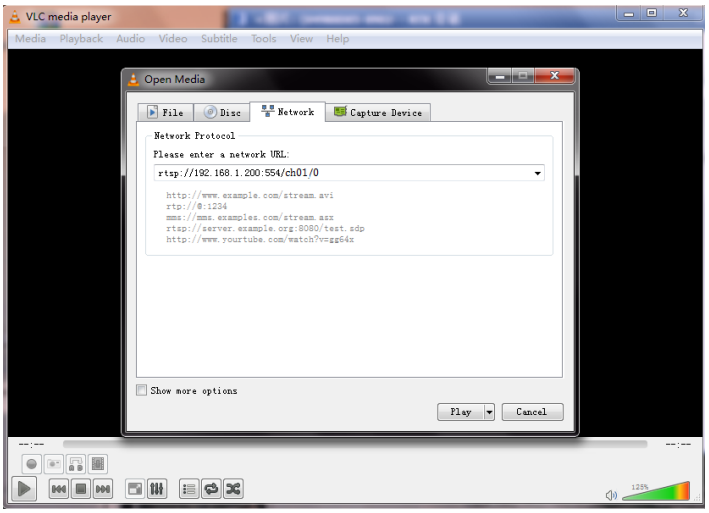
3.2.3.4 RTSP

Go to "Main Menu" → "Parameter" → "Network" → "RTSP". Set user name and password to view video by PC software VLC.



- **RTSP Enable:** Enable/Disable
- **Verify:** Enable/Disable
- **RTSP Port:**00554
- **RTSP User Name:** admin
- **RTSP Password:**111111
- **Instruction: rtsp: /**/IP:Port/chA/B
- **A:** 01(ch1), 02(ch2)...
- **B:** 0(main stream),1(sub stream)

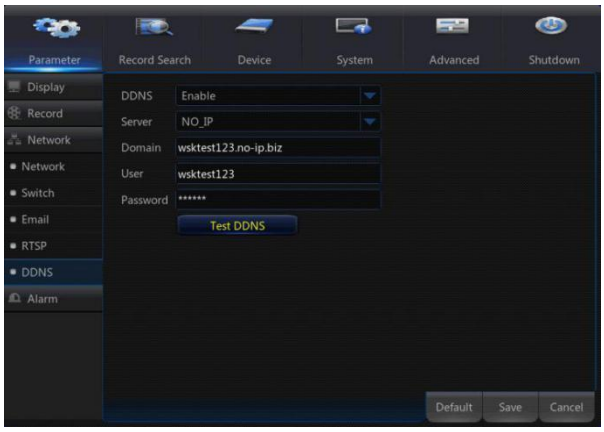
Follow the instruction to input IP and port to preview video.

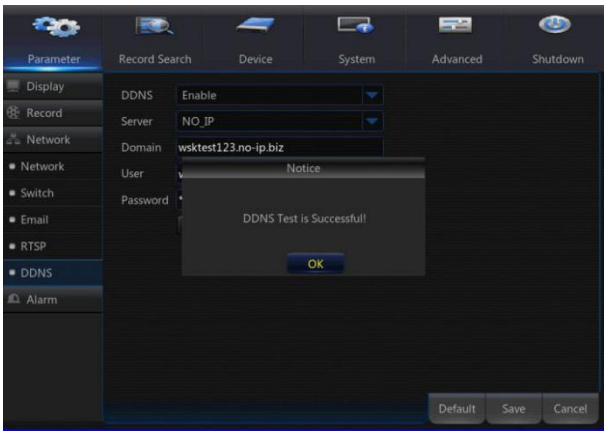


3.2.3.5 DDNS

Go to “Main Menu”→“Parameter”→“Network”→“DDNS” to enter into the menu interface.

User may set DDNS in any one of the above network connection after applying dynamic domain service. User may remotely access the NVR by using domain http://applied domain: mapped HTTP port number through web browsers, such as http://wsktest123.no-ip.biz:80.When using DDNS domain name to access the NVR, 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 NVR local setting.

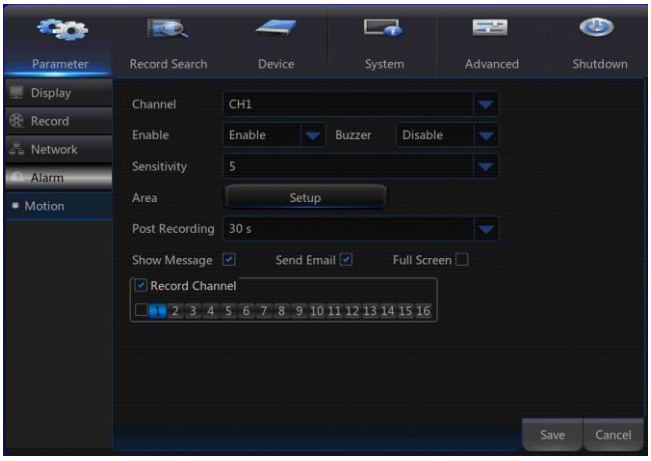




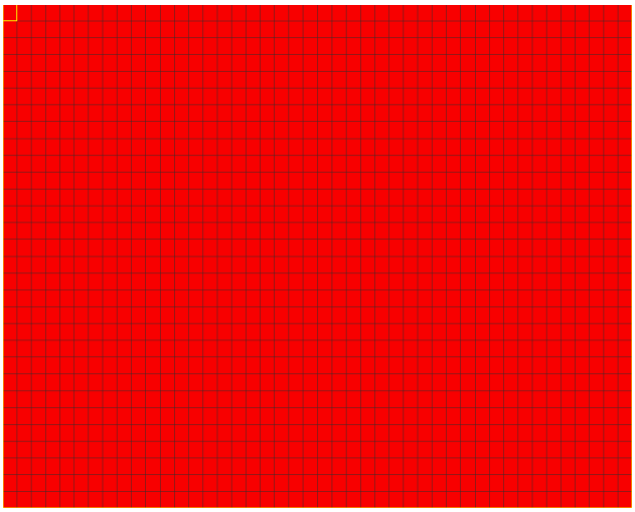
3.2.4 Alarm

Go to “Main Menu”→“Parameter”→ “Alarm” → “Motion” to enter into the interface.

3.2.4.1 Motion



- **Channel:** Enable or disable Motion function.
- **Enable:** Enables the use of a switch.
- **Sensitivity:** Support 1-8 level, 8 is the highest level.
- **Buzzer:** When detecting object moving, an alarm is turned on (disable, 10 seconds, 20 seconds, 40 seconds and 60 seconds).
- **Show Message:** Messages will be displayed on the screen when a moving object is detected and alarms are enabled.
- **Send Email:** When a moving object is detected, an email will be sent to the address entered.
- **Full Screen:** When a moving object is detected, a message will be displayed in full screen.
- **Post Recording:** The duration time of the alarm recording can be set as 30 seconds, 1 minute, 2 minutes and 5 minutes.



Area: Set the specific area(s) in the camera's field of view to monitor for motion. A single channel is divided into 44 x 30 (PAL) or 44 x 30 (NTSC) configurable grids. The red grids indicate that the motion detection in the selected area is enabled. Semitransparent boxes means motion detection in that area is disabled. Once you set your motion alert preferences, right click the mouse button to return and click Save to make the setting effective.

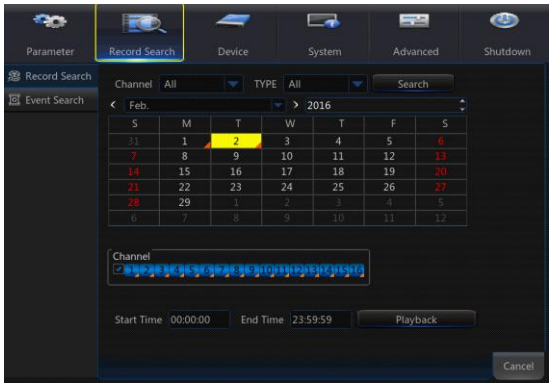
Record Channel: When object motion is detected, the record channel setting will be activated.

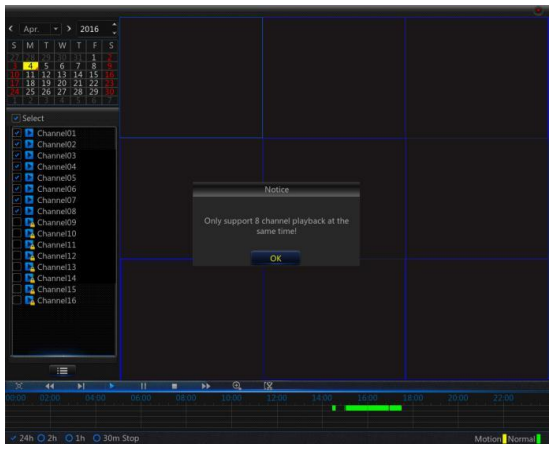
Alarm Type	Functions & Descriptions
Video Loss	When the NVR fails to receive video signals due to some problems (camera damage, line dropout or damage, power failure), the alarm will appear.
Motion Detection	When IP camera detects object moving, alarm will be activated. Sensitivity is subject to the actual application environment test. Sensitivity is adjusted according to the sensitivity of the moving object detected and parameters set in the setting.
HDD Status	Alarm will appear when HDD does not work due to damage, power failure, HDD auto-overwrite off and insufficient space.

3.3. Record Search

3.3.1 Record Search

Go to "Main Menu"→"Record Search"→"Record Search" to enter into the interface





Channel: Select the channel you want to search.

Type: Select the type the playback record. There are three options, All，Normal and Motion.

Start Time/End Time: Select the specific period of time. The default setting is from 0:00 to 24:00.

Playback Channel: Click a date and select corresponding channel in Playback Channel. The selected channels shall not be more than 8.

Playback: Select the desired year and month and click "Search". If there are any records, a yellow corner mark which shows the recording at specific date will appear at the down-right corner of the date sheet. Select the date checkbox and select playback channel and click Playback to enter into the interface.

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, 1/16), Play, Pause/Frame. When playback ends, NVR will remain in the playback interface.

Key	Description	Key	Description
	Play		Full Screen/Quit Full Screen
	Pause		Rewind (X2, X4, X8 and X16)
	Stop		Fast Forward (X2, X4, X8 and X16)
	Slow play (1/2, 1/4, 1/8, 1/16)		Zoom in/Zoom out
	Record Clip		

Time Axis setup, file clip and zoom in/out

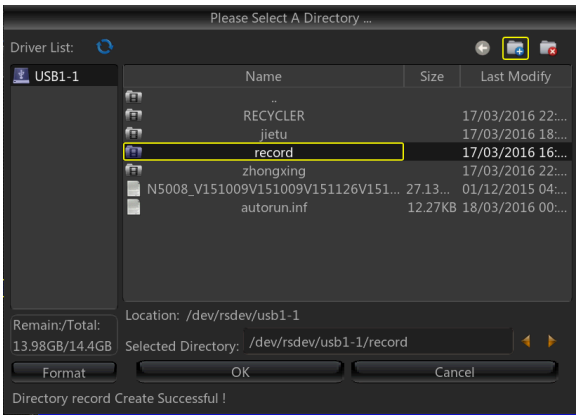
1) The NVR supports the processing control bar function when playing back record files

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

Detailed operation:

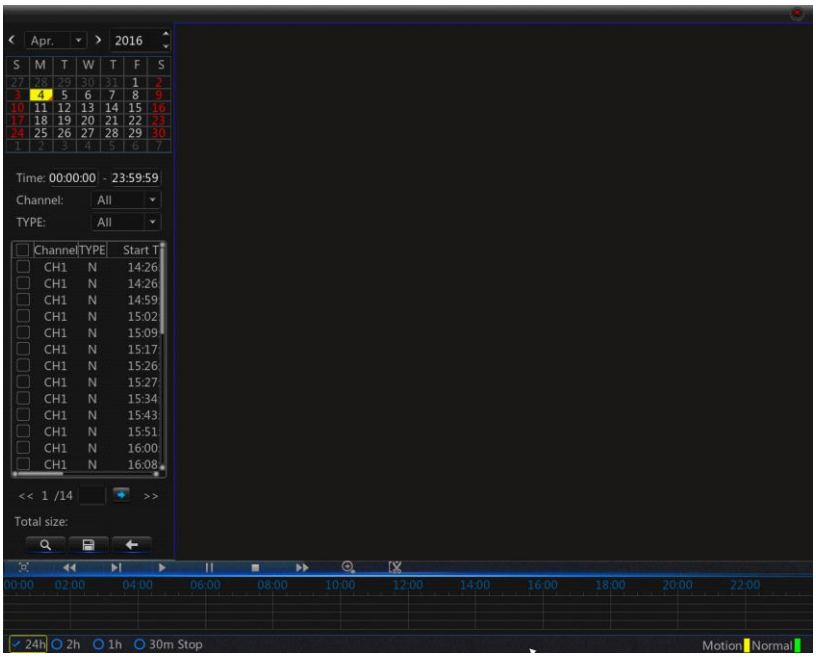
Fixed time axis: If you select [2h] option, that means the processing control bar covers two-hour of content. The time range refers to 1 hour before and after the middle point.

2) Record clip and backup function and playback zoom in/out function.



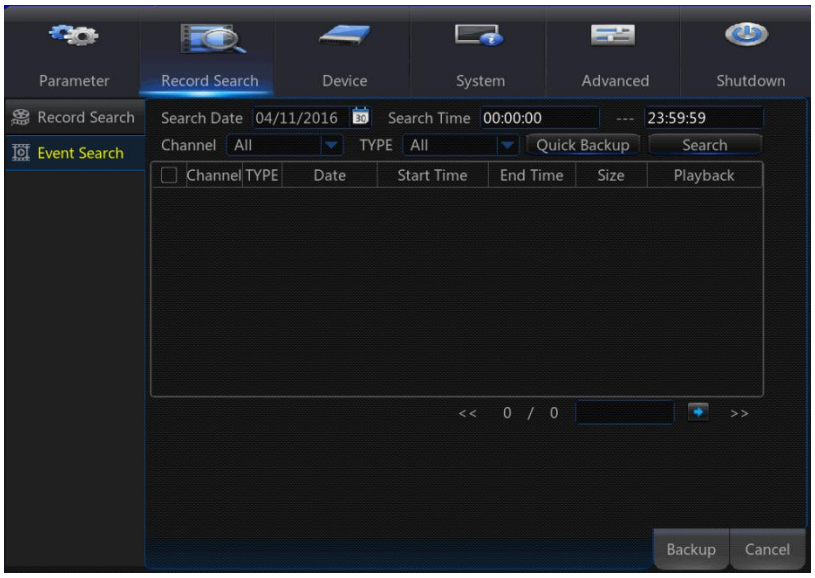
- **Clip and backup:** When it is under single channel playback, the [ ] icon will appear in the Play Control bar. Click the icon to start video clip function, click the icon again to end the function and pop up the dialog. Now, you may save the clipped video file.
- **Zoom out:** When it is under single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

Click on the [ ] button as shown above to turn to the figure below, and then select time, channel and video type to search and display the video.



3.3.2 Event Search

Go to “Main Menu”→“Record Search”→“Event Search” 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:



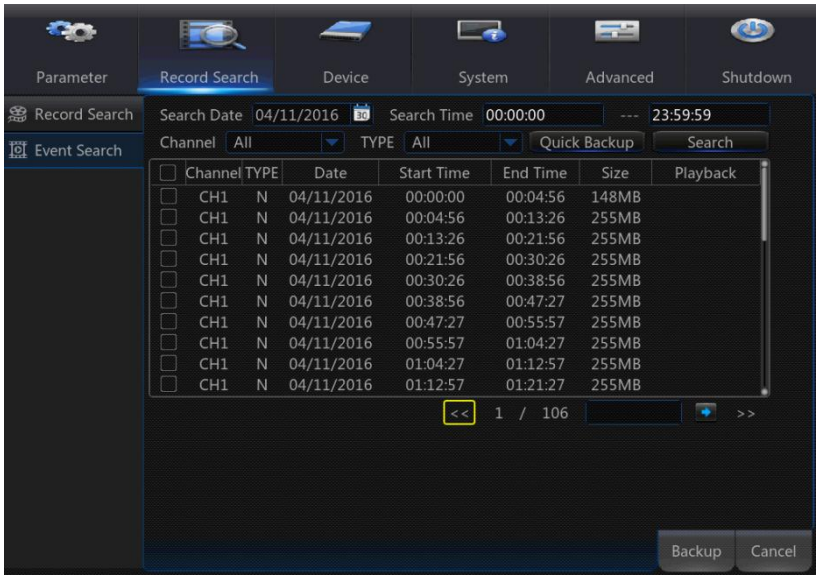
：Previous page; Click the button to go to previous page when viewing events (except the first page). When viewing the first page, click this button to display the event list in the first page.

：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.

: Jump; Input the desired record event page in the input box and click arrow button to jump to the input page.

Two types of backup: Quick Backup and Backup

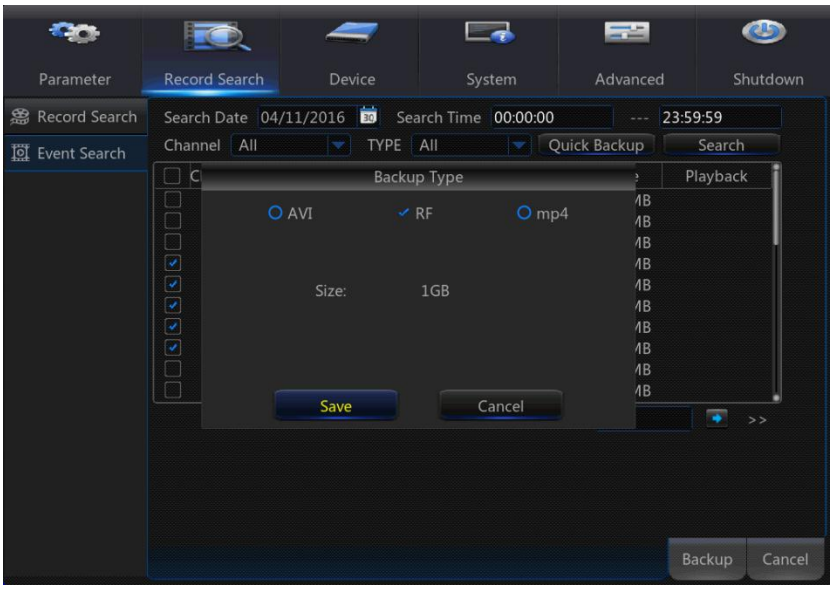
If you want to back up a record in the detailed file list, you may check the box on the left of the record ("√"means it has been selected) and click "Backup" to enter into "Select backup type" (Make sure USB flash drive or other portable storage device are connected).



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

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

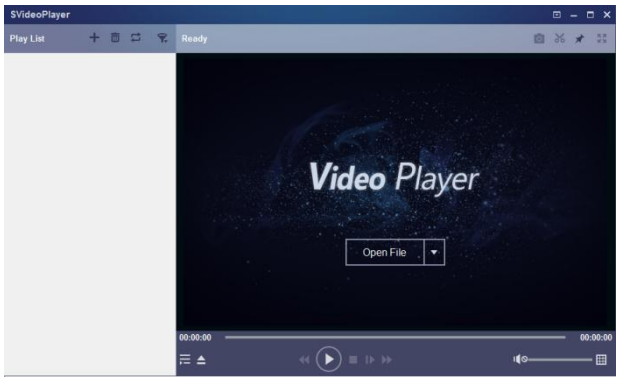
Note: Before backup, connect devices for backup (USB flash drive or other devices with USB interface)

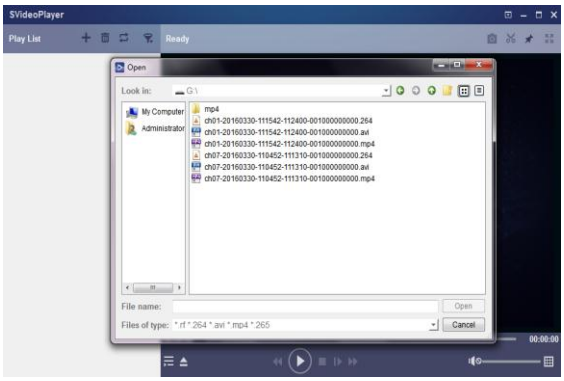


3.3.3 Play Backup Files

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 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\SVideoPlayer\picture

Cut: Save path: C:\Users\Administrator\SVideoPlayer\video

Full screen display

Never on top

Always on top

On top during playing

Adjust volume

Window Division,

1/4/9/16 channels optional.

Add folder or file.

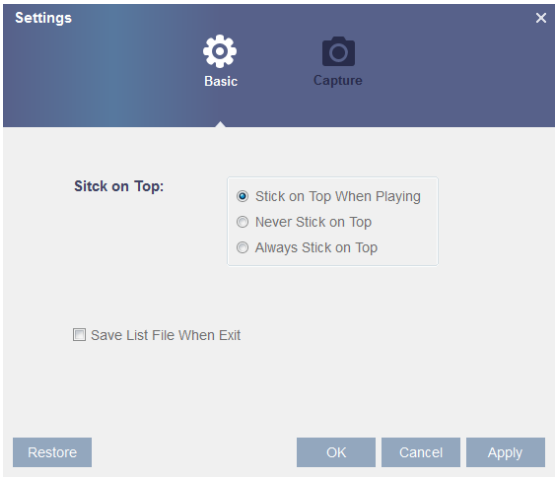
Playback mode, Single, Order, Repeat one, Repeat ALL are optional

Delete all files in the list.

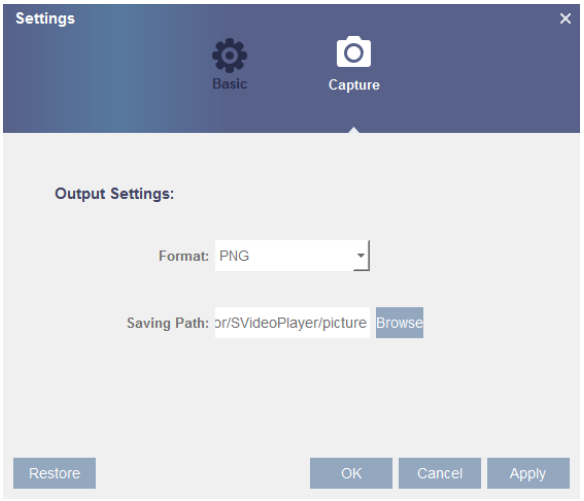
Search File

Language/Settings

Basic Settings: Set on-top mode



Capture Settings: Set the path to save image



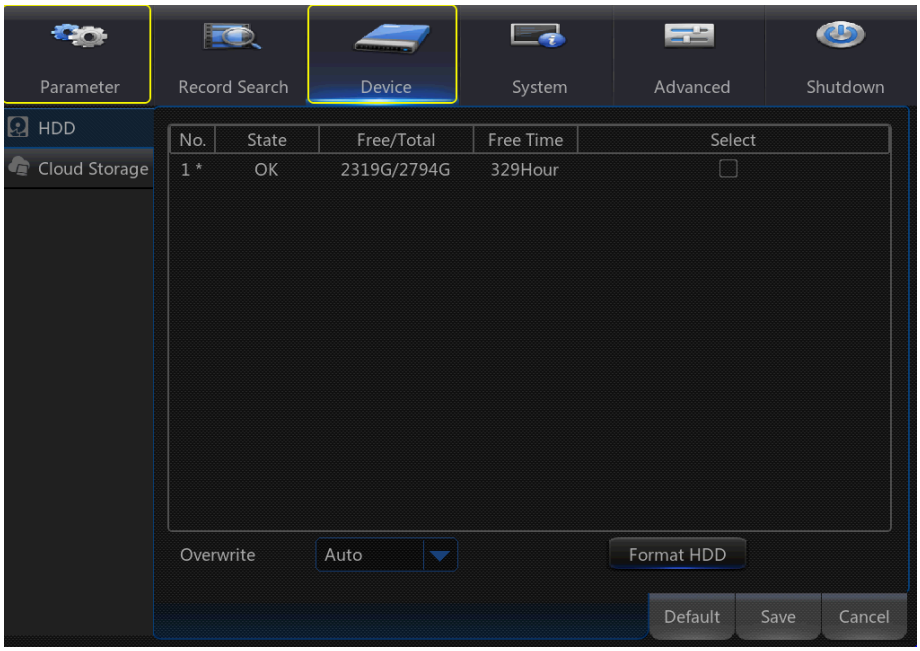
Note:

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

3.4 Device

3.4.1 HDD

Go to “Main Menu”→“Device”→“HDD” to enter into the interface.



When NVR is connected to a HDD, the system will automatically detect if the HDD is normal or not; if the HDD needs to be formatted, status will be shown as “Not formatted”. Select the HDD and format the HDD. If the system detects the HDD is in normal state, the HDD status will be shown as “Normal”.

No.: Number of HDD connected to system.

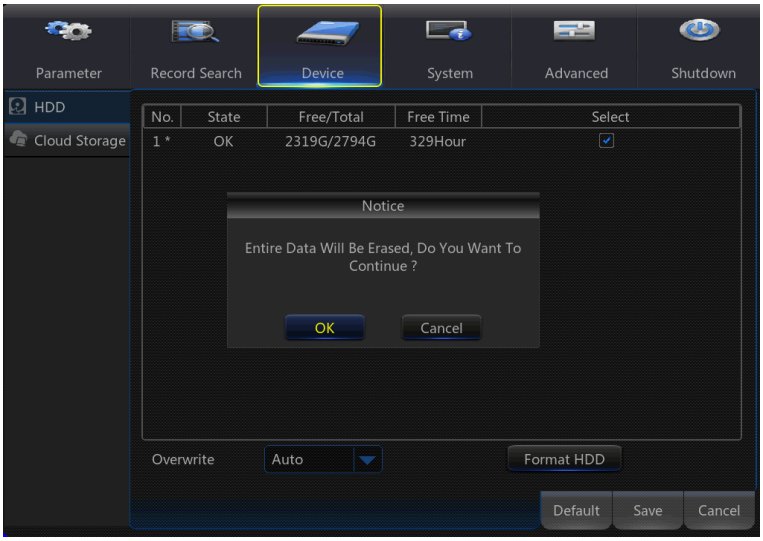
Status: It shows the current status of HDD. HDD status include ‘OK’ and ‘Full’ etc.

Free/Total Space: Remaining or total space of the HDD

Free Time: Remaining time for the HDD recording according to currently set “Resolution”, “Encoding Rate” and “Frame Rate” of image.

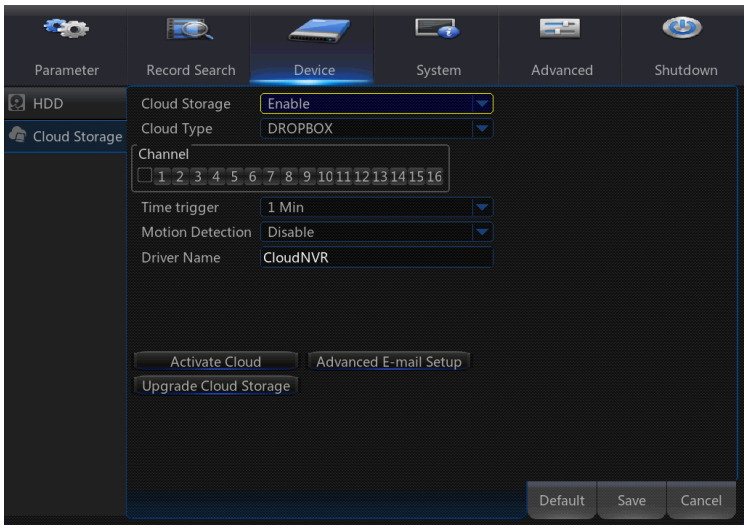
Auto-overwrite: When set to Auto, the NVR will overwrite the oldest files on the hard drive if hard drive space is full. When set to Disable, the NVR will stop recording if hard drive space is full, and prompt that the hard drive is full.

Format HDD: Format HDD for the first use.



Note: Recording can only be performed when HDD is in “OK” state.

Go to “Main Menu”→“Device”→“Cloud storage” to enter into the interface.



3.4.2 Cloud Storage

Cloud Storage (Network HDD)can upload videos to your Dropbox account.

1) Register in Dropbox website, Address: https://www.dropbox.com/
2) Configure network to ensure the normal operation of NVR network.
3) Configure Cloud: Enable Cloud and set the channel and interval for the NVR to periodically captured pictures; Enable Motion Detection to get captured pictures for motion detection.
4) Driver Name refers to the name created in the folder of Dropbox and the name can be defined by the user, e.g. CloudNVR. The folder is to store the NVR periodically captured pictures).
5) Click [Advanced E-mail Setup] to set the Email box. User shall input his Email.

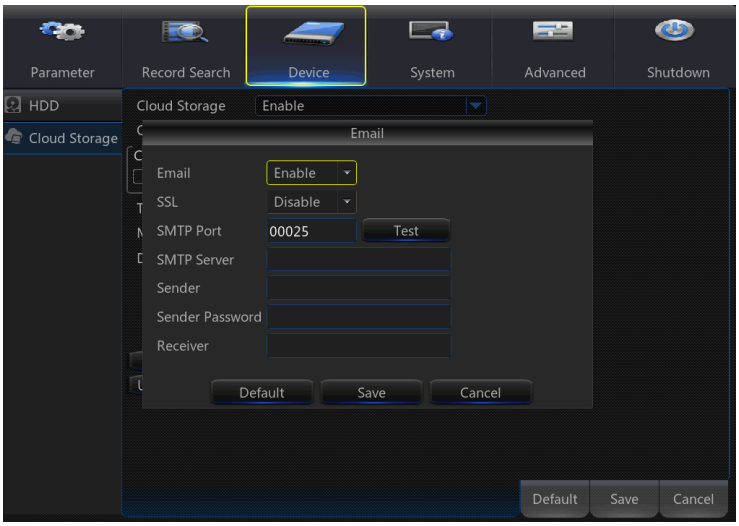
6) Click [Active Cloud] to activate Cloud and Email will receive the URL related to Cloud

User input the registered user name to visit the above website and the following interface will be popped up.

7) Click the icon at the upper-left to view the folder (CloudNVR) referred to in Step 4.

8) Enter the folder to view the NVR captured pictures.

9) Click [Upgrade Cloud storage] to Check and update the new version.



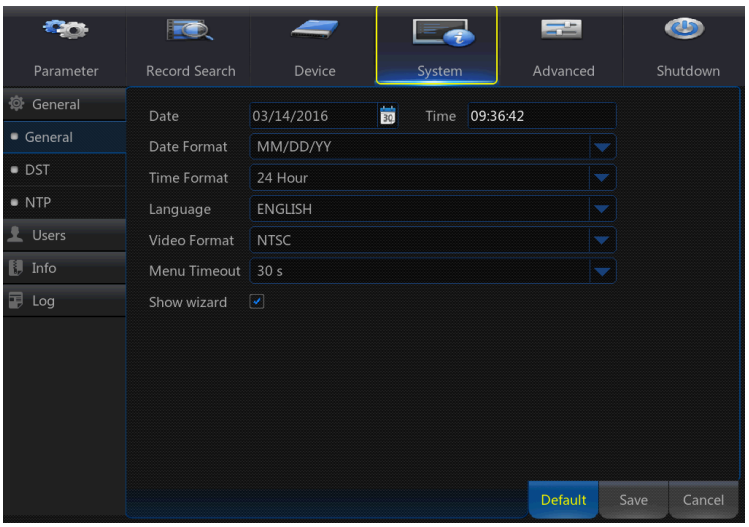
3.5 System

3.5.1 General

3.5.1.1 General

Go to “Main Menu”→“System”→“General” to enter into the interface.

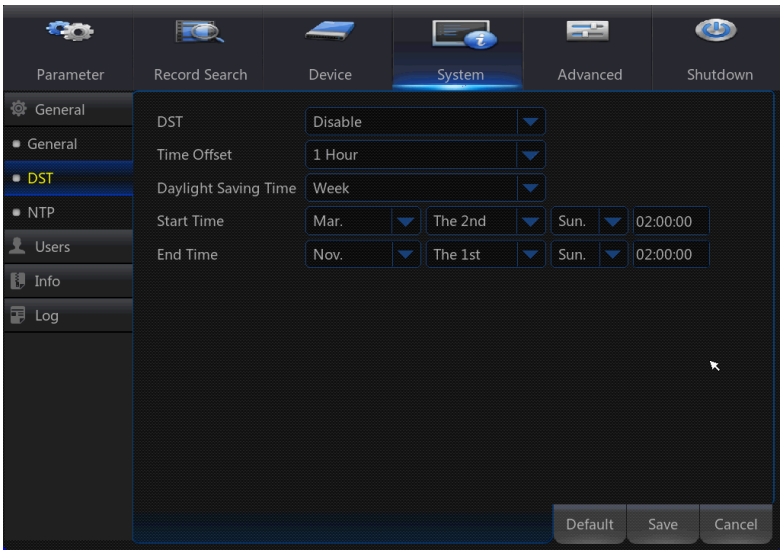
User may set Date, Time, Date Format, Time Format, Language, Video Format, Menu Timeouts and Show Wizard in this page.



3.5.1.2 DST

Go to “Main Menu”→“System”→“General”→“DST” to enter into the interface.

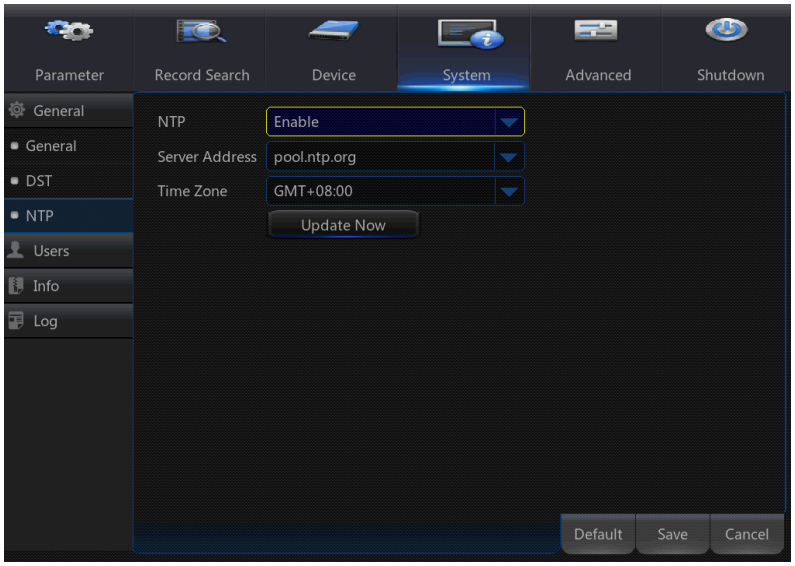
Enter into the interface set DST, Time Offset, Start Time and End Time.



3.5.1.3 NTP

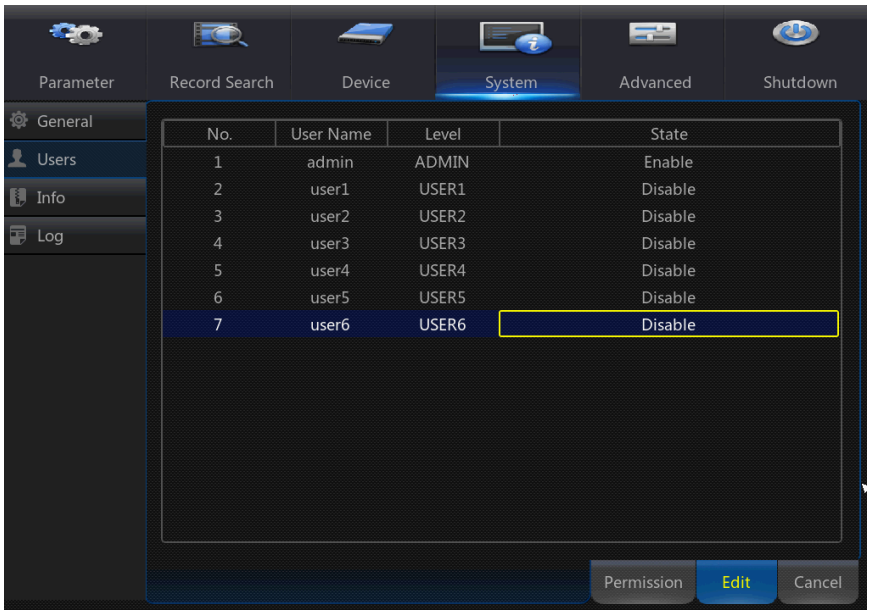
Go to “Main Menu”→“System”→“General”→“NTP” to enter into the interface.

- **NTP service**: Enable/Disable NTP function.
- **Server Address**: Select NTP server (time.windows.com, time.nist.gov, pool.ntp.org).
- **Time Zone:** Corresponding time zones for various nations or regions.
- **Update Now:** Enable NTP function and save parameters and click Update Time to calibrate the system time.
- **Note:** When NTP function is set to “Enable”, system will calibrate the system time at every 00:07:50 and every start-up.

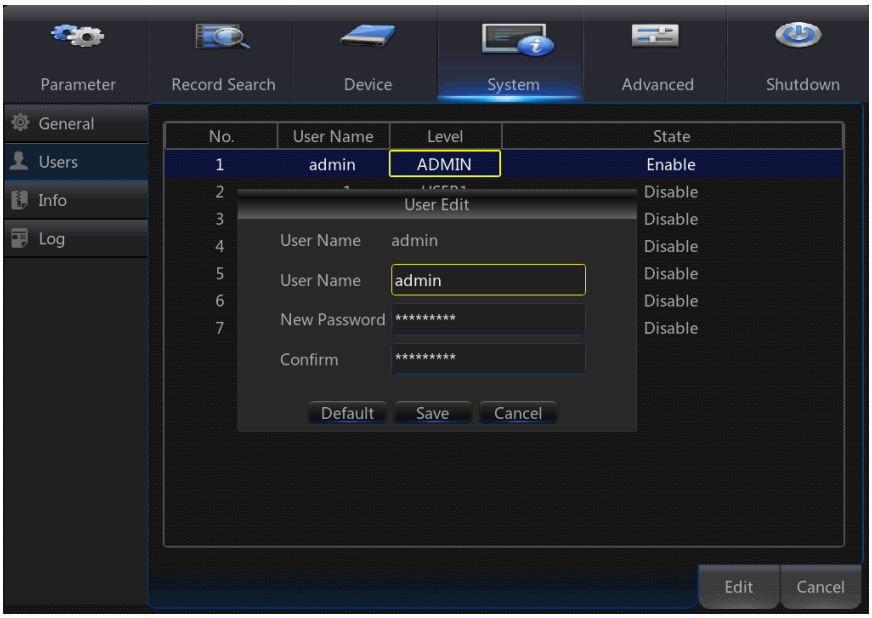


3.5.2 Users

Go to “Main Menu”→“System”→“Users” to enter into the User interface.

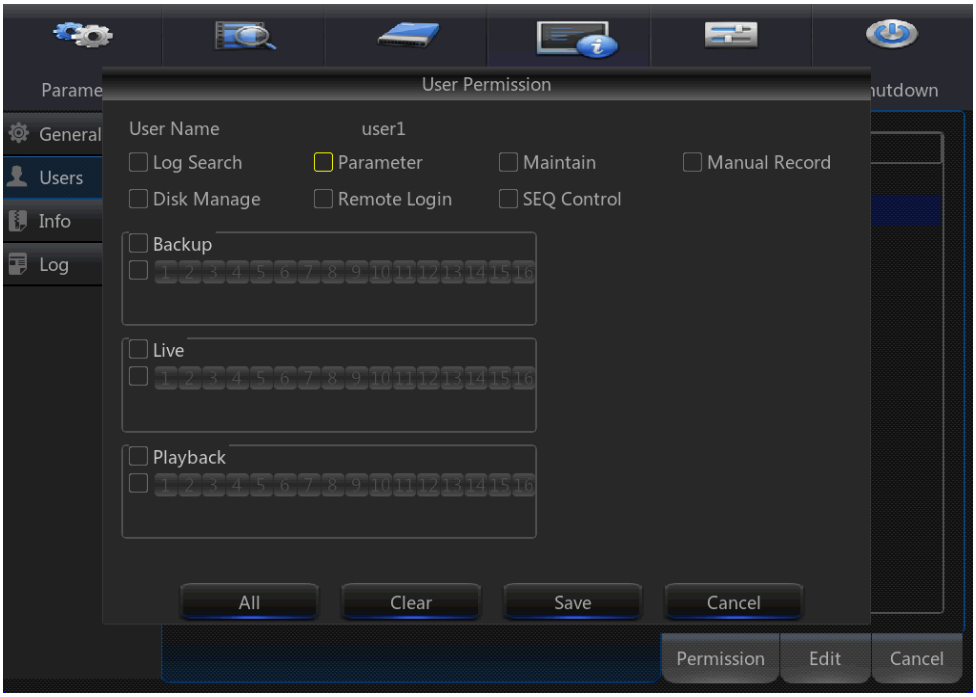


It supports up to seven users, including one administrator and six users. Click [Edit] button to enter into the [User Edit] interface to input user name and password.



The user name must consist of 1-8 letters, characters or figures. Password MUST be 8-13 characters long, and the combination of at least two types of characters.

- **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.
- **Maintain:** allow you update version, recover ex-factory value, device reboot and shut down.
- **Manual Record:** allow you manually start/stop record.
- **Disk Manage:** allow you manage and control the HDD and USB drive.
- **Remote Login:** allow you remotely login into the NVR.
- **SEQ Control:** allow you sequence live screens for all the channels.
- **Backup:** -Select the ENABLE option and select channel for backup, the user is allowed to back up the record in the selected channel.
- **Live:** Select the ENABLE option and select a channel and the user is allowed to view all the live images in the selected channel.
- **Playback**: Select the ENABLE option and the user is allowed to playback the selected record in the channel.



3.5.3 Info

3.5.3.1 Info

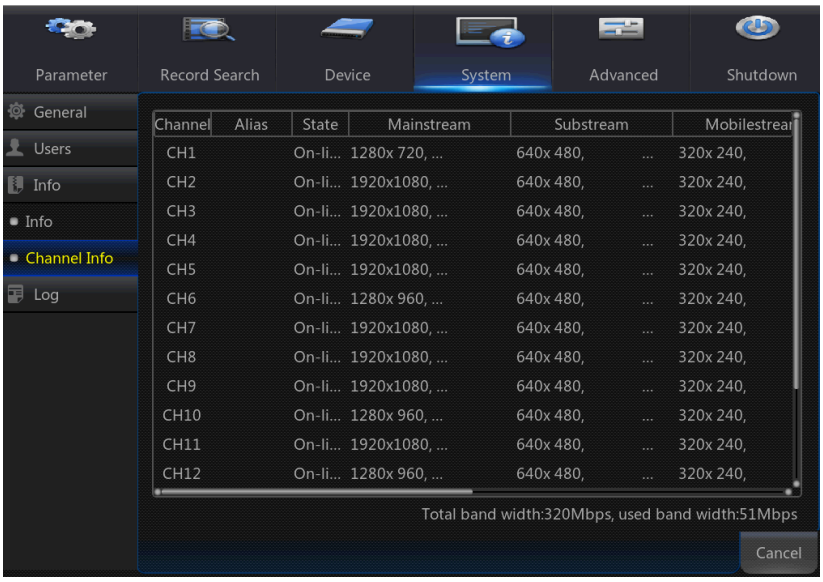
Go to “Main Menu”→“System”→“Info” to enter into the interface.

User can view system information, including Device ID, Device Name, Device Type, Hardware Version, Software Version, IE Client Version, IP Address/Domain, MAC Address, HDD Capacity, Video Format, Media Port, Web Port, P2P ID, etc.

3.5.3.2 Channel Info

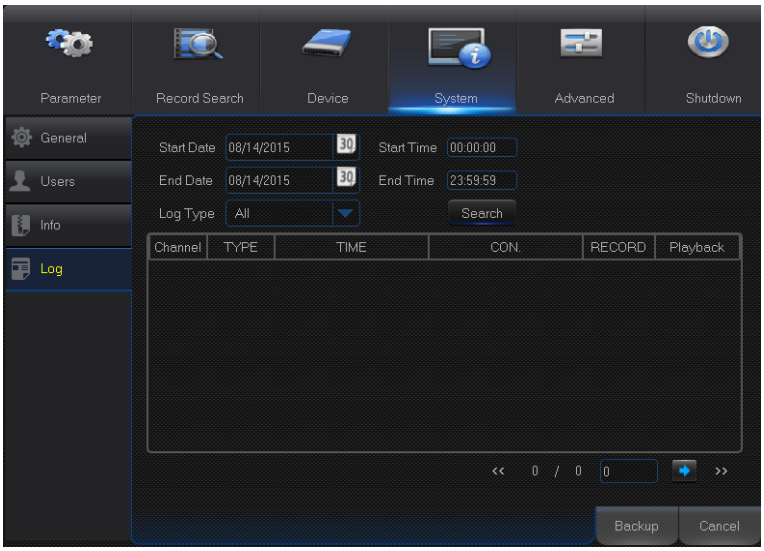
Go to “Main Menu”→“System”→“Info”→“Channel Info”.

User may view the information of various connected IPC, including state, Mainstream, Substream, Mobilestream, motion detection, privacy zone, etc.



3.5.4. Log

Go to “Main Menu”→“System”→“Log”.



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

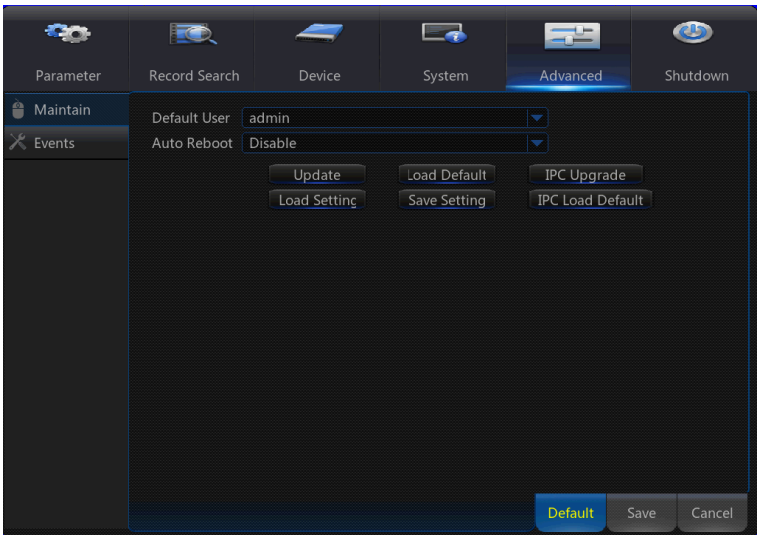
3.6 Advanced

3.6.1 Maintain

Go to “Main Menu”→“Advanced”→ “Maintain” to enter into the interface.

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

Upgrade: Decompress update file package and copy the upgrade file folder named “nvrupgrade” the upgrade program is inside to root directory of USB flash drive; Insert the USB flash drive into USB port of NVR; Click <Upgrade>.



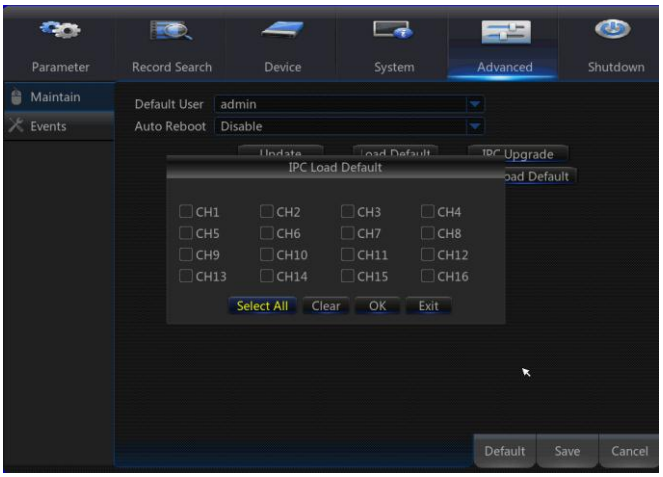
Load Default: If [Load Default] is selected, you can initialize the system to the ex-factory default. Click “Load Default” and select items to be restored

Load Settings: Load parameters in the removable storage device to NVR.

Save Settings: Save the set parameters of user’s NVR to the removable storage device.

IPC Upgrade: IPC can be upgraded by the connected NVR. Decompress IPC upgrading file and copy *.sw file to nvrupgrade directory and copy to the root directory of USB flash drive, Insert the USB flash drive into USB port of NVR—>Select the IPC you want to upgrade—>Click Upgrade to start upgrading IPC.

IPC Load Default: Click “IPC Load Default” and then click “OK” to confirm. Then it will prompt that IPC is loaded default successfully and IPC will be restarted. Click “Select All” is to select all channels to do load default for all cameras. “Clear” is to clear all selection, and “Exit” is to exit.

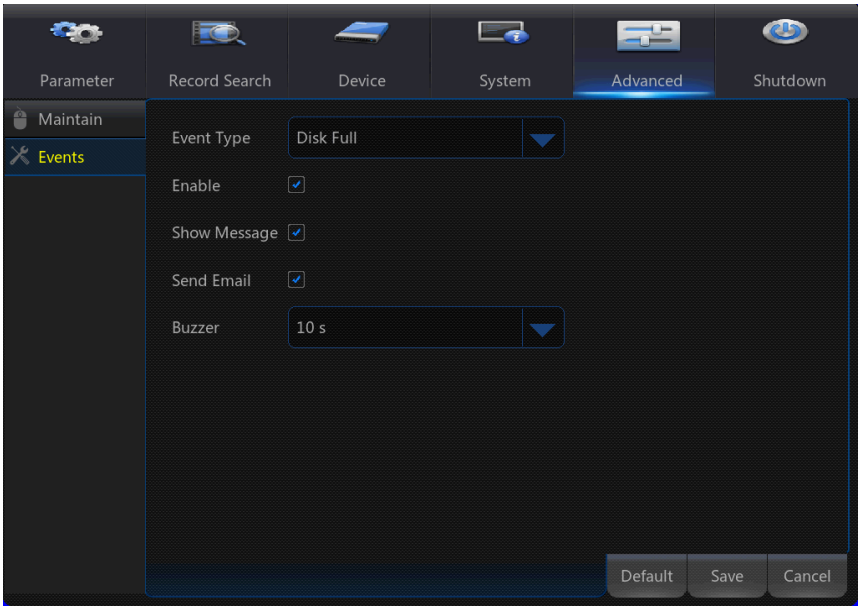


Note: Do not take out the USB memory or turn the power off during upgrading. When the update is done, system will be automatically restarted. After about 5 minutes, the upgrading will be finished. It is recommended to load ex-factory default after upgrading. The auto maintain function can be effective only when the NVR returns back to Preview mode with no any operation within the set auto maintain time.

3.6.2 Events

Go to “Main Menu”→“Advance”→ “Events” to enter into the interface.

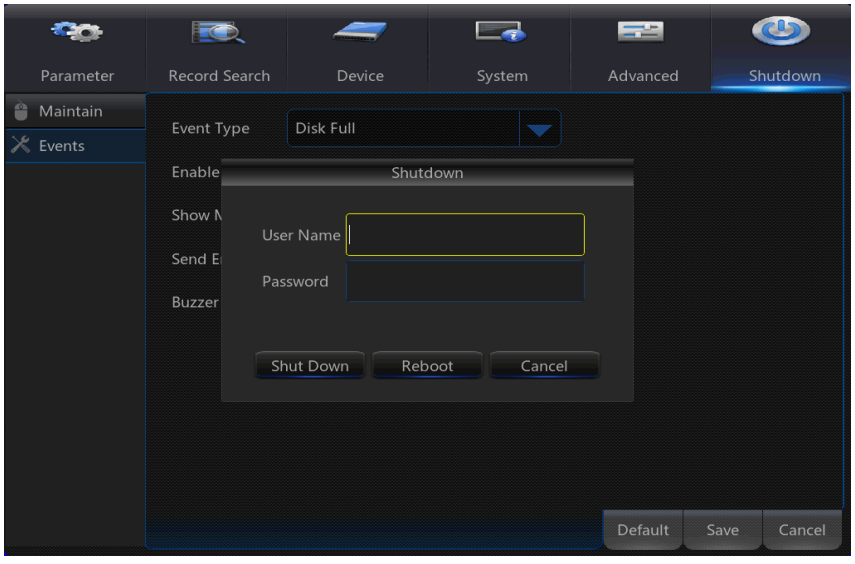
Event Type: Support three abnormal types: Disk Full, Disk Error and Video Loss.
Enable: Active alarms for abnormal situations.
Show Message: You can set show message on the screen when sensor alarm is detected.
Buzzer: How long the buzzer will sound (10s, 20s, 40s, 60s).
Send Email: Select to send Email to specified Email address when abnormal events appear.



3.7 Shutdown

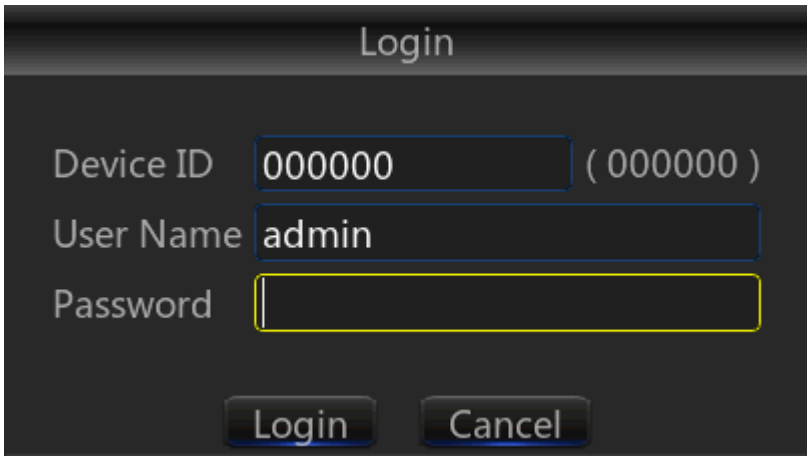
Go to “Main Menu”→“Shutdown” to enter into the menu interface.

Shutdown function requires user to login by inputting User Name and Password so as to shut down or reboot system.



3.8 Menu Lock

In consideration of system safety, user may click the icon on the toolbar when he leaves away from NVR and the system interface will be locked. User has to input Device ID, User Name and Password on the login interface to unlock. The login interface is.



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

3.9 Split Mode

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

3.10 Stream Switch

Click HD to switch to Main Stream, and click SD to switch to Sub Stream. When you switch to 16 channels live view mode, you can only view 12 channels at Main Stream. If you would like to view all 16 channels, please click SD to switch to Sub Stream.

3.11 View Image Quality

You can click to switch among Realtime, Balanced and Smooth.

3.12 Record Search

Click icon on the toolbar to enter into the Record Search interface to search and playback. Refer to former chapter 3.3.1 for specific operating method.

3.13 Start Sequence

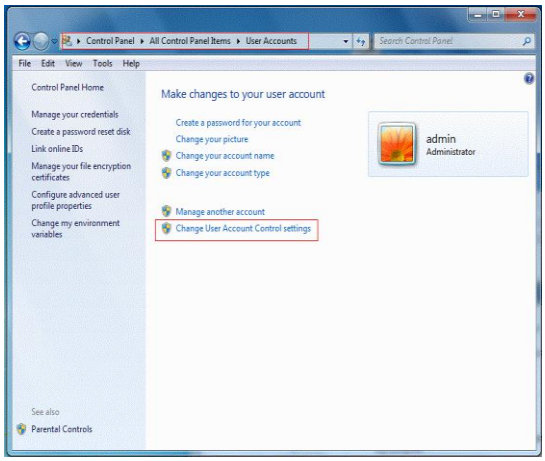
After set channel sequence time (Refer to chapter3.2.1.3), click Start Sequence icon on the toolbar to start sequence.

Chapter 4 Web Application Manager

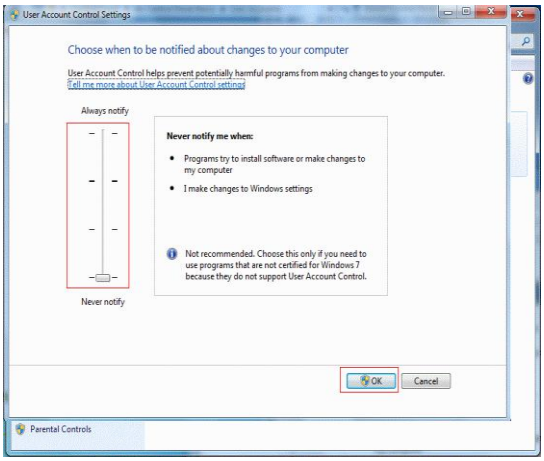
4.1 Download and Installation of Plugin

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.

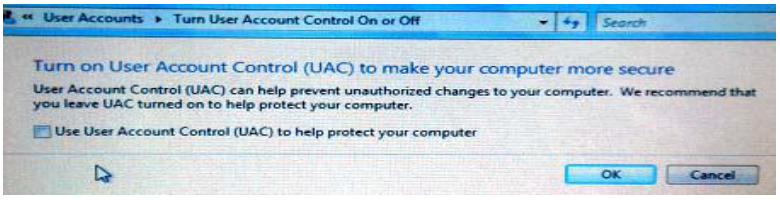
Vista System: Start→Setup→Control Panel. Set user authority in control pane shown as the following picture. Remove the Tick "√" in front of the option "Use UAC to help protect your computer" and confirm OK.



WIN7-1

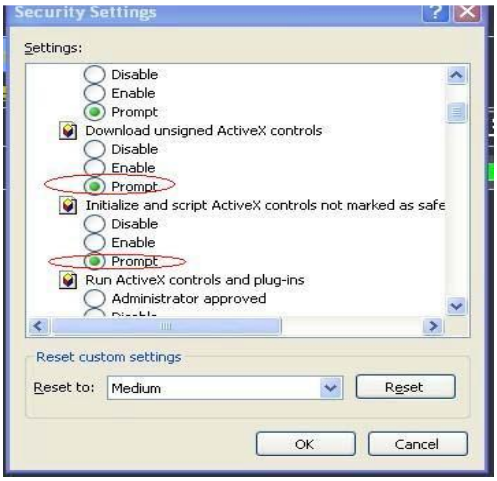


WIN7-2



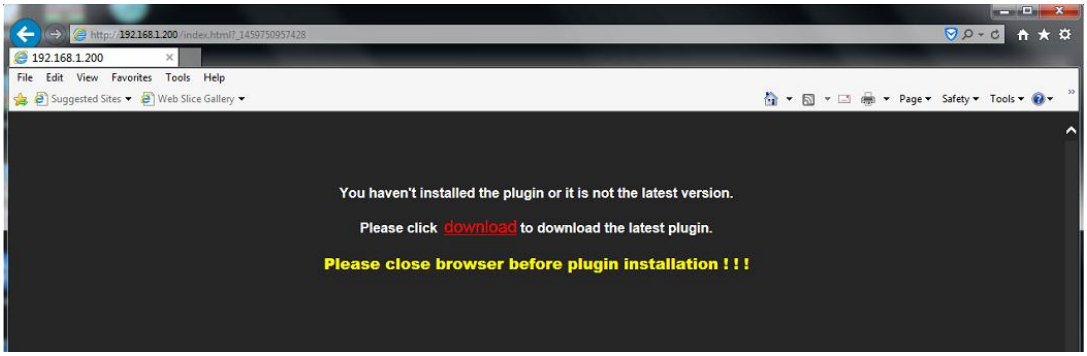
Vista

Note: If the web plugin 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.

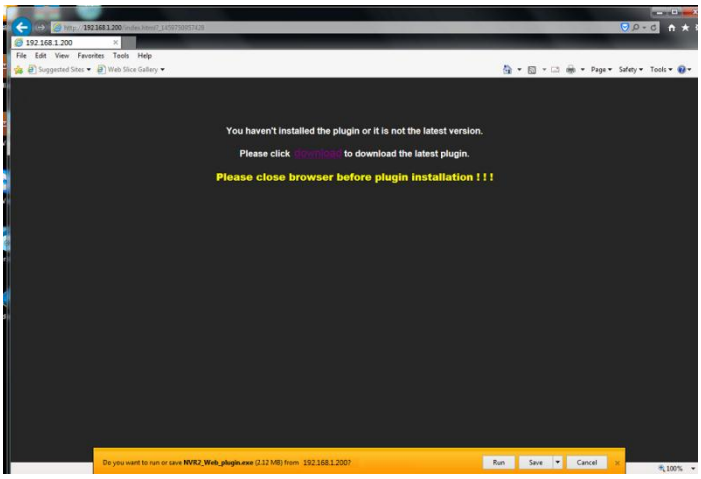


4.1.1 Download and Installation of Plugin for IE

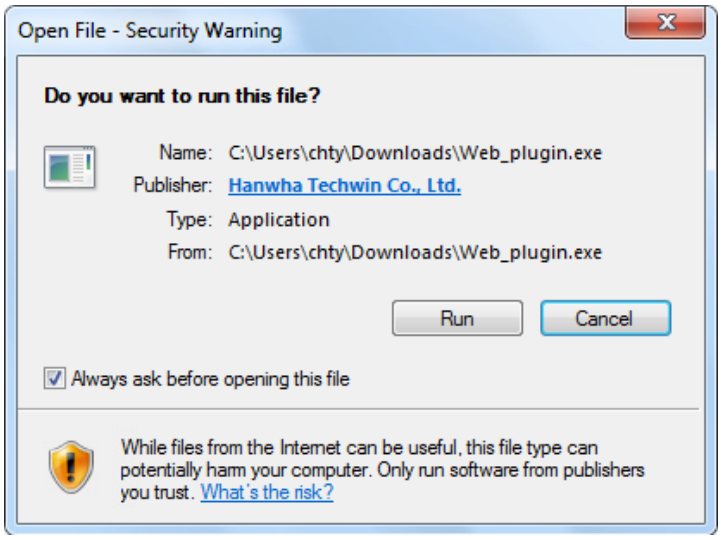
Open your web browser and input the IP address of NVR, such as: http://192.168.1.200:80 .



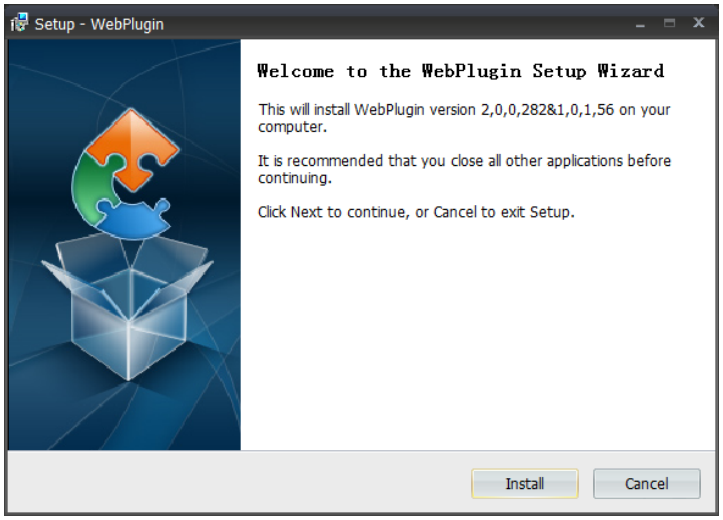
Click on "download", and then click on "Run" in being downloaded File - Security Warning box”



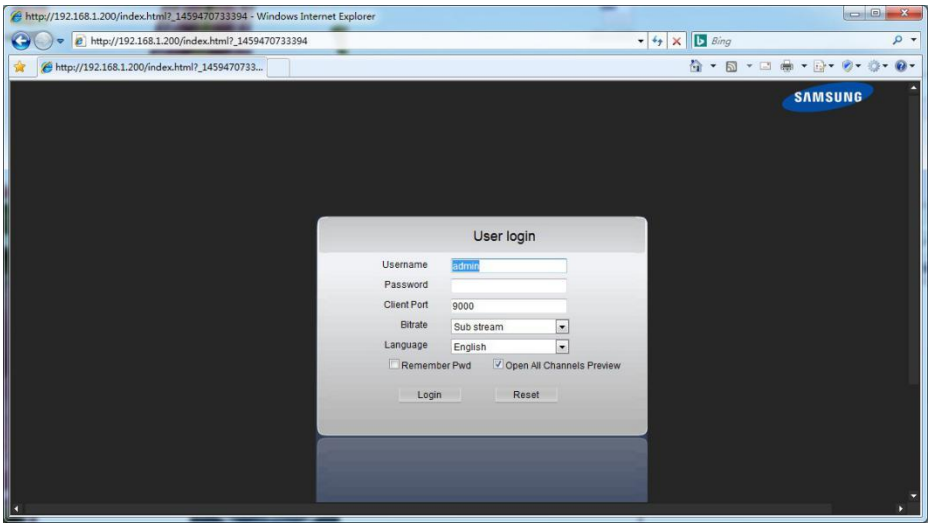
Click on "Run" in warning box reading "Do you want to run this software?"



Click on "Install" in the dialog box "Setup-Web Plugin”.

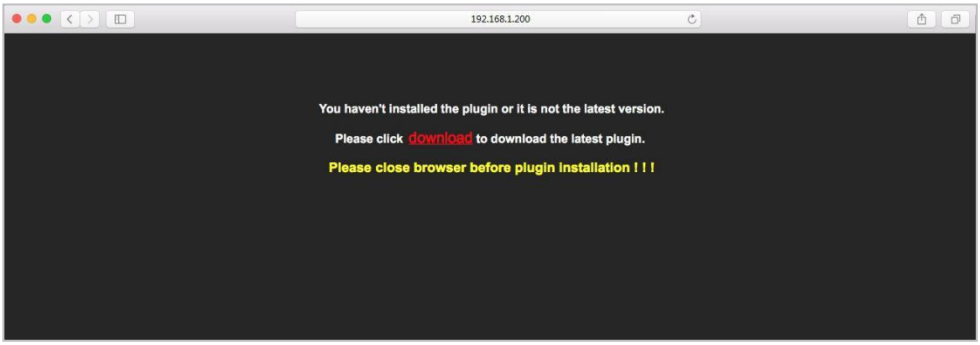


Shut down IE browser and restart it, and then enter IP address plus HTTP port of NVR in address bar to access login page.



4.1.2 Download and installation of plugin for Mac SAFARI.

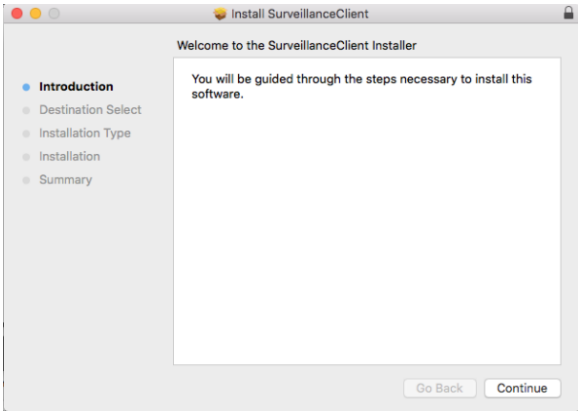
Enter IP address of NVR in address bar of Mac SAFARI, for example, http://192.168.1.200, and click on “download” to download the plugin.

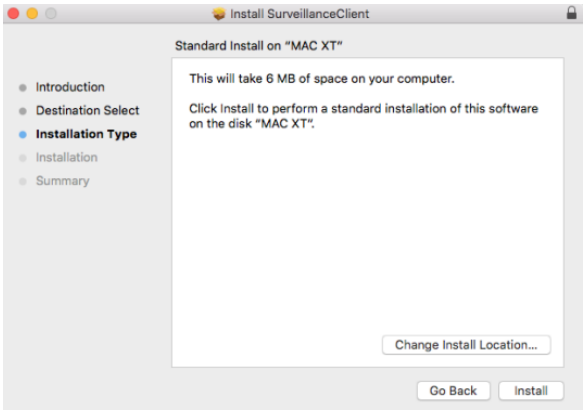


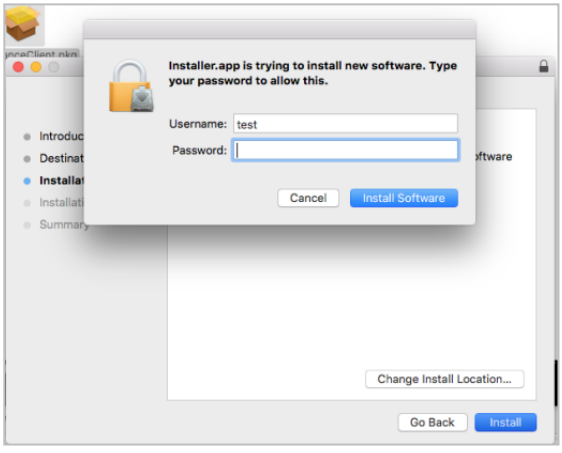
Locate the downloaded plugin "SurveillanceClient.dmg" and double click on it

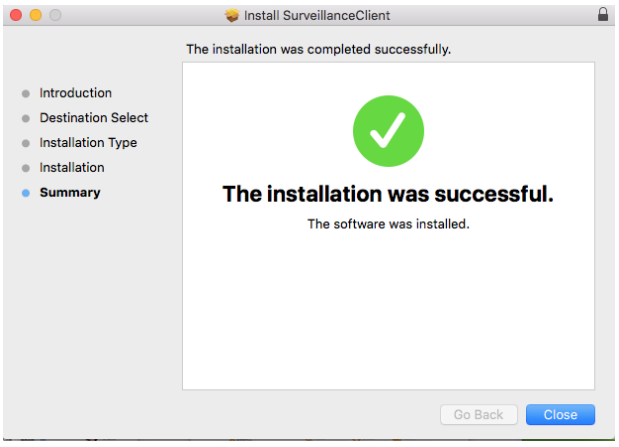
Install the plugin by double clicking on "SurveillanceClient.pkg.

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

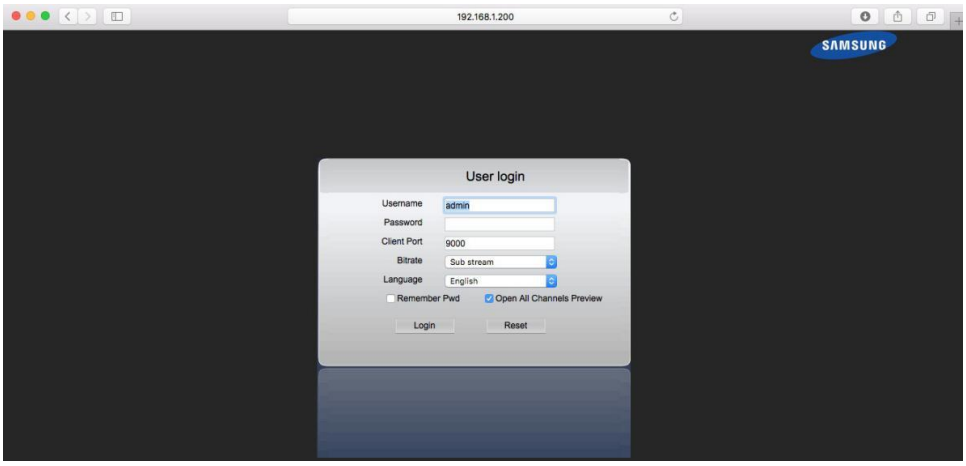








Shut down Mac SAFARI browser and restart it, and then enter IP address of NVR in address bar to access login page.

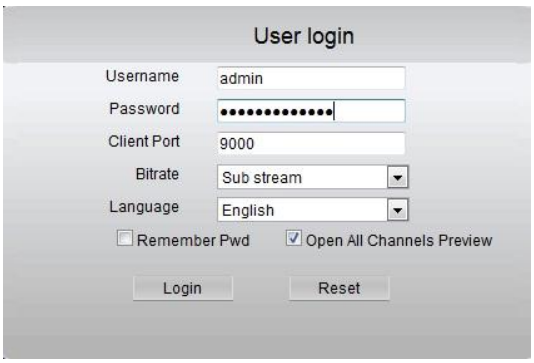


Note: The above instructions are for first time installations. You can use the same plug-in for IE and Google Chrome. If plug-in for windows OS was installed on IE or Google Chrome once, you need to use IE which needs to be run as administrator. Use Google Chrome to log in to NVR.
If you use Google Chrome to log in, please use Version 41 or lower. If you use V42 to V44 to log in, you need to enable NPAPI plug-ins. You can enter chrome://flags/#enable-npapi on URL bar of Google Chrome to find and enable NPAPI. Please note that it doesn't support V45 or above.
When you do a firmware upgrade, you have to re-download and re-install the plug-in. Based on different situations, it may not be able to install the plug-in through browsers. In this case, please copy and install the plug in on the CD attached (Web_plugin_Windows_YYYY_MM_DD.exe for Windows system, and SurveillanceClient_Mac_YYYY_MM_DD.dmg for Mac).

.

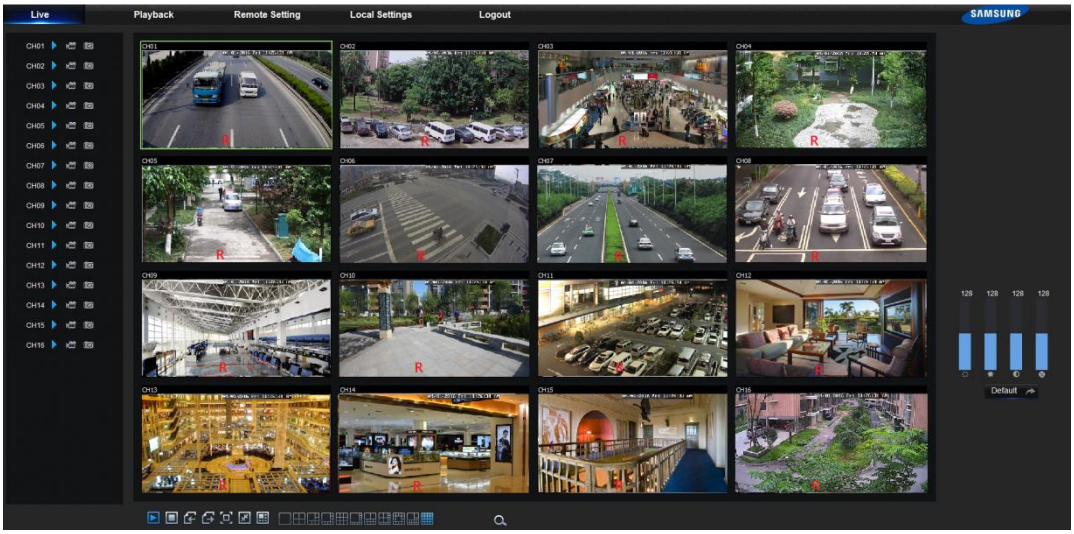
4.2 Web Application Manager Login

After plugin installation, please input user name and password, select Sub Stream or Mobile Stream (In general, select SubStream for intranet and MobileStream for extranet.), and select language in the interface. There is an option for opening all channel preview, select it to open all live pictures. Press Login to log in client and visit NVR remotely. Set password as per introductions of user management in system setting.



4.3 Live Interface

Log in and go to live view. Menu Bar: Live, Playback, Remote Settings, Local Setting and Logout



4.3.1 LIVE

4.3.1.1 Live Display

Log in the Web Application Manager, 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:

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

: Open or close the images on Live window. When it is in gray color, the channel preview is disabled. Or click the right key of mouse on each <Live> window to pop up channel operation menu .

: Switch display mode in channel window.

: Open all the Live channels.

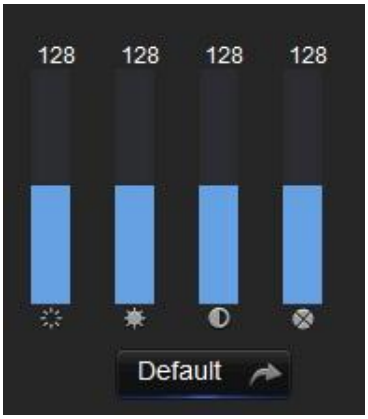
: Close all the Live channels.

: Display previous group of channels.

: Display next group of channels.

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

4.3.1.2 Video Control



: Adjust the hue of video.

: Adjust the brightness of video.

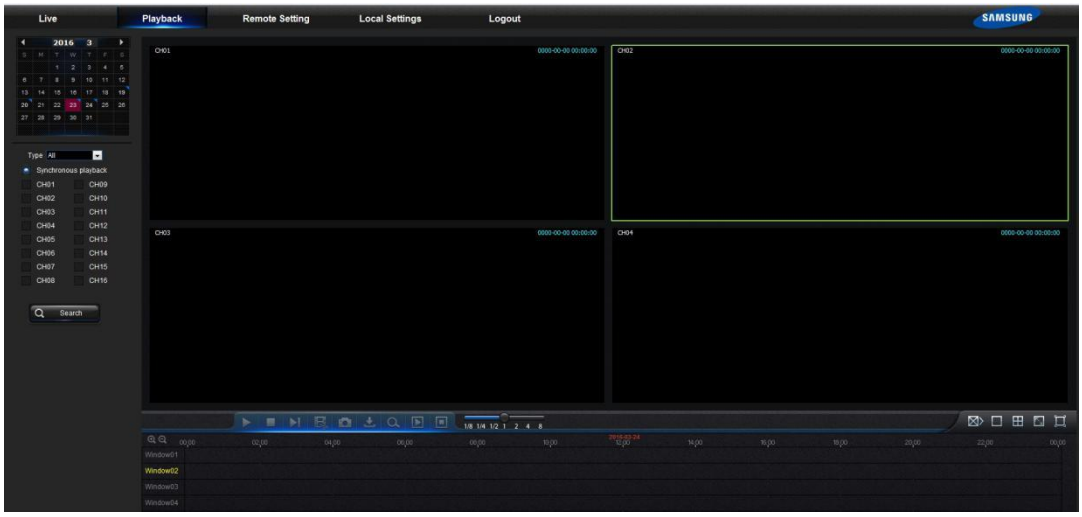
: Adjust the contrast of video.

: Adjust the saturation of video.

4.3.2 Playback

Click

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

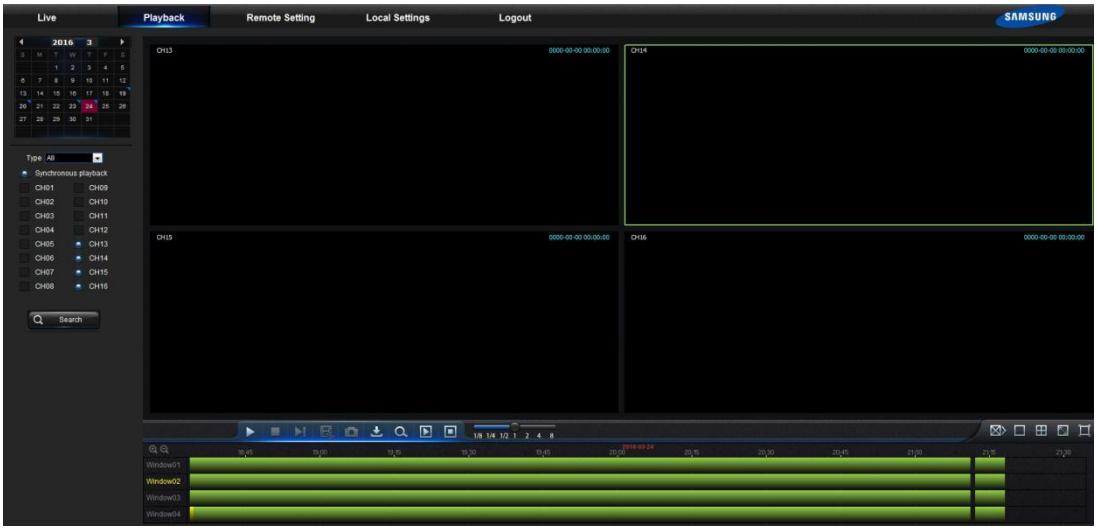


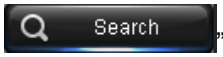
It supports 4 channels playback.

4.3.2.1 Record Search

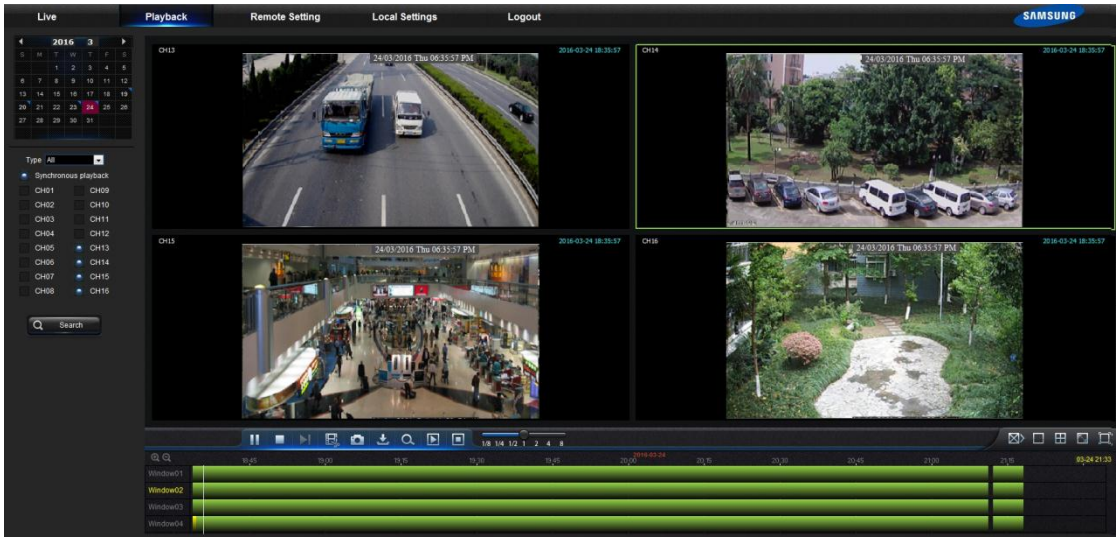
Record playback procedure

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, Motion record and All) and channels, and then click " 

", and time axis panel will display specific time quantum. On the time axis, green part stands for normal record, yellow stands for motion record and original part stands for no record during this period.



Before playback, choose to enable playback 4 channels synchronously. If you tick-select "

", 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.

4.3.2.2 Playback Control

Playback control bar.

Detailed brief description is shown as below list

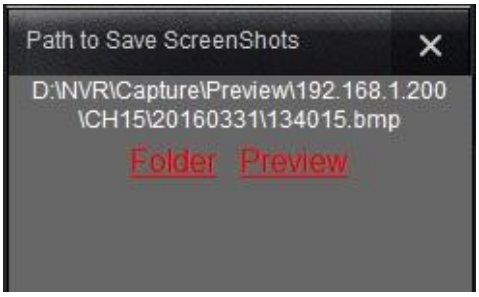
Key	Description	Key	Description
	Play		Open all the playback channels
	Pause		Slow playing 1/2,1/4,1/8, Fast playing 1/2/4/8
	Stop		Stop playing all the files
	By frame		Single channel mode
	Record Clip		Quad mode
	Snap		Full Screen
	Download		Stop playing all the playback

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 *.rf format.

Capture function

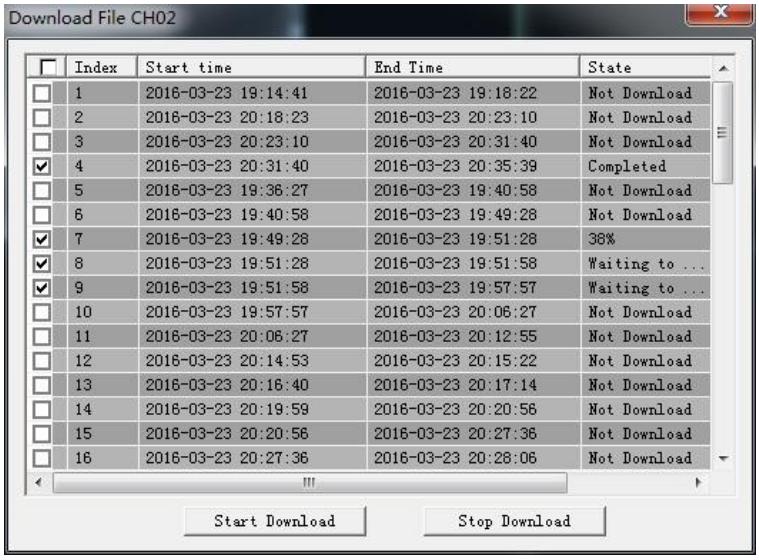
Move the mouse curse to the channel you want to capture, and click [ ] icon to capture the live images remotely. After capturing the images successfully, a path prompt box will be popped up.



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.



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 finished, "completed" will be displayed on the status bar.

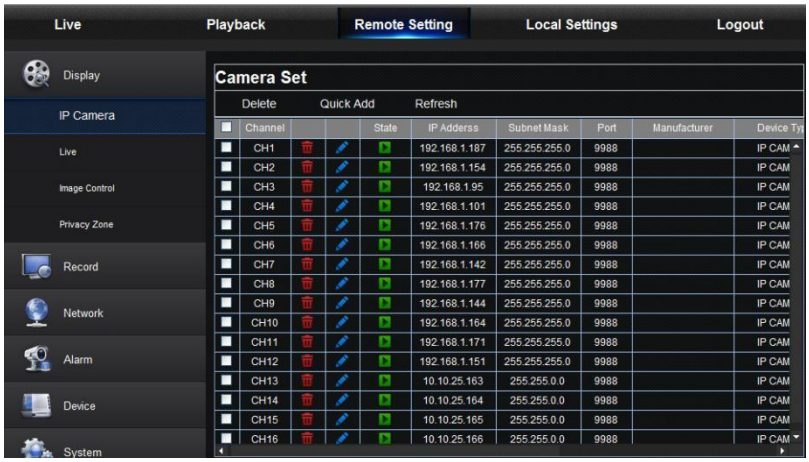
4.3.3 Remote Setting

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

4.3.3.1 Display

Unfold [Display] option to find its sub-options: IP Camera, Live, and Image Control and Privacy zone.

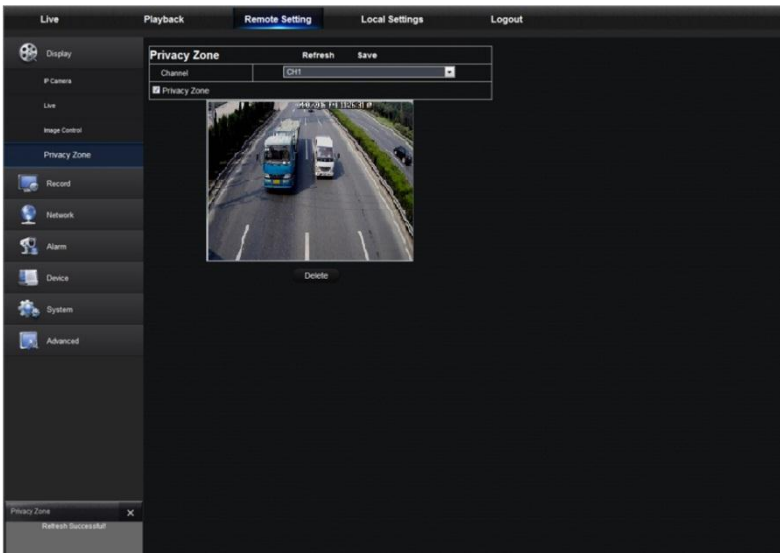
1. IP Camera: Display the information of added IPC. It can quickly add the on-line IPC and delete the added IPC.



2. Live: You may change channel name, position, channel preview and relevant parameters. If show time is set as <disable>, current NVR system time will not appear on the screen on Live mode.

3.Image Control : The IPC some remote settings such as white balance，3d noise reduction image reversal and so on.

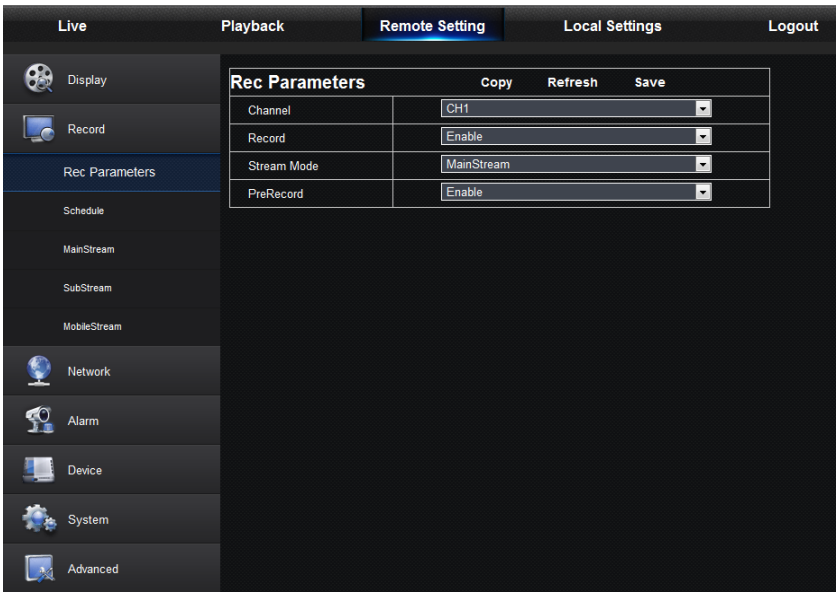
4. Privacy Zone: Each channel can set 4 privacy zones. The relevant parameters should be consistent with NVR local setting. Select zones to be deleted and click “Delete” and click “Save” at up-right corner.



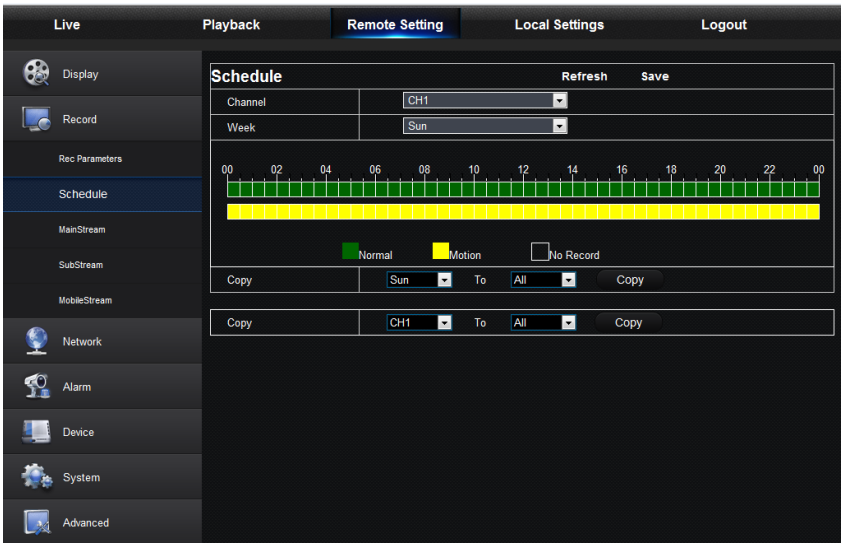
4.3.3.2 Record

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

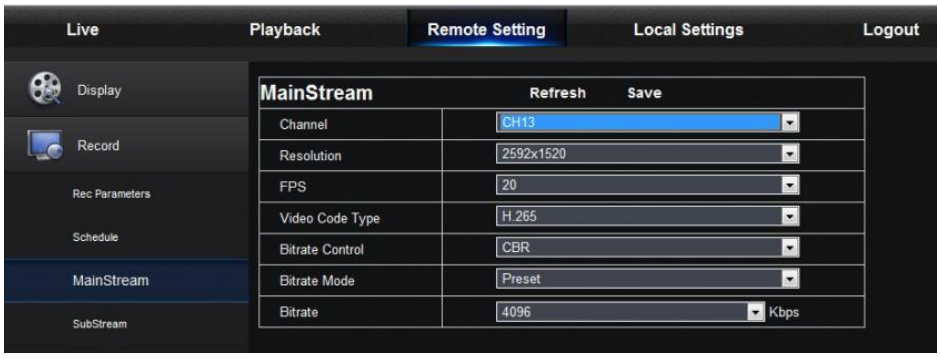
1. **Record Parameters:** The parameters should be consistent with NVR local setting.

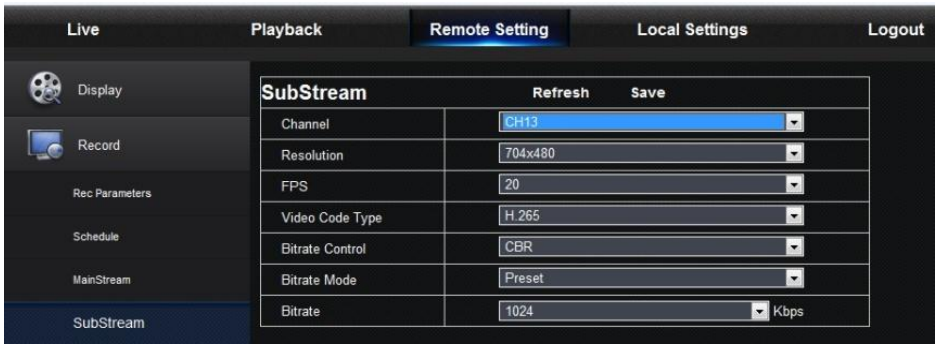


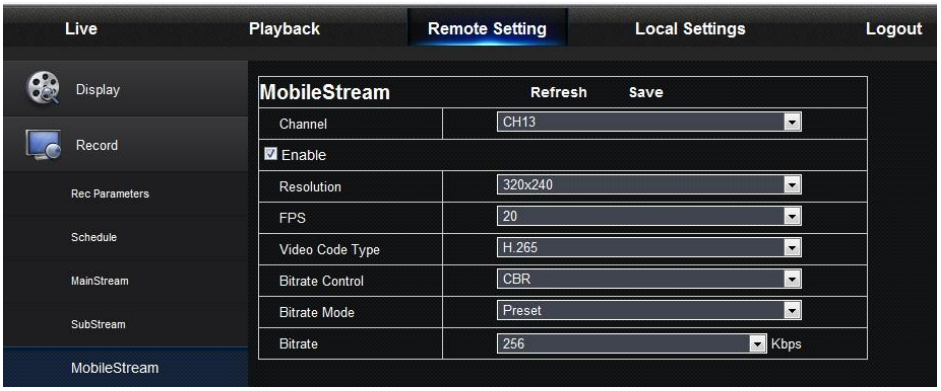
2. **Record Schedule:** The parameters should be consistent with NVR local setting. Green stands for Normal record; Yellow stands for Motion detection;



3. **Stream setting：** User may set Mainstream, Substream and Mobilestream. The relevant parameters should be consistent with NVR local setting.



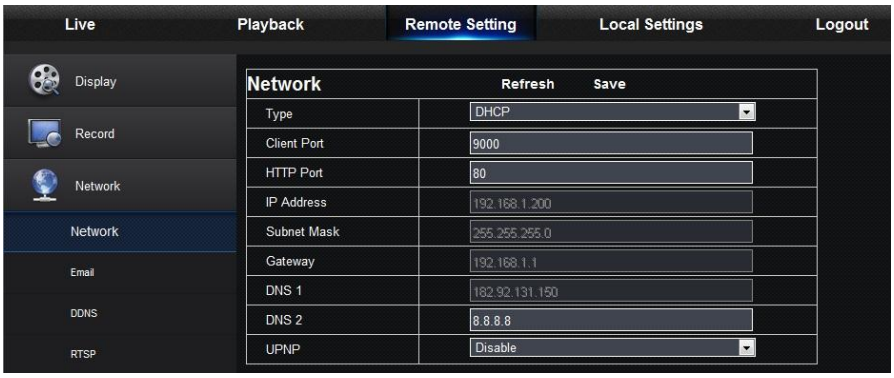




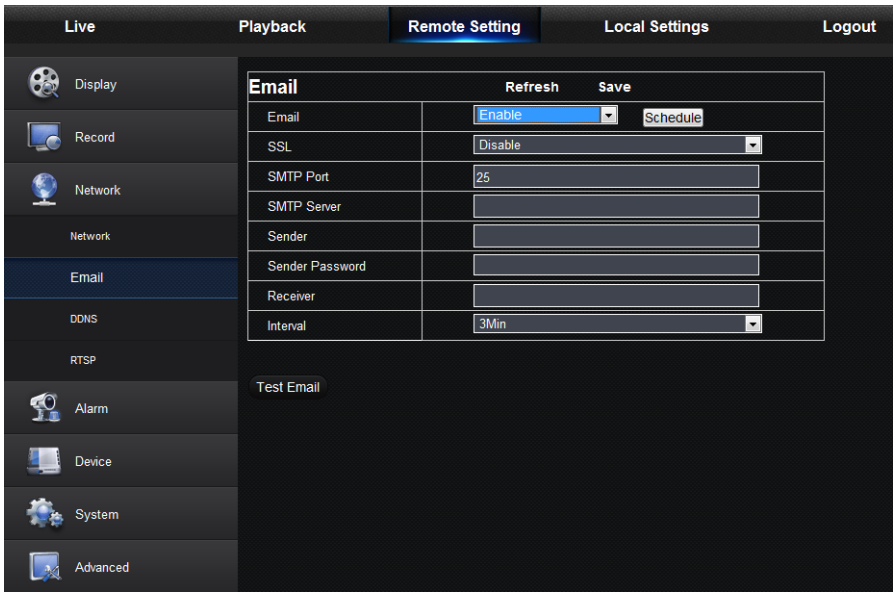
4.3.3.3 Network

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

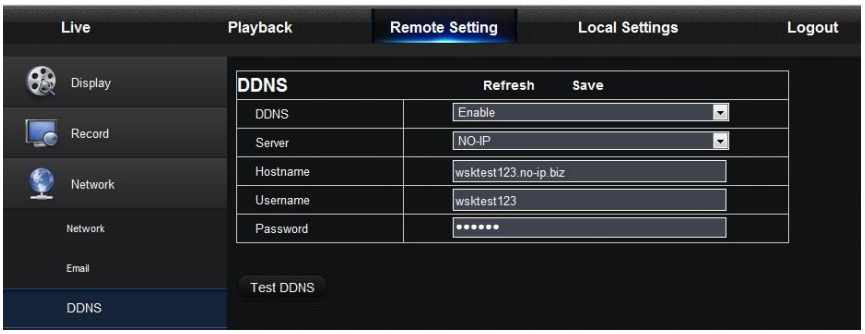
1. **LAN setting:** NVR supports Static/DHCP/PPPoE modes. System default network type is <DHCP>. User can set parameters as required. After the network parameters are modified successfully, NVR will automatically restart.

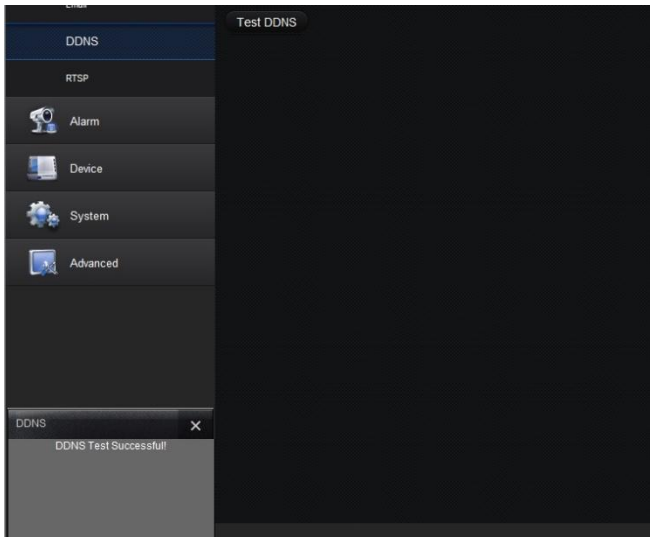


2. Email: Set NVR alarm Email configuration parameters, including Email address, SSL, Email Enable, Interval and Email Schedule, etc. Detailed parameters should be consistent with NVR local setting.

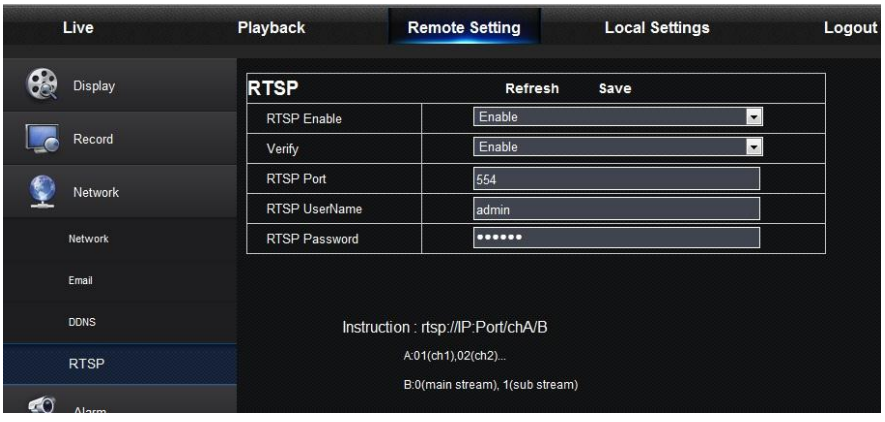


3. DDNS: After user applies for DDNS service, you could enable <DDNS> function under any one network type mode (Static, DHCP and PPPoE). And you may remotely visit the NVR through domain name (http://domain name: HTTP port No.). When visiting NVR by using DDNS, user should make sure port and current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





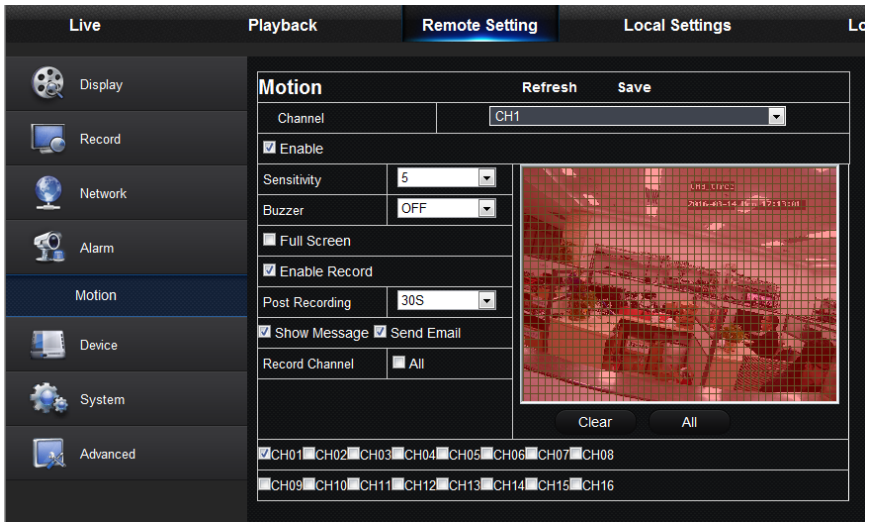
4. RTSP: Go to “Main Menu” → “Parameter” → “Network” → “RTSP”. Set User Name and Password to view video by PC software VLC



- **RTSP Enable:** Enable/Disable
- **Verify:** Enable/Disable
- **RTSP Port:**554
- **User Name:** admin
- **Password:**111111
- **Instruction:** rtsp: //IP:Port/chA/B
- **A:** 01(ch1), 02(ch2)...
- **B:** 0(main stream),1(sub stream)

4.3.3.4 Alarm

1. Motion Detection: Configure Sensitivity, Motion Record and Alarm Capture, etc. Detailed setting should be consistent with NVR local setting.

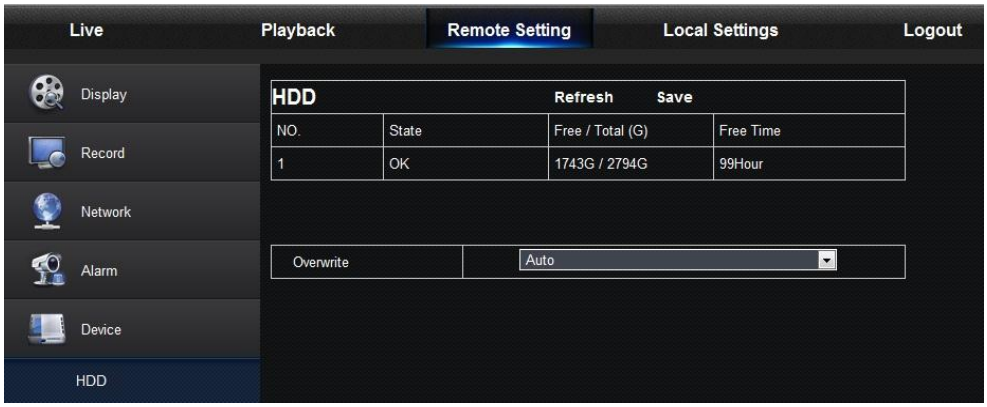


4.3.3.5 Device

Click <Device> to unfold its sub-options: HDD and Cloud Storage.

1.HDD

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



1. Cloud storage

Go to “Main Menu”→“Device”→“Cloud storage” to enter into the interface.

A cloud storage parameters

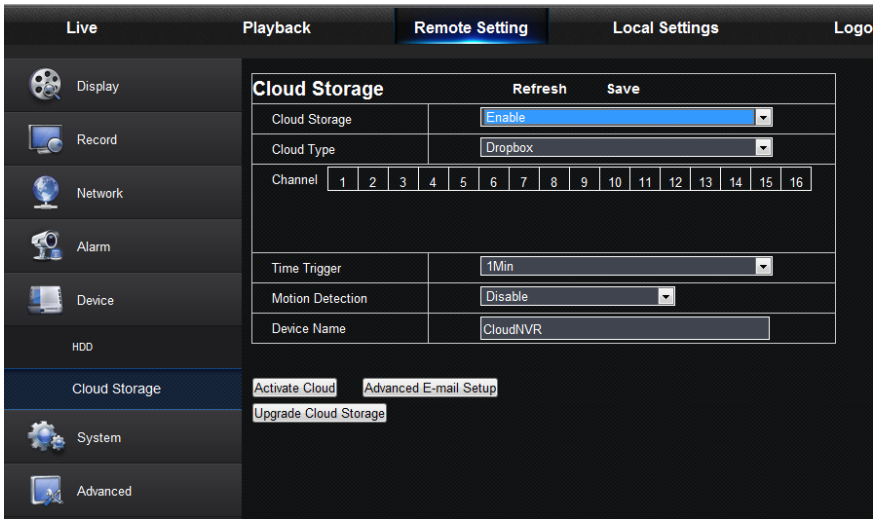
Cloud: Cloud Space (Network HDD). It can upload the NVR periodically captured pictures and motion detection captured pictures to Dropbox

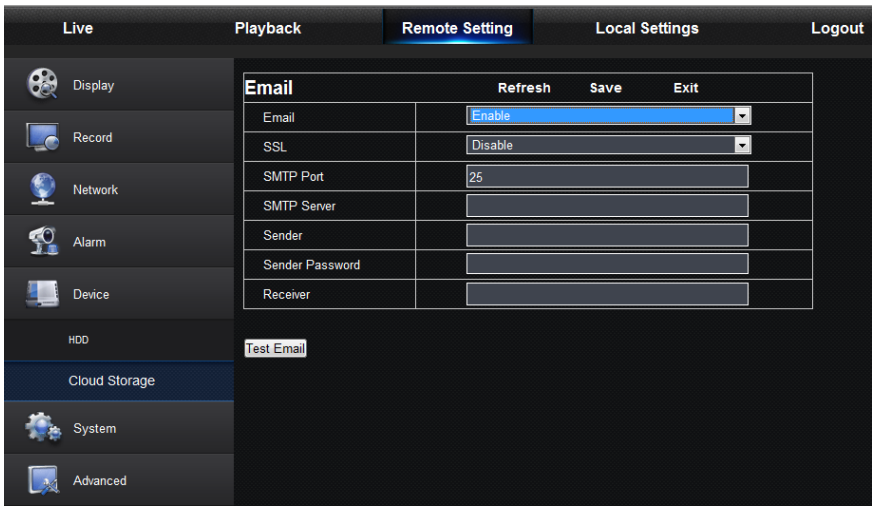
1) Register in Dropbox website, Address: https://www.dropbox.com/

2) Configure network to ensure the normal operation of NVR network.

3) Configure Cloud: Enable Cloud and set the channel and interval for NVR periodically captured pictures; Enable Motion Detection to get captured pictures for motion detection.

4) Driver Name refers to the name created in the folder of Dropbox and the name can be defined by the user, e.g. CloudNVR. The folder is to store the NVR periodically captured pictures).
5) Click [Advanced E-mail Setup] to set the Email box. User shall input his Email.
6) Click [Active Cloud] to activate Cloud and Email will receive the URL related to Cloud
User input the registered user name to visit the above website and the following interface will be popped up.
7) Click the icon at the upper-left to view the folder (CloudNVR) made in the 4th step.
8) Enter the folder to view the NVR captured pictures.
9) Click [Upgrade Cloud storage] to Check and update the new version.



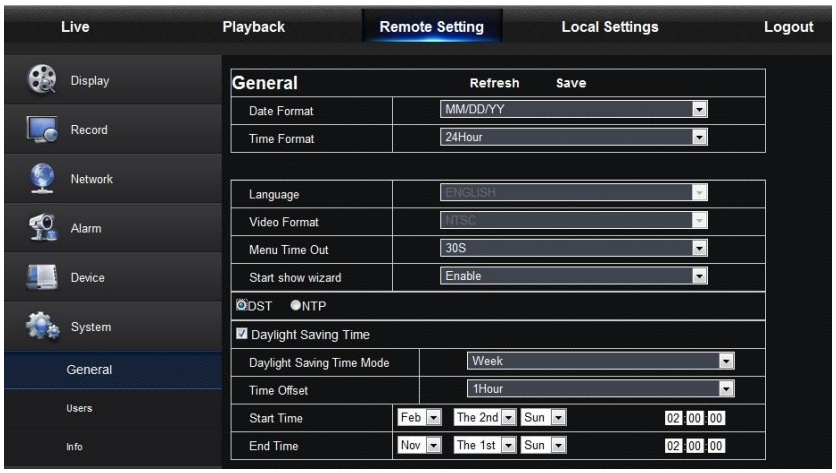


4.3.3.6 System

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

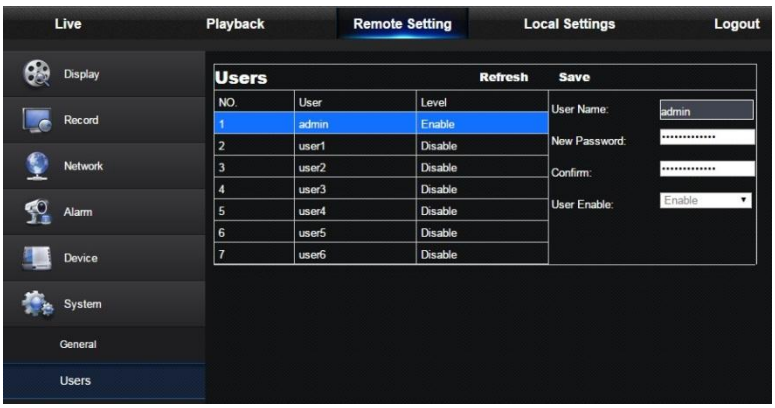
1. General

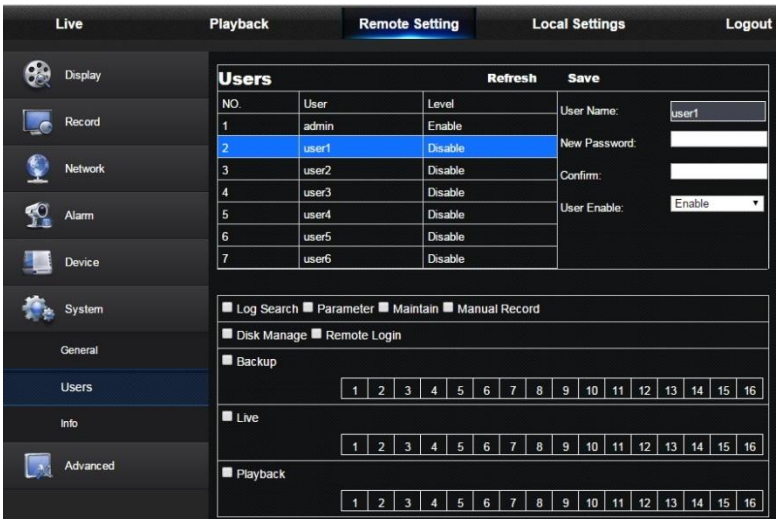
User may check NVR language and video system and set system time, date format, menu display time, DST and NTP parameters. Detailed setting should be consistent with NVR local setting.



2. Users

User may configure user name and password. Detailed setting should be consistent with NVR local setting.





3. Info

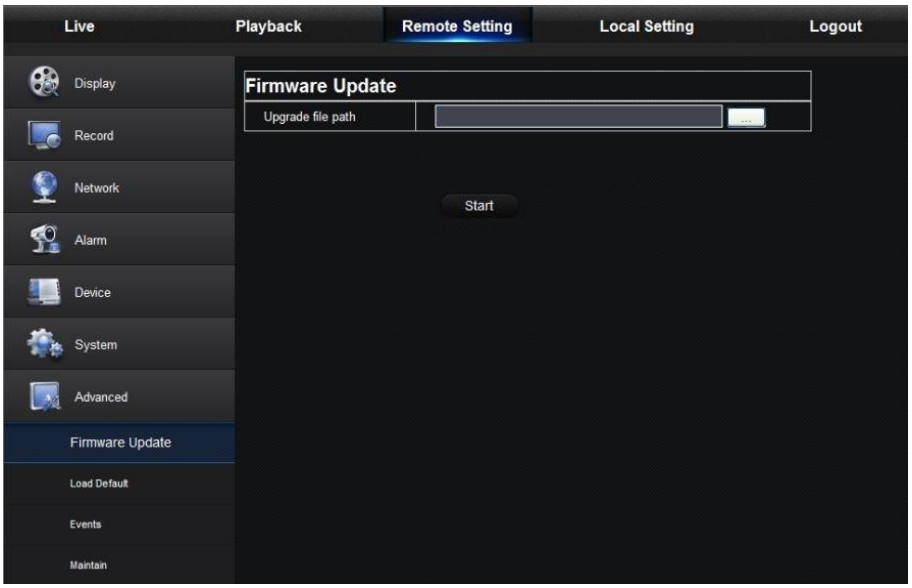
User can view system information, including Device ID, Device Name, Device Type, Hardware Version, Software Version, IE Client Version, IP Address/Domain, MAC Address, HDD Capacity, Video Format, Media Port, Web Port, P2P ID, etc.

4.3.3.7 Advanced

Click Advance to unfold its sub-options: Firmware Update, Load default, Events and Maintain.

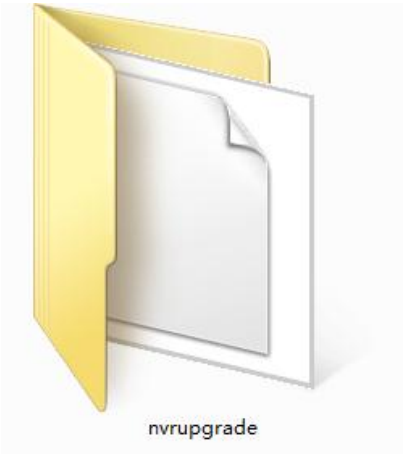
1. Firmware Update

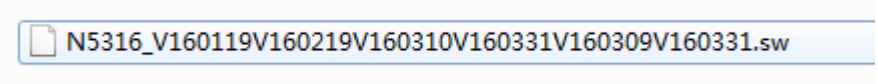
User may remotely update NVR system.



Updating procedure:

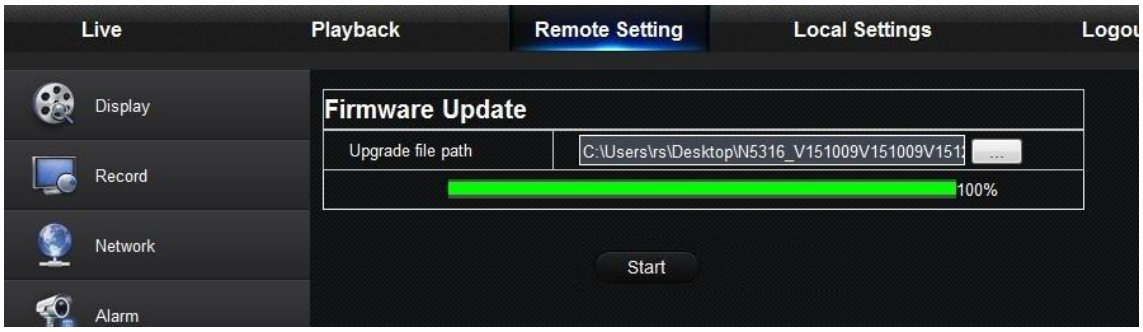
Firstly, select the update file path. The file format is *.sw.





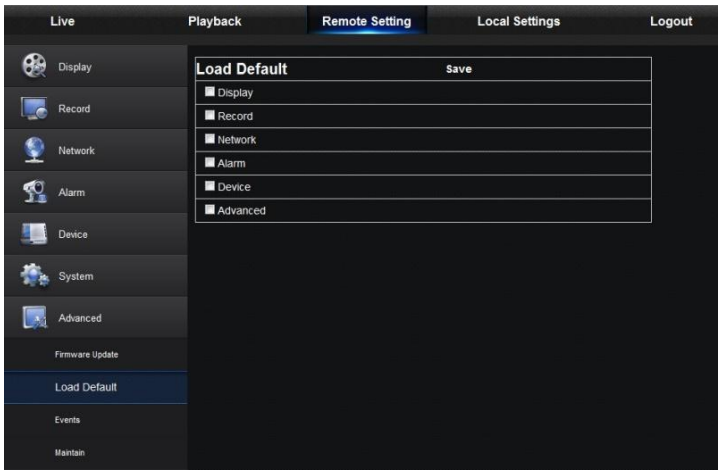
Secondly, click “Start” to start updating. The updating progress can be seen on the screen. After firmware is upgarded, please restart the browser and enter IP address and HTTP port of the NVR to log in remotely.

Notes: Before clicking on Start, be sure to exit from the menu.



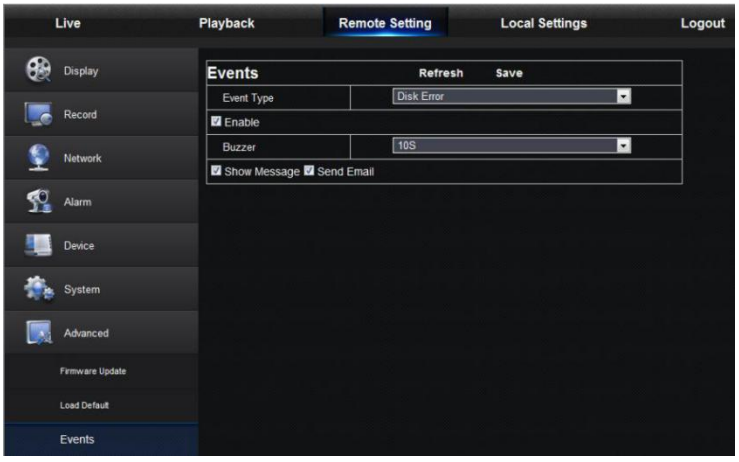
2. Load Default

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



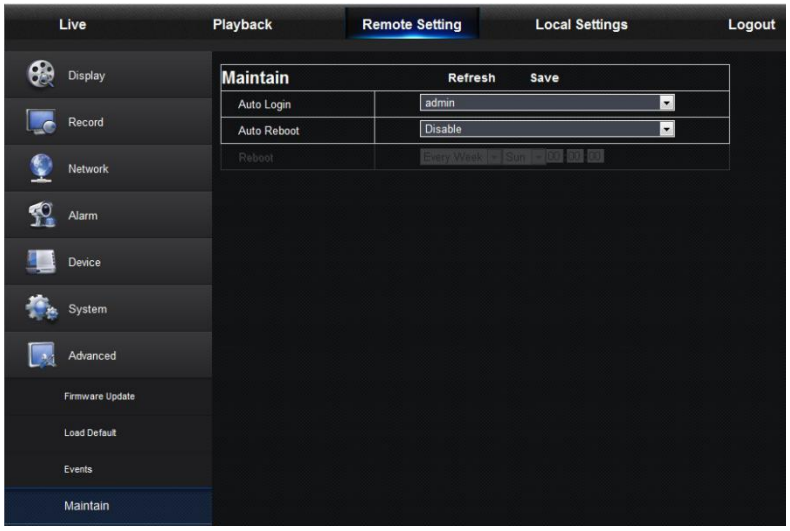
3. Events

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



4. Maintain

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



4.3.4 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 and AVI)

4.3.5 Logout

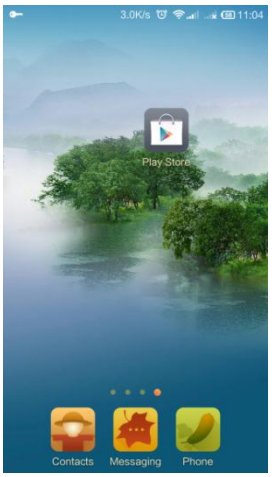
Click

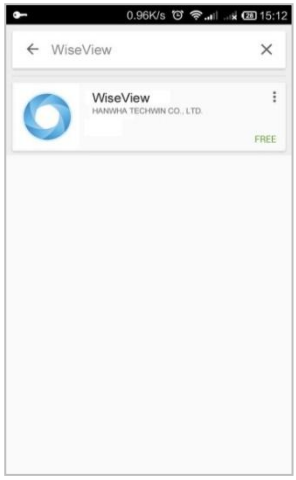
to log out and return to the Login interface.

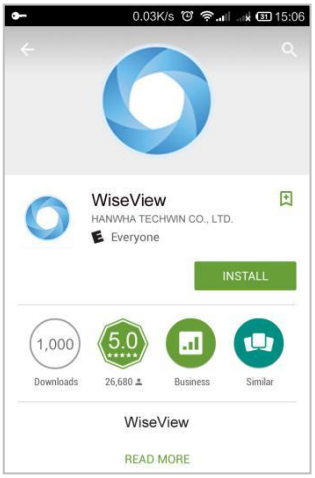
Chapter 5 Mobile App

Android Phones/Tablets

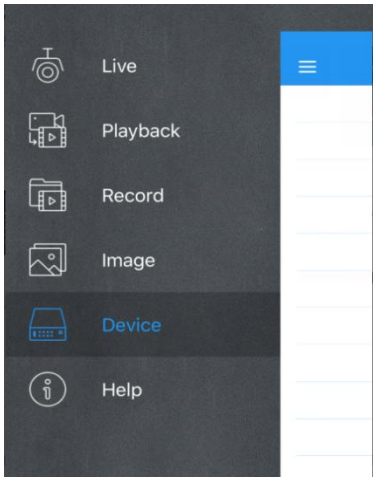
1. Open Play Store to search WiseView and click ‘INSTALL’ to install.

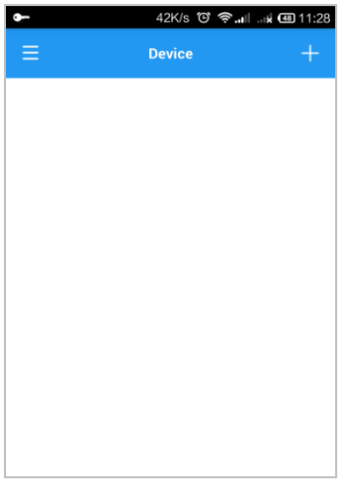


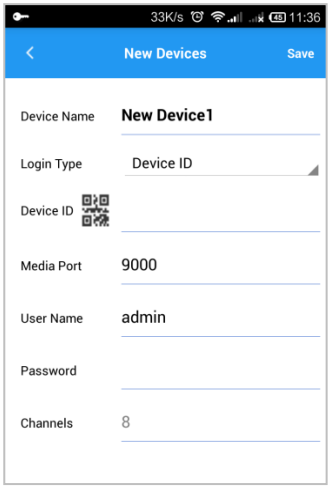




2. After installation, open WiseView and select ‘Device’. Then click ‘ + ’ to add new device. Scan QR code under Information page of system on local NVR. Then input client port, user name and password, and then click Save to log in the device.

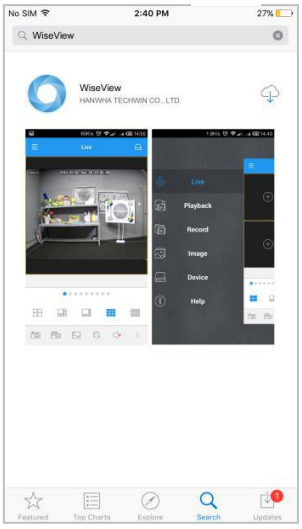




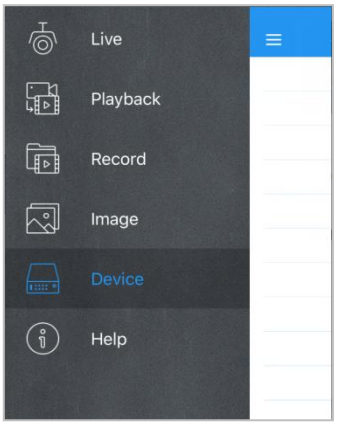


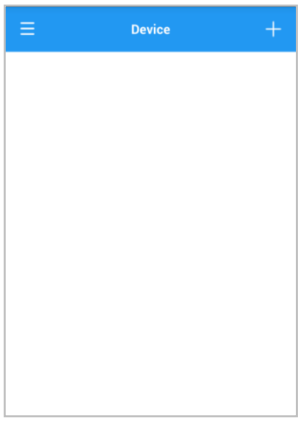
iPhone/iPad

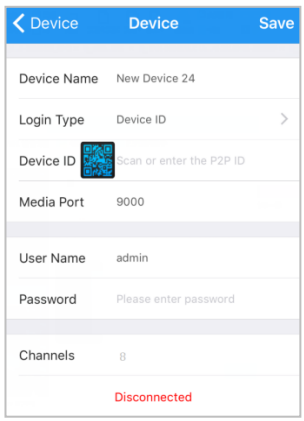
1. Open App Store to search WiseView, and click icon to install.

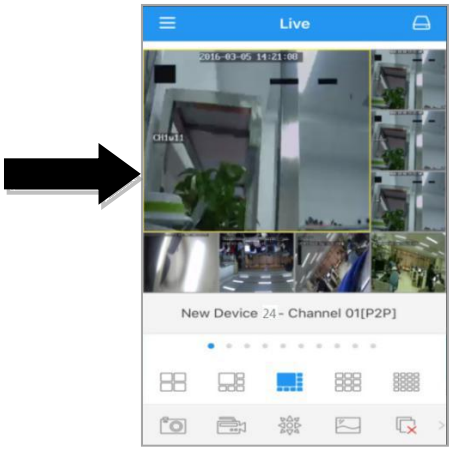


2. Open WiseView, and go to Device. Click '+' to add new device. Scan QR code under Information page of system on local NVR. Then input client port, user name and password, and then click Save to log in the device.









It supports max. 1080P resolution during live view on mobile phones. If the image resolution is above 1080P, the video will not be fluent.

Chapter 6 Appendix

6.1 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. Password MUST be 8~13 characters long, and the combination of two kinds of characters at least.
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. Confirm if motion is enabled, motion area is set up, and motion sensitivity level is too low.

12. 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. Besides, refer to corresponding HDD alarm setting.
13. 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.

6.2 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.

   This is A class product.it maybe bring wireless interference in life. Under this situation, it need user to make measures.

6.3 Product Specification

CAMERA

Video		**SNC-4241BE**
Imaging Device		4M CMOS (1/3")
Effective Pixels		2592x1520
Scanning System		Progressive
Synchronization		Internal
Horizontal Resolution		1520
Min. Illumination		0.62Lux (30IRE);1.28Lux (45IRE) In Color Mode
Camera Output		RJ45
Lens		
Focal Length		3.6mm
Max. Aperture Ratio		F2.1
Angular Field of View(H / V / D)		D:94°/H:77.5°/V:43.4°
Operational		
Shutter Mode		Auto
Gain Control		Auto
White Balance		Auto
Wide Dynamic Range		YES
Digital Noise Reduction		3DNR
OSD		N/A
Refresh Rate		50/60Hz
Day & Night		Color ,Black White , Auto
IR Distance		82ft(Total darkness)/130ft(Ambient lighting)
Environmental		
Operating Temperature / Humidity		-10°C ~ +50°C (+14°F ~ +129°F) / Less than 90% RH
Ingress Protection		IP66
Electrical		
Input Voltage		POE/12VDC
Power Consumption		5W(DC 12POWER),7W(PoE POWER)
Mechanical		
Color / Material		White /Metal
Dimension (WxHxD)		φ68 x149mm
Weight		361g
ETC	Bracket	one body (assembled)
	Screw	3 EA (per 1 Cam)
	Anchor	3 EA (per 1 Cam)

NVR

Description		SNR-D5401
Video	Inputs	16CH
	Resolution	4M / 3M / 1080P/720P
Live	Frame rate	4M@240fps, 3M@330fps, 1080P@480fps
	Resolution	1,024x768, 1,280x720, 1,280x1,024, 1,440x900, 1,920x1,080, 1,680x1,050, 1,600x1,200, 1,900x1,200, 2,560x1,440, 3,840x2,160
	Multi Screen display	[Local Monitor] 1/4/6/8/9/10/13/14/16 Sequence [Web] 1/4/6/8/9/10/13/14/16 Sequence
Performance		
Operating System	Embedded	Linux
	Installation wizard	support
Recording	Compression	H.264 / H.265
	Recording Bandwidth	Up to 320Mbps
	Recording Resolution	4M@320fps, 3M@480fps, 1080P@480fps
	Mode	Manual, Schedule (Continuous/Event), Event(Pre/Post)
	Event	Motion(Sensitivity Level 1~8)
	Overwrite modes	Disable/Auto
	Pre-alarm	On/off
	Post-Alarm	Up to 5min (30 sec,1,2,5min)
Search & Playback	Search mode	Date/time, Normal, Motion
	Playback function	Fast forward / backward (2x, 4x, 8x, 16x) Slow forward(1/2x, 1/4x, 1/8x,1/16x) Step Forward (All above is only available on the NVR itself rather than website)
Network (IPv4)	Live stream	Depends on Mainstream and Substream set on local NVR Mainstream : Max.4M 80fps, 3M/1080P/720P 120fps Substream:Max.D1(704x480)/VGA(640x480)/QVGA (320x240)480fps
	Max. scan channel	64CH
	Protocol support	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, DHCP, PPPoE, SMTP, DNS, DDNS, uPnP
	Monitoring	Web viewer, Mobile Viewer

Smart phone	Web / App viewer	Microsoft Internet Explorer (Ver. 8~11), Google Chrome (Ver.42.x or lower), Apple Safari (Ver. 9.0.3 or higher, Mac OS X 10.10 or higher)
	Protocol support	TCP/IP, UDP/IP, UDP,P2P
	Transmission speed	QVGA(340x240) Max.20fps (Single channel)
	Max. scan channel	64CH
Storage	Internal HDD	1 SATA HDD (3TB)
	USB (Back-up)	3 USB Ports (USB 2.0 x 2EA, USB 3.0 x 1EA)
	File Format (Back-up)	AVI, MP4, RF (RF means H.264 or H.265.)
Security	Password Protection	1 Admin and 6 Users
		User access log, Encryption
Interface		
Monitors	VGA	1 VGA
	HDMI	1 HDMI
	Simultaneous Output	VGA and HDMI
Audio	Inputs/Output	N/A
	Compression	N/A
	Sampling Rate	N/A
Alarm	Remote notification	Notification via e-mail
Connections	Ethernet	1 WAN RJ45 10/100/1000M Base-T / 16 LAN
	USB	3 USB Ports (USB 2.0 x 2EA, USB 3.0 x 1EA)
	Application Support	Mouse, Remote Control
General		
Electrical	Input Voltage	AC 100-240V
	Power consumption	20W(1*HDD), PSE : Total 130W (Average 8.1W per each PoE port)
Environmental	Operating Temperature/ Humidity	0°C~+40°C (32°F ~ 104°F) / 20% ~ 85%RH
Mechanical	Dimension (WxHxD)	380*326*52
	Weight (With hard disks)	3.64kg
OSD Language		English, French, Spanish

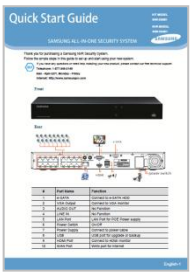
6.4 Accessories Attached (SNK-D5081)

☐ NVR

☐ Camera

☐ Screw & Anchor & Hex key

☐ USB Mouse



☐ Quick Guide

☐ Remote Control AAA Battery

☐ 60ft RJ45 Cable

☐ HDMI Cable

☐ RJ45 Cable

☐ Power Cable

☐ Water-proof Accessories

☐ CD

☐ Hard Drive Mounting Screws

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